



Pest Management Plan

Draft Gold Coast Pest Management Plan 2013 - 2017

CITY OF
GOLDCOAST.

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Abbreviations

BQ	Biosecurity Queensland
C1	Class 1 Declared pest
C2	Class 2 Declared pest
C3	Class 3 Declared pest
CG	Community Groups
Council	City of Gold Coast
DAFF	Queensland Department for Agriculture, Fisheries and Forestry
DEHP	Queensland Department of Environment and Heritage Protection
EPBC Act	Commonwealth Environmental Protection and Biodiversity Conservation Act 1999
ESA	Environmentally Significant Area
FA	Queensland Fisheries Act 1994
COGC	City of Gold Coast
GSA	General Strategic Actions
KTP	Key Threatening Process
LFW	Land for Wildlife
LGA	Local Government Area
LGAPMP	Local Government Area Pest Management Plan
LPA	Queensland Land Protection (Pest and Stock Route Management) Act 2002
NCA	Queensland <i>Nature Conservation Act</i> 1994
NCS	Nature Conservation Strategy
ND	Non-declared
PL	Private Landowners
PPA	Queensland Plant Protection Act 1989
QPAS	Queensland Pest Animal Strategy
QPWS	Queensland Parks and Wildlife Service
QWS	Queensland Weeds Strategy
SEQ	South East Queensland
SEWPAC	Commonwealth Department for Sustainability, Environment, Water, Population and Communities
TAP	Threat Abatement Plan
WoNS	Weeds of National Significance

Glossary

Biodiversity – The diversity of all species of life forms (plants, animals, insects, micro-organisms), the genes they contain and the ecosystems they create.

Climate change – Change in the climate that is directly or indirectly attributed to human activity that alters the global atmosphere.

Declared pests – Species which are declared pest animals or plants under the Queensland Land Protection (Pest and Stock Route Management) Act 2002. Species can be declared as Class 1, 2 or 3 pests, for which there are legal requirements to control these species (ie declared plants or declared animals).

Environmental weeds – Plants that threaten native biodiversity (may include native species).

Human health pests – Pests that impact on human health (ie cockroaches, rats, mosquitoes, bed bugs).

Non-declared pests – Species that are considered pests but are not declared under any Acts of legislation.

Pest species – a general term for a plant, animal, invertebrate, fungus, pathogen that has a negative impact on the natural environment, human health, agriculture, economic or social factors. Pest plants are commonly termed weeds while pest animals are commonly termed feral animals.

Prohibited plant – a plant that must be removed as part of any works associated with a development consent or approved landscape works.



Executive Summary

The impacts of pest plants and animals on the natural environment, economic, social and cultural values of the Gold Coast area have long been recognised. Pest species degrade natural ecosystems, impact on agricultural productivity, threaten biodiversity, impact on human health and interfere with recreation and cultural uses and values of an area. Managing these pest species is acknowledged as a priority in many existing City of Gold Coast management documents and works programs.

Effectively managing the threats posed by pest species requires commitment and co-ordinated effort and action from a range of key stakeholders. This City of Gold Coast Local Government Area Pest Management Plan (LGAPMP) has been developed in accordance with the Queensland *"Land Protection (Pest and Stock Route Management) Act 2002"*, to co-ordinate the pest management priorities and actions of all key stakeholders and deliver integrated pest management activities. Partners who are integral to the success of this Plan's delivery and implementation include City of Gold Coast and its community, Biosecurity Queensland, Queensland Parks and Wildlife Service, SEQWater, SEQCatchments, business and industry representatives. This Pest Management Plan was developed through consultation with these stakeholders and particularly with numerous work units of the City of Gold Coast.

This LGAPMP applies to all land and waterways within the City of Gold Coast Local Government Area and targets the pest species listed in various classes under the *Land Protection (Pest and Stock Route Management) Act 2002*. The LGAPMP is consistent with the priorities and directions set by higher order (National, State and Regional) pest plant and animal management documents.

This LGAPMP establishes local priorities for species and areas to be managed. The LGAPMP also includes a detailed Action Plan which outlines the required pest management strategies and actions, with implementation timeframes and responsibilities assigned. The Action Plan component includes mechanisms and timeframes for monitoring and reporting on its implementation and success in managing the impacts of pest species on the Gold Coast.

This LGAPMP has a 4 year lifespan, commencing when it is formally adopted by City of Gold Coast and will undergo a minor review each year with a full review prior to its expiry on 30 June 2017.



1 Introduction

1.1 Background

Pest animals and weeds are recognised as a significant threat to biodiversity and agricultural productivity, and have the ability to interfere with human health and recreation. The effective management of pests requires a clear and strong commitment from the State Government, Council, local industry and the community. The cost to control and manage pest animals and weeds is significant and growing annually. The most cost effective method of managing pests is to prevent further invasions.

In 2009, the Invasive Animals Co-operative Research Centre released a report into the direct economic costs of pest animals. The report calculated that the six most problematic pest animal species are impacting Australia's economy to the tune of over \$620 million annually - and when combined with the six most common invasive weed species, the economic impact is over \$1 billion annually.

The report showed that the substantial national costs of managing pest plants and animals adds significantly to the price paid at the supermarket for meat, vegetables and other produce.

The Queensland *Land Protection (Pest and Stock Route Management) Act 2002* (the *Land Protection Act*) identifies that all councils in Queensland are to develop a Local Government Area Pest Management Plan (LGAPMP) for all declared pests. Council's LGAPMP 2013-2017 (this document) has been prepared to fulfil this requirement.

This LGAPMP acknowledges the role of not only City of Gold Coast in the management of pests in the area, but the responsibilities of Commonwealth, State and private organisations as well as those of the wider community in the control and effective management of pest species and the protection of natural environmental, social, economic and cultural values of the city.

1.2 Purpose

This LGAPMP provides the basis for the cooperative management of pests by all stakeholders across the City of Gold Coast (COGC) Local Government Area (LGA). The LGAPMP identifies priorities for pest management within the COGC LGA and establishes strategies that address the environmental, agricultural, economic and social impacts of pests. The LGAPMP also identifies high priority pest species to ensure that resources are allocated appropriately and provides details for the monitoring, evaluation, reporting and improvement of pest management activities.

1.3 Scope of the LGAPMP

This LGAPMP applies to all land and waterways within the COGC LGA, including land owned or controlled by the State Government, Council, public utilities, private companies, corporations and individuals. The LGAPMP does not apply to land owned by the Commonwealth however all landowners and land managers will benefit from a consistent approach to pest management activities across the city.

For the purpose of this LGAPMP, targeted pest species include all pests declared under the *Land Protection Act*, as well as locally significant pests that, while not declared species, have been identified through consultation between Council, State government agencies, industry and the community. The LGAPMP also provides support for the State's management of pest fish species, myrtle rust (*Uredo rangelli*) and fire ants (*Solenopsis invicta*) within the COGC LGA which are not listed under the *Land Protection Act*. Target species subject to this LGAPMP are identified and listed within the document.

Not included in the scope of this LGAPMP are marine pests, native (nuisance) animals and plants, non-declared animals, domestic or public health pests (including rodents, mosquitoes, midges and cockroaches), or pathogens of humans, domestic animals and livestock. Biosecurity Queensland coordinates the State Government response for prevention, outbreaks and recovery of such pathogens and this plan does provide limited information on the management of potential problem native species (Section 6.3).

1.4 Commencement and duration

In accordance with the *Land Protection Act*, this LGAPMP is a four year plan which is to remain in place for this duration or until it is renewed. The LGAPMP will not come into force until it has been endorsed by the Minister for Agriculture, Fisheries and Forestry and formally adopted by Council.

Salvinia (*Salvinia molesta*) boomed off to allow introduction of the salvinia biological control agent (*Cyrtobagous salviniae*)



COGC staff checking salvinia
biological control agents

1.5 Structure of this Plan

The overall structure of this LGAPMP is presented in Figure 1.

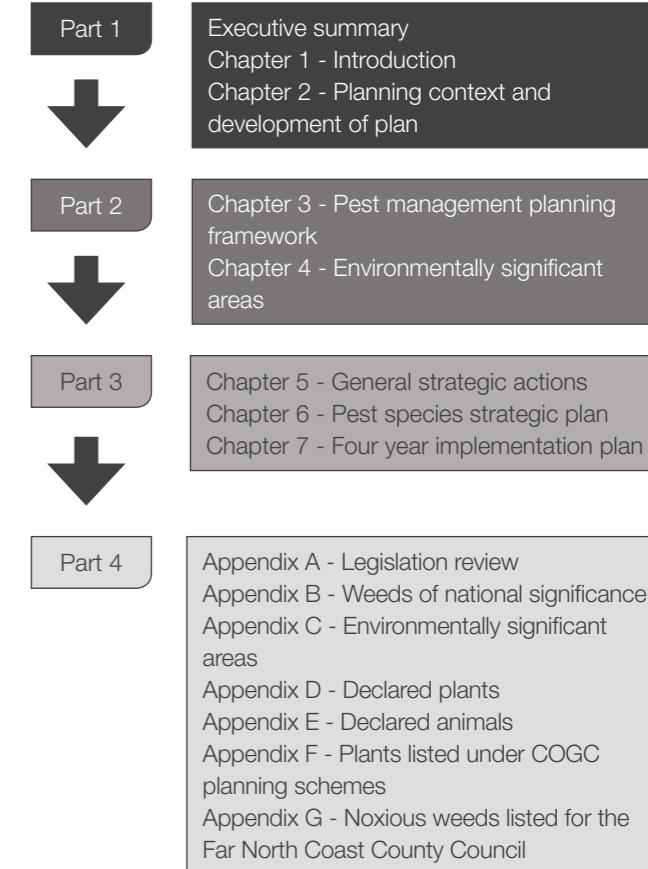


Figure 1: Structure of the City of Gold Coast LGAPMP Planning Context and Development of the LGAPMP

2 Planning Context and Development of the LGAPMP

2.1 Statutory and planning context

The statutory and planning context of the LGAPMP is illustrated in Figure 2 which demonstrates the variety of legislative, political and policy influences on the content and scope of the LGAPMP. The various components are detailed further in Appendix A.

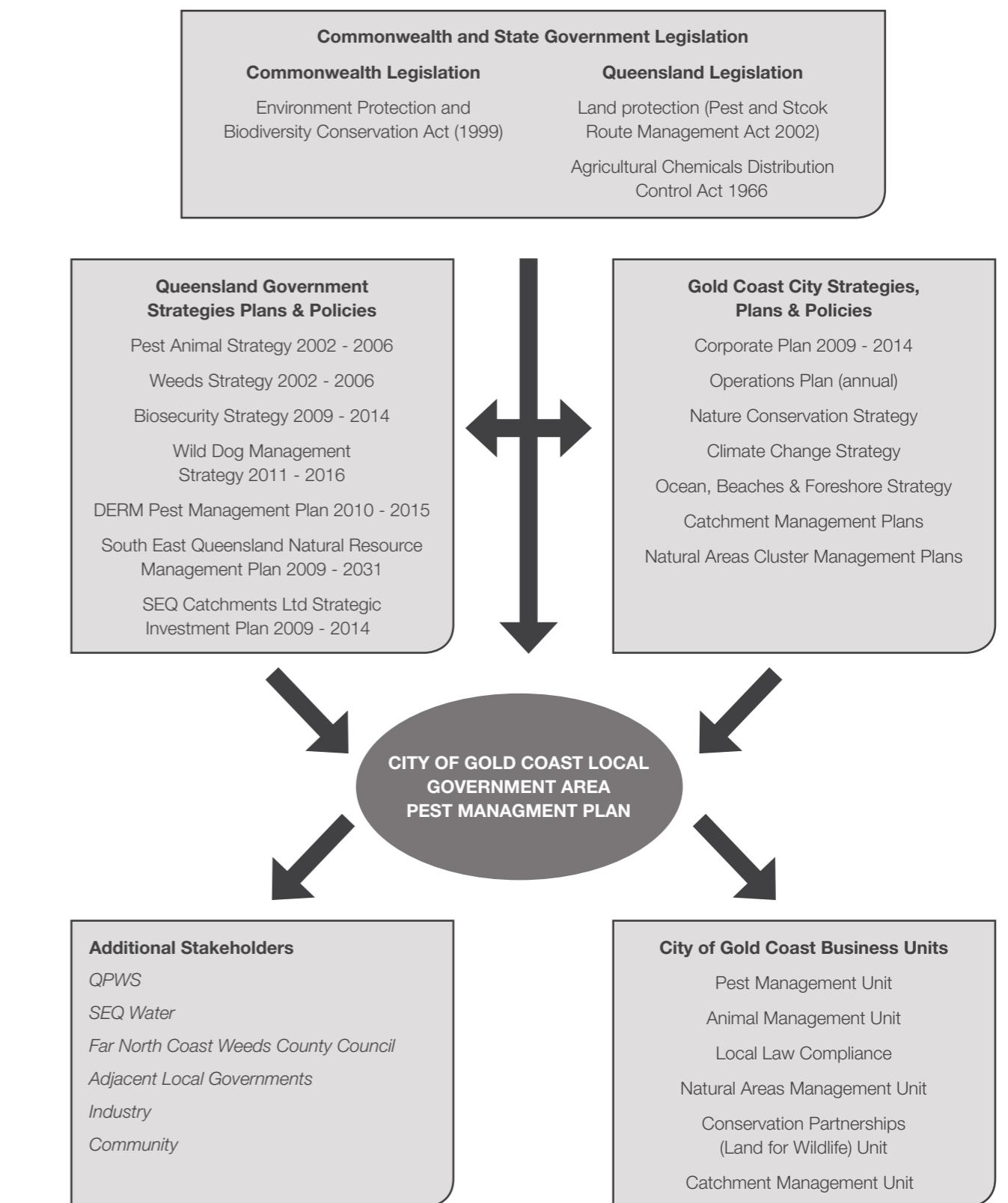


Figure 2: Planning framework for the City of Gold Coast LGAPMP

Table 1 below provides an overview of all relevant legislation and plans. A comprehensive review of the legislation is provided in Appendix A.

NATURAL RESOURCE MANAGEMENT	BIOSECURITY MANAGEMENT	PEST STRATEGIES	PEST SPECIFIC
COMMONWEALTH			
Caring for our Country Outcomes 2008- 2013	AUSVETPLAN	Australian Weeds Strategy	Listed Key Threatening Processes
Biodiversity conservation Strategy 2010-2030	PLANTPLAN	Australian Pest Animal Strategy	Approved Threat Abatement Plans
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	National Environmental Biosecurity Response Agreement	National Weed Incursion Plan	Approved Recovery Plans Weeds of National Significance Strategies National Environmental Alert List Agricultural Sleeper Weeds in Australia 2011 – 2014 National Four tropical weeds eradication program
STATE			
Queensland Coastal Plan 2012 <i>Vegetation Management Act 1999</i>	<i>Land Protection (Pest and Stock Route Management) Act 2002</i>	Queensland's Weeds Strategy 2002-2006	Biosecurity Queensland pest plant and animal policies
<i>Nature Conservation Act 1992 Environmental Protection Act 1994</i>	Queensland Biosecurity Strategy 2009-2014	Queensland Pest Animal Strategy 2002-2006	State guidelines for the management of pest plants and animals
	<i>Plant Protection Act 1999</i>	State Agency Pest Management Plans	Pest animal species strategies ie Wild Dog, Feral Deer
		<i>Pest Management Act 2001</i>	
REGIONAL			
SEQ Regional Plan 2009 - 2031 <i>SEQ Natural Resource Management Plan 2009 - 2031</i>			
Rural Futures Strategy for South East Queensland 2009			
<i>SEQ Healthy Waterways Strategy 2007-2012</i>			
<i>SEQ Catchments Strategic Plan and Investment Plan</i>			
LOCAL			
Our Living City Gold Coast Planning Scheme 2003 v1.2		City of Gold Coast LGAPMP 2013-2017	
<i>Nature Conservation Strategy 2009-19</i>			
PROPERTY			
Property Management Planning Ecological Restoration Plans	Property Biosecurity Plans	Property Pest Management Plans	

Table 1 : Planning context for the development of pest management plans

2.2 Commonwealth strategies

Australia's Biodiversity Conservation Strategy 2010-2030 recognises invasive species as a key threat to the conservation of biodiversity and that these threats need to be managed to maintain species diversity. This strategy sets the priority for actions, which includes reducing threats to biodiversity.

The Australian Weeds Strategy (2007) and Australia's Pest Animal Strategy (2007) provide a framework for the control of pest impacts on environmental assets, agricultural assets, economic and social aspects and provide leadership to combat the impacts of weeds and pest animals in Australia.

Forty species of Weeds of National Significance (WoNS) have been identified, each with a national coordinator, national management group and strategic plan with priority actions for control. The WoNS have been identified because of their invasiveness and their potential impact on socio-economic and environmental values. All WoNS, along with those which are known to occur in the COGC LGA, are listed in Appendix B.

2.3 State and regional strategies

The Queensland Biodiversity Strategy 2011 outlines the State Government's responsibility to conserving biodiversity. The strategy identifies invasive species (plants and animals) as a key threat to the conservation and management of Queensland's biodiversity, and identifies priority actions for how these threats can be reduced.

The Queensland Biosecurity Strategy 2009-2014 aims to protect Queensland from the risks and impacts of pests and diseases through the cooperation of the entire Queensland community. This strategy identifies a number of actions that focus on improving biosecurity systems, identifying goals and strategies for biosecurity, and provides for the capability and capacity to respond to biosecurity issues as they arise.

The Queensland Weeds Strategy 2002-2006 and Queensland Pest Animal Strategy 2002-2006 provide a framework by which weeds and pest animals will be managed across the state. These strategies provide a framework by which government, industry and the broader community can be involved in the management of weeds and pest animals. (Both strategies are under review by the Queensland Government at present).

The South East Queensland (SEQ) Natural Resource Management Plan 2009-2031 identifies targets for the condition and extent of natural resources in the region. Vertebrate and floristic pests are identified in this plan as a threat to both biodiversity and agriculture. However, there are no specific targets around pest management in this plan.

The SEQ Catchments Ltd Strategic Plan and SEQ Catchments Ltd Strategic Invest Plan 2009-2014 aim to take a leading role in the strategic directions of natural resource

management planning in SEQ, by engaging key stakeholders (ie local governments) and the local community in the delivery of natural resource management outcomes. The investment plan takes a targeted approach to investment to achieve the natural resource management targets for SEQ, which includes pest management as a key activity.

The SEQ Regional Coastal Management Plan describes how the coastal zone within the SEQ region is to be managed by protecting and managing important coastal resources. Invasive pests are identified as a threat to coastal ecosystems and the State Coastal Management Plan provides information on policies and priorities for coastal pest management.

2.4 COGC strategies and plans

COGC strategies that identify pest management as a significant issue and make specific reference to the LGAPMP include the:

- Nature Conservation Strategy
- Climate Change Strategy
- Sustainable Flood Management Strategy

The Nature Conservation Strategy (NCS) 2009-2019 states that Council's objective is to conserve biodiversity and natural assets through a strong commitment to protecting, managing and restoring a diverse, connected and viable conservation network across public and private lands within the LGA. Pests are identified in the NCS as a key threat to the conservation of biodiversity.

The NCS highlights that the 2006-2010 LGAPMP required review and that subsequent LGAPMPs should include a strategic direction to conserve the biodiversity of the region and that the LGAPMP include an environmental pest (plants and animals) management plan. However, as identified below, at present there are no local laws adopted by Council that identify environmental pests (plants or animals).

The Climate Change Strategy identifies that there will be increased costs associated with the conservation of the natural environment and management of pest species (vertebrate and flora) after significant climatic events. This LGAPMP aims to improve coordination, outcomes and monitoring of pest control works in the City, which will increase Council's ability to reduce the impact of pests associated with climate change.

The Sustainable Flood Management Strategy acknowledges that flooding can have adverse impacts on the environment, which may lead to environmental degradation. Specifically these adverse impacts can include the further spread of pest species, particularly weed species. This will in turn have an impact on the economic ability of Council to effectively control pest species. This strategy acknowledges the potential for flooding to spread pests through the COGC LGA, but its primary concern is with flood management.

The COGC Operational Plan 2012 – 13 outlines Council's commitment to pest species management in three key areas supported by funding and resources; the Nature Conservation Strategy, Animal Management and Environmental Health.

Several other Council planning policies are relevant to pest management within the LGA and a brief discussion of these is included in Appendix A. New or updated strategic documents such as the Planning Scheme will need to acknowledge the economic, environmental and social risk that pest plants and animals pose to the COGC LGA.

2.5 Development of Council's LGAPMP

2.5.1 Plan development

Under the *Land Protection Act*, local councils' are required to develop a LGAPMP. The previous LGAPMP (2006-2010) was reviewed as part of the development of this new plan. However, the directive was to change the plan drastically from its current content and format. Specific aspects of the planning process are dictated by the Act, including the establishment of a stakeholder working group, the provision of a public submission period and certain aspects of the plan approval process. The *Resource Kit for Developing Local Government Area Pest Management Plans* was also considered in this planning process.

2.5.2 Consultation

A wide range of business groups within the Council were consulted to provide advice in the development of this plan. Following this a wide cross section of state government agencies, local industries, community groups and the broader community were consulted to advise and shape the plan. Workshops were conducted to identify stakeholder roles and responsibilities, priority actions and strategies to combat pest plants and animals. Organisations that were involved in the development of the plan include:

- City of Gold Coast;
- Biosecurity Queensland;
- Queensland Parks and Wildlife Service;
- Redlands City Council;
- Logan City Council;
- Gold Coast Airport;
- SEQWater;
- Tweed Shire Council;
- Far North Coast Weeds;
- Agforce;
- Growcom;
- Pet Industry Association of Australia;
- Springbrook Natural History Group; and
- Individual Community members.

Following the development of the draft plan, a notice was placed in the Gold Coast local paper on Wednesday 8 May 2013 advising the Gold Coast community that the draft plan was available for viewing and inviting the community to make

submissions on the draft plan. The draft plan was available for viewing for the four week period as required by the *Land Protection Act*. Copies of the draft plan were made available at Council's customer service centres, Council libraries and on Council's website. All submissions for the plan were considered and incorporated into the plan where appropriate.

2.5.3 The approval process

The approval process for the plan was as follows:

1. Draft plan released for public exhibition and comment as required (8 May – 8 June 2013)
2. Draft plan amended and council endorsement of the final draft
3. The Draft plan was provided to the Minister for Agriculture, Fisheries and Forestry for endorsement in accordance with s.29 of the *Land Protection Act* on XXXX (date)
4. Following from the response from the Minister, further amendments were identified and incorporated.
5. Minister-Approved Plan presented to Council for adoption by resolution on XXXX (date)
6. Approved and adopted plan implemented by stakeholders and available for public inspection (free of charge) to all members of the public (s.35).

2.5.4 Implementation and review of the LGAPMP

The LGAPMP remains in place for a four (4) year period and during that time the plan must be implemented by all stakeholders to the fullest extent practicable. The LGAPMP has been developed to demonstrate the annual actions to be implemented during its 4 year lifespan.

Minor reviews of the LGAPMP's implementation and effectiveness are to occur annually, and where required, minor amendments can be made without the need for re-exhibition and adoption of the amended document. Any changes in pest distribution and population dynamics are able to be incorporated through these reviews and it is imperative that the LGAPMP and its suite of actions are adaptable to these changing conditions.

The four year implementation plan component of this LGAPMP is intended to be reviewed and updated annually in accordance with the requirement of the *Land Protection Act* and any amendments will require ministerial approval.

Council intends to complete the annual review of the four year implementation plan a minimum of six months before the end of each financial year so programs requiring new or additional funding can be included in the operational budget process in January each year. The implementation plan will be evaluated through an analysis of the plan's success measures. This review will involve COGC's External Pest Working Group.

2.5.5 Delivery of the plan

Details for the implementation of this LGAPMP are provided in section 7. A wide variety of stakeholders are involved in its implementation and these are shown in section 5. A key action of the LGAPMP is the establishment of a Community Pest Management Group (CPMG) to oversee the implementation of the Plan, including the implementation of actions, monitoring and evaluation of management actions and its review. The CPMG is to include representatives from all of the stakeholders identified in the LGAPMP. A primary action of the CPMG will be to establish a charter and terms of reference for the operation of this group.

2.5.6 Stakeholder roles and responsibilities

Stakeholders involved in pest management (see section 5) are extremely varied and include, Commonwealth, State and Local Governments agencies, community groups (including individuals), industry, private land owners and research agencies (ie CSIRO). As defined under the *Land Protection Act*, all stakeholders have certain obligations in the management of pests, including:

- All individuals must comply with the Act to not introduce or spread declared pest species, including the spread of soil and propagules by vehicles;
- All landowners, including Commonwealth, State, Local government, industries, private landowners etc, must take reasonable steps to keep land under their care and control free of Class 1 and 2 declared pest species and Class 3 where their land is in or adjacent to an Environmentally Significant Area.;
- For industry, (ie agricultural, horticultural, nursery, landscaping, pet industries) there are laws preventing the commercial use and supply of declared pest plants and animals,
- City of Gold Coast has additional responsibilities including enforcement of the control of pests and the preparation and implementation of the LGAPMP; and
- The Department of Agriculture, Fisheries and Forestry (DAFF) and particularly Biosecurity Queensland is responsible for providing leadership and guidance in regards to pest management as well as the development of state pest management strategies and guidelines, providing technical management information and undertaking research into pest management in accordance with the obligations set out in the *Land Protection Act*.

Under both the Water Management Act 2001 and Vegetation Management Act 1999 a permit is required where native vegetation will be damaged or destroyed through pest management works. It is the responsibility of all stakeholders to secure a permit from the Department for Environment and Heritage Protection before pest management works are undertaken.

A detailed explanation of the legislation, policy and approval requirements in regards to pest management in Queensland is provided in Appendix A of this plan.

2.5.7 The action plan

The implementation of this LGAPMP is guided by the General Strategic Actions (Section 5) and the Pest Species Specific Actions (Section 6). These actions then guide the detailed actions in the Four Year Implementation Plan (Section 7).

The Four Year Implementation Plan highlights actions that will be undertaken and identifies the stakeholders that are responsible or will be involved in the delivery of each action. Many of the actions identified are already underway as part of existing duties or projects. However, several actions are currently unfunded and are identified as requiring funding to be enacted.

2.5.8 Funding the implementation of the plan

It is the requirement of all stakeholders to resource the implementation of this LGAPMP where they have been identified as the responsible stakeholder. However, stakeholders may not always be able to access funding to deliver the outcomes of the LGAPMP. External funding sources such as Caring for Country or the Biodiversity Fund may be able to provide funding for pest management programs, where the pest program aligns with strategic actions identified in higher level plans, policies and strategies.

3 Pest Management Planning Framework

3.1 Principles of pest management

The Queensland *Land Protection (Pest and Stock Route Management) Act 2002* requires all Councils in Queensland to develop a Local Government Area Pest Management Plan (LGAPMP) for their local government area (s.25). The purpose of the LGAPMP is to engage Council, State Government agencies, private industries and the community to be involved in the integrated management of pest plants and animals which have been declared by the state or under local laws. The LGAPMP is to be consistent with the principles of effective pest management, State pest management strategies and any relevant guidelines for pest control.

The *Land Protection Act* identifies:

- a framework by which an LGAPMP is to be developed,
- the eight principles of pest management with which the LGAPMP is to be consistent (s.26), and
- that the LGAPMP must be consistent with state government pest management strategies and guidelines and the overall vision for pest management in Queensland (s.26).



The eight principles of pest management as defined by the *Land Protection Act* are summarised below in Table 2.

Table 2: Principles of Pest Management from the Land Protection Act 2002

INTEGRATION: Pest management is an integral part of managing natural resources and agricultural systems

PUBLIC AWARENESS: Public awareness and knowledge must be raised to increase capacity and willingness of individuals to manage pests

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

IMPROVEMENT: Research about pests, and regular monitoring and evaluation of pest control activities, is necessary to improve pest management practices

CONSULTATION & PARTNERSHIP: Consultation and partnership arrangements between local communities, industry groups and all government agencies must be established to achieve a collaborative approach to pest management

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

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

PREVENTION: Preventative management is achieved by a) preventing the spread of pests especially by human activity, and b) early detection and intervention to control pests

3.2 Desired outcomes

The Queensland Weeds Strategy (QWS) 2002-2006 and Queensland Pest Animal Strategy (QPAS) 2002-2006 identify the vision for pest management in Queensland as finding an acceptable level where “pest plants and animals have an acceptable impact on people, production and natural environment”. To achieve this vision these plans identify desired outcomes for pest animal and weed management in Queensland.

The State Government desired outcomes provide the direction for the local government strategic objectives and actions for the General Strategic Actions and Pest Species Specific Actions sections of the LGAPMP as shown in Figure 3.



Figure 3: Link between Desired Outcomes, Strategic Programs and Implementation Plan.

Pest Management is part of Good Environmental Management

It's true that left unchecked, pest species can and will have a significant impact on the environmental, economic, social and recreational values of the Gold Coast area. Adequate management and control of priority pest species will help to reduce these impacts, however it is important to remember that pest management activities must be carried out according to the broader principles of good environmental management.

Chemical application of herbicides, pesticides and fungicides may provide relatively quick and effective results on numerous pest species. However the type of chemical and its application method must be thoroughly considered to ensure no negative or unintended consequences follow from their use. In the past kerosene was used as a chemical ‘carrier agent’ for effectively treating salvinia (*Salvinia molesta*) and water lettuce (*Pistia stratoites*) within waterways, however this technique should not be used given that it contributes chemical pollution to the waterways which remains after the pest plants have been removed.

Similarly, where the banks of waterways are heavily infested with weeds such as morning glory (*Ipomea sp*) and cat's claw creeper (*Dolichandra unguis-cati*) complete removal of the weed is desirable in the long term however treatment and removal works may need to be staged to reduce the risk of subsequent creekbank erosion and sedimentation of waterways.

Killing too many aquatic weeds at once can also cause problems. As the plant material starts to decay it can add significant quantities of nutrients to the waterbody. This may promote excessive and undesirable growth of other aquatic plants and algae, reduce available oxygen and give rise to odour issues.

Table 3 identifies the Desired Outcomes for pest control within the COGC LGA, which are aligned with the Desired Outcomes identified in QWS and QPAS.

DESIRED OUTCOME	ISSUES	OBJECTIVE	
		AWARENESS AND EDUCATION (PRINCIPLE: PUBLIC AWARENESS)	
1. Informed and active City committed to pest management (QPAS DO 1 & 6; QWS DO 1)	Public Awareness	1.1	Education leads to greater ownership, awareness and involvement
	Education & Training	1.2	Education material and training programs are practical, current and accessible to target audiences
	Community Engagement & Involvement	1.3	Stakeholders are motivated to seek advice and information and are involved in pest management
COMMITMENT AND PARTNERSHIPS (PRINCIPLES: COMMITMENT, CONSULTATION AND PARTNERSHIPS)			
2. Stakeholders are committed to and undertake coordinated management of weeds and pest animals (QPAS DO 3 & 6; QWS DO 4)	Identify Roles & Responsibilities	2.1	Roles and responsibilities are defined, understood and adopted by all stakeholders
	Community Engagement	2.2	Advice and support is available to land managers
	Commitment	2.3	Community groups and land managers are encouraged and supported to develop and implement pest management planning
	Partnerships	2.4	Stakeholders committed to integrated management
		2.5	Develop partnerships with relevant agencies and research industries
		2.6	Boundaries do not influence the management of pests
STRATEGIC DIRECTIONS (PRINCIPLE: PLANNING)			
3. Planning and management of pest species is coordinated with regional, local, State and Commonwealth plans (QPAS DO 5 & 6; QWS DO 3 & 5)	Coordination & Integration	3.1	Planning and management is coordinated and integrated across relevant agencies and stakeholders
		3.2	Planning and implementation incorporates a multi-tenure approach
	Consistency & Resourcing	3.3	Planning identifies priorities, constraints and required resources
EFFECTIVE INTEGRATED MANAGEMENT SYSTEMS (PRINCIPLE: BEST PRACTICE, INTEGRATION)			
4. Methodologies and practices improve natural resource management outcomes (QPAS DO 5; QWS DO 5)	Effective Use of Management Practices	4.1	Current best practice techniques and practices are adopted by all stakeholders
	Adaptation	4.2	Apply adaptive management practices
PREVENTION, ERADICATION, AND CONTAINMENT (PRINCIPLE: PREVENTION)			
5. Introduction, spread and establishment of pests is prevented in the City (QPAS DO 4; QWS DO 4)	Early Detection & Eradication	5.1	Education and awareness activities contribute to the prevention and establishment of new pest species in the City
	Prevention & Introduction	5.2	Prevent the introduction, establishment and spread of new pests to the City
MONITORING AND ASSESSMENT (PRINCIPLES: IMPROVEMENT AND BEST PRACTICE)			
6. Pest management is innovative, adaptive, drives research and contributes to improved and effective pest management throughout the City (QPAS DO 2 & 5; QWS DO 2 & 5)	Monitoring	6.1	Relevant and reliable data is collected, maintained and available
	Evaluation	6.2	Data is collected about education, training and management programs and informs decision making and the design of monitoring & evaluation programs
	Research	6.3	Research furthers the understanding of the biology, ecology, impacts and control of pests

Table 3: Desired Outcomes for the LGAPMP

4 Environmentally Significant Areas

The identification of Environmentally Significant Areas (ESAs) under the *Land Protection Act* provides for the prioritised protection of areas of high biodiversity value against pest plants and animals. The significance of ESAs are that the *Land Protection Act* requires landholders (including Council) to prevent class three pests on their land from causing or having the potential to cause an adverse economic, environmental or social impact on an ESA adjacent to the owners land or impact on the owners land that is, or is in or adjacent to, an ESA.

The ESAs present in COGC LGA are mapped in Figure 4, Figure 5 and Figure 6 based on the categories of ESAs listed in Section 78(7) of the *Land Protection Act*:

Group 1 – a Protected Area;

Group 2 – land dedicated as a reserve for environmental purposes under the Queensland *Land Act* (1994), section 31;

Group 3 – a world heritage area listed under the World Heritage Convention;

Group 4 – an area supporting a critically endangered or endangered ecological community in the list established under the Commonwealth *Environment Protection and Biodiversity Conservation* (EPBC) Act (1999), section 181;

Group 5 - a declared Ramsar wetland listed under the Commonwealth EPBC Act (1999);

Group 6 - an area of high nature conservation value under the Queensland *Vegetation Management Act* (1999);

Group 7 - an area, other than State-controlled land, identified in a local government's pest management plan as an area that has species environmental significance for native wildlife;

Group 8 – a wild river area.

Within the COGC LGA, there are ESAs based on these criteria, these sites are identified in Appendix B and mapped in Figure 4, Figure 5 and Figure 6. The areas mapped as Group 4 (endangered and critically endangered ecological communities listed under the Commonwealth EPBC Act) are based on Council's broad-scale vegetation mapping and ground truthing of this data is required.

Section 78(7) Part (g) of the *Land Protection Act* allows for a local council to designate additional ESAs. However, at this time there are no locally designated ESAs in the COGC LGA. Any subsequent reviews of this plan may identify additional areas that are to be identified as ESAs. Land that is owned by individuals in the community (ie Land for Wildlife) or community groups for biodiversity conservation may be considered as land identified as an ESA. Any new ESAs will be identified based on their biodiversity values, ecological condition, willingness and ability of the landowner to manage the land, community support for pest management, potential for pests to cause a significant threat to the biodiversity values of the land and availability of resources to control pests.



Kudzu (*Pueraria montana* var. *lobata*) can grow up to 20cm a day, images were taken 3 months apart

Figure 4: City of Gold Coast northern portion ESAs

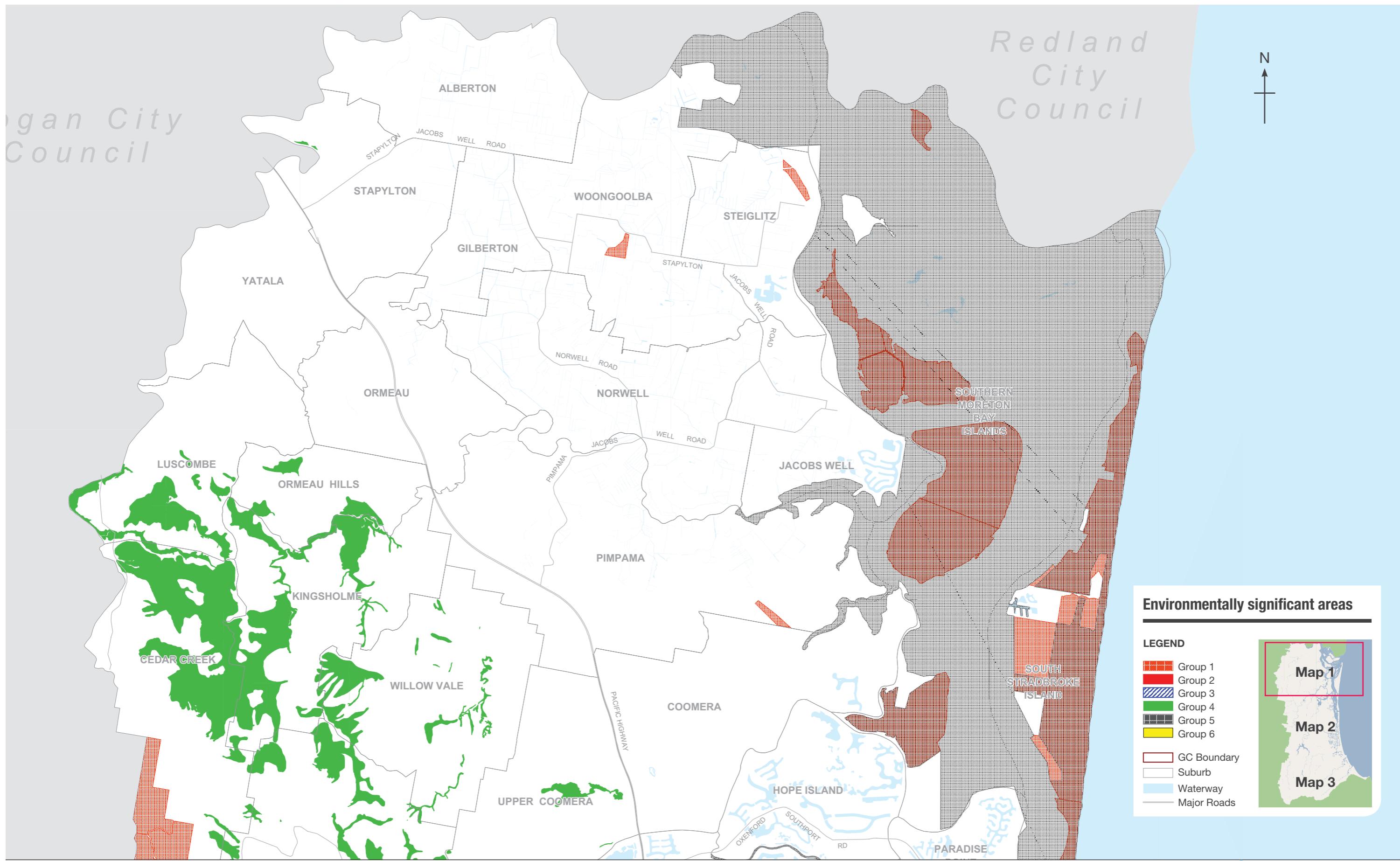


Figure 5: City of Gold Coast central portion ESAs

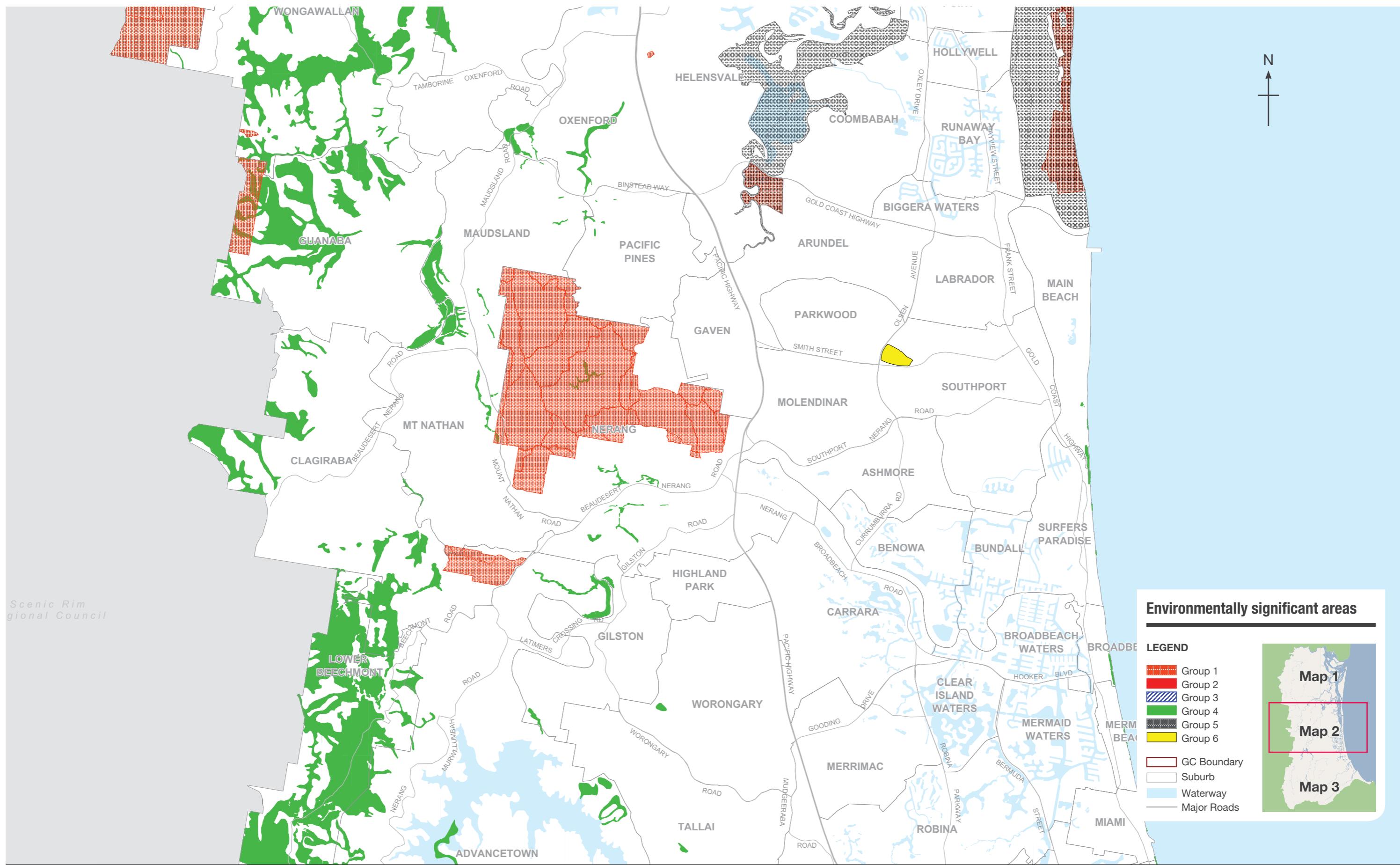
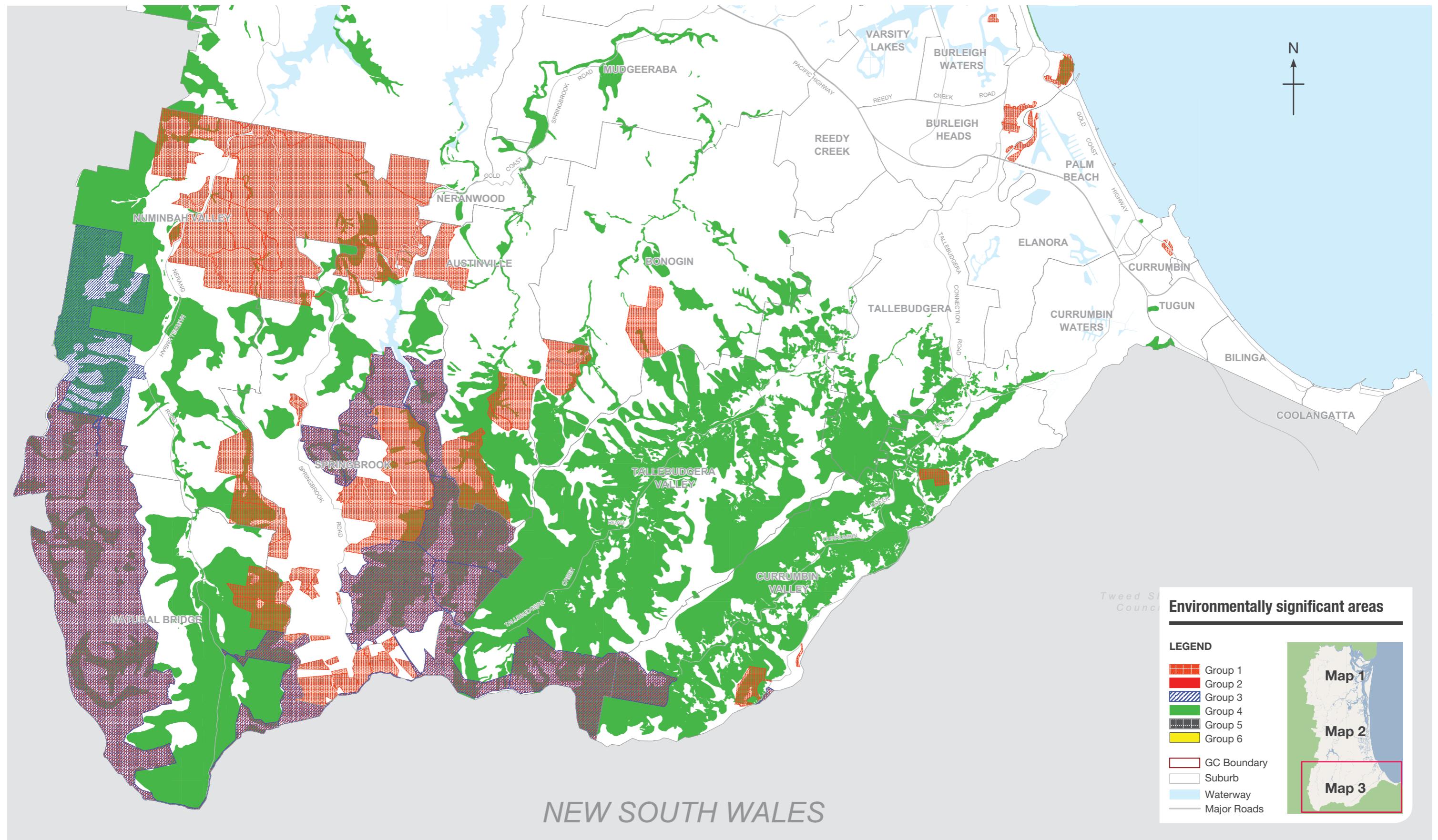


Figure 6: City of Gold Coast southern portion ESAs



5 General Strategic Actions

This section of the LGAPMP identifies the strategic actions that will contribute to achieving the desired outcomes (Table 4). These strategic actions will contribute to the management of pests generally across the City, not the specific management of pest species. One or more success measures have been identified for each strategic action and these will be used to evaluate the effectiveness of the LGAPMP's implementation. Alongside each success measure, the key stakeholder(s) that are responsible for the delivery of the strategic action have been identified. A brief description of the key stakeholders is also provided below.

These strategic actions will be implemented over the four-year life of the plan through the implementation plan (section 7) and are aligned with both the desired outcomes identified by Council and those identified in the state government weed and pest animal strategies.

Biosecurity Queensland (BQ) is the lead agency involved in the control and management of all Class 1 species found in Queensland and are responsible for the Declaration Status of all pests.

Community Groups (CG) already existing and new groups may be established to assist with the management of pests. Where appropriate these community groups will be involved in pest management on private land, council managed land and the National Parks estate. These community groups will be supported by Council and / or QPWS staff and some already exist such as the Cane Toad Busters and Indian Myna Action Group.

Industry (Ind) includes the nursery / horticultural industry (including market stall holders), agricultural industries, Forestry Plantations and other land managers which are involved in the management of, or effect the agricultural and natural environments. These industries are responsible for the management of pests in their possession and / or on their land and are expected to comply with the legislative requirements in the management of pests.

Queensland Government Agencies (QGA) refers to multiple agencies within the Queensland Government ie Department of Transport and Main Roads, Queensland Rail etc, who are major landowners involved in the management of infrastructure. These agencies are also responsible for the management of declared pests on the land for which they are responsible (eg easements, depots).

Queensland Parks and Wildlife Service (QPWS) is a major land owner in the City and is responsible for the management of pests on their land. QPWS is responsible for many aspects of pest management, including the control of pests on their estate, engagement of community groups in pest control and biodiversity management programs, involvement and coordination of vertebrate pest control programs on their land.

City of Gold Coast (COGC) is responsible for many aspects of the LGAPMP, including its development and review and large components of its implementation. This includes management of pests on council owned land, enforcement of pest control on private land, monitoring, reporting and evaluation on the LGAPMP's contents and the annual and 4-yearly reviews of the LGAPMP. Council is not responsible for the management of pests on land which is not under their care and control; this is the responsibility of that landowner / manager.

Research Industries (RI) are responsible for the development of new pest management techniques. Research industries are not expected to be directly involved in pest management in the COGC LGA, but where possible these linkages and relationships will be formed to ensure that management practices employed reflect current best practice.

Private Landowners (PL) are responsible for the management of declared pests on their private landholdings. While agencies such as Council are able to provide advice in regards to pest management, the responsibility and expense of pest control remains with the landowner.

New South Wales Government Associations (NSWGA) refers to agencies in NSW that are responsible for the management of pests ie Tweed Shire Council, Far, North Coast Weeds, Livestock and Health Pest Authorities.

Local Governments (LG) refers to other Queensland Local Governments adjoin the COGC LGA ie Redlands City Council, Logan City Council and Scenic Rim Regional Council

Community Pest Management Group (CPMG) are community groups that focus on the management of pests in a specific region of, or on the management of a particular pest species, in the COGC.

Non-Government Organisations (NGO) that are involved in pest management throughout the City i.e SEQ Catchments, Healthy Waterways and others



Feral Cat (*Felis catus*)
pose a threat to native wildlife

Wild Dog (*Canis familiaris*)
with GPS tracking collar attached

Senegal Tea (*Gymnocoronis spilanthoides*)
a class one pest

Fire Ants (*Solenopsis invicta*)
- brown with dark abdomens and vary in size

Table 4: General Strategic Actions

DESIRED OUTCOME	GENERAL STRATEGIC ACTIONS	SUCCESS MEASURE	RESPONSIBILITY
PUBLIC AWARENESS			
1.1, 1.2, & 1.3	GSA 1 Develop and promote information to raise awareness of stakeholders to mitigate negative pest impacts within COGC.	Market research completed to identify best vehicle(s) for engaging target audience and creating meaningful awareness and behaviour change Alert the community to any new incursions of Class 1 pest species or other pest species that are highly likely to be declared Class 1 Deliver displays at all community events identified in implementation plan including detailed and up to date maps of pest distributions across the LGA / SEQ region	All Stakeholders Council All Stakeholders
		Workshops and training events delivered to stakeholders regarding pest identification and current best practice management	All Stakeholders, Co-ordinated by Council
		Community groups and private landowners are trained in current best practice pest management techniques	Council, SEQ Catchments
		All professional staff have national accreditation for pest management	QGA
COMMITMENT AND PARTNERSHIPS			
2.1 & 2.2	GSA 2(a) Identify knowledge, skills, roles and responsibilities for pest management and planning and ensure they are accepted by all stakeholders	Stakeholder surveys undertaken to establish a baseline of stakeholder knowledge and skills in relation to pest management Target audience identified and engaged Stakeholder roles and responsibilities are understood	Council Council QGA
		Actions for all stakeholders, including review programs, are identified and agreed to through consultation	QGA
		Key stakeholders are engaged, committed and have ownership of pest management programs	QGA
		Appropriate allocation of resources for annual work programs is provided by all stakeholders	QGA
		Adequate resources are allocated to compliance through extension programs and enforcement	Council, BQ
		Awareness raising is undertaken with landowners / managers	QGA, Ind
		Operational procedures are developed, followed and refined in regards to the enforcement of declared pests	Council, BQ
		Information from compliance programs is shared within Council	BQ, LG, NSWGA
		All existing and potential funding programs identified	Council, BQ
		External funding applications submitted	Council, BQ
		All ESA within the City are listed, identified and mapped	Council, QGA, QPWS, LG
		Appropriate management of pests is undertaken in ESA using current best practices	Council, QPWS, QGA,
		Compliance encouraged and enforced when necessary to improve overall pest management outcomes and awareness of landowner's responsibilities	Council, BQ

DESIRED OUTCOME	GENERAL STRATEGIC ACTIONS	SUCCESS MEASURE	RESPONSIBILITY
STRATEGIC DIRECTIONS			
3.1,3.2 & 3.3	Community Pest Management Group established and maintained	Council	
	Support provided to Community Pest Management Group	Council	
	Work with nursery and aquarium industry to remove pest species from sale	Council	
	Stakeholders are able to access tools / equipment to undertake pest management	All Stakeholders	
	Incentive programs developed to assist stakeholders with the management of pests	QGA	
	All stakeholders are committed to achieving desired outcomes of LGAPMP and improvement of pest management outcomes across the COGC LGA	All Stakeholders	
	Relationships with research agencies are established	Council	
	Working relationships with neighbouring councils are maintained and consistent management programs are developed and implemented	Council, NSWGA, LG	
	Existing regional pest management programs are maintained	BQ	
	Regional pest management programs, including detection and management of pests, are identified, developed and delivered	BQ	
	Management programs are implemented and coordinated with all stakeholders, including neighbouring councils and cross border agencies	All Stakeholders	
	Pests and their populations are contained or reduced across the landscape	All Stakeholders	
	Partnerships with research agencies established and maintained	RI, All Stakeholders	
	Research areas identified and contribute to pest management	BQ, RI, Ind	
EFFECTIVE INTEGRATED MANAGEMENT SYSTEMS			
4.1 & 4.2	Current best practice management techniques are developed	All Stakeholders	
	Integrated pest management techniques are adopted with acknowledged current best practice which considers potential off-target damage and health and safety concerns	All Stakeholders	
	Coordinated programs reduce the ecological, social and environmental impacts of established pest animals	COGC, BQ	
	Stakeholders are able to access and utilise resources for environmental and natural resource management in order to manage pests using current best practice management techniques	Council, QGA	
	Prioritisation process developed which considers the biodiversity values of sites, in conjunction with the threat to posed by pest species	QGA, Council, LG, NSWGA	
	Prioritisation process identifies high value biodiversity assets to be managed for pest control	QGA, Council, LG, NSWGA	
	Pest management planning is incorporated into and across consistent policies, strategies and the planning process	QGA, Council, LG, NSWGA	
	Pest management is undertaken in the delivery of operational programs	Council, QPWS, QGA	
	Small satellite populations are eradicated	All Stakeholders	
	Pest species are contained to core infestations or localised locations	All Stakeholders	
	Control pests inside barrier fences (ie rabbits)	All Stakeholders	
	High value assets are protected from of pest species	All Stakeholders	

DESIRED OUTCOME	GENERAL STRATEGIC ACTIONS	SUCCESS MEASURE	RESPONSIBILITY
PREVENTION, ERADICATION, CONTAINMENT, ASSET PROTECTION AND ENVIRONMENTAL PEST MANAGEMENT			
5.1 & 5.2	GSA 5. Establish early detection mechanisms and response strategies to prevent the introduction of new pest species	Prohibit the cultivation, distribution, sale and supply of all declared pest species	All Stakeholders
		Cross-border relationships alert all stakeholders about potential pest threats	All Stakeholders
		Response strategies to outbreaks of new Class 1 species are developed	BQ, RI
		Hygiene protocols are developed and circulated to all stakeholders to prevent the introduction and spread of pest species	BQ, Council, RI
		Risk areas and entry pathways for new Class 1 pest species are surveyed and monitored	BQ
MONITORING AND ASSESSMENT			
6.1 & 6.2	GSA 6. Develop a standard data collection methodology and database for the monitoring and evaluation of pest species distribution, abundance and management, which influences the adaptive management of pests	Use adaptive management framework to improve management of pests	All Stakeholders
		A methodology for the collection of data is established	Council, BQ
		A database to store information about pests and pest management activities is established	Council, BQ
		Monitoring and evaluation methodologies are developed, including baselines	All Stakeholders
		Selected pest management activities are monitored and evaluated and influence future management programs	QPWS, Council, QGA, NSWGA, LG



6 Pest Species Strategic Program

The management of declared pest species requires strategic management at the state level, where control efforts need to be coordinated and enforced. Declared pests are categorised into classes according to the level of risk each species poses to the economic, environmental and social values of an area. Class 1 declared species are the highest priority for control and are to be eradicated from or prevented from becoming established in Queensland. Class 2 and 3 declared species are currently widely established as pests in Queensland, with the aim of management being to reduce their spread and impact, however the control of Class 3 declared species can only be enforced within or adjacent to ESA. It is illegal to sell Class 1, 2 or 3 pest plant species.

Declared Pest Plant and Declared Pest Animal species are listed in Appendix C and D respectively.

The *Land Protection Act* enables Council to use Local Laws (under the Queensland *Local Government Act 2009*) to nominate additional species creating localised problems and requiring these pests to be controlled at a local level. However, pests nominated in Local Laws are not declared under the *Land Protection Act* and the control of non-declared local problem species is at the discretion of the landowner, except when directed to control plants and animals that are identified as undesirable under the planning scheme, or are a risk to public safety or considered a nuisance under Council's local laws.

Table 5: Management categories recognised under the LGAPMP

CATEGORY	DEFINITION / AIM	SECTION
PREVENTION	Prevent the establishment of new pest species in the City	6.2.1
ERADICATION	Newly established pest species in the City with a restricted distribution and low abundance that have the potential to be eradicated	6.2.2
REDUCTION	Pest species are prevented from spreading further throughout the City in distribution and abundance	6.2.3
MITIGATION	Key environmental / agricultural / built assets are identified and pest species are actively managed within and adjacent to these areas, including ESA, but are not actively controlled outside of these areas	6.2.5
ENVIRONMENTAL PEST MANAGEMENT	Pest species are managed for their impact on the natural environment throughout the City	6.2.6

After completing a three year research project into community attitudes around pest animals, the Invasive Animals Co-operative Research Centre report released in May 2012 showed that wild dogs are the number one concern to the community at present and that cane toads, feral cats, rabbits, European carp, feral pigs, foxes, common (Indian) myna, rats and mice round out the top ten animals of concern. There tended to be a lower awareness of the impact of invasive species among younger Australians and over 70% of survey respondents were willing to participate in community efforts to pest animals. The survey showed strong support for humane control methods, especially fertility control, biological control agents and genetic control. Even poisons which act in humane ways were considered by the majority surveyed to be acceptable treatment method.

In terms of priorities for research money, research into invasive animals was ranked equal third with native biodiversity research. Only research into water and soil degradation rated more highly. Respondents believed that the greatest benefit to flow from invasive animals research is to the natural environment, followed closely by benefits to farmers and the broader Australian economy.

6.1 Outline

The pest species strategic program categorises pest species into one of five (5) management categories described in Table 5. These categories have been developed to provide direction and prioritisation for the management of pest species within the COGC LGA. Various factors have been considered in determining which management category a species is allocated into include the declaration class, the level of threat posed, its current distribution and the likelihood of achieving effective control of the species.

A thorough and objective analysis of the above features for each pest species requires extensive species abundance and distribution spatial data for the entire COGC LGA, which at present is not available. Therefore this initial categorisation of species into the five management categories will require revision as new data comes to hand and annual reviews of the LGAPMP are undertaken. As this information is not currently available for pest species within the COGC LGA, the prioritisation of pest species has been based on the collective knowledge and experience of stakeholders who were involved in the development of the LGAPMP.

The pest species strategic program has a four year time frame and incorporates the management of pest species that are declared under the *Land Protection Act*, as well as the management of other pest species identified under other Acts of legislation and non-declared species (Table 6). The legislative requirement to control declared pest species means that management of these species will take precedence over the control of other pest species present in the COGC LGA that do not pose a risk to human health. As new species are added to the list, the LGAPMP will be updated (annually) to reflect the current situation.

Table 6: Legislation that other pest species are or can be identified under

ABBREVIATION	LEGISLATION	SPECIES ADMINISTERED
FA	Fisheries Act 1994	Noxious Fish
PPA	Plant Protection Act 1989	Species found in soil (ie tramp ants)
NCA	<i>Nature Conservation Act</i> 1992	Prohibited Wildlife (ie birds)
DBC	Local Government Act 2009	Pest plants and animals Declared By Council
PS	Sustainable Planning Act 2009	Species prohibited under COGC Planning Scheme
ND	-	Not Declared under any legislation but commonly acknowledged as pests

Pest species are also given a priority for control or management so as to identify where funding is required to be allocated and these priorities are shown in Table 7.

Table 7: Definitions for management priority

MANAGEMENT PRIORITY	DEFINITION
Critical	Management must be undertaken
High	Management is a High priority for control
Medium	Management is a Medium priority for control
Low	Management is a Low priority for control

6.2 Management Categories

6.2.1 Prevention

The objective for this management category is the prevention and early detection of the establishment of new pest species in the COGC LGA. Species that fit into this category are all species that have not previously been recorded within the COGC LGA (Table 8). If / when any of these species are detected, they will be instantly re-allocated to the "Eradication" category where an appropriate rapid response will be undertaken to control and eradicate the pest species.

Species included in this category can be described as having no known populations in the COGC LGA, a declaration status of Class 1, 2 or 3, a high likelihood of success of preventing establishment (or eradication if / when detected) and are a high priority for control. The priority actions to prevent the establishment and early detection of these species include:

- **P1** - Educational material developed to educate community, industry and government agencies about the, identification and threat of these pest species;
- **P2** - Workshops are run to educate all relevant field staff and other stakeholders in the identification of pest species which are to be prevented from entering the COGC LGA;
- **P3** - The sale of declared pests is prevented;
- **P4** - Hygiene protocols developed to prevent the introduction of new pest species;
- **P5** - Regularly survey sites of previous controlled populations and invasion pathways (ie roads, rivers, creeks, nurseries, markets) and validate all sightings;
- **P6** - Assess knowledge gaps of species to be prevented from entering the COGC LGA and assess potential consequences if these species are found;
- **P7** - Identification of pest species which are found in close proximity to the COGC LGA boundary; and
- **P8** - If species detected, reassign to Eradicate category.

Fire Ants (*Solenopsis invicta*) are not listed as a declared species under the *Land Protection Act* and Biosecurity Queensland is leading

the coordination of the control programs. All stakeholders will cooperate with the management of Fire Ants. In December 2012 the COGC LGA was declared to be free from Fire Ants after the success of previous eradication works.

Additional species that have been identified in NSW as significant pest species, but have not been recorded in Queensland, or declared in Queensland are shown in Table 8.

Table 8: Species to be prevented from becoming established in the City

SCIENTIFIC NAME	COMMON NAME	STATUS	PRIORITY
PLANTS			
<i>Acacia nilotica</i>	Prickly Acacia	C2	Medium
<i>Acaciella</i> spp. <i>Mariosousa</i> spp. <i>Senegalia</i> spp. and <i>Acacia</i> spp. (syn. <i>Vachellia</i> spp.)	Acacias non-indigenous to Australia other than <i>Senegalia albizzoides</i> , <i>Acacia nilotica</i> and <i>Acacia farnesiana</i>	C1	High
<i>Andropogon gayanus</i>	Gamba Grass	C2	Medium
<i>Annona glabra</i>	Pond Apple	C2	Medium
<i>Asparagus asparagoides</i>	Bridal Creeper	C1	High
<i>Bassia scoparia</i> syn. <i>Kochia scoparia</i>	Kochia	C1	High
<i>Cabomba</i> spp. (other than <i>C. caroliniana</i>)	Fanwort	C1	High
<i>Chromolaena</i> spp.	Siam Weed	C1	High
<i>Chrysanthemoides monilifera</i> ssp. <i>monilifera</i>	Boneseed	WoNS	High
<i>Clidemia hirta</i>	Koster's Curse	C1	High
<i>Cylindropuntia fulgida</i>	Coral Cactus	C2	Medium
<i>Cylindropuntia imbricata</i>	Devil's Rope Pear	C2	Medium
<i>Cylindropuntia spinosior</i>	Snake Cactus	C2	Medium
<i>Cylindropuntia</i> spp. and their hybrids, other than <i>C. spinosior</i> , <i>C. fulgida</i> and <i>C. imbricata</i>	Cholla Cactus	C1	High
<i>Eichhornia azurea</i>	Anchored Water Hyacinth	C1	High
<i>Elephantopus mollis</i>	Tobacco weed	C2	Medium
<i>Equisetum</i> spp.	Horsetails	C1	High
<i>Gmelina elliptica</i>	Badhara Bush	C1	High
<i>Harrisia martinii</i> syn. <i>Eriocereus martinii</i> , <i>Harrisia pomanensis</i> syn. <i>Cereus pomanensis</i> , <i>Harrisia tortuosa</i> .	Harrisia Cactus	C2	Medium
<i>Harrisia</i> spp. syn. <i>Eriocereus</i> spp. (other than <i>H. martinii</i> , <i>H. tortuosa</i> and <i>H. pomanensis</i> syn. <i>Cereus pomanensis</i>)	Harrisia Cactus	C1	High
<i>Harungana madagascariensis</i>	Harungana	C3	Medium
<i>Hedychium flavescens</i>	Yellow Ginger	C1	High
<i>Hymenachne amplexicaulis</i>	Hymenachne	C2	High
<i>Jatropha gossypiifolia</i> and hybrids	Bellyache bush	C2	Medium
<i>Lagarosiphon major</i>	Lagarosiphon	C1	High
<i>Limnocharis flava</i>	Yellow Burrhead	C1	High
<i>Ludwigia peruviana</i>	Peruvian Primrose Bush	C1	High
<i>Lycium ferocissimum</i>	African Boxthorn	C2	Medium

SCIENTIFIC NAME	COMMON NAME	STATUS	PRIORITY
<i>Mikania</i> spp.	Mikania Vine	C1	High
<i>Mimosa diplosticha</i> var. <i>diplosticha</i>	Giant Sensitive Plant	C2	Medium
<i>Mimosa pigra</i>	Mimosa Pigra	C1	High
<i>Musa balbisiana</i> *	Seeded Banana		High
<i>Myrica faya</i>	Candleberry Myrrh	C1	High
<i>Myriophyllum spicatum</i>	Eurasian Water Milfoil	C1	High
<i>Nassella neesiana</i>	Chilean Needle Grass	C1	High
<i>Nassella trichotoma</i>	Serrated Tussock	C1	High
<i>Neptunia oleracea</i> and <i>N. plena</i>	Water Mimosa	C1	Critical
<i>Opuntia aurantiaca</i>	Tiger Pear	C2	Medium
<i>Opuntia monacantha</i> syn. <i>Opuntia vulgaris</i>	Drooping Tree Pear	C2	Medium
<i>Opuntia streptacantha</i>	Westwood Pear	C2	Medium
<i>Opuntia tomentosa</i>	Velvety Tree Pear	C2	Medium
<i>Opuntia</i> spp. (other than <i>O. ficus-indica</i> , <i>O. stricta</i> , <i>O. aurantiaca</i> , <i>O. monacantha</i> , <i>O. tomentosa</i> and <i>O. streptacantha</i>)	Prickly Pear	C1	Critical
<i>Parkinsonia aculeata</i>	Parkinsonia	C2	Medium
<i>Parthenium hysterophorus</i>	Parthenium	C2	High
<i>Pennisetum setaceum</i>	African Fountain Grass	C3	Medium
<i>Piper aduncum</i>	Spiked Pepper	C1	High
<i>Pithecellobium dulce</i>	Madras Thorn	C1	High
all <i>Prosopis glandulosa</i> , <i>P. velutina</i> and <i>P. pallida</i>	Mesquites	C2	Medium
<i>Prosopis</i> spp. and hybrids (other than <i>P. glandulosa</i> , <i>P. pallida</i> and <i>P. velutina</i>)	Mesquites	C1	High
<i>Salix humboldtiana</i> syn. <i>Salix chilensis</i>	Pencil Willow	C3	Medium
<i>Salix matsudana</i>	Tortured Willow	C3	Medium
<i>Salix</i> spp. (other than <i>S. babylonica</i> , <i>S. humboldtiana</i> (syn. <i>S. chilensis</i>), <i>S. matsudana</i> , <i>S. × calodendron</i> and <i>S. × reichardtii</i>)	Willow	C1	High
<i>Salvinia</i> spp. (other than <i>S. molesta</i>)	Salvinia	C1	High
<i>Senna hirsuta</i>	Hairy Cassia	C2	Medium
<i>Senna obtusifolia</i>	Sicklepod	C2	Medium
<i>Senna tora</i>	Foetid Cassia	C2	Medium
<i>Sesbania punicea</i>	Red Sesbania	C1	High
<i>Sporobolus jacquemontii</i>	American Rat's Tail grass	C2	Medium
<i>Stratiotes aloides</i>	Water Soldiers	C1	High
<i>Striga</i> spp. (other than native species)	Witch Weeds	C1	High
<i>Thunbergia annua</i>	Annual Thunbergia	C1	High
<i>Thunbergia fragrans</i>	Fragrant Thunbergia	C1	High
<i>Trapa</i> spp.	Floating Water Chestnuts	C1	High

SCIENTIFIC NAME	COMMON NAME	STATUS	PRIORITY
<i>Ulex europaeus</i>	Gorse	C1	High
<i>Ziziphus mauritiana</i>	Chinee Apple	C2	Medium
<i>Ziziphus spina-christi</i>	Christ's Thorn	C1	High
ANIMALS			
<i>Solenopsis invicta</i>	Fire Ants	PP Act	Critical
<i>Anoplolepis gracilipes</i>	Yellow Crazy Ant	C1	Critical
<i>Bufo melanostictus</i>	Asian Spined Toad	C1	Critical
<i>Chortocetus terminifera</i>	Australian Plague Locust	C2	Low
<i>Locusta migratoria</i>	Migratory Locust	C2	Low
<i>Austracris guttulosa</i>	Spur-throated Locust	C2	Low
<i>Wasemannia auropunctata</i>	Electric Ant	PP Act	High
<i>Carpodacus mexicanus</i>	House Finch	NC Act	Low
<i>Emberiza citrinella</i>	Yellowhammer	NC Act	Low
<i>Fringilla coelebs</i>	Chaffinch	NC Act	Low
<i>Passer montanus</i>	Eurasian Tree Sparrow	NC Act	Low
<i>Pycnonotus cafer</i>	Red-vented Bulbul	NC Act	Low
<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul	NC Act	Low
<i>Pyrrhula pyrrhula</i>	Eurasian Bullfinch	NC Act	Low
<i>Quelea quelea</i>	Red-billed Quelea	NC Act	Low
<i>Trichoglossus haemodus</i> * (except <i>Trichoglossus haemodus moluccanus</i>)	Rainbow Lorikeet (except east coast sub species)	NC Act	Low
<i>Turdus merula</i>	Common Blackbird	NC Act	Low
<i>Turdus philomelos</i>	Song Thrush	NC Act	Low

*Species has been recorded in NSW (not in Queensland) and identified as a significant pest species. It is not declared in NSW or QLD, but is being considered for declaration in NSW.

*The Rainbow Lorikeet (*Trichoglossus haemodus moluccanus*) is native to the east coast of Australia. All other sub species (ie Red-necked Lorikeet *Trichoglossus haemodus rubritrochis*) are to be prevented from becoming established in the City.

The creeping menace that is Cat's Claw Creeper (*Dolichandra unguis-cati*)

Using its distinctive 3 pronged tendril (which closely resembles a cat's claw), this fast growing thick vine native to Brazil and Argentina climbs over and smothers existing native vegetation. It can collapse trees through its weight and severely inhibits the regeneration of native species. In 2006 COGC identified this weed as a new but growing problem in the Mudgeeraba catchment. Recognising that if this weed spread downstream and to an even larger area, the environmental consequences and treatment costs would be even greater, COGC developed and implemented a targeted treatment plan. The infestation was severely reduced and follow up restoration works were undertaken in order to reduce the likelihood of the weed taking hold in that catchment again in the future.



6.2.2 Eradication

The objective for this category is the eradication of the identified pest species from the city of Gold Coast. This level of management is not feasible for all pest species in the COGC LGA and has only been nominated for species with a very restricted distribution, very low abundance and multiple effective control techniques. The eradication of pest species requires cooperation between stakeholders, coordinated control actions, integrated control techniques and needs to occur across all land tenure regardless of land ownership. Strategic actions required for the eradication of these species include:

- **P9** - Educational material developed to educate community, industry and government agencies about the, identification and threat of these pest species
- **P10** - Workshops are run to educate all relevant field staff and other stakeholders in the identification of pest species which are to be prevented from entering the COGC LGA
- **P11** - Early response strategies developed for emerging pest species to prevent the further spread of the species
- **P12** - Seasonal monitoring undertaken and informs future management actions, including the reassessment of feasibility of eradication program and use of management techniques

Eradication programs take many years to achieve and require both short and long term targets. It must be acknowledged that eradication programs are difficult, often expensive and may not be achieved in the long term despite the best efforts of all stakeholders. The long-term target to achieve eradication is that the pest species has not been recorded in the COGC LGA for a minimum of 10 years. However, this may vary for some species depending on the longevity of propagules (ie seed viability may exceed 10 years).

All Class 1 pests that are known to occur in the COGC LGA are shown in Table 9. The control programs for all Class 1 species will be coordinated by Biosecurity Queensland and Council will cooperate with all control actions and encourage all other stakeholders to cooperate.

Several other declared species (Class 2) have also been allocated to this category due to their restricted distribution and low abundance in the COGC LGA.

In regards to the control of the European Rabbit (*Oryctolagus cuniculus*), the coordination for this species will be undertaken by the Darling Downs-Moreton Rabbit Board. All stakeholders will cooperate with all control actions for the management of rabbits.

Table 9: Species with the potential to be eradicated from the City

SCIENTIFIC NAME	COMMON NAME	STATUS	DISTRIBUTION AND ABUNDANCE	PRIORITY
PLANTS				
<i>Acacia xanthophloea</i> *	Fever Tree	C1	Isolated	Critical
<i>Alternanthera philoxeroides</i>	Alligator Weed	C1	Isolated	Critical
<i>Cecropia</i> spp.	Mexican Bean Tree	C1	Isolated	High
<i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i>	Bitou Bush	C1	Localised	Critical
<i>Cryptostegia grandiflora</i>	Rubber Vine	C2	Unknown – (Herbarium record)	High
<i>Cylindropuntia rosea</i> *	Hudson Pear	C1	Isolated	High
<i>Gleditsia</i> spp. including cultivars and varieties	Honey Locust	C1	Isolated	Critical
<i>Gymnocoronis spilanthoides</i>	Senegal Tea	C1	Localised	High
<i>Heterotheca grandiflora</i>	Telegraph Weed	C2	Localised	Critical
<i>Hygrophila costata</i>	Hygrophila	C1	Localised	High
<i>Miconia calvescens</i> *	Miconia	C1	Isolated	High
<i>Nassella tenuissima</i>	Mexican Feather Grass	C1	Isolated	Critical
<i>Opuntia microdasys</i> *	Polka Dot Cactus	C1	Isolated	High
<i>Pueraria montana</i> var. <i>lobata</i> , syn. <i>P. lobata</i> , <i>P. triloba</i>	Kudzu	C2	Isolated	Critical

SCIENTIFIC NAME	COMMON NAME	STATUS	DISTRIBUTION AND ABUNDANCE	PRIORITY
<i>Thunbergia laurifolia</i> *	Laurel Clockvine	C1	Isolated	Critical
ANIMALS				
<i>Oryctolagus cuniculus</i>	European Rabbit	C1	Isolated	High
<i>Mustela furo</i> *	Ferret	C1	Absent	Critical
<i>Elaphe guttata</i> *	American Corn Snake	C1	Absent	Critical
<i>Trachemys scripta elegans</i>	Red-eared Slider Turtle	C1	Isolated	Critical

*populations previously known to occur in the COGC LGA and their continued presence needs to be determined

Telegraph weed (*Hetratheca grandiflora*) was first discovered in Queensland at The Spit on the Gold Coast in the early 1990 and is now a Class 2 declared plant. Significant infestations have occurred at South Stradbroke Island, Wavebreak Island, Paradise Point and Labrador. As the distribution of the weed is currently very restricted, it has been the target of a significant control effort by Council and other land managers in the infested areas which has severely reduced both the extent and abundance of the plant.

In the 1990s the total area infested was estimated at no more than a few hectares but by 2004 it had spread to over 300 hectares. Without the significant intervention program undertaken, the spread of this plant northwards (assisted by frequent strong southerly winds along the beaches) would be rapid, threatening the significant coastal areas of Moreton Bay, the Sunshine Coast and Fraser Island.

6.2.3 Reduction

The objective for this category is to reduce the impact of pest species identified and prevent them from spreading further throughout the COGC LGA. This involves controlling outlying populations and actively managing core populations to reduce their ability to spread. It has been identified that it is not feasible to eradicate these species from the COGC LGA. Strategic actions for the management of these species include:

- **P13** - Produce communication and education material to engage stakeholders in containment zones;
- **P14** - Collect baseline information to identify the distribution and abundance of species, develop containment lines, strategic management targets and produce maps identifying this information; and
- **P15** - Undertake bi-annual surveys of containment zones to monitor the effectiveness of management actions and to inform future management programs.

All Class 2 and 3 species (with localised distribution and low abundance) are included in this category and are shown in Table 10. The likelihood of success in containing these species is considered to be high and their priority for control is high.

Table 10: List of pest species to be reduced

SCIENTIFIC NAME	COMMON NAME	STATUS	DISTRIBUTION AND ABUNDANCE	PRIORITY
PLANTS				
<i>Ambrosia artemisiifolia</i>	Annual Ragweed	C2	Widespread	Low
<i>Anredera cordifolia</i>	Madeira Vine	C3	Widespread	Medium
<i>Aristolochia</i> spp. other than native species	Dutchman's Pipe	C3	Localised	Low
<i>Baccharis halimifolia</i>	Groundsel Bush	C2	Widespread	Med
<i>Bryophyllum delagoense</i> syn. <i>Bryophyllum tubiflorum</i> , <i>Kalanchoe delagoensis</i> , <i>Bryophyllum × houghtonii</i> (syn. <i>Bryophyllum daigremontianum</i> × <i>Bryophyllum delagoense</i> , <i>Kalanchoe × houghtonii</i>)	Mother of Millions and hybrids	C2	Localised	Medium
<i>Cabomba caroliniana</i>	Cabomba	C2	Localised	Medium
<i>Dolichandra unguis-cati</i>	Cat's Claw Creeper	C3	Widespread	Medium
<i>Eichhornia crassipes</i>	Water Hyacinth	C2	Widespread	Medium
<i>Opuntia stricta</i> ; syn. <i>O. inermis</i>	Prickly Pear	C2	Localised	Medium

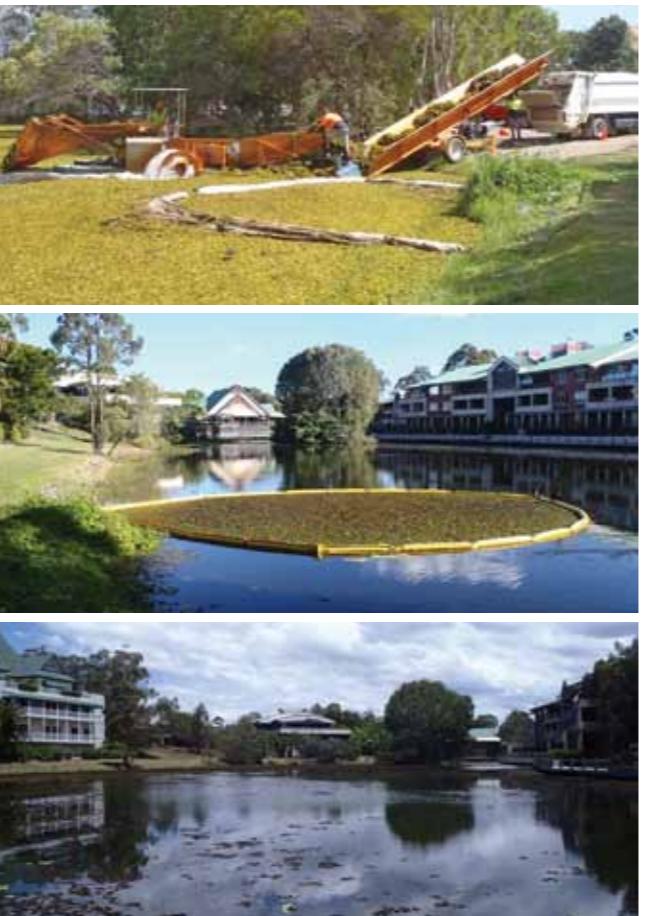
SCIENTIFIC NAME	COMMON NAME	STATUS	DISTRIBUTION AND ABUNDANCE	PRIORITY
PLANTS				
<i>Pistia stratiotes</i>	Water Lettuce	C2	Localised	Medium
<i>Salvinia molesta</i>	Salvinia	C2	Widespread	Medium
<i>Senecio madagascariensis</i>	Fireweed	C2	Widespread	Medium
<i>Sporobolus pyramidalis</i> and <i>S. natalensis</i>	Giant Rat's Tail Grass	C2	Localised	Medium
<i>Tamarix aphylla</i>	Athel Pine	C3	Unknown (herbarium record)	Low
<i>Thunbergia grandiflora</i>	Blue Thunbergia	C2	Isolated	Medium
ANIMALS				
<i>Sus scrofa</i>	Feral Pig	C2	Localised	High
<i>Canis familiaris dingo</i>	Dingo	C2	Unknown	High
<i>Canis familiaris</i>	Wild Dog	C2	Widespread	High
<i>Dama dama</i>	Feral Fallow Deer	C3	Localised	Medium
<i>Cervus elaphus</i>	Feral Red Deer	C3	Localised	Medium
<i>Cervus timorensis</i>	Feral Rusa deer	C2	Reduction	Medium
<i>Vulpes vulpes</i>	European Red Fox	C2	Widespread	Medium
<i>Axis axis</i>	Feral Chital Deer	C2	Localised	Medium
<i>Capra hircus</i>	Feral Goat	C2	Isolated	Low

Water bugs to the rescue

Salvinia (*Salvinia molesta*), a Class 2 declared plant, is a free floating water weed native to South America. It has spread over considerable areas of Queensland and is a WoNS. *Salvinia* forms dense thick mats on the water surface, reducing water circulation and the ability of light and oxygen to penetrate the water column. It can out-compete native plants reducing the amount of habitat available for native fauna and as it decomposes it causes foul odours and further reduces oxygen levels in the water. Extensive growth can also prevent recreational activities, block irrigation equipment and cause significant damage to infrastructure used in delivering drinking water supplies. Under ideal growth conditions infestations can double in size in just 3 days.

Salvinia can be spread between waterbodies through aquatic equipment such as dredges, boats, fishing equipment or through animals carrying small fragments on their legs, feet or wings to a new site. It can also be spread to new downstream areas through flood events.

The *Salvinia* Weevil (*Cyrtobagous salviniae*) is a successful biological control agent for *salvinia* in Australia. The weevils will not eradicate infestations but can help reduce them to much lower levels, and when supported by other management methods such as physical removal, very good results can be achieved overtime. Weevils need sufficient time and favourable conditions to build up a population large enough to significantly impact on *salvinia* infestations.



6.2.4 Mitigation

The objective for the category of Mitigation is to protect key environmental, infrastructure and agricultural assets from the impacts of pest species. The aim is to prevent the impact of pests on these assets. Strategic actions for the management of pest species in these areas include:

- **P16** - Undertake communication and education programs about the assets to be protected and from which species with all relevant stakeholders
- **P17** - Identification of Assets to be Protected and from which pest species;
- **P18** - Develop and implement a PMP for the area to be protected; and
- **P19** - Establish baselines and undertake yearly monitoring to determine the effectiveness of management programs and inform future management.

Several Class 2 pest species and many Class 3 pest species are included in this management category and are shown in Table 11. These pest species can be identified as having a localised impact within the COGC LGA and a declaration status of Class 2 or 3.

Vital infrastructure includes built assets (ie bridges, roads etc) or an asset which is managed for a specific purpose (ie water treatment facilities, fire breaks). Singapore Daisy is a declared pest which is widespread across the COGC LGA and forms dense thickets. In some circumstances these dense thickets can prevent the movement of fauna and its management is required in areas which have been identified as vital for the movement of wildlife.

Agricultural assets are identified as areas which are free of a particular weed species or a particular weed species is low in abundance, but the pest (Class 2 or 3) is not a high priority for management issue elsewhere in the COGC LGA. For example, Parramatta Grass (*Sporobolus africanus*) is wide spread at present however in most areas this is not a significant pest species as it poses little or no threat to the natural environment and urban lifestyle and is managed accordingly. However, in agricultural areas such as the Tallebudgera Valley this species is a threat to agriculture, particularly cattle production. The aim of management is to protect areas such as the Tallebudgera Valley, or other key assets, from the impact of Parramatta Grass on cattle production and this species is a high priority for control in these areas.

Table 11: Pest species identified for Mitigation

SCIENTIFIC NAME	COMMON NAME	STATUS	DISTRIBUTION AND ABUNDANCE	PRIORITY
PLANTS				
<i>Asparagus aethiopicus 'Sprengerii'</i> , <i>A. africanus</i> and <i>A. plumosus</i>	Asparagus Fern	C3	Widespread	Low
<i>Cardiospermum grandiflorum</i>	Balloon Vine	C3	Widespread	Low
<i>Cascabela thevetia</i> syn. <i>Thevetia peruviana</i>	Captain Cook Tree	C3	Widespread	Low
<i>Celtis sinensis</i>	Chinese Celtis	C3	Widespread	Low
<i>Cinnamomum camphora</i>	Camphor Laurel	C3	Widespread	Low
<i>Cryptostegia madagascariensis</i>	Ornamental Rubber Vine	ND	Unknown	Low
<i>Hedychium coronarium</i>	White Ginger	C3	Widespread	Low
<i>Hedychium gardnerianum</i>	Kahili Ginger	C3	Widespread	Low
<i>Lantana camara</i>	Lantana	WoNS/C3	Widespread	Low
<i>Lantana montevidensis</i>	Creeping Lantana	WoNS/C3	Widespread	Low
<i>Ligustrum lucidum</i>	Broad-leaf Privet	C3	Widespread	Low
<i>Ligustrum sinense</i>	Small-leaf Privet	C3	Widespread	Low
<i>Rubus anglocandicans</i> , and <i>R. fruticosus</i> agg.	Blackberry	C3	Unknown (herbarium record)	Low
<i>Schinus terebinthifolius</i>	Broad-leaved Pepper Tree	C3	Widespread	Low
<i>Spathodea campanulata</i>	African tulip tree	C3	Widespread	Low

SCIENTIFIC NAME	COMMON NAME	STATUS	DISTRIBUTION AND ABUNDANCE	PRIORITY
PLANTS				
<i>Sphagneticola trilobata</i> ; syn. <i>Wedelia trilobata</i>	Singapore Daisy	C3	Widespread	Low
<i>Sporobolus africanus</i>	Parramatta Grass	C2	Widespread	Low
<i>Sporobolus fertilis</i>	Giant Parramatta Grass	C2	Widespread	Low
<i>Tecoma stans</i>	Yellow Bells	C3	Widespread	Low
ANIMALS				
<i>Cyprinus caprio</i>	European Carp	FA	Widespread	Low
<i>Felis catus</i>	Feral Cat	C2	Widespread	Medium
<i>Gambusia</i> spp.	Gambusia	FA	Widespread	Low
<i>Lupus capensis</i>	European Hare	ND	Widespread	Low
<i>Oreochromis mossambicus</i>	Mozambique tilapia	FA	Widespread	Low
<i>Rhinella marina</i>	Cane Toad	ND	Widespread	Low
<i>Tilapia mariae</i>	Spotted Tilapia	FA	Unknown	Low



A report produced in 2009 by the Invasive Animals Cooperative Research Centre provided a stark warning that if not properly cared for and constrained, domestic cats can add to the already substantial impact on wildlife that feral cats are having. Feral cats have been implicated in the extinction of up to seven species of Australian native mammals. There are over 35 vulnerable and endangered bird species, 36 mammal species, seven reptiles and three amphibians adversely affected by feral cats. The risk that cats pose is significant enough for predation of feral cats to be listed as a Key Threatening Process under the Commonwealth Environment Protection and Biodiversity Conservation Act (1999). The impact of cats is not restricted just to predation. Cats also compete with native species for food, water and shelter resources and are the only definitive host for the parasite that causes toxoplasmosis – a devastating condition that severely affects several species of native animals as well as humans. Estimates of feral cat numbers present in Australia vary greatly and may be as high as 15 million.



6.2.5 Environmental Pest Management

The overall objective for this category is to increase the community awareness of environmental pests within the COGC LGA, which are species that are not declared but are having negative impacts on the natural environment, particularly biodiversity. A strategic management objective is provided for each species.

Within the COGC LGA there are many species of introduced plants and animals that have a detrimental impact on the natural environment. These species are often escaped garden plants, escaped pets (ie fish) or agricultural pests that are able to impact on natural ecosystems or cause problems in recreational areas. These species are not declared pests under any legislation, but are recognised as having a significant effect on the biodiversity of Australia and specifically the Gold Coast region.

The priority for control of these pests in the context of this LGAPMP ranges from High-Low, and are managed as part of other strategic programs that are run by Council (ie Land for Wildlife, Natural Areas Management Unit) where their ongoing management receives a high priority. These pests will be managed within ESAs or areas identified for mitigation and asset protection. Some of the environmental pest species are shown in Table 12 with a more extensive list provided in Appendix B.

Strategic actions for the management of pest species in this category include:

- **P20** - Develop and distribute education material that identifies environmental pests, where they come from, the threat they pose and appropriate management; and
- **P21** - Engage the community in biodiversity conservation programs through the management of environmental pests.

Table 12: Significant environmental pests in the COGC LGA

SCIENTIFIC NAME	COMMON NAME	STATUS	MANAGEMENT OBJECTIVE	DISTRIBUTION AND ABUNDANCE	PRIORITY
PLANTS					
<i>Ochna serrulata</i>	Ochna	PS	Reduction	Widespread	Medium
<i>Myriophyllum aquaticum</i>	Parrots Feather	ND	Mitigation	Widespread	Low
<i>Erythrina crista-galli</i>	Cockscomb Coral Tree	PS	Reduction	Localised	Low
<i>Gloriosa superba</i>	Glory Lily	ND	Reduction	Localised	High
<i>Heteranthera reniformis</i>	Kidney-leaf Mud-plantain		Localised	Reduction	High
<i>Solanum viarum</i>	Tropical Soda Apple	ND	Early Detection	Not Present	Low
<i>Sagittaria platyphylla</i>	Sagittaria	WoNS/ND	Reduction	Unknown	Low
ANIMALS					
<i>Acridotheres tristis</i>	Common Myna	ND	Mitigation	Widespread	Medium
<i>Anser anser</i>	Feral Geese	ND	Mitigation	Isolated	Low
<i>Pavo cristatus</i>	Feral Peacocks	ND	Mitigation	Isolated	Low

In addition, many plants have been identified under the Council Planning Scheme as being prohibited, restricted or restricted for use within the COGC LGA. These species along with the definition of these terms is provided in Appendix E. This list of plants includes some species that are declared species under the *Land Protection Act*.

6.3 Potential Problem Native Wildlife

Within the COGC LGA there are several native species of wildlife that some people see as problem species. These species have been able to either:

- exploit the urban landscape that has been created and have increased significantly in abundance and distribution;
- cause problems at the interface with natural environment and anthropogenic landscapes; or
- have threatening behaviour towards people at some times of the year, particularly when they are breeding.

These species become problem animals when large populations or individuals come into contact with the human population. All native species of wildlife are protected under the Queensland Nature Conservation Act (1992) and significant penalties can apply for breaches of the Act. However, in some circumstances management intervention may be required. Intervention cannot be undertaken without approval from the Department for Environment and Heritage Protection (DEHP), which is the lead agency for the management of native wildlife in Queensland.

Where problem native species are managed to reduce their populations and impacts, it can be more effective to change human behaviour and to make 'urban habitats' less suitable for wildlife species.

In extreme circumstances it may be required to actually control some populations of these problem species. If this is the case, the responsibility for managing the problem is that of the landowner and they must obtain a damage mitigation permit in accordance with the *Nature Conservation Act* with direction from the DEHP.

Within the COGC LGA there are several species of native animals that may become problem species. The specific problems associated with these species and actions which can be undertaken to address these problems are described for some of these species below.

6.3.1 Noisy Miner

The Noisy Miner (*Manorina melanocephala*) has been able to increase significantly in abundance and distribution through the large scale landscape changes that have occurred in the natural and urban environment. Removal of a complex mid level canopy and shrub layer from remnant stands of native vegetation has allowed this species to increase significantly. While this species does not cause significant problems to humans, it has been found to be responsible for the displacement of many other species of native birds.

The Noisy Miner is often confused with the introduced Common Myna (*Acridotheres tristis*) by members of the community however its identification from the Common Myna is relatively simple. The Noisy Miner is light grey in colour, approximately 25 cm in size with a black ear and head and

a yellow skin patch behind the eye. The Common Myna is approximately 25 cm in size, is a dark brown, almost black upper body, with a white lower body, a large yellow skin patch behind the eye and a large white patch on each wing when it flies.



Figure 7: Australian Native Noisy Miner (*Manorina melanocephala*)

Source: COGC website



Figure 8: Introduced Common Myna (*Acridotheres tristis*)

Source: COGC website

6.3.2 Australian Magpie

The Australian Magpie (*Gymnorhina tibicen*) is a distinctive black and white bird 35-45 cm in size. The Australian Magpie breeds between July and November, but peak breeding activity occurs in September and October. During the breeding season, the Australian Magpie can aggressively defend its nest by swooping any threatening animal, including humans, that come in the vicinity of the nest. This behaviour can continue for 6-8 weeks while the chicks are in the nest. Pedestrians and cyclists should be aware of this behaviour to minimise the chance of being swooped by a bird. Avoiding nesting areas is a key action that can be undertaken, but this is not always feasible. Other actions that can be undertaken include wearing a hat or carrying an umbrella to protect yourself or looping cable ties through your bike helmet to prevent the bird from coming into contact with your helmet.

6.3.3 Australian Brush Turkey

The Australian Brush Turkey (*Alectura lathami*) is a natural resident of rainforests and wet forests. It now also inhabits many parts of the COGC LGA and can be found in urban parks and residential yards. The Australian Brush Turkey builds a large mound in which to incubate its eggs. To build its nest it uses plant debris found on the forest floor. This process is somewhat destructive and may seem messy to humans, but is an essential part of their breeding behaviour. If this species is impacting on your yard there are several actions you can undertake. Tree guards can be placed around plants to protect them and a heavier mulch or gravel can be used to minimise their impacts from digging.

6.3.4 Australian White Ibis

The Australian White Ibis (*Threskiornis molucca*) has exploited the human environment by scavenging in public bins and open landfills for food resources. Urban development areas with large open water bodies (such as detention basins) can form 'artificial' wetland habitat, similar to the natural breeding habitat of the Ibis such as the Macquarie Marshes. This has allowed their numbers to increase significantly beyond what a natural

environmental system could sustain in an area. These large birds can form dense flocks and cause problems in or around airports, increasing the risk of an aircraft bird strike. At communal roosting high numbers of birds congregate and generate a large amount of strong smelling excrement, associated health risks, high volumes of noise and aggressive behaviour towards humans can be the source of many complaints.

6.3.5 Flying Foxes (Pteropus spp.)

There are several species of flying foxes (or fruit bats) that occur within the COGC LGA. The most common species is the Grey-headed Flying Fox (*Pteropus poliocephalus*), which is listed as Vulnerable under the Commonwealth EPBC Act due to their maternity camps being vulnerable to disturbance and the effect that this disturbance could have on population numbers. Any actions that will impact on this species or its habitat will require approval from the Commonwealth Department of Sustainability, Environment, Water and Communities.

Flying foxes roost in colonies and the smell and mess from their faeces around these camps can be extremely disturbing. Flying Foxes have also been known to cause damage to fruit trees. The relocation of roosting camps can be difficult if not impossible and is not considered a practical solution to managing the issue of Flying Foxes. Council has resolved to develop a whole of city Flying Fox Management Plan in response to community concerns about the number of flying fox roosts on the Gold Coast. The aim of the plan is to appropriately manage the health and amenity issues associated with identified flying fox roosts in the City.

6.3.6 Corvids

Two species of corvids occur in the region, these being the more common Torresian Crow (*Corvus orru*) and less common Australian Raven (*Corvus coronoides*). These species feed on a wide variety of food resources, including carrion (dead animals). These species have adapted to the urbanised landscape within Australia and will feed on rubbish left around by people. The most effective way to manage the interaction of Crows/Ravens with humans is to dispose of rubbish appropriately and ensure that all bins are securely closed and do not allow the birds to gain access. However, if these species are causing continued problems, a Damage Mitigation Permit from the DEHP will be required.

6.3.7 Snakes

Several species of snake can survive in urban and semi-urban areas through the COGC LGA and may be reside, or travel through, residential yards and public parks. All snakes are protected under the Queensland Nature Conservation Act (1992) and cannot be harmed. Whilst not all snakes will strike, and not all snakes are venomous, the safest course of action when a snake is encountered in your property is to avoid the snake and contact a licensed snake catcher. If the snake is located on land owned by Council, the snake sighting should be reported to Council who will relocate the snake if it poses a risk to human safety.

The future of pest management

As the lead agency in managing pest animals and plants, Biosecurity Queensland (BQ) is continuing research into new methods and improving existing methods of pest control. The following snapshots of pest management research provide hope for improved control capabilities in the near future.

Madeira Vine: The South American Madeira Vine Beetle (*Anreda cordifolia*) has been trialled at Kenmore, Upper Brookfield, Sherwood and the Numinbah Valley with early indications showing severe damage to leaves on the madeira vine and that the beetle is laying egg batches. Recently nominated as a WoNS, madeira vine smothers and destroys vegetation particularly along waterways, spreading rapidly into new areas and producing thousands of small potato-like tubers along its stems which fall to the ground and start a new plant. The beetle has been tested against 37 species closely related to madeira vine and did not harm any non-target plants. BQ aims to release the beetle in batches of up to 500 individuals throughout the areas infested and monitor its effectiveness.

Aquatic Weeds: BQ has trialled a range of different herbicides on water lettuce, water hyacinth and salvinia in recent times with mixed results. Water lettuce was readily controlled and water hyacinth responded well to one of the herbicides applied, however salvinia showed mixed results. The timing of herbicide application also strongly influenced the results as the weeds reacted at different rates according to season, with all herbicides having better results at warmer times of the year when the weeds are actively growing.

Feral Pigs: New techniques for feral pig control are currently under consideration by BQ based on recent success of those methods in Europe. Fertility control through vaccines, mechanical bait feeders and the use of thermal imagery for detecting feral pig locations are planned to be trialled over the coming years in a number of semi-urban areas.

Wild dogs and Foxes: The Invasive Animals Co-operative Research Centre (CRC) will trial a 'next generation' bait that includes an antidote if any working dogs or domestic pets are affected. Also under investigation are mechanical injectors and lethal trap devices. The CRC are reviewing the success of a regional approach to wild dog control based on a co-operative partnership between farmers and public land managers utilising various control techniques.

FeralScan: FeralScan is a landholder, community, industry, government and business collaboration incorporating 'Citizen Science'. FeralScan uses data collected to better target pest control activities. FeralScan supports anyone with an invasive animal problem to access essential information and other resources, help with control measures, record information about pest species sightings etc. There are numerous components to FeralScan including RabbitScan, FoxScan, MynaScan and CamelScan. FeralFishScan is part of the future program expansion.



Feral Red Deer (*Cervus elaphus*)
a class three pest

7 Four Year Implementation Plan

The four year implementation plan is a requirement of the *Land Protection Act* (S. 31) and illustrates how the LGAPMP will be implemented during its lifespan by all stakeholders. As identified in the LGAPMP (Section 3) the Desired Outcomes of this LGAPMP reflect those of the *Queensland Pest Animal Strategy 2002-2006* and *Queensland Weeds Strategy 2002-2006*. The General Strategic Program (Section 5) and Pest Species Strategic Program (Section 6) are proposed to be implemented through the General Strategic Actions and Pest Specific Actions identified in Table 4 and Table 13, respectively.

The implementation plan illustrates actions that will be implemented within a four year timeframe, the stakeholders responsible for delivering each action, the time frame for each action and success criteria against which actions will be measured.

As required under the *Land Protection Act* (S. 33) the implementation plan is to be reviewed annually. Council intends to review the plan 6 months before the end of the financial year, so programs that require funding in the following financial year can be developed and submitted to Council in line with annual funding cycles.

Table 13: Pest Species specific actions

ACTION NUMBER	ACTIONS TO BE IMPLEMENTED	SUCCESS CRITERIA	STAKEHOLDERS	TIMEFRAME	RESOURCING	STATUS
MANAGEMENT CATEGORY: PREVENTION						
P1	Educational material developed to educate community, industry and government agencies about the identification and threat of these pest species	Education pamphlets developed and distributed for key species that have the potential to invade the City	BQ, COGC, NRM	Ongoing		
P2	Workshops are run to educate all relevant field staff and other stakeholders in the identification of pest species which are to be prevented from entering the City	Delivery of workshops	BQ, COGC	Ongoing		
P3	The sale of declared pests is prevented	Surveys undertaken at nurseries, market stalls and pet shops	COGC	Immediately and Ongoing		
P4	Hygiene protocols developed to prevent the introduction of new pest species	Hygiene protocols adopted by all stakeholders	QGA, COGC, BQ	Immediately		
P5	Regularly survey sites of previous controlled populations and invasion pathways (ie roads, rivers, creeks, nurseries, markets) and confirm all sightings	Baselines established for the prevention of new pests Number of surveys undertaken and infestations detected	BQ, COGC	Quarterly		
P6	Assess knowledge gaps of species to be prevented from the City and assess potential consequences if these species are found in the City	Knowledge gaps and consequences of pest identified	COGC, BQ	Immediately and Ongoing		
P7	Identification of pest species which are found in close proximity to the City boundary	Invasion front identified	COGC, LG	Immediately		
P8	For any species listed as Prevention which are detected in the LGA, reassign to Eradicate category	Number of species allocated from prevention to Eradicate category	COGC	Immediately and Ongoing		

Action Number	Actions to be Implemented	Success Criteria	Stakeholders	Timeframe	Resourcing	Status
MANAGEMENT CATEGORY: ERADICATION						
P9	Educational material developed to educate community, industry and government agencies about the, identification and threat of these pest species	Education pamphlets developed and distributed for species that can be eradicated from the City	BQ, COGC	Ongoing		
P10	Workshops are run to educate all relevant field staff and other stakeholders in the identification of pest species which are to be prevented from entering the City	Delivery of workshops	BQ, COGC	Ongoing		
P11	Early response strategies developed for emerging pest species to prevent the further spread of the species	Early response strategy developed	COGC	Immediately and Ongoing		
P12	Seasonal monitoring undertaken and informs future management actions, including the reassessment of feasibility of eradication program and use of management techniques	Monitoring and evaluation undertaken	COGC	Biannually		
MANAGEMENT CATEGORY: REDUCE IMPACT						
P13	Produce communication and education material to engage stakeholders in containment zones	Stakeholders are educated and engaged	BQ, COGC	Ongoing		
P14	Collect baseline information to identify the distribution and abundance of species, develop containment lines, strategic management targets and produce maps identifying this information	Maps produced showing strategic targets and containment lines	COGC	Ongoing		
P15	Undertake bi-annual surveys of containment zones to monitor the effectiveness of management actions and to inform future management programs	Pest extent and abundance is reduced	COGC	Biannually		
MANAGEMENT CATEGORY: MITIGATION						
P16	Undertake communication and education programs about the assets to be protected and from which species with all relevant stakeholders	Stakeholders engaged	COGC	Ongoing		
P17	Identification of all assets to be protected and from which pest species	Assets to be protected are identified and mapped	COGC	Ongoing		

Action Number	Actions to be Implemented	Success Criteria	Stakeholders	Timeframe	Resourcing	Status
P18	Develop and implement a PMP for the asset/area to be protected	PMP developed and implemented	COGC	Ongoing		
P19	Establish baselines and undertake yearly monitoring to determine the effectiveness of management programs and inform future management	Monitoring and evaluation undertaken	COGC	Immediately and Annually		
MANAGEMENT CATEGORY: ENVIRONMENTAL PESTS						
P20	Develop and distribute education material that identifies environmental pests, where they come from, the threat they pose and appropriate management	Education material developed and distributed	COGC	Ongoing		
P21	Engage the community in the management of environmental pests through biodiversity conservation programs and activities	Community engaged in pest management	COGC, QPWS	Ongoing		





European Fox (*Vulpes Vulpes*)
A class two pest

Appendix A: Commonwealth, State and Local Law Review

Commonwealth Legislation and Policies

Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation (EPBC)* Act 1999 is concerned with the conservation of Australia's biodiversity. The development of the LGAPMP and associated control and management of pest species needs to comply with the EPBC Act, particularly on matters of National Environmental Significance (NES), ie Ramsar listed wetlands, threatened species and ecological communities and key threatening processes.

A number of Key Threatening Processes (KTP) have been identified under the EPBC Act that involve invasive pest species and relate to the LGAPMP. Several of these KTPs have Threat Abatement Plans (TAPs) which are designed to guide and coordinate Australia's response to the KTP. However, there is no obligation for the land manager to follow TAP. The KTPs which are relevant to the management of pests in the COGC LGAPMP are identified in Table 14, along with the associated TAP.

Table 14: List of Key Threatening Processes and those with Threat Abatement Plans that relate to the LGAPMP

KEY THREATENING PROCESSES	THREAT ABATEMENT PLAN
Competition and land degradation by rabbits	✓
Competition and land degradation by unmanaged goats	✓
Invasion of northern Australia by Gamba Grass and other introduced grasses	
Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants	
Predation by feral cats	✓
Predation by European red fox	✓
Predation, Habitat Degradation, Competition and Disease Transmission by Feral Pigs	
The biological effects, including lethal toxic ingestion, caused by Cane Toads (<i>Bufo marinus</i>)	
The reduction in the biodiversity of Australian native fauna and flora due to the red imported fire ant, <i>Solenopsis invicta</i> (fire ant)	
Predation, habitat degradation, competition and disease transmission by feral pigs	✓

Queensland Legislation and Policies

Land Protection (Pest and Stock Route Management) Act 2002

The Queensland *Land Protection (Pest and Stock Route Management)* Act 2002 (the *Land Protection Act*) provides a framework by which weeds and pest animals are to be managed. The key purpose of the act is to identify responsibilities for the management of declared pests and prevent their spread through Queensland by human activity. The act provides the principles of pest management, a framework for pest management planning and identifies declared pest species.

Local councils are responsible for the development and implementation of a Local Government Area Pest Management Plan (LGAPMP) for all declared pests in their Local Government Area. The purpose of the LGAPMP is to coordinate the control of declared pests by bringing together all sectors of the community. It is the responsibility of the local council to control declared weeds on public land under their care and control and to enforce the management of declared pests on other community and private lands. The LGAPMP is to be consistent with the principles of pest management, state pest management strategies and any relevant guidelines for pest control.

Pest Management Act 2001

The Queensland *Pest Management Act* 2001 is primarily concerned with protecting the public from the health risks associated with pest control and fumigation activities (including the fumigation of burrows, dens) and the adverse results from ineffective pest control. The *Pest Management Act* 2001 establishes a licensing regime to regulate pest and fumigation activities, to ensure that these actions are carried out in a safe and competent manner and that all treatments are recorded appropriately. Associated with this Act are the *Pest Management Regulations* 2003, which provide exemptions for licensed people in the treatment of fire ants (*Solenopsis invicta* and *S. geminata*) and electric ants (*Wasmannia auropunctata*).

Vegetation Management Act 1999

The Queensland *Vegetation Management Act* 1999 is primarily concerned with the conservation of biodiversity as it relates to native vegetation. The *Vegetation Management Act* 1999 ensures that remnant vegetation is conserved, that clearing does not cause land degradation, prevents the loss of biodiversity and maintains ecological processes. Where a *Pest Management Plan* is approved by the Minister, the clearance of native vegetation is permitted when the clearance of native vegetation is required to control non-native plants or declared pests (Section 20P). In some instances, the management of pest species may require damage to, or the destruction of, native vegetation. In these circumstances a permit under the *Vegetation Management Act* 1999 will be required from the Department for Environment and Heritage Protection (DEHP). If native species

are identified as a pest, the Vegetation Management Act 1999 and Vegetation Management Regulation 2000 apply.

Nature Conservation Act 1992

The purpose of the Queensland *Nature Conservation Act 1992* is the conservation of nature through various mechanisms including the dedication and management of protected areas, education of the community and protection of wildlife. The *Nature Conservation Act 1992* is relevant to the development of LGAPMP where wildlife is identified as a declared pest ie dingos (section 78 (b) of the *Land Protection Act 2002*). Dingoes are protected in all National Parks in Queensland, but are declared pest species outside of the National Parks estate. If native species are identified as a pest, the *Nature Conservation (Wildlife) Regulation 2006* applies.

Water Act 2000 and Water Amendment Act 2001

The Queensland *Water Amendment Act 2001* relates to the development of a LGAPMP where pest control work is required on the bank of a watercourse, lake or spring. The control of pests on or in a water course has the potential to destabilise the bank and/or pollute the water course. A permit may be required to destroy native vegetation if it is for the purpose of undertaking pest control works.

Environmental Protection Act 1994

The aim of the Queensland *Environment Protection Act 1994* is to protect Queensland's environment, while allowing for development in an environmentally sustainable way. The Environmental Protection Act 1994 relates to the development of a LGAPMP through the contamination of the environment through the release of pollutants. This is particularly relevant where the use of herbicides or pesticides is used for the control of pests. These herbicides and pesticides have the potential to have off-target damage and/ or the potential to cause harm to land, air or water quality. In these circumstances, land owners/ managers should identify risk mitigation strategies to prevent damage to the environment.

Transport Infrastructure Act 1994

The Queensland *Transport Infrastructure Act 1994* is primarily concerned with the planning and management of transport infrastructure. Under the *Land Protection (Pest and Stock Route Management) Act 2002*, the Department of Transport and Main Roads is responsible for the management of declared pests on state controlled roads and road corridors, which are defined within the Act.

Heritage Act 1992

The Queensland *Heritage Act 1992* is concerned with the conservation of Queensland's cultural heritage for the benefit of the current community and future generations. In relation to the LGAPMP, where pest species are found in areas of cultural significance, the control of pest species may be restricted if the pest species is directly related to the site of cultural significance.

Soil Conservation Act 1986

The Queensland *Soil Conservation Act 1986* is primarily concerned with the mitigation of soil erosion. In some cases, the control of pest species, particularly weeds, could increase the rate of soil erosion by exposing the soil through plant removal. Where this is the case, pest control is required to be undertaken such that it minimises potential for soil erosion and may require ameliorative or mitigation actions to follow weed removal, such as the use of non-native, non-invasive species to stabilise bare soil areas.

Agricultural and Veterinary Chemicals Act 1994

The Queensland *Agricultural and Veterinary Chemicals Act 1994* is concerned with the use and application of pesticides in Queensland. This relates to the LGAPMP as pesticides are used in the control of animal and plant pests. Where the LGAPMP identifies the use of pesticides as a management technique, they will be required to used in accordance with the *Agricultural and Veterinary Chemicals Act 1994*.

Agricultural Chemicals Distribution Control Act 1966

The Queensland *Agricultural Chemicals Distribution Control Act 1966* is concerned with the licensing of operators to use chemicals (pesticides and herbicides), the recording of applications of chemicals and governs the general use of chemicals. Any commercial (ie farmers, sub-contractors and others) or industry (ie COGC, QPWS, and others) operator is required to hold a license for the use chemicals and comply with their use as outlined within the Act, including the recording of application of these chemicals.

Fisheries Management Act 1994

The Queensland *Fisheries Management Act 1994* is primarily concerned with the management of noxious fish species. In relation to the LGAPMP, the identification of noxious fish is required in aquatic (non-marine) environments.

Local Government Act 2009

The Queensland *Local Government Act 2009* allows a local council to develop and implement local laws. In relation to the LGAPMP, the COGC is able to develop local laws that relate to pest species in the LGA which are both declared and non-declared species.

In the case of existing declared species, the Class of the pest can be elevated, but cannot be decreased (ie a Class 2 weed could be elevated to a Class 1 weed, but not lowered to a Class 3 weed). While for non-declared species, any pest species can be identified as a declared species in any class. However, when identifying pest species for local declaration, Council needs to consider the cost of control to government and the community, the current distribution against the potential distribution, current impacts versus potential impacts (positive and negative) community support for control, available resources and availability of effective control measures for the pest, before identifying additional pest species.

Plant Protection Act 1989

The Queensland *Plant Protection Act 1989* and the *Plant Protection Regulation 2002* relate to the LGAPMP. Under this Act, council has an obligation to manage fire ants (*Solenopsis invicta*) on its estate. It also prohibits the sale of plants with the pests myrtle rust, *Puccinia psidii* or *Uredo rangelli* within the specified area of the LGAPMP.

Health (Drugs and Poisons) Regulation 1996

Under the *Health (Drugs and Poisons) Regulations 1996*, 1080 (sodium mono-fluoroacetate) is a restricted poison and an applicant must undergo a training course supervised by the Department of Agriculture, Fisheries and Forestry to be able to administer this pest animal poison. Queensland Health administers the licensing for fumigation and use of 1080, Cyanide, Strychnine and tranquilisers.

Weapons Act 1990

Where weapons are used in the control of feral animals (ie shooting) the Queensland *Weapons Act 1990* must be followed at all times. Any limitations in the Weapons Act which may prevent the shooting of the pest species must be adhered to.

City of Gold Coast Legislation and Planning Processes

City of Gold Coast Bold Future Vision, Community Plan and Corporate Plan

COGC's Bold Future Vision sets out the pathway for the LGA to achieve a socially, environmentally and economically sustainable future. The Bold Future Vision nominates six key themes to co-ordinate future planning and activity. These six themes are:

- A city leading by example,
- A city loved for its green, gold and blue
- A city connecting people and places
- A city with a thriving economy
- A safe city where everyone belongs
- A city shaped by clever design.

Of most direct relevance to the development of the LGAPMP is the theme of 'a city loved for its gold, green and blue' where the emphasis is on protecting and enhancing the natural environment, open spaces, beaches and waterways.

Under the Local Government Act 2009, all local governments are required to produce and adopt a minimum 10 year Community Plan. This Community Plan should be supported by long term financial and asset management plans to ensure Council's services are delivered in a sustainable way. COGC adopted a suite of existing long term plans, reports and documents as the basis for its first interim Community Plan. These include:

- Bold Future Vision,
- Corporate Plan 2009 – 2014,
- Budget, 10 Year Financial Plans and the Long Term Financial Model.

COGC's Corporate Plan (2009- 2014) adopts the six key focus areas of the Bold Future Vision. In regards to the key focus area of a City Loved for the Green, Gold and Blue, the corporate plan aims to achieve by 2014 a city where:

- parks and open green spaces are connected, safe and accessible for all members of the community,
- biodiversity is protected,
- wildlife corridors are well managed and connected,
- the city's beaches and coastline are protected to sustain their amenity and biodiversity,
- water and waterways across the city are protected and enhanced,
- resources and waste are managed responsibly for the benefit of future generations.

Similarly, in relation to the key focus area of a Safe City where Everyone Belongs, the corporate plan aims to achieve by 2014 a city where:

- our active and healthy community embraces recreation, leisure and social interaction,
- we are a safe and secure community and people live and visit without fear,
- we maintain high quality public health services,
- our community is inclusive, supportive and vibrant,
- adequate social infrastructure meets the diverse needs of the community,

COGC will monitor its performance in this area through the level of community satisfaction with the accessibility, condition and facilities in parks and open spaces.

Strategies Under Development

The Ocean, Beach and Foreshore Strategy is currently under development. This strategy will need to consider the impact of pest species, and particularly the LGAPMP, in the development of this strategy and the identification of actions to be carried out along the beaches and foreshores.

Natural Areas Cluster Plans

The Gold Coast LGA is divided up into 19 environmental 'clusters'; a cluster being an area with similar environmental features and attributes and requiring relatively similar management actions and approaches. In time, Management Plans are being developed for each Cluster area which address flora and fauna protection, rare and threatened species management, protection and enhancement of wildlife and habitat corridors, bushfire management, pest species management, development of sympathetic recreational opportunities and management of undesirable human impacts.

Catchment Management Plans

COGC is endeavouring to develop Catchment Management Plans (CMPs) for each major water catchment within the LGA. These CMPs identify the main threatening processes within the catchment and identify a suite of strategies and actions to be implemented to reduce those threats and the ongoing impacts of human activity with that catchment. The CMPs guide the activities of the many volunteer community groups, Council staff and contractors engaged in catchment restoration works.

Catchment Management Planning is extremely important for the management of aquatic pests. Many pest aquatic weeds respond positively to increased nutrient loads in waterways, which allow them to proliferate downstream where the nutrients accumulate. Similarly, downstream infestations are likely to be a symptom of upstream infestations and management of upstream infestations is crucial to prevent the continual reinfestation of downstream sites.

This approach also applies to pest animal species, such as Tilapia (Tilapia spp., Oreochromis spp. and Sarotherodon spp.) and the Red-eared Slider Turtle (*Trachemys scripta elegans*), which can be found in fresh water environments.

City of Gold Coast Operational Plan 2012-13

The COGC Operational Plan 2011-12 demonstrates the commitment of the COGC to the management of pest species found within the LGA in three key areas, through the Nature Conservation Strategy, Animal Management and Environmental Health.

Within the key focus area (4) of a 'Safe City Where Everyone Belongs', the 2012 – 13 Operational Plan identifies the following major initiatives and key operational activities that relate to pest plant and animal management:

1. Pest Animal Management Services:

- Protection of the city's diversity by managing pest animal impacts by performing compliance activities,
- Engagement with the Gold Coast community and relevant stakeholders,
- Preparation and implementation of pest animal operational plans as required by Council's Pest Management Plan.

2. Pest Management Operations:

Development of the Pest Management Plan which will be the overarching strategic document for pest management services across the COGC area. The plan will provide for improved co-ordination and efficiencies across the various pest management service entities. Provision of high quality services and programs that protect the community from pests of public health and environmental significance.

Local and Subordinate Laws

The COGC local and subordinate laws do appear to be compliant with state legislation and the local government's administrative procedures as they relate to the management of pests in the LGA. These local and subordinate laws, as they relate to the management of pests in the COGC LGA, are primarily concerned with the potential effects that pest management could have on the health and safety of the community as well as the environment.

Several local laws specifically identify the protection of public health and safety and the protection of property, visual amenity and the environment. This is particularly relevant for pest management as some management actions, including the use of herbicides and pesticides have the potential to affect these items. This has been identified in Local Laws 6, 8, 9, 11, 13.1 and 16.

Two local laws that require further clarification in relation to pest management activities are discussed below.

Local Law 6 – Vegetation Management

Under Local Law 6, a management policy is required for vegetation that is protected under a Vegetation Protection Order (VPO), and this management policy may choose to include reference to the eradication of pest species. For protected vegetation on land not subject to a VPO, no management policy currently exists, and while the Local Law states that one can be created, it would need to encompass all protected vegetation not protected under a VPO.

For all vegetation, damage is permitted where reasonably necessary for the carrying out of work authorised or required under an Act.

Local Law 6 defines vegetation as 'a tree or trees, plants (including palms) and all other organisms of vegetable origin (whether living or dead) but does not include declared plants within the meaning of the Rural Lands Protection Act 1985, or plants declared by the local government as undesirable plants in a local law policy'. It should be noted that the Rural Lands Protection Act 1985 has subsequently been superseded by the Land Protection (Pest and Stock Route Management) Act 2002. While this definition allows for the local law to acknowledge undesirable plant species, no such reference to these species currently exists.

The LGAPMP is the most suitable place to identify species that Council's considers a locally non-declared pest species. Any species that Council considers should be a 'locally declared species' should be included within Local Law 6, allowing for these species to be removed from the definition of "vegetation".

Local Law 8 – Public Health, Safety and Amenity

The purpose of this local law is to protect public health and safety through the ability to declare additional species (to

those listed by the *Land Protection Act*) as pests requiring some level of management action. This LL contains power for Council to locally declare plants and animals as pests (S.18(e)). This LL can require the removal of any plant providing it meets the definition of a nuisance plant. (Note: Nuisance is defined under this Local Law as having the meaning given in Section 6, Commission of a Nuisance. For the purposes of Section 5 (Prohibition of a Nuisance) of this local law, a nuisance is deemed to exist if; -

- (a) An object or material on the premises –
 - (i) Has been carried away by the wind and has caused –
 - (a) Harm to human health or safety or personal injury, or
 - (b) Property damage or a loss of amenity, or
 - (ii) Is likely in the authorised persons opinion to –
 - (a) Be carried away by the wind or fall; and
 - (b) Give rise to a risk of –
 - (i) Harm to human health or safety or personal injury, or
 - (ii) Property damage or a loss of amenity; or
- (b) A plant on the premises –
 - (i) Is dangerous other otherwise hazardous, or
 - (ii) Attracts vermin, or
 - (iii) is a fire hazard; or
 - (iv) has caused personal injury or property damage; or
 - (v) is unsightly; or
 - (vi) has a negative impact on the amenity of the surrounding area; or
 - (vii) is likely in the authorised person's opinion to –
 - (a) be dangerous or otherwise hazardous; or
 - (b) attract vermin; or
 - (c) be a fire hazard; or
 - (d) give rise to a risk of harm to human health or safety, personal injury or property damage; or
- (c) An act or omission on the premises –
 - (i) has caused the breeding or harbouring of flies or vermin; or
 - (ii) is likely in the authorised person's opinion to give rise to the breeding or harbouring of flies or vermin; or
- (d) a plant or animal on the premises is a declared pest; or
- (e) a declared pest has been sold, displayed or offered for sale or supplied; or
- (f) fencing on the premises –
 - (i) is dangerous fencing; or
 - (ii) is unsightly; or
 - (iii) has caused personal injury or property damage; or
 - (iv) is likely in the authorised person's opinion to give rise to a risk of personal injury or property damage; or
- (g) a dead animal on the premises –
 - (i) has caused harm to human health or safety, personal injury or a loss of amenity; or
 - (ii) is likely in the authorised person's opinion to give rise to a risk of harm to human health or safety, personal injury or loss of amenity; or

Appendix B: Weeds of National Significance (WoNS)

- (u) the smoking of tobacco in an area declared by a resolution of the local government to be a smoke-free area; or
- (v) an internal combustion engine operating on the premises—
 - (i) has caused harm to human health or a loss of amenity; or
 - (ii) is likely in the authorised person's opinion to give rise to a risk of harm to human health or a loss of amenity; or
- (w) a shopping trolley—
 - (i) is located or has been allowed to be located on—
 - (a) a public place; or
 - (b) premises other than the premises on which the shopping trolley is ordinarily kept or used; and
 - (iii) is not being used to carry goods; and
 - (iii) is reasonably believed by an authorised person to have been abandoned by the person who last used the shopping trolley; or
- (x) a building, structure or caravan is—
 - (i) unsanitary; or
 - (ii) not in a state of good order or repair; or
 - (iii) unsafe; or
 - (iv) unfit for human habitation; or
- (y) a kite is flown on, over or adjacent to a road, electric line or telecommunications facility; or
- (z) a stone, bottle or other object is placed, thrown or otherwise discharged onto or over a road or other premises; or
- (aa) spray painting, lacquering, steam cleaning, high pressure hosing, grinding or sand blasting is carried out on a public place or on private premises and is reasonably likely to—
 - (i) have a detrimental impact on the health or amenity of a person on a different premises; or
 - (ii) cause damage to another premises; or
- (ab) a person engages in fishing from a bridge which is specified in a subordinate local law; or
- (ac) a person jumps or dives from a bridge; or
- (ad) graffiti is placed on private premises so as to be visible from a public place; or
- (ae) an act or omission specified in a subordinate local law will give rise to a risk of—
 - (i) harm to human health or safety or personal injury; or
 - (ii) property damage or a loss of amenity.

Local Law 11 – Roads and Malls

Local Law 11 identifies that roads, associated structures and plants are in harmony with their built environment and that they do not cause environmental harm or nuisance. The local law also identifies that where plants interfere with the road, traffic or footpaths these plants are able to be removed by Council if they are causing environmental harm or environmental nuisance. However, this local law does not indicate which species are preferred or should not be planted along roads and carriageways. The provision of this law in regards to confinement of kept animals is particularly relevant to the keeping of deer, which are declared pests when located outside an enclosure.

Local Law 12 – Keeping and Control of Animals

The objects of this local law are to regulate the keeping of animals to protect the community from risk of injury, ensure that animals do not create a nuisance or hazard, and prevent pollution or other environmental damage. It also aims to ensure that animals are kept in a manner that is consistent with the rights and expectations of the local community.

COGC Planning Scheme

The Gold Coast Planning Scheme (2003, amended Version 1.2 amended November 2011) is the current planning scheme in operation through the Gold Coast LGA. The Planning Scheme was developed as an instrument under the provisions of the Integrated Planning Act 1997 (IPA) and regulates the following activities:

- Building Work,
- Operational Work,
- Lot Re-configuration,
- Material Change of Use.

As well as determining appropriate land use zones, permissible types of development and appropriate environmental controls on land use activities, the Planning Scheme also contains a number of strategies, policies and guidance documents set minimum standards for various related development activities such as landscaping and signage. The Planning Scheme also identifies that developers who will be handing land to the care and control of COGC after the development is complete is required to undertake reasonable pest control management on the land in accordance with the requirements of the Development Application.

Table 15: Weeds of National Significance and the records within COGC LGA

COMMON NAME	SPECIES NAME	RECORDED IN LGA
Alligator Weed	<i>Alternanthera philoxeroides</i>	Yes
Gamba Grass	<i>Andropogon gayanus</i>	No
Pond Apple	<i>Annona glabra</i>	No
Madeira Vine	<i>Anredera cordifolia</i>	Yes
	<i>Asparagus aethiopicus</i>	Yes
Asparagus weeds (*except <i>A. officinalis</i> and <i>A. Racemosus</i>)	<i>A. africanus</i>	Yes
	<i>A. asparagoides</i>	No
	<i>A. declinatus</i>	No
	<i>A. plumosus</i>	Yes
	<i>A. scandens</i>	No
Opuntid Cacti (* <i>Opuntia</i> spp excludes <i>O. ficus-indica</i> , <i>Cylindropuntia</i> spp and <i>Austrocylindropuntia</i> spp.)	<i>Austrocylindropuntia</i> spp.	No
	<i>Cylindropuntia</i> spp.	Yes
	<i>Opuntia</i> spp.	Yes
Cabomba	<i>Cabomba caroliniana</i>	Yes
Boneseed	<i>Chrysanthemoides monilifera</i> spp. <i>monilifera</i>	No
Bitou Bush	<i>C. monilifera</i> spp. <i>rotundata</i>	Yes
Rubber Vine	* <i>Cryptostegia grandiflora</i>	Yes
	<i>Cytisus scoparius</i>	No
Brooms	* <i>Genista monspessulana</i>	Yes
	<i>G. linifolia</i>	No
Cats Claw Creeper	<i>Dolichandra unguis-cati</i>	Yes
Water Hyacinth	<i>Eichhornia crassipes</i>	Yes
Hymenachne	<i>Hymenachne amplexicaulis</i>	No
Bellyache Bush	<i>Jatropha gossypifolia</i>	No
Lantana	<i>Lantana camara</i>	Yes
African Boxthorn	<i>Lycium ferocissimum</i>	No
Mimosa	<i>Mimosa pigra</i>	No
Chilean Needle Grass	<i>Nassella neesiana</i>	No
Serrated Tussock	<i>Nassella trichotoma</i>	No
Parkinsonia	<i>Parkinsonia aculeata</i>	No

COMMON NAME	SPECIES NAME	RECORDED IN LGA
Parthenium	<i>Parthenium hysterophorus</i>	No
Blackberry	<i>Rubus fruticosus</i> aggregate	No
Sagittaria (*excludes <i>Sagittaria montevidensis</i>)	* <i>Sagittaria platyphylla</i>	Yes
Willows	<i>Salix</i> spp.	No
Salvinia	<i>Salvinia molesta</i>	Yes
Fireweed	<i>Senecio madagascariensis</i>	Yes
Silverleaf Nightshade	<i>Solanum elaeagnifolium</i>	No
Athel Pine	* <i>Tamarix aphylla</i>	Yes
Gorse	<i>Ulex europaeus</i>	No
Prickly Acacia	<i>Vachellia nilotica</i>	No
Mesquite	<i>Prosopis</i> spp	No

* Herbarium records indicate that these species have been recorded within the LGA, but their continued presence needs to be confirmed



Alligator Weed (*Alternanthera philoxeroides*) a Weed of National Significance easily spreads by fragments.

Appendix C: Environmentally Significant Areas in COGC LGA

The land which is classed as an environmentally significant area within City of Gold Coast Local Government Area is mapped in Figure 6, Figure 5 and Figure 6 and each of these categories of land are defined below.

1. Protected Area, as defined under the Queensland Nature Conservation (Protected Areas) Regulation 1994

- Burleigh Head National Park – 41NPW429
- Lamington National Park - 496NPW225, 273WD4726 and 249WD5357 other than parts within the areas shown and described on SP110556 as road to be opened.
- Nerang National Park - 224NPW804
- Nicoll Scrub National Park – 382WD4389 and 1903NPW190
- Southern Moreton Bay Islands National Parks – 408NPW645, 1AP7164 and 21W31475
- Springbrook National Park – Lots 344, 495, 498 and 790 and the parts of Lots 499 and 702 on Plan NPW918, Lot 1 on RP85712, Lots 1, 4, 5, 7, 9 to 12 and 14 on RP102950, Lots 2 and 3 on RP119621, Lot 29 on RP139816, Lot 43 on RP140927, Lot 7 on RP154831, Lot 1 on RP183012, Lot 2 on RP206235, Lot 2 on RP210091, Lot 3 on RP217885, Lots 1 and 2 on RP218891, Lot 15 on RP813651, Lots 152 and 153 on Plan WD532, Lot 155 on Plan WD599, Lot 73 on Plan WD1186, Lot 95 on Plan WD2082 and Lot 5 on SP207868
- Tamborine National Park Lot 441 and the part of Lot 326 on Plan NPW909
- Springbrook National Park (Recovery) - Lot 3 on RP100199, Lots 30 and 31 on RP139816, Lots 1 and 9 on RP150877, Lot 4 on RP160167, Lots 10 and 12 on RP201032, Lot 1 on RP224325, Lot 1 on SP100210 and Lot 15 on RP889011
- Burleigh Knoll Conservation Park – 161WD4040
- Cabbage Tree Point Conservation Park – 15CP861652
- Coombabah Lake Conservation Park – 6CP868569
- Currumbin Hill Conservation Park – 299WD4480
- Fleays Wildlife Park Conservation Park – 503NPW533
- Nerang Conservation Park – 568NPW743
- Pimpama Conservation Park – 40WD1436
- Saltwater Creek Conservation Park – 116WD2623
- South Stradbroke Island Conservation Park – 529NPW1117
- Springbrook Conservation Park – 569NPW917
- Tallebudgera Creek Conservation Park Lot 94 on plan WD6256, Lot 248 on Plan WD4976, Lot 1 on Plan WD804791, Lot 175 on Plan WD5346 and Lot 7 on RP201055
- Tomewin Conservation Park – 533NPW706 and 127CP892730
- Woongoolba Conservation Park 378WD5822

2. Land Dedicated as a Reserve for environmental purposes under the Queensland Land Act 1994, Section 31.

- Estelle road reserve -Currimbin Valley 378WD4607
- Tipplers Campground – South Stradbroke Island 74WD5641
- South Stradbroke Island - 76SP244689
- Unnamed reserves – South Stradbroke Island 37WD1476 and 77SP244689
- Tipplers Jetty – South Stradbroke Island, Lots 38 and 64 on Plan WD4474 and 164SP180106
- Pimpama River Conservation Area –12SP138877
- Miami Bushland Reserve - Lots 672 and 683 on Plan RP42591
- Hindle Reserve – Main Beach Lots 1, 2, 3, 4 and 5 on Plan SP228336
- Unnamed Reserve - Stapylton236WD5608

3. A World Heritage Area, listed under the "Convention Concerning the Protection of the World Cultural and Natural Heritage".

- Shield Volcano Group of the Gondwana Rainforests of Australia, comprising of
 - Springbrook National Park (part) - 495NPW918 - refer M:\DATA\NAture\World Heritage Areas 2007,
 - Reserve for prison purposes R932 (Res 12018) and R547 (Res 2678) only able to identify one property - 221RP816151
 - Rabbit Board Reserve R475 (Res 5740), R470 (Res 11.135), R603 (Res 3934), R464 (Res 11.108) and R489 (Res 929) - only able to identify one property 127CP892730

4. An area supporting a critically endangered or endangered ecological community, as per the list in the Commonwealth Environment Protection and Biodiversity Conservation Act (1999), Section 181.

All records that match the following descriptions:

- Littoral Rainforest and Coastal Vine Thickets of Eastern Australia
- Lowland Rainforest of Subtropical Australia
NB: COGC vegetation community mapping is undertaken at a desktop level and groundtruthing of the vegetation present within these areas must be undertaken to verify the nature of the actual vegetation community present.

5. A declared Ramsar wetland under the Commonwealth Environment Protection and Biodiversity Conservation Act (1999)

6. An area of high nature conservation value under the Queensland Vegetation Management Act (1999).

- Griffith University – 569SP234957

Appendix D: Class 1, 2 and 3 Pest Plant species in Queensland

Class 1 Pest Plants

A class 1 pest is not commonly present in Queensland and, if introduced would cause an adverse economic, environmental or social impact. Class 1 pests established in Queensland are subject to eradication from the State. Landowners must take reasonable steps to keep land free of Class 1 pests.

This list is current as at September 2012 however new declarations of plants and / or changes in plant declaration can occur at any time and care should be taken to ensure that the most recent listed is utilised. The lists can be accessed at: http://www.daff.qld.gov.au/4790_7005.htm

Class 1 Pest Plant Species

- Alligator weed (*Alternanthera philoxeroides*)
- Anchored Water Hyacinth (*Eichhornia azurea*)
- Badhara Bush (*Gmelina elliptica*)
- Bitou Bush (*Chrysanthemoides monilifera* subsp. *rotundata*)
- Bridal Creeper (*Asparagus asparagoides*)
- Candleberry Myrrh (*Myrica faya*)
- Chilean Needle Grass (*Nassella neesiana*)
- Cholla Cactus (*Cylindropuntia* spp. and their hybrids, other than *C. spinosior*, *C. fulgida* and *C. imbricata*)
- Christ's Thorn (*Ziziphus spina-christi*)
- Eurasian Water Milfoil (*Myriophyllum spicatum*)
- Fanwort (*Cabomba* spp. other than *C. caroliniana*)
- Floating Water Chestnuts (*Trapa* spp.)
- Gorse (*Ulex europaeus*)
- Honey Locust (*Gleditsia* spp. including cultivars and varieties)
- Horsetails (*Equisetum* spp.)
- Hygrophila (*Hygrophila costata*)
- Kochia (*Bassia scoparia* syn. *Kochia scoparia*)
- Koster's Curse (*Clidemia hirta*)
- Lagarosiphon (*Lagarosiphon major*)
- Limnocharis or Yellow Burrhead (*Limnocharis flava*)
- Madras Thorn (*Pithecellobium dulce*)
- Mexican Bean Tree (all *Cecropia* spp.)
- Mexican Feather Grass (*Nassella tenuissima*)
- Miconia (*Miconia* spp.)
- Mikania Vine (*Mikania* spp.)
- Mimosa Pigra (*Mimosa pigra*)
- Peruvian Primrose Bush (*Ludwigia peruviana*)
- Red Sesbania (*Sesbania punicea*)
- Senegal Tea (*Gymnocoronis spilanthoides*)
- Serrated Tussock (*Nassella trichotoma*)
- Siam Weed (*Chromolaena* spp.)
- Spiked Pepper (*Piper aduncum*)
- Thunbergia: Annual Thunbergia (*Thunbergia annua*), Fragrant Thunbergia (*T. fragrans*), Laurel Clockvine (*T. laurifolia*)
- Water Mimosa (*Neptunia oleracea* and *N. plena*)
- Water Soldiers (*Stratiotes aloides*)
- Willow (*Salix* spp. other than *S. babylonica*, *S.*

humboldtiana (syn. *S. chilensis*), *S. matsudana*, *S. × calodendron* and *S. × reichardtii*)

- Witch Weeds (*Striga* spp. other than native species).
- Yellow Ginger (*Hedychium flavescens*)

Class 2 Pest Plants

Class 2 pest plants are established in Queensland and have, or could have, an adverse economic, environmental or social impact. The management of these pests requires co-ordination and they are subject to programs led by local government, community or landowners. Landowners must take reasonable steps to keep land free of Class 2 pest plants.

This list is current as at July 2012 however new declarations of plants and / or changes in plant declaration can occur at any time and care should be taken to ensure that the most recent listed is utilised. The lists can be accessed at: http://www.daff.qld.gov.au/4790_7005.htm

Class 2 Pest Plant Species

- African Boxthorn (*Lycium ferocissimum*)
- Annual Ragweed (*Ambrosia artemisiifolia*)
- Bellyache Bush (*Jatropha gossypiifolia* and hybrids)
- Cabomba (*Cabomba caroliniana*)
- Chinese Apple (*Ziziphus mauritiana*)
- Cholla Cactus: Coral Cactus (*Cylindropuntia fulgida*), Devil's Rope Pear (*C. imbricata*), Snake Cactus (*C. spinosior*)
- Fireweed (*Senecio madagascariensis*)
- Gamba Grass (*Andropogon gayanus*)
- Giant Sensitive Plant (*Mimosa diplotricha* var. *diplotricha*)
- Groundsel Bush (*Baccharis halimifolia*)
- Harrisia Cactus (*Harrisia martinii* syn. *Eriocereus martinii*, *H. tortuosa* and *H. pomanensis* syn. *Cereus pomanensis*)
- Hymenachne or Olive Hymenachne (*Hymenachne amplexicaulis*)
- Kudzu (*Pueraria montana* var. *lobata*, syn. *P. lobata*, *P. triloba*) other than in the Torres Strait Islands
- Mesquites (*Prosopis glandulosa*, *P. pallida* and *P. velutina*)
- Mother of Millions (*Bryophyllum delagoense* syn. *B. tubiflorum*, *Kalanchoe delagoensis*)
- Mother of Millions hybrid (*Bryophyllum × houghtonii* (syn. *B. daigremontianum* × *B. delagoense*, *Kalanchoe × houghtonii*))
- Parkinsonia (*Parkinsonia aculeata*)
- Parthenium (*Parthenium hysterophorus*)
- Pond Apple (*Annona glabra*)
- Prickly Acacia (*Acacia nilotica*)
- Prickly Pear: Common Pest Pear, Spiny Pest Pear (*O. stricta*; syn. *O. inermis*), Tiger Pear (*O. aurantiaca*), Westwood Pear (*O. streptacantha*), Tree Pears: Drooping Tree Pear (*O. monacantha* syn. *O. vulgaris*),

Appendix E: Class 1, 2 & 3 Pest Animal species in Queensland

- Velvety Tree Pear (*O. tomentosa*)
- Rat's Tails Grasses: American Rat's Tail Grass (*Sporobolus jacquemontii*), Giant Parramatta Grass (*Sporobolus fertilis*), Giant Rat's tail Grass (*Sporobolus pyramidalis* and *S. natalensis*), Parramatta grass (*Sporobolus africanus*)
- Rubber Vine (*Cryptostegia grandiflora*)
- *Salvinia* (*Salvinia molesta*)
- Sicklepods: Sicklepod (*Senna obtusifolia*), Foetid Cassia (*Senna tora*), Hairy Cassia (*Senna hirsuta*)
- Telegraph Weed (*Heterotheca grandiflora*)
- Thunbergia or Blue Thunbergia (*Thunbergia grandiflora*)
- Tobacco Weed (*Elephantopus mollis*)
- Water Hyacinth (*Eichhornia crassipes*)
- Water Lettuce (*Pistia stratiotes*)

Class 3 Pest Plants

Class 3 pest plants are established in Queensland and have, or could have, an adverse economic, environmental or social impact. The primary objective of Class 3 listing is to prevent sale, therefore preventing the spread of these plants into new areas. Landholders are not required to control Class 3 Pest plants unless their land is adjacent to an environmentally sensitive area and they are issued with a pest control notice.

This list is current as at July 2012 however new declarations of plants and / or changes in plant declaration can occur at any time and care should be taken to ensure that the most recent listed is utilised. The lists can be accessed at: http://www.daff.qld.gov.au/4790_7005.htm

Class 3 Pest Plant Species

- African Fountain Grass (*Pennisetum setaceum*)
- African Tulip Tree (*Spathodea campanulata*)
- Aristolochia or Dutchman's Pipe (*Aristolochia* spp. other than native species)
- Asparagus Fern (*Asparagus aethiopicus* 'Sprengerii', *A. africanus* and *A. plumosus*)
- Athel Pine (*Tamarix aphylla*)
- Balloon Vine (*Cardiospermum grandiflorum*)
- Blackberry (*Rubus anglochindicans*, *Rubus fruticosus* agg.)
- Broad-leaved Pepper Tree (*Schinus terebinthifolius*)
- Camphor Laurel (*Cinnamomum camphora*)
- Captain Cook Tree or Yellow Oleander (*Cascabela thevetia* syn. *Thevetia peruviana*)
- Cat's Claw Creeper (*Macfadyena unguis-cati*)
- Chinese Celtis (*Celtis sinensis*)
- Harungana (*Harungana madagascariensis*)
- Kahili Ginger (*Hedychium gardnerianum*)
- Lantana: Common Lantana (*Lantana camara*), Creeping Lantana (*L. montevidensis*)
- Madeira Vine (*Anredera cordifolia*)
- Privets: Broad-leaf Privet or Tree Privet (*Ligustrum lucidum*), Small-leaf Privet or Chinese Privet (*L. sinense*)
- Purple or Ornamental Rubber Vine (*Cryptostegia madagascariensis*)
- Singapore Daisy (*Sphagneticola trilobata*; syn. *Wedelia trilobata*)
- White Ginger (*Hedychium coronarium*)
- Willows: Pencil Willow (*Salix humboldtiana* syn. *S. chilensis*), Tortured Willow (*Salix matsudana*)
- Yellow Bells (*Tecoma stans*)

Class 1 Pest Animals

A Class 1 Pest animal species is one that is not commonly present in Queensland, and if introduced would cause an adverse economic, environmental or social impact. Class 1 pest animal species established in Queensland are subject to eradication by the State. Landowners must take reasonable steps to keep land free of Class 1 pests.

This list is current as at December 2012 however new declarations of plants and / or changes in plant declaration can occur at any time and care should be taken to ensure that the most recent listed is utilised. The lists can be accessed at: http://www.daff.qld.gov.au/4790_7005.htm

Class 1 Pest Animal Species:

- Crazy Ants (*Anoplolepis gracilipes*)
- All mammals, reptiles and amphibians except:
- Class 2 declared pest animals
- Mammals, reptiles and amphibians indigenous to Australia, including marine mammals of the orders Pinnipedia, Sirenia or Cetacea
- And the following non-declared animals:
- Alpaca (*Lama pacos*)
- Asian House Gecko (*Hemidactylus frenatus*)
- Axolotl (*Ambystoma mexicanum*)
- Bali Cattle (*Bos javanicus* and *B. sondaicus*)
- Bison or American Buffalo (*Bison bison*)
- Black Rat (*Rattus rattus*)
- Camel (*Camelus dromedarius*)
- Cane Toad (*Bufo marinus*)
- Cattle (*Bos* spp.)
- Chital (axis) deer (*Axis axis*) other than feral Chital Deer
- Domestic Cat (*Felis catus*)
- Domestic Dog (*Canis familiaris*)
- Domestic Goat (*Capra hircus*)
- Domestic Pig (*Sus scrofa*)
- Donkey (*Equus asinus*)
- European Hare (*Lepus capensis*)
- Fallow Deer (*Dama dama*) other than feral fallow deer
- Guanicoe (*Lama guanicoe*)
- Guinea Pig (*Cavia porcellus*)
- Horse (*Equus caballus*)
- House Mouse (*Mus musculus*)
- Llama (*Lama glama*)
- Mule (*Equus caballus* x *Equus asinus*)
- Red Deer (*Cervus elaphus*) other than a feral red deer
- Rusa Deer (*Cervus timorensis*) other than a feral rusa deer
- Sewer Rat (*Rattus norvegicus*)
- Sheep (*Ovis aries*)
- Water Buffalo (*Bubalus bubalis*)

Class 2 Pest Animals

Class 2 pest animal species are established in Queensland and have, or could have, an adverse economic, environmental or social impact. Management of these pests requires co-ordination and they are subject to programs led by local government, community or landowners. Landowners must take reasonable steps to keep land free of Class 2 pests.

This list is current as at December 2012 however new declarations of plants and / or changes in plant declaration can occur at any time and care should be taken to ensure that the most recent listed is utilised. The lists can be accessed at: http://www.daff.qld.gov.au/4790_7005.htm

Class 2 Pest Animal Species

- Australian Plague Locust (*Chortoicetes terminifera*)
- Cat, other than a domestic cat (*Felis catus*)
- Dingo (*Canis familiaris dingo*)
- Dog, other than a domestic dog (*Canis familiaris*)
- European Fox (*Vulpes vulpes*)
- European Rabbit (domestic and wild breeds) (*Oryctolagus cuniculus*)
- Feral Pig (*Sus scrofa*)
- Feral Chital Deer (*Axis axis*)
- Feral Rusa Deer (*Cervus timorensis*)
- Goat, other than a domestic goat (*Capra hircus*)
- Migratory Locust (*Locusta migratoria*)
- Spur-throated Locust (*Austracris guttulosa*)

Class 3 Pest Animals

Class 3 pest animal species are established in Queensland and have, or could have, an adverse economic, environmental or social impact. Landholders are not required to control Class 3 pests unless their land is in or adjacent to an environmentally significant area.

This list is current as at December 2012 however new declarations of plants and / or changes in plant declaration can occur at any time and care should be taken to ensure that the most recent listed is utilised. The lists can be accessed at: http://www.daff.qld.gov.au/4790_7005.htm

Class 3 Pest Animal Species

- Feral Fallow Deer (*Dama dama*)
- Feral Red Deer (*Cervus elaphus*)

Appendix F: Plants identified under the COGC Planning Scheme (2011)

The City of Gold Coast Planning Scheme restricts the use of certain plant species under the following policies.

- Policy 13** – Landscape Strategy Part 2 – Landscape works Documentation Manual, Section D – General Information 1.0 Undesirable plants
- Policy 15** - Management of Coastal Dune Areas, Chapter 6 Undesirable Species of Dune Areas

Identified species are prohibited or restricted as new plantings in Landscape Works requiring approval from Council. This list identifies species Council considers to be environmental weeds, are expensive to maintain and plants that pose a safety risk. Note: Recognised environmental weeds with a trunk girth in excess of 40cm and height of 4 metres may be classified as protected under Planning Scheme Chapter 36 "Vegetation Management". Removal may require Council approval.

Prohibited plants – The following plants are prohibited from use in any new landscaping works requiring approval from the City of Gold Coast. All plants declared as pests by the Queensland Government and plants listed as Noxious by the New South Wales Government. These species can be found in Appendix C and Appendix F.

Reason for exclusion code:

I = Invasive: species have been shown to be highly invasive
 Iw = seeds are dispersed and spread widely by wind and or water
 Ir = regrown from stems, leaves, rhizomes, tubers or bulbs
 Ib = seeds are dispersed widely by birds and other animals
 Is = heavy seed drop
 T = Toxic: species that are dangerous to humans and animals
 M = Maintenance: species have significant maintenance problems

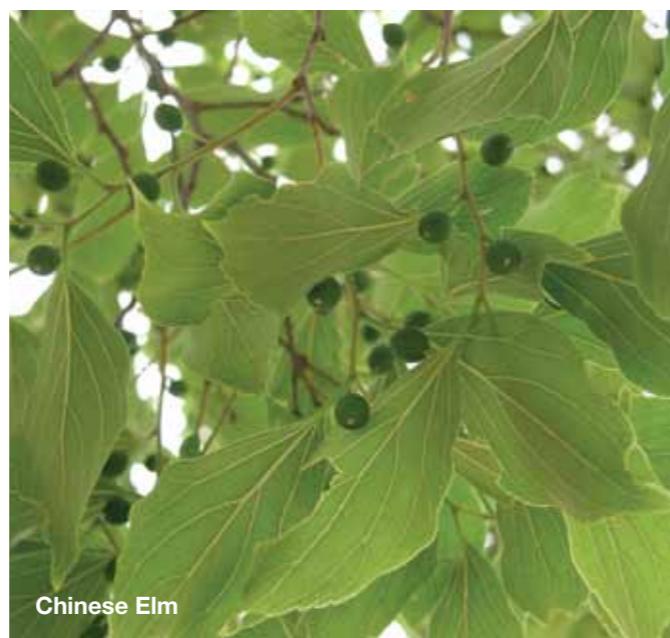
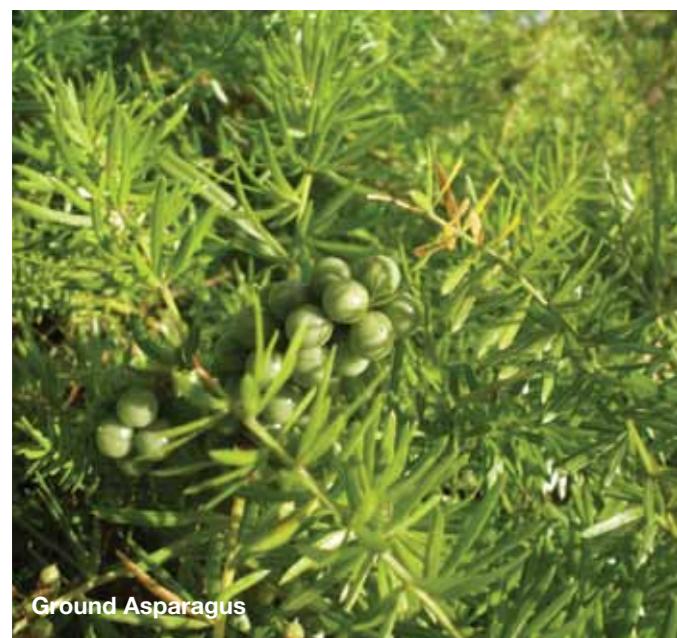
TREES / PALMS

COMMON NAME	SPECIES	REASON FOR EXCLUSION	RELEVANCE	STATUS
Angel's Trumpet	<i>Brugmansia candida</i> (syn. <i>Datura arborea</i>)	T - Seeds, Flowers, Stem, Leaves, Nectar are toxic	Any new landscaping works requiring approval from Council	
Chinese Elm / Chinese Celtis	<i>Celtis sinensis</i>	Iw,Ib,Is - Invasive in waterways and rural areas	Any new landscaping works requiring approval from Council	Class 3
Camphor Laurel	<i>Cinnamomum camphora</i>	Ib - Invasive in rural areas and waterways. Can cause problems to underground infrastructure in urban areas	Any new landscaping works requiring approval from Council	Class 3
Coffee Tree	<i>Coffee arabica</i>	Precautionary measure	Any new landscaping works requiring approval from Council	
Cadagi Gum	<i>Corymbia torelliana</i> (syn <i>Eucalyptus torelliana</i>)	Is,M - Weed outside North Queensland, problems with roots and footpaths, mould on leaves, bad for asthma and allergies, seed exudes a resin that kills native bees	Any new landscaping works requiring approval from Council	
Rubber Tree	<i>Ficus elastica</i>	Ir - Damages underground and built structures	Any new landscaping works requiring approval from Council	
Chinese Rain Tree	<i>Koelreuteria elegans</i> ssp. <i>formosana</i>	Iw,Ib - Seed is spread widely by wind, invasive in fringe areas of bushland	Any new landscaping works requiring approval from Council	
Golden rain Tree	<i>Koelreuteria paniculata</i>	Iw,Ib - Seed is spread widely by wind, invasive in fringe areas of bushland	Any new landscaping works requiring approval from Council	

TREES / PALMS

COMMON NAME	SPECIES	REASON FOR EXCLUSION	RELEVANCE	STATUS
Slash Pine	<i>Pinus elliotti</i>	Iw,Ib,Is - Invasive in bushland and urban bushland	Any new landscaping works requiring approval from Council	
Radiata Pine	<i>Pinus radiata</i>	Iw,Ib,Is - Invasive in bushland and urban bushland	Any new landscaping works requiring approval from Council	
Umbrella Tree	<i>Schefflera actinophylla</i>	Ib,Is,M - Invasive in bushland, seed is spread widely by birds and bats	Any new landscaping works requiring approval from Council	
Broad Leafed Pepper Tree	<i>Schinus terebinthifolia</i>	Ib - Highly invasive in bushland areas, sap can cause allergies	Any new landscaping works requiring approval from Council	Class 3
Cassia	<i>Senna pendula</i> var. <i>glabrata</i> syn. <i>Senna bicapsularis</i>	Iw	Any new landscaping works requiring approval from Council	
Cassia	<i>Senna septemtrionalis</i> syn. <i>Senna floribunda</i>	Iw	Any new landscaping works requiring approval from Council	
African Tulip Tree	<i>Spathodea campanulata</i>	Iw	Any new landscaping works requiring approval from Council	Class 3
Cocos Palm	<i>Syagrus romanzoffia</i>	Ib,M - Maintenance problem in public areas, prolific seed drop	Any new landscaping works requiring approval from Council	
Chinese Elm	<i>Ulmus chinensis</i>	Iw - Highly invasive in bushland	Any new landscaping works requiring approval from Council	
SHRUBS/GROUNDCOVERS				
Mirror Plant	<i>Coprosma spp</i>	Ir,Ib	Any new landscaping works requiring approval from Council	
Lantana	All <i>Lantana spp</i>	Ib	Any new landscaping works requiring approval from Council	Class 3
Japanese Honeysuckle	<i>Lonicera japonica</i>	Ir, M - Spread most commonly through garden waste, maintenance problem	Any new landscaping works requiring approval from Council	
Mickey Mouse Plant	<i>Ochna serrulata</i>	Ir,Ib	Any new landscaping works requiring approval from Council	
Cape Honeysuckle	<i>Tecomaria capensis</i>	Ir	Any new landscaping works requiring approval from Council	
Captain Cook tree, Yellow oleander or Peruvian Oleander	<i>Cascabela thevetia</i> syn. <i>Thevetia peruviana</i>	T - Sap and leaves are toxic, a single seed can kill a child	Any new landscaping works requiring approval from Council	Class 3

ANNUALS, BIENNIALS, PERENNIALS & VINES				
COMMON NAME	SPECIES	REASON FOR EXCLUSION	RELEVANCE	STATUS
Dutchman's Pipe	<i>Aristolochia elegans</i>	Ir - Highly invasive, leaves kill larvae of the Birdwing Butterfly	Any new landscaping works requiring approval from Council	Class 3
Mother of Millions	<i>Bryophyllum spp.</i>	Ir,Is - Highly invasive in dunes and open space areas, spread through garden waste	Any new landscaping works requiring approval from Council	Class 2
Purple Succulent	<i>Callisia fragrans</i>	Ir	Any new landscaping works requiring approval from Council	
Pampass Grass	<i>Cortaderia selloana</i>	Iw,M - Hard eradicate as it has vigorous regrowth characteristics, spread through garden waste	Any new landscaping works requiring approval from Council	
Balloon Vine	<i>Cardiospermum grandiflorum</i>	Iw	Any new landscaping works requiring approval from Council	Class 2
Morning glory (blue)	<i>Ipomoea indica</i>	Ir Vine smothers native vegetation, vigorous growth habit, spread through garden waste,	Any new landscaping works requiring approval from Council	
Morning glory (common)	<i>Ipomoea purpurea</i>	Ir - Vine smothers native vegetation, vigorous growth habit, spread through garden waste,	Any new landscaping works requiring approval from Council	
Cat's Claw Creeper	<i>Dolichandra unguis-cati</i> syn. <i>Macfayena unguis-cati</i>	Ir,Iw	Any new landscaping works requiring approval from Council	Class 3
Fishbone Fern	<i>Nephrolepis cordifolia</i>	Ir - Highly invasive, spread through garden waste	Any new landscaping works requiring approval from Council	
Glycine	<i>Neonotonia wightii</i>	Ir - Becoming a major problem, potential to become worse than Lantana	Any new landscaping works requiring approval from Council	



ANNUALS, BIENNIALS, PERENNIALS & VINES				
COMMON NAME	SPECIES	REASON FOR EXCLUSION	RELEVANCE	STATUS
Fountain Grass, Swamp foxtail	<i>Pennisetum spp.</i>	I - Fire hazard in open space areas, vigorous grower in open space areas. The species is being discouraged in the Gold Coast City due to its weed potential. The variety <i>Pennisetum alopecuroides</i> is often referred to as a "native". This is currently being disputed in the botanical world. Other species of <i>Pennisetum</i> are often sold as the 'native' variety, therefore Council is prohibiting the use of any <i>Pennisetum</i> sp. in landscape works requiring approval in the short term, as a precaution.	Any new landscaping works requiring approval from Council	
Ground Asparagus	<i>Asparagus aethiopicus</i>		Any new landscaping works requiring approval from Council	Class 3
Asparagus Fern (climbing)	<i>Asparagus africanus</i>		Any new landscaping works requiring approval from Council	Class 3
Mother In-law Tongue	<i>Sansevieria trifasciata</i>	Ir - Highly invasive, vegetative parts spread through garden waste	Any new landscaping works requiring approval from Council	
Climbing Nightshade	<i>Solanum seaforthianum</i>	I - Appearing in rainforest areas and becoming highly invasive	Any new landscaping works requiring approval from Council	
Corky Passion Vine	<i>Passiflora suberosa</i>	Ir	Any new landscaping works requiring approval from Council	
White Passion Flower	<i>Passiflora subpeltata</i>		Any new landscaping works requiring approval from Council	



ANNUALS, BIENNIALS, PERENNIALS & VINES				
COMMON NAME	SPECIES	REASON FOR EXCLUSION	RELEVANCE	STATUS
Japanese Sunflower	Tithonia diversifolia	Ir - Invasive in bushland	Any new landscaping works requiring approval from Council	
Wandering Jew	Tradescantia spp.	Ir - Spread through garden waste	Any new landscaping works requiring approval from Council	
Trad	Tradescantia fluminensis	Ir - Spread through garden waste	Any new landscaping works requiring approval from Council	
Purple Trad	Tradescantia pallida	Ir - Spread through garden waste	Any new landscaping works requiring approval from Council	
Moses in the Cradle	Tradescantia spathacea	Ir - Spread through garden waste	Any new landscaping works requiring approval from Council	
Variegated Wandering Jew	Tradescantia zebrina syn. Zebrina spp.	Ir - Spread through garden waste	Any new landscaping works requiring approval from Council	
Singapore Daisy	Sphagneticola trilobata syn. Wedelia trilobata	Ir - Highly invasive and spread mostly through garden waste	Any new landscaping works requiring approval from Council	Class 3

RESTRICTED USE - TOXICITY AND SAFETY REASONS

The following species have toxicity or safety problems and are restricted from use in any new planting in the following areas:

- child care centres and commercial plant nurseries
- any type of children's playgrounds;
- primary schools; and
- respite and aged care centres,
- coastal dune areas.

TREES / PALMS				
COMMON NAME	SPECIES	REASON FOR EXCLUSION	RELEVANCE	STATUS
Foam Bark Tree	<i>Jagera pseudorhus</i>	Seed pod coat has irritant hairs	All areas	
Norfolk Island Hibiscus	<i>Lagunaria patersonii</i>	Irritant seeds "Cow itch tree"	All areas	
Paperbark	<i>Meleleuca quinquenervia</i>	Flowers can cause upper respiratory problems in young children	Child care centres and nurseries only	
White Cedar	<i>Melia azedarach</i>	Seed poisonous	Child care centres and nurseries only	
Date Palm	<i>Phoenix</i> spp.	Spiky petiole and fronds are dangerous in the juvenile state	Child care centres and nurseries only	
	<i>Pinus</i> spp.	Pine Trees Cones and pine needles dangerous	All areas	
Frangipani	<i>Plumeria</i> spp.	Sap irritant	Child care centres and nurseries only	
Yew	<i>Taxus</i> spp.	Foliage, seeds	All areas	
SHRUBS				
Allamanda	<i>Allamanda</i> spp.	Sap and leaves toxic	All areas	
Cunjevoi	<i>Alocasia brisbanensis</i>	All Parts are toxic	All areas	
	<i>Bougainvillea</i> spp.	Thorns are dangerous	Child care centres and nurseries only	
	<i>Duranta</i> spp.	Berries are toxic	Child care centres and nurseries only	
Crepe Jasmine	<i>Ervatamia coronaria</i>	All Parts	All areas	
Poinsettia	<i>Euphorbia</i> spp.	Sap irritant/poisonous	All areas	
Matt Rush	<i>Lomandra longifolia</i>	Spiky flowers heads dangerous for young children	Child care centres and nurseries only	
Oleander	<i>Nerium oleander</i>	All Parts	Child care centres, nurseries and playgrounds only	
Spice Bush	<i>Trunia youngiana</i>	Very poisonous native rainforest plant		
White Arum Lily	<i>Zantedeschia aethiopica</i>	All Parts		

Note: some species of Grevilleas can cause allergies. Advice can be obtained from Council on which species cause problems.

PRESTRICTED USE - ENVIRONMENTAL OR MAINTENANCE REASONS

The following species have environmental or maintenance problems and are restricted from use in any new planting in the following areas:

- Council managed road reserve areas;
- public parks, water bodies and waterways, drainage reserves, artificial and natural wetland areas;
- coastal dune areas;
- within or near significant areas of native bushland, environmental reserves, conservation areas, dunal areas (as identified in the Gold Coast City Planning Scheme, Nature Conservation Strategy, or any relevant Council Management Strategies).

TREES AND SHRUBS				
COMMON NAME	SPECIES NAME	REASON FOR EXCLUSION	RELEVANCE	STATUS
Bauhinia	<i>Bauhinia variegata/galpini</i>	Invades fringe areas of bushland, maintenance problem in road reserves	Not to be planted on existing or future Council estate	
Coral Tree	<i>Erythrina indica</i>	encourage the use of the native species <i>Erythrina vespilio</i> Regenerates vigorously from vegetative parts, maintenance problem in open space areas, invades fringe areas of bushland	Not to be planted on existing or future Council estate	
	<i>Erythrina cristagalli</i>			
Chinese Empress Tree	<i>Paulownia</i> spp.	Ir - the species has been used in forestry trials in Australia – opinion differs on its potential as a weed, but it may have some potential as a weed in highly disturbed tropical habitats such as edges of rainforests. Therefore Council is restricting its use in any landscape works requiring approval in environmental areas in the short term as a precaution	Not to be planted on existing or future Council estate	
SHRUBS AND GROUND COVERS				
Willow Tree	<i>Salix</i> spp.	Problem along waterways	Not to be planted on existing or future Council estate	Class 1, Class 3
Rosewood	<i>Tipuana tipu</i>	Potentially invasive. May be acceptable in certain urbanised road reserve areas or in situations where such does not appear to have a significant impact on the local environmental conditions. This	requires consultation with Council to determine if use is appropriate in any particular situation	
Century Plant	<i>Agave</i> spp.	Invasive and environmental nuisance	Not to be planted on existing or future Council estate	
Coral Berry	<i>Ardisia crenata</i>	Becoming a problem in rainforest areas	Not to be planted on existing or future Council estate	
Bougainvillea	<i>Bougainvillea</i> spp. (except dwarf varieties)	Vigorous growth characteristics, can be unsafe in public areas	Not to be planted on existing or future Council estate	

SHRUBS AND GROUND COVERS				
COMMON NAME	SPECIES NAME	REASON FOR EXCLUSION	RELEVANCE	STATUS
	<i>Buddleia</i> spp.	Invasive in fringe areas of bushland	Not to be planted on existing or future Council estate	
Canna Lily	<i>Canna indica</i>	Vigorous grower, invasive	Not to be planted on existing or future Council estate	
Jessamine	<i>Cestrum</i> spp.	Environmental weed, poisonous	Not to be planted on existing or future Council estate	
Cotoneaster	<i>Cotoneaster</i> spp.	Seeds spread by birds	Not to be planted on existing or future Council estate	
Dizzy Lizzie, Balsam (except for non invasive contemporary hybrids)	<i>Impatiens</i> spp.	Invasive in bushland and open space areas reproduced by runners and bits of stems and leaves	Not to be planted on existing or future Council estate	
Firethorn	<i>Pyracantha</i> spp.	Invasive in reclaimed and rural areas, spread by birds	Not to be planted on existing or future Council estate	
Indian Hawthorne	<i>Rhaphiolepis indica</i>	Invasive in fringe areas, spread by birds	Not to be planted on existing or future Council estate	
African Milk Bush	<i>Synadenium grantii</i>		Not to be planted on existing or future Council estate	
Yellow Bignonia Yellow Bells	<i>Tecoma stans</i>	Invasive in bushland. Seed spread by wind.	Not to be planted on existing or future Council estate	Class 3
Tamarisk	<i>Tamarix</i> spp.	Invasive and environmental nuisance	Not to be planted on existing or future Council estate	
Yucca	<i>Yucca</i> spp.	Invasive and environmental nuisance	Not to be planted on existing or future Council estate	
Bunya Pine	<i>Araucaria bidwillii</i>	A large tree that can often outgrow its spatial restrictions especially in urban backyards and road reserves. On maturity, the tree bears large pine cones that can pose potential safety problems in well utilised public areas	should not be utilised in road reserves within urban residential areas because of safety or maintenance reasons:	
Figs	<i>Ficus</i> spp.	Not recommended for use near buildings or underground services because of highly invasive root systems, unless extensive root barrier treatment is undertaken	Should not be utilised in road reserves within urban residential areas because of safety or maintenance reasons:	

Appendix G: Noxious Weed Species in Far North Coast County Council Area

SPECIES NAME	COMMON NAME	MANAGEMENT CLASS
<i>Eichhornia azurea</i>	Anchored water hyacinth	1
<i>Centaurea nigra</i>	Black knapweed	1
<i>Orobanche species</i>	Broomrapes	1
<i>Asystasia gangetica subspecies micrantha</i>	Chinese violet	1
<i>Myriophyllum spicatum</i>	Eurasian water milfoil	1
<i>Hieracium species</i>	Hawkweed	1
<i>Heteranthera reniformis</i>	Heteranthera	1
<i>Equisetum species</i>	Horsetail	1
<i>Hydrocotyl ranunculoides</i>	Hydrocotyl	1
<i>Hymenachne amplexicaulis</i> and hybrids	Hymenachne	1
<i>Acacia karroo</i>	Karoo thorn	1
<i>Bassia scoparia</i>	Kochia	1
<i>Clidemia hirta</i>	Kosters curse	1
<i>Lagarosiphon major</i>	Lagarosiphon	1
<i>Nassella tenuissima</i>	Mexican feather grass	1
<i>Miconia species</i>	Miconia	1
<i>Mikania micrantha</i>	Mikania	1
<i>Mimosa pigra</i>	Mimosa	1
<i>Parthenium hysterophorus</i>	Parthenium	1
<i>Annona glabra</i>	Pond apple	1
<i>Acacia nilotica]</i>	Prickly acacia	1
<i>Cryptostegia grandiflora</i>	Rubber vine	1
<i>Gymnocoronis spilanthoides</i>	Senegal tea plant	1
<i>Chromolaena odorata</i>	Siam weed	1
<i>Centaurea stoebe subspecies micranthos</i>	Spotted knapweed	1
<i>Trapa species</i>	Water caltrop	1

SPECIES NAME	COMMON NAME	MANAGEMENT CLASS
<i>Pistia stratiotes</i>	Water lettuce	1
<i>Stratiotes aloides</i>	Water soldier	1
<i>Striga species</i>	Witchweed	1
<i>Limnocharis flava</i>	Yellow burrhead	1
<i>Echinochloa polystachya</i>	Aleman grass	2
<i>Alternanthera philoxeroides</i>	Alligator Weed	2
<i>Chrysanthemoides monilifera</i> subspecies <i>monilifera</i>	Boneseed	2
<i>Hygrophila costata</i>	Hygrophila	2
<i>Solanum viarum</i>	Tropical soda apple	2
<i>Schinus terebinthifolius</i>	Broad-leaf pepper tree	3
<i>Celtis sinensis</i>	Chinese celtis	3
<i>Triadica sebifera</i>	Chinese tallow tree	3
<i>Hygrophila polysperma</i>	East Indian hygrophila	3
<i>Sporobolus pyramidalis</i>	Giant rat's tail grass	3
<i>Cestrum parqui</i>	Green cestrum	3
<i>Baccharis halimifolia</i>	Groundsel bush	3
<i>Gleditsia triacanthos</i>	Honey locust	3
<i>Pueraria lobata</i>	Kudzu	3
<i>Caesalpinia decapetala</i>	Mysore thorn	3
<i>Salvinia molesta</i>	Salvinia	3
<i>Tecoma stans</i>	Yellow bells	3
<i>Sagittaria montevidensis</i>	Arrowhead	4
<i>Xanthium species</i>	Bathurst/Noogoora/Hunter/South American/Californian/cockle burr	4

SPECIES NAME	COMMON NAME	MANAGEMENT CLASS
<i>Chrysanthemoides monilifera</i> subspecies <i>rotundata</i>	Bitou bush	4
<i>Rubus fruticosus</i> aggregate species	Blackberry	4
<i>Asparagus asparagoides</i>	Bridal creeper [4
<i>Cinnamomum camphora]</i>	Camphor laurel	4
<i>Nassella neesiana</i>	Chilean needle grass	4
<i>Sorghum x album</i>	Columbus grass	4
<i>Ageratina adenophora]</i>	Crofton weed	4
<i>Sporobolus fertilis</i>	Giant Parramatta grass	4
<i>Harrisia species</i>	Harrisia cactus	4
<i>Sorghum halepense</i>	Johnson grass	4
<i>Lantana species</i>	Lantana	4
<i>Egeria densa]</i>	Leafy elodea	4
<i>Phyla canescens</i>	Lippia	4
<i>Ludwigia longifolia]</i>	Long-leaf willow primrose	4
<i>Ageratina riparia</i>	Mistflower	4
<i>Carduus nutans</i>	Nodding thistle	4
<i>Cortaderia species</i>	Pampas grass	4
<i>Cylindropuntia species</i>	Prickly pear	4
<i>Opuntia species</i>	Prickly pear	4
<i>Ligustrum lucidum</i>	Privet (Broad-leaf)	4
<i>Ligustrum sinense</i>	Privet (Narrow-leaf/Chinese)	4
<i>Toxicodendron succedaneum]</i>	Rhus tree	4
<i>Cytisus scoparius</i>	Scotch broom	4
<i>Nassella trichotoma</i>	Serrated tussock	4
<i>Cenchrus incertus</i>	Spiny buragrass	4
<i>Cenchrus longispinus</i>	Spiny buragrass	4

SPECIES NAME	COMMON NAME	MANAGEMENT CLASS
<i>Hypericum perforatum</i>	St. John's wort	4
<i>Eichhornia crassipes</i>	Water hyacinth	4
<i>Pennisetum macrourum</i>	African feathergrass	5
<i>Sisymbrium runcinatum</i>	African turnip weed	
<i>Sisymbrium thellungii</i>	African turnip weed	
<i>Ambrosia artemisiifolia</i>	Annual ragweed	
<i>Cynara cardunculus</i>	Artichoke thistle	
<i>Tamarix aphylla</i>	Athel pine	
<i>Festuca gautieri</i>	Bear-skin fescue	
<i>Ambrosia confertiflora</i>	Burr ragweed	
<i>Cabomba species</i>	Cabomba	
<i>Stachytarpheta cayennensis</i>	Cayenne snakeweed	
<i>Gaura parviflora</i>	Clockweed	
<i>Sonchus arvensis]</i>	Corn sowthistle	
<i>Cuscuta species]</i>	Dodder	
<i>Amelichloa brachychaeta,</i> <i>Amelichloa caudata</i>	Espartillo	
<i>Cenchrus brownii</i>	Fine-bristled burr grass	
<i>Pennisetum setaceum</i>	Fountain grass	
<i>Cenchrus biflorus</i>	Gallon's curse	
<i>Carthamus glaucus</i>	Glaucous starthistle	
<i>Scolymus hispanicus</i>	Golden thistle	
<i>Argemone mexicana</i>	Mexican poppy	
<i>Cenchrus echinatus</i>	Mossman River grass	
<i>Xanthium species</i>	Noogoora burr	
<i>Oryza rufipogon</i>	Red rice	

SPECIES NAME	COMMON NAME	MANAGEMENT CLASS
<i>Sagittaria platyphylla</i>	Sagittaria	
<i>Brassica barrelieri</i> subspecies <i>oxyrrhina</i>	Smooth-stemmed turnip	
<i>Picnomon acarna</i>	Soldier thistle	
<i>Helianthus ciliaris]</i>	Texas blueweed	
<i>Salix</i> species	Willows	
<i>Cyperus esculentus</i>	Yellow nutgrass	

This report should be cited as 'Eco Logical Australia 2013. City of Gold Coast Local Government Area Pest Management Plan. Prepared for City of Gold Coast.'

Acknowledgements

This document has been prepared by Eco Logical Australia Pty Ltd with support from City of Gold Coast.

Published March 2013

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