

Balonne Shire



PEST MANAGEMENT PLAN

2012 – 2016

Adopted 15th February 2013

SUMMARY

The ***Balonne Shire Pest Management Plan 2012-2016*** has been developed for the benefit of the entire community and continues with the work undertaken under the 2005-09 Plan. The expertise of many local stakeholders (including local and state government agencies, industry groups, environmental representatives, community groups and individual landholders) has been drawn on in planning for cooperative management of pests on all land within the shire boundaries.

The key objectives of the plan are to:

- Reduce the economic, environmental and social impacts of pests within Balonne Shire.
- Improve the use of the resources and expertise available for managing pests within the Shire.
- Prevent the establishment of new pests and minimize the spread of current pests.
- Improve the protection of environmentally significant areas.

This plan has been developed in accordance with the requirements of the *Land Protection (Pest and Stock Route Management) Act 2002* and will serve as a guide to all local land managers.

MISSION STATEMENT

Balonne Shire Council's vision is: "For the people: A vibrant dynamic community, living and celebrating our diversity, natural assets and talents".

Council's mission or purpose is: "To respond to community needs and expectations and to provide a range of services through quality leadership, policies and community representation".

One of Council's major goals is:

- To provide effective and efficient management of stock routes, animal and weed pests

The strategies that Council has identified are to:

- ▣ Provide effective management of rural services including stock routes, council controlled land, pest and rural lands management, and
- ▣ Partner with agencies to facilitate the development of a washdown facility to service the Balonne Shire.

To help achieve this Council has developed the "***Balonne Shire Pest Management Plan 2012-2016***".

The mission of the *Balonne Shire Pest Management Plan 2012 – 2016* is to:

**MINIMISE THE SPREAD AND IMPACT OF PESTS WITHIN BALONNE
SHIRE THROUGH A COOPERATIVE APPROACH WITH ALL
STAKEHOLDERS**

ABBREVIATIONS

BSC	Balonne Shire Council (abbreviation used in tables)
Council	Balonne shire Council (abbreviation used in text)
DAFF	Queensland Department of Agriculture, Fisheries and Forestry
IT	Information Technology staff employed by the Balonne Shire Council
LPO	Land Protection Officer with the Queensland Department of Natural Resources and Mines
NP&WS	National Parks and Wildlife Service
QMDC	Queensland Murray-Darling Committee
PWG	Pest Working Group within Balonne Shire Council
SRN	Stock Route Network
SWNRM	South West Natural Resource Management Ltd
SRS	Stock Route Supervisor employed by the Balonne Shire Council
WONS	Weeds of National Significance
WS	Works Supervisor employed by Balonne Shire Council

DEFINITIONS

1080	Sodium fluoroacetate poison for vertebrate pests
Declared Animal	Animals that are declared pests under the <i>Land Protection (Pest and Stock Route Management) Act 2002</i> . Land managers are responsible for the control of declared animals on their land.
Pest Animal	An exotic animal, causing detrimental impacts on the environment, industry or community activities. A pest animal maybe a declared animal. Pest animals are managed for impact reduction, usually through some form of population control.
Pestinfo	Statewide weed and pest animal database.
Problem Animal	An individual or local population of native animals that sometimes conflict with local or immediate human activities. Native species are generally protected under the <i>Nature Conservation Act 1992</i> and are managed for conservation goals. Control is undertaken by authorised officers or under permit.

Rapid Response
Agreement

An agreement between neighbouring Local Governments to ensure a framework is in place to rapidly coordinate resources across a region to respond to critical outbreaks of Parthenium weed, to help prevent infestation of neighbouring regions. Gives stakeholders and authorities increased capacity to deal with critical outbreaks of Parthenium.

TABLE OF CONTENTS

	<u>Page</u>
Summary	ii
Mission Statement	ii
Abbreviations	iii
Definitions	iii
1.0 Introduction	1
1.1 Background	1
1.1.1 Impacts of Pest Animals and the Consequences of Doing Nothing	1
1.1.2 Impacts of Pest Plants and the Consequences of Doing Nothing	2
1.1.3 Responsibilities	3
1.1.4 Current Resources	3
1.2 Purpose	5
1.3 Objective	5
1.4 Scope	5
1.5 Context and Related Plans	5
1.6 Stakeholder Input	9
1.7 Consultation Process	11
1.8 Review Process	11
2.0 Desired Outcomes, Strategic Actions and Success Indicators	11
2.1 Desired Outcome One: Stakeholders are informed, Knowledgeable, and have ownership of weed and pest animal management	12
2.2 Desired Outcome Two: All stakeholders are committed to and undertake coordinated management of weeds and pest animals	15
2.3 Desired Outcome Three: Reliable information is available as a basis for decision making	17
2.4 Desired Outcome Four: Strategic directions are established, maintained, and owned by all stakeholders	19
2.5 Desired Outcome Five: Introduction, spread, and establishment of weeds and pest animals is prevented	22
2.6 Desired Outcome Six: Integrated systems for managing the impacts of established weeds and pest animals are developed and widely implemented	25
3.0 Priority Pest Species	27
3.1 Classification	27
3.1.1 State	27
3.1.2 Local	28
3.2 Pest Plants	28
3.2.1 Prevention of Introduction	29
3.2.2 Early Detection & Eradication	30
3.2.3 Containment	33
3.2.4 Promote Awareness	34

3.3	Pest Animals	35
3.3.1	Prevention of Introduction	35
3.3.2	Early Detection & Eradication	35
3.3.3	Containment	36
3.3.4	Promote Awareness	37
4.0	High Priority Pests Annual Work Plans	38
4.1	Harrisia Cactus	40
4.2	Coral Cactus	41
4.3	Hudson Pear	42
4.4	Hymanachne	43
4.5	Mother-Of-Millions	44
4.6	Parthenium	45
4.7	Parkinsonia	48
4.8	Locusts	50
4.9	Wild Dogs / Dingoes	52
4.10	Rabbits	55
4.11	Feral Pigs	56
4.12	Foxes	58
4.13	Tilapia	59
4.14	Tramp ants	60
5.0	Emergency Response	61
6.0	Implementation	61
	Appendices	63

TABLES

	<u>Page</u>
Table One	Principles of Pest Management
Table Two	Documents significant to the <i>Balonne Shire Pest Management Plan 2012 - 2016</i>
	6
	7

APPENDICES

	<u>Page</u>
Appendix One	Pest Plants and Animals Recorded within Balonne Shire
	63

1.0 INTRODUCTION

The *Land Protection (Pest and Stock Route Management Act) 2002* requires local government to develop, adopt and implement local area pest management plans as part of an integrated planning framework for managing declared pest plants and animals across Queensland.

The ***Balonne Shire Pest Management Plan 2012 to 2016*** has been developed using the ***Balonne Shire Pest Management Plan 2005-2009*** as its' basis and in conjunction with a local community working group. It is consistent with Council's Corporate and Operational Plans, state management strategies for pest animals and weeds, state guidelines, plans and other relevant environmental legislation.

This Plan only covers declared pests under the *Land Protection (Pest and Stock Route Management Act) 2002* and does not include native animals and plants which may also be considered pests in various areas of the Shire.

1.1 BACKGROUND

Balonne Shire covers 31,119 square kilometres and is heavily reliant upon agricultural industries (crops and livestock). Covering about 90% of the total Shire area the leading primary industries in the Shire include cotton, sheep/wool, grain crops, wild game harvesting, fruit/vegetable production and beef/cattle industries.

Pest animals and plants are reported by the Department of Natural Resources & Mines (2004) as costing Queensland over \$600 million annually in lost production and control costs. Effective management of pests helps protect the agricultural industries upon which Balonne Shire relies, as well as, protect the environment and human health.

There is some potential for growth of the coal seam gas industry, particularly in the north of the Shire, which may result in substantially more vehicular traffic across rural land. This may increase the likelihood of the spread of pest plant seeds.

Following the floods of 2010, 2011 and 2012, significant road damage requires reappear. This will result in earthmoving equipment moving through various areas with the potential to carry weed seeds.

Effective management of pests within the Shire results in considerable public benefit as well as private benefits for the Balonne Shire and surrounding communities.

1.1.1 Impacts of Pest Animals and the Consequences of Doing Nothing

Priority Pest animals within Balonne Shire are outlined in Section 3.3.

There is currently no specific data available on the cost of impact each pest has on the Shire, however, based upon current knowledge their potential impact could be devastating if there was no management undertaken to prevent, eradicate, contain, control and/or minimise their spread.

Pest animals have the potential to alter ecosystem function, reduce primary industry productivity and profitability, seriously limit the long-term sustainability of natural and agricultural landscapes and can impact on human and animal health.

Some economic and environmental impacts recorded for pest animals include:

- Direct predation
- Spread of disease
- Degradation of native habitat
- Destruction or damage to crops, pasture and livestock
- Competition for habitat, shelter and food resources with both domestic and native animals

The true economic impact of pest and problem animals within Queensland is unknown and poorly researched, particularly in the areas of environmental and social costs. However as an indication, the Queensland Department of Agriculture, Fisheries and Forestry have estimated feral pigs reduce grain production in Queensland by \$12 million annually, rabbits cost Australia's economy between \$600 million and \$1 billion annually and through a study undertaken by Rural Management Partners wild dogs cost the state \$33 million per year in livestock losses, disease spread and control. Given that Balonne Shire relies heavily on its agricultural industries it is also fair to say that the impact of not managing pest animals would be devastating for the Shire.

1.1.2 Impacts of Pest Plants and Consequences of Doing Nothing

Priority pest plants within Balonne Shire are outlined in Section 3.2. A full list of pest plants recorded within the Shire is provided in Appendix I.

As with pest animals, there is currently no specific data available on the cost of impact each pest plant has on the Shire, however, based upon current knowledge their potential impact could be devastating if there was no management undertaken to prevent, eradicate, contain, control and minimise their spread.

Pest plants compete with pasture species to reduce available grazing, may be toxic to stock (such as Mother-of-Millions), compete with crops for space, water and nutrients and in the case of aquatic pest plants can affect water quality and biodiversity within streams and wetlands. Pest plants also degrade natural vegetation and impact on biodiversity. Social impacts include effects on human health, recreation, safety and aesthetics.

The true economic impact of pest and problem animals within Queensland is also unknown and poorly researched, particularly in environmental and social areas. However as an indication, the Queensland Department of Natural Resources & Mines has estimated the annual cost of weeds in winter crops in southern Queensland alone as \$40 million. In 1992 it was also estimated that Parthenium cost the beef industry \$16.5 million per year in reduced beef production and control costs. Balonne Shire relies heavily on its agricultural industries and based on these statistics it is feasible to say that the impact of not managing pest plants would be devastating for the Shire.

1.1.3 Responsibility

Declaration under the *Land Protection (Pest and Stock Route Management) Act 2002* imposes a legal responsibility for control of declared pest animals and plants by all landowners on land under their management. A full list of declared plants and animals can be found on the Queensland Department of Agriculture, Fisheries and Forestry website: www.daff.qld.gov.au.

This *Pest Management Plan* has been developed to identify strategies and actions Council intends to implement to manage pest plants and animals on lands under their control to fulfil their obligations under the *Act*.

Individual landholders have the responsibility of stopping the spread of weeds on their land, minimising the introduction of new pests, monitoring pest species and their distribution, and observing hygiene measures and regulations. Under Section 77(1) of the *Act* a landowner must also take reasonable steps to keep their land free of class 1 and class 2 pests where “their land” includes;

- unfenced land comprising part of a road or stock route that adjoins or is within the owner’s land
- other land that is fenced in with the owner’s land
- the bed, banks and water of a watercourse on the owner’s land, unless the owner holds a declared pest permit
- the bed, banks and water to the centre-line of a watercourse forming a boundary, or part of a boundary, of the owner’s land.

The Department of Agriculture, Fisheries and Forestry and local government provide expertise and technical information to assist.

Local Governments and other issuing entities may give an owner written notice (a “pest control notice”) if a landowner does not comply with their obligations under the *Act*. This notice would include a reasonable action the owner must take against the pest within a stated reasonable period. A penalty could apply if the action is not undertaken.

1.1.4 Current Resources

Council employs one full time Officer, who is authorised to:

- Control pests on land under its control; and
- Administer and enforce the *Land Protection (Pest and Stock Route Management) Act 2002*, by monitoring pest infestations within the Shire.

This Officer spends about 50% of their time on pest plant and animal management and about 50% on stock route management.

Other resources Council has to help control animal and plant pests within the Shire include:

Vehicle:	1 x 4x4 vehicle
Major Equipment:	1 x 4x4 motor bike with spraying attachment
	1 Large broom spray unit mounted on a trailer
	1 Hand held spray unit
	1 Quick Spray Unit
	1 Hand Held Global Positioning System (GPS) unit
	Baiting Equipment (includes 1080 trailer, mixer etc)

Operational Funds: Mapping Software
 Refer Annual Financial Plan

Neighbouring Councils have additional spray units that Balonne Shire Council may borrow if required, providing the unit isn't already in use. Some neighbouring Local Governments have also developed a "Rapid Response Agreement" for which Balonne Shire Council is a party.

1.2 PURPOSE

The purpose of the *Balonne Shire Pest Management Plan 2012 – 2016* is to identify resources and actions required to achieve the following outcomes which are consistent with the *Queensland Pest Animal Strategy 2002-2006* and the *Queensland Weeds Strategy 2002-2006* developed by the Department of Natural Resources & Mines:

- ❑ Stakeholders are informed, knowledgeable, and have ownership of weed and pest animal management.
- ❑ All stakeholders are committed to and undertake coordinated management of weeds and pest animals.
- ❑ Reliable information is available as a basis for decision making.
- ❑ Strategic directions are established, maintained, and owned by all stakeholders.
- ❑ The introduction, establishment, and spread of weeds and pest animals are prevented and/or minimised.
- ❑ Integrated systems for managing the impacts of established weeds and pest animals are developed and widely implemented.

This Plan also identifies weeds and pests within the Shire, their impact, local priority, distribution and declaration status.

An annual action plan is incorporated and includes performance indicator targets, operational objectives, operational actions and resources able to be allocated to the strategic management of each priority pest identified in the Plan.

1.3 OBJECTIVES

The key objectives of the plan are to:

- Reduce the economic, environmental and social impacts of pests within Balonne Shire.
- Improve the use of the resources and expertise available for managing pests within the Shire.
- Prevent the establishment of new pests and minimize the spread of current pests.
- Improve the protection of environmentally significant areas.

1.4 SCOPE

The *Balonne Shire Pest Management Plan 2012-2016* covers the entire Balonne Shire, including land owned or controlled by individuals, industry or the state.

Species targeted within this Plan are listed in Section 3.0. The local distribution outlined in this section only relates to land within the Shire managed by Council and does not include freehold or leasehold land, national parks, state forests and other land managed by the state.

1.5 CONTEXT AND RELATED PLANS

Council also supports the principles of pest management within the *Queensland Pest Animal Strategy 2002-2006* and the *Queensland Weed Strategy 2002-2006* and is consistent with the *Pest Management Guidelines* developed by the Department of Agriculture, Fisheries and Forestry. The principles of pest management are outlined in Table One.

Table One

Principles of Pest Management

Principle	Description
Integration	Pest management is an integral part of managing natural resources, development and agricultural systems.
Public Awareness	Public awareness and knowledge of pests must be raised to increase the capacity and willingness of individuals to manage pests.
Commitment	Effective pest management requires a long-term commitment to pest management by the community, industry groups and government entities.
Consultation and partnership	Consultation and partnerships arrangements between local communities, industry groups, State government agencies and local governments must be established to achieve a collaborative approach to pest management.
Planning	Pest management planning must be consistent at local, regional, state and national levels to ensure target priorities for pest management are identified at each level.
Prevention	Preventative pest management is achieved by: <ol style="list-style-type: none">1. Preventing the spread of pests and viable parts of pests, especially by human activity; and,2. Early detection and intervention to control pests.
Best Practice	Pest management must be based on ecologically and socially responsible pest management practices that protect the environment and the productive capacity of natural resources.
Improvement	Research about pest, and regular monitoring and evaluation of pest control activities, is necessary to improve pest management practices.

The relationship between these principles, desired outcomes and strategic actions are outlined in Section 2.0.

A number of other regional, state and national plans, strategies and policies have been developed to address pest management and related issues on a larger scale. The *Balonne Shire Pest Management Plan 2012 – 2016* was developed and will operate within these frameworks to achieve a collaborative approach to pest management. Documents that are significant to this Plan are listed in Table Two.

Table Two

Documents Significant to the Balonne Shire Pest Management Plan 2005 – 2009

Scale	Natural Resource Management	Pest Management	Pest Species
National	<ul style="list-style-type: none"> • National Action Plan for Salinity and Water Quality • National Strategy for the Conservation of Australia's Biodiversity • National Guidelines and Principles for Rangeland Management • <i>Environment Protection and Biodiversity Conservation Act</i> 	<ul style="list-style-type: none"> • National Weeds Strategy • Managing Vertebrate Pests – Principles and Strategies • Model Code of Practice for the Welfare of Animals – Feral Livestock Animals Destruction or Capture, Handling and Marketing 	<ul style="list-style-type: none"> • Strategies for Weeds of National Significance (particularly Parthenium and Parkinsonia) • National Pest Animal Species Threat Abatement Plans • Australian Plague Locust Commission Strategic Plan
State	<ul style="list-style-type: none"> • Queensland Biodiversity, Conservation and Natural Resource Management Statement. • <i>Nature Conservation Act 1992</i> • <i>Water Act 2000</i> • <i>Environmental Protection Act 1994</i> (eg. control of Dingoes) • <i>Transport Infrastructure Act 1994</i> • <i>Land Title Act 1994</i> • <i>Vegetation Management Act 1999</i> • <i>Animal Care and Protection Act 2001</i> • <i>Queensland Heritage Act 1992</i> (eg. managing pests in areas of cultural heritage) • <i>Soil Conservation Act 1986</i> (eg. using non-invasive species to minimise soil loss) • <i>Agricultural and Veterinary Chemicals (Queensland) Act 1994</i> (eg. using pesticides appropriately) 	<ul style="list-style-type: none"> • Queensland Weeds Strategy • Queensland Pest Animal Strategy • Control of Exotic Pest Fishes Strategy 	<ul style="list-style-type: none"> • Queensland Locust Management Strategy • Queensland Mouse Management Strategy • Queensland Parthenium Strategy • Queensland Wild Dog Management Strategy • Queensland Rabbit Management Strategy

Table Two con't.....

Scale	Natural Resource Management	Pest Management	Pest Species
Regional and Catchment	<ul style="list-style-type: none"> Regional Natural Resource Management Plan (Queensland Murray-Darling) 		<ul style="list-style-type: none"> APEC Parthenium Strategy for Southern Queensland.
Local Government	<ul style="list-style-type: none"> Balonne Shire Council Stock Route Management Plan 2012-2016 Balonne Shire Council Corporate Plan 2009/2013 Balonne Shire Council Operational Plan 2009-2013 Council of the Shire of Balonne Planning Scheme Balonne Shire Council Local Law No. 13 (Control of Pests) 	<ul style="list-style-type: none"> Balonne Shire Pest Management Plan 2012-2016 	
Property	<ul style="list-style-type: none"> Sub-catchment plans Individual Property Plans Environmental Management Systems (EMS's) QPWS Park Plans 		

1.6 STAKEHOLDER INPUT

A working group was established to advise Council on the development of the *Pest Management Plan* and to develop a collaborative approach to pest management. Stakeholders involved and their responsibilities in this process are outlined in the table below.

Stakeholders	Representative	Responsibility
Queensland Department of Natural Resources & Mines	Mr Graham Hardwick Principal Biosecurity Officer Roma	<ul style="list-style-type: none"> Alignment of <i>Balonne Shire Pest Management Plan</i> with State management strategies, policies and guidelines. Provide local knowledge.
Environment and Heritage Protection	Mr Andy Coward Ranger in Charge Un-staffed Parks & Southwest Pest Management Coordinator National Parks & Wildlife Service Roma	<ul style="list-style-type: none"> Alignment of <i>Balonne Shire Pest Management Plan</i> with State management strategies, policies and guidelines. Provide Local Knowledge.
SWNRM	Ms Amy Steer	<ul style="list-style-type: none"> Provide expert knowledge.
QMDC	Ms Pippa Bagshaw	<ul style="list-style-type: none"> Representative of regional NRM group.
DTMR	District Engineer (TBA)	<ul style="list-style-type: none"> Provide knowledge and integration with road construction/maintenance and machine movement.
CSG Industry	Jamie Gorrie, Advisor Land Management, SANTOS	<ul style="list-style-type: none"> Provide knowledge and integration with CSG plant and equipment movement.
Landcare / Catchment Groups	Mr Ian Tutt Landcare Coordinator Warroo/Balonne Landcare	<ul style="list-style-type: none"> Alignment of <i>Balonne Shire Pest Management Plan</i> with regional natural resource management plan objectives and outcomes.
BSC Wild Dog Advisory Committee	Mr Jeff Betts Mr Bill Winks Mr Adam Pardbury Mr Rod Avery Mr Peter Gaunt	<ul style="list-style-type: none"> Provide local knowledge.
Balonne Shire Council	Mr Karl Hempstead Stock Routes Supervisor Balonne Shire Council	<ul style="list-style-type: none"> Provide Local Knowledge. Identify Balonne Shire Council direction and available resources.
Balonne Shire Council	Cr. Rod Avery Cr. Robbie Paul Cr. Ian Winks CEO – Scott Norman	<ul style="list-style-type: none"> Provide Local Knowledge. Identify Balonne Shire Council direction and available resources.

During the development of the initial Plan, many key organizations and the Balonne Shire community were invited to comment on the draft during the consultation process outlined in Section 1.7. Where reasonable, these organizations have been advised of the update to the Plan. The key organizations include:

Agricultural Industry:

- Agforce
- St George Cotton Growers' Association
- Dirranbandi Cotton Growers' Association
- Drovers

Service Industry:

- Ergon
- Queensland Rail
- Telstra

Traditional Owner Groups

- South Queensland Traditional Owners Natural Resource & Cultural Heritage Management Association
- Kamilaroi Lands Trust

Government Departments:

- Environmental Protection Agency (Queensland Parks & Wildlife Service)
- Queensland Department of Natural Resources and Mines
- Department of Local Government and Planning
- Local Government Association of Queensland
- Department of Main Roads

Pest Management Groups:

- Darling Downs Moreton Rabbit Board
- Australian Plague Locust Commission
- Land Protection Council

Neighbouring Shires:

- Paroo Shire Council
- Maranoa Regional Council
- Western Downs Regional Council
- Goondiwindi Regional Council
- Moree Plains Shire Council
- Walgett Shire Council
- Brewarrina Shire Council

Natural Resource Management Groups:

- Warroo / Balonne Landcare Group
- Dirranbandi Landcare Group
- Nindigully Landcare Group
- Maranoa-Balonne Catchment Management Association
- Queensland Murray Darling Committee
- Bindle Best Practice Group
- Border Rivers Catchment Management Association

1.7 CONSULTATION PROCESS

For the development of the Balonne Shire Pest Management Plan 2005-2009, the Balonne Shire and surrounding community were invited to comment on the Draft Plan for a 28 day period in January/February 2005. Notice of the draft Plan for Public Consultation was published in the Balonne Beacon (local newspaper) and on the Balonne Shire Council web site.

Copies of the draft Plan were also sent to each of the Stakeholders listed in Section 1.6, inviting them directly to comment on the Plan.

1.8 REVIEW PROCESS

To enable an effective review of the Balonne Shire Pest Management Plan 2005-2009, stakeholder input was again sought during November 2012.

Further major reviews of the *Balonne Shire Pest Management Plan 2005 - 2009* will be undertaken every four years, with necessary minor updates being made on an annual basis to reflect changes in resources, pest threats, legislation and/or policy.

2.0 DESIRED OUTCOMES, STRATEGIC ACTIONS AND SUCCESS INDICATORS

The purpose of the *Balonne Shire Pest Management Plan 2012 – 2016* is to identify resources and actions required to achieve the following outcomes:

- ❑ Stakeholders are informed, knowledgeable, and have ownership of weed and pest animal management.
- ❑ All stakeholders are committed to and undertake coordinated management of weeds and pest animals.
- ❑ Reliable information is available as a basis for decision making.
- ❑ Strategic directions are established, maintained, and owned by all stakeholders.
- ❑ The introduction, establishment, and spread of weeds and pest animals are prevented and/or minimised.
- ❑ Integrated systems for managing the impacts of established weeds and pest animals are developed and widely implemented.

Each desired outcome and associated strategic objectives, actions and success criteria are outlined in Sections 2.1 to 2.6.

2.1 Desired Outcome One:

Stakeholders are informed, knowledgeable and are committed to pest weed and animal management

State Principle:

- Public Awareness

Success Criteria:

- The extent to which appropriate information is available to stakeholders.
- How aware the community are of pests within the Shire and their impacts.
- How aware regional and state organizations are of pest management activities within the Shire.
- The degree to which individuals and stakeholders pursue education and training.

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Awareness	To increase community, industry, agribusiness and government awareness of pests and their impacts.	<p>Build partnerships with local Landcare and tourist groups to produce an information booklet or poster which lists weeds identified within this Plan, their impact, a description and photo (using the “Pest Fact” information provided by DAFF) and control measures and provide this booklet or poster to:</p> <ul style="list-style-type: none"> • All Rate payers • Government departments and agencies (E.g., Sunwater) • Owners / Drivers of cattle travelling or agisting within the Shire • Tourists through accommodation businesses and information centres • Sub-catchment planning groups • Game Harvesters • Service Industries (Telstra, Ergon) • Oil & Gas Industries <p>And within this same information package ask these stakeholders to notify Council of any pest sightings.</p>	BSC Landcare/QMDC Industry (eg. cotton, grazing, cropping groups)	Ongoing	No. of information booklets or posters produced and distributed within each of the community groups identified.

Desired Outcome One con't...

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Awareness con't...	To increase community, industry, agribusiness and government awareness of pests and their impacts con't...	Build partnerships with other organizations (including neighbouring Shire Councils, industry and tourist bodies) to source funding and provide signage as required in strategic areas along stock routes and roadways encouraging users to be aware of priority pest plants, how they are spread and the impacts they can have on the local community.	BSC	Ongoing	No. of locations identified and no. of pest awareness signs erected.
		Keep the regional organization of Councils, DAFF and QMDC aware of pest plant and animal activities and management within the Balonne Shire by participating in regional pest management meetings.	BSC	On-going	At least two regional meetings attended per year. Balonne Shire Council pest management priorities reflected in Regional plans and activities.
		Promote good local pest management activities by Council.	BSC	On-going	No. of articles published in local and regional newspapers.
		Build partnerships with local Landcare and tourist organizations to organise pest plant and animal awareness raising activities at local events (including shows, field days, Agforce / grower meetings and popular tourist sites). For example, display the Parthenium trailer at the St. George and Dirranbandi Shows.	SRS	On-going	No. of events at which pest plant and animal resource material is displayed.

Desired Outcome One Con't...

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Education and Training	To enhance local government officer's knowledge of pest impacts and their capacity and skills in pest management.	<p>Council's Stock Route Supervisor and where appropriate the Works Supervisor and Information Technological Officers attend:</p> <ul style="list-style-type: none"> Nationally accredited competency-based training in weed and vertebrate pest management. Workplace health and safety training Accredited vehicle wash down training Queensland Department of Health approved training in the use of sodium fluoroacetate (1080) Agsafe training courses such as 'Principles of pest management' and 'Chemical handling, storage, and transport' Compliance training GPS and MapInfo training General Computer training Relevant pest management conferences and workshops 	SRS WS IT	On-going	<p>Number of Council staff that achieve competencies.</p> <p>Extent of pests identified and eradicated by Council staff.</p> <p>Pest mapping information is up-to-date and readily assessable using MapInfo.</p>
Availability of Information	To make readily available to all stakeholders data on the distribution, abundance and current management status of pests.	<p>On Council's web site provide:</p> <ul style="list-style-type: none"> the <i>Balonne Shire Pest Management Plan 2012 - 2016</i> links to DAFF web site (includes current state wide knowledge of the distribution of pests) urban district maps. 	BSC	Ongoing	<i>Balonne Shire Pest Management Plan</i> and links to DAFF web site able to be accessed on Council's web site (this can be gauged on the web site).
		Digitally record and continually update all known locations of priority pests identified in this Plan within the Shire using MapInfo and periodically provide this information to DAFF.	SRS & IT Landcare/QMDC DAFF	On-going	DAFF maps showing the distribution of pests that include update data from Council.
		Use media such as local newspapers, radio, television and web sites to disseminate pest information to the community.	Landcare/QMDC BSC DAFF	On-going	No. of articles or advertisements published.

2.2 Desired Outcome Two:

All Stakeholders are committed to and undertake coordinated management of pest weeds and animals

State Principles:

- Commitment
- Consultation and Partnership

Success Criteria:

- Number of stakeholders working in partnership on long-term pest management.
- Extent to which stakeholders comply with and enforce the *Act*.

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Long term commitment	Establish long term commitment by stakeholders to pest plant and animal management.	Establish partnerships with key stakeholders to undertake strategic actions identified within this Plan.	BSC	Ongoing	No. of partnerships established.
		Maintain a working group of key stakeholders to review the <i>Balonne Shire Pest Management Plan 2012 - 2016</i> .	BSC	On-going	Working group established and meets once per year.
		In conjunction with DAFF and other Local Governments encourage regional groups to develop and implement reward and recognition system for good pest management.	BSC	On-going	Reward and recognition system established. No. of awards received within Balonne Shire.
		Continue to support the Queensland Parks & Wildlife Service to bait national parks and state forests within a coordinated approach.	BSC	On-going	Baiting of National Parks and State Forests continued and conducted during the coordinated baiting campaign.

Desired Outcome Two Con't...

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Compliance and Enforcement	Enforce compliance with relevant Acts dealing with the management of pest plants and animals.	Maintain a register of notices issued to land managers and other enforcement activities.	BSC	On-going	No. of compliance notices issued. Percentage of compliance with first and second notices issued.
		Develop procedures for communication with state land managers and their lessees about pest management.	BSC	Ongoing	Procedure document produced.
		Participate in developing a state wide network of local government compliance officers.	DAFF BSC	On-going	Network established and operating.
		In conjunction with other stakeholders develop and implement procedures for assessing and declaring pest species under model local laws.	DAFF BSC Other Councils	Ongoing	Procedure document produced and available.

2.3 Desired Outcome Three:

Reliable information is available as a basis for decision-making

State Principles:

- Improvement

Success Criteria:

- The extent to which data is collected and used in pest management.
- The level of stakeholder understanding of pest biology, ecology and impacts (including the costs of action and non-action)
- The extent to which the community attitudes to pest management are understood.

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Data collection and assessment	To collect, use, and make available to all stakeholders data relevant to weed and pest animal management.	Map high and medium priority pest plants and animals and contribute this information to the DAFF Pestinfo data base and Annual Pest Assessment (state wide mapping of all declared species).	SRS & IT	On-going	Amount of information from Council included on PestInfo.
		Develop monitoring guidelines and field evaluation record sheets. Continually monitor and evaluate the effectiveness of control activities (eg. result of spraying "x" priority pest plant).	DAFF SRS	On-going	Percentage of pest control activities for which monitoring and evaluation data is recorded.
		For regional planning purposes share pest data information with neighbouring local governments, Landcare/QMDC, DAFF and other state agencies and natural resource management groups).	BSC	On-going	Balonne Shire Council pest information included in regional and state maps and plans.
Pest biology and pest impacts	To further the understanding of the biology, ecology and impacts of pest animals and plants.	Consider pest behaviour (biology and ecology), pest impacts (economic, social, and environmental), and pest control costs in the local declaration and prioritization of pest species.	PWG	On-going	Percentage of priority pests determined with reference to available information on behaviour, impacts, and control costs.

Desired Outcome Three con't...

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Pest biology and pest impacts con't...	To further the understanding of the biology, ecology and impacts of pest animals and plants con't...	Support, and/or in partnership with, neighbouring Local Governments, regional groups and state government departments develop projects to determine the ecology (where required) and local and regional impact of high priority pests.	PWG	Ongoing	No. of projects developed, implemented and their outcomes.
Community attitudes	To further the understanding of community attitudes to weed and pest animal management	Where possible, support regional organizations and state government departments to gather information on community awareness and attitudes about pest animals and plants.	BSC	On-going	No. of requests made by regional organizations and state departments to Council and no. of requests fulfilled.

2.4 Desired Outcome Four:

Strategic directions are established, maintained and owned by all stakeholders

State Principles:

- Planning
- Integration

Success Criteria:

- The number of pest management plans at different levels incorporated into the planning framework
- The degree of coordination in implementing, evaluating and reviewing pest management plans
- The proportion of pest management actions that are adequately resourced
- The extent to which pest management actions are integrated with planning at different levels

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Planning	To create a planning framework for pest plant and animal management	Ensure that <i>the Balonne Shire Pest Management Plan 2012 - 2016</i> is consistent with related strategies and plans.	PWG	On-going	No inconsistencies between plans.
		Encourage Landholders to develop property pest management plans for high priority pest situations	Landcare/QMDC BSC DAFF	On-going	Number of property pest management plans produced. Change in density or impact of pests.
Strategy management and coordination	To implement, evaluate, and review integrated weed and pest animal strategies	Review the annual action plan three months before the end of each financial year.	PWG	Yearly	Percentage of annual action programs given timely review.
		Complete each new <i>Balonne Shire Pest Management Plan</i> three months before the expiry of its predecessor.	PWG	Every 4 years	Completion of new Pest Management Plan prior to expiry of predecessor.
		Implement actions of priority pest plant and animal actions identified within the <i>Balonne Shire Pest Management Plan 2012 - 2016</i> .	BSC SRS DAFF IT Landcare/QMDC Industry, Community and Indigenous groups State Agencies Landholders	On-going	Percentage of actions implemented.

Desired Outcome Four con't...

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Strategy management and coordination con't...	To implement, evaluate, and review integrated weed and pest animal strategies con't...	Participate in the development of regional pest plant and animal management plans, workshops and actions, as appropriate and where funding / resources permits (ie. for across shire or similar issues).	BSC & SRS	On-going	No. of pest management activities being addressed regionally by local governments. No. of regional activities Council is involved in.
Resources	To efficiently and adequately resource weed and pest animal management	Commit to adequately resourcing the <i>Balonne Shire Pest Management Plan 2012 – 2016</i> and in particular those actions relating to high priority pests.	BSC DAFF	On-going	Percentage of this Plan adequately resourced and implemented. Percentage of resources allocated according to pest priorities.
		In partnership with other local governments within the region continue to support a review of local government precepts payable for the Barrier Fence. Continue to submit the local government precept to the Minister of Agriculture, Fisheries and Forestry for the Wild Dog Barrier Fence, plague locust control, general research & extension and rabbit control and research.	BSC	2005	Precepts reviewed. Precepts paid.
		Seek funding and other resources wherever possible for actions within the <i>Balonne Shire Pest Management Plan 2012 - 2016</i> .	BSC Landcare/QMDC DAFF Industry Landholders	On-going	Resources (actual dollars and in-kind) obtained from non-local government sources.
		Establish fair and equitable rates and charge fees to private landowners for pest management services undertaken Council on private land.	BSC	Reviewed annually	Value of income derived from service provision versus expenses of work undertaken.

Desired Outcome Four con't...

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Resources con't...	To efficiently and adequately resource weed and pest animal management con't...	Assess the need for a special rate / charge to help fund actions within this Plan to respond to threats.	BSC	Ongoing	Value of potential income from special rates / charges and willingness of community to adopt.
		Include pest management actions in other Council planning documents and new development applications (including preventing weed seed spread, eradicating high priority weeds on new development sites, planting non-invasive species).	BSC	On-going	No. of pest management actions included in other Council planning documents and new development applications.
		Support regional organizations of Councils and Landcare / catchment groups to encourage all property land management planning processes to incorporate pest management as an integral component (eg. within sub-catchment planning, property planning, environmental management systems etc).	BSC DAFF Industry State Govt	On-going	Record of support provided by Council.
		Support the QMDC to have all mineral and energy companies adopt shire weed management plans as part of current recommended practices	BSC	On-going	Record of support provided by Council.

2.5 Desired Outcome Five:

Introduction, spread and establishment of weeds and pest animals is prevented

State Principles:

- Prevention

Success Criteria:

- The extent to which the introduction of new pests is prevented
- The extent to which the local establishment of new pests is prevented
- The extent to which pests are prevented from spreading

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Prevention	Prevent the introduction of new pest plants and animals	Adopt weed prevention protocols and promote the use of these protocols to other stakeholders. To help achieve this identify pest species for prevention of entry to the Shire by using a range of published information from neighbouring Shires and DAFF.	BSC DAFF Landcare/QMDC Industry	Ongoing	Percentage of key stakeholders using weed prevention protocols.
		Include the existing weed hygiene declaration as a requirement of the permit application for travelling and agistment stock.	BSC SRS	Ongoing	A weed hygiene declaration is obtained for all travelling and agisted stock.
		Promote weed hygiene declarations for movement of harvesting, construction, and other industry related equipment, as well as, the movement of fodder, soil and turf.	BSC SRS Overseer DAFF Landcare/QMDC Industry	On-going	Industry identified that a high percentage of key stakeholders are using weed hygiene declarations.
		Use and review a standard code of practice to minimise weed seed spread associated with any works undertaken by Council and outside contractors to Council (including on existing and new developments).	BSC SRS Overseer Neighbouring Councils	Ongoing	Code of practice produced and adhered to. No. of infrastructure development contracts that include weed prevention codes.

Desired Outcome Five Con't...

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Prevention con't...	Prevent the introduction of new pest plants and animals con't...	Be involved in a process to be coordinated by the QMDC to determine (i) strategic locations for wash down facilities within the Maranoa-Balonne and Border Rivers catchment, (ii) upgrades needed for existing facilities and (iii) the requirements for new facilities.	BSC SRS Landcare/QMDC DAFF Industry	Complete	Strategically placed wash down facilities constructed and used within the region.
Early detection and eradication		Target pests identified for "early detection and eradication" in Section 3.0 of this Plan.	SRS	On-going	Change in distribution of pests identified for "early detection and eradication" within the Balonne Shire.
		Conduct seasonal surveys of road sides and other critical areas within Balonne Shire for pest plants and animals.	SRS Landholders DAFF	On-going	
		Encourage landholders to provide Council with mapping details of high and moderate priority pests through industry, sub-catchment and other producer groups.	BSC Landcare/QMDC	On-going	No. of pest sites identified by landholders and sent to Council.
		Participate in a State Government exercises to develop a rapid response program for handling new infestations of Class 1 pests.	DAFF BSC	Ongoing	Evidence of BSC attending and/or providing comments into this process.

Desired Outcome Five con't...

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Containment	Contain and reduce priority pest infestations within the Balonne Shire	Target pests identified for “containment” in Section 3.0 of this Plan.	SRS	On-going	Change in distribution of pests identified for “containment” within Balonne Shire.
		Support rapid response agreements signed off by Balonne Shire Council with neighbouring Councils.	BSC & SRS Neighbouring Councils	On-going	No. of responses associated with the rapid response agreement/s.
		Respond to landholder requests promptly.	SRS	On-going	Requests dealt with within one working day upon receipt by Council.
		Contain Class 2 pests to core areas.	SRS	On-going	Change in distribution of Class 2 pests.
		Undertake quarterly inspections of landfills and known illegal dumping sites within the Shire to identify potential weed species escapees.	SRS	Ongoing	Inspections documented and steps taken to eliminate weed escapees..

2.6 Desired Outcome Six:

Integrated systems for managing the impacts of established weeds and pest animals are developed and widely implemented

State Principles:

- Best practice
- Improvement
- Commitment

Success Criteria:

- The extent to which best practice is adopted
- The extent to which the populations and impacts of established pests are reduced
- The degree of protection afforded to environmentally significant areas by weed management programs
- The extent to which local pest management practices are developed and improved
- The extent to which incentives enhance pest management

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Adoption of management techniques	Adopt and promote best practice in weed and pest animal management	Encourage industry, Landcare and catchment organizations to support the implementation of the <i>Balonne Shire Pest Management Plan 2012 – 2016</i> within their programs, as appropriate.	BSC	On-going	No. of programs that refer to or incorporate actions from this Plan.
		Support DAFF to distribute best practice publications to relevant stakeholders.	BSC	On-going	No. of requests from DAFF.
		Consider timing, integrated techniques, non-target damage, cost, prevention, animal welfare, workplace health and safety, monitoring, research, operational procedures and chemical registration requirements in planning.	PWG	On-going	A list of topics to be considered by Council during any planning is developed and provided to relevant working groups, as necessary.

Desired Outcome Six con't...

Issue	Strategic Objective	Strategic Actions	Who	When	Success Indicators
Population and impact management	Reduce pest populations and impacts	Participate in the coordination of plague pest animal management with all stakeholders and support the lead agency, as appropriate.	SRS	On-going	Amount and type of support provided. No. of complaints.
		Provide an "on demand" 1080 baiting service to help landholders manage wild dogs and where practical and possible participate in coordinated baiting campaigns.	SRS	As required	No. of landholders participating and area land and location covered in 'hot spot' areas.
Environmentally significant areas	Protect environmentally significant areas from weeds	Regularly monitor environmental significant areas for pests identified within <i>Balonne Shire Pest Management Plan 2012 – 2016</i> and develop appropriate management plans as required (giving consideration to developing partnership agreements with other key stakeholders and accessing non local government resource support).	SRS & BSC Landholders Landcare/QMDC DAFF QP&WS Sub-catchment groups	On-going	No. of significant areas targeted for pest management. No. of pest management plans for significant areas implemented.
Development of management practices	Develop new, and improve existing, pest plant and animal management practices	Advise regional pest / natural resource management groups of areas in which future research is required to help manage pest plants and animals within the Shire.	SRS & BSC DAFF Landcare/QMDC Landholders Industry	On-going	No. of regional pest / natural resource management groups attended.
Incentives	To offer incentives to stakeholders for practising pest management	Obtain support from other organizations (eg. QMDC), as required, and set up a small working group to investigate and assess the effectiveness (including cost) of potential incentives / disincentives for pest management activities within Balonne Shire.	BSC Landcare/QMDC DAFF Landholders Industry	Ongoing	Recommendations on the effectiveness of incentives / disincentives presented to Council.

3.0 PRIORITY PEST SPECIES

This section lists the priority pests identified as impacting or having the potential to impact upon the Balonne Shire's industry, community and environmental systems.

Each pest is listed under one of the following desired levels of control:

- Prevention of introduction
- Early detection and eradication
- Containment
- Promote awareness

The "local distribution" information provided in Section 3.2 and 3.3 only relates to land within the Shire managed by Council and does not include freehold or leasehold land, national parks, state forests and other land managed by the state.

3.1 CLASSIFICATION

A number of pest plants and animals are declared under *the Land Protection (Pest and Stock Route Management) Act 2002*. These plants are listed under three different categories outlined in Section 3.1.1.

In addition to this classification Council gives an additional priority rating of "high", "medium" or "low" to each pest animal and plant based on the current and potential impact of the pest within the Shire, where greater resourcing and attention is given to higher priority pests.

3.1.1 State

A Class 1 pest is one not commonly present in Queensland which, if introduced, would cause an adverse economic, environmental, or social impact. Class 1 pests established in Queensland are subject to eradication from the state. Landholders must take reasonable steps to keep land free of Class 1 pests. Other powers of the Act apply. For example, Class 1 animals can be kept only under permit.

Class 2 pests are established in Queensland and have, or could have, an adverse economic, environmental or social impact. Their management requires coordination and they are subject to existing programs. They may also be new pests requiring state coordination, and subject to local government, community or landholder-led programs. Landholders must take reasonable steps to keep land free of Class 2 pests. Other powers of the Act apply.

Class 3 pests are plant species established in Queensland which have, or could have, an adverse economic, environmental, or social impact. Their impact is primarily environmental. A pest control notice for Class 3 pests can be issued only for land that is, or is adjacent to, an environmentally significant area. Only some of the other powers of the Act apply.

3.1.2 Local

Within Local Law No. 13 (Control of Pests) Council may, by local law policy, declare an animal or plant of a specified species to be a pest. There are no animals or plants currently declared by Council under this local law.

3.2 PEST PLANTS

Within the following tables the local distribution only relates to land within the Shire managed by Council and does not include freehold or leasehold land, national parks, state forests and other land managed by the state.

3.2.1 Prevention of Introduction (Plants)

Common and scientific names	Local Priority	Local distribution	Declared status	Impacts
Bathurst Burr <i>Xanthium spinosum</i>	Medium	Not present within Balonne Shire stock routes, reserves and other land managed by Council	Not Declared	Contaminates wool and competes with summer crops.
Fireweed <i>Senecio madagascariensis</i>	Medium	Not present within Balonne Shire stock routes, reserves and other land managed by Council	Class 2	Competes with pasture and is toxic to stock.
Honey Locust <i>Gleditsia</i> spp. including cultivars and varieties	Medium	Not present within Balonne Shire stock routes, reserves and other land managed by Council.	Class 1	Invasive tree that can smother pastures and native vegetation and inflict painful injuries with its long spines. It is a prolific seeder and can rapidly form dense thickets restricting stock, vehicle and human movement.
Salvinia <i>Salvinia</i> spp. other than <i>S. molesta</i>	Medium	Not present within Balonne Shire stock routes, reserves and other land managed by Council.	Class 1	Can form dense mats over the surface of slow-moving waterways, including dams and reservoirs. Prolific growth can prevent recreational activities, block irrigation equipment and displace native plants and wildlife.
Thornapples <i>Datura</i> spp.	Medium	There was a small area around an old set of sale yards near St. George, which has been eradicated.	Not Declared	Compete with summer growing crops and pastures for moisture and nutrients. The plants, being large and coarse, also interfere with harvesting equipments. All parts of the plant, particularly seeds, are poisonous to animals, including humans.
Water Lettuce <i>Pistia stratiotes</i>	Medium	Not present within Balonne Shire stock routes, reserves and other land managed by Council.	2	Can form dense mats over the surface of slow-moving waterways, including dams and reservoirs. Prolific growth can prevent recreational activities, block irrigation equipment and displace native plants and wildlife.

3.2.2 Early Detection and Eradication (Plants)

Common and scientific names	Priority	Local distribution	Declared status	Impacts
African Lovegrass <i>Eragrostis curvula</i>	Medium	Reported in the Shire.	Not Declared	A native of southern Africa this grass was first introduced to Australia as a potential pasture species however is relatively unpalatable to livestock. It rapidly invades sparse or weakened pastures and its seed is easily transported by machinery and motor vehicles.
Harrisia Cactus <i>Eriocereus</i> spp.	High	There are currently only a few plants present on the S716 Stock Route (St George to Mitchell) and near the St. George cemetery.	Class 2	Can form dense infestations reducing pasture potential, hindering vehicle movement and can cause injuries to livestock. Produces large quantities of seed easily spread by animals, particularly birds, and broken off portions of the plant will take root and grow.
Coral Cactus <i>Cylindropuntia fulgida</i> var. <i>mamillata</i>	High	One infestation located between Dirranbandi and Hebel.		If allowed to spread it replaces more useful species. Spreads vegetatively by movement of segments which root where they contact the ground. Much of the movement is by water down watercourses.
Hudson Pear <i>Cylindropuntia rosea</i>	High	One infestation located at Hebel and eradicated.	Class 1	If left uncontrolled, Hudson pear can destroy grazing land and prevent most forms of outdoor recreation, including bushwalking and camping. Its reverse-barbed spines can kill wildlife and a single human fatality has been recorded. Spreads vegetatively by movement of segments which root where they contact the ground

Early Detection and Eradication (Plants) con't...

Common and scientific names	Priority	Local distribution	Declared status	Impacts
Hymenachne	High	Infestations located along irrigation ditches and particularly along the Moonie River at Thallon and at the mouth of the Beardmore Dam on the Maranoa River	Class 2	<ul style="list-style-type: none"> infestations can affect drains, lagoons, wetlands, creeks and rivers interferes with irrigation, infrastructure and wildlife habitats degrades water quality for recreational purposes
Mother-of-Millions <i>Bryophyllum</i> spp.	High	Predominately found around the old rubbish dumps at St. George and Thallon. Other minor outbreaks are scattered throughout the Shire.	Class 2	Poisonous to stock. Under favourable conditions it can form dense infestations, particularly on shallow soil types, replacing understorey plants and pasture. The spread threatens the sustainability of agriculture and other land uses and can also devastate native plants and animals.
Noogoora Burr <i>Xanthium occidentale</i>	Medium	Rust has eradicated most plants. Used to be near a swamp on Commissioners Point Road, however, there has not been any there for a long time due to rust.	Not Declared	Contaminates wool and competes strongly with summer crops. Potentially poisonous to stock when young.
Parkinsonia <i>Parkinsonia aculeata</i>	High	A few plants have been found on the PO6 Stock Route near Mungindi.	Class 2	Forms dense, and often impenetrable, thorny thickets along watercourses and around dams reducing pasture potential and restricting stock movement. Large infestations can provide harbour for pest animals. Seeds able to float and spread easily by flood water.

Early Detection and Eradication (Plants) con't...

Common and scientific names	Priority	Local distribution	Declared status	Impacts
Parthenium <i>Parthenium hysterphorus</i>	High	There are two reasonably large infestations in the Shire. One in the north and the other in the northeast part of the Shire. A few smaller outbreaks have been contained along the highway.	Class 2	A vigorous plant that colonises pastures reducing pasture production potential. All parts of the plant, including pollen and dry material, produce allergic responses in humans.
Prickly Pear <i>Opuntia stricta</i> and <i>Opuntia tomentosa</i>	Medium	Scattered throughout the Shire	Class 2	Invasive, reducing pasture potential and can restrict stock and vehicle movement.
Tiger Pear <i>Opuntia aurantiaca</i>	Medium	There were plants near the cemetery in St. George, however these have been eradicated. Some plants are recorded along the Moonie River.	Class 2	Invasive, reducing pasture potential and can restrict stock, vehicle and human movement due to large sharp spines, barbed bristles and because it can grow densely. Patches can provide effective harbour for pests animals. It is also a host of fruit fly, which in turn can impact on fruit growing industries.

3.2.3 Containment (Plants)

Common and scientific names	Priority	Local distribution	Declared status	Impacts
African Boxthorn <i>Lycium ferocissimum</i>	Medium	Localised to areas within about five kilometres of St. George.	Class 2	Can form impenetrable thickets reducing pasture productivity, impeding stock movement and providing shelter for pest animals.
Lantana <i>Lantana camara</i>	Medium	Small amount in the Thallon area	Class 3	Can form impenetrable thickets reducing pasture productivity, impeding stock movement and providing shelter for pest animals.
Lippia <i>Phyla canescens</i>	Medium	Sporadically found along the Balonne River near the township of St. George and along the Moonie River.	Not Declared	Forms a mat over the ground layer reducing pasture productivity and can contribute to erosion.
Paterson's Curse <i>Echium plantagineum</i>	Medium	Only a few plants have been found along the Castlereagh Highway south of Dirranbandi.	Not Declared	Reduces pasture production potential.

3.2.4 Promote Awareness (Plants)

Common and scientific names	Priority	Local distribution	Declared status	Impacts
Saffron Thistle <i>Carthamus lanatus</i>	Low	Scattered along most roadways.	Not Declared	Reduces pasture production potential.
All declared plants and other plants listed in Sections 3.2.1 to 3.2.4 and plants identified in Appendix I.				

3.3 PESTANIMALS

3.3.1 Prevention of Introduction (animals)

No pests have been identified in the prevention of introduction level of control category.

3.3.2 Early Detection and Eradication (animals)

Common and scientific names	Priority	Local distribution	Declared status	Impacts
Australian Plague Locust <i>Chortoicetus terminifera</i>	High	Seasonal	Class 2	Can significantly reduce the quantity of pasture and crops.
Migratory Locust <i>Locusta migratoria</i>	High	Seasonal	Class 2	Can significantly reduce the quantity of pasture and crops.
Spur-Throated Locust <i>Austracris guttulosa</i>	High	Seasonal	Class 2	Can significantly reduce the quantity of pasture and crops.
Dog, other than Domestic Dog <i>Canis familiaris</i>	High	Low numbers / sightings throughout the Shire	Class 2	Kill, harass and maim sheep and cattle, domestic pests, native wildlife and other domestic animals.
European Rabbit <i>Oryctolagus capensis</i>	High	Very low numbers scattered throughout the Shire	Class 2	Reduce the quantity and quality of pasture, cause soil erosion by preventing the regeneration of vegetation and compete for food and burrow space with native animals.
Tilapia	Medium	Not reported in the shire. Present in the Dawson catchment.		Can have significant impacts on native fish populations. Introduction is likely through use as live bait.

3.3.3 Containment (animals)

Common and scientific names	Priority	Local distribution	Declared status	Impacts
Feral Goats <i>Capra hircus</i>	Medium	Scattered throughout the Shire.	Class 2	Provide additional grazing pressure.
Feral Pigs <i>Sus scrofa</i>	High	Mostly found along the river systems and watercourses.	Class 2	Kill lambs. Damage pasture and crops by grazing, trampling and uprooting the ground and can damage stored grain facilities, fence lines and watering points. They are carriers of endemic diseases such as leptospirosis, Q fever, brucellosis and sparganosis. They are also susceptible to a wide range of exotic diseases and could act as reservoirs or vectors should these diseases enter Australia. Can significantly impact the natural environment through wallowing, grazing, rooting and predation.
European Fox <i>Vulpes vulpes</i>	High	Prevalent throughout the Shire.	Class 2	Kills lambs, goat kids, poultry, small mammals, frogs, fish and birds. They are a threat to the survival of many ground-dwelling native animals.
Cane toad <i>Bufo marinus</i>	Low	Not reported locally, however Commonwealth publications suggest its presence. Range depends on moisture and temperature.	Nil	Poisons native wildlife and dogs, in particular predators.

3.3.4 Promote Awareness (animals)

Common and scientific names	Priority	Local distribution	Declared status	Impacts
European Carp <i>Cyprinus carpio</i>	Low	Common throughout all waterways and river systems.	Class 1	Compete against native fish and other aquatic fauna for habitat and food. Under certain conditions of soil and vegetation type carp can actively undermine banks of irrigation channels causing them to slump. They can also cause increased turbidity within waterways and through their feeding behaviours can increase nutrient availability in the water by resuspending sediments, which in turn may encourage an increase in blue-green algae. Carp act as carriers of the anchor worm, <i>Lernaea cyprinacea</i> , which in heavy infestations may prevent spawning and can be fatal for large adult Murray Cod and Golden Perch larvae.
Cat, other than domestic cat <i>Felis catus</i>	Medium	Common throughout the Shire.	Class 2	Kills poultry, small mammals, frogs, fish, reptiles and birds. They are a threat to the survival of many ground-dwelling native animals. They are carriers of diseases such as toxoplasmosis (which can be transmitted to domestic stock) and sarcosporidiosis.

4.0 HIGH PRIORITY PESTS ANNUAL WORK PLAN

Resources to manage pests are limited. Consequently actions associated with high priority pests will be implemented first. Other actions will be implemented as resources become available.

Prevention is generally recognised as a more cost effective method than containment or eradication. Consequently Council also places a high priority on actions associated with hygiene management and awareness.

The following “general” actions relate to all high priority plant pests outlined in Sections 4.1 to 4.4.

[illegible]

Operational Action	Who	When	Success Indicator
Mapping: <ul style="list-style-type: none"> • Map current major infestations sites of high / medium and Class 1 and Class 2 priority pests. • Encourage landholders to report and provide maps of the locations of priority pest plants upon land they manage. • Update maps of known infestations. 	BSC	On-going	Map produced and regularly updated
Funding: <ul style="list-style-type: none"> • Investigate and source additional funding sources and resources to help manage for pests. 	BSC	On-going	Amount of additional funding sourced
Private Property <ul style="list-style-type: none"> • Provide advice to landowners regarding the control of infestation areas on private areas. • Work cooperatively and encourage landholders to eradicate any pest infestations. • Regular follow-up inspections of known infestation areas on private property of high priority pests. 	SRS	On-going	No. of complaints No. of property inspections undertaken

4.1 HARRISIA CACTUS

Scientific Name	<i>Eriocereus martini</i> and <i>Eriocereus tortuosus</i>		
Background Information	<p>Harrisia Cactus is a native of South America. Dense infestations reduce pasture productivity and impede stock movement. The plant fruits prolifically (each fruit contains from 400-1000 seeds) and seeds are spread widely by birds and animals, such as feral pigs. Plants are easily established from seed dropped by these animals. Harrisia cactus can also reproduce by stem sections taking root. A deep, underground, tuberous root system allows the plant to survive even if the above ground parts are killed.</p> <p>Harrisia Castus has been recorded in brigalow and associated softwood county, box and ironbark stands and pine forests.</p>		
Control Information	<p>Harrisia cactus can be controlled by mechanical, biological and chemical methods.</p> <p>Two introduced insects have become established in the field: A stem boring longicorn beetle <i>Alcidion cereicola</i> and a mealy bug <i>Hypogeococcus festerianus</i> (the most successful to the two). Mealy bug disperses naturally via wind although landholder assistance is necessary for its continuous spread, particularly between patches.</p>		
Operational Objective	Detect and eradicate Harrisia Cactus within the Balonne Shire.		
Success Indicator	Rapid control of any detected Harrisia Castus within Balonne Shire.		
Operational Actions	Action	Who	When
	Continue surveillance of lands within the Shire to detect Harissia cactus. If detected, spray or where feasible dig out plants completely and burn ensuring all tubers that can grow are removed and destroyed on lands within the Shire.	SRS Landholders	Ongoing

4.2 CORAL CACTUS

Scientific Name	<i>Cylindropuntia fulgida</i> var. <i>mamillata</i>		
Background Information	<p>Distinguished by presence of distorted segments; corrugated surface of segments; presence of small bristles (glochids) in clusters in depressions (areoles) on segments, these glochids readily attach to skin and are difficult to remove, areoles also have 0–10 white to brownish spines to 1.7 cm long, thorns are at the base of areoles and glochids at the tops; absence of flowers and therefore fruit.</p> <p>Spreads vegetatively by movement of segments which root where they contact the ground and also by seed. Much of the movement is by water down watercourses. Spread can also be via stock movement.</p> <p>At present uncommon but appears to be increasing in a number of areas. This form of <i>Cylindropuntia fulgida</i> var. <i>mamillata</i> is often planted as an oddity. If allowed to spread it replaces more useful species.</p>		
Control Information	<p>Coral cactus can be controlled by mechanical, biological and chemical methods.</p> <p>Plants are damaged to a limited extent by the form of <i>Dactylopius tomentosus</i> (a cochineal insect) present in Australia.</p>		
Operational Objective	Detect and eradicate Coral Cactus within the Balonne Shire.		
Success Indicator	Rapid control of any detected Coral Cactus within Balonne Shire.		
Operational Actions	Action	Who	When
	Continue surveillance of lands within the Shire to detect Coral cactus. If detected, spray or where feasible dig out plants completely and burn ensuring all tubers that can grow are removed and destroyed on lands within the Shire.	SRS Landholders	Ongoing

4.3 HUDSON PEAR

Scientific Name	<i>Cylindropuntia rosea</i>		
Background Information	Hudson pear is a cactus native to Mexico. It is a major pest around Lightning Ridge in New South Wales, where it has formed an extensive wild population. If left uncontrolled, Hudson pear can destroy grazing land and prevent most forms of outdoor recreation, including bushwalking and camping. Its reverse-barbed spines can kill wildlife and a single human fatality has been recorded. Currently, Hudson pear is rare in Queensland and there is an opportunity to prevent its spread. Weed risk assessment presents evidence that Hudson pear is a high-risk potentially invasive pest (includes the closely related <i>C. tunicata</i>).		
Control Information	<p>The prospects for successful biological control of Hudson pear are fairly good as previous biological control programs targeting cacti have proven highly successful. <i>Dactylopius tomentosus</i>, a species of cochineal insect introduced to control rope pear (<i>Cylindropuntia imbricata</i>) attacks Hudson pear but is not particularly damaging. Recent South African research has shown that there are several biotypes of <i>D. tomentosus</i> present in Mexico, at least one of which is likely to be more damaging to Hudson pear.</p> <p>Chemical control is possible.</p> <p>Mechanical removal of Hudson Pear is not recommended due to the hazards it presents.</p>		
Operational Objective	Detect and eradicate Hudson Pear within the Balonne Shire.		
Success Indicator	Rapid control of any detected Hudson Pear within Balonne Shire.		
Operational Actions	Action	Who	When
	Continue surveillance of lands within the Shire to detect Hudson Pear. If detected, chemically treat the plants.	SRS Landholders	Ongoing

4.4 Hymenachne

Scientific Name	<i>Hymenachne amplexicaulis</i>		
Background Information	Originally introduced to Australia from South America to provide ponded pasture for cattle, hymenachne (<i>Hymenachne amplexicaulis</i>) has become an unwanted pest of stream banks, shallow wetlands and irrigation ditches, primarily in the coastal wet tropics of northern Queensland. Hymenachne is capable of growing in permanent wetlands up to 1.2 m in depth. Cases have been reported of hymenachne growing up to 3 m water depth for at least a nine-month period and up to 4 m as a floating raft.		
Control Information	<p>Mechanical/physical control Mechanical or physical removal will not completely eradicate hymenachne because of the plant's ability to reproduce vegetatively from very small pieces. The use of heavy earth moving machinery to remove hymenachne from drains has met with some success in North Queensland.</p> <p>Fire Fire is a tool for the dry season. When integrated with other control methods, fire can improve overall results and reduce cost.</p> <p>Grazing control In western shires, constant heavy grazing in dry conditions has removed hymenachne from the ponded pasture system.</p>		
Operational Objective	To eradicate known infestations and encourage control by landowners.		
Success Indicator	Decline of Hymenachne within the Shire.		
Operational Actions	Action	Who	When
	Eradicate all known infestation sites and follow-up with regular inspections.	Landholders SRS Sunwater	On-going
	When feasible and practical burn infestations along with the accompanying debris, after ensuring fire breaks are in place.	Landholders SRS Sunwater	On-going
	Collate and spread biological control agents for Hymenachne if they are released.	Landholders SRS	As required
	Encourage Landholders to identify, map and eradicate Hymenachne areas (where mapped areas are to be recorded on a central mapping computer system).	Landcare/QMDC Landholders DAFF BSC	On-going

4.5 MOTHER-OF-MILLIONS

Scientific Name	<i>Bryophyllum</i> spp.		
Background Information	Highly toxic to stock and well adapted to dry areas. Mother-of-Millions are escaped ornamental plants from Madagascar. Five species are commonly naturalised in Queensland. They establish well in leaf litter or other debris on shallow soils in shady woodlands and often grow on roadsides, along fence lines and around old rubbish dumps.		
Control Information	<p>Keep stock, especially hungry stock, away from infested areas until the plants are controlled. Establish pastures and other more desirable plants to compete successfully with future MOM seedlings and plantlets. For small areas, pull up plants by hand and either (i) stack and burn them or (ii) bag and bury the plants at Balonne Shire Council's refuse tip.</p> <p>Burning is the most economical control, encourages grass competition and can lessen the problem for years to come. Herbicides can also be used to control MOM all year round, however the most opportune time is in winter when the plants are flowering and they are easy to see.</p>		
Operational Objective	To eradicate known infestations and encourage control by landowners.		
Success Indicator	Decline of Mother-of-Millions at the St. George dump and no plants present within the land managed by Balonne Shire Council. Landholders reporting areas of MOM and reducing its distribution.		
Operational Actions	Action	Who	When
	Eradicate all known infestation sites and follow-up with regular inspections.	Landholders SRS	On-going
	When feasible and practical burn infestations along with the accompanying debris, after ensuring fire breaks are in place.	Landholders SRS	On-going
	Enforce restrictions on the sale of Mother-of-Millions as a garden ornamental.	BSC DAFF	As required
	Support Western Downs Regional Council in encouraging research into, and the release of, biological control to help manage Mother-of-Millions.	BSC Landcare/QMDC DAFF	As required
	Collate and spread biological control agents for Mother-of-Millions if they are released.	Landholders SRS	As required
	Encourage Landholders to identify, map and eradicate MOM areas (where mapped areas are to be recorded on a central mapping computer system).	Landcare/QMDC Landholders DAFF BSC	On-going

4.6 PARTHENIUM

Scientific Name	<i>Parthenium hysterophorus</i>
Background Information	Parthenium, a native of subtropical areas in South and North America, is an annual herb with a deep tap root and erect stem that becomes woody with age. It is a vigorous species that colonises weak pastures with sparse ground cover and will readily colonise disturbed, bare areas along roadsides and heavily stocked areas (eg. around yards and watering points). Parthenium is capable of growing in most soils types but becomes most dominant in alkaline, clay loam soils. It also grows in Brigalow, Gidgee and softwood scrub soils. Parthenium seeds can spread easily via water, vehicles, machinery, stock, feral and native animals and in feed and seed. It reduces pasture production potential and all parts of the plant, including pollen and dry material, produce allergic responses in humans.
Priority in Adjacent Local Areas	Parthenium is a Weed of National Significance and has high priority in every adjoining local shire and statewide for coordinated programs of eradication, containment and control. These are particularly aimed at minimizing its spread by vehicles, machinery, stock, grain, fodder, and host animals.
Control Information	<ul style="list-style-type: none"> • Grazing management is the most useful method of controlling large-scale Parthenium infestations. Maintain pasture in good condition, with high levels of ground and grass crown cover. <ul style="list-style-type: none"> ○ Maintain moderate stocking rates to avoid overgrazing which decreases the vigour and competitiveness of pastures and allows the entry and spread of Parthenium. Consider pasture spelling to rehabilitate degraded areas, especially during the main growing season (eg. spring-summer). Refer to the <i>Balonne Shire Council Stock Route Management Plan 2005-2009</i>. • Consider fencing areas to exclude stock and allow more flexible management. • Herbicide control – spray early before it can set seed and watch treated areas closely for at least four years. <ul style="list-style-type: none"> ○ Small and isolated infestations should be treated immediately. ○ Extensive infestations will require herbicide treatment in conjunction with pasture management. ○ Controlling Parthenium in crops requires selective herbicide use and/or crop rotations. ○ Ideally, herbicide control will involve a knockdown herbicide to kill plants that are present and a residual herbicide to control future generations. Consider withholding periods when using herbicides. • Nine species of insect and two rust pathogens have been introduced to control Parthenium. The combined effects of biological control agents reduce the density and vigour of Parthenium and increase grass production. • Vehicles and implements passing through Parthenium infested areas should be washed down with water. The wash down procedure should be confined to only one area, so that any plants that establish from dislodged seed can be destroyed before they set seed.

Parthenium con't...

Control Information con't...	<ul style="list-style-type: none"> • Caution should be taken when moving cattle from infested to clean areas. Avoid movement during wet periods as cattle readily transport seed in muddy soil. When cattle are moved from infected to clean areas they should be held in yards or small paddocks until seed has dropped from their coats and tails prior to release in larger paddocks or on the stock routes. • Take caution when purchasing seed, hay and other fodder material, ask for a weed free commodity declaration from the supplier and keep a close watch on areas where fodder was fed out for the emergence of Parthenium and other weeds. • Property hygiene is important – ensure visitors from or who have travelled through infested areas do not spread weed seeds. 		
Operational Objective	To detect and eradicate Parthenium within Balonne Shire and prevent the introduction of new plants and seeds.		
Success Indicator	Parthenium contained (with the longer term aim of eradication) at two sites on private land North and North-east of St. George and no Parthenium on land managed by Balonne Shire Council.		
Operational Actions	Action	Who	When
	Eradicate small and isolated infestations on stock routes, reserves and roadways immediately using an appropriate herbicide control.	SRS	As required
	Treat new infestations first.	Landcare/QMDC Landholders SRS	On-going
	Continually monitor and treat infested sites.	Landholder SRS	On-going
	Assist landholders to eradicate Parthenium on private property and leasehold land through helping with providing advice, equipment, the SRS helping the landholder to spray the site for the first time and establishing monitoring programs (Landholder to undertake required follow-up spraying).	Landholder SRS DAFF Landcare/QMDC	On-going
	Issue notices for the destruction of Parthenium infestations in situations where landowners are not taking reasonable action to eradicate the pest.	BSC	As required

Parthenium con't...

Operational Actions con't...	Action	Who	When
	Use herbicides in a timely manner to assist pasture management.	Landholders SRS	As required
	Continue to maintain good pasture cover (set stocking rates, monitor pasture condition, spell paddocks/stock routes / holding paddocks / reserves, monitor stock feeding areas, establish pasture management for riparian areas, manage fire risk for riparian zones).	Landholders BSC	On-going
	Use biological controls as part of an integrated management program (best used in dense infestations).	SRS Landholders	On-going
	Ensure on-going access to biological control agents through supporting the bio-control breeding program at Injune.	BSC	On-going

4.7 PARKINSONIA

Scientific Name	<i>Parkinsonia aculeate</i>
Background Information	Parkinsonia is a native to tropical America and is hairless shrub or small tree, rarely to 10m high. It can form dense, and often impenetrable, thorny thickets along watercourses and around dams reducing pasture potential and restricting stock movement. Large infestations can provide harbour for pest animals. Seeds are able to float and spread easily by flood water. Parkinsonia is adapted to an extremely wide range of soil types and it is projected that it will continue to spread through watercourses and adjoining areas throughout the sub-humid and semiarid environments in Queensland.
Priority in Adjacent Local Areas	Parkinsonia has been recognised as a Weed of National Significance.
Control Information	<ul style="list-style-type: none"> • Early control is essential as a mature Parkinsonia tree can produce more than 13,000 seeds annually – the best and most economical control is prevention. • Three species of insects have been introduced into Australia as biological control agents against Parkinsonia. The most effective species the seed beetles <i>Penthobruchus germani</i> and <i>Mimosetes ulkei</i>. • Establishing improved pasture and/or maintaining good pasture competition will aid in managing Parkinsonia by competition. • Fire will destroy seedlings if sufficient fuel load is present, but mature plants will usually survive. • Herbicides can be applied using: <ul style="list-style-type: none"> ○ aerial application (useful for dense, strategic infestations and is usually undertaken by purpose applications for helicopters) ○ foliar (overall) spray (very effective control method for control of seedlings up to 1.5m tall). ○ basal bark spray (effective for stems up to 15cm diameter) ○ cut stump treatment (maybe performed at any time of year) ○ soil application.
Success Indicators	No Parkinsonia within Balonne Shire.
Operational Objective	Detect and eradicate all Parkinsonia plants.

Parkinsonia con't...

Operational Actions	Action	Who	When
	Eradicate small and isolated infestations on stock routes, reserves and roadways immediately using an appropriate herbicide control.	SRS	2005 and on-going
	Continually monitor and treat infested sites on susceptible areas (such as waterways, floodplains and water facilities) and stock routes, reserves and roadways.	Landholders SRS	On-going
	Ensure machinery (contract and Council machinery) that has worked in infested areas has been thoroughly washed down, and encourage Landholders to do the same.	Overseer BSC Landholders	On-going
	Learn to identify Parkinsonia plants, particularly as seedlings.	SRS Overseer WS Landholders	On-going
	Report any sightings of Parkinsonia to Balonne Shire Council.	Landholders	On-going

4.8 LOCUSTS

Scientific Name	<i>Chortoicetes terminifera</i> , <i>Austracris guttulosa</i> and <i>Locusta migratoria</i>
Background Information	<p>The Australian plague locust, spur-throated locus and migratory locust are native to Australia but are also declared pests under the <i>Land Protection (Pest and Stock Route Management) Act 2002</i>. These species are capable of quickly inflicting severe damage to agricultural production in areas where they persist and they can migrate to other areas and cause further damage. Many minor plagues and localised outbreaks have occurred in Queensland. Preventative actions have ensured some of these minor events have not escalated.</p> <p>The Australian Plague Locust (<i>Chortoicetes terminifera</i>) poses the most threat to the Balonne Shire. A high density swarm (>50 insects per m²) of Australian plague locusts covering two square kilometres will contain around a hundred million insects and can eat 20 tonnes of vegetation a day. In Queensland all crops can potentially be attacked, however summer crops are most at risk. Batches of eggs are laid in the soil in holes 6 to 7 cm deep and the hole filled with a froth plug. Under ideal conditions eggs hatch in 2-3 weeks, but if there is no rain some can remain viable in the soil for 6 to 12 months. The hatched locusts (nymphs or hoppers) are small, sexually immature and flightless. They progress through a number of growth stages before 'fledging' into the adult form.</p> <p>DAFF is responsible for coordinating locust control operations throughout the state and has developed the Queensland Locust Management Strategy. Plague prevention strategies aim to keep the locust population at a manageable level by limiting the rate of population increase in each successive generation until climatic conditions cause a natural population decline.</p> <p>The Australian Plague Locust Commission, which has joint State and Commonwealth funding, will implement control measures where the Commission considers locusts present an interstate threat. This Commission, CSIRO and the Department of Natural Resources are members of the Locust and Grasshopper Bio Control Committee which was established to develop and achieve registration of the fungus, <i>Metarhizium anisopliae</i> var. <i>acridum</i>.</p>
Priority in Adjacent Local Areas	Locusts are a state priority, evident by the development of the Queensland Locust Management Strategy.
Control Information	<p>The ability of locusts to invade previously uninfested areas and lay eggs within days, combined with the mobility of flying swarms, makes swarm control particularly difficult for individual landholders. Locust control is usually best carried out at the hopper stage. Currently, the most cost-effective way to achieve control is by spraying the densest concentrations of locusts, either as bands or swarms.</p> <p>The Australian Plague Locust Commission is researching control techniques to reduce non-target impacts of chemical control.</p>

Locusts con't...

Operational Objective	Monitor for outbreaks of locusts and participate in coordinated action.		
Success Indicator	Productivity saved due to operational actions implemented.		
Operational Actions	Action	By Whom	When
	Receive advice from Landholders on infestations and pass the information onto the DAFF Land Protection Officer and the Australian Plague Locust Commission.	Landholders SRS	On-going
	Direct general enquiries to the DAFF	BSC Landholders	On-going
	Assist in the identification of and subsequent treatment of outbreaks in conjunction with the DAFF and with landholder cooperation.	LPO SRS Landholders	As required
	Distribute locust best practice information to landholders.	DAFF Landcare BSC	Yearly
	Promote the need for resources for locust management to stakeholder funding bodies.	BSC Landholders DAFF Industry	On-going
	Cooperate with DAFF to help develop a contingency plan to ensure resources, communications, chemical handling procedures and application equipment are in place.	SRS Industry	As required
	Cooperate with DAFF to ensure availability of suitable airstrips and drum disposal facilities.	BSC	As required
	Request reimbursement from Contingency Fund of agreed rebates on landholder expenditure on insecticides.	BSC	As required
	Ground control of hoppers in declared situations on land under municipal control, including stock routes, roadsides and reserves.	SRS Landholders	As required

4.9 WILD DOGS

Scientific Name	<i>Canis familiaris</i> and <i>Canis familiaris dingo</i>
Background Information	All landholders in Queensland are required to reduce the number of wild dogs on their properties under the <i>Land Protection (Pest and Stock Route Management) Act 2002</i> . The Queensland Wild Dog Management Strategy 2002-2007 aims to establish a comprehensive approach to managing all wild dogs as pests and managing the dingo as both a pest and a native species. The strategy sets out a framework for the necessary cooperation, coordinated by DAFF, clarifies the responsibilities of all stakeholders and brings together proposed commitment from major stakeholders. A draft Memorandum of Understanding between the DAFF, AgForce Queensland, Darling Downs Local Government Association, South-west Local Government Association and Environmental Protection Agency for the management of wild dogs inside the wild dog barrier and check fences.
Priority in Adjacent Local Areas	Wild dogs are a state priority, evident by the development of the Queensland Wild Dog Management Strategy.
Control Information	<ul style="list-style-type: none"> 1080 baits are the most economic, efficient, humane and effective method of controlling wild dogs, especially in inaccessible or extensive areas. Baits can be laid in large numbers by hand, from vehicles and from aircraft. 1080 can only be obtained through licensed DAFF and Local Government operators. To increase baiting effectiveness and the duration of low wild dog numbers, it is essential that baiting programs be coordinated among adjoining properties. For additional control wild dogs can also be: <ul style="list-style-type: none"> Shot - which is opportunistic and mostly used for the control of small populations. Trapped – which can be time-consuming, labour-intensive and depends on the skill of the operator. Fenced out – can be expensive to build and requires continual maintenance to repair damage caused by fallen timber, floods and animals. For fencing to be successful, it must be possible to eliminate wild dogs from within the fence. Livestock guardian dogs – less successful on larger holdings where stock are more widely scattered and restricts the use of trapping and baiting.
Operational Objective	<ol style="list-style-type: none"> Coordinated wild dog baiting services and access to those services. High landholder participation in wild dog control. Ongoing support for wild dog committee and syndicates. Numbers of wild dogs within Balonne Shire reduced.
Success Indicators	<ol style="list-style-type: none"> Productivity saved due to actions implemented. Area of land baited within high wild dog density areas. Low level of stock losses. Reduced wild dog sightings.

Wild Dogs con't...

Operational Actions	Actions	Who	When
	Foster and maintain the Wild Dog Advisory Committee	BSC	Ongoing
	Foster and maintain four wild dog management syndicates within the Shire.	BSC	Ongoing
	Support the Wild Dog Advisory Committee through funding, material support, bounties and advice.	BSC SRS	Ongoing
	When necessary and in consultation with syndicates, utilise enforcement actions as legislated to reduce wild dog numbers.	BSC SRS	As appropriate
	Encourage landholders to report sightings.	BSC & SRS Landholders	On-going
	Provide a 1080 service to landholders in accordance with 1080 guidelines. Ensure that usage of 1080 is in line with DAFF training and records completed in a timely, accurate manner.	SRS	As required
	Continue incentives for individuals and community groups to participate in coordinated control of wild dogs (eg. rates rebates, bounties, meat, aircraft)	BSC Neighbouring Councils Landcare/QMDC	Ongoing
	Identify resource requirements for coordinated control programs and improved opportunities for their provision.	BSC Neighbouring Councils NP&WS	Ongoing
	Maintain Council support for community based projects which address wild dog problems.	BSC	On-going
	Seek support from neighbouring Councils and negotiate with DAFF and/or the Queensland Government to have the current method of calculating the Dingo Barrier Fence Precept maintained in the public interest and for the protection of primary production, and in particular, grazing.	BSC DAFF Council Regional Group	Ongoing
	In conjunction with other local governments: <ul style="list-style-type: none"> collect and distribute information on stock loss, impacts, control strategies and costs. Identify "hot spots" and develop targeted and coordinated control programs	SRS Neighbouring Councils QMDC	On-going

Wild Dogs con't...

Operational Actions con't...	Actions	Who	When
	Participate in trapping workshops.	SRS	As appropriate
	Assist in the development of site-specific management programs for areas where dingo conservation conflicts with agricultural production and human safety.	BSC & SRS Landholders	As required
	Participate in local government wild dog committees.	BSC & SRS	On-going
	Provide advice to DAFF on the adequacy of existing techniques and identify potential future research needs.	SRS Landholders	On-going
	Assist in the evaluation of strategies for wild dog control.	SRS	On-going
	Distribute information kits, fact sheets and brochures.	BSC Landcare/QMDC DAFF	Yearly
	Conduct or prepare local media releases, and other extension activities.	BSC Landcare/QMDC DAFF	On-going
	Encourage strategic baiting planning.	SRS	On-going
	Implement control of domestic dogs, including identification / registration.	Local Law Officer	On-going

4.10 RABBITS

Scientific Name	<i>Oryctolagus cuniculus</i>		
Background Information	Rabbits were first reported in south-western Queensland in the 1880's and by 1886 they were scattered from Wompah in the west to Mungindi in the east. Capable of producing between five to six litters in a good season (ie 100 young per doe per year) they are now spread throughout Queensland, although numbers have contracted since the release of Rabbit Haemorrhagic Disease (formerly known as Rabbit Calicivirus Disease). Rabbits are one of Australia's major agricultural pests. They compete with domestic and native animals for food and shelter, destroy the landscape and are a primary cause of soil erosion by preventing regeneration of vegetation. Rabbits in the Balonne Shire tend to live in hollow logs or grass tussocks, with only a few opting for burrows. The introduction to, and selling of, rabbits in Queensland is not permitted, except under a permit system.		
Priority in Adjacent Local Areas	Rabbits are a state priority, evident by the development of the Queensland Rabbit Management Strategy.		
Control Information	<p>An integrated control approach should be adopted. It is important landholders understand that biological control agents are not the sole answer to the rabbit problem. It is essential they are incorporated into a management strategy with other control techniques.</p> <p>Destroying a rabbit's home (eg. fumigating and ripping warrens) is the most effective method for long-term control. Other control methods include Myxomatosis, baiting with 1080 or pindone, rabbit proof fencing, clearing surface cover, fumigating warrens, shooting and trapping.</p>		
Operational Objective	Number of rabbits within Balonne Shire reduced.		
Success Indicators	Low numbers within Balonne Shire.		
Operational Actions	Action	Who	When
	Receive advice from private landholders on infestations.	BSC & SRS	On-going
	Notify Land Protection Officer in regard to areas of infestation.	SRS Landholders	On-going
	Fumigate warrens on Council controlled land.	SRS & LPO	As required
	Follow up on action taken by the Land Protection Officer	SRS	As required
	Encourage ripping of burrows by private landholders.	SRS & LPO	On-going

4.11 FERAL PIGS

Scientific Name	<i>Sus scrofa</i>
Background Information	<p>Feral pigs have omnivorous feeding habits and consequently have a wide range of available food sources. They:</p> <ul style="list-style-type: none"> ▪ Damage crops (from sowing to harvest) by uprooting seed and seedlings to feeding on or trampling mature crops. ▪ Attack and eat livestock (predominantly lambs), reducing the opportunity for income from the sale of lambs and for herd improvement by limiting selection for optimum traits. ▪ Damage pasture by grazing, rooting and transporting weeds. ▪ Spread weeds and transmit diseases that can infect other livestock and be transmitted to humans, such as Sparganosis, Leptospirosis and Q Fever. ▪ Damage and foul watering points and can contribute to silting within these areas. ▪ Disturb the natural vegetation (particularly within creeks, swamps and lakes) affecting water quality and reducing habitat for native animals. <p>Evidence is also available to show feral pigs prey upon native fauna including marsupials, amphibians, reptiles, insects, ground-nesting birds and their eggs.</p> <p>Numbers will vary in accordance with seasons with higher impacts noted as conditions dry and high numbers of pigs compete for available food.</p>
Control Information	<ul style="list-style-type: none"> ▪ Control programs generally need to be conducted over large areas because their home ranges can range between 2 to 50 km². ▪ Poisoning, trapping and shooting, or a combination of these, are the most commonly used control methods. ▪ Pig activity needs to firstly be assessed in the area in which pigs are to be controlled. The type of environmental conditions (eg. swamps, terrain etc) will determine the most appropriate control method to use. ▪ DAFF reports that when poisons can be safely used this is the best method of removing the bulk of the pig population with the least effort, time and expense. Trapping can be an extremely good technique between poisoning campaigns when pig populations are low, or when poisons cannot be used safely. ▪ Where it is economically viable, electrified pig fencing may be worthwhile around key management areas such as lambing paddocks or cropping areas.
Operational Objective	Low populations of feral pigs resulting in minimal impact to agricultural industries and the environment within Balonne Shire.
Success Indicators	<ul style="list-style-type: none"> ▪ High lamb weaning rates recorded within Balonne Shire. • Minimal loss in crop production due to feral pigs within Balonne Shire. • Minimal disturbance to riparian and wetland vegetation.

Feral Pigs con't...

Operational Actions	Actions	Who	When
	Receive advice from private landholders on infestations (including estimate of extent of damage and the density of the feral pig population).	BSC & SRS	On-going
	Notify Land Protection Officer in regard to areas of infestations.	SRS Landholders	On-going
	Advise Landholder of options for managing feral pig populations.	SRS, SWNRM & LPO	On-going
	Where appropriate coordinate baiting programs for feral pig control and give consideration to joint baiting programs targeting wild dogs, foxes and pigs.	SRS & LPO	On-going
	Maintain a mapping database of areas being treated through baiting campaigns.	SRS & IT	On-going

4.12 FOXES

Scientific Name	<i>Vulpes vulpes</i>		
Background Information	Introduced from Europe, foxes are primarily carnivorous scavengers and opportunistic predators consuming a varied diet of kangaroo and sheep carrion (the largest proportion of their diet in Queensland), rabbits, rodents, frogs, birds, insects and fruit. In some instances foxes may kill lambs and goat kids. They are also known to 'surplus kill' (ie. they will kill multiple easy prey despite and abundance of carrion). Fox predation is considered the greatest threat to the long-term survival of many small marsupial species in Australia. Foxes also have the potential to spread diseases.		
Control Information	<ul style="list-style-type: none"> Current control options available include poisoning (where 1080 poison baits are the most economic and effective method), trapping, shooting, guard animals and exclusion fencing. DAFF reports the potential of M-44 mechanical toxin ejectors and fertility control such as immunocontraception, is also being researched. 		
Operational Objective	Number of foxes within Balonne Shire is reduced.		
Success Indicators	<ul style="list-style-type: none"> High lamb weaning rates recorded within Balonne Shire. Low number of foxes reported within Balonne Shire. 		
Operational Actions	Actions	Who	When
	Receive advice from private landholders on infestations (including estimate of extent of damage and the density of the fox population).	BSC & SRS	On-going
	Notify Land Protection Officer in regard to areas of infestations.	SRS Landholders	On-going
	Advise Landholder of options for managing fox populations.	SRS & LPO	On-going
	Where appropriate coordinate baiting programs for fox control and give consideration to joint baiting programs targeting feral pigs, wild dogs and foxes.	SRS & LPO	On-going
	Maintain a mapping database of areas being treated through baiting campaigns.	SRS & IT	On-going

4.13 TILAPIA

Scientific Name	<i>Tilapia mariae</i> and <i>Oreochromis mossambicus</i>		
Background Information	<p>The black mangrove cichlid or 'spotted tilapia' (<i>Tilapia mariae</i>) and the Mozambique tilapia (<i>Oreochromis mossambicus</i>) were illegally introduced into Australian waterways during the 1970s. Both species have become well established in the relatively short time since their introduction. At first they were probably released as unwanted aquarium fish, and Mozambique tilapia are now established in catchments in tropical and subtropical Australia while black mangrove cichlids are mostly restricted to northeast Queensland. Both tilapia species are declared invasive pests in most Australian states. The rapid rate at which both species are spreading, together with evidence from overseas studies, suggests that they will have harmful impacts in Australia.</p>		
Control Information	<ul style="list-style-type: none"> There are no proven current control methods, however research is underway. 		
Operational Objective	<ul style="list-style-type: none"> Limitation of the likelihood of tilapia becoming established within the Balonne Shire waterways. Awareness by locals of tilapia if caught. 		
Success Indicators	<ul style="list-style-type: none"> Lack of identification of tilapia in streams. 		
Operational Actions	Actions	Who	When
	<ul style="list-style-type: none"> Receive advice from individuals of catches of tilapia. Education of the public of tilapia identification, particularly through fishing club networks. 	BSC & SRS	On-going

4.14 Tramp ants

Common and Scientific Names	Red imported fire ant (<i>Solenopsis invicta</i>) Tropical fire ant (<i>S. geminata</i>) Little fire ant (<i>Wasmannia auropunctata</i>) African big-headed ant (<i>Pheidole megacephala</i>) Yellow crazy ant (<i>Anoplolepis gracilipes</i>) Argentine ant (<i>Linepithema humile</i>).		
Background Information	Most tramp ants also affect primary industry and social amenity, and some affect human health. While there are no overall estimates of the environmental, economic, and social costs of tramp ant invasions in Australia, economists estimate that the red imported fire ant alone would cost Australia \$8.9 billion over 30 years if left uncontrolled.		
Control Information	Control of tramp ants is complex requiring prevention, preparedness and response by all agencies.		
Operational Objective	Preparedness for the potential threat by tramp ants.		
Success Indicators	Lack of tramp ants in the Shire.		
Operational Actions	Actions	Who	When
	Seek detailed information regarding the threats presented by tramp ants and the actions Balonne Shire may be required to undertake as a part of a concerted control program.	BSC & SRS	Ongoing

5.0 EMERGENCY RESPONSE

The Balonne Shire Management Plan recognises many pest species that have the potential to impact on primary production and the environment within the Shire. However, emergent threats may arise within the life of this Plan. In recognition of the risk of so far unforeseen threats, an emergency response mechanism is provided for.

In the case of an unforeseen threat, the following actions shall be taken:

- Representatives of BSC, DAFF, DNRM and other expert groups shall convene to;
 - Assess potential impacts of the threat
 - Assess needs for additional external support
 - Consider potential control measures
 - Consider legal implications of taking action
 - Consider financial implications of taking action
- Review the Balonne Shire Pest Management Plan in relation to the emergent threat.

6.0 IMPLEMENTATION

This updated *Balonne Shire Pest Management Plan* will be submitted to the Minister for Natural Resources in 2012 after the Plan has been through a review process and has been approved by Council.

In keeping with sections 30(2) and 32 of the Act, Council will adopt the Plan for implementation after the Minister judges that the Plan satisfies requirements of the *Land Protection (Pest and Stock Route Management) Act 2002* (Qld).

After adoption, the Plan will be available for public inspection in both written and electronic form at the Council's office.

The Plan will remain current until 1 July 2016, with annual action plans enabling its implementation over that time

As part of the process of implementation, Council has and will continue to communicate to stakeholders their responsibilities, and will oversee the coordination of pest management activities contained within this Plan.

Monitoring and evaluation processes (including the measurement of actions against stated success criteria) will be in place to ensure the effectiveness of the Plan.

Any amendments to the plan will require its resubmission to the Minister for approval, and the old Plan will be replaced upon the adoption of the new one.

7.0 CONCLUSION

Balonne Shire Council will use available limited resources to implement this Plan. Actions associated with high priority pests will be implemented first. Other actions will be implemented as resources become available.

Prevention is generally recognised as a more cost effective method than containment or eradication. Consequently Council also places a high priority on actions associated with hygiene management and awareness.

Council will continue to work with a range of stakeholders to implement this Plan and will undertake a regular review of actions, including how they are meeting the operational objectives through the success indicators.

APPENDIX ONE

PEST PLANTS RECORDED WITHIN BALONNE SHIRE

Source: C. Eddie, R. Lindores pers. comm.

Common Name	Scientific Name
African Boxthorn	<i>Lycium ferocissimum</i>
American Malvastrum	<i>Malvastrum americanum</i>
Bathurst burr	<i>Xanthium spinosum</i>
Blue heliotrope	<i>Heliotropium amplexicaule</i>
Capeweed	<i>Arctotheca calendula</i>
Cat's claw creeper	<i>Macfadyena unguis-cati</i>
Spiny burr grass	<i>Cenchrus incertus</i>
Paddy melon / Pie melon	<i>Citrullus lanatus</i> var. <i>lanatus</i>
Common sowthistle	<i>Sonchus oleraceus</i>
Cretan weed	<i>Hedypnois rhagadioloides</i>
Crownbeard	<i>Verbesina encelioides</i>
Goathead / Spiny emex	<i>Emex australis</i>
Gomphrena weed	<i>Gomphrena celosioides</i>
Harrisa cactus	<i>Eriocereus</i> spp.
Khaki weed	<i>Alternanthera pungens</i>
Lantana	<i>Lantana camara</i>
Lippia	<i>Phyla canescens</i>
London rocket	<i>Sisymbrium irio</i>
Mayne's Pest	<i>Verbina aristigera</i>
Maltese Cockspur	<i>Centaurea melitensis</i>
Mexican Poppy	<i>Argemone ochroleuca</i> .
Mother-of-Millions	<i>Bryophyllum</i> spp.
Noogoora Burr	<i>Xanthium occidentale</i>
Parkinsonia	<i>Parkinsonia aculeata</i>
Parthenium	<i>Parthnium hysterophorus</i>
Paterson's Curse	<i>Echium plantagineum</i>
Prickly Pear (includes Velvety Tree Pear and Common Pest Pear)	<i>Opuntia stricta</i> , <i>O. tomentosa</i>
Red natal grass	<i>Melinis repens</i>
Saffron Thistle	<i>Carthamus lanatus</i>
Small flowered mallow	<i>Malva parviflora</i>
Sow Thistle	<i>Sonchus asper</i> subsp. <i>glaucescens</i>
Spear Thistle	<i>Cirsium vulgare</i>
Tall fleabane	<i>Conyza bonariensis</i>
Tiger Pear	<i>Opuntia aurantiaca</i>
Wild Turnip Weed	<i>Brassica tournefortii</i>

PEST ANIMALS RECORDED WITHIN BALONNE

Source: C. Eddie, R. Lindores pers. comm.

Common Name	Scientific Name
Australian plague locust	<i>Chortoicetes terminifera</i>
Dingoes	<i>Canis familiaris dingo</i>
European foxes	<i>Vulpes vulpes</i>
European rabbits	<i>Oryctolagus cuniculus</i>
Feral goats	<i>Capra hircus</i>
Feral pigs	<i>Sus scrofa</i>
Migratory locust	<i>Locusta migratoria</i>
Mosquito Fish	<i>Gambusia holbrooki</i>
Spur-throated locust	<i>Austracris guttulosa</i>
Wild dogs	<i>Canis familiaris</i>