



Shire of Northam
Heritage, Commerce and Lifestyle

SHIRE OF NORTHAM

**MINUTES OF THE
ORDINARY COUNCIL MEETING
HELD
WEDNESDAY
19 AUGUST 2015**

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MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

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**Minutes of the Ordinary Meeting of Council held in the Council Chambers on
WEDNESDAY, 19 August 2015 at 5:31 pm**

DISCLAIMER

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In particular and without derogating in any way from the broad disclaimer above, in any discussion regarding any planning application or application for a licence, any statement or limitation of approval made by a member or officer of the Shire of Northam during the course of any meeting is not intended to be and is not taken as notice or approval from the Shire of Northam. The Shire of Northam warns that anyone who has an application lodged with the Shire of Northam must obtain and only should rely on **WRITTEN CONFIRMATION** of the outcome of the application, and any conditions attaching to the decision made by the Shire of Northam in respect of the application.

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1. OPENING AND WELCOME

The Shire President, Cr S B Pollard declared the meeting open at 5.31pm.

At the Council Forum meeting held on 12 August 2015 the Shire President, Cr Steven Pollard advised that a former Town of Northam Councillor (from 1967 to 1995), Mr George Nuich had recently passed away and requested that Councillors, Staff and Gallery to stand for a minute silence.

2. DECLARATION OF INTEREST

Item Name	Item No.	Name	Type of Interest	Nature of Interest
Request to Waiver Tipping Fees	13.2.2	Cr S B Pollard	Indirect Financial	He provides accounting services to Share & Care.
Shire of Northam Local Biodiversity Strategy	13.2.1	Cr K D Saunders	Impartiality	That one of the target areas identified may include her farming property that may be impacted.
Northam Recreation Centre Fee Waiver	13.4.1	Cr U Rumjantsev	Impartiality	He is part of the Avon Valley Relay for Life Committee as their media & entertainment spokesperson.
Elected Members Motions Of Which Previous Notice Has Been Given	14	Cr R W Tinetti	Impartiality	He is the President of the Avon Branch of the Nationals WA and these changes involve our local member.
Changes to Method of Valuation used for Rating Purposes	13.3.4	Cr J E Williams	Impartiality	Her husband submitted 2 objections (2012 & 2015) against the proposal as an affected landowner.

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3. ATTENDANCE

COUNCIL

Councillors

S B Pollard
T M Little
K D Saunders
U Rumjantsev
A W Llewellyn
D G Beresford
J E Williams
R W Tinetti
D A Hughes

Chief Executive Officer
Executive Manager Engineering Services
Executive Manager Community Services
Executive Manager Development Services
Executive Assistant – CEO
Governance Officer

J B Whiteaker
C D Kleynhans
R Rayson
C B Hunt
A C Maxwell
C Greenough

GALLERY

3 Members of the public.
Timothy Williams – Avon Valley Advocate.

4. APOLOGIES

Executive Manager Corporate Services D R Gobbart

5. LEAVE OF ABSENCE PREVIOUSLY APPROVED

Nil.

6. APPLICATIONS FOR LEAVE OF ABSENCE

Nil.

7. RESPONSE TO PREVIOUS PUBLIC QUESTIONS TAKEN ON NOTICE

Nil.

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8. PUBLIC QUESTION TIME

Geoff Carruthers - Northam Men's Shed

Question: Can consideration be given in respect to waiving the charges for insurance costs and outgoings associated to the lease agreement between the Shire of Northam and Northam Men's Shed?

Mr Carruthers advised that a letter was provided to the Shire in relation to this matter. He stated that this group provide a number of activities for the men of Northam, which includes holding several fundraisers. Recently the club have been advised that they are required to pay for outgoings including water, power and contracted services such as pest control. In addition, he advised that the group have insurance through the Australian Men's Shed Association which covers buildings up to \$250,000. He stated that they have never been charged for these costs, and if required to pay these fees, it would have a detrimental impact on the group.

Response: Mr Jason Whiteaker, Chief Executive Officer, advised that it was his view that as per the Council's Leasing Policy, not for profit organisations are not required to pay building insurance however it does outline that the outgoings are the responsibility of the lease holder. He advised that staff will review the letter and look at the issues raised and provide a response to the Men's Shed, or a report to Council if deemed necessary in this instance.

Mr Murray – Bakers Hill

Question: Why wasn't there more public consultation in respect to the proposal for the changes in method of valuation for rating purposes?

Mr Murray advised that the residents/landholders received a letter advising of the process and also given information in respect to determining whether their properties are used for rural purposes. He stated that there was no other opportunity for people to disagree with the proposal and he would have liked to see a community meeting or similar to allow those impacted, an opportunity to raise concerns/object to the proposal.

Response: Mr Jason Whiteaker, Chief Executive Officer, advised that the letter was sent to all residents which are potentially impacted by the proposed change, giving them the opportunity to submit an objection. The Shire did receive a number of objections and further details of these are outlined within the report of the agenda and

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minutes, however there were not a significant number of objections received. In addition a letter was also sent approximately three years ago indicating that these changes were going to occur, as well as a range of public meetings at that time.

Mr Whiteaker stated that the Council is trying to apply the legislative framework and methodology which is required under the Local Government Act 1995. Mr Whiteaker outlined that a key premise of the rating system was to promote equity. Unfortunately the current rating system is viewed as being inequitable due to a significant number of properties that are not used predominantly for rural purposes (therefore residential) being rated on an unimproved valuation, whereas other residential properties within the Shire which are similar are rated on a gross rental value.

Mr Whiteaker outlined the process to follow and the role that the valuer general will play in determining valuations. Mr Whiteaker further stated that the Council is very mindful of the financial impact proposed the changes may have on individuals. The purpose of this process is not about Council generating more rate revenue, it is about making the rating for the Shire of Northam consistent and equitable.

9. PUBLIC STATEMENT TIME

Nil.

10. PETITIONS/DEPUTATIONS/PRESENTATIONS

At the Council Forum meeting held on 12 August 2015 the Shire President, Cr Steven Pollard advised that the Shire of Northam had been successful in winning the Best Upper School category for Banners in the Terrace at Local Government Week 2015 which was completed in collaboration with Avon Vale Primary School. Cr Pollard is going to present the school with this award at a suitable time to be scheduled with the school.

2 members of the public departed the Council Chambers at 5.50pm.

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11. CONFIRMATION OF MINUTES OF PREVIOUS MEETINGS

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2508

Moved: Cr Williams

Seconded: Cr Hughes

- 1. That the minutes of the Ordinary Council meeting held on Wednesday, 15 July 2015 be confirmed as a true and correct record of that meeting.**
- 2. That the minutes of the Special Council meeting held on Wednesday, 15 July 2015 be confirmed as a true and correct record of that meeting.**
- 3. That the minutes of the Special Council meeting held on Tuesday, 11 August 2015 be confirmed as a true and correct record of that meeting.**

CARRIED 9/0

12. ANNOUNCEMENTS BY THE PRESIDING OFFICER WITHOUT DISCUSSION

12.1 PRESIDENTS REPORT – ORDINARY COUNCIL MEETING - WEDNESDAY 19 AUGUST 2015

<u>Visitations and Consultations:</u>	
16/08/2015	Launch of Health Navigator initiative
23/07/2015	ABC Regional radio interview re: YHIDC alleged assault
25/07/2015	Link Theatre retractable seating launch
29/07/2015	Attend Law and Order forum
31/07/2015	CEO Review Committee meeting with CEO re: draft 2015/16 KPIs
31/07/2015	Avon Descent – Avon River Festival
01/08/2015	Avon Descent start and Toodyay food festival events
02/08/2015	Avon Descent finish at Bayswater for medal presentations
04/08/2015	Northam Heritage Forum re: old Northam train station future
05/08/2015	Andrew O'Connor (ABC News 7:30 Report) re: Wheatbelt road toll
05/08/2015	Local Government Week day #1
06/08/2015	Local Government Week day #2
06/08/2015	WALGA tri Zone meeting re: Wheatbelt Health MOU Group
6 – 9/08/2015	State Sand Greens golf tournament in Northam
07/08/2015	Local Government Week day #3

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<u>Upcoming Events</u>	
13/08/2015	Annual Parks and Works Conference opening – Cr. Little attending
14/08/2015	AusIndustry breakfast meeting
17/08/2015	Springhill development application information session
17/08/2015	Fresh Start building tour
18/08/2015	Vietnam Veterans' Day
18/08/2015	AROC meeting in Toodyay
18/08/2015	Parliamentary dinner with fellow Councillors and Mia Davies MLA
20/08/2015	DEMC meeting and Fire Risk workshop
21/08/2015	WALGA Avon Midlands Zone meeting in Dalwallinu
21/08/2015	Avon Valley Small Business Awards night
22/08/2015	The Lost WW1 Diary show
26/08/2015	Dowerin Field days day #1
26/08/2015	Shire quarterly strategic meeting
27/08/2015	Dowerin Field Days day #2
27/08/2015	Super towns Committee meeting
27/08/2015	Northam Scouts annual meeting
28/08/2015	Northam Art Prize launch event
29/08/2015	Northam Ballooning Fiesta event
29/08/2015 – 06/09/2015	National Ballooning Championships in Northam
29/08/2015	Hugo Throssell VC 100 th anniversary of ANZAC action award event
29 – 30/08/2015	Northam and Districts Small Farm and Business Expo
03/09/2015	Community consultation opportunity in Grass Valley
05/09/2015	National Ballooning Championships awards
11 – 12/09/2015	Northam Agricultural Show days
12/09/2015	Avon Link train service 20 th year of operation anniversary

Operational matters:

Avon Descent

The 43rd Avon Descent has been run and with welcome rain at the 11th hour, the race itself was a success. The entrant numbers were about half of the normal total, as many potential “descanters” were put off by the lack of water at the time entries closed. Unfortunately, our street parade was cancelled due to inclement weather however the Perdaman Group sponsored fireworks were well received by the crowd in attendance.

National Ballooning Championships

The time has almost arrived for these championships to be conducted, some 31 years after the last time the event was held here in 1984. It is pleasing to see the numbers of events and activities looking to leverage off the visitors that the event is expected to attract.

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New shopping centre proposed development

After nearly 20 years of very limited use, the old hospital site finally appears to be destined for a new purpose with a development application being received by the Shire involving double anchor supermarkets and a retail fuel outlet proposed. Finding a useful purpose for this site has been a long time coming and if the Development Assessment Panel (DAP) gives this project the necessary approvals, that will be the end of a hiatus period that many will be pleased to see behind us.

Wheatbelt roads death toll

The ABC News program is following the story on why the risk of serious crashes in the Wheatbelt is around 7 times greater than the State average so it is hoped that causes will be identified which can be addressed. State Road Safety Minister Liza Harvey called a forum in Merredin this month to gain a better insight into what makes the Wheatbelt unique for the wrong reasons, in this case.

Strategic matters:

Localised flooding

Recent rain events have once again highlighted the lack of capacity in our drainage system to manage and mitigate moderately intense rainfall events. Whilst the rainfall event itself is an “Act of God”, there have been quite a few of these events in recent years which adversely affect many land owners, albeit briefly. If we are to continue to rely heavily on our road and drainage network to contain and transport water flows to the creeks and rivers in our Shire, we have to be working towards best practice in those hotspots that continue to suffer from the inundation that comes with these events. The washout of gravel and soil that occurs with these events from both Shire and privately owned lands is a continuing high maintenance cost to the Shire that alternative verge cover materials may better manage.

Tattersalls/Fitzgeralds Hotel site

Now that demolition is nearly complete, it will be interesting to see what use this site may be put to in the coming months and years by the owner. Whilst there has been the loss of another historic building, hopefully any replacement structure will be a suitable addition to the CBD of Northam.

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13 REPORTS OF OFFICERS

13.1 ADMINISTRATION

13.1.1 FINANCIAL ASSISTANCE GRANTS TO LOCAL GOVERNMENT

Name of Applicant:	Shire of Northam
Name of Owner:	Shire of Northam
File Ref:	8.2.5.15
Officer:	Chief Executive Officer - Jason Whiteaker
Officer Interest:	N/A
Policy:	N/A
Voting:	Simple Majority
Date:	31 July 2015

PURPOSE

For Council to acknowledge the quantum and importance of Federal Assistance Grants (FAGs).

BACKGROUND

The WA Local Government Association have written to all Local Governments in Western Australia outlining the following;

The Australian Local Government Association (ALGA) is conducting a national campaign to highlight the importance of Financial Assistance Grants (FAG's) to Australian Local Governments. The campaign aims to reverse the damaging three year indexation freeze on FAG payments that was implemented in the 2015/16 Federal Budget.

FAG funding is not currently keeping pace with demand for services and infrastructure in local government and the freeze will worsen this. Freezing FAGs at their current Level until 2017-18 will result in a permanent reduction in FAGs base by 13%.

ALGA, in its 2015 Federal Budget submission, has called for FAG indexation to be restored immediately and for the Federal Government to consider the adequacy of the quantum of FAGs and the indexation methodology. Whilst the Federal Government recently announced an additional \$1.105b funding addition to the Roads to Recovery (R2R) program, this is only allocated for two years and is not guaranteed to continue. Further, R2R is a tied grant program unlike FAGs funding, cannot be used for general purposes. Any shift away from general

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purpose funding could seriously impact Local Government's financial sustainability.

In order to guard against this risk. ALGA has previously asked Councils to support the FAGs campaign by passing a resolution similar to the attached draft.

The success of the national campaign relies on money WA Councils passing resolution to highlight the importance of FAGs. If your Council has not done already, I ask that you pass such a resolution at the earliest possible opportunity.

It's also important that Councils acknowledge the receipt of FAGs from the Commonwealth in media releases and Council publications, including annual reports.

STATUTORY IMPACTS

N/A

CONFORMITY WITH THE STRATEGIC COMMUNITY PLAN / CORPORATE PLAN

FAGs are a vital part of the revenue base of all councils, and this year councils will received \$2.3 billion from the Australian Government under this important program.

The Government's decision in the 2014 Federal Budget to freeze the indexation of FAGs for three year's beginning in 2014-15 will unfortunately cost councils across Australia an estimated \$925 million by 2017-18.

ALGA and the state local government associations are seeking the support of Council for advocacy to have the Federal Government reverse the decision to freeze the indexation of FAGs.

While the FAGs are paid through each state's Local Government Grants Commission, the funding opportunities with the Commonwealth and it is important it is recognised as such. Council, and every other council in Australia, have been asked to pass a resolution acknowledging the important of the Commonwealth's Financial Assistance Grants in assisting Council to provide important community infrastructure.

Council is also being asked to acknowledge the receipt of Financial Assistance Grants from the Commonwealth in media releases and council publications, including you annual report and highlight to the media a council project costing a similar size to the FAG received by Council so that the importance and impact of the grants can be more broadly appreciated

FINANCIAL IMPLICATIONS

Federal Assistance Grants received over the past 4 years are shown in the table below;

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Year	General Purpose	Local Roads	Bridges	Annual Total
2011.12	\$1,947,213	\$755,488		\$2,702,701
2012.13	\$2,149,711	\$714,906	\$146,000	\$3,010,617
2013.14	\$2,470,270	\$765,723		\$3,235,993
2014.15	\$2,564,984	\$773,585		\$3,338,569

OFFICER'S COMMENT

Obviously Federal Assistance Grants are a vital component of the Shire of Northam's revenue base. The decision to 'freeze' the FAG's no doubt has a financial impact on the Local Government Sector as a whole (as outlined in the background). With this in mind staff are recommending to Council that it support the position of the WA Local Government Association

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2509

Moved: Cr Rumjantsev

Seconded: Cr Little

That Council;

- 1. Acknowledge the importance of Federal funding through the Financial Assistance Grants program for the continued delivery of Council's services and infrastructure;**
- 2. Acknowledge receipt of \$3,338,569 in 2014-15; and**
- 3. Incorporates acknowledgement of Federal Funding into its 2015/16 Annual Report and other publications where appropriate**

CARRIED 9/0

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13.2. DEVELOPMENT SERVICES

Cr K D Saunders has declared an "Impartiality Interest" in item 13.2.1 - Shire of Northam Local Biodiversity Strategy as one of the target areas identified may include her farming property that may be impacted.

13.2.1 SHIRE OF NORTHAM LOCAL BIODIVERSITY STRATEGY

Name of Applicant:	Internal
Name of Owner:	Shire of Northam
File Ref:	7.2.1.18
Officer:	Chadd Hunt
Officer Interest:	Nil
Policy:	Draft Local Biodiversity Strategy
Voting:	Simple
Date:	30 July 2015

PURPOSE

For Council to consider the final adoption of the Local Biodiversity Strategy for the Shire of Northam.

BACKGROUND

Council considered the draft Local Biodiversity Strategy (LBS) at its meeting held on 15th April 2015 where it resolved the following-

That Council, endorse for public advertising the Shire of Northam draft Local Biodiversity Strategy, to be brought back to Council for adoption after consideration and review based on comments received during the advertising period.

Following this resolution the draft LBS was advertised in the local newspaper and Council website for a period of approximately 4 weeks. At the conclusion of the advertising period no submissions were received.

The LBS has drawn together a large number of environmental documents, research and mapping into a single document on Northam biodiversity.

STATUTORY REQUIREMENTS

Section 1.3(3) of the Local Government Act 1995 states that *"In carrying out its functions, a Local Government is to use its best endeavors to meet the needs of current*

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and future generations through integration of environmental protection, social advancement and economic prosperity.”

If the Local Biodiversity Strategy is adopted, it is expected that the Shire of Northam Local Planning Strategy, Scheme and Policies are amended to give legislative support to the implementation of the Biodiversity Strategy.

CONFORMITY WITH THE STRATEGIC COMMUNITY PLAN / CORPORATE PLAN

OBJECTIVE N2: Enhance the health and integrity of the natural environment.
 STRATEGY N2.1: Identify vulnerable environments or areas in need of protection
 ACTION: Develop a Shire of Northam Biodiversity Strategy in liaison with Wheatbelt NRM

BUDGET IMPLICATIONS

A number of the recommendations within the Strategy will require resource to action. These include a combination of both staff time and other associated costs such as mapping, advertising, and expert advice if required. It is proposed that some tasks be shared with Wheatbelt NRM which have been identified as a partner in delivering the outcomes of the strategy.

OFFICER’S COMMENT

The LBS integrates land use planning tools and conservation land management tools to protect biodiversity. Whilst a number of actions appear easily implemented it should be recognised that there is significant resource required to fully address the action list. In staffs opinion the key in achieving the actions identified within the strategy is the input and assistance from the key agencies involved in preparing the strategy.

The recommended actions by contained within the draft LBS are as follows (proposed within a five year timeframe):

Action	Priority
Integration into the land use planning framework	
Confirm the conservation values of the selected <i>Land Administration Act 1997</i> reserves proposed for change of purpose, or change of classification of reserve to Conservation of Flora and Fauna in the planning scheme (Appendix D, Table 5).	High
Scheme Amendment to change the classification of selected high conservation reserves to Conservation of Flora and Fauna (vested in the Shire)	High
Scheme Amendment to change the classification of selected high conservation reserves (vested in State agencies)	Medium
Introduction of a new Rural Conservation zone, or strengthen Rural, Rural Residential and Rural Small Holding zone provisions	High

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Action	Priority
Amend Conservation designations on Local Planning Strategy maps to include adopted Target Areas and local conservation reserves	Medium
Develop a number of Local Planning Policy/Policies (see section 4.1)	High
Local Government Natural Area Management	
Develop a strategic 5 year management plan for all conservation reserves using the information collected via NAIA Templates	High
Develop and implement best-practice procedures for all Shire staff and contractors working and accessing natural areas and managing infrastructure assets	Medium-High
Investigate the feasibility of forming a <i>Biosecurity Group</i> in partnership with adjoining Local Governments	Medium
Implement a strategic reserve management plan	Medium
Increase riparian vegetation cover and condition on lands managed by the Shire (focusing on upper reaches and northern shores of priority waterways)	Medium
Private landholder support	
Facilitate private landholder consultation to identify the most desirable incentives for biodiversity conservation on private land	High
Prepare and implement a private landholder incentives strategy to support biodiversity conservation on private lands.	Medium
Facilitate riparian vegetation restoration on private lands	
Communication	
Integrate all Local Biodiversity Strategy mapping into the Shire's information system	High
Develop and promote sustainable landscaping strategy for residential areas and streetscaping	Medium
Facilitate discussions with local Aboriginal leaders to investigate opportunities for their involvement in promoting the cultural values of natural areas in the Shire	High
Facilitate discussions with the Wheatbelt NRM, adjoining Local Governments, DPaW and other relevant stakeholders on identification of regional ecological linkages.	Medium
Develop a monitoring and reporting schedule	High
Undertake a review of the feasibility and effectiveness of the proposed implementation actions every 5-7 years.	Medium
Local Government capacity building	
Contract or employ Environmental Officer services to include natural area management, submission of grant applications to obtain external funding for reserve management and facilitate partnerships with other relevant stakeholders and the community in reserve management, restoration and support to private landholders.	High
Form partnerships with not-for-profit groups active in the Shire to facilitate reserve management and private landholder support for	High

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Action	Priority
biodiversity management	
Establish a Natural Resource Management (NRM) Reference Group to facilitate partnerships in implementing the Local Biodiversity Strategy objectives and other NRM priorities (e.g. Avon River and other priority waterways recovery)	High

Priority ranking indicates the general order of priority, and does not necessarily reflect a specific timeframe. Actions will be undertaken within the context of existing resources and competing work requirements.

The Biodiversity Strategy is provided in Appendix 6 as a separate attachment to this agenda.

RECOMMENDATION

That Council;

- 1. Formally adopts the Shire of Northam Local Biodiversity Strategy without modification as attached; and**
- 2. Acknowledges that the endorsed action strategy therein be actioned over a five year period in close consultation with the identified partner agencies and within the parameters of existing staff numbers and capacity, which will be reviewed as part of the 2016/17 budget process.**
- 3. Contact the key agencies identified in the Local Biodiversity Strategy to assist with the delivery of the action strategy.**

MOTION / COUNCIL DECISION

Minute No: C.2510

Moved: Cr Hughes

Seconded: Cr Little

That Council;

- 1. Formally adopts the Shire of Northam Local Biodiversity Strategy subject to the weed Tribulus Terrestris (Calthrop/Caltrop) being added as a priority weed on Table 6, Page 39 and 40 of the Biodiversity Strategy as attached; and**
- 2. Acknowledges that the endorsed action strategy therein be actioned over a five year period in close consultation with the identified partner agencies and within the parameters of existing staff numbers and capacity, which will be reviewed as part of the 2016/17 budget process.**
- 3. Contact the key agencies identified in the Local Biodiversity Strategy to assist with the delivery of the action strategy.**

CARRIED 9/0

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Cr S B Pollard has declared an "Indirect Financial" interest in item 13.2.2 – Request to Waiver Tipping Fees as he provides accounting services to Share & Care.

Cr S Pollard departed the Council Chambers at 5.57pm.

13.2.2 REQUEST TO WAIVER TIPPING FEES

Name of Applicant:	Internal Report
Name of Owner:	N/A
File Ref:	4.1.1.20
Officer:	Chadd Hunt / Carmen Sadleir
Officer Interest:	Nil
Policy:	Nil
Voting:	Simple Majority
Date:	27 July 2015

PURPOSE

To consider a request, as attached from Share and Care Community Services Group to permit gardening service contractors engaged by them to dispose of waste at the Old Quarry Road Waste Disposal facility free of charge.

BACKGROUND

The Shire has received a request from Share and Care Community Services Group requesting authorisation to allow their contractors to utilise the Old Quarry Road landfill site under the Share and Care account.

A search of Council's records has indicated that in fact Share and Care have not paid tipping fees since at least 2000, therefore their request is for the Shire to also permit their commercial contractors to tip free of charge when they are undertaking work for Share and Care.

Although there does not appear to be a formal agreement with Share and Care regarding free tipping it is thought that this arrangement may have been permitted many years ago due to the nature of Northam Share and Care's work in the community.

Share and Care Community Services Group is a not for profit organisation funded by Commonwealth and State Government and Lotterywest. First established in 1975 it has 80 paid employees and 4 volunteers.

The group utilise the Old Quarry Road Waste Management Facility for depositing waste from their Home and Community Care Program. The program offers basic gardening, cleaning and home maintenance services for people with disabilities and the elderly that

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have been independently assessed by the HACC - Regional Assessment Service as being unable to undertake these activities themselves.

STATUTORY IMPACTS

Local Government Act 1995, Part 6, Division 4, Section 6.12

6.12. Power to defer, grant discounts, waive or write off debts

- (1) Subject to subsection (2) and any other written law, a local government may —*
- (a) when adopting the annual budget, grant* a discount or other incentive for the early payment of any amount of money; or*
 - (b) waive or grant concessions in relation to any amount of money; or*
 - (c) write off any amount of money, which is owed to the local government.*

**Absolute majority required.*

(2) Subsection (1) (a) and (b) do not apply to an amount of money owing in respect of rates and service charges.

(3) The grant of a concession under subsection (1) (b) may be subject to any conditions determined by the local government.

CONFORMITY WITH THE STRATEGIC COMMUNITY PLAN / CORPORATE PLAN

OBJECTIVE C 1: Create an environment that provides from a growing, caring and health community.

STRATEGY C 1.5: Facilitate provision of services for aged persons and people with disabilities.

FINANCIAL IMPLICATIONS

The loss of income resulting from Share and Care not paying tipping charges has been in the vicinity of \$7,500 per annum over the last 5 years. This amount will increase if commercial contractors hired by Share and Care are permitted to tip free of charge and it will be further compounded by other not-for-profit government funded organisations who may also have a claim.

From analysis of weighbridge readings of waste deposited by Share and Care the following indicates revenue not collected from the last 5 year financial year periods:

Financial Year	Income Lost (Tip Fees)
2014 - 2015	\$7,455.40
2013 - 2014	\$7,586.75
2012 - 2013	\$7,424.30
2011 - 2012	\$7,473.40
2010 - 2011	\$7,213.00
Total	\$37,152.85

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OFFICER'S COMMENT

Whilst it is acknowledged that Share and Care Community Services Group provide an important community service in helping people with disabilities and the elderly through the provision of basic gardening, cleaning and maintenance services, other government funded organisations that also provide an important community service are paying to deposit at the Old Quarry Road Waste Management Facility. Therefore it is important to note that providing exemption is likely to trigger a flow-on effect which will have budgetary consequences.

Council's proposed 2015/2016 fees and charges as well as previous year's fees and charges provide that there is no charge for domestic waste from residents of the Shire for up to 10 disposals per year. Generally waste from contractors, landscaping, building, cleaning and maintenance is considered commercial waste which attracts a charge.

Although Council provides a free red skip bin to residents within the town of Northam and twice yearly bulk skip bins at other townsites within the Shire, this is beneficial for large scale clean ups. However the work undertaken by Share and Care which is more of a regular maintenance program, for example mowing a client's lawn on a regular basis, requires them to access the landfill.

Research with other local authorities of Mundaring, Swan, Kalamunda and the Red Hill Landfill facility has indicated that no discounted tipping fees for community or not-for-profit groups apply.

In consideration of this request, Shire staff would like Council to also consider the increasing costs of landfill management, rehabilitation requirements, future upgrades and expansion.

Should Council wish to support the request from Share and Care Community Services Group further clarity would be required as to whether all non-profit community groups and their commercial contractors should be charged a fee for disposal, and how this would be managed operationally.

Given the above comments it is staff's recommendation that all disposals at Council's landfill facilities should attract the prescribed fee. It is also recommended that staff work closely with the Share and Care Community Services and other similar groups to utilise the existing free skip bin service on a more regular basis.

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RECOMMENDATION

That Council;

- 1. Does not permit any not-for-profit government funded organisations, their commercial contractors or any community organisations to dispose free of charge at the Councils Waste Management facilities due to the high costs associated with the management of a landfill facility; and**
- 2. Advise Share and Care Community services of the above resolution and request staff to work with the organisation to utilise the free bulk bin services for the Northam townsite.**

MOTION

Moved: Cr Hughes
Seconded: Cr Rumjantsev

That Council;

Permits certified contractors, on the days they wholly work for Government funded not - for - profit Organisation, being limited to Northam Share and Care, Northam Silver Chain and Northam Avon Youth to dispose of rubbish and green waste, collected from clients of the above Organisations, free of charge, at the Shire Waste Management Facilities.

PROCEDURAL MOTION / COUNCIL DECISION

Minute No: C.2511

Moved: Cr Tinetti
Seconded: Cr Saunders

That Council, lay the matter on the table to allow for further investigation.

CARRIED 8/0

Cr Pollard returned to the Council Chambers at 6.08pm.

The Deputy President, Cr T Little read aloud the decision of Council.

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Share & Care
Community Services Group
Building resilience in communities

Seniors and Younger Disabled Services

PO Box 365
NORTHAM WA 6401
T: 08 9622 5195
F: 08 9622 5070
ABN: 378 351 039 86

Case Management Coordination
(Family & Domestic Violence)
08 9622 7321

Emergency Accommodation
08 9622 2828

Emergency Relief
08 9622 2828

Families Assistance
08 9622 2828

Financial Counselling
08 9622 2828

Home & Community Care
08 9622 5195

Home Care Packages
08 9622 5195

Homelessness Support Program
08 9621 2311

Homemaker Program
08 9622 2828

Meals On Wheels
08 9622 5195

Men's Lodge
08 9621 2311

Men's Social Support Group
08 9622 5195

Mental Health Program
08 9622 5195

Mobile Respite Service
08 9622 5195

Narrogin Outreach DV
Counselling Service
08 9881 6810

Narrogin Women's Refuge
08 9881 6810

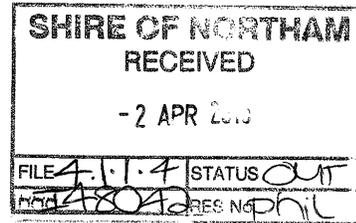
Northam Women's Refuge
1800 353 122

Rainbow Centre
08 9881 6810

Safe at Home Program
08 9622 7321

Start Tapping Program
08 9622 5195

Mr Phil Stevens
Shire of Northam
PO BOX 613
NORTHAM WA 6401



Dear Mr Stevens

RE: BJ's Gardening Services contracting to Share and Care Community Services Group Inc.

Due to increasing consumer numbers BJ's Gardening Service is providing gardening services on our behalf to consumers and would like to utilise the Northam waste disposal site to dispose of consumer's garden waste as our home maintenance team currently does.

Would you please confirm that we have provided enough information for your records?

Any further questions please contact our office.

Kind Regards

Carol Jones-Lummis
Chief Executive Officer

30th March 2015

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**13.2.3 ADOPTION OF THE AVON REGIONAL ORGANISATION OF COUNCILS
STRATEGIC WASTE MANAGEMENT PLAN 2015-2020**

Name of Applicant:	Internal Report
Name of Owner:	N/A
File Ref:	4.1.1.20
Officer:	Chadd Hunt / Carmen Sadleir
Officer Interest:	Nil
Policy:	Waste Avoidance and Resource Recovery Act 2007
Voting:	Simple Majority
Date:	27 July 2015

PURPOSE

Council to adopt the Avon Regional Organisation of Councils (AROC) Strategic Waste Management Plan (SWMP) 2015-2020 developed by Ian Watkins from IW Projects.

BACKGROUND

In order for the Shire of Northam to participate in any funding opportunities from the Waste Authority the Shire must be in a Strategic Waste Management Group made up of two or more Councils. At the Shire's Ordinary Council Meeting of the 19 February 2014, Council made the following resolution:

'That Council withdraw from the 'Avon Group' of Councils waste group and combine with the 'Avon Regional Organisation of Councils' waste group on the condition that all other member Councils of AROC agree with the proposal'.

The Shire of Northam was responsible liaising with all member Councils for the new AROC group and seeking and assessing the quotations for the AROC Strategic Waste Management Plan. Three quotations were received and the development of this plan was awarded to IW Projects.

The plan has now been completed and agreed to by the AROC group and is now provided as Appendix 7, as a separate attachment to the agenda for adoption by Council.

STATUTORY IMPACTS

In working towards Zero Waste the State Governments Waste Authority has identified that larger regional areas with a population greater than 25,000 people should be working towards achieving a landfill recovery rate of 45 percent by 2016 (*Waste Strategy for Western Australia draft II*)

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Additionally the 2012 Waste Authorities *“Western Australian Waste Strategy: Creating the Right Environment”* has identified five (5) strategic objectives within which strategies relating to knowledge, infrastructure and incentives have been developed to support a coordinated approach to changing the behaviours of individuals, groups and organisations. These strategies will have future effects on the Shires waste management activities:

Strategy objective 1 – Initiate and maintain long-term planning for waste and recycling processing, and enable access to suitably located land with buffers sufficient to cater for the State’s waste management needs.

Strategy objective 2 - Enhance regulatory services to ensure consistent performance is achieved at landfills, transfer stations and processing facilities.

Strategy objective 3 - Develop best practice guidelines, measures and reporting frameworks and promote their adoption.

Strategy objective 4 - Use existing economic instruments to support the financial viability of actions that divert waste from landfill and recover it as a resource.

Strategy objective 5 - Communicate messages for behaviour change and promote its adoption, and acknowledge the success of individuals and organisations that act in accordance with the aims and principles in the Strategy and assist in its implementation.

CONFORMITY WITH THE STRATEGIC COMMUNITY PLAN / CORPORATE PLAN

OBJECTIVE N1: Mitigate the Shire of Northam’s carbon footprint, reducing waste and greenhouse gas production.

STRATEGY N1.1: Manage waste disposal in an environmentally sensitive manner that meets the needs of a growing population.

STRATEGY N1.3: Encourage the use of recycled materials and create a ‘Towards Zero Waste’ culture amongst the community.

FINANCIAL IMPLICATIONS

The plan identifies proposed key activities from 2015/2016 through to 2019/2020. The key activities nominated for 2015/2016 do not have any budget impact however there may be budget considerations in future years for projects which will be decided on an annual basis during budget deliberations. Having this plan however will benefit AROC member Shires in accessing government funding for various Strategic Waste Management Projects.

OFFICER’S COMMENT

Waste Authorities *“Western Australian Waste Strategy: Creating the Right Environment”* identifies strategies relating to knowledge, infrastructure and incentives which have been

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developed to support a coordinated approach to changing the behaviours of individuals, groups and organisations in waste minimisation. This strategy builds on existing programs and initiatives such as the Regional Funding Program where the Shire of Northam's previous waste group were successful in obtaining \$421,522.20 (including GST) for the introduction of kerbside recycling.

Being in a regional group is important in order for the Shire to be able to access new funding opportunities from the Waste Authority. The Shire therefore joined AROC for the purposes of Strategic Waste Management Activities including the development of a Strategic Waste Management Plan. In February 2015, AROC appointed *IW Projects* to develop a Strategic Waste Management Plan that incorporated the complete AROC region.

The scope of work was to include the following activities

1. *Review available waste management documentation belonging to AROC members, including waste management contracts, waste and recycling data, strategic waste plans, correspondence from Department of Environment Regulation (DER) and any other relevant waste management documentation.*
2. *Undertake a site visit to each shire to inspect waste management sites, discuss waste management issues, past successes and future direction.*
3. *Compile conceptual strategic waste management initiatives.*

This scope of works has now been completed and the AROC Strategic Waste Management Plan 2015-2020 has now been developed.

This document, as attached, identifies the group's strategic direction including identification of twenty (22) major activities (refer page vii for summary) to be undertaken by the nominated Working Group made up of each Local Governments key waste management staff.

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2512

Moved: Cr Tinetti

Seconded: Cr Hughes

That Council, adopt the attached Avon Regional Organisation of Councils Strategic Waste Management Plan 2015-2020 as an informing strategy to the Shire of Northam Corporate Plan.

CARRIED 9/0

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13.2.4 APPLICATION FOR A STALL PERMIT TO OPERATE ON SHIRE LAND

Name of Applicant:	Internal Report
Name of Owner:	Shire of Northam
File Ref:	4.1.2.1
Officer:	Chadd Hunt / Gill Mansfield
Officer Interest:	Nil
Policy:	Local Government Act 1995 Activities on Thoroughfares and Public Places and Trading Local Law 2008
Voting:	Simple Majority
Date:	31/07/2015

PURPOSE

The purpose of this report is to consider an application for a stallholders permit under the *Activities on Thoroughfares and Public Places and Trading Local Law 2008 (the Local Law)* from Mark Ferris of B & B Fisheries Pty Ltd, trading as Direct Seafood's, 25 Trieste Court, Mindarie, WA 6030.

BACKGROUND

The activity proposed by the applicant is considered to be a 'stall' under the Local Law and as such the conduct of a 'stall' in a 'public place' requires a stall holders permit to be issued by the Shire.

Delegations at officer level are normally exercised in permitting stallholder applications, however applications have generally been confined to stalls being either part of an approved event, sports game or community markets.

The current application however is a request to trade, selling frozen fish, from a public place, nominated as the car park at either the Town Hall or Bernard Park for one day per fortnight. The applicant has advised that attending the community markets is not an option because they trade at Hillarys Wharf every Saturday. They are looking for locations to trade on their generally otherwise quiet trading days.

STATUTORY REQUIREMENTS

The *Activities on Thoroughfares and Public Places and Trading Local Law 2008*, clause 6.1 defines:-

"stall holder" as a person in charge of a stall;

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“stall” as a moveable or temporarily fixed structure, stand or table in, on or from which goods or services are sold, hired or offered for sale or hire”;

“trading” as including (inter alia) –

- (b) displaying goods in any public place for the purpose of –
 - (i) offering them for sale or hire;*
 - (ii) inviting offers for their sale or hire;*
 - (iii) soliciting orders for them; or*
 - (iv) carrying out any other transaction in relation to them; and**
- (c) going from place to place, whether or not public places, and
 - (i) offering the goods for sale or hire**

“public place” as including –

- (a) any thoroughfare or place which the public are allowed to use whether or not the thoroughfare or place is on private property; and*
- (b) local government property.*

CONFORMITY WITH COMMUNITY STRATEGIC PLAN / CORPORATE PLAN

OBJECTIVE C2: Provide services and processes to enhance public safety

STRATEGY C2.1: Provide community services to uphold public safety standards

BUDGET IMPLICATIONS

No budget implications apart from application fee

OFFICER’S COMMENT

The applicant has requested approval to conduct a stall selling frozen Australian wild caught fish from a mobile food vehicle (picture attached) on Wednesday of every fortnight from 8.00am to 5.00pm from either the Bernard Park car park or the Town Hall car park.

The Food Business is registered under the *Food Act 2008* by the City of Wanneroo but still requires the Shires approval to operate as a stall under the *Activities on Thoroughfares and Public Places and Trading Local Law 2008*.

Whilst the local law provides that in determining an application for a permit the local government is to have regard to relevant policies, desirability of the proposed activity,

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location, National Competition Principles and such other relevant matters, no Shire policy currently exists to provide guidance.

Therefore in determining stallholders applications to trade other than when associated with events, sports and markets consideration should be given to the implications of permitting the conduct of commercial activities from Council land, such as determining limitation on the number of permits to be issued, public safety, public access to the facility, car park restriction, the temporary or permanent nature of the stall, benefits to the community, competition with existing businesses.

Research of some other local governments has indicated the following:-

The City of Fremantle has launched a 'unique food vehicle' project which identifies under-utilised public spaces in the community and makes them available to diverse food vehicle businesses. They identify that a unique food vehicle should:

- engage the community
- provide, healthy, good quality and culturally unique food
- provide affordable food
- provide only safe food

The City of Bayswater has also recognised the emerging trend of pop up mobile food vehicles as a means of activating under-utilised streets and public places and they have introduced a trial. They have identified seven (7) potential locations for mobile food vehicles and have created a set of key principles which must be met when assessing applications for stalls not located within an established market or at an approved event. The key principles include:

- operate in locations which support activation of underutilized public spaces
- encourages clusters to promote diversity of product and social interaction
- provide unique food vendor activity which encourages community interaction
- temporary in nature
- residential amenity not be unreasonable compromised
- operate to complement existing food businesses in town
- work in partnership with existing sporting clubs and groups

The Shire of Mundaring permits food stalls at approved markets or events only.

In staffs opinion the operation of the proposed stall raises a number of issues with respect to the existing commercial businesses within the town and will have the potential to set a precedent for dealing with similar applications in the future. In the absence of any policy or strategic direction with respect to the manner in which applications should be dealt with it is recommended that this application should not be approved in the proposed locations.

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RECOMMENDATION / COUNCIL DECISION

Minute No: C.2513

Moved: Cr Little

Seconded: Cr Saunders

That Council;

- 1. Advise B & B Fisheries Pty Ltd, trading as Direct Seafood's that Council currently will not permit Shire land to be used for the purpose of commercial trading unless it is within an approved event, sports meeting or markets; and**
- 2. Request the Chief Executive Officer to draft a policy to provide guidance to applicants and staff in relation to stalls and trading in a public place.**

CARRIED 9/0

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13.3. CORPORATE SERVICES

13.3.1 ACCOUNTS AND STATEMENTS OF ACCOUNTS

Name of Applicant:	Internal Report
File Ref:	2.1.3.4
Officer:	Leasa Osborne / Denise Gobbart
Officer Interest:	Nil
Policy:	Nil
Voting:	Simple Majority
Date:	31 July 2015

PURPOSE

The Accounts due and submitted to the Ordinary Council Meeting on 19 August 2015 are attached.

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2514

Moved: Cr Rumjantsev
Seconded: Cr Tinetti

That Council endorse the payments for the period 1 July 2015 to 31 July 2015, as listed, which have been made in accordance with the delegated authority reference number (M/F/F/Regs LGA 1995 S5.42).

Municipal Bank Vouchers 34200 to 34246	\$ 103,143.83
Trust Bank Vouchers 1912 to 1912	\$ 1,000.00
Municipal Bank Electronic Fund Transfer EFT20309 to EFT20313 and EFT20316 to EFT20572	\$ 2,096,823.81
Trust Bank Electronic Fund Transfer EFT20314 to EFT20315	\$ 500.00
Direct Debit Fund Transfer 8581.1 and 8730.1 and 8758.1 and 8793.1 to 8793.13 and 8872.1 to 8872.14	\$ 61,200.02
Municipal Bank Electronic Fund Transfer Payroll 02/07/2015	\$ 174,623.16
Municipal Bank Electronic Fund Transfer Payroll 06/07/2015	\$ 94.88
Municipal Bank Electronic Fund Transfer Payroll 16/07/2015	\$ 174,198.07
Municipal Bank Electronic Fund Transfer Payroll 30/07/2015	\$ 172,769.36
TOTAL	\$ 2,784,353.13

CARRIED 9/0

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LIST OF ACCOUNTS DUE AND SUBMITTED TO COUNCIL JULY 2015				
CHQ/EFT	DATE	NAME	DESCRIPTION	AMOUNT \$
1912	24/07/2015	STALLION HOMES	KERB BOND REFUND FOR 5 BUNKER WAY NORTHAM A15112.	- 1,000.00
			TOTAL TRUST CHEQUES	- 1,000.00
EFT20309	03/07/2015	AUSTRALIAN TAXATION OFFICE - PAYG	PAYG PAYRUN W/END 30/06/2015.	- 46,363.00
EFT20310	03/07/2015	CHILD SUPPORT AGENCY	PAYROLL DEDUCTIONS.	- 312.38
EFT20311	03/07/2015	WESTERN AUSTRALIAN LOCAL GOVERNMENT ASSOCIATION	ADVERTISEMENT OF ASSET MANAGER POSITION IN THE WEST AUSTRALIAN ON 02/05/2015 & AVON VALLEY GAZETTE ON 01/05/2015.	- 1,882.12
EFT20312	06/07/2015	AUSTRALIAN TAXATION OFFICE - PAYG	SUPERANNUATION ADJUSTMENT REF PRN 46019919513 FOR 01/07/2010 TO 09/09/2014.	- 46,657.52
EFT20313	08/07/2015	CHERYL FAY GREENOUGH	REIMBURSEMENT FOR POLICE CLEARANCE APPLICATION.	- 61.80
			SUB TOTAL EFT MUNICIPAL	- 95,276.82
EFT20314	14/07/2015	CANCELLED PAYMENT		
EFT20315	14/07/2015	FEDERALS FOOTBALL CLUB	REFUND OF BOND ON TOWN HALL BOOKING #1921 ON 04/07/2015.	- 500.00
			SUB TOTAL EFT TRUST	- 500.00
EFT20316	14/07/2015	SHIRE OF TOODYAY	DIVIDEND FOR SEPTAGE PONDS FOR 2014/2015.	- 9,424.80
EFT20317	14/07/2015	ABNOTE AUSTRALASIA PTY LTD	PURCHASE OF X2000 SHIRE OF NORTHAM LIBRARY CARDS.	- 1,012.00
EFT20318	14/07/2015	ACES ANIMAL CARE EQUIPMENT SERVICES PTY LTD	PURCHASE OF X10 FOLDING CAT TRAPS & X 2 FOLDING DOG TRAPS FOR RANGER SERVICES.	- 1,812.00
EFT20319	14/07/2015	AERODROME MANAGEMENT SERVICES PTY LTD	MASTER PLAN REVIEW FOR NORTHAM AIRPORT.	- 12,006.50
EFT20320	14/07/2015	AG IMPLEMENTS NORTHAM PTY LTD	REPLACEMENT OF REAR WINDOW INCLUDING FITTING & FREIGHT FOR JOHN DEERE TRACTOR N11063.	- 274.98
EFT20321	14/07/2015	AJ SMITH WELDING	TOW FUSO CANTER TRUCK N.3805 TO WORK SITE & HIRE TELEHANDLER AS WELL AS REMOVING TRUCK BED & REPLACING AFTER CLUTCH INSTALLATION, EMERGENCY WORKS MITCHELL AVE/NEWCASTLE RD NORTHAM LOCATING SERVICES TELSTRA, WATER, SEWER & OPTIC FIBRE DUE TO WATER MAIN BURSTING & STAND POST BACK UP LEVEL & WELD STRAIGHT AT THE NORTHAM GUN CLUB AFTER DAMAGED BY THE SHIRE.	- 10,659.00

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EFT20322	14/07/2015	ALCHEMY TECHNOLOGY	SMS SOFTWARE MAINTENANCE UPGRADES FOR CURRENT CONFIGURATION INCLUDING HACC REPORTING & BED BOOKING MODULE TO 30/06/2016, TELEPHONE, EMAIL, REMOTE & TECH SUPPORT TO 30/06/2016, TECHNICAL SUPPORT, DEVELOPMENT & UNLIMITED UPGRADES TO 30/06/2016 & ANNUAL REMOTE DIAL IN SUPPORT FACILITY TO 30/06/2016 FOR KILLARA.	- 1,943.70
EFT20323	14/07/2015	ANDY'S PLUMBING SERVICE	SUPPLY & INSTALL 20MM PRESSURE VALVE NEAR WATER METER AT NORTHAM LIBRARY, APEX PARK, NORTHAM TOWN HALL & RSL HALL NORTHAM, REPLACE DAMAGED HOSE COCK TO CARAVAN DISCHARGE POINT AT JUBILEE PAVILION, REPAIR TOILET CISTERN IN MALE TOILETS & CLEAR BLOCKAGE TO SEWER LINE AT BERNARD PARK, REPLACE EXISTING SHOW ROSES TO PREMISES, REPLACE HOT & COLD RELIEF VALVE & RESECURE METAL BOX TO BRICK WALL AT BERT HAWKE PAVILION, REPAIR TAP TO DRINK FOUNTAIN & CHECK PLUMBING TO TOILET BLOCK AT CLACKLINE PUBLIC TOILET BLOCK LION PARK, REPAIR FAULTY IGNITION TO GAS STOVE AT NORTHAM TOWN HALL, REPLACE BROKEN TAP SPRING AT SULLAGE WASTE POINT, REPLACE BROKEN TIME FLOW TAP TO MALE BASIN AT BERNARD PARK TOILETS, REPAIR TWO LEAKING TOILET CISTERNS AT BERNARD PARK PLAYGROUP, REPAIR HAND BASIN & AUTO BOILER AT MEMORIAL HALL, REPAIR FAULTY TOILET CISTERN & CLEAR BLOCKAGE TO SEWER LINE AT NORTHAM REC CENTRE & INVESTIGATE WATER LEAK AT KILLARA.	- 6,566.45
EFT20324	14/07/2015	ANTHONY ROSKELL	CLEANING OF WUNDOWIE LIBRARY, HALL & PUBLIC TOILETS FOR THE PERIOD 02/06/2015 TO 30/06/2015.	- 955.00
EFT20325	14/07/2015	APEX CLUB OF NORTHAM INC	DONATION FOR SUPPORTING THE RECONCILIATION WEEK COMMUNITY ACTIVITIES & AUSTRALIA DAY BBQ 2015.	- 400.00
EFT20326	14/07/2015	APPLIED INDUSTRIAL TECHNOLOGIES T/A NORTHAM BEARINGS	PURCHASE OF X1 B30S BELT FOR CRICKET WICKET MOWER.	- 32.69
EFT20327	14/07/2015	AUS RECORD	PURCHASE OF X300 TRADITIONAL TUBE CLIP SET FOR CORPORATE SERVICES.	- 198.00
EFT20328	14/07/2015	AUSTRAL POOL SOLUTIONS PTY LTD	PURCHASE OF X2 PACE CLOCKS PLUS DELIVERY CHARGES FOR THE NORTHAM & WUNDOWIE POOLS.	- 1,633.50
EFT20329	14/07/2015	AUSTRALASIAN PERFORMING RIGHT ASSOCIATION LTD APRA	LICENCE RENEWAL FOR THE PERIOD 01/07/2015 TO 30/09/2015 FOR RETAIL & GENERAL BACKGROUND MUSIC TIER 4, LIVE ARTIST PERFORMANCES & MUSIC ON HOLD.	- 458.67

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EFT20330	14/07/2015	AUSTRALIAN TRAINING MANAGEMENT	BACKHOE OPERATOR TRAINING & ASSESSMENTS ON 09/06/2015 & 10/06/2015 FOR X4 ENGINEERING STAFF.	- 2,800.00
EFT20331	14/07/2015	AUTOPRO NORTHAM	PURCHASE OF X4 SINGLE TRAILER LAMPS FOR RANGER SINGLE CAB N.4100 & FORD RANGER SUPERCAB N.3902.	- 53.50
EFT20332	14/07/2015	AV-SEC SECURITY SERVICES	ALARM ATTENDANCE AT NORTHAM VISITORS CENTRE ON THE 19/05/2015.	- 121.00
EFT20333	14/07/2015	AVON DEMOLITION & EARTHMOVING	MANAGEMENT OF OLD QUARRY ROAD WASTE MANAGEMENT FACILITY FOR THE PERIOD 09/06/2015 TO 21/06/2015.	- 1,568.00
EFT20334	14/07/2015	AVON PAPER SHRED	SHREDDING OF X1 240LTR BIN OF CONFIDENTIAL OFFICE PAPER FROM KILLARA.	- 110.00
EFT20335	14/07/2015	AVON TELECOMS PTY LTD	SERVICE CALL TO NORTHAM TOWN HALL ALARM SYSTEM & BERT HAWKE OVAL SECURITY SYSTEM IN JUNE 2015 & SECURITY MONITORING FOR AVON VALLEY ARTS SOCIETY, NORTHAM VISITOR CENTRE, NORTHAM SES, BERT HAWKE OVAL, WUNDOWIE LIBRARY & TELECENTRE & WASTE DISPOSAL CENTRE FOR AUGUST 2015.	- 687.05
EFT20336	14/07/2015	AVON VALLEY BAKERY	ASSORTED CAKES, SLICES, SANDWICHES, PARTY PIES, QUICHES & SAUSAGE ROLLS FOR REGIONAL ACHIEVEMENT & COMMUNITY AWARDS LAUNCH ON 20/05/2015.	- 303.00
EFT20337	14/07/2015	AVON VALLEY CONTRACTORS	SUPPLY & DELIVER PAVING SAND TO SHIRE DEPOT ON 04/05/2015 & 05/05/2015.	- 1,446.50
EFT20338	14/07/2015	AVON VALLEY MOWER & CHAINSAW CENTRE	PURCHASE OF X15 10KG DRY CHLORINE FOR WUNDOWIE SWIMMING POOL, X4 10KG DRY CHLORINE & X15 20L LIQUID CHLORINE FOR NORTHAM SWIMMING POOL.	- 2,349.81
EFT20339	14/07/2015	AVON VALLEY NISSAN	REPLACE GAS STRUT ANCHOR BALL ON CENTRE DOOR, RETENSION ALL HINGES, REPLACE FRONT HEADLAMP GLOBE RIGHT HAND SIDE & GREASE CHAIR ON BCI PROMA WHEELCHAIR BUS KILLARA2 & PURCHASE OF X1 2015 NISSAN NAVARA TRAY TOP N11084 & TRADE IN OF 2010 FORD SUPERCAB TRAY TOP N.3902.	- 18,763.69
EFT20340	14/07/2015	AVON VALLEY STOCK FEED & GARDEN SUPPLIES	HIRE OF DINGO FOR RETICULATION INSTALLATION MAY STREET RESERVE ON 25/06/2015.	- 320.00
EFT20341	14/07/2015	AVON WASTE	DOMESTIC & COMMERCIAL RUBBISH COLLECTION FOR JUNE 2015 & PURCHASE OF X300 SULO NATURE GREEN BINS WITH YELLOW LIDS TO BE PICKED UP & STORED AT AVON WASTE YARD UNTIL ROLLED OUT AS NEEDED.	- 128,006.28
EFT20342	14/07/2015	AVW ELECTRICAL	MODIFICATIONS TO LIBRARY POWER BOARD & WIRING, SUPPLY & INSTALL SECURITY LIGHT & CONTROLS TO FRONT OF FLUFFY DUCKS PLAYGROUP.	- 2,161.50

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EFT20343	14/07/2015	BEAUREPAIRES	PURCHASE OF X2 TYRES, BALANCE & ALIGNMENT FOR SES VEHICLE 1CIZ913.	-	578.94
EFT20344	14/07/2015	BLACKWELL PLUMBING PTY LTD	UNBLOCK WHOLE TOILET BLOCK DUE TO VANDALISM DRAINS FULL OF TOILET PAPER AT BERNARD PARK	-	335.50
EFT20345	14/07/2015	BLOOMY'S FLORIST	GET WELL FLOWERS FOR JEAN MCGREADY.	-	132.00
EFT20346	14/07/2015	BOC LIMITED	OXYGEN MEDICAL C SIZE FOR BAKERS HILL FIRE BRIGADE FOR THE PERIOD 01/02/2015 TO 31/01/2016, BALLOON GAS FOR NORTHAM VISITOR CENTRE FOR THE PERIOD 29/05/2015 TO 27/06/2015, DISSOLVED ACETYLENE G SIZE GAS ANNUAL CONTAINER SERVICE CHARGE & OXGEN INDUST G SIZE GAS ANNUAL CONTAINER SERVICE CHARGE FOR THE PERIOD 01/07/2015 TO 30/06/2015 FOR NORTHAM DEPOT, NORTHAM REC CENTRE, NORTHAM POOL & WUNDOWIE POOL.	-	887.88
EFT20347	14/07/2015	BRICK MART	PURCHASE OF X4 PLANTER BOXES FOR ADMIN OFFICE GARDEN & X8 PLANTER BOXES FOR DEPOT NURSERY.	-	1,440.00
EFT20348	14/07/2015	CADD'S FASHIONS	PURCHASE OF ASSORTED UNIFORM ITEMS FOR ENGINEERING SERVICES STAFF.	-	1,282.50
EFT20349	14/07/2015	CENTRAL MOBILE MECHANICAL REPAIRS	REPLACE SPARK PLUGS & CLEAN AIR FILTER ON ISUZU TIPPER N.4096, REPLACE BROKEN AIR FILTER IN MITSUBISHI CANTER TRUCK N.003, REPLACE FUSE HOLDER IN HINO DUMP TRUCK N.4013, CHECK ENGINE AS ABS LIGHT IS ON IN FUSO TRUCK N10759, REPAIR WIRING IN KOMATSU LOADER N.3856, REMOVE EMULSION PUM AND CHECK IN HINO FLOCON N.008, REPAIR BRAKES ON MITSUBISHI CANTER TRUCK N.003, TRAVEL TO ORH TRUCK SALES & SAWYERS VALLEY TO INSPECT 2 WATER TRUCKS THEN RETURN TO NORTHAM & CHECK QUICK RELEASE BUCKET PINS ON VOLVO BACKHOE N.3555.	-	3,421.33
EFT20350	14/07/2015	CJD EQUIPMENT PTY LTD	PURCHASE OF X12 CHISEL TOOTH, X2 WASHERS, X2 CONTROL RODS, X2 LOCK KITS, X4 LOCK CYLINDERS, X4 HEXAGON NUTS & X2 LOCK BOLTS FOR VOLVO BACKHOES N.004 & N.3555.	-	741.52
EFT20351	14/07/2015	CLACKLINE FENCING CONTRACTORS	REPAIRS TO PERIMETER FENCING AT OLD QUARRY ROAD SEPTAGE PONDS & INKPEN REFUSE SITE.	-	25,222.00
EFT20352	14/07/2015	COLIN DUNCAN GRANT	CLEANING OF NORTHAM DISTRICT SES ON 17/05/2015.	-	110.00
EFT20353	14/07/2015	CONSULT INNOVATE CREATE	HEALTHY CLUB WORKSHOP IN NORTHAM BASED ON YORK/JURIEN BAY PROGRAM HELD ON 27/05/2015 AT NORTHAM REC CENTRE.	-	527.12
EFT20354	14/07/2015	CONTRAFLOW PTY LTD	TRAFFIC MANAGEMENT PLAN REVISIONS FOR AVON RIVER FESTIVAL 2015.	-	165.00

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EFT20355	14/07/2015	COUNTRY COPIERS NORTHAM	COLOUR COPIER SERVICE/METER READING FOR IRA-C7055 ADMIN PHOTOCOPIER.	-	978.60
EFT20356	14/07/2015	COURIER AUSTRALIA	FREIGHT CHARGES FOR ENGINEERING SERVICES ON 15/06/2015 & 19/06/2015.	-	22.42
EFT20357	14/07/2015	COVS PARTS PTY LTD	PURCHASE OF X1 20L ADBLUE DIESEL ADDITIVE FOR BCI PROMA WHEELCHAIR BUS KILLARA2.	-	65.43
EFT20358	14/07/2015	DAIMLER TRUCKS PERTH	PURCHASE OF X1 LENS RR TURN SIGNAL FOR MITSUBISHI FUSO TRUCK N10759..	-	18.70
EFT20359	14/07/2015	DAVE'S TREE SERVICE	REMOVAL OF OVER HANGING BRANCHES FROM WESTERN POWER LINES AT 42 CHIDLOW STREET NORTHAM.	-	2,640.00
EFT20360	14/07/2015	DUNNING INVESTMENTS PTY LTD	DUNNINGS ACCOUNT FOR THE MONTH OF JUNE 2015.	-	22,162.61
EFT20361	14/07/2015	ECOMIST SWAN	CHARGES FOR 12 MONTHLY SERVICE FOR SANITARY BINS, YEARLY SERVICE FOR FRAGRANCE & SHARPS CONTAINER FOR KILLARA.	-	1,153.90
EFT20362	14/07/2015	EF & PM COOK	CROSS OVER REIMBURSEMENT FOR 11 HEATON DRIVE NORTHAM A15343.	-	500.00
EFT20363	14/07/2015	EVOLUTION TRAFFIC CONTROL PTY LTD	SUPPLY OF TRAFFIC MANAGEMENT SERVICES AT NEWCASTLE RD BRIDGE ON 30/04/2015, SELBY STREET ON 09/06/2015 & WELLINGTON STREET & GORDON STREET PAVING ON 06/06/2015.	-	3,216.82
EFT20364	14/07/2015	FIRE AND SAFETY WA	PURCHASE OF X2 UNISAFE LENS CLEANING TOWELETTES BOX 300 FOR BRIGADES.	-	122.54
EFT20365	14/07/2015	FM SURVEYS	FEATURE SURVEY OF DROP OFF CARPARK AREA AT THE OLD RAILWAY MUSEUM, SURVEY FOR AVON VALLEY ARTS SOCIETY CAR PARK, CONTOUR & FEATURE SURVEY NORTHAM CEMETERY & MITCHELL AVE NORTHAM INFORMATION BAY SITE PLAN.	-	4,691.50
EFT20366	14/07/2015	FORPARK AUSTRALIA	SUPPLY & INSTALL NEW PLAYGROUND EQUIPMENT AT FRIEND PLACE IN NORTHAM & SUPPLY AND INSTALL NEW PLAYGROUP EQUIPMENT AT JUBILEE RECREATION CENTRE IN NORTHAM.	-	45,369.50
EFT20367	14/07/2015	FRED HOPKINS WA	PURCHASE OF CELLI PEGASUS 200 2M VERGE MOWER FOR ENGINEERING SERVICES.	-	18,370.00
EFT20368	14/07/2015	GATE TRENCHING	INSTALL 525MM PIPE AT ROAD CROSSING KATRINE & SPRINGFIELD ROADS NORTHAM.	-	10,025.27

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EFT20369	14/07/2015	GLENN STUART BEVERIDGE	REPAIRS TO DOOR LOCKS & SUPPLY & INSTALL NEW SHOWER HEAD AT NORTHAM VISITOR CENTRE, REPAIRS TO VANITY CABINET & DOOR LOCK AT KILLARA, REMOVE SHADE SAILS FROM BERNARD PARK, MORRELL PARK & APEX PARK, REMOVE GRAFFITI FROM TABLES AT BERNARD PARK, SUPPLY & INSTALL TOILET ROLL HOLDERS AT NORTHAM LIBRARY, ASSIST WITH BUILDING INSPECTION AT VINTAGE VEHICLE BUILDING, REPAIR OFFICE DOOR HANDLE, REPAIR SLIDING DOOR ON MAIN SHED & SUPPLY & INSTALL DOWN PIPE AT NORTHAM DEPOT, REPAIR ROOF LEAK AT NORTHAM SWIMMING POOL CLUB HOUSE, CLEAN GUTTERS AT NORTHAM VISITOR CENTRE, OLD ADMIN BUILDING, NORTHAM LIBRARY, BAKERS HILL PAVILLION, BAKERS HILL CRICKET CLUB BUILDING, BAKERS HILL FIRE SHED & CLACKLINE HALL, COVER FLOOR LIGHTS WITH HARDIE FLEX IN SOUND SHELL, REPAIR LOCKON TOILET DOOR AT BERNARD PARK TOILET, SUPPLY & INSTALL DOOR LOCK TO KATRINE TOILETS, REMOVE SECURITY SCREENS FROM WINDOWS AT BERT HAWKE PAVILLION & BERNARD PARK PLAYGROUP TO CLEAN WINDOWS THEN REPLACE SCREENS BACK ON, REPLACE VERANDAH FLOORING AT OLD GIRLS SCHOOL, SUPPLY & INSTALL GATE CATCH AT BERNARD PARK & REMOVE GRAFFITI ON WALK WAY & METER BOX AT NORTHAM VISITOR CENTRE.	- 13,070.20
EFT20370	14/07/2015	GRAFTON ELECTRICS	DISCONNECT SUSPENDED POWER POINTS AT KILLARA, REPAIR ELECTRICAL FAULT AT RIVERS EDGE CAFE, REMOVE THERMOMETER & REPLACE LIGHT IN TOWN CLOCK, CARRY OUT ELECTRICAL REPAIRS AT NORTHAM LIBRARY, REPAIR LIGHT AT SKATE PARK, REPAIR LIGHT AT NORTHAM DEPOT, INSTALL FLOOD LIGHTS AT RAILWAY MUSEUM CAR PARK, CHECK RCD'S & REPLACE SECURITY LIGHTS AT WUNDOWIE HALL, SUPPLY & INSTALL LIGHT TOWER TO VEHICLE IMPOUND YARD, SUPPLY PUMP FOR RUSHTON PARK, REPAIR FAULT WITH BBQ AT OPPOSITE APEX PARK, REPLACE BROKEN CABLE PIT ON MINSON AVE, REPLACE LIGHTS & TEST EXIT LIGHTS AT TOWN & LESSER HALL, REPAIR EXIT & EMERGENCY LIGHTS AT ADMIN, REPLACE LIGHT SWITCHES AT WUNDOWIE LIBRARY, CHECK FAULT WITH AUTO CURTAIN AT MEMORIAL HALL, REPAIR FAULT TO BERT HAWKE PUMP,	- 14,325.04

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EFT20371	14/07/2015	GROVE WESLEY DESIGN ART	MANUFACTURE FOUR DOUBLE SIDED TEAR DROP BANNERS 3M WITH SPIKES FOR ROADWISE COMMITTEE & PURCHASE X36 SWAN MUGS & X36 BALLOON MUGS FOR NORTHAM VISITOR CENTRE.	- 2,525.82
EFT20372	14/07/2015	HAYS SPECIALIST RECRUITMENT (AUSTRALIA) PTY LIMITED	PROFESSIONAL SERVICES PROVIDED BY FRANK EPPE DURING THE PERIOD 15/06/2015 TO 19/06/2015 FOR WUNDOWIE TOWN DRAINAGE IMPROVEMENTS.	- 3,729.00
EFT20373	14/07/2015	HEMA MAPS PTY LTD	PURCHASE OF ASSORTED MAP BOOKS FOR NORTHAM VISITOR CENTRE.	- 330.01
EFT20374	14/07/2015	HOST AUTO REPAIRS	INSPECT & REPAIR BRAKES ON TOYOTA HILUX UTILITY N10709.	- 108.90
EFT20375	14/07/2015	IMMACU SWEEP	SWEEPING OF TOWN CENTRE FOOTPATHS & SWEEPING & GULLY EDUCATION SERVICES FOR THE PERIOD 25/05/2015 TO 30/05/2015.	- 3,762.00
EFT20376	14/07/2015	INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA - WA DIVISION	IPWEA BREAKFAST FORUM MANAGING MAJOR PROJECT SERIES: FIONA STANLEY HOSPITAL CONSTRUCTION COMPLEXITY, INNOVATION & EXCELLENCE FOR ROSS RAYSON.	- 55.00

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EFT20377	14/07/2015	INTERFIRE AGENCIES PTY LTD T/A LOVETT FAMILY TRUST	PURCHASE OF X1 HAZARD LED GRILL DASH COVERT 12VDC AMB/AMB & X1 HAZARD LED GRILL DASH COVERT CIG PLUG 12VDC AMB/AMB FOR ENGINEERING SERVICES.	-	458.26
EFT20378	14/07/2015	INVISION SIGNS AND DESIGNS	TICKET PRINTING FOR THE LOST WW1 COUNTRY ARTS PERFORMANCE 2015, X1 NAME BADGE FOR RANGER DOMINIQUE, X10,000 A5 FLYERS FOR 2015 AVON DESCENT & X1 PULL UP BANNER FOR EVENTS.	-	1,108.70
EFT20379	14/07/2015	IT VISION	IMPLEMENTATION OF OVERDUE RATES MAPPING LAYER.	-	228.80
EFT20380	14/07/2015	IXOM OPERATIONS PTY LTD	SERVICE FEE FOR X4 920KG CHLORINE CYLINDERS FOR TREATED WASTE WATER & NORTHAM POOL FOR THE PERIOD 01/06/2015 TO 30/06/2015.	-	663.28
EFT20381	14/07/2015	JEF SALES & SERVICE	REMOVE SHAFT ASSY, DISMANTLE ENGINE UNIT COMPLETELY & EXAMINE FOR QUOTE OF REPAIRS ON STIHL FS85 BRUSHCUTTER FOR ENGINEERING SERVICES.	-	110.00
EFT20382	14/07/2015	JOHN HANSEN	REFUND FOR PURCHASE OF X10 INFRA RED DIGITAL TEMPERATURE THERMOMETER GUN FOR NORTHAM VOLUNTEER BUSH FIRE BRIGADES.	-	125.10
EFT20383	14/07/2015	K & N TRADITIONAL LANDSCAPES	POINTING OF ROOF STEP FLASHING & SETTING OF NEW CHIMNEY POTS TO OLD NORTHAM FIRE STATION.	-	3,300.00
EFT20384	14/07/2015	KELYN TRAINING SERVICES	BASIC WORKSITE TRAFFIC MANAGEMENT (BWTM) & TRAFFIC CONTROL (TC) TRAINING CONDUCTED ON SITE OVER 2 DAYS ON 24TH & 25TH JUNE FOR 12 ENGINEERING STAFF.	-	4,412.50
EFT20385	14/07/2015	KLEENHEAT GAS	PURCHASE OF BULK BOC GAS FOR KILLARA & YEARLY FACILITY FEES FOR 45KG VAP CYLINDER FOR NORTHAM TOWN HALL.	-	988.08
EFT20386	14/07/2015	KOMATSU AUSTRALIA PTY LTD	PURCHASE OF X1 LAMP SET TO SUIT KOMATSU LOADER N.3856.	-	70.41
EFT20387	14/07/2015	L G BUSINESS SYSTEMS PTY LTD	PURCHASE OF X10 500PK A4 LASER PAY ENVELOPES SELF SEAL FOR SHIRE ADMIN.	-	1,211.10
EFT20388	14/07/2015	LANDGATE	UPDATED MAPS & COPYRIGHT FOR A3 TEAR OFF MAPS 2015.	-	720.15
EFT20389	14/07/2015	LANDMARK	PURCHASE OF X12 2.5T RATCHET TIE DOWN STRAPS & X5 20L SINO ROUNDUP CT BROADACRE FOR ENGINEERING SERVICES.	-	819.50

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EFT20390	14/07/2015	LGC TRAFFIC MANAGEMENT	TRAFFIC CONTROL ON JESSUP TCE ON 19/06/2015, 26/06/2015 & 29/06/2015, CORNER OF MAY ST & BURGOYNE ST ON 01/07/2015 & 02/07/2015, SELBY ST ON 06/05/2015, 07/05/2015 & 08/05/2015 & BYFIELD STREET ON 09/06/2015 TO 14/06/2015, 22/06/2015, 23/06/2015, 24/06/2015, 25/06/2015, 29/06/2015, 30/06/2015.	- 15,338.16
EFT20391	14/07/2015	LLOYDS EARTHMOVING	PURCHASE OF 4M3 OF FLOWER & VEGE MIX FOR ADMIN OFFICE GARDEN.	- 420.00
EFT20392	14/07/2015	LO-GO APPOINTMENTS	PROFESSIONAL SERVICES PROVIDED BY DOMENICO BONO RATES OFFICER FOR THE PERIOD 16/06/2015 TO 19/06/2015.	- 2,040.56
EFT20393	14/07/2015	LOUI'S PLANT HIRE	STRIP VEGETATION FROM DRAIN & LEAVE GROUND LEVEL AT GEORGE NUICH PARK.	- 8,250.00
EFT20394	14/07/2015	LRA CIVIL PTY LTD	PROGRESS CLAIM NUMBER 2 FOR WUNDOWIE DRAINAGE REUSE & ASSOCIATED PUMP STATION WORKS.	- 52,005.20
EFT20395	14/07/2015	MADE WITH LOVE	CUTTING & PIECING TOGETHER CARDS FOR ANZAC MEMORIAL.	- 700.00
EFT20396	14/07/2015	MARTIN'S PAINTING SERVICE	PAINTING OF EAVES & FACIA AT WUNDOWIE HALL, PAINTING EXTERIOR WALLS AT WUNDOWIE PAVILLION, PAINTING SPORTS COURTS WALLS AT BAKERS HILLS PAVILLION & PAINT FRONT GABLE OF SHIRE ADMIN BUILDING.	- 9,680.00
EFT20397	14/07/2015	MCDOWALL AFFLECK PTY LTD	TOWN & LESSER HALL LIFT GRANT APPLICATION REPORT 50% PROGRESS PAYMENT.	- 2,090.00
EFT20398	14/07/2015	MCLEODS BARRISTERS & SOLICITORS	LEGAL SERVICES PROVIDED FOR J.D. MOSIEJCYK HEALTH ACT PROSECUTIONS.	- 1,447.83
EFT20399	14/07/2015	MEGA-FIX	PURCHASE OF X1 DIAMOND BLADE FOR ENGINEERING SERVICES.	- 419.65
EFT20400	14/07/2015	MERIT LINING SYSTEMS PTY LTD	DESIGN, SUPPLY & INSTALL ELASTIC/PLASTIC FUSION COVER FOR WUNDOWIE DAM.	- 24,771.34
EFT20401	14/07/2015	METRO BEVERAGE CO PTY LTD	PURCHASE OF X3 NU PURE 750ML SPORTS WATER, X6 NU PURE 600ML WATER FOR NORTHAM REC CENTRE.	- 129.35

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EFT20402	14/07/2015	MIDALIA STEEL	PURCHASE OF X2 12MM STEEL ROUND BAR GALVANISED FOR WUNDOWIE TOWNSITE & X4 12MM DEFORMED/TEMPCORE BAR FOR FRIEND PLACE PARK.	- 77.27
EFT20403	14/07/2015	MIDLAND MOWERS	PURCHASE OF X2 DECK BELTS FOR FERRIS MOWERS N.4019 & N.4060.	- 318.00
EFT20404	14/07/2015	MIDLAND TRAILERS PTY LTD	PURCHASE OF X2 3000X2100 (10X7) ROCKER TANDEM FLATTOP TRAILERS WITH MECHANICAL DISC BRAKES 2000KG LOAD & TRAILER 300MM DROP SIDES & FIXED FRONT PANEL/HEADBOARD 900MM HIGH FOR ENGINEERING SERVICES.	- 14,930.00
EFT20405	14/07/2015	MIRACLE RECREATION EQUIPMENT	SUPPLY OF TIMBER BIRDS NEST SWING FOR GEORGE NUICH PARK.	- 7,678.00
EFT20406	14/07/2015	MORRIS PEST AND WEED CONTROL	PROVIDE VISUAL TERMITE INSPECTION & REPORT OF ALL SHIRE BUILDINGS.	- 10,587.50
EFT20407	14/07/2015	NAVMAN WIRELESS PTY LTD	SUBSCRIPTION SERVICE FEE & MONTHLY SATELLITE SERVICE FOR THE PERIOD 15/06/2015 TO 14/07/2015.	- 439.78
EFT20408	14/07/2015	NORTHAM CENTRAL NEWSAGENCY	WEST AUSTRALIAN DELIVERIES FOR SHIRE ADMIN FOR THE PERIOD 01/06/2015 TO 30/06/2015 & KILLARA FOR THE PERIOD 01/05/2015 TO 30/06/2015.	- 123.00
EFT20409	14/07/2015	NORTHAM FEED & HIRE	PURCHASE OF X1 DUCK CRUMBLES, X10 WHEAT & X4 LAYER CRUMBLE FOR THE UPKEEP OF THE SWAN COLONY, X6 ALERT DOG BISCUITS, X2 DROVER DOG BISCUITS, X1 BOX SCHMACKOS, X1 DOG ROLL, X6 WORM TABS, X1 PAR BOILED RICE, X1 CHUM SLAB, X1 LEAD ROPE, X1 HALTER, X2 HAY, X2 5KG LAYING PELLETS & X3 FANCY FEAST CAT FOOD FOR RANGER SERVICES.	- 823.10
EFT20410	14/07/2015	NORTHAM FURNITURE & BEDDING	PURCHASE OF X1 TRENDLINE 3258 LRG BCASE W/STORAGE L/OAK & X1 TRENDLINE 2321 WORK STATION LIGHT OAK FOR KILLARA.	- 438.00
EFT20411	14/07/2015	NORTHAM HARDWARE	PURCHASE OF ASSORTED RETICULATION PARTS FOR ADMIN GARDEN.	- 25.65
EFT20412	14/07/2015	NORTHAM JUNIOR FOOTBALL ASSOCIATION	KIDSPORT FUNDING.	- 1,635.00
EFT20413	14/07/2015	NORTHAM LIQUOR BARONS	GIFT VOUCHER FOR STAFF MEMBER OF THE QUARTER.	- 200.00

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EFT20414	14/07/2015	NORTHAM MAZDA	20,000KM SERVICE TO MAZDA BT-50 UTE N10938.	-	408.85
EFT20415	14/07/2015	NORTHAM MITRE 10 SOLUTIONS	PURCHASE OF X2 CUTTING DISCS, X5 25LT MANURE & COMPOST GROW, 3 2PK BATTERIES, X1 50PK GALVANISED SCREWS, X11 NIPPLE RED, X1 VALVE BALL, X4 9 VOLT BATTERIES, X20 25PK JOINER, X1 10PK RATCHET CLIPS, X25 HOLD DOWN PEGS, X1 GARDEN EDGING, X1 FLOORING TROWEL, X1 PLASTER TOOL, X2 LANDSCAPER BROOMS, X8 20MM SOCKETS, X1 100PK CABLE TIES & X1 TROLLEY JACK FOR ENGINEERING SERVICES, ASSORTED PARTS FOR SPRAY TANK, X1 SCOTCH TAPE, X1 MOUNTING TAPE, X1 BOLT & X3 PLASTIC KEY TAGS FOR DEVELOPMENT SERVICES, X1 SHARPIE MAGNUM, X2 CRAYON, X1 100PK CABLE TIE & X1 50PK BOLT FOR RANGER SERVICES.	-	726.35
EFT20416	14/07/2015	NORTHAM QUICK SERVE - DRYCLEANERS	X4 SETS OF RANGER BADGES SEWEN ON TO DOMINIQUE WEBB UNIFORMS.	-	40.00
EFT20417	14/07/2015	NORTHAM SCOUT GROUP	KIDSPORT FUNDING.	-	200.00
EFT20418	14/07/2015	NORTHAM SPRINGFIELD FOOTBALL CLUB	GRANT AWARDED TO NORTHAM SPRINGFIELD FOOTBALL CLUB.	-	500.00
EFT20419	14/07/2015	NORTHAM TOWING SERVICE	TOWING OF X3 ABANDONED HOLDEN COMMODORES FROM EAST STREET NORTHAM TO SHIRE IMPOUND YARD ON 05/06/2015.	-	352.00
EFT20420	14/07/2015	NORTHAM TOYOTA	90,000KM SERVICE & INSPECTION ON TOYOTA HIACE COMMUTER BUS KILLARA 4.	-	715.50
EFT20421	14/07/2015	NORTHAM VETERINARY CENTRE	EUTHANASIA OF X2 FERAL CATS FROM 72 GAIRDNER ST NORTHAM, X1 DOG FROM TAMMA RD BAKERS HILL & X1 SURRENDERED DOG.	-	557.13
EFT20422	14/07/2015	OCLC (UK) LTD	AMLIB ANNUAL MAINTENANCE & AMLIB 7 USER SQLBASE FOR THE PERIOD 01/07/2015 TO 30/06/2016.	-	5,115.07

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EFT20423	14/07/2015	OXTER SERVICES	PURCHASE OF X2 HAND TOWELS, X3 48PK TOILET ROLLS & X1 5L HAND WASH FOR NORTHAM VISITOR CENTRE, X8 36PK TOILET ROLLS FOR BERNARD PARK, X3 HAND TOWELS FOR SHIRE ADMIN, X1 48PK TOILET ROLLS FOR APEX PARK, CLACKLINE & BAKERS HILLS PAVILLION & BAKERS HILL HOOPER PARK ABLUTIONS INVOICING FOR THE PERIOD 01/06/2015 TO 30/06/2015 & KATRINE MAINTENANCE INVOICING FOR THE PERIOD 01/06/2015 TO 30/06/2015.	-	3,115.01
EFT20424	14/07/2015	PLANNING INSTITUTE AUSTRALIA	PIA ANNUAL MEMBERSHIP 2015/16 FOR FULL MEMBER (WA) ROY DJANEGARA & GRADUATE (WA) COURTNEY WYNN.	-	910.00
EFT20425	14/07/2015	PROFESSIONAL LOCKSERVICE	REPAIRS TO LOCKS AT BERT HAWKE, WUNDOWIE OLD FIRE STATION & BAKERS PAVILION.	-	1,036.86
EFT20426	14/07/2015	PROMAPP SOLUTIONS LIMITED	PROMAPP PROCESS MANAGER, SOFTWARE AS A SERVICE, MONTHLY SUBSCRIPTION ENTERPRISE 50 LICENSE FOR JUNE 2015.	-	1,020.00
EFT20427	14/07/2015	PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA (TRANS WA)	TRAIN TICKET SALES TO 31/05/15.	-	37.62
EFT20428	14/07/2015	QUIN'S GOURMET BUTCHERS	PURCHASE OF X200 SAUSAGES & X400 BACON SLICES FOR AUSTRALIA DAY BREAKFAST 2015 & ASSORTED MEATS FOR KILLARA.	-	619.99
EFT20429	14/07/2015	R & JT CONTRACTORS PTY LTD	SUPPLY X1 ELECTRONIC MOTORIZED VALVE FOR SPRAY TANKR, EXCAVATOR HIRE TO EXCAVATE & FIND LEAK ON RECYCLE WATER LINE ADJACENT TO BERT HAWKE OVAL, REPAIR LEAKING STANDPIPE AT SHIRE DEPOT INSTALL RPZ, REPAIR LEAKING TOILET AT BAKERS HILL FIRE SHED & SUPPLY & INSTALL RETICULATION BACKFLOW VALVE IN FITZGERALD STREET RETICULATION.	-	2,021.47
EFT20430	14/07/2015	RED DOT STORES	PURCHASE OF ASSORTED ACTIVITY SUPPLIES FOR CMI GROUP KILLARA.	-	91.85
EFT20431	14/07/2015	RETECH RUBBER	PURCHASE 81M2 OF COMPACTED ROCK DUST TO AREA TO BE LEVELED 140MM BELOW FINISHED HEIGHT AT JUBILEE PLAYGROUND.	-	16,230.50

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EFT20432	14/07/2015	RURAL PRESS REGIONAL MEDIA (WA) PTY LTD	ADVERTISEMENT IN THE WA SENIOR PAPER IN APRIL 2015 FOR NORTHAM VISITOR CENTRE.	- 679.80
EFT20433	14/07/2015	SETH WILLIAM TUCKER T/A TUCKERBUILT	INSTALL EPOXY RESIN PEBBLE MIX TO ISLAND ON CNR NEWCASTLE RD & MITCHELL AVE NORTHAM.	- 2,656.50
EFT20434	14/07/2015	SHIRE OF DOWERIN	AROC 2014/15 ANNUAL FEE CONTRIBUTION.	- 5,500.00
EFT20435	14/07/2015	SLAV'S CLEANING SERVICE	CLEANING WATER PLAYGROUND & BBQ AREA AT BERNARD PARK IN MARCH 2015, CLEANING OF ADMIN, DEPOT AMENITIES ROOM, ABLUTIONS & OFFICES, APEX PARK TOILETS, BERNARD PARK TOILETS, VISITOR CENTRE, TOURIST BUREAU & MEETING ROOM, LIBRARY, VISITOR CENTRE TOILETS & COMMON AREAS FOR JUNE 2015, SUPPLY & INSTALL SOAP DISPENSER AT NORTHAM VISITOR CENTRE, CLEANING OF MEMORIAL HALL FOR ANZAC DAY & SUPPLY & INSTALL HAND TOWEL DISPENSER AT SHIRE ADMIN BUILDING.	- 9,324.01
EFT20436	14/07/2015	SPECIALE SMASH REPAIRS	REPAIR STONE CHIP IN WINDSCREEN ON TOYOTA HIACE VAN KILLARA4.	- 55.00
EFT20437	14/07/2015	ST JOHN AMBULANCE AUSTRALIA	SERVICING OF FIRST AID KITS AT ASSORTED SHIRE BUILDINGS.	- 704.00
EFT20438	14/07/2015	STAPLES AUSTRALIA PTY LIMITED	PURCHASE OF ASSORTED STATIONARY ITEMS FOR SHIRE ADMIN.	- 454.96
EFT20439	14/07/2015	STATE LIBRARY OF WESTERN AUSTRALIA	LOST BOOK CHARGES FOR THE CURIOUS CASE OF BENJAMIN BUTTON & OTHER STORIES BY SCOTT FITZGERALD.	- 29.70
EFT20440	14/07/2015	SUPERCIVIL	SUPPLY & LAY 44M X SM2 CONCRETE KERB AT WUNDOWIE, SUPPLY & LAY 14M PATCH WORK AT GORDON ST & WELLINGTON ST & SUPPLY & LAY 239M X 300 MOUNTABLE KERBING, 277M2 OF 100MM DEEP FOOTPATH, 16.5M2 OF 150MM DEEP FOOTPATH & INSTALL X2 PRAM RAMPS AT JESSUP TERRACE.	- 42,670.02
EFT20441	14/07/2015	THE FARM SHOP	PURCHASE OF X1 STRAINER CHAIN WIRE HEAVY DUTY, X2 20PK GRIPPLE WIREJOINER MEDIUM & X1 PLIERS CRESCENT 8IN FOR ENGINEERING SERVICES..	- 293.05

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EFT20442	14/07/2015	THE PAPER COMPANY OF AUSTRALIA	PURCHASE OF X125 REAMS A4 PHOTOCOPY PAPER & X15 REAMS A3 COPYMATE TRUTONE PHOTOCOPY PAPER FOR ADMIN BUILDING.	-	693.00
EFT20443	14/07/2015	THE WATERSHED	PURCHASE OF ASSORTED RETICULATION PARTS FOR SHIRE ADMIN GARDEN.	-	383.52
EFT20444	14/07/2015	THE WORKWEAR GROUP	PURCHASE OF ASSORTED UNIFORM ITEMS FOR ROBYN CRAGAN, RACHAEL HAMPTON, KEN MARTIN, KRISTY TURNER, MICHELLE BLACKHURST, WENDY SOFOULIS, GAI MARTIN, ALISON DOWELL, ELIZABETH MCINTOSH, MANDY MCGUIGAN, SHANE OVERTON, MARIE UNGUARY, SUE LOGAN, KIM MURCUTT, ROBERTA O'NEIL, DONNA PIRIHI & SUE DAWSON.	-	3,351.18
EFT20445	14/07/2015	TRACEY PEARCE	REIMBURSEMENT OF FUEL PURCHASED BY EMPLOYEE FOR SHIRE VEHICLE.	-	77.18
EFT20446	14/07/2015	TRAINING COURSE EXPERTS	FORKLIFT TRAINING FOR COLIN MCPHERSON, MARK FERNIHOUGH, RUSSELL FITZGERALD, HAROLD GODDARD, COLIN LEWIS, GLEN FRANKS & KRISTY ROBINSON ON 20/05/2015 & FORKLIFT TRAINING FOR DANNY MCMAHON, IAN DHU, ERROL GARLETT, TREVOR ASHMAN, DAVID, JUDITH & PIER SMIT.	-	5,400.00
EFT20447	14/07/2015	TRISLEY'S HYDRAULIC SERVICES PTY LTD	REPLACE EXISITING BACK PLATE WITH A CERAMIC LINED CAST IRON BACK PLATE TO MAIN CIRCULATION PUMP AT NORTHAM POOL.	-	4,400.00
EFT20448	14/07/2015	WA CONTRACT RANGER SERVICES	RANGER SERVICES PERFORMED AS REQUESTED BY SHIRE FOR MONTH FOR JUNE 2015 & TEMPORARY CARE OF CATS FOR JUNE 2015.	-	5,483.50
EFT20449	14/07/2015	WA RANGERS ASSOCIATION INC	PURCHASE OF X10 WA RANGER SHOULDER BADGES, X3 WA RANGER ID CARDS & X3 WA RANGER CAP GREEN FOR RANGER SERVICES.	-	133.45
EFT20450	14/07/2015	WAY SIGNS	SUPPLY & FIT 2 X 2000 X 1000 BRUSHED ALUMIUM SIGNS FOR KILLARA WITH GRAFFITI COATING.	-	2,530.00

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EFT20451	14/07/2015	WESTERN AUSTRALIAN LOCAL GOVERNMENT ASSOCIATION	ADVERTISEMENT FOR PROJECT/CONTRACT ADMINISTRATION OFFICER POSITION, MONTHLY FULL PAGE NEWSLETTER FOR MAY 2015, RANGER FIXED TERM POSITION, BERNARD PARK DRAINAGE REDESIGN CONCEPT PLAN & PROCUREMENT CONSULTANCY SERVICE TENDER PROCESS WORKSHOP HELD AT THE SHIRE ADMIN ON 10/06/2015.	- 8,118.77
EFT20452	14/07/2015	WESTSIDE FIRE SERVICES	SCHEDULED FEES FOR THE TESTING & INSPECTION OF THE FIRE EQUIPMENT FOR THE PERIOD OF 01/06/2015 TO 31/08/2015.	- 231.00
EFT20453	14/07/2015	WESTWIDE AUTO ELECTRICS AND AIR CONDITIONING	FIT NEW BATTERIES TO FUSO CANTER TRUCK N.3805, REPAIR BRAKE LIGHT ON MITSUBISHI TRUCK N10759, REPAIR ELECTRICAL FAULT TO HAKO FOOTPATH SWEEPER 1DNH350, FIX LIGHTS ON BABCAT TRAILER 1TNU484, REPAIR RADIO IN VOLVO BACKHOE N.3555, REMOVE RADIOS FROM RANGER UTE & SEND FOR REPAIRS, FIT NEW RADIO TO MAZDA BT-50 UTE N10938, REPAIR DASH LIGHT ON CATERPILLAR BOBCAT 1CAX990, REPLACE SOLENOID IN FUSO CANTER TRUCK N.3805 & REPAIR BATTERY TERMINAL TO CLARK BOBCAT LOADER N.006.	- 4,000.00
EFT20454	14/07/2015	WHEATBELT GENERAL PRACTICE NORTHAM	PRE-EMPLOYMENT MEDICAL FOR RANGER DOMINIQUE WEBB.	- 130.90
EFT20455	14/07/2015	WHEATBELT OFFICE & BUSINESS MACHINES	PURCHASE OF X8 CAT5E NETWORK CABLE 15M FOR NORTHAM LIBRARY & X1 WIRELESS KEYBOARD & MOUSE FOR ENGINEERING SERVICES.	- 162.10
EFT20456	14/07/2015	WHEATBELT SAFETYWEAR	PURCHASE OF X3 CARGO PANTS, X3 WORK SHIRTS & X1 PRO GLOVES FOR RANGER DOMINIQUE WEBB.	- 211.00
EFT20457	14/07/2015	WORMALD FIRE (WA)	ROUTINE INSPECTION & MAINTENANCE FOR NORTHAM TOWN HALL FOR THE PERIOD 01/06/2015 TO 30/06/2015.	- 143.89
EFT20458	14/07/2015	WRIGHT EXPRESS AUSTRALIA PTY LTD (PUMA ENERGY)	PURCHASE OF DIESEL FROM EL CABALLO FOR BAKERS HILL BUSH FIRE BRIDGADE DURING JUNE 2015.	- 67.16
EFT20459	14/07/2015	WUNDOWIE AND DISTRICTS MENS SHED INC	REIMBURSEMENT FOR THE PURCHASE OF ASSORTED PLUMBING FITTINGS PURCHASED TO COMPLETE DISABLED TOILET AT OLD FIRE STATION WUNDOWIE.	- 271.77

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EFT20460	14/07/2015	ZENIEN	INSTALLATION OF CCTV CAMERA AT WUNDOWIE TOWN HALL.	- 3,630.00
EFT20461	14/07/2015	ZIPFORM	PURCHASE OF X6000 DLX WINDOW FACE ENVELOPES FOR RATES.	- 375.65
EFT20462	16/07/2015	AUSTRALIAN CIVILS PTY LTD	CLAIM NUMBER 2 FOR CONTRACT 2 OF 2015 WUNDOWIE TOWN DRAINAGE IMPROVEMENTS.	- 268,263.60
EFT20463	17/07/2015	WESTNET PTY LTD	ANNUAL CHARGE FOR BROADBAND1 ENTERPRISE OPTION 2 SERVICE NTC@WESTNET.COM.AU FOR THE PERIOD 01/06/2015 TO 01/06/2016.	- 1,199.40
EFT20464	17/07/2015	AUSTRALIAN TAXATION OFFICE - PAYG	PAYG PAYRUN 6TH JULY 2015 \$38.00 & PAYG PAYRUN 16TH JULY 2015 \$47470.00.	- 47,508.00
EFT20465	17/07/2015	CHILD SUPPORT AGENCY	PAYROLL DEDUCTIONS.	- 312.38
EFT20466	21/07/2015	LGIS INSURANCE BROKING	LGIS INSURANCES FOR MANAGEMENT LIABILITY, MARINE CARGO, TRAVEL, SALARY CONTINUANCE & MOTOR VEHICLES FOR THE PERIOD 30/06/2015 TO 30/06/2016.	- 72,601.11
EFT20467	24/07/2015	STEWARTS PHARMACY	PURCHASE OF X10 1.4L SHARP'S CONTAINERS FOR KILLARA.	- 69.50
EFT20468	24/07/2015	ABBOTT & CO PRINTERS	PURCHASE OF X50 INVOICE/RECEIPT BOOKS OF 50'S IN TRIPLICATE PRINTED 1 COLOUR & NUMBERED ON NCR.	- 811.80
EFT20469	24/07/2015	ABEL CONCEPTS (AUST) PTY LTD	SUPPLY & DELIVERY OF X1 SET OF GP7000 AFL GOAL POSTS FOR ENGINEERING SERVICES.	- 2,794.00
EFT20470	24/07/2015	ALLVEHICLES (NORTHAM RADIATOR SPECIALISTS & AVON 4WD CENTRE)	WINCH CONTROL BOX FOR MATTHEW MACQUEEN VEHICLE AFTER HIS WAS DAMAGED DURING FIRE.	- 570.00
EFT20471	24/07/2015	ANDY'S PLUMBING SERVICE	CLEAR BLOCKAGE TO SEWER MAIN & REPAIR BROKEN SEWER PIPE AT BERNARD PARK TOILETS.	- 1,204.50
EFT20472	24/07/2015	APPLIED INDUSTRIAL TECHNOLOGIES T/A NORTHAM BEARINGS	PURCHASE OF X1 D SHACKLE LIFTER, X2 GREASE GUNS & X2 GREASE CUPLETS FOR VOLVO BACKHOE N.3555.	- 174.60
EFT20473	24/07/2015	ASLAB PTY LTD	SUBBASE TESTING AT BYFIELD STREET NORTHAM.	- 1,337.92
EFT20474	24/07/2015	AUS RECORD	PURCHASE OF X200 TRADITIONAL TUBE CLIP	- 146.30

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			SET FOR CORPORATE SERVICES.	
EFT20475	24/07/2015	AUSTRALIA POST	AUSTRALIA POST ACCOUNT FOR ADMIN, KILLARA & LIBRARY FOR JUNE 2015.	- 1,068.75
EFT20476	24/07/2015	AUTOPRO NORTHAM	PURCHASE OF X1 15MTR AIR HOSE W/FITTINGS, X1 AIR COMPRESSOR 12V 150PSI/150ML, X1 SOCKET & X1 ADAPTOR FOR ENGINEERING SERVICES.	- 257.74
EFT20477	24/07/2015	AV-SEC SECURITY SERVICES	SECURITY MONITORING QUARTER FEE FOR OLD RAILWAY MUSEUM FOR THE PERIOD 01/07/2015 TO 30/09/2015, SECURITY OFFICERS FOR CHRISTMAS IN THE PARK EVENT ON 12/12/2014, SECURITY ON 22/03/2015 AT BERNARD PARK FOR CONCERTS IN THE PARK EVENT, ALARM ATTENDANCE AT BERT HAWKE OVAL ON 04/06/2015, RSL HALL ON 16/06/2015, NORTHAM VISITOR CENTRE ON 14/06/2015 & NORTHAM REC CENTRE ON 23/06/2015 & 28/06/2015.	- 1,052.60
EFT20478	24/07/2015	AVON COMPUTECH	PURCHASE OF X1 ACT CUSTOMISED I7 WORKSTATION & VA2465SMH VIEWSONIC LED 23.6IN 16:9 5.5MS 1920 X 1080 HDMI DVI FOR CORPORATE SERVICES.	- 1,608.00
EFT20479	24/07/2015	AVON DEMOLITION & EARTHMOVING	MANAGEMENT OF INKPEN ROAD WASTE MANAGEMENT FACILITY FOR THE PERIOD 23/06/2015 TO 05/07/2015.	- 1,568.00
EFT20480	24/07/2015	AVON SHEARING SUPPLIES & COUNTRY CLOTHING	PURCHASE OF X3 AOS HANNIBAL KING SINGLE SWAGS FOR ROADWISE COMMITTEE.	- 897.00
EFT20481	24/07/2015	AVON SPICE CAFE	CATERING FOR ORDINARY COUNCIL MEETING ON 15/07/2015.	- 374.00
EFT20482	24/07/2015	AVON TELECOMS PTY LTD	RELOCATE PHONE LINES IN NORTHAM SES OPS ROOM IN HENRY ST PREMISES.	- 660.00
EFT20483	24/07/2015	AVON VALLEY CONTRACTORS	SUPPLY & DELIVER X26 4MM GRAVEL DUST FOR ENGINEERING SERVICES.	- 514.80
EFT20484	24/07/2015	AVON VALLEY GLASS	RE-WIRE SCREEN DOOR WITH PET MESH AT THE QUARRY ROAD POUND.	- 99.00
EFT20485	24/07/2015	AVON VALLEY NISSAN	50,000KM SERVICE ON NISSAN NAVARA N.4057.	- 263.00
EFT20486	24/07/2015	AVW ELECTRICAL	MOVE 4 POWER POINTS FROM FLOOR LEVEL TO TOP OF DESK AT WUNDOWIE LIBRARY.	- 1,793.00

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EFT20487	24/07/2015	BEAUREPAIRES	SUPPLY & FITTING OF X4 DRIVE TYRES & X3 TRAILER TYRES ON FUSO TIP TRUCK N.3885, SUPPLY & FIT X4 TYRES & BALANCE ON HYUNDAI VELOSTER N10734 & TRAVEL TO SITE & REPAIR TYRE ON INKPEN TIP KOMATSU LOADER.	-	3,909.76
EFT20488	24/07/2015	BLACKWELL PLUMBING PTY LTD	REPAIR LEAKING EXTERIOR FRONT TAP AT UNIT 5 KURINGAL VILLAGE, REPAIRS TO HOT WATER SYSTEM AT UNIT 8 KURINGAL VILLAGE, UNBLOCK TOILET AT BERNARD PARK, REPAIR DAMAGED SEWERAGE UNDER GROUND AT NORTHAM REC CENTRE & REPLACE CISTERN IN HOOPER PARK TOILET BAKERS HILL.	-	1,478.10
EFT20489	24/07/2015	BRICK MART	SUPPLY & LAY X83 RECONSTITUTED LIMESTONE BLOCKS AT APEX PARK NORTHAM, X20 RECONSTITUTED LIMESTONE BLOCKS AT FREIND PLACE PLAYGROUND & REPAIR DAMAGED LIMESTONE WALL AT NORTHAM REC CENTRE PLAYGROUND.	-	4,970.74
EFT20490	24/07/2015	BRITEL ENTERPRISES PTY LTD	ONE ADVERTISEMENT TO APPEAR IN SES DIARY PLANNER 2015/2016 FOR NORTHAM VISITOR CENTRE.	-	450.00
EFT20491	24/07/2015	C.Y.O'CONNOR INSTITUTE	COURSE FEES FOR CERTIFICATE III IN AGED CARE FOR GAIL PIETERSIE, JOANNE FRENCH & RACHEL HAMPTON.	-	393.10
EFT20492	24/07/2015	CANNON HYGIENE AUSTRALIA PTY LTD	SANITARY UNIT QUARTERLY INVOICE FROM 01/07/2015 FOR ASSORTED SHIRE PROPERTIES.	-	344.51
EFT20493	24/07/2015	CARLY PIDCO T/A ENGAGE URBAN PLANNING	CONTRACT PLANNING OFFICER FOR 45.75 HOURS DURING THE PERIOD 12/06/2015 TO 14/07/2015 & PREPARATION OF DEVELOPER CONTRIBUTION PLAN & POLICY.	-	7,267.50

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EFT20494	24/07/2015	CENTRAL MOBILE MECHANICAL REPAIRS	TEST COOLING SYSTEM IN VOLVO GRADER N.001, 6970HR SERVICE ON VOLVO GRADER N.001, 940HR SERVICE ON VOLVO GRADER N.002, 1870HR SERVICE ON STEEL DRUM ROLLER N.3871, REPLACE GREASE NIPPLES IN CLARK BOBCAT N.006, CHECK OIL LEAK IN MITSUBISHI FUSO TIP TRUCK N.3885, REPLACE FIRE EXTINGUISHER BRACKET IN FUSO CANTER TRUCK N10922, 54,150KM SERVICE ON HINO TRUCK N.4012, 2470HR SERVICE ON KOMATSU 6 WHEEL LOADER N.3856, 1045HR SERVICE ON CATERPILLAR SKID STEER BOBCAT 1CAX990, INSPECT ROAD BROOM TRAILER N5066 AS CRACKS IN FRAMEWORK & REPAIR GENERATOR FOR ENGINEERING SERVICES.	-	7,555.62
EFT20495	24/07/2015	CJD EQUIPMENT PTY LTD	PURCHASE OF X1 EXPANSION TANK & X1 TEMPERATURE SENSOR & CALL OUT CHARGES TO REPAIR FOR VOLVO GRADER N.001 DUE TO OVERHEATING.	-	4,757.71
EFT20496	24/07/2015	CLACKLINE FENCING CONTRACTORS	REPAIRS TO SECURITY FENCING AT THE IMPOUNDED VEHICLE YARD.	-	100.00
EFT20497	24/07/2015	CLARK EQUIPMENT	PURCHASE OF X2 HYDRAULIC COUPLERS FOR CLARK BOBCAT LOADER N.006.	-	318.48
EFT20498	24/07/2015	CLOCKMASTERS AUSTRALIA PTY LTD	PURCHASE OF X1 4500 GPS UNIT FOR TOWN CLOCK.	-	1,705.28
EFT20499	24/07/2015	COUNTRY COPIERS NORTHAM	PURCHASE OF X6 CLIPBOARDS & X1 BROCHURE HOLDER FOR CLEANING RECORDS AT PUBLIC TOILETS.	-	47.50
EFT20500	24/07/2015	COUNTRYWIDE LANDSCAPING	REPAIR OF BRICK BOUNDARY FENCE ON THE CORNER OF NEWCASTLE RD & MITCHELL AVENUE NORTHAM & PULL DOWN & RE-BUILD LETTER BOX ON THE CORNER OF NEWCASTLE RD & MITCHELL AVENUE NORTHAM.	-	1,830.00
EFT20501	24/07/2015	COURIER AUSTRALIA	COURIER DELIVERY CHARGES FOR ENGINEERING & COMMUNITY SERVICES ON 23/06/2015 & 02/07/2015.	-	133.90
EFT20502	24/07/2015	DATA #3 LIMITED	MICROSOFT STANDARD LICENCE 2013 RENEWAL.	-	1,265.00
EFT20503	24/07/2015	DEPARTMENT OF ENVIRONMENT REGULATION	QUARTERLY DER LANDFILL LEVY FOR APRIL TO JUNE 2015.	-	3,756.54

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EFT20504	24/07/2015	DEPARTMENT OF PLANNING	FEES FOR PLANNING APPLICATION P2074 SUBMITTED TO DEVELOPMENT ASSESMENT PANEL FOR A14245 10 BEAMISH AVE NORTHAM.	- 6,221.00
EFT20505	24/07/2015	DUN & BRADSTREET AUSTRALIA	EXTERNAL SOLICITOR COSTS FOR ASSORTED RATES PROPERTIES.	- 1,248.71
EFT20506	24/07/2015	EASTERN METROPOLITAN REGIONAL COUNCIL	ADMINISTRATION SUPPORT FOR AVON RIVER FESTIVAL 2015.	- 2,200.00
EFT20507	24/07/2015	ELAINE BOND	RATES REFUND FOR ASSESSMENT A13116 32 OLD YORK ROAD NORTHAM.	- 595.91
EFT20508	24/07/2015	EP PROPERTY CARE SERVICES	BBQ CLEANED & WASHED WEEKLY CLEAN FILTERS SWEEP AREA CLEAN BENCH SEAT & SWEEP AREA AT APEX PARK, BROOME TCE & BERNARD PARK, CLEANING OF BENCH SEATS OUTSIDE NORTHAM LIBRARY & FITZGERALD STREET CLEANING FOR JUNE 2015.	- 805.20
EFT20509	24/07/2015	FLAT OUT FREIGHT	DELIVERY OF STAGE FLOODLIGHTS FOR NORTHAM TOWN HALL ON 23/06/2015 & PARK BENCHES FOR BERNARD PARK ON 24/06/2015.	- 87.00
EFT20510	24/07/2015	FULTON HOGAN INDUSTRIES PTY LTD	PURCHASE OF X1 TONNE OF COLDMIX FOR ENGINEERING SERVICES.	- 704.00
EFT20511	24/07/2015	GLENN STUART BEVERIDGE	CUT BACK ROOF SHEETING & MODIFY GUTTER & DOWN PIPES AT CLACKLINE HALL, SUPPLY & INSTALL GUTTER TO SIDE & REAR AT SENIORS MEMORIAL HALL, RE-BOLT HAND BASIN TO WALL AT BERNARD PARK, REPAIRS TO LEAKING ROOF AT BAKERS HILL REC CENTRE, REMOVAL OF ASBESTOS FROM NORTHAM DEPOT, SECURE DOORS AT RIVERS EDGE CAFE AFTER BREAK IN, RECOVER DAMAGED GROUND LIGHTS AT NORTHAM SOUND SHELL, SUPPLY & INSTALL TOILET SEATS AT BAKERS HILL TOILETS & CLACKLINE TOILETS, INSTALL CLEANERS CLIP BOARDS TO ASSORTED TOILET BLOCKS IN THE SHIRE OF NORTHAM, INSTALL TOILET ROLL HOLDERS AT WUNDOWIE TOILET BLOCK & APEX PARK TOILET, SECURE LOOSE VANITY SINK AT KILLARA, INSTALL STAINLESS STEEL HANDRAIL AT NORTHAM VISITOR CENTRE & INSTALL HAND RAIL TO WEST SIDE OF THE NICHE WALL AT THE NORTHAM CEMETERY.	- 6,396.60

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EFT20512	24/07/2015	GRAFTON ELECTRICS	REPAIR STAGE LIGHTS & LIGHT IN REAR STAIRS AT TOWN HALL, SHIFT HAND DRYER AT BERNARD PARK TOILETS, REPLACE FLURO IN GARDENERS SHED AT THE NORTHAM DEPOT, REPAIR FAULT TO PUMP AT TREATMENT PONDS, REPAIR LIGHTS IN MEETING ROOM AT NORTHAM LIBRARY & DISCONNECT VALVE AT HENRY ST OVAL.	-	1,524.12
EFT20513	24/07/2015	GREENWARD CONSULTING	REVIEW & AMENDMENT OF THE DRAFT REPORTS TO INCLUDE 16-30 & 23-35 FITZGERALD STREET & 1-15 & 12-18 PEEL TERRACE FOR LOCAL PLANNING POLICY FOR THE FITZGERALD STREET COMMERCIAL & CIVIC CENTRE HERITAGE PRECINCT.	-	726.00
EFT20514	24/07/2015	HAMMERSMITH	PURCHASE OF ASSORTED STAINLESS STEEL FITINGS FOR SAFETY RAIL AT THE CEMETERY NEW NICHE WALL.	-	380.25
EFT20515	24/07/2015	HAYS SPECIALIST RECRUITMENT (AUSTRALIA) PTY LIMITED	PROFESSIONAL SERVICES PROVIDED BY FRANK EPPE PROJECT SUPERVISION FOR WUNDOWIE DRAINAGE IMPROVEMENTS FOR THE PERIOD 29/06/2015 TO 03/07/2015.	-	3,272.50
EFT20516	24/07/2015	HIGH PERFORMANCE PRINTER REPAIRS PTY LTD	PURCHASE OF BLACK, YELLOW, MAGENTA & CYAN COLOURED INK FOR ENGINEERING SERVICES.	-	924.00
EFT20517	24/07/2015	INLAND PLUMBING & TOTAL RETICULATION	PURCHASE OF ASSORTED RETICULATION PARTS FOR MAY STREET RESERVE PLAYGROUND.	-	991.10
EFT20518	24/07/2015	IT VISION	RENEW SYNERGYSOFT & UNIVERSE ANNUAL LICENSE FEES TO 30/06/2016.	-	68,712.60
EFT20519	24/07/2015	JAYNE MCINNES	CLEANING OF THE SENIORS MEMORIAL HALL FOR THE PERIOD 14/05/2015 TO 09/07/2015.	-	1,260.00
EFT20520	24/07/2015	KATHLEEN SCHOLZ	REIMBURSEMENT OF MEALS PURCHASED WHEN ATTENDING THE LICENSING COURSE DURING THE PERIOD 13/07/2015 TO 17/07/2015.	-	47.80
EFT20521	24/07/2015	KLEENWEST DISTRIBUTORS	PURCHASE OF X1 BOX OF 100 240LTR BIN LINERS FOR NORTHAM REC CENTRE.	-	47.30

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EFT20522	24/07/2015	LANDGATE	GROSS RENTAL VALUATIONS CHARGEABLE SCHEDULE NO.G2015/6 DATED 09/05/2015 TO 05/06/2015, RURAL UV'S CHARGEABLE SCHEDULE R2015/6 DATED 16/05/2015 TO 29/05/2015, PLAN SEARCH REQUESTS CHANGING METHOD OF VALUTION UV TO GRV DURING JUNE 2015 & TITLE SEARCH FOR PLANNING DURING JUNE 2015.	- 3,892.46
EFT20523	24/07/2015	LGC TRAFFIC MANAGEMENT	PROVIDE TRAFFIC MANAGEMENT ON 26/06/2015 FOR WUNDOWIE DRAINAGE, 10/06/2015 AT CHIDLOW ST/PEEL TERRACE FOR TREE LOPPING & 09/07/2015 TO BEAMISH AVE WORKSITE.	- 2,419.32
EFT20524	24/07/2015	LO-GO APPOINTMENTS	PROFESSIONAL SERVICES PROVIDED BY DOMENICO BONO RATES OFFICER FOR THE PERIOD 22/06/2015 TO 26/06/2015.	- 2,714.36
EFT20525	24/07/2015	LOCAL GOVERNMENT MANAGERS AUSTRALIA WA DIVISION INC	MEMBERSHIP RENEWAL 2015/2016 FOR JASON WHITEAKER.	- 505.00
EFT20526	24/07/2015	MAJOR MOTORS	158,639KM SERVICE ON ISUZU MLR TIPPER N.4096 CARRIED OUT BY NORTHAM TOYOTA ON 19/05/2015.	- 339.71
EFT20527	24/07/2015	MATHEW MACQUEEN	REIMBURSEMENT FOR TRAVEL COSTS ASSOCIATED WITH 2014/2015 FIRE SEASON.	- 1,547.70
EFT20528	24/07/2015	MEGA-FIX	PURCHASE OF X1 HONDA PETROL AIR COMPRESSOR MODEL WP16/70 70L TANK 2 CYLINDERS & SOCKET SET & RATTLE GUN FOR ENGINEERING SERVICES.	- 2,714.95
EFT20529	24/07/2015	MERIT LINING SYSTEMS PTY LTD	DESIGN, SUPPLY & INSTALL ELASTIC/PLASTIC FUSION COVER FOR WUNDOWIE DAM.	- 12,385.67
EFT20530	24/07/2015	METRO BEVERAGE CO PTY LTD	PURCHASE OF X3 750ML NU PURE SPORTS WATER & X6 600ML NU PURE SPRING WATER FOR NORTHAM REC CENTRE.	- 129.35
EFT20531	24/07/2015	MIDLAND MOWERS	SERVICE OF FERRIS IS2500Z RIDE ON LAWNMOWER N.4019.	- 632.65
EFT20532	24/07/2015	MORRIS PEST AND WEED CONTROL	RE-STOCK RODENT BAIT STATIONS AT ASSORTED SHIRE BUILDINGS.	- 2,310.00
EFT20533	24/07/2015	NORTHAM CENTRAL NEWSAGENCY	NEWSPAPER DELIVERIES FOR PERIOD 01/06/2015 TO 30/06/2015 FOR NORTHAM LIBRARY.	- 88.85

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EFT20534	24/07/2015	NORTHAM HARDWARE	PURCHASE OF ASSORTED RETICULATION PARTS FOR OLD TOWN ADMIN GARDEN & PURCHASE OF X1 30M TAPE, X1 6M FLURO TAPE & X1 GUN AIR TYRE INFLATION FOR ENGINEERING SERVICES.	-	150.84
EFT20535	24/07/2015	NORTHAM HYUNDAI	30,000KM SERVICE TO HYUNDAI VELOSTER N10734.	-	340.50
EFT20536	24/07/2015	NORTHAM MITRE 10 SOLUTIONS	PURCHASE OF ASSORTED CLEANING PRODUCTS TO SET UP POUND TO HOUSE ANIMALS OTHER THAN DOGS, X2 480MM WIDE TOOLBOX FLUSH LID, X1 14MM DRILL SHANK, X65 JARRAH GARDEN STAKES, X15 WHITE TOP GARDEN STAKES, X1 WOODEN SCRUB BRUSH, X1 2L PRESSURE SPRAYER, X1 2 IN 1 TAP ADAPTOR & ASSORTED RETICULATION FITTINGS FOR ENGINEERING SERVICES.	-	400.43
EFT20537	24/07/2015	NORTHAM TOWING SERVICE	TOWING OF ABANDONED HYUNDAI ELANTRA FROM KOOJEDDA RD BAKERS HILL ON 30/06/2015, TOYOTA COROLLA FROM MITCHELL AVE NORTHAM ON 29/06/2015 & HOLDEN COMMODORE FROM KATRINE RD NORTHAM ON 30/06/2015.	-	346.50
EFT20538	24/07/2015	NORTHAM TOYOTA	30,000KM SERVICE ON TOYOTA RAV 4 N9467.	-	290.99
EFT20539	24/07/2015	NORTHAM TREE SERVICES	TREE REMOVAL & STUMP GRIND AT NORTHEY ST NORTHAM.	-	880.00

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EFT20540	24/07/2015	OXTER SERVICES	CEMETERY INVOICING FOR 3 WEEKS ENDING 03/07/2015, GRAVE RE-OPENING FOR FOLEY, NEW GRAVE FOR RYDER & BEARD & GRAVE CERTIFICATION FOR FOLEY, RYDER & BEARD, GRASS VALLEY TOWNSITE MAINTENANCE INVOICING FOR THE PERIOD 01/06/2015 TO 03/07/2015, BAKERS HILL TOWNSITE INVOICING FOR THE PERIOD 01/06/2015 TO 03/07/2015 & PURCHASE OF TOILET ROLLS & ASSORTED CLEANING PRODUCTS FOR NORTHAM CEMETERY, NORTHAM TOWN HALL, WUNDOWIE PUBLIC TOILETS, WUNDOWIE HALL, WUNDOWIE LIBRARY, BAKERS HILL HOOPER PARK TOILETS, KATRINE TOILETS, BERNARD PARK TOILETS, ADMIN BUILDING, APEX PARK TOILETS, NORTHAM VISITOR CENTRE, PURCHASE OF ASSORTED CARRY BAGS FOR NORTHAM VISITOR CENTRE & X32 2PLY LUNCHEON WHITE, X2 48PK TOILET ROLLS, X40 50PK PLASTIC CUPS & X2 PUREGIENE SLIMLINE FOR KILLARA.	- 8,499.04
EFT20541	24/07/2015	PORTNER PRESS PTY LTD	EMPLOYMENT LAW UPDATE 5 2015.	- 97.00
EFT20542	24/07/2015	PROFESSIONAL LOCKSERVICE	PURCHASE OF X1 MEMORIAL HALL KEY & X2 NORTHAM LIBRARY KEYS & SUPPLY & INSTALL COMPLIANT DOOR LOCKS AT RAILWAY MUSEUM & AVON VALLEY VINTAGE VEHICLE CLUB HOUSE.	- 5,547.30
EFT20543	24/07/2015	QUIN'S GOURMET BUTCHERS	PURCHASE OF ASSORTED MEATS FOR KILLARA.	- 328.05
EFT20544	24/07/2015	R & JT CONTRACTORS PTY LTD	REMOVE & REPAIR SOLENOID & EXCAVATE MAIN LINE TO REPAIR LEAK AT BERT HAWKE OVAL.	- 1,309.92
EFT20545	24/07/2015	RETAIL DECISIONS (COLES)	COLES ACCOUNT FOR THE MONTH OF JUNE 2015.	- 2,871.78
EFT20546	24/07/2015	RICHARD DOUGLAS MARRIS	4000CMTS OF GRAVEL PURCHASED FROM PIT FOR RICHTER ROAD & MARWICK RD GRAVEL RESHEETING & 1140CMTS OF GRAVEL FOR GENTLE ROAD.	- 22,616.00
EFT20547	24/07/2015	ROADS2000	SUPPLY & LAY 10MM/50 BLOW LAT 1% DG ASPHALT AT MITCHELL AVE/NEWCASTLE RD ON 17/06/2015 & SUPPLY & LAY 7MM/50BLOW DG ASPHALT AT BEAMISH AVE ON 10/06/2015 & SELBY ST ON 09/06/2015.	- 109,014.48

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EFT20548	24/07/2015	SHANE ASHMAN	REIMBURSEMENT OF BUILDING APPLICATION FEE.	- 49.00
EFT20549	24/07/2015	SLAV'S CLEANING SERVICE	CHARGES FOR CLEANING OF TOWN HALL FOR MOVIE ON 03/10/2014, CLEANING OF WATER PLAYGROUND & BBQ AREA AT BERNARD PARK FOR MAY 2015, REPLACING TOILET SEAT IN BERNARD PARK TOILETS & CLEANING APEX PARK TOILETS DUE TO VANDALISM.	- 456.50
EFT20550	24/07/2015	SPECIALISED TREE SERVICE	TREE PRUNING AT VARIOUS LOCATIONS IN BAKERS HILL, WUNDOWIE, EL CABELLO, & CLACKLINE AS PER WESTERN POWER REQUIREMENTS.	- 21,535.00
EFT20551	24/07/2015	SPORTPOWER NORTHAM	PURCHASE OF X2 SHIRE OF NORTHAM EMBROIDED POLO SHIRTS FOR RANGER SERVICES & X1 SHIRE OF NORTHAM EMBROIDED POLO SHIRTS FOR TRAINEE AT THE LIBRARY.	- 79.80
EFT20552	24/07/2015	STERIHEALTH SERVICES PTY LTD	SERVICE OF STEEL WALL SAFE 6-20 UNITS AT APEX PARK, BERNARD PARK & BAKERS HILL TOILETS FOR JUNE 2015.	- 300.87
EFT20553	24/07/2015	SUPERCIVIL	CONSTRUCTION OF FOOTPATH & KERBING AT BEAMISH AVENUE NORTHAM, JESSUP STREET & BYFIELD STREET NORTHAM.	- 65,870.62
EFT20554	24/07/2015	T-QUIP	PURCHASE OF X2 FUEL FILTERS & X2 AIR FILTERS FOR HAKO FOOTPATH SWEEPER 1DNH350.	- 153.60
EFT20555	24/07/2015	THE WORKWEAR GROUP	PURCHASE OF ASSORTED UNIFORM ITEMS FOR BEV JONES, JENNY BECKER, MARLENE PLEWS & LEASA OSBORNE.	- 434.98
EFT20556	24/07/2015	TITLE PUBLISHING PTY LTD	CHARGES FOR LOCATIONS DIRECTORY LISTING FROM 15/07/2015 TO 14/07/2016 FOR NORTHAM VISITOR CENTRE.	- 247.50
EFT20557	24/07/2015	TRENTON LORD (AUST)	PURCHASE OF X24 5PK OF BS BAGS FOR NORTHAM VISITOR CENTRE.	- 39.27
EFT20558	24/07/2015	UDLA	LANDSCAPE ARCHITECTURAL CONSULTANCY SERVICES ASSOCIATED WITH THE AVON CENTRAL MALL NORTHAM.	- 2,871.00
EFT20559	24/07/2015	VERNICE PTY LTD	HIRE OF 40 TONNE EXCAVATOR 12/05/2015 TO 18/06/2015 AT OLD QUARRY ROAD SITE & HIRE OF 30 TONNE DUMP TRUCK 19/05/2015 TO 18/06/2015.	- 65,593.00

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EFT20560	24/07/2015	VODAFONE	MESSAGING CHARGES FOR SES & BRIGADES FOR THE PERIOD 01/06/2015 TO 30/06/2015.	- 89.10
EFT20561	24/07/2015	WA RANGERS ASSOCIATION INC	PURCHASE OF X6 RANGER SHOULDER BADGES & X4 RANGER VEHICLE STICKERS.	- 82.45
EFT20562	24/07/2015	WESTERN AUSTRALIAN LOCAL GOVERNMENT ASSOCIATION	REGISTRATION FOR HUMAN RESOURCES SEMINAR ON 07/08/2015 FOR BEV JONES, X18 2015 LOCAL GOVERNMENT DIRECTORIES FOR COUNCILLORS, EXECUTIVES, CEO, REC CENTRE, KILLARA, VISITOR CENTRE & LIBRARY, ADVERTISEMENT OF TENDER 8 OF 2015, CLUB DEVELOPMENT OFFICER/RECREATION OFFICER POSITION & MONTHLY SHIRE OF NORTHAM NEWSLETTER FOR JUNE 2015.	- 4,217.27
EFT20563	24/07/2015	WESTWIDE AUTO ELECTRICS AND AIR CONDITIONING	REPAIR ELECTRICAL PROBLEM ON AFRON ELEVATED WORK PLATFORM N3662 AS EWP TAGGED OUT 30/06/2015, FIT & WIRE GLOBE IN VOLVO GRADER N.002, REPLACE REVOLVING BEACON ON HINO DUMP TRUCK N.4013, REPLACE LEFT HAND BEACON & TRACE WIRING FAULT ON FUSO TRUCK N.007 & FIT & WIRE FLASHING LIGHTS TO ISUZU MU-X N10721.	- 1,986.50
EFT20564	24/07/2015	WHAT'S ON GROUP T/A EYEZON PTY LTD	NORTHAM VISITOR CENTRE ADVERTISEMENT IN WHAT'S ON FOLD OUT MAP.	- 295.00
EFT20565	24/07/2015	WHEATBELT SAFETYWEAR	PURCHASE OF X1 MONGREL ZIP SIDE LACE UP SAFETY BOOTS FOR DOMINIQUE WEBB, X1 PAIR STEEL BLUE SAFETY BOOTS FOR GLEN FRANKS & X1 PAIR MACK PISTON SAFETY BOOTS FOR DAVID GOLDSMITH.	- 415.00
EFT20566	24/07/2015	WORMALD FIRE (WA)	INVESTIGATE & REPAIR ZONE 4 FAULT (SMOKE DETECTORS) AT NORTHAM TOWN HALL ON 10/06/2015.	- 815.10
EFT20567	24/07/2015	YORK & DISTRICT COMMUNITY MATTERS	CHARGES FOR ADVERTISEMENT FOR 2015 AVON RIVER FESTIVAL.	- 163.00
EFT20568	27/07/2015	LGIS - LOCAL GOVERNMENT INSURANCE SERVICES WA	LGIS CRIME INSURANCE & BUSH FIRE INSURANCE FOR THE PERIOD 30/06/2015 TO 30/06/2016 & LGIS WORKCARE, LGIS LIABILITY & PROPERTY INSURANCE FIRST INSTALMENTS FOR SHIRE OF NORTHAM FOR THE PERIOD 30/06/2015 TO 30/06/2016.	- 303,069.83
EFT20569	27/07/2015	CANCELLED PAYMENT		

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EFT20570	28/07/2015	WESTERN AUSTRALIAN TREASURY CORPORATION	LOAN NO.223 FIXED COMPONENT - CONSTRUCTION OF RECREATION FACILITIES.	- 68,481.29
EFT20571	31/07/2015	AUSTRALIAN TAXATION OFFICE - PAYG	PAYG PAYRUN 30TH JULY 2015.	- 45,242.00
EFT20572	31/07/2015	CHILD SUPPORT AGENCY	PAYROLL DEDUCTIONS.	- 312.38
			SUB TOTAL EFT MUNICIPAL	- 2,001,546.99
34200	03/07/2015	AUSTRALIAN SERVICES UNION	PAYROLL DEDUCTIONS.	- 25.10
34201	03/07/2015	LOCAL GOVERNMENT AND RACECOURSE EMPLOYEES UNION	PAYROLL DEDUCTIONS.	- 38.80
34202	03/07/2015	SHIRE OF NORTHAM	PAYROLL DEDUCTIONS.	- 1,045.00
34203	03/07/2015	SYNERGY	ELECTRICITY CHARGES FOR WUNDOWIE LIBRARY (TELECENTRE) FOR THE PERIOD 21/04/2015 TO 18/06/2015.	- 354.15
34204	03/07/2015	TELSTRA CORPORATION	TELEPHONE CHARGES FOR NORTHAM REC CENTRE TO 04/07/2015.	- 105.86
34205	03/07/2015	WATER CORPORATION	WATER USE & SERVICE CHARGES FOR LIBRARY AT 158L BANKSIA AV WUNDOWIE LOT 158 RES 24259 FOR THE PERIOD 25/04/2015 TO 23/06/2015.	- 132.07
34206	03/07/2015	WESTERN POWER	ANNUAL INSPECTION FOR KILLARA WHEELCHAIR BUS KILLARA2 BOOKED IN FOR MONDAY 06/07/2015 AT 8:30AM.	- 147.85
34207	14/07/2015	A COUNTRY PRACTICE	AFTER HOURS VET CONSULT & EUTHANASIA OF HORSE FROM 66 WITHERS STREET NORTHAM.	- 324.50
34208	14/07/2015	BAUER MEDIA LTD	RENEWALS TO COUNTRY STYLE, DONNA HAY, TASTE, TOP GEAR & WEIGHT WATCHERS MAGAZINE FOR THE LIBRARY.	- 269.75
34209	14/07/2015	FAIRFAX BUSINESS MEDIA	ADVERTISEMENT IN THE SENIOR PAPER FOR APRIL 2015.	- 679.80
34210	14/07/2015	LUCY'S TEAROOMS	CATERING FOR STAFF TRAINING HACC AT KILLARA ON 17/06/2015 & SANDWICHES FOR KILLARA BIGGEST MORNING TEA ON 18/06/2015.	- 327.00

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34211	14/07/2015	NORTHAM BETTA HOME LIVING	REPLACEMENT TOM TOM GO VIA 280 GPS FOR RANGER VEHICLE N4021.	-	189.00
34212	14/07/2015	NORTHAM RETRAVISION	PURCHASE OF X1 POWER CORD, X1 WALL MOUNT BRACKET FOR TV & X1 SAMSUNG 48IN LED/LCD SMART TV FOR SES.	-	1,078.90
34213	14/07/2015	PERFECT COMPUTER SOLUTIONS PTY LTD	TRAVEL EXPENSES TO THE DEPOT ON THE 19/6/2015.	-	285.00
34214	14/07/2015	PETTY CASH	PETTY CASH RECOUP FOR NORTHAM VISTOR CENTRE, ADMIN, WUNDOWIE LIBRARY, KILLARA, NORTHAM DEPOT & NORTHAM LIBRARY FOR JUNE 2015.	-	500.35
34215	14/07/2015	PFD FOOD SERVICES PTY LTD	PURCHASE OF ASSORTED FOOD ITEMS FOR KILLARA.	-	293.00
34216	14/07/2015	PRECISION LASER SYSTEMS	SERVICING OF THE DEPOT LASER LEVELLING EQUIPMENT & HIRE OF LASER 1145 WITH ACCESSORIES FOR THE PERIOD 18/06/2015 TO 01/07/2015.	-	528.95
34217	14/07/2015	SHIRE OF NORTHAM	12 MONTH VEHICLE REGISTRATION FOR SUBARU OUTBACK N10931.	-	305.10
34218	14/07/2015	STEVEN DOUGLAS BIGNELL	REFUND OF THE ADVERTISING PORTION OF THE PLANNING APPLICATION P2062 FEES AS NO ADVERTISING WAS REQUIRED.	-	129.00
34219	14/07/2015	SYNERGY	ELECTRICITY ACCOUNTS FOR ASSORTED SHIRE PROPERTIES FOR THE PERIOD OF 04/03/2015 TO 18/06/2015.	-	25,616.36
34220	14/07/2015	TELSTRA CORPORATION	BIGPOND ADSL CHARGES FOR NORTHAM DISTRICT SES FOR THE PERIOD 15/05/2015 TO 14/06/2015 & MOBILE TELEPHONE CHARGES UNTIL 24TH JUNE 2015.	-	1,872.99
34221	14/07/2015	WATER CORPORATION	WATER USE & SERVICE CHARGESFOR ASSORTED SHIRE PROPERTIES FOR THE PERIOD 15/04/2015 TO 26/06/2015.	-	8,766.08
34222	14/07/2015	WESTERN POWER	ANNUAL BUS INSPECTION ON COMMUNITY BUS N.009 TO BE CONDUCTED ON 16/07/2015.	-	147.85
34223	14/07/2015	WESTERN POWER	ANNUAL BUS INSPECTION FOR WUNDOWIE COMMUNITY BUS N460 TO BE CONDUCTED ON 21/07/2015.	-	147.85
34224	17/07/2015	AUSTRALIAN SERVICES UNION	PAYROLL DEDUCTIONS.	-	25.10
34225	17/07/2015	LOCAL GOVERNMENT AND RACECOURSE	PAYROLL DEDUCTIONS.	-	41.00

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		EMPLOYEES UNION		
34226	17/07/2015	SHIRE OF NORTHAM	PAYROLL DEDUCTIONS.	- 1,145.00
34227	24/07/2015	A COUNTRY PRACTICE	STERILISATION OF X2 CATS FROM 125 DUKE ST & 661 YORK RD NORTHAM.	- 200.00
34228	24/07/2015	CITY OF GOSNELLS	LOST LIBRARY ITEM FEE FOR EDDIE MURPHY DELIRIOUS DVD.	- 26.20
34229	24/07/2015	FREMANTLE CITY LIBRARY AND INFORMATION SERVICE	LOST LIBRARY ITEM FEE FOR THE BOOK THE THIRD DOOR BY EMILY RODDA.	- 10.00
34230	24/07/2015	GEORDAS THARIYATH	REIMBURSEMENT OF PRE-EMPLOYMENT MEDICAL FOR ASSET MANAGER POSITION.	- 279.40
34231	24/07/2015	CANCELLED PAYMENT		
34232	24/07/2015	LUCY'S TEAROOMS	BEEF & GRAVY ROLLS FOR BFAC MEETING on 07/07/2015 & LUNCH FOR TENDER PROCESS WORKSHOP ON 10/06/2015.	- 287.50
34233	24/07/2015	NORTHAM BETTA HOME LIVING	PURCHASE OF X2 MENALUX S69 VACUUM BAGS FOR NORTHAM REC CENTRE & X1 TOM TOM GPS FOR RANGER SERVICES TO REPLACE BROKEN ONE.	- 228.90
34234	24/07/2015	NORTHAM TOYWORLD	PURCHASE OF X3 LEGO MINDSTORMS EV3 PROGRAMMABLE ROBOTS FOR NORTHAM LIBRARY.	- 1,497.00
34235	24/07/2015	CANCELLED PAYMENT		
34236	24/07/2015	SYNERGY	ELECTRICITY CHARGES FOR STREET LIGHT TARIFFS & ASSORTED SHIRE PROPERTIES FOR THE PERIOD 17/04/2015 TO 09/07/2015.	- 33,766.58
34237	24/07/2015	TELSTRA CORPORATION	TELSTRA LANDLINE ACCOUNT FOR THE PERIOD 05/06/2015 TO 04/07/2015.	- 4,715.36
34238	24/07/2015	WATER CORPORATION	WATER USE & SERVICE CHARGES FOR ASSORTED SHIRE PROPERTIES FOR THE PERIOD 18/03/2015 TO 14/07/2015.	- 5,023.83
34239	24/07/2015	CANCELLED PAYMENT		
34240	27/07/2015	SHIRE OF NORTHAM	TRANSFER FEE FOR 2015 BOX TOP TRAILERS 1TQM573 & 1TQM574 BOTH ACQUIRED ON 01/07/2015.	- 33.50
34241	28/07/2015	SHIRE OF NORTHAM	12 MONTH LICENCE & THIRD PARTY INSURANCE FOR ASSORTED SHIRE VEHICLES.	- 10,940.00

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34242	28/07/2015	WESTERN POWER	ANNUAL INSPECTION FOR COMMUNITY BUS N.009 RE-INSPECTION DUE TO PREVIOUS INSPECTION FAIL.	- 97.95
34243	30/07/2015	SHIRE OF NORTHAM	12 MONTH LICENCE & THIRD PARTY INSURANCE POLICY FOR TOYOTA COASTER BUS (COMMUNITY BUS) N.009.	- 305.10
34244	31/07/2015	AUSTRALIAN SERVICES UNION	PAYROLL DEDUCTIONS.	- 25.10
34245	31/07/2015	LOCAL GOVERNMENT AND RACECOURSE EMPLOYEES UNION	PAYROLL DEDUCTIONS.	- 41.00
34246	31/07/2015	SHIRE OF NORTHAM	PAYROLL DEDUCTIONS.	- 1,145.00
			TOTAL MUNICIPAL CHEQUES	- 103,143.83
DD8581.1	03/07/2015	TENNANT AUSTRALIA	LEASE FEE CLEANING EQUIPMENT JUNE 2015 NORTHAM RECREATION CENTRE	- 1,067.00
DD8730.1	03/07/2015	TENNANT AUSTRALIA	LEASE FEE CLEANING EQUIPMENT NORTHAM RECREATION CENTRE JULY 2015	- 1,067.00
DD8758.1	09/07/2015	BANKWEST	JOHN HANSEN MASTERCARD 22 MAY TO 22 JUNE 2015, HAN PALACE- MEALS-14/6/15, HAN PALACE- MEALS-15/6/15, GRILL & CHILL-16/6/15, PERTH CITY HOTEL-18/6/15, PERTH CITY HOTEL-19/6/15, GST	- 179.68
DD8758.1	09/07/2015	BANKWEST	DENISE GOBBART MASTERCARD 22 MAY TO 22 JUNE 2015, BALLANTYEN JEWELLERS - KEVIN KANE GIFT, CITY OF SOUTH PERTH - UHY PARKING TICKET, CITY OF VINCENT-PCS PARKING, CITY OF SOUTH PERTH UHY PARKING, SUBWAY NORTHAM - AVON MIDLAND COUNTRY ZONE MEETING 19/6/15- CATERING, GST	- 256.80
DD8758.1	09/07/2015	BANKWEST	ROSS RAYSON MASTERCARD 22 MAY TO 22 JUNE 2015, KMART 1395 - APRON, QUINS GOURMET BUTCHER, Q NGUYEN T NGUYEN - ROLLS, SHIRE OF NORTHAM PM1411 (N11075) LICENCE, SHIRE OF NORTHAM PM1411 (N11075) LICENCE PLATE FEE & RECORDING, HOME BAKE SHOP BAKERS HILL, NORTHAM BRUNOS PIZZA, GST	- 649.50
DD8758.1	09/07/2015	BANKWEST	JASON WHITEAKER MASTERCARD 22/5/15 TO 22/6/15, KFC - WALGA MEETING - LUNCH, SUBWAY NORTHAM - CATERING MANAGE EMPLOYEE PERFORMANCE TRAINING-28/5/15, GST	- 132.15

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DD8758.1	09/07/2015	BANKWEST	CHADD HUNT MASTERCARD 22/5/15 TO 22/6/15, AUSTRALIAN INSTITUTE OF BUILDING SURVEYORS, ANNUAL FEE, GST	- 839.00
DD8758.1	09/07/2015	BANKWEST	CLINTON KLEYNHANS MASTERCARD 22/5/15 TO 22/6/15, EXCELL SERV SOLUTIONS, EXCELL SERV SOLUTIONS, GST	- 97.78
DD8758.1	09/07/2015	BANKWEST	FACILITY FEE, FACILITY FEE BANK CARD FEES	- 99.00
DD8793.1	14/07/2015	WA SUPER	PAYROLL DEDUCTIONS.	-24363.45
DD8793.2	14/07/2015	EWRAP SUPER	SUPERANNUATION CONTRIBUTIONS.	-120.96
DD8793.3	14/07/2015	SUNSUPER	SUPERANNUATION CONTRIBUTIONS.	-219.92
DD8793.4	14/07/2015	AMG UNIVERSAL SUPER	SUPERANNUATION CONTRIBUTIONS.	-334.99
DD8793.5	14/07/2015	PRIME SUPER	SUPERANNUATION CONTRIBUTIONS.	-124.99
DD8793.6	14/07/2015	AUSTRALIAN SUPER PTY LTD	SUPERANNUATION CONTRIBUTIONS.	-1851.04
DD8793.7	14/07/2015	REST INDUSTRY SUPER	SUPERANNUATION CONTRIBUTIONS.	-263.74
DD8793.8	14/07/2015	CONCEPT ONE THE INDUSTRY SUPERANNUATION FUND	SUPERANNUATION CONTRIBUTIONS.	-178.64
DD8793.9	14/07/2015	ZURICH AUSTRALIA LIMITED	SUPERANNUATION CONTRIBUTIONS.	-237.30
DD8872.1	28/07/2015	WA SUPER	PAYROLL DEDUCTIONS.	-22882.29
DD8872.2	28/07/2015	AMP LIFE LIMITED	SUPERANNUATION CONTRIBUTIONS.	-255.77
DD8872.3	28/07/2015	EWRAP SUPER	SUPERANNUATION CONTRIBUTIONS.	-115.56
DD8872.4	28/07/2015	SUNSUPER	SUPERANNUATION CONTRIBUTIONS.	-219.92
DD8872.5	28/07/2015	AMG UNIVERSAL SUPER	SUPERANNUATION CONTRIBUTIONS.	-335.56
DD8872.6	28/07/2015	PRIME SUPER	SUPERANNUATION CONTRIBUTIONS.	-159.94
DD8872.7	28/07/2015	HESTA SUPER FUND	SUPERANNUATION CONTRIBUTIONS.	-50.95
DD8872.8	28/07/2015	AUSTRALIAN SUPER PTY LTD	SUPERANNUATION CONTRIBUTIONS.	-2034.11
DD8872.9	28/07/2015	REST INDUSTRY SUPER	SUPERANNUATION CONTRIBUTIONS.	-195.01

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DD8793.10	14/07/2015	BT SUPER FOR LIFE	SUPERANNUATION CONTRIBUTIONS.	-521.95
DD8793.11	14/07/2015	COMMONWEALTH SUPERSELECT	SUPERANNUATION CONTRIBUTIONS.	-310.58
DD8793.12	14/07/2015	(THE QUEENSLAND LOCAL GOVERNMENT SUPERANNUATION BOARD) LG SUPER	SUPERANNUATION CONTRIBUTIONS.	-266.73
DD8793.13	14/07/2015	AMP LIFE LIMITED	SUPERANNUATION CONTRIBUTIONS.	-255.77
DD8872.10	28/07/2015	CONCEPT ONE THE INDUSTRY SUPERANNUATION FUND	SUPERANNUATION CONTRIBUTIONS.	-176.38
DD8872.11	28/07/2015	ZURICH AUSTRALIA LIMITED	SUPERANNUATION CONTRIBUTIONS.	-237.30
DD8872.12	28/07/2015	BT SUPER FOR LIFE	SUPERANNUATION CONTRIBUTIONS.	-521.95
DD8872.13	28/07/2015	COMMONWEALTH SUPERSELECT	SUPERANNUATION CONTRIBUTIONS.	-310.58
DD8872.14	28/07/2015	(THE QUEENSLAND LOCAL GOVERNMENT SUPERANNUATION BOARD) LG SUPER	SUPERANNUATION CONTRIBUTIONS.	-266.73
			TOTAL DIRECT DEBIT	- 61,200.02
PAYROLL	02/07/2015	SHIRE OF NORTHAM MAIN PAY RUN	SHIRE OF NORTHAM EMPLOYEES PAYROLL.	- 174,623.16
PAYROLL	06/07/2015	SHIRE OF NORTHAM ONE OFF PAY RUN	SHIRE OF NORTHAM ONE OFF EMPLOYEE PAYROLL	- 94.88
PAYROLL	16/07/2015	SHIRE OF NORTHAM MAIN PAY RUN	SHIRE OF NORTHAM EMPLOYEES PAYROLL.	- 174,198.07
PAYROLL	30/07/2015	SHIRE OF NORTHAM MAIN PAY RUN	SHIRE OF NORTHAM EMPLOYEES PAYROLL.	- 172,769.36
			TOTAL PAYROLL	- 521,685.47
			TOTAL EFT MUNICIPAL	-\$2,096,823.81
			TOTAL EFT TRUST	-\$ 500.00
			TOTAL CHEQUE MUNICIPAL	-\$ 103,143.83
			TOTAL CHEQUE TRUST	-\$ 1,000.00
			TOTAL DIRECT DEBIT	-\$ 61,200.02

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

			TOTAL PAYROLL	-\$ 521,685.47
			TOTAL	-\$2,784,353.13

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

The payment of cheque numbers 34200 to 34246 from Municipal Fund (dated 1st July 2015 to 31st July 2015), the payment of trust cheque numbers 1912 to 1912 from the Trust Fund and the payment of Electronic Funds Transfer numbers EFT20309 to EFT20313 and EFT20316 to EFT20572 (dated 1st July 2015 to 31st July 2015). EFT Trust Fund EFT20314 to EFT20315 and Direct Debits 8581.1 and 8730.1 and 8758.1 and 8793.1 to 8793.13 and 8872.1 to 8872.14 have been made in accordance with delegated authority reference number (M/F/F/Regs LGA 1995 S5.42)

Municipal Bank Vouchers 34200 to 34246	\$ 103,143.83
Trust Bank Vouchers 1912 to 1912	\$ 1,000.00
Municipal Bank Electronic Fund Transfer EFT20309 to EFT20313 and EFT20316 to EFT20572	\$ 2,096,823.81
Trust Bank Electronic Fund Transfer EFT20314 to EFT20315	\$ 500.00
Direct Debit Fund Transfer 8581.1 and 8730.1 and 8758.1 and 8793.1 to 8793.13 and 8872.1 to 8872.14	\$ 61,200.02
Municipal Bank Electronic Fund Transfer Payroll 02/07/2015	\$ 174,623.16
Municipal Bank Electronic Fund Transfer Payroll 06/07/2015	\$ 94.88
Municipal Bank Electronic Fund Transfer Payroll 16/07/2015	\$ 174,198.07
Municipal Bank Electronic Fund Transfer Payroll 30/07/2015	\$ 172,769.36
 TOTAL	 \$ 2,784,353.13

CERTIFICATION OF THE PRESIDENT

I hereby certify that this schedule of account covering Vouchers and Electronic Funds Transfer payments as per above and totalling \$2,784,353.13 was submitted to the Ordinary Meeting of Council on Wednesday, 19 August 2015.

_____ CERTIFICATION OF THE PRESIDENT

CERTIFICATE OF THE CHIEF EXECUTIVE OFFICER

This schedule of accounts paid covering Vouchers and Electronic Funds Transfer payments as per above and totalling \$2,784,353.13 was submitted to each member of the Council on Wednesday, 19 August 2015, has been checked and is fully supported by vouchers and invoices which are submitted herewith and which have been duly certified as to the receipt of goods and the rendition of services and as to prices, computations and casting and the amounts shown are due for payment.

_____ CHIEF EXECUTIVE OFFICER

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

13.3.2 FINANCIAL STATEMENTS TO 30 JUNE 2015

Name of Applicant:	Internal Report
File Ref:	2.1.3.4
Officer:	Denise Gobbart / Zoe Macdonald
Officer Interest:	Nil
Policy:	Nil
Voting:	Simple Majority
Date:	31 July 2015

PURPOSE

The Statement of Financial Activity for the period ending 30 June 2015 is included as a separate attachment to this Agenda and includes the following reports:

- Statement of Financial Activity;
- Acquisition of Assets;
- Disposal of Assets;
- Information on Borrowings;
- Reserves;
- Net Current Assets;
- Rating Information;
- Trust Funds;
- Operating Statements;
- Balance Sheet;
- Financial Ratio;
- Budget to Actual Material Variance; and
- Bank Reconciliation

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2515

Moved: Cr Saunders

Seconded: Cr Williams

That Council receive the Financial Statements, prepared in accordance with the Local Government (Financial Management) Regulations, for the period ended 30 June 2015.

CARRIED 9/0

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015



SHIRE OF NORTHAM
MONTHLY STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

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SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

**SHIRE OF NORTHAM
STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015**

	NOTE	June 2015 Actual \$	June 2015 Y-T-D Budget \$	Projected 2014/15 Budget \$	Variations Actuals to Budget \$	Variations Actual Budget to Y-T-D %
Operating						
Revenues/Sources	8					
Governance		99,624	100,715	100,715	(1,091)	(1.08%)
General Purpose Funding		6,342,321	4,709,374	4,709,374	1,632,947	34.67%
Law, Order, Public Safety		437,035	795,058	795,058	(358,023)	(45.03%)
Health		38,907	45,000	45,000	(6,093)	(13.54%)
Education and Welfare		1,233,363	1,238,616	1,238,616	(5,253)	(0.42%)
Housing		44,286	48,431	48,431	(4,145)	(8.56%)
Community Amenities		3,594,743	3,518,368	3,518,368	76,375	2.17%
Recreation and Culture		722,188	1,155,092	1,155,092	(432,904)	(37.48%)
Transport		1,470,920	1,482,094	1,482,094	(11,174)	(0.75%)
Economic Services		1,528,375	1,833,756	1,833,756	(305,381)	(16.65%)
Other Property and Services		78,198	69,000	69,000	9,198	13.33%
		15,589,960	14,995,504	14,995,504	594,456	3.96%
(Expenses)/(Applications)	8					
Governance		(1,117,579)	(1,443,703)	(1,443,703)	326,124	22.59%
General Purpose Funding		(355,250)	(257,850)	(257,850)	(97,400)	(37.77%)
Law, Order, Public Safety		(1,053,887)	(1,181,118)	(1,181,118)	127,231	10.77%
Health		(374,072)	(361,960)	(361,960)	(12,112)	(3.35%)
Education and Welfare		(1,355,718)	(1,378,259)	(1,378,259)	22,541	1.64%
Housing		(90,123)	(94,569)	(94,569)	4,446	4.70%
Community Amenities		(2,993,523)	(3,565,111)	(3,565,111)	571,588	16.03%
Recreation & Culture		(3,670,891)	(4,190,943)	(4,190,943)	520,052	12.41%
Transport		(4,275,839)	(4,912,766)	(4,912,766)	636,927	12.96%
Economic Services		(1,842,571)	(2,117,344)	(2,117,344)	274,773	12.98%
Other Property and Services		(209,416)	(75,095)	(75,095)	(134,321)	(178.87%)
		(17,338,869)	(19,578,718)	(19,578,718)	2,239,849	(11.44%)
Adjustments for Non-Cash (Revenue) and Expenditure						
(Profit)/Loss on Asset Disposals	2	(232,659)	(364,385)	(364,385)	131,726	36.15%
Movement in Accrued Interest		(15,021)	0	0	(15,021)	0.00%
Movement in Accrued Salaries and Wages		(149,557)	0	0	(149,557)	0.00%
Movement in Deferred Pensioner Rates/ESL		(10,729)	0	0	(10,729)	0.00%
Movement in Employee Benefit Provisions		113,590	0	0	113,590	0.00%
Depreciation on Assets		2,718,653	3,475,533	3,475,533	(756,880)	21.78%
Capital Revenue and (Expenditure)						
Purchase Land Held for Resale	1	0	0	0	0	0.00%
Purchase Land and Buildings	1	(373,133)	(632,620)	(632,620)	259,487	41.02%
Purchase Plant and Equipment	1	(426,796)	(825,980)	(825,980)	399,184	48.33%
Purchase Furniture and Equipment	1	(22,587)	(28,300)	(28,300)	5,713	20.19%
Purchase Bush Fire Equipment	1	0	(460,000)	(460,000)	460,000	100.00%
Purchase Playground Equipment	1	(35,871)	(375,778)	(375,778)	339,907	0.00%
Purchase Infrastructure Assets - Roads	1	(2,198,211)	(2,454,404)	(2,454,404)	256,193	10.44%
Purchase Infrastructure Assets - Bridges	1	0	(108,000)	(108,000)	108,000	
Purchase Infrastructure Assets - Footpaths	1	(356,803)	(537,196)	(537,196)	180,393	33.58%
Purchase Infrastructure Assets - Drainage	1	(1,238,328)	(2,798,124)	(2,798,124)	1,559,796	0.00%
Purchase Infrastructure Assets - Parks & Ovals	1	(193,746)	(530,634)	(530,634)	336,888	63.49%
Purchase Infrastructure Assets - Airfields	1	0	0	0	0	#DIV/0!
Purchase Infrastructure Assets - Streetscape	1	(136,482)	(248,566)	(248,566)	112,084	45.09%
Purchase Infrastructure Assets - Other	1	(122,430)	(418,593)	(418,593)	296,163	70.75%
Proceeds from Disposal of Assets	2	676,967	933,364	933,364	(256,397)	27.47%
Repayment of Debentures	3	(1,578,755)	(1,578,756)	(1,578,755)	1	0.00%
Proceeds from New Debentures	3	0	0	0	0	0.00%
Advances to Community Groups		0	0	0	0	0.00%
Self-Supporting Loan Principal Income	3	214,568	214,568	214,568	0	0.00%
Transfers to Restricted Assets (Reserves)	4	(1,986,858)	(2,208,653)	(2,208,653)	221,795	10.04%
Transfers from Restricted Asset (Reserves)	4	689,759	1,421,440	1,421,440	(731,681)	0.00%
Transfers from Restricted Asset (Other)		0	0	0	0	#DIV/0!
						#DIV/0!
ADD Net Current Assets July 1 B/Fwd	5	3,866,773	3,866,773	3,866,776	0	0.00%
LESS Net Current Assets Year to Date	5	5,819,675	(41,287)	(41,287)	5,860,962	(14195.66%)
Amount Raised from Rates	6	(8,243,809)	(8,200,238)	(8,200,234)	(43,571)	0.53%

This statement is to be read in conjunction with the accompanying notes.

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

1. ACQUISITION OF ASSETS	June 2015 Actual \$	2014/15 Budget \$
The following assets have been acquired during the period under review:		
<u>By Program</u>		
Governance		
Law, Order & Public Safety		
Brigade Appliance -3.4 Grass Valley	0.00	335,000
Brigade Appliance - Light Tanker Irishtown BFB	0.00	125,000
CCTV - Fitzgerald St & Peel Tce	800.00	25,000
Health		
EMDS Vehicle	36,718.18	40,000
EHO Vehicle	26,015.91	25,675
Education & Welfare		
Land & Buildings - Respite Centre Construction	122,633.42	142,485
Replacement Air Conditioners	14,130.00	12,000
Community Amenities		
Cemetery Niche Wall, Surrounds & Roof	39,940.71	40,368
Drainage - Town Centre Supertowns	190,567.55	97,381
Drainage - Bernard Park Supertowns	189,074.37	527,100
Drainage - Town Centre Stage 2	0.00	1,027,386
Cemetery Drainage	0.00	10,080
Cemetery Lot Development	8,711.03	20,000
Aerators - Supertowns	1,470.00	242,593
Avon Mall Streetscaping	51,861.82	100,000

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

	June 2015 Actual \$	2014/15 Budget \$
1. ACQUISITION OF ASSETS (Continued)		
<u>By Program (Continued)</u>		
Recreation and Culture		
Land & Buildings - Replace 3 Airconditioners	16,132.60	18,000
Land & Building - Replace Balcony	0.00	178,200
Land & Building - Bakers Hall Kitchen upgrade	1,110.00	1,110
Rec Centre Additional Vents/ Exit Doors	4,000.00	29,000
Rec Centre Automatic Doors	12,568.29	11,000
Shade Sails Windowie	17,500.00	25,000
Recreation Manager Vehicle	31,138.18	35,000
Recreation Replacement Chairs	11,800.00	12,980
Recreation Portable Light Weight Stage	3,089.00	2,750
Recreation Automatic Hand Dryer	0.00	5,280
George Nuich park Playground/ Shade	14,105.00	305,532
Jubilee Playground Upgrade	21,766.14	20,450
Play Equipment Wundowie	0.00	9,796
Install Cricket Pitch - Jubilee Oval	0.00	15,000
Henry Street Oval Fencing WAFL Grant	30,502.09	33,725
Free Standing Stackable Seating	0.00	3,580
Skate park Clarke Street Lighting Change to BMX	0.00	20,000
Bert Hawke Drainage	0.00	40,000
Bert Hawke Lighting	0.00	20,000
Wundowie Skate park	13,200.00	181,700
CSRFF Bakers Hill - Resurface 2 Hardcourts	4,180.71	32,732
Henry Street Oval Drainage	68,220.00	50,000
Playground POSImprovements	52,605.55	30,675
Parks Seating & Play Equipment	0.00	40,000
Retic Wundowie Oval	2,110.80	23,000
Bakers Hill Oval	5,426.75	55,222
Library Energy Efficiency	22,495.27	22,495
Railway Precinct Upgrade	0.00	50,000
Carpark/ Drop Zone Old Railway Station	30,339.68	100,716

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SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

	June 2015 Actual \$	2014/15 Budget \$
1. ACQUISITION OF ASSETS (Continued)		
<u>By Program (Continued)</u>		
Transport		
Footpath Construction	356,803.19	537,196
Rural Stormwater Drainage	20,783.17	30,000
Laneway Construction Northam	90,276.53	82,000
Southern Brook Road RRG 14/15	314,996.02	160,772
Jennapullin Road RRG 14/15	188,899.04	147,854
- Roadworks - General Construction	392,068.26	606,879
- Roadworks - Bridge Construction	0.00	108,000
- Roadworks - Roads to Recovery	490,054.34	514,049
- Roadworks - Blackspot Funding	269,758.67	359,043
- Roadworks - Gravel Sheeting	433,120.56	521,307
Laneway Land Acquisition	0.00	28,500
Infra Development- Super Towns	19,037.98	34,000
Plant & Equipment - Road Plant Purchases	332,123.26	700,305
Economic Services		
Six Burner Stove/ Oven Installed	7,698.00	7,290
Christmas Decorations	12,563.64	30,000
Information Bays	54,280.29	37,850
Signs Tower - GEH	0.00	10,000
Bakers Hill Water Project	60,724.05	66,353
Wundowie Stormwater Harvest	777,179.05	1,039,824
Old Fire Station - Re Roof Double Storey Section	140,122.85	127,962
Car Park Medical Centre	99,685.62	126,000
	<u>5,104,387.57</u>	<u>9,418,195</u>

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

1. ACQUISITION OF ASSETS (Continued)	June 2015 Actual \$	2014/15 Budget \$
<u>By Class</u>		
Land Held for Resale	0.00	0
Land and Buildings	373,133.14	632,620
Plant and Equipment	426,795.53	825,980
Furniture and Equipment	22,587.00	28,300
Bush Fire Equipment	0.00	460,000
Playground Equipment	35,871.14	375,778
Infrastructure Assets - Roads	2,198,211.40	2,454,404
Infrastructure Assets - Footpaths	356,803.19	537,196
Infrastructure Assets - Bridges & Culverts	0.00	108,000
Infrastructure Assets - Drainage	1,238,328.19	2,798,124
Infrastructure Assets - Parks & Ovals	193,745.90	530,634
Infrastructure Assets - Airfields	0.00	0
Infrastructure Assets - Streetscape	136,481.79	248,566
Infrastructure Assets - Other	122,430.29	418,593
	5,104,387.57	9,418,195

SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

2. DISPOSALS OF ASSETS

The following assets have been disposed of during the period under review:

By Class	Written Down Value		Sale Proceeds		Profit(Loss)	
	June 2015	2014/15	June 2015	2014/15	June 2015	2014/15
	Actual	Budget	Actual	Budget	Actual	Budget
	\$	\$	\$	\$	\$	\$
Land & Buildings						
Wundowie Yak Lot 311 - Asset S222	0.00	24,070	0.00	200,000	0.00	175,930
Lot 160 Sims Road - Asset S522	300,000.00	300,000	309,090.91	309,091	9,090.91	9,091
Lot 400 Byfield Street-reserve37450 - Asset LAND1303	9,545.45	9,545	249,840.00	249,840	240,294.55	240,295
Lot 21 Northam-York Road Muluckine - Asset LAND1346	25,000.00	25,000	24,500.00	24,500	(500.00)	(500)
Plant & Equipment						
EMDS Vehicle - PN1217 - Asset MV1221	15,817.48	16,163	13,081.82	15,000	(2,735.66)	(1,163)
EHO Vehicle -PN1206-Asset MV1207	13,316.76	13,317	10,000.00	10,000	(3,316.76)	(3,317)
Rec Manager Vehicle - PN1210 - Asset MV1212	11,689.14	14,500	15,000.00	10,000	3,310.86	(4,500)
9 Tonne Truck - PN0914 - N007 - Asset 9247	0.00	0	0.00	0	0.00	0
3.5 Tonne truck - PN00914 - N007 - Asset 9247	0.00	25,000	0.00	31,045	0.00	6,045
Kubota Front Mower - PN1005 - Asset GP1001	0.00	0	0.00	0	0.00	0
Road Broom - PN5066 - N.5066 - Asset S133	0.00	0	0.00	0	0.00	0
EMES Vehicle - PN1209 -N10721 - Asset MV1211	25,661.66	26,500	18,181.82	19,000	(7,479.84)	(7,500)
Parks & Gardens Utility - PN1014 - MV1014	0.00	23,280	0.00	12,388	0.00	(10,892)
Ops Manager Utility - PN1104- N10636 - Asset MV1104	29,948.22	31,543	19,090.91	24,000	(10,857.31)	(7,543)
Asset Manager Utility - PN1204 - N10710 - Asset1205	11,269.68	13,334	9,090.91	8,500	(2,178.77)	(4,834)
Grade Utility - PN1104 - N10686 - Asset MV1104	2,060.00	2,060	9,090.91	10,000	7,030.91	7,940
Multi Roller - PN1709 - Asset S589	0.00	44,667	0.00	10,000	0.00	(34,667)
	444,308.39	568,979	676,967.28	933,364	232,658.89	364,385

Summary

Profit on Asset Disposals
Loss on Asset Disposals

June 2015 Actual	2014/15 Budget
\$	\$
259,727.23	439,301
(27,068.34)	(74,916)
<u>232,658.89</u>	<u>364,385</u>

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

3. INFORMATION ON BORROWINGS (Continued)

(b) New Debentures - 2014/15

The Shire of Northam does not propose to raise any new debenture in 2014/15.

(c) Unspent Debentures

Council had no unspent debenture funds as at 30th June 2014, it is not expected to have any unspent debenture funds as at 30th June 2015.

(d) Overdraft

Council has not utilised an overdraft facility during the financial year although an overdraft facility of \$100,000 with the Bank of Western Australia does exist. It is not anticipated that this facility will be required to be utilised during 2014/15.

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

	June 2015 Actual \$	2014/15 Budget \$
4. RESERVES - CASH BACKED		
(a) Aged Accomodation Reserve		
Opening Balance	249,145	249,145
Interest	9,121	9,460
Amount Set Aside / Transfer to Reserve	15,900	15,900
Amount Used / Transfer from Reserve	(18,701)	(22,660)
	255,465	251,845
(b) Employee Liability Reserve		
Opening Balance	512,931	512,932
Interest	18,774	22,221
Amount Set Aside / Transfer to Reserve	0	0
Amount Used / Transfer from Reserve	(37,103)	(37,103)
	494,602	498,050
(c) Housing Reserve		
Opening Balance	234,208	234,208
Interest	8,574	9,182
Amount Set Aside / Transfer to Reserve	0	0
Amount Used / Transfer from Reserve	0	0
	242,782	243,390
(d) Reticulation Scheme Reserve		
Opening Balance	0	0
Interest	0	0
Amount Set Aside / Transfer to Reserve	48,750	40,000
Amount Used / Transfer from Reserve	0	0
	48,750	40,000
(e) Office Equipment Reserve		
Opening Balance	118,133	118,133
Interest	4,325	5,015
Amount Set Aside / Transfer to Reserve	0	0
Amount Used / Transfer from Reserve	0	0
	122,458	123,148
(f) Plant & Equipment Reserve		
Opening Balance	487,733	487,732
Interest	17,872	23,745
Amount Set Aside / Transfer to Reserve	360,000	360,000
Amount Used / Transfer from Reserve	(264,851)	(560,372)
	600,754	311,105
(g) Recreation Reserve		
Opening Balance	30,226	30,226
Interest	1,105	1,969
Amount Set Aside / Transfer to Reserve	0	0
Amount Used / Transfer from Reserve	(13,200)	(32,195)
	18,131	0
(h) Road & Bridgeworks Reserve		
Opening Balance	623,888	623,888
Interest	22,829	25,889
Amount Set Aside / Transfer to Reserve	6,158	20,000
Amount Used / Transfer from Reserve	(105,422)	(161,000)
	547,453	508,777

SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

	June 2015 Actual \$	2014/15 Budget \$
4. RESERVES - CASH BACKED (Continued)		
(i) Refuse Site Reserve		
Opening Balance	182,085	182,085
Interest	6,671	6,354
Amount Set Aside / Transfer to Reserve	60,000	60,000
Amount Used / Transfer from Reserve	(20,000)	(20,000)
	228,755	228,439
(j) Regional Development Reserve		
Opening Balance	114,375	114,374
Interest	4,271	5,270
Amount Set Aside / Transfer to Reserve	755,000	755,000
Amount Used / Transfer from Reserve	0	0
	873,645	874,644
(k) Speedway Reserve		
Opening Balance	130,201	130,200
Interest	4,767	5,104
Amount Set Aside / Transfer to Reserve	0	0
Amount Used / Transfer from Reserve	0	0
	134,967	135,304
(l) Community Bus Replacement Reserve		
Opening Balance	30,039	30,039
Interest	1,100	393
Amount Set Aside / Transfer to Reserve	0	0
Amount Used / Transfer from Reserve	0	0
	31,138	30,432
(m) Septage Pond Reserve		
Opening Balance	245,028	245,028
Interest	8,978	8,002
Amount Set Aside / Transfer to Reserve	70,000	70,000
Amount Used / Transfer from Reserve	0	(27,200)
	324,006	295,830
(n) Killara Reserve		
Opening Balance	148,921	143,212
Interest	5,452	7,000
Amount Set Aside / Transfer to Reserve	0	0
Amount Used / Transfer from Reserve	0	0
	154,373	150,212
(o) Stormwater Drainage Projects Reserve		
Opening Balance	46,521	46,521
Interest	1,703	257
Amount Set Aside / Transfer to Reserve	0	0
Amount Used / Transfer from Reserve	(20,783)	(40,000)
	27,441	6,778

SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

	June 2015 Actual \$	2014/15 Budget \$
4. RESERVES - CASH BACKED (Continued)		
(p) Recreation and Community Facilities Reserve		
Opening Balance	625,572	625,572
Interest	22,920	16,859
Amount Set Aside / Transfer to Reserve	249,840	249,840
Amount Used / Transfer from Reserve	(87,518)	(148,815)
	810,814	743,456
(q) Administration Office Reserve		
Opening Balance	470,224	470,224
Interest	17,235	18,434
Amount Set Aside / Transfer to Reserve	183,591	183,591
Amount Used / Transfer from Reserve	0	0
	671,050	672,249
(r) Council Buildings & Amenities Reserve		
Opening Balance	147,308	147,308
Interest	5,390	3,815
Amount Set Aside / Transfer to Reserve	0	200,000
Amount Used / Transfer from Reserve	(22,495)	(22,495)
	130,204	328,628
(s) River Town Pool Dredging Reserve		
Opening Balance	273,667	273,667
Interest	10,019	8,768
Amount Set Aside / Transfer to Reserve	0	0
Amount Used / Transfer from Reserve	0	(223,600)
	283,686	58,835
(t) Parking Facilities Construction Reserve		
Opening Balance	162,328	162,329
Interest	5,940	6,168
Amount Set Aside / Transfer to Reserve	55,000	65,000
Amount Used / Transfer from Reserve	(99,686)	(126,000)
	123,583	107,497
(u) Art Collection Reserve		
Opening Balance	15,646	15,645
Interest	573	417
Amount Set Aside / Transfer to Reserve	5,000	5,000
Amount Used / Transfer from Reserve	0	0
	21,219	21,062
Total Cash Backed Reserves	6,145,276	5,629,681
Total Interest	177,619	184,322

All of the above reserve accounts are to be supported by money held in financial institutions.

SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

	June 2015 Actual \$	2014/15 Budget \$
4. RESERVES - CASH BACKED (Continued)		
Summary of Transfers to Cash Backed Reserves		
Transfers to Reserves		
Aged Accommodation Reserve	25,021	25,360
Employee Liability Reserve	18,774	22,221
Housing Reserve	8,574	9,182
Reticulation Scheme Reserve	48,750	40,000
Office Equipment Reserve	4,325	5,015
Plant & Equipment Reserve	377,872	383,745
Recreation Reserve	1,105	1,969
Road & Bridgeworks Reserve	28,987	45,889
Refuse Site Reserve	66,671	66,354
Regional Development Reserve	759,271	760,270
Speedway Reserve	4,767	5,104
Community Bus Replacement Reserve	1,100	393
Septage Pond Reserve	78,978	78,002
Killara Reserve	5,452	7,000
Stormwater Drainage Projects Reserve	1,703	257
Recreation and Community Facilities Reserve	272,760	266,699
Administration Office Reserve	200,826	202,025
Council Buildings & Amenities Reserve	5,390	203,815
River Town Pool Dredging Reserve	10,019	8,768
Parking Facilities Construction Reserve	60,940	71,168
Art Collection Reserve	5,573	5,417
	<u>1,986,858</u>	<u>2,208,653</u>
Transfers from Reserves		
Aged Accommodation Reserve	(18,701)	(22,660)
Employee Liability Reserve	(37,103)	(37,103)
Housing Reserve	0	0
Reticulation Scheme Reserve	0	0
Office Equipment Reserve	0	0
Plant & Equipment Reserve	(264,851)	(560,372)
Recreation Reserve	(13,200)	(32,195)
Road & Bridgeworks Reserve	(105,422)	(161,000)
Refuse Site Reserve	(20,000)	(20,000)
Regional Development Reserve	0	0
Speedway Reserve	0	0
Community Bus Replacement Reserve	0	0
Septage Pond Reserve	0	(27,200)
Killara Reserve	0	0
Stormwater Drainage Projects Reserve	(20,783)	(40,000)
Recreation and Community Facilities Reserve	(87,518)	(148,815)
Administration Office Reserve	0	0
Council Buildings & Amenities Reserve	(22,495)	(22,495)
River Town Pool Dredging Reserve	0	(223,600)
Parking Facilities Construction Reserve	(99,686)	(126,000)
Art Collection Reserve	0	0
	<u>(689,759)</u>	<u>(1,421,440)</u>
Total Transfer to/(from) Reserves	<u>1,297,099</u>	<u>787,213</u>

SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

4. RESERVES (Continued)

In accordance with council resolutions in relation to each reserve account, the purpose for which the reserves are set aside are as follows:

Aged Accomodation Reserve

Provision of future capital works requirements for aged units at Kuringal Village, Wundowie, and other sites within the Shire of Northam.

Employee Liability Reserve

Provision for employees future liability commitments, ie annual leave, long service leave requirements and negotiated gratuities and sickness payouts.

Housing Reserve

Reserve established for future construction of Community Housing in Wundowie.

Reticulation Scheme Reserve

Provision for future replacement/upgrading of water reuse and reticulation infrastructure. Funds not expected to be used in a set period as further transfer to the reserve account are expected as funds are utilised.

Office Equipment Reserve

Acquisition and upgrading of Council offices, furniture, computers and general equipment. Funds not expected to be used in a set period as further transfer to the reserve account are expected as funds are utilised.

Plant & Equipment Reserve

Acquisition and upgrading of Council works plant and general equipment in accordance with plant replacement program. Funds not expected to be used in a set period as further transfer to the reserve account are expected as

Recreation Reserve

Purpose - Development and improvement of recreation and sporting facilities within the Shire of Northam. It is anticipated that this reserve will be fully utilised in 2014/15.

Road & Bridgeworks Reserve

Provision for upgrading of road and bridge infrastructure within the Shire of Northam. Funds not expected to be used in a set period as further transfer to the reserve account are expected as funds are utilised.

Refuse Site Reserve

Purpose - Development of Refuse Sites and related infrastructure and equipment, including provision for future replacement facility and/or site. Funds are not expected to be used in a set period as further transfers to the reserve account are anticipated.

Regional Development Reserve

Purpose - To provide for future projects whereby a broader range of development ideas may be required to be encouraged on a regional basis, in consultation with other stakeholders and/or Local Governments. Funds are not expected to be used in a set period as further transfers to the reserve account are anticipated.

Speedway Reserve

Purpose - To provide funds for possible future rehabilitation works required at the Northam Speedway site on Fox Road Northam. No date has been specified for the use of this Reserve.

Community Bus Replacement Reserve

Purpose - To provide funds for future replacement of the Shire of Northam Community Buses. Funds are not expected to be used in a set period as further transfers to the reserve account are anticipated.

SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

4. RESERVES (Continued)

Septic Pond Reserve

Purpose - To provide for funds for future upgrades and maintenance to septic ponds and related infrastructure. Funds are not expected to be used in a set period as further transfers to the reserve account are anticipated.

Killara Reserve

Purpose - To provide a fund for surplus funds from Killara Operations and a restricted cash for and unspent Killara Grants. No date has been specified for the use of this Reserve.

Stormwater Drainage Projects Reserve

Purpose - To provide funds for stormwater drainage projects. No date has been specified for the use of this Reserve.

Recreation and Community Facilities Reserve

Purpose - To provide fund for Recreation and Public Facilities within the Shire of Northam. No date has been specified for the use of this Reserve. 2% of net rates levied each year set aside for the provision of recreation and sport facilities.

Administration Office Reserve

Purpose - To provide a fund for the expansion or relocation of the Shire of Northam Administration Centre. No date has been specified for the use of this Reserve.

Council Buildings & Amenities Reserve

Purpose - Provision for maintenance and upgrading of Council buildings and amenities. Funds not expected to be used in a set period as further transfer to the reserve account are anticipated.

River Town Pool Dredging Reserve

Purpose - Provision for dredging and maintenance of the River Town Pool. Funds not expected to be used in a set period as further transfers to the reserve account are anticipated.

Parking Facilities Construction Reserve

Purpose - Provision for future car parking facilities. Funds are not expected to be used in a set period as further transfers to the reserve account are anticipated.

Art Collection Reserve

Purpose - Provision for the care and maintenance of the Shire of Northam's art collection, including acquisitions and disposal. Funds are not expected to be used in a set period as further transfers to the reserve account are anticipated.

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

	June 2015 Actual \$	2013/14 Financial Report \$	2014/15 Budget \$
5. NET CURRENT ASSETS			
Composition of Estimated Net Current Asset Position			
CURRENT ASSETS			
Cash - Unrestricted	3,604,078	2,267,969	200,000
Cash - Restricted Unspent Grants	1,636,080	2,107,310	0
Cash - Restricted Unspent Loans	0	0	0
Cash - Restricted Reserves	6,145,276	4,848,177	5,356,746
Sundry Debtors	1,277,154	795,312	1,231,884
Rates - Current	1,136,116	964,704	0
Pensioners Rates Rebate	16,222	14,700	0
Provision for Doubtful Debts	(124,729)	(37,650)	0
GST Receivable	175,636	0	0
Accrued Income/Prepayments	0	34,017	0
Inventories	30,222	60,459	30,000
	13,896,055	11,054,997	6,818,630
LESS: CURRENT LIABILITIES			
Sundry Creditors	(1,207,536)	(1,901,308)	(2,191,198)
Rates Income in Advance	0	0	0
GST Payable	(98,854)	0	0
Accrued Salaries & Wages	0	(149,557)	0
Accrued Interest on Debentures	(35,622)	(50,643)	0
Payroll Creditors	(202,109)	0	0
Accrued Expenditure	0	0	0
Withholding Tax Payable	0	0	0
Payg Payable	(26,147)	(9,621)	0
Loan Liability	(210,153)	(592,668)	0
Provision for Annual Leave	(534,837)	(490,281)	0
Provision for Long Service Leave	(320,601)	(251,568)	0
Other Payables	0	0	0
	(2,635,859)	(3,445,646)	(2,191,198)
NET CURRENT ASSET POSITION	11,260,196	7,609,351	4,627,432
Less: Cash - Reserves - Restricted	(6,145,276)	(4,848,177)	(5,356,746)
Less: Cash - Unspent Grants - Restricted	0	0	0
Add: Current Loan Liability	210,153	592,668	210,153
Add: Leave Liability Reserve	494,602	512,931	535,153
ESTIMATED SURPLUS/(DEFICIENCY) C/FWD	5,819,675	3,866,773	15,992

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

6. RATING INFORMATION

RATE TYPE	Rate in \$	Number of Properties	Rateable Value \$	2014/15 Rate Revenue \$	2014/15 Interim Rates \$	2014/15 Back Rates \$	2014/15 Total Revenue \$	2014/15 Budget \$
General Rate								
00 Non-Rateable	0.0000	690	1,502,494	0	0	0	0	0
01 GRV-Townsites Residential	10.1868	2,962	36,970,552	3,766,116	29,055	415	3,795,586	3,789,716
02 GRV-Northam Commercial/Industrial	11.3201	247	11,275,640	1,284,621	2,574	0	1,287,195	1,269,307
05 Agricultural Local	0.5487	514	159,172,000	873,377	(2,313)	154	871,218	879,477
06 Agricultural Regional	0.4548	209	111,808,000	508,503	793	0	509,296	514,603
07 Rural Small Holdings	0.6256	550	96,536,000	603,929	(52)	0	603,877	608,029
Sub-Totals		5,172	417,264,686	7,036,546	30,056	569	7,067,172	7,061,132
Minimum Rates								
	Minimum \$							
01 GRV-Northam Town Gen	830	935	4,259,662	776,050	0	0	776,050	776,050
02 GRV-Northam Town Diff	830	47	184,818	39,010	0	0	39,010	39,010
05 Agricultural Local	830	143	11,669,596	118,690	0	0	118,690	118,690
06 Agricultural Regional	830	203	22,932,413	168,490	0	0	168,490	168,490
07 Rural Small Holdings	830	101	12,559,000	83,830	0	0	83,830	83,830
Sub-Totals		1,429	51,605,489	1,186,070	0	0	1,186,070	1,186,070
							8,253,242	8,247,202
Ex-Gratia Rates							12,824	12,824
Excess Rate Receipts							15,120	0
Totals							8,281,186	8,260,026

SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

6. RATING INFORMATION (Continued)

All land except exempt land in the Shire of Northam is rated according to its Gross Rental Value (GRV) in townsites or Unimproved Value (UV) in the remainder of the Shire.

The general rates detailed above for the 2014/15 financial year have been determined by Council on the basis of raising the revenue required to meet the deficiency between the total estimated expenditure proposed in the budget and the estimated revenue to be received from all sources other than rates and also considering the extent of any increase in rating over the level adopted in the previous year.

The minimum rates have been determined by Council on the basis that all ratepayers must make a reasonable contribution to the cost of the Local Government services/facilities.

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

7. TRUST FUNDS

Funds held at balance date over which the Municipality has no control and which are not included in this statement are as follows:

Detail		Balance 01-Jul-14 \$	Amounts Received \$	Amounts Paid (\$)	Balance \$
Town Hall Bond	1	2,500	4,200	(5,200)	1,500
Lesser Hall Bond	2	900	1,500	(1,500)	900
Nomination Deposits	4	0	0	0	0
Library Deposits & Income	5	0	0	0	0
POS - Cash in Lieu	6	304,163	34,766	0	338,929
Bonds - Building	7	35,500	0	(1,000)	34,500
Crossovers - Bond	9	86,892	0	(500)	86,392
Recreation Centre Bond	11	400	1,700	(1,700)	400
Facilities - Bonds	18	200	0	0	200
Footpath/Kerbing Deposit	22	93,500	33,500	(30,500)	96,500
Retentions	26	179,888	53,907	(64,620)	169,175
Sundry Trust	27	8,310	5,000	0	13,310
Building & Construction (B	29	0	51,706	(51,706)	0
Builders Reg Board Levy	30	0	30,104	(30,104)	0
Standpipe Key	31	6,600	650	(350)	6,900
Resited Dwellings	32	7,200	30,000	0	37,200
Deposits-Extractive Indust	33	257,673	9,921	(6,046)	261,548
Other	34	17,983	2,546	(4,782)	15,747
Other - Rental Bond	35	400	0	(200)	200
Bonds - Animal Traps	36	130	440	(440)	130
Storm Damage Donations	38	175	0	0	175
		<u>1,002,414</u>	<u>259,940</u>	<u>(198,648)</u>	<u>1,063,706</u>

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

8. OPERATING STATEMENT

	June 2015 Actual	2014/15 Budget	2013/14 Actual
	\$	\$	\$
OPERATING REVENUES			
Governance	99,624	100,715	40,150
General Purpose Funding	14,623,507	12,969,400	10,081,279
Law, Order, Public Safety	437,035	795,058	597,399
Health	38,907	45,000	36,897
Education and Welfare	1,233,363	1,238,616	2,203,330
Housing	44,286	48,431	33,537
Community Amenities	3,594,743	3,518,368	2,656,067
Recreation and Culture	722,188	1,155,092	565,774
Transport	1,470,920	1,482,094	1,061,150
Economic Services	1,528,375	1,833,756	934,185
Other Property and Services	78,198	69,000	108,321
TOTAL OPERATING REVENUE	23,871,146	23,255,530	18,318,090
 OPERATING EXPENSES			
Governance	1,117,579	1,443,703	832,978
General Purpose Funding	355,250	257,850	238,116
Law, Order, Public Safety	1,053,887	1,181,118	1,074,223
Health	374,072	361,960	436,018
Education and Welfare	1,355,718	1,378,259	1,413,584
Housing	90,123	94,569	76,820
Community Amenities	2,993,523	3,565,111	3,135,882
Recreation & Culture	3,670,891	4,190,943	3,564,797
Transport	4,275,839	4,912,766	4,669,090
Economic Services	1,842,571	2,117,344	1,996,232
Other Property and Services	209,416	75,095	79,020
TOTAL OPERATING EXPENSE	17,338,869	19,578,718	17,516,760
 CHANGE IN NET ASSETS RESULTING FROM OPERATIONS	 6,532,277	 3,676,812	 801,330

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

9. BALANCE SHEET

	June 2015 Actual \$	2013/14 Actual \$
CURRENT ASSETS		
Cash Assets	11,385,434	9,223,456
Receivables	2,510,498	2,097,184
Inventories	30,222	60,458
TOTAL CURRENT ASSETS	<u>13,926,154</u>	<u>11,381,098</u>
NON-CURRENT ASSETS		
Receivables	400,038	476,285
Inventories	0	25,045
Land	16,574,100	16,883,600
Property, Plant and Equipment	40,430,826	40,609,683
Infrastructure	50,171,869	47,714,085
TOTAL NON-CURRENT ASSETS	<u>107,576,833</u>	<u>105,708,698</u>
TOTAL ASSETS	<u>121,502,987</u>	<u>117,089,796</u>
CURRENT LIABILITIES		
Payables	1,570,267	2,258,079
Interest-bearing Liabilities	210,153	589,713
Provisions	855,439	741,848
TOTAL CURRENT LIABILITIES	<u>2,635,859</u>	<u>3,589,640</u>
NON-CURRENT LIABILITIES		
Interest-bearing Liabilities	2,301,760	3,498,001
Provisions	158,484	127,552
TOTAL NON-CURRENT LIABILITIES	<u>2,460,244</u>	<u>3,625,553</u>
TOTAL LIABILITIES	<u>5,096,103</u>	<u>7,215,193</u>
NET ASSETS	<u>116,406,884</u>	<u>109,874,603</u>
EQUITY		
Retained Surplus	80,768,876	75,533,694
Reserves - Cash Backed	6,145,276	4,848,177
Reserves - Asset Revaluation	29,492,732	29,492,732
TOTAL EQUITY	<u>116,406,884</u>	<u>109,874,603</u>

SHIRE OF NORTHAM
MINUTES
ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

SHIRE OF NORTHAM

NOTES TO AND FORMING PART OF THE STATEMENT OF FINANCIAL ACTIVITY

FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015

10. FINANCIAL RATIO

	2015 YTD	2014	2013	2012
Current Ratio	2.87	1.43	1.82	1.53

The above rates are calculated as follows:

Current Ratio equals
$$\frac{\text{Current assets minus restricted current assets}}{\text{Current liabilities minus liabilities associated with restricted assets}}$$

SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

**SHIRE OF NORTHAM
STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD 1 JULY 2014 TO 30 JUNE 2015**

	NOTE	June 2015 Actual \$	June 2015 Y-T-D Budget \$	Projected 2014/15 Budget \$	Variences Actuals to Budget \$	Variences Actual Budget to Y-T-D %	
<u>Operating</u>							
<u>Capital Revenue and (Expenditure)</u>							
Purchase Land Held for Resale	1	0	0	0	0	0.00%	
Purchase Land and Buildings	1	(373,133)	(632,620)	(632,620)	259,487	41.02%	Timing on Building works
Purchase Plant and Equipment	1	(426,796)	(825,980)	(825,980)	399,184	48.33%	Timing on Plant purchases
Purchase Furniture and Equipment	1	(22,587)	(28,300)	(28,300)	5,713	20.19%	Automatic Hand Dryers at Recreation Centre yet to be purchased
Purchase Bush Fire Equipment	1	0	(460,000)	(460,000)	460,000	100.00%	Timing unknown for supply by DFES
Purchase Playground Equipment	1	(35,871)	(375,778)	(375,778)	339,907	90.45%	Projects not complete
Purchase Infrastructure Assets - Roads	1	(2,198,211)	(2,454,404)	(2,454,404)	256,193	10.44%	Timing on budget allocations
Purchase Infrastructure Assets - Bridges	1	0	(108,000)	(108,000)	108,000	100.00%	Quotes obtained - project to be carried forward
Purchase Infrastructure Assets - Footpaths	1	(356,803)	(537,196)	(537,196)	180,393	33.58%	Works to be Carried Forward
Purchase Infrastructure Assets - Drainage	1	(1,238,328)	(2,798,124)	(2,798,124)	1,559,796	55.74%	Timing on budget allocations
Purchase Infrastructure Assets - Parks & Ovals	1	(193,746)	(530,634)	(530,634)	336,888	63.49%	Timing on budget allocations
Purchase Infrastructure Assets - Airfields	1	0	0	0	0	0.00%	
Purchase Infrastructure Assets - Streetscape	1	(136,482)	(248,566)	(248,566)	112,084	45.09%	Timing on budget allocations
Purchase Infrastructure Assets - Other	1	(122,430)	(418,593)	(418,593)	296,163	70.75%	Timing on budget allocations
Proceeds from Disposal of Assets	2	676,967	933,364	933,364	(256,397)	27.47%	Assets not disposed of
Repayment of Debentures	3	(1,578,755)	(1,578,755)	(1,578,755)	0	0.00%	
Proceeds from New Debentures	3	0	0	0	0	0.00%	
Advances to Community Groups		0	0	0	0	0.00%	
Self-Supporting Loan Principal Income	3	214,568	214,568	214,568	0	0.00%	
Transfers to Restricted Assets (Reserves)	4	(1,986,858)	(2,208,653)	(2,208,653)	221,795	10.04%	Property Sale didn't proceed River Dredging not undertaken, Not all works and plant purchases complete
Transfers from Restricted Asset (Reserves)	4	689,759	1,421,440	1,421,440	(731,681)	51.47%	
Transfers from Restricted Asset (Other)		0	0	0	0	0.00%	
ADD Net Current Assets July 1 B/Fwd	5	3,866,773	3,866,776	3,866,776	(3)	0.00%	
LESS Net Current Assets Year to Date	5	5,819,675	(41,287)	(41,287)	5,860,962	(14195.66%)	
Amount Raised from Rates	6	(8,243,809)	(8,200,234)	(8,200,234)	(43,575)	0.53%	

This statement is to be read in conjunction with the accompanying notes.

SHIRE OF NORTHAM

MINUTES

ORDINARY COUNCIL MEETING HELD ON 19 AUGUST 2015

BANK RECONCILIATION STATEMENT
Period Ending 30th June 2015

	Muni Fund Shire	Trust Fund Shire	Reserve A/c Shire	Unspent DRD DRAINAGE FUNDS Shire
Balance as per Bank Statements				
ANZ 2645-61899 \$ 66,993.92				
Business Bonus 028-0331279 \$3,399,671.59				
Muni Operating A/C 028-5350119 \$90,204.07				
WA TREASURY BANK \$606,398.72				
Term Deposit (Trust)T183 028-036059-9 \$26,716.15				
Term Deposit (Trust)T396 028-0387254 \$34,557.40				
ANZ Term Deposit (Trust) POS 9975-02546 \$338,929.02				
Term Deposit (Trust) Extractive Industry 028-695773-2 \$94,493.97				
Term Deposit (Trust)T376 & T440 028-0392516 \$81,742.29				
Term Deposit (Trust)T527 028-0386517 \$24,038.07				
Trust Operating A/C 028-5350143 \$373,879.24				
Term Deposit (Trust T701) 028-0397045 \$41,866.56				
Term Deposit (Trust T823) 028-0403591 \$30,004.00				
Term Deposit (Trust 825) 028-0403583 \$30,000.00				
Term Deposit (Trust754,755,756) 028-0399526			\$1,452,628.92	
Business Bonus(Reserve) 028-0364535			\$676,922.95	
Term Dep Term Deposit 028-0390108			\$2,011,168.70	
ANZ Term Deposit 997465749			\$2,039,416.32	
Term Deposit 028-0400828				
WATC OCDF 066-040 19300000				\$1,029,681.00
Total As Per Bank Statements	\$4,163,268.30	\$1,076,246.70	\$6,180,136.89	\$1,029,681.00
Plus				
Outstanding Deposits 29,946.98				
Outstanding Dep (Trust) -				
Outstanding Dep (Muni)				
	\$29,946.98	\$0.00	\$0.00	\$0.00
Less				
Unpresented Cheques (20,629.05)		(12,540.98)		
	(\$20,629.05)	(\$12,540.98)	\$0.00	\$0.00
Adjustments				
Transfer from Muni to Reserve (50,359.00)			50,359.00	
Transfer from Reserve to Muni 85,220.00			(85,220.00)	
Transfer of bank fee charges Unspent Grants				
Bank Statement Balance after Adjustments	\$4,207,447.23	\$1,063,705.72	\$6,145,275.89	\$1,029,681.00
General Ledger Accounts				
111000010 MUNI BANK 3,601,048.51				
1111800010 Trust Bank 1,063,705.72				
1111001010 Short Term Investment 606,398.72			0.00	
1111501010 Reserve Inv Bank			6,145,275.89	
1111002010 Unspent Grant				\$1,029,681.00
Balance Per General Ledger Accounts	\$4,207,447.23	\$1,063,705.72	\$6,145,275.89	\$1,029,681.00
IMBALANCE	\$0.00	\$0.00	\$0.00	\$0.00

Prepared by  POSITION : FINANCE OFFICER

Confirmed by  POSITION : ACCOUNTANT

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13.3.3 MAY STREET PRE PRIMARY - 8 BURGOYNE STREET, NORTHAM

Name of Applicant:	Department of Education
Name of Owner:	Shire of Northam
File Ref:	A10334/014209
Officer:	Cheryl Greenough / Denise Gobbart
Officer Interest:	Nil
Policy:	B7.11 Management of Council Property Leases
Voting:	Simple Majority
Date:	28 July 2015

PURPOSE

For Council to consider the viability of renewing the lease agreement for the May Street Pre Primary building leased by the Department of Education (the Department).

BACKGROUND

On 4 April 2005 the Department leased the building at 8 Burgoyne Street, on Reserve 40862 for a period of 5 years at a value of \$1,400 for the first year of the term to increase yearly with the CPI. On the 2 June 2010 the Department took up the option to renew for a further 5 years finalising on 3 April 2015. The building was built prior to 1951.

On 7 July 2011 the Department requested permission to place a transportable classroom on the kindergarten site however parking was an issue as there wasn't sufficient parking bays for 5 staff as well as drop-offs and pick-ups and at that stage the request was declined.

The Shire wrote to the Department on 12 November 2012 informing them that the building may require major upgrades to make the building compliant. When the lease becomes due the Shire will have the following options to consider:

1. To request the upgrades be undertaken by the Department;
2. To request the current building is replaced by the Department with a new or transportable building; or
3. The Shire may demolish the building and discontinue the lease.

The letter was a courtesy and at that time not considered urgent but provided advice for assistance with future planning and the potential need for growth within the town.

In May 2015 the Department contacted the shire with regard to renewing the lease for the building. These discussions culminated in the request for a building condition report

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to be undertaken. On 27 May 2015, Mr Nathan Gough the Shire's Building and Project supervisor, completed the condition report. The report states:

"The building is in poor condition. Construction is a timber sub frame, flooring, wall framing and roof frame with asbestos cladding and corrugated iron roof. Damp and dry rot have caused the stumps to subside and movement is seen in the levels of the walls and roof line. The gutters and down pipes are in poor condition.

The cost to repair the building is not viable as the asbestos cladding should be removed and replaced, the building re-levelled and the design of the building would need to be substantially altered to comply with current building standards."

After receipt of the Building Condition Report, the Department has expressed an interest in option 2 above, with the expectation that the Shire will demolish the old building at no cost to the Department and they will replace the old building with a new transportable building.

STATUTORY REQUIREMENTS

Section 3.58 Local Government Act 1995 Disposing of Property

- (1) *In this section —*
dispose includes to sell, lease, or otherwise dispose of, whether absolutely or not;
property includes the whole or any part of the interest of a local government in property, but does not include money.
- (5) *This section does not apply to —*
- (a) *a disposition of an interest in land under the Land Administration Act 1997 section 189 or 190; or*
 - (b) *a disposition of property in the course of carrying on a trading undertaking as defined in section 3.59; or*
 - (c) *anything that the local government provides to a particular person, for a fee or otherwise, in the performance of a function that it has under any written law; or*
 - (d) *any other disposition that is excluded by regulations from the application of this section.*

[Section 3.58 amended by No. 49 of 2004 s. 27; No. 17 of 2009 s. 10.]

Local Government (Functions & General) Regulation 30. Dispositions of property excluded from Act s. 3.58

- (1) *A disposition that is described in this regulation as an exempt disposition is excluded from the application of section 3.58 of the Act.*
- (2) *A disposition of land is an exempt disposition if —*

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- (a) *the land is disposed of to an owner of adjoining land (in this paragraph called the transferee) and —*
- (i) *its market value is less than \$5 000; and*
 - (ii) *the local government does not consider that ownership of the land would be of significant benefit to anyone other than the transferee; or*
- (b) *the land is disposed of to a body, whether incorporated or not —*
- (i) *the objects of which are of a charitable, benevolent, religious, cultural, educational, recreational, sporting or other like nature; and*
 - (ii) *the members of which are not entitled or permitted to receive any pecuniary profit from the body's transactions; or*
- (c) *the land is disposed of to —*
- (i) *the Crown in right of the State or the Commonwealth; or*
 - (ii) *a department, agency, or instrumentality of the Crown in right of the State or the Commonwealth; or*
 - (iii) *another local government or a regional local government; or*
- (d) *it is the leasing of land to an employee of the local government for use as the employee's residence; or*
- (e) *it is the leasing of land for a period of less than 2 years during all or any of which time the lease does not give the lessee the exclusive use of the land; or*
- (f) *it is the leasing of land to a person registered under the Health Practitioner Regulation National Law (Western Australia) in the medical profession to be used for carrying on his or her medical practice; or*
- (g) *it is the leasing of residential property to a person.*

CONFORMITY WITH THE STRATEGIC COMMUNITY PLAN / CORPORATE PLAN

OBJECTIVE C1: Create an environment that provides for a caring and healthy community.

STRATEGY C1.2: Advocate the provision of greater choice of educational services within the community.

BUDGET IMPLICATIONS

No provision has been made in the draft 2015/16 budget for the demolition of the May Street Pre Primary building. If the lease is to be renewed and the Department placing a new building on site, they are requesting that the Shire demolish the existing building and provide a clean site for the new building. A comparison can be made with the \$10,000 provision in the draft budget for the demolition of the old toilet block at the rear of the swimming pool.

The draft budget provides for revenue of \$3,535 for the lease of the building. This is based on a CPI increase from the prior year. The Shire policy for Commercial, Government or Government Agencies reflects that the Shire will receive no less than the *market valuation for any lease or licence of the Shire's property as determined by the Valuer General.*

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A quote for a valuation report to ascertain the annual lease fees will need to be obtained prior to any lease being entered into. The approximate cost for the valuation will be \$2,000

It is noted that the Shire Policy "B 7.11 Management of Council Property Leases" states the following;

4. Commercial, Government or Government Agencies Agreement:

- 4.1. *The Shire has an expectation that it will receive no less than market valuation for any lease or licence of the Shire's property as determined by the Valuer General, and*
- 4.2. *The Shire recognises that partnerships can be entered into for the benefit of the local community and acknowledges the adopted lease or licence rent will be determined on a case by case basis taking into consideration:*
 - Land contribution*
 - Building cost contribution*
 - State or Federal legislation*
 - Level of benefit to local community*

OFFICER'S COMMENT

Having given due consideration to all of the options provided, Shire staff feel that option 3 is preferred as the demolition of the building would provide greater scope for the future needs of the Killara Day and Cottage Respite Centre.

As the Pre Primary building is to the rear of Killara Day and Cottage Respite Centre it is considered to be a viable prospect and potentially the only prospect for extending the day and cottage respite centre to cater for the future needs of the aging population.

The Department are very keen to find a resolution that will provide local pre-primary students with new facilities and feel the placement of an early childhood transportable building on the May Street site (once the building is demolished) will provide a solution for all stakeholders. Should Council agree to demolish the old building to make way for a transportable, the Department will provide the building, including plumbing, electricity and landscaping while still maintaining the existing conditions of the lease.

The Department are aware of the parking issues and realise that this will need to be taken into account. They are also aware that this may be a short term solution while other options are investigated at a future time.

As circumstances have changed and numbers have dropped at the Northam Primary School, relocation of the Pre-Primary to the Primary School grounds may be an option for the Department to consider.

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Council have three options to consider:

1. That the Pre Primary re-locate to an existing education site;
2. If item 1 is not yet practical, a new lease will be commenced in accordance with the Council's Leasing Policy for a period of up to 5 years
3. Any costs for demolition or site costs will be at the Department of Education's expense and not the Shire's expense.

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2516

Moved: Cr Hughes

Seconded: Cr Rumjantsev

That Council, advise the Department of Education that;

- 1. It is preferred that the Burgoyne Street Pre Primary re-locate to an existing education site;**
- 2. If item 1 is not yet practical, a new lease will be commenced in accordance with the Council's Leasing Policy for a period of up to 5 years;**
- 3. Any costs for demolition or site costs will be at the Department of Education's expense and not the Shire's expense.**

CARRIED 9/0

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ATTACHMENT 1

BUILDING REPORT

May Street Pre Primary
8 Burgoyne Street
Northam

REPORT SUMMARY

REPORT DATE	BUILDING NAME	PREPARED BY
May 27, 2015	May Street Pre Primary Northam	Nathan Gough Building and Project Supervisor

BUILDING AGE

The building was built prior to 1951.

BUILDING CONDITION

The building is in poor condition.

Construction is a timber sub frame, flooring, wall framing and roof frame with asbestos cladding and corrugated iron roof.

Damp and dry rot have caused the stumps to subside and movement is seen in the levels of the walls and roof line.

The roof, gutters and down pipes are also in poor condition.

The cost to repair the building is not viable as the asbestos cladding should be removed and replaced, the building re-levelled and the design of the building would need to be substantially altered to comply with current building standards.

COMPLIANCE ISSUES

ASBESTOS

Most of the building's interior and exterior walls are constructed of asbestos. This does not ordinarily constitute a hazard to the health of the users of the building as the asbestos is painted. Care needs to be taken that it is not broken or disturbed in any way. An asbestos management plan needs to be available in the building.

ACCESSIBILITY

The building provides no accessible access or facilities to disabled persons.

HEALTH AND SAFETY

Exit door locks are non-compliant.

Fire extinguishers are not present.

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Emergency exit plan is not present.
Gas heater needs to be checked for certification or removed.

RECOMMENDATIONS

For the building to continue to be used as a preschool and for the health and safety of the users it would be required to:

1. Provide an asbestos management plan for the building.
2. Provide compliant exit door locks.
3. Provide fire extinguishers and signage.
4. Provide an emergency exit plan.
5. Install illuminated exit signs, discharge unit and log book.
6. Check gas heater for certification or remove.
7. It may be advisable to provide access for disabled persons especially if the building is to be continued to be used on a long term basis.

ATTACHMENT 2



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Cr J E Williams has declared an "Impartiality" interest in item 13.3.4 – Changes to Method of Valuation Used for Rating Purposes as her husband submitted 2 objections (2012 & 2015) against the proposal as an affected landowner.

13.3.4 CHANGES TO METHOD OF VALUATION USED FOR RATING PURPOSES

Name of Applicant:	Internal
Name of Owner:	Shire of Northam
File Ref:	8.1.1.1
Officer:	Domenico Bono & Denise Gobbart
Officer Interest:	N/A
Policy:	
Voting:	Simple Majority
Date:	26 June 2015

PURPOSE

This proposal is for Council to consider changing the valuation method for non-rural properties from the Unimproved (UV) valuation method to the Gross Rental Valuation (GRV) method of determining valuations for rating purposes. Under section 6.28 of the *Local Government Act 1995*, the Shire is required to review and make recommendations to the Minister for Local Government, as to the method of valuation to be used for rating purposes.

BACKGROUND

As a result of the growth and change in traditional land use within the Shire of Northam, Council resolved at the meeting held on the 18th August 2010 to review the method of valuation based on land predominantly used for non-rural purposes.

The purpose of this review was to identify properties that were predominantly non-rural in nature and then put forward the proposal to change the method of valuation.

Currently the rating mix for the Shire of Northam is 70.9% of properties are rated GRV and 29.1% rated as UV. If these changes are approved the rating mix will change to 87.3% GRV and 12.7% will remain as UV. Many of these properties currently rated as UV actually have a predominately non-rural use. This has caused an inequity in the rating, where some properties are paying proportionally higher rates than some rural residential properties.

Reviews conducted in 2012 and more recently since March 2015 have identified some 964 properties that are predominantly Non-Rural in nature. As part of the review small lifestyle and industrial lots currently valued as using the UV method were assessed and

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the majority are proposed to change to GRV, unless we ascertain the property is used predominately for rural purposes, that significant revenue is derived from these activities and the activities are allowed under the relevant Local Planning Scheme.

Land Use Declaration forms were sent out to all affected landowners with a covering letter explaining the process along with a copy of Section 6.28 of the Local Government Act and a two page Frequently Asked Questions sheet. Property owners were given 28 days to return the form, although forms were accepted after this time frame.

Of the 964 properties we were seeking to change, we received the following responses:

- a) 658 No Land Use Declaration was received.
- b) 229 Answered 'No' to the property being used for Rural Purposes
- c) 37 Answered 'Yes' to the property being used for Rural Purposes, 'No' to the property being used 'Predominately' for Rural Purposes
- d) 40 Answered 'Yes' to the property being used for Rural Purposes, 'Yes' to the property being used 'Predominately' for Rural Purposes

We have undertaken both desktop reviews and consultation with the affected landowners in determining which properties are being recommended to have the rating valuation method changed.

These properties are currently being rated using the UV method of valuation. It would be more appropriate for the use of the GRV method of valuation as these properties can no longer be considered as predominately for rural purposes in nature, see Section 6.28 of the Local Government Act 1995.

STATUTORY IMPACTS

Section 6.28 of the Local Government Act 1995

6.28 Basis of Rates

- (1) *The Minister is to –*
 - (a) *Determine the method of valuation of land to be used by a local government as the basis for a rate; and*
 - (b) *Publish a notice of the determination in the Government Gazette.*
- (2) *In determining the method of valuation of land to be used by a local government the Minister is to have regard to the general principle that the basis for a rate on any land is to be –*
 - (a) *Where the land is used predominantly for rural purposes, the unimproved value of the land; and*
 - (b) *Where the land is used predominantly for non-rural purposes, the gross rental value of the land.*
- (3) *The unimproved value or gross rental value, as the case requires, of rateable land in the district of a local government is to be recorded in the rate record of that local government.*

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Valuation of Land Act 1978

Unimproved Land Values (UV's)

A new UV is determined each year for all land within the State, and it comes into force on 30 June. UV is defined in the *Valuation of Land Act 1978*, and in some cases it is a statutory formula. As a broad guide the following applies:

- *Within a Townsite*
For land situated within a townsite the UV is the site value of the land. In general this means the value of the land as if it were vacant with no improvements except merged improvements. Merged improvements relate to improvements such as clearing, draining and filling.
- *Outside a Townsite – Rural*
The UV of land outside a townsite is valued as if it had no improvements. In this case the land is valued as though it remains in its original, natural state, although any land degradation is taken into account.

If the UV cannot reasonably be determined on this basis, it is calculated as a percentage of the value of the land as if it had been developed to a fair district standard but not including buildings. This percentage is prescribed (where it applies) by the VG from year to year and is currently 50%.

- *Exceptions*
There are certain exceptions to the above for which the *Valuation of Land Act 1978* provides a statutory formula for calculating the UV – such as a fixed rate per hectare or a multiple of the annual rent.

Exceptions include Mining Tenements, leases under the *Land Administration Act* (such as for grazing) Agreement Acts, and land held under the *Conservation and Land Management Act*.

- *Strata Titles*

Section 62(1) of the *Strata Titles Act* provides that for UV the Valuer General must value the whole of the land subject to a strata plan as a single parcel in single ownership. The rating and taxing authority is required to apportion the value in proportion to the unit entitlement, which is shown on the registered strata plan.

Section 62A(2) of the *Strata Titles Act* provides that each lot in a survey-strata scheme shall be valued as a separate parcel of land.

- *UV Valuation Methodology*

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Market based UV's are determined by reference to the land market at the date of valuation. All sales relevant to the predetermined date of valuation are investigated and where considered necessary, the parties interviewed.

Unsuitable sales, such as between related parties or those with special circumstances, are discarded. By this process, a fair and reasonable criteria is established for the fixing of values.

Gross Rental Values (GRV's)

GRV is defined in the *Valuation of Land Act 1978*, means the gross annual rental that the land might reasonably be expected to realise if let on a tenancy from year to year upon condition that the landlord were liable for all rates, taxes and other charges thereon and the insurance and other outgoings necessary to maintain the value of the land.

A GRV is determined on the basis that the rental **includes** outgoings such as rates and other property expenses.

As most commercial rentals are negotiated net of outgoings these need to be added to the net rental to equate to the statutory definition.

The introduction of the Goods and Services Tax (GST) has impacted on the determination of GRV. Where property rental payments are subject to GST, they represent a tax payable by the property owner and are included in the GRV.

Where an annual rental cannot reasonably be determined, the GRV becomes the assessed value. Assessed value is defined in the *Valuation of Land Act 1978* as a percentage applying to the capital value of land within a particular class.

Residential land for which no rental value can be determined is valued on the basis of 3% of its total capital value from 1 July 2011. Assessed value for land designated for other uses is assessed on the basis of 5% of its total capital value.

Land used for residential purposes only must be valued on the basis of rental value. Any other land with a relatively low rental value in comparison to its capital value may be valued as if it were vacant land.

- *GRV Valuation Methodology*

A database of rental evidence is assembled from information obtained from a variety of sources.

A schedule of properties rented at the date of valuation is prepared for the area to be valued.

The rented properties are inspected and the rents analysed (for example deductions for furniture included in the letting).

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Unsuitable lettings, such as those between related parties, are discarded so that the final list is acceptable as the basis for the determination of fair gross rentals as illustrated by actual market dealings.

From the analysis of actual rentals the fair gross rental of each property is established, after making allowances for any special features or detriments.

The GRV normally represents the annual equivalent of a fair weekly rental. For instance a GRV of \$15,600 represents a weekly rental of \$300.

CONFORMITY WITH THE STRATEGIC COMMUNITY PLAN / CORPORATE PLAN

OBJECTIVE G2: Improve organisational capability and capacity

STRATEGY G2.3: Operate/Manage organisation in a sustainable manner

ACTION: Review UV to GRV rating for rural residential properties under 5 hectares

Council has an obligation to provide a fair and equitable rating system.

FINANCIAL IMPLICATIONS

It is anticipated that the review of the rating system, will create a fair and equitable rating system for all rate payers. The rate in the dollar will be adjusted so that the Shire's total rate revenue will be similar to prior years (subject to % increase). However, the impact on individual assessments will vary greatly as some properties rates will increase whilst others will decrease.

Providing an indication of the likely impact that the change will have on the rate assessment of the affected property(s) is not possible as this cannot be determined without having revaluations done for all properties at a cost. Not only would this cost be an unreasonable extra burden on the Shire of Northam finances, Landgate does not have the resources to provide indicative valuations for the purpose of assessing implications.

The estimated cost provided from Landgate for the revaluation of the identified properties recommended to change to GRV is approximately \$54,000 for 1,000 properties, This would be partially offset by the reduced cost for Unimproved Values on the 1,000 properties estimated approximately \$20,000, providing a net cost of approximately \$34,000. This cost is over and above our annual costs for revaluations.

It is noted that the UV valuations are undertaken every year at a cost of approximately \$25,000, with the proposed lesser number of valuations to be undertaken annually this

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cost will be significantly reduced. GRV Valuations are undertaken every 5 years, which is due in 30 June 2016 at an estimated cost of \$72,000, this cost would increase with the additional proposed properties.

OFFICER'S COMMENT

The Local Government Operational Guidelines, "*Number 02 – March 2012 Changing Methods of Valuation of Land*" was used throughout this process.

2.1 Step 1 – Identifying Land Use Changes that may Affect Predominant Use

The properties identified in this process have been subdivided from farming land into smaller lots with a predominately residential or industrial use.

2.2 Step 2 – Reviewing Predominant Use

The majority of this process has been done using method (c) By Subdivision.

It is recommended that this method may be a suitable option where:

- The majority of lots within a subdivision are used for a purpose that is not consistent with the purpose for which the subdivision is valued; or
- Land within an approved subdivision can only be used for a purpose that is not consistent with the purpose for which the land is valued.

The following criteria were considered when assessing properties:

- a) The activity conducted on the land
- b) The development of the land
- c) Revenue derived from rural activities on the land
- d) Any applicable Local Planning Scheme restrictions
- e) Use of surrounding land

Zonings

Residential Zone

- *Provide for residential development at a range of densities with a variety of housing types to meet the needs of all sectors of the community through application of the Residential Design Codes.*
- *Maintain and enhance the residential character and amenity of the zone.*

Rural Residential Zone

- *To provide for the use of land for rural living purposes in a rural setting on lots generally ranging in size from 1 to 4 hectares whilst preserving the amenity of such areas, ensuring landscape protection and conservation and controlling land use impacts.*
- *To reduce or eliminate the detrimental effect of keeping livestock in the zone by limiting stock numbers to those kept for hobby purposes and not for commercial gain.*

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Rural Smallholding Zone

- *To provide for the use of land for rural living purposes in a rural setting on lots generally ranging in size from 4 to 40 hectares while preserving the amenity of such areas, ensuring landscape protection and conservation and controlling land use impacts.*
- *Support a range of rural pursuits which are compatible with the capability of the land and retain the rural character and amenity of the locality.*
- *Support a range of low impact commercial and tourist uses that are compatible with and retain the rural character and amenity of the locality.*

General Industry Zone

- *Provide land for industrial, manufacturing, freight-related and storage activities which by reason of its emissions and bulk require adequate separation from residential and other sensitive land uses.*
- *Encourage and facilitate employment-generating development which will contribute to the economic and social well-being of the Shire.*
- *Discourage non-industry related uses within industrial areas that may constrain industrial activities.*
- *Encourage new industry to contain its emissions on-site and, if that is not possible, within the zone having due regard to nearby established premises.*

Light & Service Industry Zone

- *Provide for a range of light and service industries, wholesale sales, warehouses, showrooms, trade and services which, by reason of their scale, character and operational or land requirements, are not generally appropriate in or cannot conveniently or economically be accommodated in the commercial or mixed use zones.*
- *Provide for light and service industrial activities and associated uses that are compatible and acceptable in close proximity to rivers and residential areas.*

Special Use Zone

- *Provide for special categories of land use which are not fully compatible with other zones in the Scheme.*

Desktop Assessment

The number of developments listed for each property on the spreadsheet was determined by viewing both aerial maps of properties and building application details contained in our electronic records system. Our aerial maps are as at November 2014 to January 2015, some properties have applications in the system that cannot be confirmed as built by aerial viewing. Whilst care has been taken to report as accurately as possible, it is neither practical nor equitable to do site visits to every property to confirm the number of buildings on a lot.

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Map 1 Irishtown D1446

The lots on Diagram 1446 Frenches Road Irishtown are small town lots ranging in size from 0.2ha to 0.6ha the lots are zoned Rural.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 4 properties recommended for this change in valuation method are included in Appendix 1.

Map 2 Olive D19441

Lot 2 Olive Road on Diagram D19441 is 0.5362ha and zoned Rural Residential and is predominately residential in nature.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 3 Hawke D078014

Lot 30 Hawke Avenue on Diagram D78014 is 1.8659ha and zoned Rural Residential and is predominately residential in nature.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 4 Jennapullin D24418

This lot is the Telstra Telephone Exchange. It is 0.944ha and is zoned Rural. It is a small building to housing the telephone exchange.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 5 Great Eastern Highway D25486

This property is a single lot on Diagram 25486. It is situated on Great Eastern Highway Wundowie. It is a hobby farm of 1.6187ha and is zoned Rural.

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As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 6 Great Eastern Highway D31782

This property is a single lot on Diagram 31782. It is situated on Great Eastern Highway. It is the site of the Telstra Microwave Tower facilities on the outskirts of the Northam Town site. It is a 0.3716ha and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 7 Linley Valley D32575

This is a small subdivision on Diagram 32575. It is situated on Linley Valley Road Wooroloo. It is adjacent to the Wooroloo abattoir. The lots range in size between 0.3387ha and 1.1660ha and zoned Rural.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 4 properties recommended for this change in valuation method are included in Appendix 1.

Map 8 Decastilla Road D44726

This property is a single lot on Diagram 44726. It is situated on Decastilla Road. It is a hobby farm of 1.9333ha which is zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 9 Northam Race Club D46404

This property is a single lot on Diagram 46404. It is the Northam Race Club at 175 Yilgarn Avenue. It is a 69.089ha site which is zoned Recreation.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

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Map 10 Berry Brow Road D47758

This property is a single lot on Diagram 47758. It is situated on Berry Brow Road Bakers Hill. It is a hobby farm of 1.9983ha which is zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 11 - Irishtown D3684

This property is a single lot on Diagram 3684. It is situated on Haddrill Road Irishtown. It is a lot 0.4047ha which is zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 12 Jose Road D50765

This property is a single lot on Diagram 50765. It is situated on Jose Road. It is a Hobby Farm of 1.6622ha which is zoned rural residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 13 Gooch & Leeder D223203

This is a subdivision on Diagram 223203. It is situated around Gooch & Leeder Roads. The blocks sizes range between 2.7789ha and 6.9297ha and are hobby farms. They are predominately zoned Rural Small Holdings.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 29 properties recommended for this change in valuation method are included in Appendix 1.

Map 14 Carter Street P52931

This property is a single lot on Plan 52931. It is situated on Carter Street. It is a hobby farm of 3.2646ha and zoned Rural Residential.

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As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 15 Tighe P55504

This is a 2 lot subdivision on Plan 55504. It is situated on Tighe Road. The blocks are 2.9434ha and 5.4385ha. They are hobby farms and zoned Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 16 Moondyne Road D55717

This is a subdivision on Diagram 55717. It is situated on Moondyne Road. The blocks sizes are between 3.8410ha and 5.4385ha. They are hobby farms and zoned Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 4 properties recommended for this change in valuation method are included in Appendix 1.

Map 17 Brockman Street D55785

This is a subdivision on Diagram 55785. It is situated on Brockman Street. The block sizes are between 0.3864ha and 2.3281ha. They are town lots within the Bakers Hill town site and zoned Residential R10.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 6 properties recommended for this change in valuation method are included in Appendix 1.

Map 18 Chitty Road D56026

This property is a single lot on Diagram D56026. It is situated on Chitty Road. It is a hobby farm of 2.0014ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of

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this property recommended for this change in valuation method are included in Appendix 1.

Map 19 Kimberley Road D61773

This property is a single lot on Diagram 61773. It is situated on Kimberley Road. It is a hobby farm of 4.0590ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 20 Gooch Road D65213

This property is a single lot on Diagram 65213. It is situated on Gooch Road. It is a hobby farm of 4.2505ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 21 Muluckine Road D65750

This property is a single lot on Diagram 65750. It is situated on Muluckine Road. It is a town lot of 0.2024ha and zoned Residential R10.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 22 Olive Road D65836

This property is a single lot on Diagram 65836. It is situated on Olive Road. It is a hobby farm of 3.3120ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

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Map 23 Olive Road D67403

This is a 2 lot subdivision on Diagram 67403. It is situated on Olive Road. The block sizes are 0.2.6382ha and 3.3558ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 24 Tames Road D68750

This is a 2 lot subdivision on Diagram 68750. It is situated on Tame Road. The block sizes are 0.9324ha and 3.6683ha and zoned Residential R10.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 25 Great Eastern Highway D69989

This property is a single lot on Diagram 69989. It is situated on Great Eastern Highway. It is a hobby farm of 1.4226ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 26 Hawke Avenue D72213

This is a 2 lot subdivision on Diagram 72213. It is situated on Hawke Avenue. The block sizes are 2.1572ha and 2.1578ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 27 – Bridgeman D76037

This is a 2 lot subdivision on Diagram 76037. It is situated on Bridgeman Road. The block sizes are 2.0252ha and 2.3296ha and zoned Rural Residential.

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As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 28 – Removed

Map 29 Kimberley Road D78172

This is a 2 lot subdivision on Diagram 78712. It is situated on Kimberley Road. The block sizes are 0.4000ha and 0.4591ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 30 Tait Close D78300

This is a subdivision on Diagram 78300. It is situated on Tait Close. The block sizes range between 0.2846ha and 0.4512ha. They are town lots and zoned Residential R10.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 5 properties recommended for this change in valuation method are included in Appendix 1.

Map 31 Hawke Avenue D79798

This is a 2 lot subdivision on Diagram 79798. It is situated on Hawke Avenue. The block sizes are 0.8101ha and 3.1565ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 32 Railway Road D80047

This property is a single lot on Diagram 80047. It is situated on Railway Road. It is a hobby farm of 1.9929ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

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Map 33 Railway Road D80048

This property is a single lot on Diagram 80048. It is situated on Railway Road. It is a hobby farm of 1.9794ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 34 Spencers Brook Road D83001

This is a 2 lot subdivision on Diagram 83001. It is situated on Spencers Brook Road. The blocks are 34.4621ha and 92.3097ha. They are holiday camps and farm stay accommodation and zoned Special Use.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 35 Olive Road D83643

This property is a single lot on Diagram 83643. It is situated on Olive Road. It is a hobby farm of 4.0476ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 36 Burma Road D83790

This property is a single lot on Diagram 83790. It is situated on Burma Road. It is a Go Kart Track with an area of 3.2442ha and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 37 Surrey Road D85567

This property is a single lot on Diagram 85567. It is situated on Surrey Road. It is a town lot with an area of 0.3470ha and zoned Rural Residential.

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As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 1.

Map 38 Irishtown D85627

This is a 2 lot subdivision on Diagram 85627. It is situated in the Irishtown district. It comprises the community hall with an area of 0.4047ha and a hobby farm of 1.8735ha and zoned Rural.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 39 Surrey Road D86513

This is a 2 lot subdivision on Diagram 86513. It is situated on Surrey Road. The block sizes are 2.2508ha and 2.5154ha. They are hobby farms and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 1.

Map 40 Carlin Road D87719

This is a subdivision on Diagram 87719. It is situated on Carlin Road. The block sizes range between 1.0ha and 2.1452ha. They are hobby farms and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 7 properties recommended for this change in valuation method are included in Appendix 1.

Map 41 Spencers Brook Road D87974

This property is a single lot on Diagram 87974. It is situated on Spencers Brook Road. It is a hobby farm with an area of 1.4253 and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of

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this property recommended for this change in valuation method are included in Appendix 2.

Map 42 O'Driscoll Street D881113

This is a subdivision on Diagram 881113. It is situated on O'Driscoll Street. The blocks are all 0.405ha. They are town lots and zoned Residential R10.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 5 properties recommended for this change in valuation method are included in Appendix 2.

Map 43 Railway Road D89004

This is a 2 lot subdivision on Diagram 89004. It is situated on Railway Road. The block sizes 0.6794ha and 1.4453ha. They are hobby farms and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 5 properties recommended for this change in valuation method are included in Appendix 2.

Map 44 Kimberley Road D89544

This is a 2 lot subdivision on Diagram 89544. It is situated on Kimberley Road. The block sizes are 3.0880ha and 5.0299ha. They are hobby farms and zoned Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 2.

Map 45 Valencia Lane D93504

This property is a single lot on Diagram 93504. It is situated on Valencia Lane. It is a hobby farm with an area of 3.035ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 2.

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Map 46 Muluckine Road D95647

This property is a single lot on Diagram 95647. It is situated on Muluckine Road. It is a town lot within the town site and has an area of 0.2024ha and zoned Residential R10.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 2.

Map 47 Biasin Road D95734

This property is a single lot on Diagram 95734. It is situated on Biasin Road. It is a hobby farm with an area of 1.1643ha and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 2.

Map 48 Almond Avenue D98402

This is a subdivision on Diagram 98402. It is situated on Almond Avenue. The block sizes range between 1.05ha and 1.5700ha. They are hobby farms and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 5 properties recommended for this change in valuation method are included in Appendix 2.

Map 49 Almond Avenue & Jose Road D98403

This is a subdivision on Diagram 98403. It is situated in the area Almond Avenue & Jose Road. The block sizes range between 1.0300ha and 2.3292ha. They are hobby farms and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 7 properties recommended for this change in valuation method are included in Appendix 2.

Map 50 Great Eastern Highway D98446

This property is a single lot on Diagram 98446. It is situated on Great Eastern Highway. It is a hobby farm with an area of 2.0482ha and zoned Rural Residential.

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As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 2.

Map 51 Citron Avenue D100905

This property is a single lot on Diagram 100905. It is situated on Citron Avenue. It is a town lot with an area of 0.2023ha and zoned Residential R10.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 2.

Map 52 Spencers Brook P54

This is a subdivision on Plan 54. It is situated in the Spencers Brook area. The block sizes range between 0.1821ha and 0.4856ha. They are town lots and zoned Residential R10.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 30 properties recommended for this change in valuation method are included in Appendix 2.

Map 53 Seabrook Brook P1031

This is a subdivision on Plan 1031. It is situated on Northam Cranbrook Road. The block sizes range between 0.1000ha and 0.1012ha. They are town lots and zoned Residential R10.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 9 properties recommended for this change in valuation method are included in Appendix 2.

Map 54 Muluckine Road P1046

This property is a single lot on Plan 1046. It is situated on Northam Cranbrook Road. It is a hobby farm and has an area of 3.5562ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of

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this property recommended for this change in valuation method are included in Appendix 2.

Map 55 Muluckine P1087

This is a subdivision on Plan 1087. It is situated on Northam-Cranbrook Road. The block sizes range from 3.2657ha to 4.2000ha. They are hobby farms and zoned Rural Small Holdings.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 4 properties recommended for this change in valuation method are included in Appendix 2.

Map 56 Seabrook-Muluckine P1403

This is a subdivision on Plan 1403. It is the Seabrook Village town site and it is on Muluckine Road. The lot sizes range from 0.1012ha to 5.200ha. They are zoned Residential R10, with the one exception being Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 48 properties recommended for this change in valuation method are included in Appendix 2.

Map 57 Seabrook - Muluckine P1965

This is a subdivision on Plan 1965. It is an extension Seabrook Village Town site and it is on the Muluckine Road. The lots range between 0.0642ha and 0.1386ha and zoned Residential R10.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 7 properties recommended for this change in valuation method are included in Appendix 2.

Map 58 Vineyard Road P4744

This is a 2 lot subdivision on Plan 4744. It is on Vineyard Road. The blocks are 0.3533ha and 1.7503ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 2.

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Map 59 Brown & Olive Road P12671

This is a subdivision on Plan P12671. The properties are on Brown Road & Olive Road. The blocks range in size from 0.2000ha to 2.5347ha. They are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 6 properties recommended for this change in valuation method are included in Appendix 2.

Map 60 Sims Road P59523

This is a subdivision on Plan P59523. The properties are on Sims Road. The blocks range in size from 2.303ha to 3.967ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 5 properties recommended for this change in valuation method are included in Appendix 2.

Map 61 Mairinger Way P12717

This is a subdivision on Plan P12717. The properties are on Mairinger Way. The blocks range in size from 1.9815ha to 3.4022ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 10 properties recommended for this change in valuation method are included in Appendix 2.

Map 62 Mairinger Way P12718

This is a subdivision on Plan P12718. The properties are on Mairinger Way. The blocks range in size from 1.9221ha to 2.6482ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 9 properties recommended for this change in valuation method are included in Appendix 2.

Map 63 Mairinger Way P12719

This is a subdivision on Plan P12719. The properties are on Mairinger Way. The blocks range in size from 2.0044ha to 2.8396ha and zoned Rural Residential.

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As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 11 properties recommended for this change in valuation method are included in Appendix 2.

Map 64 Benrua & Kimberley P13084

This is a subdivision on Plan P13084. The properties are on Benrua Road and Kimberley Road. The blocks range in size from 2.8591ha to 5.5696ha and zoned Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 15 properties recommended for this change in valuation method are included in Appendix 2.

Map 65 Boondine, Leeder & Avro Anson P14704

This is a subdivision on Plan P14704. The properties are located on Boondine Road, Leeder Road and Avro Anson Road. The blocks range in size from 3.2729ha to 6.7429ha and zoned Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 17 properties recommended for this change in valuation method are included in Appendix 2.

Map 66 Harvey & Leeder P14705

This is a subdivision on Plan P14705. The properties are located on Harvey Road, and Leeder Road. The blocks range in size from 3.331ha to 7.729ha zoned Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 9 properties recommended for this change in valuation method are included in Appendix 2.

Map 67 Leeder & Moondyne P14854

This is a subdivision on Plan P14854. The properties are located on Leeder Road, and Harvey Road. The blocks range in size from 2.0000ha to 4.1798ha and zoned Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of

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these 11 properties recommended for this change in valuation method are included in Appendix 2.

Map 68 Bodeguero Way P15151

This is a subdivision on Plan P15151. The properties are located on Bodeguero Way. The blocks range in size from 2.0000ha to 3.2290ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 48 properties recommended for this change in valuation method are included in Appendix 2.

Map 69 Benruea & Raymond P16416

This is a subdivision on Plan P16416. The properties are located on Benruea Road & Raymond Court. The blocks range in size from 2.0000ha to 2.1662ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 14 properties recommended for this change in valuation method are included in Appendix 2.

Map 70 Searle & Paynter Drive P16758

This is a subdivision on Plan P16758. The properties are located on Searle Drive & Paynter Drive. The blocks range in size from 4.00ha to 8.9728ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 15 properties recommended for this change in valuation method are included in Appendix 3.

Map 71 Hyde Drive & Dawson Road P17522

This is a subdivision on Plan P17522. The properties are located on Hyde Drive & Dawson Road. The blocks range in size from 1.1187ha to 2.2314ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 29 properties recommended for this change in valuation method are included in Appendix 3.

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Map 72 Tamma Road P19012

This is a subdivision on Plan P19012. The properties are located on Tamma Road. The blocks range in size from 1.1000ha to 2.4315ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 9 properties recommended for this change in valuation method are included in Appendix 3.

Map 73 Carlin & Tamma Road P19013

This is a subdivision on Plan P19013. The properties are located on Carlin Road and Tamma Road. The blocks range in size from 1.0297ha to 5.00ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 27 properties recommended for this change in valuation method are included in Appendix 3.

Map 74 Accedens Rise P19529

This is a subdivision on Plan P19529. The properties are located on Accedens Rise blocks range in size from 1.1500ha to 4.3000ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 18 properties recommended for this change in valuation method are included in Appendix 3.

Map 75 Carlin Road P20276

This is a subdivision on Plan P20276. The properties are located on Carlin Road. The blocks range in size from 1.00ha to 2.2586ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 22 properties recommended for this change in valuation method are included in Appendix 3.

Map 76 Redcourte, O'Driscoll, Berry Brow & Tamma Road P21243

This is a subdivision on Plan P21243. The properties are located on Redcourte Road, O'Driscoll Street, Berry Brow Rise and Tamma Road. The blocks range in size from 1.0087ha to 5.9111ha and are zoned Rural Residential.

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As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 28 properties recommended for this change in valuation method are included in Appendix 3.

Map 77 Tamma Road P21543

This is a subdivision on Plan P21543. The properties are located on Tamma Road. The blocks range in size from 1.1703ha to 3.0663ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 10 properties recommended for this change in valuation method are included in Appendix 3.

Map 78 Jose Road & Tamarillo Court P41146

This is a 2 lot subdivision on Plan P41146. The properties are located on Jose Road and Tamarillo Court. The blocks sizes are 2.0411ha and 3.7221ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 3.

Map 79 Almond Avenue P23674

This is a subdivision on Plan P23674. The properties are located on Almond Avenue. The blocks range in size from 1.0104ha to 3.6061ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 14 properties recommended for this change in valuation method are included in Appendix 3.

Map 80 Leeming P25370

This is a subdivision on Plan P25370. The properties are located on Leeming Road. The blocks range in size from 0.5050ha to 6.9737ha and are zoned General Industry.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 6 properties recommended for this change in valuation method are included in Appendix 3.

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Map 81 Great Eastern Highway P27560

This is a subdivision on Plan P27560. The properties are located on Great Eastern Highway. The blocks range in size from 3.7613ha to 4.1616ha and are zoned Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 3 properties recommended for this change in valuation method are included in Appendix 3.

Map 82 Vanzetti Street P34941

This property is a single lot on Plan 34941. It is situated on Vanzetti Street. It is a town block within the Seabrook town site and has an area of 0.2023ha and zoned Residential R10.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 3.

Map 83 Almond & Jose Road DP36364

This is a subdivision on Plan P36364. The properties are located on Almond Avenue and Jose Road. The blocks range in size from 1.03ha to 4.00ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 24 properties recommended for this change in valuation method are included in Appendix 3.

Map 84 Leeming Road P38565

This property is a single lot on Plan 38565. The property is located on Leeming Road. The block has an area of 1.7097ha and zoned General Industry.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 3.

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Map 85 Jose Road & Greengage Place P39591

This is a subdivision on Plan P369591. The properties are located on Jose Road and Greengage Place. The blocks range in size from about 1.02ha up to about 2.6106ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 33 properties recommended for this change in valuation method are included in Appendix 3.

Map 86 Bridgeman Road P222054

This is a subdivision on Plan P222054. The properties are located on Bridgeman Road. The blocks range in size from 2.0195ha to 3.9269ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 7 properties recommended for this change in valuation method are included in Appendix 3.

Map 87 Northam Toodyay P43546

This property is a single lot on Plan 46546. The property is located on the Northam Toodyay Road. The block has an area of 14.148ha. It is an industrial facility used to process Hay and Straw and zoned General Industry.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 3.

Map 88 Olive, Brown & Vineyard P43854

This is a subdivision on Plan P43854. The properties are located on Olive Road, Brown Road and Vineyard Road. The blocks range in size from 1.9648ha to 2.0125ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 3 properties recommended for this change in valuation method are included in Appendix 3.

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Map 89 Hyde Drive P17523

This is a subdivision on Plan P17523. The properties are located on Hyde Drive. The blocks range in size from 1.1262ha to 2.9045ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 29 properties recommended for this change in valuation method are included in Appendix 3.

Map 90 Great Eastern Highway P49626

This property is a single lot on Plan 49626. The property is located on the Great Eastern Highway. The block has an area of 3.2738ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 3.

Map 91 Augustini P247100

This property is a single lot on Plan 247100. The property is located on the Augustini Road. The block has an area of 3.0350ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 92 Hyde Drive P67685

This property is a single lot on Plan 67685. The property is located on Hyde Drive. The block has an area of 2.2314ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 93 Moondyne Road P52376

This property is a single lot on Plan 52376. The property is located on Moondyne Road. The block has an area of 2.0504ha and zoned Rural Small Holding.

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As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 94 Koojedda & Jose Road P53481

This is a subdivision on Plan P53481. The properties are located on Koojedda & Jose Roads. The blocks range in size from 1.00ha to 1.3735ha and zoned Rural.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 3 properties recommended for this change in valuation method are included in Appendix 4.

Map 95 Decastilla Road D55201

This property is a single lot on Plan 52501. The property is located on Decastilla Road. The block has an area of 4.743ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 96 Great Eastern Highway P55202

This property is a single lot on Plan 55202. The property is located on Great Eastern Highway. The block has an area of 5.9175ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 97 Great Eastern Highway P52203

This property is a single lot on Plan 52203. The property is located on Great Eastern Highway. The block has an area of 3.7217ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

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Map 98 Great Eastern Highway P55204

This property is 3 lots on Plan 55204. The property is located on Great Eastern Highway. The lot sizes range from 3.8293 to 4.1665ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 99 Great Eastern Highway P57588

This property is a single lot on Plan 57588. The property is located on Great Eastern Highway. The property has Short Stay Chalet Accommodation. The block has an area of 8.0258ha and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 100 Great Eastern Highway P58742

This property is a single lot on Plan 58742. The property is located on Great Eastern Highway. The block has an area of 2.0066ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 101 Acacia Retreat P59510

This is a subdivision on Plan 59510. The properties are located on Acacia Retreat. The blocks range in size from 2.0001ha to 3.0373ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 20 properties recommended for this change in valuation method are included in Appendix 4.

Map 102 Heather Glade P60244

This is a subdivision on Plan 60244. The properties are located in Heather Glade. The blocks sizes range from 1.1292ha to 1.1442ha and zoned Rural Residential.

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As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 6 properties recommended for this change in valuation method are included in Appendix 4.

Map 103 Leeming & Spionkop Road P60952

This is a subdivision on Plan 60952. The properties are located on Leeming Road and Spionkop Roads. The blocks range in size from 0.5505ha to 4.2048ha and zoned General Industry.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 10 properties recommended for this change in valuation method are included in Appendix 4.

Map 104 Spionkop Road P61668

This property is a single lot on Plan 61668. The property is located on Spionkop Road. The block has an area of 2.6844ha and zoned General Industry.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 105 Gaden & Doys Road P65642

This is a subdivision on Plan 65642. The properties are located on Gaden Road, and Doys Road. The blocks range in size from 2.0ha to 2.9437ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 4 properties recommended for this change in valuation method are included in Appendix 4.

Map 106 Great Eastern Highway, Augustini, Refractory & Rail P222051

This is a subdivision on Plan 22051. The properties are located on Great Eastern Highway, Augustini Road, Refractory Road and Rail Close. The blocks range in size from 0.7380ha to 6.0828ha and are a mixed zoning of Rural Residential, Rural Small Holding and Rural.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of

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these 35 properties recommended for this change in valuation method are included in Appendix 4.

Map 107 Great Eastern Highway P255361

This property is a single lot on Plan 255361. The property is located in Great Eastern Highway. The block has an area of 0.7421ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 108 Great Eastern Highway P86031

This is a 2 lot subdivision on Plan 86031. The properties are located on Great Eastern Highway. The block sizes are 1.4435ha and 2.4358ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 4.

Map 109 Fernie/Sims Road P53470

This is a subdivision on Plan 53470. The properties are located on Fernie Road, Sims Road and Magnolia Close. The blocks range in size from 2.0007ha to 5.3481ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 13 properties recommended for this change in valuation method are included in Appendix 4.

Map 110 Great Eastern Highway P106372

This property is a single lot on Plan 106372. The property is located in Great Eastern Highway. The block has an area of 3.7904ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

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Map 111 Lawrence Road P109303

This property is a single lot on Plan 109303. The property is located in Lawrence Road. The block has an area of 6.8892ha and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 112 Brushtail, Woylie & Gumtree D62028

This is a subdivision on Diagram 62028. The properties are located on Brushtail Brow, Woylie Rise and Gumtree Road. The blocks range in size from 1.2428ha to 3.2624ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 20 properties recommended for this change in valuation method are included in Appendix 4.

Map 113 Foundry & Coates P142311

This is a subdivision on Plan 142311. The properties are located on Foundry Road and Coates Road. The blocks range in size from 2.17ha to 2.833ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 3 properties recommended for this change in valuation method are included in Appendix 4.

Map 114 Foundry Road P150531

This is a subdivision on Plan 150531. The properties are located on Foundry Road. The blocks range in size from 2.0234ha to 2.5692ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 3 properties recommended for this change in valuation method are included in Appendix 4.

Map 115 Valencia D150598

This property is a single lot on Diagram 150598. The property is located in Valencia Lane. The block has an area of 1.2841ha and zoned Rural Small Holding.

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As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 116 Great Eastern Highway P158744

This is a subdivision on Plan 158744. The properties are located on Great Eastern highway. The blocks range in size from 1.0891ha to 2.0234ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 6 properties recommended for this change in valuation method are included in Appendix 4.

Map 117 Great Eastern Highway D163501

This property is a single lot on Diagram 163501. The property is located in Great Eastern Highway. The block has an area of 1.6662ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 118 Railway Road P164484

This is a 2 lot subdivision on Plan 164484. The properties are located on Railway Road. The blocks sizes are 1.1277ha and 1.1552ha and are zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 4.

Map 119 Carter Road P188403

This property is a single lot on Plan 188403. The property is located in Carter Road. The block has an area of 0.1323ha and zoned Residential R10.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

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Map 120 Decastilla Road P251280

This property is a single lot on Plan 251280. The property is located in Decastilla Road. The block has an area of 3.4031ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 4.

Map 121 Dyer, Kimberley & Surrey Road P204742

This is a subdivision on Plan 204742. The properties are located on Dyer Road, Kimberley Road and Surrey Road. The blocks range in size from 1.3178ha to 3.0290ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 10 properties recommended for this change in valuation method are included in Appendix 5.

Map 122 Retort P206901

This property is a single lot on Plan 206901. The property is located in Retort Close. The block has an area of 1.0216ha and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

Map 123 Thomas Street P217820

This property is a single lot on Plan 217820. The property is located in Thomas Street. The block has an area of 0.1397ha and zoned Residential R10.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

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Map 124 Glenmore Estate P55322

This is a subdivision on Plan 55322. The properties are located on Glenmore Drive and Gleeson Hill Road. The blocks range in size from about 2.0159ha up to about 5.2688ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 64 properties recommended for this change in valuation method are included in Appendix 5.

Map 125 Redcourte, O'Driscoll & View Street P44700

This is a subdivision on Plan 44700. The properties are located on Redcourte Road, O'Driscoll Street and View Street. The blocks range in size from 1.0011ha to 2.103ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 24 properties recommended for this change in valuation method are included in Appendix 5.

Map 126 Great Eastern Highway D9554

This property is a single lot on Diagram 9554. The property is located on Great Eastern Highway. The block has an area of 1.9121ha and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

Map 127 - Removed

Map 128 N G Development- Carlin P72721

This is a subdivision on Plan 72721. The properties are located on Carlin Road. The blocks range in size from 1.0071ha to 1.5504ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 19 properties recommended for this change in valuation method are included in Appendix 5.

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Map 129 Great Eastern Highway P222252

This is a subdivision on Plan 222252. The properties are located on Great Eastern Highway, Kimberley Road and Dyer Road. The blocks range in size from 0.2023ha to 4.0494ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 5 properties recommended for this change in valuation method are included in Appendix 5.

Map 130 Great Eastern Highway P302065

This property is a single lot on Plan 302065. The property is located on Great Eastern Highway. The block has an area of 2.4725ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

Map 131 Great Eastern Highway D201928

This is a 2 lot subdivision on Diagram 201928. The properties are located on Great Eastern Highway. The lot sizes 1.9931 and 2.0157ha and zoned Rural.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 5.

Map 132 Benruea D60108

This property is a single lot on Diagram 60108. The property is located on Benruea Road. The block has an area of 2.8509ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

Map 133 Doys Road P202075

This property is a single lot on Plan 202075. The property is located on Doys Road. The block has an area of 3.1786ha and zoned Rural.

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As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

Map 134 Hawke D22520

This property is a single lot on Diagram 22520. The property is located on Hawke Avenue. The block has an area of 2.8562ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

Map 135 Koojedda P142771

This property is a single lot on Plan 142771. The property is located on Koojedda Road. The block has an area of 5.4420ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

Map 136 Linley Valley D30020

This property is a single lot on Diagram 30020. The property is located on the Linley Valley Road. The block has an area of 1.2141ha and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

Map 137 Martin D35784

This property is a single lot on Diagram 35784. The property is located on Martin Street. The block has an area of 4.0430ha and zoned Rural.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

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Map 138 Olive Road D67012

This property is a single lot on Diagram 67012. The property is located on Olive Road. The block has an area of 2.00ha and zoned Rural Residential.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

Map 139 Olive D86342

This is a 2 lot subdivision on Diagram 863428. The properties are located on Olive Road. The blocks sizes are 3.0052ha and 3.5754ha and zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 5.

Map 140 Refractory Road P070147

This is a 2 lot subdivision on Plan 070147. The properties are located on Refractory and Hoggarth Roads. The blocks are 6.0828ha and zoned Rural Small Holding.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 5.

Map 141 Mauravillo Estate P402934

Mauravillo Estate is a new lifestyle housing subdivision containing 167 Lots. Plan 402934 is stage one of the subdivision and comprises of 63 Lots ranging in size from around 1.0023ha to 5.5396ha and is zoned Rural Residential.

As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 63 properties recommended for this change in valuation method are included in Appendix 5.

Map 142 Koojedda P052953

This is a 2 lot subdivision on Plan 052953. The properties are located on Koojedda Road. The blocks are 2.0137ha and 2.3374ha and zoned Rural Small Holding.

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As these properties have a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of these 2 properties recommended for this change in valuation method are included in Appendix 5.

Map 143 Valencia P058826

This property is a single lot on Plan 058826. The property is located on Valencia Lane. The block has an area of 2.0277ha and zoned Rural Small Holding.

As this property has a predominately non-rural usage we recommend the overall valuation method be changed from Unimproved Value to Gross Rental Value. Details of this property recommended for this change in valuation method are included in Appendix 5.

It is recommended that the Council resolve to seek Ministerial approval for the basis of rating for the various land areas noted in the report to be changed from UV to GRV.

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2517

Moved: Cr Beresford

Seconded: Cr Little

That Council, apply to the Minister for Local Government for a determination pursuant to Section 6.28 (1) of the Local Government Act 1995, to change the basis of rates for properties detailed under Appendix 1 to 5 being Maps 1 to 143, excluding Maps 28 and 127 from Unimproved Value (UV) to Gross Rental Value (GRV) as the predominant use of the land of these properties have been determined to be residential or non-rural, not of a commercial rural nature.

CARRIED 7/2

Cr Williams and Cr Rumjantsev voted against the motion.

Ms Cheryl Greenough departed at 6.15pm and returned at 6.16pm.

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**13.3.5 ADDENDUM TO AVON VALLEY VINTAGE VEHICLE ASSOCIATION
(AVVVA) LEASE AGREEMENT**

Name of Applicant:	Avon Valley Vintage Vehicle Association (AVVVA)
Name of Owner:	Shire of Northam
File Ref:	A11190
Officer:	Cheryl Greenough/Denise Gobbart
Officer Interest:	N/A
Policy:	B7.11 Management of Council Property Leases
Voting:	Simple Majority
Date:	13 August 2015

Item withdrawn.

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Cr U Rumjantsev has declared an "Impartiality" interest in item 13.4.1 – Northam Recreation Centre Fee Waiver as he is part of the Avon Valley Relay for Life Committee as their media & entertainment spokesperson.

13.4. COMMUNITY SERVICES

13.4.1 NORTHAM RECREATION CENTRE FEE WAIVER

Name of Applicant:	Avon Valley Relay for Life 2016
Name of Owner:	Shire of Northam
File Ref:	8.2.8.4
Officer:	Ross Rayson
Officer Interest:	N/A
Policy:	Nil
Voting:	Simple Majority
Date:	30 July 2015

PURPOSE

For Council to consider the request received from the Avon Valley Relay for Life Committee to waive the fees associated with hiring Henry St Oval, and sections of the Northam Recreation Centre for the Relay for Life Charity event to be held on 19 and 20 March 2016.

BACKGROUND

The Shire of Northam has received correspondence from the Avon Valley Relay for Life committee in relation to the Avon Valley relay for Life which is scheduled to be held on 19th and 20th March 2016. The applicant has requested that Council give consideration to waiving the hire fees of Henry St Oval and sections of the Recreation Centre for the conduct of this event, which is held to raise money for the Cancer Council of WA and cancer research.

The 2016 event will be the third event held in Northam, following on from previous events held in 2012 and 2014. In 2014, 13 teams (of up to 15 people) took part in this event and the committee is aiming to increase that number by at least 50% in 2016.

The hire would be for three days, 18-20 March inclusive. Whilst the event only runs for 24 hours, the additional time requested is for set up, and pack down, at the conclusion of the event. The hire fees for the equivalent use are:

Henry St Oval - \$343.00 per day x three days = \$1,029.00
Hospitality Room - \$320.00 per day x three days = \$ 960.00

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Activity Rooms 1 & 2 -	\$330.00 per day x three days = \$	990.00
Floodlights -	\$15.00 per hour x 12 hours = \$	<u>180.00</u>
		\$3,159.00

100% of all funds raised by Relay for Life goes directly to Cancer Council WA, whose vision and mission are as follows:

Our vision

- *Achieve a cancer-free future for our community.*

Our mission

- *Cancer Council Western Australia works with our community to reduce the incidence and the impact of cancer.”*

STATUTORY IMPACTS

Local Government Act 1995, Part 6, Division 4, Section 6.12

6.12. Power to defer, grant discounts, waive or write off debts

- (1) Subject to subsection (2) and any other written law, a local government may —*
- (a) when adopting the annual budget, grant* a discount or other incentive for the early payment of any amount of money; or*
 - (b) waive or grant concessions in relation to any amount of money; or*
 - (c) write off any amount of money, which is owed to the local government.*

**Absolute majority required.*

- (2) Subsection (1) (a) and (b) do not apply to an amount of money owing in respect of rates and service charges.*
- (3) The grant of a concession under subsection (1) (b) may be subject to any conditions determined by the local government.*

CONFORMITY WITH THE STRATEGIC COMMUNITY PLAN / CORPORATE PLAN

OBJECTIVE C1: Create an environment that provides for a caring and healthy community.

STRATEGY C1.3: Advocate for appropriate and accessible health services

FINANCIAL IMPLICATIONS

The proposed waiver of fees will result in a loss of revenue of \$3,159.00 (GST inclusive) in the 2015/16 financial year.

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OFFICER'S COMMENT

The Relay for Life event is held every two years. It is a charity event, with 100% of all funds raised going to Cancer Council of WA and cancer research. Officers recommend that a full waiver of fees be granted on this occasion.

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2518

Moved: Cr Rumjantsev

Seconded: Cr Hughes

That Council, waive the hire fees for the Northam Recreation Centre facilities and Oval totalling a cost of \$3,159.00 including GST for Avon Valley Relay for Life 2016, in support of the Relay for Life event to be held on 19 & 20 March 2016.

CARRIED 9/0

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13.4.2 SHIRE OF NORTHAM DISABILITY ACCESS & INCLUSION PLAN

Name of Applicant:	Disability Services Commission
File Ref:	1.6.21.1
Officer:	Ross Rayson / Michelle Blackhurst / Nicole Hampton
Policy:	Nil
Voting:	Simple Majority
Date:	31 July 2015

PURPOSE

The purpose of this item for Council to endorse the Disability Access and Inclusion Plan (DAIP) 2014-18.

BACKGROUND

The WA Disability Services Act (1993) require each Local Government to have a Disability Access and Inclusion Plan (DAIP) (formerly known as a Disability Services Plan).

Disability Access and Inclusion Plans provide a means of ensuring that people with disability have the same fundamental rights as all other residents to access services, community events, buildings and facilities, information, consultative and complaint resolution processes.

The Shire of Northam's initial Disability Access and Inclusion Plan was adopted at the Ordinary Council Meeting on 15 October 2008 and has since been reviewed. The DAIP 2009-2013 provides a planned approach to progressively address barriers to access and inclusion across all areas of Council responsibility.

The 2014-2018 DAIP builds upon the work already achieved in ensuring that both the physical infrastructure and the communities' perception and awareness of the needs of people with a disability is enhanced through education.

STATUTORY IMPACTS

Compliance with Disability Services Act 1993.

CONFORMITY WITH THE STRATEGIC COMMUNITY PLAN / CORPORATE PLAN

OBJECTIVE S1: Create an environment that provides for a caring and healthy community.

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STRATEGY S1.5: Facilitate the provision of services for aged persons and people with disabilities.

FINANCIAL IMPLICATIONS

Items listed in the 'Implementation Plan' will require financial resources.

OFFICER'S COMMENT

The Shire of Northam is committed to facilitating the inclusion of people with disabilities through the improvement of access to its information facilities and services. Towards this goal the Shire of Northam adopted its first Disability Service Plan (DSP) in 1995 to address the access barriers within the community.

The Shire of Northam has found that the planned approach to progressively addressing barriers to access and inclusion across all areas of Council responsibility has resulted in many initiatives and has assisted the Shire to make significant progress towards better access.

In 2006, 2007 and 2008 the Shire of Northam undertook a comprehensive review of its DSP and subsequently developed the 2009-2013 DAIP.

The 2014-2018 DAIP builds upon the work already achieved with the 2009-2013 DAIP in ensuring that both the physical infrastructure and the communities' perception and awareness of the needs of people with a disability is enhanced through education.

The 2014-2018 was due to be completed December 2013. The Disability Services Commission has given an extension for the development of the 2014-2018, which is now due.

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2519

Moved: Cr Saunders

Seconded: Cr Williams

That Council, adopt the Disability Access & Inclusion Plan (DAIP) 2014/18 as attached subject to the Disability Access & Inclusion Plan (DAIP) 2014/18 being advertised to the community for comment for a period of 21 days and that in the event public comments are received, a further report be provided to council for consideration.

CARRIED 9/0

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**DISABILITY ACCESS
AND INCLUSION PLAN (DAIP)**
2014-2018

SHIRE OF NORTHAM
PO Box 613, NORTHAM WA 6401
395 Fitzgerald Street, NORTHAM WA 6401
Telephone: (08) 9622 6100
Facsimile: (08) 9622 1910
Email: records@northam.wa.gov.au
Website: www.northam.wa.gov.au

This document explains how Council will improve access to functions, facilities and services for people with disability provided by the Shire of Northam in accordance with outcomes areas and Standards as stated within the Western Australian Disability Services Act (1993)

If you have any questions or would like to provide feedback regarding barriers to access please address your letters to the Chief Executive Officer, Shire of Northam, PO Box 613, Northam WA 6401.

Should you require this document in an alternative format such as large print please telephone the Shire of Northam on (08) 9622 6100, or fax (08) 9622 1910 or alternatively email records@northam.wa.gov.au

Please note that this plan can be made available in electronic format and is able to be downloaded from Councils website www.northam.wa.gov.au

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1. Introduction

The Shire of Northam is proud to present the 2014–2018 Disability Access and Inclusion Plan (DAIP).

The WA Disability Services Act (1993) require each Local Government to have a DAIP (formerly known as a Disability Services Plan).

If you would like to contribute to the continued development of the DAIP or have questions or comments regarding disability access, policy or programs please contact the Community Development Officer on 9622 6100 or email cdo@northam.wa.gov.au.

2. About the Plan

Disability Access and Inclusion Plans provide a means of ensuring that people with disability have the same fundamental rights as all other residents to access services, community events, buildings and facilities, information, consultative and complaint resolution processes.

The Shire of Northam's initial Disability Access and Inclusion Plan was adopted at the Ordinary Council Meeting on 15 October 2008 and has since been reviewed. The DAIP 2009-2013 provides a planned approach to progressively address barriers to access and inclusion across all areas of Council responsibility.

The 2014-2018 DAIP builds upon the work already achieved in ensuring that both the physical infrastructure and the communities' perception and awareness of the needs of people with a disability is enhanced through education.

3. Background

3.1 The Shire of Northam

The Shire of Northam is an established regional centre situated approximately 96 kilometres east of Perth in the picturesque Avon Valley. The Shire of Northam has its office within the townsite of Northam which occupies approximately 24 square kilometres with surrounding farmland and small towns in the surrounding 1419 square kilometres in the Shire. The towns include Wundowie, Bakers Hill, Clackline, Spencers Brook and Grass Valley, with smaller localities of Seabrook, Southern Brook, Irishtown and El Caballo.

Northam is the centre of a large agricultural district within the Avon Valley and Central Wheatbelt. There are farming communities within the Shire of Northam who primarily produce crops such as oats, wheat, barley, canola and lupins as well as other avenues of income from livestock such as sheep (wool) and cattle. Northam is used for farmer's everyday banking, retail shopping, recreation, education and government needs.

The Shire is undergoing extensive residential growth and change, including several large areas of land being developed for new housing of suburban size and rural-residential size. Council is committed to developing the Shire and

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encouraging growth through means of new investment and tourism, with an emphasis on maintaining the warm country feel and friendly community atmosphere.

3.2 Functions, Facilities and Services

The Shire of Northam is responsible for a range of functions, facilities and services including:

Services to Property:

- Provision and maintenance of roads, footpaths and cycle ways;
- Construction and maintenance of community buildings and facilities;
- Land drainage and development;
- Waste management including collection, disposal and recycling;
- Street cleaning and litter control;
- Planting and caring for street trees;
- Numbering of buildings and lots
- Installation and maintenance of street signage;
- Street lighting;
- Bush fire control.

Services to the Community:

- Provision and maintenance of playing areas and playgrounds, parks, gardens, reserves sports grounds and facilities for sports groups;
- Provision and maintenance of facilities for community groups and public halls;
- Management of recreation centres and pools;
- Public libraries, information services and internet access via the libraries;
- Environmental health services; home support and respite services at the Killara Centre;
- Citizenship ceremonies and community events.
- Community Grants

Regulatory Services:

- Planning of road systems, subdivisions and town planning schemes;
- Building approvals for construction, additions or alterations;
- Environmental health services and ranger services including dog control; and the development, maintenance and control of parking;
- Compliance services.

General Administration:

- Public Information service;
- Lodging of complaints;
- Payment of fees including rates and dog licences.

Processes of Government:

- Ordinary and special Local Government and committee meetings;
- Elector's meetings and election of Council Members;
- Ward meetings and community consultations.

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Economic & Tourism Development:

- White Swans Management;
- Notices & Signage; Avon Descent and Avon River Festival;
- Special Events, Heritage and Cultural Promotion;
- Municipal Heritage Inventory;
- Parks and river walk-trails.

Human Resources Management:

- Conferences (by Councillors and staff), Council vehicles, computers and other equipment, vehicles, training, telephones, workplace safety, staff recruitment, policies, procedures, and stock management.

3.3 People with Disabilities in the Shire of Northam

According to the Bureau of Statistics (ABS) Survey of Disability, Ageing and Carers (2012) 18.5% of the Australians identify themselves as having some form of disability. Based on the population estimate and these findings it is estimated that there are around 2066 people with disabilities living in the Shire of Northam. The seasonal influx of tourists, including tourists with a disability must also be considered.

3.4 Planning for Better Access

It is a requirement of the Western Australian Disability Services Act (1993) that all Local Government authorities develop and implement a DAIP that outlines the ways in which the authority will ensure that people with disability have equal access to its facilities and services.

Other legislation underpinning access and inclusion includes the Western Australia Equal Opportunity Act (1984) and the Commonwealth Disability Discrimination Act 1992 (DDA), both of which make discrimination on the basis of a person's disability unlawful.

3.5 Progress in the Shire of Northam

The Shire of Northam is committed to facilitating the inclusion of people with disabilities through the improvement of access to its information facilities and services. Towards this goal the Shire of Northam adopted its first Disability Service Plan (DSP) in 1995 to address the access barriers within the community.

The Shire of Northam has found that the planned approach to progressively addressing barriers to access and inclusion across all areas of Council responsibility has resulted in many initiatives and has assisted the Shire to make significant progress towards better access.

In 2006, 2007 and 2008 the Shire of Northam undertook a comprehensive review of its DSP and subsequently developed the 2009-2013 DAIP.

The 2014-2018 DAIP builds upon the work already achieved with the 2009-2013 DAIP in ensuring that both the physical infrastructure and the communities'

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perception and awareness of the needs of people with a disability is enhanced through education.

The following is a sample of the Shire of Northam's progress and achievements in improving access for people with disability:

Existing functions, facilities and services are adapted to meet the needs of people with disability.

- When planning community events, the Shire of Northam consider elements of access in the planning stages of each event.
- The Shire of Northam conducted a comprehensive access audit of buildings, facilities and public spaces in 2015 through the Age Friendly Community program, to determine where improvements could be made.
- The Shire of Northam's website includes a wide range of documents available to the public and it has a functionality which allows the user to alter the text size.
- The Northam Public Library has disabled access to the second floor of the building.

Access to buildings and facilities has been improved.

- Wheelchair access points to get onto the footpath have been installed in the CBD.
- As the Shire of Northam undertakes maintenance and renewal of footpaths, the requirements of people with disabilities will be an important consideration, particularly with respect to level surfaces and access from road surfaces onto footpaths.
- Widened parking bays for people with disabilities where practicable.
- Developed a program for signage improvement throughout the town.
- Tactile pavers have been included in new footpaths.
- Undesirable growth in footpath crevices have been eradicated via a regular maintenance program.
- Public toilets have been upgraded to be accessible.
- Paths and ramps continue to be upgraded.
- The Shire of Northam administration office has been fitted with a purpose built lowered service counter to enable wheelchair bound people to adequately and comfortably be served.
- The Shire of Northam has improved line marking, signage and policing.
- Existing swimming facilities have a limited remaining useful life. A heated swimming facility will be part of Council's future considerations for aquatic facilities in Northam.
- Additional disabled parking bays have been positional in areas where there are higher volumes of parking.
- The Shire of Northam has identified the most appropriate locations for additional public seating through the Friendly Aged Community project and will install new seating.
- All new buildings in the Shire comply with AS1428.1 Disability Standard.

Information about functions, facilities and services is provided in formats which met the communication needs of people with disability.

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- The Shire of Northam works in partnership with Home and Community Care (HACC) to provide an extensive range of HACC services to the Shire of Northam community.
- The Shire of Northam is investigating a function on the website that allows people listen to documents.

Employee awareness of the needs of people with disabilities and skills in delivering services is improved

- Selected staff have participated in comprehensive disability awareness training.
- The Human Resources team has committed to producing a policy to promote a more inclusive workplace.

Opportunities are provided for people with disabilities to participate in public consultations, grievance mechanisms and decision-making processes.

- The Shire of Northam promotes a number of ways for people to make complaints and comments including phone and online through the website.
- The Shire of Northam promotes consultation processes with the public through a number of different means to ensure that all people have adequate access.
- Where the Shire of Northam becomes aware of deficiencies in service or facilities provided by other organisations as a matter of policy, brought those deficiencies to the attention of the relevant organisation.

Opportunities are provided for people with disability to access employment opportunities within the Shire of Northam.

- Recruitment practices are reviewed regularly.
- The Human Resources team has committed to producing a policy to promote a more inclusive workplace.
- The Shire of Northam administration building has facilities to ensure that disabled employees are included.
- Advertisements for vacancies include the statement that the Shire of Northam is an Equal Opportunity Employer.
- Flexible employment options are available for employees with disability.
- Workplace is set-up and equipment is tailored to employee needs.

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4. Access and Inclusion Statement

The Shire of Northam is committed to ensuring that the community is accessible for and inclusive of people with disabilities, their families and carers.

The Shire of Northam interprets an accessible and inclusive community as one in which all Council functions, facilities and services (both in-house and contracted) are open, available and accessible to people with disabilities, providing them with the same opportunities, rights and responsibilities as other people in the community.

The Shire of Northam

- Recognises that people with disabilities are valued members of the community who make a variety of contributions to local social, economic and cultural life;
 - Believes that a community that recognises its diversity and supports the participation and inclusion of all of its members makes for a richer community life;
 - Believes that people with disabilities, their families and carers should be supported to remain in the community;
 - Is committed to consulting with people with disabilities, their families and carers and disability organisations in addressing barriers to access and inclusion;
 - Will ensure its agents and contractors work towards the desired outcomes of the DAIP;
 - Is committed to supporting local community groups and businesses to provide access and inclusion of people with disabilities; and
 - Is committed to achieving initiatives within the following six (6) Outcome areas and Standards as prescribed within the Disability Service Act (1993).
1. People with disability have the same opportunities as other people to access the services of, and any events organised by, the Shire of Northam.
 2. People with disability have the same opportunities as other people to access the buildings and other facilities of the Shire of Northam.
 3. People with disability receive information from the Shire of Northam in a format that will enable them to access the information as readily as other people are able to access it.
 4. People with disability receive the same level and quality of service from the staff of the Shire of Northam.
 5. People with disability have the same opportunities as other people to make complaints to the Shire of Northam.
 6. People with disability have the same opportunities as other people to participate in any public consultation by the Shire of Northam.
 7. People with disability have the same opportunities as other people to obtain and maintain employment with the Shire of Northam.

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Standard: A Disability Access and Inclusion Plan must provide a means of ensuring that people with disabilities have the same opportunities as other people to participate in any public consultation by the Shire of Northam.

5. Development of the Access and Inclusion Plan

5.1 Responsibility for the Planning Process

Responsibility for developing, monitoring, implementing, reviewing and amending the DAIP is a whole of organisation responsibility that is led by the Community Development Officer and this includes the responsibility of ensuring that the plan is rolled out throughout the organisation.

The Chief Executive Officer has the responsibility to oversee the development, implementation, review and evaluation of the plan. The final plan is endorsed by Council and it is the responsibility of all officers to implement the relevant actions.

5.2 Community Consultation Process

In March 2015, the Shire of Northam conducted a Community Perception Survey with the purposes of gauging the opinions of the community about the services and facilities provided by the Shire of Northam. This was a wide consultation process and was used to identify potential strategies to be incorporated into the new plan. The Shire of Northam received 631 valid responses, including 550 by mail and 81 online.

The Community Perception Survey was completed by community members including people with disability, their families and carers, service providers, Shire of Northam staff and elected members.

The Shire of Northam mailed the survey to all residential properties in the Shire of Northam and promoted the survey online and in the Shire's regular community publication.

In March 2015, the Shire of Northam conducted an Age Friendly Community audit on all Shire owned buildings, public spaces and other important services. This involved one-on-one consultations with members of the public, shop owners and service providers and inspections of Shire owned buildings, footpaths and public spaces.

In February 2015, 12 people who were identified as having a disability were supported to complete the 'Disability Access and Inclusion' survey to ascertain whether they are happy with the current access and inclusion within the Shire of Northam, and to give them an opportunity to provide comment on areas where they feel access and inclusion could be improved.

5.3 Findings of the Consultation

The Community Perception Survey showed that the communities perception is that the community is reasonably happy, with 52% of respondents indicating that they are

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satisfied that the Shire of Northam provides adequate access to public facilities, events and services for people with disability.

Following the Age Friendly Community audit, the Shire of Northam has successfully secured some funding to improve some of the accessibility barriers that were identified as needing improvement. This included appropriate locations for additional public seating, new footpaths that allow dual mobility devices linking the public transport and the recreation services.

Other projects were identified as being barriers to access and inclusion and these will be addresses in the DAIP Action Plan.

5.4 Access Barriers

The access barriers identified in the consultation process were:

- Council policy to guide and inform access and inclusion activities may not reflect contemporary values and practice;
- Processes of the Council may not be as accessible as possible;
- Events may not always be held in a manner and location that best facilitates the participation of people with disabilities;
- Suitable parking for people with disabilities may not be meeting the needs of this growing demographic;
- Elements of the Council's website require improvement to best meet the needs of people with disabilities;
- Staff may be uninformed or lacking in confidence to adequately provide the same level of service to people with disabilities;
- People with disabilities may not be aware of consultation opportunities with the Council.

These barriers raised the need to develop strategies in the DAIP. The barriers have been prioritised in order of importance, which assists in setting timeframes for the completion of strategies to overcome those access barriers.

5.5 Responsibility for Implementing the DAIP

Implementation of the DAIP is the responsibility of all areas of the Shire. The Disability Services Act (1993) requires all public authorities to take all practical measures to ensure that the DAIP is implemented by its officers, employees, agents and contractors.

5.6 Communicating the Plan to Staff and People with Disabilities

- Once adopted by Council, the DAIP will be promoted within the community.
- Copies of the plan will be available upon request and in alternative formats if required, including hard copy in standard print, electronic format (CD), via email and on Council's website.

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- As plans are amended Council staff and the community will be advised of the availability of updated plans, using the above methods.

5.7 Review and Evaluation Mechanisms

The Disability Services Act requires that DAIPs be reviewed at least every five years. Whenever the DAIP is amended, a copy of the amended plan must be lodged with the Disability Services Commission. The Implementation Plan and Action Plan can be updated more frequently if desired.

5.8 Monitoring and Reviewing

The employee with the responsibility for the DAIP will analyse progress in implementing the DAIP and provide a report to management and Council on progress and recommended changes to the implementation plan annually.

The Council's DAIP will be reviewed and submitted to the Disability Services Commission in 2018. The report will outline what has been achieved under the Council's DAIP 2014-2018.

5.9 Evaluation

- An evaluation will occur as part of the four-yearly review of the DAIP.
- The community, staff and Elected Members will be consulted as per the endorsed consultation strategies, as part of any evaluation.

5.10 Reporting on the DAIP

The Disability Services Act requires the Council to report on the implementation of its DAIP in its annual report outlining:

- Progress towards the desired outcomes of its DAIP;
- Progress of its agents and contractors towards meeting the six desired outcomes; and
- The strategies used to inform agents and contractors of its DAIP.

The Council is also required to report on progress in the prescribed format to the Disability Services Commission by 31 July each year.

6. Strategies to Improve Access and Inclusion

The following overarching strategies have been developed to address each of the six desired outcome areas of the Disability Services Act from feedback gained in the consultation process. These will form the basis of the Implementation Plan.

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Outcome 1:

People with disability have the same opportunities as other people to access the services of, and any events organised by, the Shire of Northam.

Strategy	Timeline
Ensure that people with disabilities are consulted on their needs for services and the accessibility of current services	Ongoing
Monitor Shire services to ensure equitable access and inclusion	Ongoing
Ensure that all Shire of Northam policies and frameworks are consistent with the DAIP and support equitable access to services	Ongoing
Internal planning and evaluation of Shire of Northam events including festivals, meetings and consultations to incorporate access and inclusion	Ongoing
External agencies to consider access and inclusion in the planning of events and services in the Shire of Northam.	Ongoing

Outcome 2:

People with disability have the same opportunities as other people to access the buildings and other facilities of the Shire of Northam.

Strategy	Timeline
Ensure that all buildings and facilities meet the standards for access and any demonstrated additional need	Ongoing
Ensure that all new or redevelopment works provide access to people with disabilities, where practicable	Ongoing
Ensure that ACROD parking meets the needs of people with disabilities in terms of quantity and location	Ongoing
Advocate to local businesses and tourist venues the requirements for and benefits flowing from the provision of accessible venues	Ongoing
Ensure that all recreational areas are accessible	Ongoing
Address specific building and facility issues raised during public consultation process	Ongoing

Outcome 3:

People with disability receive information from the Shire of Northam in a format that will enable them to access the information as readily as other people are able to access it.

Strategy	Timeline
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Ensure that the community is aware that Council information is available in alternative formats upon request	Ongoing
Improve employee awareness of accessible information needs and how to provide information in other formats	Ongoing
Ensure that the Council's website meets good practice	Ongoing
Marketing is consistent to the accessibility standards for information	Ongoing

Outcome 4:

People with disability receive the same level and quality of service from the staff of the Shire of Northam.

Strategy	Timeline
Ensure that all elected members and employees are aware of access needs and can provide appropriate services	Ongoing
Improve community awareness about disability and access issues	Ongoing

Outcome 5:

People with disability have the same opportunities as other people to make complaints to the Shire of Northam.

Strategy	Timeline
Ensure that grievance mechanisms are accessible for people with disabilities and are acted upon	Ongoing

Outcome 6:

People with disability have the same opportunities as other people to participate in any public consultation by the Shire of Northam.

Strategy	Timeline
Ensure that people with disability are actively consulted about the DAIP and any other significant planning processes	Ongoing
Ensure that people with disabilities are aware of and can access other established consultative processes	Ongoing

Outcome 7:

People with disability have the same opportunities as other people to obtain and maintain employment within the Shire of Northam.

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Strategy	Timeline
Recruitment practices ensure equal opportunity of employment	Ongoing
Ensure equal employment principles are upheld and reflected in all workforce development activities.	Ongoing
Encourage employees to improve positive mental health and wellbeing	Ongoing

7. Implementation Plan 2014-2018

The Implementation Plan details the task, timelines and responsibilities for each broad strategy to be implemented in 2014-2018 to progress the strategies of the DAIP.

It is intended that the Implementation Plan will be updated annually to progress the achievement of all the strategies over the duration of the four year plan.

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Outcome 1: People with disability have the same opportunities as other people to access the services of, and any events organised, by the Shire of Northam.			
Strategy	Task	Task Timeline	Responsibility
Ensure that people with disabilities are consulted on their need for services and the accessibility of current services.	Obtain feedback from community members with disability on a regular basis.	Ongoing	Executive Manager Community Services
	Identify and catalogue a comprehensive list of special needs groups within the community and create an Access and Inclusion Directory.	December 2015	Community Development Officer
Monitor Shire services to ensure equitable access and inclusion.	Conduct systematic reviews of the accessibility of services.	Ongoing	Executive Manager Community Services
	Rectify identified barriers and provide feedback to consumers.	Ongoing	Executive Manager Community Services
Ensure that all of the Shire of Northam policies and frameworks are consistent with the DAIP and support equitable access to services.	Incorporate the objectives and strategies of the DAIP into the Shire's existing planning processes, particularly the Strategic Plan.	Ongoing	All Managers
Internal planning and evaluation of Shire of Northam events including festivals, meetings and	Review the Accessible Events checklist.	October 2015	Events Coordinator
	Ensure all events are planned using the Accessible Events checklist.	Ongoing	Events Coordinator

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consultations to incorporate access and inclusion.	Audit current regular events to check the adequacy of access and inclusion to build improvement measures.	October 2015	Events Coordinator
	Debriefing and evaluation of the City's events and services to include access and inclusion.	Ongoing	Events Coordinator
	Promote each event as accessible.	Ongoing	All Staff Communication Officer
	Promotional material for events where applicable to include 'Please advise of any access/dietary requirements or communication support you may need to participate'.	Ongoing	All Staff Communication Officer
External agencies to consider access and inclusion in the planning of events and services in the Shire of Northam.	Include Accessible Events Checklist as a requirement in the events package.	August 2015	Events Coordinator
	Provide Access and Inclusion Directory to external agencies on request and include it on the website.	Ongoing	Community Development Officer

Outcome 2: People with disability have the same opportunities as other people to access the buildings and other facilities of the Shire of Northam.

Strategy	Task	Task Timeline	Responsibility
Ensure that all buildings and facilities meet the standards for access and any demonstrated additional need.	Continue to identify access barriers to buildings and facilities and make a submission to Council to commence work on rectifying identified barriers.	Ongoing	Senior Building Officer

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	Ensure that all emergency evacuation plans safeguard people with disability.	September 2015	Senior Building Officer
Ensure that all new or redevelopment works provide access to people with disability, where practicable.	Ensure that the legal requirements for access are met in all plans for new or redeveloped buildings and facilities.	Ongoing	Senior Building Officer
	Ensure that no development application is signed off without a declaration that it meets the legal requirements.	Ongoing	Senior Building Officer
	Ensure that key staff are trained and kept up to date with the legal requirements.	Ongoing	Senior Building Officer
	Engage with members of the community regarding access when undergoing building refurbishment.	Ongoing	Senior Building Officer
Ensure that ACROD parking meets the needs of people with disabilities in terms of quantity and location.	Undertake an audit of ACROD bays and implement a program to rectify any noncompliance. Enforce parking in ACROD bays require an ACROD sticker.	December 2015	Executive Manager Development Services / Executive Manager Engineering Services
	Enforce 'no parking on footpaths'.	Ongoing	Executive Manager Development Services
	Consider the need for additional ACROD bays at some locations.	Ongoing	Executive Manager Development Services/ Executive

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			Manager Engineering Services
	Continue to upgrade public toilets and public spaces in accordance with priority areas that were identified in the Age Friendly Community audit.	Ongoing	Executive Manager Development Services
Advocate to local businesses and tourist venues the requirements for, and benefits flowing from, the provision of accessible venues.	As requested, provide information (available on the DSC website), on the needs of people with disabilities and of legal requirements and best practice.	Ongoing	Community Development Officer
	Follow up with local businesses concerns about their premises raised by community members.	Ongoing	Senior Building Officer
	Make access information available on the Shire's website.	Ongoing	Senior Building Officer
	Promote Access and Inclusion through the Northam Chamber of Commerce.	Ongoing	Community Development Officer
Ensure that all recreational areas are accessible.	Continue to upgrade recreational areas in accordance with priority areas that were identified in the Age Friendly Community audit.	Ongoing	Executive Manager Engineering Services
	Where possible provide programs, activities and equipment that is accessible and inclusive.	Ongoing	Recreation Centre Manager
Address specific building and facility issues raised during public consultation process	Provide more seating in public places.	Ongoing	All Managers
	Increase number of footpaths in town or improvement to verge walkways, incorporating kerb ramps for disabled access.	Ongoing	Executive Manager Engineering Services

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	Regular clearing of footpaths to ensure they are free of loose stones on the concrete, as per maintenance schedule.	Ongoing	Executive Manager Engineering Services
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Outcome 3: People with disability receive information from the Shire of Northam in a format that will enable them to access the information as readily as other people are able to access it.			
Strategy	Task	Task Timeline	Responsibility
Ensure that the community is aware that Shire information is available in alternative formats upon request.	Ensure that documents carry a notation that it is available in alternative formats.	Ongoing	All Managers / Communications Officer
Improve employee awareness of accessible information needs and how to provide information in other formats.	Make front counter staff aware that State Government Access Guidelines for Information, Services and Facilities are available on the internet.	Ongoing	Executive Manager Community Services
	Train employees in providing accessible information.	Ongoing	All Managers / Human Resources
Ensure that the Shire's website meets contemporary good practice.	Review website to ensure it complies with the W3C web content guidelines.	Ongoing	Communications Officer
	Investigate ways to improve the website through alternative functions that support disability access.	Ongoing	Communications Officer
Marketing is consistent to the accessibility standards for information.	The Shire of Northam Style Guide is to be consistent with best practice in accessible information.	Ongoing	Communications Officer

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Outcome 4: People with disability receive the same level and quality of service from the employees of the Shire of Northam as other people receive.			
Strategy	Task	Task Timeline	Responsibility
Ensure that Elected Members and employees are aware of access needs and can provide appropriate services.	Determine training needs of employees and conduct training as required. Include training requirements in a future Corporate Induction Manual.	Ongoing	Chief Executive Officer / Human Resources
	Ensure that information and resources are readily available to staff on Access and Inclusion.	Ongoing	Community Development Officer
	Staff induction includes Access and Inclusion.	Ongoing	Human Resources
Improve community awareness of disability and access issues.	Develop strategies for increasing awareness, including the use of the Shire newsletter and website.	Ongoing	Executive Manager Community Services
	Provide Access and Inclusion Directory to the community on request and include it on the website.	Ongoing	Community Development Officer/Communications Officer

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Outcome 5: People with disability have the same opportunities as other people to make complaints to the Shire of Northam.			
Strategy	Task	Task Timeline	Responsibility
Ensure that complaint procedures are accessible for people with disabilities and are acted upon.	Review current complaint procedures and implement any recommendations.	September 2015	Community Development Officer
	Develop other methods of making complaints, such as web-based forms.	September 2015	Community Development Officer
	Promote accessible complaints mechanisms to the community.	Ongoing	Community Development Officer

Outcome 6: People with disability have the same opportunities as other people to participate in any public consultation by the Shire of Northam.			
Strategy	Task	Task Timeline	Responsibility
Ensure that people with disability are actively consulted about the DAIP and any other significant planning processes.	Consult people with disabilities and use a range of consultation techniques where appropriate.	Ongoing	Executive Manager Development Services
	Create the register of people with disability and use to provide comment on access and inclusion issues.	Ongoing	Community Development Officer
Ensure that people with disability are aware of and can	Consultations are widely advertised.	Ongoing	Community Development Officer

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access other established consultative processes.			
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Outcome 7: People with disability have the same opportunities as other people to obtain and maintain employment in the Shire of Northam.

Strategy	Task	Task Timeline	Responsibility
Recruitment practices ensure equal opportunity of employment.	Create an Equal Opportunity Employment Plan to ensure recruitment processes meet the requirements for people with disability.	September 2015	Human Resources
	Review the Equal Opportunity Plan annually.	Ongoing	Human Resources
	Staff induction includes Access and Inclusion.	September 2015	Human Resources
Ensure equal employment principles are upheld and reflected in all workforce development activities.	Ensure all workforce development activities include access and inclusion principals.	Ongoing	Human Resources
Encourage employees to improve positive mental health and wellbeing.	Provide information to employees as it becomes available to encourage them to take an interest in their health and wellbeing.	Ongoing	Human Resources

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13.5. ENGINEERING SERVICES

**13.5.1 REPLACEMENT VEHICLE FOR OPERATIONS MANAGER- NORTHAM
DEPOT**

Name of Applicant:	Internal Report
File Ref:	8.2.4.6
Officer:	Clinton Kleynhans
Officer Interest:	Nil
Policy:	Nil
Voting:	Absolute Majority of Council
Date:	14 August 2015

PURPOSE

For Council to endorse the out of budget expenditure to replace the Operations Manager Ute, registration N11064 that was in a rear end collision and damaged beyond economic repair.

BACKGROUND

The ute was impacted from behind by another vehicle while stationary on Great Northern Highway, Muchea on 25th June 2015. An insurance claim was lodged for the replacement of the vehicle on the 6th July 2015 and confirmation of reimbursement of the New Replacement Vehicle was received on 10th August 2015.

New Replacement Cost of the vehicle is: Total \$35,889.55

As the purchase was not included in the adopted budget Council is required to endorse the replacement of this vehicle.

The vehicle is the 2015 Ford Ranger XL 4x4 3.2LT Manual Dual cab which is supplied by Valley Ford Northam Hyundai.

STATUTORY REQUIREMENTS

Local Government Act 1995
Part 6 – Financial Management
Division 2 – Annual Budget

- 6.8 *Expenditure from municipal fund not included in annual budget*
(1) *A local government is not to incur expenditure from its municipal fund for an additional purpose except where the expenditure –*

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- (a) *is incurred in a financial year before the adoption of the annual budget by the local government;*
- (b) *is authorised in advance by resolution*; or*
- (c) *is authorised in advance by the mayor or president in an emergency.*

**Absolute majority required.*

- (1a) *In subsection (1) –
Additional purpose means a purpose for which no expenditure estimate is included in the local government’s annual budget.
[Section 6.8 amended by No. 1 of 1998s.19.]*

CONFORMITY WITH COMMUNITY STRATEGIC PLAN

OBJECTIVE: Provide and support an effective and efficient transportation network.

STRATEGY: Maintain an efficient, safe and quality local road network.

BUDGET IMPLICATIONS

The replacement of this vehicle was not provided for in the budget. For the preferred vehicle an expense of \$35,889.55 is required in GL: 12399004 Plant and Equipment. This expenditure is to be offset by revenue of \$35,889.55 in GL: 12399505. These figures are exclusive of GST.

OFFICER’S COMMENT

It is recommended that Council endorse the purchase of a new vehicle to replace the vehicle that was damaged and written off as a total loss by the Shire’s Insurer.

RECOMMENDATION / COUNCIL DECISION

Minute No: C.2520

Moved: Cr Hughes

Seconded: Cr Rumjantsev

That Council, endorse by absolute majority the out of budget expenditure of \$35,889.55 excluding GST for the purchase of one only new 2015 Ford Ranger XL 4 X 4 Dual Cab 3.2LT manual diesel as quoted from Valley Ford Northam Hyundai, with the purchase being funded by Insurance Claim Number CL; 63004098F.

CARRIED 9/0

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Cr R W Tinetti has declared and "Impartiality" interest in item 14 – Elected Members Motions of Which Previous Notice has been given as he is the President of the Avon Branch of the Nationals WA and these changes involve our local member.

14. ELECTED MEMBERS MOTIONS OF WHICH PREVIOUS NOTICE HAS BEEN GIVEN

Cr Denis Beresford gave notice of intention to move the following motion;

MOTION / COUNCIL DECISION

Minute No: C.2521

Moved: Cr Beresford
Seconded: Cr Rumjantsev

That Council, objects strongly to the proposed changes to the Central Wheatbelt Electoral boundaries and lodges a submission to the Western Australian Electoral Commission before the advertised closing date.

CARRIED 9/0

Cr Beresford provided the following comments;

Community Interest

People in Goomalling, Dowerin and like towns, travel to Northam regularly, making access to the member and vice versa easy and convenient. Community of interest could be defined as which Regional Centre is seen as the hub of your district. The current Centres are Northam and Merredin. The proposed redistribution ignores this entirely and seems to focus on numbers only.

Members Travel and Time

In country electorates, the member needs to provide equal representation to those in small metro seats. This can only be achieved by limiting the geographical size of the electorate. The last redistribution combined Northam and Merredin making the electorate much harder to cover. Any further increase in size will make equal representation very difficult.

Land Use

The proposed changes are trying to add mining and pastoral areas to what is essentially farming districts.

Local Government Boundaries

The Shire's of Northam, Goomalling, Dowerin, Toodyay, and Wyalkatchem work closely together and should have the same State representative. Shire's in the southern part of

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the proposed new electorate have no affinity with the Shires around Northam and Merredin and belong to entirely different regional organisations.

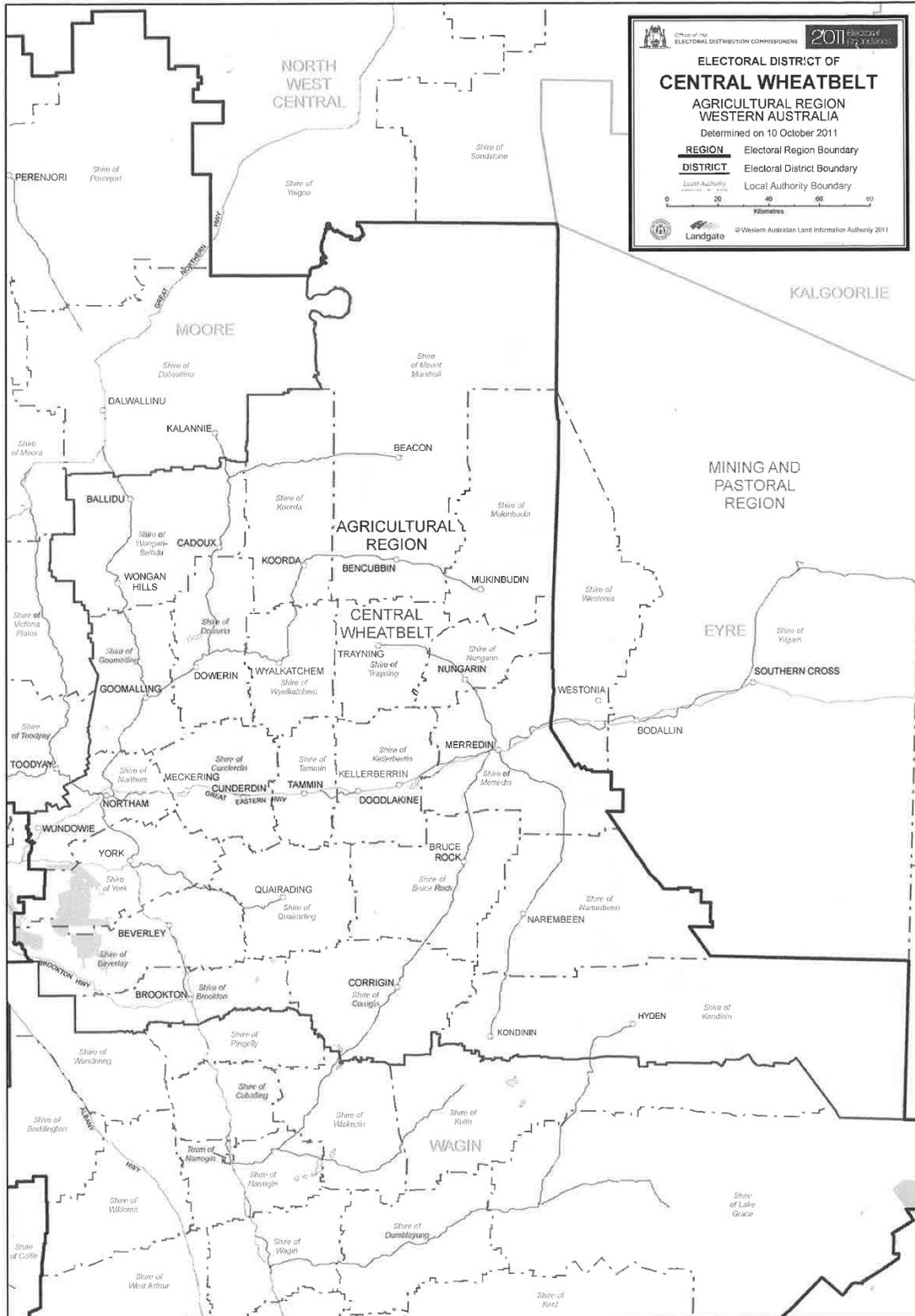
Numbers failing with Guidelines

The commissioners seem to place a great importance on this, but the board hearing ward boundary changes for the Shire of Northam completely dismissed gross variations in ward representation. Surely state appointed boards should have some consistency. The new value should not be *One Vote, One Value* as pushed by previous City based government, but equal representation.

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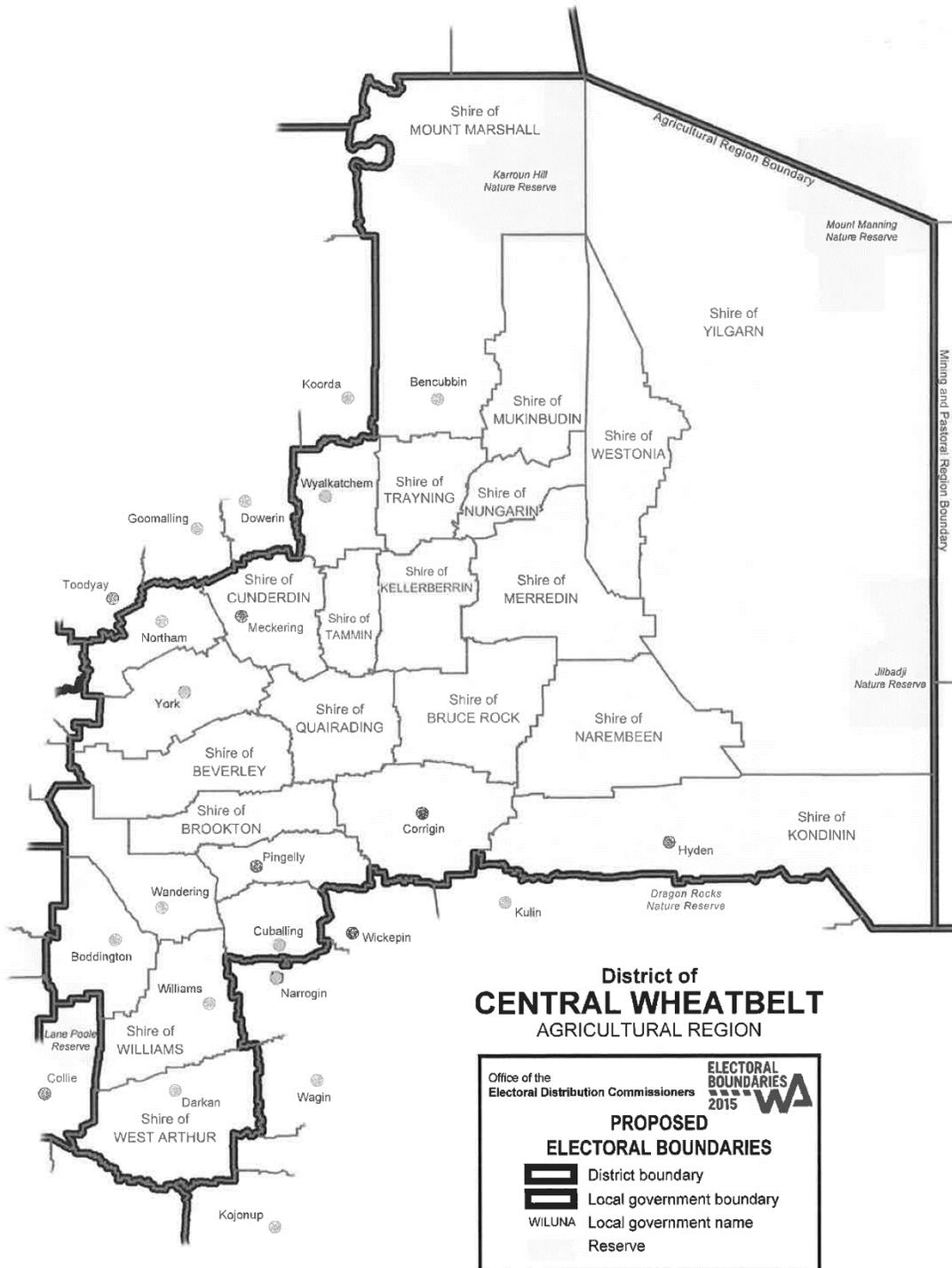
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15. NEW BUSINESS OF AN URGENT NATURE INTRODUCED BY DECISION OF MEETING

15.1. ELECTED MEMBERS

Nil.

15.2. OFFICERS

Nil.

16. CONFIDENTIAL ITEMS

Nil.

17. DECLARATION OF CLOSURE

There being no further business, the Shire President, Cr S B Pollard declared the meeting closed at 6.34pm.

"I certify that the Minutes of the Ordinary Meeting of Council held on Wednesday, 19 August 2015 have been confirmed as a true and correct record."

_____ President

_____ Date

Shire of Northam
LOCAL
BIODIVERSITY
STRATEGY



February 2015

DOCUMENT TRACKING

Item	Detail
Project Name	Shire of Northam Local Biodiversity Strategy
Project Number	
File location	
Prepared by	Renata Zelinova
Approved by	
Status	
Version	1
Last saved on	

Disclaimer

This document may only be used for the purpose for which it was commissioned and in accordance with the contract between the client and Nam Natura Consulting. The scope of services was defined in consultation with the Shire of Northam, by time and budgetary constraints imposed by the client, and the availability of reports and other data on the subject area. Changes to available information, legislation and schedules are made on an ongoing basis and readers should obtain up to date information.

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Acknowledgements:

This report has been prepared through the Local Biodiversity Program, an initiative of the Western Australian Local Government Association (WALGA) in partnership with the Department of Planning (DoP) and the Department of Parks and Wildlife (DPaW), funded through the State Natural Resource Management (NRM) Program 2012-2014.

The Local Biodiversity Program wishes to acknowledge the following people for their involvement in the Shire of Northam Local Biodiversity Strategy.

Project team

- Renata Zelinova, Local Biodiversity Program Manager (WALGA)
- Danielle Matthews, Senior Planning Officer – Local Biodiversity Program (DoP)
- Jason Batory, Batory Spatial
- Teik Oh, GIS Analyst, Fluffy Software P/L

Shire of Northam

- Phil Steven, Executive Manager Development Services
- Bronwyn Southee, Senior Planner

Stakeholder Reference Group:

- Cr Kathy Saunders, Shire of Northam
- Rowan Hegglin, Wheatbelt NRM
- Peter Weatherly, Avon Valley Environmental Society Inc
- Teresa Bryant, Office of Environmental Protection Authority
- Robert Huston and David Jolliffe, Department of Parks and Wildlife
- Julia Murphy, Greening Australia

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APPENDIX D: Retention and protection status of vegetation in the Shire of Northam

APPENDIX E: Shire of Northam species report Summary (NatureMap)

APPENDIX F: Ecological criteria for remnant vegetation prioritisation in the Shire of Northam
(Adapted from Del Marco *et al* 2004)

APPENDIX G: A Morphological Classifier for Remnant Vegetation

APPENDIX H: Limitations of the native vegetation prioritisation and connectivity analysis

APPENDIX I: Target Areas – Notes on opportunities to improve protection status of priority vegetation

APPENDIX J: Proposed Target Areas and Crown reserves proposed for extension or change of reserve purpose to conservation (Local Biodiversity Program, 2014)

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Abbreviations

AW – Avon Wheatbelt Bio-region

BVA – Beard Vegetation Association

CSIRO - Commonwealth Scientific and Industrial Research Organisation

DAFWA – Department of Agriculture and Food Western Australia

DEC – Department of Environment and Conservation

DPaW – Department of Parks and Wildlife (replaced DEC in 2013)

EPA – Environmental Protection Authority

EPBC Act – Environment Protection and Biodiversity Conservation Act 1999

EPT – Environmental Planning Tool

ESA – Environmental Sensitive Area

GIS – Geographic Information System

IBRA – Interim Biogeographic Regionalisation of Australia

JF – Jarrah Forest Bio-region

LBP – Local Biodiversity Program

LWF – Land for Wildlife

NAIA – Natural Area Initial Assessment

NRCGP – Northam Regional Centre Growth Plan

NRM – Natural Resource Management

PEC – Priority Ecological Community

SWAEI – Southwest Australia Ecoregion Initiatives

TEC – Threatened Ecological Community

UCL – Unallocated Crown Land

WALGA – Western Australian Local Government Association

WAPC – Western Australian Planning Commission

Executive Summary

VISION

Over the next 20 years, the diversity of indigenous species and ecosystems in the Shire of Northam is conserved, resilient to threats, restored and valued by the local community.

OBJECTIVES:

- To achieve a comprehensive, adequate and representative network of locally protected natural areas by improving the protection status, health and viability of each vegetation complex that is not currently adequately protected in the Shire
- To maintain and improve landscape function by implementing best practice environmental restoration and use of sustainable land use practices including appropriate land use planning and natural resource management.
- To achieve long term community engagement in local biodiversity management.

The Local Biodiversity Strategy:

- provides an overview of biodiversity assets retained in the Shire;
- summarises legislative and policy requirements for biodiversity conservation;
- reviews existing provisions in the local planning framework for biodiversity conservation;
- recommends a set of actions to improve the current status of biodiversity conservation in the Shire of Northam.

The strategy outlines key actions to be implemented over the next 5 years that will enable achievement of the vision for biodiversity conservation and contribute to the achievement of the Shire of Northam corporate vision.

Methodology used to identify local conservation priorities follows the State government endorsed process for local biodiversity conservation planning developed by the Western Australian Local Government Association's Biodiversity Programs. Mapping and technical assistance was provided by the Local Biodiversity Program, informed with expert local knowledge through the representatives of the Stakeholder Reference Group set up by the Shire of Northam.

An assessment of the current status of biodiversity in the Shire shows the following:

- 23.7% of the pre-European extent of native vegetation remains in the Shire.
- Native vegetation retention is unevenly distributed, with 42% remaining within the western portion of the Shire that overlaps with the Jarrah Forest bioregion and around 10% remaining in the eastern portion of the Shire that overlaps with the Avon Wheatbelt bioregion.

- 4.7% of the pre-European extent of vegetation is protected (Department of Parks and Wildlife lands managed for conservation) or 5.3% when including Unallocated Crown lands reserved for Conservation of Flora and Fauna in the Shire's Local Planning Scheme.
- 76% of the remaining vegetation is classified as Local Natural Areas.
- Of nine Beard Vegetation Associations (BVAs) represented in the Shire, five have less than 1% protected, an additional one has less than 5% protected locally.
- All Beard Vegetation Associations are considered regionally significant, all have less than 17% of pre-European extent protected in the Wheatbelt and Jarrah Forest bio-regions.
- Of eleven vegetation complexes represented in the Jarrah Forest portion of the Shire, nine are considered regionally significant, three having 0% and additional three less than 5% of their pre-European extent protected in the Shire.
- **99.5% of the remaining vegetation in the Shire is of regional conservation significance.**
- Over 1130 native species have been recorded within the Shire, including four endemics, 14 threatened and further 51 species being of conservation priority.
- Decline in fauna is a primarily due to the loss of habitat, especially species specific hollow bearing trees and presence of feral predators such as foxes and cats.
- The chain of wetlands associated with local rivers such as the Avon River and the Mortlock River and their tributaries not only retain specialist habitat but the associated riparian and upland vegetation is critical to maintaining connectivity through the highly fragmented landscape.
- The overall health of waterways in the Shire varies and reflect land management within their catchments.
- Future on-ground activities need to build on the significant investment towards improving the Avon River health over the past twenty years.
- The health of the Avon River and its tributaries has direct impact on water quality of the Swan River.
- A regional connectivity study that aimed to develop guiding principles for corridor planning within the Avon River Basin identifies the western portion of the Shire as being within a 'high connectivity zone' and the eastern portion within a 'medium connectivity zone'.
- The biodiversity of the Shire continues to be threatened by a range of passive factors including passive clearing (through on-going grazing), inappropriate land-use, lack of protection and active management of weeds, pest animals, pathogens and impacts from industry such as agriculture.

- To remain viable into the future the biodiversity found within the Shire of Northam, especially rare and threatened species, endemics or species of interest require active management.

To assess the relative conservation priority, 20 criteria representing biodiversity attributes were intersected with 2013 native vegetation mapping. The prioritisation criteria consider:

- Representation of ecological communities in the Shire and biogeographical regions
- Presence of rare and threatened species and ecological communities
- Presence of wetlands, waterways, riparian vegetation
- Native vegetation patch size and connectivity among patches.

Most mapped native vegetation met numerous criteria, indicating high conservation values of the remaining vegetation.

Considering that the current retention and protection status of native vegetation is below the State and the national policy accepted thresholds of 10% and 30% of pre-clearing extent, any further clearing of vegetation should be avoided, including the removal of significant, mature paddock trees and stag-trees and excessive fenceline / roadside vegetation. Many paddock trees are being removed in the agricultural areas within the Shire to facilitate the use of GPS steer harvesting and seeding equipment. Increased awareness among landholders of ways to avoid removing these valuable trees should aim at eliminating this not essential practice. Remnant paddock trees are often hollow bearing, of significant age and are examples of what remnant vegetation would have looked like pre clearing. Large paddock trees provide food and habitat and are important in a local context for species of regional and national importance such as Carnaby's black cockatoos.

The Shire's Local Planning Strategy and Scheme include numerous provisions for biodiversity. Findings of this Local Biodiversity Strategy will provide further guidance and reduce uncertainty in future decision making. Further recommendations for strengthening existing provisions for biodiversity conservation in the Shire's existing land use planning framework are made, including development and adoption of Local Planning Policies which will provide guidance to developers and land owners regarding necessary consideration of biodiversity, development design options to minimise the impacts of future land uses and facilitate restoration of degraded areas to increase suitable habitat for local fauna and improve the health of local waterways.

Fifty-five 'Target Areas' have been identified to highlight areas with good opportunities to improve the representation of under protected native vegetation in the Shire. For each of these areas specific suggestions are made on opportunities to protect portions of the highest conservation value. The change or extensions of reserve purposes to include conservation are recommended as a priority where opportunities exist. However, with over 80% of native vegetation mapped on Rural zoned lands in the Avon Wheatbelt portion of the Shire and 42% on Rural zoned lands in the Jarrah Forest portions of the Shire, future vegetation retention and its management to maintain biodiversity values will depend on conservation on private land. Any future rezoning for development should avoid clearing and provide formal protection to the retained natural areas.

The 'Target Areas' highlight portions of remaining vegetation where protection of portion of the vegetation will contribute to the national target of 17% of bioregions protected, adopted by the Australian Government (2010). Local contributions to the national target were calculated considering the proportion of pre-clearing extent of native vegetation associations and vegetation complexes in the Shire of Northam and the remaining extent using the 2013 native vegetation mapping. Due to high levels of clearing in portions of the Shire, fragmented nature of remaining native vegetation, for eight out of fourteen vegetation complexes and vegetation associations represented in the Shire, it will not be possible to achieve the desired level of formal protection. Protecting all remaining vegetation in good or better condition representative of these over-cleared vegetation types should be a priority.

In the context of this Local Biodiversity Strategy, natural areas are considered protected if they are on Crown land vested for conservation, zoned or reserved in a local planning scheme for conservation and/or managed on private land with conservation covenant on land title.

Many of the existing biodiversity threatening processes are expected to be further exacerbated with changing temperatures and rainfall due to climate change. Building resilience of the natural areas and facilitating expected shifts in species distributions by improving landscape connectivity are considered important ways of improving biodiversity conservation. The Local Biodiversity Program developed three connectivity metrics to assist with identifying the most cost effective ways of improving connectivity between protected natural areas.

Connectivity analysis of native vegetation in the Shire identified gaps between existing protected areas and identify parts of landscape where buffering of small protected areas and strategic re-vegetation between these areas will contribute to a more effective network of natural areas. The results of the connectivity analysis should be used to inform future priorities for vegetation restoration to build the resilience of local ecosystems against anticipated impacts of climate change.

All mapping layers developed for the Local Biodiversity Strategy are available through the special login on-line mapping viewer, the Environmental Planning Tool. A brief guide how to use this mapping viewer is provided in the Appendices.

The Local Biodiversity Strategy contains information that can be used by the Shire of Northam and other relevant stakeholders to:

- Inform land use planning to facilitate sustainable development and protect environmental assets
- Identify priority areas for restoration, utilising offset requirements or external grant opportunities
- Engage all relevant stakeholders.

The main document provides an overview of biodiversity status, legislative and policy requirements for biodiversity conservation, review of existing land use provisions for biodiversity conservation in the Shire, describes the methodology adopted to prioritise natural area in the shire and recommends a set of actions, focusing on functions and responsibilities of the Shire. Appendices include more detailed information and descriptions of methodologies used in the Local Biodiversity Strategy, results of native vegetation status statistical analysis

which supports the prioritisation and site specific recommendations for the fifty-five 'Target Areas'.

Priority Actions:

Action	Priority
Integration into the land use planning framework	
Confirm the conservation values of the selected <i>Land Administration Act 1997</i> reserves proposed for change of purpose, or change of classification of reserve to Conservation of Flora and Fauna in the planning scheme (Appendix D, Table 5).	High (2015-2016)
Scheme Amendment to change the classification of selected high conservation reserves to Conservation of Flora and Fauna (vested in the Shire)	High
Scheme Amendment to change the classification of selected high conservation reserves (vested in State agencies)	Medium
Introduction of a new Rural Conservation zone, or strengthen Rural, Rural Residential and Rural Smallholding zone provisions	High
Amend Conservation designations on Local Planning Strategy maps to include adopted Target Areas and local conservation reserves	Medium
Develop a number of Local Planning Policy/Policies (see section 4.1)	High
Local Government Natural Area Management	
Develop a strategic 5 year management plan for all conservation reserves using the information collected via NAIA Templates	High
Develop and implement best-practice procedures for all Shire staff and contractors working and accessing natural areas and managing infrastructure assets	Medium-High
Investigate the feasibility of forming a <i>Biosecurity Group</i> in partnership with adjoining Local Governments	Medium
Implement a strategic reserve management plan	Medium
Increase riparian vegetation cover and condition on lands managed by the Shire (focusing on upper reaches and northern shores of priority waterways)	Medium
Private landholder support	
Facilitate private landholder consultation to identify the most desirable incentives for biodiversity conservation on private land	High
Prepare and implement a private landholder incentives strategy to support biodiversity conservation on private lands.	Medium
Facilitate riparian vegetation restoration on private lands	
Communication	
Integrate all Local Biodiversity Strategy mapping into the Shire's information system	High (2014-2015)
Develop and promote sustainable landscaping strategy for residential areas and street-scaping	Medium
Facilitate discussions with local Aboriginal leaders to investigate opportunities for their involvement in promoting the cultural values of natural areas in the Shire	High
Facilitate discussions with the Wheatbelt NRM, adjoining Local Governments, DPaW and other relevant stakeholders on identification of regional ecological linkages.	Medium
Develop a monitoring and reporting schedule	High

Action	Priority
Undertake a review of the feasibility and effectiveness of the proposed implementation actions every 5-7 years.	Medium
Local Government capacity building	
Contract or employ Environmental Officer services to include natural area management, submission of grant applications to obtain external funding for reserve management and facilitate partnerships with other relevant stakeholders and the community in reserve management, restoration and support to private landholders.	High
Form partnerships with not-for-profit groups active in the Shire to facilitate reserve management and private landholder support for biodiversity management	High
Establish a Natural Resource Management (NRM) Reference Group to facilitate partnerships in implementing the Local Biodiversity Strategy objectives and other NRM priorities (e.g. Avon River and other priority waterways recovery)	High

1 Context

1.1 Benefits of biodiversity conservation

Biodiversity, or biological diversity, is a variety of all life forms. There are three levels of biodiversity:

- Genetic diversity or the variety of genetic information contained in individual plants, animals and micro-organisms;
- Species diversity or the variety of species;
- Ecosystem diversity or the variety of habitats, ecological communities and ecological processes.

Natural Resource Management Council 2010

Conservation of biodiversity is critical to sustainable living which depends on maintenance of ecological services provided by the variety of ecosystems. Ecosystem services can be divided into four main groups (TEEB 2011, Millenium Ecosystem Assessment, 2005):

- Provisioning services such as food, raw materials, fresh water, medicinal resources;
- Regulating services including microclimate, carbon sequestration and storage, moderation of extreme events, waste-water treatment, erosion prevention, pollination, biological control;
- Habitat or Supporting Services such as habitat for species, maintenance of genetic diversity;
- Cultural services such as recreation, mental and physical health, tourism, aesthetic appreciation and inspiration for culture, art and design, spiritual experience and sense of place.

Other benefits of keeping green spaces in urban and peri-urban areas include positive effects on property values. It has been estimated that property values increase about 10% in streets with large trees. Other recorded benefits include increased profits in tree-lined retail areas, greater acceptance of higher density residential developments near good quality green spaces, up to 25% reduction in energy consumption in buildings shaded by trees, reduced impacts on storm water management, reduced pollution and improved human health (reduction in heat-related illnesses), sense of place and identity, encourage outdoor activity, reduced infrastructure damage due to UV radiation exposure (Brown *et al* 2013, Pandit 2013, Matusik Property Insight 2006).

A study undertaken in rural Victoria, Australia concluded that with a shift in rural land ownership from agriculture-focused farmers to amenity focused 'lifestyle' owners, remnant vegetation adds value to lifestyle properties. It was found that an optimal proportion of tree cover on property was about 40% of land area leading to a 12% increase in average property price (Polyakov *et al*. 2012). Another study examined the levels of benefit provided by native vegetation on rural

properties across a range of property types and sizes (Polyakov *et al* 2014). It was found that private landowners on small and medium sized properties benefit most from presence of native vegetation on these properties. However, to maximize the biodiversity value of native vegetation on small and medium rural lands, effective management will need to be established to minimize fragmentation and impacts of weeds, feral animals or diseases on native vegetation.

1.2 Definition of Conservation, Protection and Retention

The Local Biodiversity Strategy aims to conserve the diversity of natural areas and associated ecosystems in the Shire of Northam. In the context of this Strategy, conservation, protection and retention of natural areas are defined as follows:

Conservation: In relation to biodiversity, conservation is the protection, maintenance, management, sustainable use, restoration and improvement of the natural environment (Australian Government 2010).

Protection: Protected areas are those natural areas that are secured for conservation either as

- public lands vested for a biodiversity conservation purpose (e.g. nature conservation)
- Indigenous Protected Areas
- private lands where the biodiversity values are secure for conservation under zoning, or covenanting
- Shared management reserves (Australian Government 2010).

Retention: is all the process ensuring a natural area is retained but not necessarily afforded protection to ensure its continued existence and viability (Del Marco *et al* 2004).

A Local Biodiversity Strategy:

Provides an overview of biodiversity assets retained in a local government area and identifies conservation priorities;

Summarises legislative and policy requirements for biodiversity conservation;

Reviews existing provisions in the local planning framework for biodiversity conservation;

Recommends a set of actions to improve the current status of biodiversity conservation;

Facilitates engagement of relevant stakeholders.

1.3 Legislative and Policy Framework

Biodiversity conservation requires a multi-level approach including Commonwealth, State, Local Government, industry and non-government groups, private individual and the community, all contributing to biodiversity conservation at appropriate levels. Development and implementation of a local biodiversity strategy provides an effective mechanism for meeting legislative requirements and strategic objectives at the local government level.

Australia's Biodiversity Conservation Strategy 2010-2030 (NRMMC 2010) provides the overarching guiding national framework, identifying three national priorities for action and ten national targets for all governments to work towards during the first 5 years of implementation. Priority actions include:

- 1 Engaging all Australians in biodiversity conservation through:
 - 1.1 Mainstreaming biodiversity
 - 1.2 Increasing indigenous engagement
 - 1.3 Enhancing strategic investments and partnerships.
- 2 Building ecosystem resilience in a changing climate by:
 - 2.1 Protecting diversity
 - 2.2 Maintaining and re-establishing ecosystem functions
 - 2.3 Reducing threats to biodiversity.
- 3 Getting measurable results through:
 - 3.1 Improving and sharing knowledge
 - 3.2 Delivering conservation initiatives efficiently
 - 3.3 Implementing robust national monitoring, reporting and evaluation.

Implementation of a Local Biodiversity Strategy contributes to the delivery of majority of the Australian Government priority actions.

Australia, as the signatory to the international Convention on Biological Diversity, adopted a target of 17% of each of its bioregions¹ being protected in the National Reserve System (<http://www.environment.gov.au/land/nrs/about-nrs/requirements>).

Priority actions towards meeting this target are identified in the *Australia's National Reserve System Strategy 2009-2030* (Australian Government 2010) which was prepared in collaboration with all States. The Strategy identifies priority actions for a coordinated national approach towards achieving the following national targets for a National Reserve System:

- Examples of at least 80% of all regional ecosystems in each bioregion by 2015
- Examples of at least 80% of all regional ecosystems in each subregion by 2025
- Core areas established for the long-term survival of threatened ecosystems and threatened species habitats in each of Australia's bioregions by 2030

The National Reserve System is the network of formally recognised parks, reserves, and other protected areas primarily dedicated to the long-term protection of Australia's Biodiversity. Only those areas that meet the International Union for the Conservation of Nature (IUCN) definition of protected area are considered part of the National Reserve System. According to the IUCN, a protected area is: "A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values."

Australian Government 2010

¹ Bio-regions are regions defined by a combination of biological, social and geographical criteria, seeking to describe the dominant landscape scale attributes of climate, lithology, geology, landforms and vegetation. They are determined by the Interim Biogeographic Regionalisation for Australia (IBRA) (<http://www.environment.gov.au/land/nrs/science/ibra>).

- Critical areas for climate change resilience, such as refugia, to act as core lands of broader whole of landscape scale approaches to biodiversity conservation by 2030.

The Shire of Northam overlaps with two bio-regions and protection levels within both are under the 17% target (Australian Government 2014).

Biodiversity conservation is supported by a range of Commonwealth and State legislation, statutory and non-statutory policies. The principal national and state legislation includes:

- *Environment Protection and Biodiversity Conservation Act 1999*
- *Wildlife Conservation Act 1950*
- *Environmental Protection Act 1986* and the related *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*.

The key State Government environmental and planning policies relevant to biodiversity conservation are:

EPA Position Statement No. 2: Environmental Protection of Native Vegetation in Western Australia (EPA, 2000) provides an overview of the Environmental Protection Authority's (EPA) position on the clearing of native vegetation in the State. Particular reference is made to clearing in agricultural areas, stating that clearing in agricultural areas of the South West of Western Australia should not continue, except for relatively small areas and where alternative mechanisms for biodiversity protection are addressed. The Position Statement lists several key criteria when assessing impacts of potential clearing, including the recognition of 30% of pre-clearing extent of a vegetation type as a threshold level below which species loss appears to accelerate exponentially and a level of 10% of pre-clearing extent as being a level representing 'endangered'.

Environmental Protection Bulletin No 20: Protection of naturally vegetated areas through planning and development (EPA, 2013) EPA's expectations for consideration of naturally vegetated areas in the design of urban and peri-urban development at all stages of land use planning are outlined in this Bulletin, including design guidelines for planning and development proposals. It outlines the matters related to the protection of natural areas that are most appropriately addressed at the different land use planning stages, ranging from regional planning strategies and frameworks to local planning strategies, schemes and subdivision or development plans.

The Bulletin No. 20 complements the ***EPA Guidance Statement No. 33: Environmental Guidance for Planning and Development*** (EPA, 2008) which outlines the EPA's broad principles for maintaining and protecting native terrestrial vegetation and flora, the EPA's objectives for biodiversity conservation, flora and fauna, and lists the natural areas that the EPA

EPA's broad principles for maintaining biodiversity and protecting native vegetation and flora:

- Avoid clearing
- Maintain biodiversity at sustainable levels
- Conserve biodiversity in-situ
- Prevent loss of biodiversity
- Prepare and implement regional strategies for biodiversity protection
- Protect ecological linkages
- Anticipate threats to biodiversity and
- Reintroduce native vegetation.

EPA, 2008

considers are of high conservation significance, including critical environmental assets and high value environmental value assets.

Statement of Planning Policy No. 2: Environment and Natural Resources Policy (SPP2) (WAPC 2003) was prepared under statutory procedures set out in the *Planning and Development Act 2005*. The WAPC and local governments must have 'due regard' to the provisions of state planning policies when preparing or amending local planning schemes and when making decisions on planning matters.

The objectives of SPP No. 2 are to: integrate environment and natural resource management with broader land use planning and decision-making; protect, conserve and enhance the natural environment; and promote and assist in the wise and sustainable use and management of natural resources.

General policy measures relevant to the Shire include:

'(iv) Protect significant natural, indigenous and cultural features, including sites and features significant as habitats and for their floral, cultural, built, archaeological, ethnographic, geological, geomorphological, visual or wilderness values.

'(vi) Recognise that certain natural resources, including biological resources, are restricted to particular areas and that these geographical areas or land types may need to be identified accordingly and appropriate provision made to protect the areas for the use of those resources.

'(x) Support conservation, protection and management of native remnant vegetation where possible, to enhance soil and land quality, water quality, biodiversity, fauna habitat, landscape, amenity values and ecosystem function.

'(xi) Consider alternatives to land acquisition for conservation and landscape protection where limited or no public access is required.'

Other policy measures relevant to local biodiversity conservation planning include those in clause 5.5 Biodiversity, which states that planning strategies, schemes and decision-making should:

'(i) Consider mechanisms to protect areas of high biodiversity and/or conservation value.

'(ii) Seek to avoid or minimise any adverse impacts, directly or indirectly, on areas of high biodiversity or conservation value as a result of changes in land use or development.

'(iii) Assist in establishing a comprehensive, adequate and representative conservation reserve system throughout the State for flora, fauna habitat, landscapes, waterways, estuaries and wetlands.

'(iv) Safeguard and enhance linkages between terrestrial and aquatic habitats which have become isolated, including the re-establishment of habitat corridors.

'(v) Assist the return of areas of high biodiversity conservation value to the public estate or otherwise ensure the protection of high biodiversity conservation values through mechanisms including planning controls or conservation covenants.

(vi) Support the use of management plans to protect areas of high biodiversity conservation value in the long term.'

1.4 Regional Natural Resource Management Strategies

Two regional natural resource management groups (NRM) operate in the Shire of Northam; the Wheatbelt NRM and the Perth Region NRM. These regional groups play an important part in facilitating partnerships, sourcing funds and coordinating delivery of the regional NRM strategies.

The Wheatbelt NRM Strategic Plan 2012-2015 outlines strategic objectives and priorities towards achieving its vision “to bring exemplary natural resource management to the Wheatbelt to create healthy environments and livelihoods” (Wheatbelt NRM 2014). Implementation of the Shire of Northam’s local biodiversity strategy will contribute towards many of the regional objectives, providing good opportunities for close cooperation.

Wheatbelt NRM 5-year strategic objectives include:

- Develop Strategic Adaptive Management approach and embed resilience/systems thinking into NRM
- Strengthen partnerships in the understanding and management of our social-ecological systems
- Adapt to a changing climate
- Increase perennial vegetation cover
- Support agricultural industry innovation targeting efficiency in chemical use and improved soil health
- Promote ‘fit for purpose’ land use
- Coordinate fire and invasive species management in both conservation and agricultural systems
- Encourage community action for environmentally sustainable lifestyles.

The Shire of Northam is within the Avon Arc sub-region of the Wheatbelt NRM region. NRM priorities for the Avon Arc subregion include: Enhance, protect and manage fragmented, at-risk biodiversity, improve fertiliser efficiency of agricultural landscapes, major tributary riparian management, and manage peri-urban changes.

Perth Region NRM which overlaps with the western portion of the Shire of Northam is currently reviewing its Strategic plan. The local biodiversity strategy provides a good opportunity to inform the regional strategic planning process and identify new opportunities for partnerships. More information about the Perth Region NRM Strategy review can be found on the following link <http://www.perthregionnrm.com/community/swan-region-strategy/swan-region-strategy-review.aspx>.

1.5 Local Strategic and Planning Context

In 2010, the Shire adopted a corporate plan, *Strategic Community Plan 2012-2022* (Shire of Northam 2013b), which sets out the broad objectives and initiatives for future development and growth within the Shire. Delivery of these initiatives should be consistent with the Shire's Mission Statement and be based on a number of goals and strategies, including:

“To deliver responsive, sustainable services in a manner that preserves and enhances our environment and lifestyle whilst respecting our heritage and facilitating economic growth.”

Shire of Northam Corporate Mission:

“To deliver responsive, sustainable services in a manner that preserves and enhances our environment and lifestyle.”

*Strategic Community Plan
2012-2022*

Shire of Northam Local Planning Strategy (Shire of Northam 2013b)

The Shire's adopted mission to preserve and enhance the environment is directly reflected in its Local Planning Strategy which was adopted in 2013:

Vision/Objectives

- Protect, conserve and enhance the environmental values and natural resources of the Shire for the benefit of current and future generations while providing appropriate development opportunities to promote the local economy.
- Protect privately owned land recognised as Conservation on Strategy maps to provide for possible future inclusion into State Nature Reserves.

Numerous strategies and actions were identified in the Local Planning Strategy to achieve this vision, including preparation of a local biodiversity strategy. For the full list of strategies and actions relevant to biodiversity conservation see Appendix A.

The Shire's Local Planning Strategy identifies new areas for development to facilitate the predicted population increase by 27% to 12,300 persons in 2031. While the largest increase is anticipated within the Northam townsite, localities such as Wundowie, Bakers Hill and Clackline are also expected to be affected.

Shire of Northam Local Planning Scheme No. 6 (Department of Planning 2013)

Similar strategic planning objectives are outlined in the aims of the local planning scheme:

“(i) protect, conserve and enhance the environmental values and natural resources of the Scheme area including the protection of remnant vegetation and the rehabilitation and revegetation of degraded land.”

The objectives for Rural zoned land in the Shire provide further rationale for this Strategy:

“To protect land from land degradation and further loss of biodiversity by:

- (i) Minimising the clearing of remnant vegetation and encouraging the protection of existing remnant vegetation;*
- (ii) Encouraging the development of and the protection of corridors of native vegetation;*
- (iii) Encouraging the development of environmentally acceptable surface and sub-surface drainage works; and*
- (iv) Encouraging rehabilitation of salt affected land.”*

In 2012, the Shire in partnership with the Wheatbelt Development Commission and state agencies developed a growth plan for the Northam townsite which was identified as one of nine towns in Western Australia with the potential for significant growth. The region’s natural environment, relative housing affordability, proximity to the Perth Metropolitan Region and lifestyle options, are factors that are forecasted to encourage continued population growth.

The Northam Regional Centre Growth Plan’s (Shire of Northam 2012) objective for the environment is:

“The protection and enhancement of natural environmental and cultural assets, biodiversity, air and water quality, and building resilience against the long term effects of climate change.”

The Growth Plan identifies a number of strategic goals and actions towards meeting the environmental objective, including:

- “By 2013 existing vegetation corridors along waterways shall be protected and revegetation along waterways where clearing has taken place will be occurring.
- Remnant vegetation shall be protected from clearing and damage where possible.
- By 2013 landscapes with high natural resource values will have been identified and protected. Restoration of degraded landscapes will be encouraged and roads that have landscapes requiring protection will be identified.
- By 2013 the capacity of landscapes to absorb development shall be well understood. Careful planning, siting and design of new development in a way which is sensitive to local landscape character will be the norm.
- By 2013 sustainable use of the Shire’s natural resources will occur through sound planning, protection, and management practices.
- By 2013 the long term protection of areas of local and regional conservation significance in Crown ownership throughout the Shire shall be facilitated.
- By 2021 the long-term health and aesthetic value of the Avon River will be protected through sound environmental management practices and when planning for drainage and environmental works.
- By 2017 the quality of stormwater runoff from urban areas will be improved by incorporating the best management practices of water sensitive urban design.
- By 2013 best practice measures will be in place in regards to the protection of river system health.
- By 2021 the river systems will be improved when and where possible.”

Additional strategic goals were adopted to address waste disposal, climate change adaptation, protection of sensitive land uses from all types of emissions and risk management strategies and measures to protect from natural disasters and environmental impacts.

This Local Biodiversity Strategy provides information on local conservation priorities and identifies land where revegetation and habitat restoration will enhance landscape connectivity, highlighting land in the Shire where the local strategic environmental objectives can be achieved.

2. Biodiversity Assets

2.1 Regional context

The Shire of Northam is within an internationally recognised hotspot for biodiversity conservation, the South West of Western Australia. Hotspots identify regions with high levels of biological diversity and endemism² that are under threat (Myers *et al* 2000, Conservation International 2011). In the South West of Western Australia approximately half of the flora are endemic (Hopper and Gioia 2004) and the latest estimates show over 8000 species of flora in this region with approximately 15-20% not yet named (Keighery and Keighery, 2011).



Figure 1: SWAEI Priority Index
(Purple identifies selected 100% in the modelling, to green polygons selected less than 10%)

Hotspots for biodiversity conservation are areas of 'exceptional concentration of species (at least 1500 species of vascular or higher plants) and experiencing habitat' (at least 70% of original habitat lost) (Myers *et al* 2000). Around the world, 35 areas were identified as hotspots and the Southwest of Western Australia was the only area in Australia. In 2004, additional nine areas were included (Conservation International 2011).



Figure 2: SWAEI Biodiversity Importance/Cost of threat

The conservation significance of vegetation within the Shire is supported through the outcomes of a systematic conservation planning process undertaken by the Southwest Australia Ecoregion Initiative (SWAEI) (SWAEI 2012). The SWAEI identified "Zones for Conservation Action", defined as 'a cluster of highly desirable planning units³ that contribute to achieving the targets set for 1,391 biodiversity conservation features in the most efficient manner' (SWAEI 2012). The priority indexation in Figure 1 demonstrates that many areas within the Shire are identified as critical to achieving the conservation targets in the Ecoregion (purple).

Figure 2 shows that within many planning units with high biodiversity values (greens and browns) there are good opportunities to retain these

Find the above layers in the EPT: Priorities for Further Investigations/ Southwest Australia Ecoregion Initiative http://lbp.asn.au/index_public.html or go to http://swaecoregion.org/web/map/SWAEI_Map_tidy.html

² Endemic refers to a species having a natural distribution confined to a particular geographic region.

³ Planning units used in the SWAEI modelling consisted of hexagons with a 2km diameter.

assets as few are considered threatened by urbanisation, *Phytophthora* dieback and salinity.

Two biogeographical regions occur within the Shire of Northam; the Jarrah Forest and Wheatbelt Interim Biogeographic Regions of Australia (IBRA). Significant sections of the Wheatbelt IBRA are over-cleared, with remaining vegetation showing high levels of flora endemism.

The western half of the Shire is within the Jarrah Forest IBRA. While large areas of vegetation are protected at the bioregion level, there are numerous vegetation types in the Jarrah Forest without adequate formal protection and management for conservation (Local Biodiversity Program, 2013).

2.2 Geology, Landforms and Soils

The Shire of Northam is underlain by the Yilgarn Block granite craton, the massive, ancient, igneous geological unit located east of the north-south trending Darling Fault. As well as granite, the craton contains dolerite dykes and metamorphic rocks such as gneiss.

Although there are occasional outcrops of the granitic bedrock, especially in valleys, it is largely overlain by a layer of much younger lateritic rock and associated gravels, clay and sand, and weathered bedrock, to a depth of up to 20 m. The hard cap layer of laterite is generally 2 m in depth. It forms low breakaways where the plateau surface has been eroded by water courses.

The diversity of landforms found in the Shire is influenced by the drainage systems and rainfall which vary across the Shire from east to west. The Shire contains two broad physiographic zones: the Darling Range in the west; and to its east, the Rejuvenated Drainage Zone, which includes the Rejuvenated and the Mature Drainage Zones (Pen 1999).

In the western portion of the Shire, closer to the Darling Fault, the highest elevations are around 300 m AHD. Drainage lines occupy steep, well-defined V-shaped valleys and channels in which the valleys may be 60 m to 200 m deep (Pen 1999). The average annual rainfall here is around 600-700 mm.

The central and eastern portion of the Shire is within the Mature Drainage Zone which occurs in areas with average annual rainfall of 450-650 mm. In this zone valleys are broad, as much as 5 km across, but the landscape is undulating with noticeable drainage lines, broad flattish but generally continuous river valleys, with some salt lakes and pools. Streamlines are considered rejuvenated, often having a braided, densely vegetated form. The rejuvenation was caused by the uplifting of the Darling Plateau about 50 million years ago triggering the incision of the rivers more deeply into the landscape.

Changes in landform, soils and rainfall are reflected in the diversity of vegetation occurring in the Shire of Northam. Within the westerly portion of the Shire, in the Darling Range and Plateau, the gently undulating



Figure 3: Mt Ommaney, Northam (Google Images)

uplands are dominated by jarrah (*Eucalyptus marginata*) forest, mixed with marri (*Corymbia calophylla*), bull banksia (*Banksia grandis*) and common sheoak (*Allocasuarina fraseriana*). The sides of the major valleys support jarrah, marri and sometimes wandoo (*E. wandoo*), with yarri (*E. patens*) on the lower slopes and flooded gum and freshwater paperbark (*Melaleuca raphiophylla*) on the valley floor. The slopes of minor valleys of tributary streams are dominated by jarrah, marri and yarri. Their swampy floors support scrubs of brook peppermint (*Taxandria linearifolia*) and other shrubs, and woodlands of modong (*Melaleuca preissiana*) and swamp banksia (*Banksia littoralis*).

In the Shire's central and eastern portions, where rainfall is lower, forest communities are replaced by woodland communities. The typical jarrah/marri forests of the Darling Plateau are replaced by wandoo woodlands and on the eastern slopes of the Darling Range, York gum (*E. loxophleba* subsp. *loxophleba*) begins. Flooded gum (*E. rudis*) grows along the drainage lines. East of Northam, red morel (*E. longicornis*), gimlet (*E. salubris*) and salmon gum (*E. salmonophloia*) begin to dominate, with wandoo still present.

Patches of Brown Mallet (*E. astringens*) also occur in the Shire and are considered some of the Northern most outlier occurrences of this species (Julia Murphy, personal comment).

A suite of Eucalypt mallee species including but not limited to *E. pluricaulis*, *E. decurva*, *E. drummondii*, *E. horistes*, *E. tenera*, *E. phenax*, *E. albida* are also found within the Shire. These species grow on a variety of soil types and again some are considered outlying occurrences of their known extent (Julia Murphy, personal comment).

The lighter yellow and grey/white sand plains in the eastern portion of the Shire also support regionally important occurrences of *Banksia prionotes* (Acorn Banksia) and *B. attenuata* (Slender Banksia) that often grow in association with Proteaceous species. These communities are very important for nectivorous species, especially over the warmer and drier months (Julia Murphy, personal comment). An occurrence of *Acacia tetragonophylla* (Kurara) in the Shire is another example of a species that is generally known from further North and East and is typically to the pastoral areas of Western Australia. This occurrence is significant in that it is approximately 180 km South from the next nearest population and considered 'atypical' to the area and the local landforms and soil types (Julia Murphy, personal comment).

The isolated granite outcrops support rich and diverse ecosystems that contribute to high biodiversity, endemism and rarity of species in the south-west of Western Australia. Due to the high degree of heterogeneity recorded between outcrop assemblages of fauna (invertebrates) and flora, a large proportion of granite outcrops in the Wheatbelt need to be protected (Pinder *et al* 2000, Yates *et al* 2003).

A number of hills (Sugarloaf Hill, Mount Dick, Centenary Hill etc), some of which are small but are highly elevated, are also important geologically and for endemic flora found in these niches. The same is true for the breakaways that are associated with some of the hills found in the Shire (Julia Murphy, personal comment).

2.3 Vegetation

For this Strategy, native vegetation mapping is used as a surrogate to describe the variety of ecosystems in the study area. Biodiversity conservation priorities at the regional or biogeographic region scale and local scale are based on the degree of retention and protection of native vegetation. One of the key principles of biodiversity conservation is to prevent loss of species and ecosystems failure by retaining at least 30% of the pre-European settlement extent of each ecological community (EPA 2000, Del Marco *et al* 2004).

About 24% of the Shire is covered by remnant vegetation which is unevenly distributed. Remnant vegetation is mostly concentrated within the western half of the Shire, within the Jarrah Forest bioregion, where 42% of the pre-European extent remains. There is significantly more remnant vegetation in the Jarrah Forest than in the eastern half of the Shire, the Wheatbelt bioregion, where only about 10% of the pre-European extent of vegetation remains.

Over 76% of the Shire's remnant vegetation is classified as Local Natural Areas, or natural areas outside the lands managed by the Department for Parks and Wildlife (DPaW), including freehold land and land reserved in Local Government and other State Government agencies. Local Natural Areas are the focus of this Local Biodiversity Strategy.

Table 1: Overview of 2013 extent of remnant vegetation in the Shire of Northam (Local Biodiversity Program, 2014 & DPAW, 2013)

	Area	% of pre-European extent	% of current extent
Pre-European vegetation extent	143,125ha	100%	
2013 remnant vegetation extent	33,908ha		100%
Portion of current extent on DPAW managed lands	8,077ha	23.69%	23.81%
Portion of current extent in Local Natural Areas	25,831ha		76.19%
Portion protected on DPAW lands	6,688ha	4.67%	19.72%
Total protected locally*	7,644ha	5.34%	22.54%

*Locally protected natural areas include lands reserved for conservation on DPAW managed lands, other reserves with conservation purpose and land reserved in the Local Planning Scheme

The Roadside Conservation Committee has undertaken assessments of roadside vegetation conservation values of major roadsides across the State, including the Shire of Northam. These surveys have ranked the conservation value of roadsides by local government area, recording main vegetation types, vegetation structure and species, weeds, other threats and habitat features such as hollow logs and wildlife corridors.

In highly cleared landscapes such as the eastern side of the Shire, vegetation is often retained only within roadsides and might contain threatened or priority flora (see Figure 4 and in Appendix D Figure 4.2). Therefore the roadside vegetation mapping data should be used to support the prioritisation of conservation works within the Shire as well as to inform any planned road maintenance work to avoid damage to high conservation value vegetation. The Roadside Conservation Committee provides a range of publications on how to minimise impacts of

roadworks on native vegetation (<http://www.dpaw.wa.gov.au/management/off-reserve-conservation/roadside-conservation/>).

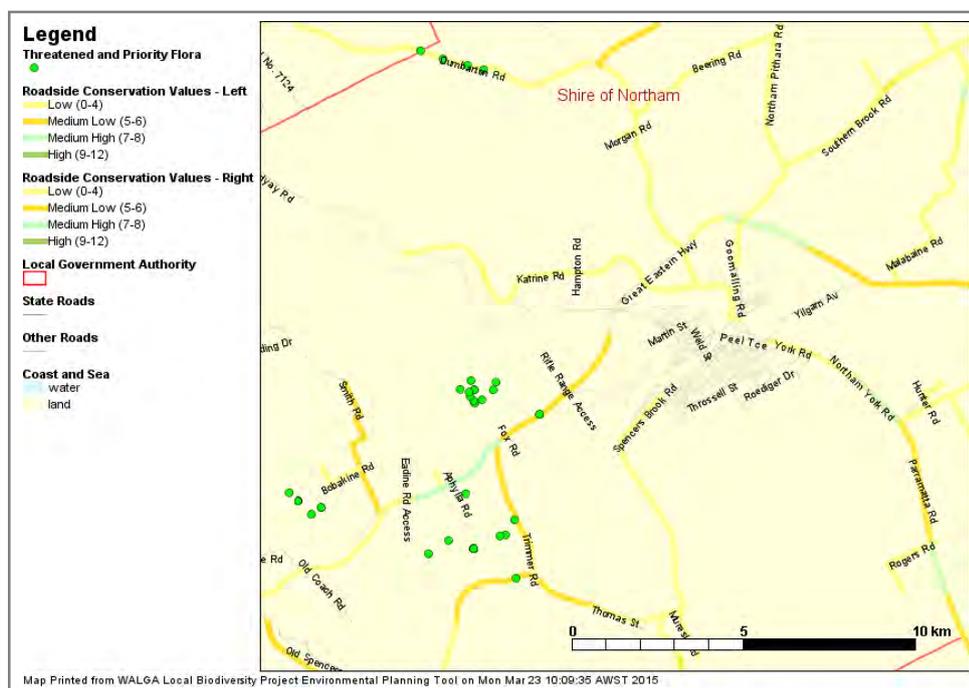


Figure 4: Roadside vegetation conservation value in the portion of the Shire of Northam (1988-1996) and records of Threatened and Priority flora (DPAW 2014).

2.3.1 Diversity of vegetation

There are two regional scale vegetation mapping datasets that cover the Shire:

- The Beard vegetation mapping (Shepherd *et al* 2001) describes vegetation at 1:250,000 in the south-west of Western Australia and is based primarily on vegetation structure. Vegetation associations have been described to the minimal standard of Level 3 Broad Floristic Formations for the National Vegetation Inventory System (See Appendix B).
- Vegetation mapping of the south-west forest regions of Western Australia by Havel and Mattiske (2000) converted geomorphologic maps into maps of vegetation using climatic data and outputs of localised quantitative studies, produced at the scale of 1:250,000. This dataset covers only the Darling Range (Jarrah Forest bioregion).

The State wide mapping by JS Beard (Shepherd *et al* 2001) shows broad floristic formations and describes nine Beard vegetation associations (BVAs) within the Shire of Northam.

Three vegetation associations; BVA4 (Medium woodland; marri & wandoo) and BVA3003 (Medium forest; jarrah, wandoo & powderbark) and BVA3004 (Medium forest; jarrah, laterite with wandoo in valleys, sandy swamps with teatree and banksia) are recognised as the Jarrah Forest bioregion for which more detailed vegetation mapping is available. The extent of these three vegetation associations closely aligns with the boundary between the two biogeographic regions and therefore the more detailed mapping is used in this Strategy to

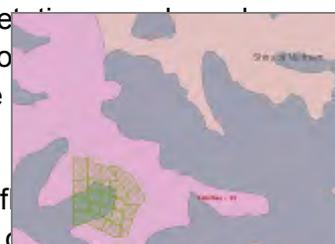


Figure 5: Pre-European vegetation mapping (Mattiske & Havel 2000). Compare with Figure 6.

describe the vegetation within the Jarrah Forest portion of the Shire. Figures 6 and 7 compare the two mapping datasets for the same portion of the Shire.

In the Wheatbelt bioregion portion of the Shire, BVA352 (Medium woodland; York gum) was mapped as the most common vegetation association. Currently it still remains the most common vegetation association but less than 10% remains in the Shire and less than 30% remain in the bioregion.

The most threatened vegetation associations in the Shire are BVA694 (Shrublands; scrub-heath on yellow sandplain Banksia-Xylomelum alliance in the Geraldton Sandplain & Avon-Wheatbelt Regions) and BVA1049 (Medium woodland; wandoo, York gum, salmon gum, morrel & gimlet). Less than 10% of the pre-European extent is retained in the Wheatbelt bioregion and within the Shire.

Two mapped vegetation associations have a limited extent and therefore can be considered locally rare. They are BVA511 (Medium woodland; salmon gum & morrel) with 531ha and BVA946 (Medium woodland; wandoo) with only 16ha mapped in the Shire. These amounts represent less than 1% of the total pre-clearing extent mapped in the Wheatbelt bioregion so the portions in the Shire of Northam could be considered negligible in the bioregion context. However, these vegetation associations were over-cleared and less than 30% of the pre-European extent remains in the bioregion. In the Shire, their limited coverage was also reduced to less than 30% of BVA946 with only 4ha remaining, and to less than 10% of BVA511 with only 67ha remaining in the Shire.

At a local level, the best retained vegetation association in the Wheatbelt portion of the Shire is BVA1048 (Mosaic: Shrublands; melaleuca patchy scrub / Succulent steppe; samphire) with 48% of its pre-European extent still remaining in the Shire. However, at the regional level, its extent has reduced to less than 30%.

While all vegetation associations of the Wheatbelt portion of the Shire of Northam also occur outside the Shire, with portions of the regional extent within the Shire ranging from less than 1% to about 9%, these vegetation associations are cleared across the region to below the 30% or 10% threshold levels. Therefore all vegetation associations represented in the Shire of Northam are of high conservation priority.

In the Jarrah Forest portion of the Shire, there are three Beard vegetation associations and eleven vegetation complexes. The vegetation complex mapping indicates the appropriate biodiversity conservation priorities in the Jarrah Forest portion of the Shire.

Three vegetation complexes have less than 500ha in the Shire and can be considered locally rare. They are Cooke (470ha), Goonaping (258ha) and Swamp (29ha).



Figure 6: Remnant vegetation by Beard vegetation associations in the southern portion of the Shire of Northam

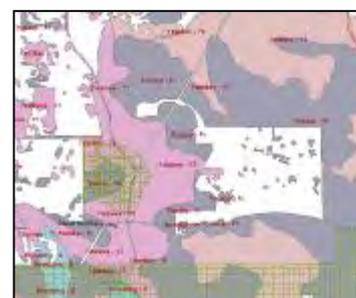


Figure 7: Remnant vegetation by vegetation complexes (Havel & Matiske, 2000) in the southern portion of the Shire of Northam

The most common vegetation complexes are Yallanbee 6, Pindalup and Yallanbee 5, which together originally covered about 60% of the Jarrah Forest portion of the Shire. The Shire proportion of the regional extent of these vegetation complexes ranges from less than 1% to 13%, so none of these are geographically limited to the Shire boundaries.

The representative vegetation complexes and vegetation associations can be divided into two conservation significance categories reflecting their retention and protection status at the regional and local scale (Table 2).

Table 2: Categories of vegetation in the Shire of Northam

		Vegetation complexes (See Appendix C for descriptions)	Beard vegetation associations	Total vegetation remaining in each category or % of remaining vegetation
Regionally significant				
Less than 10% retained in the region			BVA694 BVA1049	1266ha or 3.7%
Less than 30% retained in the region and/or less than 17% protected in the region	And less than 30% retained in the Shire	Bindoon Coolakin Michibin Murray 2 Williams	BVA352 BVA511 BVA946	7611.93ha (AW) 6884.31ha (JF) (Total not shown due to the overlap of vegetation mapping datasets)* 36.98%
	And more than 30% retained in the Shire	Cooke Pindalup Yallanbee 5 Yallanbee 6	BVA1048 (BVA4, BVA1006 and BVA3003**)	371.56ha (AW) 19559.88ha (JF) 19,931.44ha(AW+JF) or 58.78%
Locally significant				
Locally rare and unprotected		Swamp		12.84ha or 0.04%
Other vegetation complexes		Goonaping		201.87ha or 0.5%
Total*				100%

*Summary of area totals in each category in Table 2 is larger than the area of vegetation remaining in the Shire (33908ha). This is due to the overlap between the two vegetation mapping datasets, in particular between BVA352, BVA511, BVA946 and the vegetation complexes in the corresponding conservation significance category.

**These three BVAs are not included in the total area of 19,559.88ha (JF)

Table 2 demonstrates that nearly all vegetation remaining in the Shire is of regional conservation significance. Comparing the distribution of vegetation complexes and Beard vegetation associations with the conservation significance categories demonstrates the benefits of undertaking detailed mapping of vegetation complexes. While Beard vegetation associations representative of vegetation in the Jarrah Forest bioregion (BVAs 4, 1006 and 3003) are considered regionally significant due to poor representation in the State's conservation estate, they are all retained above the 30% threshold level locally. Vegetation complex mapping which illustrates patterns of vegetation in the Jarrah Forest bioregion identifies vegetation complexes that are of higher conservation priority as little of this vegetation is retained locally. Within an area containing Beard vegetation associations of equal conservation significance, areas of higher conservation priority can be identified by mapping at a more detailed level (i.e. vegetation complexes.)

The retention and protection status of vegetation complexes is based on the 2013 vegetation extent mapping available through DAFWA and calculations by the Local Biodiversity Program. The retention

and protection status of the Beard vegetation associations are based on figures published by the Department of Parks and Wildlife (Government of Western Australia 2013). See Appendix D for the detailed statistical data.

2.3.2 Protection status of vegetation

In the context of this Local Biodiversity Strategy the following land categories are considered formally protected:

- Lands managed by DPaW for conservation (National Parks, Nature Reserves, Conservation Parks and *Conservation and Land Management Act* S5(g) Reserves)
- Land Administration Act 1997 reserves for the purposes of Protection of Vegetation, Flora, Fauna or Foreshores (vested in and managed by an agency other than DPaW)
- Land classified as local reserves for *Conservation of Flora and Fauna* under the Shire of Northam Local Planning Scheme No 6 (2013)
- Private lands with conservation covenants⁴ on land title.

There are many landholders (broad-acre farming or lifestyle) that manage their remnant vegetation for the purposes of conservation or amenity, with one property managed under a conservation covenant (Wheatbelt NRM) and 28 landholders participating in the voluntary program ‘*Land for Wildlife*’ (DPaW, 2014) in the Shire. However, a review of covenanting programs in Australia (Fitzsimons and Carr, 2013) found that lack of time to undertake active management of protected values by the covenantors was one of the biggest impediments to achieving biodiversity conservation outcomes. Other barriers included lack of financial resources, human resources and consistent monitoring methodologies to assess the effectiveness of adopted management strategies. Therefore, effective stewardship programs to assist land owners with the management of remnant vegetation for conservation purposes are critical. See section 4.2.2. of this document for recommended strategies to develop an effective private landholders incentives scheme.

In the regional context, which only considers the representation of vegetation within the DPaW conservation lands, two vegetation complexes represented in the Shire have more than 17% of their pre-European regional extent protected; Goonaping and Swamp. All Beard vegetation associations (including those within the Jarrah Forest bioregion) and all other vegetation complexes have less than 17% protected in the Wheatbelt and Jarrah Forest bioregions.

Large portion of the Shire of Northam falls within one of the Australia Government’s under-represented bioregions (regions that have less than 10% of original remnant vegetation protected) and in these regions the conservation and maintenance of existing biodiversity values is considered the highest priority (Australian Government, 2014).

There are several vegetation complexes and vegetation associations that have no local protection and thus not contributing to their regional protection status. The Local Biodiversity

⁴ Conservation covenants are binding agreements between a landowner and an authorised body to help the land owner to protect and manage the environment on their property, registered on the land title. In Western Australia there are two main agencies providing biodiversity conservation covenanting programs: the Department of Parks and Wildlife and the National Trust.

Program estimates the area of each vegetation association or complex that should be contributed from the Shire of Northam to assist in reaching regional goals for protection. These estimates are based on the proportion of the pre-European regional extent of vegetation in the Shire (see Tables 1 and 2 in Appendix D). Cooke and Pindalup vegetation complexes are not adequately protected at the regional level but there is an acceptable level of representation in the Shire⁵.

Table 3 lists all vegetation associations and vegetation complexes with inadequate protection in the region (less than 17% of the pre-European extent in the bioregion) and their local protection status.

Table 3: Protection status of regionally under-represented vegetation within the Shire of Northam and further area of vegetation requiring protection in the Shire to contribute to the improved protection status in the bioregion.

Vegetation mapping		% of pre-European extent in the Shire of Northam protected*	Minimum area required in the Shire to improve protection status of vegetation at the regional level
Wheatbelt bioregion (0.49% of pre-European extent protected in the Shire)			
Beard vegetation associations	352	0.48%	All remaining in good condition#
	511	0.00%	All remaining in good condition#
	694	0.23%	All remaining in good condition#
	946	0.00%	All remaining in good condition#
	1048	2.9%**	107ha
	1049	0.00%	All remaining in good condition#
Jarrah Forest bioregion (5% of the pre-European extent protected in the Shire)			
Vegetation complexes	Bindoon-Bi	0.00%	810ha
	Cooke-Ce	46%	0
	Coolakin-Ck	3.80%	1129ha
	Michibin-Mi	5.26%	1067ha
	Murray 2-My2	1.70%	215ha
	Pindalup-Pn	19.09%	0
	Williams-Wi	0.00%	191ha
	Yallanbee-Y5	15.96%	108ha
	Yallanbee-Y6	15.26%	286ha

*Protected within DPaW managed lands for conservation, in local reserves with conservation purpose or reserved Conservation of Flora and Fauna in the Local Planning Scheme No 6(2013).

**All protected outside DPaW managed lands.

#Remaining area of native vegetation representative of this BVA is below or at the minimum area that is required from the Shire to achieve proportionate contribution to the regional protection target of 17%. Due to the unavailability of information on vegetation condition of native vegetation in the Shire, it is not feasible to calculate the minimum area.

The same pattern of uneven vegetation distribution observed in the distribution of remaining vegetation is reflected in the differences in protection levels between the two bioregions in the Shire. While just over 5% of the pre-European extent of vegetation is protected in the Shire, the majority of the protected areas are in the Jarrah Forest portion of the Shire, with only 443ha or 0.49% of the pre-European extent of the Wheatbelt bioregion portion of the Shire protected.

⁵ This should not be interpreted that no further areas with vegetation representative of Cooke and Pindalup vegetation complexes should be formally protected. Vegetation representation is only one of many criteria being considered when selecting areas for conservation.

BVA511, BVA946, BVA1049, Bindoon and Williams vegetation complexes are not represented in any conservation reserve or protected via other mechanisms within the Shire.

Table 3 shows the minimum area of regionally under-protected vegetation associations and vegetation complexes that should be protected within the Shire to contribute the Shire's proportion of the regional protection target⁶. In most instances the minimal area required to contribute to the national target for vegetation associations in the Wheatbelt bioregion is no longer achievable due to the limited extent remaining.

2.4 Threatened species and ecological communities

A search of the NatureMap database (DPaW, 19/03/2015) identifies 1126 different native species of flora and fauna within the Shire of Northam, including nine species of fauna, one spider and five species of flora that are rare or likely to become extinct. A further eleven fauna species are protected under international agreements or other specially protected fauna. Thirty eight priority species are listed (Table 4). Two native arachnid species are listed as endemic to the Shire area: *Antichtopauropus breviarus* and *Stylopauropoides lapicidarius*.

In 2011, a discovery of a new species, *Euoplos sp* (*Albino trap door spider*) on a private property in the Shire was the focus of international media for new biological discoveries and recognised by the National Geographic's list for the top ten weirdest life forms of 2011 (<http://news.nationalgeographic.com.au/news/2011/11/111108-new-spider-albino-australia-trapdoor-burrows-animals/>).

Dr Mark Harvey (WA Museum senior curator) has stated "this is only one of three known species in the world — all from Western Australia — with a white head and normal-coloured body."

Table 4: List of Threatened and Priority flora and fauna for the Shire of Northam (DPWA 2015)

Specially protected fauna (Recovery Plans have been endorsed for the highlighted species)	Conservation code
<i>Actitis hypoleucos</i> (Common sandpiper)	IA
<i>Apus pacificus</i> (Fork-tailed swift)	IA
<i>Ardea modesta</i> (Eastern Great Egret)	IA
<i>Aspidites ramsayi</i> (Woma)	S
<i>Bettongia penicillata</i> subsp. <i>ogilbii</i> (Woylie, Brush-tailed Bettong)	T
<i>Calidris ruficollis</i> (Red-necked Stint)	IA
<i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black Cockatoo)	T
<i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo)	T
<i>Calyptorhynchus latirostris</i> (Carnaby's Black Cockatoo)	T
<i>Dasyurus geoffroyi</i> (Chuditch, Western Quoll)	T
<i>Falco peregrinus</i> (Peregrine Falcon)	S

⁶ The minimal proportion is calculated as the percentage of the Shire proportion of the 17% of pre-European extent in the bioregion. For example, the pre-European extent of Bindoon-Bi of 4763ha represents 13.2% of the regional pre-European extent of this vegetation complex. To achieve at least 17% protection regionally, at least 6129ha needs to be protected in the Jarrah Forest bioregion. An amount the Shire should contribute to achieve the national target (17%) can be determined as 13.2%

<i>Falco peregrinus</i> subsp. <i>macropus</i> (Australian Peregrine Falcon)	S
<i>Hydromys chrysogaster</i> (Water-rat)	P4
<i>Idiosoma nigrum</i> (Shield-backed Trapdoor Spider)	T
<i>Isoodon obelus</i> subsp. <i>fusciventer</i> (Quenda, Southern Brown Bandicoot)	P5
<i>Ixobrychus flavicollis</i> subsp. <i>australis</i> (Australian Black Bittern)	P1
<i>Leipoa ocellata</i> (Malleefowl)	T
<i>Macropus irma</i> (Western Brush Wallaby)	P4
<i>Macrotis lagotis</i> (Bilby, Dalgyte)	T
<i>Merops ornatus</i> (Rainbow Bee-eater)	IA
<i>Morelia spilota</i> subsp. <i>imbricata</i> (Carpet Python)	S
<i>Oxyura australis</i> (Blue-billed duck)	P4
<i>Phascogale tapoatafa</i> subsp. <i>tapoatafa</i> (Southern Brush-tailed Phascogale)	T
<i>Tringa glareola</i> (Wood Sandpiper)	IA
<i>Tringa nebularia</i> (Common Greenshank)	IA
<i>Tyto novaehollandiae</i> subsp. <i>novaehollandiae</i> (Masked owl)	P3
<i>Westralunio carteri</i> (Carter's Freshwater Mussel)	T
Threatened and Priority Flora	Conservation code
<i>Acacia aphylla</i> (Leafless Rock Wattle)	T
<i>Acacia camphylophylla</i>	P3
<i>Acacia lirellata</i> subsp. <i>lirellata</i>	P3
<i>Amperea micrantha</i>	P2
<i>Anigozanthos bicolor</i> subsp. <i>exstans</i>	P3
<i>Anigozanthos humilis</i> subsp. <i>chrysanthus</i> (Golden Catspaw)	P4
<i>Asterolasia grandiflora</i>	P4
<i>Caladenia integra</i> (Mantis Orchid, Smooth-lipped Spider Orchid)	P4
<i>Calytrix oncophylla</i>	P2
<i>Chordilex chaunocoleus</i>	P4
<i>Cyanicula ixioides</i> subsp. <i>candida</i>	P2
<i>Cyanicula ixioides</i> subsp. <i>ixioides</i>	P4
<i>Dicrastylis reticulata</i>	P3
<i>Eremaea blackwelliana</i>	P4
<i>Eucalyptus loxophleba</i> x <i>wandoo</i>	P4
<i>Frankenia conferta</i> (Silky Frankenia)	T
<i>Frankenia glomerata</i> (Cluster Head Frankenia)	P3
<i>Gastrolobium hamulosum</i> (Hookpoint Poison)	T
<i>Gastrolobium rotundifolium</i> (Gilbemine Poison)	P3
<i>Grevillea candolleana</i>	P2
<i>Grevillea pimeleoides</i>	P4
<i>Hibbertia montana</i>	P4
<i>Lasiopetalum</i> sp. <i>Northam</i> (F. Hort 1196)	P2
<i>Lechenaultia laricina</i> (Scarlet Leschenaultia)	T
<i>Stylidium asteroideum</i> (Star Triggerplant)	P3
<i>Stylidium exappendiculatum</i>	P3
<i>Stylidium periscelanthum</i> (Pantaloons Triggerplant)	P3
<i>Stylidium striatum</i> (Fan-leaved Triggerplant)	P4
<i>Synaphea diabolica</i>	P3
<i>Synaphea</i> sp. <i>Darkin</i> (F. Hort et al. 586)	P3
<i>Tetratheca pilifera</i>	P3
<i>Tetratheca similis</i>	P3
<i>Thomasia glabripelata</i>	T
<i>Thysanotus cymosus</i>	P3
<i>Thysanotus tenuis</i>	P3
<i>Trichocline</i> sp. <i>Treeton</i> (B.J. Keighery & N. Gibson 564)	P2
<i>Verticordia serrata</i> var. <i>linearis</i>	P3

*Conservation Codes (See Appendix E for definitions)

T - Rare or likely to become extinct

X - Presumed extinct

IA - Protected under international agreement

S - Other specially protected fauna

P1 - Priority 1

P2 - Priority 2

P3 - Priority 3

P4 - Priority 4
P5 - Priority 5

Two of the bird species listed in Table 4 have been recorded breeding in the Shire: Blue-billed duck (P4) and Rainbow bee-eater (IA) (Birds Australia, 2009). Rainbow bee-eaters migrate from north to the south west of Australia to breed, often utilising the existing breeding sites. They form nests in the ground and are therefore vulnerable to predation by foxes. Fencing off known breeding sites will significantly increase the chance of successful breeding.

Of the listed threatened fauna, it can be assumed that the Woylie became locally extinct. The current Recovery Plan for this species (Yeatman & Groom, 2012) identifies only four remaining indigenous populations in the south west of Western Australia, all outside the Shire. Bilby and malleefowl can also be assumed locally extinct (<http://www.environment.gov.au/biodiversity/threatened/>).

However, the Shire's natural areas still provide habitat and support populations of other six threatened fauna species. All vegetation in the Jarrah Forest portion of the Shire is mapped as priority for investigation as feed habitat for the Endangered Carnaby's black cockatoo, with large sections within a buffer of a known breeding site, one possible breeding site and two confirmed roosting sites (DEC, 2011). Wheatbelt is the traditional breeding region for the Carnaby's black cockatoos, however due to significant habitat loss they have been expanding westwards as a breeding bird into the Darling Range and on to the Swan Coastal Plain (Johnston *et al*, 2010).

Distribution of the Carnaby's black cockatoo in the Jarrah Forest bio-region overlaps with the distribution of two threatened black cockatoos, Baudin's and Forest red-tailed cockatoos (Australian Government, 2012a). All three species of black cockatoos are endemic to the south west of Western Australia.

Clearing of forests and woodland habitat resulted in the loss of food and hollow-bearing trees and are the major reason for the decline of all three species in the south west of Western Australia (Johnston *et al*, 2010). All three species use tree hollows for breeding. Formation of such hollows is a very slow process and recent studies show that hollows suitable for black cockatoos start appearing in eucalypts that are at least 230 years old. Some of the oldest nest used by the three black cockatoos are estimated to be between 300-500 years old (<http://museum.wa.gov.au/explore/online-exhibitions/cockatoo-care/veteran-and-stag-trees>). Protection of native trees, even in otherwise cleared landscapes is critical to the conservation of these endemic species.

In addition to the loss of habitat due clearing and altered fire regimes, major threats to conservation of black cockatoos are (Johnston *et al*, 2010):

- Competition for breeding hollows by other birds (Gallahs, corellas, some ducks) and possums;
- Feral European honey bees taking over nest hollows;
- Shooting by orchardists;
- Poaching of eggs and chicks for the aviary trade;
- Impacts of climate change such as extreme temperatures;
- Vehicle strikes.

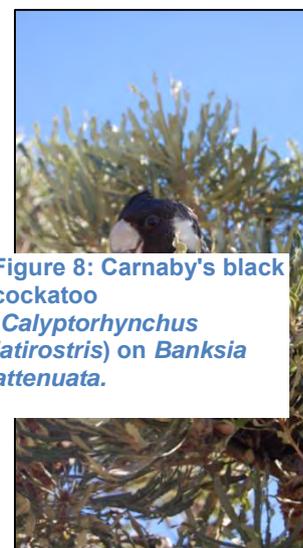


Figure 8: Carnaby's black cockatoo (*Calyptorhynchus latirostris*) on *Banksia attenuata*.

Protection and improvement of critical habitat, including adequate hollow-bearing trees in the landscape are key to ensuring the conservation of the chuditch and the Southern Brush-tailed Phascogale and to allow for genetic variation between populations in the south west of Western Australia (Department of Environment and Conservation, 2012, <http://www.environment.gov.au/node/14789>). Control of foxes and feral cats across all lands are also listed as priority recovery actions but more research is required into feral cat control techniques to minimise risk on chuditch (Department of Environment and Conservation, 2012).

Fauna surveys of four nature reserves managed by DPAW in the Shire demonstrated the diversity of fauna present and highlighted the importance of smaller reserves to the diversity of birds in the region. Many bird species not recorded elsewhere in the Shire and its surrounds were found in the Meenaar Nature Reserve which was found to be particularly rich in bird species. Although the reserve is less than 100 hectares and divided by a major highway, at least 17 bird species were recorded to nest in the Reserve (Department of Conservation and Land Management, 1987). This highlights the importance of protecting the smaller patches of vegetation retained in the highly fragmented landscape.

Westralunio carteri (*Carter's Freshwater Mussel*) is endemic to the south west of Western Australia and occurred in fresh waters from Moore River to King George Sound (Albany) and to the Avon River. It is estimated that its range reduced by about 50% due to salinization of the eastern extent of its range. The species was nominated in 2014 for listing as vulnerable under the EPBC Act. Further information has been required before the species can be listed under the EPBC Act that might be considered in 2015 (Commonwealth of Australia, 2015). To increase the chances for this species to expand to its original range, the mean water salinity should be less than 1.6 ppt and overhanging riparian vegetation, submerged tree roots and woody debris should be maintained along stream banks (Klunzinger & Walker, 2014)

See Appendix E for the full list of flora and fauna species recorded in the Shire of Northam, including naturalised species.

While there are no threatened or priority ecological communities recorded within the Shire, the Department of Parks and Wildlife lists the 'Pools of the Avon and Dale Rivers' as Priority 1 ecological communities on its list of Threatened and Priority ecological communities published in May 2014 (http://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/tecs/Priority_ecological_community_list_20_May2014.pdf).

Possible threatened ecological communities that do not meet survey criteria are added to the Priority Ecological Community Lists under Priorities 1, 2 and 3.

Priority 1: Poorly known ecological communities
Ecological communities that are known from very few occurrences with a very restricted distribution (generally 5 or less occurrences or a total area of less than 100ha). Occurrences are believed to be under threat either due to limited extent, or being on lands under immediate threat (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) or for which current threats exist. May include communities with occurrences on protected lands. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.

Source:
<http://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/tecs/tec-definitions-dec2010.pdf>

2.5 Waterways and Wetlands

Waterways in the Shire of Northam flow in three catchments; Avon-Mortlock catchment that captures water from the eastern parts of the Shire, Main Avon catchment that covers the central parts of the Shire and Lower Swan catchment which captures water from the most of the Darling Range portion of the Shire.

Avon (Wheatbelt) wetland mapping (DEC 2008) identifies several channel wetlands, including Avon River and its tributaries, many of them forming wetland suits⁷ being part and several wetlands associated with granite outcrops (Figure 9).

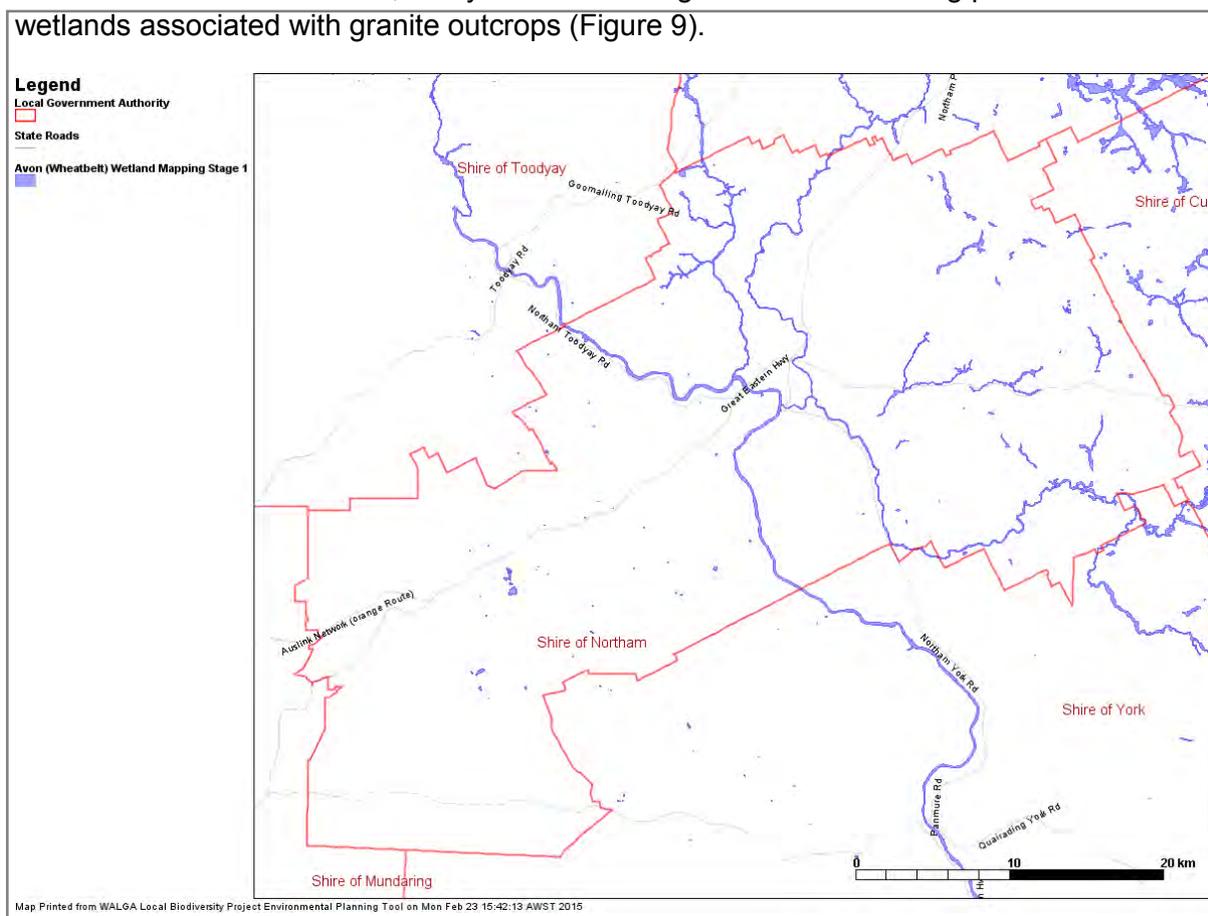


Figure 9 : Avon (Wheatbelt) Wetland Mapping (Phase 1) (Department of Environment and Conservation, 2008)

In its natural state, the portion of Avon River within the Shire had a highly braided form with a broad floodplain, numerous large and small pools. Following a major flood in 1955, the Avon River was modified or trained to reduce risk of future flooding. River training between 1957 and 1972, overgrazing, vegetation clearing and salinization within the Avon River basin significantly affected the condition of the river (Government of Western Australia, 2007; Pen, 1999). As a result, the once diverse wildlife which occupied the river and other wetlands became simplified and less abundant,

⁷ The term 'suite' refers to a group of wetlands in the same group, linked hydrologically but not necessarily geographically (DEC 2008).

with increasing number of introduced plants and feral animals. One of the obvious changes is the replacement of *Eucalyptus rudis* by more salt-tolerant *Casuarina obesa* (Water and Rivers Commission, 1999a).

While none of the mapped wetlands are classified as an important wetland by the Department of Parks and Wildlife (Department of Environment and Conservation, 2008), the Avon River, its tributaries and other wetlands are critical to maintaining biodiversity by providing specific habitat. In the Shire of Northam the waterways are critical to connecting natural areas across the landscape.

Avon River pools that form during the dry and hot months are considered the most valuable habitats of the river system (Government of Western Australia, 2007). In addition to their environmental values, they also have high aesthetic, recreational and cultural values (Shire of Northam 2012).

In 2007 the Department of Water compiled information on ecological, social and economic values of 21 sections of the Avon River and identified 16 pools as a high priority for rehabilitation. Three of these priority pools occur in the Shire of Northam: Glen Avon Pool, Katrine Pool and Burlong Pool. While not listed as a priority for rehabilitation in the Department of Water study (Government of Western Australia, 2007), Northam Town Pool also has ecological, social and economic values that should be maintained. Key management priorities include sediment management, water quality and aesthetics.

The section of the Avon River between the Northam Town Pool and Burlong Pool contains the only section of the river not affected by the river training scheme which operated from 1957 to 1972. It was designed to reduce the duration of flooding events. This section, known as the 'West Northam Forest', retains a relatively natural character, with braided channels and a dense vegetated floodway (Government of Western Australia, 2007).

There have been several major initiatives and groups over the last two decades in particular that have initiated works, research or administered funding and regional activity towards improving the condition of waterways in the Avon Basin (Revell *et al*, 2006).

In 1999, the Avon River Management Authority adopted a vision for the Avon River for the year 2020 (Water and Rivers Commission, 1999b). It is summarised as follows:

- *The Avon River and its tributaries have significantly improved as naturally functioning ecosystems according to measurable indicators.*
- *Sustainable agricultural systems are now firmly in place in 50% of the Avon River basin.*
- *All point sources of pollution of the Avon River have been identified and either eliminated or their impact minimised.*
- *Town Planning Schemes and Rural Strategies are in place and being implemented, which ensure top priority to maintaining the quality and the recovery of the Avon River ecosystem.*
- *Recreation use of the river is managed so as to provide fun, as well as appreciation of the river, with minimal environmental impact.*
- *The river wildlife has also recovered according to measurable indicators, and feral animals have been largely eliminated from the riverine bushland.*
- *Rural and urban communities have learned to respect the river, and to share responsibility for its recovery and conservation.*

- *Integrated, purposeful management of the river and the catchment are accepted as the responsibility of government agencies and community groups, and these parties share a common vision and goals, and enjoy working together to achieve them’.*

Some significant on-ground outcomes towards restoring the waterways in the Shire of Northam have been achieved and significant data collected to inform future strategic management within the catchment. Table 5 summarises the major outcomes of river and foreshore condition assessments undertaken in the Shire (Water and Rivers Commission, 1999b; Water and Rivers Commission, 2002; Water and Rivers Commission, 2003). The foreshore and channel assessments recorded bank stability, waterways features, foreshore condition, vegetation health and coverage, fencing status, overall stream environmental rating, habitats and their diversity, evidence of management, management issues, vegetation type and water quality (pH and electrical conductivity). Recommendations for future management were also listed. These datasets and other localised surveys provide good baseline data, and following an update on progress over the past 10 years, can be used to inform further planning for management and restoration priorities.

Table 5: Overview of key findings of foreshore condition assessments for waterways in the Shire of Northam (Water and Rivers Commission, 1999b; Water and Rivers Commission, 2002; Water and Rivers Commission, 2003)

(% of surveyed sections)	Avon River – Section 6 Northam (WRC, 1999)*	Mortlock River North (WRC, 2003)	Spencers Brook (WRC, 2002)
Foreshore condition			
A (A1 Pristine, A2 Near pristine, A3 Slightly degraded)	0	0	0
B (B1 Degraded – weed infested, B2 Degraded – heavily weed infested, B3 Degraded – weed dominant)	53%	8%	7%
C (C1 Erosion prone, C2 Soil exposed, C3 Eroded)	38%	91%	89%
D (D1 Ditch – eroding, D2 Ditch – freely Eroding, D3 Drain – weed dominant)	9%	1%	4%
Health Factors			
Floodway and bank vegetation			
Excellent	N/A	0	0
Good		0	0
Moderate		47%	26%
Poor		53%	70%
Very Poor		0	4%
Verge vegetation			
Excellent	N/A	0	0
Good		0	0
Moderate		30%	26%
Poor		66%	74%
Very Poor		4%	0
Stream cover			
Excellent	N/A	0	0
Good		1%	11%

(% of surveyed sections)	Avon River – Section 6 Northam (WRC, 1999)*	Mortlock River North (WRC, 2003)	Spencers Brook (WRC, 2002)
Moderate		58%	78%
Poor		30%	7%
Very Poor		11%	4%
Bank stability and erosion			
Excellent		0	0
Good		2%	0
Moderate		54%	22%
Poor	N/A	43%	74%
Very Poor		1%	4%
Sections with artificial bank stabilisation interventions		8%	22%
Habitat diversity			
Excellent		0	0
Good		1%	0
Moderate	N/A	97%	81%
Poor		2%	15%
Very Poor		0	4
Overall stream health rating			
Excellent		0	0
Good		0	0
Moderate	N/A	20%	26%
Poor		74%	70%
Very Poor		6%	4%
Observed vegetation regeneration	16%	73%	48%
Fencing status			
Both sides	52%	41%	7%
Left bank		16%	26%
Right bank	32%	12%	26%
No fencing	16%	31%	41%

*Avon River recovery plan used different methodology to assess the overall health of the river section.

The Wheatbelt NRM uses a threshold of more than 30% of waterway being degraded as an indicator of potential fundamental system change in river functions (Wheatbelt NRM, 2014). As identified in Table 5, all assessed waterways in the Shire of Northam are below this threshold. Waterway and riparian vegetation management, including fencing and revegetation are recommended as priority actions to improve the health of the waterways ((Wheatbelt NRM, 2014, Water and Rivers Commission, 1999b; Water and Rivers Commission, 2002; Water and Rivers Commission, 2003). While most of the Avon River is fenced, the Mortlock River, Spencers Brook and tributaries in the Shire of Northam will benefit from further fencing.

Extensive records of water quality monitoring are available for the Avon River and its main tributaries in the Shire of Northam, including information on pH, total nitrogen, total phosphorus or water salinity. All of these measures vary from one location to another. For example the natural pH of a waterway depends on the soil and rock over which the water moves. On the Mortlock River North, the average pH value recorded between 1975 and 2002 was 7.87 (7 equals neutral), with a

maximum of pH 8.74 (slightly alkaline) and a minimum of pH 6.70 (slightly acidic). Monitoring of pH is important as change in pH more than 0.5 units from the natural seasonal minimum and maximum may be detrimental to flora and fauna living within the waterway (Water and Rivers Commission, 2003). On the Avon River, most readings of pH collected during a snapshot assessment in 2006 were classified as neutral and slightly alkaline, in the Shire of Northam they ranged from 7.5 to 9.1 (Government of Western Australia, 2006). In the western portion of the Shire, the pH values ranged from 6.7-7.2 (classified as neutral) with one site recording pH 6.3, slightly acidic.

Except for the one locality with pH 6.3, all assessed waterways show pH above the threshold of below pH 6.5, adopted by the Wheatbelt NRM (2014). In areas with pH below the threshold level, retrofitting of local dam disposal of saline discharge is recommended (Wheatbelt NRM, 2014).

The salinity levels in waterways in the Shire ranged from moderately saline (2000-5000mg/L TDS⁸) to highly saline (10000-35000mg/L TDS) levels (Government of Western Australia, 2006). Higher salinity was recorded in the Mortlock River North, where the average salinity level for data collected between 1976 and 1997 was 13,400mg/L TDS (Water and Rivers Commission, 2003). Waterway salinity values declined towards the western boundary of the Shire (Government of Western Australia, 2006). Increased water salinity affects the quality and diversity of foreshore vegetation with indigenous vegetation such as *Eucalyptus rudis* being replaced by salt-tolerant species such as *Casuarina obesa*. Increased salinity of waterways can affect riparian vegetation restoration efforts (Government of Western Australia, 2006).

Water quality monitoring data collected within the Avon basin, with numerous collection sites occurring in the Shire, can be accessed via the Department of Water's *Water Information Reporting* platform available on <http://wir.water.wa.gov.au/SitePages/SiteExplorer.aspx>. Between 1999 and 2008, the Department of Water undertook water quality monitoring of 255 sites from 23 basins in Western Australia. One of the monitoring sites is within the Northam townsite and 3 additional sites are either within or in close proximity of the Shire boundaries. Data collected during these statewide assessments is available through the Department's interactive webpage available via <http://www.water.wa.gov.au/idelve/srwqa/>.

2.6 Ecological linkages

Habitat loss and fragmentation due to land clearing, salinization of the landscape and the introduction of feral animals are recognised as the biggest threats to biodiversity in the Wheatbelt region. Improving landscape connectivity by securing and managing remaining vegetation and undertaking revegetation are an effective management response to fragmentation (Australian Government, 2012b; EPA, 2008; Wilkins *et al*, 2006; Molloy *et al*, 2009).

See the Wheatbelt connectivity zones mapping in the Environmental Planning Tool: Northam Local Biodiversity Strategy/Wheatbelt NRM Corridor Plan Connectivity Zones

⁸ TDS – Total Dissolved Salts.

Wheatbelt NRM, an independent, community-based organisation for natural resource management in the Avon Wheatbelt bioregion, has developed a regional scale corridor plan (Richardson *et al*, 2013), based on the following broad principles for corridor planning and implementation:

1. “The planning process must be robust but any analyses able to be readily re-run in-house to exploit future opportunities.
2. Existing vegetation needs to be used as a skeleton on which to build corridors.
3. For existing vegetation patches the bigger the better.
4. For existing vegetation patches the closer the better.
5. Threats need to be considered early in the planning process.
6. Clearly defined and measurable objectives need to be determined during the planning process.”



Figure 10: Wheatbelt NRM Connectivity zones (purple boundaries) and 2014 native vegetation extent.

The study identifies high, medium and low ‘connectivity zones’ which take into account the number of patches of ‘functional vegetation’⁹, their area and configuration. The Shire of Northam falls within two connectivity zones: the portion west of the Northam townsite, within a high connectivity zone (HC West); and the portion east of the townsite, within a medium connectivity zone (MC North).

High connectivity zones include patches that are considered already well-connected. Maintenance and improvement of connectivity at local scales should be a priority in these areas. Medium connectivity zones identify areas where achievement of landscape connectivity will require significant investment.

Improved connectivity within the Wheatbelt’s medium connectivity zone will connect the rangelands, the extensive land use region east of the Wheatbelt, with the jarrah forest to its west, facilitating climate change response by connectivity along the climatic gradient from the drier central areas to the more mesic coastal areas (Richardson *et al*, 2013).

Connectivity zones address connectivity at the broad landscape scale. To assist with implementation, assessment of opportunities and constraints to establishing an ecological corridor at local level is recommended. Considerations include: the remnant patch size and distance between patches; land tenure; ecological values; and potential constraints to securing long term functionality of a corridor (Richardson *et al*, 2013).

The local natural area prioritisation presented in Section 3 of this document can be used to identify priority natural areas to form the stepping stones in corridors to be improved within the high and medium conservation zones.

⁹ Richardson *et al* (2013) defines “functional vegetation” as remnant patches outside the high risk salinity zone, are greater than 30ha and within a nominal distance (500m or 1km) of another patch or are greater than 200ha.

2.7 Threats to biodiversity

The extent and integrity of naturally occurring ecosystems in a landscape are affected by numerous threatening processes. As a result, many species of flora and fauna, and entire ecosystems, have been lost in the region, including within the Shire of Northam. The 2005 Avon Natural Resource Management Strategy (Avon Catchment Council 2005) recorded the following biodiversity losses within the Avon Basin Region:

- Five extinct flora species
- 71 endangered species and over 450 species of vascular plants being at risk from rising water tables
- Two extinct mammal species
- 121 Declared Rare Flora and 234 Priority Flora
- At least three endangered bird species and many of those remaining having a greatly contracted range.

The key contributors to biodiversity decline in the region are:

- Vegetation fragmentation, loss of habitat due to clearing and lack of management
- Altered hydrology, changing rainfall-runoff patterns, sedimentation of river pools, altered water quality, loss of riparian vegetation
- Altered fire regimes
- Feral animals, introduced plants and diseases such as Phytophthora dieback and marri canker
- Rubbish dumping, trampling and uncontrolled river crossings, stock access to waterways
- Lack of community understanding of the environmental values and the threatening processes.

Vegetation loss in semi-rural environments is often hidden as it occurs incrementally. Subdivisions into small lots of between 1-4 hectares, in rural residential or rural subdivisions, that provide for rural style living lead to clearing of vegetation along property boundaries, building envelopes and for access tracks. Any remaining vegetation will degrade over time due to unsustainable land use and increased exposure to threatening process such as increased risk of weed invasion, spread of pathogens and fire hazard reduction activities (Gardner, 2007). Grazing of the understorey by stock is another significant threat to the long-term viability of native vegetation and its habitat value to local fauna.

Table 6: A list of weeds and feral animals identified as major threats to biodiversity in nature reserves in the Shire of Northam*.

Significant Weeds

WONS - Weed of National Significance (<http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html>)

DP – Declared Pests include plants that are prevented entry into the State or have control or keeping requirements within the State.

<ul style="list-style-type: none"> • Spiny or Sharp Rush (<i>Juncus acutus</i>) • Skeleton Weed (<i>Chondrilla juncea</i>) DP • Bridal Creeper (<i>Asparagus asparagoides</i>) (WONS) • African Lovegrass (<i>Eragrostis curvula</i>) • Balloon Cotton Bush (<i>Gomphocarpus physocarpus</i>) • Euphorbia terracina (<i>Geraldton Carnation Weed</i>) • Cape Tulip (<i>Morea flaccida & Morea miniata</i>) DP • Patterson's Curse (<i>Echium plantagineum</i>) DP 	<ul style="list-style-type: none"> • Ryegrass (<i>Lolium loliaceum</i>) • Stinkwort (<i>Dittrichia graveolens</i>) • Watsonia (<i>Watsonia meriana var. bulbillifera</i>) • African Boxthorn (<i>Lycium ferocissimum</i>) (WONS) • Early Black Wattle (<i>Acacia decurrens</i>) • Flinders Range Wattle (<i>Acacia iteaphylla</i>)
<ul style="list-style-type: none"> • Feral animals <ul style="list-style-type: none"> • Feral Cats • Wild Dogs • Foxes • Native parrots • Pigs • Rabbits 	

*Source: Summary of Assets from Asset Collation prepared by the Avon Catchment Council in 2004. Copy provided by Greening Australia (WA).

Table 6 lists priority weeds in the Shire but does not include all weeds that occur within the Shire. The Shire's proximity and connectivity (via the Great Eastern Highway) to the wetter Hills area provides a conduit for emerging weeds that are becoming established. Roadsides provide ideal conditions for both established and emerging weeds as they are more mobile in these environments, are water gaining areas (through drains and culverts) and are disturbed via grading and maintenance.

The Shire of Northam already adopted a Local Law to address the control of Watsonia (*Watsonia meriana var bulbillifera* and *Watsonia meriana var meriana*) which required land owners to control this species and gives powers to the Shire to recover cost associated with control of the weed by the Shire if the landowner fails to do so (Pest Plant Local Law 2011, Government Gazette No 138, 22 July 2011). The provisions of this Local Law could be extended to other priority weed species. The Shire should also investigate opportunities for forming a *Recognised Biosecurity Group* under the provisions of the *Biosecurity and Agriculture Management Act 2007* (<https://www.agric.wa.gov.au/bam/recognised-biosecurity-groups-rbgs>). The Department of Agriculture and Food provides support to forming Recognised Biosecurity Groups.

Some ecosystems are more susceptible to specific threats. For example, Shedley (2007) identifies several high priority vegetation communities and species in the Avon Basin that require sensitive fire management, including:

- granite rock and ironstone outcrops
- heath communities
- salmon gum woodlands
- fresh and brackish wetlands
- malleefowl habitat
- fauna dependent on tree hollows.

Many threats will be exacerbated by the impacts of changing climate, particularly increased temperatures and increasing aridity (Wheatbelt NRM, 2014). The Wheatbelt NRM's Strategy (2014) recommends that the goals for the management of native vegetation should be to build resilience

and to limit the impact of existing and emerging stressors on the natural ecosystems and landscapes.

According to Davies (2010), a 10% increase in riparian revegetation is required for a 1°C decrease in water temperature in the waterways of south-western Australia. Due to increased drying and warming, it is recommended that restoration of rivers and streams includes targeted replanting of riparian vegetation, focusing on north banks of east-west upland streams to moderate water temperatures to levels below thermal limits of sensitive fauna (Davies 2010).

Management responses to improve biodiversity conservation in fragmented landscapes and to increase the capacity of natural areas to adapt to climate change should include the following (Molloy *et al* 2009, Commonwealth of Australia 2010):

- Provision of access to a greater number and diversity of resources
- Conservation of larger and more viable populations
- Enabling species dispersal and migration
- Provision of a more representative mosaic of habitat types and structures
- Facilitation of greater genetic variation within species
- Increase the capacity of species and communities to persist through removal of threats and adapting to disturbances.

Many of the above requirements can be facilitated are being addressed in this document.

3 Prioritisation of Local Natural Areas for Biodiversity Conservation

3.1 Methodology

The local biodiversity conservation planning approach adopted in this study follows the State government-endorsed methodology that was developed through the Perth Biodiversity Project and published in the *Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region* (Del Marco *et al*, 2004). It is used by numerous Local Governments in the South West of Western Australia. Local biodiversity conservation planning incorporates assessment of ecological values of local natural areas, consideration of opportunities and constraints to their protection and identification of conservation priorities and feasible implementation actions.

A set of biodiversity conservation principles guides the local biodiversity conservation planning process. Identification of local conservation objectives and identification of effective implementation mechanisms are based on the need to meet legislative, environmental and planning policy requirements and best practice in biodiversity conservation.

BIODIVERSITY CONSERVATION PRINCIPLES

1. Prevent exponential loss of species and ecosystem failure by retaining at least 30% of the pre-European extent of each ecological community
2. Protect regionally significant and locally significant natural areas
3. Biodiversity is best conserved in-situ - protect what you have before revegetating
4. Regeneration is a higher priority than revegetation
5. Prioritise protection and management of natural areas which have the highest biodiversity value
6. Involve the community in helping conserve biodiversity
7. Biodiversity values must be made transparent in decision-making processes
8. Site-specific field survey is essential to understanding biodiversity value
9. Natural area conservation is a legitimate land use

Native vegetation mapping is used to describe the various ecosystems represented in the Shire. Combining native vegetation mapping with other spatial data that describes biodiversity assets, such as significant flora and fauna records, forms the basis for the identification of priority natural areas for conservation.

This Strategy focuses on *local natural areas* that have been defined as natural areas¹⁰ which lie outside lands managed by the Department of Parks and Wildlife, Regional Parks (and Bush Forever in the Perth Metropolitan Region) (Del Marco *et al* 2004). In the Shire of Northam, over 25,700 hectares, or 76% of the remaining vegetation, is classified as 'Local Natural Areas'.

The objective of ensuring that a *comprehensive, adequate and representative* network of ecosystems is protected in the Shire assumes that by meeting this objective, the Shire will have made its necessary contribution to regional and national objectives for biodiversity conservation. '*Comprehensiveness*' refers to the degree to which a full range of ecological communities are protected. '*Adequacy*' refers to the ability of a reserve system to maintain the ecological viability and integrity of populations, species and communities. Complementary management of the adjacent lands can play a significant role in ensuring long term viability of conservation reserves. '*Representativeness*' refers to the extent to which protected areas are capable of reflecting the known biological diversity and ecological patterns and processes.

3.1.1. Criteria for determining conservation significance

Criteria for rating the conservation significance of local natural areas are based on *Local Government Biodiversity Planning Guidelines* (Del Marco *et al*, 2004) and reflect EPA criteria for identification of regionally significant natural areas (EPA, 2008). The criteria can be divided into four categories:

1. **Representation** – considers the regional and local level of retention and protection of all ecosystems represented within a Local Government, and compares this against accepted thresholds, such as the goal of retaining at least 30% of pre-European vegetation extent and protecting 17%.
2. **Rarity** – considers the presence of rare vegetation, flora and fauna.
3. **Maintenance of ecological functions** – reflects the level to which local natural areas contribute to the maintenance of healthy ecosystems in the landscape. Due to limited spatial data available to assess this at all ecosystem levels, vegetation connectivity and remnant patch size are used as a surrogate measure
4. **Protection of wetlands, riparian, estuarine and coastal ecosystems** – recognises the important role that these ecosystems play in maintaining biodiversity.

The EPA considers a range of additional criteria such as novel combination of species, diversity of species and vegetation, large populations, extreme ranges of species and scientific significance (EPA, 2008). However, this Strategy focuses on attributes that are mapped at Local Government and regional levels. It is not intended to undertake an all-

¹⁰ Natural area is used to describe an area that contains native species or communities in a relatively natural state and hence contains biodiversity. Natural areas can be areas of native vegetation, vegetated or open water bodies, waterways, springs, rock outcrops, bare ground, caves, coastal dunes or cliffs. Note that natural areas exclude parkland cleared areas, isolated trees in cleared settings, ovals and turfed areas (Del Marco *et al* 2004)

inclusive assessment but rather to identify priority areas where further field assessments are required to confirm the inferred and other values.

Twenty criteria represented by various spatial layers were applied to the 2013 native vegetation extent mapping (DAFWA 2013)¹¹. See Appendix F for the details. The final prioritisation layer shows the number of criteria met by each patch of remnant vegetation. The higher the number of criteria met, the higher the conservation priority of a given patch of remaining vegetation (See Figure 11, Appendix F or turn on the *Prioritisation Criteria* layer under the Northam Local Biodiversity Strategy heading in the EPT).

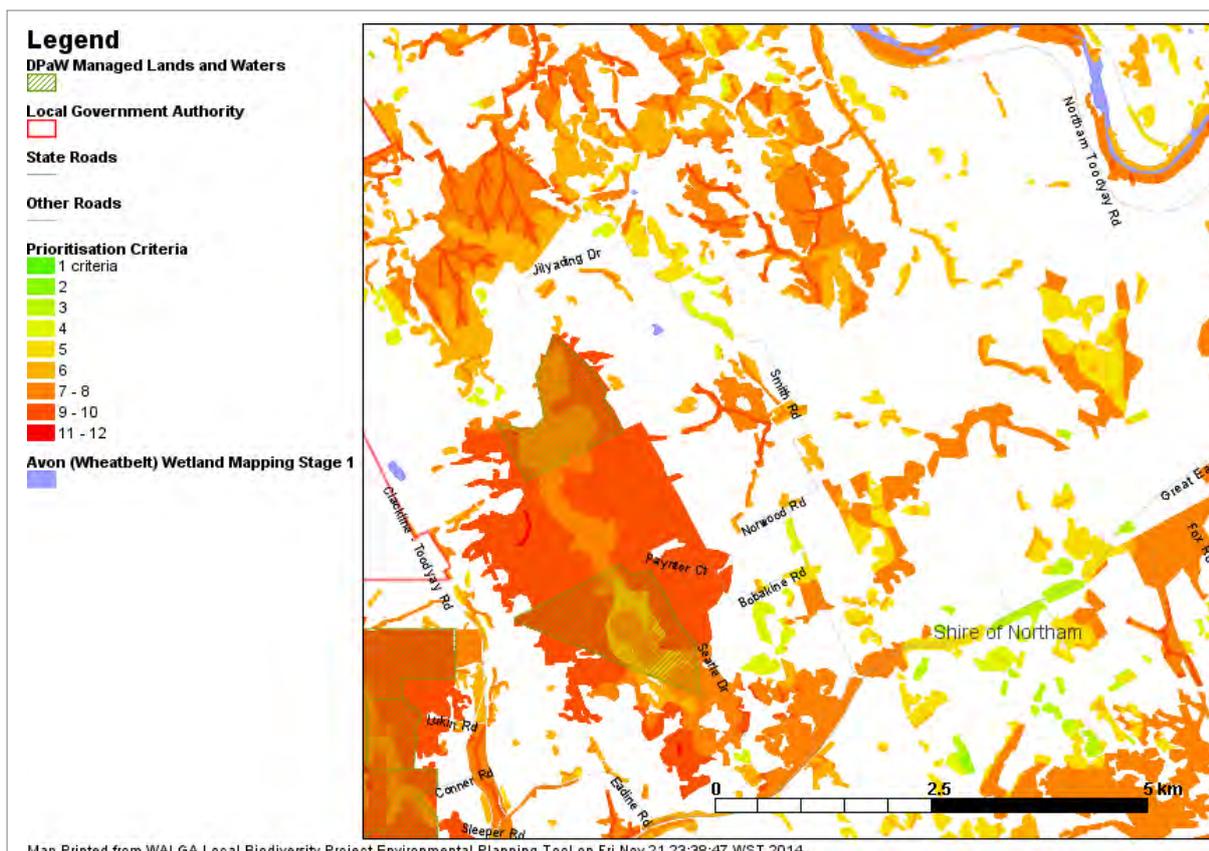


Figure 11: Number of prioritisation criteria met by native vegetation in the portion of the Shire of Northam (as displayed in the Environmental Planning Tool).

To interpret the information, it is important to understand which criteria are being triggered. An absence of threatened flora, fauna or ecological community's records does not necessarily mean those features are not present within a patch of native vegetation, as the lack of records can be due to the lack of adequate surveys. See Appendix H for further information on how to use data layers in the EPT to assist with decision making that is specific to a particular locality.

¹¹ The 2013 native vegetation extent mapping does not include all vegetation identifiable using aerial photography interpretation. For example, no native vegetation is mapped within the Meenar Nature Reserve. As the objective of this study is to consider 'local natural areas', for the purposes of prioritization, vegetation within the Meenar Nature Reserve, a natural area managed by DPAW for conservation, the missing vegetation was not substituted.

3.1.2. Connectivity and patch size analysis

The landscape connectivity zones identified for the Wheatbelt NRM Region (Richardson *et al*, 2013) provide a regional context for considering the role that individual patches of remaining native vegetation play at the local scale. However, further spatial analysis is needed, to better understand the impacts of changes in the current pattern of remnant vegetation and identify priority areas for restoration to improve connectivity at the local level.

Three connectivity descriptors or measures were developed through the Perth Biodiversity Project (Oh, 2012) to assess the level of connectivity between patches of remnant vegetation. A 'patch' was defined as a discrete polygon of vegetation or mapped wetland separated from another patch by at least 10 metres of non-vegetated land. Remnant patches were based on the 2013 native vegetation extent mapping (DAFWA, 2013) and the Avon (Wheatbelt) wetland mapping (DEC, 2008). Comparison of the native vegetation extent mapping with aerial photography identified gaps in the dataset, where native vegetation was missing. Vegetation within the Meenar Nature Reserve was added to the analysis.

The three connectivity descriptors, or measures, used to describe the various aspects of connectivity are:

- **'Fragmentation'** is a scaleless and dimensionless measure which describes the shape and local arrangement of defined patches in the study area. It measures the degree to which any remnant patch diverts from the 'ideal circle' shape. A high vegetation fragmentation index applies to large, compact or locally well-connected patches (least fragmented); a low index applies to small, isolated or poorly shaped patches (most fragmented).
- **'Regional Connectivity'** measures how well a patch contributes to a network of patches in the wider landscape. A high regional connectivity index applies to large patches or patches that are part of a large, dense regional network; and a low index applies to small, fragmented or isolated patches.
- **'Connectivity Reach'** refers to the size of the connective network that a patch belongs to but does not consider how sparse (fragmented) or dense that network is.

These connectivity descriptors, or measures, do not consider the inner patch diversity of habitats or the dispersal needs of individual species of fauna. However, they provide a good opportunity to objectively assess the role of individual patches, and the impacts that changes in vegetation distribution patterns have on connectivity (Perth Biodiversity Project, 2012; Local Biodiversity Program, 2013). A more detailed description of the connectivity modelling algorithm used is available in Appendix G.

A patch size analysis was undertaken to assist with quick identification of those areas of native vegetation that could potentially support a range of fauna or where specific land use provisions could be applied. In this analysis, a patch is defined as a discrete polygon of native vegetation separated from another polygon by 10m, where only native vegetation

extent mapping was used for the analysis (DAFWA, 2013) and wetland mapping was not included.

It is important to note that the patch size analysis does not consider the diversity or habitat characteristics within a patch. Although the patch size might indicate sufficient habitat size for a certain species of fauna, the quality of the habitat within this patch might not be adequate. Therefore this data layer should not be used in isolation.

Table 7 shows the patch size categories used and potential correlations with fauna habitat needs or other considerations.

Table 7: Patch size categories

Remnant vegetation patch size category	Consideration (Remnant size requirements for fauna are based on Wildlife Notes No 11, Hussey and Mawson 2004)
<2ha	2ha is the minimum to support one Brush-tailed Possum
2.1-5ha	5ha is the threshold to which the 2013 amendments to the clearing regulations limits apply 5ha is the minimum needed to support a Quenda population
5.1-10ha	Used in prioritisation criteria, 5-10 ha are common lot sizes for rural subdivisions. 10 ha has been adopted by the Wheatbelt NRM as a threshold for fragmentation (Wheatbelt NRM, 2014)
10.1-25ha	25ha of suitable vegetation is needed to support Pygmy Possums and Honey Possums
25.1-40ha	40ha Rural subdivision threshold
40.1-100ha	50-100ha needed to support Brush Wallaby population
100.1-200ha	Potential to support Woylie population
200.1-1000ha	Potential to support Echidna and Wambenger populations
>1000ha	Potential to support Chuditch population

The distribution of vegetation patches within the Shire correlates with the levels of native vegetation retention. Significantly larger patches, over 40 hectares, occur in the western portion of the Shire within the Jarrah Forest bioregion.

Despite the high level of clearing in the Wheatbelt portion of the Shire, the remaining vegetation is retained in several large and medium patches. These should be the highest priority for formal protection and form the key stepping stones in the local ecological network of natural areas. Results of the patch size mapping are available via the on-line Environmental Planning Tool and in Figure 12.

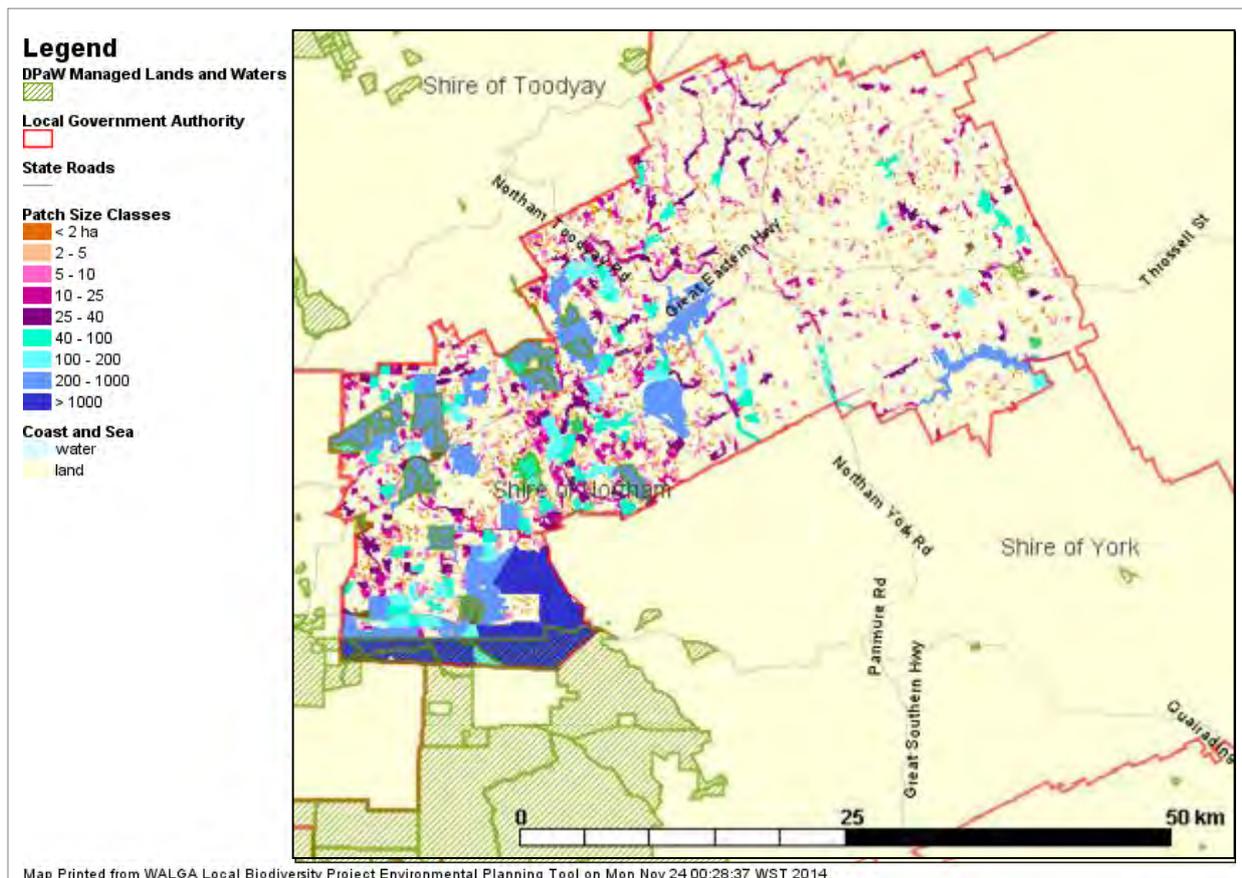


Figure 12: The patch size of native vegetation in the Shire(Local Biodiversity Program 2014).

3.1.3 Opportunities and constraints to local natural area protection

In the context of the local biodiversity conservation planning approach (Del Marco *et al*, 2004), protected natural areas are those that are secured for conservation either as public lands vested for biodiversity conservation purpose or private lands where the biodiversity values are secured under zoning or covenanting.

Of the 33,908 hectares of native vegetation remaining in the Shire, 6,486.8 hectares is protected in conservation reserves managed by the Department of Parks and Wildlife (DPaW). This represents 19% of the remaining vegetation and 4.5% of the pre-European extent (DPaW, 2013). A further 1,590 hectares is managed by the DPaW and these are areas that are considered to provide good opportunities for natural area retention and protection. However, site specific recommendations for DPaW managed lands are outside the scope of this Strategy¹².

An additional 934 hectares are protected in public reserves not managed by DPaW and vested for conservation and via the provisions of the ‘Conservation of Flora and Fauna’

¹² Local biodiversity strategies focus on ‘local natural areas’, defined as natural areas outside DPaW managed lands.

reservation in the Shire’s Local Planning Scheme No.6 (2013). These lands are defined as ‘Locally Protected Reserves’ in this Strategy and shown in Figure 13 (LP1 – LP11).

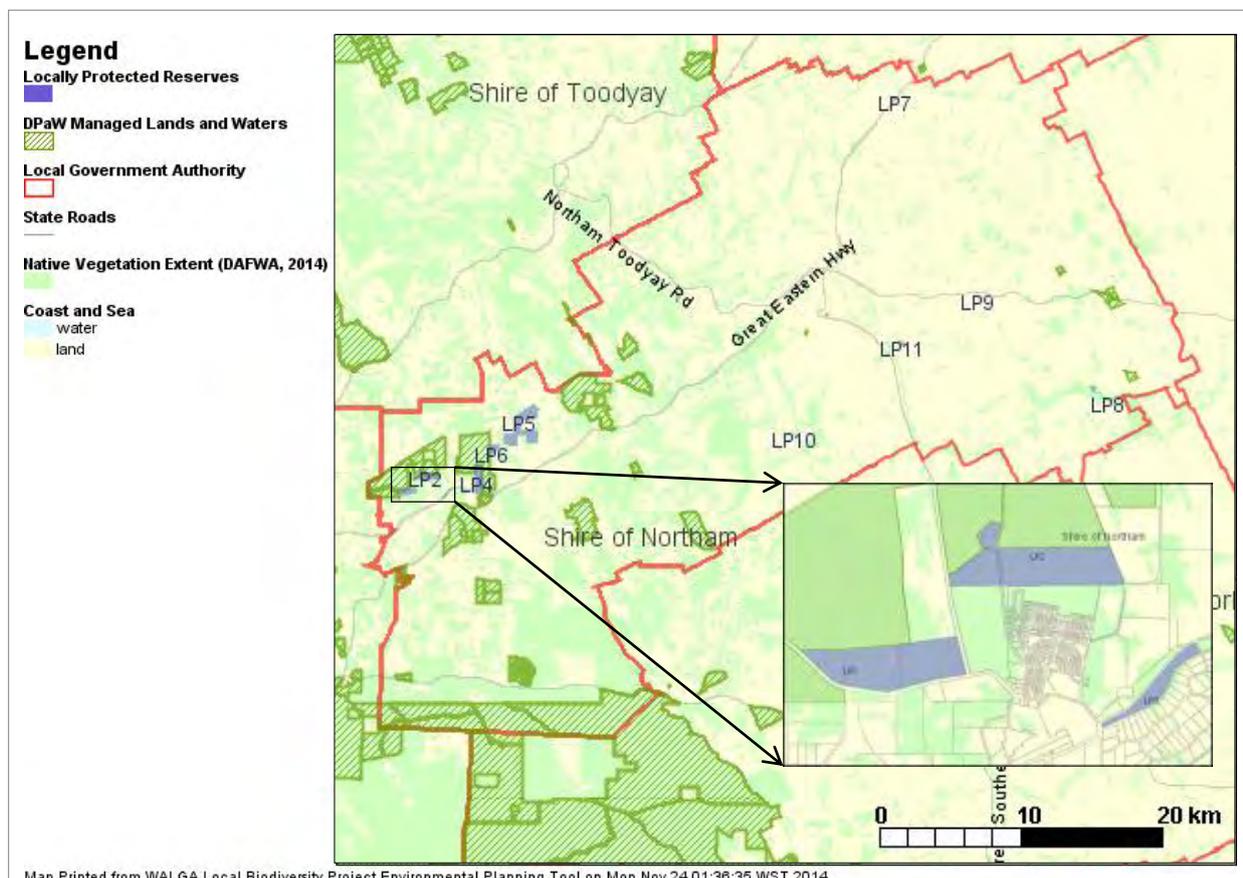


Figure 13: 2014 native vegetation extent, DPaW managed lands and lands protected through the Shire of Northam Local Planning Scheme No 6 (Local Biodiversity Program, 2014).

The ‘Locally Protected Reserves indicated in Figure 11 comprise Unallocated Crown Land (UCL) and six reserves with conservation or landscape protection purposes (four vested in the Shire of Northam and two in the State). Table 5 lists these conservation purpose reserves. In the Shire’s Local Planning Scheme No. 6 (2014) most of the ‘Local Protected Areas’ are classified as ‘Conservation of Flora and Fauna’, a land use category that also overlaps DPaW managed conservation purpose reserves. There are three ‘Locally Protected Reserves’ which are classified for other land uses in the Local Planning Scheme No 6 (2014):

- LP6 and LP10 are reserves classified for Parks and Recreation in the Scheme
- LP7 is a reserve classified for Public Purposes (about 0.4ha) and the remainder are zoned Rural in the Scheme.

It is recommended to amend the Local Planning Scheme and reclassify LP6, LP7 and LP10 as ‘Conservation of Flora and Fauna’ to reflect the vested purpose of these reserves (established under the *Land Administration Act 1997*).

Table 8: 2013 native vegetation extent in conservation reserves not managed by the Department of Parks and Wildlife (Local Biodiversity Program, 2014)

Reserves managed by the Shire of Northam	Vegetation types represented in the reserves				Total	Management responsibility	Notes*#
	Yalanbee - Y6	BVA 352	BVA 1048	BVA 1049			
R 48721 (Conservation)	34.44ha				34.44ha	Shire of Northam	In LP6; #14 Bakers Hill
R 1549 (Landscape Protection)		0.98ha	22.7ha		23.7ha	Shire of Northam	In LP8; #1 Grass Valley
R 6102 (Preservation of Natural Vegetation)		0.89ha			0.89ha	Shire of Northam	In LP9; #5 Grass Valley
R 42084 (Protection of Historical Site and Natural Vegetation)		9.70ha			9.70ha	Shire of Northam	In LP11, #1 Seabrook
R 41145 (Foreshore Protection)		0.33ha				Department of Planning	In LP10
R 50656 (Protection of Natural Landscapes)				3.34ha		Department of Regional Development	In LP7
Total:	34.44ha	11.89ha	22.7ha	3.34ha	68.68ha		

*Identification symbol in the mapping layer 'Locally protected reserves', e.g. LP7.

#Corresponding reference number in the Shire of Northam Land Rationalisation Strategy (2013a)

When identifying land with good opportunities to increase the protection status of remaining vegetation, reserved lands and Crown land are examined as a priority. In the Shire of Northam, 544 hectares of native vegetation is in public reserves vested in the Shire for various purposes. Nearly 69 hectares is in reserves with conservation purpose (Table 8) and 275 hectares is in reserves providing good opportunities for vegetation retention and potentially increased protection (see Appendix D, Table 8). Recommendations in the Shire's Land Rationalisation Strategy for the Northam Townsite (Shire of Northam, 2013a) were considered when compiling the list of reserves where the proposal is to extend or change the current purpose to include conservation.

Over 1,000 hectares of native vegetation is within Unallocated Crown Land (UCL). A significant portion of this vegetation is protected via the Shire's Local Planning Scheme No.6 provisions through reservation as 'Conservation of Flora and Fauna' (LP1-LP5 on Figure 13). Numerous UCLs are located along the Avon River and the Avon Mortlock Rivers Special Control Area (Local Planning Scheme No 6, 2014). Establishing management responsibilities and support for management of biodiversity values within these UCLs should be the highest priority for all relevant stakeholders.

Many private landholders have a good understanding and appreciation of the benefits that retaining native vegetation brings to their properties. In the Shire of Northam, nearly 860 hectares of native vegetation is within 29 properties registered with the DPaW's *Land for Wildlife Program* (personal communication DPaW *Land for Wildlife Program* Manager, 2014), a voluntary program through which participating landowners have access to technical advice on how to maintain habitat values of native vegetation on their land. Continued support to these landholders, promotion of this program to others and promotion of benefits of entering into conservation covenants could lead to wider participation and result in more formal protection of some vegetation on private land.

In addition to provisions for natural area protection, various land use categories in the Local Planning Scheme and vesting purposes of reserved lands can be divided into a further three categories according to the opportunities they provide for natural area retention or protection. Table 9 provides an overview, categorizing the Shire of Northam land uses.

Table 9: Opportunities for natural area retention and protection through land use planning (Local Biodiversity Program, 2014).

Opportunities category	Local Planning Scheme No 6 land uses and reserve purposes.	% of remaining vegetation within land use categories*
Protected	Crown reserves with conservation purpose (outside DPaW lands) and UCLs reserved in the Local Planning Scheme for Conservation of Flora and Fauna.	3.6% in AW 17.5% in JF
Good opportunities	Properties with DPaW's <i>Land for Wildlife</i> status. Parks and Recreation, Rural zoned lands and Crown reserves vested for Recreation (LU1) & Catchment (outside DPaW managed)	86% in AW 44.4% in JF ¹³
Varied opportunities	State Forest, Special Use, Public Purposes, Rural Smallholdings (>10ha lot size) and Crown reserves vested for all other purposes to those listed above.	7.2% in AW 37.5% in JF ¹⁴
Limited opportunities	Tourist, Commercial, Residential, Rural Residential, Development, Light & Service Industrial, Mixed Use and General Industry zoned land and Railway Reserve, Roads, Major or Regional Road Reserves	3.2% in AW 0.7% in JF ¹⁵

*AW – Avon Wheatbelt IBRA region and JF – Jarrah Forest IBRA region portions of the Shire

More detailed information on the distribution of native vegetation within all land uses is available in Appendix D.

¹³ Includes 15 ha of vegetation within properties registered with the *Land for Wildlife Program* and zoned Rural Smallholdings and Rural Residential in the Local Planning Scheme No 6.

¹⁴ Excludes 6.6ha of vegetation within properties registered with the *Land for Wildlife Program* and zoned Rural Smallholdings in the Local Planning Scheme No 6.

¹⁵ Excludes 8.4ha of vegetation within properties registered with the *Land for Wildlife Program* and zoned Rural Residential in the Local Planning Scheme No 6.

Most remaining vegetation is located on land where the zoning provides good or varied opportunities for retention and protection of representative vegetation in the Shire. The largest portion of the remaining vegetation is on land zoned Rural in the Local Planning Scheme No.6 (2014).

There is a difference between the two bioregions in the Shire. While 86% of the remaining vegetation in the Avon Wheatbelt portion of the Shire is located on land where zoning provides good opportunities for vegetation retention or protection, in the Jarrah Forest bioregion portion only 44% of remaining vegetation is in this category. Nearly the same amount is within land uses providing varied opportunities, such as State Forest.

A relatively small amount of vegetation is located on land where the zoning provides limited opportunities for vegetation retention, with a higher portion recorded in the already over-cleared eastern half of the Shire, where over 100 hectares of vegetation is mapped within road and railway reserves. While a relatively small amount of the remaining vegetation is located in transport corridors, it is often retained in highly cleared parts of the landscape, providing the only opportunity for fauna movement. Vegetation in road or railway reserves can provide habitat for threatened or Priority flora. Therefore road upgrades and maintenance activities should be undertaken in a way that avoids or minimizes impacts on vegetation.

The Northam Regional Centre Growth Plan (NRCGP) (Shire of Northam, 2012) area includes 136 hectares of native vegetation and the Avon and the Mortlock Rivers (See Figure 12). The results of natural area prioritisation show that most of the remaining vegetation in the NRCGP area meets numerous prioritisation criteria, suggesting high conservation value. There are two Beard vegetation associations represented in the NRCGP area; regionally significant vegetation BVA 4 and BVA 352. The NRCGP area west of the Avon River is within the transition zone between the two bioregions meeting in the Shire. Table 10 shows the distribution of vegetation within the NRCGP.

Table 10: 2013 vegetation extent by Beard vegetation associations within the Northam Regional Centre Growth Plan area (Local Biodiversity Program, 2014).

Growth Plan land uses	Avon Wheatbelt IBRA		Jarrah Forest IBRA		Total
	BVA4	BVA352	BVA4	BVA352	
Equine Precinct		8.96ha			8.96ha
Industrial Development	3.45ha	16.73ha	50.02ha		70.21ha
Urban Expansion	2.07ha	50.59ha	3.78ha	0.69ha	57.14ha
Total	5.53ha	76.28ha	53.81ha	0.69ha	136.31ha

The remaining vegetation and the rivers provide a good opportunity to establish a green network through the growing town. This will provide recreational opportunities, reduce the heat effect of built up areas, increase amenity, and encourage walking and cycling as preferred means of transport.

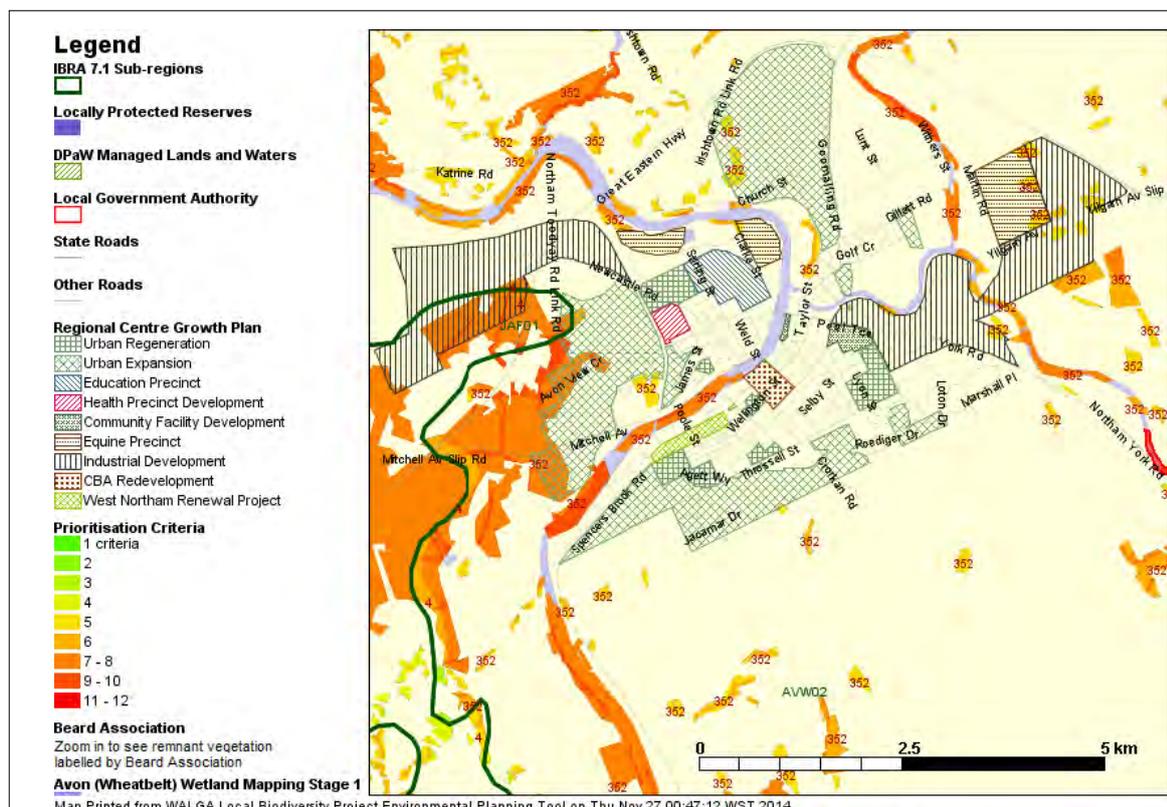


Figure 12: Number of prioritisation criteria met by native vegetation, and the Northam Regional Centre Growth Plan.

The Shire’s Local Planning Scheme No 6 (2013) and Local Planning Strategy (2013) include numerous provisions and development controls supporting biodiversity protection and restoration of degraded lands (see Appendix A).

3.1.4 Identification of representation targets and the Target Areas

Representation of ecological communities is one of the criteria considered when identifying conservation priorities. The retention and protection levels of vegetation are relatively easy to measure and provide a good opportunity for setting quantifiable conservation targets.

When determining local conservation targets, an assumption is made that each local area within a Local Government administrative boundary should contribute to the regional conservation target. The area contributed should be at least equal to the proportion of the original vegetation extent within the local area. This is a general principle and might not be achievable in all local areas due to historic clearing or the varied degrees of opportunities existing across the region. In addition, representation is only one criteria and other biodiversity values are equally important when building the regional network of protected natural areas.

The calculation of local representation targets is explained using the example of the Bindoon vegetation complex. There were 4,763 hectares of Bindoon vegetation complex mapped as pre-European extent in the Shire of Northam, representing 13.2% of the total area of Bindoon vegetation complex mapped in the Jarrah Forest bioregion. To achieve at least 17%

protection of the Bindoon vegetation complex in the region (Jarrah Forest bioregion), at least 6,129 hectares should be protected within several locations of its pre-European extent. This means that from the Shire of Northam at least 810 hectares or 13.2% of the 6,129 hectares should be contributed. In 2013, there was no Bindoon vegetation complex protected in the Shire and, at the regional level, less than 30% remains and less than 17% is protected.

Therefore the conservation target for Bindoon vegetation complex in the Shire of Northam should be 810 hectares of the 1,005 hectares remaining. Further analysis of opportunities to formally protect this vegetation complex in the Shire needs to be undertaken to assess the feasibility of this proposed representational target.

When identifying potential mechanisms for formal protection¹⁶, and assessing the feasibility of the proposed representational targets, the key factors to consider are land tenure, land use and the size of the patches of remnant vegetation that represent the vegetation complexes/Beard vegetation associations. Tables 1 and 2 in Appendix D show the calculations for determining the representation protection targets for each vegetation type and Table 9 in Appendix D provides an overview of opportunities to improve the protection status for vegetation complexes and Beard vegetation associations in the Shire of Northam.

These opportunities are further mapped by the identification of “Target Areas”, highlighting areas where good opportunities exist to improve the protection status of under-represented vegetation complexes in the Shire. They include significant patches of remnant vegetation representative of vegetation complexes/BVAs that have been identified as not being adequately represented in the regional conservation estate (considering reserve and off-reserve protection mechanisms).

Additional Target Areas are identified to highlight priority wetlands associated with watercourses in the Wheatbelt portion of the Shire. Vegetation restoration along these watercourses will improve landscape connectivity, improve water quality and reduce sedimentation in the Avon River pools.

It should be noted that it is not intended that all vegetation mapped within these Target Areas will be formally protected or all lands considered for restoration.

The Target Areas may include freehold land, land reserved for various purposes other than conservation, and Unallocated Crown Land. Priority was given to areas where there are good opportunities to protect vegetation considering the existing land use provisions, land tenure (Unallocated Crown Land) or the presence of initiatives that support land conservation (participation in the *Land for Wildlife program*).

Other considerations when selecting the Target Areas were whether increased protection in the proposed location is likely to contribute to: protecting other biodiversity values such as threatened and Priority species or communities, fauna habitat, wetlands; maintaining connectivity between already protected natural areas; or extending or buffering already

¹⁶ Natural areas are protected when reserved and managed for conservation (DPaW conservation lands or local reserves), and through measures such as a conservation zone or a conservation covenant.

protected areas; and the size of individual priority vegetation complexes within remnant patches (mosaic).

Appendix H provides details of areas within each vegetation complex that occur in Target Areas, and notes on mechanisms to protect the most significant portions of this vegetation. Appendix H demonstrates that despite more than 1,000 hectares of Bindoon vegetation complex remaining in the Shire, it is unlikely that the Shire’s target of protecting 810 hectares of this complex can be reached. This is due to several factors (see Figures 13 and 14):

- the high levels of fragmentation of patches of the Bindoon vegetation complex
- none of the remaining vegetation is within UCLs or other Crown reserves
- None of the private properties with Bindoon complex are registered with the *Land for Wildlife* program (DPaW, 2014)
- 88% of the remaining extent is on Rural zoned land, 11% is reserved for Public Purposes and Special Use in the Local Planning Scheme and 1% is within Road reserves.

However, as demonstrated in Figure 14, most of the Bindoon complex is within 12m of a confirmed breeding site for the Endangered Carnaby’s black cockatoo, a species that is protected under the EPBC Act. Opportunities to protect some of these areas by purchasing them to offset development of cockatoo sites elsewhere should be investigated. Protection and restoration of the habitat of this endangered species is a high priority.

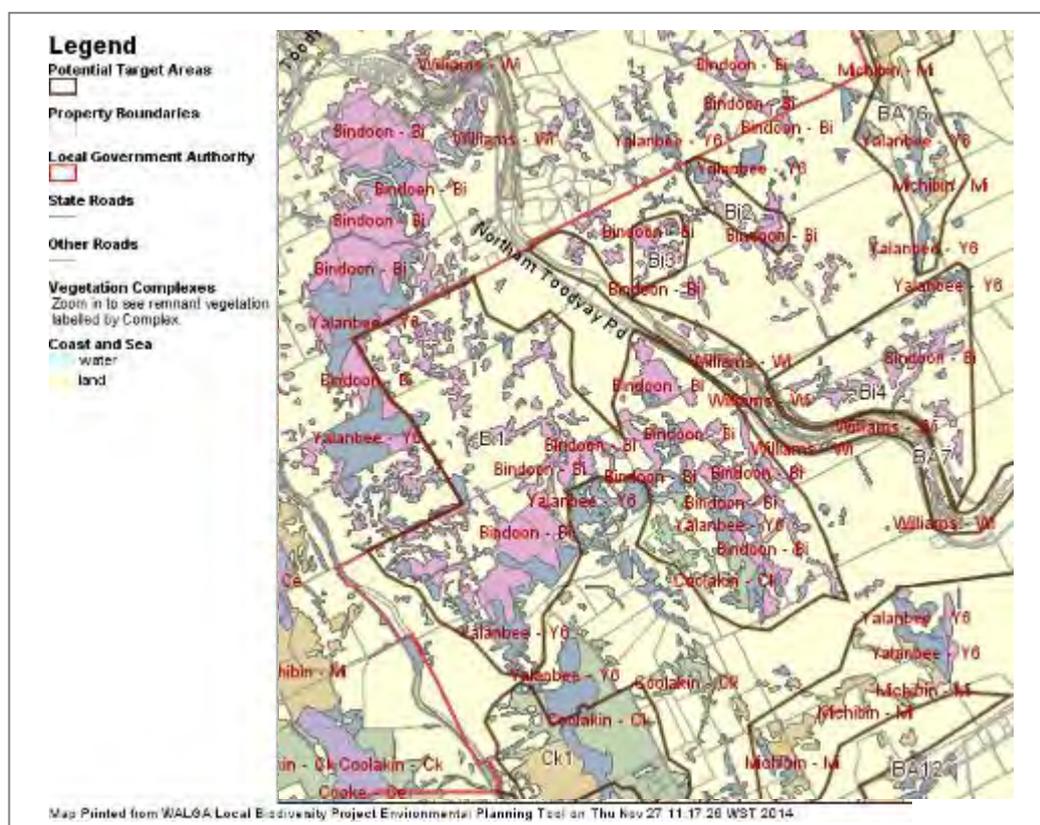


Figure 13: 2013 extent of Bindoon vegetation complex in the Shire of Northam. Potential Target Areas Bi1-Bi4. For more information see Appendix H.

It is important to note that Target Area boundaries are designed to be indicative only and include already cleared areas or even portions of areas where development has been approved. Target Areas are not to be interpreted as areas where development is prohibited. They should be used to identify areas where any remaining vegetation and other natural areas are of conservation significance and their retention and protection should be a priority when deciding on future land use planning.

Further, it is critical that ALL native vegetation in the Shire has conservation value: natural areas not included in a Target Area should NOT be deemed as not having conservation value. Target Areas highlight those areas where analysis, based on current knowledge, shows that conservation efforts should be directed. Considering the extent of clearing, the primary objective should be to use every opportunity to retain vegetation and restore habitat within strategic locations (see section 3.2.2).

Further opportunities to increase the protection status of vegetation in the Shire are provided by extending or changing the current vesting purpose of selected existing Crown reserves to include conservation. Some of these selected reserves are within the Target Areas such as R25785 is included in the Target Area Ck4, and many are outside the Target Areas such as R11619. So when identifying areas where opportunities are identified to improve the protection status of vegetation complexes/Beard vegetation association, two mapping layers need to be explored; the Target Areas and the 'Proposed Protection via Change of Reserve Purpose' (see Appendix I).

There are 27 Crown reserves vested in the Shire of Northam and 11 reserves vested in various State agencies, including 4,857 hectares of native vegetation, proposed for increased protection. Of the total amount of vegetation in these selected reserves, 81% is within one reserve managed by the Water Corporation. Only 456 hectares of native vegetation is located within reserves managed by the Shire. Improving the protection of natural areas in the Shire depends on all relevant stakeholders and the support of the Shire. The selection of Crown reserves vested in the Shire was partly based on recommendations in the Shire's Land Rationalisation Strategy (2013). Appendix D comprises a full list of reserves proposed to be formally protected or have their purpose altered to include natural area conservation.

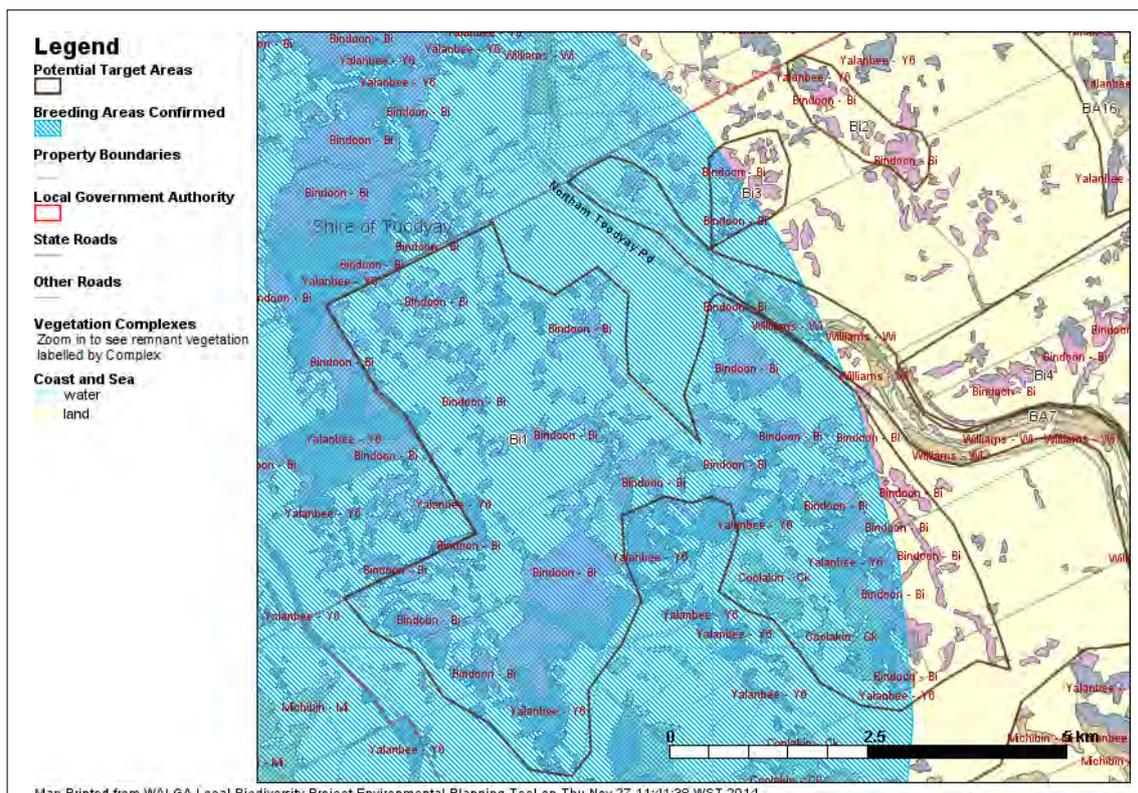


Figure 14: Confirmed breeding area buffer for the Carnaby's black cockatoos over portion of the Shire of Northam over 2013 vegetation extent by vegetation complex mapping.

3.2 Conservation Priorities

Considering the extensive clearing of native vegetation in the Shire, all remaining native vegetation plays an important role in maintaining biodiversity in the Shire. However, based on current knowledge, some areas of remaining vegetation are of higher relative conservation significance due to known records of threatened or priority flora, fauna or ecological communities or because they are associated with special habitats and are important for maintenance of specific ecosystem functions.

The relative conservation significance of each portion of native vegetation is mapped as the number of prioritisation criteria met by any portion of native vegetation (see Appendix F for the list of criteria). The more criteria met, the greater the relative significance. However, it is important to consider whether any of the criteria met, even in portions to which only a few criteria apply, include biodiversity values protected by the State or the Federal legislation. Figure 15 demonstrates the importance of understanding which criteria contribute to the relative importance of a patch of vegetation.

The results of the prioritisation mapping should be used in any future land use decisions which may affect native vegetation and other natural areas in the Shire. Native vegetation to which only a few criteria apply still need to be checked for the type of criteria met by the

patch itself as well as nearby areas. Adequate field surveys need to be undertaken to confirm the presence or suitability of habitat for protected species.

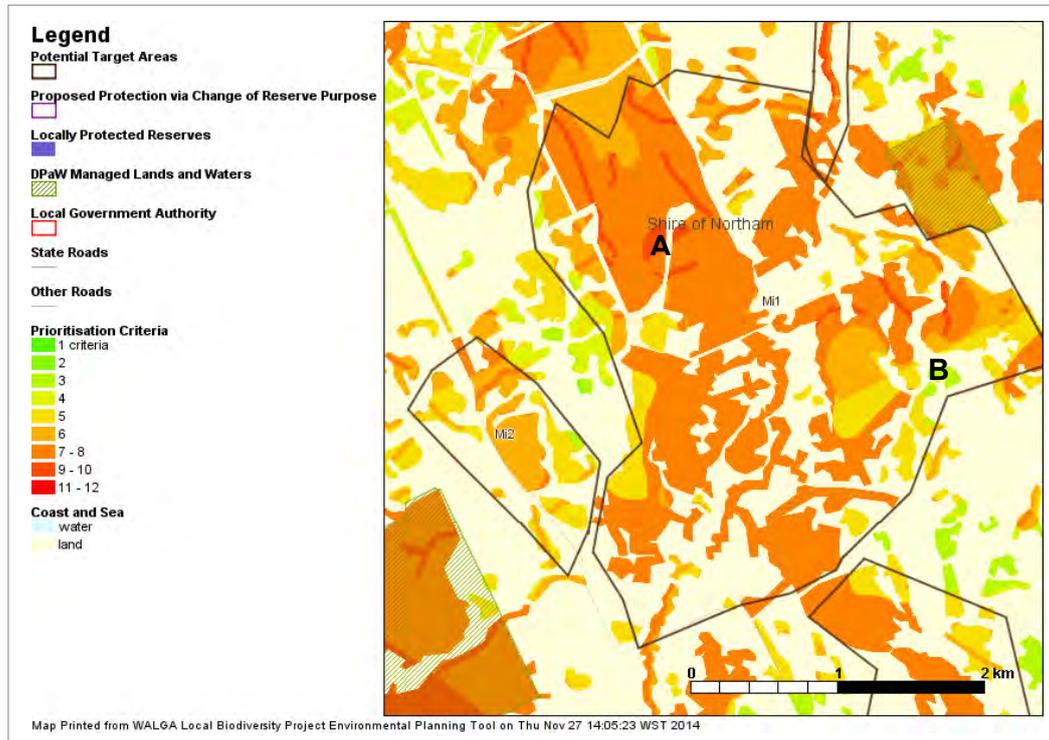


Figure 15: 2014 native vegetation mapping according to the number of prioritisation criteria met. Patch A meets 9 criteria. Patch B meets only 3 criteria but these include potential feeding habitat for Carnaby's black cockatoos. Patch A is of higher priority for protection but the importance of Patch B and its surrounds will need to be assessed under the relevant legislation.

3.2.1 Target Areas and Selected Reserves

Target Areas and selected reserves where inclusion or changes to conservation purposes are proposed should be identified for a specific objective, such as the need to achieve an adequate representation of the diverse vegetation communities in the conservation network in the Shire. By improving the protection status of native vegetation in the Shire, its protection at the regional level will also improve.

To further highlight the importance of the Avon River and the Mortlock River, six additional Target Areas were identified. While native vegetation retention within the buffers of these watercourses will contribute the retention/protection levels of the representative vegetation complexes, protection of riparian vegetation and improvement of the river ecosystem are the main objective for these Target Areas (Figure 16, AV1, AV2, MR1, MR2, MR3, W1).

Each Target Area focuses on a specific vegetation complex or Beard vegetation association. However, other biodiversity values may also be important. Therefore, when assessing which portions of native vegetation within any Target Area should be formally protected, the results

of the natural area prioritisation (Appendix F, Figure 16), connectivity analysis and confirmation of the indicative values in the field should be referred to.

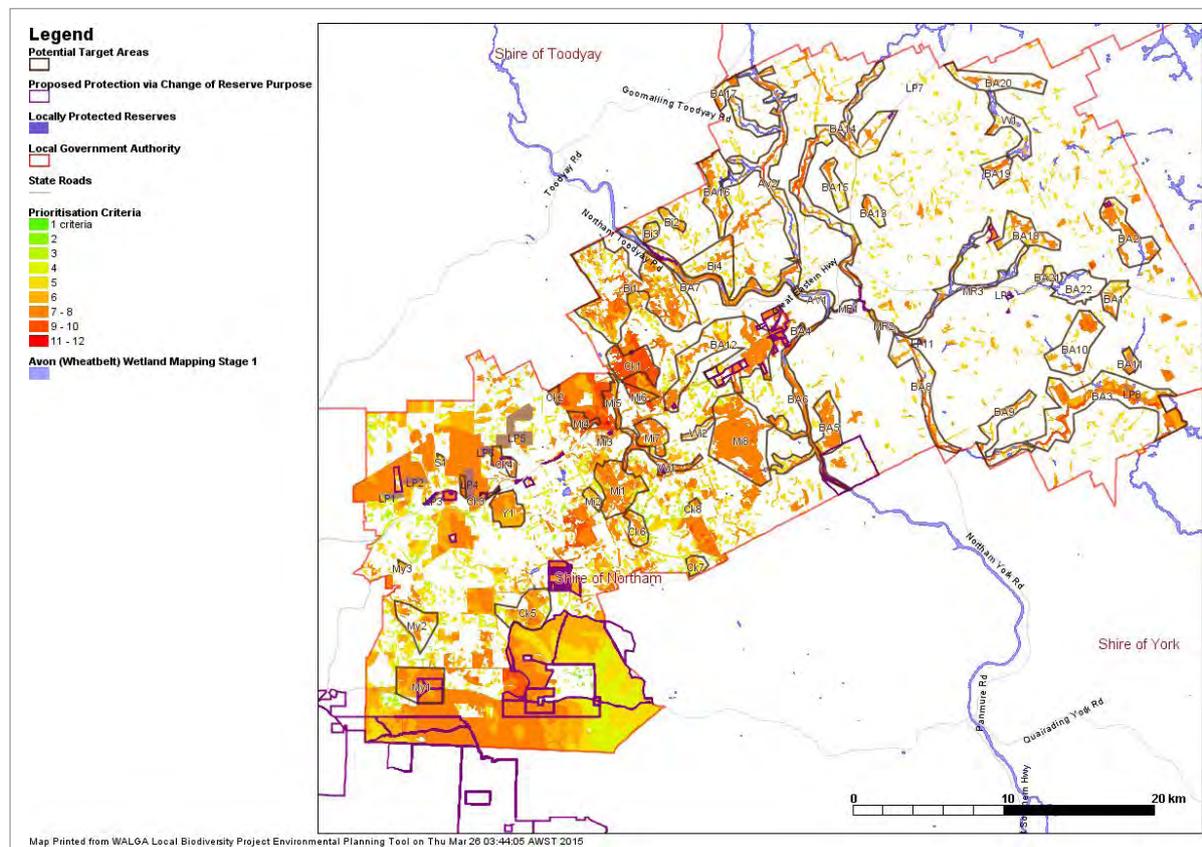


Figure 16: 2013 Native vegetation with the number of prioritisation criteria met, Potential Target Areas and Selected Reserves.

When identifying Target Areas, lands with least limitations to native vegetation retention were sought, referring to the existing land use provisions of the Local Planning Scheme No 6 (2013). However, some vegetation types are limited to lands that have been identified for more intensive development in the Shire’s Local Planning Strategy (2013).

Target Areas within lands zoned *Future Rural Living (1-40ha)* in the Local Planning Strategy include: Mi3, Mi5, My3, portion of Ck1 and Ck3.

Target Areas within lands mapped as *Priority Resource and Extraction Area* in the Local Planning Strategy include Mi4, portion of Ck1, Ck2 and Bi1.

While there is more vegetation representative of Michibin – Mi vegetation complex within all Target Areas than the identified target for protection (Table 3 and Appendix H), in all other vegetation complexes within Target Areas identified for potential future development, the amount of vegetation within all Target Areas is smaller than the proposed target.

To achieve the proposed representation targets for native vegetation in the Shire of Northam, additional provisions for vegetation retention and protection are recommended for inclusion in the Shire's Local Planning Strategy and the Scheme (see Table 11).

3.2.2. Connectivity

The connectivity measures provide a visual indication of the role that a remnant patch plays in connecting remnant vegetation across the landscape and how vulnerable each connection is. Results of the spatial modelling covering the Shire and a 12 km buffer can be viewed on the Environmental Planning Tool.

Results of the connectivity modelling were used to select the Target Areas, identifying natural areas that are larger, compact, in close proximity to other natural areas and part of larger networks of natural areas. This was to ensure that areas proposed to be protected will remain viable in the long-term. Due to the highly fragmented character of the landscape, numerous smaller, isolated natural areas were also included in the Target Areas. To improve connectivity of natural areas in the Shire, ecological linkages should be identified.

In the local biodiversity conservation planning context, ecological linkages are defined as a series of continuous and non-continuous patches of native vegetation which, by virtue of their proximity to each other, act as stepping stones of habitat which facilitate the maintenance of ecological processes and the movement of organisms within, and across, a landscape (Molloy *et al* 2009).

While ecological linkages have not been identified for the Shire of Northam as part of this local biodiversity strategy, guidance is provided on how to utilise the results of the connectivity modelling to:

- identify gaps between protected natural areas (greater than 1000 metres)
- identify vegetation patches with high Connectivity Reach values and high Fragmentation values and poor levels of Regional Connectivity.

These areas should be priorities for future restoration works. Further scenario modelling can be undertaken to assess the effectiveness of a proposed network of ecological linkages or test the impact of vegetation loss on connectivity of protected areas in the landscape.

Comparison of remnant vegetation connectivity in the Shire of Northam with that of the adjoining Perth Metropolitan and Peel Regions provides an insight into how to interpret these connectivity measurements. For example, in the Perth and Peel Regions the highest values for Connectivity Reach (see description in the section 3.1.2 of this document) are over 77 within sections of the Jarrah Forest where native vegetation is retained in very large, nearly contiguous patches. In the Shire of Northam the highest value achieved is between 64 and 68 (recorded for the Water Corporation managed reserve R6203), indicating that even the largest patches of vegetation are part of smaller networks than those recorded in other parts of the Jarrah Forest where vegetation forms very large networks (see Figure 17). Yet all protected areas, including those in the eastern sections of the Shire, recorded Connectivity

Reach values above 30 (middle of the value range), indicating that these areas are generally part of an existing relatively large network of protected and unprotected natural areas.

However, Connectivity Reach only measures the size of the network that any native vegetation patch belongs to. It does not describe the quality of the connection *within* that network. Regional Connectivity and Fragmentation measures provide further insight. All three connectivity measures can be used to design an effective network of ecological linkages throughout the Shire and to identify priority areas for restoration. An example is provided in Figures 18 and 19.

The example in Figures 18 and 19 demonstrates the use of connectivity measures to identify priority areas for conservation action, focusing on strengthening or re-establishing connectivity between high conservation value natural areas. Several conservation reserves stretch southwest to northeast, from the western boundary of the Shire to the Wheatbelt portion and are linked to recognised regional ecological linkages in the adjoining Perth Metropolitan Region (Del Marco *et al* 2004). These reserves and other remaining patches of native vegetation are some of the largest retained in the Shire. However, there are significant gaps between some of them, including native vegetation that may be subject to future development applications, and cleared areas with some small patches of vegetation that are 500-1,000m apart, a distance that is greater than recommended for effective connectivity.

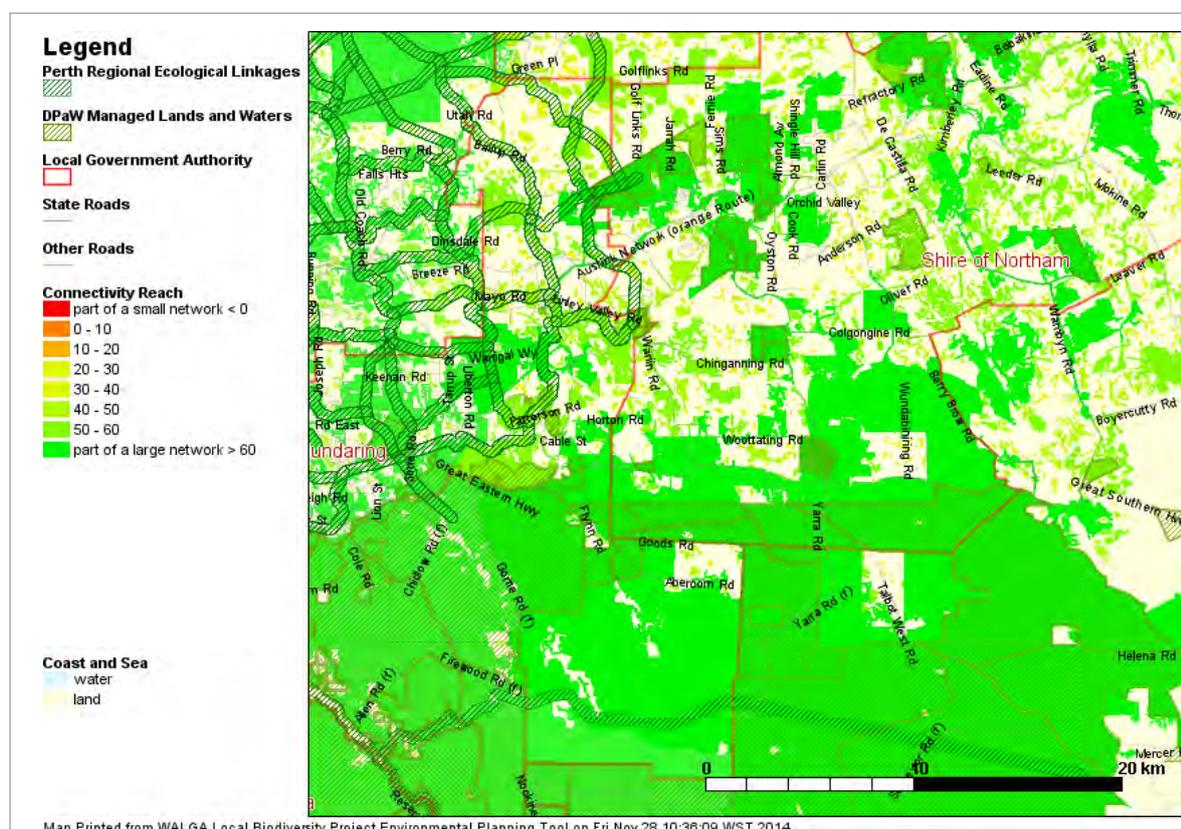


Figure 17: Connectivity Reach in Jarrah Forest portion of the Shire of Northam and adjoining portions of the Perth Metropolitan Region

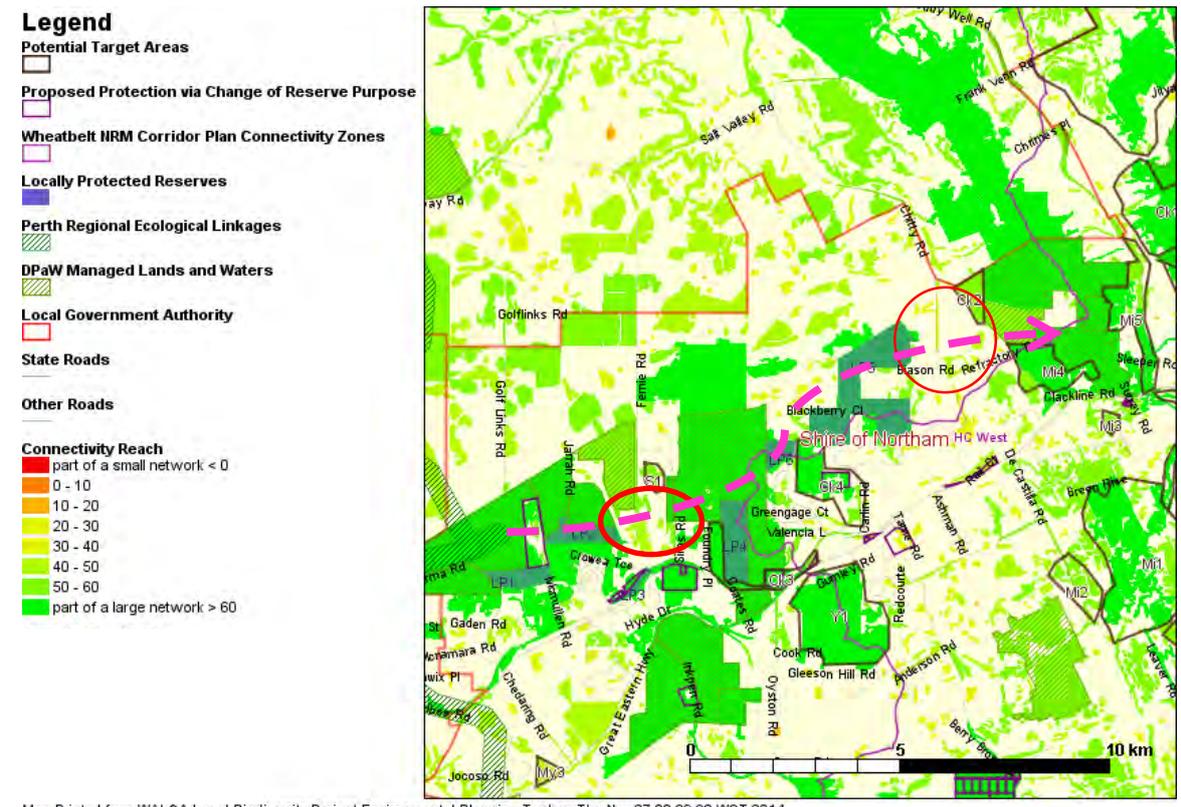


Figure 18: An example of a regional ecological linkage (dashed line) with gaps between stepping stones (red circles) over native vegetation by Connectivity Reach.

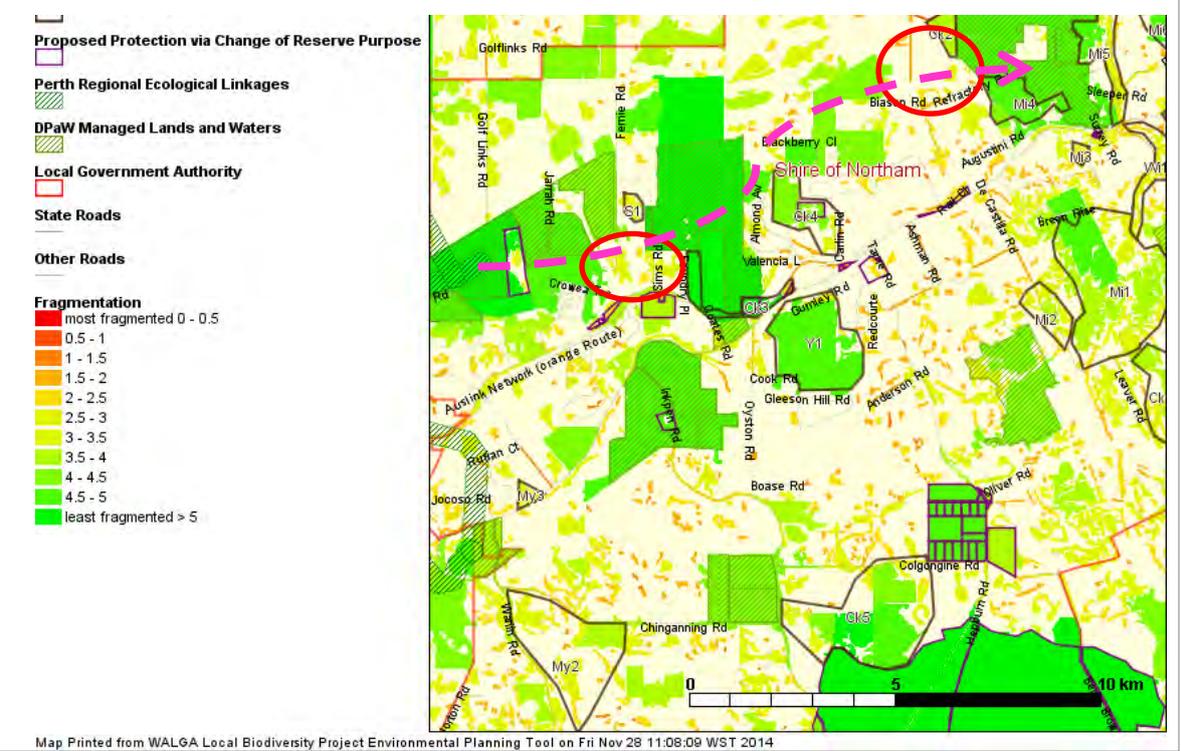


Figure 19: An example of a regional ecological linkage (dashed line) with gaps between stepping stones (red circles) over native vegetation by Fragmentation.

Scenario modelling undertaken in the Perth Metropolitan Region (Perth Biodiversity Project 2013; Local Biodiversity Program 2014) shows that if native vegetation was retained only where it is already protected, then connectivity between these protected areas would be significantly reduced and Fragmentation and Regional Connectivity values (see Appendix G) would be significantly decrease. It is reasonable to conclude that the long term viability of the remaining protected areas would be significantly reduced.

Another example of good opportunities to improve landscape connectivity is provided by the network of waterways in the Wheatbelt portion of the Shire. Widening the buffers and connecting significant vegetation within 1,000-2,000m of the foreshores of watercourses will improve the functioning of the ecological linkages these rivers form and link often isolated reserves and significant natural areas with other areas in the catchment (see Figure 20 and 21). Restoration of vegetation to reduce the edge effect and consolidate remaining patches of vegetation will improve the connectivity quality between the identified conservation priority natural areas.

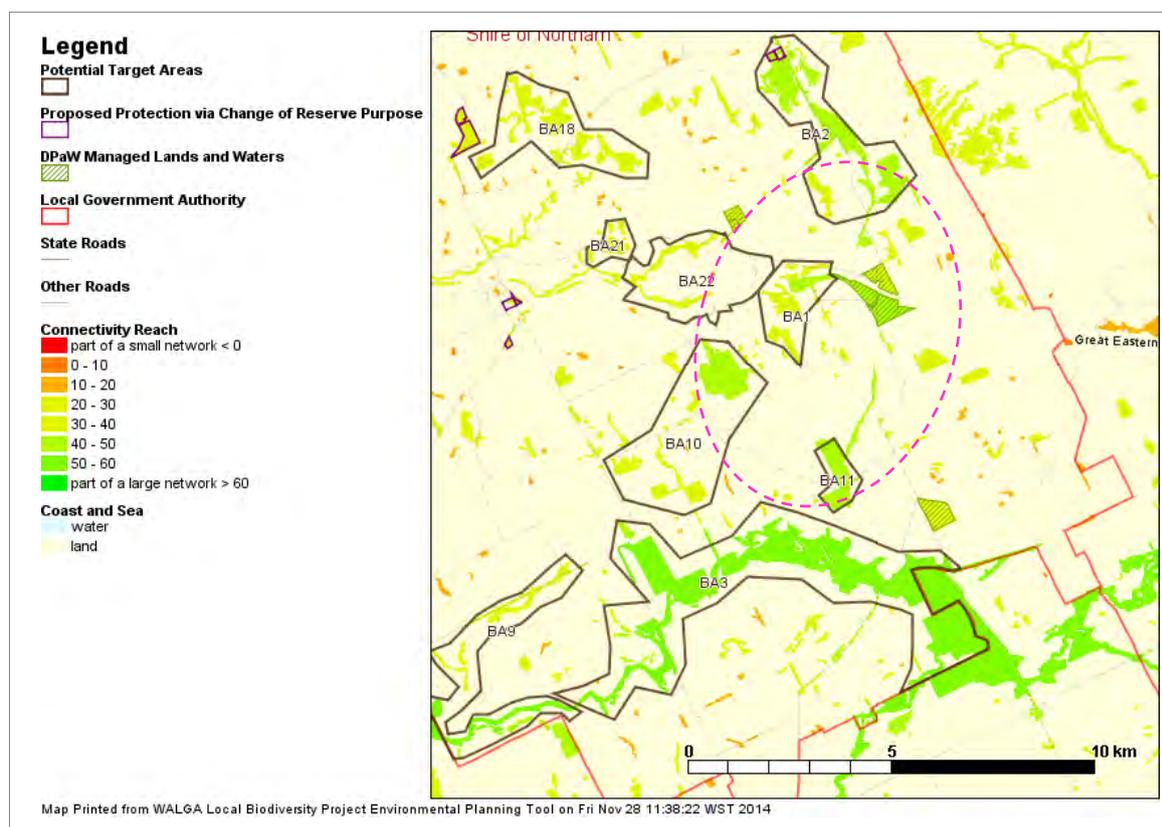


Figure 20: Connectivity Reach values in the eastern parts of the Shire of Northam. Dashed line identifies a priority area where native vegetation restoration would improve connectivity between conservation reserves and other natural areas in the landscape.

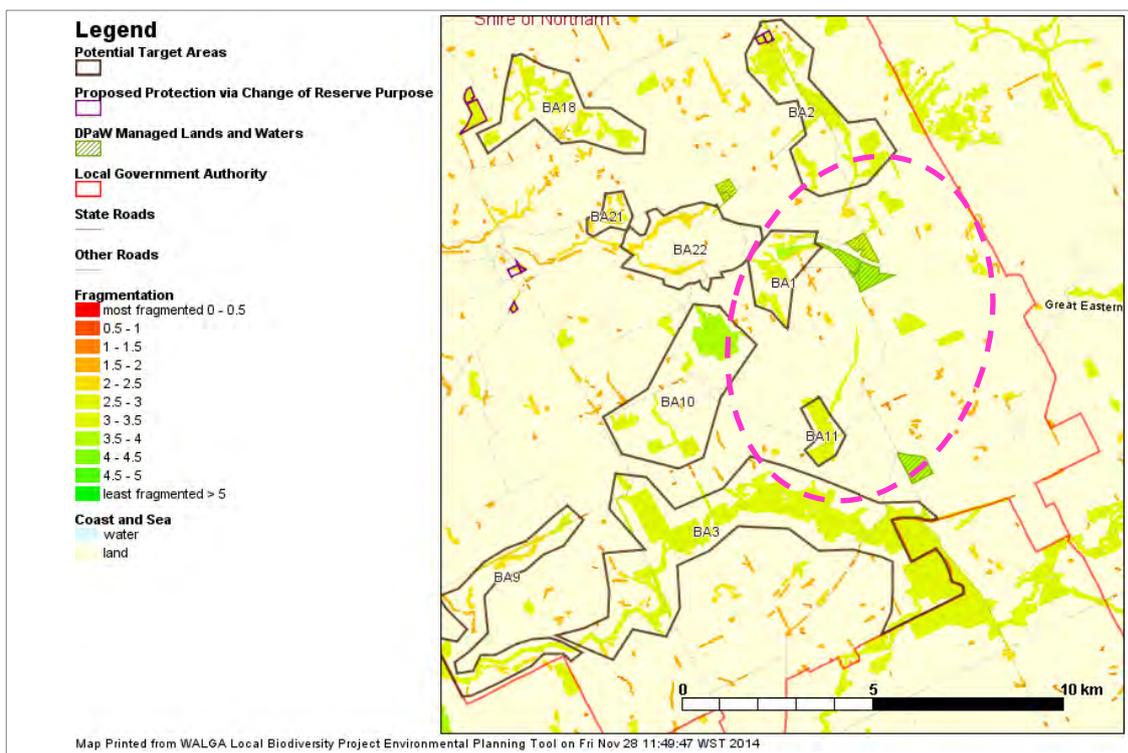


Figure 21: Fragmentation values in the eastern portion of the Shire are significantly lower than in the Jarrah Forest (see Figure 19).

When identifying areas to be retained and managed as parts of a regional or local ecological linkage the following guiding principles are recommended (del Marco *et al* 2004, Davis and Brooker 2008, Molloy *et al* 2009):

Guiding Principles for Establishing Ecological Linkages

Aim for a heterogeneous matrix of habitats rather than a homogenous one. Utilise an existing native vegetation matrix and complex landscapes with minimal disturbance.

The widest possible diversity of habitat types should be sought within a linkage with similar habitats preferably less than 500m -1000m apart.

Where continuous stands of native vegetation are not available, ecological linkages should be made of remnants that form stepping stones between larger intact patches.

Provision of large regional linkages to localised corridors is preferable in supporting a wide range of communities and species, supporting their movement over a number of generations.

Regional corridors should be 500m wide where possible and a minimum of 300m wide.

The number of linkages connecting to any given patch should be maximized as this improves overall connectivity and long-term viability.

Ecological linkages should be selected along directions that facilitate normal species migration and species and assemblages adapt to climate change. For example, linkages may be North-South, East-West, to high points in the landscape and along watercourses. Patches at high points in the landscape where they are visible from other patches, are important for species dispersal and home range utilisation.

Re-vegetation is a viable strategy for establishing or strengthening corridors in cleared landscapes; priority given to opportunities to expand existing remnant vegetation. Aim to form continuous vegetation linkages or corridors at least 100m wide. If this is not possible, ensure stepping stones of reconstructed or created habitat are at least 2ha to 4ha in size and no more than 500m to 1000m apart.

Avoid or mitigate impacts of gaps in linkages caused by roads and other barriers to fauna mobility

Open canopies over highly disturbed understorey may be of little value, except for highly mobile species

Although the current degree of connectivity for many large conservation reserves in the Shire of Northam is encouraging, the maintenance and improvement of connectivity within gaps should be a priority. However, efforts to improve the connectivity of significant habitats in the Shire will only be effective if a similar effort is made outside the Shire boundary. This can be achieved via partnerships with regional organisations that have the capacity to deliver natural resource management projects across several administrative boundaries.

In the Wheatbelt portion of the Shire, vegetation along waterways provides good opportunities

4 Implementation

To achieve the Local Biodiversity Strategy vision and objectives, several types of implementation mechanisms will be initiated. Figure 22 shows which implementation tools will be utilised to meet the Shire’s local biodiversity objectives. In addition, a clear community and stakeholder engagement strategy is needed, to ensure active participation. Establishment of an Environmental Officer or Natural Resource Management Officer position within the Shire would ensure coordination of activities and timely implementation of the proposed action.

The Shire should consider the establishment of a Natural Resource Management Reference Group to inform and support the implementation of the Shire’s Local Biodiversity Strategy. The reference group could include representatives from the following agencies and community groups with expertise in natural resource management including Department of Parks and Wildlife, Department of Water, Greening Australia, Avon Valley Environmental Society Inc, Wheatbelt NRM, and Conservation of Avon River Environment (CARE).

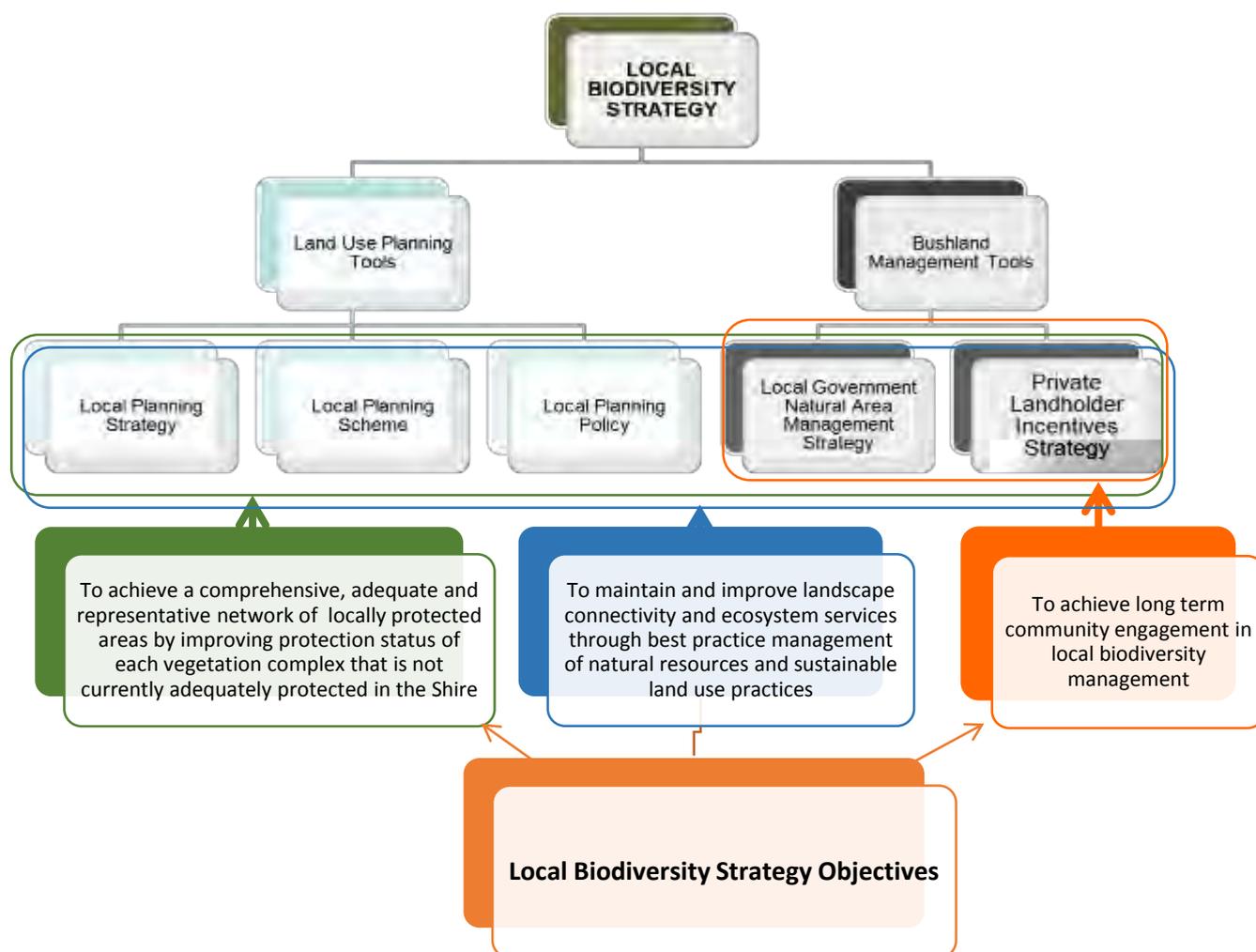


Figure 22: Link of Local Biodiversity Strategy Objectives to Implementation Tools.

4.1 Integration of biodiversity into the local planning framework

Integration of local biodiversity conservation objectives into the local planning framework is the key to ensuring that the approach to considering biodiversity in decision-making is transparent and consistent, ensuring long-term achievement of objectives.. There are numerous examples in Western Australia where Local Governments are improving the biodiversity provisions of their planning frameworks. Best practice examples recorded to date were published by the Local Biodiversity Program in 2012

(<http://pbp.walga.asn.au/Publications/IntegrationofBiodiversityintoLocalLandUse.aspx>).

The Shire of Northam's Local Planning Strategy (2013) and Local Planning Scheme No 6 (2014) already include numerous provisions for biodiversity. To achieve the local biodiversity objectives outlined in this Strategy, further planning considerations are recommended:

- Local Conservation Reserves - Extend the area classified as 'Conservation of Flora and Fauna' by including significant local government reserves, by amending the scheme and changing the classification of current reserves.
- Rural Conservation zoning – consider the introduction of a new zone to formalise protection of natural vegetation on private rural land when rural subdivision is being considered.
- Extension of the Special Control Area for Avon, Mortlock River and Spencers Brook to other significant watercourses.
- Adoption of Local Planning Policy/Policies – provide guidance.
- Consider an amendment to conservation designation on Local Planning Strategy maps and inclusion of adopted Target Areas (see section 3.2).

Local planning strategy

- Consider amending the 'Conservation' designations on Local Planning Strategy maps, including Target Areas and local conservation reserves, after biodiversity values have been confirmed by field surveys (see proposed list of reserves in Table 5, Appendix D).
- Incorporate into the Local Planning Strategy the proposed protection targets for native vegetation (as outlined in Table 3 of this document)

Local planning scheme

- Local Conservation Reserves
 - Classify additional reserves as Reserves for Conservation of Flora and Fauna, subject to confirmation of values in the field, by amending the relevant scheme maps and seeking to change reserve purposes (see list in Appendix D, Table 5);

- Request that those agencies responsible for managing 11 high conservation value reserves (see Appendix D, Table 5) undertake to have the current reserve purposes altered under the Land Administration Act 1997 to include conservation.
- Rural Conservation zone – introduce a new zone to formalise protection of natural vegetation on private land. Registering properties with a covenanting agency will provide additional protection and increased opportunities for landholders to access external support for their management activities. (See Table 8).

Local planning policy

- To establish the Local Biodiversity Strategy as a valid planning consideration as a document forming clear conservation objective and facilitating the aim of the Local Planning Scheme to ‘protect, conserve and enhance the environmental values and natural resources of the Scheme area including the protection of remnant vegetation and the rehabilitation and revegetation of degraded land’. Definition of the minimal standards for surveys to confirm biodiversity assets, conditions and establish effective management.
- Provide guidance for Rural, Rural Residential & Rural Smallholding and if introduced the new Rural Conservation zones regarding local priority biodiversity assets to be retained and restored within the Scheme provisions.
- Provide guidance for Avon-Mortlock, Landscape Protection & Spencers Brook Special Control Areas regarding ways of preserving the ecological values of special landscapes, the rivers and their riparian zones and building their resilience. The Avon River Recovery Plan (Water and Rivers Commission, 1999), the Mortlock Rovers and Spencer’s Brook foreshore assessment reports (Water and Rivers Commission, 2002 and 2003) include specific recommendation
- Provide guidance for the establishment of ecological linkages.

It is recommended that guidance is provided to landowners and planners on how Local Natural Areas need to be considered in each of the zones and land use categories. These recommendations are summarised in Table 11 and should be included as provisions in the Shire’s Local Planning Strategy and Local Planning Scheme update.

Table 11: Summary of recommended strategies/provisions for biodiversity conservation in the Shire’s Local Planning Strategy and Scheme.

Land use category	Guidance/provisions
Residential	Retain natural areas in good or better condition in Public Open Space (POS) while maintaining an adequate active recreation function. Natural areas of high conservation values should be transferred into a reserve with conservation and passive recreation purpose.

Land use category	Guidance/provisions
	<p>All streetscaping should use local species (Link to the development of a Landscaping Policy). Encourage use of local specie in private gardens, in particular the front yards. (link to the potential local plants subsidy scheme)</p> <p>For natural areas already retained in POS, are listed in this document in Table 5, Appendix D and indicative conservation values are confirmed via field assessment, change the vesting for conservation (under the <i>Land Administration Act 1987</i>) and classify as 'Conservation of flora and fauna' in the LPS No 6.</p>
Rural Residential (1-4ha)	<p>On zoned land not yet developed, require redesign of structure/subdivision plans where significantly improved retention/protection of native vegetation could be achieved.</p> <p>Limit fencing within native vegetation</p>
Rural Smallholdings (4-40ha)	<p>Where considering further subdivision of lands zoned Rural Smallholdings (as identified in the Local Planning Strategy), avoid lands covered in native vegetation, in particular those within Target Areas. Where feasible, subdivide portions of cleared lands and classify portions on lots larger than 20ha as Rural conservation or similar.</p> <p>Where rural residential subdivision is being proposed to replace Rural Smallholdings, require subdivision design that will maximise protection of native vegetation, with vegetation located in large parcels. Consider requiring cluster forms of subdivisions where fencing would be limited to the building envelopes to minimise vegetation fragmentation. To reduce need for further fencing, opportunities to align property boundaries with strategic fire breaks should be encouraged.</p> <p>Extend the current zone provisions in the Scheme No 6 to require all development to be located outside native vegetation and outside adequate buffers to waterways. Clearing for a single house will only be considered if no other alternative locations are available. Any other clearing shall be limited to clearing required for fencing, vehicular access and bushfire safety purposes.</p> <p>Where opportunities become available, reserve large parcels of native vegetation for conservation (purchased as offsets under the Commonwealth and State environmental approval process).</p> <p>Consider offering natural area management assistance (private landholder incentives) with emphasis on lands within Target Areas.</p>
Rural	<p>Extend the current zone provisions in the Scheme No 6 to require all development to be located outside native vegetation and outside adequate buffers to waterways. Clearing for a single house will only</p>

Land use category	Guidance/provisions
	<p>be considered if no other alternative locations are available. Any other clearing shall be limited to clearing required for fencing, vehicular access and bushfire safety purposes.</p> <p>Where rural type subdivision is being proposed, require subdivision design that will maximise protection of native vegetation, with vegetation located in large parcels. Consider requiring cluster forms of subdivisions where fencing would be limited to the building envelopes to minimise vegetation fragmentation. Fencing of isolated stands of vegetation should be required. To reduce need for further fencing, opportunities to align property boundaries with strategic fire breaks should be encouraged.</p> <p>When considering subdividing rural zoned land, examine opportunities to rezone parcels with high conservation value vegetation as Rural Conservation.</p> <p>Where opportunities become available, reserve large parcels of native vegetation for conservation (purchased as offsets under the Commonwealth and State environmental approval process).</p> <p>Consider offering natural area management assistance (private landholder incentives) with emphasis on lands within Target Areas.</p>
Rural Conservation	<p>Consider introducing new conservation type zoning into the Local Planning Scheme No 6: it would apply to private lands classified as 'Conservation' in the Local Planning Strategy and will assist in achieving Proposed objectives (from the Shire of Chittering Local Planning Scheme No 6):</p> <ul style="list-style-type: none"> • <i>To maximise the long-term protection and management of significant environment values.</i> • <i>To minimise the fragmentation of, and where deemed relevant, promote ecological linkages between, these values.</i> • <i>To ensure that development is compatible and integrated with these values.</i> • <i>To create lot/s that are of sufficient size to sustain the long-term protection and management of these values.</i> • <i>Encourage innovative subdivision design, such as consolidated cluster style development, that maximises the long-term protection and management of these values.</i> <p>Consider offering natural area management assistance (private landholder incentives) with emphasis on lands within Target Areas.</p>
Development conditions for lands zoned Rural Conservation, Rural	The following general clauses should apply to the development and use of land in these rural zones (adapted from the Shire of Chittering Local Planning Scheme No 6):

Land use category	Guidance/provisions
Smallholdings and Rural Residential	<p>Subdivision shall be generally in accordance with a Structure Plan prepared in accordance with Council policy or any subsequent variation approved by the Council and the Western Australian Planning Commission.</p> <p>An application for subdivision of land in these zones is to be accompanied by a Structure Plan prepared in accordance with Council policy which indicates and addresses the following but is not limited to:</p> <ul style="list-style-type: none"> (a) lot sizes, dimensions and identification of building envelopes or building exclusion areas; (b) areas to be set aside for public open space, pedestrian access ways, horse trails, community facilities, etc, as may be considered appropriate; (c) strategic firebreaks; (d) any Catchment Management Plan recommendations; (e) any part of the natural environment which is required to be protected from degradation or required for landscape, biodiversity protection and maintenance of connectivity; (f) an assessment of the presence and impacts of Dieback in consultation with Council and the appropriate State government environmental agency and the ability of the subdivision design and works to mitigate against the spread and effect of Dieback; (g) any facilities which the purchasers of the lots will be required to provide (e.g. their own potable water supply, liquid or solid waste disposal, etc.); (h) areas where conventional septic tanks may not be suitable; (i) The description of adjoining land(s) and their uses; (j) Remnant vegetation and any land affected by rare and endangered flora and fauna; (k) Location of watercourses, drainage lines and areas of inundation and the distance of any infrastructure from these. (l) identify the area/s that need to comply with an approved Environmental Management Plan. (m) in the Rural Conservation zoning, provide evidence of an agreement with a covenanting agency that the property meets the criteria and the conservation covenant will be registered on title.
Reserved Land	<p>Include natural areas in Public Open Space identified in the Local Biodiversity Strategy as of high conservation value within a Local Reserve classified 'Conservation of Flora and Fauna' in the LPS No 6.</p> <p>Retain other natural areas on land vested in or managed by the Shire except where land is required for another purpose and alternative location on cleared land is not practicable.</p> <p>Manage natural areas for conservation on all lands classified 'Conservation' and vested in the Shire.</p> <p>Liaise with relevant government agencies regarding the management of other reserved lands, vested and managed by them for various purposes other than conservation. Pursue possibility of improving the protection levels for natural area within these reserves via change of reserve purpose under the Land Administration Act</p>

Land use category	Guidance/provisions
	1987, classification in the Local Planning Scheme No 6 or by covenanting.
Special Control Area – Avon & Mortlock Rivers and Spencers Brook	Extend its provisions to Target Areas BA8, MR1, MR2, MR3, BA14, Av2, BA8, BA9.

4.2 Bushland Management Tools

4.2.1 Local Government Natural Area Management Strategy

With over 450 hectares of significant native vegetation within reserves vested in the Shire, it is important to ensure that the biodiversity values of these reserves are maintained. Lack of resources for natural area management can be a major issue. However, maintaining natural areas in good condition is significantly less expensive than maintaining highly landscaped parks. Greater opportunities to access external funding through various State, Federal government or Lotterywest programs are available for managing natural areas, especially when working in partnership with the local community.

In some Local Government areas there are close partnerships between the Local Government and local landcare groups, often including financial assistance to support the group. Landcare groups and a proposed Northam NRM Reference Group could provide expertise in natural resource management and community engagement in reserve management, and access to other funding sources for specific restoration projects in local reserves or on some private land.

The Southern Brook Catchment Landcare group is one local example of a community driven NRM group have successfully attracted significant external resources to implement both on-ground works and planning activities. This group provides a model for how other community groups can achieve local priority NRM outcomes. The Shire's future support of community groups could only strengthen local outcomes and achieve some of the actions identified in this strategy.

The Southern Brook Catchment group has recently completed a catchment plan and supporting maps that will fast-track and strengthen the group's ability to attract resources and evaluate their progress against their goals. The Catchment Plan identifies local actions and builds on past restoration activities within the catchment. This information was not available for the whole Shire at the time of preparation of this document but is critical to site specific planning. The Southern Brook Catchment Plan can be downloaded via the following link: <http://www.wowcinema.com.au/files/Catchment%20Report.pdf>.

To assist with prioritising investment, it is recommended that a Strategic Plan for Reserve Management is developed by the Shire, following the WALGA's Guidelines for Bushland Management (PBP and SWBP 2009). Although the Guidelines document focusses on Perth and parts of the south west of Western Australia, the proposed procedures for prioritisation are applicable to other regions. One of the key steps is recording the ecological values and threats to these values for each reserve using the Natural Area Initial Assessment Templates (Del Marco *et al* 2004) which were adapted to the Wheatbelt Region (Julia Murphy, Greening Australia WA, personal comment).

To minimise the spread of weeds and diseases between natural areas, it is critical that all Shire operational and engineering staff as well as contractors providing maintenance works along roads, recreational reserves and other public lands, undertaking post-fire clean-up or any other work that involve soil movement or disturbance, are aware and apply best practice procedures to prevent the spread of dieback, weeds and damage to native vegetation or fauna habitat. Requirements for maintenance of adequate hygiene practices during any operations involving movement of soil, plant material or use of machinery in conservation reserves should be clearly stipulated in contracts for future works within the Shire.

4.2.2 Private Landholder Incentives Strategy

With 54% (over 18,500 hectares) of the Shire's native vegetation retained on private land, private landholder support for retaining vegetation and maintaining biodiversity values is critical to conserving biodiversity in the Shire and in the region.

The State Government and not-for-profit organisations such as Greening Australia (16 years based in the Northam Shire) have programs and significant experience with devolved grants and the active engagement and support of private landholders in natural resource management. Some programs are already active in the Shire, such as the DPaW's *Land for Wildlife* program with 28 properties registered in the Shire and Greening Australia's landscape scale Living Mortlock project that facilitates the management of remnant vegetation (terrestrial & riparian), revegetation of very significant areas of predominately private land. . Further information on conditions and incentives of covenanting programs available in Western Australia is available via the following link

<http://www.dpaw.wa.gov.au/management/off-reserve-conservation/nature-conservation-covenant-program> .

The issue of landowner support will need to be addressed where vegetation retention and its management is stipulated as a land development condition. Although vegetation can be relatively easily retained on private land through scheme provisions, the long-term biodiversity values of that vegetation can deteriorate unless it is adequately managed.

It is recommended that before developing a private landholders incentive strategy, the Shire facilitates wider discussion with its community, the proposed Natural Resource Management Reference Group and incentives providers to identify the most effective and acceptable incentives to the local community.

Past experience shows that incentives should be tailored to local community needs. The types of support to consider include:

- Technical advice on best practice on-ground management considering site specific plant communities and threats, including fire risk management with minimal impact on vegetation (provided for example by the City of Greater Geraldton, Shire of Chittering through the Chittering Landcare Centre, City of Busselton, Shires of Mundaring, Serpentine-Jarrahdale);
- Assistance and support with grant applications for external funding to support rehabilitation or restoration projects;
- Advice on availability of conservation covenanting programs;
- Rate rebates on lands under conservation covenants (used in the Shire of Serpentine-Jarrahdale and the Shire of Busselton)
- Annual small grants (up to \$10,000-\$20,000 allocated annually) to private landholders (used for example in the Cities of Mandurah, Armadale and Cockburn) towards weed control, fencing or habitat restoration.
- Provision of subsidised local plants with site specific advice on appropriate species selection.

4.3 Communication

To effectively engage the local community and other land managers in the Shire, it is important to maintain consistent communication on the Shire's objectives for biodiversity conservation. This should be facilitated by:

- Including all Local Biodiversity Conservation mapping on the Shire's information system available to all internal services, including planning, engineering and infrastructure maintenance.
- Preparing a landscaping plan for residential areas and streetscapes, using local species. Proposed revegetation and plantings including major works and documents such as the Bernard Park Landscape Master Plan should detail the proposed species used in these planting. The proposed Northam NRM Reference Group should be consulted to ensure that appropriate local species (and provenance seed) is used in Shire plantings.
- The Shire encourage the use of local species in private gardens and produce a booklet that identifies local species suitable for landscaping purposes Some examples of local species lists for landscaping purposes can be found at Perth NRM (http://www.perthregionnrm.com/media/69113/PerthNRM-coastal-gardens-A5_LR.pdf) and Chittering Landcare Centre <http://chitteringlandcare.org.au/reports-publications/native-species-planting-lists/>
- Informing State agencies such as the Department of Planning, Department of Water, Department of Parks and Wildlife about the outcomes of the Local Biodiversity Strategy.

- Referring to the findings of the Local Biodiversity Strategy when providing comments on initiatives by State Agencies.
- Referring to the findings of the Local Biodiversity Strategy when providing comments on subdivision and scheme amendment proposals.
- Facilitating discussions with peak natural resource management groups such as Wheatbelt NRM or Greening Australia, local landcare groups or other not-for-profit organisations active in the Shire to develop potential partnerships that will support on-ground management on public and private lands.
- Facilitating discussions with local Aboriginal leaders to investigate opportunities for their involvement in promoting the cultural values of natural areas in the Shire.
- Reporting to the local community at least every two years on progress with implementation.

4.4 Local Government Capacity Building

Implementation of a Local Biodiversity Strategy is best delivered where a local government employs adequately qualified staff with expertise in natural resource management that can coordinate activities across local government services and facilitate partnerships with relevant stakeholders, including the local community.

Where limited Local Government resources do not allow for an employment of staff with specialist expertise, forming a close relationship with an active and skilled landcare group can provide an alternative. An example of such an arrangement is the agreement between the Shire of Chittering and the Chittering Landcare Centre. However, these are most effective in areas with a history of working together.

Considering the expected growing population in the Shire of Northam due to its proximity to Perth and the growing interest in high quality rural living, it is recommended that the Shire considers employing an Environmental Officer that will be responsible for the implementation of the Local Biodiversity Strategy and other initiatives such as the recovery and management of the Avon River and its pools, community engagement in reserve management and sourcing external funding for reserve management.

The effectiveness of the Environmental Officer role will increase with the establishment of a Natural Resource Management Reference Group (under the provisions of the *Local Government Act 1995*), consisting of relevant stakeholders and community representatives with relevant expertise in natural resource management.

5 Action Plan

Priority: High – complete by 2016-2017
 Medium – complete by 2018-2021

Action	Priority	Responsibility	Key Performance Indicator
Integration into the land use planning framework			
Confirm the conservation values of the selected Land Administration Act 1997 reserves proposed for change of purpose, or change of classification of reserve to Conservation of Flora and Fauna in the planning scheme (Appendix D, Table 5).	High (2015-2016)	Shire to engage adequately qualified consultant/Environmental Officer	All reserves assessed using the NAIA ¹⁷ templates and report on recommendations for reserve purpose change made.
Scheme Amendment to change the classification of selected high conservation reserves to Conservation of Flora and Fauna (vested in the Shire)	High	Development Services	All selected reserves with confirmed high conservation values classified for Conservation of Flora and Fauna in the LPS No 6
Scheme Amendment to change the classification of selected high conservation reserves (vested in State agencies)	Medium	Development Services	90% of selected reserves reserved for Conservation of Flora and Fauna
Introduction of a new Rural Conservation zone, or amend Rural, Rural Residential and Rural Smallholding zone provisions	High	Development Services	New zone provisions adopted by the Council and the WAPC
Amend Conservation designations on Local Planning Strategy maps to include adopted Target Areas and local conservation reserves	Medium	Development Services	Local Planning Strategy Amendment adopted by the Council and the WAPC
Develop a number of Local Planning Policy/Policies (see section 4.1)	High	Development Services	Local Planning Policy adopted by the Council
Local Government Natural Area Management			
Develop a strategic 5 year management plan for all conservation reserves using the information collected via NAIA Templates	High	Shire to engage adequately qualified consultant/Environmental Officer	Strategic Management Plan adopted by the Council

¹⁷ NAIA Templates – Natural Area Initial Assessment Templates (Del Marco et al 2004).

Action	Priority	Responsibility	Key Performance Indicator
Develop and implement best-practice procedures for all Shire staff and contractors working and accessing natural areas and managing infrastructure assets	Medium-High	Environmental Officer/Engineering Services/Community Infrastructure/Development Services	Best practice procedures part of induction of new staff, part of contractual agreements for all works potentially within or near protected natural areas
Investigate the feasibility of forming a <i>Biosecurity Group</i> in partnership with adjoining Local Governments	Medium	Environmental Officer/Corporate Services	Report to the Council prepared on the outcomes of the investigation.
Implement the strategic reserve management plan	Medium	Environmental Officer/Community Infrastructure	At least 80% of conservation reserves being actively managed by 2020
Increase riparian vegetation cover and condition on lands managed by the Shire (focusing on upper reaches and northern shores of priority waterways)	Medium	Environmental Officer/Community Infrastructure	By 2020, at least 10% increase in riparian vegetation cover achieved along waterways on lands managed by the Shire.
Private landholder support			
Facilitate private landholder consultation to identify the most desirable incentives for biodiversity conservation on private land	High	Environmental Officer/Community Services	At least 30% of private landholders actively engaged in the survey
Prepare and implement a private landholder incentives strategy to support biodiversity conservation on private lands.	Medium	Shire to engage adequately qualified consultant/Environmental Officer	Private landholders incentive strategy adopted by the council
Facilitate riparian vegetation restoration on private lands		Development Services/ Environmental Officer through new partnerships formed	By 2020, at least 5% increase in riparian vegetation cover along waterways in private ownership.
Communication			
Integrate all Local Biodiversity Strategy mapping into the Shire's information system	High (2014-2015)	Development Services	Mapping accessible to all Shire services
Develop and promote sustainable landscaping strategy for residential areas and streetscaping	Medium	Shire to engage adequately qualified consultant/Development Services/Engineering	All new subdivisions and streetscape upgrades in

Action	Priority	Responsibility	Key Performance Indicator
		Services/Community Infrastructure	accordance with the landscaping strategy
Facilitate discussions with local Aboriginal leaders to investigate opportunities for their involvement in promoting the cultural values of natural areas in the Shire	High	Community Services/Environmental Officer	Shire officer to attend at least 2 meetings per annum of local elders group
Facilitate discussions with the Wheatbelt NRM, adjoining Local Governments, DPaW and other relevant stakeholders on identification of regional ecological linkages.	Medium	Environmental Officer/Development Services	Priority local ecological linkages identified.
Develop a monitoring and reporting schedule	High	Environmental Officer/Development Services/Corporate Services	Bi-annual report on progress with implementation of the Local Biodiversity Strategy and on the status of biodiversity in the Shire presented to the Council and the community
Undertake a review of the feasibility and effectiveness of the proposed implementation actions every 5-7 years.	Medium	Environmental Officer/Development Services	Results of the review with recommendations on further actions presented to the Council
Local Government capacity building			
Contract or employ Environmental Officer services to include natural area management, submission of grant applications to obtain external funding for reserve management and facilitate partnerships with other relevant stakeholders and the community in reserve management, restoration and support to private landholders.	High	Corporate Services	In 2015-16 budget, provision for Environmental Officer services is approved and provided
Form partnerships with not-for-profit groups active in the Shire to facilitate reserve management and private	High	Environmental Officer/Community Infrastructure	At least one working partnership formed

Action	Priority	Responsibility	Key Performance Indicator
landholder support for biodiversity management			
Establish a Natural Resource Management (NRM) Reference Group to facilitate partnerships in implementing the Local Biodiversity Strategy objectives and other NRM priorities (e.g. Avon River and other priority waterways recovery)	High	Corporate Services/Environmental Officer	NRM Reference Group meeting on regular basis

The period report should report on the progress against the Key Performance Indicators and the timelines presented in the above table but also report on the following:

- Level of improvement in protection levels for all under represented vegetation complexes (% protected)
- Retention status for native vegetation.
- % of conservation reserves actively managed (change in condition when feasible)
- Hectares of natural areas re-vegetated (within reserves and on private land, including information on plant survival success rate)
- Water quality in the Avon and Mortlock Rivers
- Status of fencing along priority waterways
- Status of improved connectivity within identified linkages, including vegetation within road reserves identifies as high conservation value
- Fauna status (observations).

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GLOSSARY

Adequate refers to how much of each ecosystem should be sampled to provide ecological viability and integrity of populations, species and ecological communities at a bioregional scale. The concept of adequacy incorporates ecological viability and resilience of ecosystems for individual protected areas and for the protected area system as a whole (National Reserve System Task Group, 2009).

Bushland is land on which there is vegetation which is either a remainder of the natural vegetation of the land or, if altered, is still representative of the structure and floristics of the natural vegetation, and provides the necessary habitat for fauna (Bush Forever, Vol 1 & 2). 'Bushland' falls into the following condition classes: Pristine, Excellent, Very Good and Good (after Keighery 1994).

Comprehensive refers to the degree to which the full range of regional ecosystems recognisable at an appropriate scale within and across each IBRA bioregion is included within protected areas (National Reserve System Task Group, 2009).

Connectivity refers to the degree of connection between natural areas. Effectiveness will vary according to the type and mobility of different species.

Ecological community is a naturally occurring biological assemblage that occurs in a particular type of habitat. The scale at which ecological communities are defined will often depend on the level of detail in the information source, therefore, no particular scale is specified (Environmental Protection Authority 2003). The criteria in this document are based on using vegetation complexes as a means of interpreting ecological communities (except for threatened ecological communities).

Under the Environment Protection and Biodiversity Conservation Act 1999, ecological communities are similarly defined as assemblage of native species that:

- inhabits a particular natural area
- meets the additional criteria specified in the regulations made for the purposes of this definition.

Ecological linkages are non-contiguous natural areas that connect larger natural areas by forming stepping stones that allow the movement over time of organisms between these larger areas.

Endemic refers to a species having a natural distribution confined to a particular geographical region.

Habitat is the natural environment of an organism or community, including all biotic (living) or abiotic (non-living) elements; a suitable place for an organism or community to live (Environmental Protection Authority 2004). This term can be applied at a range of scales (Environmental Protection Authority 2004). Vegetation can become a reasonable surrogate for outlining habitat when its main components, structure and associated landform are also

described (Environmental Protection Authority 2004). Habitat can be occupied by an organism or community continuously, periodically or occasionally or can have once been occupied and still have the potential for organisms of that kind to be reintroduced (Williams et al 2001).

IBRA Bioregion or subregion as determined by the Interim Biogeographic Regionalisation for Australia (IBRA), is a region defined by a combination of biological, social and geographical criteria rather than geopolitical considerations; generally, a system of related, interconnected ecosystems. Region descriptions seek to describe the dominant landscape scale attributes of climate, lithology, geology, landforms and vegetation (Commonwealth of Australia 2010). A subregion is a subdivision of a bioregion which contains distinctive geomorphic units that closely align with land capability and development potential (Commonwealth of Australia 2010).

Local Natural Areas (LNAs) are natural areas that exist outside of Bush Forever Sites (Swan Coastal Plain), the DPaW Managed Lands and Regional Parks.

Native vegetation is indigenous aquatic or terrestrial vegetation. It does not include vegetation that was intentionally sown, planted or propagated unless that vegetation was sown, planted or propagated as required under the Environmental Protection Act 1986 or another written law; or that vegetation is of a class declared by regulation to be included in this definition. Native vegetation does not include dead vegetation unless that dead vegetation is of a class declared by regulation to be included in this definition. Native vegetation does include non-vascular plants (for example, mosses, fungi, algae) and marine plants (seagrass, macro algae [seaweed]). Native vegetation is more than trees and includes understorey and groundcover plants.

Natural area is used to describe an area that contains native species or communities in a relatively natural state and hence contains biodiversity. Natural areas can be areas of native vegetation, vegetated or open water bodies (lakes, swamps), or waterways (rivers, streams, creeks – often referred to as channel wetlands, estuaries), springs, rock outcrops, bare ground (generally sand or mud), caves, coastal dunes or cliffs (adapted from Environmental Protection Authority 2003). Note that natural areas exclude parkland cleared areas, isolated trees in cleared settings, ovals and turfed areas.

Regionally significant bushland is a component of remnant vegetation that collectively aims to form a comprehensive, adequate and representative system of conservation areas (Environmental Protection Authority 2003). In order for bushland areas to fall into this category, they need to be part of the existing or proposed conservation system or to meet, in part or whole, a range of criteria which are outlined in Appendix 3 of Environmental Protection Authority (2003).

Representativeness: Comprehensiveness considered at a finer scale (IBRA subregion), and recognizes that regional variability within ecosystems is sampled within the reserve system. One way of achieving this is to aim to represent each regional ecosystem within each IBRA sub-region (National Reserve System Task Group, 2009).

Reserves are lands designated under the *Land Administration Act 1987*. They are areas of Crown land reserved for various public purposes, for example, parks, recreation, drainage or a range of public purposes. The reserve is identified by a number, for example, Reserve No.

12345. Reserves may be vested, leased or Crown Granted in Trust. Crown Reserves have varying levels of protection depending on the purpose of the reserve.

Target Areas are areas that highlight areas where good opportunities exist to improve the protection status of under-represented vegetation complexes in the Shire. Six Target Areas focus on buffers of important waterways. It should be noted that it is not intended that all vegetation mapped within these Target Areas will be formally protected or all lands considered for restoration. Target Area boundaries are designed to be indicative only and include already cleared areas or even portions of areas where development has been approved. Target Areas are not to be interpreted as areas where development is prohibited. They should be used to identify areas where any remaining vegetation and other natural areas are of conservation significance and their retention and protection should be a priority when deciding on future land use planning.

Vegetation complexes (as defined by Heddle, Loneragan & Havel 1980; Mattiske & Havel 1998). Vegetation complexes are based on the pattern of vegetation at a regional scale as they reflect the underlying key determining factors of landforms, soils and climate. In the area covered by the Perth and Peel Regions, there was a reliance on the underlying landform and soils as defined and mapped by Churchward and McArthur (1980) and a major review of the forest climates by Gentilli (1989).

Viability (as in ecological viability) is the likelihood of long-term survival of a particular ecosystem or species.

APPENDIX A: Local Planning Framework Summary

Shire of Northam Local Planning Strategy (2013)

The following strategies and actions have been identified in the Local Planning Strategy to facilitate the achievement of the Strategy's vision and objectives for the environment and natural resources, which are:

- Protect, conserve and enhance the environmental values and natural resources of the Shire for the benefit of current and future generations while providing appropriate development opportunities to promote the local economy.
- Protect privately owned land recognised as Conservation on Strategy maps to provide for possible future inclusion into State Nature Reserves.

Strategies (Section 5.1.4)

- Promote the planning, protection, management and sustainable use of the Shire's natural resources.
- Provide for the rehabilitation and revegetation of degraded land.
- Facilitate the long term protection of areas of local and regional conservation significance in Crown ownership throughout the Shire.
- Support land use change and development that demonstrates positive environmental outcomes or reduces the degree of negative impact on the environment.
- Discourage land use development and/or subdivision on privately owned land recognised as Conservation on the Strategy maps.
- Promote and support community involvement in environmental groups and rehabilitation of the natural environment.
- Facilitate a strategic approach for the long term protection of natural areas.

Actions (Section 5.1.5)

- Give due consideration to land capability and suitability when making decisions about the future use and development of land within the Shire that has potential to have significant negative environmental impacts (ONGOING)
- Identify areas of local and regional conservation significance in Crown ownership throughout the Shire and classify them as 'Conservation' reserve in Local Planning Scheme No. 6 (IMMEDIATELY)
- Support the preparation and implementation of management plans for public and privately owned land identified as being of high conservation value (ONGOING)
- Prepare, adopt and regularly review local planning policies to control development affecting: native remnant vegetation;...wetlands identified as being of international, national or state significance... (SHORT TERM)
- Incorporate provisions in Local Planning Scheme No. 6 that can be applied both generally and specifically to facilitate the protection, management and sustainable use of the Shire's natural resources (IMMEDIATELY)
- Incorporate 'Special Control Area' provisions in Local Planning Scheme No. 6 specific to the Avon or Mortlock River systems and apply the provisions accordingly to ensure that any future development and use of land adjacent to these river systems is appropriately located, preserves their ecological values and landscape qualities and does not adversely affect their capacity to convey floodwaters or give rise to any further land degradation (IMMEDIATELY & ONGOING)
- Consult with the Western Australian Local Government Association (WALGA) and Wheatbelt Natural Resource Management Inc. to determine the feasibility and cost of

preparing a local biodiversity strategy consistent with WALGA's Local Government Biodiversity Planning Guidelines to facilitate the protection and management of natural areas within the Shire (SHORT TERM)

Shire of Northam Local Planning Scheme No. 6 (2013) – an extract of provisions for biodiversity

1.6 Aims of the Scheme

(i) protect, conserve and enhance the environmental values and natural resources of the Scheme area including the protection of remnant vegetation and the rehabilitation and revegetation of degraded land

3.2 Local Reserves

Conservation of Flora and Fauna

4.2.8 Rural Zone

To protect land from land degradation and further loss of biodiversity by:

- (i) Minimising the clearing of remnant vegetation and encouraging the protection of existing remnant vegetation;
- (ii) Encouraging the development of and the protection of corridors of native vegetation;
- (iii) Encouraging the development of environmentally acceptable surface and sub-surface drainage works; and
- (iv) Encouraging rehabilitation of salt affected land.

4.2.10 Rural Smallholding Zone

•To provide for the use of land for rural living purposes in a rural setting on lots generally ranging in size from 4 to 40 hectares while preserving the amenity of such areas, ensuring landscape protection and conservation and controlling land use impacts.

5.25 Extractive and mining industries

5.25.1 The development of **extractive and mining industries** that are not covered by the Mining Act 1978 in the Scheme Area will only be supported by the local government under the following circumstances –

- (a) where the extraction of minerals or basic raw materials does not unreasonably affect the natural environment or amenity in the locality of the operation during or after excavation;

5.25.2 All applications for planning approval for the establishment of extractive and mining industry operations in the Scheme area are to be accompanied by a management plan and report which –

- (a) describes the physical characteristics of the excavation site including significant environmental features;

5.30 Development in the Rural Residential and Rural Smallholding Zones

5.30.1 The provisions applicable to a specific area of **Rural Residential or Rural Smallholding** zoned land in Schedule 11 & 12 shall specify any additional provisions considered appropriate to the particular site to achieve the objectives of the Scheme and the relevant zone. If a provision in Schedule 11 & 12 conflicts with any other provision of the Scheme, the provision in Schedule 11 & 12 shall prevail.

5.30.2 The subdivision of any land within the Scheme area classified Rural Residential or Rural Smallholding zone shall generally be in accordance with a structure plan prepared pursuant to clause 5.31. The subdivision of existing Rural Residential or Rural Smallholdings lots that do not have adopted structure plans will generally not be supported.

5.30.6 The local government or the Western Australian Planning Commission may require the provision of building envelopes or building exclusion areas for any land proposed to be subdivided in the Rural Residential or Rural Smallholdings zone. These shall be –
(c) located to avoid any native vegetation or any area recognised for protection or rehabilitation as shown on the approved structure plan and/or environmental management plan;

5.30.11 No local native trees or shrubs shall be felled or removed from any lot classified Rural Residential or Rural Smallholding zone other than within an approved building envelope except where in the opinion of the local government –
(a) such trees and shrubs are dead, diseased or dangerous;
(b) the establishment or maintenance of a firebreak is required under a regulation or local law;
(c) it is necessary to allow for the construction or maintenance of vehicle access, fences or essential service infrastructure; or
(d) it is necessary to provide for the reduction of any existing or potential fire hazard.

5.30.14 The subdivision of any land within the Scheme area classified Rural Residential or Rural Smallholding zone will be conditional upon the subdivider preparing and implementing an Environmental Management Plan to the satisfaction and approval of the local government. The plan shall include details of –
(b) all vegetation protection areas;
(c) measures for the protection, revegetation and maintenance of landscape buffers along seasonal watercourse and wetlands

5.30.16 All landscape buffer, tree preservation, revegetation and/or stream protection areas shown on an approved structure plan and/or Environmental Management Plan are to be protected from livestock by fencing or other means to the satisfaction of the local government and the requirements thereof are to be detailed within the Environmental Management Plan.

5.31.4 Structure Plan Form and Content

A Structure Plan is to contain such detail as, in the opinion of the local government and Western Australian Planning Commission, is required to satisfy the planning requirements for the structure plan area, and should include the following details –
(c) key opportunities and constraints of the structure plan area including landform, topography, hydrology, landscape, vegetation, soils, conservation and heritage values, ownership, land use, roads and services;
(d) conservation and environmental values including bushland, wetlands, streams and water courses, foreshore reserves and setbacks, environmental policy areas and urban water management areas;

6. Special Control Areas

6.2 SCA1 – Avon and Mortlock Rivers Special Control Area

6.2.1 PURPOSE

The purpose of the **Avon & Mortlock Rivers Special Control Area** is to –

(a) Preserve the ecological values of the Avon and Mortlock Rivers as a significant drought refuge for freshwater fishes and water birds;

(b) Avoid development that would negatively impact upon the ecological values and landscape qualities of the area

6.2.5 Conditions of Approval

The local government's approval to any subdivision and/or development on any land within the Avon & Mortlock Rivers Special Control Area may be conditional upon one or more of the following –

- (a) Planting and/or retention of vegetation;
- (b) Fencing of remnant vegetation;
- (c) Control of stock along wetland and foreshore areas;
- (d) Prohibition of dwellings and effluent disposal systems within 100 metres of wetland and foreshore areas;
- (g) Preparation of conservation management plans; and
- (h) Preparation and registration of restrictive covenants and/or deeds of agreement to secure performance of land management agreements.

6.3 SCA2 – Landscape Protection Special Control Area

6.3.1 PURPOSE

THE PURPOSE OF THE **LANDSCAPE PROTECTION SPECIAL CONTROL AREA** IS TO -

(b) Avoid development which would negatively impact upon the ecological values and landscape qualities of the area

6.4 SCA4 – Spencers Brook Special Control Area

6.4.1 PURPOSE

THE PURPOSE OF THE **SPENCERS BROOK SPECIAL CONTROL AREA** IS –

(a) To preserve the ecological values of the river and riparian zone

8.2 Permitted Development

Except as otherwise provided in the Scheme, for the purposes of the Scheme the following development does not require the planning approval of local government –

- (b) the erection on a lot of a single house including any extension, ancillary outbuildings and swimming pools, except where –
- (vi) the development is within 50 metres of a Major and/or Regional Road reserve where the reserve/s abut land classified Rural zone, Rural Smallholding zone and Rural Residential zone;

SCHEDULE 2 — ADDITIONAL USES

A2.	Lot 102 (967) Northam-Toodyay Road, Katrine on Deposited Plan 55137	Group Farming The purpose of the 'group farming' use is to permit the establishment of more than one residence on the property to facilitate opportunities for rural living in the context of a commitment to the protection and enhancement of the agricultural and environmental status of the land and its rural landscape values.
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SCHEDULE 3 — RESTRICTED USES

R2	Part Lot 4396 Great Eastern Highway and Part Lot 31 Oyston Road, Bakers Hill (zoned 'Agriculture-Local)	One Residential Dwelling, Home Occupation, Bed & Breakfast and/or Cottage Industry
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3. Clearing

- 3.1. Clearing shall only be permitted within a building envelope.
- 3.2. Should a tree within a building envelope be identified by an independent Flora/Fauna Study as significant in respect to providing habitat for native fauna or being an outstanding specimen, the local government may require the tree to be retained notwithstanding Clause 3.1 above.
- 3.3. Clearing may be permitted, subject to local government approval, for the construction of a driveway for vehicular access to a building envelope. Only one driveway shall be permitted per lot and clearing shall minimise impacts on native flora and fauna.
- 3.4. Revegetation of areas damaged during the construction of a building or driveway may be required at the local government's discretion.
- 3.5. Fallen timber shall not be removed or cleared from areas outside the building envelope where it abuts large areas of remnant vegetation or areas that are identified for vegetation protection.

SCHEDULE 11 — RURAL RESIDENTIAL ZONES

RR5.	Various lots in the vicinity of Anderson Road, Gleeson Hill Road & Glenmore Drive, Wundowie as shown on the Scheme Map.	1. All Vegetation Management Areas shown on the approved structure plan shall be re-vegetated by the planting of locally native species and protected from fire and excessive grazing.
RR7.	Various lots in the vicinity of Fernie & Sims Roads, Bakers Hill as shown on the Scheme Map.	1. The minimum permitted lot size shall be 2.0 hectares. 3. All Vegetation Management Areas shown on the approved structure plan shall be re-vegetated by the planting of locally native species and protected from fire and excessive grazing.
RR12.	Loc 21630 (23), Loc 25089 (81), Loc 25088 (91), Loc 21631 (11) and Loc 25087 (99) Foundry Place and Loc 21632	3. Prior to the local government's adoption of any proposed structure plan, a flora and fauna survey shall be undertaken to the specifications and satisfaction of the local government and the Department of Environment and Conservation.

- RR25. (188)
Coates
Road,
Wundowie
Loc 3709
(L1) Chitty
Road and
Lot 340
(127)
Augustini
Road,
Bakers Hill
2. The subdivider shall prepare and implement an Environmental Management Plan to the satisfaction and approval of the local government prior to the subdivision of the land. The plan shall include:-
(a) vegetation protection except that necessary to provide for the provision of roads, other infrastructure and building development within building envelopes as approved by the local government;
(c) "Watercourse Protection Areas" the extents of which are to be determined after consultation with the relevant government agency, and where the following will apply

APPENDIX B: National Vegetation Information System (NVIS) Information Hierarchy

Hierarchical Level	Description	NVIS structural/floristic components required
I	Class	Dominant growth form for the ecologically or structurally dominant stratum
II	Structural Formation	Dominant growth form, cover and height for the ecologically or structurally dominant stratum.
III	Broad Floristic Formation	Dominant growth form, cover, height and dominant land cover genus for the upper most or the ecologically or structurally dominant stratum.
IV	Sub-Formation	Dominant growth form, cover, height and dominant genus for each of the three traditional strata. (i.e. Upper, Mid and Ground)
V	Association	Dominant growth form, height, cover and species (3 species) for the three traditional strata. (i.e. Upper, Mid and Ground)
VI	Sub-Association	Dominant growth form, height, cover and species (5 species) for all layers/sub-strata.

Source: **National Vegetation Information System, Version 6.0**
Executive Steering Committee for Australian Vegetation Information (ESCAVI)
Department of the Environment and Heritage, 2003
 ISBN 0 642 54953 2

<http://www.environment.gov.au/node/18930>

APPENDIX C: Description of vegetation mapped in the Shire of Northam

Key:

	Darling Plateau
	Uplands
	Depressions and Swamps on Uplands
	Valleys
	Valley floors and swamps

Vegetation complexes (Havel & Matiske 1998)	Description
Bindoon - Bi	Woodland of <i>Eucalyptus loxophleba</i> on the slopes, flanked by woodlands of <i>Eucalyptus wandoo</i> - <i>Eucalyptus accedens</i> on the breakaways and upper slopes in the peri-arid zone.
Cooke - Ce	Mosaic of open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia calophylla</i> (subhumid zone) and open forest of <i>Eucalyptus marginata</i> subsp. <i>thalassica</i> - <i>Corymbia calophylla</i> (semi-arid and arid zones) and on deeper soils adjacent to outcrops, closed heath of Myrtaceae-Proteaceae species and lithic complex on granite rocks and associated soils in all climate zones, with some <i>Eucalyptus laeliae</i> (semiarid), and <i>Allocasuarina huegeliana</i> and <i>Eucalyptus wandoo</i> (mainly semiarid to peri-arid zones).
Coolakin - Ck	Woodland of <i>Eucalyptus wandoo</i> with mixtures of <i>Eucalyptus patens</i> , <i>Eucalyptus marginata</i> subsp. <i>thalassica</i> and <i>Corymbia calophylla</i> on the valley slopes in arid and peri-arid zones.
Goonaping - G	Mosaic of open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> (humid zones) and <i>Eucalyptus marginata</i> subsp. <i>thalassica</i> (semi-arid to peri-arid zones) on the sandy-gravels, low woodland of <i>Banksia attenuata</i> on the drier sandier sites (humid to peri-arid zones) with some <i>Banksia menziesii</i> (northern arid and peri-arid zones) and low open woodland of <i>Melaleuca preissiana</i> - <i>Banksia littoralis</i> on the moister sandy soils (humid to peri-arid zones).
Michibin - Mi	Open woodland of <i>Eucalyptus wandoo</i> over <i>Acacia acuminata</i> with some <i>Eucalyptus loxophleba</i> on valley slopes, with low woodland of <i>Allocasuarina huegeliana</i> on or near shallow granite outcrops in arid and peri-arid zones.
Murray 2 - My2	Open forest of <i>Eucalyptus marginata</i> subsp. <i>thalassica</i> - <i>Corymbia calophylla</i> - <i>Eucalyptus patens</i> and woodland of <i>Eucalyptus wandoo</i> with some <i>Eucalyptus accedens</i> on valley slopes to woodland of <i>Eucalyptus</i>

	<i>rudis</i> - <i>Melaleuca raphiophylla</i> on the valley floors in semiarid and arid zones.
Pindalup - Pn	Open forest of <i>Eucalyptus marginata</i> subsp. <i>thalassica</i> - <i>Corymbia calophylla</i> on slopes and open woodland of <i>Eucalyptus wandoo</i> with some <i>Eucalyptus patens</i> on the lower slopes in semi-arid and arid zones.
Swamp - S	Mosaic of low open woodland of <i>Melaleuca preissiana</i> - <i>Banksia littoralis</i> , closed scrub of Myrtaceae spp., closed heath of Myrtaceae spp. and sedgeland of <i>Baumea</i> and <i>Leptocarpus</i> spp. on seasonally wet or moist sand, peat and clay soils on valley floors in all climatic zones.
Williams - Wi	Mixture of woodland of <i>Eucalyptus rudis</i> - <i>Melaleuca raphiophylla</i> , low forest of <i>Casuarina obesa</i> and tall shrubland of <i>Melaleuca</i> spp. on major valley systems in arid and peri-arid zones.
Yalanbee - Y5	Mixture of open forest of <i>Eucalyptus marginata</i> subsp. <i>thalassica</i> - <i>Corymbia calophylla</i> and woodland of <i>Eucalyptus wandoo</i> on lateritic uplands in semiarid to peri-arid zones.
Yalanbee - Y6	Woodland of <i>Eucalyptus wandoo</i> - <i>Eucalyptus accedens</i> , less consistently open forest of <i>Eucalyptus marginata</i> subsp. <i>thalassica</i> - <i>Corymbia calophylla</i> on lateritic uplands and breakaway landscapes in arid and peri-arid zones.
Vegetation Association (Beard)	Description
4	Medium woodland; marri & wandoo
352	Medium woodland; York gum
511	Medium woodland; salmon gum & morrel
694	Shrublands; scrub-heath on yellow sandplain banksia-xylomelum alliance in the Geraldton Sandplain & Avon-Wheatbelt Regions
946	Medium woodland; wandoo
1006	Medium woodland; jarrah, wandoo & powderbark
1048	Mosaic: Shrublands; melaleuca patchy scrub / Succulent steppe; samphire
1049	Medium woodland; wandoo, York gum, salmon gum, morrel & gimlet
3003	Medium forest; jarrah & marri on laterite with wandoo in valleys, sandy swamps with teatree and Banksia

APPENDIX D: Retention and protection status of vegetation in the Shire of Northam

Note: There are limitations of the native vegetation extent mapping, such as:

- the preferential mapping of treed landscapes, leading to some mapping of areas that are parkland cleared or completely degraded;
- the inclusion of areas that are approved for through development approvals and/or clearing permits;
- inclusion of re-vegetation sites that do not represent original native ecosystems present prior to clearing.

The statistics on native vegetation retention are therefore considered to be an over-estimate of the native vegetation remaining in the field. For example if the figures show that 40% of the pre-European (or pre-clearing) extent of a vegetation type remains, it would be expected that in fact about 30% of vegetation is present at the time of publication of those statistics. Therefore, when comparing the local or regional vegetation retention and protection status of vegetation against the accepted thresholds of 10%, 30% or 17% of their pre-European extent, the actual figures of 15%, 40% and 20% are used (Del Marco *et al* 2004).

The following statistics were generated by the Local Biodiversity Program using the following datasets:

- 2013 native vegetation extent mapping (Department of Agriculture and Food)
- DPaW managed lands (Department of Parks and Wildlife, 2013)
- Pre-1750 Vegetation Complexes - Complete Coverage captured by Mattiske and Havel for the Regional Forest Agreement (Department of Conservation and Land Management, 2003)
- Pre-European vegetation mapping by Beard, 1980 (Department of Agriculture and Food)
- Local Planning Scheme No 6 (2014) zones and reserves (Department of Planning, 2014)
- Crown reserves (Landgate, 2013)
- IBRA regions and sub-regions (version 7.1) (Australian Government, 2013)
- Local Government boundaries (Landgate, 2013)
- Land for Wildlife property boundaries (Department of Parks and Wildlife, 2014)

Table 1: Native vegetation status in the Shire of Northam (based on Beard vegetation associations mapping)

Source: Government of Western Australia. (2013). *2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report)*. Current as of June 2013. WA Department of Parks and Wildlife, Perth. <https://www2.landgate.wa.gov.au/web/guest/downloader>
 Columns B, K, L, M & N added by the Local Biodiversity Program (2014)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Vegetation Association	Pre-European Extent	Proportion (%) of the State-wide pre-European extent in the Shire.	Current Extent	% Remaining	IUCN I - IV in Pre-European Extent ^A	IUCN I - IV in Current Extent	% Current Extent Protected (IUCN I - IV) for Conservation (proportion of Pre-European Extent)	% Pre-European Extent in IUCN I - IV (proportion of Pre-European Extent)	Current Extent in All DPaW-Managed Land	% Current Extent in All DPaW-Managed Land (proportion of Current Extent)	17% of the pre-European extent of vegetation complexes in the region (ha)	Proportion the Shire of Northam should contribute to the conservation of 17% of pre-European regional extent (ha) L=K*B/100	Area protected in local conservation reserves	Area required to improve protection status of vegetation complexes at regional and local level (ha) N=L-E-M
4	22579	<1	9780	43	2200	2165	10	10	2425	25	175618	1756		0
352	66825	9.20	7541	11	307	291	0	0	291	4	112572	10356	13	10036
511	531	<1	67	13					0	0	16380	163		163
694	7309	2.00	415	6	100	17	0	1	17	4	29593	591		491
946	16	0.03	4	26					0	0	8408	3		3
1006	13907	31.00	6060	44	1487	1464	11	11	1567	26	7634	2366		880
1048	772	5.50	372	48					0	0	2349	129	23	107
1049	14933	1.80	852	6					0	0	141675	2550		2550
3003	16253	24.50	8818	54	2594	2550	16	16	3777	43	11296	2767		174
Total	143125		33908	24	6688	6487		5	8077	24				

Regional significance (IBRA region - AW & JAF)

- <10% or 1500ha remaining regionally
- <30% remaining and <17% protected regionally
- <30% remaining regionally
- <17% protected regionally

Local significance

- <10% remaining locally
- <30% remaining locally
- <17% protected locally
- locally rare and unprotected

Table 2: 2013 Native vegetation extent by vegetation complexes – Shire of Northam (Local Biodiversity Program, 2014)

	A	B	C	D	E	F	G	H	I	J	K	L	M
Vegetation complexes by Havel & Matiske (1998)	Pre-European extent (ha)	Proportion of pre-European regional extent in the Shire	2013 Remnant vegetation extent (ha)	% of pre-European extent remaining in the Shire	In DPaW managed for conservation *	% of pre-European extent protected in the Shire	DPaW managed other	DPaW managed State Forest	Local Natural Areas	Portion of LNA protected (local conservation reserves & zoning)	17% of the pre-European extent of vegetation complexes in the region (ha)	Proportion the Shire of Northam should contribute to the conservation of 17% of pre-European regional extent (ha) L=K*B/100	Area required to improve protection status of vegetation complexes at regional and local level (ha) M= L-E-J
Bindoon - Bi	4763	13.21%	1005.78	21.12%		0.00%			1005.78	0.00	6129	809.71	809.71
Cooke - Ce	470	1.28%	413.93	88.07%	217.69	46.32%			196.24	0.00	6252.00	79.90	0.00
Coolakin - Ck	8538	5.20%	2214.86	25.94%	320.18	3.75%	2.38		1892.31	2.38	27929.00	1451.46	1128.90
Goonaping - G	258	0.94%	201.87	78.25%	116.62	45.20%	7.62		77.63	0.00	4669.00	43.86	0.00
Michibin - Mi	9095	5.41%	3010.38	33.10%	274.10	3.01%	233.02		2503.25	205.38	28565.00	1546.15	1066.67
Murray 2 - My2	1407	2.37%	335.10	23.82%	23.87	1.70%			311.22	0.00	10084.00	239.19	215.32
Pindalup - Pn	10562	6.32%	6094.44	57.70%	1966.96	18.62%		921.52	3205.40	49.68	28415.00	1795.54	0.00
Swamp - S	29	0.05%	12.84	44.29%		0.00%			12.84	0.00	9121.00	4.93	4.93
Williams - Wi	1124	3.88%	318.19	28.31%		0.00%			318.19	0.00	4927.00	191.08	191.08
Yalanbee - Y5	10382	8.20%	5479.79	52.78%	1544.70	14.88%	26.49	287.78	3619.65	112.61	21523.00	1764.90	107.59
Yalanbee - Y6	16466	8.30%	7571.72	45.98%	1961.86	11.91%	109.86		5500.00	551.51	33725.00	2799.22	285.85
Total	63094		26658.91	42.25%	6426.00	10.18%	379.37	1209.30	18642.52	921.56			3810.04

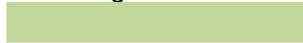
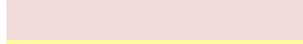
Note: these statistics only apply to the western portion of the Shire, to the extent of the vegetation complex mapping by Havel and Matiske (2003)

Legend:

Regional significance

	<30% remaining and <17% protected regionally
	<17% protected regionally

Local significance

	<30% remaining locally
	<17% protected locally
	locally rare and unprotected

Note: for the determination of thresholds, the following actual figures were used: for 30% used 40%, for 17% used 20%

Formal Reserves = Existing National Parks, Nature Reserves, Cons Parks, 5(g) Reserves

* DPaW managed for conservation:

Local Natural Areas = natural areas outside DPaW managed lands

Table 3: 2013 native vegetation extent of Beard vegetation associations and the Local Planning Scheme No 6 land uses (Local Biodiversity Program, 2014)

Beard Vegetation Association	4	352	511	694	946	1006	1048	1049	3003	Total
Avon Wheatbelt	211.96	7197.15	65.54	391.58	4.13	0.00	361.16	813.79	0.00	9045.32
COMMERCIAL		0.11								0.11
CONSERVATION OF FLORA & FAUNA	13.23	299.81		16.84						329.88
HIGHWAY	0.35	4.11								4.45
INDUSTRIAL		1.03								1.03
LIGHT & SERVICE INDUSTRY		2.32								2.32
LOCAL ROAD		1.12								1.12
MAJOR ROAD	1.23	64.74		4.53				11.29		81.79
PARKS AND RECREATION	6.23	153.53		1.22			34.42	3.51		198.90
PUBLIC PURPOSES	30.40	237.96		19.71			18.10	0.41		306.57
RAILWAY		23.10		0.11				0.00		23.21
RECREATION		68.77								68.77
REGIONAL ROAD	0.61	4.39								5.00
RESIDENTIAL		2.57								2.57
RURAL RESIDENTIAL	0.82	95.45								96.27
RURAL SMALLHOLDING	11.84	72.39								84.22
RURAL	145.19	5841.79	65.54	349.18	4.13		308.64	798.59		7513.05
SPECIAL RESIDENTIAL	2.07	64.15								66.23
SPECIAL USE		259.81								259.81
Jarrah Forest	9390.97	68.21	0.00	0.00	0.00	5938.50	0.00	0.00	8606.90	24004.57
RURAL	4302.71	63.38				2480.41			3236.73	10083.23
CONSERVATION OF FLORA & FAUNA	1056.46	2.00				1935.49			1201.39	4195.35

Beard Vegetation Association	4	352	511	694	946	1006	1048	1049	3003	Total
HIGHWAY	6.14	0.80								6.94
INDUSTRIAL						15.49			6.54	22.03
MAJOR ROAD	84.75					7.65			11.84	104.24
PARKS AND RECREATION	182.57					302.48			45.21	530.26
PUBLIC PURPOSES	2307.73	0.07				868.05			1394.47	4570.32
RESIDENTIAL						2.47			7.51	9.98
RURAL RESIDENTIAL	25.13	1.27								26.40
RURAL SMALLHOLDING	310.52					326.44			60.44	697.41
SPECIAL RESIDENTIAL	3.70	0.69								4.39
STATE FOREST	1111.27								2627.58	3738.85
TOURIST									15.18	15.18
Total	9602.93	7265.36	65.54	391.58	4.13	5938.50	361.16	813.79	8606.90	33049.89

Note: Total extent for some of the Beard vegetation association shown in this table is different to that shown in Table 1. This is mainly due to the gaps in the local planning scheme land uses dataset.

Table 4: 2013 native vegetation extent by vegetation complexes and Local Planning Scheme No 6 land uses (Local Biodiversity Program, 2014)

	CONSERVATION OF FLORA & FAUNA	INDUSTRIAL	MAJOR ROAD	PARKS AND RECREATION	PUBLIC PURPOSES	RESIDENTIAL	RURAL SMALLHOLDING	RURAL	SPECIAL USE	STATE FOREST	TOURIST	Total
Bindoon - Bi			2.89	0.02	19.61			887.93	91.61			1002.06
Cooke - Ce	176.90							200.02		39.66		416.58
Coolakin - Ck	323.81		0.62	215.47	2.24		106.13	1494.88				2143.15
Goonaping - G			0.95		20.23			62.77		115.40		199.35
Michibin - Mi	273.33		74.25	34.75	21.36		166.44	2390.05				2960.19
Murray 2 - My2	23.87		2.62	2.53	0.34		6.01	274.28			10.42	320.08
Pindalup - Pn	568.72	22.03	8.19	4.14	1884.47	8.73	55.31	1069.55		2340.73		5961.87
Swamp - S							2.30	10.54				12.84
Williams - Wi			11.88	16.04	17.15		24.26	220.62	3.13			293.08
Yalanbee - Y5	1472.03		6.77	84.46	861.36	1.25	177.46	2283.47		469.92	4.76	5361.48
Yalanbee - Y6	1620.18		15.20	138.66	1467.42		238.51	3210.64	8.77	775.49		7474.87
Total	4458.84	22.03	123.39	496.07	4294.17	9.98	776.43	12104.74	103.51	3741.20	15.18	26145.55

Note: these statistics only apply to the western portion of the Shire, to the extent of the vegetation complex mapping by Havel and Matiske (2003) – see Figure 4.1.

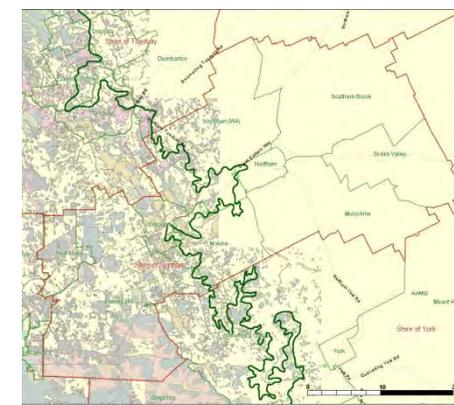


Figure 4.1: The extent of vegetation complex mapping by Havel and Matiske (2003) in the Shire of Northam. The dark green line represents the boundary between the Jarrah Forest and Wheatbelt bio-regions.

Table 5: List of Crown reserves proposed to have their purpose changed to include “Conservation”, and the extent of native vegetation remaining in these reserves (Local Biodiversity Program, 2014)

Reserve Number and Purpose Colouring identifies land use classification in the LPS No 6	Vegetation Complexes					BVAs				Total	Records of threatened species or ecological communities	Notes*
	Coolakin - Ck	Michibin - Mi	Pindalup - Pn	Yalanbee - Y5	Yalanbee - Y6	4	352	694	1049			
R 420 (Recreation & Parkland)							32.9			32.9	Vu	#1 Northam
R 2602 (Historic Watering Place)							0.41			0.41		In BA21; #2 Grass Valley
R 3203 (Sand & Gravel Quarry)							12.7	18.5		31.2		#3 Grass Valley
R 3308 (Recreation)	1.60									1.6		#1 Bakers Hill
R 4200 (Recreation and Golf Course)	7.12				0.00					7.1		#3 Bakers Hill
R 5645 (Water)							2.91			2.9		
R 6305 (Water)									7.2	7.2		#1 Meenar
R 9251 (Parks & Recreation)							1.26			1.26		#10 Grass Valley
R 11619 (Recreation)				45.9						45.9		#1 Wundowie
R 15384 (Parklands)									2.4	2.4		In BA14; #2 Jennapullin
R 18954 (Recreation)							1.54			1.5		#11 Grass Valley
R 19542 (Recreation)		1.40								1.4		#2 Clackline, Add adjoining R16349 (#1 Clackline))
R 25225 (Recreation and Golf Links)				37.60						37.6		#6 Wundowie
R 25785 (Recreation)	4.74				12.15					16.9		in Ck4; #6 Bakers Hill
R 25796 (Rubbish Depot)			2.08	8.32						10.4		
R 26840 (Rubbish Disposal)						49				48.9	PEC	#2 Northam
R 28043 (Recreation)	2.69	4.79								7.5		

Reserve Number and Purpose Colouring identifies land use classification in the LPS No 6	Vegetation Complexes					BVAs				Total	Records of threatened species or ecological communities	Notes*
	Coolakin - Ck	Michibin - Mi	Pindalup - Pn	Yalanbee - Y5	Yalanbee - Y6	4	352	694	1049			
R 32143 (Community Purposes)							6.74			6.7		In Wi1; #1 Mokine
R 38973 (Recreation Trotting Training Track)			9.31	0.18						9.5		In LP1
R 39381 (Public Recreation)							2.93			2.9		In Bi7; #1 Katrine
R 41452 (Recreation- Motor Cycle Sports)							14.5			14.5		#12 Northam - proposed to sell for residential development (2011)
R 41559 (Public Recreation)							9.62			9.6		In BA7; #2 Katrine
R 41937 Rubbish Disposal)				4.86								In LP2
R 43247 (Public Recreation)							0.41			0.41		
R 43255 (Public recreation)							0.73			0.73		#30 Northam
R 44700 (Recreation & Parkland)		13.45			19.80	55	11.6			100	T	In BA12; #5 Northam
R 51213 (Municipal Purposes)						26	29.2			55	PEC	
Reserves not managed by the Shire Reserve Number (purpose)	Coolakin - Ck	Michibin - Mi	Pindalup - Pn	Yalanbee - Y5	Yalanbee - Y6	4	352	694	1049			Management responsibility/ Locality
R 23746 (Railway/Quarry)	2.76				12.81					15.6		Westrail/Bakers Hill
R 26947 (Sewage Treatment)			6.83							6.8		Water Corporation/ Wundowie
R 293 (Parklands)		3.52								3.5		Department of Planning/Mokine

Reserve Number and Purpose Colouring identifies land use classification in the LPS No 6	Vegetation Complexes					BVAs				Total	Records of threatened species or ecological communities	Notes*
	Coolakin - Ck	Michibin - Mi	Pindalup - Pn	Yalanbee - Y5	Yalanbee - Y6	4	352	694	1049			
R 30185 (Government Requirements)	1.70									1.7		ESA#, adjoins another 2.2ha mapped as ESA. Bakers Hill
R 30393 (Zoological Garden)	206.00	8.27			108.00					322.3		Zoological Gardens Board/Bakers Hill
R 30718 (Agricultural College)							80.7			80.7		Department of Training/ Muluckine
R 35531 (Public Recreation)							4.6			4.6		Department of Planning/Northam
R 35961 (Public Recreation)							8.2			8.2		Department of Planning- Subject to 20A/Northam
R 40985 (Water Supply)					2.25					2.25		Water Corporation
R 6203 (Reservoir/Catchment)			1872.24	717.33	1380.23					3970		Water Corporation/ Bakers Hill
Total in selected reserves:	226.61	31.42	1890.47	814.21	1537.5	130	221	18.5	9.7	4872		

* Corresponding reference number in the Shire of Northam Land Rationalisation Strategy (2011)

*TA identification label

#ESA – Environmentally Sensitive Areas are declared in the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005* under section 51B of the Environmental Protection Act. ESA identify areas with high conservation value where vegetation clearing exemptions do not apply.

Key: Local Planning Scheme land uses

	Conservation of Flora and Fauna
	Parks and Recreation

	Public Purposes
	Rural
	Residential

Table 6: 2013 native vegetation extent within Unallocated Crown Land in the Shire of Northam (Local Biodiversity Program, 2014)

IBRA regions	Vegetation complex	2013 extent (ha)
Jarrah Forest	Coolakin - Ck	71.25
	Michibin - Mi	3.31
	Pindalup - Pn	62.91
	Yalanbee - Y5	176.88
	Yalanbee - Y6	489.34
Avon Wheatbelt	Beard vegetation association	
	4	2.02
	352	214.35
	511	1.05
	694	0.39
	1048	10.39
	1049	1.34
Total in the Shire		1033.23

Table 8: 2013 native vegetation distribution on properties registered with the *Land for Wildlife* (LWF) Program in the Shire of Northam (Local Biodiversity Program 2014)

LFW REG No.	Coolakin - Ck	Michibin - Mi	Murray 2 - My2	Pindalup - Pn	Yalanbee - Y5	Yalanbee - Y6	BVA 352	BVA 1048	BVA 1049	Total	Land use
177										2.20	Rural
179				34.29	5.68					39.97	Rural
348					2.47					2.47	Rural
394		1.95								1.95	Conservation of Flora and Fauna
404					0.28					0.28	Rural Residential
559							1.17			1.17	Rural
567	7.05	198.18				93.16				298.39	Conservation of Flora and Fauna
624							0.60			0.60	Rural
634		37.43				28.17				65.61	Rural
710							29.87			29.87	Rural
890				15.36	0.01					15.37	Rural
1003		1.60				1.15				2.75	Rural Smallholdings
1045						2.71				2.71	Rural Residential
1165							78.85	36.50		115.35	Parks and Recreation
1181							96.93			96.93	Parks and Recreation
1333						5.41				5.41	Rural Residential
1408							9.65			9.65	Conservation of Flora and Fauna
1485			11.88	0.30						12.17	Rural
1537					0.16					0.16	Rural
1620									6.32	6.32	Rural
1625							2.13			2.13	Rural
1639				7.97	3.46					11.43	Rural
1900							42.50	23.45		65.95	Rural
1998		0.24				3.69				3.93	Rural Smallholdings
2035		7.48								7.48	Rural

LFW REG No.	Coolakin - Ck	Michibin - Mi	Murray 2 - My2	Pindalup - Pn	Yalanbee - Y5	Yalanbee - Y6	BVA 352	BVA 1048	BVA 1049	Total	Land use
2149							5.60	31.39		36.99	Rural
2157									3.57	3.57	Rural
2416	16.18									16.18	Rural
Total	23.23	246.88	11.88	57.91	12.07	134.29	267.30	91.34	9.89	856.99	

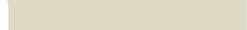
Table 9: Opportunities to improve the protection status of vegetation types with inadequate protection in the Shire of Northam (Local Biodiversity Program, 2014)

Vegetation complexes by Havel & Mattiske (1998)	Area required to improve protection status of vegetation complexes at regional and local level (ha)	Area of vegetation in Land for Wildlife (ha)	Area of vegetation in selected Shire vested reserves (ha)	Area of vegetation in other Crown reserves (ha)	Area of vegetation on Unallocated Crown Land (ha) (and not already protected via LPS6 provisions)	Distribution of vegetation complexes in land use categories providing good opportunities for vegetation retention/protection					Total remaining - 2013 (ha)
						Parks & Recreation	Agriculture - Local	Agriculture - Regional	Rural Smallholdings	Total in land uses with good opportunities	
Bindoon - Bi	810	0	0	0	0	0.02	716.74	171.19		887.95	1005.78
Cooke - Ce	0	0	0	0	0		200.02			200.02	413.93
Coolakin - Ck	1129	23.23	14.55	210.46	71.2	215.47	1494.88		106.13	1816.47	2214.86
Goonaping - G	0	0	0	20.25	0		62.77			62.77	201.87
Michibin - Mi	1067	248.9	18.24	11.79	3.3	34.75	2303.23	86.82	166.44	2591.25	3010.38
Murray 2 - My2	215	11.88	0	0	0	2.53	274.28		6.01	282.82	335.10
Pindalup - Pn	0	61.6	11.39	1879.07	62.9	4.14	1069.55		55.31	1128.99	6094.44
Swamp - S	5	0	0	0	0		10.54		2.30	12.84	12.84
Williams - Wi	191	0.32	0	0	0	16.04	184.44	36.18	24.26	260.92	318.19
Yalanbee - Y5	108	13.4	96.87	717.33	176	84.46	2283.47		177.46	2545.40	5479.79
Yalanbee - Y6	286	134	31.95	1501	489	138.66	3074.96	135.69	238.51	3587.82	7571.72
Total	3810	493.33	173	4339.9	802.4					13377.24	26658.90
BVAs not covered by vegetation											

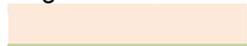
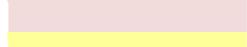
complex mapping

352	10052	267.3	123.13	80.72	214.35	153.53	2553.79	3288.00	72.39	6067.70	7540.70
511	163	0	0	0	1.05	0.00	0.00	65.54		65.54	67.13
694	574	0	18.51	0	0.39	1.22	0.00	349.18		350.40	414.62
946	3	0	0	0	0	0.00	0.00	4.13		4.13	4.14
1048	107	91.4	0	0	10.39	34.42	0.00	308.64		343.06	371.76
1049	2550	9.89	9.65	3.34	1.34	3.51	0.00	798.59		802.10	851.56
Total:	13448	368.59	151.29	84.06	227.52	192.68	2553.79	4814.08	72.39	7632.93	9249.91

Regional significance

-  <10% remaining regionally
-  <30% remaining and <17% protected regionally
-  <17% protected regionally

Local significance

-  <10% remaining locally
-  <30% remaining locally
-  <17% protected locally
-  locally rare and unprotected

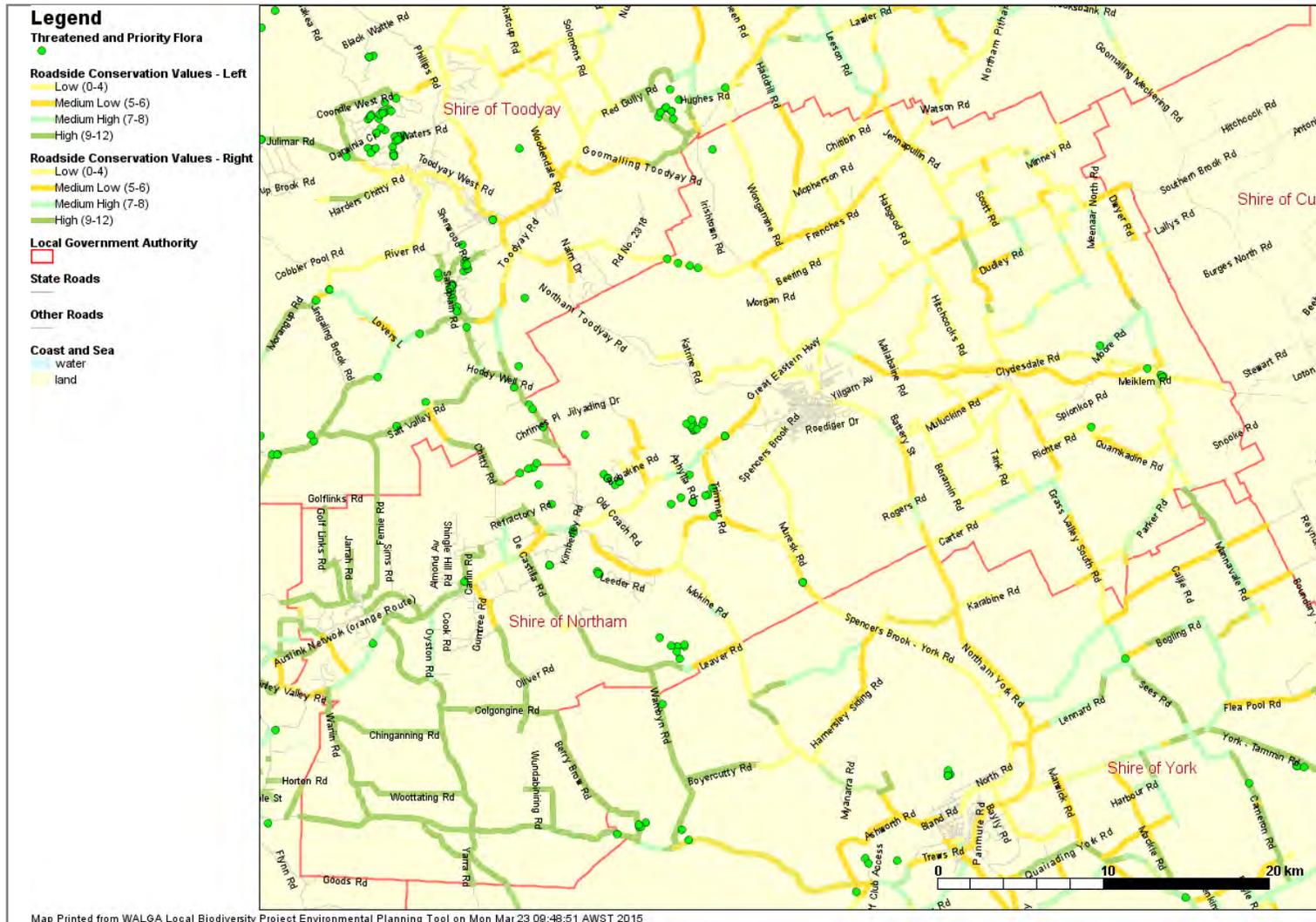
Note: for the determination of thresholds, the following actual figures were used: for 30% used 40%, for 17% used 20%

* DPaW managed for conservation:

Local Natural Areas = natural areas outside DPaW managed lands

 remaining vegetation extent below the recommended minimal target

Figure 4.2: Conservation value of roadside vegetation in the Shire of Northam (1988-1996) and records of Threatened and Priority flora (DPAW 2014)



APPENDIX E: Shire of Northam species report Summary (NatureMap)

CONSERVATION CODES FOR WESTERN AUSTRALIAN FLORA AND FAUNA

Sourced from: http://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/Listings/Conservation_code_definitions.pdf

T Threatened species

Listed as Specially Protected under the *Wildlife Conservation Act 1950*, published under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Fauna that is rare or likely to become extinct are declared to be fauna that is in need of special protection

Flora that are extant and considered likely to become extinct, or rare and therefore in need of special protection, are declared to be rare flora

Species* which have been adequately searched for and are deemed to be, in the wild, either rare, at risk of extinction, or otherwise in need of special protection, and have been gazetted as such. The assessment of the conservation status of these species is based on their national extent.

X Presumed extinct species

Listed as Specially Protected under the *Wildlife Conservation Act 1950*, published under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).

Species which have been adequately searched for and there is no reasonable doubt that the last individual has died, and have been gazetted as such.

IA Migratory birds protected under an international agreement

Listed as Specially Protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.

Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), relating to the protection of migratory birds.

S Other specially protected fauna

Listed as Specially Protected under the *Wildlife Conservation Act 1950*. Fauna declared to be in need of special protection, otherwise than for the reasons mentioned for Schedules 1, 2 or 3, are published under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.

Threatened Fauna and Flora are ranked according to their level of threat using IUCN¹⁸ Red List categories and criteria. For example: Carnaby's Cockatoo (*Calyptorhynchus latirostris*) is listed as 'Specially Protected' under the Wildlife Conservation Act 1950, published under Schedule 1, and referred to as a 'Threatened' species with a ranking of 'Endangered'.

CR Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.

EN Endangered - considered to be facing a very high risk of extinction in the wild.

VU Vulnerable - considered to be facing a high risk of extinction in the wild.

A list of the current rankings can be downloaded from the Parks and Wildlife Threatened Species and Communities webpage at <http://dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/>

P Priority species

Species that maybe threatened or near threatened but are data deficient, have not yet been adequately surveyed to be listed under the Schedules of the Wildlife Conservation (Specially Protected Fauna) Notice or the Wildlife Conservation (Rare Flora) Notice, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened flora or fauna. Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened list for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring. Conservation dependent species that are subject to a specific conservation program are placed in Priority 5.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

1: Priority One: Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under

¹⁸ IUCN – International Union for Conservation of Nature.

immediate threat from known threatening processes. Such species are in urgent need of further survey.

2: Priority Two: Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

3: Priority Three: Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

4: Priority Four: Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

5: Priority Five: Conservation Dependent species

Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

NatureMap Species Report

Created on 19/03/2015

Current Names Only

Core Datasets Only

Method: Intersect

*Predefined Area Intersect

Shire Boundary: NORTHAM

*identifies introduced or naturalised species

Conservation codes are defined in the previous section of Appendix E.

Species List

[Abutilon cryptopetalum](#)
[Acacia acuminata](#) Jam, Mangard
[Acacia aphylla](#) Leafless Rock Wattle **T**
[Acacia applanata](#)
*[Acacia baileyana](#)
[Acacia barbinervis](#) subsp. [barbinervis](#)
[Acacia bidentata](#)
[Acacia campylophylla](#) **P3**
[Acacia celastrifolia](#) Glowing Wattle
[Acacia cupularis](#)
[Acacia drummondii](#) subsp. [drummondii](#)
[Acacia erinacea](#)
[Acacia huegeli](#)
[Acacia lasiocalyx](#) Silver Wattle, Wilyurwur
[Acacia lasiocarpa](#) var. [bracteolata](#)
[Acacia lasiocarpa](#) var. [sedifolia](#)
[Acacia latipes](#)
[Acacia latipes](#) subsp. [latipes](#)
[Acacia leptopetala](#)
[Acacia leptospermoides](#) subsp. [leptospermoides](#)
[Acacia lirellata](#) subsp. [lirellata](#) **P3**
[Acacia meisneri](#)
[Acacia microbotrya](#) Manna Wattle, Kalyang
[Acacia multispicata](#)
[Acacia nervosa](#) Rib Wattle
[Acacia preissiana](#)
[Acacia pulchella](#) Prickly Moses
[Acacia pulchella](#) var. [goadbyi](#)
[Acacia pulchella](#) var. [pulchella](#)
[Acacia pulchella](#) var. [reflexa](#)
[Acacia restiacea](#)
[Acacia saligna](#) subsp. [lindleyi](#)
[Acacia squamata](#)
[Acacia stenoptera](#) Narrow Winged Wattle
[Acacia thieleana](#)
[Acacia urophylla](#)
[Acacia willdenowiana](#) Grass Wattle
[Acaena echinata](#) Sheep's Burr
[Acanthagenys rufogularis](#) Spiny-cheeked Honeyeater
[Acanthiza apicalis](#) Broad-tailed Thornbill, Inland Thornbill
[Acanthiza chrysorrhoa](#) Yellow-rumped Thornbill
[Acanthiza inornata](#) Western Thornbill
[Acanthiza uropygialis](#) Chestnut-rumped Thornbill
[Acanthorhynchus superciliosus](#) Western Spinebill
[Accipiter cirrocephalus](#) Collared Sparrowhawk
[Accipiter fasciatus](#) Brown Goshawk
[Acrocephalus australis](#) Australian Reed Warbler
[Actinobole uliginosum](#) Flannel Cudweed
[Actitis hypoleucos](#) Common Sandpiper **IA**
[Adenanthos cygnorum](#) subsp. [cygnorum](#) Common Woollybush
[Aegotheles cristatus](#) Australian Owllet-nightjar
[Agraptocorixa eurynome](#)
[Agrostocrinum hirsutum](#)

[Agrostocrinum scabrum subsp. scabrum](#)
[Ainudrilus nharna](#)
 *[Aira caryophyllea](#) Silvery Hairgrass
 *[Aira cupaniana](#) Silvery Hairgrass
[Alboa worooa](#)
[Allocasuarina campestris](#)
[Allocasuarina huegeliana](#) Rock Sheoak, Kwool
[Allocasuarina humilis](#) Dwarf Sheoak
[Alona cf. rectangula novaezealandiae](#)
 *[Alopecurus myosuroides](#) Slender Foxtail
[Alyogyne hakeifolia](#)
[Amanita umbrinella](#)
[Amanita xanthocephala](#)
 *[Amaranthus viridis](#) Green Amaranth
[Amblyomma triguttatum](#)
[Amperea micrantha](#) **P2**
[Amphibromus nervosus](#)
 *[Amsinckia calycina](#) Yellow Burrweed
[Amyema linophylla subsp. linophylla](#)
[Amyema miquelii](#) Stalked Mistletoe
[Amyema miraculosa subsp. miraculosa](#)
[Amyema preissii](#) Wireleaf Mistletoe
[Aname mainae](#)
[Anas castanea](#) Chestnut Teal
[Anas gracilis](#) Grey Teal
[Anas platyrhynchos](#) Mallard
[Anas rhynchotis](#) Australasian Shoveler
[Anas superciliosa](#) Pacific Black Duck
[Anigozanthos bicolor](#) Little Kangaroo Paw
[Anigozanthos bicolor subsp. bicolor](#)
[Anigozanthos bicolor subsp. exstans](#) **P3**
[Anigozanthos humilis](#) Catspaw
[Anigozanthos humilis subsp. chrysanthus](#) Golden Catspaw **P4**
[Anigozanthos humilis subsp. humilis](#)
[Anigozanthos manglesii subsp. manglesii](#)
[Anisops baylii](#)
[Anisops hyperion](#)
[Anisops thienemanni](#)
[Anopheles annulipes](#)
[Antaresia stimsoni subsp. stimsoni](#) Stimson's Python
[Antechinomys laniger](#) Kultarr
[Anthocercis ilicifolia subsp. ilicifolia](#)
[Anthochaera carunculata](#) Red Wattlebird
[Anthochaera lunulata](#) Western Little Wattlebird
[Anthotroche pannosa](#) Felted Anthotroche
[Antichiropus variabilis](#)
[Antichtopauropus brevitarsus](#)
[Antiporus gilberti](#)
[Aphelia brizula](#)
[Aprasia repens](#) Sand-plain Worm-lizard
[Apus pacificus](#) Fork-tailed Swift **IA**
[Aquila audax](#) Wedge-tailed Eagle
[Aquila morphnoides subsp. morphnoides](#) Little Eagle
[Araneus senicaudatus](#)
 *[Arctotheca calendula](#) Cape Weed
[Ardea intermedia](#) Intermediate Egret
[Ardea modesta](#) Eastern Great Egret **IA**
[Ardea novaehollandiae](#) White-faced Heron
[Ardea pacifica](#) White-necked Heron
[Ardeotis australis](#) Australian Bustard
 *[Argemone ochroleuca subsp. ochroleuca](#)
[Argiope trifasciata](#)
[Aristida contorta](#) Bunched Kerosene Grass
[Aristida holathera var. holathera](#)

[Arrenurus balladoniensis](#)
[Artamus cinereus](#) Black-faced Woodswallow
[Artamus cinereus subsp. melanops](#) Black-faced Woodswallow
[Artamus cyanopterus](#) Dusky Woodswallow
[Artamus personatus](#) Masked Woodswallow
[Arthropodium dyeri](#)
 *[Asparagus asparagoides](#) Bridal Creeper
 *[Asparagus officinalis](#) Asparagus
[Aspidites ramsayi](#) Woma **S**
[Asterolasia grandiflora](#) **P4**
[Astroloma ciliatum](#) Candle Cranberry
[Astroloma compactum](#)
[Astroloma epacridis](#)
[Astroloma glaucescens](#)
[Astroloma pallidum](#) Kick Bush
[Astroloma serratifolium](#) Kondrung
[Atriplex amnicola](#) Swamp Saltbush
 *[Atriplex prostrata](#) Hastate Orache
[Atriplex semibaccata](#) Berry Saltbush
[Atriplex suberecta](#)
[Austracantha minax](#)
[Austrochiltonia subtenuis](#)
[Austrolestes annulosus](#)
[Austrolestes io](#)
[Austropaxillus muelleri](#)
[Austrostipa campylachne](#)
[Austrostipa elegantissima](#)
[Austrostipa hemipogon](#)
[Austrostipa macalpinei](#)
[Austrostipa nitida](#)
[Austrostipa sp. Marchagee \(B.R. Maslin 1407\)](#)
[Austrostipa trichophylla](#)
[Austrostipa variabilis](#)
 *[Avellinia michelii](#)
 *[Avena barbata](#) Bearded Oat
 *[Avena fatua](#) Wild Oat
[Aythya australis](#) Hardhead
 *[Babiana angustifolia](#)
[Babingtonia camphorosmae](#) Camphor Myrtle
[Badumna insignis](#)
[Baeckea crispiflora](#)
[Banksia armata var. armata](#)
[Banksia attenuata](#) Slender Banksia, Piara
[Banksia bipinnatifida](#)
[Banksia bipinnatifida subsp. bipinnatifida](#)
[Banksia dallanneyi var. dallanneyi](#)
[Banksia dallanneyi var. mellicula](#)
[Banksia densa var. densa](#)
[Banksia drummondii subsp. hiemalis](#)
[Banksia fraseri var. fraseri](#)
[Banksia grandis](#) Bull Banksia, Pulgarla
[Banksia hewardiana](#)
[Banksia nobilis subsp. nobilis](#)
[Banksia proteoides](#) King Dryandra
[Banksia sessilis var. sessilis](#)
[Banksia sphaerocarpa var. sphaerocarpa](#) Fox Banksia
[Banksia squarrosa](#) Pingle
[Banksia squarrosa subsp. squarrosa](#)
[Banksia stiposa](#)
[Banksia undata var. undata](#)
 *[Bartsia trixago](#)
[Battarrea stevenii](#)
[Baumea laxa](#)
[Baumea rubiginosa](#)

[Beaufortia incana](#)
[Bennelongia barangaroo](#)
[Berosus approximans](#)
[Berosus australiae](#)
[Berosus sp.](#)
[Bettongia penicillata subsp. ogilbyi](#) Woylie, Brush-tailed Bettong **T**
[Billardiera fraseri](#) Elegant Pronaya
[Billardiera fusiformis](#) Australian Bluebell
[Billardiera venusta](#)
[Biziura lobata](#) Musk Duck
[Blennospora drummondii](#)
[Boeckella triarticulata](#)
[Boerhavia schomburgkiana](#)
[Boronia busselliana](#)
[Boronia coerulescens subsp. spinescens](#)
[Boronia penicillata](#)
[Boronia ramosa subsp. anethifolia](#)
[Boronia scabra subsp. scabra](#)
[Boronia subsessilis](#)
[Borya laciniata](#)
[Borya scirpoidea](#)
[Borya sphaerocephala](#) Pincushions
[Bossiaea eriocarpa](#) Common Brown Pea
[Bossiaea ornata](#) Broad Leaved Brown Pea
[Bossiaea spinescens](#)
[Bostockia porosa](#)
[Brachionus plicatilis s.l.](#)
[Brachionus quadridentatus cluniorbicularis](#)
 *[Brachychiton populneus](#) Kurrajong
[Brachyloma preissii subsp. lanceolatum](#)
 *[Brachypodium distachyon](#) False Brome
[Brachyscome ciliaris](#)
[Brachyscome iberidifolia](#)
[Brachyurophis semifasciatus](#) Southern Shovel-nosed Snake
 *[Brassica nigra](#) Black Mustard
 *[Brassica x juncea](#) Indian Mustard
 *[Brassica x napus](#)
 *[Briza maxima](#) Blowfly Grass
 *[Briza minor](#) Shivery Grass
[Bromus arenarius](#) Sand Brome
 *[Bromus catharticus](#) Prairie Grass
 *[Bromus diandrus](#) Great Brome
 *[Bromus hordeaceus](#) Soft Brome
 *[Bromus rubens](#) Red Brome
[Bulbine semibarbata](#) Leek Lily
[Burchardia congesta](#)
[Burchardia multiflora](#) Dwarf Burchardia
[Burhinus grallarius](#) Bush Stone-curlew
[Cacatua pastinator](#) Western Long-billed Corella
[Cacatua sanguinea](#) Little Corella
 *[Cacatua tenuirostris](#) Eastern Long-billed Corella
[Cacomantis flabelliformis](#) Fan-tailed Cuckoo
[Cacomantis pallidus](#) Pallid Cuckoo
[Caesia micrantha](#) Pale Grass Lily
[Caesia sp. Wongan \(K.F. Kenneally 8820\)](#)
[Caladenia barbarossa](#) Dragon Orchid
[Caladenia denticulata](#)
[Caladenia doutchiae](#)
[Caladenia drummondii](#) Winter Spider Orchid
[Caladenia filifera](#)
[Caladenia flava](#) Cowslip Orchid
[Caladenia flava subsp. flava](#)
[Caladenia footeana](#)
[Caladenia hirta subsp. hirta](#)

- [Caladenia integra](#) Mantis Orchid, Smooth-lipped Spider Orchid **P4**
[Caladenia longicauda subsp. eminens](#)
[Caladenia longicauda subsp. longicauda](#)
[Caladenia longiclavata](#) Clubbed Spider Orchid
[Caladenia nobilis](#)
[Caladenia pulchra](#)
[Caladenia reptans](#) Little Pink Fairy Orchid
[Caladenia reptans subsp. reptans](#)
[Caladenia sp. Brookton Hwy \(G. Brockman GBB 547\)](#)
[Caladenia x spectabilis](#)
[Calandrinia calypttrata](#) Pink Purslane
 *[Calandrinia ciliata](#)
[Calandrinia eremaea](#) Twining Purslane
[Calectasia narragara](#)
[Calidris ruficollis](#) Red-necked Stint **IA**
[Callistemon phoeniceus](#) Lesser Bottlebrush, Dubarda
[Callitris pyramidalis](#) Swamp Cypress
[Calochilus stramenicola](#)
[Calothamnus quadrifidus subsp. quadrifidus](#)
[Calothamnus sanguineus](#) Silky-leaved Blood flower, Pindak
[Calyptorhynchus banksii](#) Red-tailed Black-Cockatoo
[Calyptorhynchus banksii subsp. naso](#) Forest Red-tailed Black-Cockatoo **T**
[Calyptorhynchus baudinii](#) Baudin's Cockatoo (long-billed black-cockatoo), Baudin's Cockatoo **T**
[Calyptorhynchus latirostris](#) Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo **T**
[Calytrix angulata](#) Yellow Starflower
[Calytrix breviseta subsp. stipulosa](#)
[Calytrix flavescens](#) Summer Starflower
[Calytrix fraseri](#) Pink Summer Calytrix
[Calytrix glutinosa](#)
[Calytrix gracilis](#)
[Calytrix leschenaultii](#)
[Calytrix oncophylla](#) **P2**
[Calytrix sapphirina](#)
[Calytrix strigosa](#)
[Calytrix sylvana](#)
[Calytrix violacea](#)
[Candonocypris novaezelandiae](#)
 *[Capsella bursa-pastoris](#) Shepherd's Purse
[Carassius auratus](#)
 *[Carduus pycnocephalus](#) Slender Thistle
[Carex inversa](#) Knob Sedge
 *[Carpobrotus edulis](#) Hottentot Fig
 *[Carrichtera annua](#) Ward's Weed
 *[Carthamus tinctorius](#)
[Cassytha flava](#) Dodder Laurel
[Cassytha glabella forma dispar](#)
[Cassytha pomiformis](#) Dodder Laurel
[Cassytha racemosa](#) Dodder Laurel
[Casuarina obesa](#) Swamp Sheoak, Kuli
[Caustis dioica](#)
 *[Cenchrus echinatus](#) Burrgrass
 *[Centaurea melitensis](#) Maltese Cockspur
 *[Centaurium tenuiflorum](#)
[Centipeda crateriformis subsp. crateriformis](#)
 *[Centranthus macrosiphon](#)
[Centrolepis aristata](#) Pointed Centrolepis
[Centrolepis drummondiana](#)
[Centrolepis polygyna](#) Wiry Centrolepis
[Centrolepis sp. Kalannie \(B.J. Lepschi et al. B.JL 3517\)](#)
[Cercartetus concinnus](#) Western Pygmy-possum, Mundarda
[Cercophonius sulcatus](#)
[Chalinolobus gouldii](#) Gould's Wattled Bat
[Chalinolobus morio](#) Chocolate Wattled Bat
 *[Chamaecytisus palmensis](#) Tagasaste

[Chamaescilla corymbosa](#) Blue Squill
[Chamaescilla corymbosa var. corymbosa](#)
[Chamaescilla versicolor](#)
[Charadrius melanops](#) Black-fronted Dotterel
[Charadrius ruficapillus](#) Red-capped Plover
[Cheilanthes austrotenuifolia](#)
[Cheilanthes sieberi subsp. sieberi](#)
[Chenonetta jubata](#) Australian Wood Duck, Wood Duck
 *[Chenopodium glaucum](#) Glaucous Goosefoot
 *[Chenopodium murale](#) Nettle-leaf Goosefoot
[Cherax cainii](#) Marron
[Chironomus aff. alternans \(V24\)](#)
[Chironomus occidentalis](#)
[Chironomus tepperi](#)
[Chloris truncata](#) Windmill Grass
 *[Chloris virgata](#) Feathertop Rhodes Grass
[Chordifex chaunocoleus](#) P4
[Choretrum chrysanthum](#)
[Chorizema aciculare subsp. laxum](#)
[Chorizema dicksonii](#) Yellow-eyed Flame Pea
[Christinus marmoratus](#) Marbled Gecko
 *[Chrozophora tinctoria](#) Turnsole
[Chrysocephalum apiculatum](#)
[Chthonocephalus pseudevax](#) Woolly Groundheads
 *[Cichorium intybus](#) Chicory
[Cincloramphus cruralis](#) Brown Songlark
[Cincloramphus mathewsi](#) Rufous Songlark
[Circus approximans](#) Swamp Harrier
[Circus assimilis](#) Spotted Harrier
 *[Citrullus colocynthis](#)
 *[Citrullus lanatus](#) Pie Melon
[Cladopelma curtivalva](#)
[Cladorhynchus leucocephalus](#) Banded Stilt
[Cletocamptus dietersi](#)
[Climacteris rufa](#) Rufous Treecreeper
[Colluricincla harmonica](#) Grey Shrike-thrush
 *[Columba livia](#) Domestic Pigeon
[Comesperma calymega](#) Blue-spike Milkwort
[Comesperma integerrimum](#)
[Comesperma scoparium](#) Broom Milkwort
[Conospermum incurvum](#) Plume Smokebush
[Conospermum stoechadis subsp. sclerophyllum](#)
[Conostephium preissii](#)
[Conostylis aculeata](#) Prickly Conostylis
[Conostylis candicans subsp. candicans](#)
[Conostylis caricina subsp. caricina](#)
[Conostylis juncea](#)
[Conostylis prolifera](#) Mat Cottonheads
[Conostylis pusilla](#)
[Conostylis setigera](#) Bristly Cottonhead
[Conostylis setigera subsp. setigera](#)
[Coracina novaehollandiae](#) Black-faced Cuckoo-shrike
[Corvus bennetti](#) Little Crow
[Corvus coronoides](#) Australian Raven
[Corvus coronoides subsp. perplexus](#) Australian Raven
[Corymbia calophylla](#) Marri
[Corynoneura sp. \(V49\)](#)
 *[Cotula bipinnata](#) Ferny Cotula
 *[Cotula coronopifolia](#) Waterbuttons
[Coturnix pectoralis](#) Stubble Quail
[Cracticus nigrogularis](#) Pied Butcherbird
[Cracticus tibicen](#) Australian Magpie
[Cracticus tibicen subsp. dorsalis](#) White-backed Magpie
[Cracticus torquatus](#) Grey Butcherbird

[Craspedia variabilis](#)
[Crassula closiana](#)
[Crassula colorata var. acuminata](#)
[Crassula decumbens](#) Rufous Stonecrop
[Crassula decumbens var. decumbens](#)
[Crassula extrorsa](#)
 *[Crassula natans](#)
[Crenadactylus ocellatus subsp. ocellatus](#) Clawless Gecko
[Crinia pseudinsignifera](#) Bleating Froglet
[Cryptandra intermedia](#)
[Cryptandra myriantha](#)
[Cryptandra nutans](#)
[Cryptandra pungens](#)
[Cryptoblepharus buchananii](#)
[Ctenophorus ornatus](#) Ornate Crevice-Dragon
[Ctenophorus reticulatus](#) Western Netted Dragon
[Ctenotus fallens](#)
[Ctenotus pantherinus subsp. pantherinus](#) Leopard Ctenotus
 *[Cucumis myriocarpus](#) Prickly Paddy Melon
[Culicoides sp.](#)
[Cyanicula gemmata](#)
[Cyanicula ixioides subsp. candida](#) P2
[Cyanicula ixioides subsp. ixioides](#) P4
[Cyanostegia lanceolata](#) Tinsel Flower
[Cygnus atratus](#) Black Swan
 *[Cygnus olor](#) Mute Swan
[Cymbopogon obtectus](#) Silkyheads
 *[Cynara cardunculus subsp. flavescens](#)
 *[Cynodon dactylon](#) Couch
 *[Cyperus congestus](#) Dense Flat-sedge
 *[Cyperus eragrostis](#) Umbrella Sedge
[Cyperus gymnocaulos](#) Spiny Flat-sedge
 *[Dacelo novaeguineae](#) Laughing Kookaburra
 *[Dactylis glomerata](#) Cocksfoot
[Dampiera alata](#) Winged-stem Dampiera
[Dampiera lavandulacea](#)
[Dampiera linearis](#) Common Dampiera
[Daphnositta chrysoptera](#) Varied Sittella
[Dasyurus geoffroyi](#) Chuditch, Western Quoll T
 *[Datura innoxia](#)
 *[Datura wrightii](#) Hairy Thornapple
[Daucus glochidiatus](#) Australian Carrot
[Daviesia angulata](#)
[Daviesia decurrens](#) Prickly Bitter-pea
[Daviesia hakeoides subsp. subnuda](#)
[Daviesia microphylla](#)
[Daviesia nudiflora](#)
[Daviesia nudiflora subsp. drummondii](#)
[Daviesia physodes](#)
[Daviesia preissii](#)
[Delma fraseri](#) Fraser's Legless Lizard
[Demansia psammophis subsp. reticulata](#) Yellow-faced Whipsnake
[Dendrocygna arcuata](#) Wandering Whistling Duck, Chestnut Whistling Duck
[Desmocladius asper](#)
[Desmocladius fasciculatus](#)
[Desmocladius virgatus](#)
[Diacypsis spinosa](#)
[Dianella revoluta](#) Blueberry Lily
[Dianella revoluta var. revoluta](#)
[Dicaeum hirundinaceum](#) Mistletoebird
[Dichopogon capillipes](#)
[Dichopogon fimbriatus](#) Chocolate Lily
[Dichopogon preissii](#)
[Dicrasyllis globiflora](#)

[Dicrastylis reticulata](#) **P3**
[Dicrotendipes pseudoconjunctus](#)
[Didymanthus roei](#)
[Dillwynia laxiflora](#)
[Dioscorea hastifolia](#) Warrine, Warram
[Diplodactylus polyophthalmus](#)
[Diplodactylus pulcher](#)
[Diplolaena graniticola](#)
[Diplopeltis huegelii](#)
[Diuris corymbosa](#)
[Diuris porrifolia](#)
[Diuris sp. Western Wheatbelt \(G.J. Keighery & N. Gibson 6951\)](#)
[Dodonaea bursariifolia](#)
[Dodonaea ceratocarpa](#)
[Dodonaea larreoides](#)
[Dodonaea pinifolia](#)
[Dodonaea viscosa](#) Sticky Hopbush
[Dodonaea viscosa subsp. angustissima](#)
[Drakaea gracilis](#)
[Dromaius novaehollandiae](#) Emu
[Drosera bulbosa](#) Red-leaved Sundew
[Drosera callistos](#)
[Drosera erythrorhiza](#) Red Ink Sundew
[Drosera glanduligera](#) Pimpernel Sundew
[Drosera macrantha](#) Bridal Rainbow
[Drosera macrantha subsp. macrantha](#)
[Drosera macrophylla](#) Showy Sundew
[Drosera macrophylla subsp. macrophylla](#)
[Drosera macrophylla subsp. monantha](#)
[Drosera menziesii subsp. menziesii](#)
[Drosera miniata](#) Orange Sundew
[Drosera rosulata](#)
[Drosera spilos](#)
[Drosera stolonifera](#) Leafy Sundew
[Drosera stricticaulis](#) Erect Sundew
[Drosera subhirtella](#) Sunny Rainbow
[Drosera zonaria](#) Painted Sundew
[*Echinochloa crus-galli](#)
[*Echium plantagineum](#) Paterson's Curse
[Egernia kingii](#) King's Skink
[*Ehrharta calycina](#) Perennial Veldt Grass
[*Ehrharta erecta](#) Panic Veldt Grass
[*Ehrharta longiflora](#) Annual Veldt Grass
[Elanus caeruleus subsp. axillaris](#) Australian Black-shouldered Kite
[Elythranthera emarginata](#) Pink Enamel Orchid
[Eopsaltria georgiana](#) White-breasted Robin
[Epthianura albifrons](#) White-fronted Chat
[Epthianura tricolor](#) Crimson Chat
[*Eragrostis cilianensis](#) Stinkgrass
[*Eragrostis curvula](#) African Lovegrass
[Eragrostis dielsii](#) Mallee Lovegrass
[Eragrostis falcata](#) Sickle Lovegrass
[*Eragrostis mexicana](#)
[Eremaea blackwelliana](#) **P4**
[Eremaea pauciflora](#)
[Eremaea pauciflora var. pauciflora](#)
[Eremiascincus richardsonii](#) Broad-banded Sand Swimmer
[Eremophila decipiens subsp. decipiens](#)
[Eriachne ovata](#)
[Eriochilus dilatatus](#) White Bunny Orchid
[Eriochilus dilatatus subsp. undulatus](#)
[*Erodium botrys](#) Long Storksbill
[Erodium cygnorum](#) Blue Heronsbill
[*Erodium moschatum](#) Musky Crowfoot

[Erymophyllum ramosum subsp. ramosum](#)
[Erymophyllum tenellum](#)
[Eryngium pinnatifidum](#) Blue Devils
[Erythrogonys cinctus](#) Red-kneed Dotterel
[Eucalyptus accedens](#) Powderbark Wandoo
[Eucalyptus decurva](#) Slender Mallee
[Eucalyptus drummondii](#) Drummond's Gum
[Eucalyptus horistes](#)
[Eucalyptus lane-poolei](#) Salmon White Gum
[Eucalyptus loxophleba subsp. loxophleba](#) York Gum
[Eucalyptus loxophleba x wandoo](#) **P4**
[Eucalyptus marginata subsp. marginata](#) Jarrah
[Eucalyptus marginata subsp. thalassica](#) Blue-leaved Jarrah
[Eucalyptus pluricaulis subsp. pluricaulis](#)
[Eucalyptus rudis](#) Flooded Gum, Kurlurda
[Eucalyptus salmonophloia](#) Salmon Gum, Wurak
[Eucalyptus wandoo](#) Wandoo, Wondu
[Eucalyptus wandoo subsp. wandoo](#)
[Eucypris virens](#)
[Eucyrtops latior](#)
[Eurostopodus argus](#) Spotted Nightjar
[Eylais sp.](#)
[Falco berigora](#) Brown Falcon
[Falco berigora subsp. berigora](#) Brown Falcon
[Falco cenchroides](#) Australian Kestrel
[Falco longipennis](#) Australian Hobby
[Falco peregrinus](#) Peregrine Falcon **S**
[Falco peregrinus subsp. macropus](#) Australian Peregrine Falcon **S**
[Falcunculus frontatus](#) Crested Shrike-tit
[Falcunculus frontatus subsp. leucogaster](#) Western Shrike-tit, Crested Shrike-tit
 *[Fallopia convolvulus](#)
 *[Festuca arundinacea](#) Tall Fescue
[Flavoparmelia rutidota](#)
[Frankenia conferta](#) Silky Frankenia **T**
[Frankenia glomerata](#) Cluster Head Frankenia **P3**
 *[Frankenia pulverulenta](#)
[Fulica atra](#) Eurasian Coot
 *[Fumaria bastardii](#)
 *[Fumaria capreolata](#) Whiteflower Fumitory
 *[Fumaria densiflora](#) Denseflower Fumitory
 *[Fumaria muralis subsp. muralis](#)
[Gahnia australis](#)
[Galaxias occidentalis](#) Western Minnow
 *[Galium divaricatum](#)
[Gallinula tenebrosa](#) Dusky Moorhen
[Gallirallus philippensis](#) Buff-banded Rail
[Gallus gallus](#)
[Gambusia sp.](#)
[Gastrolobium callistachys](#) Rock Poison
[Gastrolobium calycinum](#) York Road Poison
[Gastrolobium capitatum](#)
[Gastrolobium cyanophyllum](#)
[Gastrolobium epacridoides](#)
[Gastrolobium hamulosum](#) Hookpoint Poison **T**
[Gastrolobium hookeri](#)
[Gastrolobium ilicifolium](#)
[Gastrolobium microcarpum](#) Sandplain Poison
[Gastrolobium obovatum](#) Boat-leaved Poison
[Gastrolobium parviflorum](#)
[Gastrolobium parvifolium](#) Berry Poison
[Gastrolobium rotundifolium](#) Gilbernine Poison **P3**
[Gastrolobium spathulatum](#) Poison Bush
[Gastrolobium spinosum](#) Prickly Poison
[Gastrolobium stowardii](#)

[Gastrolobium trilobum](#) Bullock Poison
[Gastrolobium villosum](#) Crinkle-leaved Poison
[Gavicalis virescens](#) Singing Honeyeater
[Gehyra variegata](#)
[Geopelia cuneata](#) Diamond Dove
[Gerygone fusca](#) Western Gerygone
[Gilberta tenuifolia](#)
 *[Gladiolus caryophyllaceus](#) Wild Gladiolus
[Glischrocaryon aureum](#) Common Popflower
[Glossopsitta porphyrocephala](#) Purple-crowned Lorikeet
[Glycine canescens](#) Silky Glycine
[Gnephosis tenuissima](#)
[Gompholobium knightianum](#)
[Gompholobium marginatum](#)
[Gompholobium preissii](#)
[Gompholobium shuttleworthii](#)
[Gompholobium tomentosum](#) Hairy Yellow Pea
[Gonocarpus cordiger](#)
[Gonocarpus nodulosus](#)
[Gonocarpus pithyoides](#)
[Goodenia berardiana](#)
[Goodenia coerulea](#)
[Goodenia convexa](#)
[Goodenia drummondii subsp. megaphylla](#)
[Goodenia glareicola](#)
[Goodenia helmsii](#)
[Goodenia occidentalis](#)
[Goodenia pinifolia](#) Pine-leaved Goodenia
[Goodenia pulchella subsp. Wheatbelt \(L.W. Sage & F. Hort 795\)](#)
[Grallina cyanoleuca](#) Magpie-lark
[Grevillea candolleana](#) **P2**
[Grevillea excelsior](#) Flame Grevillea
[Grevillea hookeriana subsp. hookeriana](#)
[Grevillea huegelii](#)
[Grevillea incurva](#)
[Grevillea oncogyne](#)
[Grevillea paniculata](#)
[Grevillea pilulifera](#) Woolly-flowered Grevillea
[Grevillea pimeleoides](#) **P4**
[Grevillea sp. Gunapin \(F. Hort 308\)](#)
[Grevillea synapheae subsp. synapheae](#)
[Grevillea uncinulata](#) Hook-leaf Grevillea
[Grevillea vestita subsp. vestita](#)
[Grevillea wilsonii](#) Native Fuchsia
[Guichenotia angustifolia](#)
[Guichenotia sarotes](#)
[Gymnometriocnemus sp. A](#)
[Gyrostemon ramulosus](#) Corkybark
[Haemodorum discolor](#)
[Haemodorum laxum](#)
[Haemodorum simplex](#)
[Haemodorum simulans](#)
[Hakea circumalata](#)
[Hakea erinacea](#) Hedge-hog Hakea
[Hakea incrassata](#) Marble Hakea
[Hakea lissocarpha](#) Honey Bush
[Hakea loranthifolia](#)
[Hakea platysperma](#) Cricket Ball Hakea
[Hakea preissii](#) Needle Tree, Dandjin
[Hakea ruscifolia](#) Candle Hakea
[Hakea scoparia subsp. scoparia](#)
[Hakea smilacifolia](#)
[Hakea spathulata](#)
[Hakea stenocarpa](#) Narrow-fruited Hakea

[Hakea trifurcata](#) Two-leaf Hakea
[Haliastur sphenurus](#) Whistling Kite
[Hamirostra melanosternon](#) Black-breasted Buzzard
[Heleioporus albopunctatus](#) Western Spotted Frog
[Heleioporus barycragus](#) Hooting Frog
[Heleioporus eyrei](#) Moaning Frog
[Helichrysum leucopsidium](#)
[Helichrysum macranthum](#)
[Heliotropium curassavicum](#) Smooth Heliotrope
[Hellyethira litua](#)
[Hemianax papuensis](#)
[Hemiandra pungens](#) Snakebush
[Hemicordulia tau](#)
[Hemigenia barbata](#)
[Hemigenia incana](#) Silky Hemigenia
[Hemigenia parviflora](#)
[Hesperoedura reticulata](#)
[Hibbertia acerosa](#) Needle Leaved Guinea Flower
[Hibbertia ancistrophylla](#)
[Hibbertia aurea](#)
[Hibbertia avonensis](#)
[Hibbertia commutata](#)
[Hibbertia diamesogenos](#)
[Hibbertia exasperata](#)
[Hibbertia hibbertioides var. hibbertioides](#)
[Hibbertia huegelii](#)
[Hibbertia hypericoides](#) Yellow Buttercups
[Hibbertia lasiopus](#) Large Hibbertia
[Hibbertia montana](#) **P4**
[Hibbertia pachyrrhiza](#)
[Hibbertia rupicola](#)
[Hibbertia subvaginata](#)
[Himantopus himantopus](#) Black-winged Stilt
[Hirundo neoxena](#) Welcome Swallow
[Holconia westralia](#)
[Homalosciadium homalocarpum](#)
 *[Hordeum glaucum](#) Northern Barley Grass
 *[Hordeum leporinum](#) Barley Grass
[Hovea pungens](#) Devil's Pins, Puyenak
[Hovea trisperma](#) Common Hovea
[Hyalosperma cotula](#)
[Hyalosperma demissum](#)
[Hyalosperma glutinosum subsp. glutinosum](#)
[Hybanthus calycinus](#) Wild Violet
[Hydrocotyle callicarpa](#) Small Pennywort
[Hydrocotyle pilifera](#)
[Hydrocotyle pilifera var. glabrata](#)
[Hydromys chrysogaster](#) Water-rat **P4**
 *[Hyparrhenia hirta](#) Tambookie Grass
[Hypericum gramineum](#) Small St John's Wort
[Hyphydrus elegans](#)
[Hypocalymma angustifolium](#) White Myrtle, Kudjid
[Hypocalymma robustum](#) Swan River Myrtle
 *[Hypochoeris glabra](#) Smooth Catsear
[Hypolaena exsulca](#)
[Idiomata blackwalli](#)
[Idiosoma nigrum](#) Shield-backed Trapdoor Spider **T**
[Ilyocypris australiensis](#)
[Ischnura heterosticta heterosticta](#)
[Isoetopsis graminifolia](#) Cushion Grass
[Isolepis cernua var. cernua](#)
[Isolepis congrua](#)
[Isolepis hookeriana](#) Bristle Club Rush
[Isolepis marginata](#) Coarse Club-rush

- [**Isolepis prolifera*](#) Budding Club-rush
[**Isoodon obesulus subsp. fusciventer*](#) Quenda, Southern Brown Bandicoot **P5**
[**Isopeda leishmanni*](#)
[**Isopedella cana*](#)
[**Isopogon divergens*](#) Spreading Coneflower
[**Isopogon sp. Darling Range \(F. Hort 1662\)*](#)
[**Isotoma hypocrateriformis*](#) Woodbridge Poison
[**Isotoma scapigera*](#) Long-scaped Isotome
[**Isotropis cuneifolia subsp. cuneifolia*](#)
[**Isotropis drummondii*](#) Lamb Poison
[**Isotropis juncea*](#) Slender Lamb Poison
[**Ixobrychus flavicollis subsp. australis*](#) Australian Black Bittern **P1**
[**Jacksonia condensata*](#)
[**Jacksonia floribunda*](#) Holly Pea
[**Jacksonia furcellata*](#) Grey Stinkwood
[**Jacksonia restioides*](#)
[**Jacksonia sternbergiana*](#) Stinkwood, Kapur
[**Juncus acutus*](#) Spiny Rush
[**Juncus acutus subsp. acutus*](#)
[**Juncus bufonius*](#) Toad Rush
[**Juncus capitatus*](#) Capitata Rush
[**Juncus hybridus*](#)
[**Juncus subsecundus*](#) Finger Rush
[**Kennedia coccinea*](#) Coral Vine
[**Kennedia prostrata*](#) Scarlet Runner
[**Kennedia stirlingii*](#) Bushy Kennedia
[**Keraudrenia integrifolia*](#) Common Firebush
[**Kickxia elatine subsp. crinita*](#)
[**Kiefferulus intertinctus*](#)
[**Kingia australis*](#) Kingia, Pulong
[**Labichea lanceolata subsp. brevifolia*](#)
[**Labichea punctata*](#) Lance-leaved Cassia
[**Lachnagrostis filiformis*](#)
[**Lachnagrostis preissii*](#)
[**Lachnostachys ferruginea*](#) Rusty Lambstail
[**Lachnostachys verbascifolia var. verbascifolia*](#)
[**Lagenophora huegelii*](#)
[**Lalage tricolor*](#) White-winged Triller
[**Lampona cylindrata*](#)
[**Lasiopetalum quinquenervium*](#)
[**Lasiopetalum sp. Northam \(F. Hort 1196\)*](#) **P2**
[**Lasiorhinus latifrons*](#) Southern Hairy-nosed Wombat
[**Lawrencella rosea*](#)
[**Laxmannia grandiflora*](#)
[**Laxmannia grandiflora subsp. grandiflora*](#)
[**Laxmannia ramosa subsp. ramosa*](#)
[**Laxmannia sessiliflora subsp. australis*](#)
[**Laxmannia squarrosa*](#)
[**Lechenaultia biloba*](#) Blue Leschenaultia
[**Lechenaultia floribunda*](#) Free-flowering Leschenaultia
[**Lechenaultia formosa subsp. Wheatbelt \(R.J. Cranfield 4718\)*](#)
[**Lechenaultia laricina*](#) Scarlet Leschenaultia **T**
[**Lecidea sarcogynoides*](#)
[**Leipoa ocellata*](#) Malleefowl **T**
[**Lepidosperma benthamianum*](#)
[**Lepidosperma brunonianum*](#)
[**Lepidosperma leptostachyum*](#)
[**Lepidosperma longitudinale*](#) Pithy Sword-sedge
[**Lepidosperma obtusum*](#)
[**Lepidosperma pubisquameum*](#)
[**Lepidosperma resinatum*](#)
[**Lepidosperma scabrum*](#)
[**Lepidosperma sp. P1 small head \(M.D. Tindale 166A\)*](#)
[**Lepidosperma squamatum*](#)

[Lepidosperma tuberculatum](#)
[Leptoceras menziesii](#)
[Leptochloa fusca](#)
[Leptospermum erubescens](#) Roadside Teatree
[Lerista distinguenda](#)
[Leucochrysum fitzgiibonii](#)
[Leucopogon nutans](#) Drooping Leucopogon
[Leucopogon oxycedrus](#)
[Leucopogon polymorphus](#)
[Leucopogon propinquus](#)
[Leucopogon pubescens](#)
[Leucopogon pulchellus](#) Beard-heath
[Leucopogon sp. Gunapin \(F. Hort 808\)](#)
[Leucopogon sp. Northern Scarp \(M. Hislop 2233\)](#)
[Levenhookia leptantha](#) Trumpet Stylewort
[Levenhookia pusilla](#) Midget Stylewort
[Levenhookia stipitata](#) Common Stylewort
[Lialis burtonis](#)
[Lichenostomus leucotis](#) White-eared Honeyeater
[Lichmera indistincta](#) Brown Honeyeater
[Limnodynastes dorsalis](#) Western Banjo Frog
 *[Limonium sinuatum](#) Perennial Sea Lavender
 *[Linaria maroccana](#)
[Linum marginale](#) Wild Flax
[Liodessus inornatus](#)
[Liopholis multiscutata](#) Bull Skink
[Litoria moorei](#) Motorbike Frog
[Lobelia anceps](#) Angled Lobelia
[Lobelia cleistogamoides](#)
[Lobelia tenuior](#) Slender Lobelia
 *[Lolium remotum](#) Hardy Ryegrass
 *[Lolium rigidum](#) Wimmera Ryegrass
[Lomandra caespitosa](#) Tufted Mat Rush
[Lomandra collina](#) Pale Mat Rush
[Lomandra effusa](#) Scented Matrush
[Lomandra hermaphrodita](#)
[Lomandra micrantha](#) Small-flower Mat-rush
[Lomandra micrantha subsp. micrantha](#)
[Lomandra nigricans](#)
[Lomandra nutans](#)
[Lomandra preissii](#)
[Lomandra spartea](#)
[Lomandra suaveolens](#)
[Loxocarya striata](#)
 *[Lupinus angustifolius](#) Narrowleaf Lupin
[Lycosa dimota](#)
 *[Lysimachia arvensis](#) Pimpernel
[Lysinema pentapetalum](#)
 *[Lythrum hyssopifolia](#) Lesser Loosestrife
[Macropus fuliginosus](#) Western Grey Kangaroo
[Macropus irma](#) Western Brush Wallaby **P4**
[Macropus robustus subsp. erubescens](#) Euro, Biggada
[Macrotis lagotis](#) Bilby, Dalgyte **T**
[Macrozamia fraseri](#)
[Macrozamia riedlei](#) Zamia, Djiridji
[Maireana brevifolia](#) Small Leaf Bluebush
[Malacorhynchus membranaceus](#) Pink-eared Duck
[Malleostemon tuberculatus](#)
[Malurus leucopterus](#) White-winged Fairy-wren
[Malurus splendens](#) Splendid Fairy-wren
[Manorina flavigula](#) Yellow-throated Miner
[Marianthus bicolor](#) Painted Marianthus
[Marianthus coeruleopunctatus](#) Blue-spotted Marianthus
[Meeboldina coangustata](#)

[Meeboldina scariosa](#)
[Megalopsalis leptekes](#)
[Megalurus gramineus](#) Little Grassbird
[Megaporus howitti](#)
[Megaporus sp.](#)
[Melaleuca brevifolia](#)
[Melaleuca hamata](#)
[Melaleuca holosericea](#)
[Melaleuca leptospermoides](#)
[Melaleuca marginata](#)
[Melaleuca radula](#) Graceful Honeymyrtle
[Melaleuca raphiophylla](#) Swamp Paperbark
[Melaleuca thyoides](#)
[Melaleuca trichophylla](#)
[Melaleuca viminea](#) Mohan
[Melaleuca viminea subsp. viminea](#)
 *[Melinis repens](#)
[Melithreptus brevirostris](#) Brown-headed Honeyeater
[Melithreptus brevirostris subsp. leucogenys](#) Brown-headed Honeyeater
[Melopsittacus undulatus](#) Budgerigar
[Menetia greyii](#)
[Merops ornatus](#) Rainbow Bee-eater **IA**
[Mesocyclops brooksi](#)
[Mesomelaena preissii](#)
[Mesomelaena tetragona](#) Semaphore Sedge
[Metacyclops sp. 462](#)
[Microcorys ericifolia](#)
[Microeca fascinans](#) Jacky Winter
[Microlaena stipoides](#) Weeping Grass
[Microlaena stipoides var. stipoides](#)
[Micronecta gracilis](#)
[Micronecta robusta](#)
[Microtis orbicularis](#) Dark Mignonette Orchid
[Millotia myosotidifolia](#)
[Millotia tenuifolia](#) Soft Millotia
[Millotia tenuifolia var. tenuifolia](#) Soft Millotia
[Milvus migrans](#) Black Kite
[Mirbelia dilatata](#) Holly-leaved Mirbelia
[Mirbelia ramulosa](#)
[Mirbelia spinosa](#)
[Missulena occatoria](#)
 *[Molineriella minuta](#) Small Hairgrass
[Monachather paradoxus](#)
 *[Monoculus monstrosus](#)
[Monohelea sp. 1](#)
 *[Monopsis debilis var. depressa](#)
[Monotaxis bracteata](#)
[Monotaxis grandiflora var. grandiflora](#)
 *[Moraea flaccida](#) One-leaf Cape Tulip
 *[Moraea fugax](#)
 *[Moraea miniata](#) Two-leaf Cape Tulip
 *[Moraea setifolia](#)
[Morelia spilota subsp. imbricata](#) Carpet Python **S**
[Muehlenbeckia adpressa](#) Climbing Lignum
 *[Mus musculus](#) House Mouse
[Myiagra inquieta](#) Restless Flycatcher
[Mytilocypris ambiguosa](#)
[Mytilocypris tasmanica chapmani](#)
 *[Narcissus tazetta subsp. italicus](#)
 *[Narcissus tazetta subsp. tazetta](#)
[Necterosoma darwini](#)
[Necterosoma penicillatus](#)
[Necterosoma regulare](#)
[Necterosoma sp.](#)

[Neelaps bimaculatus](#) Black-naped Snake
[Neophema elegans](#) Elegant Parrot
[Neurachne alopecuroidea](#) Foxtail Mulga Grass
[Nicodamus mainae](#)
 *[Nicotiana glauca](#) Tree Tobacco
[Nicotiana rotundifolia](#) Round-leaved Tobacco
[Nilobezzia sp. 1](#)
[Nilobezzia sp. 2](#)
[Ninox connivens](#) Barking Owl
[Ninox novaeseelandiae](#) Boobook Owl
[Nitocra reducta \(sp. 5\)](#)
[Notalina spira](#)
[Nycticorax caledonicus](#) Rufous Night Heron
[Nyctophilus geoffroyi](#) Lesser Long-eared Bat
[Nymphicus hollandicus](#) Cockatiel
[Ochthebius sp.](#)
[Ocyphaps lophotes](#) Crested Pigeon
[Oecetis sp.](#)
 *[Oenothera speciosa](#) White Evening Primrose
[Olax benthamiana](#)
[Olearia elaeophila](#)
[Olearia lehmanniana](#)
[Olearia muricata](#) Rough-leaved Daisy Bush
[Olearia paucidentata](#) Autumn Scrub Daisy
 *[Oncosiphon piluliferum](#)
 *[Oncosiphon suffruticosum](#)
[Onychocamptus bengalensis](#)
[Onychohydrus scutellaris](#)
[Opercularia vaginata](#) Dog Weed
[Oreoica gutturalis](#) Crested Bellbird
[Orthetrum caledonicum](#)
[Orthrosanthus laxus var. gramineus](#) Grass-leaved Orthrosanthus
 *[Oxalis flava](#) Pinkbulb Soursob
 *[Oxalis glabra](#)
 *[Oxalis purpurea](#) Largeflower Wood Sorrel
[Oxyura australis](#) Blue-billed Duck **P4**
[Pachycephala pectoralis](#) Golden Whistler
[Pachycephala rufiventris](#) Rufous Whistler
[Pachycephala rufiventris subsp. rufiventris](#) Rufous Whistler
 *[Panicum capillare](#) Witchgrass
 *[Papaver hybridum](#) Rough Poppy
 *[Papaver rhoeas](#) Field Poppy
[Paracaleana triens](#)
[Paranacaena littoralis](#)
[Paranais litoralis](#)
 *[Parapholis incurva](#) Coast Barbgrass
[Parasuta gouldii](#)
[Parasuta nigriceps](#)
[Pardalotus punctatus](#) Spotted Pardalote
[Pardalotus striatus](#) Striated Pardalote
 *[Parentucellia latifolia](#) Common Bartsia
[Paspalidium constrictum](#) Knottybutt Grass
 *[Paspalum vaginatum](#) Salt Water Couch
 *[Passiflora filamentosa](#)
[Patersonia juncea](#) Rush Leaved Patersonia
[Patersonia rudis](#) Hairy Flag
[Patersonia rudis subsp. rudis](#)
[Pelecanus conspicillatus](#) Australian Pelican
 *[Pentameris airoides](#) False Hairgrass
 *[Pentameris airoides subsp. airoides](#)
[Pericalymma ellipticum](#) Swamp Teatree
[Persoonia angustiflora](#)
[Persoonia elliptica](#) Spreading Snottygobble
[Persoonia quinquenervis](#)

[Petroica goodenovii](#) Red-capped Robin
[Petrophile divaricata](#)
[Petrophile drummondii](#)
[Petrophile ericifolia](#) subsp. [subpubescens](#)
[Petrophile heterophylla](#) Variable-leaved Cone Bush
[Petrophile seminuda](#)
[Petrophile serruriae](#)
[Petrophile squamata](#) subsp. [northern](#) (J. Monks 40)
[Petrophile striata](#)
 *[Petrorhagia dubia](#)
[Phalacrocorax carbo](#) Great Cormorant
[Phalacrocorax sulcirostris](#) Little Black Cormorant
[Phalacrocorax varius](#) Pied Cormorant
 *[Phalaris aquatica](#) Phalaris
 *[Phalaris minor](#) Lesser Canary Grass
 *[Phalaris paradoxa](#) Paradoxa Grass
[Phaps chalcoptera](#) Common Bronzewing
[Phaps elegans](#) Brush Bronzewing
[Phascogale tapoatafa](#) subsp. [tapoatafa](#) Southern Brush-tailed Phascogale, Wambenger T
[Pheladenia deformis](#)
[Philothea spicata](#) Pepper and Salt
 *[Phyla canescens](#)
[Phylidonyris novaehollandiae](#) New Holland Honeyeater
[Phyllangium paradoxum](#)
[Phyllangium sulcatum](#)
[Phyllanthus calycinus](#) False Boronia
 *[Phyllopodium cordatum](#)
[Physopsis spicata](#) Hill River Lambstail
[Phytophthora cinnamomi](#)
[Ptilostyles hamiltonii](#)
[Pimelea angustifolia](#) Narrow-leaved Pimelea
[Pimelea argentea](#) Silvery Leaved Pimelea
[Pimelea brevifolia](#) subsp. [modesta](#)
[Pimelea ciliata](#) subsp. [ciliata](#)
[Pimelea imbricata](#) var. [piligera](#)
[Pimelea preissii](#)
[Pimelea suaveolens](#) subsp. [suaveolens](#)
[Pimelea sylvestris](#)
[Pithecarpa pulchella](#) var. [pulchella](#)
[Pittosporum angustifolium](#)
 *[Plantago coronopus](#) subsp. [commutata](#)
[Platalea flavipes](#) Yellow-billed Spoonbill
[Platalea regia](#) Royal Spoonbill
[Platycercus icterotis](#) Western Rosella
[Platycercus spurius](#) Red-capped Parrot
[Platycercus zonarius](#) Australian Ringneck, Ring-necked Parrot
[Platycercus zonarius](#) subsp. [zonarius](#) Port Lincoln Parrot
[Platynectes](#) sp.
[Platysace cirrosa](#) Karna
[Pleuroxus](#) cf. [foveatus](#)
 *[Poa annua](#) Winter Grass
 *[Poa bulbosa](#) Bulbous Blue Grass
 *[Poa pratensis](#) Kentucky Bluegrass
[Podargus strigoides](#) Tawny Frogmouth
[Podargus strigoides](#) subsp. [brachypterus](#) Tawny Frogmouth
[Podiceps cristatus](#) Great Crested Grebe
[Podolepis canescens](#) Bright Podolepis, Grey Podolepis
[Podolepis capillaris](#) Wiry Podolepis
[Podolepis lessonii](#)
[Podolepis tepperi](#)
[Podykipus leptoiuloides](#)
[Pogona minor](#) subsp. [minor](#) Dwarf Bearded Dragon
[Pogonolepis stricta](#)
[Poliiocephalus poliocephalus](#) Hoary-headed Grebe

- *[Polygonum bellardii](#)
- [Polypedilum nubifer](#)
- *[Polypogon monspeliensis](#) Annual Beardgrass
- [Polytelis anthopeplus](#) Regent Parrot
- [Pomatostomus superciliosus](#) White-browed Babbler
- [Poranthera microphylla](#) Small Poranthera
- [Porphyrio porphyrio](#) Purple Swamphen
- [Porzana fluminea](#) Australian Spotted Crake
- [Porzana pusilla](#) Baillon's Crake
- [Porzana tabuensis](#) Spotless Crake
- [Potamogeton ochreatus](#) Blunt Pondweed
- [Prasophyllum elatum](#) Tall Leek Orchid
- [Prasophyllum gracile](#)
- [Prasophyllum hians](#) Yawning Leek Orchid
- [Prasophyllum triangulare](#) Dark Leek Orchid
- [Procladius paludicola](#)
- [Prostanthera canaliculata](#)
- [Pseudechis australis](#) Mulga Snake
- [Pseudogobius olorum](#)
- [Pseudonaja affinis subsp. affinis](#) Dugite
- [Pseudonaja mengdeni](#) Western Brown Snake
- [Pseudonaja modesta](#) Ringed Brown Snake
- [Pseudophryne guentheri](#) Crawling Toadlet
- [Pterochaeta paniculata](#)
- [Pterodroma macroptera subsp. macroptera](#)
- [Pterodroma mollis](#) Soft-plumaged Petrel
- [Pteropus scapulatus](#) Little Red Flying-fox
- [Pterostylis concava](#)
- [Pterostylis recurva](#) Jug Orchid
- [Pterostylis sargentii](#) Frog Greenhood
- [Pterostylis sp. crinkled leaf \(G.J. Keighery 13426\)](#)
- [Pterostylis vittata](#) Banded Greenhood
- [Ptilotus declinatus](#) Curved Mulla Mulla
- [Ptilotus divaricatus](#) Climbing Mulla Mulla
- [Ptilotus drummondii](#) Narrowleaf Mulla Mulla
- [Ptilotus drummondii var. drummondii](#) Pusstail
- [Ptilotus humilis](#)
- [Ptilotus manglesii](#) Pom Poms, Mulamula
- [Ptilotus polystachyus](#) Prince of Wales Feather
- [Ptilotus spathulatus](#)
- [Ptychostomum angustifolium](#)
- *[Puccinellia ciliata](#) Puccinellia
- [Purnella albifrons](#) White-fronted Honeyeater
- [Pyrorchis nigricans](#) Red beaks, Elephants ears
- [Quinetia urvillei](#)
- [Ramalina inflata subsp. australis](#)
- *[Raphanus raphanistrum](#) Wild Radish
- [Recurvirostra novaehollandiae](#) Red-necked Avocet
- [Rhagodia drummondii](#)
- [Rhagodia preissii](#)
- [Rhipidura leucophrys](#) Willie Wagtail
- [Rhodanthe citrina](#)
- [Rhodanthe corymbosa](#)
- [Rhodanthe laevis](#)
- [Rhodanthe manglesii](#)
- [Rhodanthe polycephala](#)
- [Rhodanthe pygmaea](#)
- [Rhodanthe spicata](#)
- [Ricinocarpos undulatus](#)
- *[Romulea rosea](#) Guildford Grass
- *[Romulea rosea var. communis](#)
- [Roycea spinescens](#)
- *[Rumex pulcher subsp. woodsii](#)
- [Ruppia maritima](#) Sea Tassel

[Ruppia megacarpa](#)
[Rytidosperma acerosum](#)
[Rytidosperma caespitosum](#)
[Rytidosperma occidentale](#)
 *[Sagina apetala](#) Annual Pearlwort
[Santalum acuminatum](#) Quandong, Warnga
[Sarscypridopsis aculeata](#)
[Scaevola glandulifera](#) Viscid Hand-flower
[Scaevola lanceolata](#)
[Scaevola pilosa](#) Hairy Fan-flower
[Scaevola repens var. repens](#)
[Schenkia australis](#)
[Schoenus armeria](#)
[Schoenus clandestinus](#)
[Schoenus curvifolius](#)
[Schoenus hexandrus](#)
[Schoenus nanus](#) Tiny Bog Rush
[Schoenus sculptus](#) Gimlet Bog-rush
[Schoenus sp. A2 Kulin \(B.G. Briggs 7939\)](#)
[Schoenus sp. smooth culms \(K.R. Newbey 7823\)](#)
[Schoenus subfascicularis](#)
[Schoenus unispiculatus](#)
[Scholtzia involucreta](#) Spiked Scholtzia
[Scholtzia sp. Duck Pool \(M.E. Trudgen MET 5427\)](#)
[Selaginella gracillima](#) Tiny Clubmoss
[Senecio multicaulis subsp. multicaulis](#)
[Senecio pinnatifolius](#)
[Senna artemisioides subsp. filifolia](#)
[Senna charlesiana](#)
[Sericornis frontalis](#) White-browed Scrubwren
 *[Silene gallica var. gallica](#)
 *[Silene vulgaris](#) Bladder Campion
[Siloaxerus filifolius](#)
[Siloaxerus humifusus](#) Procumbent Siloaxerus
[Siloaxerus multiflorus](#)
[Simoselaps bertholdi](#) Jan's Banded Snake
[Smicromis brevirostris](#) Weebill
[Sminthopsis crassicaudata](#) Fat-tailed Dunnart
[Sminthopsis gilberti](#) Gilbert's Dunnart
 *[Solanum elaeagnifolium](#) White Horse Nettle, Silverleaf Nightshade
[Solanum hoplopetalum](#) Thorny Solanum
[Solanum lasiophyllum](#) Flannel Bush, Mindjulu
 *[Solanum nigrum](#) Black Berry Nightshade
 *[Solanum triflorum](#) Threeflower Nightshade
 *[Solidago canadensis](#) Goldenrod
 *[Sonchus asper](#) Rough Sowthistle
 *[Sonchus oleraceus](#) Common Sowthistle
 *[Sorghum halepense](#) Johnson Grass
[Sowerbaea laxiflora](#) Purple Tassels
 *[Spergularia diandra](#) Lesser Sand Spurry
[Spergularia marina](#)
[Sphaerolobium medium](#)
[Spiculaea ciliata](#) Elbow Orchid
[Stackhousia monogyna](#)
[Stenanthemum coronatum](#)
[Stenanthemum emarginatum](#)
[Stenanthemum intricatum](#)
[Sternopriscus multimaculatus](#)
[Sternopriscus sp.](#)
[Stictonetta naevosa](#) Freckled Duck
[Stirlingia abrotanoides](#)
[Strepera versicolor](#) Grey Currawong
 *[Streptopelia chinensis](#) Spotted Turtle-Dove
 *[Streptopelia senegalensis](#) Laughing Turtle-Dove

[Stuckenia pectinata](#)
[Stylidium affine](#) Queen Triggerplant
[Stylidium amoenum](#) Lovely Triggerplant
[Stylidium androsaceum](#)
[Stylidium asteroideum](#) Star Triggerplant **P3**
[Stylidium brunonianum](#) Pink Fountain Triggerplant
[Stylidium calcaratum](#) Book Triggerplant
[Stylidium caricifolium](#) Milkmaids
[Stylidium ciliatum](#) Golden Triggerplant
[Stylidium dichotomum](#) Pins-and-needles
[Stylidium diuroides](#) Donkey Triggerplant
[Stylidium emarginatum](#) Biddy-four-legs
[Stylidium eriopodum](#)
[Stylidium exappendiculatum](#) **P3**
[Stylidium hispidum](#) White Butterfly Triggerplant
[Stylidium lateriticola](#)
[Stylidium leptophyllum](#) Needle-leaved Triggerplant
[Stylidium periscelanthum](#) Pantaloon Triggerplant **P3**
[Stylidium petiolare](#) Horn Triggerplant
[Stylidium piliferum](#) Common Butterfly Triggerplant
[Stylidium pubigerum](#) Yellow Butterfly Triggerplant
[Stylidium repens](#) Matted Triggerplant
[Stylidium schoenoides](#) Cow Kicks
[Stylidium sp. Bindoon \(K.F. Kenneally 11405\)](#)
[Stylidium sp. Darling Range \(H. Bowler 371\)](#)
[Stylidium striatum](#) Fan-leaved Triggerplant **P4**
[Stylidium xanthellum](#)
[Stylopaupoides lapicidarius](#)
[Stypandra glauca](#) Blind Grass
[Styphelia tenuiflora](#) Common Pinheath
[Sulcanus conflictus](#)
 *[Symphyotrichum squamatum](#) Bushy Starwort
[Synaphea decorticans](#)
[Synaphea diabolica](#) **P3**
[Synaphea interioris](#)
[Synaphea sp. Darkin \(F. Hort et al. 586\)](#) **P3**
[Synaphea sp. Udumung \(A.S. George 17058\)](#)
[Synothele michaelsoni](#)
[Synsphyronus callus](#)
[Tachybaptus novaehollandiae](#) Australasian Grebe, Black-throated Grebe
[Tachyglossus aculeatus](#) Short-beaked Echidna
[Tadorna tadornoides](#) Australian Shelduck, Mountain Duck
[Taeniopygia guttata](#) Zebra Finch
[Taeniopygia guttata subsp. castanotis](#) Zebra Finch
[Tanytarsus fuscithorax/semibarbitarsus](#)
[Tanytarsus sp. C \(bispinosus\)](#)
[Tasmanicosa leuckartii](#)
[Taxandria linearifolia](#)
[Tecticornia pergranulata subsp. pergranulata](#) Blackseed Samphire
[Templetonia sulcata](#) Centipede Bush
[Tetrapterum cylindricum](#)
[Tetrapterum cylindricum](#)
[Tetradlea octandra](#)
[Tetradlea confertifolia](#)
[Tetradlea hirsuta](#) Black Eyed Susan
[Tetradlea pilifera](#) **P3**
[Tetradlea similis](#) **P3**
[Tetradlea virgata](#)
[Thelymitra antennifera](#) Vanilla Orchid
[Thelymitra benthamiana](#) Leopard Orchid
[Thelymitra canaliculata](#) Blue Sun Orchid
[Thelymitra crinita](#) Blue Lady Orchid
[Thelymitra macrophylla](#)
[Thelymitra maculata](#)
[Thomasia foliosa](#)

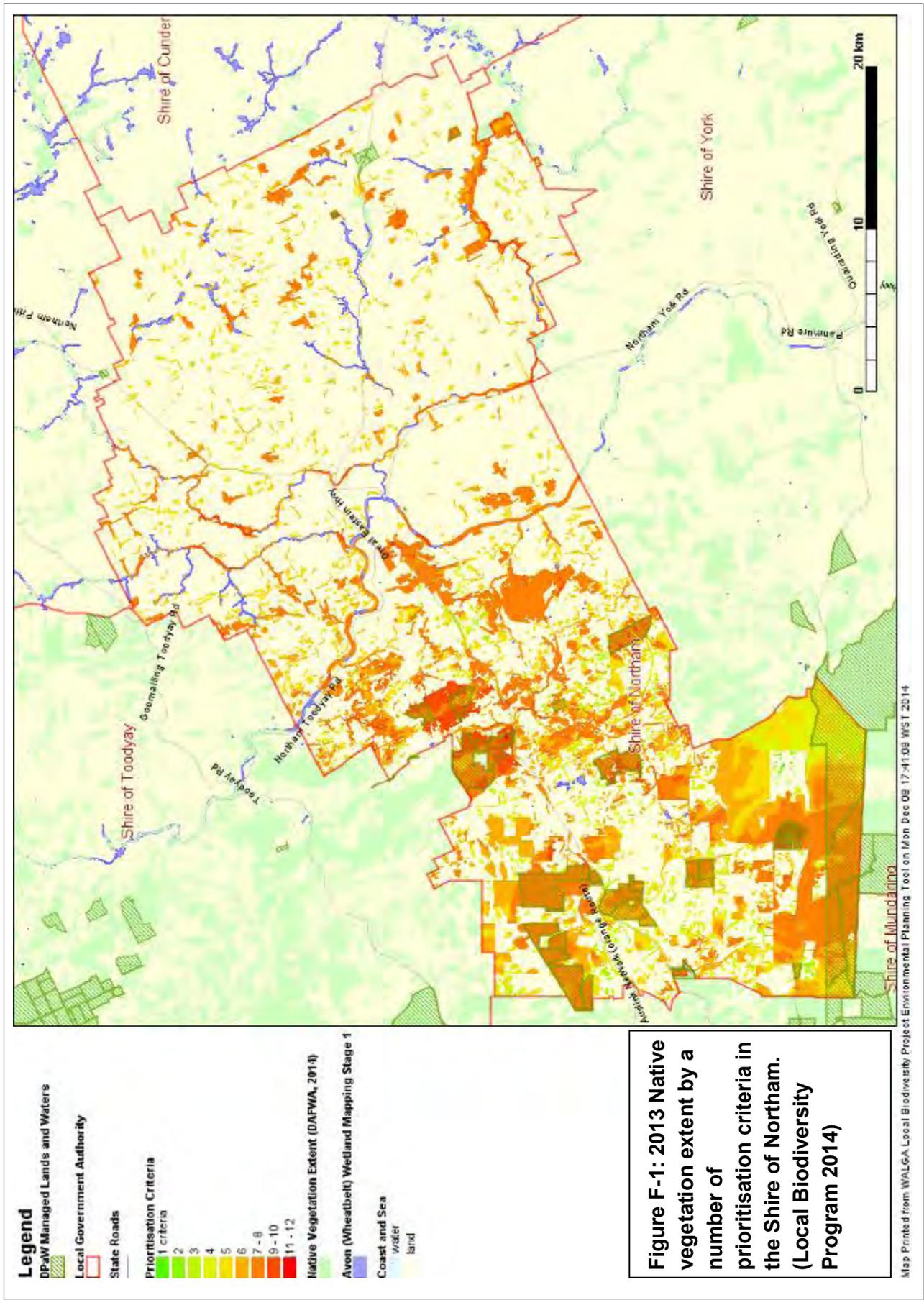
[Thomasia glabripetala](#) **T**
[Thomasia glutinosa](#) Sticky Thomasia
[Thomasia glutinosa var. glutinosa](#)
[Thomasia macrocalyx](#)
[Threskiornis molucca](#) Australian White Ibis
[Threskiornis spinicollis](#) Straw-necked Ibis
[Thryptomene racemulosa](#)
[Thysanotus asper](#) Hairy Fringe Lily
[Thysanotus cymosus](#) **P3**
[Thysanotus gracilis](#)
[Thysanotus manglesianus](#) Fringed Lily
[Thysanotus multiflorus](#) Many-flowered Fringe Lily
[Thysanotus patersonii](#)
[Thysanotus scaber](#)
[Thysanotus sp. Twining Wheatbelt \(N.H. Brittan 81/29\)](#)
[Thysanotus sparteus](#)
[Thysanotus tenellus](#)
[Thysanotus tenuis](#) **P3**
[Thysanotus thyrsoides](#)
[Thysanotus triandrus](#)
[Tiliqua occipitalis](#) Western Bluetongue
[Tiliqua rugosa subsp. rugosa](#)
[Tinytrema yarra](#)
[Todiramphus sanctus](#) Sacred Kingfisher
[Trachymene cyanopetala](#)
[Trachymene ornata](#) Spongefruit
[Trachymene pilosa](#) Native Parsnip
[Tribonanthes longipetala](#)
[Trichocline sp. Treeton \(B.J. Keighery & N. Gibson 564\)](#) **P2**
[Trichocline spathulata](#) Native Gerbera
[Trichoglossus haematodus](#) Rainbow Lorikeet
[Trichosurus vulpecula subsp. vulpecula](#) Common Brushtail Possum
[Tricoryne elatior](#) Yellow Autumn Lily
[Tricoryne humilis](#)
 *[Trifolium arvense var. arvense](#)
 *[Trifolium campestre](#) Hop Clover
 *[Trifolium subterraneum](#) Subterranean Clover
 *[Trifolium tomentosum var. tomentosum](#)
[Triglochin isingiana](#)
[Tringa glareola](#) Wood Sandpiper **IA**
[Tringa nebularia](#) Common Greenshank **IA**
[Triplectides australis](#)
[Tripteroococcus brunonis](#) Winged Stackhousia
 *[Triticum aestivum](#) Wheat
[Trymalium angustifolium](#)
[Trymalium daphnifolium](#)
[Trymalium ledifolium](#)
[Trymalium ledifolium var. lineare](#)
[Turnix velox](#) Little Button-quail
 *[Typha orientalis](#) Bulrush, Cumbungi
[Tyto alba subsp. delicatula](#) Barn Owl
[Tyto novaehollandiae subsp. novaehollandiae](#) Masked Owl (southern subsp) **P3**
[Underwoodisaurus milii](#) Barking Gecko
 *[Urochloa panicoides](#)
[Urodacus armatus](#)
[Urodacus novaehollandiae](#)
[Urodacus planimanus](#)
 *[Ursinia anthemoides](#) Ursinia
 *[Ursinia anthemoides subsp. anthemoides](#)
[Usnea scabrada](#)
 *[Vaccaria hispanica](#) Cow Soapwort
[Vanellus tricolor](#) Banded Lapwing
[Varanus gouldii](#) Bungarra or Sand Monitor
[Varanus tristis](#) Racehorse Monitor

- [Velleia cynopotamica](#)
*[Vellereophyton dealbatum](#) White Cudweed
[Venator immansueta](#)
*[Verbascum creticum](#)
[Verreauxia reinwardtii](#) Common Verreauxia
[Verticordia acerosa](#) var. [preissii](#)
[Verticordia brachypoda](#)
[Verticordia chrysantha](#)
[Verticordia densiflora](#) var. [cespitosa](#)
[Verticordia densiflora](#) var. [densiflora](#)
[Verticordia eriocephala](#) Common Cauliflower
[Verticordia huegelii](#) var. [stylosa](#)
[Verticordia insignis](#) subsp. [insignis](#)
[Verticordia pennigera](#)
[Verticordia picta](#) Painted Featherflower
[Verticordia serrata](#) var. [linearis](#) P3
*[Vicia sativa](#) subsp. [cordata](#)
[Vittadinia gracilis](#)
*[Vulpia bromoides](#) Squirrel Tail Fescue
*[Vulpia myuros](#) forma [megalura](#)
*[Vulpia myuros](#) forma [myuros](#)
*[Wahlenbergia capensis](#) Cape Bluebell
[Wahlenbergia gracilentia](#) Annual Bluebell
[Wahlenbergia preissii](#)
[Waitzia acuminata](#) var. [acuminata](#)
[Waitzia acuminata](#) var. [albicans](#)
[Waitzia nitida](#)
*[Watsonia meriana](#) var. [bulbillifera](#)
[Westralunio carteri](#) Carter's Freshwater Mussel T
[Wilsonia humilis](#) Silky Wilsonia
[Wurmbea dioica](#) subsp. [alba](#)
[Wurmbea drummondii](#) York Gum Nancy
[Wurmbea tenella](#) Eight Nancy
[Xanthagrion erythroneurum](#)
[Xanthoparmelia tasmanica](#)
[Xanthorrhoea drummondii](#)
[Xanthorrhoea preissii](#) Grass tree, Palga
[Xanthosia ciliata](#)
[Xanthosia huegelii](#)
[Xanthosia singuliflora](#)
[Xerochrysum bracteatum](#)
[Zosterops lateralis](#) Grey-breasted White-eye, Silvereye

APPENDIX F: Ecological criteria for remnant vegetation prioritisation in the Shire of Northam (Adapted from Del Marco *et al* 2004)

Criteria	Spatial representation	Comments
Regional representation		
1_1 The area is of recognised International, National, State or Regional value	Fauna Habitat Zones from the RFA (2013) Land for Wildlife (2013) DPAW managed lands for conservation Local reserves with conservation purpose Priority Remnants (>500ha) from the Avon Regional Vegetation Prioritisation (WHRM, 2013-2014?)	
1_2 The area is of an ecological community with only 1500ha or 30% less of its pre-European extent remaining in IBRA region	Jarraah Forest: Bi, Ck, Mi, Wi, Wheatbelt portion: 4, 352, 511, 694, 946, 1048, 1049	Using 40% actual See Appendix D.
1_3 large (greater than 20 ha) area of remnant vegetation	Remnant vegetation patch equal or greater than 20ha (discrete area separated from other discrete area by >10m)	
1_4 The area is of an ecological community with only 1500ha or 17% or less protected in formal reserves in the Jarraah Forest IBRA region	Jarraah Forest: Bi, Ce, Ck, Mi, My2, Pn, Wi, Y5, Y6 Wheatbelt portion: 4, 352, 511, 694, 946, 1048, 1049,	Using 20% actual See Appendix D.
Local representation		
1_6a of an ecological community with 30% or less remaining within the LG area	Jarraah Forest: Bi, Ck, Mi, My2, Wi Wheatbelt: 352, 511, 694, 946, 1049	See Appendix D.
1_6b of an ecological community with 17% or less protected within the LG area	Jarraah Forest: Bi, Ck, Mi, My2, S, Wi, Y5, Y6 Wheatbelt: 4, 352, 511, 694, 946, 1048, 1049,	See Appendix D.
1_7 large (greater than 10ha) area of remnant vegetation	Remnant vegetation patch equal or greater than 10ha (discrete area separated from other discrete area by >10m)	
2 Rarity		
2_1 contains threatened ecological community		2014 DPAW records
2_2 contains priority ecological community		2014 DPAW records
2_3 contains declared rare flora	Threatened species records buffered (50m)	2014 DPAW records
2_4 contains records for threatened fauna	Threatened fauna records buffered (200m)	2014 DPAW records
2_5a Areas requiring investigation for Carnaby's Cockatoo feeding habitat	In Jarraah Forest – DPAW mapping (2011), outside Jarraah forest the following BVAs: 352, 511, 694, 946, 1049 used as surrogates	
2_5b Carnaby's breeding sites (confirmed and possible) with 12 km buffer		

Criteria	Spatial representation	Comments
2_5c Carnaby's roosting sites (confirmed and possible) with 6km buffer		
2_6 contains priority or other significant flora	Priority flora records buffered	2014 DPAW records
2_7 contains priority or other significant fauna	Priority fauna records and Birdlife Australia significant birding site mapping (2009)	2014 DPAW records
3 Maintaining ecological processes and protection of wetlands and streamline vegetation		
3_1 wetlands plus 50m buffer	Wheatbelt wetlands Including the South west agricultural zone wetlands (EPP policy wetlands) -	
3_2a riparian vegetation plus buffer	Hydrography lines buffered (20m) and intersected with remnant vegetation	
3_2b Avon River Pools and recognised conservation significance sections of Avon plus 200m buffer and sections of river foreshore mapped as being in good or better condition	High and Medium (with ecological values only) priority river pools: Katrine Pool, Burlog Pool, Glen Avon Pool, Northam Town River Pool , Northam "Forest" section of Avon River (as defined by the Stakeholder Reference Group, see Maps 1 and 2, Appendix B)	DoW foreshore condition mapping intersected with the surrogate layer for riparian vegetation (using A1-A3 and B1-B3 categories of condition).
3_3 granite outcrops	Wheatbelt wetlands mapping	



APPENDIX G: A Morphological Classifier for Remnant Vegetation

By Teik Oh, Fluffy Software PL

Introduction

When planning for bushland reserves, designing a reserve with an “ideal” shape is an important consideration for effective long term management of biodiversity values. Assuming there are no topographical, planning or other constraints a circle is the ideal shape for a remnant as drawn on a 2-D map. A circle has the following properties:

- Minimum boundary length to area ratio for a size of patch;
- The most compact shape to represent a particular size of patch;
- Greatest self-connectivity. With a circle the average distance of any two randomly chosen points within the patch (over many samples) is lower than any other shape.

These properties correspond to conventional wisdom in bushland management and ecology of minimising boundary lengths of remnant vegetation (fencing and weed management costs) and maximising ecological connectivity.

Given that in most instances remnant vegetation is, by definition, “what’s left” we don’t have the luxury of reconfiguring remnant shapes but instead need measures for assessing the distribution and shape of remnants as they are.

Shape classifiers can give insight into the spatial properties of remnant patches – not just how large they are – but how their shapes, positions and sizes affect their ecological attributes particularly connectivity.

Shape classifiers produce a number to describe something about a shape. This paper examines a traditional and some new shape classifiers to see what they can tell us about remnant vegetation distribution.

Remnant vegetation in a landscape is comprised of a collection of physically separate patches. A patch may contain different types of vegetation but this variation is not considered in this discussion.

Perimeter to Area Ratio

Perimeter to area ratio is widely used as a measure of remnant management viability in bushland management:

$$PA = P / A;$$

where P = perimeter and A = area

This is based on an assumption that shorter boundaries and larger areas are good properties for a remnant so remnants with a low PA ratio are more viable than areas with a higher PA ratio. The measure is not dimensionless with the units being the inverse of length.

The definition is certainly intuitive but what does it look like when applied to a diverse range of remnants? Figure 1 shows PA ratio for remnants from the coast to the scarp with dark green patches having lowest PA ratio and red the highest values.

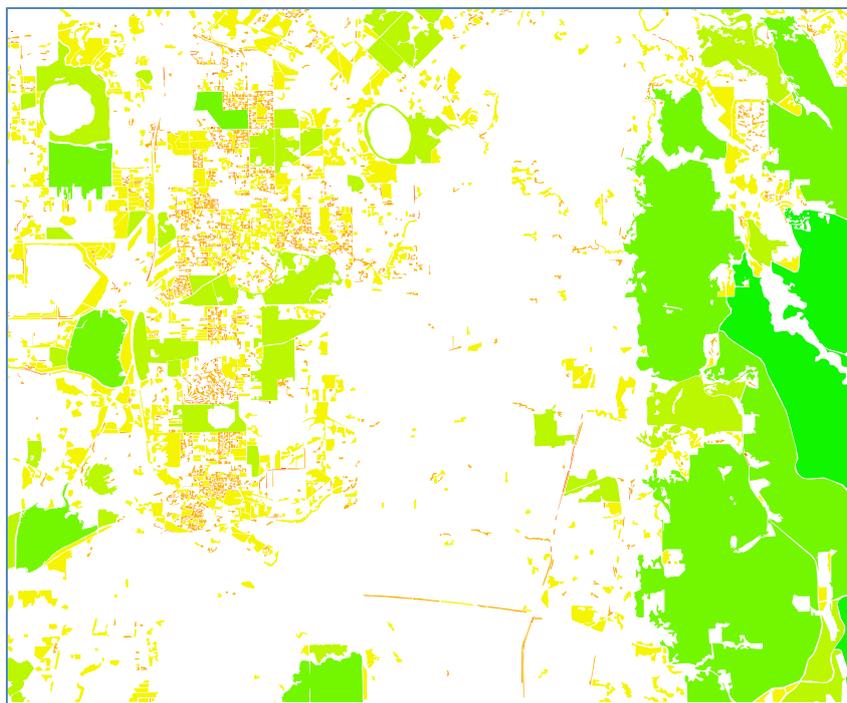


Figure 0-1: Remnant vegetation by perimeter to area ratio. (Dark green represents small PA ration and red represents large PA ratio)

When applied regionally we notice that patch size is the dominant parameter. As area varies to the square of length, large patches have a low PA ratio irrespective of their shape. Thin linear features are not well-distinguished from more compact shapes. Conversely, small areas have a high PA ratio.

However, the PA ratio doesn't tell us very much when looking across a diverse landscape.

Perimeter Squared to Area Ratio - Circularity

To counter the effect of patch size dominating PA ratio the following modification to the formula derived from the isoperimetric inequality for shapes (http://en.wikipedia.org/wiki/Isoperimetric_quotient) is introduced:

$$P2A = P^2 / A$$

By using the square of perimeter the formula is converted into a dimensionless measure of shape as the units cancel out.

Further, the measure is *scale-less* and is a pure measure of the *circularity* of a shape – how much like a circle it is. Circles have the lowest P2A ratio and as described in the introduction, circle is the “ideal” patch shape. The scale-less property means that a patch that has exactly the same boundary shape (e.g. rectangle) as one that is 10 times smaller (a smaller rectangle with same width to height ratio) will have the same P2A ratio.

Figure 2 represents the application of P2A ratio to the same area pictured in Figure 1. Green = low P2A ratio, red = high P2A ratio:

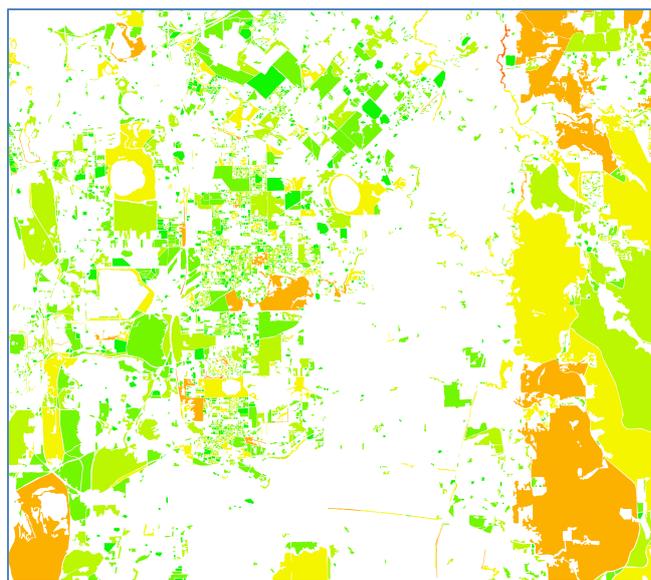


Figure 0-2: Application of P2A ratio. (Green = low, orange = large)

Compact patches are green and thin linear features are well identified as orange-red. Patches with a complicated boundary but otherwise compact show up as yellow-orange.

Shape and Scale

The P2A ratio provides a convenient single number to describe how close to the ideal circle the shape of a patch is. It is a scale-less measure independent of the size of the shape. However, much of our understanding of physical phenomena depends very much on scale – not just in the way we measure them but how we define them.

Consider a whole-of-state view of Western Australia. When displayed on a computer monitor and with the finite resolution of human vision we can perceive the Swan River estuary as a fairly simple shape. As we increase the magnification more detail of the estuary boundary and minor tributaries can be seen. As we zoom in further even minor tributaries become complicated shapes. At each zoom level we can see landscape features at a particular range of detail. Features that are too small cannot be seen and features that are very large may not be apparent because the rate of change of detail is low at the viewed scale.

So, it is desirable to create scale-dependent measures of a distribution of shapes such as remnant vegetation in a landscape to help understand scale-specific phenomena.

Buffered Boundary Classifier

A new scale dependent shape classifier is introduced. For a given remnant patch P, a new shape is created by buffering P by a fixed distance d. The classifier is calculated as:

$$C(P, d) = \text{Area}(P) / \text{Area}(P \text{ buffered } d);$$

where Area() is a function calculating the area of a shape. C is a dimensionless measure as it is the ratio of two areas. However, it is specified by d which is a distance and has a unit.

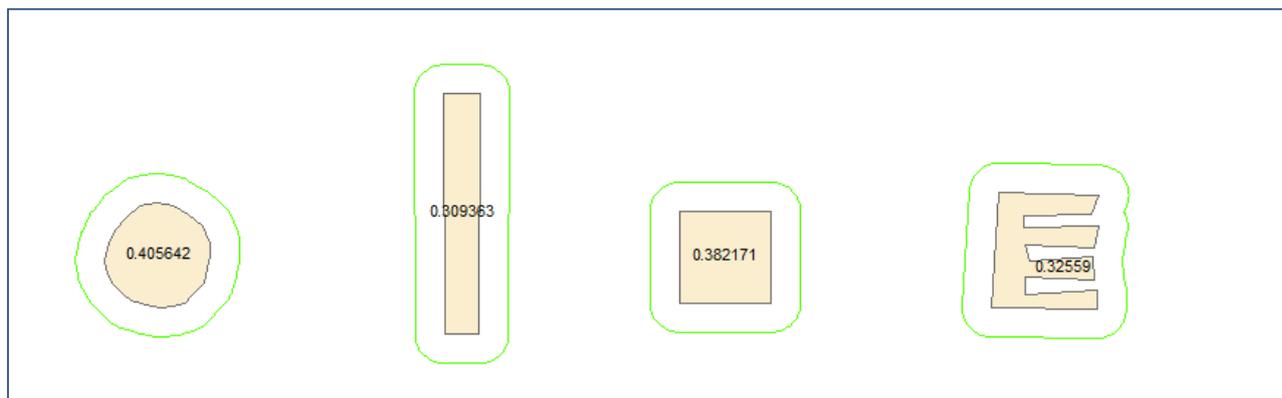


Figure 0-3: Changing Buffered boundary classifier value when applied to various shapes.

The shapes in Figure 3 are about the same size (10 units squared) with a buffer distance of 1 unit applied (green boundary). Shapes are labeled by calculated C value. Some observations:

- circle has highest C value – slightly larger than the square which is also very compact
- thin rectangle has lowest C value
- the fork shape has a higher value than you might expect given the complex shape but the distance between the fork tynes is < 1 unit.

Figure 4 shows the effect of reducing the buffer distance, d , to 0.1 units.

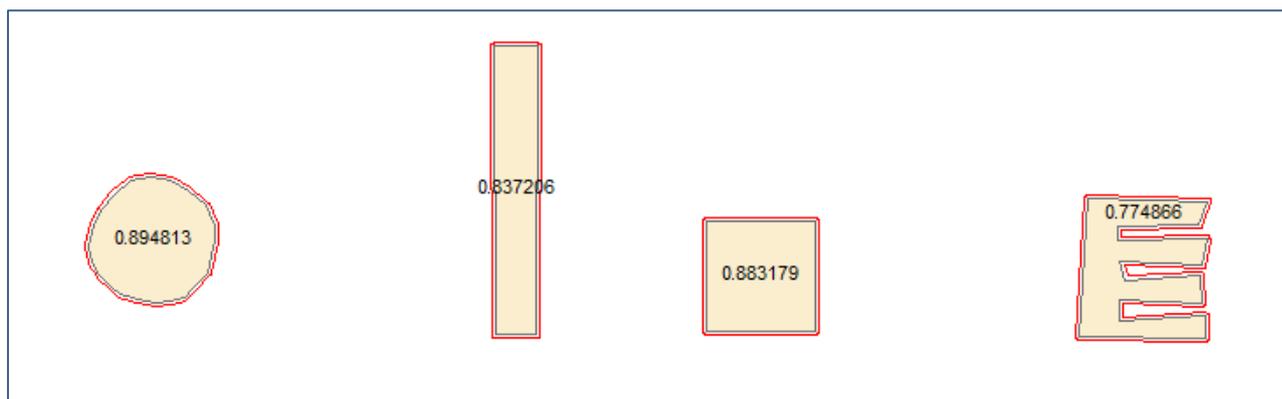


Figure 0-4: Effect of variation of the buffer on the value of the buffered boundary classifier.

Observations:

- circle and square have about the same values
- thin rectangle has moderate C value
- fork shape has lowest C value.

Figure 5 shows the effects of d being increased to 10 units. Buffered boundary classifier values are approximately the same for all the different shapes.

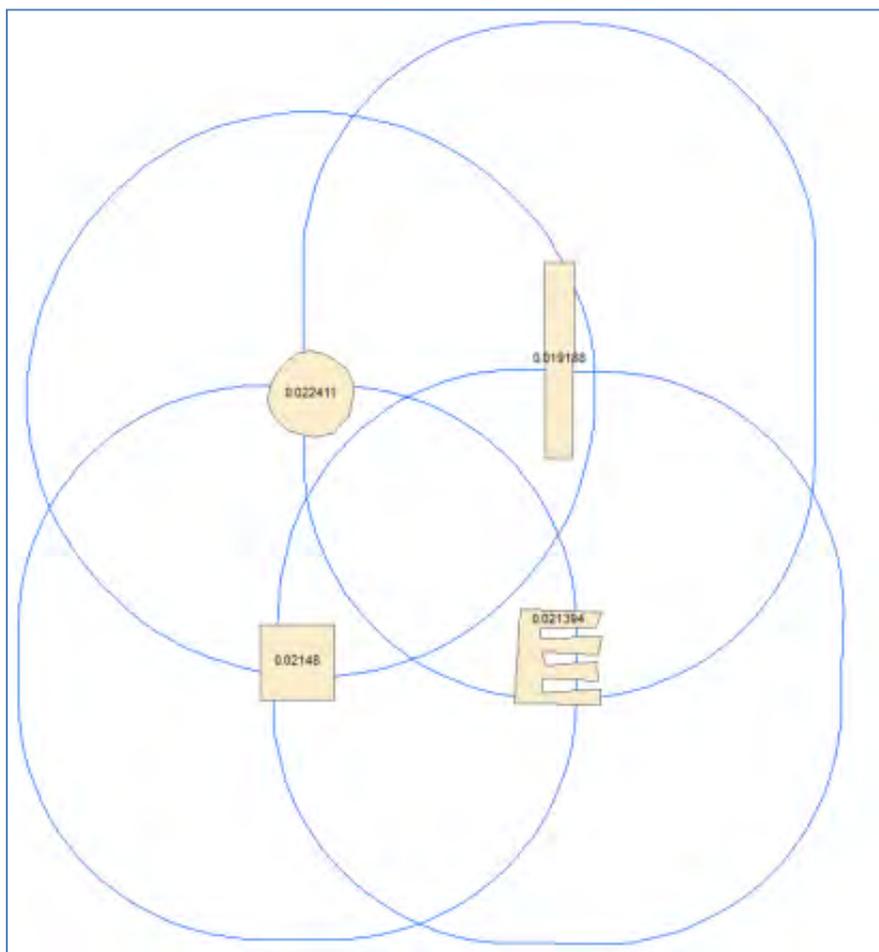


Figure 0-5: Effect of increased buffer distance on the buffered boundary classifier value.

What is happening? With $d = 1$, the classifier works well to discriminate differences in shape where the scale of change is about 1 unit in size. Thus it works well to pick out the thin rectangle. However, it fails to discriminate the fork tynes which has shape changes < 1 unit in size (the fork tynes).

With $d = 0.1$, the fork tynes are discriminated but not the larger scale shape changes (thin rectangle vs square).

At $d = 10$, the features are all about the same at that scale and have similar C values. But you can imagine if the shapes were 10x in size in length and width then $d = 10$ will serve well to discriminate amongst them.

This suggests that for a given value of d there will be a range in size of shape features (variation from a circle of radius d) that it will be effective in discriminating.

Integrated Buffered Boundary Classifier

While it is very informative to look at C values for a range of d values separately, can the C equation be generalised to create a single measure for the whole landscape across a range of d values? The standard mathematical technique is to integrate C for a range of d $[0, d_{max}]$.

As it is not possible to calculate the integral precisely we can approximate it by a finite sum

$$C_s = \sum C(P, d)$$

where d is an element of some set of values. But what set of values should be used? The set of d values should be chosen to represent characteristics of the input shapes (set of P).

Remnant Vegetation and the Buffered Boundary Classifier

What does the buffered boundary classifier inform us about remnant vegetation? By exploring C values for different d values you can get a sense of detail at different scales for the patch. Does it have fine detail or coarse detail? How close is it to circular at different scales?

When scales are combined in the integrated form we have a single number that can discriminate patches such that:

- low numbers correspond to small or poorly shaped patches
- high numbers correspond to large, compact patches.

Remnant Vegetation and Distribution

Consider the following typical illustration of remnant patches in a semi-developed area (Figure 6).

While we can classify the shape of each patch using any of the previously described classifiers it doesn't make much sense to consider patches by themselves. In the above example the patch highlighted is really part of a larger network of remnant vegetation. It may be separated from its neighbours by fences, firebreaks and small physical barriers but it isn't truly separated in an ecological sense. Animals and plant propagules such as pollen can easily be spread between adjacent patches.

So, shape classifiers need to be extended to consider the surrounding landscape. Two variations of the buffered boundary classifier were developed.



Figure 0-6: Example of remnant patch distribution.

Fragmentation

This is a variation of the buffered boundary classifier where the buffer area for a shape P is calculated but instead of the area of P being the dividend, the sum of all remnant vegetation within the buffered area is used as illustrated in Figure 7.



Figure 7: Remnant patches shown as part of a patch network within a d buffer.

So, fragmentation F can be written as:

$$F(S, P, d) = \text{Area}(S \text{ within } P \text{ buf } d) / \text{Area}(P \text{ buf } d);$$

where S is the set of all remnants in the landscape. It can be written in integrated form as:

$$F_s = \sum C(S, P, d).$$

The set of d's chosen for the Regional Framework for Local Biodiversity Conservation Priorities for Perth and Peel (RFLBCP) fragmentation measure are {10, 20, 50, 100, 250, 500 metres}. Figure 8 shows the results of C_{LS} mapped in the RFLBCP study area where low values of F_s are represented in red and high F_s values are green.

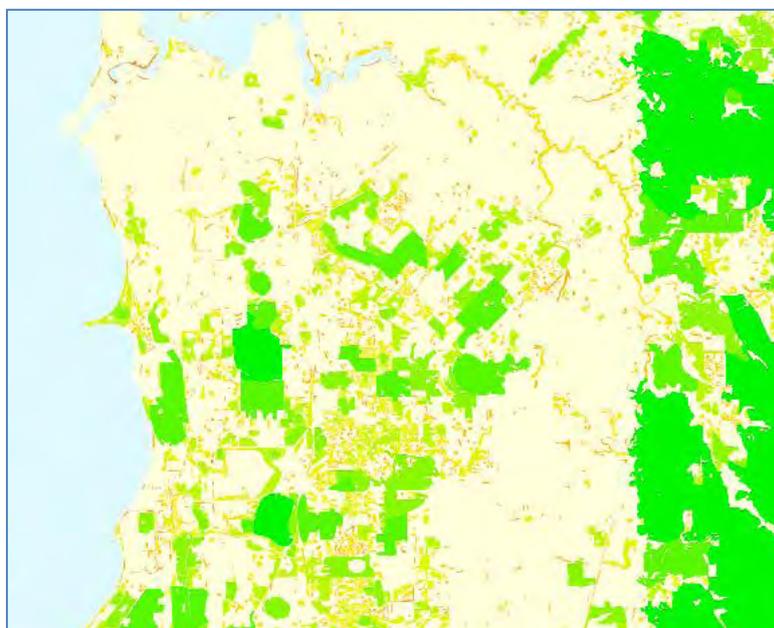


Figure 8: Remnant vegetation by 'Fragmentation' in the portion of the southern Metropolitan Region.

Fragmentation F_s discriminates patches such that:

- low numbers correspond to small, locally isolated or poorly shaped patches (red, orange)
- high numbers correspond to large, compact or locally well connected patches (green).

Regional Connectivity

A variation on fragmentation is regional connectivity where the buffer is calculated on not just the selected patch but all patches that can be reached from the patch by travelling no more than d distance, expressed by the following formula:

$C(S, P, d) = \text{Area}(S \text{ within } d \text{ of } P) / \text{Area}((S \text{ within } d \text{ of } P) \text{ but } d)$;

where S is the set of all remnants in the landscape. By using different values of d we can examine the potential range of an organism if it has a limited travel distance.

Figure 9 illustrates an example where a d of 20m is applied to the example patch used in Figures 6 and 7.

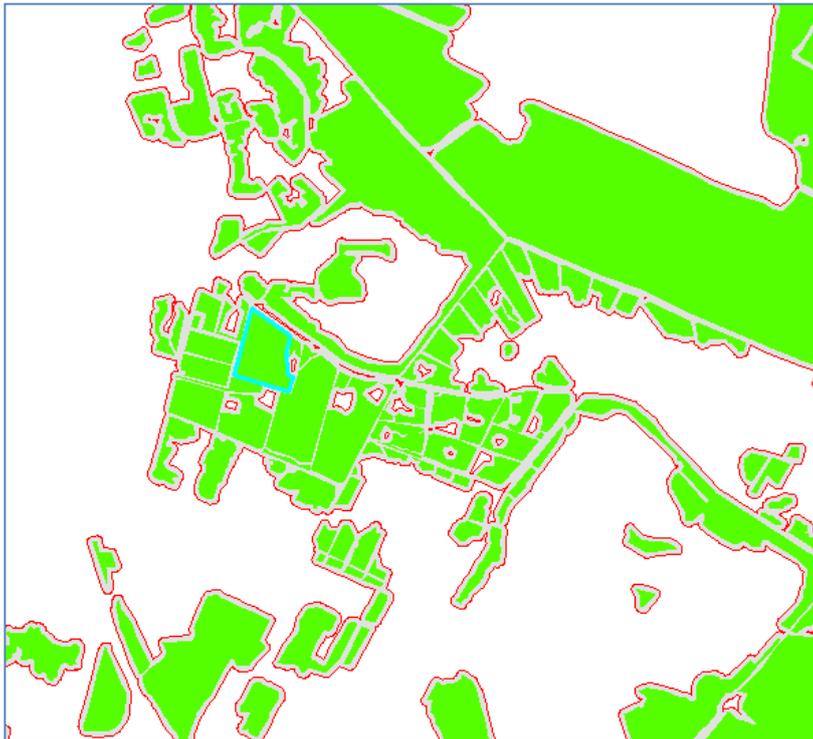


Figure 9: Illustration of patch network connectivity, Regional Density, with d value of 20 metres.

The example remnant vegetation patch is part of a large network of patches all within 20m of each other. More isolated patches form smaller groups or are by themselves.

The integrated form of Regional Connectivity, C_s , can also be calculated and applied with same values of d as F_s {10, 20, 50, 100, 250, 500m} (Figure 10).

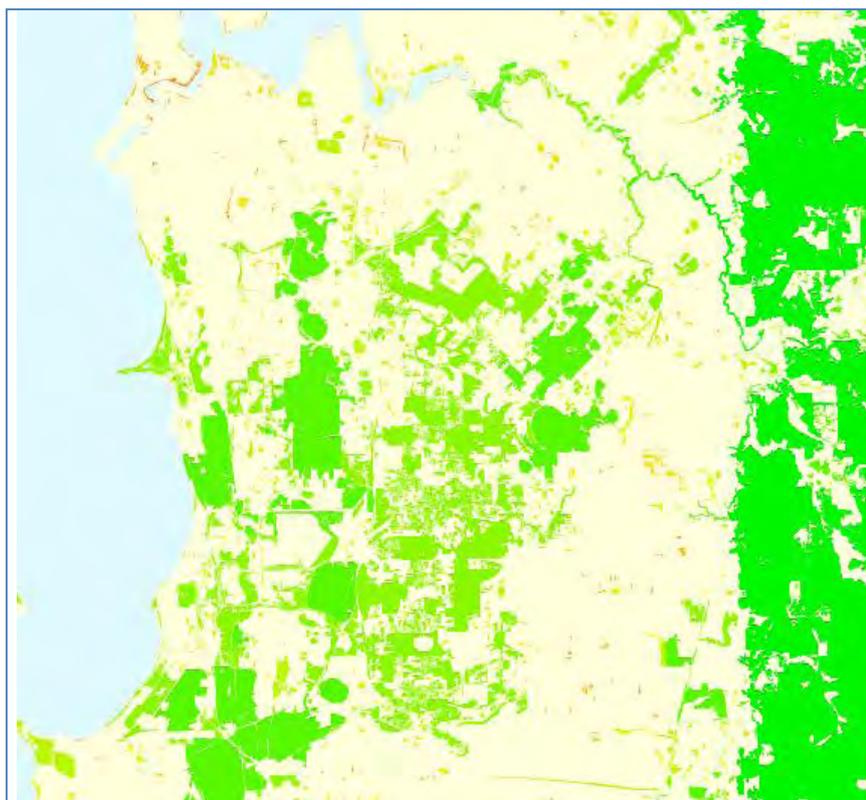


Figure 10: Remnant vegetation by 'Regional Density or Connectivity Quality' in the southern Metropolitan Region.

C_s discriminates patches such that:

- low numbers correspond to small, regionally isolated or poorly shaped patches (red, orange)
- high numbers correspond to large, compact or regionally well connected patches (green).

When comparing the Canning River system values for F_s (Figure 8) and C_s (Figure 10), the high C_s value suggests it has a strong role in connecting the region. However, a low F_s value suggests that it is a fragile system.

Reach

Regional density for a patch involves calculating the neighbouring patches that may be traversable from the patch at a particular distance. Restated from above:

$$C(S, P, d) = \text{Area}(S \text{ within } d \text{ of } P) / \text{Area}((S \text{ within } d \text{ of } P) \text{ buf } d);$$

where S is the set of all remnants in the landscape.

The dividend of that expression:

$$\text{Area}(S \text{ within } d \text{ of } P)$$

is the total area that can be accessed from a patch, P , by traversing no more than a patch gap of d . Calculated across the landscape, larger area indicates patches which are part of a larger connective

group than smaller areas. As there is tremendous variation within areas, a new parameter reach is calculated as follows:

$$R(S, P, d) = \log_e(\text{Area}(S \text{ within } d \text{ of } P))$$

The logarithm is taken to give a sense of the scale of the area. Summed across a range of distances this gives:

$$R_s = \sum \log_e(\text{Area}(S \text{ within } d \text{ of } P));$$

where d is an element of some set of distances e.g. {10, 20, 50, 100, 250, 500m}.

Considered across a landscape, higher reach values indicate patches which are part of larger connected networks than patches with smaller reach values.

Representing Connectivity Parameters

We don't know enough about connectivity parameters to say what constitutes "good" or "bad" for particular values. Consider regional density where we observe that:

- low numbers correspond to small, regionally isolated or poorly shaped patches
- high numbers correspond to large, compact or regionally well connected patches

How do you define a "low" or "high" number? Yet we need to be able to meaningfully symbolise a map so that patches can be shaded in some gradient such that someone looking at the map can discriminate between the various patches.

Initially, the approach was to use classifications internal to a study area ie. develop ranges for colouring the maps based on the distribution for that particular study. The connectivity measures have been used for over two years (as of June 2014) on several projects in varied parts of the south-west landscape from largely vegetated rural areas such as Augusta Margaret River to largely cleared areas such as central Perth. Over this time experience has allowed a standard scale to be developed that seems to describe well the different types of landscapes the connectivity measures have been applied to.

For map colouring, any colour gradation could be used such as red to green or light purple to dark purple to represent the spectrum of these parameters.

Fragmentation

Range : Legend description

[0,0.5) : most fragmented 0 - 0.5

[0.5,1) : 0.5 - 1

[1,1.5) : 1 - 1.5

[1.5,2) : 1.5 - 2

[2,2.5) : 2 - 2.5

[2.5,3) : 2.5 - 3

[3,3.5) : 3 - 3.5

[3.5,4) : 3.5 - 4

[4,4.5) : 4 - 4.5

[4.5,5] : 4.5 - 5

> 5 : least fragmented > 5

Regional Connectivity

Range : Legend description

[0,0.5) : small, poorly shaped or regionally isolated patches 0 - 0.5

[0.5,1) : 0.5 - 1

[1,1.5) : 1 - 1.5

[1.5,2) : 1.5 - 2

[2,2.5) : 2 - 2.5

[2.5,3) : 2.5 - 3

[3,3.5) : 3 - 3.5

[3.5,4) : 3.5 - 4

[4,4.5) : 4 - 4.5

[4.5,5] : 4.5 - 5

> 5 : large, compact or regionally well connected patches > 5

Reach

Range : Legend description

< 0 : part of a small network < 0

[0,10) : 0 - 10

[10,20) : 10 - 20

[20,30) : 20 - 30

[30,40) : 30 - 40

[40,50) : 40 - 50

[50,60] : 50 - 60

> 60 : part of a large network > 60

Viewing Changes in Connectivity Parameter Values – Scenario Modelling

A great potential of connectivity calculation is to model the effect of various scenarios such as clearing of vegetation for development or examining the effect of a proposed revegetation corridor. Such scenarios can be modelled by adding or removing patches to the study area and re-running the calculations.

Using Shape Classifiers to Explore Connectivity Scenarios in the Landscape

Can the shape classifiers described above provide diagnostic insight into remnant distribution and connectivity? The classifiers have fairly straightforward and simple definitions but are they useful and easily interpretable? The following examples are for reach, regional connectivity and fragmentation calculated for an area from Bold Park to Kings Park in Perth with three scenarios explored:

1 current remnant vegetation extent and significant wetlands

2 assuming Public Open Spaces can be vegetated to support connectivity of the mapped remnant vegetation

3 all remnant vegetation is cleared except for that in areas considered protected (Bush Forever Areas).

For the second analysis, a surrogate layer of areas that potentially could be re-vegetated was created by applying a 25 metres buffer along Public Open Space boundaries. Public Open Spaces were identified using the Local Planning Schemes overlapping the study area (sourced from the Department of Planning, January 2012).

Figures 11-13 show the three scenarios with a discussion following each section. The set of distances, *d*, used are {10, 20, 50, 100, 250, 500m}.

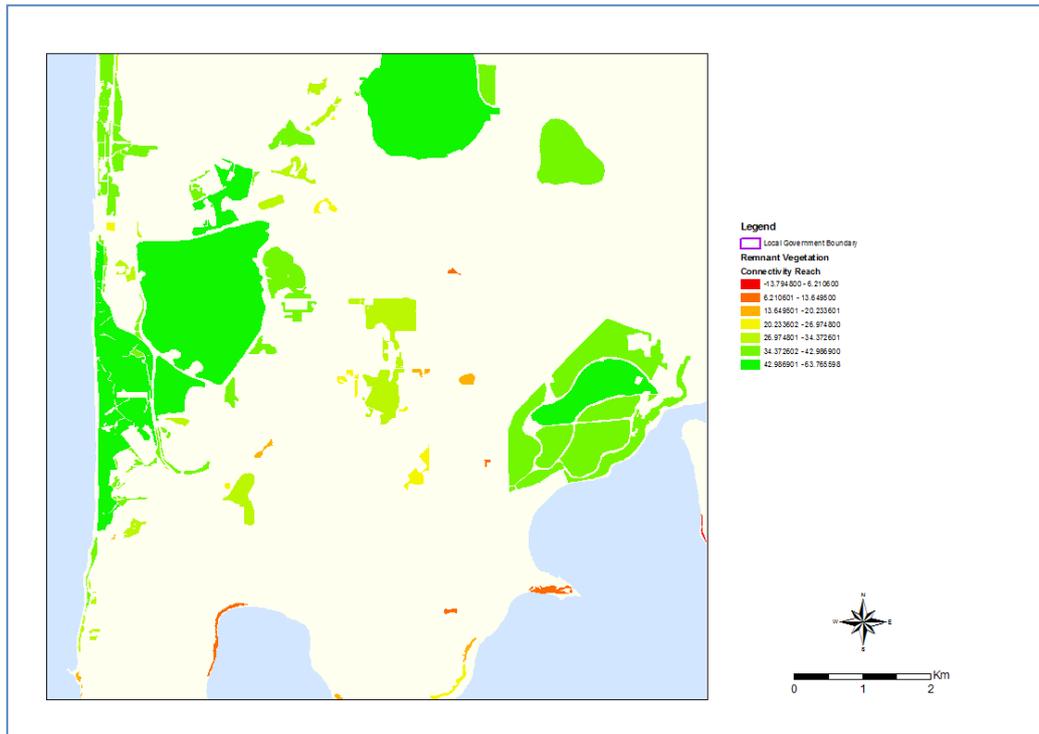


Figure 11: Application of 'Reach' classifier to the current extent of remnant vegetation.

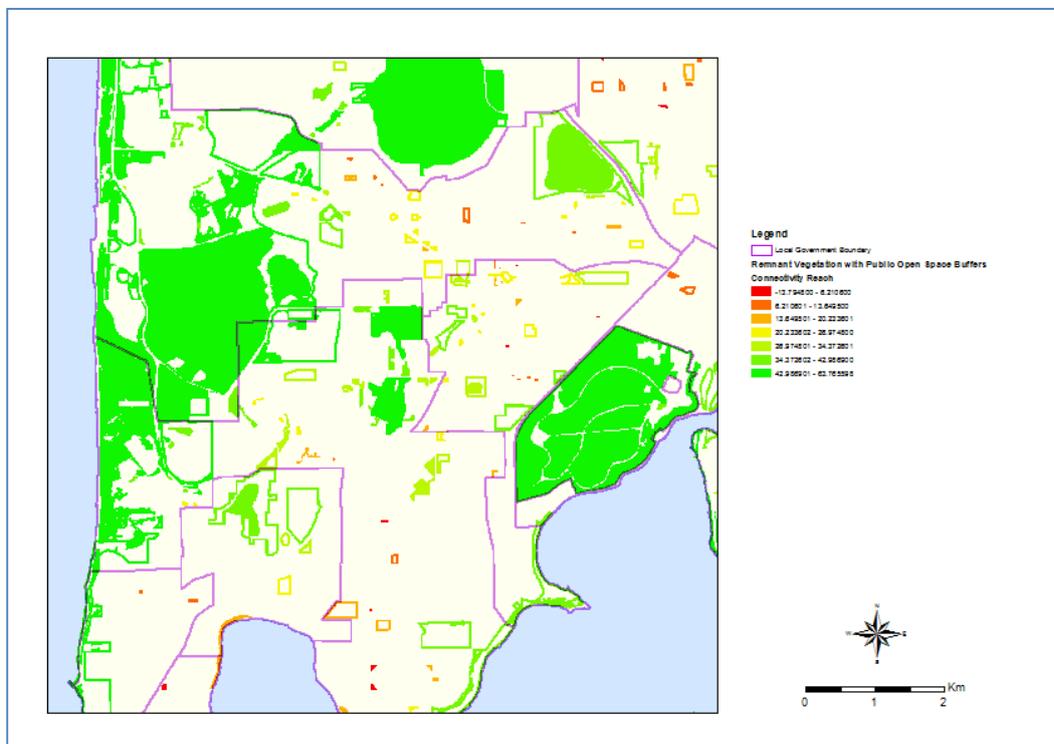


Figure 12: Application of 'Reach' classifier to current remnant vegetation, significant wetlands and buffers within Public Open Space.

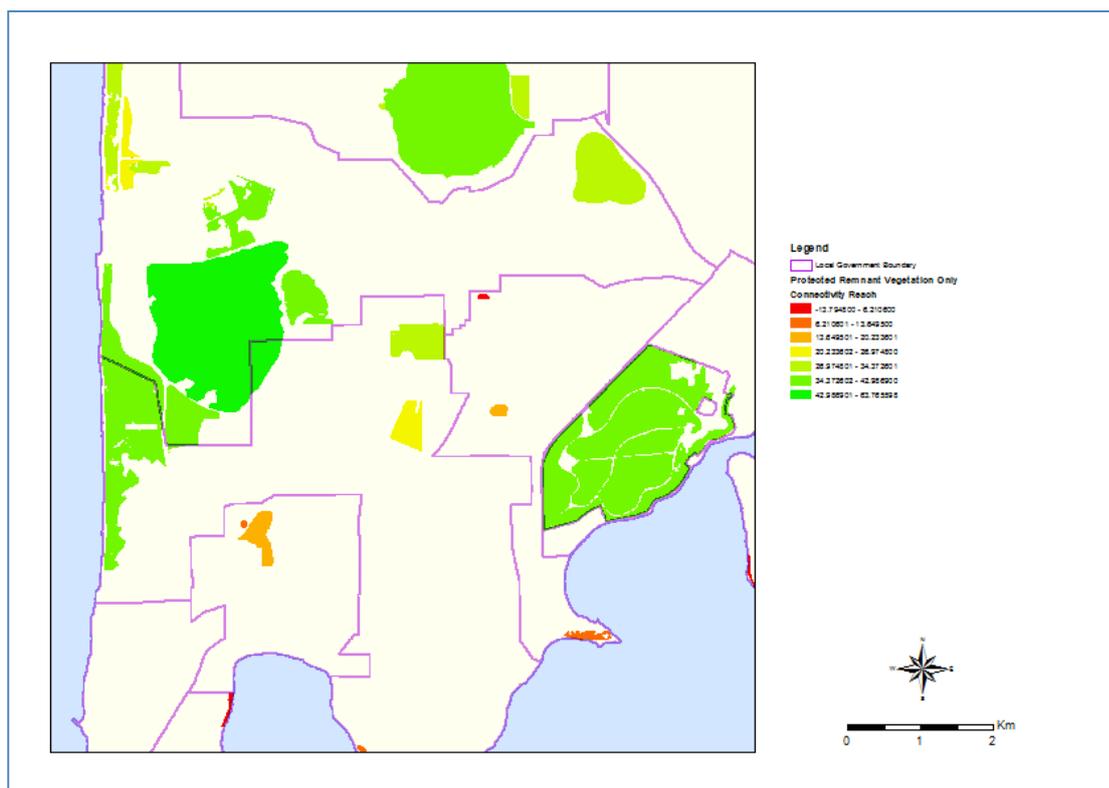


Figure 13: Application of the 'Reach' classifier to remnant vegetation and wetlands in areas considered protected.

Figure 11 forms the baseline, showing remnant vegetation as mapped in 2010. If vegetation corridors can be created to link the remnants then Reach improves significantly as shown in Figure 12. The patches become part of larger networks, or, more “connected”. On the other hand, if remnant vegetation continues to be cleared with no linkages created then there is an overall decline in Reach (Figure 13).

Another way to interpret Figure 12 is that the Public Open Space linkages that play a significant role in joining the landscape have a high Reach value (green). Perhaps this can be one way to identify significant linkages.

Application of Regional Connectivity to the three remnant vegetation extent scenarios

Regional Connectivity is a complementary parameter to Reach. While Reach describes the size of the connected network a patch is part of, the Regional Density describes the quality of connection (how far it deviates from the ideal circular shape) of the network.

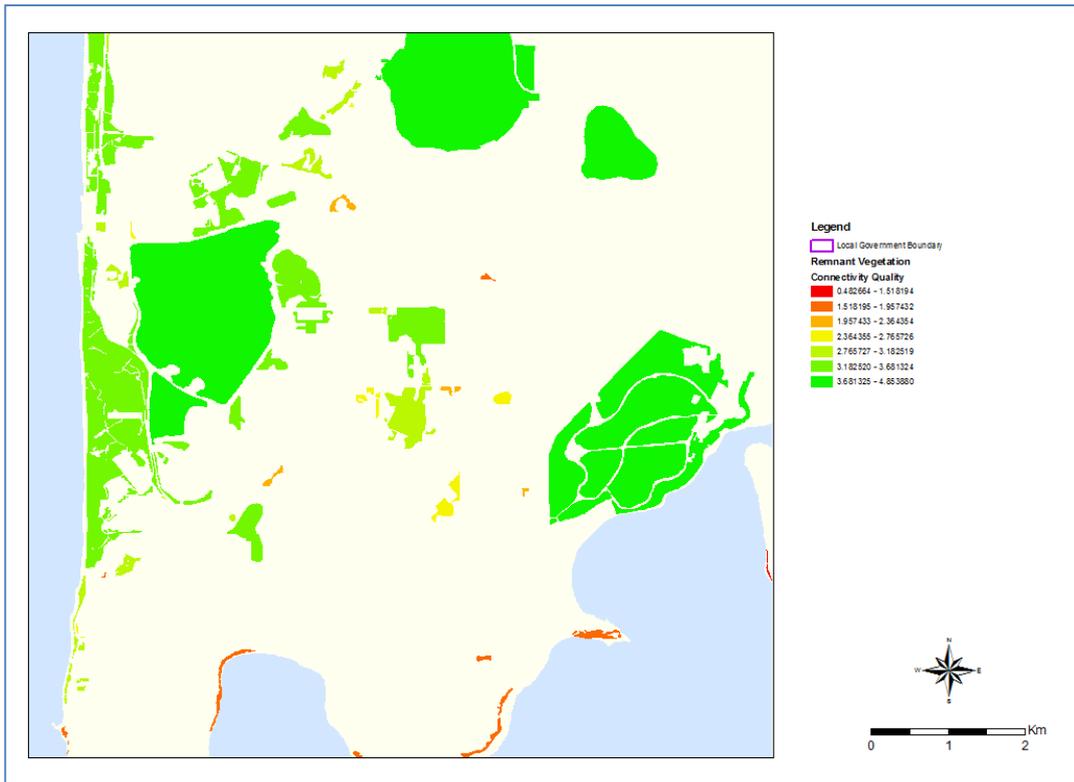


Figure 14: Remnant vegetation and significant wetlands by Regional Connectivity.

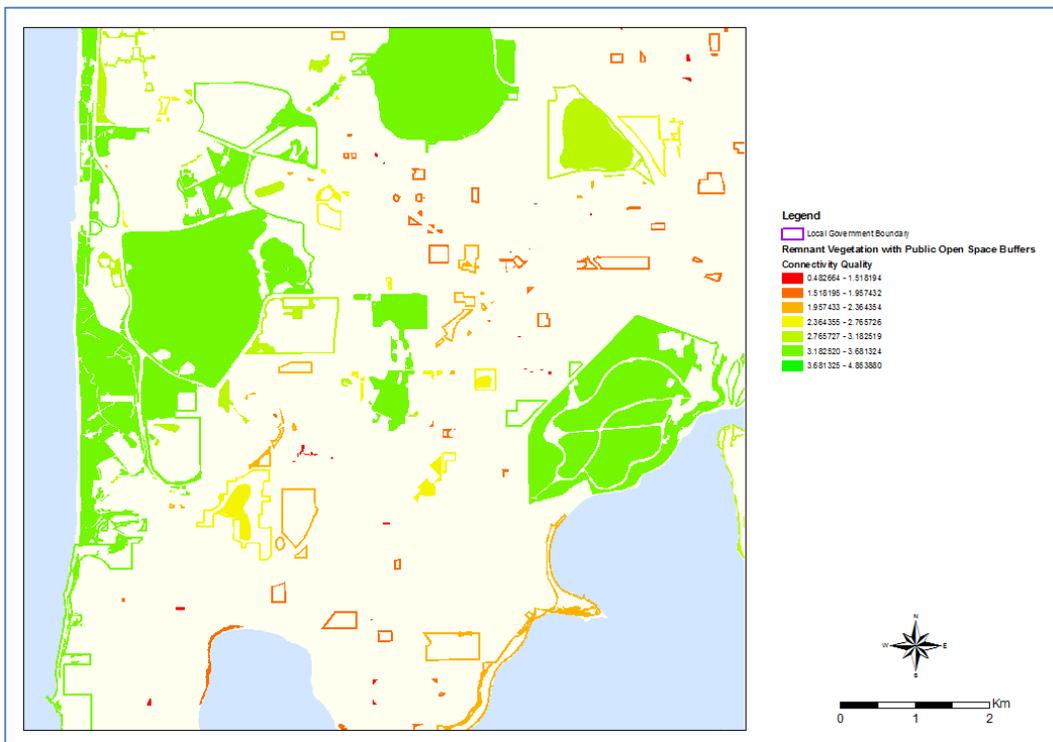


Figure 15: Application of Regional Connectivity to remnant vegetation, significant wetlands and buffered Public Open Space areas.

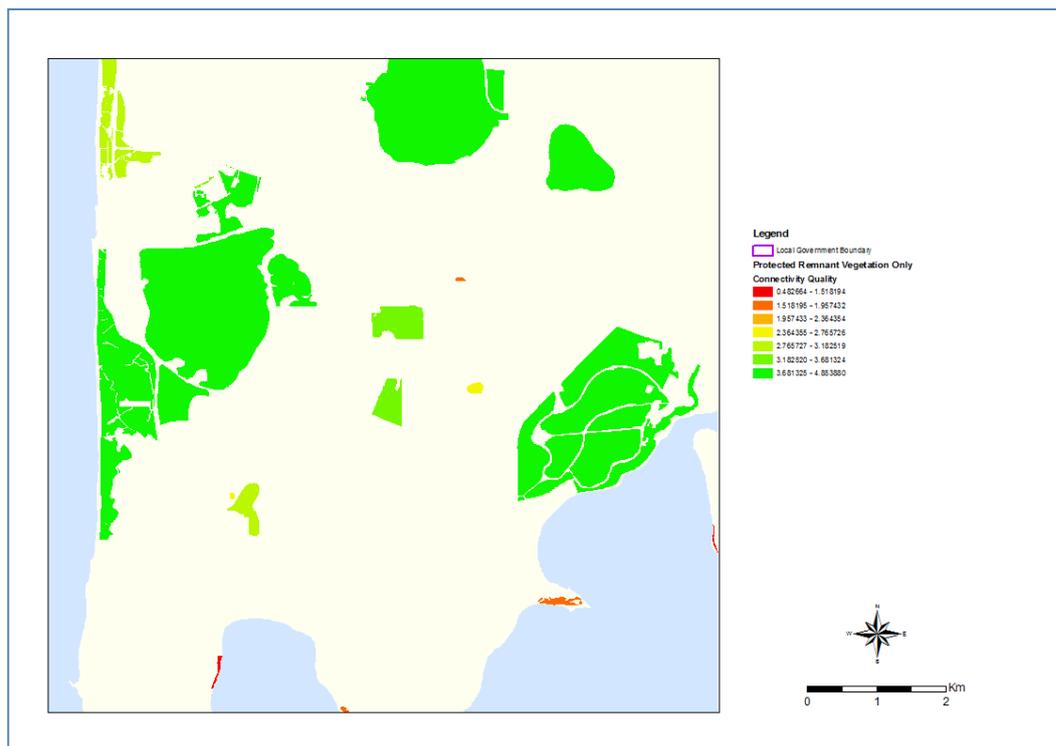


Figure 16: Effects of vegetation clearing on the value of Regional Connectivity in protected areas.

While Reach improves with the addition of Public Open Space (POS) linkages, Figure 15 shows Regional Connectivity decreases in some remnant patches following the inclusion of POS into the analysis. This is because the buffered POS areas used as surrogates are represented by thin linear features, that whilst helping to create larger networks are quite weak in themselves. Linkages can have the characteristic of difficult to manage remnants so they detract from the overall quality of the connected network.

Fragmentation

Fragmentation explores what is going around a patch, rather than the regional network it may be connected to.

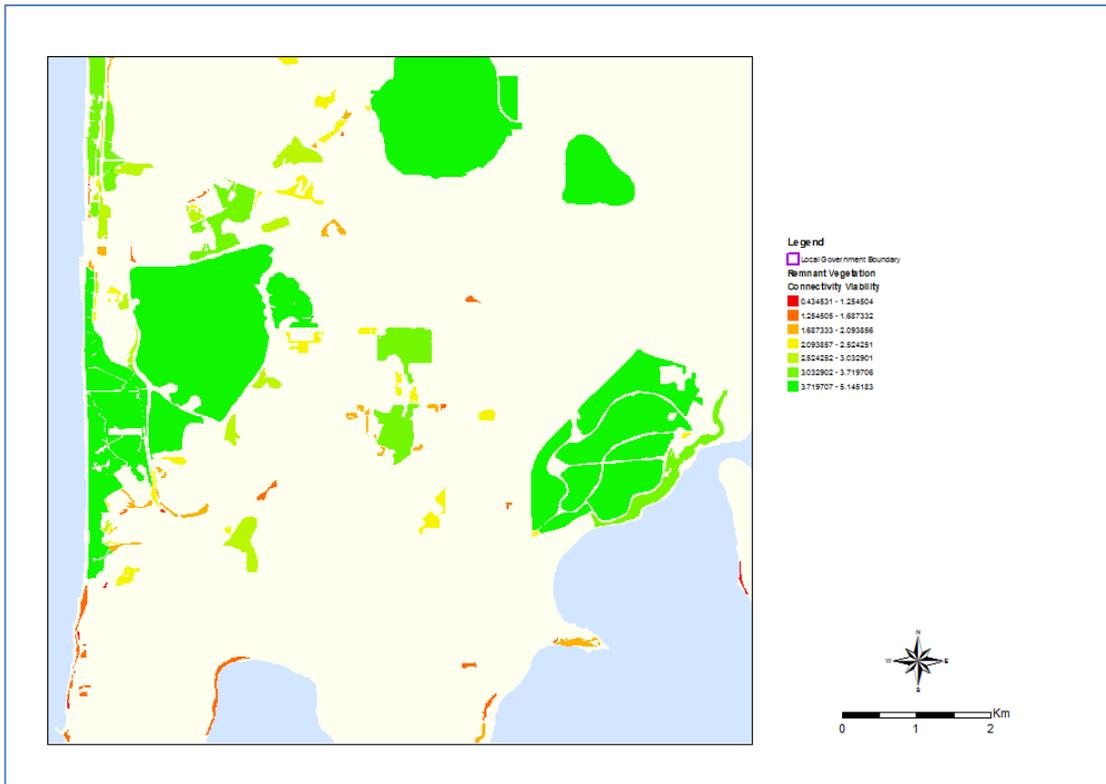


Figure 17: Remnant vegetation and significant wetlands by Local Density

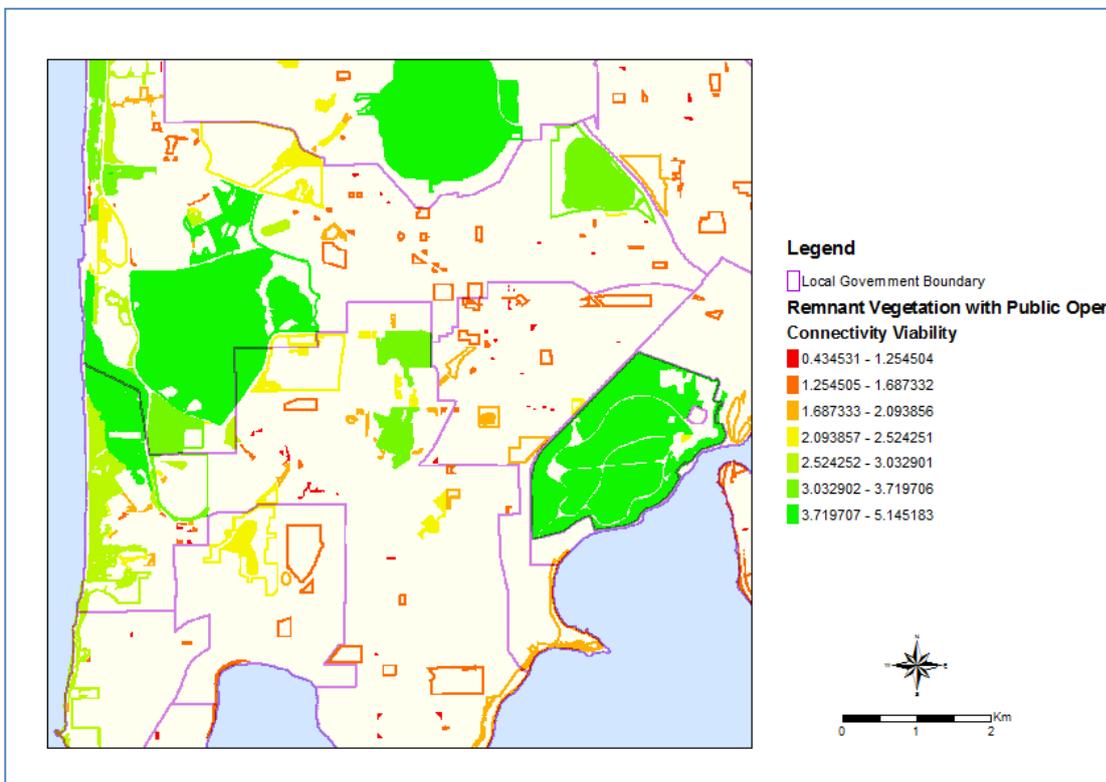


Figure 18: Application of Local Density to remnant vegetation, significant wetlands and buffered Public Open Space areas.

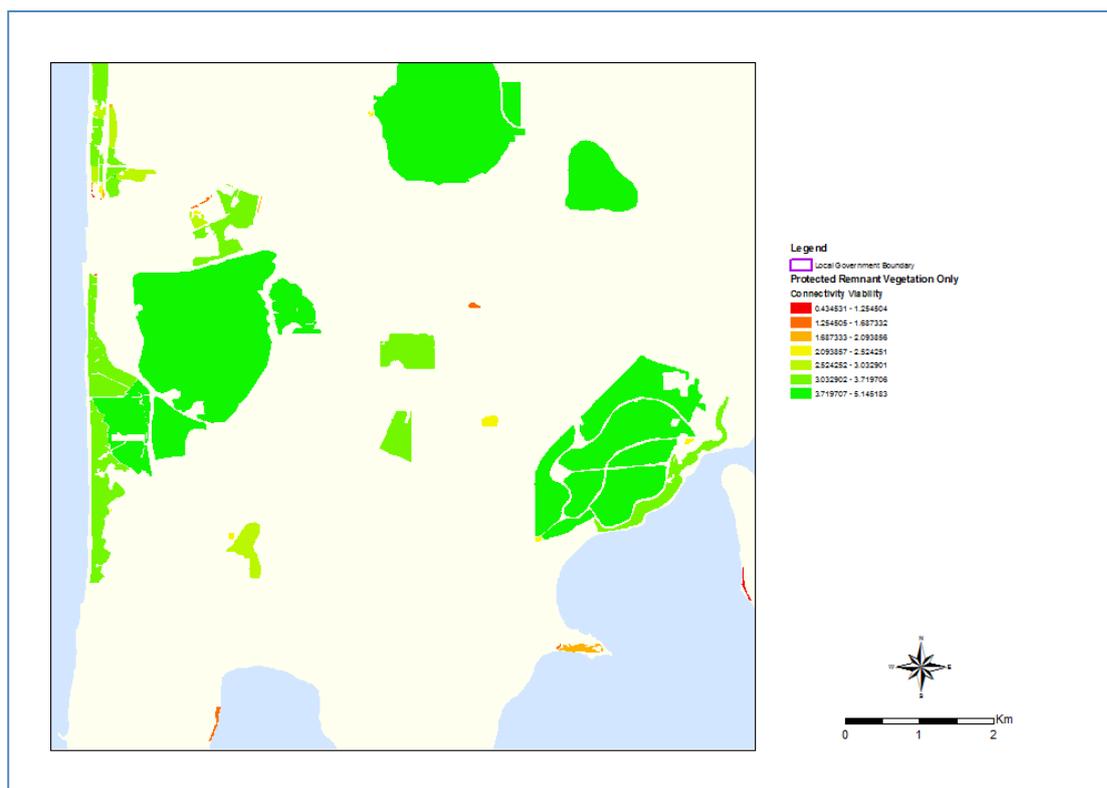


Figure 19: Effects of vegetation clearing on the value of Local Density in protected areas.

Fragmentation is not particularly affected by linkages or the removal of remnant vegetation (except in some cases where the shapes of the patches are changed). If we consider local density to be a surrogate for how viable a patch is in the landscape then, clearly, the thin linear features of linkages score a low viability score but they serve a role in joining the large, compact remnant vegetation patches such as Bold Park and Kings Park.

Together, all three indicators provide a useful insight into the distribution of vegetation in the landscape and the possible role linkages may play and the possible impact of further vegetation clearance.

APPENDIX H: Limitations of the native vegetation prioritisation and connectivity analysis

When referring to the results of mapping in this study, it is important to consider the limitations of the datasets used and thus the limitation of their interpretation:

- Remnant vegetation extent mapping is based on 1:20,000 scale and includes areas that are highly degraded as well as sites that were revegetated after being completely cleared. Therefore, vegetation retention and protection status represented as a percentage of the pre-clearing extent are considered over-estimates. Therefore, when comparing the local or regional vegetation retention and protection status against the accepted thresholds of 10%, 30% or 17%, the actual figures of 15%, 40% and 20% are used.
- Datasets representing threatened ecological communities, and rare and priority flora and fauna, do not necessarily represent the full extent of known records or a comprehensive listing of all threatened species and communities, as comprehensiveness is dependent on the amount of surveying done in an area. Therefore absence of records should not be interpreted as absence of conservation priority flora, fauna or ecological community until the survey status for a locality is investigated. Field assessments are essential to confirm the presence or absence of significant biodiversity features.
- Mapping of granite outcrops, which are important refuge sites for flora and fauna is limited. More accurate mapping suitable for local level assessments should be used to inform future land use decisions.
- Local Planning Schemes are updated from time to time, as amendments are approved. When considering the study recommendations, it is important to consider the date of datasets used.
- The opportunities and constraints analysis does not consider basic raw material locations, Aboriginal Heritage sites or land subject to Native Title claims.
- Datasets that were created to act as surrogates for specific prioritisation criteria, such as riparian vegetation or potential feeding habitat for Carnaby's black cockatoos, are based on generalisations. The real extent of these features needs to be determined in the field.
- Buffers to waterways and wetlands represent the minimum width required, and might not be sufficient for some wetlands. Adequate buffers need to be determined after consideration of a range of local conditions. Some guidance is provided in the EPA Guidance Statement No 33 (2008) or visit the following website:
<http://www.dpaw.wa.gov.au/management/wetlands/conserving-and-managing-our-wetlands> .

- The degree of connectivity assigned to each remnant patch is based on 2013 vegetation extent mapping (provided by DAFWA, 2013). Vegetation clearing since 2013 will affect connectivity values.
- Connectivity modelling does not consider the movement patterns of specific species, habitat requirements, or inner patch connectivity. For example, water bodies are included in the connectivity modelling and are considered a single patch including the adjoining fringing vegetation; but the open water would present a barrier to the movement of many terrestrial species. A proportion of open water within a remnant patch can also limit the availability of suitable habitat within that patch for a range of terrestrial fauna.

APPENDIX I: Target Areas – Notes on opportunities to improve protection status of priority vegetation

Vegetation complexes and Beard vegetation associations	Notes/Comments	Area of vegetation within Target Areas (TA) (Bi1 – TA labeling used on mapping in the Environmental Planning Tool)
<p>Bindoon-Bi</p> <p>Woodland of <i>Eucalyptus loxophleba</i> on the slopes, flanked by woodlands of <i>Eucalyptus wandoo</i>-<i>Eucalyptus accedens</i> on the breakaways and upper slopes in the peri-arid zone.</p>	<p>LPS 6 – Local Planning Scheme LP Strategy – Local Planning Strategy (July 2013) TA – Potential Target Areas LFW – Land for Wildlife</p> <ul style="list-style-type: none"> 88% on lands zoned Rural – Agriculture (fragmented), 11% reserved for Public Purposes and zoned Special Use (SU4 in LPS 6, vegetation to be retained in 30m riparian buffer), 1% within Road reserves No local formal protection Several good opportunities within patches >40ha, most remnants <10ha Mostly within a buffer of a confirmed breeding site of the Endangered Carnaby's black cockatoo. <p>Bi1 – Includes property with existing provisions to protect and enhance the existing agricultural and environmental status of the land (Group Farming, A2, in LPS 6), Property listed on the State Register of Heritage Places (geological monument)</p> <p>Bi2 – smaller patches but along creeklines and while it might be difficult to achieve formal protection, support to landholders with fencing and management of threats will help to retain these larger remnants.</p> <p>Bi3 – within SU4 (LPS 6) – provision to protect vegetation and restoration.</p> <p>It is not feasible to protect 797ha of Bi within the Shire even though over 800ha is within the proposed TAs because of high level of fragmentation of vegetation representative of Bi. Larger patches in good condition and acting as stepping stones (with fragmentation index >3 and regional connectivity index >3.5) should be a priority for formal protection. Every opportunity to improve the protection status of this vegetation complex in the Shire should be explored.</p> <p>A large portion of vegetation within Bi1 and Bi4 is within the SCA Landscape Protection in LPS 6.</p> <p>Note: There is a large LFW property within the Shire of Toodyay adjoining the Shire of Northam boundary. Retention and protection of natural areas within Bi1 will provide important stepping stones between this LFW property and close-by DPAW reserves within the Shire.</p>	<p>In Bi1: Bindoon - Bi 642.90 ha In Bi2: Bindoon - Bi 34.41 ha</p> <p>In Bi3: Bindoon - Bi 36.78 ha</p> <p>In Bi4: Bindoon - Bi 91.99 ha</p> <p>Total in TAs: 808ha</p> <p>Area required to achieve adequate local protection: 797ha</p>

Vegetation complexes and Beard vegetation associations	Notes/Comments	Area of vegetation within Target Areas (TA) (Bi1 – TA labeling used on mapping in the Environmental Planning Tool)
	<p>In LP Strategy – Bi1- Bi4 are mostly in Landscape Protection zones, except the largest remnant within Bi1 which is identified as Priority Resource and Extraction Area.</p>	
<p>Coolakin – Ck</p> <p>Woodland of <i>Eucalyptus wandoo</i> with mixtures of <i>Eucalyptus patens</i>, <i>Eucalyptus marginata</i> subsp. <i>thalassica</i> and <i>Corymbia calophylla</i> on the valley slopes in arid and peri-arid zones</p>	<p>225ha in reserves R30393, R4200, R28043, R25785 & R30185 recommended for purpose to include conservation.</p> <p>Ck3 includes R23746 & R30185 which adjoins a strip of land zoned Agriculture-Local between Koojedda Rd and the Great Eastern Hwy, mapped as ESA. This area adjoins the eastern portion of the Woondowing Nature Reserve.</p> <p>Ck2 – identified in the LP Strategy as ‘Priority Resource and Extraction Area’ – future potential extractive activities should consider alternative locations and minimise impact on the remaining vegetation.</p> <p>R30393 is vested for the purposes of Zoological Garden and reserved Parks & Recreation in the LPS. Subject to vegetation condition assessment, it is recommended that conservation of threatened vegetation is added to the reserve purpose.</p> <p>Ck1 & Ck4 are within the Landscape Protection SCA in LPS 6.</p> <p>Due to the fragmented nature of remnants representative of Coolakin vegetation complex, it will not be possible to contribute the 1073ha, the missing share from the Shire to the regional protection of Coolakin.</p> <p>Every opportunity to improve the protection status of this vegetation complex in the Shire should be explored.</p>	<p>In Ck1: Coolakin - Ck 259.77ha In Bi1: Coolakin - Ck 63.49 ha In Ck2: Coolakin - Ck 42.51 ha In Ck3: Coolakin - Ck 14.17 ha In Ck4: Coolakin - Ck 46.97 ha In Ck5: Coolakin - Ck 155.95ha In Ck6: Coolakin – Ck 85.50ha InCk7: Coolakin - Ck 31.84ha In Ck8: Coolakin - Ck 25.78ha</p> <p>Total in Ck1-Ck8 &Bi1: 726ha</p> <p>Area required to achieve adequate local protection: 1073ha</p>
<p>Michibin – Mi</p> <p>Open woodland of <i>Eucalyptus wandoo</i> over <i>Acacia acuminata</i> with some <i>Eucalyptus loxophleba</i> on valley slopes, with low</p>	<p>30ha in R28043, R44700, R30393 and R293 recommended for purpose to include conservation.</p> <p>TA Mi1 includes 3 properties registered with LFW. Retention and protection of vegetation within Mi1 and Mi2 is important to maintaining connectivity within Wheatbelt High Priority connectivity zone, and between conservation reserves Warranine Nature Reserve, Clackline Nature Reserve and freehold land managed by DPAW (registered with</p>	<p>In Ck1: Michibin – Mi 104.62ha In Bi1: Michibin - Mi 19.84 ha In Bi4: Michibin - Mi 20.37 ha In Mi1: Michibin – Mi 373.78 ha In Mi2: Michibin - Mi 46.51 ha In Mi3:</p>

Vegetation complexes and Beard vegetation associations	Notes/Comments	Area of vegetation within Target Areas (TA) (Bi1 – TA labeling used on mapping in the Environmental Planning Tool)
woodland of <i>Allocasuarina huegeliana</i> on or near shallow granite outcrops in arid and peri-arid zones.	<p>LPS 6 – Local Planning Scheme LP Strategy – Local Planning Strategy (July 2013) TA – Potential Target Areas LFW – Land for Wildlife</p> <p>LFW and reserved Conservation of Flora and Fauna in the LPS).</p> <p>Mi4 – identified in the LP Strategy as ‘Priority Resource and Extraction Area’</p> <p>In Mi5 includes properties zoned Rural Smallholdings with restrictions on further subdivision (RSH3, LPS 6). Support to landholders on properties adjoining the Clackline Nature Reserve will help with providing a buffer between the rural areas and the nature reserve.</p> <p>Mi6 – within SCA2 (Landscape protection – however LPS No 6 does not specify provisions) Mi6, Mi7 & Mi8 are within the Landscape Protection SCA.</p>	<p>Michibin - Mi 11.03 ha In Mi4: Michibin - Mi 101.00ha In Mi5: Michibin - Mi 106.69ha In Mi6: Michibin - Mi (b, c) 44.92 ha In Mi7: Michibin - Mi (b, c) 197.45 ha In Mi8: more than 230ha (1062 of vegetation within Mi8 mapped by Beard mostly as BVA 352 (Medium woodland; York gum)</p> <p>Total in TAs: at least 1256ha Area required to achieve adequate local protection: 948.52 ha</p>
<p>Murray 2 – My2</p> <p>Open forest of <i>Eucalyptus marginata</i> subsp. <i>thalassica-Corymbia calophylla-Eucalyptus patens</i> and woodland of <i>Eucalyptus wandoo</i> with some <i>Eucalyptus accedens</i> on valley slopes to woodland of <i>Eucalyptus rudis-Melaleuca raphiophylla</i> on the valley floors in semi-arid and arid zones.</p>	<p><2% protected locally, only 2.5ha in R33050 recommended for purpose to include conservation.</p> <p>My1 – includes part of R6203 (Reservoir/catchment, Water Corporation) and adjoins a DPAW freehold property. Includes the largest example of My2 within a large vegetated area that is being mapped as Conservation in the LP Strategy (no further development or subdivision assumed). Current zoning is Agriculture Local My2 – includes patches of vegetation registered with LFW.</p> <p>Most vegetation mapped as My2 outside the proposed TAs occurs in small patches on lands zoned Rural. If all the Murray 2 vegetation zoned in the LP Strategy as Conservation was formally reserved for Conservation, the local protection status of My2 would only increase to 6% of the pre-European extent. Therefore, further protection is dependent on conservation on private land.</p> <p>Due to the fragmented nature of the remaining vegetation representative of My2, it will not be</p>	<p>In My1 Murray 2 - My2 63.85ha In My2: Murray 2 - My2 89.74ha In My3: Murray 2 - My2 18.24 ha Total in TAs: 171.4ha</p> <p>Area required to achieve adequate local protection: 218ha</p>

Vegetation complexes and Beard vegetation associations	Notes/Comments	Area of vegetation within Target Areas (TA) (Bi1 – TA labeling used on mapping in the Environmental Planning Tool)
	possible to provide the proportionate share to the regional conservation status of this vegetation type.	
Swamp – S Mosaic of low open woodland of <i>Melaleuca preissiana</i> - <i>Banksia littoralis</i> , closed scrub of Myrtaceae spp., closed heath of Myrtaceae spp. and sedgelands of <i>Baumea</i> and <i>Leptocarpus</i> spp. on seasonally wet or moist sand, peat and clay soils on valley floors in all climatic zones.	The only example of vegetation representative of Swamp vegetation complex is located within two properties zoned Agriculture-Local northeast of the Wundowie locality. Some extend onto adjoining properties zoned Rural Residential where long term retention of vegetation in good condition will not be viable. LP Strategy identifies this area as Future Rural Living Development (1-40ha), including a property held freehold by the Shire. The Shire's Land Rationalisation Strategy (2011) recommends that this property is to be subdivided and sold. Consideration of the introduction of a Rural conservation zone or creation of a local conservation reservation including the last remaining example of this locally rare vegetation type would provide more formal protection than subdivision conditions currently being used in other parts of the Shire.	In S1: Swamp - 10.9 ha Area required to achieve adequate local protection: 5ha
Williams – Wi Mixture of woodland of <i>Eucalyptus rudis</i> - <i>Melaleuca rhapsiophylla</i> , low forest of <i>Casuarina obesa</i> and tall shrubland of <i>Melaleuca</i> spp. on major valley systems in arid and peri-arid zones	None of the remaining vegetation representative of Wi is protected in the Shire. Wi1 includes R32143 vested for Community purposes and containing 6.52ha of Wi. It might not be possible to formally reserve vegetation representative of Wi for conservation in the Shire due to the fragmented nature of the remaining vegetation. Opportunities exist to ensure informal protection of Wi through the provisions of the Landscape Protection zone (LP Strategy) and strengthening provisions for protection of vegetation along watercourses (e.g. extending the Avon & Mortlock River SCA provisions to other high priority areas as identified in the Local Biodiversity Strategy). Portions of Wi1, Wi2 and Mi8 are within the SCA Landscape Protection. While it might not be possible to formally protect 187ha of Williams vegetation complex in the Shire, every opportunity to improve the protection status of this regionally significant vegetation type should be investigated and supported.	In Mi1: Williams - Wi 3.91 ha In Wi1: Williams - Wi 115.71ha In Wi2: Williams - Wi 21.66 ha In Mi8 at least 9ha mapped but it is reasonable to assume that more would be mapped along Spencers Brook and its tributaries with the 1062 ha of vegetation within Mi8 mapped by Beard mostly as BVA 352 (Medium woodland; York gum) In BA6: at least 27.10ha Total in TAs: at least 150ha Area required to achieve adequate local protection: 187ha

Vegetation complexes and Beard vegetation associations	Notes/Comments	Area of vegetation within Target Areas (TA) (Bi1 – TA labeling used on mapping in the Environmental Planning Tool)
<p>Yallanbee – Y5</p> <p>Mixture of open forest of <i>Eucalyptus marginata</i> subsp. <i>thalassica-Corymbia calophylla</i> and woodland of <i>Eucalyptus wandoo</i> on lateritic uplands in semiarid to peri-arid zones.</p>	<p>91.8ha is in R11619 and R25225 recommended for purpose to include conservation.</p> <p>There is 1434.7ha in R6230 reserved for Reservoirs/catchments and managed by the Water Corporation.</p> <p>Significant portions of Ck5 and My1 are being mapped in the LP Strategy as Conservation. If protection of vegetation within these areas was formalized, the Shire would achieve the minimal target for formal conservation of Y5.</p>	<p>In Ck3: Yallanbee - Y5 36.20 ha In Ck5: Yallanbee - Y5 38.52 ha In My1: Yallanbee - Y5 405.13 ha Total in TA: 479.7ha</p> <p>Area required to achieve adequate local protection: 198ha</p>
<p>Yallanbee – Y6</p> <p>Woodland of <i>Eucalyptus wandoo-Eucalyptus accedens</i>, less consistently open forest of <i>Eucalyptus marginata</i> subsp. <i>thalassica-Corymbia calophylla</i> on lateritic uplands and breakaway landscapes in arid and peri-arid zones.</p>	<p>Ck1 includes R40986 (Water Supply) Yallanbee - Y6</p> <p>Portion of Y1 is within the Landscape Protection SCA (LPS 6).</p> <p>There are many good opportunities to increase the formal protection status of Y6 in the Shire and meet the minimal contribution to the regional protection of this vegetation type (286ha). However, Y6 is the most widespread vegetation type in the Jarrah Forest portion of the Shire and thus plays an important role in connecting the landscape.</p>	<p>In Ck1: Yallanbee - Y6 52.78 ha In Bi1: Yallanbee - Y6 281.73 ha In Bi2: Yallanbee - Y6 11.89 ha In Ck3: Yallanbee - Y6 33.76 ha In Ck4: Yallanbee - Y6 68.61 ha In Ck5: Yallanbee - Y6 172.88 ha In Y1: Yallanbee - Y6 288.81 ha Total in TAs: 910.42</p> <p>Area required to achieve adequate local protection: 285.63ha</p>
<p>BVA 352</p> <p>Medium woodland; York gum</p>	<p>BVA 352 was and remains the most widespread vegetation type in the Wheatbelt portion of the Shire. Due to historical broadscale clearing, it has been overcleared and it is not possible to contribute with an adequate proportion from the Shire towards adequate protection at the regional level.</p> <p>The proposed TAs identify examples of BVA 352 with good opportunities to formalize protection</p>	<p>In Mi8: Katanning(AVW02) : 352 - 1034.23 ha Northern Jarrah Forest(JAF01) : 352 - 6.50 ha In BA 1: Katanning(AVW02) : 352 - 48.62 ha In BA3:</p>

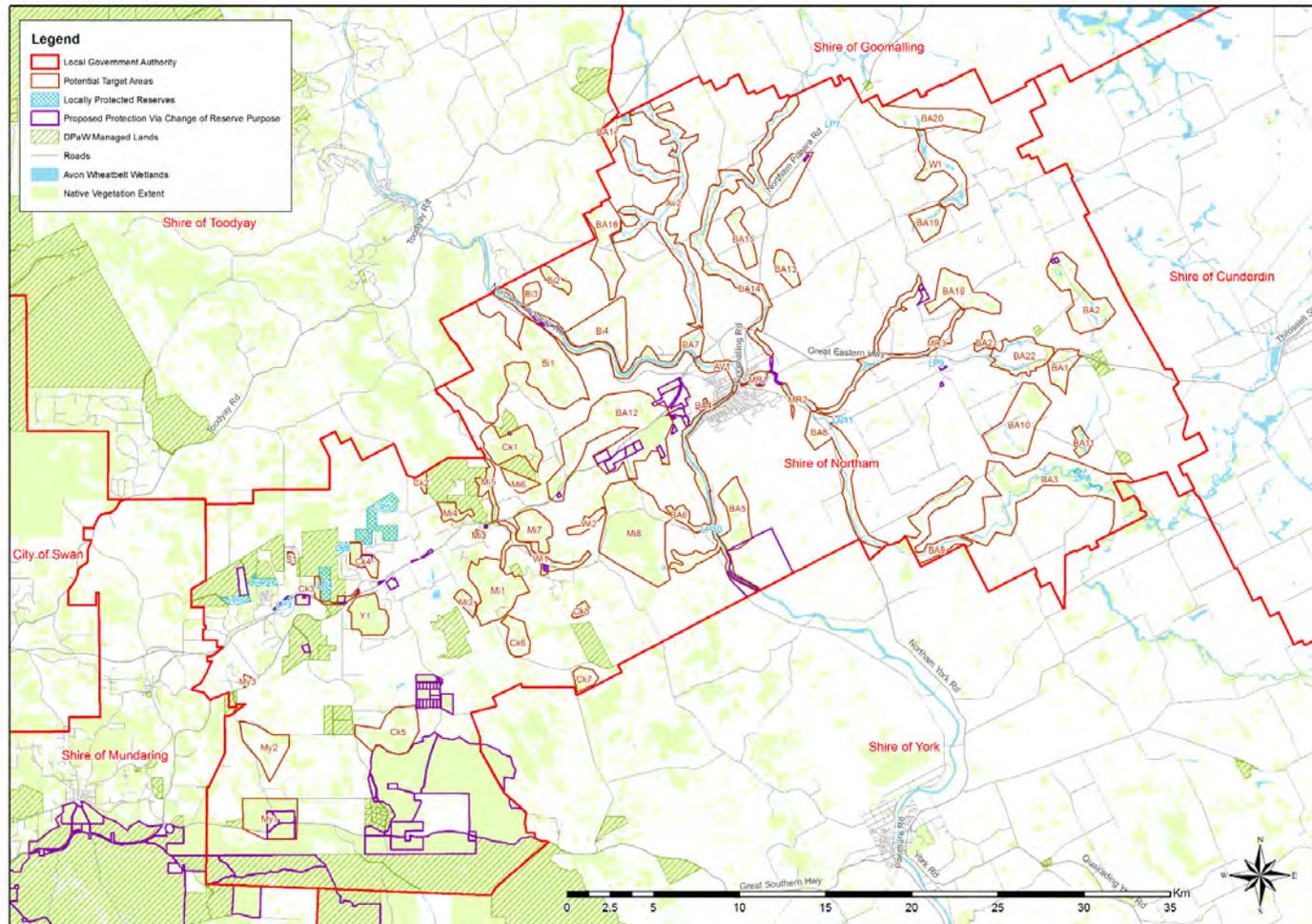
Vegetation complexes and Beard vegetation associations	Notes/Comments LPS 6 – Local Planning Scheme LP Strategy – Local Planning Strategy (July 2013) TA – Potential Target Areas LFW – Land for Wildlife	Area of vegetation within Target Areas (TA) (Bi1 – TA labeling used on mapping in the Environmental Planning Tool)
	levels for portions of remaining vegetation in good condition.	Katanning(AVW02) : 352 - 371.02 ha In BA4: Katanning(AVW02) : 352 - 5.42 ha In BA5: Katanning(AVW02) : 352 - 239.58 ha In BA6: 352 – 365.26 ha In BA7: Katanning(AVW02) : 352 - 167.98 ha In BA8: Katanning(AVW02) : 352 - 99.44 ha In BA10: Katanning(AVW02) : 352 - 166.63 ha In BA11: Katanning(AVW02) : 352 - 46.58 ha In BA12: Katanning(AVW02) : 352 - 122.11 ha Northern Jarrah Forest(JAF01) : 352 - 8.21 ha In BA14: Katanning(AVW02) : 352 - 233.10 ha In BA15: Katanning(AVW02) : 352 - 71.70 ha In BA16: Katanning(AVW02) : 352 - 198.20 ha In BA17: Katanning(AVW02) : 352 - 57.91 ha In BA18: Katanning(AVW02) : 352 - 149.08 ha In BA20: Katanning(AVW02) : 352 - 8.37 ha Total in TAs: 3398ha Area required to achieve adequate local protection:

Vegetation complexes and Beard vegetation associations	Notes/Comments	Area of vegetation within Target Areas (TA) (Bi1 – TA labeling used on mapping in the Environmental Planning Tool)
	LPS 6 – Local Planning Scheme LP Strategy – Local Planning Strategy (July 2013) TA – Potential Target Areas LFW – Land for Wildlife	10052ha – unachievable only 7540.66ha remains
BVA 511 Medium woodland; salmon gum & morrel	<p>The only two larger patches of the remaining extent of this locally rare vegetation type are in BA13 and BA14.</p> <p>In BA13 – in the LP Strategy land with one of the larger remaining examples of BVA 511 is identified as “Priority Resource and Extraction Area”. Any future proposal for extraction should completely avoid the remnant vegetation.</p> <p>The only reserved area of salmon gum is reported in the Throssell Nature Reserve (R7220), DPAW land (1987)</p>	<p>In BA13: Katanning(AVW02) : 511 - 41.85 ha In BA14: Katanning(AVW02) : 511 - 17.14 ha Total in TAs: 58.9ha</p> <p>Area required to achieve adequate local protection: 163ha unachievable only 67.13 ha remains</p>
BVA 694 Shrublands; scrub-heath on yellow sandplain banksia-xylomelum alliance in the Geraldton Sandplain & Avon-Wheatbelt Regions	<p>BA1 & BA2 are relatively close to the Meenaar Nature Reserve. Protection of the largest patches in good condition, through conservation covenants, creation of reserves and restoration of degraded areas, would improve the connectivity between the nature reserves and other patches of vegetation in this highly fragmented part of the landscape.</p>	<p>In BA 1: Katanning(AVW02) : 694 - 33.00 ha In BA2: Katanning(AVW02) : 694 - 158.64 ha In BA18: Katanning(AVW02) : 694 - 7.49 ha</p> <p>Total in TAs: 199ha Area required to achieve adequate local protection: 574ha unachievable only 414.61 ha remains</p>
BVA 946 Medium woodland; wandoo	<p>All the remaining extent of vegetation mapped as BVA 946 occurs on one property on the boundary with the Shire of Toodyay and is mapped within several patches smaller than 3ha. More detailed mapping will need to be undertaken to determine the real extent of BVA 946 in this area before seeking formal protection.</p> <p>Due to the fragmented character of the remaining vegetation it is unlikely formal protection can be achieved within the Shire. Better opportunities might exist in the adjoining areas within the Shire of Toodyay.</p>	<p>In BA17: Katanning(AVW02) : 946 - 3.76 ha</p> <p>All remaining should be retained.</p>

Vegetation complexes and Beard vegetation associations	Notes/Comments	Area of vegetation within Target Areas (TA) (Bi1 – TA labeling used on mapping in the Environmental Planning Tool)
	Informal protection through existing land use provisions should ensure retention of this locally rare vegetation association.	
BVA 1048 Mosaic: Shrublands; melaleuca patchy scrub / Succulent steppe; samphire	Formal protection of all vegetation in good condition within BA3 will not only allow to meet the minimal proposed protection target but also secure one of the largest areas of remnant vegetation in the eastern part of the Shire on which future initiatives to improve connectivity can be built.	In BA3: Katanning(AVW02) : 1048 - 363.97 ha Area required to achieve adequate local protection:106.5ha
BVA 1049 Medium woodland; wandoo, York gum, salmon gum, morrel & gimlet	BA2 & BA19 – contain the 2 largest patches of BVA1049 remaining in the Shire BA2 includes R6305 reserved for water purpose. These large patches are relatively isolated (connectivity measures at average values) but with strategic restoration could be re-connected to other protected areas.	In BA2: Katanning(AVW02) : 1049 - 70.31 ha In BA14: Katanning(AVW02) : 1049 - 80.74 ha In BA19: Katanning(AVW02) : 1049 - 65.88 ha In BA20: Katanning(AVW02) : 1049 - 92.70 ha Total in TAs: 309.6ha Area required to achieve adequate local protection: 2550ha unachievable only 851.56 ha remains
Target Areas focusing on waterways		
AV1	Portion of Avon River within the Townsite Classified as Conservation in the LPS	
AV2	Mostly covered by the Special Control Area (SCA) Avon River and Mortlock River provisions	
MR1	Includes 3 reserves proposed to change purpose to include conservation; classified Parks and Recreation in LPS No 6.	
MR2	Extend the SCA Avon-Mortlock Rivers to include this section	
MR3	Extend the SCA Avon-Mortlock Rivers to include this section	
W1	Protection of mapped wetlands is a high priority, by fencing, revegetation within buffers.	Katanning (AVW02) 1049 - 44ha

Vegetation complexes and Beard vegetation associations	Notes/Comments LPS 6 – Local Planning Scheme LP Strategy – Local Planning Strategy (July 2013) TA – Potential Target Areas LFW – Land for Wildlife	Area of vegetation within Target Areas (TA) (Bi1 – TA labeling used on mapping in the Environmental Planning Tool)
	Wetlands and the remaining vegetation provide opportunity to consolidate connectivity between large patches of priority vegetation within BA19 and BA20	Katanning (AVW02) 694 – 2.4ha

Appendix J: Proposed Target Areas and Crown reserves proposed for extension or change of reserve purpose to conservation (Local Biodiversity Program, 2014)



Target Areas are areas that highlight areas where good opportunities exist to improve the protection status of under-represented vegetation complexes in the Shire. Six Target Areas focus on buffers of important waterways. Target Area boundaries are designed to be indicative only and include already cleared areas or even portions of areas where development has been approved. Target Areas are not to be interpreted as areas where development is prohibited. They should be used to identify areas where any remaining vegetation and other natural areas are of conservation significance and their retention and protection should be a priority when deciding on future land use planning.

APPENDIX K: How to use the on-line Environmental Planning Tool

The Environmental Planning Tool (EPT) is an on-line application designed to facilitate access to environmental information relevant to land use planning and support strategic natural resource management.

It was developed through the Western Australian Local Government Association's Local Biodiversity Program.

All the mapping developed for the Shire of Northam Local Biodiversity Strategy is available through a special login version of this Environmental Planning Tool. This section outlines how to access the mapping and lists datasets most relevant to this document.

It is recommended that readers use the EPT when reading the Local Biodiversity Strategy as the zoom in functions and other supporting data available through the EPT allow review of the mapping in the context of numerous other relevant datasets.

Before you start

System Requirements

To use the Environmental Planning Tool (EPT) or the Regional Framework Mapping Viewer you will need a computer with internet access with at least 1GB of RAM. This should include any computer made in the last 8-10 years running Windows XP or later, Mac OSX 11.5 or later, or Linux.

The GeolCE map viewer requires Java 6 or newer for your computer. You will be prompted to install Java if your computer does not already have it. Java is available for Windows, Mac OSX, Linux and other popular operating systems. Java applets are not currently supported on iOS or Android so you will not be able to use this application on a smartphone or tablet.

To access the EPT go to:

http://lbp.asn.au/index_ept.html

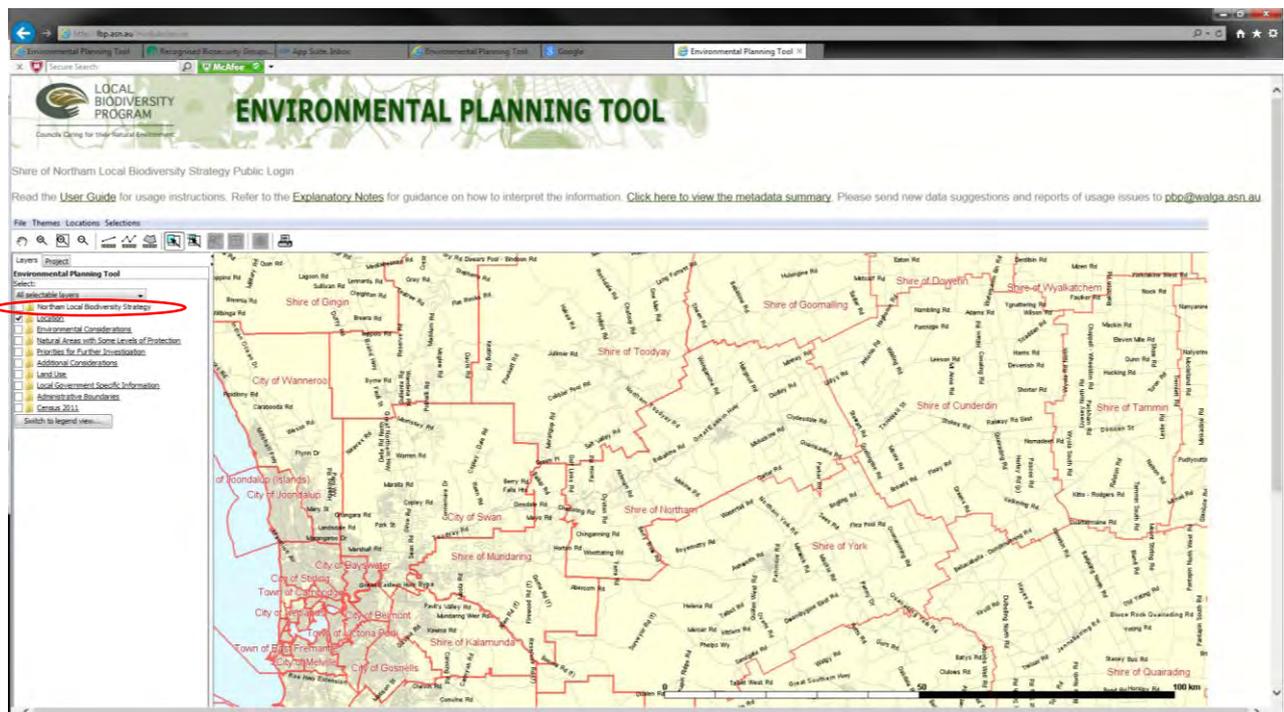
Read **Terms and Conditions**, **Tips for beginners** and enter your supplied user name and password details and press the login button to enter the main Environmental Planning Tool (EPT) page.

Login details for this project:

User name: northamLBSP

Password: floribunda

When you log in you should see the following screen:



In the Legend window, you should see the following heading: *Northam Local Biodiversity Strategy*.

Using your computer mouse or the function buttons on top of the map window, zoom into the Shire of Northam and open the list of layers under the Northam Local Biodiversity Strategy heading.

Brief description of the most relevant datasets is provided below. Before you start, it is recommended that you read the **User Guide** that can be downloaded through a link above the map Legend window. The User Guide describes the function buttons and how to use them most effectively to interrogate the datasets. For example, the EPT allow you to create reports on available data for a selected area which can be based on a cadastral boundary, native vegetation patch, 'Target Area' or you can define your own area using the drawing tools under the 'Project' heading (see top of the Legend window).

You can highlight as many mapping layers as feasible to view. A scroll bar under most of the layers allows controlling the transparency of those layers, allowing the viewing of multiply overlapping datasets.

All underlined text is linked to the **Explanatory Notes** which relevant background to the datasets. **Metadata Summary** lists all the datasets, and includes information in data currency and contact details for relevant data custodians.

Description of Spatial Layers displayed in the Environmental Planning Tool

Layer category	Layer title	Brief description (LBP = Local Biodiversity Program)
Northam Local Biodiversity Strategy	Unallocated Crown Land	This data layer highlights properties classified as V CROWN in the cadastral data layer available through Landgate (2013).
	Regional Centre Growth Plan	Areas identified in the Shire of Northam's Growth Plan as potential areas for future expansion. Data layer created by the LBP based on hard copy plans provided by the Shire.
	Potential Target Areas	<p>Potential Target Areas represent areas where good opportunities exist to improve the protection status of underrepresented vegetation complexes in the Shire. The lines are designed to include significant patches of remnant vegetation representative of vegetation complexes that have been identified as not being adequately represented in the regional conservation estate (considering reserve and off-reserve protection mechanisms). However, it is not intended that all vegetation mapped within these Potential Target Areas will be formally protected.</p> <p>Potential Target Areas can include freehold land and lands reserved for various purposes (other than conservation). Priority was given to areas where good opportunities exist to protect vegetation considering the existing land use provisions, land tenure (Unallocated Crown Land) or presence of initiatives supporting land conservation (Land For Wildlife).</p> <p>Remnant vegetation outside the Potential Target Areas</p> <p>See Appendix D for details of an area of each vegetation complex occurring within each Potential Target Area and notes on mechanism to examine to secure protection of the most significant portions of this vegetation.</p>
	Locally Protected Areas	Lands within reserves with vesting purpose conservation of flora, fauna, landscape protection or foreshore protection and lands reserved in the Local Planning Scheme No 6 as Conservation of Flora and Fauna.

	<p>Proposed Protection via Reserve Purpose</p>	<p>This layer identifies reserves where a change or extension of reserve purpose to conservation will contribute to the improved protection status of underrepresented vegetation complexes</p> <p>Six reserves vested in other agencies were also included as they include relatively large examples of conservation priority vegetation complexes on Crown land. Vegetation condition on these sites will need to be examined before pursuing formal conservation.</p> <p>See Appendix H for the list of Potential Conservation Reserves, their current vesting purpose, area of remnant vegetation and vegetation complex and other conservation assets.</p>
	<p>Prioritisation criteria</p>	<p>Number of prioritisation criteria met by any portion of remnant vegetation provides a mechanism for comparison of relative conservation significance of remnant vegetation in the Shire. 20 criteria describing the representation status of vegetation, its rarity, presence of important ecosystem features to maintain ecological functions were used. The higher the number of criteria met, the greater the relative conservation significance. It is important to note that some areas with lower count of criteria might contain rare flora, fauna or ecological communities and thus will require special consideration. In addition, absence of threatened flora, fauna and ecological communities' records does not mean they cannot be present, the reason can be a lack of surveys.</p> <p>See Appendix F for the description of the criteria used.</p> <p>Data layer developed by the LBP using the 2013 remnant vegetation extent mapping and other datasets including surrogates.</p>
	<p>Patch size</p>	<p>A patch of remnant vegetation is defined as a discrete polygon of vegetation separated from another polygon by 10m. Remnant vegetation patched are categorized according to their size to assist with identification patches that could potentially support a range of fauna or where specific land use provisions could be applied. It is important to note that the patch size analysis does not consider the diversity of or suitability of habitat within a patch. Thus while the patch size might</p>

		<p>indicate sufficient habitat size for a certain species, the quality of the habitat within this patch might not be adequate. Therefore this data layer should not be used in isolation.</p> <p>Data layer developed by the LBP using the 2013 remnant vegetation extent mapping. Patch size categories informed by fauna minimal habitat size information provided by DPaW and LPS provisions.</p>
	<p>Wheatbelt NRM Corridor Plan Connectivity Zones</p>	<p>The Wheatbelt Corridor Plan is a landscape scale connectivity study which identified high, medium and low ‘connectivity zones’ considering the number of patches of ‘functional vegetation’¹⁹, their area and configuration. The Shire of Northam falls within two connectivity zones, the portion west of the Northam townsite is within a high connectivity zone (HC West) and the portion east of the townsite is within a medium connectivity zone (MC North).</p> <p>High connectivity zones include patches that are considered already well connected. Maintenance and improvement of connectivity at local scales should be a priority in these areas. Medium connectivity zones identify areas where achievement of landscape connectivity will require significant investment. However, improvement of connectivity within the medium connectivity zone North (labelled as Central in the WNRM report) will connect the rangelands to the jarrah forest, facilitating climate change response by connectivity across the climatic gradient (Richardson <i>et al</i>, 2013).</p>
<p>Connectivity</p> <p>Three connectivity metrics have been developed by the LBP to describe the level of connectivity between patches of</p>	<p>Fragmentation</p>	<p>Fragmentation, a scaleless and dimensionless measure which describes the shape and local arrangement of patches in the study area. It measures a degree to which any remnant patch is diverting from the ‘ideal circle’ shape. A high vegetation fragmentation index indicates large, compact or locally well connected patches; a low</p>

¹⁹ Richardson *et al* (2013) defines “functional vegetation” as remnant patches outside the high risk salinity zone, greater than 30ha and are within a nominal distance (500m or 1km) of another patch or are greater than 200ha.

<p>remnant vegetation, defined as a discrete patch of vegetation separated from another patch by at least 10, as mapped in the 2013 remnant vegetation extent dataset (DAFWA). The metrics do not consider the inner patch diversity of habitats.</p> <p>More detailed description of the model used will be available in the report.</p>		<p>index indicates small, isolated or poorly shaped patches.</p> <p>2013 remnant vegetation extent mapping was used as a basis for this analysis.</p>
	Connectivity Reach	Connectivity Reach, describes the size of the connective network a patch belongs to but does not consider how sparse or dense that network is.
	Regional Connectivity	Regional Connectivity, a scaleless and dimensionless measure of how well a patch contributes to a network of patches in the wider landscape. A high regional connectivity index indicates large patches or patches that are part of a large, dense regional network; and a low index indicates small, fragmented or isolated patches.
<p>Additional layers recommended to be the selected when viewing the layers created specifically for Local Biodiversity Strategy or where further baseline information used in the prioritization analysis can be found</p>		
Administrative boundaries	DPAW managed lands	Dataset identifying all lands managed by the Department of Parks and Wildlife for various purposes such as conservation, state forest or other (status 2013)
	IBRA 7.1 sub-regions	Datasets identifying portions of the Shire within the Jarrah Forest and Avon Wheatbelt biogeographic regions.
Location/Topographical features	Property boundaries	2013 Landgate data
	Hydrography lines	Used in the Prioritisation criteria to model riparian vegetation
	Aerial photography (SLIP)	Recommended – most up to date than Google.
Environmental Considerations	Threatened and priority flora, fauna and ecological communities	Used in the Prioritisation criteria. However, please note 2014 data was used in the prioritization and this will be made available in the EPT at the end of August.
	Vegetation/Native vegetation extent/Beard association and Vegetation complexes	When viewing, only one of the two vegetation mappings can be highlighted at one time, however the Environmental Consideration Report generated for any area of interest will list vegetation extent by both vegetation mapping datasets where they overlap. Based on 2013 vegetation extent mapping (DAFWA).

	Wetlands/Avon (Wheatbelt) wetland mapping stage 1	Used in the Prioritisation criteria
Land Use	Local Scheme zones	Please note this layer is based on January 2013 data provided by the Department of Planning. This will be updated soon to show the LPS 6 land uses. However, in the notes on current land use provisions described in the Notes on the Proposed Target Areas for vegetation, the current LPS 6 and the Local Planning Strategy were used.
	Crown reserves	Landgate dataset identifying Reserve number, purpose, vesting agency and agency with management responsibility.

AVON REGIONAL ORGANISATION OF COUNCILS

STRATEGIC WASTE MANAGEMENT PLAN 2015 TO 2020



Prepared for

SHIRE OF NORTHAM on behalf of the AROC member councils

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Executive Summary

The Avon Regional Organisation of Councils (AROC) is a regional grouping of six local governments. The AROC group represents a population of approximately 22,000 people, covers an area of approximately 10,600 km² and was formed in 1999.

Waste management has traditionally not been a major focus of the group, with the various members effectively undertaking waste management activities in isolation. The exceptions being, the Shires of Northam and Toodyay and the Shires of Dowerin and Goomalling, which have worked together to some degree on waste management matters.

In February 2015, the AROC appointed *IW Projects* to develop a Strategic Waste Management Plan that incorporated the complete AROC region.

In March 2012, the Minister for the Environment launched the WA Waste Strategy: *Creating the Right Environment*. The Strategy employs best practice and continuous improvement, along with target setting, as primary approaches to drive change. This document has been used as a point of reference when creating the strategic direction for the group.

In conjunction with the above WA Waste Strategy, the Waste Authority develops an annual Business Plan, the current plan (*Business Plan 2014/15*) also includes projections through to the 2018/2019 financial year; consequently, this document provides guidance to the group on the Waste Authority's likely direction for the majority of the duration of the group's Strategic Waste Management Plan.

The members of the AROC group have previously developed strategic waste management plans, either individually or in smaller groups. These plans were reviewed to assess past priority areas, priority waste streams, proposed activities and achievements.

Across the group, there was a diverse range of priorities that were previously considered. A constant theme related to improving or implementing kerbside recycling collection services and improving the management and operation of landfill facilities. Other common areas included hazardous household waste and e-waste recycling.

In recent years, there has been a dramatic improvement in the kerbside recycling collection services being offered within the region. In addition, both hazardous household waste and e-waste recovery has increased noticeably as well as an improvement in the diversion of green waste from landfill.

A review of the current waste and recycling quantities being generated within the region has indicated that there are varying degrees of accuracy surrounding the quantities of materials being generated. Consequently, it is difficult to accurately determine what waste diversion impact an active recycling program will achieve.

The focus for this Strategic Waste Management Plan is on the quantity and type of materials that are currently being landfilled. These are the materials that need to be concentrated on to, where possible, increase waste diversion from landfill. Consequently, the quantity of current recycling is not overly important, but the range and participation rates are extremely important. This becomes the indicator of how broad the recycling base is within the individual shires and also whether there is an opportunity to increase the participation rate within the existing recycling systems.

Following a review of the level of waste management services within the region, it was concluded that not all services are available to all areas within each shire. There is typically a concentration of effort in the larger town sites, with decreasing service availability as the population density decreases. The ideal is for each shire to assess the level of service provided to its community and determine the benefit of expanding the existing services into larger areas of the shire or looking at those services that are not provided and assessing the pros and cons of undertaking new services.

The focus of any improvement or new service should be around minimising the quantity of waste to landfill. Consequently, increasing only kerbside waste collection is simply improving the convenience level for a portion of the community; however, not increasing waste diversion. Any new kerbside waste collection service should ideally be in conjunction with a new recycling collection service. The ideal is that each householder that is receiving a kerbside waste collection service should also be receiving a kerbside recycling service. This should be a mandatory combination.

With regards to the service delivery mechanism, there is no strategic waste management benefit or disbenefit to operating services in-house or contracting them out. The main considerations are cost and efficiency. So long as the service mechanism delivers the least cost and most effective (compliant) solution, then this is deemed the best service mechanism.

With the current stage of development of the waste management activities within the group, it is deemed premature to consider involvement in any substantial waste processing technology. The preference at this stage would be to concentrate on improving waste diversion from landfill through small, affordable steps before the group ventures out into larger scale and more costly solutions. In time, if there is real progress achieved within the group in maximising small-scale waste diversion, then there is the opportunity to expand the group's horizons to include the more advanced waste technologies that are available.

Based on the review of the groups previous SWMP's and the progress achieved within the group, the following are considered the group's priority areas:

- Waste management activity coordination and leadership
- Data collection
- Existing recycling activities
- Additional recycling activities
- Landfill management
- Community education

- Increased participation in recycling activities.

Based on the above priority areas, the following are the group's priority wastes:

- Comingled recyclables waste
- Household Hazardous Waste
- E-Waste
- Landfilled Waste
- Organic waste (primarily green waste).

There have been a number of group synergies identified that provide the ability to contract out larger operations than would be possible for the individual councils. This would initially revolve around transport (collection) efficiencies, but in time potentially progress to materials processing activities. There is also the opportunity for the individual councils to operated their own facilities (landfill/drop-off/transfer station) while sharing knowledge and experiences to improve the standard of facility operation and encourage continuous improvement.

The following proposed activities have been identified for the group during the validity period of this Plan:

No.	Proposed Activity
2015 – 2016 Financial Year	
1	Establish a Waste Management Working Group within AROC or appointment of a dedicated Regional Waste Management Coordinator
2	Knowledge sharing within the region
3	Improve systems for the collection and recording of waste management data
4	Investigate and implement improvements to existing recycling systems
5	Improve/implement Hazardous Household Waste drop off facilities
6	Review of disposal facility gate fee structure
2016 – 2017 Financial Year	
7	Extraction of recyclables from landfill and transfer station tipping area
8	Improve compliance with landfill Registration and Licence conditions
9	Improve landfill planning and overall management
10	Regional sharing of waste management equipment
11	Investigate benefits for joint tendering
12	Local Governments lead by example

2017 – 2018 Financial Year	
13	Waste Management Working Group to undertake waste education activities or appointment of a dedicated Regional Waste Education Coordinator
14	Develop a common website structure for waste management information
15	Develop a regional waste management calendar
16	Improve participation rates in existing recycling systems
17	Increase the range of materials that can go into the comingled recycling bin
18	Increase opportunities for recycling drop off
2018 – 2019 Financial Year	
19	Green waste diversion from landfill
20	Develop/improve tip shop facilities
21	Improve staff training in waste management activities
22	Ongoing community education
2019 – 2020 Financial Year	
Continuous improvement and rollout of above activities	

With the group having numerous “grass roots” proposed activities to be undertaken during the 2015 to 2020 period, the preference is to actively pursue these basic activities before embarking on the more technologically advanced process. The group is to use this period to firmly establish the regional cooperation between the participants and implement effective waste management operations and shared contracts/activities prior to considering the more advanced technology solutions.

The individual group participants will require political and financial support from their individual councils in order to achieve noticeable improvements in waste management activities within the shires and the region. This support is essential for the future success of the group’s proposed activities. In addition, the group is to actively pursue available funding sources to supplement the financial contributions from individual member councils.

In order to achieve the group’s proposed activities for the period 2015 to 2020, it is essential that this Strategic Waste Management Plan be regularly reviewed. The review is primarily to gauge the group’s actual achievement against the proposed activities to provide direction as to where the necessary effort is required in order to achieve the desired outcomes by the end of the Plan validity period. As a minimum, this Plan should be reviewed on an annual basis, with a summary review presented to a quarterly group meeting.

1. Introduction

The Avon Regional organisation of Councils (AROC) is a regional grouping of six local governments. The AROC group represents a population of approximately 22,000 people, covers an area of approximately 10,600 km² and was formed in 1999. The six member councils include:

- Shire of Chittering;
- Shire of Dowerin;
- Shire of Goomalling;
- Shire of Northam;
- Shire of Toodyay; and,
- Shire of Victoria Plains.

The group's primary business focus includes:

- Strategic land use planning;
- Tourism management and promotion of the regional area;
- Socioeconomic, environmental and natural resource planning;
- Waste management;
- Seniors accommodation solutions; and,
- Centralised information technology and rating systems.

Waste management has traditionally not been a major focus of the group, with the various members effectively undertaking waste management activities in isolation. The exceptions being, the Shires of Northam and Toodyay and the Shires of Dowerin and Goomalling, which have worked together to some degree on waste management matters.

In February 2015, the AROC appointed *IW Projects* to develop a Strategic Waste Management Plan that incorporated the complete AROC region.

The scope of work was to include the following activities:

1. Review available waste management documentation belonging to AROC members, including waste management contracts, waste and recycling data, strategic waste plans, correspondence from Department of Environment Regulation (DER) and any other relevant waste management documentation.
2. Undertake a site visit to each shire to inspect waste management sites, discuss waste management issues, past successes and future direction.
3. Compile conceptual strategic waste management initiatives.

4. Hold a joint meeting with all AROC members to discuss strategic waste management initiatives for the individual shires and the group of shire and determine the group's future direction.
5. Based on the information reviewed and discussed, compile a Strategic Waste Management Plan for the group.

2. Strategic Waste Planning

Strategic planning should ideally incorporate the following activities:

- Determine where the group is currently – Current competencies;
- Identify what is important – Priority areas;
- Define what the group must achieve – Objectives to address priority issues;
- Define who is accountable – How the group is going to get to where it wants to go; and,
- Review, review, review – Regular formal reviews to assess progress.

This document follows these fundamental strategic steps to identify the group's strategic direction.

3. State Waste Strategy

3.1. Creating the Right Environment

In March 2012, the Minister for the Environment launched the WA Waste Strategy: *Creating the Right Environment*.

The Strategy employs best practice and continuous improvement, along with target setting, as primary approaches to drive change. The Strategy builds on existing programs and initiatives such as the Regional Funding Program, Household Hazardous Waste Program, Data Program, Waste Awards, and grants programs as well as strategic partnerships, to achieve the desired outcomes.

The amount of waste being recovered in Western Australia has been increasing steadily for a number of years, and there is evidence that increases in the landfill levy have accelerated this trend. However, the State's performance when benchmarked against other mainland states is still poor and requires a significant boost if comparable outcomes are to be achieved. In order to achieve this, the key drivers that have shaped the strategies and targets in *Creating the Right Environment* include:

- Key Driver 1 - The need to lift the effectiveness of planning for long-term waste management at a State level.
- Key Driver 2 - Access to data and information to underpin the measurement of strategies and services.

- Key Driver 3 - Significant opportunities to improve performance on construction and demolition, and commercial and industrial waste recovery.
- Key Driver 4 - Consolidation and improvement in municipal waste collection and processing performance.
- Key Driver 5 - A desire to do better on packaging waste management, litter recovery and other problematic wastes.
- Key Driver 6 - Improved landfill practices and incentives to reduce waste to landfill.

Creating the Right Environment has five strategic objectives within which strategies relating to knowledge, infrastructure and incentives have been developed to support a coordinated approach to changing the behaviour of individuals, groups and organisations:

- Strategy Objective 1 – Initiate and maintain long-term planning for waste and recycling processing, and enable access to suitably located land with buffers sufficient to cater for the State's waste management needs.
- Strategy Objective 2 - Enhance regulatory services to ensure consistent performance is achieved at landfills, transfer stations and processing facilities.
- Strategy Objective 3 - Develop best practice guidelines, measures and reporting frameworks and promote their adoption.
- Strategy Objective 4 - Use existing economic instruments to support the financial viability of actions that divert waste from landfill and recover it as a resource.
- Strategy Objective 5 - Communicate messages for behaviour change and promote its adoption, and acknowledge the success of individuals and organisations that act in accordance with the aims and principles in the Strategy and assist in its implementation.

Targets in the Strategy are based on ambitious but achievable improvements in current recovery rates. The targets are expressed as the proportion of waste recovered compared to that generated. Recovery targets for municipal solid waste in the Perth Metropolitan Region are 50% by 30 June 2015 (up from 36% in 2009/10) and 65% by 2020 and in major regional centres 30% by 30 June 2015 (up from 15% in 2009/10) and 50% by 30 June 2020. Statewide targets for the commercial and industrial sector are 55% by 30 June 2015 (up from 46% in 2009/10) and 70% by 30 June 2020. Construction and demolition waste State wide targets are 60% by 30 June 2015 (up from 29%) and 75% by 30 June 2020.

The implementation of the Strategy is supported by funding from the Waste Avoidance and Resource Recovery Account, and initiatives and actions funded under the Strategy are contained in the Waste Authority's annual Business Plan.

3.1.1. Impact on the Group

The Waste Strategy is a State wide strategy for improved waste management; hence, covers all regions within the State. As can be expected, the main concentration of focus is in those areas where the most waste is generated and consequently the implementation of the Strategy's initiatives will have the most impact. The focus areas are:

- The Perth Metropolitan Area.
- Major regional centres – Avon, Greater Bunbury, Albany, Geraldton, Kalgoorlie, Karratha, Peel and Busselton.
- All other areas within the State.

Due to the distribution of the member councils within AROC, the group falls into the second focus area – *major regional centre* as well as the third focus area – *other areas with the State*. The consequence of this is that there will be *Municipal Solid Waste Sector Targets* for the Avon area (Northam and Toodyay) while the remainder of the members will not have specified targets. These Strategy Targets should be used to drive the Avon portion of the group to make reasonable changes and improvements to its current level of recycling, while providing a level of encouragement to the remainder of the group to follow suit.

It is noted that the Strategy Targets refers to "*material presented for collection*" being that material that is to be accounted for when determining the group's success against the set targets. This would certainly include all kerbside collections (waste, recyclables, green waste, bulk waste etc.). It is unclear as to whether material presented at the group's transfer station, drop-off facilities, tip shops and landfills by local residents is included in the targeted quantities. According to the written word, this material would appear to be outside the targeted materials, but logically, it should be presumed that this material is also considered for diversion from landfill. In future, if reporting against the Waste Strategy Targets (which may impact future funding opportunities), the group should be mindful of this fact and separate the data into the "Targeted" material and "Other" material. The challenge in reporting success is in the accuracy of the data available.

Although the recycling targets are an important aspect of the overall Strategy, they are not the only aspect of the Strategy. As documented above, there are numerous Key Drivers and Strategic Objectives that set out a range of aspects of current waste management practice that the Waste Authority seeks to influence. Some of these Drivers and Objectives are relevant to the group and need to be considered in the group's future planning:

- **Key Driver 1 - The need to lift the effectiveness of planning for long-term waste management at a State level.** State level planning is beyond the influence of the group. However, the group should be aware of its current waste management facility capacities, primarily landfill airspace, to develop an understanding of the medium and long-term requirements within the group.

- **Key Driver 2 - Access to data and information to underpin the measurement of strategies and services.** In order to plan for the future, it is essential that the group has an understanding of the quantity of waste and recycling material that is handled. There is a need to develop a simple data collection system that enables the individual councils to gain a better understanding of their current activities. This data collection will provide valuable information for future decision making as well as reporting against the Waste Strategy Targets.
- **Key Driver 3 - Significant opportunities to improve performance on construction and demolition, and commercial and industrial waste recovery.** This Key Driver has no particular relevance to the group at this stage of its waste management development. Possibly at some time well into the future, when the group is looking for continuous improvement projects, the group may consider strategies to improve the management of construction & demolition (C&D) waste and commercial & industrial waste (C&I). It is however important to note that a single demolition project could generate a relatively significant quantity of C&D waste. The landfill operators should have contingency plans on what to do with a large quantity of C&D waste.
- **Key Driver 4 - Consolidation and improvement in municipal waste collection and processing performance.** There is an opportunity to improve on the existing waste and recycling collection systems currently in operation. This is achieved by a combination of community education to increase at-source waste sorting while reducing recyclable contamination and expanding the collection service or drop-off opportunities into additional areas.
- **Key Driver 5 - A desire to do better on packaging waste management, litter recovery and other problematic wastes.** For the group, this Driver is somewhat linked to Key Driver 4 above as well as providing improved E-waste collections and handling, hazardous household waste collections and handling and increasing the range of materials that can be collected at the verge side and diverted from landfill.
- **Key Driver 6 - Improved landfill practices and incentives to reduce waste to landfill.** This Objective is relevant to the group as there are numerous landfills in the region. Improving the management thereof is and should continue to be a priority for the group. Knowledge and experience (positive and negative) sharing will assist in raising the average level of facility management in the region. Incentives primarily relate to “gate fee” incentives. The region’s facility gate fees need to be structured to incentivise waste diversion from landfill. That is, recycling disposal should be cheaper than waste disposal. Tip passes; however, make it difficult to change behaviour based on cost of tipping.

- **Strategy Objective 1 – Initiate and maintain long-term planning for waste and recycling processing, and enable access to suitably located land with buffers sufficient to cater for the State’s waste management needs.** This Objective is not overly relevant to the group as it is more relevant to the Perth metropolitan area and its surrounds; however, when the group or individual councils are looking for future waste management sites (primarily new landfills), these issues need to be considered. The group or individual councils may review planning policies and Structure Plans to ensure that there are adequate buffers secured around existing facilities and potentially for future waste management sites.
- **Strategy Objective 2 - Enhance regulatory services to ensure consistent performance is achieved at landfills, transfer stations and processing facilities.** This Objective is relevant to the group. This Objective identifies that there is likely to be increased DER monitoring and inspections of waste management facilities in the future to ensure that facilities are managed to best practice standards. Sites not being operated appropriately will likely be encouraged to comply with best practice and in extreme circumstances penalised accordingly. The enhanced regulatory services are also likely to result in more stringent design and compliance requirements when developing new waste management facilities (mainly landfill sites). This has the potential to significantly increase the cost of developing and operating future waste management facilities.
- **Strategy Objective 3 - Develop best practice guidelines, measures and reporting frameworks and promote their adoption.** This is of limited impact to the group and is likely to be an output from the DER at some time in the future.
- **Strategy Objective 4 - Use existing economic instruments to support the financial viability of actions that divert waste from landfill and recover it as a resource.** This is seen as a direct reference to increasing the Perth metropolitan landfill levy to narrow the cost gap between recycling operations and landfill disposal costs. With the landfill levy only applying to the Metropolitan area, this is of no consequence to the group. It is important to note that in time, there is the potential that the landfill levy will be expanded into the major regional centres, of which, the Avon region is one.

- **Strategy Objective 5 - Communicate messages for behaviour change and promote its adoption, and acknowledge the success of individuals and organisations that act in accordance with the aims and principles in the Strategy and assist in its implementation.** This Objective is structured around community education and the influencing of behavioural change to achieve community buy-in to improved recycling activities. This is seen as an important aspect of any proposed changes within the group or individual council's waste management activities. It is pointed out that community education is not a one-off activity; it is an ongoing requirement to ensure continued success of the recycling activities.

Overall, the WA Waste Strategy is likely to have the following impact on the group:

- Put pressure on the group as a major regional centre to achieve the stated targets by improving waste diversion activities;
- Require the group to have a common and transparent data collection system (in order to measure the success against the Targets);
- Require improvement in current landfill operations to comply with best practice landfill management;
- Make future site development more costly due to increased regulatory requirements; and,
- Opportunity to obtain funding to achieve the objectives of the Strategy.

3.2. Waste Authority Business Plan 2014/15

Although the Waste Authority Business Plan is developed annually, this plan contains projections through to the 2018/2019 financial year; consequently, this provides guidance to the group on the Waste Authority's likely direction for the majority of the duration of the group's Strategic Waste Management Plan.

3.2.1. Strategic Objectives

This is the third Business Plan since the release of the State Waste Strategy (March 2012) and builds on the foundation of the earlier plans and includes actions relevant to the key strategic objectives identified in the Waste Strategy (above):

- **Planning** - Initiate and maintain long-term planning for waste and recycling processing to cater for the State's waste management needs.
- **Regulation** - Enhance regulatory services to ensure consistent performance is achieved at landfills, transfer stations and processing facilities.
- **Best Practice** - Develop best practice guidelines, measures and reporting frameworks and promote their adoption.

- **Economic Instruments** - Use existing economic instruments to support the financial viability of actions that divert waste from landfill and recover it as a resource.
- **Engagement** - Communicate messages for behaviour change and promote its adoption, and acknowledge the success of individuals and organisations that act in accord with the aims and principles in the Strategy and assist in its implementation.
- **Data and Measurement** - Collect and analyse data on waste and recycling services and performance across Western Australia to allow assessment of progress against Waste Strategy targets to meet reporting requirements.
- **Strategic Policy Development and Review** - Regular review and updating of the Waste Strategy elements in response to emerging issues, changing market circumstances, national waste policy development and implementation of initiatives, such as producer responsibility schemes.
- **Administrative and Program Service Provision and Support** – Administrative and program delivery staff salaries, office and management overheads, Waste Authority sitting fees, committee and sub-committee support and on-costs.

4. Review of Existing Group SWMP's

The following existing Strategic Waste Management Plans are available within the group:

- Shire of Chittering – *Strategic Waste Management Plan – Talis Consulting February 2014*;
- Shires of Dowerin and Goomalling – *Strategic Waste Plan September 2008*;
- Shires of Northam and Toodyay – *Strategic Waste Minimisation Plan 2008 – 2013 – IW Projects October 2008*; and,
- Shire of Victoria Plains – No strategic plan.

4.1. Shire of Chittering

4.1.1. Priority Areas

The Shire of Chittering Strategic Waste Management Plan sets the following priorities with regards to future waste management activities:

- Regionalisation - Regionalisation of waste management services can offer several benefits to the local governments and communities involved. These include:
 - Improved economies of scale;

- Increased recycling and landfill diversion opportunities;
- Provide services to communities that may not otherwise be possible at local level; and,
- Improvement environmental outcomes.
- Resource recovery and waste management services – Improved kerbside recycling collection services.
- Landfill opportunities – Best practise landfill facility (lined landfill), providing a disposal location for other surrounding Local Governments and also the Perth Metropolitan area.

4.1.2. Priority Wastes and Proposed Activities

The priority wastes and proposed activities associated with the above priority areas include:

- Kerbside collection services:
 - Dry/comingled recycling;
 - Organic (green waste/organics);
 - General waste*; and,
 - Commercial and industrial collection services*;
- Verge side collection:
 - Green waste;
 - Hard waste; and,
 - Skip bin services;
- Drop off services:
 - Community reuse facility;
 - Recycling centre;
 - Bulk waste acceptance (green waste, inert, scrap metal);
 - Household hazardous waste; and,
 - General waste;
- Recycling and resource recovery:
 - Material recovery facility of comingled dry recyclables;
 - Green waste mulching*;
 - Inert waste recycling;
 - Scrap metal*;
 - Hazardous waste treatment;

- Organic waste treatment (composting); and
- Energy recovery;
- Disposal:
 - Putrescible landfill*
 - Inert landfill.

* Indicates the services that were available at the time of developing the Talis SWMP.

Where there are existing waste management activities within the shire, the intention is to improve these and optimise the service and or treatment that is available.

4.1.3. Achievements

Due to the Talis SWMP only being finalised in February 2014, there plan is relatively new and hence there has not been significant advancement of the proposed activities. The most significant achievement has been the implementation of a kerbside recycling collection service, which has been contracted out as a single contract incorporating both kerbside waste and recycling collection services. The contract was signed on 29 May 2014, with a five-year contract duration until 28 May 2019. However, the waste and recycling collection services only commenced in September 2014.

4.2. Shires of Dowerin and Goomalling

4.2.1. Priority Areas

No priority areas were identified.

4.2.2. Priority Wastes and Proposed Activities

No priority wastes were identified; however, the following waste management activities were mentioned for potential improvements:

- A need for hazardous household waste facilities;
- Controlled access to landfill and having them manned;
- Charging disposal fees at the landfills;
- Improved resource recovery at landfills;
- Consolidating landfills down to a single, well managed landfill in Goomalling;
- Transporting all waste to Northam landfill;
- Kerbside recycling; and,
- Green waste shredding and reuse for landscaping.

The SWMP identified the following action items:

- Public consultation on options including landfill closure(s) and transfer station;
- Fence and manning of Dowerin landfill;
- Plan for hazardous household waste collection/disposal;
- Increase drop off facilities at landfills for collection of recyclables;
- Provide covered storage for baled cardboard at Lions depot;
- Purchase hydraulic presses for baling cardboard & plastics;
- Develop a roster involving community & sporting clubs to assist with recycling;
- Investigate the green waste issues;
- Investigate the possibility of Waste Wise Schools programs for both shires;
- Promote recycling; and,
- Adopt and implement a Sustainable Procurement Policy.

4.2.3. Achievements

The following achievements have been recorded since the development of the SWMP:

- Controlled access to the Dowerin landfill site;
- Manning of the Dowerin landfill site;
- Implementing a gate fee structure;
- Increased resource recovery at landfill sites;
- Improved operation of the landfill sites; and,
- Improved facilities at the Lions depot in Goomalling.

4.3. Shires of Northam and Toodyay

4.3.1. Priority Areas

The priority areas (in order of priority) were:

- Organic products;
- Building products;
- Chemical products;
- Packaging products;
- Electrical products; and,
- Synthetic products.

4.3.2. Priority Wastes

The group identified the following priority waste streams (in order of priority):

- Packaging waste (not currently being collected by existing recycling activities);
- Organic waste and green waste;
- Household Hazardous Waste;
- E-waste; and,
- Construction and Demolition waste.

4.3.3. Proposed Activities and Achievements

The group's SWMP identified the following suite of activities to be carried out during the period of the plan:

Table 4.3.3.1 – Proposed Activities and Achievements

Activity	Achievement
Where possible, apply local solutions to local problems.	Nothing specific identified.
Develop systems for the collection and recording of waste management data.	Improved data collection at Toodyay WMF and Old Quarry Road landfill, Inkpen Road landfill relies of rough estimations.
Improve the management of landfill facilities.	Progressive improvement on landfill operations.
Implement a household hazardous waste collection system.	Toodyay HHW facility shared by the group.
Investigate the development of kerbside recycling collections in the Region.	Both shires have implemented kerbside recycling.
Implement regular community education/information communication.	Improved community communication via website, radio, waste management calendars and visits to schools.
Implement sustainable purchasing policies.	No formal policy, voluntary participation.
Improve internal communication and knowledge sharing.	Increased participation/working between the group.
Develop links with neighbouring shires.	Participation in AROC and the development of a joint SWMP.
Investigate and implement additional recycling activities.	Increased suite of recyclables at Toodyay WMF and the Old Quarry Road landfill.
Investigate the development of organics/composting facilities.	Nil action.
Implement E-Waste collection systems.	Implemented at Toodyay WMF and both Northam landfills.
Lead by example - improve shire internal recycling activities.	Nil action.
Encourage elected members support in waste minimisation.	Nil action.
Improve transport efficiencies in recycling management.	Implementation of kerbside recycling collection.
Improve materials handling of all existing recycling activities.	Improved suite and volume of recyclable materials at Toodyay WMF and Old Quarry landfill.
Implemented planning solutions to force the developers to manage waste appropriately.	Nil action.
Assess the need to employ a dedicated regional waste management officer.	Nil action.
Continuous improvement.	Ongoing activity.
Investigate implementation of C&D waste processing.	Minimal improvement, bricks and rubble used as landfill cover material.
Improve participation rate in existing recycling systems.	Ongoing activity.
Investigate the potential for developing an "Earth Carers" group in the region.	Minimal activity through Lions Club and swimming club.

4.4. Commentary on Priority Areas

Across the group, there was a diverse range of priorities that were considered. A constant theme related to improving or implementing kerbside recycling collection services and improving the management and operation of landfill facilities.

Other common areas included hazardous household waste and e-waste recycling.

4.5. Commentary on Priority Wastes

Based on the priority areas identified, there was a concentration on trying to improve the collection and handling of materials presented at the kerbside or verge side by residents, this being seen as a captive market, where local government is able to implement services, whilst guaranteeing participation and material quantities.

Other priority wastes included improved recovery of comingled recyclables at drop off facilities, inert waste recycling and the development of both hazardous household waste and e-waste receival facilities.

4.6. Commentary on Achievements

With the relatively small population bases in most shires, the large distances between the waste generators and existing recycling facilities and the cost of establishing new recycling operations, it is typical that only the easier recycling solutions have been progressed.

There has been a dramatic improvement in the kerbside recycling collection services being offered within the region. This, although relatively expensive, is a broadly accepted means of easily achieving significant increases in recycling, as this is a tried and tested solution, which fits into an existing recycling system. Fortunately, the group is close enough to the Perth metropolitan area to be able to feed the collected recyclables into the existing material recovery facilities in Perth (currently the Southern Metropolitan Regional Council, via Avon Waste). Although there is a cost in transporting the loose comingled materials to Perth, the sorting and materials handling is highly efficient in comparison to undertaking this activity in the regional areas. In addition, the suite of recyclable materials that can be processed is also greater than would be the case in the regional areas.

Both hazardous household waste and e-waste recovery has increased noticeably. The primary activity undertaken by the shires has been to provide disposal locations for the drop off of these materials by the public. The collected materials are then simply passed on to downstream processors or recyclers. Both of these products have funded downstream solutions; hence, can be effectively carried out by the shires with minimal effort and cost.

The diversion of green waste from landfill has also improved. This has added an additional cost to the shires in having to then mulch the green waste, as opposed to the traditional solution of burning green waste, which is no longer encouraged by the DER, but on the positive side, the mulched product can be utilised locally for residential and public place landscaping, along with the associated saving in landfill airspace consumption.

5. AROC Waste Quantities

There are varying degrees of accuracy surrounding the quantities of waste materials being generated within the region. The Shire of Northam has a weighbridge at its Old Quarry Road WMF, which is used to provide accurate quantities of waste and recyclable materials entering or leaving the site. In addition, Avon Waste uses the weighbridge to weigh the kerbside recyclables collected within the Shire of Northam and the Shire of Toodyay. There is some accurate information available on the quantities of recyclables processed through the Goomalling Community Recycling Depot. This information is received from the downstream recyclers that pay for the recyclable materials. For the remainder of the waste and recyclable materials handled within the region, the material quantities are simply based on best guess estimates or typical state-wide averages per household and in some cases, simply not available.

The focus for this Strategic Waste Management Plan is on the quantity and type of materials that are currently being landfilled. These are the materials that need to be concentrated on to, where possible, increase waste diversion from landfill. Consequently, the quantity of current recycling is not overly important, but the range and participation rates are extremely important. This becomes the indicator of how broad the recycling base is within the individual shires and also whether there is an opportunity to increase the participation rate within the existing recycling systems.

Table 5.1 – Waste and Recycling Quantities provides a summary of the available data within the region.

Table 5.1 – Waste and Recycling Quantities

Material	Shire					
	Chi	Dow	Goo	Nor	Too	V/P
Waste to landfill						
Kerbside waste collection	1,148 t	213 t	250 t	4,200 t	1,218 t	203 t
Town skip bins	0 t	0 t	0 t	254 t	0 t	0 t
Self haul - residential	6,115 t	Unknown	240 t	2,000 t	662 t ¹	Unknown
Self haul - commercial	Incl.	Unknown	Incl.	5,800 t ²	0 t	Unknown
Self haul – shire generated	Unknown	Unknown	Incl.	757 t	Unknown	Unknown
<u>Total Waste to Landfill</u>	<u>Unknown</u>	<u>Unknown</u>	<u>490 t</u>	<u>13,011 t</u>	<u>Unknown</u>	<u>Unknown</u>
Kerbside recycling collection	373 t	56 t	NA	1,200 t	290 t	22 t
Drop off facility recycling	1,313 t ³	Unknown	NA	770 t ³	26 t ³	Unknown
Volunteer drop off facility recycling	Unknown	43 t	280 t ⁴	39 t	0 t	0 t
Hazardous Household Waste	0 t	Unknown	NA	0.5 t	Unknown	Unknown
E-Waste	5.79 t	Unknown	NA	30 t	6.75 t	Unknown
<u>Total Recycled</u>	<u>Unknown</u>	<u>Unknown</u>	<u>280 t</u>	<u>2,039.5 t</u>	<u>Unknown</u>	<u>Unknown</u>
Miscellaneous						
Used Motor Oil	1.3 t	Unknown	NA	21.9 t ⁵	8.6 t ⁵	Unknown

¹ From Railway Road transfer station.

² Excludes Toodyay kerbside waste and transfer station deliveries.

³ Excludes green waste.

⁴ Excludes recyclables from Dowering and Toodyay.

⁵ Conversion factor KL to t = 0.8.

Table 5.2 – Waste and Recycling Quantities Comparison Based on State Wide Averages provides a summary of the waste quantities based on the number of households in each shire and the state wide generation averages.

Table 5.2 – Waste and Recycling Quantities Comparison Based on State Wide Averages

Material	Shire					
	Chi	Dow	Goo	Nor	Too	V/P
No. of Households	2,100	562	574	6,177	3,100	613
Kerbside waste generation average	20 kg/household/week or 1.04 t/household/year					
Kerbside waste state average	2,184 t	584 t	461 t	5,939 t	2,288 t	638 t
Kerbside Avon Waste data	1,148 t	213 t	250 t	3,494 t	1,218 t	203 t
Kerbside recycling generation average	14 kg/household/fortnight or 0.36 t/household/year					
Kerbside recycling state average	756 t	202 t	166 t	2,224 t	1,116 t	221 t
Kerbside Avon Waste data	560 t	56 t	NA	1,022 t	290 t	22 t
Total domestic waste generation average	29 kg/household/week or 1.51 t/household/year					
Total domestic waste generation state average	3,171 t	849 t	695 t	9,327 t	4,681 t	926 t
Total domestic waste generation Shire Data	7,263 t	Unknown	490 t	8,200 t	1,880 t	Unknown

The state average kerbside waste and recycling tonnage is based on the total number of households in each shire. The intent of this is to indicate the maximum quantities of materials that could be collected from the kerbside if all households were covered by a kerbside collection service. It is however, not proposed that there be 100% kerbside collection coverage within all of the shires, as the cost of servicing the remote areas does not justify the effort. This simply gives an indication that the more of the shires that are serviced, the more material will be collected.

Increasing kerbside waste collection coverage is seen simply as a convenience service to the community; however, increasing the kerbside recycling collection is an effective means of dramatically increasing the quantity of waste diverted from landfill. The ideal scenario being that each property that is serviced with a waste collection pick-up, is also serviced with a recycling collection pick-up.

6. AROC Available Waste Management Infrastructure

The following is a list of available waste management infrastructure in the AROC region.

Table 6.1 – Waste Management Infrastructure

Location	Ownership	Current Status
Class II Landfills		
Muchea WMF	Shire of Chittering	Operational, min. 10 yrs life
Bindoon WMF	Shire of Chittering	Operational, min. 5 yrs life
Amery Road WMF, Dowerin	Shire of Dowerin	Operational, min. 10 yrs life
Waterhouse Road WMF, Goomalling	Shire of Goomalling	Operational, min. 10 yrs life
Old Quarry Road WMF	Shire of Northam	Operational, min. 10 yrs life
Inkpen Road WMF	Shire of Northam	Operational, min. 5 yrs life
Calingiri WMF	Shire of Victoria Plains	Operational, min. 5 yrs life
Bolgart WMF	Shire of Victoria Plains	Operational, min. 5 yrs life
Mogumber Landfill	Shire of Victoria Plains	Operational by arrangement
Waste Transfer Stations		
Railway Road WMF, Toodyay	Shire of Toodyay	Operational, large
Recycling Drop-Off Facilities		
Muchea WMF	Shire of Chittering	Operational, medium
Bindoon WMF	Shire of Chittering	Operational, small
Amery Road WMF, Dowerin	Shire of Dowerin	Operational, small
Cottrell Street Recycling Shed, Dowerin	Shire of Dowerin	Volunteer operation, small
Waterhouse Road WMF, Goomalling	Shire of Goomalling	Operational, small
Community Recycling Depot, Goomalling	Shire of Goomalling	Volunteer operation, medium
Old Quarry Road WMF	Shire of Northam	Operational, small
Inkpen Road WMF	Shire of Northam	Operational, small
Railway Road WMF, Toodyay	Shire of Toodyay	Operational, large
Calingiri WMF	Shire of Victoria Plains	Operational, small
Bolgart WMF	Shire of Victoria Plains	Operational, small

Location	Ownership	Current Status
Materials Recycling Facilities		
Muchea WMF	Shire of Chittering	Green waste mulching
Bindoon WMF	Shire of Chittering	Green waste mulching
Amery Road WMF, Dowerin	Shire of Dowerin	Green waste mulching
Sanders Road, Dowerin	Shire of Dowerin	Green waste mulching
Waterhouse Road WMF, Goomalling	Shire of Goomalling	Green waste mulching
Old Quarry Road WMF	Shire of Northam	Green waste mulching
Inkpen Road WMF	Shire of Northam	Green waste mulching
Railway Road WMF, Toodyay	Shire of Toodyay	Green waste mulching
Calingiri WMF	Shire of Victoria Plains	Green waste mulching
Reuse Facility/Tip Shop		
Muchea WMF	Shire of Chittering	Operational, small
Bindoon WMF	Shire of Chittering	Operational, small
Waterhouse Road WMF, Goomalling	Shire of Goomalling	Operational, small
Railway Road WMF, Toodyay	Shire of Toodyay	Operational, large

7. Available Waste Management Services

The following is a list of available waste management services in the AROC region.

Table 7.1 – Waste Management Service

Service	Shire					
	Chi	Dow	Goo	Nor	Too	V/P
Kerbside waste collection	✓	✓	✓	✓	✓	✓
Kerbside recycling collection	✓	✓	x	✓	✓	✓
Bulk waste verge collection	x	x	x	✓ ¹	x	x
Recycling verge collection	x	✓ ²	✓ ²	x	x	x
Public bin waste collection	✓	✓	✓	✓	✓	✓
Public bin recycling collection	✓	✓	x	✓	x	✓
Public event recycling	x	✓	✓ ²	x	x	x

¹ Via a system of skip bins

² Undertaken via volunteer organisation

The above table represents the range of waste management services available within each shire. Not all services are available to all areas within each shire. There is typically a concentration of effort in the larger town sites, with decreasing service availability as the population density decreases.

The ideal is for each shire to assess the level of service provided to its community and determine the benefit of expanding the existing services into larger areas of the shire or looking at those services that are not provided and assessing the pros and cons of undertaking new services.

The focus of any improvement or new service should be around minimising the quantity of waste to landfill. Consequently, increasing only kerbside waste collection is simply improving the convenience level for a portion of the community; however, not increasing waste diversion. In reality, this may even decrease waste diversions as the householder will find it easier to simply dispose of recyclables in the green bin as opposed to recycling, which, without a kerbside recycling collection, the householder would have to take the recyclables to a drop off facility. Any new kerbside waste collection service should ideally be in conjunction with a new recycling collection service. The ideal is that each householder that is receiving a kerbside waste collection service should also be receiving a kerbside recycling service. This should be a mandatory combination.

Where there is a strong volunteer organisation which actively undertakes recycling activities, such as Goomalling and to a lesser degree Dowerin, there is often hesitation by council in implement kerbside recycling collections. Where these situations occur, the shires are to assess the effectiveness and longevity of the volunteer organisations and the extent to which recyclable materials are being diverted from landfill. The solution is not necessarily to implement kerbside recycling collection, as this could have a negative impact on the community sentiment surrounding recycling involvement. The shire should also consider what associated activities could be improved or implemented to increase waste diversion from landfill, while feeding into the volunteer operation. An example being the provision of recycling bins at the landfill for the collection of source separated recyclables at the tipping face. These collected recyclables could then be fed into the community recycling operation.

There is no green waste verge side collection offered in any of the shires. This could be a mechanism of reducing the quantity of green waste ending up in the landfills. However, this solution would only be applicable to those properties that receive kerbside waste collection, as the self-haul customers can be controlled to divert green waste at the landfills.

8. Contracted Waste Services

The following is a list of waste management services within each shire that are contracted out to external providers.

Table 8.1 – Waste Management Service

Service	Shire					
	Chi	Dow	Goo	Nor	Too	V/P
Kerbside waste collection	✓	✓	✓	✓	✓	✓
Kerbside recycling collection	✓	✓	NA	✓	✓	✓
Bulk waste verge collection	NA	✓	NA	✓	NA	NA
Public bin waste collection	✓	✓	✓	✓	✓	✓
Public bin recycling collection	NA	✓	NA	✓	NA	✓
Public event recycling	NA	✗	✓	NA	NA	NA
Landfill operations	✗	✗	✗	✓	NA	✗
Transfer station operations	NA	NA	NA	NA	✓	NA

There is no strategic waste management benefit or disbenefit to operating services in-house or contracting them out. The main considerations are cost and efficiency. So long as the service mechanism delivers the least cost and most effective (compliant) solution, then this is the best service mechanism.

9. AROC Available Recyclable Material Drop Off

The following is a list of recyclable materials that can be dropped off in each shire within the AROC region.

Table 9.1 – Recyclable Material Disposal

Service	Shire					
	Chi	Dow	Goo	Nor	Too	V/P
Aerosol cans	✓	✓	✓	✓	✓	✓
Aluminium, cans	✓	✓	✓	✓	✓	✓
Aluminium, foil	✓	✓	✓	✓	✓	✓
Building material, timber, C&D	✓	✓	✓	x	✓	✓
Cardboard	✓	✓	✓	✓	✓	✓
Carpets	✓	x	x	x	x	x
Cartridges, printer & photocopier	x	x	x	✓	✓	x
Ceramic, pieces	✓	✓	x	✓	✓	✓
DrumMuster	✓	x	✓	✓	x	x
E-waste	✓	✓	✓	✓	✓	x
EPIRB's (emergency position beacons)	x	x	x	x	✓	x
Fire alarms	x	x	x	x	✓	x
Fire extinguishers	x	x	x	x	✓	x
Flares	x	x	x	x	✓	x
Gas bottles	x	x	x	x	✓	x
Glass, containers	✓	✓	✓	✓	✓	✓
Glass, plate, pieces	✓	✓	✓	✓	✓	✓
Green waste	✓	✓	✓	✓	✓	✓

Service	Shire					
	Chi	Dow	Goo	Nor	Too	V/P
<u>Hazardous Household Waste</u>						
Acids	x	x	x	x	✓	x
Alkalis	x	x	x	x	✓	x
Batteries, dry cell	x	x	x	✓	✓	x
Batteries, wet cell	✓	x	✓	✓	✓	✓
Flammable liquids	x	x	x	x	✓	x
Light globes, fluorescent	x	x	x	✓	✓	x
Paint	✓	x	x	x	✓	x
Pesticides	x	x	x	x	✓	x
Solvents	x	x	x	x	✓	x
Liquid, paperboard	✓	✓	✓	✓	✓	✓
Mattresses (separated for disposal)	✓	x	✓	x	✓	✓
Medicine, expired, excess	✓	✓	✓	✓	✓	✓
Metal, cans	✓	✓	✓	✓	✓	✓
Metal, scrap	✓	✓	✓	✓	✓	✓
Mobile phones & accessories	x	x	✓	✓	✓	x
Oil, used engine	✓	✓	✓	✓	✓	✓
Paper, books and magazines	✓	✓	✓	✓	✓	✓
Paper, clean	✓	✓	✓	✓	✓	✓
Paper, newspaper	✓	✓	✓	✓	✓	✓
Plastic plant pots	✓	x	x	x	✓	x
Plastic, mixed	✓	✓	✓	✓	✓	✓
Plastic, sorted	✓	✓	✓	✓	✓	✓
Plastic, wrapping	✓	✓	✓	✓	✓	✓
Polystyrene foam	✓	✓	x	✓	✓	✓
Tyres, used vehicle	✓	x	x	✓	x	x

The above list represents the broad range of materials that are currently being recycled within the region. It is for each shire to assess how to increase the range of recyclables diverted from landfill and also how to increase the participation rate to maximise the quantity of material diverted from landfill. The starting point should be those materials that are likely to cause environmental harm if disposed of to an unlined landfill (HHW, used engine oil, e-waste).

10. Proposed Activities

10.1. Proposed Activity Descriptions

Following the review of previous strategic waste management plans, the degree of success in achieving the previously proposed activities and based on an understanding of the requirements within the group, the Proposed Activities for the period 2015 to 2020 are presented in the order of priority.

Table 10.1.1 – Proposed Activities – 2015 to 2020 provides the table of Proposed Activities in the order of priority, including related details and responsibilities.

Table 10.1.1 – Proposed Activities – 2015 to 2020

No.	Activity	Details	Responsibility/Man-hours
2015 – 2016 Financial Year			
1	Establish a Waste Management Working Group (WMWG) within AROC or appointment of a dedicated Regional Waste Management Coordinator (RWMC)	<p>To have a waste management working group within AROC or a dedicated staff member from one of the shires to “champion” waste management activities and to drive the Plan objectives.</p> <p>Initially, set up the WMWG to champion the waste management activities and if, in time, the WMWG has sufficient workload, consider appointing a dedicated staff member to take over the WMWG activities.</p> <p>If a dedicated staff member is appointed, ideally this person is an existing waste management employee within one of the group member councils that is appointed on a part-time or full-time basis as the coordinator of regional and local waste management activities to ensure that the proposed activities are actioned within a reasonable timeframe.</p> <p>Provides a dedicated focus on regional and local waste management issues.</p> <p>Responsible for coordinating regional activities.</p> <p>Responsible for coordinating similar waste management activities within individual councils.</p>	<p>Group</p> <p>Not a significant task for the group to implement, once the decision has been made to progress with this activity.</p>

		<p>Knowledge sharing between group participants to ensure efficiency in waste management activities from landfill operations through to waste minimisation activities.</p> <p>Organising, coordinating and driving regular waste management meetings amongst councils.</p> <p>Report back to AROC on a regular basis (at least six-monthly) on achievements against the Plan.</p> <p>Initially coordinating common waste education information amongst councils and developing basic waste education programs (not a primary activity).</p> <p>In time, undertake waste education activities or arrange for the appointment of a Regional Waste Education Coordinator.</p> <p>Manage the Regional Waste Education Coordinator's activities to achieve desired regional and local outcomes.</p> <p>Review gate fee pricing structure to influence disposal habits.</p> <p>Undertake or coordinate regional tendering of waste management services (kerbside waste and recycling collection, bulk waste collection, bulk recycling removal etc.).</p> <p>Undertaking regular reviews of the Strategic Waste Management Plan and Proposed Activities.</p>	
2	Knowledge Sharing within the Region	<p>Sharing of knowledge amongst the members of the region to achieve a more efficient and cost effective waste management outcome.</p> <p>Site visits within the region to observe the waste management activities being undertaken.</p> <p>Regular AROC operational waste management meetings to discuss issue of common interest and share solutions.</p>	<p>WMWG or RWMC</p> <p>No specific man-hours allocated to this task, as it will form part of business as usual activities.</p>
3	Improve systems for the collection and recording of waste management data	<p>Some accurate data is available within the region.</p> <p>Need for a common mechanism for estimating material quantities to enable reasonably accurate comparison across councils.</p> <p>Staff training will be required to ensure consistency across the region.</p>	<p>WMWG or RWMC</p> <p>Estimated 40 man-hours to set up a data collection system and then 2 hours per month to maintain.</p>

4	Investigate and implement improvements to existing recycling systems	<p>General improved participation in existing systems.</p> <p>Opportunities to extract additional packaging waste from general waste stream (which is currently being disposed of to landfill).</p> <p>Recycling bins at transfer station and landfills to enable the drop-off of packaging waste prior to the disposal of general waste. These would be positioned where the vehicles are unloaded.</p> <p>Additional recycling street bins.</p> <p>Provision of recycling bins to householders that are not on the kerbside recycling collection run and enable them to swap a full bin for an empty bin when delivered to the transfer station or landfill. The kerbside recycling collection contractor (currently Avon Waste) then empties the MGB's as part of its regular collection run.</p> <p>The above maximises the opportunities to extract packaging material from the general waste stream prior to disposal. The materials separated will fit into existing kerbside recycling collection systems (side lift collection), processing (standard MRF) and downstream product consumption.</p>	<p>WMWG or RWMC</p> <p>The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 4 hours per month.</p>
5	Improve/implement Hazardous Household Waste drop off facilities	<p>Improve existing HHW drop off facilities and implement new drop off locations (permanent or temporary).</p> <p>Potential to purchase dedicated trailers with separate storage compartments for the storage of different types of hazardous household materials. This could be permanently located at drop off facilities (landfills/shire depots) and/or used as mobile drop off units as part of an advertised campaign of temporary collection days around the shires.</p> <p>Once sufficient HHW was collected, the trailers could then simply be towed to Toodyay where the HHW would be transferred to the Railway Road WMF HHW storage area.</p> <p>It is noted that, in order to transport any accumulated Controlled Waste, the shires will need to register as Licensed Controlled Waste Carriers, which entails the trailers or trucks and drivers to be registered with the DER.</p>	<p>WMWG or RWMC</p> <p>Estimated 40 man-hours to develop activity solutions and apply for funding, 20 hours to roll out the solutions and then 2 hours per month to maintain.</p>

6	Review of disposal facility gate fee structure	<p>Assess disposal facility gate fees to encourage/influence disposal habits. Recycling to be cheaper than landfill. Uniformity across the region to limit the likelihood of waste from an expensive landfill going to a cheaper landfill. Regular review to ensure appropriate influence. Consider the negative impact of tip passes where there is no incentive for the householders to separate their waste and recyclables.</p>	<p>WMWG or RWMC Estimated 8 man-hours to gather existing data, assess gate fee structures, propose any amendment to local or regional gate fee structures and then 1 hour per month to maintain.</p>
2016 – 2017 Financial Year			
7	Extraction of recyclables from landfill and transfer station tipping area	<p>There is a substantial amount of recyclable material being landfilled, as evidenced by an inspection of the region's landfills. This includes metal/aluminium cans/paper/cardboard/plastics/green waste etc. Increased effort in removing bulk materials from general waste. Provide more dedicated areas or bins (MGB) at off-loading points to encourage customers to separate materials prior to the disposal of general waste. Removing the recyclables from general waste (small loads). Existing site staff, when opportunities present, remove easily accessible recyclable materials and place them in bins provided above. Employ additional operational staff (new staff or increased hours for existing staff) to extract additional recyclable materials from disposed waste. Removing recyclables from landfill tipping face (large loads). Use a small excavator with grab attachment to extract larger recyclable materials from the tipping face.</p>	<p>WMWG or RWMC The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 4 hours per month.</p>
8	Improve compliance with landfill Registration and Licence conditions	<p>Although not a waste diversion activity, ensuring compliance with appropriate facility Regulations and Licence conditions is an essential activity.</p>	<p>Individual shires The man-hour allocation would be a function of the degree of effort required to achieve the necessary level of compliance. Allocate 4 hours per month.</p>

9	Improve landfill planning and overall management	<p>Although not a waste diversion activity, it is essential that each shire manage their landfill facilities so as to optimise landfill airspace availability and maximise the utilisation of the landfill site.</p> <p>Medium term (5 years) and long term (+10 years) planning is essential to ensure secure landfill disposal options into the future.</p> <p>To develop a new landfill site is an extremely expensive and time-consuming exercise (provided an appropriate site can be identified).</p>	<p>Individual shires</p> <p>The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 20 hours to develop a plan (one off activity).</p>
10	Regional sharing of waste management equipment	<p>The joint purchase and sharing of waste management equipment such as green waste shredder, small excavator with grab etc.</p> <p>Communal equipment needs to be well managed, accounted for and maintained or else it quickly falls into disrepair.</p>	<p>WMWG or RWMC</p> <p>The man-hour allocation would be a function of the number of pieces of equipment associated with this activity. Allocate 2 hours per month.</p>
11	Investigate benefits for joint tendering	<p>Economies of scale may be achieved by combining waste management contracts into a single tendering exercise. This would primarily relate to a combined regional kerbside waste and recycling tender/contract.</p> <p>The majority of the costs associated with these services are the travel distance and the cost of processing recyclable materials. Neither if these would change between a single contract or multiple contracts. In addition, a single contractor currently provides these individual services to the shires; hence, this single contractor currently has the economy of scale within the individual collection contracts.</p> <p>Combining all of the services into a single tender/contract, may encourage more competition from the waste collection industry and hence, the group may receive more competitive pricing.</p>	<p>WMWG or RWMC</p> <p>Estimated 40 man-hours to develop joint tender(s) and apply for funding, 20 hours to roll out the solutions and then 2 hours per month to manage.</p>

12	Local Governments lead by example	<p>Each shire to lead by example and improve its own internal recycling activities, including sustainable purchasing policies etc.</p> <p>The shires can only expect the community to actively participate in recycling activities if the shires are demonstrating by leading by example.</p> <p>Associated activities start with sustainable purchasing, office comingled recycling, possibly composting of parks and garden waste through to reuse and recycling of road construction materials.</p>	<p>Individual shires</p> <p>No group involvement, man-hours provided by individual shires as part of their normal staffing arrangements.</p>
2017 – 2018 Financial Year			
13	Waste Management Working Group (WMWG) to undertake waste education activities or appointment of a dedicated Regional Waste Education Coordinator (RWEK)	<p>To have the Waste Management Working Group or a dedicated staff member from one of the shires to “champion” waste management education activities to drive public participation in recycling initiatives.</p> <p>If the WMWG did not take on this role, then ideally an existing employee within one of the group member councils be appointed on a part-time basis as the coordinator of regional and local waste management education activities. This person could also be the RWMC; however, combining both activities would require a unique individual and possibly a full time appointment to take on these two roles.</p> <p>Take direction from the WMWG or RWMC.</p> <p>Coordinate waste education activities.</p> <p>Coordinate the development of annual waste management calendars and ensure website information consistency across the region.</p> <p>Generally the same message across the region, but may be some local variants to suit local situations.</p> <p>Work with downstream recyclers to improve the feedstock quality that they receive. Result in cost savings that could be passed back to the region/Local Government or at least an increased willingness to receive the recyclable materials.</p> <p>Work with the WMWG or RWMC to influence community perception/habits to fall inline with regional recycling direction.</p> <p>Encourage local community involvement (Lions Club etc.).</p>	<p>WMWG or RWMC</p> <p>Estimated 20 man-hours to develop a job description and conduct interviews, 4 hours per month to manage the employee.</p>

14	Develop a common website structure for waste management information	<p>Due to all kerbside recycling collection within the region being carried out by a single collection contractor, there can be a common web-based information package that provides information to the community on the “do’s and don’ts” of kerbside recycling.</p> <p>For all other common waste management activities, a common message can be posted on the individual shire websites, or common links to the appropriate location to obtain the necessary information. Consistency of message will assist the community in increased participation in recycling activities.</p>	<p>WMWG or RWEC</p> <p>Estimated 20 man-hours to develop website and 2 hours per month to maintain and update.</p>
15	Develop a regional waste management calendar	<p>Northam as developed a useful waste management calendar in conjunction with the SMRC. This calendar can be modified each year and be used in each shire as the main source of waste management information for the community.</p> <p>The greatest expense associated with the annual calendars will be the printing cost. It is not seen as necessary to provide a hard copy to each household. Electronic copies can be made available on the shire websites. However, there should always be a few hard copies available at the shire officers for those in the community that are not able to access the shire web-based system.</p>	<p>WMWG or RWEC</p> <p>Estimated 20 man-hours per year to develop a group calendar, upload onto website and arrange printing of a few copies for each shire.</p>
16	Improve participation rate in existing recycling systems	<p>No specific targeted activity.</p> <p>Part of continuous improvement of existing systems.</p> <p>Ongoing review of existing systems and improvement as necessary.</p> <p>Continuous community education to increase participation in recycling activities.</p>	<p>WMWG or RWMC or RWEC</p> <p>The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 5 hours per month for each of the two coordinators.</p>
17	Increase the range of materials that can go into the comingled recycling bin	<p>With Avon Waste utilising the SMRC materials recovery facility, there is a wide range of materials that can be recycled, more than the traditional comingled material types. This information need to be disseminated into the community and ongoing education strategies rolled out to ensure that the appropriate materials are placed in the appropriate bins.</p> <p>In future tenders, increase the range of materials in the yellow bin (forced solution) or get a pricing structure for various additional material types (assess the economic viability of increasing the range of materials).</p>	<p>WMWG or RWEC</p> <p>The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 5 hours per month.</p>

18	Increase opportunities for recycling drop off	<p>Provision of recycling bins to householders that are not on the kerbside recycling collection run and enable them to swap a full bin for an empty bin when delivered to the dedicated drop off locations such as transfer station, landfill, shire depot, volunteer recycling facilities etc. The kerbside recycling collection contractor (currently Avon Waste) then empties the MGB's as part of its regular collection run.</p> <p>There will however be a need to manage the number of yellow lidded bins involved in this scheme as there is the likelihood that many bins could simply go missing.</p>	<p>WMWG or RWMC</p> <p>The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 5 hours per month for each of the two coordinators.</p>
2018 – 2019 Financial Year			
19	Green waste diversion from landfill	<p>Green waste is currently recycled in all shires; hence, there is an existing mulching system into which the additional green waste can go.</p> <p>Separate from general waste stream at landfills and transfer station.</p> <p>Separate and mulch - product provided to local residents or council for garden improvement products (as currently occurs).</p> <p>Separate and compost – possible future regional activity.</p>	<p>WMWG or RWMC and RWEC</p> <p>The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 2 hours per month for each of the two coordinators.</p>
20	Develop/improve tip shop facilities	<p>Improve the facilities at existing tip shops to enable an increased range of materials to be displayed for reuse, primarily protection from the elements.</p> <p>Consider developing additional tip shops where the material is available and there is the community to participate in a reuse scheme.</p>	<p>WMWG or RWMC and RWEC</p> <p>The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 40 hours for the WMWG or RWMC to propose solution, raise funding and implement solutions and 2 hours per month for each of the two coordinators.</p>

21	Improve staff training in waste management activities	<p>Knowledge sharing amongst the group. Specific group training for facility operators. Involvements of specialist trainers for specific activities.</p>	<p>RWMC and RWEC The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 2 hours per month for each of the two coordinators.</p>
22	Ongoing community education	<p>Community education is an ongoing activity. The same/similar message needs to be regularly sent out to the community. As recycling activities change or new systems are implemented, there is a need to communicate the desired message to the community.</p>	<p>RWMC and RWEC The man-hour allocation would be a function of the degree of effort applied to this activity. Allocate 2 hours per month for the WMWG or RWMC and 5 hours per month for the WMWG or RWEC.</p>
2019 – 2020 Financial Year			
Continuous improvement and rollout of above activities.			

10.2. Proposed Activity Timing

The proposed activities have been listed in order of priority; however, to provide some guidance on the potential timing of the proposed activities, they have been split into the first four years of the five-year plan, with the last year being available for continuous improvement and to undertake any activities that have been delayed or are lagging behind the proposed timeline.

There are six activities proposed for the each of the first three years, with the remaining four activities in the fourth year. Should the group or individual shires opt not to undertake all of the proposed activities, then the annual workload will be reduced proportionally.

The potential timing of the proposed activities is simply a guide to the group. Following consideration of the proposed activities, the group may change the timing of activities to suit its specific needs.

10.3. Proposed Activity Man-hours

In addition to providing the potential timing for the proposed activities, an estimation of the man-hours required to undertake each activity has also been provided. The actual man-hours required would be a function of the effort put in to each of the activities. The vast majority of the estimated man-hours have been allocated to the Waste Management Working Group, Regional Waste Management Coordinator and/or the Regional Waste Education Coordinator; however, depending on how the individual projects are managed, some of the effort may be passed on to various shire officers involved in the activities; hence, reducing the involvement of the coordinators.

Based on the estimated man-hours, **Table 10.3.1 – Man-hour Summary** provides the annual, accumulated man-hours required to undertake all of the proposed activities.

Table 10.3.1 – Man-hour Summary

Year	WMWG/RWMC	WMWG/RWEC	Shires
2015 – 2016 Financial Year	13.5 days & 9 hrs/month	0 hrs	0 hrs
2016 – 2017 Financial Year	7.5 days & 17 hrs/month	0 hrs	2.5 days & 4 hrs/month
2017 – 2018 Financial Year	2.5 days & 31 hrs/month	5 days & 17 hrs/month	4 hrs/month
2018 – 2019 Financial Year	5 days & 38 hrs/month	2.5 days & 28 hrs/month	4 hrs/month
2019 – 2020 Financial Year	38 hrs/month	2.5 days & 28 hrs/month	4 hrs/month

As can be seen from the above, should the group opt to undertake all of the proposed activities, the Waste Management Working Group the Regional Waste Management Coordinator and/or the Regional Waste Education Coordinator man-hours will steadily increase to approximately 5 days per month and 3.5 days per month respectively. Should the same person undertake both of the roles, it is reasonable that the workload could be carried out in approximately 1.5 weeks per month, as there would be some man-hour savings in communication and management between the two positions.

Although there has been a constant monthly man-hour allocation, it is likely that there will be some spikes in the workload that will require more intense effort for a short period; however, on average, the man-hours should balance out as represented above.

11. Suitable Waste Management Technology

11.1. Waste Management Technology

The waste industry has progressed significantly in recent time in developing a wide range of technologies available to treat or process waste and recyclable materials. These technologies range from simple windrow aerobic composting of organic materials through to elaborate waste to energy solutions, which are able to receive the vast majority of municipal and commercial & industrial (C&I) waste streams.

Typically, the application of any technological solution as a substitute to simple landfilling (the cheapest solution) results in the cost of waste management increasing, often significantly in comparison to landfilling. When considering the option of utilising suitable waste management technologies, the group or an individual council needs to be certain that they have control the waste stream that is proposed to be processed. Without direct control of the waste stream, there is a real chance that as the cost of disposal increases to cover the cost of the new technology, the uncontrolled waste (typically self haul domestic and commercial waste) will go to a cheaper location for disposal, which is usually the next closest landfill facility or transfer station.

Consequently, the group or individual council should only consider processing municipal waste that is collected from the kerbside/verge side and to a lesser degree other municipal waste delivered to landfill by self-haul residents. All other waste will be highly reactive to market forces and simply be diverted to the cheapest disposal location.

The exception being if the technological solution can be implemented at a lesser or equal cost in comparison to landfill disposal fees. Then a similar quantity of incoming waste can be relied on irrespective of its source. There is always the possibility that waste generation habits will change over time; hence, the waste stream is likely to change accordingly.

Based on the above, the group is to be careful when determining what waste stream is proposed for processing.

Processing of municipal waste is a real possibility as the community is usually comfortable to pay a little more for waste disposal in order to achieve a more environmentally friendly solution.

C&I waste is difficult to process and usually costs significantly more than landfill disposal (otherwise commercial operators would currently be processing the material); hence, the associated cost increase is likely to drive the waste elsewhere.

C&D waste is relatively easy to process (sorting and screening) and can potentially be carried out at a similar cost to landfill. The establishment cost of this type of operation is relatively affordable and if it were economically viable based on waste volumes, commercial operators would already be offering this service.

11.2. Available Waste Management Technology

Considering only municipal waste, there are the following available waste processing technologies (not an exhaustive list, but a spread of available technologies):

- Composting:
 - Requires a relatively clean source separated feed stock;
 - A variety of processes – aerobic or anaerobic;
 - Windrow, in-vessel, enclosed;
 - Manual, fully automated;
 - Product quality highly dependent on feedstock quality;
 - Relatively low processing cost; and,
 - Odour management can be an issue.
- Manual sorting of mixed waste streams:
 - Can process mixed waste;
 - Produces a range of sorted products;
 - Mechanical (excavator/loader) sorting for larger items;
 - Manual (hand) sorting for smaller items;
 - Flexible to handle changing waste stream;
 - Slow process, low throughput; and,
 - Relatively low processing cost.
- Mechanical sorting (MRF type solution):
 - Designed based on a defined waste stream;
 - Cost proportional to infrastructure requirements and processing complexities;
 - Sorts predetermined material types;
 - Unable to process general waste;
 - Relatively inflexible to accommodate changing waste stream;
 - High throughput (depending on design); and,
 - Relatively high processing cost.

- Specific Material Processing (eg. E-waste, glass)
 - Requires a single waste stream, either source separated or sorted by one of the above operations;
 - Low process throughput;
 - Dedicated waste stream;
 - Inflexible process (depending on design); and,
 - Cost highly dependent on process.
- Waste to Energy:
 - Range of commercial solutions available;
 - Usually requires large throughput tonnage to make economically viable, but can be developed for site specific solutions;
 - Receives a large range of waste materials;
 - Relatively new technology in Australia and not readily accepted by the environmental regulators (however, this is changing);
 - Community concerns about emissions (more a perception than a real concern with the modern facilities);
 - Expensive processing cost; and,
 - Produces a product (power or energy) that has a ready and reliable market and of high value.

11.3. Way Forward

The selection of the type of waste management technology is highly dependent on the type of waste that the group or individual council is proposing to process. The type of technology should not drive the selection process. The type and quantity of waste needs to be determined and thereafter, the range of suitable processing technologies can be investigated. Typical decision factors include:

- Waste type;
- Waste quantity;
- Control of waste stream;
- Affordability level of processing (upper cost that is palatable);
- Process location (transport, impact on neighbours, space availability, environmental restrictions);
- Likely recyclable product(s);
- Availability of downstream use for recycled product(s);
- Reliability of downstream use for recycled product(s);

- Consequence of losing the downstream customer(s) over the short-term (Global Financial Crisis had a significant influence on the recycling industry for a number of years);
- Business structure (in-house operation or contracted out); and,
- Duration of operation.

The above list of decision factors provides a basic list for the initial consideration of possible technologies. This is not an all inclusive list, as there will be a number of additional factors that will emerge as the options narrow down to the detail of what is being considered or is available.

The primary consideration should be caution about the true cost of implementing a technological solution and the consequences if the costs blowout beyond the reasonable expectation of the group (locked in contract or option to terminate or modify the activity).

Based on the knowledge of the type and quantity of material being managed by the group, any reasonably sized process will require the involvement of the Shire of Northam. With the shire having the majority of the waste material, the facility location will be comparatively closer to Northam than the other shire town sites; hence, the other shires will have the added expense of the additional transport cost to consider.

With the current stage of development of the waste management activities within the group, it is deemed premature to consider involvement in any substantial waste processing technology. The preference at this stage would be to concentrate on improving waste diversion from landfill through small, affordable steps before the group ventures out into larger scale and costly solutions.

In time, if there is real progress achieved within the group in maximising small-scale waste diversion, then there is the opportunity to expand the group's horizons to include the more advanced waste technologies.

12. Regional Waste Strategic Plan 2015 - 2020

12.1. Vision

The AROC group of councils will strive to maximise waste diversion from landfill in an efficient, cost effective and environmentally sustainable manner.

12.2. Priority Areas

Based on the review of the group's previous SWMP's and the progress achieved within the group, the following are considered the group's priority areas:

- Waste management activity coordination and leadership
- Data collection
- Existing recycling activities
- Additional recycling activities
- Landfill management
- Community education
- Increased participation in recycling activities.

12.3. Priority Wastes

Based on the above priority areas, the following are the group's priority wastes:

- Comingled recyclables waste
- Household Hazardous Waste
- E-Waste
- Landfilled Waste
- Organic waste (primarily green waste).

12.4. Regional Synergies

Table 12.4.1 – Regional Synergies lists the potential synergies between the group participants during the 2015 to 2020 validity period of the Strategic Waste Management Plan.

Table 12.4.1 – Regional Synergies

No.	Activity	Synergy
1	Kerbside waste and recycling collection	Joint contracts
2	Bulk verge collection	Joint contracts
3	Waste disposal	Knowledge sharing
4	Recycling management	Knowledge sharing
5	Drop-off facilities	Knowledge sharing
6	Minor recycling activities	Joint operation/Joint contracts
7	Equipment sharing	Joint utilisation

The majority of the synergies come with the ability to contract out larger operations than would be possible for the individual councils. This would initially revolve around transport (collection) efficiencies, but in time progress to materials processing activities.

There is also the opportunity for the individual councils to operated their own facilities (landfill/drop-off/transfer station) while sharing knowledge and experiences (through the Regional Waste Management Officer) to improve the standard of facility operation and encourage continuous improvement.

12.5. Proposed Activities

Table 12.5.1 – Proposed Activities 2015 to 2020 provides a list of the proposed activities for the duration of this Plan. The activities are listed in the order of priority.

Table 12.5.1 – Proposed Activities 2015 to 2020

No.	Proposed Activity
2015 – 2016 Financial Year	
1	Establish a Waste Management Working Group within AROC or appointment of a dedicated Regional Waste Management Coordinator
2	Knowledge sharing within the region
3	Improve systems for the collection and recording of waste management data
4	Investigate and implement improvements to existing recycling systems
5	Improve/implement Hazardous Household Waste drop off facilities
6	Review of disposal facility gate fee structure
2016 – 2017 Financial Year	
7	Extraction of recyclables from landfill and transfer station tipping area
8	Improve compliance with landfill Registration and Licence conditions
9	Improve landfill planning and overall management
10	Regional sharing of waste management equipment
11	Investigate benefits for joint tendering
12	Local Governments lead by example
2017 – 2018 Financial Year	
13	Waste Management Working Group to undertake waste education activities or appointment of a dedicated Regional Waste Education Coordinator
14	Develop a common website structure for waste management information
15	Develop a regional waste management calendar
16	Improve participation rates in existing recycling systems
17	Increase the range of materials that can go into the comingled recycling bin
18	Increase opportunities for recycling drop off
2018 – 2019 Financial Year	
19	Green waste diversion from landfill
20	Develop/improve tip shop facilities
21	Improve staff training in waste management activities
22	Ongoing community education
2019 – 2020 Financial Year	
Continuous improvement and rollout of above activities	

Section 10, Table 10.1 - Proposed Activities – 2015 to 2020 above provides detail on the breakdown of the individual proposed activities.

12.6. Sustainable Waste Management Technologies

With the group having numerous “grass roots” proposed activities to be undertaken during the 2015 to 2020 period, the preference is to actively pursue these basic activities before embarking on the more technologically advanced process.

The group is to use this period to firmly establish the regional cooperation between the participants and implement effective waste management operations and shared contracts/activities prior to considering the more advanced technology solutions.

12.7. Funding

The individual group participants will require political and financial support from their individual councils in order to achieve noticeable improvements in waste management activities within the shires and the region. This support is essential for the future success of the group’s proposed activities.

As a regional grouping of Local Governments and being located within one of the Waste Authority identified major regional centres (Avon), there is the opportunity to access significant funding from the Waste Authority to implement some of the proposed activities, so long as the activities are in line with the Waste Authority strategic direction.

The group is to actively pursue available funding sources to supplement the financial contributions from individual member councils.

12.8. Review

This Strategic Plan sets out the group’s proposed activities for the period 2015 to 2020. In order to achieve this it is essential that this Strategic Waste Management Plan be regularly reviewed.

The review is primarily to gauge the group’s actual achievement against the proposed activities to provide direction as to where the necessary effort is required in order to achieve the desired outcomes by the end of the Plan validity period.

A secondary component of the review is to assess the validity of the Strategic Waste Management Plan direction in comparison to the group’s and the Waste Authority’s direction. It is acknowledged that during the five-year validity period of this Plan, there is the possibility that some aspects of this Plan may lose relevance and may need to be amended to suit the latest group or Waste Authority direction.

As a minimum, this Plan should be reviewed on an annual basis, with a summary review presented to a quarterly group meeting.