City of Busselton
Geographe Bay

Council Agenda

12 December 2018

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city@busselton.wa.gov.au

CITY OF BUSSELTON

MEETING NOTICE AND AGENDA – 12 DECEMBER 2018

TO: **THE MAYOR AND COUNCILLORS**

NOTICE is given that a meeting of the Council will be held in the Council Chambers, Administration Building, Southern Drive, Busselton on Wednesday, 12 December 2018, commencing at 5.30pm.

Your attendance is respectfully requested.

DISCLAIMER

Statements or decisions made at Council meetings or briefings should not be relied on (or acted upon) by an applicant or any other person or entity until subsequent written notification has been given by or received from the City of Busselton. Without derogating from the generality of the above, approval of planning applications and building permits and acceptance of tenders and quotations will only become effective once written notice to that effect has been given to relevant parties. The City of Busselton expressly disclaims any liability for any loss arising from any person or body relying on any statement or decision made during a Council meeting or briefing.



MIKE ARCHER

CHIEF EXECUTIVE OFFICER

3 December 2018

CITY OF BUSSELTON

AGENDA FOR THE COUNCIL MEETING TO BE HELD ON 12 DECEMBER 2018

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1. DECLARATION OF OPENING AND ANNOUNCEMENT OF VISITORS

2. ATTENDANCE

Apologies

Approved Leave of Absence

Cr Grant Henley

3. PRAYER

4. APPLICATION FOR LEAVE OF ABSENCE

5. DISCLOSURE OF INTERESTS

6. ANNOUNCEMENTS WITHOUT DISCUSSION

Announcements by the Presiding Member

7. QUESTION TIME FOR PUBLIC

Response to Previous Questions Taken on Notice

Public Question Time For Public

8. CONFIRMATION AND RECEIPT OF MINUTES

Previous Council Meetings

8.1 Minutes of the Council Meeting held 28 November 2018

RECOMMENDATION

That the Minutes of the Council Meeting held 28 November 2018 be confirmed as a true and correct record.

Committee Meetings

8.2 Minutes of the Policy and Legislation Committee Meeing held 27 November 2018

RECOMMENDATION

That the Minutes of the Policy and Legislation Committee Meeing held 27 November 2018 be noted.

9. RECEIVING OF PETITIONS, PRESENTATIONS AND DEPUTATIONS

Petitions

Presentations

Deputations

10. QUESTIONS BY MEMBERS OF WHICH DUE NOTICE HAS BEEN GIVEN (WITHOUT DISCUSSION)

11. ITEMS BROUGHT FORWARD FOR THE CONVENIENCE OF THOSE IN THE PUBLIC GALLERY

12. REPORTS OF COMMITTEE

12.1 Policy and Legislation Committee - 27/11/2018 - NAMING OF PLACES POLICY REVIEW

SUBJECT INDEX:	Policy Review
STRATEGIC OBJECTIVE:	Attractive parks and open spaces that create opportunities for people to come together, socialise and enjoy a range of activities.
BUSINESS UNIT:	Community Development
ACTIVITY UNIT:	Community Development
REPORTING OFFICER:	Community Development Coordinator - Vicki James
AUTHORISING OFFICER:	Director, Community and Commercial Services – Naomi Searle
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Proposed Naming of City Roads and Assets Policy ⇩ Attachment B Current Naming of Parks, Gardens, Memorials, Sports Grounds Council Policy 237⇩ Attachment C Current Street Names Policy 141 ⇩ Attachment D Proposed Naming of City Roads and Assets Policy - Committee ⇩

This item was considered by the Policy and Legislation Committee at its meeting on 27 November 2018, the recommendations from which have been included in this report.

PRÉCIS

The purpose of this report is to present a revised Naming of City Parks, Gardens, Reserves, Memorials, Sports Grounds and Buildings Policy, with the current policy (Attachment B) having been amended as part of the City's overall review of its Council policies, having regard to the recommendations of the Governance System Review (GSR) carried out by Mr John Woodhouse in 2017.

The new policy includes some minor updates to the current policy, as well as the inclusion of aspects of the Street Names Policy (Attachment C). It is considered that the Street Names Policy can be rescinded upon adoption of the proposed new policy; to be renamed Naming of City Roads and Assets (Attachment A) (the Policy).

BACKGROUND

In 2007, a report was presented to Council to adopt a policy that established clearly defined guidelines and selection criteria for the naming of City owned and managed facilities. The Council resolved (C0702/038) that Policy 237 "Naming of Parks, Gardens, Reserves, Memorials, Sports Grounds and Building" be adopted.

The adopted policy specifically dealt with any proposal for a facility or part thereof to be named after a person. On the 25 July 2012 a recommendation was made to Council to review this policy to include reference to the consideration of geographical and purpose driven names. The Council resolved (C1207/197) to adopt the updated policy.

On the 14 June 2017 a recommendation was made to Council to review the policy and specifically to delete a clause requiring a proposal be advertised for public comment for a 30 day period following its receipt. The Council resolved (C1706/126) to adopt the updated policy.

The Policy has now been amended with some minor updates as well as the inclusion of key aspects of the Street Names Policy, allowing that policy to be rescinded, and contributing to a more streamlined policy framework.

STATUTORY ENVIRONMENT

In accordance with Section 2.7(2)(b) of the Local Government Act 1995 it is the role of the Council to determine the local governments policies. The Council does this on recommendation of a Committee it has established in accordance with Section 5.8 of that Act.

RELEVANT PLANS AND POLICIES

In August 2017 the CEO commissioned a high level independent review of the City's governance systems - the GSR. Included in the scope of the review was the City's policy and procedure framework with the following recommendations made:

1. *There should be a review of the Council Policies with the intent that a Council Policy:*
    a. *Should deal with higher level objectives and strategies;*
    b. *Should not deal with operational matters, employee matters, or other matters which are the responsibility of the CEO; and*
    c. *Should, where appropriate provide sufficient direction to the CEO to develop OPPs which deal with the implementation of the Council Policy or other detailed matters.*
2. *As part of that review, any existing Council Policy should be deleted where it could, more sensibly, be dealt with by an OPP adopted by the CEO.*
3. *Consideration should be given to developing a new Council Policy which sets out the 'framework' for Council Policies, OPPs and other procedures. The new Policy would explain the role to be played by each level of document. It could, for example, be called a Policy Framework Policy.*

In response a Policy Framework has been developed and endorsed by Council, setting out the intent of Council policies, as opposed to operational documents such as Staff Management Practices and operational procedures, and a Council policy template developed.

The Policy aligns with this framework and adopted template.

The Policies and Standards for Geographical Naming in Western Australia is a relevant policy. The Geographic Names Committee, an appointed advisory committee, utilises the Landgate Policies and Standards for Geographical Naming in Western Australia, (version 01:2017) in regards to geographical naming issues.

FINANCIAL IMPLICATIONS

Adoption of the Policy has no financial implications.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

Adoption of the Policy has no long term financial plan implications

STRATEGIC COMMUNITY OBJECTIVES

The Policy aligns with and supports the Council's Key Goal Area 6 - 'Leadership' and more specifically, Community Objective 6.1 Governance systems, process and practices are responsible, ethical and transparent.

RISK ASSESSMENT

There are no risks identified of a medium or greater level associated with the Officers recommendation, with the Policy reiterating and maintaining Council's current direction for the naming of parks, gardens, reserves, memorials, sports grounds and buildings and naming of roads.

CONSULTATION

No external consultation is required in relation to this policy review.

OFFICER COMMENT

The Policy has been reviewed and the following minor changes have been incorporated:

1. Minor amendments to wording and reformatting of paragraphs throughout for the purposes of clarity;
2. The inclusion of aspects of the current Street Names Policy, which provides guidelines and criteria for the naming of City Roads; and
3. More detailed reference to the Geographic Names Committee (GNC) guidelines, including the provision that the naming guidelines as set out in Policies and Standards for Geographic Naming in Western Australia will be adhered to.

The proposed amendments aligns the Policy with the high level objectives and strategy of the GSR.

CONCLUSION

Officers consider that the current policy in relation to the naming of key infrastructure assets has been operating efficiently and effectively since adoption, with the recommended changes and inclusions contained in the Policy aimed at improving guidance and streamlining the policy framework.

With respect to the Street Names Policy, officers feel that by combining key aspects of this into the Policy, the Street Names Policy can be rescinded.

OPTIONS

The Council could choose not to endorse the Policy, or make additional changes to the Policy.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

The Policy would be effective immediately upon endorsement by Council.

OFFICER RECOMMENDATION

That the Council

1. Endorse the revised Council Policy – Naming of City Roads and Assets as shown in Attachment A to replace the Council Policy Naming of Parks, Gardens, Reserves, Memorials, Sports Grounds and Buildings (Attachment B).
2. Rescind the Street Names Policy (Attachment C) upon adoption of the Naming of City Roads and Assets Policy.

COMMITTEE RECOMMENDATION

That the Council

1. Endorse the revised Council Policy – Naming of City Roads and Assets as shown in Attachment A to replace the Council Policy Naming of Parks, Gardens, Reserves, Memorials, Sports Grounds and Buildings (Attachment B) with the inclusions as shown in Attachment D:

    - add “subject to 5.11b” to the end of paragraph 5.10
    - removing the word “significant” from the definition under section 3 - City Asset
    - the word Indigenous being amended to Aboriginal in paragraph 5.4
    - removing word ‘must’ in 5.13 and adding must to the beginning of 5.13a and 5.13c
    - writing GNC in full in paragraph 5.14

2. Rescind the Street Names Policy (Attachment C) upon adoption of the Naming of City Roads and Assets Policy.

Reason: The Committee felt that the amendments would make the proposed policy more consistent and clear.

COUNCIL POLICY

City of Busselton

Council Policy Name: Naming of City Roads and Assets

Responsible Directorate: Community and Commercial Services Version: Proposed

1. PURPOSE

1.1. The purpose of this Policy is to assist Council to appropriately assess proposals to name a City Road or City Asset.

2. SCOPE

2.1. This Policy applies to the naming of City Roads and City Assets, inclusive of the entire asset or specific portion/s of it, which require a determination for naming.

3. DEFINITIONS

Term	Meaning
City Asset	Any park, garden, reserve, memorial, sporting ground or building or other significant infrastructure asset owned or under the care, control or management of the City of Busselton
City Road	Any road or variation of road, including street, place, boulevard, etc.
Policy	This City of Busselton Council Policy entitled "Naming of City Roads and Assets"

4. STRATEGIC CONTEXT

4.1. This Policy links to Key Goal Area 2 – Places and Spaces of the City's Strategic Community Plan 2017 and specifically the following Community Objective - 2.2, 'Attractive parks and open spaces that create opportunity for people to come together, socialise and enjoy a range of activities'.

5. POLICY STATEMENT

Naming Considerations

5.1. Council may consider naming a City asset in honour of persons considered to be pioneers, persons who have made an outstanding humanitarian contribution or who, in the opinion of the council, are worthy of such an honour. This may also be in acknowledgment of events of historical, environmental or cultural significance or collective community action.

5.2. Where personal names are used, the person commemorated should preferably be recognised in memoriam.

5.3. To facilitate ease of geographical identification and identification of purpose, where possible a locality name and purpose should be associated with the naming of a City Asset, even when it is determined that an honorary name will be applied.

5.4. In general terms, naming should use the form, spelling and style of contemporary Australian English or a recognised Australian Indigenous language local to the area of the feature.

5.5. Where applicable, naming guidelines as set out in Policies and Standards for Geographic Naming in Western Australia will be adhered to. The City must apply to Landgate for the naming of City Roads.

5.6. Renaming will only occur in an extraordinary case or where a name is no longer deemed appropriate.

5.7. The use of Aboriginal names and words for naming features are a way of recognising the different enduring cultural and language groups. Names originating from an Australian Aboriginal language local to the area must be written in a standard recognised format and their use shall be endorsed by the recognised local community. Evidence of this endorsement must be included with the naming proposal.

5.8. A proposal to name a City Asset can be put forward to Council for consideration by:
   a. a Councillor by way of a notice of motion;
   b. an employee by way of a report to Council;
   c. a member of the public by making a submission to the CEO; or
   d. users of a facility by making a submission to the CEO.

5.9. Any proposal to name a City Asset will include:
   a. details of the proposed City Asset to be named;
   b. proposed name; and
   c. justification for the proposal.

5.10. Through its consideration Council may endorse the name or determine that the proposal requires further community consultation.

Criteria for Assessment for Personal Recognition

5.11. A request to name a City Asset after a person shall be assessed against the following criteria:
   a. whether the person being honoured has been instrumental in the development of the City Asset or activities to be undertaken or contributed in a significant way to the City Asset;
   b. the views of the community with respect to honouring the person or event after which the City Asset is proposed to be named;
   c. the length of residency of the person proposed. For the purposes of guidance, residency of ten (10) years or more in a relevant location is likely to qualify a person for further consideration;
   d. the contribution made by the person to the local community through areas such as education, representation on Council or another level of government, volunteering, association with local sporting or service club or through business development. A significant contribution could include:
      i. two (2) or more terms of office on the local government Council;
      ii. twenty (20) or more years association with a local community, sporting or service club;
      iii. action by an individual to protect, restore, enhance or maintain an area that produces substantial long-term improvements for the community of area; or
      iv. evidence of works undertaken being of a pioneering nature for the benefit of the community.

Policies and Standards for Geographic Naming in Western Australia

5.12. The established guidelines provide, among other things, that:
   a. names should not be a duplication (within 50km radius of each other);
   b. inappropriate names should not be used including but not limited to:
      i. obscene, derogatory, racist or discriminatory names;
      ii. incongruous names; and
      iii. company or commercial names.
   c. preferred sources of names include:

i. Aboriginal names;
ii. pioneers, early settlers, war casualty lists; and
iii. thematic names, including flora, ships, etc.

5.13. In addition, the naming of City Roads or City Assets must:
a. not risk public and operational safety for emergency responders, or cause confusion for transport, communication and mail services;
b. should be reasonably easy to read, spell and pronounce; and
c. avoid a duplication of names which are spelt or pronounced the same or similar within the Council area.

5.14. The City maintains an approved list of City Road names and any application for a name that does not appear on the approved list, must include supporting documentation / justification prior to the City forwarding complying proposals to the GNC.

5.15. The City may, in certain special circumstances, support an application for naming of a City Road that departs from the Policies and Standards for Geographic Naming in Western Australia. Such a proposal must:
a. demonstrate exceptional circumstances warranting special consideration;
b. be considered to be particularly beneficial for the District;
c. have great significance which may be lost without the use of the proposed City Road name; and
d. have significant community support for the proposal.

6. RELATED DOCUMENTATION / LEGISLATION

6.1. Landgate Policies and Standards for Geographical Naming in Western Australia (V 01:2017)
6.2. Land Administration Act 1997
6.3. Land Information Authority Regulations 2007
6.4. Australian Standard AS/NZS 4819:2001 Rural and urban addressing

7. REVIEW DETAILS

Review Frequency		3 yearly		
Council Adoption	**DATE**		**Resolution #**	
Previous Adoption	**DATE**	14 June 2017	**Resolution #**	C1706/126

Last updated 14/06/2017

237	Naming of Parks, Gardens, Reserves, Memorials, Sports Grounds and Buildings	V3 Current

PURPOSE

With the development of community assets such as parks, gardens, reserves, memorials, sports grounds and buildings or other significant infrastructure assets also comes the important consideration of naming both the entire facility and certain aspects of it, such as a specific room or court. In considering naming these facilities it is often the desire of Council or sectors of the community to recognise the achievements and/or past community efforts of certain community pioneers, long term residents or significant other events of historical, environmental or cultural significance or a collective community action. This policy and associated procedure will assist Council to appropriately deal with and assess any future proposal to name a City Asset.

SCOPE

Definition

This policy applies in respect of any proposal to name a park, garden, reserve, memorial, sports ground and building or other significant infrastructure asset owned by or under the care, control or management of the City of Busselton (hereinafter referred to as a "City Asset").

Examples

To be used when a significant new community building such as a Performing Arts Centre or Community Centre; or a new park or sports ground is established and ready for use.

POLICY CONTENT

Naming Considerations

When developing and naming a community facility, it is usual for a name that demonstrates both the geographical location and the purpose of the facility to be considered.

In addition, and where appropriate, the Council of the City may consider naming a City asset in honour of persons considered to be pioneers, persons who have made an outstanding humanitarian contribution or who, in the opinion of the Council, are worthy of such an honour. This may also be in acknowledgement of events of historical, environmental or cultural significance or a collective community action.

To facilitate ease of geographic identification and identification of the facility's purpose, where possible a locality name and purpose should be considered to be associated with the naming of a City asset, even when it is determined that an honorary name will be applied.

Specific Inclusions

- This policy will also apply to proposals for the naming of defined portions of reserves specifically developed for particular sports.
- Where applicable naming guidelines set down by the State's Geographic Names Committee will be adhered to.
- Where a facility is substantially changed in nature, as a consequence of demolition, re-subdivision or significant enhancement or the like, renaming may be considered.

PROCEDURE

A proposal to name a City Asset can be put forward for Council consideration by a councillor by a notice of motion, an employee via a report to Council, a member of the public or users of a facility without requiring formal public consultation

Any proposal to name a City Asset will include:

* Details of the proposed park, garden, reserve, memorial, sports ground, building or other infrastructure asset;
* Proposed new name;
* Justification for the proposal.

Through its' consideration Council may endorse the name or determine that the matter requires further consultation.

CRITERIA FOR ASSESSMENT FOR PERSONAL RECOGNITION

A request to name a City asset after a person shall be assessed against the following criteria:

1. Whether the person being honoured has been instrumental in the development of the City asset or activities to be undertaken or contributed in a significant way to the City asset.
2. The views of the community with respect to honouring the person or event after which the City asset is proposed to be named.
3. The length of the residency of the person proposed. For the purposes of guidance, residency of ten (10) years or more in a relevant location is likely to qualify a person for further consideration.
4. The contribution made by the person to the local community through education, representation on Council, the State Government, voluntary input, association with a local sporting or service club or through business development or the like. A significant contribution could include:

   (i) Two or more terms of office on the local government council;or

   (ii) Twenty (20) or more years association with a local community or sporting group; or

(iii) Actions by an individual to protect, restore, enhance, or maintain an area that produces substantial long-term improvements for the community or area; or

(iv) Evidence of works undertaken being of a pioneering nature for the benefit of the community.

All requests to name a City asset in acknowledgement of events of historical, environmental or cultural significance or a collective community action shall be assessed against the following criteria:

1. Date and details of the event or activities of environmentalsignificance.

2. Historical and/or media records of the event.

3. Evidence of community involvement and/or community significance and spirit, if relevant.

Policy Background

Policy Reference No. - 237
Owner Unit – Community Development
Originator – Manager, Community Development
Policy approved by – Council 14 June 2017
Review Frequency – As required

History

Council Resolution	Date	Information
C1706/126	14 June 2017	
C1207/197	25 July, 2012	Incorporation of consideration of geographical and purpose names for facilities Version 2
C0702/038	28 February, 2007	Date of implementation Version 1

Last updated 08/04/2015

141	Street Names	V3 Current

1. PURPOSE

In naming new streets or renaming existing streets, the City must apply to the Geographic Names Committee (GNC) for approval. The GNC has established guidelines as to acceptable naming or renaming proposals. This policy sets out the special circumstances by which a non-complying naming or renaming proposal may be considered for application to the GNC.

2. SCOPE

The policy applies to all new streets or existing streets in the City of Busselton and includes all variations of street (such as road, place, boulevard etc).

3. POLICY CONTENT

The established GNC criteria provides that:

- Names should not be a duplication of an existing name.
- Names of living individuals are not normally suitable.
- Names characterised as follows are usually inappropriate:
  - Incongruous names
  - Christian names
  - Christian and surname combinations
  - Corrupted names
  - Unduly cumbersome or difficult to pronounce names
  - Obscene or derogatory names
  - Racist or discriminatory names
  - Company or commercialised names

Preferred sources of names include:

- Aboriginal names
- Pioneers, early settlers, war casualty lists
- Thematic names, e.g. flora, ships, etc.

The City maintains an approved list of names and any application for a street name that does not appear on the approved list is to include supporting explanation and history of the proposal. Complying proposals will be forwarded to the GNC.

In certain special circumstances, a departure from the criteria may be supported for application to the GNC for approval. In order for a proposal for a street name that does not comply with the criteria to be supported the proposal must display one or more of the following:

- The naming proposal demonstrates exceptional circumstances warranting special consideration;
- The proposal is considered to be particularly beneficial for the District;
- The proposed non-complying name has great significance, the significance of which would be lost without using the proposed name;
- There is significant community support for the proposal.

Council approval is required and non-complying name proposals, except those that are obscene or derogatory, racist or discriminatory, shall be referred to Council for consideration. Any approval provided by the Council must still be endorsed by the GNC to take effect.

Document Set ID: 2384039
Version: 1, Version Date: 09/04/2015

Last updated 08/04/2015

Policy Background

Policy Reference No - 141
Owner Unit - Infrastructure Development
Originator - Manager, Governance Services
Policy approved by - Council
Date approved -
Review frequency - as required

History

Council Resolution	Date	Information
C1504/081	8 April, 2015	Version 3
C1012/414	8 December, 2010	Clarification as to circumstances when a non-complying proposal will be considered Version 2
		Version 1

Document Set ID: 2384039
Version: 1, Version Date: 09/04/2015

COUNCIL POLICY

City of Busselton

Council Policy Name: Naming of City Roads and Assets

Responsible Directorate: Community and Commercial Services Version: Draft

1. PURPOSE

1.1. The purpose of this Policy is to assist Council to appropriately deal with and assess proposals to name a City Road or City Asset.

2. SCOPE

2.1. This Policy applies to the naming of City Roads and City Assets, inclusive of the entire asset or specific portion/s of it, which require a determination for naming.

3. DEFINITIONS

Term	Meaning
City Asset	Any park, garden, reserve, memorial, sporting ground or building or other infrastructure asset owned or under the care, control or management of the City of Busselton
City Road	Any Road or variation of Road, including street, place, boulevard, etc.
Policy	This City of Busselton Council Policy entitled "Naming of City Roads and Assets"

4. STRATEGIC CONTEXT

4.1. This Policy links to Key Goal Area 2 – Places and Spaces of the City's Strategic Community Plan 2017 and specifically the following Community Objective - 2.2, 'Attractive parks and open spaces that create opportunity for people to come together, socialise and enjoy a range of activities'.

5. POLICY STATEMENT

Naming Considerations

5.1. Council may consider naming a City Asset in honour of persons considered to be pioneers, persons who have made an outstanding humanitarian contribution or who, in the opinion of the Council, are worthy of such an honour. This may also be in acknowledgment of events of historical, environmental or cultural significance or collective community action.

5.2. Where personal names are used, the person commemorated should preferably be recognised in memoriam.

5.3. To facilitate ease of geographical identification and identification of purpose, where possible a locality name and purpose should be associated with the naming of a City Asset, even when it is determined that an honorary name will be applied.

5.4. In general terms, naming should use the form, spelling and style of contemporary Australian English or a recognised Australian Aboriginal language local to the area of the feature.

5.5. Where applicable and always in the first instance, naming guidelines as set out in Policies and Standards for Geographic Naming in Western Australia will be adhered to. The City must apply to Landgate for the naming of City Roads.

5.6. Renaming will only occur in an extraordinary case or where a name is no longer deemed appropriate.

5.7. The use of Aboriginal names and words for naming features are a way of recognising the different enduring cultural and language groups. Names originating from an Australian Aboriginal language local to the area must be written in a standard recognised format and their use shall be endorsed by the recognised local community. Evidence of this endorsement must be included with the naming proposal.

5.8. A proposal to name a significant City asset can be put forward to Council for consideration by:
   a. a Councillor by way of a notice of motion;
   b. an employee via a report to Council;
   c. a member of the public via a submission to the CEO; or
   d. users of a facility via a submission to the CEO.

5.9. Any proposal to name a significant City Asset will include:
   a. details of the proposed City Asset to be named;
   b. proposed name; and
   c. justification for the proposal.

5.10. Through its consideration Council may endorse the name or determine that the proposal requires further community consultation, subject to paragraph 5.11b.

Criteria for Assessment for Personal Recognition

5.11. A request to name a City Asset after a person shall be assessed against the following criteria:
   a. whether the person being honoured has been instrumental in the development of the City asset or activities to be undertaken or contributed in a significant way to the City asset;
   b. the views of the community with respect to honouring the person or event after which the City asset is proposed to be named;
   c. the length of residency of the person proposed. For the purposes of guidance, residency of ten (10) years or more in a relevant location is likely to qualify a person for further consideration;
   d. the contribution made by the person to the local community through areas such as education, representation on Council or another level of government, volunteering, association with local sporting or service club or through business development. A significant contribution could include:
      i. two (2) or more terms of office on the local government Council;
      ii. twenty (20) or more years association with a local community, sporting or service club;
      iii. action by an individual to protect, restore, enhance or maintain an area that produces substantial long-term improvements for the community of area; or
      iv. evidence of works undertaken being of a pioneering nature for the benefit of the community.

Policies and Standards for Geographic Naming in Western Australia

5.12. The established guidelines provide, among other things, that:
   a. names should not be a duplication (within 50km radius of each other);
   b. inappropriate names should not be used including but are not limited to:
      i. obscene, derogatory, racist or discriminatory names;
      ii. incongruous names; and
      iii. company or commercial names.
   c. preferred sources of names include:

i. Aboriginal names;
ii. pioneers, early settlers, war casualty lists; and
iii. thematic names, including flora, ships, etc.

5.13. In addition, the naming of City Roads or City Assets:
a. must not risk public and operational safety for emergency responders, or cause confusion for transport, communication and mail services;
b. should be reasonably easy to read, spell and pronounce; and
c. must avoid a duplication of names which are spelt or pronounced the same or similar within the Council area.

5.14. The City maintains an approved list of City Road names and any application for a name that does not appear on the approved list, must include supporting documentation / justification prior to the City forwarding complying proposals to the Geographical Naming Committee (GNC).

5.15. The City may, in certain special circumstances, support an application for naming of a City Road that departs from the Policies and Standards for Geographic Naming in Western Australia GNC guidelines. A proposal that departs from the GNC guidelines must:
a. demonstrate exceptional circumstances warranting special consideration;
b. be considered to be particularly beneficial for the District;
c. have great significance which may be lost without the use of the proposed City Road name; and
d. have significant community support for the proposal.

6. RELATED DOCUMENTATION / LEGISLATION

6.1. Landgate Policies and Standards for Geographical Naming in Western Australia (V 01:2017)
6.2. Land Administration Act 1997
6.3. Land Information Authority Regulations 2007
6.4. Australian Standard AS/NZS 4819:2001 Rural and urban addressing
6.5. Names covered by other legislation or regulations

7. REVIEW DETAILS

Review Frequency		3 yearly		
Council Adoption	**DATE**		**Resolution #**	
Previous Adoption	**DATE**	14 June 2017	**Resolution #**	C1706/126

12.2 Policy and Legislation Committee - 27/11/2018 - REVISED COUNCIL POLICY: RANGER AND EMERGENCY SERVICES APPROACH TO REGULATORY FUNCTIONS

SUBJECT INDEX:	Policy, Procedures and Manuals
STRATEGIC OBJECTIVE:	Governance systems, process and practices are responsible, ethical and transparent.
BUSINESS UNIT:	Environmental Services
ACTIVITY UNIT:	Ranger and Emergency Services
REPORTING OFFICER:	Ranger & Emergency Services Coordinator - Ian McDowell
AUTHORISING OFFICER:	Director, Planning and Development Services - Paul Needham
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Proposed Policy - Ranger and Emergency Services Approach to Regulatory Functions ⇩ Attachment B Current Policy - Ranger & Emergency Services Approach to Regulatory Functions ⇩

This item was considered by the Policy and Legislation Committee at its meeting on 27 November 2018, the recommendations from which have been included in this report.

PRÉCIS

This report presents a revised Ranger and Emergency Services Approach to Regulatory Functions Policy (Attachment A) (the Policy) for Council approval, with the current policy (Attachment B) having been amended with regard to the recommendations of the Governance System Review (GSR) carried out by Mr John Woodhouse in 2017.

The Policy, which has been moved into the new policy template and refined, is considered to be of continuing relevance and importance and is therefore recommended for Council approval.

BACKGROUND

The current policy was adopted by the Council in June 2013 and reviewed again in October 2017 (C1710/243) in line with the scheduled policy review.

Following a recent review of the Staff Management Practice (SMP) in dealing with the operational application of the policy, it was deemed appropriate by staff to again review the policy and to move it to the current policy template.

STATUTORY ENVIRONMENT

In accordance with section 27(2)(b) of the *Local Government Act 1995* (the Act), it is the role of the Council to determine the local government's policies. The Council does this on the recommendation of a Committee it has established, the Policy and Legislation Committee, in accordance with section 5.8 of the Act.

RELEVANT PLANS AND POLICIES

In August 2017 the CEO commissioned a high level independent review of the City's governance systems - the GSR. Included in the scope of the review was the City's policy and procedure framework with the following recommendations made:

1. *There should be a review of the Council Policies with the intent that a Council Policy:*
    a. *Should deal with higher level objectives and strategies;*
    b. *Should not deal with operational matters, employee matters, or other matters which are the responsibility if the CEO; and*
    c. *Should, where appropriate provide sufficient direction to the CEO to develop OPPs which deal with the implementation of the Council Policy or other detailed matters.*
2. *As part of that review, any existing Council Policy should be deleted where it could, more sensibly, be dealt with by an OPP adopted by the CEO.*
3. *Consideration should be given to developing a new Council Policy which sets out the 'framework' for Council Policies, OPPs and other procedures. The new Policy would explain the role to be played by each level of document. It could, for example, be called a Policy Framework Policy.*

In response a Policy Framework has been developed and endorsed by Council, setting out the intent of Council policies, as opposed to operational documents such as Staff Management Practices and operational procedures, and a Council policy template developed. The Policy adheres to this framework and template.

The Policy supplements and supports the Compliance Policy adopted by the Council in September 2018 (C1809/182).

FINANCIAL IMPLICATIONS

There are no financial implications associated with the Officer Recommendation.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

There are no long-term financial plan implications associated with the Officer Recommendation.

STRATEGIC COMMUNITY OBJECTIVES

The Policy links to Key Goal Area 6 of the City's Strategic Community Plan 2017 and specifically the Community Objective 6.1: Governance systems, process and practices are responsible, ethical and transparent.

RISK ASSESSMENT

There are no risks identified of a medium or greater level associated with the Officer Recommendation.

CONSULTATION

No specific consultation was undertaken in relation to the Policy.

OFFICER COMMENT

Following a review of the SMP in relation to the Ranger and Emergency Services Approach to Regulatory Functions, it was deemed appropriate by staff to carry out a review of the Council policy relating to the same matter.

The current policy contains a level of information considered more operational in nature and as such, has been revised. Specifically, the objectives and statements of intent relative to each individual piece of legislation have been removed from the Policy but retained in the SMP.

The Policy provides higher level objectives and strategies relating to the City's overall approach to its regulatory functions, regardless of the legislation that is being enforced.

CONCLUSION

The Policy updates the current Ranger and Emergency Services Approach to Regulatory Functions and in doing so, continues to provide for a transparent, consistent, accountable and respectful approach to the exercising of regulatory function by Ranger and Emergency Services. It is recommended that the Policy is approved by Council.

OPTIONS

The Council may choose not to adopt the Policy and instead choose to amend or reject the Policy.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

The Policy would be effective immediately upon approval by Council.

COMMITTEE RECOMMENDATION AND OFFICER RECOMMENDATION

That the Council adopts the revised Ranger and Emergency Services Approach to Regulatory Functions Policy as per Attachment A, to replace the current policy (Attachment B).

COUNCIL POLICY

City of Busselton

Council Policy Name:	Ranger and Emergency Services Approach to Regulatory Functions	
Responsible Directorate:	Planning and Development Services	Version: Proposed

1. PURPOSE

1.1. This Policy outlines the City's approach to the management and enforcement of legislation relevant to rangers and emergency services regulatory functions, with the aim of providing a transparent, consistent and accountable approach to those functions.

2. SCOPE

2.1. This Policy is applicable to the City's enforcement approach in relation to the implementation of the regulatory functions associated with ranger and emergency services including parking control, the enforcement of dog, cat and other animal controls, fire management control, litter control and unauthorised camping.

2.2. The Policy supplements the requirements, direction and advice set out in the City's Compliance Policy, relevant Acts and Regulations and Local Laws.

3. DEFINITIONS

Term	Meaning
Authorised Person	A person appointed under section 9.10 of the *Local Government Act 1995* (LGA) to issue an infringement, a person acting in the course of their duties as an employee of the City or a person authorised to commence prosecution under section 9.24 of the LGA, or otherwise authorised to commence a prosecution or issue an infringement under any other law the City administers
Policy	this City of Busselton Council policy entitled "Ranger and Emergency Services Approach to Regulatory Functions"

4. STRATEGIC CONTEXT

4.1. This Policy links to Key Goal Areas 1 – Community and Key Goal Area 6 – Leadership of the City's Strategic Community Plan 2017 and specifically the following Community Objective/s:

a. 1.1: A friendly safe and inclusive community with a strong community spirit
b. 6.1: Governance systems, processes and practices are responsible, ethical and transparent.

5. POLICY STATEMENT

5.1. The City will enforce the regulatory framework in a consistent, fair and objective manner, whilst promoting positive resident and customer relations, and providing a conscientious and respectful service.

5.2. The City will engage in community education and the provision of information in relation to its regulatory framework as appropriate and as resources allow. The overall objective is to achieve voluntary compliance by the community and visitors to the City

5.3. Statutory compliance, organisational and community priorities, and the availability of organisational resources will guide the enforcement of regulatory frameworks and the operational focus of Authorised Persons, who are expected to use their reasonable judgement and discretion to achieve the objectives of this Policy and the relevant legislation.

5.4. The City will review and amend where appropriate, its regulatory framework on a periodic basis. This process of review will be inclusive of the appropriate consultation and applicable legal and administrative processes.

5.5. The City has developed, and will periodically review and update, a Staff Management Practice to guide the internal procedures/protocols associated with the application of this Policy.

6. RELATED DOCUMENTATION / LEGISLATION

6.1. The relevant legislation associated with this Policy includes, but is not limited to, the following:

a. *Animal Welfare Act 2002 and associated Regulations*
b. *Bush Fires Act 1954 and associated Regulations*
c. *Caravan Parks and Camping Grounds Act 1995 and associated Regulation's*
d. *Cat Act 2011 and associated Regulations*
e. *Control of Vehicles (Off-road Areas) Act 1978 and associated Regulation*
f. *Dog Act 1976 and associated Regulation*
g. *Litter Act 1979 and associated Regulation*
h. *Local Government Act 1995 and associated Regulations*
i. *Activities in Thoroughfares and Public Places and Trading Local Law 2015*
j. *Dogs Local Law 2014*
k. *Jetties Local Law 2014*
l. *Keeping and Control of Cats Local Law 2014*
m. *Local Government Property Local Law 2010*
n. *Parking Local Law 2011*
o. *Waste Local Law 2016*

6.2. Council Compliance Policy

6.3. Staff Management Practice: Ranger and Emergency Services Approach to Enforcement, Reviews and Appeals.

7. REVIEW DETAILS

Review Frequency		3 yearly		
Council Adoption	**DATE**		**Resolution #**	
Previous Adoption	**DATE**	11 October 2017	**Resolution #**	C1710/243

016	Ranger & Emergency Services Approach to Regulatory Functions	V2 Current

1.0 PURPOSE

The purpose of this policy is to –

1.1 Outline the City's approach to the implementation of the regulatory framework controlling parking, dog/cats/animals, fire management, litter, unauthorised camping and related matters (all of which are primarily handled by the City's Ranger and Emergency Services).

1.2 Supplement relevant requirements, direction and advice already set out in the City's *Prosecutions Policy* and relevant Acts, Regulations, Local Laws and/or other relevant documents.

1.3 Support transparent, consistent, accountable and respectful guidance and processes associated with implementing the relevant regulatory framework, including decisions to issue work orders and infringements, pursue prosecution and respond to requests for withdrawal/cessation of work orders, infringements and prosecutions.

2.0 GENERAL PRINCIPLES

2.1 The CEO will prepare more detailed internal procedures/protocols to supplement this Policy and to guide operational staff in the exercise of these functions. The CEO will consult with Councillors as appropriate in the development of those procedures/protocols.

2.2 The City will enforce the regulatory framework relating to parking, dogs/cats/animals, fire management, litter, unauthorised camping and related matters in a consistent, fair and objective manner, whilst at the same time, promoting positive resident and customer relations, and providing a conscientious and respectful service.

2.3 Officers are expected to use their reasonable judgement and discretions whilst enforcing the regulatory framework relating to parking, dogs/cats/animals, fire management, litter, unauthorised camping and related matters.

2.4 Once there has been a decision to prosecute, or an infringement notice or work order has been issued, it will only be withdrawn following the submission and consideration of a written request for withdrawal as set out in more detailed protocols/procedures developed by the CEO.

2.5 'Mutual respect' is one of the City's values. That value is of particular importance to the exercising of regulatory functions and applies to both the City itself and the community. Respect is due to both a person who may have been issued an infringement or similar, as well as to the people who have complied with the relevant legislation, or may have been affected by the failure of someone else to do so. Behaviour disrespectful to the City, its employees or the community as a whole is inappropriate and will not be tolerated.

3.0 PARKING – OBJECTIVES/STATEMENT OF INTENT

The following sets out the key objectives/statement of intent in relation to the City's enforcement of parking controls –

3.1 The aim of parking controls and their enforcement is to ensure the efficient and equitable use and management of parking in the City, especially in the Busselton City Centre and Dunsborough Town Centre.

3.2 The City will aim to provide consistent enforcement of parking controls, but available staffing resources and workload demands may affect the City's capacity to enforce parking controls from time-to-time. Notwithstanding this, residents and visitors are responsible for ensuring they are complying with parking controls at all times.

3.3 The City will review parking controls periodically and adjust parking controls as appropriate and following completion of appropriate consultation and applicable legal/administrative processes. The City will be conscious of available resources and the need to provide for consistent enforcement in determining when, where and what parking controls should be applied.

3.4 The City's parking local law provides for control of both public car parking (on-street and public car parks) and, where requested by the landowners, private car parking (e.g. some shopping centre car parks). The City encourages landowners to request that the City manage private car parking areas in and around the Busselton City Centre and Dunsborough Town Centre, and will generally support requests to manage private parking areas where the controls are to be applied are consistent with the approach to managing public parking and the City's capacity to consistently enforce those controls. If the landowner wishes to have parking controls that are not considered to be appropriate or enforceable by the City, then the City will not agree to manage the relevant parking area. The City also does not have the capacity to manage private car parking outside the Busselton City Centre and the Dunsborough Town Centre.

3.5 The City will engage in community education and provision of information as appropriate and as resources allow, assisting residents and visitors to determine what and where parking is available to meet their needs.

4.0 ANIMALS – OBJECTIVES/STATEMENT OF INTENT

The following sets out the key objectives/statement of intent in relation to the City's enforcement of dog, cat and other animal controls –

4.1 The City promotes responsible pet ownership and recognises that pets can substantially add to the wellbeing and quality of life of their owners.

4.2 The aim of dog, cat and other animal controls is to promote responsible pet ownership, avoid nuisance being created for members of the community and visitors, limit damage to and loss of wildlife, and protect the welfare and safety of dogs, cats and other animals.

4.3 The City will aim to provide consistent enforcement of dog, cat and other animal controls, but available staffing resources and workload demands may affect the City's capacity to enforce these controls from time-to-time. Notwithstanding that, residents and visitors are responsible for ensuring they are complying with relevant regulations at all times.

4.4 The City will review dog, cat and other animal controls periodically and adjust these controls as appropriate and following completion of appropriate consultation and applicable legal/administrative processes. The City will be conscious of available resources and the need to provide for consistent enforcement in determining when, where and what controls should be applied.

4.5 The City will respond to reasonable requests for assistance with protecting the welfare of dogs, cats and other animals by the public and other agencies and investigate as necessary. When the matter

is found to be of a serious nature it will be handed over to the RSPCA or Parks and Wildlife Services (Department of Biodiversity, Conservation and Attractions) for their further action.

4.6 The City will engage in community education as appropriate and as resources allow, promoting responsible pet ownership, whilst ensuring that the primary responsibility always rests with pet and other animal owners.

5.0 FIRE MANAGEMENT – OBJECTIVES/STATEMENT OF INTENT

The following sets out the key objectives/statement of intent in relation to the City's enforcement of fire management controls –

5.1 The City recognises that bush fire safety is a shared and collective responsibility involving the whole of the community. Bush fires do not respect property boundaries and an elevated bush fire risk on one property does not just affect the property in question, it increases risk for the whole of the community.

5.2 The City promotes individual, landowner and community management for the management of bush fire risk and, in particular, strongly encourages all residents in bush fire prone areas to have their own bush fire response plan, join their local Bushfire Ready Action Group (BRAG) and/or become an emergency services volunteer with a Fire & Rescue Service or Bush Fire Brigade.

5.3 The City supports and works with the Department of Fire and Emergency Services, Department of Biodiversity, Conservation and Attractions, Fire and Rescue Service and Bush Fire Brigades as well as many others, to ensure that our community is adequately resourced and prepared to fight fires, but recognises that a major component of protecting our community is through mitigation of bush fire risk, especially through the creation and maintenance of fire breaks and low fuel areas on both public and private land.

5.4 The aim of fire management controls and their enforcement is to reduce the risks of and from bush fires to both life and property, including the lives of emergency services volunteers and others involved in fire fighting.

5.5 The City will aim to provide consistent enforcement of fire management controls, but available staffing resources and workload demands may affect the City's capacity to enforce fire management controls from time-to-time. Notwithstanding this, residents and visitors are responsible for ensuring they are complying with fire management controls at all times.

5.6 During the 'bush fire season' (generally 1 December to 12 May), enforcement of fire management controls will be the highest priority for the City's Ranger and Emergency Services, other than responding to emergencies that may occur from time-to-time. The priority areas for enforcement of fire management controls are areas identified as being bush fire prone.

5.7 The City will review fire management controls periodically and adjust controls as appropriate and following completion of appropriate consultation and applicable legal/administrative processes. The City will be conscious of available resources and the need to provide for consistent enforcement in determining when, where and what controls should be applied. The City will consider cost implications for landowners and potential environmental impacts as and when it is deemed necessary to review fire management controls, but will always place the greatest weight on the protection of human life.

5.8 The City will engage in community education as appropriate and as resources allow, promoting individual, and landowner and community responsibility for protecting our community from bush fire risk.

6.0 LITTER – OBJECTIVES/STATEMENT OF INTENT

The following sets out the key/objectives/statement of intent in relation to the City's enforcement of litter controls –

6.1 The aim of the enforcement of litter controls is to control the unlawful disposal of litter and to maintain an attractive and healthy environment and protect the safety of the community.

6.2 The City will aim to provide consistent enforcement of litter controls, but available staffing resources and workloads may affect the City's capacity to enforce controls from time-to-time. Notwithstanding this, residents and visitors are responsible for ensuring they comply with litter controls at all times.

6.3 The City will review litter controls periodically as appropriate and with appropriate consultation. The City will be conscious of available resources and the need to provide for consistent enforcement in determining when, where and what controls should be applied.

7.0 UNAUTHORISED CAMPING (OTHER THAN AT A LICENCED CARAVAN PARK AND/OR CAMPING GROUND) – OBJECTIVES/STATEMENT OF INTENT

The following sets out the key objectives/statement of intent in relation to the City's enforcement of unauthorised camping (other than at a licenced caravan park and/or camping ground) –

7.1 The aim of the enforcement of unauthorised camping controls is to ensure that people sleeping/camping in moveable dwellings, tents or their vehicles within the City comply with the relevant legislation, and to protect the health, the environment and community amenity.

7.2 The City will aim to provide consistent enforcement of unauthorised camping controls, but available staffing resources and workloads may affect the City's capacity to enforce controls from time-to-time. Notwithstanding this, residents and visitors are responsible for ensuring they comply with unauthorised camping controls at all times.

7.3 The City aims to promote responsible and sustainable caravanning and camping, reduce the impact on the natural environment and any nuisance to the community caused by irresponsible caravanning and camping.

7.4 The City will review relevant controls in relation to caravanning and camping periodically as appropriate and with appropriate consultation. The City will be conscious of available resources and the need to provide for consistent enforcement in determining when appropriate controls should be applied.

History

Council Resolution	Date	Information
C1710/243	11 October 2017	Scheduled review Version 2
C1306/160	26 June 2013	Date of Implementation Version 1

12.3 Policy and Legislation Committee - 27/11/2018 - NEW DELEGATIONS OF AUTHORITY AND AMENDMENTS TO EXISTING DELEGATIONS OF AUTHORITY

SUBJECT INDEX:	Authorised Delegation of Power/Authority
STRATEGIC OBJECTIVE:	Governance systems, process and practices are responsible, ethical and transparent.
BUSINESS UNIT:	Governance Services
ACTIVITY UNIT:	Governance Services
REPORTING OFFICER:	Governance Coordinator - Emma Heys Ranger & Emergency Services Coordinator - Ian McDowell
AUTHORISING OFFICER:	Director Finance and Corporate Services - Tony Nottle
VOTING REQUIREMENT:	Absolute Majority
ATTACHMENTS:	Attachment A BF3 Institute a prosecution, or to issue an infringement⇩ Attachment B BF4 Variation of prohibited and restricted burning times ⇩ Attachment C LG3Q Authority to destroy an impounded sick or injured animal⇩ Attachment D BF1 The performance of any of the functions of the local government⇩ Attachment E BF1 Firebreak Order, Variation to (C1106/199) - Current Version ⇩ Attachment F BF2 Appointment of Bush Fire Control Officers⇩ Attachment G BF2 Appointment of Bush Fire Control Officers (C1505/116) - Current Version⇩ Attachment H LG3F Power to remove and impound; Abandoned vehicle wrecks⇩ Attachment I LG3F Power to Remove and impound goods or abandoned vehicle wrecks (C1808/150) - Current Version⇩

This item was considered by the Policy and Legislation Committee at its meeting on 27 November 2018, the recommendations from which have been included in this report.

PRÉCIS

As part of an internal review of the City's delegations register, a number of new delegations and some minor amendments to existing delegations have been identified, all associated with functions carried out by the Ranger and Emergency Services area.

BACKGROUND

Under the *Local Government Act 1995*, and other Acts that provide for the powers and duties under which local government operate, Council has the ability to delegate some of those powers and discharge of duties to its Chief Executive Officer or other relevant officers.

The *Local Government Act 1995* requires these delegations to be reviewed by the delegator at least once every financial year, whilst other Acts, such as the *Bush Fires Act 1954* have no statutory requirement for review, but are typically reviewed on an annual basis.

A review has been undertaken of the various Acts enforced by Ranger and Emergency Services and the delegations register as it relates to these powers, with the aim of ensuring best practice governance structures and the maintenance of operational efficiencies.

As a result, a number of new delegations and some minor amendments to existing delegations are recommended. Commentary on the requests and the rationale for each is provided in the Officers comment section of this report.

STATUTORY ENVIRONMENT

Section 5.42 of the *Local Government Act 1995* provides the Council with the ability to delegate powers and duties to its CEO. Some powers and duties cannot be delegated in accordance with Section 5.43 of the Act, such as matters that require an Absolute Majority decision of the Council.

Section 48 of the *Bush Fires Act 1954* provides local government with the ability to delegate powers and duties to its CEO and other relevant officers. Some powers and duties cannot be further sub-delegated in accordance with Section 48 of the *Bush Fires Act 1954*.

Various sections and subsections of the *Bush Fires Act 1954* provide for powers to be directly delegated from Council to Officers, specifically powers under s.59 and s.59A of the Bush Fires Act 1954 can only be delegated directly from Council (no opportunity to sub delegate from CEO to Officers); and in some instances, powers cannot be delegated and the authority to discharge remains with the local government, specifically the power to appoint a Chief Bush Fire Control Officer and Deputy Chief Bush Fire Control Officer, which requires a resolution of Council.

RELEVANT PLANS AND POLICIES

There are no plans or other policies directly relevant to this matter.

FINANCIAL IMPLICATIONS

There are no financial implications associated with the Officer recommendation.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

There are no long term financial plan implications associated with the Officer recommendation.

STRATEGIC COMMUNITY OBJECTIVES

This delegation review aligns with and supports the Council's Key Goal Area 6 – 'Leadership' and more specifically Community Objective 6.1 – 'Governance systems, process and practices are responsible, ethical and transparent'.

RISK ASSESSMENT

Following an assessment of the potential implications, there are no risks assessed as being medium or greater associated with the Officer recommendation.

CONSULTATION

There was no consultation undertaken or considered necessary in relation to the Officer recommendation.

OFFICER COMMENT

Many of the proposed new delegations and amendments to existing delegations are the result of gaps being identified in the current allocation of powers, as compared to best practice governance structures. The proposed changes are intended to provide officers with increased clarity and security in relation to decision making. The proposed new and amended delegations also aim to achieve and maintain organisational efficiencies.

The table below provides an overview of the new and amended delegations, as well as expanding on the rationale above where applicable. Proposed new delegations are BF3, BF4 and LG3Q and minor amendments are proposed to delegations BF1, BF2, and LG3F.

Relevant Act	Summary of proposal
Bushfire Act Institute a prosecution, or to issue an infringement	**Proposed new delegation (BF3)** **Council to CEO and listed Officers** To enable Rangers and Senior Rangers to issue infringements for an offence against this Act. To enable the CEO, Bush Fire Control Officer, Director Planning & Development and Manager Environmental Services to commence a prosecution for an offence and institute legal proceedings for an offence against this Act. This delegation can only be made from Council to CEO and listed Officers, not Council to CEO and CEO sub-delegation to Officers
Bushfire Act Variation of prohibited and restricted burning times	**Proposed new delegation (BF4)** **Council to Mayor and CBFO** To enable the Mayor and Chief Bush Fire Officer to vary prohibited and restricted burning times. The Act only allows for the local government to specifically delegate this power to the Mayor and Chief Bush Fire Officer in joint. Additional Rationale: To remove the need for a report to be presented to Council which can have an impact on timeliness of implementing restrictions and / or create the need for late / urgent items.
Local Government Act Authority to destroy an impounded sick or injured animal	**Proposed new delegation (LG3Q)** **Council to CEO** To delegate the power to CEO to ensure an immediate determination on the destruction of a sick or injured animal can be made. Note there is an argument that the reference to local government in this section of the Act does not preclude the administration from making what are often humanely necessary and time critical decisions however the proposed delegation is recommended by WALGA in their model delegation register as best practice.

Bushfire Act The performance of any of the functions of the local government under the Act	**Proposed amendments to existing delegation (BF1)** **Council to CEO** The wording in this existing delegation is proposed to be amended in general to strengthen and clarify the delegation to be "all functions of the local government" under the Bush Fires Act 1954. Additional Rationale: This is aligned to the way in which other delegations have been prepared and allows the CEO to delegate to officers in relation to all functions (except where expressly disallowed).
Bushfire Act Appointment of Bush Fire Control Officers	**Proposed amendments to existing delegation (BF2)** **Council to CEO** The wording in this existing delegation is proposed to be amended: • Inclusion of s.38 as the Power/Duty and Act Reference; Additional Rationale: This strengthens and clarifies the delegation. Section 38 is the specific section of the Act which enables a Bush Fire Control Officer to be appointed by a local government (this was previously missing from the delegation), whereas s.48 is the power to delegate (already included and will stay).
Local Government Act Power to Remove and Impound; Abandoned Vehicle Wrecks	**Proposed amendments to existing delegation (LG3F)** **Council to CEO** The existing delegation essentially restricted the delegated powers to s.340A subsection (1) of the Act, thereby not allowing anyone to actually declare an abandoned vehicle as an "abandoned vehicle wreck" which is covered by s.340A subsection (5). The proposed delegation removes reference to subsection (1) and delegates all powers under s.340A. Addition of a condition that the disposal of the vehicle is to be undertaken in accordance with the Delegation LG3G Disposing of Uncollected Goods. Additional Rationale: Because of the reference to subsection (1) of s.340A, Officers were unable to effectively take the first step of this delegation – declaring a vehicle abandoned.

CONCLUSION

The proposed new or amended delegations serve to reduce risk, address identified gaps when compared to best practice and provide clarity and assurance to officers with regards to the powers and discharge of duties delegated to them.

In addition the proposed amendments aim to provide a sufficient level of authority to the CEO and/or relevant officers to ensure existing organisational efficiencies continue.

OPTIONS

Council may choose not to adopt the new or amended delegations or choose to place conditions on the delegations.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

Any determinations on the delegations will be effective immediately following the Council's decision.

OFFICER RECOMMENDATION

That the Council:

1. Adopts delegation BF3 – Institute a prosecution, or to issue an infringement as shown at Attachment A;
2. Adopts delegation BF4 – Variation of prohibited and restricted burning times as shown at Attachment B;
3. Adopts delegation LG3Q – Authority to destroy an impounded sick or injured animal as shown at Attached C;
4. Adopts the amended delegation BF1 – The performance of any of the functions of the local government under the Bushfires Act 1954 as shown at Attachment D;
5. Adopts the amended delegation BF2 – Appointment of Bush Fire Control Officers as shown at Attachment F;
6. Adopts the amended delegation LG3F – Power to remove and impound; Abandoned vehicle wrecks as shown at Attachment H

COMMITTEE RECOMMENDATION

That the Council:

1. Adopts delegation BF3 – Institute a prosecution, or to issue an infringement as shown at Attachment A;
2. Adopts delegation BF4 – Variation of prohibited and restricted burning times as shown at Attachment B;
3. Adopts delegation LG3Q – Authority to destroy an impounded sick or injured animal as shown at Attached C;
4. Adopts the amended delegation BF1 – The performance of any of the functions of the local government under the *Bushfires Act 1954* as shown at Attachment D;
5. Adopts the amended delegation BF2 – Appointment of Bush Fire Control Officers as shown at Attachment F, subject to clarification being provided to the Committee in relation to condition 3;
6. Adopts the amended delegation LG3F – Power to remove and impound; Abandoned vehicle wrecks as shown at Attachment H

Reason: Officers noted clarification was required to BF2. The Committee agreed to the delegation being presented directly to Council inclusive of any clarification.

Clarification was sought and communicated to the Committee via email 28 November 2018.

BF2 was subsequently amended to remove any amendments to condition 3, with condition 3 remaining as per the current delegation. The report has been updated to reflect these agreed changes.

INSTRUMENT OF DELEGATION

Reference Number	Act Reference	Delegates	Delegation Subject
BF3	*Bush Fires Act 1954* s.59 s.59A	Chief Executive Officer Bush Fire Control Officer/s Director Planning and Development Manager Environmental Services Ranger and Emergency Services Coordinator Senior Rangers Rangers	To Institute a Prosecution, or to Issue an Infringement

Delegator

Council

Power/Duty

The power to institute and carry on proceedings, or to issue an infringement notice, for an offence against the *Bush Fires Act 1954*.

Conditions

1. Rangers and Senior Rangers are prohibited from commencing a prosecution for an offence against the *Bush Fire Act 1954* (s.59(3));
2. Rangers and Senior Rangers are prohibited from instituting legal proceedings pursuant to s.59A (3) of the *Bush Fire Act 1954*; and
3. A delegation as per s.48 of the *Bush Fire Act 1954* does not include the power to sub-delegate.

Statutory Framework

Council is exercising its power of delegation under Section 48 of the *Bush Fires Act 1954*.

Verification

Initial Council Resolution
<<insert council resolution number>>

Review Requirements

Council discretion (there is no statutory review period)

Related Documents

Bush Fire (Infringement) Regulations 1978

Council Policy 016 – Ranger & Emergency Services Approach to Regulatory Functions

Annual Firebreak and Fuel Hazard Reduction Notice

INSTRUMENT OF DELEGATION

Reference Number	Act Reference	Delegates	Delegation Subject
BF4	*Bush Fires Act 1954* s.17 s.18	Mayor Chief Bush Fire Control Officer	Variation of Prohibited and Restricted Burning Times

Delegator

Council

Power/Duty

In accordance with the *Bush Fire Act 1954*, the Mayor and Chief Bush Fire Control Officer are jointly delegated authority to determine a variation of prohibited burning times (s.17) and a variation of restricted burning times (s.18).

Conditions

1. The powers and duties pursuant to sections 17 and 18 of the Bush Fire Act 1954 are jointly delegated to the Mayor and Chief Bush Fire Control Officer; and
2. Decisions under s.17(7) must comply with the requirements of s.17(7B) and s.17(8).

Statutory Framework

Council is exercising its power of delegation under Section 48 of the *Bush Fires Act 1954*.

Verification

Initial Council Resolution
<<insert council resolution number>>

Review Requirements

Council discretion (there is no statutory review period)

Related Documents

Nil

INSTRUMENT OF DELEGATION

Reference Number	Local Government Act Reference	Delegates	Delegation Subject
LG3Q	3.47A	Chief Executive Officer	Authority to destroy an impounded sick or injured animal

Delegator

Council

Power/Duty

The authority to destroy an impounded sick or injured animal pursuant to Section 3.47A of the *Local Government Act 1995*.

Conditions

Nil

Statutory Framework

Council is exercising its power of delegation under Section 5.42 of the *Local Government Act 1995*.

Verification

Initial Council Resolution
<<insert council resolution number>>

Review Requirements

In accordance with the requirements of Section 5.46(2) of the *Local Government Act 1995*, at least once every financial year.

Related Documents

Cat Act 2011
Keeping and Control of Cats Local Law 2014
Dog Act 1976
Dogs Local Law 2014

INSTRUMENT OF DELEGATION

Reference Number	Act Reference	Delegates	Delegation Subject
BF1	Bush Fires Act 1954	Chief Executive Officer	The performance of any of the functions of the local government under the Act

Delegator

Council

Power/Duty

All the functions of the local government under Section 48 of the *Bush Fires Act 1954*.

Conditions

1. Excludes the powers and duties that are subject to separate delegated authority within this Register as set out below:
   (a) BF2 – Appointment of Bush Fire Control Officers;
   (b) BF3 – Prosecutions and Infringements
   (c) BF4 – Variation of Prohibited and Restricted Burning Times
2. A delegation as per s.48 does not include the power to sub-delegate.

Statutory Framework

Council is exercising its power of delegation under Section 48 of the *Bush Fires Act 1954*.

Verification

Recent Council Resolution	Initial Council Resolution
<<insert council resolution number>>	C969/0425

Review Requirements

Council discretion (there is no statutory review period)

Related Documents

Annual Firebreak and Fuel Hazard Reduction Notice

Notes of Alteration
Council Resolution C969/0425 on 25 September 1996 gave power to the Coordinator, Ranger and Fire Services (or equivalent position) to undertake these duties, however, Council Resolution C0706/145 on

27 June 2007 revoked this power as Section 48 of the *Bush Fires Act 1954* only provides for the ability for delegation to the CEO, with no opportunity for sub-delegation (*27 June 2007)*
Improved wording to strengthen and clarify the delegation to be for all functions (subject to conditions) of the local government under the *Bush Fires Act 1954 (insert date)*

Instrument of Delegation

Reference Number	Act Reference	Delegate	Delegation Subject
BF1	S48 Bush Fires	Chief Executive Officer	Firebreak Order, Variation to

Delegator

Council.

Power/Duty

To determine applications to provide firebreaks in alternative positions and to determine applications to provide alternative fire protection measures on the land, in accordance with the provisions of Clause 8 of Council's Firebreak Order.

Conditions

Nil.

Statutory Framework

Section 48 *Bush Fires Act 1954*.

Verification

Recent Council Resolution
C1106/199

Initial Council Resolution
C969/0425

Review Requirements

At Council's discretion as necessary (no statutory requirement).

Related Documents

Firebreak Order.

Notes of Alteration
Council Resolution C969/0425 on 25 September 1996 gave power to the Coordinator, Ranger and Fire Services (or equivalent position) to undertake these duties, however, Council Resolution C0706/145 on 27 June 2007 revoked this power as Section 48 of the Bush Fires Act 1954 only provides for the ability for delegation to the CEO, with no opportunity for sub-delegation *(27 June 2007)*

INSTRUMENT OF DELEGATION

Reference Number	Act Reference	Delegates	Delegation Subject
BF2	Bush Fires Act 1954 s.38 s.48	Chief Executive Officer	Appointment of Bush Fire Control Officers

Delegator

Council

Power/Duty

To appoint person/s to act as Bush Fire Control Officer/s pursuant to Section 38 of the *Bush Fire Act 1954*.

Conditions

1. This delegation is limited to the appointment of members of volunteer bush fire brigades and City Ranger and Emergency Services Staff;
2. In the case of appointment of members of volunteer bush fire brigades, the delegation shall only be exercised where there is a recommendation to appoint from the Bush Fire Advisory Committee; and
3. This delegation does not extend to the appointment of Chief or Deputy Chief Bush Fire Control Officers.

Statutory Framework

Council is exercising its power of delegation under Section 48 of the *Bush Fires Act 1954*.

Verification

Recent Council Resolution	Initial Council Resolution
<<insert council resolution number>>	C969/0425

Review Requirements

Council discretion (there is no statutory review period)

Related Documents

Annual Firebreak and Fuel Hazard Reduction Notice

Notes of Alteration
Council Resolution C969/0425 on 25 September 1996 gave power to the Coordinator, Ranger and Fire Services (or equivalent position) to undertake these duties, however, Council Resolution C0706/145 on 27 June 2007 revoked this power as Section 48 of the *Bush Fires Act 1954* only provides for the ability for delegation to the CEO, with no opportunity for sub-delegation (*27 June 2007)*

Improved wording to strengthen and clarify the delegation and the Act reference *(insert date)*

Instrument of Delegation

Reference Number	Act Reference	Delegate	Delegation Subject
BF2	S48 Bush Fires	Chief Executive Officer	Appointment of Bush Fire Control Officers

Delegator

Council.

Power/Duty

To appoint a person to act as a Bush Fire Control Officer pursuant to Section 48 of the *Bush Fires Act 1954*.

Conditions

1. The delegation is limited to the appointment of members of volunteer bush fire brigades and City Ranger and Emergency Services staff;
2. In the case of appointment of members of volunteer bush fire brigades, the delegation shall only be exercised where there is a recommendation to appoint from the Bush Fire Advisory Committee; and
3. The delegation does not extend to the appointment of Chief or Deputy Chief Bush Fire Control Officers.

Statutory Framework

Section 48 *Bush Fires Act 1954*.

Verification

Initial Council Resolution
C1505/116

Review Requirements

At Council's discretion as necessary (no statutory requirement).

INSTRUMENT OF DELEGATION

Reference Number	Act Reference	Delegates	Delegation Subject
LG3F	*Local Government Act 1995* s.3.39 s.340A	Chief Executive Officer	Power to Remove and Impound Abandoned Vehicle Wrecks may be taken

Delegator

Council

Power/Duty

The powers to remove and impound goods or abandoned vehicle wrecks and the power to declare an abandoned vehicle wreck, pursuant to Sections 3.39 and 3.40A of the *Local Government Act 1995*.

Conditions

Disposal of a declared abandoned vehicle wreck is to be undertaken in accordance with Delegation LG3G Disposing of Uncollected Goods.

Statutory Framework

Council is exercising its power of delegation under Section 5.42 of the *Local Government Act 1995*.

Verification

Recent Council Resolution	Initial Council Resolution
<<insert council resolution number>>	C1806/188

Review Requirements

In accordance with the requirements of Section 5.46(2) of the *Local Government Act 1995*, at least once every financial year.

Related Documents

Nil

Notes of Alteration
Delegation strengthened to include the power of a local government to declare that an impounded vehicle is an abandoned vehicle wreck under s.3.40A of the Act. Improved wording to strengthen and clarify the specific power/duty (*insert date*)

Instrument of Delegation

Reference Number	Local Government Act Reference	Delegate	Delegation Subject
LG3F	3.39 3.40A(1)	Chief Executive Officer	Power to Remove and Impound Goods or Abandoned Vehicle Wrecks

Delegator

Council

Power/Duty

To authorise employees on behalf of the local government for the purposes of discharging the duties under Section 3.39 and 3.40A(1) of the *Local Government Act 1995*.

Conditions

Nil.

Statutory Framework

Council is exercising its power of delegation under Section 5.42(1)(a) of the *Local Government Act 1995*.

Section 3.39
(1) An employee authorised by a local government for the purpose may remove and impound any goods that are involved in a contravention that can lead to impounding.
(2) A person may use reasonable force to exercise the power given by subsection (1).

Section 3.40A(1)
An employee authorised by a local government for the purpose may remove and impound a vehicle that, in the opinion of the local government, is an abandoned vehicle wreck.

Verification

Recent Council Resolution	Initial Council Resolution
C1808/150	C0806/188

Review Requirements

In accordance with the requirements of Section 5.46(2) of the *Local Government Act 1995*, at least once every financial year.

12.4 Policy and Legislation Committee - 27/11/2018 - AL FRESCO TRADING IN THE BUSSELTON CITY CENTRE - CONSIDERATION OF DRAFT POLICY FOLLOWING CONSULTATION (AS WELL AS INFORMATION ON OUTCOMES OF RELATED CONSULTATION)

SUBJECT INDEX:	Activity Centre Plan - Busselton
STRATEGIC OBJECTIVE:	Creative urban design that produces vibrant, mixed-use town centres and public spaces.
BUSINESS UNIT:	Planning and Development Services
ACTIVITY UNIT:	Strategic Planning & Development
REPORTING OFFICER:	Director, Planning and Development Services - Paul Needham
AUTHORISING OFFICER:	Director, Planning and Development Services - Paul Needham
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Proposed Al Fresco Trading in Busselton City Centre Policy⇩
	Attachment B Project Detailed Report Busselton CBD Activation⇩
	Attachment C Published Under Separate Cover Confidential Valuation Advice
	Attachment D Proposed Al Fresco Trading in Busselton City Centre Policy - Committee Recommendation⇩

This item was considered by the Policy and Legislation Committee at its meeting on 27 November 2018, the recommendations from which have been included in this report.

PRÉCIS

Following a period of consultation, this report presents a draft Council Policy for Al Fresco Trading in the Busselton City Centre (the Policy). It is recommended that the Policy be formally adopted without modification.

BACKGROUND

At its ordinary meeting of 25 July 2018, the Council adopted, for consultation purposes, a draft 'Council Policy on Al Fresco Trading in the Busselton City Centre'. A copy of the Policy is included as Attachment A.

The Council also resolved that, in parallel with the consultation process, further assessment should be undertaken to identify what, if any, level an annual licence fee (for on street al fresco areas) would typically be set at, so that the Council could consider that information in considering the Policy after consultation.

STATUTORY ENVIRONMENT

In accordance with Section 2.7(2)(b) of the *Local Government Act 1995* it is the role of the Council to determine the local government's policies. The Council does this on the recommendation of a Committee it has established in accordance with Section 5.8 of that Act.

Key statutory environment is set out in the City's *Activities in Thoroughfares and Public Places and Trading Local Law 2015* ('Thoroughfares Local Law') and town planning scheme, as well as in the *Land Administration Act 1997*. Those documents have been considered in the preparation of the Policy and this report.

RELEVANT PLANS AND POLICIES

Relevant plans and policies include the City's *Economic Development Strategy 2016-2026* ('ED Strategy'), and *Local Planning Policy 4C: Busselton Town Centre Urban Design Provisions* (LPP4C). The ED Strategy identifies 'Place Making and Activation' as a key focus area, and sets out a number of related strategies, including 'Partner with business owners and managers to focus positive activity into streets and public spaces'. LPP4C identifies Queen Street as a 'Primary Street', and sets out that development on such streets should be 'highly activated' and that 'al fresco uses also encouraged'.

FINANCIAL IMPLICATIONS

There are no direct financial implications of the recommendations of this report. Depending on the direction that the Council chooses to take on these issues, there may be some financial implications, such as those associated with streetscape works that may be required to allow al fresco use of space currently allocated for car parking and/or with fees required to be paid by proprietors for use of road reserve (which is City land, although a very particular kind of City land) for al fresco trading.

Note that the Council has recently amended the guidelines of the Busselton and Dunsborough Centres Façade Refurbishment Subsidy Programme to include infrastructure associated with al fresco areas as eligible works. Under that programme, funding of up to $20,000 per project is available, up to maximum of 50% of the project cost above $5,000 (for instance, the maximum funding available for a $10,000 project is $2,500, and the maximum funding available for a $35,000 project is $15,000). $50,000 is allocated to that project in the City's current budget, and on an ongoing, annual basis as per the Long-Term Financial Plan.

It should be noted that the City's current schedule of fees and charges does not involve an ongoing fee for al fresco trading, with such fees having been removed in the adoption of last financial year's fees and charges. Where the City is contemplating allowing landowners or proprietors to undertake streetscape works to convert car bays and/or place structures in existing car bays, there would be a capacity to require the costs of the work to be met by the proponent and/or charge ongoing licence fees.

On the basis of recent assessments of the market value of a licence for al fresco space, a value of around $25-$50/m^2/annum is considered an indicative range for al fresco space on Queen Street. Given a parallel parking bay is around 15m^2 in area, that would equate to a licence fee of $375-$750 per annum for an al fresco area occupying the equivalent of one car parking bay. It should be noted that, as required by Council's 25 July resolution, further assessment has been undertaken to determine what level an annual licence fee may be set at, and it confirms that the indicative range above is supported by market assessment and is similar to the rates charged by other local governments in similar contexts.

It is worthwhile first understanding the nature of the tenure that would be provided. What is proposed is a licence form of tenure, and not a lease, and so it is a more limited form of tenure, and the rights that would ordinarily accrue to a leasehold tenant would not be present. Further, what is proposed is a licence for the use of the land, not for the use of a building. The licensee will be required to provide their own infrastructure, and will have only a relatively short licence period in which to recover that investment, should the City decide not to renew the licence.

More detailed advice on this matter has been provided as Attachment C (which is confidential because it contains commercially sensitive information).

LONG-TERM FINANCIAL PLAN IMPLICATIONS

There are no long-term financial plan implications of the recommendations of this report.

STRATEGIC COMMUNITY OBJECTIVES

The Policy links to Key Goal Area 2 of the City's Strategic Community Plan 2017 and specifically the Community Objective 2.1: Creative urban design that produces vibrant, mixed-use town centres and public spaces.

RISK ASSESSMENT

An assessment of the risks associated with implementation of the officer recommendation has been undertaken using the City's risk assessment framework. Risks are only identified where the residual risk, once controls are identified, is 'medium' or greater. No such risks have been identified, although it should be noted that individual proposals for al fresco dining on City land would themselves need to be subject of appropriate risk assessment and management.

CONSULTATION

Using the *Your Say* platform, the City ran an online survey seeking community views and information on a range of questions related to the Policy, as well as some other questions related to the planning and management of the Busselton City Centre. A summary of the outcomes of the consultation is provided as Attachment B.

A total of 295 people viewed the survey, of whom 125 provided responses. On questions directly related to the Policy, some of the key things to note from the responses are considered to be –

- To the question 'What would bring you into the Busselton City Centre more often on the weekend or evening (choose all that apply)?', the most common responses were - 'more al fresco options' (86 respondents), 'more café, bar and restaurant options' (85 respondents) and 'if there were events taking place in the City Centre' (70 respondents); and
- Between 67% and 80% were supportive of the key elements of the Policy, between 6% and 15% were not supportive, with the balance being unsure – in short, there was substantial net support for all of the key elements of the Policy.

OFFICER COMMENT

The rationale for the Policy was set out in some detail in the report considered by the Council in July and, as such, there is not seen to be a need to do so in full again in this report. The key elements of the rationale then as now, however, are seen as being -

- It is generally not possible to provide additional and high usability al fresco space on Queen Street especially without occupying space currently used for on-street car parking bays;
- A successful Busselton City Centre into the future will require an increase in the number and proportion of cafes, restaurants and/or bars, including and especially on the 'main street' (i.e. Queen Street);
- Providing more al fresco space will help to facilitate that increase, in fact it is highly likely to be critical to that occurring;

- Even then, that increase will only occur gradually and incrementally, and to avoid unnecessarily removing on-street car parking bays ahead of demand, it is best to also facilitate al fresco conversion of car parking bays in an incremental/demand-driven fashion; and
- Given that not all café, restaurant or bar businesses will continue indefinitely, it makes sense to consider al fresco options that are reversible and non-permanent.

The consultation process is not considered to have raised any concerns with the Policy. It is therefore recommended that the Policy be formally adopted, without modification. That would then allow proposals for al fresco trading on City land to be submitted and assessed, pursuant to the Policy, and subsequently implemented.

CONCLUSION

It is seen as important that the Council establish its direction on this issue, such that landowners, proprietors and officers can develop and consider proposals with some confidence. For the reasons set out in the report considered by the Council in July, it is considered that the Council should adopt a policy to support more al fresco space on Queen Street especially, but mainly in a reversible and in an incremental/demand-driven fashion.

OPTIONS

The options available to the Council are fundamentally as follows –

- Not adopt the Policy, and assess al fresco proposals on a case-by-case basis; or
- Adopt the Policy, subject to modifications.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

The officer recommendation is for the formal adoption of the Policy without modification. Implementation would involve publication of the adopted policy. That would occur within two weeks of the Council making a resolution consistent with the officer recommendation.

OFFICER RECOMMENDATION

That the Council adopts the Al Fresco Trading in the Busselton City Centre Policy, as per Attachment A.

COMMITTEE RECOMMENDATION

That the Council adopts the Al Fresco Trading in the Busselton City Centre Policy, as per Attachment A, subject to paragraph 5.6 being rewritten as "A licence will be subject to conditions requiring minimum trading periods for a minimum of six months of each year, with those minimum periods including at least two of the following (and existing al fresco trading permits will be transitioned to these arrangements) as shown in Attachment D:

(a) Saturday 3pm-6pm; or
(b) Sunday 9am-2pm; or
(c) 5pm-8.30pm, at least three nights per week.

Reason: The committee was in agreeance that paragraph 5.6 required a rewrite to ensure the policy was clear.

COUNCIL POLICY

City of Busselton

Council Policy Name: Al Fresco Trading in the Busselton City Centre

Responsible Directorate: Planning and Development Services Version: Proposed

1. PURPOSE

1.1. This Policy supports the activation and sustainability of the Busselton City Centre through facilitating an expansion in the number and scale of al fresco areas associated with cafes, bars and restaurants.

2. SCOPE

2.1. This Policy is applicable to proposals for al fresco trading in the Busselton City Centre, on the road reserve (i.e. it does not relate to private property or other local government land).

2.2. The Policy guides the exercise of the City's property functions, and guides how City land will be managed; this Policy is not a local planning policy or policy that guides the City's other regulatory functions. In exercising those other functions, however, the City will be conscious of this Policy and its purpose.

3. DEFINITIONS

Term	Meaning
Policy	this City of Busselton Council policy entitled "Al Fresco Trading in the Busselton City Centre"

4. STRATEGIC CONTEXT

4.1. This Policy links to Key Goal Area 2 - Places and Spaces of the City's Strategic Community Plan 2017 and specifically the following Community Objective 2.3: Creative urban design that produces, vibrant, mixed-use town centres and public spaces.

5. POLICY STATEMENT

5.1 The Council generally supports removal of car parking to accommodate more al fresco space on Queen Street, but mainly in a reversible and in an incremental/demand-driven fashion.

5.2 Al fresco areas should generally be provided 'out the front' of the associated premises, and shall generally be at a scale proportional to the floor area of the premises.

5.3 The preferred form of al fresco is decking placed over car bays, or a custom designed and built 'drop-in' structure, with bollards installed separating the al fresco area from the traffic lane, but not in the form of converted or adapted sea containers.

5.4 The costs of providing al fresco space will be met by the proponent (proprietor and/or landowner); proposals can be subject of applications for funding under the City's façade upgrade subsidy programme.

5.5 The land on which the al fresco space is to be provided is at no cost for up to two years, but a licence fee shall apply thereafter.

5.6 A licence agreement will be subject to conditions requiring minimum trading periods, which are to include two or more of Saturdays 3pm-6pm, Sundays 9am-2pm, or three weeknights until 8.30pm, for a minimum of six months of the year (and existing al fresco permits shall be transitioned to these arrangements).

5.7 The proponent shall be responsible for removal and decommissioning of al fresco infrastructure that is no longer required or supported.

5.8 Prior to the commencement of works, the proponent shall enter into a licence agreement with the City, for an initial two to five year term (with the term to be reflective of the level of up-front investment), with further licences generally for five year terms, if a further term is considered appropriate by the City.

6. RELATED DOCUMENTATION / LEGISLATION

6.1. Town planning scheme and related legislation, regulations and policy.
6.2. Building Act and related regulations.
6.3. Public Health Act and related regulations.
6.4. Local Government Act and related regulations, notably the City's Property Local Law and Thoroughfares Local Law.
6.5. Busselton City Centre Conceptual Plan.
6.6. City of Busselton Economic Development Strategy.

7. REVIEW DETAILS

Review Frequency		3 yearly		
Council Adoption	**DATE**		**Resolution #**	
Previous Adoption	**DATE**	N/A	**Resolution #**	N/A

Project Report

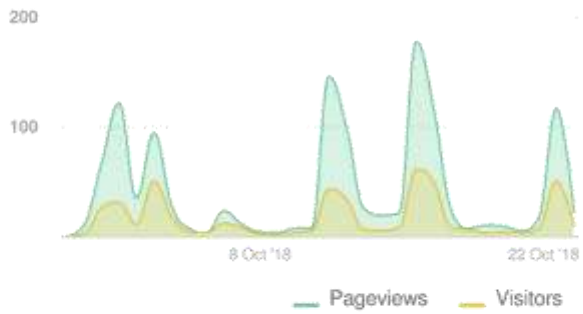
01 July 2018 - 25 October 2018

Your Say Busselton

Busselton CBD Activation

engagement hq
by Bang the Table

Visitors Summary



Highlights

TOTAL VISITS	MAX VISITORS PER DAY
508	61

NEW REGISTRATIONS
41

ENGAGED VISITORS	INFORMED VISITORS	AWARE VISITORS
125	286	435

Aware Participants	435
Aware Actions Performed	Participants
Visited a Project or Tool Page	435

Informed Participants	286
Informed Actions Performed	Participants
Viewed a video	0
Viewed a photo	0
Downloaded a document	0
Visited the Key Dates page	6
Visited an FAQ list Page	0
Visited Instagram Page	0
Visited Multiple Project Pages	168
Contributed to a tool (engaged)	125

Engaged Participants	125		
Engaged Actions Performed	Registered	Unverified	Anonymous
Contributed on Forums	0	0	0
Participated in Surveys	125	0	0
Contributed to Newsfeeds	0	0	0
Participated in Quick Polls	0	0	0
Posted on Guestbooks	0	0	0
Contributed to Stories	0	0	0
Asked Questions	0	0	0
Placed Pins on Places	0	0	0
Contributed to Ideas	0	0	0

ENGAGEMENT TOOLS SUMMARY



Tool Type	Engagement Tool Name	Tool Status	Visitors	Contributors		
				Registered	Unverified	Anonymous
Survey Tool	CBD Activation Survey	Published	295	125	0	0

INFORMATION WIDGET SUMMARY

0	0	0	0	0
DOCUMENTS	PHOTOS	VIDEOS	FAQS	KEY DATES

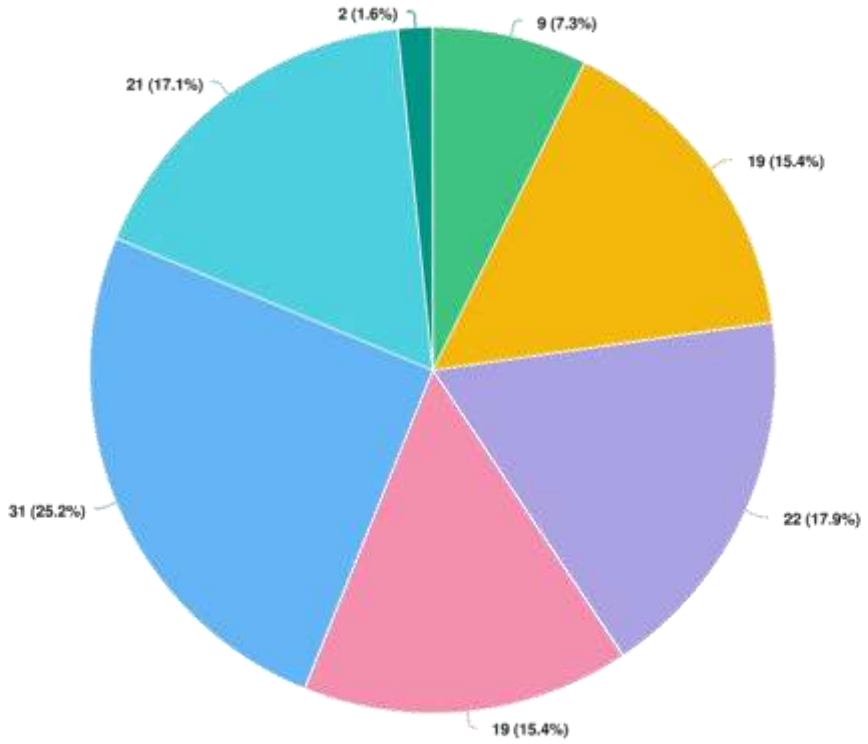
Widget Type	Engagement Tool Name	Visitors	Views/Downloads
Key Dates	Key Date	6	6

ENGAGEMENT TOOL: SURVEY TOOL

CBD Activation Survey

VISITORS 295	CONTRIBUTORS 125	CONTRIBUTIONS 125

What is your age?

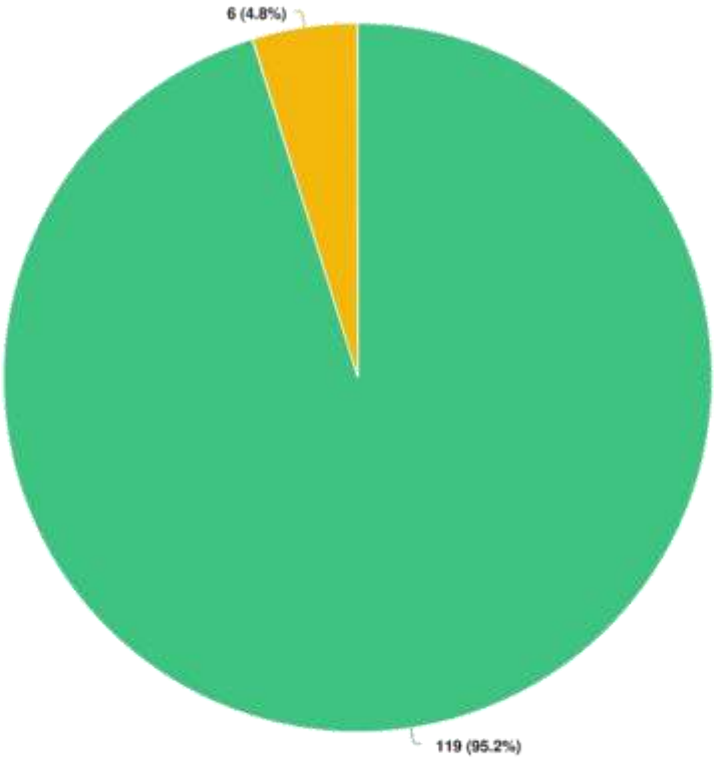


Question options

15 - 24 years 25 - 34 years 35 - 44 years 45 - 54 years 55 - 64 years 65 - 74 years 75+

Optional question (123 responses, 2 skipped)

I identify myself as:

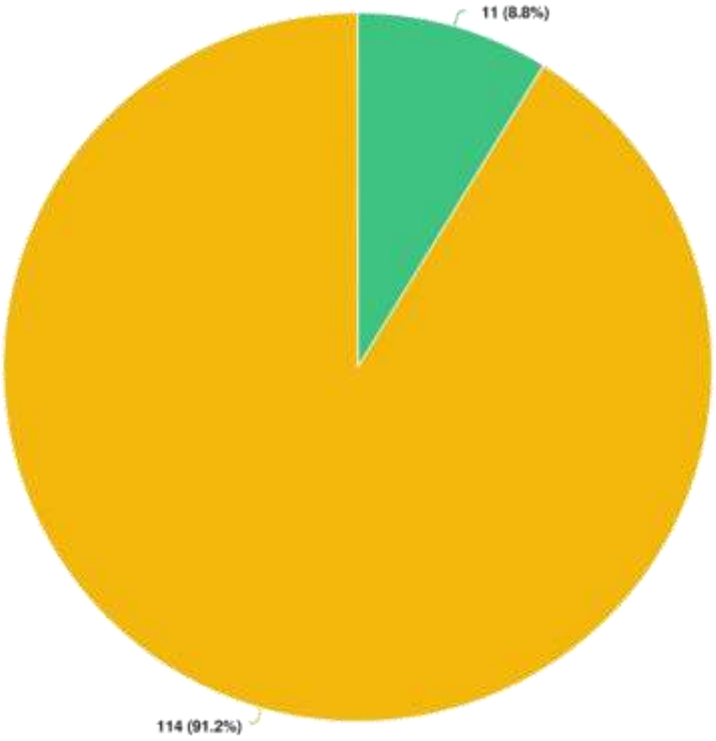


Question options

- A full-time resident of the City of Busselton
- A part-time resident to the City of Busselton

Optional question (125 responses, 0 skipped)

Are you a business or commercial property owner in the Busselton City Centre (City Centre is identified in the map above)?

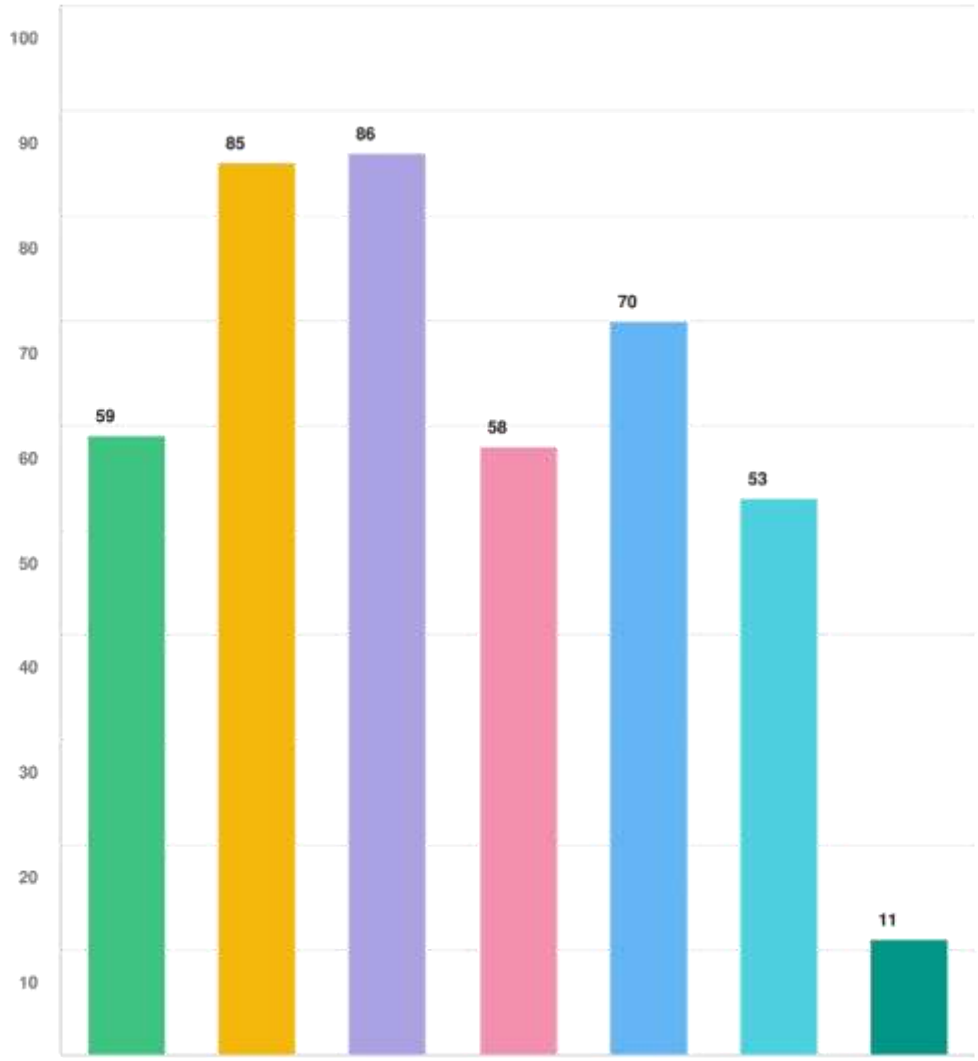


Question options

Yes No

Optional question (125 responses, 0 skipped)

What would bring you into the Busselton City Centre more often on the weekend or evening (choose all that apply)?



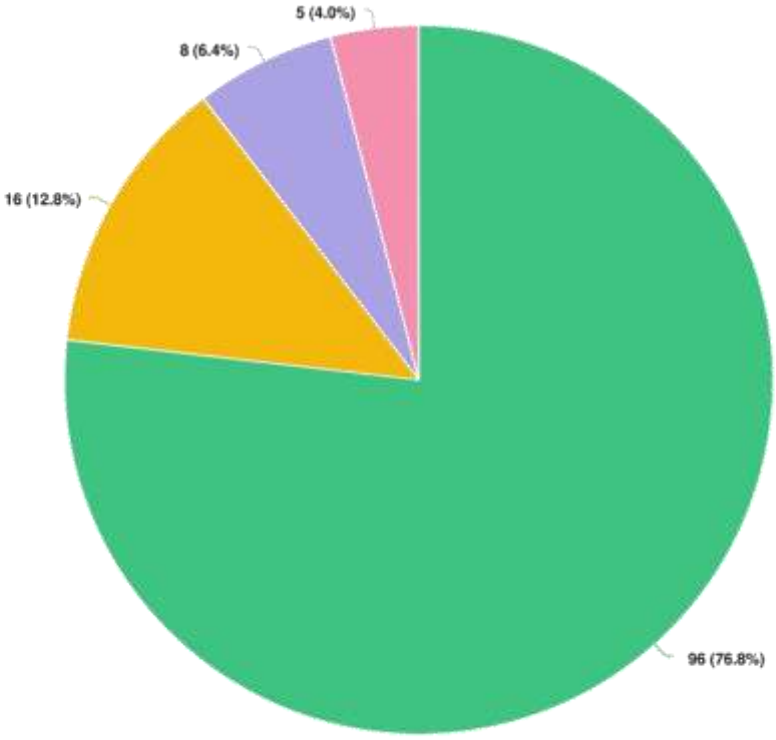
Question options

- If businesses had longer trading hours
- More cafe, bar and restaurant options
- If there were markets on in the City Centre
- Recreational or community activities
- More al fresco options
- If there were more events taking place in the City Centre
- Other

Optional question (125 responses, 0 skipped)

New Busselton Entertainment Arts and Cultural Hub (BEACH). The City is investigating the viability of a new performing arts and entertainment centre in the current vacant block in the ArtGeo Cultural Complex.

How supportive of this development are you?



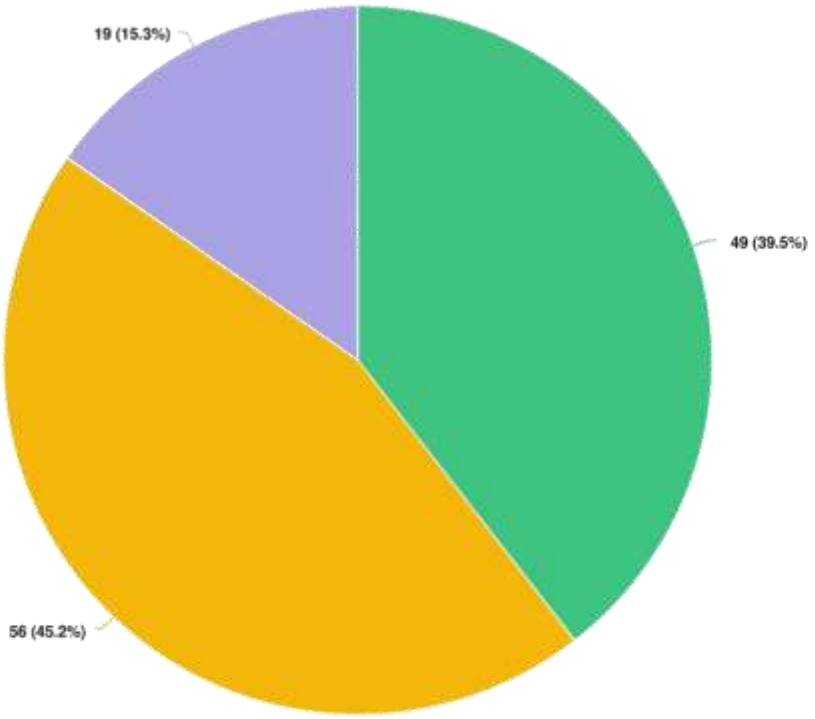
Question options

Supportive Neutral Opposed Unsure

(125 responses, 0 skipped)

Al fresco Dining Following on from initial consultations, the City Council (25 July 2018) supported a draft policy on 'Alfresco Dining in the City Centre' subject to further public consultation. To that end, public feedback is sought on the draft policy.

Did you take part in the previous survey relating to al fresco options on Queen Street?

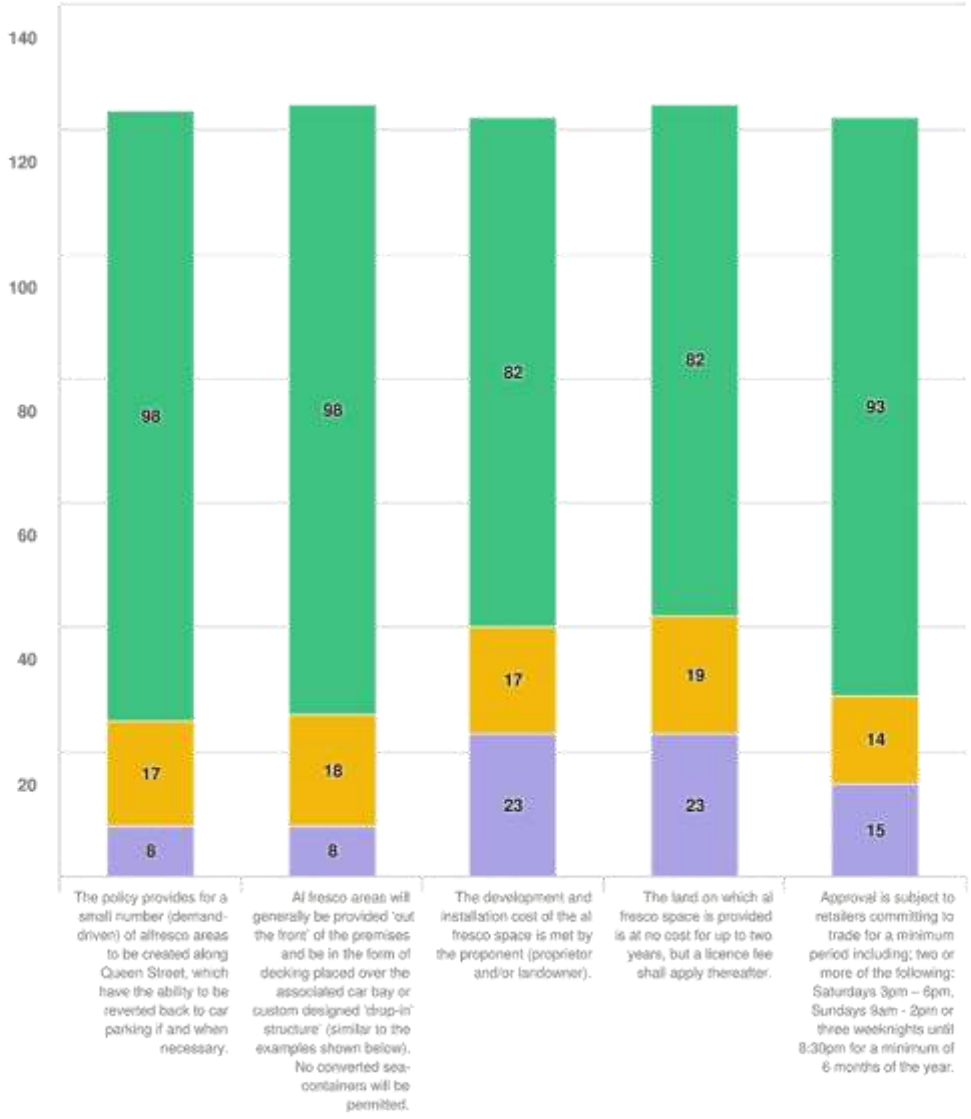


Question options

Yes No Unsure

Optional question (124 responses, 1 skipped)

Please indicate whether you support or do not support the following Draft Policy statements:



Question options

Support Do not support Unsure

Optional question (125 responses, 0 skipped)

COUNCIL POLICY

City of Busselton

Council Policy Name: Al Fresco Trading in the Busselton City Centre

Responsible Directorate: Planning and Development Services Version: Proposed

1. PURPOSE

1.1. This Policy supports the activation and sustainability of the Busselton City Centre through facilitating an expansion in the number and scale of al fresco areas associated with cafes, bars and restaurants.

2. SCOPE

2.1. This Policy is applicable to proposals for al fresco trading in the Busselton City Centre, on the road reserve (i.e. it does not relate to private property or other local government land).

2.2. The Policy guides the exercise of the City's property functions, and guides how City land will be managed; this Policy is not a local planning policy or policy that guides the City's other regulatory functions. In exercising those other functions, however, the City will be conscious of this Policy and its purpose.

3. DEFINITIONS

Term	Meaning
Policy	this City of Busselton Council policy entitled "Al Fresco Trading in the Busselton City Centre"

4. STRATEGIC CONTEXT

4.1. This Policy links to Key Goal Area 2 - Places and Spaces of the City's Strategic Community Plan 2017 and specifically the following Community Objective 2.3: Creative urban design that produces, vibrant, mixed-use town centres and public spaces.

5. POLICY STATEMENT

5.1 The Council generally supports removal of car parking to accommodate more al fresco space on Queen Street, but mainly in a reversible and in an incremental/demand-driven fashion.

5.2 Al fresco areas should generally be provided 'out the front' of the associated premises, and shall generally be at a scale proportional to the floor area of the premises.

5.3 The preferred form of al fresco is decking placed over car bays, or a custom designed and built 'drop-in' structure, with bollards installed separating the al fresco area from the traffic lane, but not in the form of converted or adapted sea containers.

5.4 The costs of providing al fresco space will be met by the proponent (proprietor and/or landowner); proposals can be subject of applications for funding under the City's façade upgrade subsidy programme.

5.5 The land on which the al fresco space is to be provided is at no cost for up to two years, but a licence fee shall apply thereafter.

5.6 A licence will be subject to conditions requiring minimum trading periods for a minimum of six months of each year, with those minimum periods including at least two of the following (and existing al fresco trading permits will be transitioned to these arrangements) –

(a) Saturday 3pm-6pm; or
(b) Sunday 9am-2pm; or
(c) 5pm-8.30pm, at least three nights per week.

5.7 The proponent shall be responsible for removal and decommissioning of al fresco infrastructure that is no longer required or supported.

5.8 Prior to the commencement of works, the proponent shall enter into a licence agreement with the City, for an initial two to five year term (with the term to be reflective of the level of up-front investment), with further licences generally for five year terms, if a further term is considered appropriate by the City.

6. RELATED DOCUMENTATION / LEGISLATION

6.1. Town planning scheme and related legislation, regulations and policy.
6.2. Building Act and related regulations.
6.3. Public Health Act and related regulations.
6.4. Local Government Act and related regulations, notably the City's Property Local Law and Thoroughfares Local Law.
6.5. Busselton City Centre Conceptual Plan.
6.6. City of Busselton Economic Development Strategy.

7. REVIEW DETAILS

Review Frequency		3 yearly		
Council Adoption	**DATE**		**Resolution #**	
Previous Adoption	**DATE**	N/A	**Resolution #**	N/A

12.5 Policy and Legislation Committee - 27/11/2018 - RECISSION OF FLAG PROTOCOL POLICY

SUBJECT INDEX:	Policy Review
STRATEGIC OBJECTIVE:	Governance systems, process and practices are responsible, ethical and transparent.
BUSINESS UNIT:	Governance Services
ACTIVITY UNIT:	Governance Services
REPORTING OFFICER:	Governance Coordinator - Emma Heys
AUTHORISING OFFICER:	Manager Governance and Corporate Services - Sarah Pierson
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Council Policy 120 Flag Protocol⇩ Attachment B Customer Service Protocol - Flags⇩

This item was considered by the Policy and Legislation Committee at its meeting on 27 November 2018, the recommendations from which have been included in this report.

PRÉCIS

The purpose of this report is to recommend rescission of Council Policy 120 Flag Protocol (Attachment A) (the Policy), which outlines the Council's authority for flags that can be flown at the City of Busselton Administration Offices.

In August 2017 the CEO commissioned a high level independent review of the City's governance systems - the Governance Systems Review (GSR). Included in the scope of the review was the City's policy and procedure framework with recommendations made in relation to the nature and intent of Council policies; namely that Council policies should deal with higher level strategies and objectives.

In accordance with the recommendations of the GSR, it is recommended that the Policy be rescinded.

BACKGROUND

The Policy outlines the City's authority for flags that can be flown at the City of Busselton Administration Offices. It was adopted in June 2012 and updated again in December 2016 (C1612/148) to include reference to the Department of Prime Minister and Cabinet Publication: Australian Flags – Part 2 – The protocols for the appropriate use and the flying of the flag, Commonwealth of Australia 2006.

The GSR was undertaken over a 3 month period by Mr John Woodhouse LLB Juris and made the following recommendations, including, but not limited to, the City's policy and procedure framework:

1. *There should be a review of the Council Policies with the intent that a Council Policy:*
    a. *Should deal with higher level objectives and strategies;*
    b. *Should not deal with operational matters, employee matters, or other matters which are the responsibility if the CEO; and*
    c. *Should, where appropriate provide sufficient direction to the CEO to develop OPPs which deal with the implementation of the Council Policy or other detailed matters.*
2. *As part of that review, any existing Council Policy should be deleted where it could, more sensibly, be dealt with by an OPP adopted by the CEO.*

In response a Policy Framework has been developed and endorsed by Council, setting out the intent of Council policies, as opposed to operational documents such as Staff Management Practices and operational procedures.

For the reasons outlined in the Officer Comment section of this report, it is considered appropriate for the Policy to be rescinded.

STATUTORY ENVIRONMENT

In accordance with Section 2.7(2) of the Local Government Act 1995 it is the role of the Council to determine the local government's policies. The Council does this on recommendation of a Committee it has established in accordance with Section 5.8 of that Act.

The Department of Prime Minister and Cabinet Publication: Australian Flags – Part 2 – The protocols for the appropriate use and the flying of the flag, Commonwealth of Australia 2006 provides for the protocols and precedence of flying the Australian National Flag. This is a comprehensive guideline document.

The Department of the Premier and Cabinet provides guidelines for flag protocols and flag precedence for the flying of the Western Australia State Flag and other flags as prescribed by the *Flags Act 1953*.

RELEVANT PLANS AND POLICIES

There are no plans or other policies directly relevant to this matter.

FINANCIAL IMPLICATIONS

There are no financial implications associated with the Officer recommendation.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

There are no long term financial plan implications associated with the Officer recommendation.

STRATEGIC COMMUNITY OBJECTIVES

The Officer recommendation will not impact adversely on the achievement of any of the community objectives contained within the Strategic Community Plan 2017 and will instead serve to meet the objectives of Key Goal Area 6, specifically community objective 6.1 – Governance systems, processes and practices are responsible, ethical and transparent, by streamlining the City's policy framework.

RISK ASSESSMENT

There are no identified risks of a medium or greater level associated with the Officer recommendation.

CONSULTATION

No external consultation is required in relation to this policy review.

OFFICER COMMENT

The Policy scope sets out the authority for flags that can be flown at the City of Busselton Administration Offices, with reference to the precedence of flying flags.

The Policy content further details the authority of the Chief Executive Officer to allow for other flags to be flown on other appropriate occasions, and for alternative flags to be flown in recognition of occasions, events, visits or the like for periods of time, but does not specify which occasions are appropriate or how they are to be determined, instead leaving it to the discretion of the CEO as an operational matter.

Upon review, the Policy is no longer considered necessary noting the recommendations of the GSR that Council policies should deal with high level objectives and strategies, while matters of an operational nature can be dealt with in Staff Management Practices. The Policy is not considered to set a strategic direction and is predominately operational in nature. Additionally the City has at an operational level a well-established procedural document in place in relation to flag protocols (Attachment B).

Through the review of other comparable Council's policies, only one was found to concern any type of flag protocol, relating to the treatment of applications to fly representative or special flags outside of the protocols already covered by the commonwealth and state guidelines. It is felt that this is a matter which can be appropriately dealt with by the CEO.

CONCLUSION

It is recommended that Council Policy 120 Flag Protocol be rescinded, as the City has an established operating procedure in place and there are federal and state guidelines which provide sufficient direction in relation to flag precedence and protocol.

OPTIONS

Council could instead require that the Policy is maintained and updated to the new template and / or further reviewed.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

The Policy will be rescinded immediately upon adoption of the Officers Recommendation.

COMMITTEE RECOMMENDATION AND OFFICER RECOMMENDATION

That the Council rescinds Council Policy 120 – Flag Protocol effective immediately.

Last updated 14 December 2016

120	Flag Protocol	V3 Current

1. PURPOSE

This policy is to provide guidance for the flying of flags at the Offices of the City of Busselton.

2. SCOPE

The policy sets out the authority for flags that can be flown at the City of Busselton Administration Offices. On all occasions, the Australian National Flag is to be flown and is to take precedence on the most prominent flagpole.

3. POLICY CONTENT

The Chief Executive Officer is authorised to fly the Western Australian State flag, Aboriginal and Torres Strait Islander flags, City of Busselton flag, Town of Sugito flag and Japanese flag, together with the Australian flag, in the City of Busselton on occasions as determined.

There may be however situations where it may be appropriate on occasion for other flags to be flown for a short period of time (such as to recognise visiting dignitaries etc).

On occasions where it is appropriate, an alternative flag may be flown to recognise an occasion, event, visit or the like for a temporary period of time.

Regard shall be given to all permanent and interim Commonwealth flag protocols.

4. APPLICATION OF THE POLICY

The policy shall be applied by customer service staff in consultation with Governance Services as necessary.

Policy Background

Policy Reference No. - 120
Owner Unit – Governance Services
Originator – Historical
Policy approved by – Council
Date Approved – 13 June, 2012
Review Frequency – As required
Related Documents – Department of the Prime Minister and Cabinet Publication: Australian Flags – Part 2 – The Protocols for the appropriate use and the flying of the flag, Commonwealth of Australia 2006.

Last updated 14 December 2016

History

Council Resolution	Date	Information
C1612/148	14 December 2016	Update to Policy to include reference to the Department of the Prime Minister and Cabinet Publication: Australian Flags – Part 2 – The Protocols for the appropriate use and the flying of the flag, Commonwealth of Australia 2006. Version 3
C1206/137	13 June, 2012	Update to policy format Version 2
		Version 1

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Shire of Busselton
Geographe Bay

CUSTOMER SERVICE PROCEDURE DOCUMENT

DIRECTORATE:	Financial and Corporate Services		
BUSINESS UNIT:	Customer Service		
TASK:	FLAG PROTOCOLS		
DESCRIPTION:	Federal, Aboriginal and Local flag protocols		
AUTHOR:	Diane Hamilton	**DATE:**	09 June 2011
HEADS OF POWER:	Department of Prime Minister and Cabinet: Booklet *Australian Flags – Part 2*	**NUMBER/ SET ID**	CSO001 / 1630729

Source Documents

The protocols outlined in this document were obtained from the Commonwealth Flag Officer, Awards and Culture Branch, Department of the Prime Minister and Cabinet. They have been tailored to suit the City of Busselton requirements including the implementation of flag flying requirements over weekends and holidays.

Please note that these protocols are also informed by the City of Busselton's Governance and Administration Policy – Flying of Flags (120/2).

Protocols

As the nation's foremost symbol, the Australian National Flag should be used with respect and dignity. These protocols are to assist you when flying or using the flag.

- Flying the flag
- Order of precedence
- Flying flags at half-mast
- Funerals
- Flag Raising Ceremonies

Flying the Australian National Flag

- The flag should be raised briskly and lowered ceremoniously.
- The flag should be raised no earlier than first light and lowered no later than dusk.
- When the flag is raised or lowered, or when it is carried in a parade or review, everyone present should be silent and face the flag. People in uniform should salute.
- The flag should always be flown freely and as close as possible to the top of the flagpole with the rope tightly secured.
- Unless all flags are raised and lowered simultaneously, the Australian National Flag should be raised first and lowered last.

- When flying with other flags, the Australian National Flag should fly on the left of a person facing the flags.
- Two flags should not be flown from the same flagpole.
- The flag should never be flown if it is damaged, faded or dilapidated. When the material of a flag deteriorates it should be destroyed privately and in a dignified way. I.e. it may be cut into small, unrecognisable pieces then disposed of with the normal rubbish collection.
- The flag should not be flown upside down, even as a signal of distress.
- The flag should not fall or lie on the ground or be used as a cover (although it can be used to cover a coffin at a funeral).
- Information on the protocols for displaying and folding the flag can be found in Part 2 of the booklet *Australian flags* (PDF 928KB)[1], which is available from your Federal Member of Parliament or Senator.

Order of precedence

The Australian National Flag takes precedence over all other flags when it is flown in Australia or Australian territory.

The standard order of precedence for the **City of Busselton** from east to west is:

- Australian National Flag
- The WA State Flag
- The Aboriginal Flag
- City of Busselton Flag

CEO approval is required to fly the state, aboriginal or Torres Strait Islander flags or the flags of any visiting nation. The order of precedence is:

- Australian National Flag
- Additional Flag
- Aboriginal Flag
- City of Busselton Flag

With the direction of the CEO, when a representative is visiting from the City of Busselton's sister city Sugito in Japan the order of precedence should be:

- Australian National Flag
- Japanese National Flag
- City of Busselton Flag
- Sugito City Flag

The Australian National Flag should not normally be flown in a position inferior to any other flag or ensign and should not be smaller than any other flag or ensign.

Flying flags at half-mast

Flags are flown at half-mast as a sign of mourning.

The half-mast position will depend on the size of the flag and the length of the flagpole. The flag must be lowered to a position recognisably half-mast to avoid the appearance of a flag which has

[1] http://www.itsanhonour.gov.au/symbols/docs/australian_flags_excerpt.pdf

accidentally fallen away from the top of the flagpole. An acceptable position would be when the top of the flag is a third of the distance down from the top of the flagpole.

There are times when direction will be given by the Australian Government for all flags to be flown at half-mast. The Commonwealth Flag Network[2] will notify the City of these occasions by email. These emails must be registered in ECM and then tasked to the responsible officer.

Flags in any locality can be flown at half-mast upon the death of a local citizen or on the day, or part of the day, of their funeral. Decisions to half-mast the Australian National Flag displayed at the City of Busselton administration offices rests with the Council and the CEO only.

When lowering the flag from a half-mast position it should be briefly raised to the peak and then lowered ceremoniously.

The flag should never be flown at half-mast at night even if it is illuminated.

When flying the Australian National Flag with other flags, all flags in the set should be flown at half-mast. The Australian National Flag should be raised first and lowered last.

Funerals

The flag can be used to cover the coffin of any Australian citizen at their funeral.

The upper left quarter or canton should be draped over the 'left shoulder' of the coffin to represent the heart.

The flag should be removed before the coffin is lowered into the ground or after the service at a crematorium.

Flag Raising Ceremonies

Schools or organisations wishing to hold a flag raising ceremony should follow the protocols outlined under the flying the flag[3] section.

Commonwealth Flag Network

For up to date advice on how to fly the Australian National Flag on special occasions, the Customer Service Coordinator and / or SCIO should register for the Commonwealth Flag Network[4].

You will receive an email at the same time as flag marshals around the country when special flag protocols (for special occasions such as ANZAC Day and NAIDOC Week or occasions when flags should be half-mast) are in affect. Note that this communication is usually three weeks in advance of The Commonwealth Flag Network email.

Commercial use

The Australian National Flag may be used for commercial purposes, including advertising, without formal permission but subject to guidelines:

[2] http://www.itsanhonour.gov.au/symbols/flag.cfm#network#network
[3] http://www.itsanhonour.gov.au/symbols/flag.cfm#network#network
[4] http://www.itsanhonour.gov.au/newsletter/subscriptionStart.cfm

- The flag should be used in a dignified manner and reproduced completely and accurately.
- It should not be defaced by overprinting with words or illustrations.
- Other objects in displays should not cover the flag.
- All symbolic parts of the flag should be identifiable.

The Aboriginal Flag is copyright controlled. Official permission must be obtained prior to commercial use.

In regard to the importation of items bearing an image of the Australian National Flag, importers consult the Department of the Prime Minister and Cabinet for approval of the item before applying for an import permit through the Australian Customs Service.

If you have any questions about the appropriate use or representation of the Australian National Flag, please contact the Commonwealth Flag Officer by post or email.

Commonwealth Flag Officer
Awards and Culture Branch
Department of the Prime Minister and Cabinet
PO Box 6500
CANBERRA ACT 2600
Australia

Authorised:
Diane Hamilton – Customer Service Coordinator
Date 05/07/2011

ECM Document ID:

Version	Changes	Author/Date
1	Initial	Diane Hamilton 10 Feb. 2009
2	Update format and information	Diane Hamilton 09 June 2011
3	Final Edit and Authorisation	Diane Hamilton 05 July 2011
4	City of Busselton Flag Policy Inserted	Diane Hamilton 20 June 2012
5	Update information	Hannah Chandler

12.6 Policy and Legislation Committee - 27/11/2018 - REVIEW OF COUNCIL POLICY 234 - RISK MANAGEMENT

SUBJECT INDEX:	Risk Management
STRATEGIC OBJECTIVE:	Governance systems, process and practices are responsible, ethical and transparent.
BUSINESS UNIT:	Corporate Services
ACTIVITY UNIT:	Governance Services
REPORTING OFFICER:	Manager Governance and Corporate Services - Sarah Pierson
AUTHORISING OFFICER:	Director Finance and Corporate Services - Tony Nottle
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Proposed Council Policy - Risk Management⇩ Attachment B Current Council Policy - Organisation Wide Risk Management⇩ Attachment C Proposed Council Policy - Risk Management - Committee ⇩

This item was considered by the Policy and Legislation Committee at its meeting on 27 November 2018, the recommendations from which have been included in this report.

PRÉCIS

This report presents a revised Risk Management policy (Attachment A) (the Policy) for Council approval, with the current policy having been amended as part of the City's overall review of its Council policies, having regard to the recommendations of the Governance System Review (GSR) carried out by Mr John Woodhouse in 2017.

The Policy, which has been moved into the new policy template and updated to reference the current Australian Standard, is considered to be of continuing relevance and importance and is therefore recommended for Council approval. It is recommended that the Policy be renamed also to simply Risk Management.

BACKGROUND

A policy in relation to risk management was originally adopted in May 2006, in order to demonstrate the City's commitment to the development of a culture of risk based decision making aimed at the effective management of potential opportunities, and reduction of potential impacts of risk. Since then the current policy has been reviewed four times, most recently in 2016, with only minor changes made such as updating Shire to City.

STATUTORY ENVIRONMENT

In accordance with Section 2.7(2)(b) of the *Local Government Act 1995* it is the role of the Council to determine the local government's policies. The Council does this on the recommendation of a Committee it has established in accordance with Section 5.8 of that Act.

In accordance with regulation 17 of the *Local Government (Audit) Regulations 1996* (Regulation 17) the CEO is to review the appropriateness and effectiveness of a local government's systems and procedures in relation to risk management, as well as internal control and legislative compliance. The CEO is to report to the audit committee the results of that review at least once every three financial years. A report in this respect was last provided in October 2016.

RELEVANT PLANS AND POLICIES

In August 2017 the CEO commissioned a high level independent review of the City's governance systems - the GSR. Included in the scope of the review was the City's policy and procedure framework with the following recommendations made:

1. *There should be a review of the Council Policies with the intent that a Council Policy:*
    a. *Should deal with higher level objectives and strategies;*
    b. *Should not deal with operational matters, employee matters, or other matters which are the responsibility if the CEO; and*
    c. *Should, where appropriate provide sufficient direction to the CEO to develop OPPs which deal with the implementation of the Council Policy or other detailed matters.*
2. *As part of that review, any existing Council Policy should be deleted where it could, more sensibly, be dealt with by an OPP adopted by the CEO.*
3. *Consideration should be given to developing a new Council Policy which sets out the 'framework' for Council Policies, OPPs and other procedures. The new Policy would explain the role to be played by each level of document. It could, for example, be called a Policy Framework Policy.*

In response a Policy Framework has been developed and endorsed by Council, setting out the intent of Council policies, as opposed to operational documents such as Staff Management Practices and operational procedures. The Policy adheres to this framework.

As per the requirements of the Policy, the City has developed a risk management framework which was endorsed by the Senior Management Group in December 2017. The framework outlines the City's formal risk management system and processes for the management of risks. Specifically it outlines:

- The definition of risk and risk management
- The City's risk reference tables
- The risk tolerance levels
- The risk management processes and procedures

FINANCIAL IMPLICATIONS

Adoption of the Policy has no additional financial implications.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

Adoption of the Policy has no additional long term financial plan implications.

STRATEGIC COMMUNITY OBJECTIVES

The Policy links to Key Goal Area 6 of the City's Strategic Community Plan 2017 and specifically the Community Objective 6.1: Governance systems, process and practices are responsible, ethical and transparent.

RISK ASSESSMENT

There are no risks identified of a medium or greater level associated with the Officer recommendation, with the Policy reiterating and maintaining Council's strategic direction in relation to the management of risk.

CONSULTATION

No specific consultation was undertaken in relation to the review of the Policy.

OFFICER COMMENT

The purpose of the Policy is to recognise the importance of risk management and Council's commitment to a culture of positive and pro-active risk management through the development and maintenance of appropriate and effective risk systems, frameworks and processes.

While Regulation 17 requires that the CEO provide a report in relation to its risk management systems (inclusive of systems relating to internal control and legislative compliance), this Policy serves to strengthen that outlining a commitment to the development of a risk management framework based on the ISO 3100 Standard (current as of 2018) and for communicating and establishing risk management processes.

The Policy also outlines the role of the Audit Committee in relation to risk management.

Due to the Policy being transferred into the new policy template a tracked changes version is not provided. The current policy is provided at Attachment B for reference. The key changes relate to removing operational aspects such as responsibilities of the Senior Management Group, the Risk Management Committee, management and employees, and updating reference to the applicable Standard.

CONCLUSION

The Policy updates the current Organisation Wide Risk Management Policy and in doing so maintains Council's strategic direction in relation to the development of a culture of risk based decision making directed towards the effective management of potential opportunities and reduction of potential impacts of risk.

OPTIONS

Council could decide not to adopt the Policy and instead choose to take a different positon / approach in relation to risk management. Council could also require further amendments to the Policy.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

The Policy will be effective as of its adoption by Council.

OFFICER RECOMMENDATION

That the Council adopts the revised Risk Management Policy as per Attachment A, to replace the current policy (Attachment B).

COMMITTEE RECOMMENDATION

That the Council adopts the revised Risk Management Policy as per Attachment A, to replace the current policy (Attachment B), subject to paragraph 5.4 being rewritten (shown in Attachment C) as per below:

5.4. The Chief Executive Officer is responsible for:

a. Communicating the Risk Management Policy throughout the City;
b. Establishing risk management processes across the City's operations;
c. Reviewing the appropriateness and effectiveness of a local government's systems and procedures in relation to risk management, internal control and legislative compliance not less than once every 3 financial years and reporting the results of that review to the audit committee as per Regulation 17 of the Local Government (Audit) Regulations 1996.

Reason: The committee felt that to maintain consistency and readability of the Policy 5.4c, and 5.4d should be reworded to remove quoting from the Regulations.

COUNCIL POLICY

City of Busselton

Council Policy Name: Risk Management

Responsible Directorate: Finance and Corporate Services Version: Proposed

1. PURPOSE

1.1. The purpose of this Policy is to demonstrate the City of Busselton's commitment to the development of a culture of risk based decision making directed towards the effective management of potential opportunities and reduction of potential impacts of risk.

2. SCOPE

2.1. This Policy is applicable to the City of Busselton and its operations.

3. DEFINITIONS

Term	Meaning
Policy	This City of Busselton Council policy entitled "Risk Management"

4. STRATEGIC CONTEXT

4.1. This Policy links to Key Goal Area 6 – Leadership of the City's Strategic Community Plan 2017 and specifically Community Objective 6.1: Governance systems, process and practices are responsible, ethical and transparent.

5. POLICY STATEMENT

5.1. Risk management is defined in the ISO 31000 Standard as the coordinated activities to direct and control an organisation with regard to risk.

5.2. The City of Busselton is committed to the effective management of risk and will implement a risk management framework based on the ISO 31000 Standard to achieve this. The Council recognises that adequate resources are needed to effectively manage risks.

5.3. The Council is responsible for:

a. Ensuring that a Risk Management Policy has been developed and adopted;
b. Ensuring the Chief Executive Officer has implemented the risk management framework; and
c. Establishment of an Audit Committee to assist the Council in fulfilling its corporate governance, stewardship, leadership and control responsibilities in relation to risk management.

5.4. The Chief Executive Officer is responsible for:

a. Communicating the Risk Management Policy throughout the City;
b. Establishing risk management processes across the City's operations;
c. Reviewing "...the appropriateness and effectiveness of a local government's systems and procedures in relation to –

i. risk management; and...
ii. internal control; and
iii. legislative compliance

not less than once in every 3 financial years..." (*Local Government (Audit) Regulations 1996* r.17); and

d. Reporting "...to the audit committee the result of that review." (*Local Government (Audit) Regulations 1996* r.17)

6. RELATED DOCUMENTATION / LEGISLATION

6.1. International Standard ISO 31000:2018 - Risk Management Guidelines
6.2. Risk Management Framework
6.3. Local Government (Audit) Regulations 1996

7. REVIEW DETAILS

Review Frequency		3 yearly		
Council Adoption	**DATE**		**Resolution #**	
Previous Adoption	**DATE**	12 October 2016	**Resolution #**	C1610/096

Last updated 12 October 2016

234	Organisation Wide Risk Management	V4 Current

PURPOSE

The purpose of this policy is to demonstrate the City of Busselton's commitment to the development of a culture of risk based decision making directed towards the effective management of potential opportunities and reduction of potential impacts of risk.

SCOPE

This policy applies to all Councillors and employees of the City of Busselton and covers all City operations.

POLICY STATEMENT

Risk Management is the systematic application of management policies, practices and procedures in order to identify, analyse, evaluate, treat and monitor risk.

The City of Busselton is committed to the effective management of risk and will implement a Risk Management Framework based on the AS/NZS ISO 31000:2009 Standard to achieve this. The Council recognises that adequate resources are needed to effectively manage risks. The Risk Management Committee has been established to assist in developing, maintaining and implementing the City's Risk Management Framework and is responsible for championing risk management processes throughout the organisation.

Responsibilities

The Council is responsible for:

* Ensuring that a Risk Management Policy has been developed, adopted and communicated throughout the City.
* Ensuring that the CEO has implemented the Risk Management Framework using Standard AS/NZS ISO 31000:2009.
* Communicating with the community about the City's approach to risk
* Establishment of an Audit Committee

The Audit Committee is responsible for:

* Assisting the Council to fulfil its corporate governance, stewardship, leadership and control responsibilities in relation to risk management.
* Providing guidance and assistance in relation to risk management initiatives and the effective conduct of risk management activities.

CEO and the Senior Management Group are responsible for:

* As part of the Risk Management Framework establishing the risk tolerance level of the City.
* Conducting risk assessments as part of decision making & future planning.

Risk Management Committee is responsible for:

* Communicating the policy and framework to all employees.
* Developing and managing the risk management plan for the City.
* Development of Risk Management skills through training and education.
* Establishing and maintaining an appropriate risk register or risk registers for the City.

Last updated 12 October 2016

Management are responsible for:

* Identifying and assessing all the risks in their area of responsibility as part of business planning reporting, project management and daily decision making.
* Collating, assessing, treating and reporting to the Risk Management Committee in relation to areas and tasks under their responsibility.

All Employees are to:

* Comply with the City's risk management policy and procedures.
* Attend relevant risk management training.
* Actively participate in the risk management programme.

Policy Background

Policy Reference No. - 234
Owner Unit – Corporate Services
Originator – Risk and OHS Officer
Policy approved by – Council
Date Approved – 12 August, 2015
Review Frequency – As required

Related Documents –

Australian and New Zealand Standard AS/NZS ISO 31000:2009 - Risk Management Principles and Guidelines.

History

Council Resolution	Date	Information
C1610/096	12 October, 2016	Minor improvements aimed at ensuring a clear policy statement and a clear set of responsibilities at all levels. Version 4
C1508/217	12 August, 2015	Version 3
C1107/229	27 July, 2011	Version 2
C0605/146	10 May, 2006	Date of implementation. Version 1

COUNCIL POLICY

City of Busselton

Council Policy Name: Risk Management

Responsible Directorate: Finance and Corporate Services Version: Proposed

1. PURPOSE

1.1. The purpose of this Policy is to demonstrate the City of Busselton's commitment to the development of a culture of risk based decision making directed towards the effective management of potential opportunities and reduction of potential impacts of risk.

2. SCOPE

2.1. This Policy is applicable to the City of Busselton and its operations.

3. DEFINITIONS

Term	Meaning
Policy	This City of Busselton Council policy entitled "Risk Management"

4. STRATEGIC CONTEXT

4.1. This Policy links to Key Goal Area 6 – Leadership of the City's Strategic Community Plan 2017 and specifically Community Objective 6.1: Governance systems, process and practices are responsible, ethical and transparent.

5. POLICY STATEMENT

5.1. Risk management is defined in the ISO 31000 Standard as the coordinated activities to direct and control an organisation with regard to risk.

5.2. The City of Busselton is committed to the effective management of risk and will implement a risk management framework based on the ISO 31000 Standard to achieve this. The Council recognises that adequate resources are needed to effectively manage risks.

5.3. The Council is responsible for:

a. Ensuring that a Risk Management Policy has been developed and adopted;
b. Ensuring the Chief Executive Officer has implemented the risk management framework; and
c. Establishment of an Audit Committee to assist the Council in fulfilling its corporate governance, stewardship, leadership and control responsibilities in relation to risk management.

5.4. The Chief Executive Officer is responsible for:

a. Communicating the Risk Management Policy throughout the City;
b. Establishing risk management processes across the City's operations;
c. Reviewing the appropriateness and effectiveness of a local government's systems and procedures in relation to risk management, internal control and legislative compliance not less than once every 3

financial years and reporting the results of that review to the audit committee as per Regulation 17 of the *Local Government (Audit) Regulations 1996*.

6. RELATED DOCUMENTATION / LEGISLATION

6.1. International Standard ISO 31000:2018 - Risk Management Guidelines
6.2. Risk Management Framework
6.3. Local Government (Audit) Regulations 1996

7. REVIEW DETAILS

Review Frequency		3 yearly		
Council Adoption	**DATE**		**Resolution #**	
Previous Adoption	**DATE**	12 October 2016	**Resolution #**	C1610/096

12.7 Policy and Legislation Committee - 27/11/2018 - REVIEW OF CORPORATE ATTIRE ENTITLEMENTS

SUBJECT INDEX:	Governance
STRATEGIC OBJECTIVE:	Governance systems, process and practices are responsible, ethical and transparent.
BUSINESS UNIT:	Corporate Services
ACTIVITY UNIT:	Governance Services
REPORTING OFFICER:	Manager Governance and Corporate Services - Sarah Pierson
AUTHORISING OFFICER:	Director Finance and Corporate Services - Tony Nottle
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Proposed Tracked Changes⇩

This item was considered by the Policy and Legislation Committee at its meeting on 27 November 2018, the recommendations from which have been included in this report.

PRÉCIS

This report presents and seeks Council's adoption of revised entitlements in relation to Elected Member corporate attire, with the proposed entitlements to be incorporated into the Council Policy - Fees Allowances and Expenses for Elected Members (the Policy), replacing clauses 5.25, 5.26, 5.27 and 5.28 of the Policy.

BACKGROUND

The Policy was updated in October 2018 to provide for improved clarity in relation to childcare reimbursements, travel reimbursements and reimbursements while Elected Members are away from home on sanctioned activities.

Officers additionally recommended some changes to corporate attire entitlements however Council resolved not to adopt those changes and to instead refer the relevant paragraphs of the Policy (5.25, 5.26, 5.27 and 5.28 of Attachment A) back to the Policy and Legislation Committee for further discussion.

At its meeting on 23 October 2018 the committee further discussed corporate attire expenses and it was agreed that Officers would table for consideration the outcomes of that discussion at the next Policy and Legislation Committee meeting.

STATUTORY ENVIRONMENT

In accordance with Section 2.7(2)(b) of the Local Government Act 1995 (the Act) it is the role of the Council to determine the local government's policies. The Council does this on the recommendation of a Committee it has established in accordance with Section 5.8 of that Act.

Section 5.98(2)(b) of the Act and Regulation 32 of the *Local Government (Administration) Regulations 1996* provides that a Council member may be reimbursed for an expense of a kind prescribed where it has been approved by the local government and where it is incurred in performing a function in his or her capacity as a council member with the express authority of the local government.

RELEVANT PLANS AND POLICIES

There are no plans or other policies relevant to this matter.

FINANCIAL IMPLICATIONS

Adoption of the Officer recommendation is expected to result in some minor cost savings and hence have a favourable (albeit small) impact on the City's annual budget.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

Adoption of the Officer recommendation will have a minor, favourable impact on the long term financial plan.

STRATEGIC COMMUNITY OBJECTIVES

The proposed amendments to the Policy further support achievement of Key Goal Area 6 – Leadership of the City's Strategic Community Plan 2017 and specifically Community Objective 6.1: Governance systems, process and practices are responsible, ethical and transparent.

RISK ASSESSMENT

There are no risks identified of a medium or greater level associated with the Officer recommendation, with the Policy providing improved clarity in relation to a number of reimbursements.

CONSULTATION

Officers reviewed the policies of the City of Stirling, City of Joondalup, City of Bunbury, Shire of Capel and Shire of Augusta-Margaret River in relation to Elected Member entitlements and, with the exception of the City of Joondalup, found no entitlement to the provision or reimbursement of corporate / business attire or expenses.

The City of Joondalup provides Elected Members with an optional Elected Member uniform (one jacket, two trousers/skirts and three shirts/blouses) and a Driz-a-bone jacket or similar. Additionally Elected Members are entitled to an annual reimbursement limit of **$1,170** ***(as at July 2018)*** for reimbursement of costs (outside of child care and travel costs) incurred as a result of performing their duties as an Elected Member. Specified expenses include:

- business attire including footwear
- dry-cleaning
- stationery
- paid tickets to social functions, meetings or events where the Elected Member has been invited by a written invitation and the organiser is a civic / cultural organisation or a stakeholder of the City of Joondalup.

OFFICER COMMENT

The Policy provides Elected Members with a range of branded corporate attire (with City logo) on being elected and an additional amount of $750pa for the purchase of business attire for each year of the election term.

Branded corporate attire consists of:

a. corporate suit (male – Trousers and Jacket);
b. corporate suit (female – Skirt, Dress, Pants and Jacket);
c. corporate shirts/blouses etc.;
d. casual/Light weight Fleecy Jacket;
e. polo top;

f. City tie/scarf.

Business attire is outlined as:
a. business attire (which may consist of a suit, jacket and shirts/blouses);
b. one pair of shoes (up to $150);
c. dry cleaning and maintenance of corporate and business attire.

After discussion with the committee it is recommended that the Policy be amended to provide each Elected Member upon election or re-election with business attire as outlined below; with all items to be purchased from a City approved provider:

a. 1 x business suit (male – 2 x Trousers and 1 x Jacket; female – 2 x skirt, dress or pants and 1 x jacket)
b. 3 x corporate shirt / blouse
c. 1 x corporate casual / fleecy jacket (branded)
d. 1 x corporate polo shirt (branded)
e. 1 x corporate tie / scarf (branded)
f. 1 x pair of business shoes up to a value of $150

Additionally it is proposed that the cost of reasonable dry cleaning and maintenance costs be reimbursed. Provided at Attachment A is a copy of the Policy with the proposed amendments shown in track changes.

The proposed amendments to the Policy aim to provide Elected Members with access to suitable attire to perform their functions, while ensuring a financially responsible approach. It is recommended that the proposed amendments are effective as of 1 July 2019 to align with the budget cycle and to provide Elected Members with a period of transition.

CONCLUSION

Following discussion at the October Policy and Legislation Committee meeting, amendments are proposed in relation to Elected Member corporate attire expenses, with clauses 5.25, 5.26, 5.27 and 5.28 of the Policy being replaced as proposed in the Officer recommendation.

OPTIONS

Council could decide not to adopt the proposed amendments and leave the Policy unchanged or they could seek to make additional or different amendments.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

If adopted the Policy would be amended effective 1 July 2019.

OFFICER RECOMMENDATION

That the Council adopt the following to replace clauses 5.25, 5.26, 5.27 and 5.28 of the Council Policy Fees Allowances and Expenses for Elected Members, effective 1 July 2019:

5.25 Upon election or re-election, Elected Members will be entitled to the following business attire:

a. Business suit (male – 2 x Trousers and 1 x Jacket)

b. Business suit (female – 2 x Skirt/Dress/Pant and 1 x Jacket)

c. Business shirt / blouse – x 3

d. Corporate (City branded) casual / light weight fleecy jacket – x 1

e. Corporate (City branded) polo top – x 1

f. Corporate (City branded) tie / scarf – x 1

g. Business shoes – x 1 pair (up to a value of $150)

5.26 Elected Members will be reimbursed reasonable costs associated with the dry cleaning and maintenance of issued business attire.

5.27 With the exception of business shoes, all items of business attire must be purchased from the City's approved provider.

5.28 All items of business attire which are branded with the City of Busselton's logo should be returned to the City on expiry of office.

COMMITTEE RECOMMENDATION

That the Council adopt the following to replace clauses 5.25, 5.26, 5.27 and 5.28 of the Council Policy Fees Allowances and Expenses for Elected Members, effective 1 July 2019:

5.25 Upon election or re-election, Elected Members will be entitled to the following business attire:

a. Business suit (male – 2 x Trousers and 1 x Jacket)

b. Business suit (female – 2 x Skirt/Dress/Pant and 1 x Jacket)

c. Business shirt / blouse – x 3

d. Corporate (City branded) casual / light weight fleecy jacket – x 1

e. Corporate (City branded) polo top – x 1

f. Corporate (City branded) tie / scarf – x 1

g. Business shoes – x 1 pair (up to a value of $150)

5.26 Elected Members will be reimbursed reasonable costs associated with the dry cleaning and maintenance of business attire.

5.27 With the exception of business shoes, all items of business attire must be purchased from the City's approved provider.

5.28 All items of business attire which are branded with the City of Busselton's logo should be returned to the City on expiry of office.

Reason: The committee was in agreeance that the word issued should be removed from 5.26 to allow all business attire to be dry cleaned, subject to the cost being reasonable.

COUNCIL POLICY

City of Busselton

Council Policy Name: Fees, Allowances and Expenses for Elected Members

Responsible Directorate: Finance and Corporate Services Version: Proposed

1. PURPOSE

1.1. The purpose of this Policy is to set out the fees, allowances, reimbursements and equipment that Elected Members are entitled to, to enable them to carry out their role effectively and efficiently.

2. SCOPE

2.1. This Policy is applicable to the purchase of all City of Busselton owned equipment for the specific and individual use of an Elected Member, the reimbursement of any expenses incurred by an Elected Member in the performance of their functions and duties, and fees and allowances provided to all Elected Members.

2.2. All matters approved in this Policy are in accordance with the relevant legislation, being the *Local Government Act 1995* and the *Local Government (Administration) Regulations 1996* and the Local Government Chief Executive Officers and Elected Members Determination made under the *Salaries and Allowances Act 1975.*

3. DEFINITIONS

Term	Meaning
Act	Local Government Act 1995
Determination	The determination of the Salaries and Allowances Tribunal for Local Government Chief Executive Officers and Elected Members as current from time to time
Elected Member	Any person who holds the office of Councillor on the Council of the City of Busselton, including the Mayor and Deputy Mayor.
Policy	This City of Busselton Council policy entitled "Fees, Allowances and Expenses for Elected Members"
Regulations	Local Government (Administration) Regulations 1996

4. STRATEGIC CONTEXT

4.1. This Policy links to Key Goal Area 6: Leadership of the City's Strategic Community Plan 2017 and specifically the following Community Objective/s:

a. 6.1: Governance systems, process and practices are responsible ethical and transparent.

5. POLICY STATEMENT

Elected Members

5.1. In accordance with Division 8 of Part 5 of the Act Elected Members are entitled to receive a fee for meeting attendance, to be reimbursed for expenses and/or be paid an allowance for certain types of expenses. Certain payments are an entitlement in accordance with the Act, while others require specific local government approval.

5.2. Reimbursements under this Policy must be submitted within three months of the expenses being incurred.

Elected Member fee

5.3. As per Section 5.99 of the Act, Elected Members will be paid an annual attendance fee in lieu of fees for attending meetings referred to in Section 5.98(1) of the Act. In accordance with the Determination Elected Members shall be paid an annual fee within the Band established as set by Council when the annual budget is adopted.

5.4. The annual fee will be payable monthly or quarterly in arrears and will be calculated on a pro-rata basis for any Elected Member who commences or ceases office during the month or quarter. Upon commencement of office, and Elected Member, for the purposes of budget development, will be requested to indicate their preferred payment method.

Provision of equipment

5.5. Without limiting the application of any other clause in this Policy, the local government will provide to Elected Members access to resources to enable them to carry out their duties efficiently and effectively.

5.6. In accordance with Section 3.1 of the Act, in order to provide for the good government of persons in the District, any new Elected Member will be provided upon request with the following equipment:

a. brief case up to the value of $150;
b. standard-issue mobile telephone;
c. standard issue portable device that will be upgraded from time to time, inclusive of standard equipment associated with the day-to-day use of the device.

5.7. Any equipment provided in accordance with this Policy can be retained by the Elected Member at the completion of their term of office or if they serve a minimum of 24 months as an Elected Member.

Information and communication technology allowance

5.8. In accordance with the Determination, Elected Members are eligible to claim an annual information and communications technology allowance.

5.9. This allowance is to cover an Elected Member's costs in relation to expenses that relate to information and communications technology, for example telephone rental and call charges and internet service provider fees, and are of a kind prescribed by Regulation 32(1) of the Regulations.

5.10. The information and communications technology allowance will be paid monthly or quarterly in arrears. The allowance will be calculated on a pro-rata basis for any Elected Member who commences or ceases office during the month or quarter. Upon commencement of office, Elected Members, for the purposes of budget development, will be requested to indicate whether it is their intention to claim the information and communications technology allowance and their preferred payment method.

Reimbursement of childcare expenses

5.11. In accordance with the 5.98(2)(a) of the Act an Elected Member who incurs childcare expenses due to their attendance at a Council meeting or a meeting of a formally constituted Council committee of which they are a member is entitled to be reimbursed.

5.12. In addition, pursuant to 5.98(2)(b) of the Act, an Elected Member who incurs childcare expenses due to their attendance as an Elected Member at arranged briefing sessions and workshops within the City of Busselton district is entitled to be reimbursed.

5.13. The extent to which childcare expenses incurred will be reimbursed will be in accordance with the Determination, with the number of hours claimed limited to the actual length of the meeting plus a nominal time allowance for travel to and from the place of care.

5.14. Notwithstanding 5.13, reimbursement will be for the lowest minimum set rate of payment which provides coverage of the time calculated under paragraph 5.13.

Reimbursement of travel expenses

5.15. In accordance with the Act an Elected Member who incurs expenses to travel to a Council meeting or a meeting of a formally constituted Council committee of which they are a member is entitled to be reimbursed. Elected Members can also be reimbursed for other types of travel in accordance with Regulation 32 of the Regulations.

5.16. The following list represents the meetings and other events for which Elected Members will be able to claim reimbursement in accordance with the Determination for incurring travel expenses:

a. Council meetings - ordinary and special;
b. Committee meetings of a formally constituted Council committee of which they are a member or a deputy member acting in the capacity of a member;
c. Electors' meetings - annual and special;
d. civic receptions hosted by the City of Busselton;
e. visits by Ministers of the Crown or other distinguished visitors of similar status;
f. City organised inspection tours of matters arising before the Council or as a JDAP member;
g. any City-convened meeting by the Mayor or CEO requiring Elected Member attendance, including briefing sessions, workshops and other forums;
h. Elected Member training courses;
i. City organised meetings with ratepayers;
j. attendance at functions and events sponsored to a value of $10,000 or more by the City of Busselton through the Marketing and Events Reference Group funding, held within the boundaries of the City, and where a specific invitation has been issued by the City's administration. Additionally other events may be approved from time to time by the Mayor and the CEO;
k. where the Mayor is unable to attend a function or event and has requested another elected member to attend on his behalf. This includes attendance at functions within the district for the purposes of presenting awards / gifts;
l. attendance at functions and events for the purposes of receiving awards on behalf of the City;

m. seminars and conferences attended in the capacity of an Elected Member as approved by the City in accordance with Policy 08 "Councillors Induction, Training and Professional Development";
n. meetings of community groups or other external organisations of which the Elected Member has been appointed the Council's representative / delegate by Council resolution (except where the other body pays the elected member for meeting attendance and/or travel e.g. ministerial appointment to State Advisory Boards).

5.17. Where large distances are involved and when practicable, Elected Members are encouraged to use a City-owned motor vehicle in the first instance.

5.18. Reimbursement will be made available to Elected Members on the receipt of a certified claim form, in accordance with the Determination.

5.19. Where a City vehicle is utilised, the travel reimbursement or travel allowance cannot be claimed.

5.20. Subject to the approval of the Chief Executive Officer or delegate, Elected Members are entitled to use a City-owned motor vehicle for travel for personal reasons during the time when the vehicle is being used for City purposes, provided such use is of a minor incidental nature only.

Reimbursement of expenses while away from home on sanctioned activities

5.21. Expenses incurred for conferences, training, seminars, attendance at intrastate functions for the purposes of receiving awards and similar occasions requiring an Elected Member to stay overnight away from their place of residence will be reimbursed to the Elected Member or paid directly by the City subject to and in accordance with paragraphs 5.22 and 5.23.

5.22. Air travel (where applicable) and accommodation will be arranged and paid for by the City in consultation with the Elected Member, with the key consideration being cost effectiveness and, in relation to accommodation, proximity to the location at which the conference, training, seminar or similar occasion is being held.

5.23. While staying in accommodation provided by the City, the City will also meet the following expenses:
a. cost of laundry for Elected Member and spouse or partner for greater than 2 nights;
b. taxi fares or other public transport where these directly relate to the activity and no other transport is provided. Reimbursement for an Elected Member's spouse or partner is subject to them being accompanied by the Elected Member;
c. daily sustenance allowance per day, in accordance with the Public Service Award 1992 for Elected Member only;
d. specific conference / event related meals for Elected Member and spouse or partner.

Reimbursement of hospitality expenses

5.24. Elected Members may, subject to the provision of receipts and approval by the Mayor, seek reimbursement of the reasonable costs of beverages or snack items provided during any meeting or function for which they are entitled to reimbursement of travel under paragraph 5.15 and 5.16.

Corporate attire expenses

~~5.25. Each Elected Member is eligible to be provided with a range of corporate attire (with City logo) on being elected and is entitled to an additional amount of $750pa for business attire for each year of the election term.~~

~~5.26.~~5.25. Upon election or re-election, Elected Members will be entitled to ~~be issued with~~ the following business attire~~items~~:

a. Business suit (male - 2 x Trousers and 1 x Jacket);
b. Business suit (female – 2 x Skirt/Dress/Pant and 1 x Jacket);
c. Business shirt / blouse – x 3
d. Corporate (City branded) casual / light weight fleecy jacket – x 1;
e. Corporate (City branded) polo top – x 1
f. Corporate (City branded) tie / scarf – x 1
g. Business shoes – x 1 pair (up to a value of $150)

~~a. Corporate attire with City logo (and not charged against the allowance):~~
~~b. corporate suit (male – Trousers and Jacket);~~
~~c. corporate suit (female – Skirt, Dress, Pants and Jacket);~~
~~d. corporate shirts/blouses etc.;~~
~~e. casual/Light weight Fleecy Jacket;~~
~~f. polo top;~~
~~g. City tie/scarf.~~

~~h. Other (charged against the allowance):~~
~~i. business attire (which may consist of a suit, jacket and shirts/blouses);~~
~~ii. shoes (up to the value of $150);~~
~~iii. dry cleaning and maintenance of corporate and business attire.~~

5.26. Elected Members will be reimbursed reasonable costs associated with the dry cleaning and maintenance of issued business attire.

5.27. With the exception of business shoes, all items of ~~All of the corporate~~ business attire ~~acquisitions should be acquired~~must be purchased through the City's approved ~~uniform supplier~~provider.

5.28. All items of ~~corporate~~ business attire which are branded with the City of Busselton's logo should be returned to the City on expiry of office.

Mayor

Mayoral allowance

5.29. In addition to their entitlements as an Elected Member under this Policy, the Mayor is eligible for a Mayoral allowance in accordance with the Act. In accordance with the Determination the Mayor shall be paid an allowance within the Band established as set by Council when the annual budget is adopted.

5.30. The allowance will be payable monthly or quarterly in arrears and will be calculated on a pro-rata basis for any Mayor who commences or ceases office during the month or quarter. Upon commencement of office, the Mayor, for the purposes of budget development, will be requested to indicate whether it is their intention to claim a Mayoral allowance and their preferred payment method.

Provision of a Mayoral vehicle

5.31. The Mayor shall be provided with a City-owned motor vehicle for use in his or her official capacity. The Mayor is entitled to use the City-owned motor vehicle for travel for personal reasons during the time when the vehicle is being used for City purposes, provided such use is of a minor incidental nature only. Nothing in this section prevents the vehicle from being utilised in accordance with City fleet guidelines by other Elected Members with the agreement of the Mayor.

5.32. The Mayor may also use the vehicle for private use for convenience or necessity on a cost recovery basis. Details of private use shall be recorded in a log book which shall be provided to the City on a quarterly basis with reimbursement made to the City in one of the following ways:
   a. by deduction from the quarterly members allowance payment;
   b. an invoice provided to the Mayor.

5.33. The mileage rate will be determined by the State Salaries and Allowances Tribunal.

5.34. Unless Council approves otherwise, the Mayoral vehicle may only be used for private purposes for travel within the State of WA.

Deputy Mayor

Deputy Mayor's allowance

5.35. In addition to their entitlements as an Elected Member under this Policy, the Deputy Mayor may be paid a Deputy Mayor's allowance in accordance with the Act. In accordance with the Determination the Deputy Mayor shall be paid 25% of the Mayoral allowance.

5.36. The allowance will be payable monthly or quarterly in arrears and will be calculated on a pro-rata basis for any Deputy Mayor who commences or ceases office during the month or quarter. Upon commencement of office, the Deputy Mayor, for the purposes of budget development, will be requested to indicate whether it is their intention to claim a Deputy Mayor's allowance and their preferred payment schedule.

6. RELATED DOCUMENTATION / LEGISLATION

6.1. Local Government Act 1995
6.2. Local Government (Administration) Regulations 1996
6.3. Salaries and Allowances Tribunal Determination for Local Government Chief Executive Officers and Elected Members (as current from time to time)
6.4. Local Government Department Circular 9-2011

7. REVIEW DETAILS

Review Frequency		3 yearly		
Council Adoption	**DATE**	10 October 2018	**Resolution #**	C1810/207
Previous Adoption	**DATE**	11 October 2017	**Resolution #**	C1710/249

13. PLANNING AND DEVELOPMENT SERVICES REPORT

13.1 WATERWAY MANAGEMENT PLANS FOR THE LOWER VASSE RIVER AND TOBY INLET

SUBJECT INDEX:	WATER003: WATER QUALITY
STRATEGIC OBJECTIVE:	The health and attractiveness of our waterways and wetlands is improved to enhance community amenity.
BUSINESS UNIT:	Environmental Services
ACTIVITY UNIT:	Environmental Management
REPORTING OFFICER:	Senior Sustainability/Environment Officer - Robyn Paice
AUTHORISING OFFICER:	Director, Planning and Development Services - Paul Needham
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Lower Vasse River Water Management Plan⇩ Attachment B Toby Inlet Management Plan⇩

PRÉCIS

This report presents draft Waterway Management Plans (WMPs) for the Lower Vasse River and Toby Inlet, prepared by the City as part of the Revitalising Geographe Waterways (RGW) Program. The draft WMPs have been developed with extensive community and stakeholder consultation. Release and advertising of the WMPs for public review is now recommended prior to development of the final documents.

BACKGROUND

The health of the Lower Vasse River and Toby Inlet are of significant concern to our community. Physical modifications, altered flow regimes, nutrient enrichment and sedimentation are serious issues in these waterways, impacting ecology and public amenity. The Lower Vasse River experiences algal blooms every summer, dominated by harmful blue-green algae. Toby Inlet has large accumulations of sediments, and is prone to macroalgal blooms due to poor water quality.

An independent review of waterways management in the Geographe Bay Catchment in 2014 highlighted the lack of a lead management body and comprehensive management planning for key water assets. The review led to the formation of the Vasse Ministerial Taskforce and the Revitalising Geographe Waterways (RGW) program, which focuses on improving water quality in key water assets. As part of the RGW program, the City committed to preparation of WMPs for the Lower Vasse River and Toby Inlet. These are two of 30 projects being undertaken as part of the RGW program. There have been several Council briefings since commencement of the WMPs to provide updates on progress. The Department of Water and Environmental Regulation (DWER) has also provided briefings on the overall RGW program on several occasions.

The RGW program requires that the WMPs are completed by June 2019. Release and advertising of the draft WMPs (see Attachments A and B) for formal public review and comment is seen as appropriate prior to finalising the documents to meet this milestone.

STATUTORY ENVIRONMENT

The Lower Vasse River and Toby Inlet waterways are mostly Crown Land with no designated manager. The only exception is a 2.5km section of the Toby Inlet water body at the most downstream end, which is in reserves managed by the City. The City also manages a number of foreshore reserves adjacent to both the Lower Vasse River and Toby Inlet.

The *Rights in Water and Irrigation Act 1914* (RIWI Act) concerns the management of watercourses, and the Department of Water and Environmental Regulation is the agency responsible for implementation of the RIWI Act. In part, the objects of the *Rights in Water and Irrigation Act 1914* are -

a) to provide for the management of water resources, and in particular-

(i) for their sustainable use and development to meet the needs of current and future users; and

(ii) for the protection of their ecosystems and the environment in which water resources are situated, including by the regulation of activities detrimental to them;

The RIWI Act includes provisions to control interference with watercourses, which will apply to future implementation of the WMPs in regards to works that involve changes to the bed, banks and flow of these systems.

Other legislation that may apply to future implementation of some on-ground works components of the WMPs is:

- *Aboriginal Heritage Act 1972* (WA)
- *Fish Resources Management Act* 1994 (WA)
- *Wildlife Conservation Act 1950* (WA)
- *Biodiversity Conservation Act 2016* (WA)
- *Environmental Protection and Biodiversity Conservation Act 1999* (Commonwealth)

RELEVANT PLANS AND POLICIES

In 2016 Council adopted the *Environment Strategy 2016 – 2021* with objectives for 'Water Resources' that include:

- To ensure proactive management of water assets within the Geographe catchment.
- To provide opportunity for the community to engage with and learn about water assets, and
- practical ways to minimise impacts at the individual level.

The *Environment Strategy* also identifies the following relevant strategic actions:

- Strategic Action 2.1 - Prepare management plans for the Lower Vasse River and Toby Inlet in close consultation with the local community and stakeholders.
- Strategic Action 2.2 - Continue to work with partners of the Vasse Taskforce to develop strategic and integrated approaches to management of Water Quality in the wetlands and waterways of Geographe catchment

FINANCIAL IMPLICATIONS

Adoption of the recommendation to advertise the draft Water Management Plans for the Lower Vasse River and Toby Inlet has no financial implications.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

There are no direct Long Term Financial Plan (LTFP) implications associated with the report recommendation to release and advertise the draft WMPs for public comment.

As implementation of management actions in the WMPs occurs, and improvements are made to natural area management, however, there may be Long Term Financial Plan implications. In particular, pursuing the 'Living Streams' approach outlined in the WMP for the Lower Vasse River would potentially require significant investment, in excess of $2M. It would see staged works to alter the physical environment and undertake ecosystem restoration to create conditions less favourable to algal blooms.

An investment plan for the continuation of the RGW program during 2019-2024 has been drafted by DWER, with provisions for implementation of the WMPs. This includes a provisional annual commitment of $100,000 from the City for remediation works in the Lower Vasse River, dependent on matching investment from the State Government. It should be noted that this not all 'new money' and nor is it a single budget line – there have been allocations of this order for waterways related projects over the last four years or so.

In the longer-term, however, beyond 2024, it is likely that an alternative funding model will be required. Significant and consistent funding is likely to be required to see a sustained improvement in water quality in the catchment, including the Lower Vasse River and Toby Inlet. The inconsistent, insecure and often project- rather than programme-based funding approaches common to natural resource management are unlikely to provide that. If the local community wants to see that change, however, it is likely that the local community will need to make a substantial commitment itself – which would support a base level of activity and leverage other funds. The City is involved in two other key RGW projects, related to future funding and governance models, and it is likely the Council will need to consider these issues seriously between now and 2024.

STRATEGIC COMMUNITY OBJECTIVES

The recommendation in this report links to Key Goal Area 3 – Environment of the City's *Strategic Community Plan 2017* and specifically the following Community Objective/s:

> *3.2: Natural areas and habitats are cared for and enhanced for the enjoyment of current and future generations; and*
>
> *3.3: The health and attractiveness of our waterways and wetlands is improved to enhance community amenity*

The WMPs also align directly with Strategy 3f of the Strategic Community Plan:

> *Continue to play a strong role as part of the Vasse Ministerial Taskforce to improve the health of waterways in the Geographe Catchment (including the Lower Vasse River, Toby Inlet and the Vasse-Wonnerup Wetlands).*

The consultation process for the *Strategic Community Plan* identified waterways management as a priority issue for the community, particularly improving management of the Lower Vasse River.

RISK ASSESSMENT

An assessment of the potential implications of implementing the Officer Recommendation has been undertaken using the City's risk assessment framework. The assessment identifies 'downside' risks only, rather than 'upside' risks as well. Risks are only identified where the individual risk, once controls are identified, is medium or greater. No such risks have been identified.

CONSULTATION

Consultation to date

Extensive community consultation has been completed as an integral part of the planning process for the WMPs. This has included:

- Community information events "Focus on Toby Inlet" and "Focus on the Lower Vasse" to share information and identify key issues for community June 2015.
- Series of interviews to gather in-depth information regarding future management of both waterways March 2016.
- Community Views events in March 2016 to identify and rate management issues, valued characteristics and desired change.
- Public workshops to develop vision and management objectives February 2017.
- Formation of Community Reference Groups (CRG) for each WMP, by inviting membership from attendees to initial consultation sessions. With representation from the City, Department of Water and Environmental Regulation, and GeoCatch.
- CRG workshops to review and refine vision and management objectives April 2017.
- Presentation of draft management objectives to South West Boojarah Working Party May 2017.
- Public community update to review draft management objectives, and to present outcomes of RGW hydrological modelling June 2017.
- "Your Say" community survey on re creational activities for Toby Inlet.
- Update on progress to the South West Boojarah Working Party November 2017.
- Aboriginal Heritage Survey consultation bus tour of key sites February 2018.
- CRG workshops to develop management strategies and actions March 2018.
- Presentation of WMPs to Vasse Taskforce and review of management strategies and actions by Taskforce members and member agencies August 2018.
- Review of management strategies and actions by Project Team, with key stakeholder representatives, August 2018.
- Presentation of draft management strategies and actions to South West Boojarah Working Party October 2018.
- Review of working drafts of the WMPs by the CRG and Vasse Taskforce members October 2018.
- Ongoing representation on the Vasse Taskforce by staff and councillors 2016-2018.
- Consistent meetings of the Lower Vasse River and Toby Inlet Project Team, with representatives from City of Busselton, Department of Water and Environmental Regulation, GeoCatch, Water Corporation, Busselton Water, Department of Biodiversity, Conservation and Attractions.

The outcomes of consultation were used continually to develop the WMPs. Consultation provided direct input to visions, identifying and rating management issue, developing draft management objectives, and in developing management strategies and actions.

Recent review of the working drafts of both WMPs have indicated support for the draft documents from community members and agency stakeholders.

Proposed further consultation

Release of the WMPs for public comment, as recommended in this report, is the next consultation process required before the documents can be finalised. It is proposed to produce the WMPs as digital documents available for download from the City's web site. Limited printed copies would be produced for collection. Their availability would be advertised via *City Connect* and social media, and by direct communication with people that have registered for past consultation events.

Public information sessions will be held during the submission period to present and information in the plans to facilitate submissions. Submissions will be invited via written response, forms provided with the plans and via the *Your Say* platform.

OFFICER COMMENT

The WMPs for the Lower Vasse River and Toby Inlet were initiated though the RGW program. The RGW program was in substantial part a response to community concerns about water quality issues in these important water assets. Effective ongoing management of these systems requires clear leadership and comprehensive management planning, which can be guided by the WMPs.

The community have long held concerns for the health of these waterways and have been consulted extensively through the preparation of the WMPs. There has also been ongoing collaboration with key State Government partners through the Vasse Ministerial Taskforce.

Feedback provided has contributed directly to the vision, management objectives, management strategies and actions. This is intended to help ensure the WMPs align with community priorities, are well-understood and accepted, and have significant commitment to implementation.

The WMPs include an extensive review of the characteristics, management issues and potential management options for each system. A framework for implementation is provided, including defined management roles and an adaptive process for ongoing action planning.

The WMPs provide a description of the characteristics and management issues for each system, with visions and clear management objectives for the future. Broadly, the issues and management objectives fall into the following key focus areas for management-

- Water quality
- Ecology
- Water flow
- Sedimentation
- Amenity, recreation and education
- Toby Inlet ocean exchange (Toby Inlet only)
- Living Streams (Lower Vasse River only)
- Culture and heritage
- Governance

Through a review of available management options and consideration of stakeholder input, a comprehensive series of management strategies, each with specific actions, has been developed to guide works that will contribute to the objectives and overall visions.

For the Lower Vasse River, a 'Living Streams' approach to restoration has emerged as having significant potential to address water quality. This approach would involve significant changes to the physical environment and ecosystem restoration to create conditions less conducive to algal blooms. It would see creation of diverse habitats, including interconnected seasonal pools and seasonally dry areas, increased shading and in-stream planting. Seasonal separation of the river into compartments would facilitate targeted remediation, such as sediment removal and water treatment. Works would be staged to improve affordability and allow an adaptive approach based on outcomes. Further investigations are needed to inform this approach and develop concept plans for community consultation.

The WMPs do not include immediate commitments to implementation of specific management actions, but rather provide a framework for implementation that defines the roles and responsibilities of key stakeholders and outlines a process for action planning, works, evaluation and reporting. This will allow ongoing prioritisation and implementation of actions in line with available funding, and building on new information from research, monitoring and outcomes as management progresses.

CONCLUSION

The City has made a commitment to finalisation of the WMPs by June 2019. Now that the draft WMPs have been developed, the next step in the process is to release the documents for public comment. Public submissions can then be reviewed to finalise the WMPs. Given the extent of consultation that has already occurred, however, there may not be a significant number of submissions raising concerns with the draft WMPs per se (it is perhaps more likely that broader concerns may be raised). As a result, it is considered that Council could adopt the draft WMPs as guides to future planning (including LTFP review) and only require further formal consideration by the Council if adverse submissions are received.

OPTIONS

The Council could make changes to the draft WMPs before undertaking consultation and/or could require the draft WMPs to be formally considered by the Council after consultation, even if no adverse submissions is received.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

Following approval by Council for release of the WMPs for public comment, the following process and timeline is proposed:

December 2018 – complete formatting of WMPs for online viewing and printing.
16 January 2019 – advertising of WMPs for a public comment period of six weeks.
Week commencing 11 February – public information session.
27 February – close of public comment period.
March/April 2019 – Council briefing on outcomes of public comment period.
May 2019 – Report to Council for adoption of final WMPs.

OFFICER RECOMMENDATION

That the Council resolves to adopt the following as guides to future planning, before undertaking further consultation and further Council consideration, should adverse submissions be received during the consultation period –

1. the draft Water Management Plan for the Lower Vasse River (Attachment A)

2. the draft Water management Plan for Toby Inlet (Attachment B).

Department of Water and Environmental Regulation
Department of Primary Industries and Regional Development

Lower Vasse River Waterway Management Plan

Draft for public comment



City of Busselton
Geographe Bay

Revitalising Geographe Waterways

VASSE taskFORCE

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Acknowledgement of Wadandi people and country

The Vasse River has great spiritual, environmental, customary and social significance to the Wadandi Nyungar people. From its headwaters at Chapman Hill through to the Vasse-Wonnerup Wetlands, the Bilya (river) carries their songline. The Wadandi people are the traditional custodians of the Lower Vasse River, and this connection will be recognised in its future management.

All systems and beliefs have water as life, blood. We can't survive without fresh water: it's blood, life.

(Isaac Webb, 20185)

Executive Summary

Background

The Lower Vasse River is a reach of the Vasse River approximately 5.5km in length from the Vasse Diversion Drain to the weir structure at the Old Butter Factory. It flows through the centre of Busselton, about 250km south of Perth. This reach is greatly modified, with an estimated 90% of catchment flows diverted to Geographe Bay, and impoundment by the weir structure at its downstream end. The river is highly eutrophic, with severe algal blooms occurring each year during the warmer months.

Isolation in terms of flow; the conditions of extremely poor water quality experienced; and the high-profile location have led to the need for specific management of this area. This is the focus of this Water Management Plan. It was initiated though the Revitalising Geographe Waterways program, in response to community concerns about water quality issues in key water assets in the Geographe Bay Catchment. The Water Management Plan has been developed using a collaborative approach that has allowed for extensive consultation to work towards future management of the Lower Vasse River that aligns with community priorities, is well-understood and accepted, and has significant commitment to implementation by stakeholders.

Purpose and scope

The City of Busselton (the City) has developed this Waterway Management Plan (WMP) to guide future management strategies and actions that will work towards the vision for the Lower Vasse River:

> *The Lower Vasse River is an icon of Busselton, valued and enjoyed by the community, as a healthy waterway linking people and nature.*

The Plan includes a description of the characteristics and management issues for the Lower Vasse River, and provides objectives for the future. Through a review of available management options and consideration of stakeholder input, a comprehensive series of management strategies, each with specific actions, has been developed to guide works that will contribute to the objectives and overall vision for The Lower Vasse River.

Management focus areas

Management issues for the Lower Vasse River have been grouped into seven focus areas, with 16 associated management objectives, summarised here in order of importance as rated during community consultation. The table below provides management strategies and actions for each focus area.

1. Water Quality

Nutrients are a key driver of algal blooms, so ongoing load reduction actions are a fundamental part of management. However, it often takes a long time to achieve load reductions, and they may be counteracted by new developments and changes to land use. Algal blooms can also be addressed through interventions that limit nutrient availability or directly target algal blooms. They may also be managed by creating less favourable physical conditions for phytoplankton; or restoring ecosystem functions such as nutrient cycling and food web processes.

Objectives:

- Reduce nutrient contributions to the Lower Vasse River from all existing sources to improve water quality and reduce the frequency and severity of toxic algal blooms.
- Minimise any additional nutrients flowing into the Lower Vasse River from new developments and agricultural intensification.
- Utilise science and innovative technologies to improve water quality in the Lower Vasse River.

2. Ecology

Although degraded, the Lower Vasse River still provides habitat for native freshwater fish, frogs, turtles and invertebrates, and open water areas for waterbirds. The riparian vegetation contributes to aquatic habitats and also supports a range of terrestrial fauna and birds. The permanent fresh waters of Lower Vasse River provide a unique habitat in a landscape of seasonal wetlands and estuaries. There is significant scope to enhance ecological values through managing invasive species and restoring habitat.

Objectives:

- Protect and enhance native aquatic and terrestrial habitats in the Lower Vasse River and the foreshore reserve.
- Reduce the impact of threatening processes on the natural values of the Lower Vasse River and the foreshore reserve.
- Balance mitigation of fire risks with the protection of natural values of the Lower Vasse River foreshore reserve.

3. Water Flow

There have been substantial changes to the hydrology of the Lower Vasse River and its catchment through physical changes, diversion and impoundment. There is a strong perception in the community that increasing flows from the Vasse Diversion and removal of the Butter Factory weir boards will improve water quality and mobilise sediments. This approach is limited by flow regimes, flood risks and influence on nutrient loads; and a lack of defined management responsibilities for operation of flow control infrastructure.

Objective:

- Optimise water flow in the Lower Vasse River to balance improvement of water quality, protection of natural values and public amenity, while maintaining flood protection.

4. Sediments

The Lower Vasse River system has accumulated a layer of nutrient rich organic sediments, which contribute nutrients to the water column over summer, driving algal blooms. These sediments provide habitat for beneficial aquatic plants and benthic invertebrates. Sediments are therefore are a key consideration in addressing water quality problems in the Lower Vasse.

Objectives:

- Strategically manage accumulated sediments to protect the natural, cultural and social values of the Lower Vasse River.

5. Amenity, Recreation and Education

A number of trails and public open space areas adjoin the Lower Vasse and these are still regularly used by the community. Poor water quality has greatly reduced the opportunities for recreational activities in and around the river during the warmer months. Access and recreation was rated the highest and the focus area requiring change. There is significant potential for improving amenity and recreational and educational opportunities through enhancing ecology, improving facilities, addressing water quality problems, and developing information material.

Objectives:

- Improve visual amenity, public health and odours for residents and visitors to enjoy the Lower Vasse River.
- Facilitate recreational and educational opportunities, which are compatible with protection of the key values of the Lower Vasse River and enhance community stewardship.
- Enhance public access to the Lower Vasse River and within the foreshore reserve, with a focus on creating linkages to the town centre and surrounding areas while protecting the river's natural values.

6. Culture and Heritage

The river has historically been an iconic feature of the town and focal point for recreational and social events. There is a strong Aboriginal cultural connection to the river and a need for greater recognition of the role of Aboriginal people in future management.

Objective:

- Promote understanding of the Aboriginal and European history and culture of the Lower Vasse River.

7. Governance

The need for a designated manager of the Lower Vasse River was recognised by the independent review of waterways management, and also highlighted during community consultation. The lead role of the City in the future management of the Lower Vasse River will be recognised through endorsement and adoption of this WMP. This will task the City with responsibility for coordinating implementation, however key stakeholders and the community will have ongoing roles in many aspects of the WMP.

Objectives:

- Develop and maintain partnerships and a collaborative approach between key stakeholders and the community when managing the Lower Vasse River.
- Maximise opportunities for protection of the Lower Vasse River as part of future development proposals and changes in land uses.
- Manage the Lower Vasse River with consideration to other water assets, including the Vasse-Wonnerup Wetlands and Geographe Bay.
- Improve knowledge and understanding of key values and management issues of the Lower Vasse River to support adaptive management.

Living Streams

This WMP recommends further development of a Living Stream approach to future management of the Lower Vasse River. The term *Living Streams* describes an approach to managing urban stormwater that creates a complex ecosystem with outcomes for ecology, water quality, water conveyance and amenity. For the Lower Vasse River, this would involve altering the morphology to restore ecological processes and create physical conditions that provide greater resilience to high nutrient conditions. It may also facilitate intervention actions, such as water treatment and sediment removal, in specific areas of the river.

Implementation

The lead role of the City in the future management of the Lower Vasse River will be recognised through endorsement and adoption of this WMP. Other key stakeholders will continue to have important roles in many aspects of implementation, and there is an ongoing need for community reporting and feedback.

There are many management actions recommended in the WMP and currently there is no guaranteed funding mechanisms or timeline for implementation. A framework for implementation is provided that defines the roles and responsibilities of key stakeholders and a process for action planning, works, evaluation and reporting. This will allow ongoing prioritisation and implementation of actions in line with available funding, and building on new information from research, monitoring and outcomes as management progresses.

Implementation process for the Lower Vasse River Waterway Management Plan:



Management strategies and actions for the Lower Vasse River.

Strategies and actions are grouped for the Living Streams approach (LS) and each focus area: Water Quality (WQ); Ecology (E); Water Flow (WF); Sediments (S); Amenity; Recreation and Education (ARE); Culture and Heritage (CH); Governance (G).

Management Strategies	Management Actions	
Living streams approach	LS.1	Continue to develop Living Streams planning as a pathway for implementing ecological restoration and water quality improvement works, and assess community support for this approach.
	LS.2	Incorporate the key principles into restoration planning as part of the Living Streams approach.
Protecting water quality from urban sources	WQ1.1	Quantify nutrient and pollutant exports from Busselton Light industrial area (LIA) to the Lower Vasse River to inform a case for deep sewerage.
	WQ1.2	Explore options to secure deep sewerage for the Busselton LIA in partnership with Water Corporation.
	WQ1.3	Assess opportunities for greater connection to existing sewerage infrastructure within the LVR catchment. If there a significant opportunity exists, investigate options and incentives to increase connectivity.
	WQ1.4	Planning decisions to include appropriate sewerage management requirements and best practice water management, through implementing the *Better Urban Water Management* framework.
	WQ1.5	Develop a prioritised program for stormwater upgrades to maximise nutrient reduction outcomes.
	WQ1.6	Support educational campaigns that aim to reduce nutrients in runoff through individual and community actions (eg. Bay OK).
	WQ1.7	Support implementation of the Vasse-Wonnerup Wetlands and Geographe Bay Water Quality Improvement Plan (WQIP).
Reducing nutrient inputs from the rural catchment	WQ2.1	Support projects focussed on reducing nutrient exports from rural catchment of the LVR, as recommended in the Vasse-Wonnerup Wetlands and Geographe Bay WQIP (DoW 2010; noting future updates of this document):
	WQ2.2	Explore opportunities for enhanced nutrient assimilation in rural drains in the LVR catchment, particularly those in reserves.
Water treatment	WQ3.1	Incorporate outcomes from the Water Quality Treatment Trials (2016-2018) into future management planning.
	WQ3.2	Undertake seasonal water treatments in priority amenity area/s prior to algal bloom establishment, ensuring physical isolation to maximise effectiveness (dependent on outcomes Water Quality Treatment Trials, 2016-2018).
	WQ3.3	Maintain research partnerships to identify and investigate new technologies to treat water in the future.
Riparian vegetation management	E1.1	Develop and implement a revegetation program for City-managed foreshore reserves, considering recommended rehabilitation areas reported in Ecoedge (2017).
	E1.2	Continue to impose appropriate conditions on new developments adjacent to the Lower Vasse River that ensure future vesting and revegetation of foreshore reserves.
	E1.3	Include creation and improvement of habitat for birds and possums in planning riparian revegetation.
	E1.4	Update the Vasse River Action Plan in partnership with adjacent landholders, and extend this throughout the Lower Vasse River study area.

	E1.5	Minimise fire risks associated with foreshore reserves by: reducing growth of annual grassy weeds; and considering species type, height and planting density when planning revegetation.
Understanding and protecting waterbirds	E2.1	Undertake a survey of waterbirds of the Lower Vasse River and identify important habitat zones, with strong involvement from the community.
	E2.2	Protect identified important bird habitat zones through revegetation and weed control, recognising the current role of weeds as habitat.
	E2.3	Create additional habitat zones for birds by placing large woody debris emerging from the water.
	E2.4	Avoid identified important bird habitat zones when planning future infrastructure, and consider nesting season when planning works.
Controlling invasive species	E3.1	Prevent of further spread of Mexican waterlily through herbicide control and/or shading.
	E3.2	Undertake strategic control of Mexican waterlily to progressively reclaim areas of open water, while minimising adverse impacts and preventing a return to algal blooms in these areas.
	E3.3	Undertake regular feral fish eradication activities in partnership with Murdoch University.
	E3.4	Undertake targeted control of arum lily and Brazilian pepper trees throughout the Lower Vasse River study area.
Optimising flows	WF1.1	Increase flushing of the river by installing a second 900mm culvert at outflow point from Vasse Diversion Drain, in accordance with recommendations from the Reconnecting Rivers Report (DWER 2018).
	WF1.2	Monitor impacts of increasing flows into the Lower Vasse River.
	WF1.3	Undertake intensive monitoring water quality in the Vasse Diversion to support operational guidelines for managing the culvert.
	WF1.4	Develop operational guidelines for the Vasse Diversion culvert that defines responsibilities and provides formal guidance for manipulation of the valve to maximise water quality benefits and minimise risk of flooding.
	WF1.5	Review function of the Butter Factory weir boards to inform their future use and need for replacement.
	WF1.6	Investigate potential for increasing internal circulation in the system during summer to reduce residence time for phytoplankton.
Sediment Removal	S1.1	Undertake a small-scale sediment removal project, using geotextile bags for dewatering and disposal, to assess cost and logistics of this approach.
	S1.2	Determine feasibility of disposal options for future sediment removal: landfill, composting, soil conditioner.
	S1.3	Depending on outcomes of small scale removal, undertake staged removal of sediments in the Lower Vasse River as a component of Living Streams design.
Improving facilities and information	ARE1.1	Review existing facilities and develop a concept plan for strategic pathways and viewing points that connect people with the river.
	ARE1.2	Update the interpretive signage around the river to provide information on of the history, ecology, hydrology and management of the Lower Vasse River.
	ARE1.3	Develop online and printed resources with interesting and important information on ecology, water quality, history and management of the Lower Vasse River.
	ARE1.4	Establish bird watching areas and hides in appropriate places with informational material.
	ARE1.5	Encourage opportunities for citizen science to contribute to understanding and appreciation of the Lower Vasse River.
Public health management	ARE2.1	Continue monitoring phytoplankton species and densities to inform public health notifications.

	ARE2.2	Review algal bloom warning sign protocol and prepare a communication program to inform the community when harmful algal blooms occur.
	ARE2.3	Develop a policy for use of recreational watercrafts in the Lower Vasse River, including consideration of public health constraints.
Recognising Wadandi custodianship	CH1.1	In partnership with Wadandi people, include reference to traditional custodianship of the waterways and land in development of information resources.
	CH1.2	Manage future access in a way that avoids additional disturbance and considers protection of potential sites of significance – however Wadandi activities such as fishing, camping, the gathering of bush foods and family recreational and educational activities, should not be restricted by implementation of this plan.
	CH1.3	Seek to improve partnerships with the Wadandi community to increase their involvement in the management, protection and restoration of the Lower Vasse River.
	CH1.4	Consult further with Wadandi representatives in regards to specific works which result from this plan.
	CH1.5	Support programs that engage the Wadandi community in implementation of works associated with this plan.
Preserving historical values	CH2.1	Identify and ensure appropriate maintenance of sites of historical importance.
	CH2.2	Develop interpretive material to increase understanding of local history, and to promote, appreciate and access historical sites.
Collaborative and adaptive management	G1.1	The City to consider securing management orders over the waterway and adjacent public lands in Lower Vasse River study area, to facilitate implementation of this plan.
	G1.1	Establish a Management Advisory Group comprised of representatives from the City, Department of Water and Environmental Regulation, Department of Biodiversity Conservation and Attractions, Water Corporation, GeoCatch, Wadandi representatives, and other community representatives.
	G1.2	Continue water quality monitoring in the Lower Vasse River.
	G1.3	Ensure adequate monitoring and reporting of outcomes from management actions, and feedback results into future management actions.
	G1.4	Maintain and develop partnerships with research organisations to improve knowledge and management of the Lower Vasse River.
Optimising planning tools	G2.1	Improve clarity of planning approval requirements for changes to land use and new developments in the agricultural sector (eg. horticulture, dairies, feedlots).
	G2.2	Assess future development proposals and changes of land-use on adjoining lands with consideration of impacts on the Lower Vasse River.
	G2.3	Include 50m wide foreshore reserves as part of future development adjacent to the river.

x

1 Introduction

The City of Busselton (the City) has developed this Water Management Plan (WMP) to recommend management actions that will lead to improved water quality and ecological health for the Lower Vasse River. The vision for the Lower Vasse River, developed for this Water Management Plan in partnership with the community and stakeholders, is:

> *The Lower Vasse River is an icon of Busselton, valued and enjoyed by the community, as a healthy waterway linking people and nature.*

1.1 Background to this Waterway Management Plan

The Lower Vasse River is a high profile waterway in Busselton, flowing through the entrance to the town centre, and is a strong part of local history. It has extremely poor water quality as a result of increased nutrient loads form the catchment and changes to hydrology. Seasonal blooms of harmful phytoplankton are a major concern for the community and management. The river has been greatly modified from its original state and ecological health has declined, however it remains an important freshwater habitat supporting aquatic fauna and waterbirds.

This WMP is part of Revitalising Geographe Waterways (RGW), a $15 million program encompassing 30 projects to improve water quality and ecosystem health in key water assets. Within the RGW program, the City was given responsibility to prepare WMPs for the Lower Vasse River and Toby Inlet. The Department of Biodiversity, Conservation and attractions was given responsibility to develop an Operational Plan for the Vasse-Wonnerup Wetlands system.

The RGW program is one of five focus areas of the Vasse Geographe Strategy, a State Government initiative to address water quality in the Geographe Bay catchment (Figure 1). The program also includes three projects directly related to the Lower Vasse River WMP: the Reconnecting Rivers hydrological modelling project; the stormwater upgrades project for Busselton; and water treatment trials in the Lower Vasse River.

The Vasse Geographe Strategy was initiated by an independent review of waterways management (Hart 2014), commissioned by the State Government in response to serious community concerns about water quality issues. The Vasse Geographe Strategy is overseen by the Vasse Taskforce, comprising representatives from:

- Department of Water and Environmental Regulation (DWER)
- City
- Shire of Capel
- GeoCatch
- Department of Biodiversity Conservation and Attractions
- Department of Primary Industries and Regional Development
- Department of Planning, Land and Heritage
- South West Catchments Council
- Water Corporation
- Busselton Water



Figure 1. Framework for developing the Lower Vasse Waterway Management Plan.

1.2 Study area description

The study area includes the reach of the Vasse River approximately 5.5km in length, from the Vasse Diversion Drain to the weir boards at the Old Butter Factory, flowing through the centre of Busselton. The river discharges through a wetland area into the upper reach of the Vasse Estuary, which is part of the internationally significant Vasse-Wonnerup Wetland System. The study area includes the river itself and some adjacent areas of public land (Figure 1). Areas of water and unallocated crown land have no management responsibility designated, other areas are foreshore reserves managed by the City.

The lower section of the Vasse River is within Busselton's urban area, with a mix of residential and light industrial uses in the catchment. Upstream of the Busselton Bypass the surrounding land is agricultural, aside from the golf course. Upstream of the intersection with the Vasse Diversion, dairy and beef grazing are the dominant uses in the catchment and are intensifying.

The Vasse River catchment has ephemeral headwaters in the Whicher Scarp to the south, and lowland reaches crossing the Swan Coastal Plain. Extensive clearing and construction of the artificial drainage network during the early 1900s facilitated agricultural development across the Swan Coast Plain areas of the catchment. Native vegetation in these areas is very limited, and much of what remains is therefore of high conservation value. The upper parts of the catchment in the Whicher Scarp still retain substantial areas of remnant vegetation.

The Vasse Diversion diverts flow from approximately 90% of the Vasse River catchment to Geographe Bay. It was constructed in the early 1900s to provide flood protection for Busselton. Flow from this region of the catchment is restricted to a 900mmm pipe at the intersection, which may be open or closed by a manually-operated valve. This diversion drain physically separated the lower reach of the Vasse River, known as the Lower Vasse River, substantially changing the natural hydrological regime. At the downstream end of the study area the river is impounded by a weir, established in the early 1900s to maintain higher summer water levels through the town section for amenity and recreation

purposes. Removable weir boards are installed at the end of winter and removed in autumn. The effect of flow diversion and impoundment is essentially an elongated "lake" area from late spring to late autumn. In recent years, the weir boards have become degraded and gradual leaking of water during summer leads to water levels defined by land to the east near Ford Road.

Owing to increased inputs of nutrients from catchment sources, and the still conditions created by impoundment, the Lower Vasse River is eutrophic. Extremely high nutrient concentrations, particularly phosphorus, and ideal physical conditions drive severe seasonal algal blooms for up to seven months from November to May. Algal blooms cause unsightly water discoloration and scums and unpleasant odours. These blooms are often dominated by blue-green algae (cyanobacteria) which are potentially toxic and close the waters to public use.

Despite seasonally poor water quality, the Lower Vasse River retains social and natural values. It provides permanent freshwater habitat and vegetated foreshore areas that support native fauna, including many waterbirds, native fish, oblong turtles, freshwater mussels and western ringtail possums. Many people in the community still enjoy the ecological characteristics amenity of the river.

The isolation of the Lower Vasse River by diversion and impoundment; the conditions of extremely poor water quality experienced; and the high profile location have led to the need for specific management of this area. This is the focus of this WMP.



Figure 2. Study area for the Lower Vasse River Waterway Management Plan, showing tenure and landmarks.

1.3 History of management

Poor water quality in the Lower Vasse River has been a focus of management activities for at least two decades. The Lower Vasse River Cleanup Program (LVRCP) commenced in 1999, which implemented a range on-ground works and trials to improve the ecological health of the system (Paice 2005). Key components of the LVRCP were:

- sediment treatment and removal;
- restoring river ecology;
- rural catchment management; and
- urban catchment management.

These approaches had some success and have provided useful information for future work. The revegetation undertaken through this project has doubtless enhanced the ecological values of the river. However water quality remains extremely poor with severe algal blooms recurring each year during the warmer months. A review of the LVRCP recommended priority areas for action as:

- continued partnerships to assess appropriate sediment remediation options;
- maintenance of revegetated areas in terms of weed control;
- continued revegetation with emergent and submerged plants;
- formalise agreed management of water flows through the river to maximise flushing;
- management of the feral goldfish population;
- identifying and addressing point source problems in particular septic tank leachate; and
- ongoing monitoring and evaluation to measure progress towards long term objectives (Paice 2005).

Since the Lower Vasse River Cleanup program, managers have continued to implement nutrient reduction actions in the rural and urban catchments, including river restoration, implementation of best management practices and installation of stormwater treatments. There have also there have been small scale studies to assess potential for improving water quality using other measures such as enzyme treatments, floating islands and establishing aquatic plants.

The independent review of the waterways management (Hart 2014) highlighted the lack of an obvious lead agency. It made the distinction between long-term reduction of nutrients from the overall catchment, and short-term management of the impounded reach Lower Vasse River. It highlighted the need for an operational management plan for this section of the river that would address the dual objectives of achieving good water quality while also preventing flooding in Busselton.

1.4 Process for developing the Waterway Management Plan

The WMP has been developed using a collaborative approach that has allowed for extensive consultation to work towards future management of Toby Inlet that aligns with community priorities, is well-understood and accepted, and has significant commitment to implementation by stakeholders. Key stakeholders that contributed to this WMP are:

- City
- Community members

- Aboriginal People
- GeoCatch
- Department of Water and Environmental Regulation
- Water Corporation

The process for developing the WMP is shown in Figure 3. The consultation process has contributed directly to the management issues, vision, management objectives, management strategies and actions for the WMP. Activities undertaken for consultation are outlined in the following sections. The consultation process and the overall WMP have been informed by review of existing information about Toby Inlet and by new information gained through projects undertaken during the planning process. It is important to note the adaptive nature of this WMP. It has been prepared at a point in time, using the information currently available. Implementation will require an ongoing process of monitoring and evaluation to determine future actions.

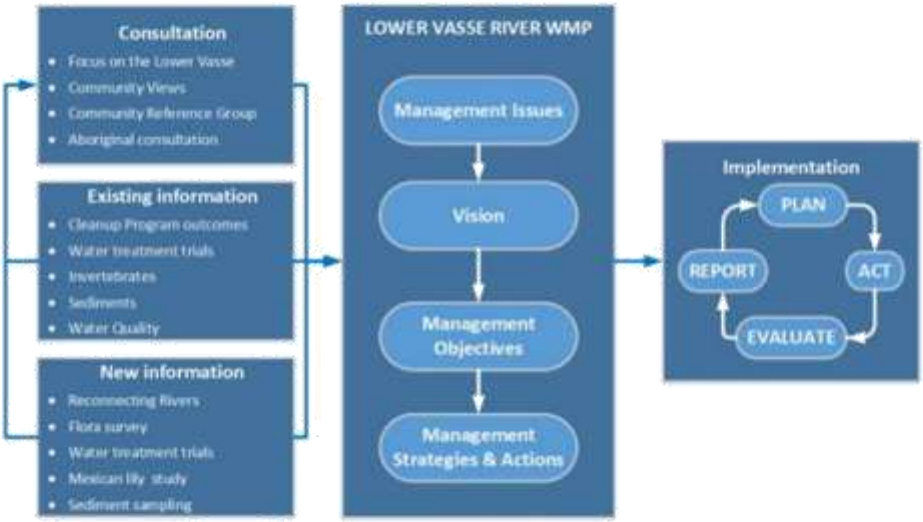


Figure 3. Process for developing the Lower Vasse River Waterway Management Plan

1.4.1 Community consultation

Consultation with stakeholders was an integral part of preparing this WMP. The aims of consultation were:

- To understand community issues and concerns on the Toby Inlet;
- Gain input, ideas, feedback into future management of the Toby Inlet;
- To get support from the community on proposed actions; and
- To raise community awareness and understanding of local water quality issues.

Early consultation events were widely advertised to attract a broad representation from the community. The first of these, *Focus on the Lower Vasse* in June 2015, provided current information

and sought to identify issues of most importance to the community. The *Community Views* event in March 2016 was also open to whole community and facilitated rating of management issues valued characteristics and desired change (Figure 4; AHA 2016). These results reflected a high level of importance on issues related to the health of Toby Inlet and associated amenity (82%). Other issues rated as important were recreation and access, heritage, flood and management. The outcomes of this consultation were used to formally identify key management issues, as outlined in Section 2 of the WMP. Information provided by the community regarding their understanding of the system and suggested management actions were used to develop draft management objectives, and were considered when reviewing management options.

Following initial consultation, the Lower Vasse River Community Reference Group (CRG) was formed to provide ongoing input to WMP. This group was formed by inviting participants of earlier events to nominate for ongoing involvement. It also included representation from the Department of Water and Environmental Regulation and GeoCatch, as key supporting partners in development of the WMP. Facilitated workshops with this group were held to develop the vision, management objectives (AHA 2017a, 2017b) and management strategies and actions (AHA 2018) for the WMP.

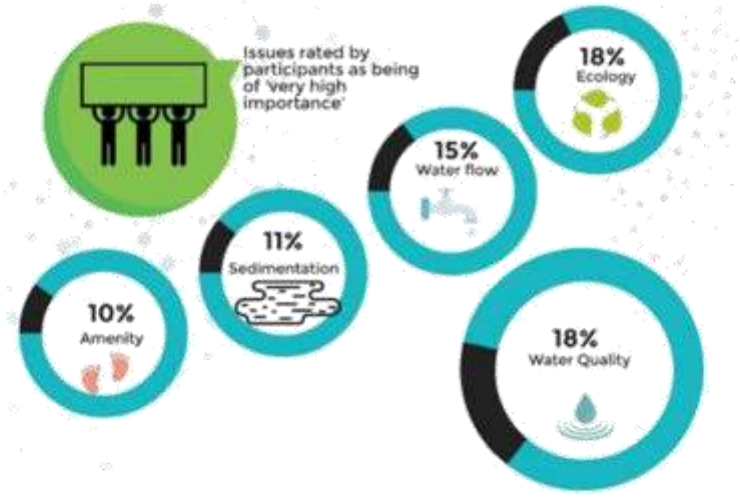


Figure 4. Outcomes of identifying and rating management issues for the Lower Vasse River from the *Community Views* consultation session, March 2016.

1.4.2 Aboriginal consultation

Aboriginal People are clearly important stakeholders, and were welcome at all consultation events. Although invited, there were no representatives from the Aboriginal community on the Community Reference Group. In recognition of Aboriginal People as the traditional custodians of country, and

understanding the particular significance of waterways to Aboriginal People, additional consultation was undertaken to allow their input to the WMP.

The study area is within the South West Boojarah Indigenous Land Use Agreement within the South West Native Title Settlement Area[1].

Presentations were given to the South West Aboriginal Land and Sea Council (SWALSC), and subsequent Aboriginal Heritage Survey. The draft management objectives were presented to the South West Boojarah (SWB) Working Party of SWALSC in May 2017. An overview of the Revitalising Geographe Waterways Program was also provided at a Working Party meeting in November 2017. An Activity Notice, related to the WMPs for Toby Inlet and the Lower Vasse River and the Operational Plan for the Vasse-Wonnerup Wetlands, was submitted to SWALSC by the City in November 2017. This Activity Notice proposed an Aboriginal Heritage Survey for the plan areas, which became a requirement of SWALSC.

The Survey was undertaken with representatives of the Aboriginal Community (members of the SWB and the Harris family, nominated by SWASLC) in February 2018, encompassing the study areas of all three plans including in the RGW program. The Survey was facilitated by Brad Goode and Associates (BGA) and included briefings and a bus tour of key sites for discussion of scientific investigations, future management actions and the content of the plans (BGA 2018). On-site discussions were held on key potential management actions including sediment removal, water treatment, reshaping and revegetation, Mexican waterlily control.

The Aboriginal representatives highlighted the importance of connectivity of waterways in the landscape from both spiritual and ecological perspectives. They highlighted the importance of managing the headwaters of the river to address the real cause of poor health in the lower reach, relating problems in the Lower Vasse to disruption of connectivity with its catchment. However they also acknowledged that it is not practical to return the river's hydrology to its natural state. The group supported specific works to address sediment and water quality problems, including sediment removal and waterlily control. Information from this consultation has been considered in the development of management strategies and actions in this WMP.

[1] Current information on the South West Native Title Settlement: http://www.noongar.org.au

2 Management Issues

Through the consultation process, management issues were grouped into eight key focus area for management:

1. Water quality
2. Ecology
3. Water flow
4. Sedimentation
5. Amenity
6. Recreation and Education
7. Heritage
8. Governance

The most important issues for management the Lower Vasse River (LVR) as rated through community consultation are water quality, ecology, water flow, and sedimentation. These are key river health issues, which are interconnected and fundamental to ongoing management of the river.

Management strategies which provide outcomes for river health will contribute directly to social issues by improving amenity and increasing opportunities for recreation and education. In turn, facilities to provide for these activities will allow for promotion of cultural heritage values. Governance relates to policy and management responsibilities, which will underlie the implementation of strategies to improve river health.

A summary of key management issues and available information for these focus areas is provided in this section.

2.1 Water quality

2.1.1 Nutrients and algal blooms

The Lower Vasse River is a eutrophic waterway, with very high nutrient concentrations resulting in extremely high densities of phytoplankton (microscopic algae), commonly referred to as algal blooms. These algal blooms persist for up to seven months each year, generally between November and May, resulting in discoloured waters, unsightly scums and unpleasant odours. The blooms are dominated by blue-green algae (cyanobacteria), which are potentially toxic to animals and humans. Not surprisingly, water quality is the most significant management issue for the Lower Vasse River.

It is interesting to note that "thick algae" was observed in the river in 1940 (Mouritz, Elphick and Anderson).

Nitrogen and phosphorus are the main nutrients contributing to eutrophication. Nutrients have been sampled in the Lower Vasse River from 1996 – 2010, and since January 2017, at two sites: the old rail bridge and the Strelly St bridge[2]. Since 2000 this sampling has excluded winter, and data has been

[2] Total nitrogen and total phosphorus for all years; dissolved nutrients since January 2017.

interpreted here over spring-summer-autumn periods to reflect the seasonal pattern of water quality problems.

Total nitrogen (TN) concentrations have often exceeded ecosystem protection guidelines in the past (Figure 6a). However sampling in recent years has shown TN closer to acceptable levels, with mean concentrations at Strelly St below guideline levels during the 2016-17 and 2017-18 seasons. Monthly data shows how TN increases from spring to summer, particularly in the downstream site at the old rail bridge where algal growth is highest (Figure 6b, e). Very little nitrogen is present as dissolved inorganic forms, which may limit the amount available for phytoplankton growth. Many species of blue-green algae have an advantage in being able to fix nitrogen from the atmosphere.

Total phosphorus (TP) concentrations in the lower Vasse River are extremely high (Figure 6c, d) consistently exceeding ecosystem protection guidelines, often by an order of magnitude. Unlike nitrogen, the phosphorus concentrations are higher at the Strelly St bridge site upstream, where algal blooms have been less severe in recent years (Figure 6e). Phosphorus concentrations show a seasonal increase from spring to summer and then remain high (Figure 6d). Dissolved phosphorus is consistently high at the Strelly St site, accounting for an average 48% of TP. At the old rail bridge site, dissolved phosphorus accounts for an average 17% of TP, and decreases over the duration of the season.

Chlorophyll a is an indicator of phytoplankton growth, and very high concentrations throughout the river until 2010 reflect seasonal algal blooms. Chlorophyll a has been much lower at the Strelly St bridge site since sampling recommenced in the 2016-17 season (Figure 6e). It has remained high at the old rail bridge in recent years, showing a seasonal increase in correspondence to increasing algal growth in the summer (Figure 6f). This is also reflected in monitoring of phytoplankton cell densities and species (Figure 7), which shows continuing dominance by blue-green algal blooms at the old rail bridge; but a substantial reduction at Strelly St. There has been a shift at the Strelly St site to harmless species of green algae, with occasional 'bloom' densities. Lower phytoplankton growth at the Strelly St site is no doubt due to the recent presence of Mexican waterlily at this site. The waterlily prevents light entering the water column, preventing algal growth. However, as discussed in Section 2.2.2, Mexican waterlily appears to reduce algal growth more broadly.

2.1.2 Nutrient sources

Nutrients reach the Lower Vasse River through surface runoff, groundwater infiltration. Nutrient sources include residential, commercial, industrial and rural sources in its local catchment area (downstream of the Vasse Diversion), as well as some flows from the Vasse Diversion. In addition to ongoing inputs to the river, nutrients are also released into the water column from accumulated sediments (2.4).

Water quality analysis and modelling for the Water Quality Improvement Plan (WQIP) estimated that septic systems in the Busselton light industrial area (LIA) contribute 0.45 tonnes (9.4%) of phosphorus 1.3 tonnes of nitrogen 3.7% to the river annually (DoW 2010). This modelling also predicted that urban expansions in the catchment could result in a 41% increase in phosphorus load and a 23% increase in nitrogen load. Importantly, the WQIP also identified one feedlot as being the largest contributor of phosphorus in the Lower Vasse River catchment (since converted to irrigated horticulture, and likely to remain a significant phosphorus source). Dairy sheds also contribute a significant proportion of nutrients from broader agricultural areas.

Nutrient concentrations in the Vasse Diversion vary widely from acceptable to extremely high, with mean annual concentrations since 2008 of 1.6-2.4 mg/L for TN and 0.03-0.23 mg/L for TP. Nutrient inputs to the Vasse River depend on the operation of the culvert valve connection to allow water to flow through the 900mm pipe at the upper end of the river (Section 2.3). Opening of the valve connection is not formally managed and flows are not formally recorded. There may be potential to optimise management of the valve connection to reduce flows when nutrient levels are high. Community perception is that water flow from the Vasse Diversion to the Lower Vasse River should be maximised to improve water quality by flushing the river.

2.1.3 Downstream impacts

In addition to problems associated with nutrient enrichment within the river itself, high loads of nutrients flowing through the river influence the wetlands and the Vasse Estuary downstream. The WQIP reports that the Lower Vasse River contributes very high nutrient loads to downstream waters relative to its catchment size (DoW 2010); and recommends long-term load reductions of 67% for phosphorus and 70% for nitrogen to meet acceptable loadings for the Vasse-Wonnerup Wetlands. Management actions for the Lower Vasse River need to consider downstream impacts. For example, increasing flows from the VDD to the LVR would increase nutrient loads from this source (Section 4.8).



Figure 5. Blue green algal bloom in the Lower Vasse River.

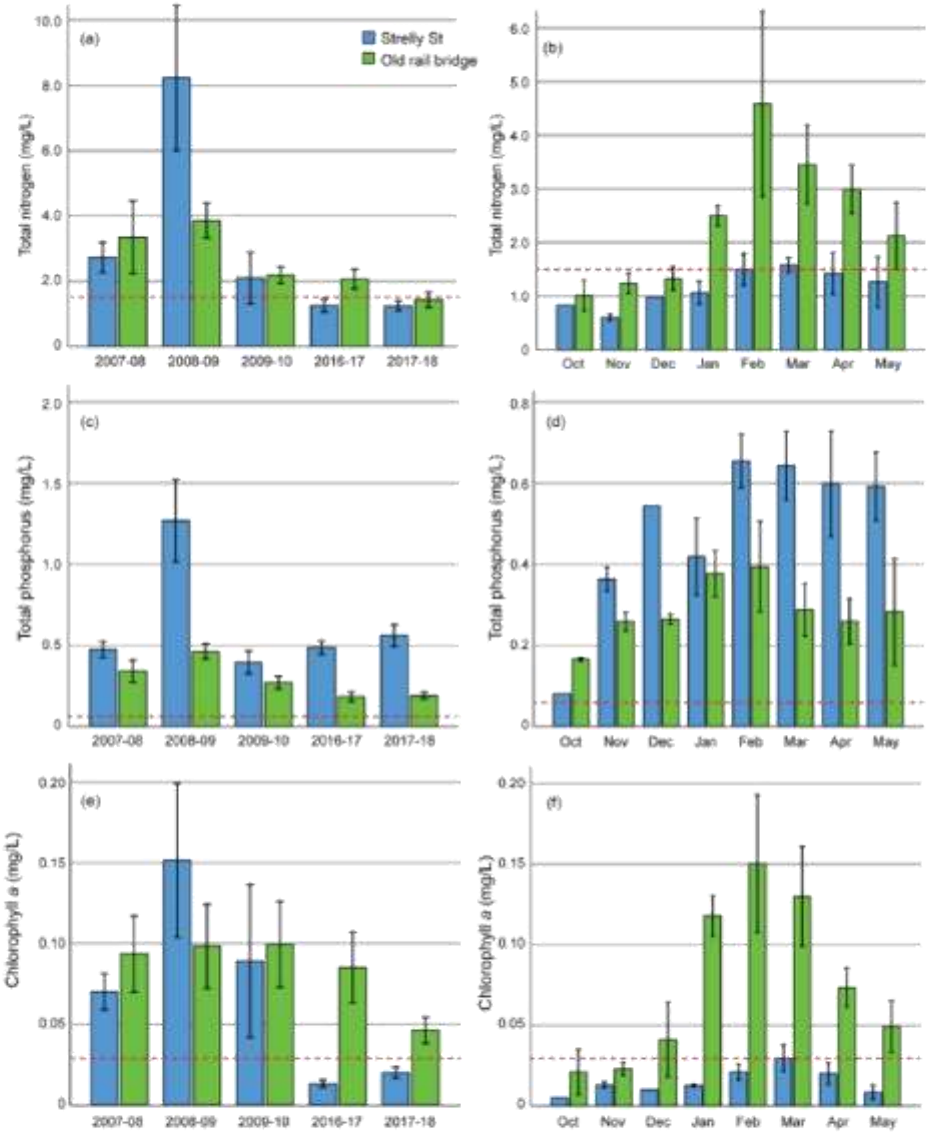


Figure 6. Mean concentrations of total nitrogen, total phosphorus and chlorophyll a across spring-summer-autumn sampling seasons (a, c, e) and for each month (b, d, f; data since January 2017). Red dashed lines are guidelines for protection of wetland ecosystems (ANZECC and ARMCANZ 2000). Error bars are +/- standard error.

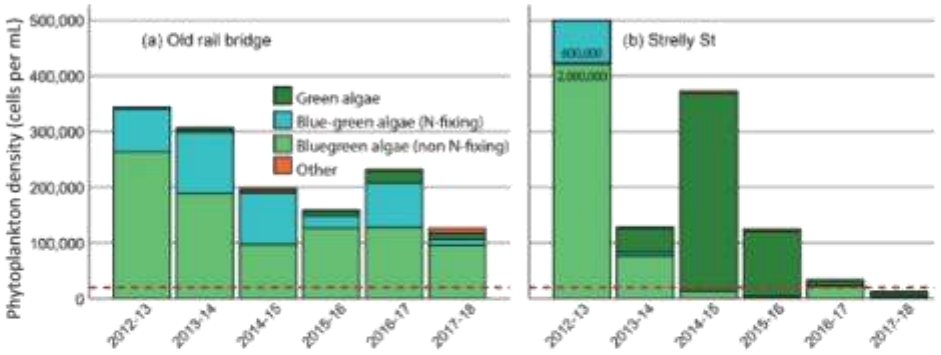


Figure 7. Mean cell densities for main phytoplankton species groups at sampling sites in the Lower Vasse River during spring-summer-autumn seasons since 2012. Red dashed line is the guideline value of 20,000 cells per millilitre for recreational use.

2.2 Ecology

The Lower Vasse River has undergone substantial physical changes through widening and de-snagging, and clearing of surrounding vegetation. This includes a "clean out" by the Public Works Department around 1939 using a dragline. It has also and has been impacted by changes to hydrology and nutrient enrichment. These changes have dramatically changed the river's ecology. Aboriginal people have stories of fishing and hunting along the Vasse River when water quality was better. However it now has little in-stream habitat and the dominance of phytoplankton during the warmer months supports limited diversity.

Although degraded, it still provides habitat for native freshwater fish, frogs, turtles and invertebrates, and open water areas for waterbirds. The riparian vegetation contributes to aquatic habitats and also supports a range of terrestrial fauna and birds. The permanent fresh waters of Lower Vasse River provide a unique habitat in a landscape of seasonal wetlands and estuaries.

Ecology was rated as the most important management issue by 18% of *Community Views* participants (AHA 2016). The river environment contributes to local amenity and the birdlife is particularly enjoyed. The study area has been identified as identified regional ecological linkage (Molloy et al. 2009, Ecoedge 2017). A summary of the main ecological components of the Lower Vasse River study area and implications for management is provided below.

2.2.1 Vegetation

Native fringing (riparian) vegetation of the Lower Vasse River has been largely cleared, leading a narrow strip of remnant trees with limited understorey and extensive weed invasion. There are opportunities to enhance vegetation in the study area through weed control and revegetation.

Vegetation along the river provides important habitat for terrestrial fauna, with overhanging trees offering excellent many roosting and nesting sites for waterbirds. In addition to direct habitat benefits, fringing vegetation is a vital component of river health. Functions include:

- supporting terrestrial and aquatic food webs;

- habitat for terrestrial and aquatic fauna;
- foreshore stabilisation;
- maintaining cooler temperatures
- interception of nutrients and sediments in runoff; and
- nutrient uptake and processing.

The width and diversity has been increased downstream of the Busselton bypass by revegetation work done for the Lower Vasse River Cleanup program and in new foreshore reserves adjacent to subdivided land. A vegetation survey in the study area in 2017 found only 5.6% of vegetation in good condition, occurring mainly within these revegetated areas (Ecoedge 2017).

The current vegetation includes only 28 native species, including some species in revegetated areas that would not have occurred there naturally. The Ecoedge (2017) survey found no occurrences of threatened or priority flora, although there are nearby occurrences of the Coastal Saltmarsh threatened ecological community (TEC); and the *Eucalyptus rudis*, Marri and Peppermint forest Priority 1 ecological community.

At least 20 species of weeds are present, including 10 of environmental concern, which are mapped in the Ecoedge (2017) survey report. The most widespread problem weeds are Arum Lily, Brazilian pepper tree and Kikuyu (Ecoedge 2017). Kikuyu and other grassy weeds form an extensive component of the understory in much of the study area. Less widespread but potentially invasive weeds include Blue periwinkle, Weeping willow and Watsonia. Within the waterway, Mexican waterlily has infested large areas.

Fire Risk

Management of vegetation needs to address current and future risk of fire, particularly in areas close to buildings and infrastructure. Adequate setbacks to sensitive infrastructures, breaking the vegetation into areas of less than 2500m^2 and having the width of vegetation less than 20m wide will reduce fire risk. A Bushfire Attack Level assessment can be used to determine suitable setbacks (Calibre 2018). Selection of species for revegetation that have lower flammability and maintaining moisture content through irrigation can also mitigate risk.

2.2.2 Mexican waterlily

Mexican waterlily (*Nymphaea Mexicana*) covers large areas of the Lower Vasse River (Figure 8a,b). Although present in small patches in the river for several years, it underwent rapid expansion during the 2013-2014 spring-summer growing season and has continued to spread gradually since then. In 2017 it covered 23% and 1.15 hectares of water between the Busselton Bypass and the Butter Factory weir boards.

This is a serious concern for the community and management authorities owing to impacts on visual amenity, loss of open water habitat and possible flow obstruction. The fringing vegetation supports many roosting and nesting sites for birds, selected for their position over the water. Growth of lilies beneath these sites prevents diving from these platforms and creates a risk for fledglings that may get trapped in the lilies beneath nests. Loss of open waters reduces space for birds to swim and dive and reduces available habitat for fish and turtles.

A study on the impacts of Mexican waterlily in the Lower Vasse River in 2017 investigated the effects of these plants on water quality and ecology (Paice 2018). In addition to the obvious problem of loss of open waters, the lilies result in very low oxygen levels in the water (Figure 9a), presenting a risk for aquatic fauna. Despite this, the structural habitat provided by the lilies supports greater abundance and diversity of aquatic invertebrates than other parts of the river. However this invertebrate population does include large numbers of non-biting midge larvae, which can contribute to nuisance insect problems.

The extensive root mass of the lilies and ongoing growth and decay contributes to a build-up of organic material, creating shallower conditions. This has allowed additional colonisation of semi aquatic plants. Currently, this has been seen the native (though prolific) Slender knotweed, *Persicaria decipiens*), but there is a risk of colonisation by wetland weeds. The reduced depth is now evident upstream of Strelly Street where waterlilies have died back from herbicide use.

Mexican waterlily has also had an effect on nutrient levels and growth of phytoplankton. Since the period of expansion in 2013-14, algal blooms have been greatly reduced in waters upstream of the point of infestation (near the boat ramp area along Southern Drive) (Figure 8c, d, Figure 9c). This is despite very high phosphorus concentrations in these areas; much higher than downstream Figure 9b). The reasons for reduced algal blooms between patches of waterlily are not fully understood. It may be a combination of greater low residence time in sunlit areas owing to lilies and riparian shading; nitrogen limitation; or chemical inhibition.

(a)



(b)



(c)



(d)



Figure 8. Mexican waterlily in the Lower Vasse River: (a) extensive growth upstream of Strelly Street in March 2017; (b) flower; (c) downstream of infestation in April 2014 showing obvious algal bloom; (d) upstream of infestation in April 2014 (same day) with no algal bloom.

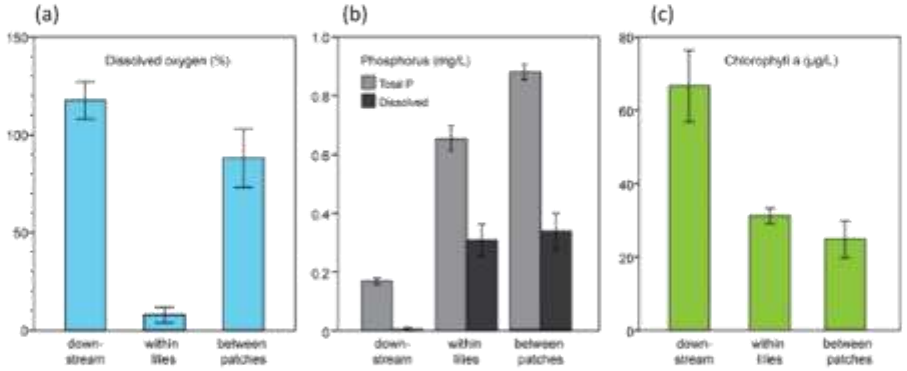


Figure 9. Comparison of water quality in relation to Mexican waterlily in the Lower Vasse River: downstream of the waterlily infestation, within dense waterlily growth, and in areas of open water between patches of waterlily (200-300m reaches) (Paice 2018).

2.2.3 Birds

The birdlife in and around the Lower Vasse River was rated by the community as the most liked characteristic (AHA 2016). Protecting and enhancing habitat for birds and providing opportunities for enjoyment of birdlife should be part of future management.

Table 1 provides a list of bird records available for the Lower Vasse River. There are probably more than this, however limited data is available. There is little formal published information about the birdlife of the Lower Vasse River, and there is scope to improve understanding and to share knowledge. Fostering existing community efforts in birdwatching to capture data would be a good step towards achieving this.

Remnant fringing rushes and overhanging trees provide important nesting and roosting sites. Secluded sections of the river and the southern bank adjacent to Southern Drive support some very dense nesting areas for cormorants, darters, Night heron and Yellow-billed spoonbills. In addition to remnant native rushes where they occur, grassy weeds also provide habitat for birds on the banks of the river, and this should be considered when undertaking weed control.

Threats to birds of the Lower Vasse River include predation by dogs, cats (domestic and feral) and foxes; degradation of vegetation through declining tree health, weed invasion and clearing; and loss of open water habitat by expansion of Mexican waterlily.

Table 1. Bird species recorded in the Lower Vasse River (Birdlife Australia 2018, Birdlife Western Australia 2017; Paice et al. 2016).

Common Name	Scientific Name
Australasian grebe	*Tachybaptus novaehollandiae*
Australasian shoveler	*Anas rhynchotis*
Australian pelican	*Pelecanus conspicillatus*

Australian reed-warbler	*Acrocephalus australis*
Australian spotted crake	*Porzana fluminea*
Australian white ibis	*Threskiornis molucca*
Australian wood duck	*Chenonetta jubata*
Black swan	*Cygnus atratus*
Black-fronted dotterel	*Elseyornis melanops*
Black-winged stilt	*Himantopus himantopus*
Blue-billed duck	*Oxyura australis*
Buff-banded rail	*Gallirallus philippensis*
Darter	*Anhinga melanogaster*
Dusky moorhen	*Gallinula tenebrosa*
Eastern great egret	*Ardea alba modesta*
Eurasian coot	*Fulica atra*
Great egret	*Egretta garzetta*
Grey teal	*Anas gracilis*
Hoary-headed grebe	*Poliocephalus poliocephalus*
Little black cormorant	*Phalacrocorax sulcirostris*
Little grassbird	*Megalurus gramineus*
Little pied cormorant	*Phalacrocorax melanoleucos*
Musk duck	*Biziura lobata*
Nankeen night heron	*Nycticorax caledonicus*
Pacific black duck	*Anas superciliosa*
Purple swamphen	*Porphyrio porphyrio*
Spotless crake	*Porzana tabuensis*
White-faced heron	*Egretta novaehollandiae*
Yellow-billed spoonbill	*Platalea flavipes*

2.2.4 Aquatic fauna

The key management issue for aquatic fauna is degraded habitat. Although a range of aquatic fauna occur in the Lower Vasse River, the degraded conditions no doubt limit the populations it can support. While management should therefore focus on enhancing habitat and reducing threats, such actions may have short term impacts on existing individuals.

Fish

Eight native fish species have been recorded in the Lower Vasse River during a fish survey in 2003-2004 and during subsequent goldfish control work: four freshwater species and four estuarine species (Table 2, Morgan and Beatty 2004, Beatty et al. 2011). These species have been heavily impacted by alteration and loss of habitat in the south west region, requiring structural habitat and refuge in permanent freshwaters. These species are generally only found in low numbers in the Lower Vasse River; although higher numbers of the Western pygmy perch and the occurrence of the listed vulnerable Mud minnow (Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice 2017) at a site just downstream of the Vasse Diversion outflow suggest better habitat there (Morgan and Beatty 2004). The estuarine Western hardyhead was most abundant downstream of the Butter Factory weir boards and the survey reported that this structure may impede migration of native fish.

Two introduced fish species are widespread in the Lower Vasse River: mosquitofish and goldfish. Mosquitofish are small and commonly seen in very large numbers in the river. Significant numbers of large goldfish occur in the Lower Vasse River. They have been noted as being common in the river near town in 1956; and trout were released in the river in 1957 (Mouritz, Elphick and Anderson), but have not been reported since then.

The presence of goldfish is an important issue in the owing to their contribution to poor water quality and algal blooms. Their benthic foraging disturbs nutrient-rich sediments and there is evidence that growth of blue-green algae is stimulated following ingestion and passage through goldfish (Kolmakov and Gladyshev 2003). A program of annual removal from 2003 to 2013 removed 842 goldfish, some exceeding 40cm in length, from the Vasse River (Beatty et al 2014).

Table 2. Fish in the Lower Vasse River (Morgan and Beatty 2004, Beatty et al. 2011)

Type / Common name	Species	Notes
Native freshwater fish		
Western pygmy perch	*Edelia vittata*	Widely distributed, low numbers
Western minnow	*Galaxias occidentalis*	Few sites, low numbers
Nightfish	*Bostockia porosa*	Few sites, low numbers
Mud minnow	*Galaxiella munda*	Headwater site only, vulnerable
Native estuarine species		
Western hardyhead	*Leptatherina wallacei*	Downstream sites
Swan River goby	*Pseudogobius olorum*	Widely distributed
Sea Mullet		Downstream, low numbers
Black bream	*Acanthopagrus butcheri*	One fish
Introduced fish		
Goldfish	*Carassius auratus*	Widely distributed,
Mosquitofish	*Gambusia holbrooki*	Widely distributed, large numbers

Other aquatic fauna

Oblong turtles (*Chelodina oblonga*, Southwestern snake-neck turtle, Western long-necked turtle) are regularly observed in the Lower Vasse River, although they have not been specifically studied. There is no published information about frogs in the study area. Decapods recorded in the study area are the endemic Gilgie (*Cherax quinquecarinatus*) and the introduced Yabbie (*Cherax destructor*) Beatty et al. 2011.

Carter's freshwater mussel (*Westralunio carterii*) is common in the Lower Vasse River, showing a preference for structured benthic habitats such as bridges (Beatty et al. 2017). It is listed as vulnerable fauna (Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice 2017; IUCN Red List).

Aquatic invertebrates are commonly used as indicators of ecological health. The open waters of the river contain little structural habitat and supports very low diversity of invertebrates, dominated by zooplankton (mostly copepods) and highly mobile predators (of zooplankton) such as backswimmers (Notonectidae) and water boatmen (Corixidae) (Paice et al. 2016). The presence of aquatic plants and waterlilies greatly increases diversity and abundance of aquatic invertebrates in the river, owing to

increased structural habitat and alternative food sources. In the case of waterlilies, this included mainly robust species tolerant of poor water quality and low oxygen conditions (Paice et al. 2016). However, growth of submerged plants (as transplants) has been shown to support significantly higher abundance and diversity across a range of functional groups (Paice 2018).

2.2.5 Other fauna

A range of other fauna are known to occur in remnant vegetation in the study area, but have not been formally surveyed. Importantly this includes the Western ringtail possum (Ngwayir, *Pseudocheirus occidentalis*), which is listed as critically endangered fauna (Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2017). Grey kangaroos are common in some parts of the study area and adjacent land and the river may provide a corridor for their movement within and increasingly developed landscape. Water rats (Rakali, *Hydromys chrysogaster*) have been anecdotally observed but are not common.

2.3 Water Flow

There have been substantial changes to the hydrology of the Lower Vasse River and its catchment. The coastal plain area of the catchment has been modified by a drainage network constructed during the 1920s to facilitate settlement, transport infrastructure and agricultural development (English 1994). This involved widening and straightening and de-snagging of water courses and construction of artificial channels. Approximately 90% of catchment flows are diverted via the Vasse Diversion Drain, creating a distinct separation of the section known as the Lower Vasse River. Water flow to the Lower Vasse River from the Vasse Diversion is controlled by a manually operated valve on a 900mm pipe.

At the downstream end of the study area the river is impounded by a weir, established around the 1920s to maintain higher summer water levels through the town section for amenity and recreation purposes. Removable weir boards are usually installed at the end of winter and removed in autumn. In recent years, the weir boards have become degraded and gradual leaking of water during summer leads to water levels defined by land to the east near Ford Road.

The Lower Vasse River flows via a wetland area known as the Vasse River Delta into the Vasse Estuary. A surge barrier on the Vasse Estuary exit channel, first constructed in 1908, allows outflow of water but prevents inflow of tidal and storm surge waters. This provides flood protection but has reduced tidal exchange throughout the estuary and the lower reaches of the river.

The modified water flow regime of the Lower Vasse River contributes to poor water quality. The effect of flow diversion and impoundment is essentially an elongated "lake" area from late spring to late autumn. Reduced flow velocity contribute to accumulation of nutrients and organic material from the catchment, and the still conditions during summer promote algal blooms. Recurring algal blooms contribute to the build-up of nutrients in sediments, creating an internal source of nutrients.

There is a strong perception in the community that increasing flows from the Vasse Diversion and removal of the Butter Factory weir boards will create a flushing effect that will improve water quality and mobilise the accumulated sediments. Management of these structures has been restricted by

limited understanding of the outcomes and constraints of this approach; and a lack of defined management responsibilities for operation..

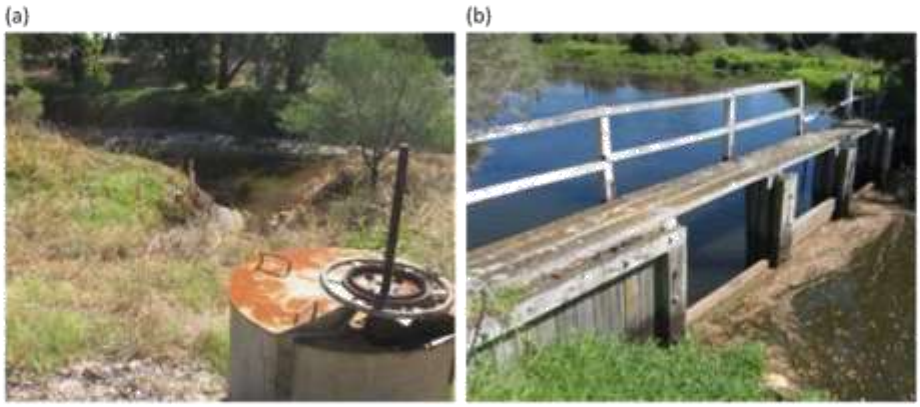


Figure 10. Flow management structures for the Lower Vasse River: (a) the valve controlling flow from the Vasse Diversion to the Lower Vasse River via a 900mm pipe; (b) the weir and removable boards at the Butter Factory.

2.4 Sediments

Sediments

The Lower Vasse River has, over several decades, accumulated a layer of nutrient rich organic sediments, generally about 0.5m thick but up to 1m in some parts (Apex 2012). Sediments accumulate from inputs of organic material from the catchment and from ongoing growth and decay of phytoplankton cells within algal blooms. Low oxygen levels and resuspension when disturbed releases nutrients to the water column over summer, contributing to algal blooms. Sediments are therefore are a key consideration in addressing water quality problems in the Lower Vasse.

There is a well-founded perception by the community that the soft organic sediments in the Lower Vasse River contribute to poor water quality, and general support for sediment removal. However there are many constraints to this management option relating to the pollution content of sediments and potential for acidification; and the high costs associated with removal and disposal. Sediment removal is discussed further in Section 4.11.

The presence of soft organic sediments impacts ecology in other ways. They provide a poor substratum for growth of beneficial aquatic plants, and poor habitat for benthic invertebrates other than worms and midge larvae. This limits biodiversity within the river system and contributes to the dominance of phytoplankton in primary production. Sediment accumulation has reduced the depth of the river over time, filling in deeper habitats and contributing to warm conditions that favour algal growth.

The bathymetry of the river (Figure 11) shows the gradual increase in depth moving downstream. There are two areas that are notably deeper: downstream of the Causeway Road bridge and

downstream of the Butter factory weir boards. This suggests scouring of sediments downstream of these constrictions, which may indicate some potential for controlling sediment using flow regimes.



Figure 11. Lower Vasse River bathymetry from Butter Factory weir boards to Isaac Street reserve.

2.5 Amenity

Amenity describes the attractiveness of a place, and for the Lower Vasse River this is directly related to water quality. Algal blooms cause obvious green discoloration of the water, unsightly scums and unpleasant odours. There is concern that the poor amenity of the river during peak the tourist season river creates a poor impression at the entrance to Busselton.

Despite poor water quality however, the ecology of the river environment, particularly the bird life, is still enjoyed by many in the community. Amenity is closely linked to the nature of adjacent reserve, and opportunities for recreation and access, which can enhance enjoyment of the Lower Vasse River.

2.6 Recreation and Education

Poor water quality has greatly reduced the opportunities for recreational activities in the river during the warmer months. Persistent and severe algal blooms, often dominated by harmful blue-green species (cyanobacteria), cause closure of the water to public use. Access and recreation was rated the highest and the focus area requiring change.

Although algal blooms are seasonal, permanent warning signs are in place to advise against contact with the water. There is potential for recreational use of the water when there are no algal blooms, however signage does not indicate any safe period for contact.

In the past, the waters were used more extensively for recreation. In the 1940s the paddle wheel steamer *Jumna* carried passengers between the town and the Cattle Chosen homestead (Mouritz, Elphick and Anderson). There are anecdotes of canoeing, swimming and fishing and in the past. Whiting, Mulloway, Bream and Mullet have been anecdotally caught in the lower reach. Mullet and Black bream were caught during recent fish sampling but people no longer fish for them.

The Busselton Festival started in 1964, and crowning of the Festival Queen on the river bank opposite the City Administration building. The Festival Queen travelled on a barge from the boat ramp upstream and the community gathered on the banks to watch. At some point this ceremony ceased, though it is not clear when, probably due to poor water quality during the summer festival. In the 1970s there were paddle-boats on the river in town.

Regardless of water quality and restrictions on recreation within the river, a number of trails, parkland and open space adjoin the Lower Vasse and these are still regularly used by the community. Rotary Park provides good public infrastructure near the river. Algal blooms and associated odours associated with a do impact use of these areas at times. There is significant potential for improved recreational, amenity and cultural connection with the river through enhancing ecology and improving facilities. Clearly though, addressing water quality is essential for improving recreation opportunities.

2.7 Culture and Heritage

The river is highly valued by the local community and has historically been an iconic feature of the town and focal point for recreational and social events. There is a strong Aboriginal cultural connection to the river and many historical features. Heritage was rated as an issue of very high importance by the community.

2.7.1 Aboriginal heritage

The Lower Vasse River holds significant value for the local Wadandi people. There is a strong spiritual connection with all waterways in the area associated with the Waugul, and they are seen as a fundamental part of all life (Huxtable 2018). In pre European times, Aboriginal People used the Vasse River and its natural resources extensively.

With European settlement and alterations to the landscape, traditional uses of the river have been substantially impacted.

> *Before all the drains were put in the Vasse River was a system of walk trails. The old people would follow the river down to here, singing songs of the elders. We utilised the bush for medicine and food. It's a supermarket, everything we need is right here, the country provides everything we need.*
>
> (I. Webb, in Huxtable 2018)

During consultation, Aboriginal representatives highlighted the importance of connectivity of waterways in the landscape from both spiritual and ecological perspectives. They highlighted the importance of managing the headwaters of the river to address the real cause of poor health in the lower reach, relating problems in the Lower Vasse to disruption of connectivity with its catchment. Representatives also acknowledged the need for intervention to improve the health of the river.

In a formal management sense, the study area is within the South West Boojarah Indigenous Land Use Agreement within the South West Native Title Settlement Area[3]. An area encompassing the New River wetland area, including part of the study area, is a registered site under the *Aboriginal Heritage Act 1972*. In addition, there may be sites of cultural significance which are not reported or registered for cultural and political reasons. This will necessitate further consultation as specific management actions are developed.

2.7.2 European history

The presence of the Vasse River influenced the decision for settlement, and the development of Busselton and many aspects of social life have long been centred around it (Mouritz, Elphick and Anderson). Prior to settlement the Vasse River was one waterway from its headwaters to Wonnerup, but has been dramatically altered. History provides a connection to the river for many people. Some important historical features and activities associated with the Lower Vasse River are listed below (from Mouritz, Elphick and Anderson).

- Early settlers moved north from the Blackwood River and via the Vasse River towards Busselton.
- The old rail bridge was constructed in 1890, with rail connections to Bunbury, Nannup and Karridale, servicing the timber industry.

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[3] Current information on the South West Native Title Settlement: http://www.noongar.org.au

- During the 1830s, the river was used to move goods from the jetty site, via what is now Queen Street, to Cattle Chosen to build the homestead. The small paddle replica paddle steamer *Jumna* transported people from St Mary's Church to Cattle Chosen; this included voyages for many prominent visitors to Busselton.
- The Busselton Festival commenced in 1964, with the crowning ceremony on the banks of the Vasse River a special event.
- The Butter Factory was transferred from Strelly Street to its current site in the banks of the river in 1918, and ceased production in 1975.
- The footbridge near Peel Terrace was built by the local council in 1972.

2.8 Governance

There are two key issues for the Lower Vasse River with regards to governance:

- defining roles and responsibilities for future management; and
- minimising impacts from planning for future developments and land use change.

Management of diffuse and point sources of nutrients from agricultural and urban catchments of the Lower Vasse River is a shared responsibility across GeoCatch, DWER, DPIRD, the City and industry groups. The independent review of water asset management (Hart and Bonneville 2014) recognised this joint responsibility. The Water Quality Improvement Plan (WQIP) provides load reduction targets, management recommendations and identifies key organisations responsible for implementation.

However, the independent review identified a clear need for a designated manager of the Lower Vasse River 'lake' section. There has been a lack of leadership and funding since the Lower Vasse River Cleanup Program, and thus little progress in management since this was completed. This issue was also evident during community consultation (AHA 2016). One of guiding principles of the Vasse Geographe Strategy is the appointment of designated lead managers for key water assets. The independent Review (Hart 2014) recommended the City becomes the lead management agency, with continuing assistance from DWER.

The Lower Vase River catchment area will undergo considerable expansion of urban and industrial areas in the future, as identified in the current Draft Local Planning Strategy (CoB 2016) (



Figure 12). This could result in significant increases in nutrient loads to the Lower Vasse River, and downstream environments (Section 2.1). The City will have an important role in minimising nutrient exports from future developments and land use change; and effectively managing future reserve areas within the vision for the Lower Vasse River. Development is also expected to result in considerable new areas of foreshore reserve to be management by the City (Figure 12).



Figure 12. Draft Local Planning Strategy (2016) land use within the Lower Vasse River study area.

3 Management objectives

This section presents sixteen draft management objectives across the eight the focus areas. These were developing in partnership with community members and provide good guidance on the expectations of future management of the Lower Vasse River.

Water Quality

1. Reduce nutrients flowing into the Lower Vasse River from all existing sources to improve water quality and reduce the frequency and severity of toxic algal blooms.
2. Minimise any additional nutrients flowing into the Lower Vasse River from new developments and agricultural intensification.
3. Utilise science and innovative technologies to improve water quality in the Lower Vasse River.

Ecology

4. Protect and enhance native aquatic and terrestrial habitats in the Lower Vasse River and the foreshore reserve.
5. Reduce the impact of threatening processes on the natural values of the Lower Vasse River and the foreshore reserve.
6. Balance mitigation of fire risks with the protection of natural values of the Lower Vasse River foreshore reserve.

Water Flow

7. Optimise water flow in the Lower Vasse River to balance improvement of water quality, protection of natural values and public amenity, while maintaining flood protection.

Sediments

8. Strategically manage accumulated sediments to protect the natural and social values of the Lower Vasse River.

Amenity

9. Improve visual amenity, public health and odours for residents and visitors to enjoy the Lower Vasse River.
10. Facilitate recreational and educational opportunities, which are compatible with protection of the key values of the Lower Vasse River and enhance community stewardship.

Recreation and Education

11. Enhance public access to the Lower Vasse River and within the foreshore reserve, with a focus on creating linkages to the town centre and surrounding areas while protecting the river's natural values.

Culture and Heritage

12. Promote understanding of the Aboriginal and European history and culture of the Lower Vasse River.

Governance

13. Develop and maintain partnerships and a collaborative approach between key stakeholders and the community when managing the Lower Vasse River.

14. Maximise opportunities for protection of the Lower Vasse River as part of future development proposals and changes in land uses.

15. Manage the Lower Vasse River with consideration to other water assets, including the Vasse-Wonnerup Wetlands and Geographe Bay.

16. Improve knowledge and understanding of key values and management issues of the Lower Vasse River to support adaptive management.

4 Review of Management Options

Development of management strategies for the Lower Vasse River has involved consideration of a range of potential initiatives. Some are fundamental approaches such as catchment nutrient reduction and riparian vegetation management. Intervention options have been considered to directly manage water quality problems. These options are important due to long-term nature of achieving nutrient load reductions, and the potential for ongoing release of nutrients from accumulated sediments.

The independent review identified need for solutions that directly reduce nutrient availability for algal growth, or alter physical conditions to make it more difficult for algae to grow or dredging the sediments (Hart and Bonneville 2013). In addition, the *Community Views* session also provided suggestions for future management options (Figure 13). These reflect long-held community opinions and are aligned well with the options considered for inclusion in the management strategies and actions in this WMP.

This section outlines existing information, challenges and likely outcomes from potential management options. This review was an integral step in the development of strategies and actions for the WMP, outlined in Section 5.



Figure 13. Suggestions for the future management of the Lower Vasse River from the *Community Views* session (AHA 2016).

4.1 Living Streams

The term *living streams* describes an approach to managing urban stormwater that creates a complex ecosystem with outcomes for ecology, water quality, water conveyance and amenity. Although traditionally applied to urban stormwater drains, this approach of restructuring the ecosystem is also relevant to restoration of the Lower Vasse River. In this case it would involve altering the morphology to restore ecological processes and create physical conditions that provide greater resilience to high nutrient conditions.

A living streams approach would see creation of diverse habitats including seasonally dry areas, river pools, channels, floodplain areas, riffle zones and islands (floating and grounded). Creation of these habitats would have clear outcomes for ecology, and the potential to provide significant water quality benefits. Compartmentalising the river by creating seasonally dry areas during summer also provides opportunities to stage works and target intervention actions.

4.1.1 Ecological outcomes

As outlined in Section 2.2, the Lower Vasse River supports many terrestrial and aquatic fauna despite its degraded status. The living stream approach would create new riparian habitat to support birds and possible other terrestrial fauna. Within the river, the increased surface area and diversity of aquatic habitats and food sources is likely to have a profound effect on aquatic invertebrate communities. This has been shown in the river in regard to aquatic plants (Paice et al. 2016, Paice 2018). Physical substrates (e.g. rocks, sand, and logs) and varied flow conditions will also support greater diversity. The plant and invertebrate communities in turn provide food resources for fish and birds.

4.1.2 Water quality outcomes

Potential water quality benefits of ecosystem restructuring through a living streams approach are summarised below. While these mechanisms may not achieve significant water quality improvements individually, all have potential to contribute to a more complex system that may address the current problem of seasonal dominance by phytoplankton. Enhanced nutrient processing capacity may also benefit downstream wetlands.

a) Aquatic plants: Modifying the depth profile and enhancing substrate can provide more favourable sediment and depth conditions for anchorage and growth of beneficial aquatic plants (macrophytes). These plants may re-establish naturally or can be transplanted. A macrophyte restoration trial in the river in 2012 did not result in water quality improvement (Paice et al. 2016), however the mechanisms by which these plants contribute to water quality are well known throughout the world (Van Donk and Van de Bund 2002; Davis et al. 2010). Interestingly the Mexican waterlily has shown water quality benefits, although it is not clear how. Aquatic plants contribute to improved water quality through:
   - competing with algae for nutrients, both directly and by supporting biofilm;
   - stabilising and oxygenating the sediments;
   - supporting organisms that graze on algae; and
   - chemical inhibition (allelopathy).

b) Freshwater mussels: Carter's freshwater mussel (*Westralunio carteri*) is a listed threatened species known to occur in the river. Modifying substrate or providing additional substrate could increase mussel populations. They are thought to play an important role in maintaining water quality in refuge pools through filtration (Caraco et al. 2006). Mussels in the Lower Vasse River have a habitat preference for bridge sites and river edges, which are more shaded and stable.

c) Benthic algae: Increasing surface area by creating a more complex river form with greater rock and wood surfaces would allow benthic algal populations to establish. These communities are alternative primary producers to phytoplankton, competing for nutrients and providing an

important food source for aquatic fauna, so that nutrients are incorporated into the feed web. Emergent wood and rock materials also provide habitat for birds.

d) Emergent plants: Reshaping river banks could provide ledges for establishment of more emergent plants through revegetation. These plants use up nutrients, shade the water, trap sediments and provide excellent habitat and food for waterbirds. They are more beneficial than rushes on the upper banks because of stringer interaction with river sediment and water column. Some emergent plant beds have been created in previous restoration efforts, but they are confined to very thin riparian strips.

e) Floating islands: There have been a number of vegetated floating islands trialled in the LVR. These would providing habitat, both above and below the water and may contribute to nutrient uptake and processing through growth of plants and associated biofilm. Some products include a nutrient holding media in the island structure. These structures also provide an immediate shading benefit, restricting algal growth. This shading function may also be useful in restricting the spread of waterlilies.

f) Changing morphology: Physical modifications that increase surface area and creates seasonal separate wetland compartments may have several advantages, including:
   - greater resilience to higher nutrient loading due to greater surface area for beneficial processes;
   - higher levels of shading, providing less favourable conditions for algal blooms;
   - reduced wind fetch and thus nutrient-release and turbidity from resuspension;
   - potential for water circulation within or between pools, reducing residence time for development of algal blooms; and
   - opportunities for targeted interventions to address water quality such as sediment removal (Section 4.11) and water treatment (Section 4.3).

4.1.3 Challenges

Modification of river morphology as part of a living stream approach would involve extensive earthworks that affect hydrology (and flooding) and existing riparian and aquatic habitats. Design will need to address constraints of these issues, and several approvals will be required (Calibre 2018). In particular, Carter's Freshwater Mussels occur in the river. This is a recently listed (2018) threatened species[4] and so will require approval and management of in-river works to minimise mortality and create a net benefit for this species.

Implementation of living streams works would involve considerable cost associated with sediment removal and infill. It has been difficult to develop reliable costings for this approach, owing to variation in potential designs; and uncertainty in volumes and methodology for sediment removal and disposal, and materials used for infill. Costs and uncertainty can be addressed through staging of works,

[4] Listed as Threatened under Wildlife Conservation Act 1950 (Western Australia); listed as vulnerable under Environmental Protection and Biodiversity Conservation Act (1999); listed as Vulnerable under Global IUCN Red List of Threatened Species.

allowing development of reliable methods and better understanding of materials. Adaptive implementation in stages based on results will improve overall outcomes.

4.2 Reducing nutrient sources

Management of nutrient inputs from urban and agricultural catchment areas is addressed in the Water Quality Improvement Plan (WQIP, DoW 2010), which is currently being reviewed. The WQIP outlines management measures and provides recommendations, which are included in the Management Strategies for this WMP (WQ1 and WQ2).

A large proportion of the catchment with agricultural landuse (approximately 90%) is currently diverted via the Vasse Diversion Drain (VDD). Nonetheless, flows from the broader rural catchment do impact water quality in the LVR. Increasing flows from the VDD to the LVR (Section 4.8) would increase nutrient loads from this source. There are also some rural land use activities remaining in the LVR catchment area.

GeoCatch, supported by DWER, has a strong focus on nutrient reduction in the agricultural catchment, supporting implementation of best management practices for fertiliser use and dairy effluent management, and soil amendments. They also promote and assist riparian management and stock control on waterways. There are opportunities to improve management of the extensive modified drainage networks, which rapidly convey nutrients and sediments within the catchment. This is the focus of the *Rethink Drainage* action area for the Revitalising Geographe Waterways program. These management initiatives are important to the long-term reduction of nutrient contributions to the Lower Vasse River from rural sources.

Much of the Lower Vasse River catchment is urban, and these areas will continue to expand with future development, creating new sources of nutrients. In existing urban areas, the City has worked in partnership with GeoCatch to implement significant stormwater management upgrades throughout the Busselton CBD and LIA areas (Appendix 3). These include:

- biofiltration beds
- rain gardens
- enhancement of natural wetlands
- constructed wetlands
- vegetated swales
- biofiltration swales
- detention basins

There may be more opportunities for stormwater upgrades in the Lower Vasse River Catchment, and a process to identify and prioritise future projects would be beneficial.

Inclusion of best practice water management technologies in new developments will be essential to minimise future nutrient inputs. The City has a key role through its planning and development approvals processes to ensure this occurs. The *Better Urban Water management Framework* (BUWMF) provides guidance ensure consideration of water resource management in the planning process (Section 0).

Sewerage infrastructure has a major role in protecting water quality in the Lower Vasse River, diverting nutrient- and pollutant-rich waters to the Busselton Wastewater Treatment Plant. Not all properties are connected to existing sewerage infrastructure, and there may be opportunities to increase

connections within the Lower Vasse River urban catchment areas, reducing nutrient exports from these areas.

The Busselton Light Industrial Area (LIA) is currently not connected to sewerage infrastructure. Septic tanks in the LIA are estimated to contribute about 10% of the phosphorus load and 4% of the nitrogen load to the Lower Vasse River annually (WQIP). However there is limited data available to base these estimates on. Development of infill sewerage infrastructure in the LIA has a high potential cost and requires clear evidence to be progressed. This would be assisted by investigation of nutrient and pollutant exports, and an audit of waste in relation to acceptable criteria.



Figure 14. Example of a rain garden for stormwater quality management, at the City Administration building.

4.3 Water treatment using specialised clays

"Water treatment trials" in the LVR have focussed on specialised clays. Covering the sediments with specially-developed material can prevent nutrient release and reduce nutrients available for algal growth. These products are applied as a slurry and settle through the water column to form a layer on the surface of the sediments. Applied in this way, these products can bind to and sink nutrients and algal cells as they settle through the water column (Figure 15). There are a number of clay products used commercially and experimentally in a global context. Three have been trialled in the Lower Vasse River: Phoslock™, flocculating clays, and hydrotalcite clay.

From 2001-2004, three trials of Phoslock™ were completed. Application during an existing algal bloom can substantially reduce available phosphorus but had no effect on the algal bloom. Application prior to establishment of the algal bloom reduced both phosphorus levels and limited algal growth by 80%,

although a less severe algal bloom still occurred (Robb et al. 2003). Application rates for Phoslock™ are well-understood and it is a commercially available product. It needs to be applied prior to establishment of an algal bloom, to restrict growth by reducing phosphorus availability.

Two types of flocculating clays have been trialled in the Lower Vasse River. Application of a clay mixture containing polyaluminium chloride in April 2000 had no overall positive effect on river appearance. An experimental clay product was applied to a small contained area in February 2002, which did show visible improvement in water quality, but little monitoring was done.

Hydrotalcite clay (HTC) has been the focus of more recent trials in the Vasse River. Like Phoslock, this product is applied as a slurry and designed to strip phosphorus from the water column and trap phosphorus by forming a layer on the sediment surface. A mesocosm study was undertaken during 2006-17; followed by a larger scale field experiment in 2017-18. The results of these trials indicate reductions in phosphorus concentrations and algal growth (DWER 2018c). Unfortunately observed water quality remained poor in the trial areas, with the water still having a green appearance. More work is required to determine appropriate dosage levels, and this product is not widely available.

In general terms, these products have not demonstrated prevention of algal blooms, but have shown some success in reducing algal growth. Their effectiveness is limited by ongoing external nutrient inputs, so ongoing applications are needed and they are costly. DWER currently recommend annual treatment of the lower reach of the river with Phoslock™ , at an estimated cost of $120,000 per year.

Targeted treatment may be possible in smaller, seasonally-isolated areas following implementation of living streams works. This would make multiple applications more affordable. An ongoing interest in future development of these products should be maintained as they are improved and developed commercially.

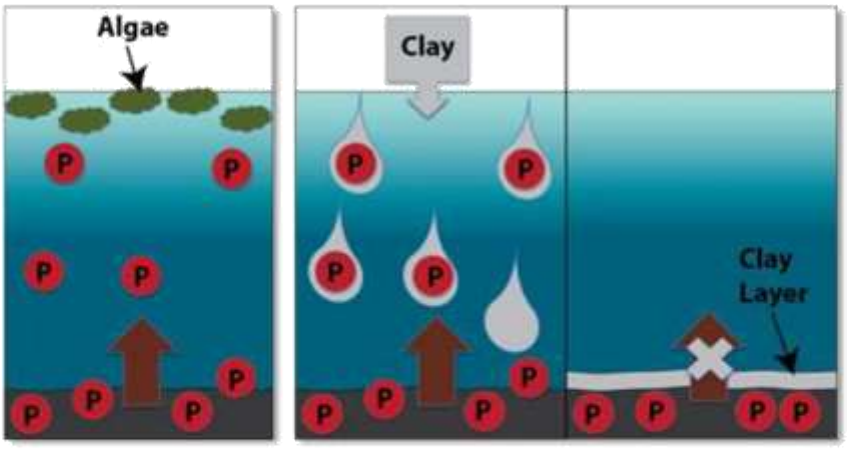


Figure 15. Phosphorus-binding clay products such as Phoslock® or the new HT-clay lock up phosphorus, making it unavailable to algae. Phosphorus is removed as the clay settles through the water and it also forms a protective layer on the sediments, reducing phosphorus release. Figure Courtesy DWER.



Figure 16. Hydrotalcite clay being applied in the Lower Vasse River during the 2017-18 trial.

4.4 Water treatment using microbiological products

A number of commercial products exist that claim to improve water quality through the introduction or enhancement of micro-organisms. There are no scientific studies available on the effectiveness of these products. Current evidence is anecdotal only and while some benefits may have been observed in small-scale situations they have not been formally reported.

The City supported trials of two such products in the LVR during the summer of 2012-2013: *The Water Cleanser* and *Soil Zyme*. Water quality variables were monitored at fortnightly intervals throughout these trials within treated mesocosms, untreated mesocosms and in open waters upstream and downstream.

The Water Cleanser (TWC) is described as a microbiological culture pad that provides high surface area and trace elements to increase the population of beneficial microbes (Archaea microbes and Bacillus bacteria) (information provided by manufacturer MEC). Enhanced nitrification and denitrification is described as the beneficial process for improving water quality. Water quality monitoring did not show any significant effects of this treatment. There may be potential for further research in partnership with Curtin University for this product.

Soil Zyme contains an enzyme protein designed to promote bacterial growth and activity. Water quality monitoring found lower pH and oxygen levels in treated waters during the trial. After three months, increasing nitrate plus nitrite and ammonia observed. This does suggest enhanced ammonification and nitrification, but there may have been limited loss from the system via denitrification (to produce nitrogen gas). This product may influence the phytoplankton community by increasing available nitrogen. The LVR generally has very low available nitrogen, which favours blue green algae that can obtain nitrogen from the atmosphere through fixation. Reducing phosphorus availability is very important for limiting algal growth, and these products do not achieve this.

These trials did not take place under conditions of severe algal blooms normally experienced in this section of the river at this time of year, so visual effects on algal blooms could not be assessed. The proliferation of Mexican waterlily in downstream parts of the river had an effect of limiting the algal bloom in the upstream reach including the treatment area.

4.5 Riparian vegetation management

In addition to the conservation value of the flora itself, fringing vegetation of wetland areas is a vital component of river health. Functions include:

- supporting terrestrial and aquatic food webs;
- habitat for terrestrial and aquatic fauna;
- foreshore stabilisation;
- shading and maintaining cooler temperatures
- interception of nutrients and sediments in runoff; and
- nutrient uptake and processing.

Riparian vegetation along the Lower Vasse River provides important bird habitat and forms part of a regional ecological linkage mapped along the length of the study area (Ecoedge 2017). However vegetation is mostly degraded with low species diversity and extensive weed invasion. There has been considerable riparian revegetation on the LVR banks since 1999, and these areas provide the best condition riparian vegetation. This demonstrates successful revegetation, but these areas need more active weed control and could be enhanced with infill planting.

Extensive areas of public lands provide good opportunities for revegetation. Ecoedge (2017) suggests five key areas for rehabilitation based on size, accessibility and level of competition with existing plants (Appendix 3. Additional areas of foreshore reserve are being created through new developments, providing new opportunities for improving riparian vegetation. The littoral zone[5] would be expanded in some areas through a living streams approach, including zones of seasonal and permanent inundation, requiring a specialised suite of species. A species list for revegetation for terrestrial and aquatic areas is provided in Appendix 4.

Outside of urban areas there is still stock access to some foreshore areas, damaging fringing vegetation and directly contributing wastes to the river. The *Vasse River Action Plan* (VRAP, Scott 2000). The study area for the VRAP extends from the headwaters in the Whicher Range to Fairlawn Road. It provides an assessment of foreshore condition and identifies areas requiring management of stock access, weed control, erosion control and revegetation. A review of implementation of the VRAP and update of foreshores assessment and focussed management recommendations for the Lower Vasse River WMP study area would assist in planning and undertaking restoration activities. This would also set a baseline for future monitoring of progress and outcomes. River action planning should also include consideration of future development and provide information to assist in planning of additional foreshore reserves.

[5] The ecological zone in freshwater systems close to the shoreline where sufficient light extends to the bottom for plant growth (Boulton et al. 2014).



Figure 17. Improving riparian revegetation through weed control and infill planting.

4.6 Managing waterlilies

The extensive cover of waterlilies in the river has negative impacts on oxygen levels and open water habitat; however they appear to have had a beneficial effect on water quality, inhibiting the development of algal blooms in open water areas upstream of the point of infestation (near the boat ramp) (Paice 2018). The structural habitat of the waterlilies also supports aquatic invertebrates, despite low oxygen levels.

Although unintentional, this is an example of "ecological engineering", whereby a change in the ecology has provided water quality benefits. The reasons for reduced algal blooms between patches of waterlily are not fully understood. It is not a result of reduced phosphorus concentrations, as phosphorus was actually extremely high in areas with low algal growth. It may be a combination of greater low residence time in sunlit areas owing to lilies and riparian shading; nitrogen limitation; or chemical inhibition (allelopathy). Understanding the mechanisms by which waterlilies inhibit algal growth may provide important insights to future management, and warrants further research. It would also be valuable to investigate the potential to achieve similar inhibition using native aquatic plant species, such as *Cycnogeton* spp., *Potamogeton* spp., *Liparophyllum* spp. and *Ottelia ovalifolia*.

Reduced algal growth was observed following a rapid expansion of waterlily cover in 2013-2014 (Figure 8), at considerably lower levels of cover than subsequent years. This suggests that water quality benefits can be maintained with some control of waterlily. Large scale control would likely see a return to widespread seasonal algal blooms; and also presents risks of widespread deoxygenation following plant die-off. Paice (2018) recommends strategic control of waterlily to gradually reclaim open waters between lily patches, targeting important waterbird habitat, and to prevent invasion of

new areas. Although outside the study area of the WMP, the downstream Lower Vasse River delta wetlands are at particular risk and should be targeted for waterlily control.

4.7 Controlling feral fish

The two main feral fish species in the LVR are goldfish and mosquitofish. There is little that can be done to control mosquitofish populations. Goldfish are known to feed in at the bottom of the river, disturbing sediments and so contributing to nutrient release and turbidity. There is also evidence that passage through goldfish stomachs can increase the growth rate of blue-green algal cells.

Although eradication of goldfish is difficult, population numbers were successfully reduced through an annual electrofishing program from 2003 to 2013 (Beatty et al 2014). The resumption of this program should be considered. Compartmentalising the river may provide opportunities for effective targeted goldfish removal.

4.8 Increasing flow inputs from the Vasse Diversion

Reduction in catchment flows due to interception by the Vasse Diversion, together with impoundment by the Butter Factory weir boards have substantially altered hydrology of the Lower Vasse River. The effect on nutrient concentrations is complex due to variation in nutrient concentrations and the combined results of flow volume, velocity and water flow through the system. Although nutrient loads may have decreased due to lower volumes, this does not translate to lower nutrient concentrations.

The impounded conditions and accumulated sediments in the lower 'lake' section of the river promote algal blooms which causes a seasonal increase in nutrient concentrations over summer when there is negligible flow (Section 2.1.1). Flushing of the river may be important for removing nutrients and organic material that accumulate in during summer (Figure 6).

There is strong support from the community for increasing flow into the Lower Vasse River from the Vasse Diversion with the aim of improving water quality. Altering flows has potential to improve water quality where it dilutes nutrient concentrations or reduces residence time for growth of algal blooms. But outcomes need to be considered in the context of flood protection and impacts on nutrient loads to downstream wetland ecosystems. This option was investigated by the *Reconnecting Rivers* study (DWER 2018b), which used hydrological modelling to determine the outcomes from a range of reconnection scenarios. The main findings of the *Reconnecting Rivers* study in relation to the Lower Vasse River were:

- the Vasse surge barrier is essential for flood prevention in Busselton;
- additional flows from the Vasse Diversion would increase nutrient loads to the Lower Vasse River and Vasse Estuary;
- an additional 900mm culvert at the Vasse Diversion offtake to the Lower Vasse River is feasible without increased flood risk and without unacceptable additional nutrient loads to the Vasse Estuary;
- the equivalent of three 900mm culverts or full reconnection of the Vasse Diversion would cause unacceptable flood risk and increase in nutrient loads to the Vasse Estuary;
- additional flows from the Vasse Diversion only has a significant effect on flows during winter;
- the potential effect of an additional culvert on summer water quality in the Lower Vasse River is small because of a lack of flow;

The study recommended that the Vasse Diversion Drain offtake structure be upgraded to an equivalent of two 900mm culverts (i.e. double its current capacity), with the ability to control flow. This infrastructure has been designed and works are currently scheduled for 2019. *Reconnecting Rivers* also recommended the development of an operational strategy to manage the culverts, with defined roles and responsibilities and consideration of how nutrient concentrations could be minimised. A greater understanding of relationships between water flow and water quality wold be beneficial to inform optimal operation of the culvert with regard to nutrient management.

4.9 Improving summer flows

There is no flow from the Vasse Diversion in the warmer months to address water quality problems during the algal bloom season through dilution and water movement (DWER 2018b). There are limited other options for creating summer flows with other water sources. These are summarised as follows:

- Storage of water for summer release: A dam to hold water for summer release would need a capacity of 18GL and cover an area of 9km^2. Water stored in such a reservoir is at risk of experiencing similar water quality problems to the Lower Vasse River. Using the Vasse Diversion or existing flood detention basins is not viable as it would compromise their flood protection function (DWER 2018b).
- Busselton Wastewater Treatment Plant discharge: This option would reduce water residence time and may decrease phosphorus concentrations with limited increase in loads to downstream wetlands (DWER 2018b). This option may be considered further, but its practicality is limited by need for substantial infrastructure and future competition for this water resource.
- Busselton Water operations: There may be potential for backwash inputs, but this has not yet been assessed.
- Internal artificial circulation: Movement of water within the system has potential to limit algal blooms by physical disturbance, reducing water temperatures. Temperature and residence time can be key factors controlling algal blooms in impounded rivers suggests (Cha et al. 2017). This approach may provide opportunities for external treatment techniques associated with recirculation (e. g. filtration via treatment wetlands). This option has not been assessed.

4.10 Removal of the Butter Factory weir boards

The Butter Factory weir boards were installed around 1918 to retain water levels in Busselton for amenity and recreation outcomes. There are mixed perceptions regarding their necessity: that removal would improve water quality in the river through flushing; that they are not necessary and greater drying would be beneficial; and that maximising depth is important to improve water quality by creating cooler conditions.

Current management practice is to remove the weir boards in winter, and reinstall them in October to maintain water levels. However, the wooden boards currently leak, so higher water levels are only maintained temporarily. From around December, the extent of water is determined by land elevation, and currently restricted by a point further downstream near Ford Rd.

Modelling through the Reconnecting Rivers project indicated that removal of the weir functionality would not create a flooding risk; and would not result in drying out of the river. This approach may have the following outcomes:

- water levels in the LVR would become lower earlier, by up to eight weeks;
- water would continue to flow into the downstream wetlands for a longer period, rather than being held back, influencing nutrient load;
- potential effects on goldfish movement.

An important operational issue at present is the safety of City staff during the installation and removal of the weir boards. A decision is required as to their future use, because if they are necessary part of river management they will need to be replaced and the mechanism for their installation and removal upgraded.

4.11 Sediment Removal

Regardless of potential reductions in nutrient loads, the organic sediment in the Lower Vasse River provides an ongoing internal source of nutrients loading that can continue to drive algal blooms. Phosphorus is released from the sediments under low-oxygen conditions, and nutrients are also resuspended from the sediments when disturbed by flows and wind. Increasing phosphorus concentrations over the summer months may be a result of sediment-nutrient release. Note that specialised clay products are a form of sediment treatment that prevents phosphorus release (Section 4.3).

Sediment removal has long been viewed by many stakeholders as an essential part of future management. It was highlighted as a key management action during community consultation (AHA 2016). As a stand-alone method it would probably not prevent algal blooms, because nutrient concentrations in surface and groundwater inputs are sufficient for excessive algal growth. However, "resetting" the river through removal of organic sediments does have potential outcomes for water quality and ecology.

Outcomes of sediment removal for river health are complex. Increasing depth may create cooler temperatures but can also result in stratification if there is little mixing of the water, so there may be little temperature-related control of algae. Deeper waters may also reduce resuspension of nutrients from the riverbed. However, shallow waters may also be less prone to algae blooms owing to more favourable conditions for aquatic plants and benthic algae. Rather than removing all soft sediments from the river, creation of deeper pools and channel habitats in some areas as part of a living stream approach is considered more feasible (Section 4.1).

A section of the river upstream of Causeway Rd bridge was dredged in March 2001. This work has increased the depth of the river in this section, however a large amount of soft sediment remains, at thickness similar to other parts of the river, and water quality remains poor (Paice 2005). In this case a mini-dredge was used to pump material to a holding dam, allowed to settle overnight and then overlying water was returned to the river. Sediment from the dam was disposed to a gravel pit.

4.11.1 Removal method

Sediments in the Lower Vasse River are very fine and contain a high moisture content, and so require pumping from the river rather than excavation. The method used in 2001 was effective in removing some sediment and allowing it to dry out sufficiently for excavation. However drying took a considerable length of time and the total amount removed was dependent on the holding capacity of the holding dam. A more recently developed option is pumping sediments into porous geotextile bags placed nearby (Figure 18); with addition of a polymer to expel the water from the bags, which flows

back into the river. This approach allows additional sediment to be pumped from the river as the volume of water is removed from collected sediments. This is considered the most feasible option for sediment removal from the river, and a proposal for a trial is currently being developed.

4.11.2 Disposal options

Disposal of dredged sediment is challenging in terms of potentially very large volumes, involving considerable transport costs; and limitations on disposal site owing to potential acidification and nutrient and pollutant content. To inform disposal options, the City undertook sampling of between the boat ramp on Southern Drive and the Butter Factory weir in March 2018, with assistance from DWER.

Levels of heavy metals and organic and inorganic contaminants to be below threshold levels for disposal at a Class I landfill facility, with the exception of lead (Table 3). Although lead content levels were above threshold values for waste not requiring a leach test, subsequent leachate testing results were well below the Class I concentration limit.

Average depth of soft sediment in core samples was 488mm, with these sediments dominated by fine silts and clays (71.4%). Sample analysis found no existing acidity (mean pH 7.0), and low acid volatile sulphur (<0.005 %S) but indicated sulfidic soils with very high potential acidity. Net acidity varied greatly, ranging from 449 to 1511 with a mean value of 980 mole H+/Tonne dry weight. This is well above the acid sulphate soils 'action criterion' of 62 mole H+/T for fine texture materials (DER 2015). When sulfidic soils are exposed to air, oxidation can result in acidification. This has been demonstrated for the dredged material from 2001 at the gravel pit, which has a pH of around 4. The average lime dosing required to buffer potential acidification is 74kg/Tonne dry weight.

Soil characteristics do show that dredged material could be disposed of at a Class I landfill facility, such as the City's Vidler Road Waste Facility. However the high nutrient and organic content of the material suggests potential for reuse of the material as a component of compost. Composting can further dilute concentrations of pollutants. This approach would require a trial and further testing of the material to ensure it is safe for any proposed end use.

Table 3. Comparison of pollutant content of Lower Vasse River sediments to threshold values for Class I landfill (sampling by City, March 2018).

Analyte	mean	Class I landfill threshold[1]	Units
Arsenic	<5	14	mg/kg
Beryllium	0.1	2	mg/kg
Cadmium	0.34	0.4	mg/kg
Chromium	6.6	10	mg/kg
Lead	35	2	mg/kg
Lead leachate	<0.01	0.1	mg/L
Mercury	0.04	0.2	mg/kg
Molybdenum	<2	10	mg/kg
Nickel	2.00	4	mg/kg
Silver	<1	20	mg/kg
Fluoride	137	300	mg/kg

Cyanide - Total	<1	16	mg/kg
Petroleum hydrocarbons C_{6-9}	<0.2	2800	mg/kg
Petroleum hydrocarbons – other	19.5	450[2]	mg/kg

[1] Landfill Waste Classification and Waste Definitions (DEC 2009)
[2] minimum threshold value for range of petroleum hydrocarbons
< indicates value below limit of detection
Phenol and pesticide suite also analysed, all results below limit of detection

4.11.3 Risks

The main risks associated with sediment removal are:

- potential impact on benthic organisms;
- short term effects on water quality;
- acidification of sulfidic sediments; and

In the Lower Vasse River the soft sediment layer general provides poor habitat for benthic organisms. However the threatened Carter's Freshwater Mussel (*Westralunio carteri*) is known to occur. Mussels in the LVR have a habitat preference for bridge sites and river edges, which are more shaded and stable. Key habitat areas could be avoided and work could be offset by overall habitat improvement; but nonetheless sediment removal work would need to consider and manage impacts on this species and be approved under state and federal legislation.

There is some risk of increased nutrient concentrations in the vicinity of dredging operations disturbance of nutrient rich sediments. Given the severe water quality problems currently experienced in the river this is not considered to be a serious risk. However the connectivity to the Vasse Estuary downstream does raise the issue of impacts on nutrient loads. This could be avoided by undertaking work when the river is disconnected from the downstream system.

The soft sediments in the Lower Vasse River are sulfidic and laboratory analysis and the pH of the old dredge spoil do indicate that oxidation would cause acidification. Severe acidification can have direct impacts on aquatic flora and fauna, lead to contamination of water resources, and cause corrosion of infrastructure. Exposure to oxygen in the water column or air would be avoided using the geotextile bag method, preventing oxidation during the removal process. The sediments are not monosulfidic (indicated by low acid volatile sulphur); so do not pose the risk of rapid acidification and associated deoxygenation of the water column with potential heavy metal release. Sediments would require lime dosing for disposal.

4.11.4 Costs

There is uncertainty around costs for sediment removal, related to volumes of material and potential shrinkage, method of removal and options for disposal. Further work is required to provide accurate estimates of sediment and determine sound methods for removal and disposal. Removal also needs to consider appropriate locations and whether it could be staged in association with a living streams design approach. The removal trial currently being developed (see 4.11.1) will inform future costings of this management option.



Figure 18. Geotextile bags used for sediment removal via dredging.

4.12 Recreation and access management

Recreational opportunities for the Lower Vasse River are mainly walking and riding along the river and bird watching. Feeding of ducks and other birds near Peel Terrace is also common, but is discouraged owing to potential impacts on water quality and bird behaviour. Recreation is clearly limited by water quality problems. Algal blooms pose a health risk that prevents direct contact activities such as swimming and use of paddle craft; and at times cause poor odours that limit activities near the water. Management actions that address water quality are thus essential to improve recreational opportunities.

There is potential to improve access and facilities for recreation and enjoyment during periods where algal blooms do not occur, or do not cause offensive odours. Community consultation indicated access and recreation as the area of management where the community would most like to see change (AHA 2016). Examples include additional pathways, boardwalks, viewing platforms, seating, bird hides and picnic areas. Upgrading of interpretive signage would also encourage people to the river and enhance their experience. There are existing pathways along the river in the vicinity of Peel Terrace and Southern Drive, and among the nearby New River Wetlands: the City is currently developing plans for an extension to this network.

There is also a need to review the use of permanent warning signs around the river, which discourage activities when there is no public health risk. This is particularly important if water quality improvements are achieved.

There is significant potential for improved recreational, amenity and cultural connection with the river. Although poor water quality does limit these outcomes, it does not prevent it. Enhancing ecological values of the river and opportunities for community connection can be achieved independent of water quality improvement. Furthermore, there are many months of the year when

water quality does not pose a health risk. Clearly though, water quality improvement is a key aspect of enhancing recreational opportunities.

Interpretive signage along the Lower Vasse River between the old Rail Bridge and Rotary Park was developed as part of the Lower Vasse River Cleanup Program, in the early 2000s. These signs are still in place but are outdated: some are longer visible and some are no longer relevant. Improved interpretive facilities and information would engage more of the community and enhance appreciation and understanding of the river and its management.

4.13 Governance options

The independent review of water asset management (Hart and Bonneville 2014) highlighted the need for the Lower Vasse River to have a designated manager. The City was recognised as the most appropriate manager, and this has been supported by the Western Australian Government in its response to the review. It is sensible that the City adopts this role given the high public profile of the river as a part of Busselton's town centre; and the large areas of foreshore reserves under the City's management control. Although the City is responsible for overall implementation of management actions, several key stakeholders also have important roles, outlined below. These roles and responsibilities are also summarised in Table 4, in Section 6.

The flow control structures at the Vasse Diversion connection and the Butter Factory, considered vital components of river management, are generally operated by the City. However, this infrastructure is owned by the Water Corporation. The Water Corporation has given the City permission to operate these mechanisms for water quality purposes, however some uncertainty remains in relation to flood protection.

The City also has an important role in its planning capacity. The *Optimising Planning Tools* project was completed by the City, for *Revitalising Geographe Waterways*, to review the potential role of planning in water resource protection (Hosken 2018). Proposals for changes in land use and new developments can trigger the imposition of new environmental protection requirements at the approval stage. This applies to both urban and rural development.

The Lower Vase River catchment area will undergo considerable expansion of urban and industrial areas in the future, which will increase potential nutrient and pollutant sources. Continued implementation of best practice stormwater management designs, and long term maintenance of infrastructure by the City is essential to minimise water quality impacts from future developments. Future residential development will provide opportunities for improving foreshore environments as new reserves are vested in the City. Consideration of water quality protection and surface water management in the planning process is guided by *Better Urban Water Management* document (WAPC 2008). There is potential to require new developments to demonstrate that nutrient and contaminant levels will not exceed background levels, but this would require amendment of the City's Local Planning Scheme and is restricted by a lack of water quality standards.

In rural areas, the current trend of intensification of agriculture is likely to continue into the future. Although there is a requirement for planning approval for intensive agricultural uses such as horticulture and feedlots, development applications for these land use changes are generally not submitted to the City. Improved clarity of planning approval requirements for changes in agricultural

land use and new agricultural developments may increase opportunities for waterway protection requirements. The development of industry best management practices (BMPs) would provide useful criteria for planning assessment.

The City's management responsibility is generally limited to the study area and does not extend into the broader catchment. Ongoing management initiatives in the catchment, in particular to address issues of nutrient enrichment and sedimentation, are a fundamental component of waterways management. GeoCatch, with the support of the Department of Water and Environmental Regulation (DWER), is the lead manager for catchment management. The Water Corporation has management responsibility for its rural drainage network.

DWER has an ongoing role in providing support for the management of the Lower Vasse River through continued involvement in water science, modelling and monitoring. If the implementation of this WMP is to be funded through ongoing investment in a broader program for Geographe Bay catchment waterways, DWER is likely to continue to have an important project management and networking role.

The community is also an important stakeholder with potential roles in management decisions, advocacy, implementation of on-ground works and contribution to community science. Many interested community members have provided valuable assistance during the preparation of this WMP and would be valuable in ongoing collaboration during implementation. The City has a strong 'Friends of' approach to reserves management, which may facilitate volunteer involvement in actions and monitoring. Aboriginal people have expressed a desire to participate in management decisions and on-ground projects.

4.14 Research and monitoring needs

Research and monitoring are needed to enable assessment and reporting on progress of management initiatives and to fill knowledge gaps. Research outcomes need to feed back into management planning through an adaptive process. The key research areas for the Lower Vasse River are summarised below.

Water quality: Ongoing water quality monitoring is an essential part of long-term assessment and reporting for waterway health. Future research into different water treatment options to reduce nutrient availability and reduce algal growth may provide important management tools. Short-term Intensive monitoring of nutrient concentrations and flows to the river from the Vasse Diversion Drain to improve understanding of the first flush dynamics of the system would inform operation of culverts.

Water flow: Investigation of the relationship between nutrient and flows in the Vasse Diversion will help inform management decisions around operation of the culvert connection. When the culvert is upgraded, inclusion of flow monitoring in the design would support future decisions in optimising flow. Better understanding of the effects of the Butter Factory weir on water levels and water quality is also needed to determine the need for upgrading this structure.

Birds: Despite being one of the most valued characteristics of the river, bird populations and key habitat areas are not well understood. Better knowledge of birds would assist in prioritising management initiatives (eg. habitat restoration) and in developing information resources for visitors. There is an opportunity for development of community-based sampling to address this gap.

Mussels: Freshwater mussels occur in the river, and have recently been added to specially protected fauna lists at the state, federal and global levels. A better understanding is needed of the mussel population, habitat requirements, potential contribution to water quality and potential impacts of management initiatives.

Mexican waterlily: The reasons for reduced algal blooms between patches of waterlily are not fully understood, and research into the mechanisms for this would provide insights for broader river management.

Sediments: Sediment removal is potentially a major part of future management of the river to address internal nutrient sources. More work is needed to develop methods of removal, determine costs, and examine potential outcomes for water quality and impacts on existing ecological values.

5 Management strategies and actions

The management strategies and actions included here have been developed to work towards meeting the management objectives and vision for the Lower Vasse River. Specific actions have been grouped into strategies for each of the management focus areas, although many have potential outcomes for several objectives. Living Streams is included separately, because it is an approach to management that influences implementation of actions for a number of focus areas. A framework for implementation of the WMP is provided in Section 6, including the roles and responsibilities of key stakeholders; definition of management areas; and a process for ongoing action planning, reporting and review.

5.1 Living Streams

Living Streams is separated from the management focus areas because it provides an overarching pathway for implementing management actions related to water quality and ecology. It involves altering the morphology and physical characteristics of the river to restore ecological processes and create less favourable conditions for algal blooms. It may also facilitate intervention actions, such as water treatment and sediment removal, in specific areas of the river.

Strategy LS1: Living streams approach

A living streams approach would see creation of diverse habitats including seasonally dry areas, river pools, channels, floodplain areas, riffle zones and islands (floating and grounded). In addition to outcomes for biodiversity in the river, these habitats would be designed to maximise potential benefits to water quality.

Management actions:

LS.3 Continue to develop Living Streams planning as a pathway for implementing ecological restoration and water quality improvement works, and assess community support for this approach.

LS.4 Incorporate the following principles into restoration planning as part of the Living Streams approach:

- maximise shading;
- enhance substrate to provide more favourable sediment and depth conditions for anchorage and growth of beneficial aquatic plants;
- modify depth contours to support more in-stream vegetation, including emergent and submerged plants, to enhance nutrient uptake and cycling;
- provide greater surface area for benthic algal populations to develop as alternative primary producers to phytoplankton;
- reduce the size of open water areas to increase resilience to nutrient loading;
- enhance habitat for freshwater mussels to maximise their role in maintaining water quality;
- reduce residence time for algal growth through flow management.

5.2 Water Quality

Nutrients are a key driver of algal blooms, so ongoing load reduction actions are a fundamental part of management. However, it often takes a long time to achieve load reductions, and they may be counteracted by new developments and changes to land use. Algal blooms can also be addressed through interventions that limit nutrient availability or directly target algal blooms. They may also be managed by creating less favourable physical conditions for phytoplankton; or restoring ecosystem functions such as nutrient cycling and food web processes.

Catchment management actions in this section are closely linked with recommendations in the Water Quality Improvement Plan (WQIP: DoW 2010), which are included for reference.

Strategy WQ1: Protecting water quality from urban sources

The Busselton Light Industrial Area (LIA) has been identified as a potentially significant source of nutrients and pollutants to the LVR. This strategy is focussed on improving understanding of this problem to guide future management. It also includes actions to maintain and expand best practice stormwater management to improve water quality.

Management actions:

WQ1.8 Quantify nutrient and pollutant exports from Busselton LIA to the Lower Vasse River to inform a case for deep sewerage.

WQ1.9 Explore options to secure deep sewerage for the Busselton LIA in partnership with Water Corporation.

WQ1.10 Assess opportunities for greater connection to existing sewerage infrastructure within the LVR catchment. If there a significant opportunity exists, investigate options and incentives to increase connectivity.

WQ1.11 Planning decisions to include appropriate sewerage management requirements and best practice water management, through implementing the *Better Urban Water Management* framework.

WQ1.12 Develop a prioritised program for stormwater WSUD upgrades to maximise nutrient reduction outcomes.

WQ1.13 Support educational campaigns that aim to reduce nutrients in runoff through individual and community actions (eg. Bay OK).

WQ1.14 Support implementation of the Vasse-Wonnerup Wetlands and Geographe Bay WQIP (DoW 2010).

Strategy WQ2: Reducing nutrient inputs from the rural catchment

Agricultural activities in the Vasse River catchment influence nutrient inputs via the Vasse Diversion culvert, which may increase when the culvert capacity is increased (see Water Flows). There are also some rural land use activities remaining in the LVR catchment area. This strategy reflects catchment management initiatives recommended in the WQIP, and future management direction in improving rural drainage.

Management actions:

WQ2.3 Support projects focussed on reducing nutrient exports from rural catchment of the LVR, as recommended in the Vasse-Wonnerup Wetlands and Geographe Bay WQIP (DoW 2010):

- *Improve fertiliser management throughout the catchment*
- *Improve effluent management at dairy sheds and feedlots*
- *Implement riparian management and stock control on streams and drains*
- *Use soil amendments on sandy soils*
- *Use perennial pastures when suitable*

WQ2.4 Explore opportunities for enhanced nutrient assimilation in rural drains in the LVR catchment, particularly those in reserves.

Strategy WQ3: Water treatment

Even when substantial reductions in nutrient loads are achieved, algal blooms often persist owing to ongoing internal nutrient supply. This strategy includes remediation approaches that address in-situ water quality, by treating water to reduce nutrient levels and algal blooms.

Management actions:

WQ3.4 Incorporate outcomes from the Water Quality Treatment Trials (2016-2018) into future management planning.

WQ3.5 Undertake seasonal water treatments in priority amenity area/s prior to algal bloom establishment, ensuring physical isolation to maximise effectiveness (dependent on outcomes Water Quality Treatment Trials, 2016-2018).

WQ3.6 Maintain research partnerships to identify and investigate new technologies to treat water in the future.

5.3 Ecology

Strategy E1: Riparian vegetation management

Riparian vegetation provides important habitat and supports ecosystem functions that maintain water quality. This strategy directs weed control and revegetation to improve and expand vegetated areas.

Management actions:

E1.6 Develop and implement a revegetation program for City-managed foreshore reserves, considering recommended rehabilitation areas reported in Ecoedge (2017).

E1.7 Continue to impose appropriate conditions on new developments adjacent to the Lower Vasse River that ensure future vesting and revegetation of foreshore reserves.

E1.8 Include creation and improvement of habitat for birds and possums in planning riparian revegetation.

E1.9 Update the Vasse River Action Plan in partnership with adjacent landholders, and extend this throughout the Lower Vasse River study area.

E1.10 Minimise fire risks associated with foreshore reserves by: reducing growth of annual grassy weeds; and considering species type, height and planting density when planning revegetation.

Strategy E2: Understanding and protecting waterbirds

Although there is high community appreciation of waterbirds in and around the Lower Vasse River, there is little formal understanding of bird populations and key habitats. This strategy will improve knowledge to guide protection and enhancement of bird habitat. There is potential for community contribution to this through a citizen science approach.

Management actions:

E2.5 Undertake a survey of waterbirds of the Lower Vasse River and identify important habitat zones, with strong involvement from the community.

E2.6 Protect identified important bird habitat zones through revegetation and weed control, recognising the current role of weeds as habitat.

E2.7 Create additional habitat zones for birds by placing large woody debris emerging from the water.

E2.8 Avoid identified important bird habitat zones when planning future infrastructure, and consider nesting season when planning works.

Strategy E3.1 Controlling invasive species

Mexican waterlily and feral goldfish are significant invasive species in the Lower Vasse River, impacting substantially on ecology and water quality. This strategy supports ongoing control programs for these species, but recognises the role of waterlily in reducing algal blooms.

Management actions:

E3.5 Prevent of further spread of Mexican waterlily through herbicide control and/or shading.

E3.6 Undertake strategic control of Mexican waterlily to progressively reclaim areas of open water, while minimising adverse impacts and preventing a return to algal blooms in these areas.

E3.7 Undertake regular feral fish eradication activities in partnership with Murdoch University.

E3.8 Undertake targeted control of arum lily and Brazilian pepper trees throughout the Lower Vasse River study area.

5.4 Water Flow

Strategy WF1: Optimising flows

This strategy considers potential for water quality outcomes by manipulating flow inputs from the Vasse Diversion Drain, and by increasing summer flows. Increased flow inputs from the Vasse Diversion Drain require careful consideration of nutrient loads and flood protection. While there are limited sources of summer flow, there is scope to further investigate options and benefits of internal water circulation. This could be made more feasible through the Living Streams approach.

Management actions:

WF1.7 Increase flushing of the river by installing a second 900mm culvert at outflow point from Vasse Diversion Drain, in accordance with recommendations from the Reconnecting Rivers Report (DWER 2018).

WF1.8 Monitor impacts of increasing flows into the Lower Vasse River.

WF1.9 Undertake intensive monitoring water quality in the Vasse Diversion to support operational guidelines for managing the culvert.

WF1.10 Develop operational guidelines for the Vasse Diversion culvert that defines responsibilities and provides formal guidance for manipulation of the valve to maximise water quality benefits and minimise risk of flooding.

WF1.11 Review function of the Butter Factory weir boards to inform their future use and need for replacement.

WF1.12 Investigate potential for increasing internal circulation in the system during summer to reduce residence time for phytoplankton.

5.5 Sediments

Strategy S1: Sediment Removal

The accumulated organic sediment in the Lower Vasse River provides an ongoing internal source of nutrients that drive algal blooms. These sediments also create a hostile environment for beneficial native aquatic plants and benthic aquatic fauna. This strategy includes removing sediment through an adaptive approach over time and considers alternatives to removal.

Management actions:

S1.4 Undertake a small-scale sediment removal project, using geotextile bags for dewatering and disposal, to assess cost and logistics of this approach.

S1.5 Determine feasibility of disposal options for future sediment removal: landfill, composting, soil conditioner.

S1.6 Depending on outcomes of small scale removal, undertake staged removal of sediments in the Lower Vasse River as a component of Living Streams design.

5.6 Amenity, Recreation and Education

Strategy ARE1: Improving facilities and information

Management actions:

ARE1.6 Review existing facilities and develop a concept plan for strategic pathways and viewing points that connect people with the river.

ARE1.7 Update the interpretive signage around the river to provide information on of the history, ecology, hydrology and management of the Lower Vasse River.

ARE1.8 Develop online and printed resources with interesting and important information on ecology, water quality, history and management of the Lower Vasse River.

ARE1.9 Establish bird watching areas and hides in appropriate places with informational material.

ARE1.10 Encourage opportunities for citizen science to contribute to understanding and appreciation of the Lower Vasse River.

Strategy ARE1: Public health management

There are many months of the year when algal blooms are not present and some areas do not experience regular summer algal blooms. The current approach of leaving warning signs in place throughout the year contributes to poor public perception of river health, and is not appropriate in terms of actual risk.

Management actions:

ARE2.4 Continue monitoring phytoplankton species and densities to inform public health notifications.

ARE2.5 Review algal bloom warning sign protocol and prepare a communication program to inform the community when harmful algal blooms occur.

ARE2.6 Develop a policy for use of recreational watercrafts in the Lower Vasse River, including consideration of public health constraints.

5.7 Culture and Heritage

Strategy CH1: Recognising Wadandi custodianship

Wadandi people have a strong connection to the Lower Vasse River and have considerable interest in its future management. This strategy will improve involvement of the Wadandi community in decisions and actions on river health and cultural connection.

Management actions:

CH1.6 In partnership with Wadandi people, include reference to traditional custodianship of the waterways and land in development of information resources.

CH1.7 Manage future access in a way that avoids additional disturbance and considers protection of potential sites of significance – however Wadandi activities such as fishing, camping, the gathering of bush foods and family recreational and educational activities, should not be restricted by implementation of this plan.

CH1.8 Seek to improve partnerships with the Wadandi community to increase their involvement in the management, protection and restoration of the Lower Vasse River.

CH1.9 Consult further with Wadandi representatives in regards to specific works which result from this plan.

CH1.10 Support programs that engage the Wadandi community in implementation of works associated with this plan.

Strategy CH2: Preserving historical values

Working towards the vision will improve community perception of the Lower Vasse River as an iconic and historical feature of the Busselton. The history of the river should be preserved in terms of physical structures and records of information.

Management actions:

CH2.3 Identify and ensure appropriate maintenance of sites of historical importance.

CH2.4 Develop interpretive material to increase understanding of local history, and to promote, appreciate and access historical sites.

5.8 Governance

Strategy G1: Collaborative and adaptive management

The City has coordinated the development of this WMP and has overall responsibility for implementation, but partnerships with other stakeholders will be essential to achieve many management actions and assess their outcomes. This strategy provides for a collaborative approach to management and will ensure outcomes of actions and new research inform future decisions. Roles and responsibilities of key stakeholders are defined in Table 4.

Management actions:

G1.2 The City to consider securing management orders over the waterway and adjacent public lands in Lower Vasse River study area, to facilitate implementation of this plan.

G1.5 Establish a Management Advisory Group comprised of representatives from the City, Department of Water and Environmental Regulation, Department of Biodiversity Conservation and Attractions, Water Corporation of WA, GeoCatch, Wadandi representatives, other community representatives.

G1.6 Continue water quality monitoring in the Lower Vasse River.

G1.7 Ensure adequate monitoring and reporting of outcomes from management actions, and feedback results into future management actions.

G1.8 Maintain and develop partnerships with research organisations to improve knowledge and management of the Lower Vasse River.

Strategy G2: Optimising planning tools

There is potential for the City to facilitate improved management through the planning and development framework. This strategy builds on the *Optimising Planning Tools* project, which outlines the potential use of planning tools in water quality protection.

Management actions:

G2.4 Improve clarity of planning approval requirements for changes to land use and new developments in the agricultural sector (eg. horticulture, dairies, feedlots).

G2.5 Assess future development proposals and changes of land-use on adjoining lands with consideration of impacts on the Lower Vasse River.

G2.6 Include 50m wide foreshore reserves as part of future development adjacent to the river.

6 Implementation

6.1 Roles and responsibilities

The lead role of the City in the future management of the Lower Vasse River will be recognised through endorsement and adoption of this WMP. This will task the City with responsibility for coordinating implementation, however key stakeholders will have ongoing roles in many aspects of the WMP. These roles and responsibilities are defined in Table 5.

As captured in action G1.1 a Management Advisory Group is recommended to oversee implementation of this WMP, comprised of representatives from the City, Department of Water and Environmental Regulation, Department of Biodiversity Conservation and Attractions, Water Corporation of WA, GeoCatch, Wadandi representatives and broader community representatives.

6.2 Management areas

In planning for implementation of management actions, it is helpful to define specific management areas of the catchment and river/foreshore, based on the characteristics of the areas and thus the actions that will be applicable. These are described as follows:

River and foreshore areas:

A. From the Butter Factory weir to Strelly Street, with significant areas of public reserve
B. From Strelly Street to Busselton Bypass, with adjacent residential and commercial areas and less prominent reserves
C. From Busselton Bypass to the Vasse Diversion, with adjacent rural properties

Catchment areas:

A. Busselton light industrial area
B. Other residential and commercial areas
C. Rural areas downstream of the Vasse Diversion
D. Rural catchment upstream of the Vasse Diversion

6.3 Implementation process

An adaptive process of action planning, works, evaluation and reporting is recommended for the WMP, summarised by Figure 19. The strategies and actions presented provide the basis for planning actions for a specified period of time, dependent on achievable priority works and research within available budgets. This would be a key role of the Management Advisory Group. Outcomes of these actions are measured through adequate monitoring, with results assessed in terms of progress towards the management objectives and vision. Reporting of outcomes to the community is essential to maintain community support and this forum would provide an opportunity to gain input to the next action planning cycle.



Figure 19. Implementation process for the Lower Vasse River Waterway Management Plan.

Table 4. Roles and responsibilities of key stakeholders for implementation of the Lower Vasse River Waterway Management Plan.

Stakeholder	Roles and Responsibilities
City	Overall implementation of the WMP. Management of reserves. Stormwater infrastructure upgrades and maintenance. Operation of the Vasse Diversion culvert. Operation of the Butter factory Weir boards. Support to community groups.
Department of Water and Environmental Regulation	Monitoring of water quality. Technical contributions to management decisions. Coordination of future investment in waterways management through Revitalising Geographe Waterways.
GeoCatch	Support to private landholders to improve land and waterway management in the catchment. Educational programs to minimise nutrient and sediment loads. Education, habitat restoration, and community group support for protection of Western Ringtail Possums.
Water Corporation	Managing flooding risk. Support to operational decisions for the Vasse Diversion culvert. Sewerage infrastructure development. Rural drainage maintenance, with potential to improve sediment trapping and nutrient assimilation.
Department of Biodiversity, Conservation and Attractions	Implement wildlife management and recovery plans. Community group support for protection of Western Ringtail Possums. Providing information about flora and fauna.
South West Boojarah Working Party	Advocating protection and enhancement of the Vasse River. Providing input to management decisions that affect environmental and cultural values. Engagement and participation of Aboriginal people in management decisions and actions.
Friends of reserves groups	Future role in local-level advocacy and management actions.

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8 Appendices

Appendix 1. List of vascular flora found within the Survey Area of the Lower Vasse River (Ecoedge 2017).

FAMILY	LATIN NAME	COMMON NAME	NATURALISED	PLANTED
Anacardiaceae	*Schinus terebinthifolius*	Pepper Tree	*	
Apiaceae	*Centella asiatica*	Centella		
Apocynaceae	*Vinca major*	Blue Periwinkle	*	
Araceae	*Zantedeschia aethiopica*	Arum Lily	*	
Asteraceae	*Lactuca saligna*	Wild Lettuce	*	
Asteraceae	*Sonchus asper*	Rough Sowthistle	*	
Casuarinaceae	*Allocasuarina fraseriana*	Sheoak		
Cyperaceae	*Carex divisa*	Divided Sedge	*	
Cyperaceae	*Ficinia nodosa*	Knotted Club Rush		
Cyperaceae	*Gahnia trifida*	Coast Saw-sedge		
Cyperaceae	*Lepidosperma gladiatum*	Coast Sword-sedge		
Dennstaedtiaceae	*Pteridium esculentum*	Bracken		
Dilleniaceae	*Hibbertia cuneiformis*	Cutleaf Hibbertia		
Euphorbiaceae	*Euphorbia terracina*	Geraldton Carnation Weed	*	
Fabaceae	*Acacia saligna*	Orange Wattle		
Fabaceae	*Lupinus cosentinii*	Blue Lupin	*	
Fabaceae	*Vicia sativa*	Common Vetch	*	
Fabaceae	*Viminaria juncea*	Swishbush		
Goodeniaceae	*Dampiera alata*	Winged-stem Dampiera		
Haemodoraceae	*Anigozanthos flavidus*	Tall Kangaroo Paw		
Juncaceae	*Juncus kraussii*	Sea Rush		
Juncaceae	*Juncus pallidus*	Pale Rush		
Menyanthaceae	*Liparophyllum lasiospermum*			
Moraceae	*Ficus carica*	Common Fig	*	
Myrtaceae	*Agonis flexuosa*	Peppermint		
Myrtaceae	*Astartea scoparia*	Common Astartea		
Myrtaceae	*Calothamnus quadrifidus*	One-sided Bottlebrush		x

FAMILY	LATIN NAME	COMMON NAME	NATURALISED	PLANTED
Myrtaceae	*Corymbia calophylla*	Marri		
Myrtaceae	*Eucalyptus citriodora*	Lemon-scented Gum	*	x
Myrtaceae	*Eucalyptus rudis*	Flooded Gum		
Myrtaceae	*Kunzea glabrescens*	Spearwood		?
Myrtaceae	*Melaleuca cuticularis*	Saltwater Paperbark		
Myrtaceae	*Melaleuca huegelii*	Chenille Honeymyrtle		x
Myrtaceae	*Melaleuca rhaphiophylla*	Swamp Paperbark		
Myrtaceae	*Melaleuca viminea*	Mohan		
Myrtaceae	*Taxandria parviceps*			
Papaveraceae	*Fumaria muralis*	Wall Fumitory	*	
Poaceae	*Bromus diandrus*	Great Brome	*	
Poaceae	*Cenchrus clandestinus*	Kikuyu Grass	*	
Poaceae	*Cortaderia selloana*	Pampas Grass	*	
Poaceae	*Cynodon dactylon*	Couch	*	
Poaceae	*Ehrharta calycina*	Perennial Veldt Grass	*	
Poaceae	*Ehrharta longiflora*	Annual Veldt Grass	*	
Poaceae	*Holcus lanatus*	Yorkshire Fog	*	
Poaceae	*Phleum pratense*	Timothy	*	
Polygonaceae	*Persicaria hydropiper*	Water Pepper		
Polygonaceae	*Rumex conglomeratus*	Clustered Dock	*	
Proteaceae	*Banksia grandis*	Bull Banksia		
Proteaceae	*Banksia littoralis*	Swamp Banksia		
Salicaceae	*Salix babylonica*	Weeping Willow	*	
Solonaceae	*Solanum linnaeanum*	Apple of Sodom	*	
Typhaceae	*Typha orientalis*	Typha		

Appendix 2. Summary of Water Sensitive Urban Design infrastructure

WSUD infrastructure implemented in the Lower Vasse River Catchment

Description
CBD area
Kent Street streetscaping Kent Street biofiltration bed
Coles Carpark Bio-filtration Gardens
Woolworths carpark – Rain Gardens and soak wells
Queen Street/Prince Street Bio-filtration beds
Busselton Community Resource Centre Rain Gardens
Busselton Community Youth Centre Rain gardens– High and Jolliffe Street Busselton
Queen Street Outfall – Natural wetlands
Busselton LIA
Frederick Street – Artificial ponds and vegetated swales
College Avenue – Constructed wetland
College – Cook connector drain
Bunnings Carpark – detention ponds
Fairlawn road – Vegetated Swale
Strelly Street – Demonstration – Biofiltration swales and rain gardens Urban Drainage Pilot Project - Details on Strelly Street biofiltration swales
Community Garden – Vegetated swales and detention ponds
Bunbury Street/Roe Terrace – Vegetated detention pond and constructed wetland
Roe Terrace – Vegetated Swale
Bunbury/Barlee Street – Bio-filtration basin

Locations of WSUD in Busselton CBD:

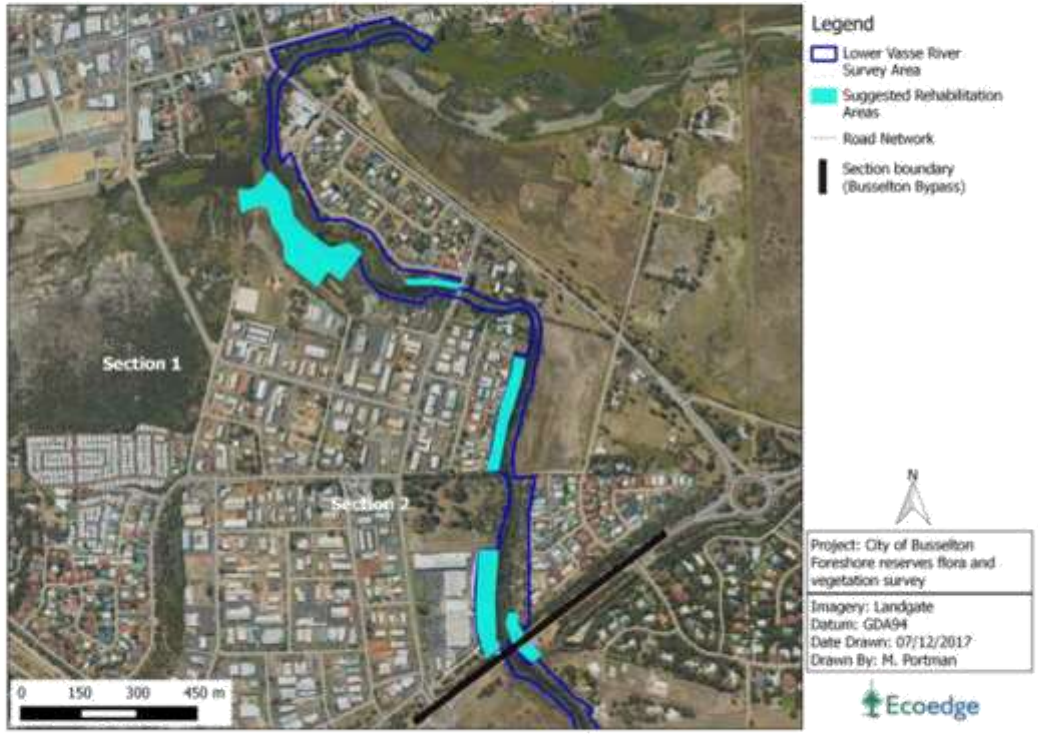


Locations of WSUD in Busselton LIA:



Appendix 3. Recommended revegetation areas for the Lower Vasse River Study area

Recommended rehabilitation areas identified the 2017 vegetation survey (Ecoedge 2017). Note the western foreshore area to the south was revegetated in June 2018.



Appendix 4. Suggested species for revegetation of the Lower Vasse River

Revegetation species list for damp and terrestrial areas (Ecoedge 2017).

Family	Species	Common Name	Habitat	Form
Cyperaceae	*Ficinia nodosa*	Knotted Club Rush	Damp	Rush
Cyperaceae	*Gahnia trifida*	Coast Saw-sedge	Damp	Sedge
Cyperaceae	*Lepidosperma gladiatum*	Coast Sword-sedge	Damp	Sedge
Cyperaceae	*Lepidosperma squamatum*		Dry	Sedge
Dennstaedtiaceae	*Pteridium esculentum*	Bracken	Dry	Herb
Dilleniaceae	*Hibbertia cuneiformis*	Cutleaf Hibbertia	Dry	Shrub
Dilleniaceae	*Hibbertia diamesogenos*		Dry	Shrub
Ericaceae	*Astroloma ciliatum*	Candle Cranberry	Dry	Shrub
Fabaceae	*Acacia saligna*	Orange Wattle	Damp	Shrub
Fabaceae	*Hardenbergia comptoniana*	Native Wisteria	Dry	Climber
Fabaceae	*Jacksonia gracillima*		Dry	Shrub
Fabaceae	*Viminaria juncea*	Swishbush	Damp	Shrub
Goodeniaceae	*Dampiera alata*	Winged-stem Dampiera	Damp	Shrub
Haemodoraceae	*Anigozanthos flavidus*	Tall Kangaroo Paw	Dry	Herb
Hemerocallidaceae	*Agrostocrinum scabrum*	Blue Grass Lily	Dry	Herb
Juncaceae	*Juncus kraussii*	Sea Rush	Damp	Rush
Juncaceae	*Juncus pallidus*	Pale Rush	Damp	Rush
Myrtaceae	*Agonis flexuosa*	Peppermint	Dry	Tree
Myrtaceae	*Astartea scoparia*	Common Astartea	Damp	Shrub
Myrtaceae	*Calothamnus sanguineus*	Silky-leaved Blood flower	Dry	Shrub
Myrtaceae	*Eucalyptus rudis*	Flooded Gum	Damp	Tree
Myrtaceae	*Hypocalymma angustifolium*	White Myrtle	Damp	Shrub
Myrtaceae	*Kunzea glabrescens*	Spearwood	Dry	Shrub
Myrtaceae	*Melaleuca cuticularis*	Saltwater Paperbark	Damp/ Saline	Tree
Poaceae	*Austrostipa flavescens*		Dry	Herb
Proteaceae	*Conospermum caeruleum* ssp. *marginatum*	Blue Brother	Dry	Shrub
Proteaceae	*Xylomelum occidentale*	Woody Pear	Dry	Tree
Santalaceae	*Exocarpos odoratus*	Scented Ballart	Damp	Shrub
Thymelaeaceae	*Pimelea angustifolia*	Narrow-leaved Pimelea	Dry	Shrub

List of emergent and submerged species for restoration of seasonally and permanently inundated areas (littoral zone).

Species	Common Name	Habitat	Form
Centella asiatica	Native celery, Gotu-cola	seasonally emergent	groundcover
Cotula coron			
Melaleuca raphiophylla	Swamp paperbark	seasonally emergent	tree
Eleocharis acuta	Common spike-rush	seasonally-permanent emergent	Rush
Schoenoplectus vallidus		seasonally-permanent emergent	rush
Baumea articulata	Jointed twigrush	seasonally-permanent emergent	rush
Baumea juncea		seasonally emergent	rush
Baumea rubiginosa		seasonally emergent	
Liparophyllum sp		seasonally emergent	broad leaf
Cycnogeton huegelii	Water ribbons	submerged – seasonally emergent aquatic	narrow leaves
Cycnogeton procera	Water ribbons	submerged aquatic	narrow leaves
Potamogeton crispus	Curly pondweed	submerged aquatic	branched macrophyte
Potamogeton ochreatus		submerged aquatic	branched macrophyte
Potamogeton drummondii		submerged aquatic	submerged and floating leaves
Ottelia ovalifoloa	Swamp lily	submerged aquatic	submerged and floating leaves
Stuckenia pectinatus		submerged aquatic	branched macrophyte

Department of Water and Environmental Regulation
Department of Primary Industries and Regional Development

Toby Inlet

Waterway Management Plan

Draft for public comment



Revitalising Geographe Waterways

VASSE taskFORCE

City of Busselton

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Acknowledgement of Nyungar people and country

The Wadandi Nyungar people are acknowledged as the traditional custodians of Toby Inlet and its catchment. Toby Inlet is a significant place of camping, fishing, hunting, and gathering food. Waterways are fundamental to life and wellbeing, and Aboriginal custodians have a spiritual connection that tasks them with the responsibility to look after these important environments.

Executive Summary

Background

Toby Inlet is a small estuary near the town of Dunsborough, Western Australia, about 250 km South of Perth. It is narrow and elongated, extending parallel to the coastline of Geographe Bay for approximately 6 km. Catchment development and hydrological changes have led to water quality and sedimentation problems in Toby Inlet. Remnant vegetation in adjacent areas is threatened by weed invasion, disturbance and illegal clearing. Despite these problems, Toby Inlet, and associated wetlands and remnant fringing vegetation retain natural values, which contribute to the amenity of the area and enjoyment by the local community.

This Waterway Management Plan (WMP) was initiated though the Revitalising Geographe Waterways program, in response to community concerns about water quality issues in key water assets in the Geographe Bay Catchment. The community have long been involved in management of Toby Inlet and its catchment, largely through the efforts of the Toby Inlet Catchment (TIC) Group to undertake research, management planning and on-ground works throughout the catchment. However there is a need for greater clarity in management roles and for a lead organisation to support community initiatives.

The WMP was developed using a collaborative approach that has allowed for extensive consultation to inform future management of Toby Inlet that aligns with community priorities, is well-understood and accepted, and has commitment to implementation by stakeholders.

Purpose and scope

The City of Busselton (the City) has developed this WMP to provide future management actions that will work towards realising the vision for Toby Inlet:

> *A healthy waterway and fringing vegetation that is actively managed, protected, valued and enjoyed by the community".*

The study area for the WMP includes the main waters of Toby Inlet, adjacent public reserves and wetland areas upstream to Quindalup Siding Road. The WMP includes a description of the characteristics and management issues for Toby Inlet, and provides objectives for future management. Through a review of available management options and consideration of stakeholder input, a comprehensive series of management strategies, each with specific actions, has been developed to guide works that will contribute to the objectives and overall vision for Toby Inlet.

Management focus areas

Management issues for Toby Inlet have been grouped into nine focus areas, with sixteen associated management objectives. These are summarised here in order of importance as rated during community consultation. The strategies and associated actions are provided in the table below, with the expected outcomes for each focus area. Owing to the interconnected nature of the system, many management strategies contribute to more than one objective.

1. Sedimentation

Extensive sediment deposition is evident in much of Toby Inlet, with deposits in the upper reach seasonally exposed during low water levels. This is a high priority management issue, which results in poor amenity associated loss of open water vistas and unpleasant odours during low water levels. Sediment deposition also interferes with water flow, fish movement and recreational use.

Objectives:

- Reduce catchment sediments and contaminants from existing and new developments entering Toby Inlet.
- Manage existing sediment to improve water quality, water flow and amenity of Toby Inlet.

2. Amenity

The issue of amenity in Toby Inlet is directly related to sedimentation, water quality and ecology. Amenity is also linked to recreation and access, which provide opportunities to enjoy Toby Inlet.

Objective:

- Improve visual amenity, public health and odours so that residents and visitors alike can enjoy Toby Inlet.

3. Water flow

Water flow within Toby Inlet has been significantly altered through drainage and diversion since European settlement. Reduced catchment flows are considered to have two main consequences: reduced winter flushing, contributing to poor water quality and sedimentation; and less frequent connection to the ocean, reducing summer flushing and increasing winter flood risk.

Objective:

- Optimise all water flow in Toby Inlet to balance improvement of water quality, protection of ecological values and public amenity, while maintaining flood protection.

4. Water quality

Water quality in Toby Inlet, associated wetlands and catchment tributaries has declined due to increased loads of sediments and nutrients, and poor flushing. Elevated nutrient levels typically cause increased growth of algae, including microscopic algae (phytoplankton) and filamentous algae (macroalgae), which impact amenity and can pose a public health risk. Macroalgal blooms in particular have been problematic. They are unsightly and can cover large areas of water, restricting access, and support breeding of nuisance midges. Decomposition of the algae reduces oxygen levels in the water and contributes to accumulation of sulfidic organic sediments.

Objectives:

- Reduce and manage nutrients and other pollutants entering Toby Inlet to improve water quality and lessen the frequency and severity of algal blooms.
- Minimise any additional nutrients entering Toby Inlet from new developments and agricultural intensification.

5. Toby Inlet Ocean Exchange

The status of Toby Inlet's connection to the ocean directly affects water quality and water levels. When the sand bar at the mouth of the inlet is closed during summer, water quality is poor and conducive to algal growth. When the sand bar is open, tidal flushing dilutes the nutrient

concentrations and reduces residence time, limiting algal growth. When the sand bar is closed during winter, water levels in Toby Inlet can become high enough to cause localised flooding problems. Declining water quality has likely increased the demand for the Inlet to be opened, and this will be an important ongoing component of managing Toby Inlet.

Objective:

- Actively manage the Toby Inlet mouth to maximise ecology, water quality and recreational values.

6. Ecology

Toby Inlet and associated wetland area retains many important ecological attributes, which contribute to regional biodiversity and are valued highly by the local community. Remnant vegetation in the study area has natural value, provides important habitat and supports ecological functions. Key threats to vegetation are weed invasion, unauthorised clearing within public reserves and unmanaged access. The aquatic habitats of these systems are closely linked to the fringing vegetation and support diverse populations of aquatic fauna and waterbirds.

Objectives:

- Restore, maintain and protect the ecological values of Toby Inlet.
- Reduce the impacts of threatening processes on the ecological values of Toby Inlet.

7. Recreation and Education

Toby Inlet provides significant recreational opportunities, including fishing, swimming, paddling, birdwatching, exercising and passive enjoyment; and also opportunities for people to learn about the ecology and history of the area. Poor water quality and sedimentation issues restrict access for recreation within the water, and poor visual amenity and odours affect other activities. Unmanaged access has degraded fringing vegetation and caused some bank erosion. There is significant potential for improving recreational and educational opportunities in and around Toby Inlet.

Objectives:

- Improve and manage public access for recreational purposes that support the amenity and ecological values of Toby Inlet.
- Facilitate appropriate water based recreational activities with consideration to the ecological values and water quality of Toby Inlet.
- Raise community awareness of Toby Inlet's recreational, cultural and ecological values.

8. Heritage

Toby Inlet holds significant cultural value for the Wadandi people due to the abundance of resources and the natural protection from weather conditions. The area has been important for hunting and camping for many years both pre- and post-settlement. Aboriginal people are well aware of the decline in health of the inlet and the relationship to drainage changes and land development. A key issue raised by Aboriginal representatives was minimising additional access and infrastructure for recreation, while retaining access for Aboriginal people.

The area around Toby Inlet was an important part of early European colonisation. Quindalup was the primary settlement established in 1866, with a school, supporting local timber export. There is also a history connected to whaling.

Objective:

- Understand, protect and preserve the heritage values of Toby Inlet.

9. Governance

An independent review of waterway management highlighted the need for Toby Inlet to have a designated manager, and for greater clarity of management roles for various organisations. The Toby Inlet Catchment Group has been instrumental in past management, but implementation of an existing management plan has been limited by a lack of funding and support from relevant organisations.

The review also recommended that research and monitoring need to be a component of future management. This would facilitate ongoing assessment and reporting of progress and allow for adaptive management based on outcomes and new knowledge.

Objectives:

- Develop and maintain partnerships and a collaborative approach between stakeholders and the community when managing Toby Inlet.
- Involve the community in the future management of Toby Inlet.
- Adopt evidence based decision making in the long term management of Toby Inlet.

Implementation

The lead role of the City in the future management of Toby Inlet will be recognised through endorsement and adoption of this Waterway Management Plan. Other key stakeholders will continue to have important roles in many aspects of implementation, and there is an ongoing need for community reporting and feedback. A framework for implementation is provided that defines roles and responsibilities for management and an adaptive cycle for management.

Implementation process for the Toby Inlet Waterway Management Plan:



Management Strategies and Actions for Toby Inlet and expected outcomes for each focus area

Focus areas: Water Quality (WQ); Toby Inlet Ocean Exchange (TIOE); Ecology (E); Water Flow (WF); Sediments (S); Amenity; Recreation and Education (ARE); Culture and Heritage (CH); Governance (G).

Management Strategy	Management Actions	Expected outcomes (related focus area)
Optimal management of Toby Inlet ocean exchange	• Maintain Toby Inlet ocean outlet, the Station Gully culvert and the Station Gully outlet in accordance with the Operational Procedures (Appendix 2). • Monitor the status of the outlet through a telemetered system to determine when opening of the sand bar is necessary. • Ensure the culvert between Station Gully and Toby Inlet remains open to improve water quality in the upper reach of Toby Inlet, east of the ocean outlet.	Sand bar management (TIOE) Defined management (G) Reduced algal growth (WQ, A) Less sediment exposure (S, A) Improved amenity (A, RE) Enhanced fish movement (E, RE) Optimising Water flow (WF)
Investigate sediment removal	• Define priority areas for sediment management and determine sediment composition and volume for these areas, building on previous sediment investigations. • Assess potential outcomes and impacts of sediment removal from priority areas and undertake a cost/benefit analysis of strategic sediment removal.	Evidence-based decision-making (G) Less sediment exposure (S, A) Improved amenity (A, RE)
Enhancing sediment movement through Toby Inlet	• Further assess potential for increased catchment flows to mobilise and flush out sediment deposits in Toby Inlet. • Assess whether sediment agitation would facilitate mobilisation and flushing of sediment deposits on Toby Inlet.	Evidence-based decision-making (G) Manage existing sediment (S) Optimising Water flow (WF)
Prevent further sedimentation	• Improve understanding of sediment sources and transport through water quality monitoring. • Develop an education approach to reducing sediments inputs from the catchment. • Identify and ensure management of potential erosion problems from new developments and changes in land use during the planning process, through implementing the Better Urban Water Management framework. • Investigate key sediment sources in the catchment and potential for works to stabilise drains and increase sediment trapping within the drainage network.	Reduce catchment sediments (WQ, S) Minimise development impacts (S, G) Evidence-based decision-making (G)
Rehabilitate exposed sediment deposits	• Identify areas of exposed sediments that could be revegetated to improve habitat and amenity and stabilise sediments. • Undertake trial revegetation of samphire in exposed sediment.	Creation of new habitat (E) Covering unsightly sediment deposits (S, A)
Reducing nutrient sources from the catchment	• Completion of scheduled infill sewerage works in residential areas adjacent to Toby Inlet. • Review the sewerage works once completed, and address any lack of connection to sewerage infrastructure through education campaigns or incentives if deemed necessary.	Reduce inputs of nutrients and other pollutants (WQ) Reduce catchment sediments (S) Reduced algal growth (WQ, A)

	• Ensure Geographe Bay catchment management initiatives extend to the Catchment of Toby Inlet, including: implementation of best management practices; and community education to reduce inputs from gardening and livestock activities in urban and special rural areas. • Increase potential for nutrient assimilation in the rural drainage network in conjunction with sediment trapping and through restoration. • Identify opportunities for reducing nutrient, sediment and pollutant sources through upgrades to stormwater infrastructure. • Continue current water quality monitoring within Toby Inlet, and extend routine monitoring to include associated wetlands and catchment tributaries, to ensure information requirements for prioritising and reviewing management initiatives are met. • Support educational campaigns that aim to reduce nutrients in runoff through individual and community actions (eg. Bay OK) and investigate options to improve nutrient management in public open space. • Minimise future nutrient sources from new development and land use change at the planning stage through implementing the *Better Urban Water Management* framework. • Support implementation of the Vasse Wonnerup wetlands Geographe Bay Water Quality Improvement Plan.	Minimise development impacts (WQ, G) Evidence-based decision-making (G)
Effectively manage foreshore reserves	• Prepare and implement a prioritised works program for weed control and revegetation. • Support community efforts in weed control and revegetation. • Ensure revegetation in high amenity areas is appealing and maintains vistas to increase community support for these activities. • Effectively manage recreational access to protect and enhance the key values of reserve areas. • Create awareness of reserve boundaries through bollards and signage where appropriate. • Develop information resources for landholders to raise awareness of reserve boundaries, the importance of fringing vegetation, weed problems and the restrictions on clearing native vegetation and building jetty structures. • Assess foreshore reserve areas that have no public access and develop appropriate management actions to benefit the broader public. • Develop a policy for jetties that ensures structural integrity and protection of adjacent foreshore areas and prevents establishment of new structures.	Conservation of vegetated habitat (E) Reduce threatening processes (E) Improved amenity (A) Managing access (RE) Maintaining fringing vegetation buffer (WQ) Preventing bank erosion (S)
Understanding fauna	• Support further research on aquatic and terrestrial fauna and bird populations to inform management initiatives and assess outcomes. • Pursue a community science approach to collecting bird data. • Develop information resources to increase community interest and understanding of fauna.	Awareness and understanding of ecological values (RE) Community involvement in management (G) Evidence-based decision-making (G)

Improving facilities for community appreciation	• Seek community input on the *Access Management Plan* for Toby Inlet (SW Environmental 2018), and subsequently develop and implement appropriate access-ways and recreational infrastructure. • Determine requirements for additional parking in support of improved facilities. • Enhance bird habitat in connection with existing and potential bird watching sites. • Encourage bird watchers to join a community science approach to collecting bird data. • Support schools in using Toby Inlet as an outdoor learning environment, including provision of information resources and consideration of an outdoor classroom.	Improved public access and amenity (RE) Support for appropriate activities (RE) Awareness and understanding of ecological values (RE) Community involvement in management (G)
Providing informative resources	• Develop appropriate signage in connection with improved access and facilities to inform the community about: ecological values of Toby Inlet; location and use of access and facilities; cultural and historical values; and management initiatives underway. • Prepare and distribute fact sheets and educational material for key management focus areas, relevant to schools, community members and natural resource managers. • Continue to update the Revitalising Geographe Waterways website with information on Toby Inlet and its management.	Awareness of recreational, cultural and ecological values (RE)
Recognising Aboriginal custodianship	• In partnership with local Aboriginal people, include reference to traditional custodianship of the waterways and land in development of information resources. • Manage future access in a way that avoids additional disturbance and considers protection of potential sites of Aboriginal significance – however activities of local Aboriginal people, such as fishing, camping, the gathering of bush foods and family recreational and educational activities, will not be restricted by implementation of this plan. • Seek to improve partnerships with the Nyungar community to increase their involvement in the management, protection and restoration of Toby Inlet and the study area. • Consult further with Aboriginal representatives in regard to specific works which result from this plan. • Support programs that engage the Aboriginal community in implementation of works associated with this plan.	Understanding and protecting heritage values (CH) Community involvement in management (G)
Conserve historical values	• Identify and ensure appropriate maintenance of sites historical importance. • Develop interpretive material to increase understanding of local history, and to promote, appreciate and access historical sites.	Understanding and protecting heritage values (CH)
Defined and collaborative management	• City to consider securing management order over waterways and adjacent public lands in study areas, to facilitate implementation. • Establish a Management Advisory Committee comprised of representatives from the City, Toby Inlet Catchment Group, Department of Water and Environmental Regulation, Water	Collaborative approach to management (G) Community involvement in management (G)

	Corporation, GeoCatch, South West Catchments Council, Wadandi representatives and broader community representatives. • Support the Toby Inlet Catchment Group as active participants in planning, on-ground works, and as a key link to the community. • Facilitate the development of locally-active Friends of Toby Inlet groups to advocate and coordinate on-ground work in reserves and on private property. • Define and resolve issues around vesting of Unallocated Crown Land.	
Evaluate and adapt management actions	• Continue monitoring of water quality in Toby Inlet. • Review monitoring requirements for catchment tributaries and groundwater. • Undertake assessment of macroalgal growth. • Ensure timely reporting of monitoring and research outcomes to the management advisory group. • Review future management actions in light of monitoring and research outcomes.	Evidence-based decision-making (G)

1. Introduction

The City of Busselton (the City) has developed this Waterway Management Plan (WMP) to guide future management actions that will lead to improved water quality and ecological health for the Toby Inlet and associated reserves and wetlands within the study area. The vision for Toby Inlet, developed in partnership with the community and stakeholders, is:

> *A healthy waterway and fringing vegetation that is actively managed, protected, valued and enjoyed by the community".*

1.1 Background to this Waterway Management Plan

Catchment development and hydrological changes have led to water quality and sedimentation issues in Toby Inlet for many years. Nutrient enrichment has resulted in seasonal blooms of filamentous algae (macroalgae), which reduce amenity and recreation values by blocking open waters and causing foul odours when they decompose. Sediment deposition in the Inlet has created shallower conditions which are exposed at low water levels, reducing visual amenity and contributing to odour problems. Phytoplankton blooms and stranding of fish in shallow pools have occasionally resulted in fish deaths in the Inlet.

This WMP is part of Revitalising Geographe Waterways (RGW), a $15 million program developed to improve water quality and ecosystem health in key water assets. Within the RGW program, the City has been identified as the lead agency for progressing improved waterway management within the Lower Vasse River and the Toby Inlet, and was given responsibility to prepare Waterway Management Plans for these systems. The Department of Biodiversity, Conservation and Attractions was given responsibility to develop an Operational Plan for the Vasse-Wonnerup Wetland Systems.

The RGW program is one of five focus areas of the Vasse Geographe Strategy, a State Government initiative to address water quality in the Geographe Bay catchment (Figure 1). The program also includes two projects directly related to the Toby Inlet WMP: the Reconnecting Toby Inlet hydrological modelling project; and the infill sewage project for residential areas adjacent to Toby Inlet.

The Vasse Geographe Strategy was initiated by an independent review of waterways management (Hart 2014), commissioned by the State Government in response to serious community concerns about water quality issues. The Vasse Geographe Strategy is overseen by the Vasse Taskforce, comprising representatives from:

- Department of Water and Environmental Regulation (DWER)
- City (the City)
- Shire of Capel
- Geographe catchment Council (GeoCatch)
- Department of Biodiversity, Conservation and Attractions (DBCA)
- Department of Primary Industries and Regional Development (DPIRD)
- Department of Planning, Land and Heritage (DPLH)

- South West Catchments Council (SWCC)
- Water Corporation (WCorp)
- Busselton Water (BW)

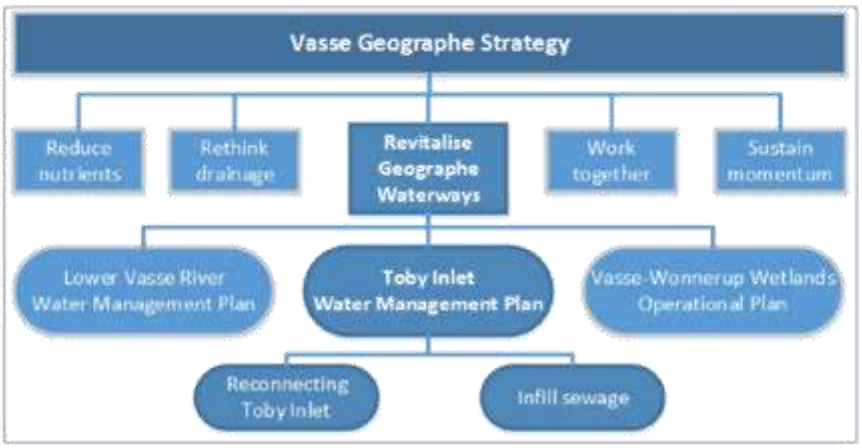


Figure 1. Management framework for the Toby Inlet Waterway Management Plan.

1.2 Study Area Description

Toby Inlet is a small estuary near the town of Dunsborough, Western Australia, about 250 km South of Perth (Figure 2). It is narrow and elongated, extending parallel to the coastline of Geographe Bay for approximately 6 km. It is situated on the Swan Coastal Plain and is connected to seasonal wetland areas upstream. The study area for the WMP is 118 hectares, encompassing Toby Inlet itself, adjacent public reserves, and the wetland area extending upstream approximately 2.7 km from Caves Road to Quindalup Siding Road. Quindalup Siding Road acts as a physical barrier to other wetlands to the east. The study area also includes a short reach of Station Gully Drain between Caves Road and the beach (150 m), which dissects the easternmost section of Toby Inlet (500 m) commonly referred to as the Deadwater. Station Gully Drain is openly connected to the Deadwater, but is only connected to Toby Inlet via a culvert under the access road to the beach.

1.2.1 Landscape and hydrology

Toby Inlet has a catchment area of approximately 33 km^2 including large areas of Swan Coastal Plain, and bounded by the Whicher Scarp to the south. The portion on the coastal plain areas is characterised by deep sandy soils and seasonally inundated flats, which have been subject to extensive clearing and drainage for agriculture. Only around 30% of native vegetation remains in the Toby Inlet catchment, with key remnants occurring in foreshore reserves, on private land adjacent to the wetland areas, and on reserves and private land in the upper catchment.

Artificial drainage, undertaken for much of the Swan Coastal Plain in the early 1900s to improve agricultural value, has changed the hydrology of Toby inlet and its catchment. This included drainage and redirection of flow within wetland areas to the south of Toby Inlet, and diversion of the upper reaches of Station Gully, Annie Brook and Mary Brook into a single drain into Geographe Bay at the eastern end of Toby Inlet (Station Gully Drain). These changes have effectively reduced the original catchment area of the inlet and the volume of water conveyed. The average annual rainfall in the catchment is 651mm (10-year average, BoM 2018), with declining rainfall evident over the last 20 years (Figure 3).

Toby Inlet is intermittently connected to the ocean, either naturally or artificially, at two points: via a channel to the east of Station Gully; and via a culvert to Station Gully, which then flows to the ocean. The connection of Toby Inlet to the ocean is likely to have always been intermittent, but it is thought that reduced flows from the catchment have decreased natural breaching of the sand bar.



Figure 2. Toby Inlet locality and study area, and routine monitoring sites.

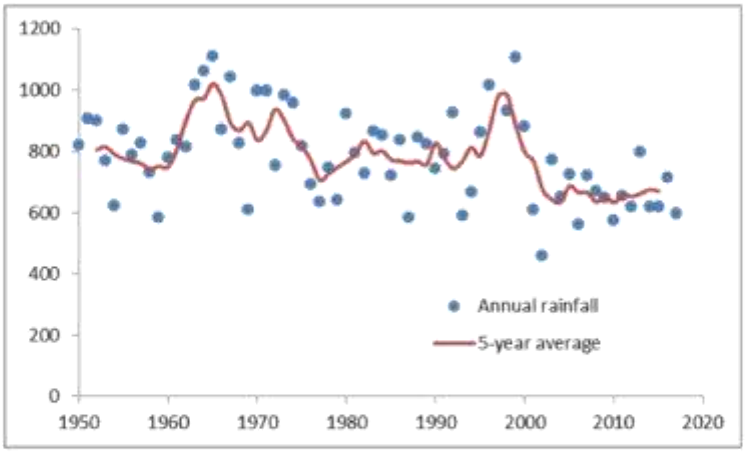


Figure 3. Rainfall records for Cape Naturaliste (BoM 2018). The 5-year average for each year includes two years before and after.

1.2.2 Land use and tenure

From the mouth of the Inlet to 300m upstream of Caves Rd, the study area is entirely within publicly-owned land (Figure 4). Upstream from this point the wetland areas are privately owned, with the exception of a drainage reserve in the central section approximately 800m long and 20m wide (Responsible agency DWER). Public lands include reserves vested in the City, unallocated Crown land (UCL) and road reserves (Appendix 1).

The eastern 1.5km section of Toby Inlet is entirely within public reserve between Caves Road and Geographe Bay, and is managed by the City. West of this, the Inlet is surrounded by residential development. Despite the foreshore being entirely public land, many sections are inaccessible to the public and are managed by adjacent private landholders. Clearing of foreshore vegetation, weed invasion, lawn encroachment and dumping of garden refuse are common problems in these areas. Many residents have established private jetties, which vary in quality and at times debris from these structures floats into the Inlet. Upstream of Caves Road, land use is mainly rural.

Agriculture (50%) and rural residential areas (32%) are the dominant land uses in the catchment. The remaining area consist of existing and future urban development (8%: residential, business and industrial), and reserves and public open space (10%). There is currently considerable urban residential development occurring on coastal plain areas to the south west of Toby Inlet.

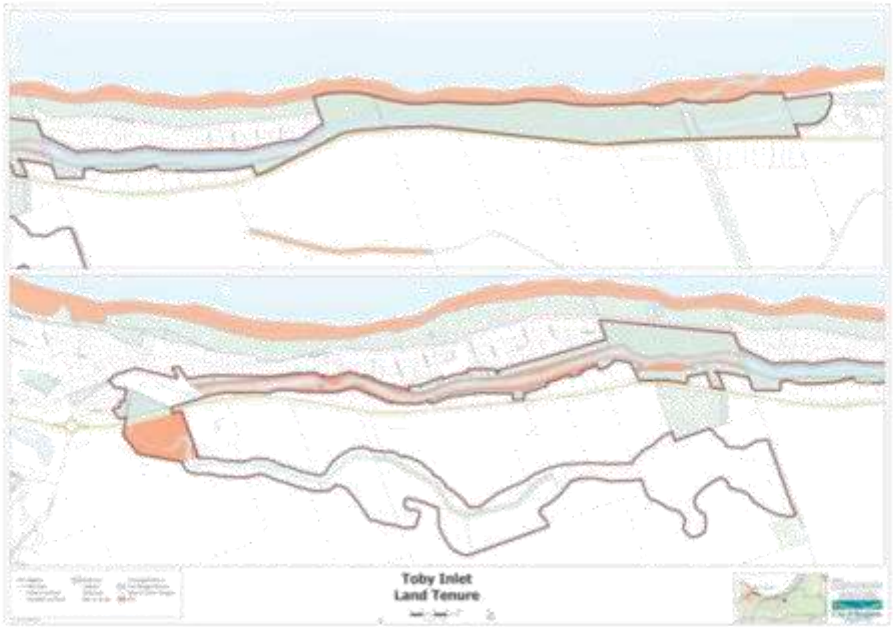


Figure 4. Toby Inlet study area land tenure.

1.2.3 Natural and social values

Toby Inlet study area retains high natural values that are important for conservation purposes, and contribute to the amenity of the area and enjoyment by the local community. The Inlet itself provides habitat for fish, crabs, frogs aquatic macroinvertebrates that support food webs. The surrounding reserves include important areas of intact remnant vegetation, including areas of the Threatened[1] Coastal Saltmarsh ecological community. Foreshore vegetation and open waters support many species of waterbirds. Remnant vegetation throughout the study area provides habitat for other birds and terrestrial fauna including the Critically Endangered[2] Western Ringtail Possum (*Pseudocheirus occidentalis*) and the Priority 4 Quenda[3] (*Isoodon obesulus fusciventer*, also known as the Southern Brown Bandicoot).

Residential areas adjacent to Toby Inlet in Quindalup benefit from its quiet location away from central Dunsborough and the natural amenity of its proximity to the protected waters of Toby inlet and Geographe Bay. The remnant vegetation, water vistas, birdlife and fishing opportunities are enjoyed by the local community and visitors to the area.

[1] *Environmental Protection and Biodiversity Conservation Act* 1999 (Commonwealth) (EPBC Act)
[2] Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2017 (WA); (EPBC Act)
[3] Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2017 (WA)

1.3 History of Management

It is important to acknowledge past and ongoing work of the community-based Toby Inlet Catchment (TIC) Group in advocating and undertaking active management of Toby Inlet, associated wetlands and broader catchment. In 1996-97, the TIC Group initiated surveys on vegetation (Weston 1997), terrestrial fauna (HAS 1997), birds (Clay and Clay 1996), and water quality and aquatic macroinvertebrates (Streamtec 1997). The outcomes of this work highlighted degradation of terrestrial and aquatic habitats in the Inlet and its catchment. Data from these surveys was used to prepare the *Toby Inlet and Associated Wetlands Management Plan* (Comer and Clay 1999) for the TIC Group. TIC Group has also prepared the *Toby Inlet Catchment Management Plan* (Clay 2002) to direct catchment scale works to improve water quality and manage flora and fauna.

The Toby Inlet Steering Committee was formed in 2003, which included community members from TIC Group, Dunsborough Coast and Land Care, Sussex LCDC and the Quindalup Strip Preservation Committee; councillors and an officer from the (then) Shire of Busselton; and officers from GeoCatch and the Water Corporation. The TIC Group prepared the *Management Plan for the Toby Inlet Foreshore and Waters* (Clay 2005), supported by the Steering Committee and adopted by the (then) Shire of Busselton.

The issues, objectives and actions in the 2005 management plan remain relevant. Since the adoption of the 2005 management plan, further work has been done to monitor water quality; determine needs and outcomes of opening the sand bar; understand sediment characteristics in the inlet; and to assess and improve the health of foreshore vegetation.

1.4 Process for developing the Waterway Management Plan

The WMP has been developed using a collaborative approach that has allowed for extensive consultation to work towards future management of Toby Inlet that aligns with community priorities, is well-understood and accepted, and has commitment to implementation by stakeholders. Key stakeholders that have contributed to this WMP are:

- City
- Community members
- Aboriginal people
- Toby Inlet Catchment Group
- Dunsborough Coast and Land Care
- GeoCatch
- Department of Water and Environmental Regulation
- Water Corporation

The process for developing the WMP is shown in Figure 5. The consultation process has contributed directly to identifying and developing the management issues, vision, management objectives, management strategies and actions for the WMP. Activities undertaken for consultation are outlined in the following sections. The consultation process and the overall WMP have been informed by

review of existing information about Toby Inlet and by new information gained through projects undertaken during the planning process. It is important to note the adaptive nature of this WMP. It has been prepared at a point in time, using the information currently available. Implementation will require an ongoing process of monitoring and evaluation to guide future actions.

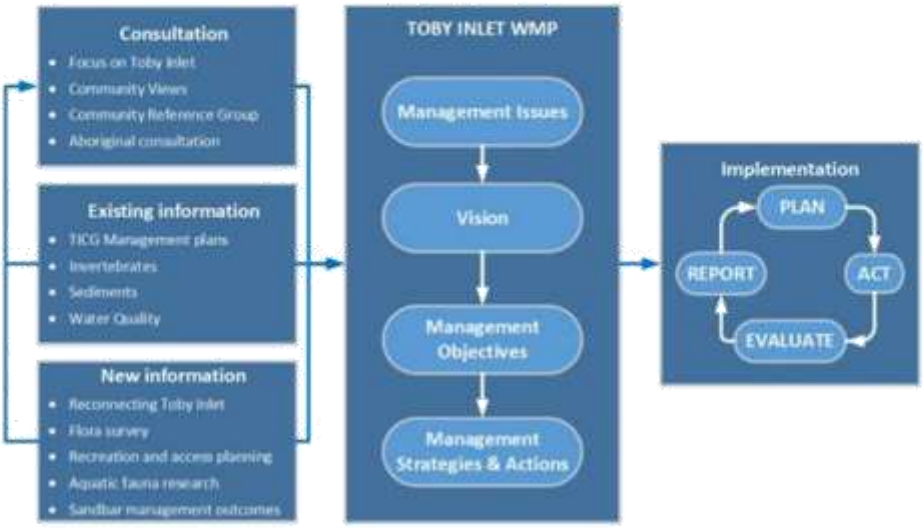


Figure 5. Process for developing the Waterway Management Plan for Toby Inlet.

1.4.1 Community consultation

Consultation with stakeholders was an integral part of preparing this WMP. The aims of consultation were:

- To understand community issues and concerns about Toby Inlet;
- Gain input, ideas, feedback into future management of the Toby Inlet;
- To get support from the community on proposed actions; and
- To raise community awareness and understanding of local water quality issues.

Early consultation events were widely advertised to attract a broad representation from the community. The first of these, *Focus on Toby Inlet* in June 2015, provided information on current understanding of Toby Inlet and sought to identify issues of most importance to the community. The *Community Views* event in March 2016 was also open to whole community and facilitated rating of management issues, valued characteristics and desired change (Figure 6; AHA 2016). These results reflected a high level of importance on issues related to the health of Toby Inlet and associated amenity (82%). Other issues rated as important were recreation and access, heritage, flood and management. The outcomes of this consultation were used to formally identify key management issues, as outlined in Section 2 of the WMP. Information provided by the community and suggested management actions were used to develop draft management objectives, and were considered when reviewing management options.

Following initial consultation, a Community Reference Group (CRG) was formed to provide ongoing input to WMP. This group was formed by inviting participants of earlier events to nominate for ongoing involvement. It also included representation from the Department of Water and Environmental Regulation and GeoCatch, as key supporting partners in development of the WMP. Facilitated workshops with this group were held to develop the vision, management objectives (AHA 2017a, 2017b) and management strategies and actions (AHA 2018) for the WMP.

1.4.2 Aboriginal consultation

Aboriginal people are important stakeholders. In recognition of Aboriginal people as the traditional custodians of country, and understanding the particular significance of waterways to Aboriginal people, additional consultation was undertaken to facilitate input to the WMP.

The draft management objectives were presented to the South West Boojarah (SWB) Working Party via the South West Aboriginal Land and Sea Council (SWALSC) in May 2017. An overview of the Revitalising Geographe Waterways Program was also provided at a Working Party meeting in November 2017.

The Aboriginal Heritage Survey was undertaken with representatives of the Aboriginal community (members of the SWB Working Party and the Harris family, as nominated by SWASLC) in February 2018, encompassing the study areas of all three plans included in the RGW program. The Survey was facilitated by Brad Goode and Associates (2018) and included briefings and a bus tour of key sites of the Toby Inlet study area for discussion of scientific investigations, future management actions and the content of the plan. Information from this consultation has been considered in the development of management objectives and actions in this WMP.

The study area is within the South West Boojarah Indigenous Land Use Agreement Area, which is one of six Indigenous Land Use Agreement areas that form part of the South West Native Title Settlement Area[4]. There is a historical camping ground within the survey area, which has been lodged as an Aboriginal Site under the Aboriginal Heritage Act (1972) and is awaiting an outcome.

[4] Current information on the South West Native Title Settlement: http://www.noongar.org.au

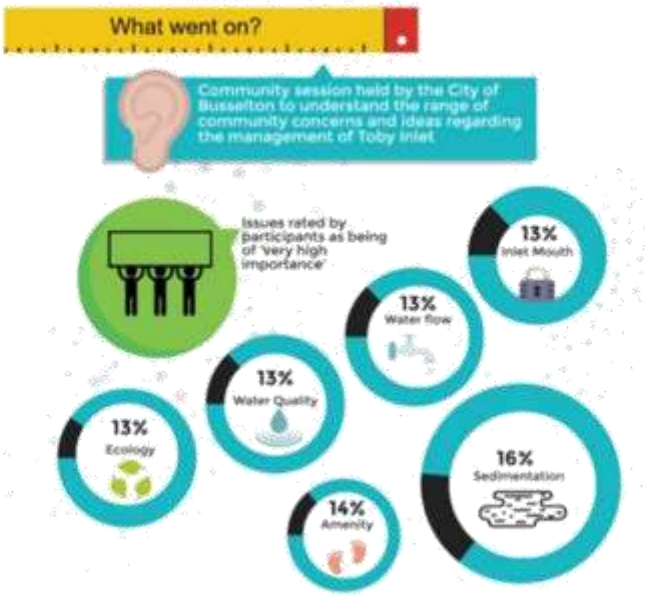


Figure 6. Outcomes from identifying and rating management tissues for Toby Inlet at the *Community Views* consultation session, March 2016.

2 Management Issues

The consultation process lead to the development of nine focus areas for management as follows:

- Sedimentation
- Amenity
- Water flow
- Water quality
- Toby Inlet mouth
- Ecology
- Recreation and education
- Heritage
- Governance

A summary of key management issues and information for these focus areas is provided in this section.

2.1 Sedimentation

Extensive sediment deposition is evident in much of Toby Inlet, with deposits in the upper reach of seasonally exposed during low water levels. Although sediment accretion in estuaries is a natural long-term process, it has been accelerated in Toby Inlet by increased sediment loads from the catchment and by excessive growth of algae in response to nutrient enrichment (discussed further in the section on water quality). Sediments deposits in Toby Inlet broadly comprise two sources: soils from the catchment, transported to and deposited in the Inlet; and accumulation of organic material within the Inlet. There is concern about the build-up of sediment in Toby Inlet for the following reasons:

- Poor amenity due to loss of open water vistas and unpleasant odours of exposed sediment during low water levels.
- Blocking of water flow in the inlet, preventing flushing of nutrients and organic material from the system.
- Reduced depth throughout the Inlet, restricting fish movement and creating potential for fish stranding in shallow pools.
- Smothering of benthic habitats, potentially impacting ecology.
- Reduced depth restricting recreational activities such as use of watercraft.

Areas of deposition downstream of Caves Road are generally sandy to a depth of 0.5m over clay and lateritic rock, and considered to be recent deposition from catchment sources (Norrish 2005, ENV 2007). Sandy deposits are also evident in other parts of the Inlet but these have not been characterised. Aerial photographs of the area show that substantial sediment deposits have been present for more than 20 years (Figure 7). These sediments have been identified as potential acid sulfate soils (ENV 2007, Figure 8) and the implications of this for management are discussed in Section 4.1.

Siltation from catchment sources is associated with clearing and drainage. Clearing of vegetation mobilises soils, and artificial drainage often creates unstable banks and channels, contributing

sediment downstream. Earthworks and drainage for residential development results in exposed soils susceptible to erosion, and can be observed in drains within the Toby Inlet catchment (add photo). Urban development in close proximity to Toby Inlet is often considered a key source of sediment. Diversion of flows may have decreased potential for flushing of sediments through the system to the ocean, exacerbating accumulation of 'sediment slugs'.

In downstream sections of Toby Inlet, accumulation of organic material has contributed significantly to sedimentation. Monosulfidic black ooze (MBO) has been found in the lower reach of Toby Inlet, from a point approximately 700m downstream of Caves Road bridge (ENV 2007, Ward et al. 2009; Figure 8). MBO commonly forms in areas of high primary productivity, where seasonal growth and decomposition of algae results in accumulation of soft organic material with high concentrations of iron monosulfides (Ward et al. 2009). Growth of phytoplankton and filamentous macroalgae in Toby Inlet has been enhanced by increased nutrient loads from the catchment. MBO presents a risk of rapid acidification when disturbed, causing deoxygenation. Analysis of these sediments did indicate high potential for acidification, but also found that acid neutralising capacity (ANC) may be sufficient to buffer this effect (Ward et al. 2009).

"There used to be little streams 25 years ago. They have all been filled in and the birds and vegetation suffers." Community views report 2016



Figure 7. Comparative aerial photographs of sediment deposition in Toby Inlet downstream of Caves Road, from 2018 (left) and 1997 (right).

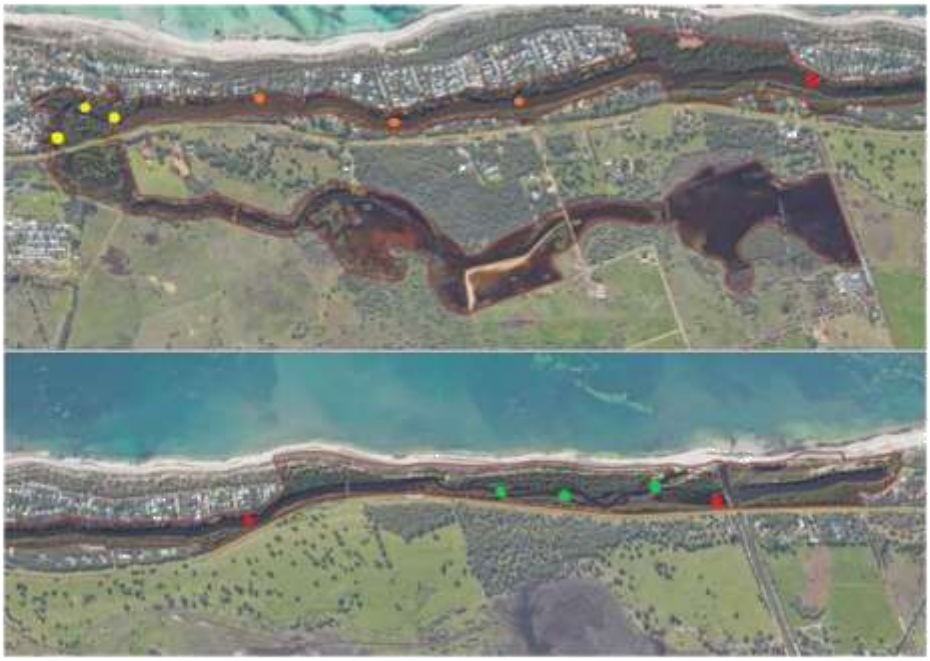


Figure 8. Acid sulphate soil and monosulfidic black ooze (MBO) presence in Toby Inlet sediments. Yellow markers show sand-dominated sediments with potential acid sulfate soils but no MBOs found in 2007 study. Orange sites show MBOs and potential acid sulfate soils in 2007 study. Green sites show no potential acidity or MBOs found in 2009 study. Red sites show MBOs and potential acid sulfate soils in 2009 study.

2.2 Amenity

Amenity describes the attractiveness of a place, and the 'visual' appeal of Toby Inlet was the characteristic most valued by participants in community consultation. Amenity was rated as one of the most important management issues, showing that people are concerned about threats to the amenity of Toby Inlet. The issue of amenity in Toby Inlet is directly related to sedimentation, water quality and ecology. Amenity is also linked to recreation and access, which provide opportunities for the public to enjoy Toby Inlet.

During low water levels, exposure of sediment deposits reduces amenity associated with open water vistas, and can result in unpleasant odours. The loss of amenity is a key reason that sedimentation in Toby Inlet has been identified as the highest-rating management issue.

In relation to water quality, seasonal macroalgal blooms are common in some parts of the inlet due to high nutrient concentration and still conditions. These masses of filamentous algae are unsightly, and cause unpleasant odours when they decompose. The algae also provide good habitat for non-biting midge larvae which may contribute to nuisance populations. As noted in Section 2.1, this material also accumulates in the Inlet and contributes to sedimentation problems.

Phytoplankton blooms occur occasionally in Toby Inlet, but have not been persistent and are usually dominated by harmless species. Isolated blooms of blue-green algae, which create a public health

risk, occurred in May 2013 and February 2018, but did not persist. Further decline in water quality has potential to increase algal blooms in Toby Inlet, impacting amenity and recreation.

Quindalup Special Character Area

The Quindalup Special Character Area (SCA) Policy was developed by the (then) Shire of Busselton in 1996 to guide urban development in a way that maintains the natural amenity of the area. The Toby Inlet study area is located within this policy area. The character of the area is described as *a relaxed holiday atmosphere, this is attributable to its low density of housing which is contained within a bush and seaside setting, surrounded by natural environs.* The policy provisions apply to all public and private land within the SCA. The Quindalup SCA Policy notes the extensive remnant vegetation on private and public land in the area as a significant characteristic, and outlines development controls to protect native vegetation.

2.3 Water flow

Water flow within Toby Inlet has been significantly altered through drainage and diversion since European settlement. Notably, the catchments of Carbunup River, Station Gully (aside from interchange at the culvert) and a number of other smaller waterways have been diverted and no longer connects to the Inlet or contribute to its flow. Prior to this, Toby Inlet was connected to the Deadwater and outflow to the ocean was via the current Station Gully outlet (anecdotal). There is also a perception by some community members that construction of dams in the catchment has contributed to reduced flow (including the Dunsborough Lakes development).

Reduced catchment flows are considered to have two main consequences: reduced winter flushing, contributing to poor water quality and sedimentation; and less frequent connection to the ocean. The issue of reduced ocean connectivity is discussed further in Section 2.5.

There is community support for increasing water flows from catchment sources with the aim of mobilising sediment deposits within the Inlet. Altering water inflows may improve water quality through:

- Increasing summer/autumn flow to reduce water residence time and so reduce potential for algal growth.
- Diluting nutrient concentrations by adding lower nutrient-content inflows.
- Increasing winter velocity to scour sediments.

Potential for reconnecting catchment flows to Toby Inlet has been investigated through the *Reconnecting Toby Inlet* hydrological modelling project (Frazer and Hall 2018), and this management option is discussed further in Section 4.3.

2.4 Water Quality

2.4.1 Surface Water

Water quality in Toby Inlet and its tributaries has declined due to increased loads of sediments and nutrients, and poor flushing. Sources of excess nutrients include runoff from agricultural and residential areas, and leachate from septic systems in nearby residential areas (DoW 2010). Elevated nutrient levels typically cause increased growth of algae, including microscopic algae (phytoplankton) and filamentous algae (macroalgae), which impact amenity and can pose a public health risk.

Nitrogen levels in the Toby Inlet are consistently higher than ecosystem protection guidelines for estuaries, particularly in spring and summer (Figure 9a). Concentrations tend to be higher in upstream sites, and are lowest near the ocean entrance in summer and autumn. This may reflect opening of the sand bar in summer autumn period and a limited flushing effect upstream.

Phosphorus concentrations in Toby Inlet are highly variable and while average values are below the ecosystem protection guideline, samples frequently exceed this throughout the Inlet (Figure 9b). Extremely high total phosphorus occurs during summer at the more upstream sites, while concentrations near the ocean outlet are low. This may reflect ocean flushing, but may be due to uptake of phosphorus by filamentous macroalgae.

While nutrient concentrations appeared higher in the most upstream site, phytoplankton growth is greater lower in the Inlet (indicated by chlorophyll a, Figure 9c). Many types of phytoplankton are harmless, but at high densities can have unpleasant odours and form unsightly scums. Some species are toxic to humans and animals, including fish. Phytoplankton sampling by DWER since 2012 shows that the levels in Toby Inlet are mostly below the recreational guideline of 20,000 cells/mL (Figure 9e). However, harmful algal species have been found frequently at low densities. Blooms of blue-green algae have been detected twice since 2012.

Macroalgal blooms are currently more problematic than phytoplankton in Toby Inlet (Figure 10). They are not toxic but are unsightly and can cover large areas of water, restricting access and impacting visual amenity. Macroalgae also provides ideal habitat for breeding of nuisance midges. When large blooms of macroalgae decompose, this reduces oxygen levels in the water and sediments. Accumulation of this material has contributed to the formation of sulfidic sediments, including MBO. Although excessive growth of macroalgae is a serious management concern, no assessment or monitoring of species or biomass has been undertaken.

Fish deaths have occurred in Toby Inlet in late September 2006 (limited information available) and on 6 March 2014 (about 1000 fish). The 2014 incident was a result of stranding of fish associated with extremely low tides draining the lower sections of the Inlet. Fish deaths can be caused by low oxygen conditions, harmful phytoplankton or by stranding in warm shallow waters. Low oxygen levels have been associated with phytoplankton blooms in Toby Inlet, and fish have been observed congregating near the closed mouth of the Inlet when oxygen is low.

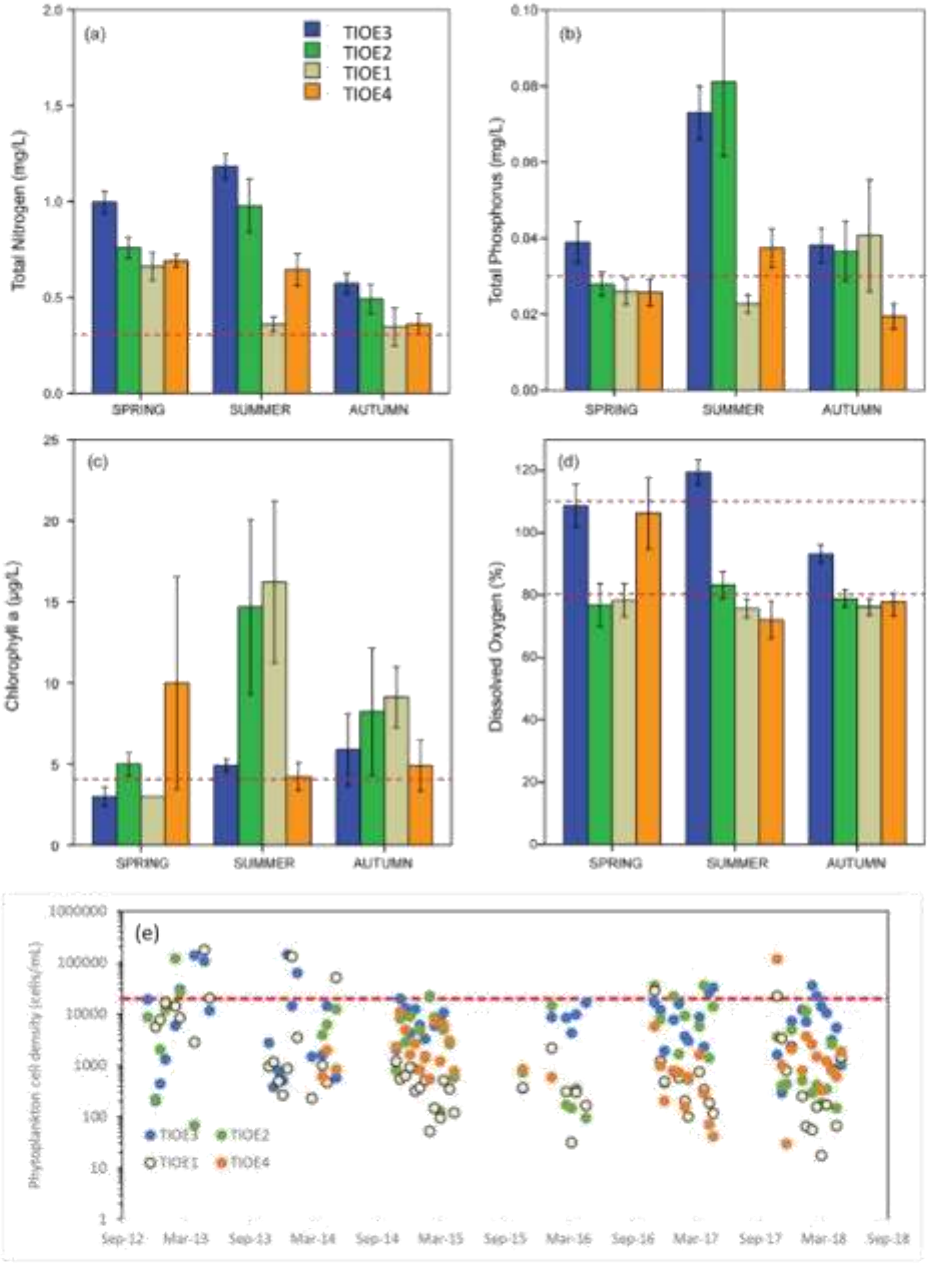


Figure 9. Average concentrations of water quality indicators (a-d) and phytoplankton density (e) in Toby Inlet (data courtesy DWER (DWER 2018). Sites TIOE3, 2 and 1 are located east to west respectively from Quindalup Siding Road to the ocean exchange and TIOE4 is just near the culvert exchange with Station Gully, as shown in Figure 1. Red dashed lines are guideline values for protection of estuarine ecosystems (a-d) and recreational use (e) (ANZECC and ARMCANZ 2000). Note logarithmic scale in (e). Error bars are +/- standard error.



Figure 10. Macroalgae growing in Toby Inlet (DoW 2010).

2.4.2 Groundwater

On the coastal plain, groundwater and surface water are closely related. Summer water levels in wetlands are often expressions of the superficial aquifer. Groundwater quality around Toby Inlet and in catchment areas is not well understood. Though there are numerous monitoring bores in the catchment, sampling has been inconsistent and there has been no analysis of data. This was not raised as an issue during community consultation, but could have implications for future management.

There have been concerns raise by community members in the past (late 1990s) and very recently about salt water intrusion in groundwater in the Dunsborough foreshore area generally, as a possible cause for the declining health of Peppermint trees. Dunsborough Coast and Land Care (DCALC) initiated a groundwater study for Dunsborough foreshore and Toby Inlet in partnership with the (then) Water and Rivers Commission. Fourteen monitoring bores were installed for assessment of salinity, nutrients and pH. However, results of the sampling program are not publicly available.

2.5 Toby Inlet ocean exchange

The common understanding among the community is that reduced water flow from the catchment has reduced the natural opening of Toby Inlet to Geographe Bay. The status of the sand bar has direct influence on water quality and water levels. When the sand bar is closed during summer, water quality is poor and conducive to algal growth. When the sand bar is open, tidal flushing dilutes the nutrient concentrations and reduces the residence time, limiting algal growth. When the sand bar is closed during winter, water levels in Toby Inlet can become high enough to cause localised flooding problems for nearby residential properties.

A memorandum of understanding for artificial opening of the sand bar was signed by key management bodies in June 2000, including the (then) Shire of Busselton, (then) Water and Rivers Commission, GeoCatch and Water Corporation. This specified that the preferred management for

Toby Inlet and Station Gully was as a common ocean outlet. The purpose of opening the sand bar was to prevent flooding of nearby properties and to increase tidal flushing to improve water quality. Managing a single ocean outlet became difficult owing to extensive sand build-up. In early 2005, the (then) Department of Environment trialled excavation of a separate ocean outlet for Toby Inlet with the aim of improving water quality in the Inlet through tidal flushing.

Although water quality is generally improved by ocean exchange, problems have occurred with excessively low water levels during low tides. Very low water levels impede recreational boating activities and lead to greater exposure of sediment deposits, reducing visual amenity and causing poor odours. There is also anecdotal evidence of fish stranding in upstream areas at very low tides.

Declining water quality has likely increased the demand for the Inlet to be opened, and this will be an important ongoing component of managing Toby Inlet.

2.6 Ecology

Toby Inlet and associated wetland area retains many important ecological attributes, which contribute to regional biodiversity and are valued highly by the local community. The vegetation communities within and surrounding Toby Inlet and associated wetlands have intrinsic conservation value and provide important habitats for terrestrial and ecological functions. The aquatic habitats of these systems are closely linked to the fringing vegetation and support diverse populations of aquatic fauna and waterbirds.

The ecology of Toby Inlet provides amenity value and supports recreational activities such as fishing, watercraft use, bird-watching and exercise pastimes. A summary of the ecological components of the Toby Inlet study area and associated management issues is provided below.

2.6.1 Vegetation

The foreshore of Toby Inlet contains large areas of intact vegetation, owing to preservations within reserves, most of which are managed by the City. The management of vegetation and conflicting landscaping and gardens of adjoining properties is a key issue.

A recent survey of flora and vegetation was completed for the City by Ecoedge (2017). The study area contains at least fifty native species within seven different vegetation communities (0), including two vegetation units that fit criteria for the Coastal Saltmarsh threatened ecological community[5]. Weston (1997) described three broad types of vegetation communities: fringing wetland and estuarine, coastal scrub, and forests and woodlands.

There are at least fifty species of weeds present in the study area, and 14 of these are considered environmentally significant (0The most significant of these is Arum lily (*Zantedeschia aethiopica*), which currently occurs as localised infestations at many sites (Ecoedge 2017). Bridal creeper and grassy weeds are also problematic. Grassy weeds continue to invade native vegetation, and there is progressive encroachment of lawns into reserve areas in some locations. There are number of potentially invasive garden escapees that pose a threat in the study area. Dumping of garden refuse

[5] EPBC Act 1999

and direct planting of exotic species within reserves, as well as spreading from private gardens, contribute to this problem.

Other key threats to vegetation are unauthorised clearing within public reserves and unmanaged access.

Despite the presence of a range of environmental weeds, the foreshore vegetation is considered generally in fair to good condition. Forty percent of vegetation is rated as very good to excellent condition. The study area is also in high proximity to a Regional Ecological Linkage. In addition to the conservation value of the flora itself, fringing vegetation of wetland areas is a vital component of wetland health. Functions include:

- supporting terrestrial and aquatic food webs;
- habitat for terrestrial and aquatic fauna;
- foreshore stabilisation;
- maintaining cooler temperatures
- interception of nutrients and sediments in runoff; and
- nutrient uptake and processing.

Future works to rehabilitate fringing vegetation must be mindful of maintaining suitable amenity to avoid future conflicts with landowners and preventing ongoing encroachment of lawns and gardens into reserve areas.

2.6.2 Birds

Birds are an important part of the Toby Inlet ecosystem and are appreciated by members of the community and by visitors. No formal bird monitoring data is available for the study area, however surveys were conducted during spring in 1996 and results are reported in Clay (2005). This survey recorded 68 bird species including 26 waterbirds and 42 forest birds (0 Given the level of community interest in birds there is an opportunity to engage people in data sharing to better understand bird populations of Toby Inlet.

The surrounding vegetation and open water areas are important habitat for birds. Threats to bird populations include degradation of habitats, predation by domestic and feral animals, and disturbance from human activities.

2.6.3 Aquatic Fauna

Though impacted by modified hydrology, nutrient enrichment and sedimentation, Toby Inlet is considered to provide important fish habitat. Sheltered estuarine systems such as Toby Inlet are important for fish breeding, particularly for estuarine species which require both fresh- and salt-water for different phases of growth and reproduction. Estuaries also tend to be highly productive, supporting aquatic invertebrate communities that provide an important food resource for fish and waterbirds.

Aquatic invertebrates

Aquatic invertebrate sampling of Toby Inlet in 1997 found a combination of estuarine and freshwater species, with more diverse wetland-type communities at upstream sites. Though species diversity was high at some sites, the system was considered dominated by cosmopolitan species characteristic of a degraded system (Streamtec 1997).

Recent sampling downstream of Caves Road in November 2017, prior to opening of the sand bar, also found higher-diversity wetland communities in more upstream regions and lower-diversity estuarine communities downstream (Tweedley et al. 2018). This study found a relatively diverse aquatic invertebrate community, including species that are intolerant of pollution and low oxygen levels, indicating a fairly healthy ecosystem. Other notable fauna observed during the study by Tweedley et al. (2018), were: Southern Bobtail Squid (*Euprymna tasmanica*, Blue Swimmer Crab (*Portunus armatus*) and Western King Prawn (*Penaeus plebejusl*). A list of taxa from both these studies is provided in Appendix 7.

The effect of opening of the sand bar on the invertebrate population, and implications of this in terms of food resources for fish and birds, have not been assessed. The recent sampling provides a useful baseline for future assessments in Toby Inlet.

Fish

Fish in Toby Inlet have long provided a food resource for Aboriginal people, and fishing has been a valued recreational pursuit for many years. There is a general perception that the fish population has declined in Toby Inlet, though it is still perceived as providing important fish habitat.

A recent study of the fish population in Toby Inlet (Tweedley et al. 2018) provides the first formal description of the fish population. For this study, fish were sampled in November 2017 and March 2018, prior to and following the opening of the sand bar (11th December 2017). The type of fish found were typical of those found in other south west estuaries and include estuarine and marine species and some freshwater-estuarine fish. Several marine species known for using estuaries as nursery areas were present. Mosquitofish, which is aggressive to native fish and not able to be controlled, was also recorded.

Following opening of the sand bar in December 2017, fish density remained similar to before opening, but species diversity increased owing to an increase in the number of marine species which recruited into the estuary. However in general, the fish population was more influenced by timing of life cycles than by opening of the sand bar.

2.6.4 Other Fauna

The terrestrial vegetation provides habitat for many species of birds and other fauna, including two mammal species of conservation significance: the Critically Endangered[6] Western Ringtail Possum (Ngwayir, *Pseudocheirus occidentalis*); and the priority 3 listed[7] Quenda (Southern Brown Bandicoot). A site survey and summary of observations by local residents in November 1996 found these two mammals, Grey kangaroos present, two species of frogs, 13 species of reptiles and the possible presence of Water Rat (Rakali, *Hydromys chrysogaster*) (Hart et al. 1997) (Appendix 6.). The

[6] Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2017 (WA); (EPBC Act)
[7] Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2017 (WA)

Brush-tailed Phascogales (*Phascogale tapoatafa*) may also be present, and is listed as a conservation-dependent species[8].

Impacts on vegetated habitat, predation by domestic and feral animals and fire are the main threats to these native mammals. Remnant vegetation is at risk of degradation from physical disturbance, inappropriate fire regimes, weed invasion and physical disturbance.

2.7 Recreation and Education

Toby Inlet provides significant recreational and educational opportunities. Activities such as fishing, swimming and paddling on the Inlet have been important recreational pastimes since early European settlement during the mid to late 1800's. Bird watching and other passive enjoyment activities are also important. Toby Inlet is the focus of a number of tourism accommodation businesses on and around the inlet. The visual amenity and opportunity for recreational pursuits are critical to both visitors and local residents alike. Poor water quality and sedimentation problems restrict access for recreation within the water, and visual amenity and odour problems affect other recreational activities. This affects a broad cross section of the community, visitors and local businesses.

Despite these problems, a number of trails, beaches and open space adjoining the Toby Inlet continue to provide recreational opportunities and these are highly valued by the community. However, unmanaged access has led to disturbance of foreshore vegetation and erosion of banks in some locations. There is significant potential for improving recreational and educational opportunities in and around Toby Inlet, by addressing water quality and sediment problems, improving facilities and providing information resources.

Private use of reserves and private jetties

Considerable areas of foreshore reserves do not have public access and some areas adjacent to private property owners are managed for private purposes. The condition of foreshore vegetation and bank stability in these areas varies from remnant vegetation in good condition to extensive clearing and bank instability. Illegal clearing of native vegetation within public reserves to improve views is an ongoing problem. Private use of public reserves by residents conflicts with access by the broader public; but some residents are concerned that increased public access will create security issues.

These privately used foreshore reserves include a number of private jetties. They have been present in Toby Inlet for many years and in general have not been raised as a key management issue. However there is an issue relating to the structural integrity of these jetties and the materials they are built from. For example a jetty made from plastic drums has come apart and a plastic drum floated in the Inlet. In addition, building of more jetty structures may cause inappropriate disturbance to foreshore areas. The City currently has no policy regarding these structures.

[8] Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2017 (WA)

2.8 Cultural Heritage

2.8.1 Aboriginal heritage

Toby inlet holds significant cultural value for Wadandi people. In pre-European times, local groups traditionally gathered to conduct ceremonies and take advantage of food resources. Following European settlement, the area continued to be used for camping, with evidence of several historical camps still present from times when Aboriginal people were not permitted to live in town (BGA 2018). There is a historical camping ground within the survey area, which has been lodged as an Aboriginal site under the *Aboriginal Heritage Act 1972* and is awaiting an outcome.

On-site discussions with local Aboriginal representatives were held during the preparation of this plan. The group described historical use of Toby Inlet and surrounds by Aboriginal People for camping and fishing and the substantial changes to the area since European settlement (BGA 2018). The group related the decline in water quality and fish abundance to the substantial changes in drainage and development of the surrounding lands. A key issue raised by the group was minimising additional access and infrastructure for recreation, while retaining access for Aboriginal people.

2.8.2 European History

The area around Toby Inlet was an important part of early European colonisation. Quindalup was the primary settlement established in 1866, supporting local timber industry, and is the site of the original school. There is also a history connected to whaling.

This extract about European history is from the Management Plan prepared by Clay (2005):

Toby Inlet was named after Captain Jacob Toby, of the coastal schooner 'Ellen'. The Ellen used to take on water at Meelup, and while in the area Captain Toby would moor close to the mouth of Toby Inlet and barter with the local residents, exchanging knives, tools, sugar and tea for fresh produce (Guinness, 1984; Smith, pers.comm2004). In the 1800's Jack Molloy commenced construction of a boat in the sheltered waters of Toby Inlet near the sand bar. The boat was well into construction when the mouth broke out, and washed away the boat supports. The boat was buried by sand and left at the site. This incident is referred to as 'Molloy's Folly" (Smith, pers. comm.).

The European history of Toby Inlet, is documented by several authors (Guiness, 1984; Kinsella, 1990: Horwitz & Wardell-Johnson, 1996). Anecdotal evidence supports the fact that Toby Inlet used to be considerably deeper than it is today. In the 1920's the channel was deep enough for small boats, and due to the accretion of sediments, this is obviously no longer possible. In 1967 the Inlet was dredged by a very unsophisticated piece of equipment, along the north bank, from a point just west of the Edgewater subdivision to a point some 400 metres east of this sub-division. From this point to the ocean a channel was cut to allow passage for small boats (Ken Davies pers.comm.2004).

In 1994 the Water Authority constructed a bund across the Inlet, at the western end of Campion Way to allow for the maintenance of an existing water main. It is said by the locals that after maintenance had been completed, the bund was not completely removed, thus restricting water flow (Ken Davies pers.comm.2004).

2.9 Governance

Governance was not identified as a priority issue of concern in the community views session, but was indicated as an area needing change. It was recognised as an important focus area during the development of management objectives, and is clearly an important overarching issue for implementation of the WMP.

The independent review of water asset management (Hart 2014) highlighted the need for Toby Inlet to have a designated manager, which was further supported in the State Government response. The review acknowledged the work of the Toby Inlet catchment Group in developing the existing management plan (Clay 2005). However, implementation of this plan has been limited by a lack of funding and support from relevant organisations, and the management roles have not been clear.

The existing management plan is not connected to any targets or monitoring, so progress and outcomes have not been measurable. The community have been dissatisfied with the progress of management for Toby Inlet. Although there has been no formal tracking of progress, there is a general perception in the community that the ecological health of Toby Inlet has continued to decline (Hart 2014).

The review also recommended that identifying research needs should be a component of future management. Annual reporting to the community on the health of Toby Inlet and the effectiveness of management was also recommended, with government support, which will require clear goals/targets and associated monitoring.

Management of Toby Inlet is minimalist at best. The community-based Toby Inlet Catchment Group have developed a Management Plan for Toby Inlet, and could do a serviceable job of managing the Inlet if they had more funding and greater backup from CoB and DoW (Independent Review - Hart 2014).

3 Management Objectives

Sixteen management objectives across the nine the focus areas are listed below. These objectives were strongly guided by community input. They provide important statements for future assessment of the implementation of this WMP.

Sedimentation

1. Reduce catchment sediments and contaminants from existing and new developments entering Toby Inlet.
2. Manage existing sediment to improve water quality, water flow and amenity of Toby Inlet.

Amenity

3. Improve visual amenity, public health and odours so that residents and visitors alike can enjoy Toby Inlet.

Water quality

4. Reduce and manage nutrients and other pollutants entering Toby Inlet to improve water quality and lessen the frequency and severity of algal blooms.
5. Minimise any additional nutrients entering Toby Inlet from new developments and agricultural intensification.

Water flow

6. Optimise all water flow in Toby Inlet to balance improvement of water quality, protection of ecological values and public amenity, while maintaining flood protection.

Toby Inlet ocean exchange

7. Actively manage the Toby Inlet mouth to maximise ecology, water quality and recreational values.

Ecology

8. Restore, maintain and protect the ecological values of Toby Inlet.
9. Reduce the impacts of threatening processes on the ecological values of Toby Inlet.

Recreation and Education

10. Improve and manage public access for recreational purposes that support the amenity and ecological values of Toby Inlet.
11. Facilitate appropriate water based recreational activities with consideration to the ecological values and water quality of Toby Inlet.
12. Raise community awareness of Toby Inlet's recreational, cultural and ecological values.

Cultural Heritage

13. Understand, protect and preserve the heritage values of Toby Inlet.

Governance

14. Develop and maintain partnerships and a collaborative approach between stakeholders and the community when managing Toby Inlet.
15. Involve the community in the future management of Toby Inlet.
16. Adopt evidence based decision making in the long term management of Toby Inlet.

4 Review of Management Options

Development of management strategies for Toby Inlet involved consideration of a range of potential initiatives. Some of these are based on fundamental waterway management approaches, such as minimising nutrient and sediment loads, and enhancing the important function of fringing vegetation. Other initiatives involve further work to better understand potential outcomes and challenges. Many of the strategies and actions build on community suggestions for future management of Toby Inlet.

4.1 Sediment Removal

There is strong community support for active removal of sediments from Toby Inlet. Community input indicates that this is driven by perceptions that sediment removal will lead to outcomes in the following areas:

- Flushing of water through the system to improve water quality.
- Removal of unsightly sediment deposits.
- Addressing unpleasant odours associated with exposed sediments.
- Deepening of the Inlet to improve boating conditions.
- Improved conditions for fish.

Removal (dredging) of sediment could be progressed if it can be justified on ecological grounds, rather than for amenity outcomes only.

4.1.1 Challenges

Previous investigations (ENV Australia 2007) have shown a layer of sandy sediments approximately 0.5m deep in the area of obvious sediment deposits downstream of Caves Road. This area would be a likely focus of sediment removal should it be deemed an appropriate action. This area did not contain MB) but did contain potential acid sulphate soils (PASS). Potential for acidity means sediment removed would require treatment for disposal.

The deeper area downstream was assessed as having a surface layer of MBO in the sediments and also contained PASS (ENV Australia 2007). The presence of MBOs is probably linked to a history of macroalgal blooms in the area. Disturbance of MBOs can cause deoxygenation, heavy metal release, nutrient release, sulphide toxicity and bad odours.

Removal and transport for disposal would involve significant costs, and may also cause physical disturbance to the environment. Further investigations would be needed to prioritise areas for sediment removal; determine volumes and characteristics of the sediment to inform disposal options; and assess potential environmental impacts. Volumes of sediment have been estimated for the large area of deposition downstream of Caves Road as:

- Deepening the channel to -0.4m AHD: 1684m^3
- Removal of large sandy deposit to 0.4m AHD: 714m^3

4.1.2 Potential outcomes of removal

The main objective associated with this approach is improved amenity: removal of sediment deposits would improve water vistas for some local residents; and deepening the Inlet would improve access for watercraft. Outcomes for water quality and ecology and potential impacts of removal are also possible but not well understood, and further investigation is needed to assess potential for both beneficial outcomes and negative impacts.

Removal of sediment in the upper and lower reaches of Toby Inlet was included in hydrological modelling done for the *Reconnecting Toby Inlet* project. This indicated some potential for improvement in water quality through increased water circulation in the estuary: reducing the bathymetry to -0.5mAHD (removing about 300mm of sediment) would create additional regular flushing of about 2%, or 100m (Frazer and Hall 2017).

Deeper conditions may also improve open water habitat for fish and birds, but this is not known. There are risks of negative impacts on the environment, which may in turn have negative effects amenity. Risks associated with sediment removal in Toby Inlet include:

- disturbance of acid sulphate soils and monosulfidic black ooze;
- physical disturbance of bed and bank habitats;
- damage to fringing vegetation.

Before a recommendation can be made with regards to sediment removal, management should focus on defining priority areas for sediment management and understanding the costs and benefits of removal.

4.1.3 Alternatives to removal

Other than removal, some potential management options to address sedimentation in Toby Inlet are:

- Minimising future sediment loads into the system.
- Mobilisation of sediment through agitation to resuspend sand into the water column, using a hydraulic sludge pump during high flows, to facilitate its movement into to the ocean.
- Acceptance of sediment deposits and rehabilitation (eg. planting) of these areas to improve ecology.

4.2 Toby Inlet ocean exchange

Connectivity of Toby Inlet to the ocean has direct effects on water quality and water levels. Potential connections are via a culvert into Station Gully, which is intermittently open to the ocean; and via a direct separate channel to the west of Station Gully. The status of these connections depends on flows coming from the catchment and the nature of the sand bars, determined by coastal processes.

The Toby Inlet Ocean Entrance Study in 1999 (Rogers and Associates 1999) identified a common channel for Station Gully and Toby Inlet as the more desirable option to improve water quality and alleviate flooding, as the combined flows from the systems have greater potential to maintain the

opening. In June 2000, a Memorandum of Understanding (MoU) was developed which specified management of Toby Inlet/Station Gully with a common ocean outlet to ensure:

1. *Protection of residential properties from flooding.*
2. *Maintenance of tidal flushing to maintain water quality in the Inlet.*
3. *Protection of rural properties from flooding.*

This MoU was signed by representatives of the (then) Shire of Busselton, Water Corporation, Toby Inlet Catchment Group, (then) Water and Rivers Commission and the Geographe Catchment Council.

The *Reconnecting Toby Inlet* hydrodynamic modelling study (Frazer and Hall 2018) determined that a separate ocean connection for Toby Inlet resulted in tidal flushing of 72% of the Inlet, compared with only 36% flushing via Station Gully. A key difference for this study was additional bathymetric survey in the area, which showed that the narrow connection between Station Gully and Toby Inlet allowed only very limited exchange between the two waterways. Thus much greater flushing of Toby Inlet is achieved via a separate ocean connection.

This work also determined a minimum sill height for the channel of -0.15 m AHD to avoid excessive draining of the Inlet on low tides. Very low water levels have caused problems with past sand bar openings owing to increased exposure of sediments, and isolation of shallow pools that provide unfavourable conditions for aquatic fauna. Recommendations from this study were:

- The Toby inlet mouth is kept open throughout the year, with a minimum sill elevation of -0.15 m AHD from October to June to avoid very low water levels during low tides.
- Keeping the culvert between Station Gully and Toby Inlet open permanently.
- Potentially, to investigate a second cut for Toby Inlet if increased flushing of the upper estuary is considered necessary.

A telemetered data logging system is in place to monitor water levels and sill height of the ocean connection.

4.2.1 Summer - water quality protection

During 2017-2018 the opening of the mouth of Toby Inlet has been maintained. A draft operational procedure is in place to keep the sandbar open, with a minimum sill elevation of -0.15 m AHD (Appendix 2. The sand bar was opened in November 2017. It stayed open until late March 2018 and was re-opened on 6th April 2018. The feedback from the community on this management initiative has generally been positive.

4.2.2 Winter - flood protection

The *Reconnecting Toby Inlet* project recommends the ocean outlet be kept open all year (Frazer and Hall 2018). However, periodic closing of sand bar through natural processes during winter creates unpredictability in works requirements to achieve this. A trigger level for flood protection purposes would be useful to initiate opening of the sand bar in winter. Detailed water level data (15-minute intervals) from the telemetered monitoring system provides some useful information for setting trigger levels for winter sandbar opening.

Intense storms in May and June 2018 resulted in a high level of sand deposition on the beach and very high water levels in Toby Inlet. Despite large rainfall events, there was insufficient flow to naturally cut through the sand bar. Water levels were in the vicinity of 1.5m (above sea level AHD) from 10th to 14th June, following a series of rainfall events from the 25th May (Figure 11). Photographs of the area during this time show minor flooding in adjacent lands at these water levels (Figure 12). The sand bar was opened on 13th June 2018, lowering water levels to about 0.8m within two days. This opening was effective, and the outlet remained open intermittently for about four weeks. Rising water levels initiated further opening of the sand bar on 24th July when water levels were around 1.1m. In this instance the sand bar closed within two days.

Maintaining the ocean outlet throughout winter may incur excessive costs if it closes frequently. An appropriate trigger level would direct works only when there is a risk of flooding, and coincide with sufficient flows to maintain the opening. Given the flooding observed when water levels were at 1.5m, and the lack of a consistent channel when opened at around 1.1m, an appropriate trigger level would be at a height between these levels.

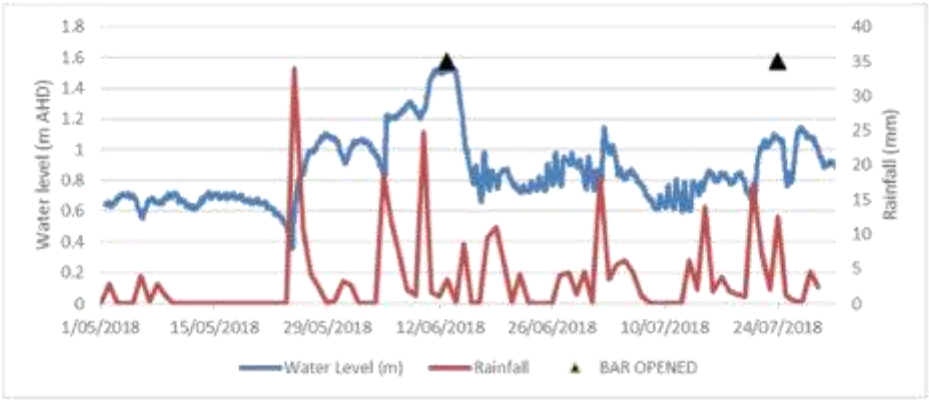


Figure 11. Water levels (blue line) at the Toby Inlet ocean outlet, daily rainfall (red line) and times when sand bar was opened (black markers) during May, June and July 2018. Rainfall data from BoM (2018).





Figure 12. Photos showing minor flooding in the vicinity of Toby Inlet from 11th - 13th June 2018.

4.3 Reconnecting catchment flows

Water flow within Toby Inlet has been significantly altered since European settlement. Notably, the Carbunup River and a number of other smaller waterways have been diverted and no longer connects to the Inlet or contribute to its flow. These changes have resulted in a significant decline in flows and influence the accumulation of nutrients and sediments in the system. The *Reconnecting Toby Inlet* hydrodynamic modelling study investigated options to reinstate flow through Toby Inlet through reconnection of catchment tributaries (Frazer and Hall 2018).

Increasing water flow may improve water quality through dilution of nutrients and by reducing water residence time (flushing). Nutrient concentrations in Station Gully, with a predominately agricultural catchment, are higher than in Toby Inlet, so additional flow from this source may have a negative effect on water quality through increased nutrient loads (Frazer and Hall 2018). Flushing of the estuary has minimal effect on water quality during winter, but is needed during summer when water quality problems occur. However, owing to seasonal flows, there is little potential for catchment flows to provide summer flushing, do the reconnection of catchment sources would not provide this benefit (Frazer and Hall, 2018). There is insufficient water available from other sources, such as Dunsborough lakes dams, to provide summer and autumn flows.

Increasing catchment inflows is also perceived as an option for addressing sedimentation problems. Although the volume of flow through Toby Inlet would be increased by additional catchment water flows, the flat landscape means that flow velocities would remain low, and would not facilitate sediment scouring (Frazer and Hall 2018). It is also worth considering that if velocities were sufficient to mobilise sediment, there may also be a risk of increased sediments from the catchment to Toby Inlet (not assessed).

4.4 Recreation Planning

Community feedback on recreation in and around Toby Inlet was sought during the consultation process and via a specific online survey (City's *Your Say* platform). These forums have indicated very clearly that management should focus on encouraging passive recreation, and on improvements to existing access rather than increasing accessibility.

Aboriginal consultation revealed a strong desire to maintain a passive level of recreation in and around Toby Inlet. Representatives also suggested that additional infrastructure and signage in the area should be minimised.

An access management plan has been developed to identify existing recreational access and infrastructure in the study area and opportunities for improvements (SWE 2018). This plan identifies four categories for management:

i. Vegetated areas with no tracks: to be retained as high conservation value areas with no further access.
ii. Vegetated areas with existing tracks: to be improved and potentially linked to each other and parkland areas enhance access for recreation and management purposes (eg. weed control and infill planting).
iii. Parkland cleared areas: existing high-use areas where improved infrastructure and formal paths would be appropriate and foreshore protection may be needed.
iv. Private property access only: not accessible for assessment and unlikely to be suitable for further public access.

Management options identified in the plan include improvements to existing tracks and the potential for additional tracks and/or a boardwalk; potential sites for canoe access, bird watching facilities, picnic facilities and outdoor classroom; and protection works for revegetation, weed control and erosion control. The concept plans for these options provide an ideal basis for further community consultation and project development.

4.5 Managing foreshore reserves

Foreshore reserves require improved management to protect remnant vegetation from weed invasion and physical disturbance from uncontrolled access. Revegetation is also needed in some degraded areas, particularly along banks where vegetation is important for stabilisation and ecological functions.

The Ecoedge (2017) vegetation survey report provides mapping of weeds that would form a basis for strategic control. This report also proposed five areas for revegetation based on size (≥ 1500m^2), accessibility for implementation, and low density of existing vegetation (Ecoedge 2017). These should be further considered in consultation with the community. Weed control and revegetation is needed to ensure protection of natural values in the study area. Some further planning may be needed to direct these efforts.

Recreation and access planning also provide recommendations for areas requiring weed control and revegetation in association with managing access and addressing foreshore erosion, and improving recreation opportunities (SW Environmental 2018). Pathways provide opportunities to formalise boundaries of reserves or interfaces between areas of parkland and natural vegetation.

Some foreshore reserves adjacent to private properties do not have public access the undertake an assessment of management issues or opportunities for improvement. The condition of foreshore vegetation, bank stability and integrity of private jetties in this area varies. A process of assessment of these areas is needed that identifies:

- inappropriate management of public land;

- jetty structures that require maintenance or removal;
- areas of recreational value for the broader community;
- required management actions to conserve ecological values; and
- potential fire risk.

This process could also be used to develop relationships with local landholders and foster community stewardship for ongoing management, such as through formation of localised *Friends of* groups that could partner with the Toby Inlet catchment Group. In addition, a policy relating to current and future jetty structures would be valuable to minimise potential impacts of the structures and ensure adjacent foreshore areas are protected.

4.6 Catchment management

The portion of the catchment closest to the Inlet has experienced rapid urban development and this is projected to continue into the future. Unsewered urban areas of Quindalup have been identified as a significant nutrient source, particularly through the critical summer months. Sewerage infill works in this area are imminent (update progress as needed). Once completed, the connection of properties to this infrastructure will be vital to ensure outcomes from this investment. There may need to be targeted awareness campaign to maximise connection.

The broader Toby Inlet catchment contains a range of land uses with significant portions dominated by native vegetation, beef grazing, lifestyle blocks and highly developed urban or commercial areas. Management of the broader catchment is beyond the scope of this plan. However, as the catchment has substantial influence on the health of waters within the study area, it is logical that its implementation would support initiatives that reduce catchment sources of nutrients and sediments. GeoCatch has a lead role in catchment management including improved land use management practices, waterway restoration and educational approaches. In addition, the Toby Inlet Catchment Group has long advocated catchment management and could partner with GeoCatch to extend initiatives in the Toby Inlet catchment.

There is also a role for land use development planning in catchment protection. Proposals for changes in land use and new developments can trigger the imposition of new environmental protection requirements. This applies directly to the objective: *reduce catchment sediments and contaminants from existing and new developments entering Toby Inlet.* The use of planning approaches is part of the governance framework for this plan.

4.7 Governance arrangements

The independent review of water asset management (Hart 2014) highlighted the need for Toby Inlet to have a designated lead manager. The City was recognised as the most appropriate manager for Toby Inlet, and this has been supported by the Western Australian Government in its response to the review. It is appropriate that the City adopts this role, given its management responsibility for a large proportion of adjacent foreshore reserves. Although the City is responsible for overall implementation of management actions, several key stakeholders also have important roles, outlined below. These roles and responsibilities are also summarised in Table 1, Section 6.

The City's management responsibility is generally limited to the study area and does not extend into the broader catchment. Ongoing management initiatives in the catchment, in particular to address issues of nutrient enrichment and sedimentation, are a fundamental component of waterways management. GeoCatch, with the support of DWER, is the lead manager for catchment management. The Water Corporation has management responsibility for its rural drainage network. This network extend into the Station Gully catchment, but is not part of the existing Toby Inlet catchment.

DWER has an ongoing role in providing support for the management of Toby Inlet through continued involvement in water science, modelling and monitoring. If the implementation of this WMP is to be funded through ongoing investment in a broader program for Geographe Bay catchment waterways, DWER is likely to continue to have an important project management and networking role.

The Toby Inlet Catchment (TIC) Group also has an active role in the management of Toby Inlet and its catchment, with a long history in management planning and on-ground works. Members of TIC Group are important advocates in the community for protection of Toby Inlet, increasing support for, and recognition of, improved management. The group continues to undertake restoration activities such as weed control, revegetation and feral animal control. This greatly assists with management of public reserves, and should continue to be supported by the City.

Establishment of "Friends of Reserves" groups for sections of Toby Inlet foreshore has been suggested during consultation as a way of fostering community stewardship to assist with and maintain restoration efforts. These groups could partner with TIC Group, increasing overall capacity. The City recognises the valuable contribution of volunteers to environmental management, and has a commitment to supporting volunteer groups such as TIC Group and Friends of Reserves groups.

The City also has an important role in its planning capacity. Through the *Revitalising Geographe Waterways* program, the City has been responsible for the *Optimising Planning Tools* project to review the potential role of planning in water resource protection.

4.8 Research needs

Research is needed to enable assessment and reporting on progress of management initiatives and to fill knowledge gaps. Research outcomes need to feed back into management planning through an adaptive process. The key research areas for Toby Inlet are summarised below.

Water quality: Ongoing water quality monitoring is an essential part of long-term assessment and reporting for waterway health. There appears to be an adequate sampling program for open waters of Toby Inlet. Investigative sampling within of tributaries and groundwater in the Toby Inlet catchment should be considered to ensure information requirements for prioritising and reviewing management initiatives are met.

Water flow: Assessment of the potential for existing flows to move sediment in association with resuspension of sediment through agitation may require further modelling or a trial.

Sediments: If removal of sediment is deemed appropriate in the future, further studies of physical and chemical characteristics will be needed to inform priority locations, the removal technique and disposal options.

Bird life: There has been little formal surveying of bird life of Toby Inlet, so the overall importance of the study area for providing bird habitat and the particular sites of importance are not well understood. There is an opportunity for community-based surveying to assist in prioritising management initiatives (eg. habitat restoration) and in developing information resources for visitors.

Aquatic fauna: Fish and aquatic invertebrates are good indicators of waterway health. Recent research has provided baseline information for future monitoring and reporting. Community involvement in this research has highlighted the potential for educational opportunities that engage people in the management of Toby Inlet.

Aquatic flora: There have been no studies of macroalgae and other aquatic plants in Toby Inlet and associated wetlands. Aquatic flora has an important structuring role, with a strong seasonal influence on habitat and water quality and hence on aquatic fauna and food web interactions. The extent and composition of macroalgal growth (as blooms or at non-nuisance levels) have not been formally monitored and may provide a good indicator of water quality.

5 Management Strategies and Actions

The management strategies and actions included here have been developed to work towards meeting the management objectives and vision for Toby Inlet. Specific actions have been grouped into strategies for each of the management focus areas, although many have potential outcomes for several objectives. A framework for implementing the WMP is provided in Section 6, including the roles and responsibilities of key stakeholders and a process for ongoing action planning, reporting and review.

5.1 Toby Inlet ocean exchange

Strategy OE1: Optimal management of Toby Inlet ocean exchange

Effective management of the Toby Inlet ocean exchange has clear outcomes for water quality by through dilution of nutrient concentrations and preventing algal growth. Establishing a minimum sill height during summer will reduce areas prone to sediment exposure and associated problems with visual amenity and odours. Management of the sand bar is also important in mitigating the flood risk for adjacent properties.

Management actions:

OE1.1 Maintain Toby Inlet ocean outlet, the Station Gully culvert and the Station Gully outlet in accordance with Operational Procedures in Appendix 2.

OE1.2 Monitor the status of the outlet through a telemetered system to determine when opening of the sand bar is necessary.

OE1.3 Ensure the culvert between Station Gully and Toby Inlet will be left open to improve water quality in the upper reach of Toby Inlet, east of the ocean outlet.

5.2 Sedimentation

Strategy S1: Investigate sediment removal

There is strong community support for active removal of sediments from Toby Inlet, however the main objective associated with this approach is improved amenity. Outcomes for water quality and ecology and potential impacts of removal are not well understood, and further investigation is needed.

Management actions:

S1.1 Defining priority areas for sediment management and determine sediment composition and volume for these areas, building on previous sediment investigations.

S1.2 Assess potential outcomes and impacts of sediment removal from priority areas and undertake a cost/benefit analysis of strategic sediment removal.

Strategy S2: Enhancing sediment movement through Toby Inlet

There may be potential to mobilise sediment within Toby Inlet so that it can be flushed out to Geographe Bay. Although the *Reconnecting Toby Inlet* study advised that increasing inflows through the system would not achieve sufficient velocities to scour sediment in Toby Inlet, the hydrological model did not extend fully into the catchment to inform this. An alternative approach to mobilising sediment may be mechanical agitation of sediments in depositional areas during high flows. There is community support to further investigate potential to mobilise deposited sediment.

Management actions:

S2.1 Further assess potential for increased catchment flows to mobilise and flush out sediment deposits in Toby Inlet.

S2.2 Assess whether sediment agitation would facilitate mobilisation and flushing of sediment deposits on Toby Inlet.

Strategy S3: Prevent further sedimentation

Existing land uses in the catchment and ongoing development are likely to continue to contribute additional sediment to the drainage system, wetlands and Toby Inlet. Minimising sources of sediments and trapping mobile sediments before they reach receiving waters is important to prevent further deposition.

Management actions:

S3.1 Improve understanding of sediment sources and transport through water quality monitoring (refer to WQ1.6).

S3.2 Develop an education approach to reducing sediments inputs from the catchment.

S3.3 Identify and ensure management of potential erosion problems from new developments and changes in land use during the planning process, through implementing the *Better Urban Water Management* framework.

S3.4 Investigate key sediment sources in the catchment and potential for works to stabilise drains and increase sediment trapping within the drainage network.

Strategy S4: Rehabilitate exposed sediment deposits

Revegetation of exposed sediments may address amenity issues. It would also stabilise the sediments, provide additional habitat, trap additional sediments and nutrients entering the Inlet.

S4.1 Identify areas of exposed sediments that could be planted to improve habitat and amenity and stabilise sediments.

S4.2 Undertake trial revegetation of samphire in exposed sediment.

5.3 Water quality

Increased nutrient loads from the catchment are a major cause of water quality decline. Actions to reduce point and non-point sources of nutrients are thus a fundamental component of managing

water quality. Management of the sand bar to provide flushing during summer and autumn is a key strategy to improve water quality in Toby Inlet (Strategy OE1). However, ocean flushing does little to address water quality issues in the upper reach of Toby Inlet or in the upstream wetland environments.

Strategy WQ1: Reducing nutrient sources from the catchment

Nutrients are a key driver of algal blooms, so ongoing load reduction actions are a fundamental part of management. Infill sewerage works is important to addressing nutrient sources from adjacent residential areas. Reducing nutrient inputs at the catchment level is a long-term management initiative, fundamental to protecting water quality in receiving aquatic environments.

Management actions:

WQ1.1 Completion of scheduled infill sewerage works in residential areas adjacent to Toby Inlet.

WQ1.2 Review the sewerage works once completed, and address any lack of connection to sewerage infrastructure through education campaigns or incentives if deemed necessary.

WQ1.3 Ensure Geographe Bay catchment management initiatives extend to Toby Inlet catchment, including: implementation of best management practices; and community education to reduce inputs from gardening and livestock activities in urban and special rural areas.

WQ1.4 Increase potential for nutrient assimilation in the rural drainage network in conjunction with sediment trapping and through restoration.

WQ1.5 Identify opportunities for reducing nutrient, sediment and pollutant sources through upgrades to stormwater infrastructure.

WQ1.6 Continue current water quality monitoring within Toby Inlet, and determine required monitoring for associated wetlands and catchment tributaries, to ensure information requirements for prioritising and reviewing management initiatives are met.

WQ1.7 Support educational campaigns that aim to reduce nutrients in runoff through individual and community actions (eg. Bay OK) and investigate options to improve nutrient management in public open space.

WQ1.8 Minimise future nutrient sources from new development and land use change at the planning stage through implementing the *Better Urban Water Management* framework.

WQ1.9 Support implementation of the Vasse Wonnerup wetlands Geographe Bay Water Quality Improvement Plan.

5.4 Ecology

Strategy E1: Effectively manage foreshore reserves

Foreshore reserves in the study area contain important areas of vegetation, provide habitat for native fauna and contribute to heathy aquatic ecology. These reserves present considerable opportunity for conservation, however active management is needed to address threats of weeds, pests, unmanaged access, clearing of native vegetation, and vegetation decline.

Management actions:

E1.1 Prepare and implement a prioritised works program for weed control, revegetation and feral animal control.

E1.2 Support community efforts in weed control, revegetation and feral animal control.

E1.3 Ensure revegetation in high amenity areas is appealing and maintains vistas to increase community support for these activities.

E1.4 Effectively management recreational access to protect and enhance the key values of reserve areas.

E1.5 Create awareness of reserve boundaries through bollards and signage where appropriate.

E1.6 Develop information resources for landholders to raise awareness of reserve boundaries, the importance of fringing vegetation, weed problems, and the restrictions on clearing native vegetation and building jetty structures.

E1.7 Assess foreshore reserve areas that have no public access and develop appropriate management actions to benefit the broader public.

E1.8 Develop a policy for jetties that ensures structural integrity and protection of adjacent foreshore areas and prevents establishment of new structures.

5.4.1 Strategy E2: Understanding fauna

There is limited formal knowledge of the fauna of Toby Inlet. Recent research on fish and aquatic invertebrates has provided an important baseline and has had excellent outcomes for community engagement. While there is some knowledge of the occurrence of other fauna in the study area such as birds and mammals, this is not based on formal surveys. Increased understanding of fauna can be achieved through scientific and community based approaches to improve information, and sharing this knowledge with the broader community.

Management actions:

E2.1 Support further research on aquatic and terrestrial fauna and bird populations to inform management initiatives and assess outcomes.

E2.2 Pursue a community science approach to collecting bird data.

E2.3 Develop information resources to increase community interest and understanding of fauna.

5.5 Amenity, Recreation and Education

Strategies for amenity, recreation and education have been combined owing to overlap between these focus areas. All relate to the interaction between people and Toby Inlet, and improving potential enjoyment.

Strategy ARE1: Improving facilities for community appreciation

There is a need to formalise access and improve recreational facilities around Toby Inlet, but with a clear focus on passive recreational pursuits, such as walking and running, bird watching, fishing and non-motorised water sports. The *Access Management Plan* for Toby Inlet provides an excellent basis

for improving recreational opportunities and access around Toby Inlet (Appendix 9. Although this has been developed with consideration of outcomes of previous community consultation, further review and feedback from the community will be required prior to its implementation.

Management actions:

ARE1.1 Seek community input on the *Access Management Plan* for Toby Inlet (SW Environmental 2018), and subsequently develop and implement appropriate access-ways and recreational infrastructure.

ARE1.2 Determine requirements for additional parking in support of improved facilities.

ARE1.3 Enhance bird habitat in connection with existing and potential bird watching sites.

ARE1.4 Encourage bird watchers to join with a community science approach to collecting bird data.

ARE1.5 Support schools in using Toby Inlet as an outdoor learning environment, including provision of information resources and consideration of an outdoor classroom.

Strategy ARE2: Providing informative resources

Management strategies around education often include interpretive signage. However given the desire for passive recreation in the Inlet and minimal facilities, extensive signage is not appropriate around Toby Inlet. Some signage regarding the values and management of the Inlet, and access points would be appropriate. Information in other forms would also be valuable for those who are interested, including learning resources for school groups. This includes printed resources and online information.

Management actions:

ARE2.1 Develop appropriate signage in connection with improved access and facilities to inform the community about: ecological values of Toby Inlet; location and use of access and facilities; and management initiatives underway.

ARE2.2 Prepare and distribute fact sheets and educational material, printed and online, for key management focus areas, relevant to schools, community members and natural resource managers.

ARE2.3 Continue to update the Revitalising Geographe Waterways website with information on Toby Inlet and its management.

5.6 Culture and Heritage

Heritage values in the vicinity of the Toby Inlet study area include traditions and history of Aboriginal people and European settlement.

Strategy CH1: Recognising Aboriginal custodianship

Toby Inlet holds significant cultural value for the local Wadandi people, as important place for food resources and camping. The area has continued to be an important camping and fishing area since European settlement. An area of campgrounds has been lodged for assessment as a Registered Aboriginal Site under the *Aboriginal Heritage Act* (1972).

Aboriginal representatives indicated clearly that they did not support extensive cultural information on signs in the area. However, acknowledgement of the significance of the area to Aboriginal may be appropriate on signs for other purposes, and in other information resources suggested in this plan. There is also potential to recognise Aboriginal peoples' connection to the area through other means, such as artwork or design of recreational facilities.

As traditional custodians, Aboriginal people are concerned about declining health of the environmental and should also be given opportunities to contribute to the future management of Toby's Inlet.

Management actions:

CH1.1 In partnership with local Aboriginal people, include reference to traditional custodianship of the waterways and land in development of information resources.

CH1.2 Manage future access in a way that avoids additional disturbance and considers protection of potential sites of Aboriginal significance – however activities of local Aboriginal people, such as fishing, camping, the gathering of bush foods and family recreational and educational activities, should not be restricted by implementation of this plan.

CH1.3 Seek to improve partnerships with the Nyungar community to increase their involvement in the management, protection and restoration of Toby Inlet and the study area.

CH1.4 Consult further with Aboriginal representatives in regard to specific works which result from this plan.

CH1.5 Support programs that engage the Aboriginal community in implementation of works associated with this plan.

Strategy CH2: Conserve historical values

There is a great deal of history associated with the whaling industry and European settlement in the study area. It is important that future generations have access to historical information and that historical sites are maintained.

Management actions:

CH2.1 Identify and ensure appropriate maintenance of sites historical importance.

CH2.2 Develop interpretive material to increase understanding of local history, and to promote, appreciate and access historical sites.

5.7 Governance

Management of Toby Inlet requires leadership which is most appropriately provided by the City. There is strong interest in the management of Toby Inlet from a broad range of stakeholders with varying interests and responsibilities. A collaborative approach to management is needed, that facilitates ongoing input from stakeholders and provides support to active members of the community, in particular the Toby Inlet Catchment Group. Partnerships with researchers are also valuable to improve our understanding of the system, inform management decisions and monitor success or otherwise of management actions.

Strategy G1: Defined and collaborative management

The City has coordinated the development of this WMP, and has overall responsibility for implementation. However other stakeholders have important roles in undertaking and supporting many management actions. Collaboration of stakeholders will therefore be essential to successful future management of the Toby Inlet study area. Major stakeholders and their roles in the future management of Toby Inlet and the study area are summarised in Table 1.

Management actions:

G1.1 City to consider securing management order over waterways and adjacent public lands in study area, to facilitate implementation.

G1.2 Establish a Management Advisory Committee comprised of representatives from the City, Toby Inlet Catchment Group, Department of Water and Environmental Regulation, Department of Biodiversity Conservation and Attractions, Water Corporation, GeoCatch, South West Catchments Council, Aboriginal representatives, and community members.

G1.3 Support the Toby Inlet Catchment Group as active participants in planning, on-ground works, and as a key link to the community.

G1.4 Facilitate the development of locally-active Friends of Toby Inlet groups to advocate and coordinate on-ground work in reserves and on private property.

G1.5 Define and resolve issues around vesting of Unallocated Crown Land.

Strategy G2: Evaluate and adapt management actions

Implementation will require an ongoing process of monitoring and evaluation of outcome, and future management will need to be informed by this proves and by new information gained through research. Long term water quality data is a fundamental tool for defining management issues and assessing outcomes of management. While an established routing monitoring program is in place for Toby Inlet itself, available data for catchment tributaries and groundwater is inconsistent. Biological monitoring approaches are valuable to assess current and future ecological health, and to provide interesting information for the community. Recent sampling of aquatic fauna has helped establish a baseline for future assessment of decline or improvement. Despite the nuisance growth of macroalgae in Toby Inlet, there has been no assessment of species or estimates of biomass.

Management actions:

G2.1 Continue monitoring of water quality in Toby Inlet.

G2.2 Review monitoring requirements for catchment tributaries and groundwater.

G2.3 Support future sampling of aquatic fauna.

G2.4 Undertake assessment of macroalgal growth.

G2.5 Ensure timely reporting of monitoring and research outcomes to the management advisory group.

G2.6 Review future management actions in light of monitoring and research outcomes.

6 Implementation

6.1 Roles and responsibilities

The lead role of the City in the future management of Toby Inlet will be recognised through endorsement and adoption of this WMP. This will task the City with responsibility for coordinating implementation, however key stakeholders will have ongoing roles in many aspects of the WMP. These roles and responsibilities are defined in Table 1.

As captured in action G1.2 a Management Advisory Group is recommended to oversee implementation of this WMP, comprised of representatives from the City, Department of Water and Environmental Regulation, Department of Biodiversity Conservation and Attractions, Water Corporation of WA, GeoCatch, Wadandi representatives and broader community representatives.

6.2 Implementation process

An adaptive process of action planning, works, evaluation and reporting is recommended for the WMP, summarised by Figure 13. The strategies and actions presented provide a basis for planning actions for a specified period of time, dependent on available budgets and identified priorities. This would be a key role of the Management Advisory Group. Outcomes of these actions are measured through adequate monitoring, with results assessed in terms of progress towards the management objectives and vision. Reporting of outcomes to the community is essential to maintain community support and this forum would provide an opportunity to gain input to the next action planning cycle.

Table 1. Key stakeholders for future management of Toby Inlet and main roles and responsibilities.

Stakeholder	Roles and Responsibilities
City	Overall implementation of the WMP. Management of reserves. Maintenance of Toby Inlet ocean exchange. Operation of Station Gully culvert. Support to community groups.
Toby Inlet Catchment Group	Undertaking weed control, revegetation and feral animal control activities. Advocating protection and enhancement of Toby Inlet. Representing community interests in future management of Toby Inlet and reserves. Leadership for citizen science opportunities.
South West Boojarah Working Party	Advocating protection and enhancement of Toby Inlet. Providing input ion management decisions to ensure maintenance of cultural values.

	Engagement of Aboriginal people in management decisions and actions.
Department of Water and Environmental Regulation	Monitoring of water quality. Technical contributions to management decisions. Coordination of future investment in waterways management through Revitalising Geographe Waterways.
GeoCatch	Support to private landholders to improve land and waterway management in the catchment. Educational programs to minimise nutrient and sediment loads. Education, habitat restoration, and community group support for protection of Western Ringtail Possums.
Water Corporation	Maintenance of Station Gully ocean exchange. Maintenance (ownership) of Station Gully culvert. Managing flooding risk.
Department of Biodiversity, Conservation and Attractions	Implement wildlife management and recovery plans. Community group support for protection of Western Ringtail Possums. Providing information about flora and fauna.
South West Catchments Council	Support for funding opportunities.
Friends of reserves groups	Future role in local-level advocacy and management actions.



Figure 13. Implementation process for the Toby Inlet Waterway Management Plan.

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8 Appendices

Appendix 1. Land tenure listing

Current vesting details for public lands in the study area.

TYPE	PIN	RESERVE NUMBER	CURRENT PURPOSE/LEGAL USE	CURRENT VESTING/MANAGEMENT
Reserve	1039621	23572	RECREATION	City
Reserve	532402	31944	PUBLIC RECREATION	City
Reserve	532412	31944	PUBLIC RECREATION	City
Reserve	11342942	31591	PUBLIC RECREATION	City
Reserve	11767346	46	LANDSCAPE PROTECTION AND RECREATION	City
Reserve	1341995	26122	PUBLIC RECREATION	City
Reserve	1051637	26122	PUBLIC RECREATION	City
Reserve	532482	26122	PUBLIC RECREATION	City
Reserve	1208973	26122	PUBLIC RECREATION	City
Reserve	1107483	36262	PUBLIC RECREATION	City
Reserve	532377	36262	PUBLIC RECREATION	City
Reserve	532386	36262	PUBLIC RECREATION	City
Reserve	532394	36262	PUBLIC RECREATION	City
Reserve	1153703	45169	PUBLIC RECREATION & FORESHORE MANAGEMENT	City
Reserve	1112023	46086	PUBLIC RECREATION, DRAINAGE AND FLORA PROTECTION	City
Reserve	1214511	46086	PUBLIC RECREATION, DRAINAGE AND FLORA PROTECTION	City
Reserve	532322	26524	PUBLIC RECREATION	City
Reserve	532329	26524	PUBLIC RECREATION	City
Reserve	532342	26524	PUBLIC RECREATION	City
Reserve	532350	26524	PUBLIC RECREATION	City
Reserve	532494	36429	RECREATION	City
Reserve	1186196	45436	PUBLIC RECREATION	City
Reserve	1215108	45436	PUBLIC RECREATION	City
Reserve	523991	29844	PUBLIC RECREATION	City
Reserve	523992	29844	PUBLIC RECREATION	City
Reserve	523989	37416	WATER SUPPLY	Water Corporation
Reserve	524084	40677	DRAINAGE	Water Corporation

Reserve	1287021	26225	RECREATION & ROAD	DEPARTMENT OF LANDS (SLSD)
Reserve	1034792	32282	DRAIN	DEPARTMENT OF WATER
UCL	11676813			
UCL	1237261			
UCL	11154519			
UCL	11154521			
UCL	11627253			
UCL	11608890			
UCL	11154520			

Appendix 2. Operational Procedures for maintenance of Toby Inlet sand bar

OPERATIONAL PRACTICE AND PROCEDURE

OPENING AND MAINTENANCE OF THE TOBY INLET SAND BAR AND CULVERT

PURPOSE

This document details the procedures that apply to the opening and maintenance of the Toby Inlet sand bar and the culvert between Toby Inlet and Station Gully. The main purposes of opening the sand bar are to improve water quality in the inlet by increasing water flushing and reduce the likelihood of algal blooms and to mitigate flooding risks to neighbouring properties.

OE1.4 Ensure the ocean outlet is kept open through the period from 1 November to 31 April to improve water quality, with a minimum sill height of -0.15m AHD to prevent excessively low water levels.

OE1.5 Open the sand bar during the period 1 May to 31 October if water levels exceed an interim trigger value of 1.3m AHD. The outcomes of this approach will be monitored and management guidelines adapted accordingly.

SPECIFICATIONS

Ocean entrance

Summer – water quality improvement

1. The Toby Inlet mouth is maintained open from 1 November to the 30 April at a minimum sill elevation of -0.15m AHD.
2. Opening to be facing approximately 45 degrees eastward, to the width of inlet.

3. Opening to be located in area highlighted in aerial photo below, subject to seasonal variability of inlet's position.
4. Opening works to coincide with rising tide and greatest tidal variations (as practicable).
5. Sand removed to be deposited to the east of opening and flattened out to not impede access by pedestrians and horses.
6. Machinery to access site via Quindalup boat ramp.
7. Sand bar to be open within two weeks of notification received of it being closed.

Winter – flooding mitigation

1. The Toby Inlet mouth is to be opened when water levels reach 1.3m AHD, causing a potential flooding risk to neighbouring properties and infrastructure.
2. Opening to be located in area highlighted in aerial photo below, subject to seasonal variability of inlet's position.
3. Opening works to coincide with lowering tide.
4. Sand removed to be deposited to the east of opening and flattened out to not impede access by pedestrians and horses.
5. Machinery to access site via Quindalup boat ramp.

Culvert

1. Culvert between Station Gully drain and Toby Inlet to remain open all year around.



RESPONSIBILITIES

The City is responsible for:

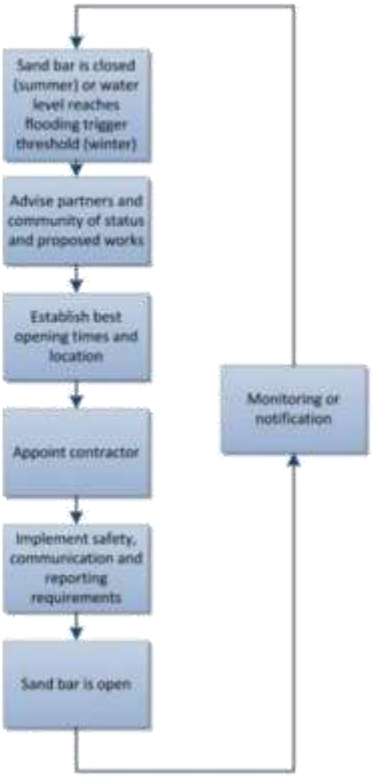
- Monitoring status of the Toby Inlet ocean entrance, with a minimum of a check per fortnight during the period of October to May.

- Organising, supervising and funding the manual opening of the Toby Inlet ocean entrance by machinery as required from October to June.
- Notifying other stakeholders (including the Water Corporation and Department of Water and Environmental Regulations) and the public of upcoming maintenance works.
- Ensuring public safety during operations, including at works site and upstream of Toby Inlet.
- Keep records of sand bar opening times.
- Maintaining the culvert between Toby Inlet and Station Gully in a good state of repair and open all year around.

The Water Corporation and the Department of Water and Environmental Regulations are responsible for:

- Notifying the City if it becomes aware that the Toby Inlet entrance has closed.
- Provide any information that may assist the City in managing the opening of the Toby Inlet ocean entrance.
- Opening Station Gully ocean outlet for flood protection purposes as necessary.

PROCESS TO BE FOLLOWED IF SAND BAR CLOSES (FLOWCHART)


Sand bar is closed (summer) or water level reaches flooding trigger threshold (winter)
Advise partners and community of status and proposed works
Establish best opening times and location
Appoint contractor
Implement safety, communication and reporting requirements
Sand bar is open
Monitoring or notification

Appendix 3. Plant species found within the Toby Inlet study area

List of vascular flora identified in the study area during survey by Ecoedge (2017)

FAMILY	SPECIES	COMMON NAME	NATURALISED
Aizoaceae	*Carpobrotus edulis*	Hottentot Fig	*
Anacardiaceae	*Schinus terebinthifolius*		*
Apiaceae	*Apium prostratum*	Sea Celery	
Apiaceae	*Centella asiatica*	Centella	
Apiaceae	*Daucus glochidiatus*	Australian Carrot	
Apocynaceae	*Vinca major*	Blue Periwinkle	*
Araceae	*Zantedeschia aethiopica*	Arum Lily	*
Araliaceae	*Hedera helix*		*
Araliaceae	*Trachymene pilosa*	Native Parsnip	
Asparagaceae	*Acanthocarpus preissii*		
Asparagaceae	*Asparagus asparagoides*	Bridal Creeper	*
Asparagaceae	*Lachenalia bulbifera*		*
Asphodelaceae	*Trachyandra divaricata*		*
Asteraceae	*Carduus pycnocephalus*	Slender Thistle	*
Asteraceae	*Cotula coronopifolia*	Waterbuttons	*
Asteraceae	*Gazania linearis*		*
Asteraceae	*Hypochaeris glabra*	Smooth Cats-ear	*
Asteraceae	*Olearia axillaris*	Coastal Daisybush	
Asteraceae	*Osteospermum jucundum*		*
Asteraceae	*Osteospermum ecklonis*		*
Asteraceae	*Senecio jacobaea*	Ragwort	*
Asteraceae	*Sonchus asper*	Rough Sowthistle	*
Asteraceae	*Symphyotrichum squamatum*	Bushy Starwort	*
Boraginaceae	*Echium plantagineum*	Paterson's Curse	*
Casuarinaceae	*Allocasuarina fraseriana*	Sheoak	
Chenopodiaceae	*Atriplex hypoleuca*		
Chenopodiaceae	*Atriplex prostrata*		
Chenopodiaceae	*Rhagodia baccata*	Berry Saltbush	
Chenopodiaceae	*Salicornia quinqueflora*	Beaded Samphire	
Chenopodiaceae	*Suaeda australis*	Seablite	
Convolvulaceae	*Dichondra repens*	Kidney Weed	
Cupressaceae	*Callitris preissii*	Rottnest Island Pine	
Cyperaceae	*Baumea juncea*	Bare Twigrush	
Cyperaceae	*Carex divisa*	Divided Sedge	*
Cyperaceae	*Ficinia nodosa*	Knotted Club Rush	
Cyperaceae	*Gahnia trifida*	Coast Saw-sedge	
Cyperaceae	*Lepidosperma gladiatum*	Coast Sword-sedge	
Dennstaedtiaceae	*Pteridium esculentum*	Bracken	
Dilleniaceae	*Hibbertia cuneiformis*	Cutleaf Hibbertia	
Ericaceae	*Leucopogon parviflorus*	Coast Beard-heath	

FAMILY	SPECIES	COMMON NAME	NATURALISED
Euphorbiaceae	*Euphorbia paralias*	Sea Spurge	*
Euphorbiaceae	*Euphorbia terracina*	Geraldton Carnation Weed	*
Fabaceae	*Acacia cochlearis*	Rigid Wattle	
Fabaceae	*Acacia cyclops*	Coastal Wattle	
Fabaceae	*Acacia littorea*		
Fabaceae	*Acacia saligna*	Orange Wattle	
Fabaceae	*Chamaecytisus palmensis*	Tagasaste	*
Fabaceae	*Dipogon lignosus*	Dolichos Pea	*
Fabaceae	*Hardenbergia comptoniana*	Native Wisteria	
Fabaceae	*Lotus subbiflorus*		*
Fabaceae	*Melilotus indicus*		*
Fabaceae	*Podalyria sericea*		*
Fabaceae	*Templetonia retusa*	Cockies Tongues	
Fabaceae	*Trifolium campestre*	Hop Clover	*
Geraniaceae	*Geranium molle*	Dove's Foot Cranesbill	*
Geraniaceae	*Geranium solanderi*	Native Geranium	
Geraniaceae	*Pelargonium capitatum*	Rose Pelargonium	*
Goodeniaceae	*Dampiera trigona*	Angled-stem Dampiera	
Goodeniaceae	*Scaevola crassifolia*	Thick-leaved Fan-flower	
Hemerocallidaceae	*Dianella revoluta*	Blueberry Lily	
Iridaceae	*Watsonia meriana*	Bulbil Watsonia	*
Juncaceae	*Juncus kraussii*	Sea Rush	
Lauraceae	*Cassytha racemosa*	Dodder Laurel	
Liliaceae	*Lilium* sp.		*
Loganiaceae	*Logania vaginalis*	White Spray	
Moraceae	*Ficus carica*	Common Fig	*
Myrtaceae	*Agonis flexuosa*	Peppermint	
Myrtaceae	*Eucalyptus rudis*	Flooded Gum	
Myrtaceae	*Melaleuca cuticularis*	Saltwater Paperbark	
Myrtaceae	*Melaleuca osullivanii*		
Myrtaceae	*Melaleuca rhaphiophylla*	Swamp Paperbark	
Myrtaceae	*Melaleuca* sp.		*
Myrtaceae	*Melaleuca viminea*	Mohan	
Orchidaceae	*Cyrtostylis robusta*		
Orobanchaceae	*Parentucellia viscosa*	Sticky Bartsia	*
Oxalidaceae	*Oxalis corniculata*	Yellow Wood Sorrel	*
Oxalidaceae	*Oxalis pes-caprae*	Soursob	*
Papaveraceae	*Fumaria muralis*	Wall Fumitory	*
Phyllanthaceae	*Phyllanthus calycinus*	False Boronia	
Plantaginaceae	*Plantago lanceolata*		*
Poaceae	*Ammophila arenaria*	Marram Grass	*
Poaceae	*Austrostipa compressa*		
Poaceae	*Austrostipa flavescens*		
Poaceae	*Avena fatua*	Wild Oat	*

FAMILY	SPECIES	COMMON NAME	NATURALISED
Poaceae	*Briza maxima*	Blowfly Grass	*
Poaceae	*Bromus diandrus*	Great Brome	*
Poaceae	*Lagurus ovatus*	Hare's Tail Grass	*
Poaceae	*Lolium perenne*	Perennial Ryegrass	*
Poaceae	*Piptatherum miliaceum*	Rice Millet	*
Poaceae	*Poa porphyroclados*		
Poaceae	*Sporobolus virginicus*	Marine Couch	
Poaceae	*Stenotaphrum secundatum*	Buffalo Grass	*
Polygalaceae	*Comesperma virgatum*	Milkwort	
Polygonaceae	*Muehlenbeckia adpressa*	Climbing Lignum	
Polygonaceae	*Rumex brownii*	Swamp Dock	*
Ranunculaceae	*Ranunculus muricatus*	Sharp Buttercup	*
Rhamnaceae	*Spyridium globulosum*	Basket Bush	
Rosaceae	*Rosa chinensis* x *multiflora*		*
Santalaceae	*Exocarpos sparteus*	Broom Ballart	
Santalaceae	*Santalum acuminatum*	Quandong	
Solanaceae	*Solanum linnaeanum*	Apple of Sodom	*
Stylidiaceae	*Stylidium adnatum*	Common Beaked Triggerplant	
Thymelaeaceae	*Pimelea argentea*	Silvery Leaved Pimelea	
Typhaceae	*Typha orientalis*	Typha	

Appendix 4. Revegetation species the Toby Inlet study area

Suggested revegetation species for main soil types in the Toby Inlet study area (Ecoedge 2017)

Saline Soils:
Atriplex prostrata
Ficinia nodosa (Knotted Club Rush)
Juncus kraussii (Sea Rush)
Melaleuca cuticularis (Saltwater Paperbark)
Salicornia quinqueflora (Beaded Samphire)
Suaeda australis (Sea Blite)
Loams:
Acacia saligna (Orange Wattle)
Agonis flexuosa (Peppermint)
Eucalyptus rudis (Flooded Gum)
Exocarpos sparteus (Broom Ballart)
Hakea varia
Hibbertia cuneiformis (Cutleaf Hibbertia)
Jacksonia furcellata
Kunzea micrantha
Melaleuca viminea (Mohan)
Spyridium globulosum (Basket Bush)
Viminaria juncea (Swish Bush)
Quindalup Dunes:
Agonis flexuosa (Peppermint)
Spyridium globulosum (Basket Bush)
Acacia littorea
Acacia cochlearis
Hibbertia cuneiformis (Cutleaf Hibbertia)
Leucopogon parviflorus
*Hardenbergia comptoniana (*Native Wisteria)
Lepidosperma gladiatum (Sword Sedge)

Appendix 5. Birds of Toby Inlet and associated wetlands

Bird species reported to occur in the study area, from a survey by Clay and Clay (1996, cited in Comer and Clay 1999).

COMMON NAME	SPECIES NAME
Water Birds	
Hairy-headed Grebe	Poliocephalusi poliocephalus
Australasian Grebe	*Tachybaptus novaehollandiae*
Australian Pelican	*Pelecanus conspicillatus*
Darter	*Anhinga melanogaster*
Little Black Cormorant	*Phalacrocorax sulcirostris*
Little Pied Cormorant	*Phalacrocorax melanoleucos*
White Faced Heron	*Ardea novaehollandiae*
Great Egret	*Egretta alba*
Sacred Ibis	*Threskiornis aethiopica*
Straw-necked Ibis	*Threskiornis spinicollis*
Yellow Billed Spoonbill	*Platalea flavipes*
Black Swan	*Cygnus atratus*
Australian Shelduck	*Tadorna tadornoides*
Pacific Black Duck	*Anas superciliosa*
Grey Teal	*Anas gibberifrons*
Australian Wood duck	*Chenonetta jubata*
Musk Duck	*Biziura lobata*
Pink-eared Duck	*Malacorhynchus membranaceus*
Hardhead	*Aythya australis*
Osprey	*Pandion haliaetus*
Eurasian Coot	*Fulica atra*
Purple Swamphen	*Porphyrio porphyrio*
Hooded Plover	*Charadrius rubricollis*
Black-fronted Plover	*Charadrius melanops*
Greenshank	*Tringa nebularia*
Silver Gull	*Larus novaehollandiae*
Caspian Tern	*Hydropgne caspia*
Crested Tern	*Sterna bergii*
Fairy Tern	*Sterna nereis*
Bush Birds	*Scientific Name*
Black-shouldered Kite	Elanus notatus
Whistling Kite	*Haliastur sphenurus*
Brown Goshawk	*Accipiter fasciatus*
Australian Kestrel	*Falco cenchroides*
Laughing Turtle-dove*	*Streptopelia senegalensis*
Common Bronze wing	*Phaps chalcopterai*
Red-tailed Black Cockatoo	*Calyptorhynchus magnificus*

White-tailed Black Cockatoo	*Calyptorhynchus baudinii/latirostris?*
Red-capped Parrot	*Purpureicephalus spurius*
Western Rosella	*Platycercus icterotis*
Australian Ringneck	*Barnardius zonarius*
Tawny Frogmouth	*Podargus strigoides*
Laughing Kookaburra	*Dacelo novaeguineae*
Sacred Kingfisher	*Halyconi sancta*
Rainbow Bee-eater	*Merops ornatus*
Welcome Swallow	*Hirundo neoxena*
Tree Martin	*Hirundo nigricans*
Richard's Pipit	*Anthus novaeseelandiae*
Black-faced Cuckoo-Shrike	*Coracina novaehollandiae*
Scarlet Robin	*Petroica Multicolor*
Rufous Whistler	*Pachycephala rufiventris*
Grey Shrike-thrush	*Colluricincla harmonica*
Grey Fantail	*Rhipidura fuliginosa*
Willie Wagtail	*Rhipidura leucophrys*
Splendid Fairy-Wren	*Malurus splendens*
White-browed Scrub-Wren	*Sericornis frontalis*
Western Gerygone	*Gerygone fusca*
Western Thornbill	*Acanthiza inornata*
Yellow-rumped Thornbill	*Acanthiza chrysorrhoa*
Varied Sitella	*Daphoenositta chrysoptera*
Rufous Treecreeper	*Climacteris rufa*
Red Wattle Bird	*Anthochaera carunculata*
Brown Honeyeater	*Lichmera indistincta*
New Holland Honeyeater	*Phylidonyris novaehollandiae*
Western Spinebill	*Acnathorynchus superciliosus*
Silvereye	*Zosterops lateralis*
Australian Magpie-Lark	*Grallina cyanoleuca*
Dusky Woodswallow	*Artamus cyanopterus*
Grey Butcherbird	*Cracticus torquatus*
Australian Magpie	*Gymnorhina tibicen*
Australian Raven	*Corvus coronoides*

Appendix 6. Other Fauna likely to occur in study area

fauna identified as present or likely to be present in the study area in the survey by Hart et al. (1997)

Frogs		
	Litoria adalaidensis* Litoria moorei* Crinia georgiana Heleioporus eyrie Limnodynastes dorsalis Pseudophryne glauerti Ranidella insignifera	
Reptiles		
Turtle	Chelodina oblonga*	Long-necked turtle
Gecko	Phyllodactylus marmoratus*	
Legless lizards	Aprasia repens Pygopus lepidopodus	
Dragon lizards	Pogona m. minor*	Western bearded dragon
Skinks	Bassiana trilineata* Cryptoblepharus plagiocephalus Egernia kingie* Egernia napoleonis* Glaphyromorphus australis Hemiergis peronei Lerista distinguenda* Menetia greyii* Morethia lineoocellata* Tiliqua r. rugose*	
Monitors	Varanus gouldii Varanus rosenbergi	
Snakes	Ramphotyphlops australis Drysdalia coronate Echiopsis curta Notechis scutatus occidentalis*	 Tiger snake

28/11/2018

	Pseudonaja affinis affinia* Rhinocephalus gouldii Rhinocephalus nigriceps	Dugite
Mammals	Pseudocheirus occidentalis* Isoodon obesulus* Macropus fuliginosus* Hydromys chrysogaster	Western ringtail possum Southern brown bandicoot Western grey kangaroo Rakali, Water rat
Introduced species	Mus musculus* Rattus rattus Vulpes vulpes* Felis catus Oryctolagus cuniculus*	

*Evidence of presence found

Appendix 7. Aquatic invertebrates of Toby Inlet and associated wetlands

Aquatic invertebrates found in Toby Inlet during the two surveys by Streamtec (1997) and Tweedley et al. (2018).

Phylum / Order		Family / Species		Streamtec (1997)	Tweedley et al. (2018)
Nematoda			Nematoda sp.	✓	
Mollusca					
	Gastropoda	Ancylidae	Ferrissia petterdi	✓	
			(?) Fluviopupa sp.	✓	
		Planorbiidae	Physastra sp.	✓	
		Tateidae	Potamopyrgus sp.		✓
	Veneroida	Galeommatidae	Arthritica semen		✓
	Littorinimorpha	Pomatiopsidae	Coxiella striatula		✓
Annelida	Oligochaeta		Oligochaeta spp.	✓	
	Cnidaria			✓	
	Hydrozoa	Hydridae	Hydra sp.	✓	
	Arachnida			✓	

	Acarina		Hydracarina sp.	✓	
	Phyllodocida	Nereididae	Simplisetia aequisetis		✓
	Spionida	Spionidae	Pseudopolydora kempi		✓
	Polychaeta	Capitellidae	Capitella captitata		✓
	Polychaeta	Orbiniidae	Scoloplos normalis		✓
	Canalipalpata	Serpulidae	Ficopomatus enigmaticus		✓
Crustacea					
	Cladocera		Cladocera sp.	✓	
		Daphiidae	Daphinia sp.	✓	
	Ostracoda	Ilyocypridae	Ilyodromas sp.	✓	
			Ostracoda sp.	✓	
	Copepoda	Cyclopoida	Cyclopidae sp.	✓	
		Harpacticoida	Harpacticodae sp.	✓	
	Amphipoda	Gammaridae	Perthia sp.	✓	✓
			Amphipod sp.	✓	
		Aoridae	Grandidierella propodentata		✓
		Melitidae	Barnardomelita matilda		✓
	Decapoda	Palaemonidae	Palaemonetes australis	✓	
		Parastacidae	Cherax quinquecarinatus	✓	
	Isopoda	Armadillidae	Oniscidea sp.		✓
	Malacostraca	Chiltoniidae	Austrochiltonia subtenuis		✓
Crustacea	Mysida	Mysidae	Mysida sp. 1		✓
Insecta					
	Ephemeroptera	Leptophlebiidae	Bilbumena	✓	
		Baetidae	Baetis soror	✓	
		Caenidae	Tasmanocoenis tillyardi (Lestage)	✓	
	Odonata Zygoptera	Coenagriidae	Ischnura aurona	✓	
	Odonata Zygoptera	Coenagriidae	Odonata sp. 1		✓

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	Odonata Zygoptera	Coenagriidae	Odonata spp.		✓
	Odonata	Aeshnidae	Austrolestes annulosus		✓
	Anisoptera	Corduliidae	Hemicordulia tau Selys	✓	
	Diptera	Simuliidae	Austrosimulium sp.	✓	
			Simulium ornatipes (Skuse)	✓	
		Ceratopogonidae	Ceratopogonidae sp. F	✓	
		Chironomidae		✓	
			Chironomidae sp. 1		✓
			Chironominae sp. 2		✓
			Chironominae spp.		✓
			Chironominae occidentalis		✓
			Chironominae alternans		✓
			Procladius sp.		✓
		Tipulidae	Tipulidae sp. A	✓	
			Tipulidae sp. B	✓	
			Tipulidae sp. X	✓	
			Unidentified spp.	✓	
		Empidadae	Empididae sp. B	✓	
			Unidentified spp.	✓	
		Culicidae	Culicidae sp. B	✓	✓
			Unidentified sp.	✓	
		Muscidae spp.	Unidentified sp.	✓	
		Stratiomyidae spp.	Unidentified sp.	✓	
		Syrphidae sp.		✓	
		Ephydridae	Ephydridae sp. X	✓	
	Lepidoptera		Lepidoptera sp. X	✓	
			Unidentified sp.	✓	
	Trichoptera	Ecnomidae	Ecnomus pansus/turgidus complex	✓	
			Oecetis sp.	✓	

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			Notalina fulva	✓	
Insecta			Triplectides australis	✓	
			Oxyethira retracta	✓	
			Hellethira sp. C	✓	
		Leptoceridae	Notalina spira		✓
	Odonata	Aeshinidae	Aeshinidae sp.		✓
	Hemiptera	Notonectidae	Paranisops sp.	✓	
	Coleoptera		Carabidae sp.	✓	
		Dytiscidae	? Rhantus sp.	✓	
			Necterosoma sp. B	✓	
			Liodesus sp.	✓	
			? Megaporus sp.	✓	
			Platynectes decempunctatus	✓	
			Homeodyetes scutelaris	✓	
			Dytiscid sp. X	✓	
		Hydrophilidae	Hydrophilidae sp. A	✓	
			Hydrophilidae sp. X	✓	
			Hydrophilidae spp.	✓	
			Berosus approximans	✓	
			Berosus sp.	✓	
			Haliplidae sp.	✓	
		Lestidae	Austrolestes annulosus		✓

Appendix 8. Fish survey results 2017-2018

Fish species captured in nearshore and offshore waters of Toby Inlet before (November 2017) and after (March 2018) opening of the sand bar (Tweedley et al. 2018).

Species name	Common name	Estuarine use group*	November 2017	May 2018
Nearshore waters				
Leptatherina wallacei	Western Hardyhead	EF	✓	✓
Atherinosoma elongata	Elongate Hardyhead	E	✓	✓
Pseudogobius olorum	Bluespot Goby	EF	✓	✓
Gambusia holbrooki	Eastern Gambusia	FEO	2.36 ✓	✓
Gambusia holbrooki	Eastern Gambusia	EF	3.24 ✓	✓
Favonigobius lateralis	Southern Longfin Goby	EM	3.10 ✓	✓

Leptatherina presbyteroides	Silver Fish	EM		✓
Amniataba caudavittata	Yellowtail Grunter	E	✓	✓
Pelates octolineatus	Western Striped Grunter	MEO		✓
Mugil cephalus	Sea Mullet	MEO	✓	✓
Rhabdosargus sarba	Tarwhine	MEO	✓	✓
Galaxias occidentalis	Western Galaxias	FEO	✓	
Craterocephalus mugiloides	Spotted Hardyhead			✓
Sillago burrus	Western Trumpeter			✓
Pseudorhombus jenynsii	Smalltooth Flounder			✓
Atherinomorus vaigiensis	Common Hardyhead			✓
Acanthopagrus butcheri	Black Bream		✓	
Offshore waters		**EUFG**		
Mugil cephalus	Sea Mullet	MEO	✓	✓
Amniataba caudavittata	Yellowtail Grunter	E	✓	✓
Acanthopagrus butcheri	Black Bream	E	✓	✓
Aldrichetta forsteri	Yelloweye Mullet	MEO	✓	✓
Pelates octolineatus	Western Striped Grunter	MEO		✓
Rhabdosargus sarba	Tarwhine	MEO		✓
Arripis georgianus	Australian Herring	MEO		✓
Sillago schomburgkii	Yellowfin Whiting	MEO		✓
Pomatomus saltatrix	Tailor	MEO		✓
Gerres subfasciatus	Common Silverbiddy	MEO		✓
Sphyraena novaehollandiae	Snook	MS		✓
Pseudorhombus jenynsii	Smalltooth Flounder	MEO		✓
Species name	**Common name**	**Estuarine use group***	**November 2017**	**May 2018**
Nearshore waters				
Leptatherina wallacei		EF	✓	✓
Atherinosoma elongata		E	✓	✓
Pseudogobius olorum		EF	✓	✓
Gambusia holbrooki		FEO	✓	✓
Afurcagobius suppositus		EF	✓	✓
Favonigobius lateralis		EM	✓	✓
Leptatherina presbyteroides		EM		✓
Amniataba caudavittata		E	✓	✓
Pelates octolineatus		MEO		✓
Mugil cephalus		MEO	✓	✓
Rhabdosargus sarba		MEO	✓	✓
Galaxias occidentalis		FEO	✓	
Craterocephalus mugiloides				✓
Sillago burrus				✓
Pseudorhombus jenynsii				✓
Atherinomorus vaigiensis				✓
Acanthopagrus butcheri			✓	
Offshore waters		**EUFG**		
Mugil cephalus		MEO	✓	✓
Amniataba caudavittata		E	✓	✓
Acanthopagrus butcheri		E	✓	✓

Aldrichetta forsteri		MEO	✓	✓
Pelates octolineatus		MEO		✓
Rhabdosargus sarba		MEO		✓
Arripis georgianus		MEO		✓
Sillago schomburgkii		MEO		✓
Pomatomus saltatrix		MEO		✓
Gerres subfasciatus		MEO		✓
Sphyraena novaehollandiae		MS		✓
Pseudorhombus jenynsii		MEO		✓

* Estuarine usage functional groups: E, solely estuarine; MEO, marine estuarine-opportunist; MS, marine straggler; FEO, freshwater estuarine-opportunist; EF, estuarine & freshwater; E, solely estuarine; EM, estuarine & marine; MEO, marine estuarine-opportunist)

Appendix 9. Access Management Plan for Toby Inlet

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14. ENGINEERING AND WORK SERVICES REPORT

14.1 Leeuwin Naturaliste 2050 Cycling Strategy prepared by the Department of Transport

SUBJECT INDEX:	Leeuwin Naturaliste 2050 Cycling Strategy
STRATEGIC OBJECTIVE:	Cycle ways that connect our communities and provide alternative transport choices.
BUSINESS UNIT:	Design and Survey
ACTIVITY UNIT:	Engineering & Works Services
REPORTING OFFICER:	Transport Sustainability Officer - Carolyn Ryder
AUTHORISING OFFICER:	Director, Engineering and Works Services - Oliver Darby
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Leeuwin Naturaliste 2050 Cycling Strategy⇩

PRÉCIS

This report seeks Council acknowledgement of the Department of Transport's (DoT) Leeuwin Naturaliste 2050 Cycling Strategy (the Strategy) as a key reference document for planning and delivery of future cycling and shared path infrastructure. The Strategy includes an action plan outlining 18 recommended priority actions to be progressed over the next five years. Integrating these priorities will strengthen future applications through DoT's Regional Bicycle Network (RBN) Grants Program.

BACKGROUND

The City of Busselton and Shire of Augusta Margaret River have delivered several strategically important cycling projects, however cycling in some areas remains unappealing due to the network's lack of coverage, connectedness and separation from motorised traffic.

The Strategy, funded by the DoT and developed by Consultants WSP Parsons Brinkerhoff, is designed to help guide investment in cycling in the Leeuwin – Naturaliste subregion with the purpose of:

- addressing key opportunities which may have previously been overlooked, particularly in relation to future land use and transport developments.
- helping to guide investment between neighbouring local governments, and between local government and state government.
- facilitating the planning and development of long-distance (interregional) cycling routes, especially those which connect with other regions and subregions.
- ensuring that the standard of future cycling facilities meets current best-practice.

The development process included consultation with the community, government agencies, Shire of Augusta Margaret River and City of Busselton staff at the project inception, and on completion of the Strategy prior to finalisation.

The Strategy contains a total of 18 priority actions identified for the City, recommended for completion within a timeframe of between 2-5 years, with the actions helping to inform future investment through the Regional Bike Network (RBN) Grants Program. The current grant funding ratio is 50:50, shared by the City and the DoT.

STATUTORY ENVIRONMENT

The following legislation contains relevant sections for consideration:

Land Administration Act 1997

Section 55 Property in roads, etc.

(2) Subject to the Main Roads Act 1930 and the Public Works Act 1902, the local government within the district of which a road is situated has the care, control and management of the road.

Local Government Act 1995

Section 3.51 Affected owners to be notified of certain proposals

Section 3.54 Reserves under control of a local government

Main Roads Act 1930

Section 15 Property in and control of main roads

(1) The absolute property in the land over which a highway or main road is declared shall vest in the Crown.
(2) The Commissioner shall have the care, control and management of the land over which a highway or main road is declared.

RELEVANT PLANS AND POLICIES

The City has been progressing a review of the 2010 Bike Plan to develop the Cycling and Shared Path Network Plan 2018-2022. This document once finalised will guide staff in the provision of key Shared Path infrastructure for the community at both a local and strategic network levels.

FINANCIAL IMPLICATIONS

Adoption of the recommendation to receive and acknowledge the Leeuwin Naturaliste 2050 Cycling Strategy has no financial implications.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

There are no direct Long Term Financial Plan (LTFP) implications associated with the report recommendation to receive and acknowledge the Leeuwin Naturaliste 2050 Cycling Strategy.

In the longer term, there may be opportunities to co-fund higher-level strategic projects, which may present LTFP implications.

STRATEGIC COMMUNITY OBJECTIVES

The Strategy aligns to Key Goal Area 5 – Transport of the City's Strategic Community Plan 2017 and specifically achievement of Community Objective 5.3: *Cycleways that connect our communities and provide alternative transport choices.*

RISK ASSESSMENT

The recommendations contained within this report are not considered to present any risks of a medium or greater level.

CONSULTATION

In developing the Strategy, consultation was undertaken with key stakeholders and the local community. This consultation endeavoured to establish the overarching aims and objectives for the Strategy, as well as identification of key routes, together with the requirements of different user groups.

Consultation was undertaken via two community "drop in sessions" conducted in the morning and evening within both the Shire of Augusta Margaret River and the City of Busselton districts, and attended by 100 people. In addition the community were invited to provide written submissions.

Various other government and non-government stakeholders were also consulted, including:

- South West Development Commission
- Department of Biodiversity, Conservation and Attractions
- Department of Local Government, Sport and Cultural Industries
- Main Roads WA
- Public Transport Authority
- Water Corporation
- Department of Water and Environmental Regulation
- Tourism WA
- Margaret River Busselton Tourism Association
- Road Safety Commission
- The National Trust WA
- WestCycle

Input was also sought and provided from the WA Trails Reference Group and WABN Implementation Reference Group.

The Strategy was presented to elected members in February 2018, prior to being released for public comment for a period of three weeks. The draft document was made available online, hosted by both the City Busselton and Shire of Augusta Margaret River's YourSay digital feedback platforms. One hundred and seventy five submissions were received and these guided the finalisation of the Strategy.

OFFICER COMMENT

The Strategy is intended to create a blueprint for connecting a future regional network, and identifies some projects that are aspirational in nature.

The action plan also identifies several priority actions that were identified in consultation undertaken by the City in development of its draft Cycling and Shared Path Network Plan 2018-2022.

It is recommended that the Strategy is acknowledged as a guiding / reference document. It is important that before any proposed cycling infrastructure project within the City's path network is considered, it is subject to a robust scoring matrix and thorough evaluation of its cost versus benefits.

CONCLUSION

The Strategy will assist the City in its planning by acting as a key reference document for planning and delivery of future cycling and shared path infrastructure.

OPTIONS

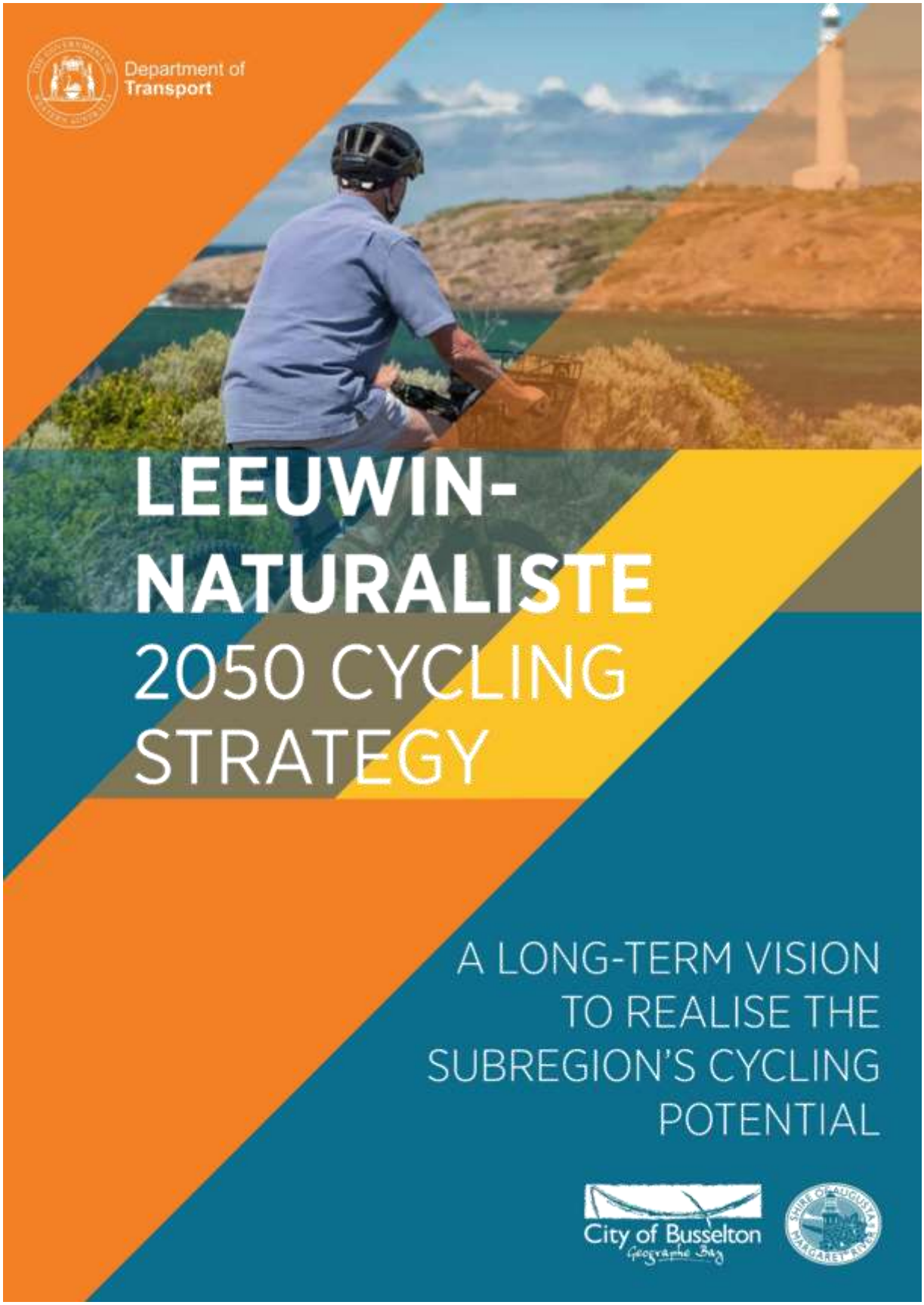
That Council does not receive or acknowledge the Leeuwin Naturaliste 2050 Cycling Strategy and does not consider the document as key reference material for planning and delivery of cycling and shared path infrastructure.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

There are no implementation actions should the Officer Recommendation be endorsed.

OFFICER RECOMMENDATION

That Council receives and acknowledges the Leeuwin Naturaliste 2050 Cycling Strategy as a key reference document for planning and delivery of cycling and shared path infrastructure.


Department of Transport
LEEUWIN-NATURALISTE
2050 CYCLING STRATEGY
A LONG-TERM VISION TO REALISE THE SUBREGION'S CYCLING POTENTIAL
City of Busselton
Geographe Bay

EXECUTIVE SUMMARY

Cities and towns with high levels of cycling enjoy a range of economic, environmental and social benefits. Not only is cycling proven to reduce traffic congestion and improve air quality, it also helps to create more vibrant and welcoming communities. Cycling can facilitate new forms of industry (such as cycle-tourism) and more generally, it enables people to live happier, healthier and more active lives. Fundamentally, increasing cycling mode share is about improving quality of life – something that is critical for attracting and retaining people in regional areas.

The key to increasing cycling mode share is providing infrastructure which is not only safe and convenient, but also competitive against other modes of transport. To achieve this, cycling needs to be prioritised ahead of other modes in appropriate locations and integrated with adjoining land use. If we are serious about reducing car dependency and helping people make better choices for short trips, these priorities need to be reflected in the way our communities are planned.

Over the past five years, the City of Busselton and Shire of Augusta Margaret River have delivered several strategically important cycling projects. There are already great examples of cycling facilities around the subregion - such as the coastal shared path linking Busselton to Dunsborough and the completed section of the Wadandi Track linking Cowaramup to Witchcliffe. However, cycling in some areas remains unappealing due to the network's lack of coverage, connectedness and separation from motorised traffic. This strategy sets out a blueprint for connecting, enhancing and extending the region's cycling infrastructure through the development of an interconnected network of off-road shared paths and trails, protected on-road bike lanes and low-stress residential streets. Opportunities to improve safety for road cyclists are also considered in this strategy.

This long-term, aspirational strategy has been developed by the Department of Transport in collaboration with the City of Busselton, Shire of Augusta Margaret River and the South West Development Commission. It is accompanied by a short-term action plan that reflects the priorities shared by local and State Government.

The *Leeuwin-Naturaliste 2050 Cycling Strategy* will help inform future investment through the Regional Bicycle Network Grants Program and potentially other funding sources.

In developing this strategy, extensive consultation has been undertaken with key stakeholders and the local community. Not only did the consultation help to refine the overarching aims and objectives of the strategy, it also clarified the community's expectations in terms of where key routes are most needed and the requirements of different user groups.

There are a number of opportunities to create world-class cycling facilities in the Leeuwin-Naturaliste subregion. Major new road projects planned for the outskirts of Busselton, Dunsborough and Margaret River will provide important opportunities to deliver parallel walking and cycling facilities. Improving access to the subregion's river and coastal foreshores will further enhance recreational cycling experiences for local residents, and help showcase some of the region's best natural assets to visitors and tourists. There are also several opportunities to establish long-distance and inter-regional cycling routes, which will help enable the Leeuwin-Naturaliste subregion to position itself as a world-class cycle-tourism destination. In all instances, it is important that future cycling routes are developed in a sustainable manner, preserving the unique environmental and heritage values of the subregion.

The *Leeuwin-Naturaliste 2050 Cycling Strategy* outlines how the subregion can realise its full cycling potential, leading to a healthier, happier and more engaged community.



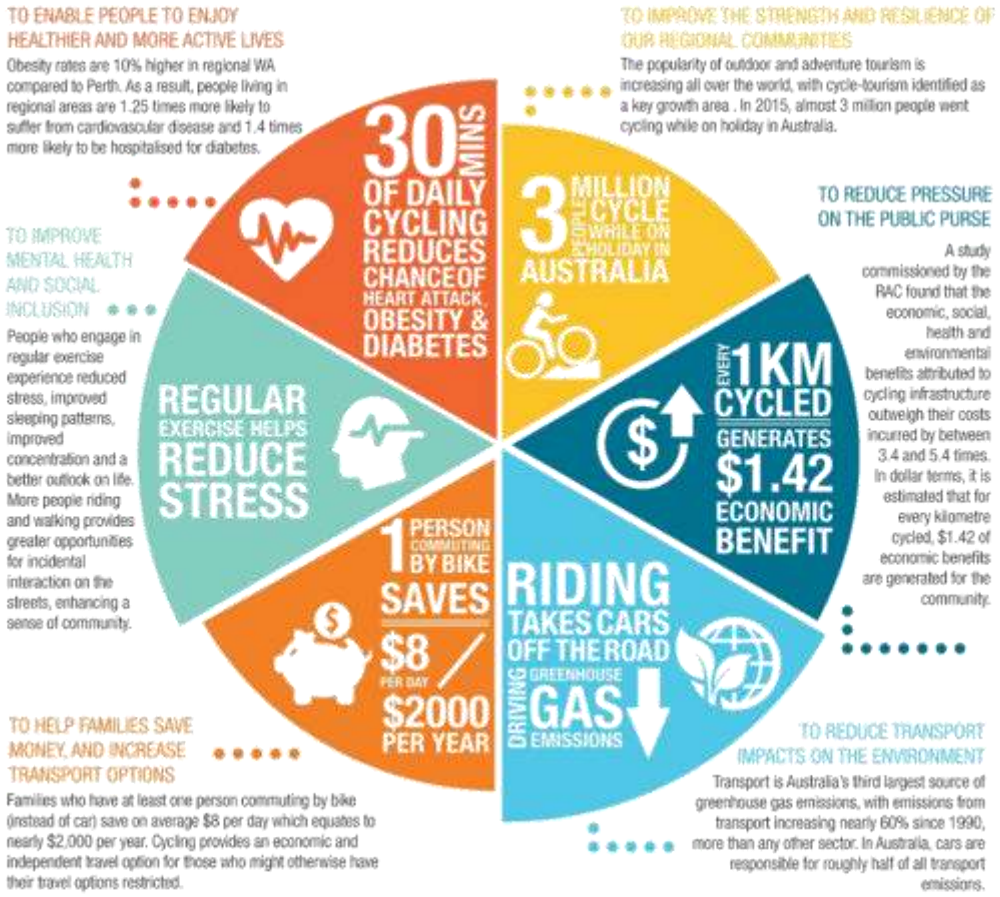
Figure 1.1 The south west corner of WA is well positioned to become one of Australia's best regions for long-distance cycling.



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WHY DO WE WANT MORE PEOPLE CYCLING



TO ENABLE PEOPLE TO ENJOY HEALTHIER AND MORE ACTIVE LIVES

Obesity rates are 10% higher in regional WA compared to Perth. As a result, people living in regional areas are 1.25 times more likely to suffer from cardiovascular disease and 1.4 times more likely to be hospitalised for diabetes.

TO IMPROVE MENTAL HEALTH AND SOCIAL INCLUSION

People who engage in regular exercise experience reduced stress, improved sleeping patterns, improved concentration and a better outlook on life. More people riding and walking provides greater opportunities for incidental interaction on the streets, enhancing a sense of community.

TO HELP FAMILIES SAVE MONEY, AND INCREASE TRANSPORT OPTIONS

Families who have at least one person commuting by bike (instead of car) save on average $8 per day which equates to nearly $2,000 per year. Cycling provides an economic and independent travel option for those who might otherwise have their travel options restricted.

TO IMPROVE THE STRENGTH AND RESILIENCE OF OUR REGIONAL COMMUNITIES

The popularity of outdoor and adventure tourism is increasing all over the world, with cycle-tourism identified as a key growth area . In 2015, almost 3 million people went cycling while on holiday in Australia.

TO REDUCE PRESSURE ON THE PUBLIC PURSE

A study commissioned by the RAC found that the economic, social, health and environmental benefits attributed to cycling infrastructure outweigh their costs incurred by between 3.4 and 5.4 times. In dollar terms, it is estimated that for every kilometre cycled, $1.42 of economic benefits are generated for the community.

TO REDUCE TRANSPORT IMPACTS ON THE ENVIRONMENT

Transport is Australia's third largest source of greenhouse gas emissions, with emissions from transport increasing nearly 60% since 1990, more than any other sector. In Australia, cars are responsible for roughly half of all transport emissions.

1. INTRODUCTION

1.1 Guiding principles

The *Leeuwin-Naturaliste 2050 Cycling Strategy* sets out a long-term vision to create a safe, direct, comfortable and integrated cycling network for the subregion. The proposed network, which connects people to activity centres and key attractions, has been developed to facilitate cycling for transport, recreation and tourism purposes. Cycling disciplines that are dependent on purpose-built facilities (such as BMX parks, downhill mountain bike trails and velodromes) typically perform non-transport functions, and are therefore not considered in this strategy.

This document is one of three 2050 cycling strategies covering the South West region. These strategies are:

- the Leeuwin-Naturaliste subregion, comprising the City of Busselton and Shire of Augusta Margaret River (this document);
- the Bunbury-Wellington subregion, comprising the City of Bunbury and the shires of Capel, Collie, Dardanup, Donnybrook-Balingup and Harvey; and
- the Warren-Blackwood subregion, comprising the shires of Nannup, Manjimup, Boyup Brook and Bridgetown-Greenbushes.



The guiding principles

The networks proposed in each of these strategies have been developed based on the following principles:

Safe: The 2050 cycling network should be built to a standard which reflects the "8 to 80" design philosophy. People of all ages should be able to cycle safely to the places they need and want to go. Unprotected cycling facilities located on busy roads are not considered suitable for vulnerable road users, and will not encourage more people to cycle, more often.

Connected: Like a road network, all cycling routes should connect to something at each end (whether that is a destination or another cycling route).

Widespread: In suburbs and towns, the network should be extensive enough for people to safely assume they can get to their destination without encountering hostile traffic conditions. When cycling networks reach a certain level of density it enables families to live comfortably without a second car.

Legible: The cycling network needs to be both intuitive and direct. To achieve this, it makes sense to locate major cycling routes parallel to natural land forms such as rivers and coastlines or within existing road and rail corridors. The development of coherent wayfinding initiatives is also important in supporting legibility.

Aspirational: Given the long-term nature of this strategy, several ambitious ideas have been put forward to help position the Leeuwin-Naturaliste subregion as one of Australia's best regions for cycling. This includes several long-distance cycle-tourism routes as shown in Figure 1.1.

Achievable: For the most part, the proposals put forward in this strategy adopt tried-and-tested planning principles. The case studies chosen provide local, interstate and international examples of similar projects undertaken in recent years.

The "8 to 80" design philosophy is about creating people-oriented towns and cities which are suitable for everyone. It is based on the notion that if you design a cycle path for example, which caters for the needs of an 8 or 80 year old, it is likely to be suitable for everyone.

1.2 Leeuwin-Naturaliste in context

The Leeuwin-Naturaliste subregion, comprising the City of Busselton and the Shire of Augusta Margaret River is home to approximately 51,000 people. The subregion is bordered by the Bunbury-Wellington subregion to the north and the Warren-Blackwood subregion to the south and east.

The study area and regional settlement hierarchy are shown in Figure 1.2. The area has a broad economic base which comprises of the mining, manufacturing, construction, tourism, agriculture and professional services sectors.

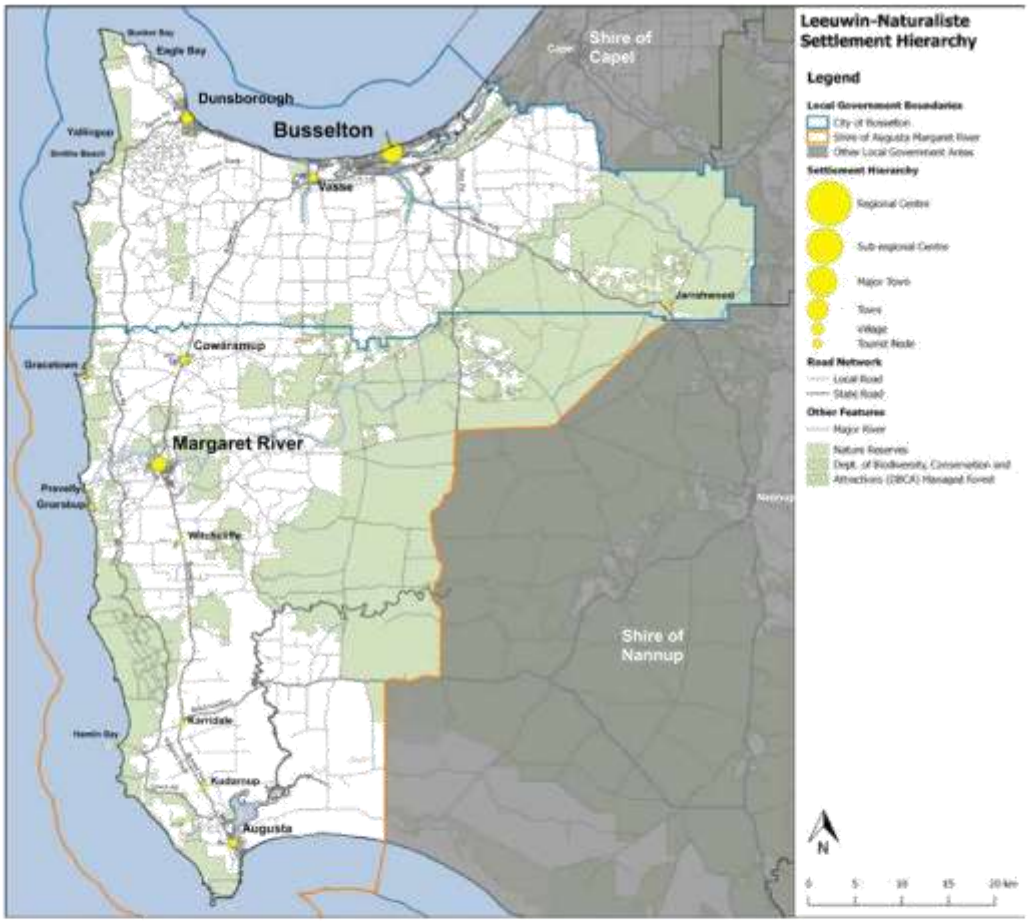


Figure 1.2 The Leeuwin-Naturaliste subregion and settlement hierarchy.[1]

[1] *Settlement hierarchy as per the Draft Leeuwin-Naturaliste Subregional Planning Strategy (2017)*

Busselton is the principal commercial and administrative centre for the subregion. Located approximately 52 km south-west of Bunbury and 230 km south of Perth, the city has a population of over 22,000 people (37,000 in the local government area) making it the third largest regional city in Western Australia. In terms of transport, the city is serviced by several major road links including Caves Road, Bussell Highway and Vasse Highway. The City is also home to the Busselton-Margaret River Regional Airport, which is expected to expand significantly over the coming years, allowing it to cater for direct interstate and international flights.

Margaret River is the second largest town in the subregion and the primary administrative and service hub for the Shire of Augusta Margaret River. The shire has a population of around 14,000 (6,300 in Margaret River town) and covers an area of approximately 2,240 km^2 which includes 120 km of coastline. The shire is linked to the City of Busselton via Caves Road and Bussell Highway and is one of Western Australia's most visited regions for international, interstate and intrastate tourists.

1.3 The need for a long-term regional cycling strategy

This strategy is designed to help guide investment in cycling in the Leeuwin-Naturaliste subregion over the next three decades. Other reasons for preparing this strategy include:

- to address key opportunities which may have previously been overlooked, particularly in relation to future land use and transport developments;
- to help guide investment between neighbouring local governments, and between local government and State Government;
- to facilitate the planning and development of long-distance (inter-regional) cycling routes, especially those which connect with other regions and subregions;
- to ensure that the standard of future cycling facilities meets current best-practice; and
- to adopt a consistent approach with other 2050 cycling strategies being developed for other Western Australian regions, and particularly those being developed for the Bunbury-Wellington and Warren-Blackwood subregions.



1.3.1 Expected changes in population

Over the past decade the City of Busselton and the Shire of Augusta Margaret River have both achieved strong growth, increasing by 10,000 and 3,000 residents respectively. Although it is difficult to accurately forecast the subregion's population over the long-term, the extrapolation of existing growth trends indicates that the subregion could be home to an additional 45,000 people by the year 2050 (as shown in Figure 1.3 below).

1.3.2 Expected changes in land use

Much of the City of Busselton's population increase is expected to occur to the south of the Vasse-Wonnerup wetlands system, in new urban growth areas such as Yalyalup, Vasse Newtown, Dunsborough Lakes, Port Geographe, Airport North, Ambergate North Broadwater and South Broadwater[3].

New residential subdivisions in the Shire of Augusta Margaret River are likely to occur on the outskirts of the Margaret River, Augusta, Cowaramup and Witchcliffe townships, with most of this future residential growth expected to occur in the new development areas of Rapids Landing and Brookfield[4].

Land use is expected to intensify in both the Busselton and Dunsborough activity centres. Subject to growth conditions, new commercial centres may also develop in Yalyalup, Vasse Newtown and Ambergate North. In addition, revitalisation projects are planned for the Busselton, Dunsborough and Yallingup foreshores.

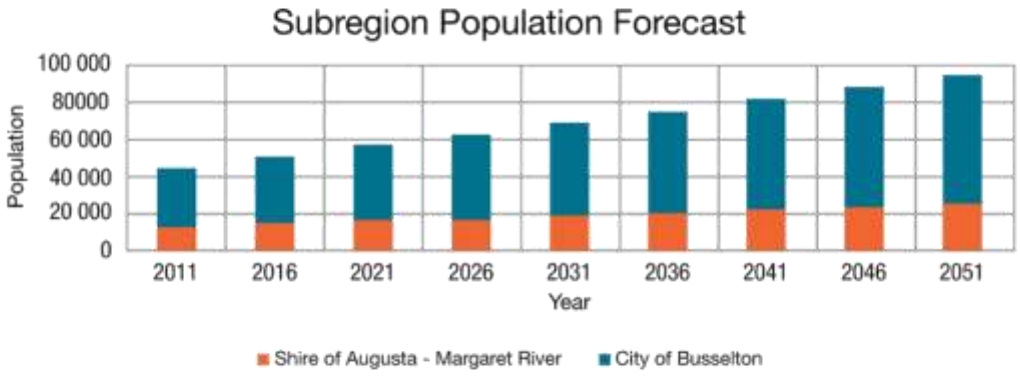


Figure 1.3 If current trends continue, the population of the Leeuwin-Naturaliste subregion could reach nearly 100,000 people by the year 2050.[2]

[2] *Population data based on upper ("Band E") forecasts provide by WA Tomorrow (2015)*
[3] *Future Busselton 2050*
[4] *Shire of Augusta Margaret River Local Planning Strategy (2017)*

1.3.3 Expected changes to transport

Some or all the following major transport projects are likely to be delivered prior to 2050.

- City of Busselton:
  - Upgrades to Busselton-Margaret River Regional Airport catering for interstate and international flights (currently underway)
  - The development of a Busselton Outer Bypass
  - The development of an eastern link connecting Causeway Road to Peel Terrace via a new road bridge
  - The development of a new road linking Busselton and Dunsborough (notionally referred to as the Vasse-Dunsborough Link)
  - A potential passenger rail service between Busselton and Perth (via Bunbury)
- Shire of Augusta Margaret River:
  - The development of the Margaret River Perimeter Road (under construction) – removing heavy vehicles and through traffic from Margaret River's town centre
  - The redevelopment of Margaret River's main street

With each of these major projects, appropriate consideration must be given to the provision of quality cycling facilities, noting that it can be difficult (and prohibitively expensive) to retrofit them at a later stage.



Figure 1.4 Major road and rail projects provide important opportunities to establish long-distance and high-quality walking and cycling facilities.

1.3.4 Relationship with other documents

The *2014-2031 Western Australian Bicycle Network (WABN) Plan* identifies the need to review cycling facilities in WA's regional centres. Although many regional local governments have their own local bike plans, it is recognised that there is a need to develop long-term regional strategies which have an aspirational focus and, where appropriate, span across entire regions or subregions. Key objectives of this process include improving connections to activity centres and schools, identifying inter-regional routes and harnessing the potential of cycle-tourism.

Funding applications for the development of key strategic projects within these areas can be made through the Regional Bike Network (RBN) Grants Program.

The RBN Grants Program makes funds available for the planning, design and construction of cycling infrastructure by local governments in regional WA, with funding matched on a dollar-for-dollar basis with local governments.

Long-term cycling strategies such as this one do not preclude local governments from preparing their own local bike plans. Local bike plans will remain important for identifying short-term priorities such as upgrades to existing infrastructure and maintenance requirements. They are also important for outlining strategies around the activation of cycling infrastructure, behaviour change and education.



Figure 1.5 Relationship between the WABN Plan, this document and local government bike plans.

1.4 Background research and analysis

In preparing this strategy several documents were reviewed pertaining to land use and transport in the Leeuwin-Naturaliste subregion. Combined with extensive stakeholder engagement, these documents were critical to understanding each local government's current approach to bike planning. A list of these documents is contained in Appendix B.

1.4.1 Mapping of current and future trip generators

Before commencing the development of the network, a mapping exercise was undertaken whereby all existing and known future trip attractors were mapped. Trip attractors are defined as any place that someone could reasonably be expected to need or want to cycle to and include things like schools, shopping centres, industrial areas, tourist destinations, health campuses and sporting precincts. The trip attractors are shown in the maps contained in Section 3.

1.4.2 Review of the existing cycling network

The Leeuwin-Naturaliste subregion has several examples of high-quality cycling infrastructure, including the Geographe Bay and Margaret River-Prevelly shared paths (refer to Figure 1.6 below). Busselton, in particular, has a better cycling network than most regional centres in Western Australia. Despite this, the subregion's cycling network is not mature enough (in terms of coverage, connectivity and separation from motorised traffic) to enable cycling to be a preferable transport mode for many people.

1.4.3 Analysis of crash data

The most recent five-year crash statistics (2013–2017) were obtained from Main Road Western Australia's (Main Roads) Crash Analysis Reporting System (CARS). Both pedestrian and cyclist crash data was obtained, noting that areas which are dangerous for pedestrians are often also dangerous for cyclists. An analysis of this data is provided in Appendix B.



Figure 1.6 The Geographe Bay (top) and Margaret River-Prevelly (bottom) shared paths are examples of high-quality, "8 to 80" cycling infrastructure which enable people of all ages and abilities to ride for transport and recreation.

1.4.4 Analysis of GPS travel data

The GPS mapping tool, Strava Labs, was used to better understand which parts of the subregion's road and path networks are most heavily utilised by cyclists. Strava is a website and mobile app which is used to track athletic activity via GPS. Despite the usefulness of this information, it should be noted that GPS travel data is typically representative of people who cycle for training or high-intensity recreational purposes. An analysis of this data is contained in Appendix B.

1.4.5 Community consultation

Consultation with the local community was central to the development of the *Leeuwin-Naturaliste 2050 Cycling Strategy*. The objectives of the consultation were to:

- help refine the overarching aims and objectives of the strategy;
- gain an understanding of the community's expectations when it comes to cycling infrastructure, as well as the needs of different user groups;
- reveal the major issues and missing links associated with the subregion's existing cycling network;
- provide the community with the opportunity to share their ideas; and
- seek local buy-in and ongoing community support for the strategy.

The consultation was carried out in two distinct phases. Phase 1 was undertaken shortly after the project commenced and involved several informal drop-in sessions. Community members were also able to provide written submissions to contribute to the development of the strategy. Phase 2 consisted of a public comment period. A detailed analysis of the community consultation undertaken is contained in Appendix C.

1.4.6 Stakeholder consultation

This strategy has been developed in collaboration with the South West Development Commission (SWDC), the City of Busselton and the Shire of Augusta Margaret River. Consultation was undertaken with various other government and non-government stakeholders, including:

- Department of Biodiversity, Conservation and Attractions
- Department of Local Government, Sport and Cultural Industries
- Main Roads
- Public Transport Authority (PTA)
- Arc Infrastructure
- Water Corporation
- Department of Water and Environmental Regulation
- Tourism WA
- Margaret River Busselton Tourism Association
- Road Safety Commission
- The National Trust
- WestCycle

Input has also been provided from the WA Trails Reference Group and WABN Implementation Reference Group both of which include additional stakeholders and interest groups.



2. REGIONAL ROUTE HIERARCHY

A hierarchy comprising five types of cycling route has been adopted for this strategy. An important aspect of the hierarchy is that unlike many traditional cycling infrastructure plans, routes are defined primarily by function, rather than built form. The key differences between the five types of route are explained below, with a quick-reference summary table provided in Appendix A.

2.1 Primary routes

Primary routes form the backbone of Leeuwin-Naturaliste's 2050 cycling network. Sometimes referred to as freeways for bikes, primary routes afford cyclists with safe and generally uninterrupted journeys. Primary routes should be completely separated from motorised traffic meaning major road and rail corridors, and river and ocean foreshores tend to be the most practical locations for these types of facilities.

In terms of built form, primary routes predominantly consist of high-quality shared paths at least 3 m in width. In high pedestrian use areas, it may be necessary to provide separate pedestrian and cycling facilities. To ensure high levels of rideability and legibility, red asphalt is usually the preferred surface treatment. An important consideration for shared paths is managing safety and ensuring etiquette between different users.



Shared path parallel to a major road



Shared path parallel to a rail corridor



Shared path along river foreshore



Shared path along coastal foreshore

Figure 2.1 Primary routes form the backbone of urban cycling networks and allow cyclists to safely undertake long, uninterrupted journeys.

2.2 Secondary routes

Secondary routes are typically located within urban or built-up environments. The aim of these routes is to provide users with access to and from important trip attractors such as major shopping centres and industrial areas, as well as education, health and sporting precincts.

In most cases, secondary routes are located adjacent to arterial roads and take the form of protected on-road bike lanes. Going forward, it is important the design of all new cycling infrastructure (including secondary routes) incorporates the "8 to 80" design philosophy. To ensure that on-road cycling infrastructure is safe and attractive to such a wide range of users, separation in the form of kerbed medians is desirable to minimise the interaction between cyclists and vehicular traffic – particularly on busier roads.

Where this is not possible softer measures such as painted hatching, mountable plastic kerbing or flexible bollards can be considered, however these treatments are normally only acceptable in low speed environments. In some cases, off-road shared paths are the best option for secondary routes

Unlike primary routes, secondary routes do not necessarily provide users with uninterrupted journeys. Due to this, it is important that appropriate consideration is given to the design of secondary routes at all intersecting roads, but particularly those controlled by either traffic signals or roundabouts. Where possible, priority should be given to the cycling route at intersecting minor roads and driveways.



Bike lane protected with concrete kerb



Protected bi-directional bike lane



Bike lane separated with mountable plastic kerbing



Shared path with priority over intersecting driveways

Figure 2.2 Secondary routes are typically found in busy, built-up environments, and can consist of either on-road or off-road cycling infrastructure.

2.3 Local routes

The objective of local routes is to collect cycling traffic from local residential areas and distribute it to secondary and primary cycling networks. Local routes are also used by cyclists to access a range of lower-order destinations such as local shops and parks. The look and feel of local routes is distinctively different from primary and secondary routes.

Examples of local route treatments include:

- 30 km/h safe active streets which adopt "self-explaining street" and "filtered permeability" urban design principles (refer to Section 4.5 for additional information);
- very quiet suburban streets, communicated using sharrows and other signage or way finding;
- sections of shared path (normally linking two or more quiet streets together); or
- on-road bike lanes (but only on quiet roads with low traffic volumes and where posted speed limits are less than or equal to 50 km/h).

In many cases, a local route may include two or more types of treatment. When this is the case, the transition from one type of facility to another needs to be carefully considered.



30 km/h safe active street



Residential street with sharrows[1]



Shared path linking two quiet streets together



One-way slow point with bicycle-bypass facilities

Figure 2.3 Local routes are typically used in connecting residential areas with higher-order cycling facilities.

[1]*Sharrows are pavement markings which assist cyclists in road positioning and alert motorists to presence of people on bikes*

2.4 Tourist trails

Tourist trails are long-distance, predominantly unsealed trails which are typically used to connect towns. Unlike downhill mountain biking trails, tourist trails are non-technical in design. While there is some level of crossover, tourist trails provide users with a more passive cycling experience.

In some cases, tourist trails cater for other types of user including bushwalkers, horse-riders and (occasionally) motorbike-riders. On such trails, it is essential that paths are managed appropriately to ensure the safety and satisfaction of all user groups.

In terms of their built form, tourist trails should ideally be wide enough to allow two people to ride side-by-side. As they are often located in remote locations, it is important that wayfinding signage is used to direct users to, from and along the route.

Tourist trails are often constructed along the alignments of disused or closed railways; commonly referred to as rail trails. Other potential corridors for tourist trails include watercourses (such as rivers, drains and irrigation channels), utility corridors (such as electricity, gas or water supply), as well as fire breaks and other tracks through forested areas including nature reserves and national parks.

Depending on land ownership, the planning, design, construction and maintenance of tourist trails is typically led by local government or the Department of Biodiversity, Conservation and Attractions. Funding is usually sought through the Department of Local Government, Sport and Cultural Industries or Lotterywest. Other government agencies such as DoT and Tourism WA can assist in the planning, design and promotion of these facilities.



Trail along river foreshore



Trail along closed railway



Trail within utility corridor



Trail along firebreak

Figure 2.4 Long-distance, predominantly unsealed tourist trails play an important role in connecting towns. They can also be used in areas where higher standard facilities cannot be justified or where they would spoil the natural environment.

2.5 Road cycling routes

Cycling is one of the most popular forms of recreation in Australia, ranking third for males and fifth for females[6]. There are two broad types of recreational cyclist in WA – leisure cyclists and sports cyclists. While investment has traditionally been directed towards providing infrastructure which supports leisure cycling, there is an emerging need to provide routes which cater for the needs and aspirations of people cycling long distances for training, sport or recreational purposes. This type of cycling, which is often undertaken by groups or clubs, is commonly carried out on rural and semi-rural roads which tend to feature nice scenery, challenging terrain and low traffic volumes.

Around WA there is a growing need to review the key routes being used by road cyclists in order to improve their safety and experiences. Initiatives may include shoulder widening, pull-off bays, advisory signage, or electronic flashing warning signs which detect when groups of cyclists are using certain sections of road. A detailed assessment is required in partnership with cycling bodies and groups to determine appropriate locations and preferred safety measures, which will likely differ from route to route.

Further supporting the safety of road cyclists in WA is the introduction of safe passing legislation. From 30 November 2017, a driver of a motor vehicle must pass a bicycle travelling in the same direction at a safe distance (1 m on roads with a posted speed limit of under 60 km/h and 1.5 m on roads over 60 km/h.) While legislation for passing safely has always existed in Western Australia, these amendments to the *Road Traffic Code 2000* clarify the minimum distance a driver must keep between their vehicle and a cyclist when overtaking. The results of the two-year trial will be evaluated by the Road Safety Commission in 2020.



Road cycling is often undertaken in groups or clubs



Advisory signage (Western Australia)



Advisory signage (Victoria)



Dynamic flashing warning lights (Victoria)

Figure 2.5 Road cycling routes are predominantly used by people riding for training, sport or recreational purposes over longer distances and can consist of advisory measures such as signage and electronic flashing warning lights.

[6] http://www.abs.gov.au

3. PROPOSED NETWORK

3.1 Overall network

The key features of the proposed 2050 Leeuwin-Naturaliste cycling network are shown in Figure 3.1. They include:

- a dense core of primary, secondary and local routes in the main population centres of Busselton, Dunsborough, Margaret River and Augusta;
- the completion of the Wadandi Track (extending north to Busselton, and south to Augusta);
- additional tourist trails linking Witchcliffe to Nannup (through the State forest) and Wonnerup to Jarrahwood (via the disused Ruabon-Tutunup rail reserve); and
- primary routes to popular coastal destinations including Yallingup, Gracetown, as well as the Cape Leeuwin and Cape Natualiste lighthouses.

The exact alignments of some routes may change following further feasibility assessment and consideration of local environmental, heritage and engineering constraints. Of particular relevance to the South West region are public drinking water source areas. Prior to the development of paths or trails in these areas it is critical that appropriate consultation is undertaken with the Department of Water and Environmental Regulation.

3.2 Busselton

The routes proposed for Busselton's 2050 cycling network are shown in Figure 3.2, and include:

- a system of primary routes forming a loop around Busselton's urban area (extending from Vasse to Wonnerup);
- a series of north to south connections linking the Geographe Bay and Busselton Bypass shared paths, along various corridors including drains and key arterial roads;
- a third east-west primary route along the northern side of the Vasse-Wonnerup wetlands system;
- new secondary routes providing access to Busselton-Margaret River Regional Airport and various urban expansion areas located south of the Busselton Bypass;
- a dense grid of secondary routes in Busselton's CBD providing access to shops, community facilities and other key destinations; and
- a series of local routes within suburban areas providing people with access to higher-order cycling facilities.

The exact alignments of some routes may change following more detailed investigation. An example of this is the Geographe Bay Shared Path where it would be desirable for the ultimate alignment to follow the coastline more closely.



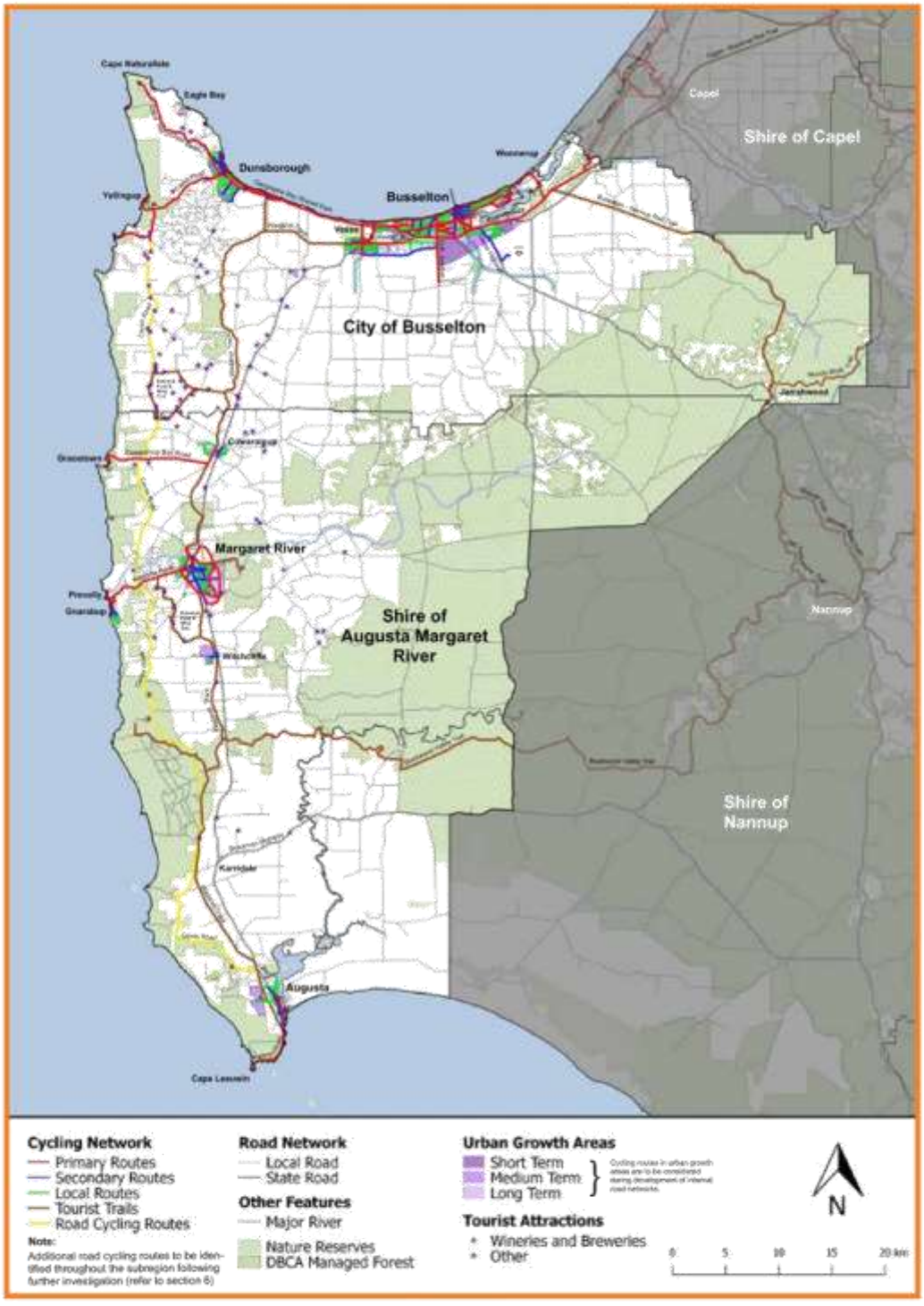


Figure 3.1 Proposed 2050 cycling network for the Leeuwin-Naturaliste subregion.

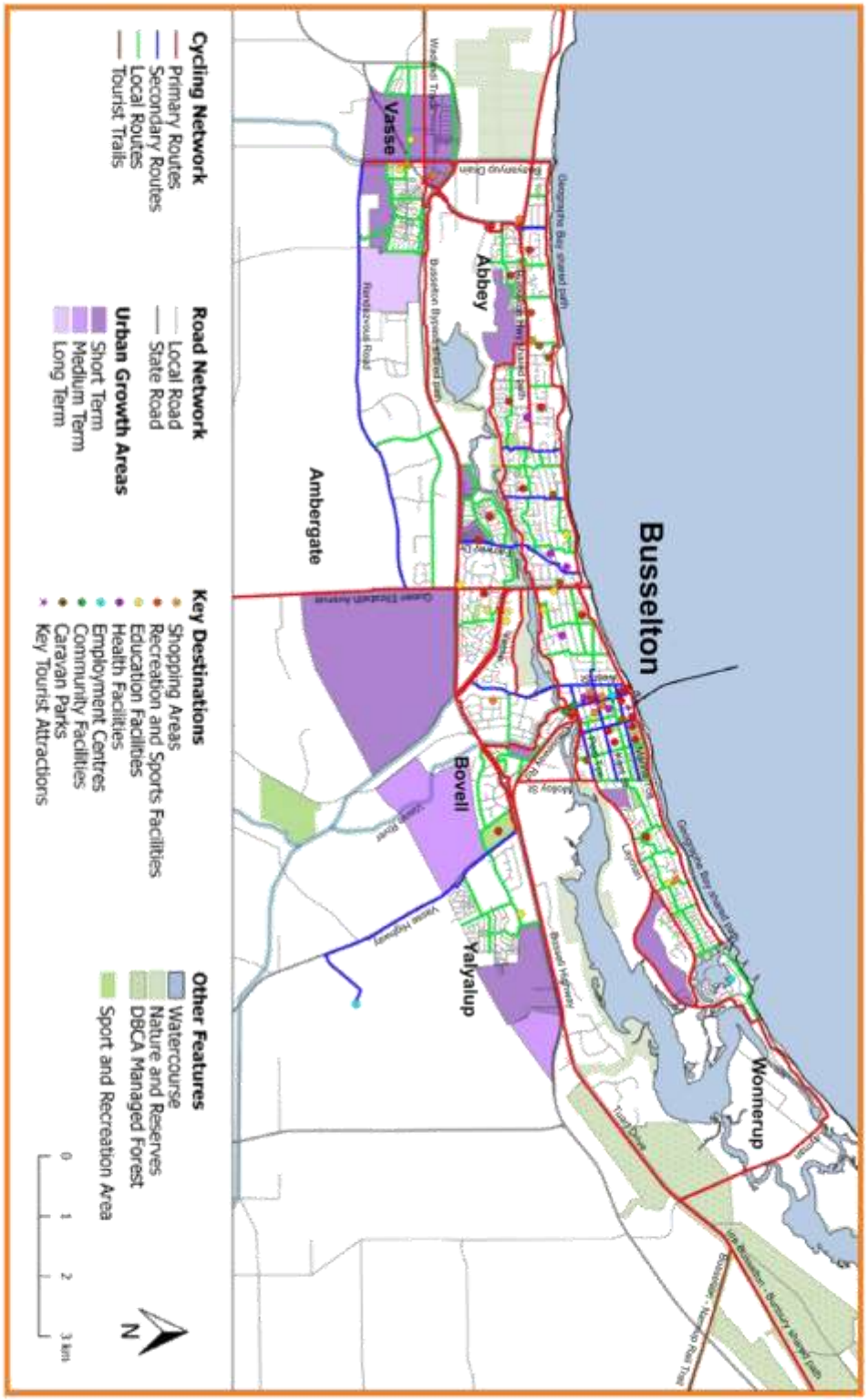


Figure 3.2 Proposed 2050 cycling network for Busselton.

3.3 Dunsborough

The routes proposed for Dunsborough's 2050 cycling network are shown in Figure 3.3, and include:

- new primary routes extending west to Yallingup (via Caves Road), east to Toby's Inlet footbridge (via Caves Road) and north to Cape Naturaliste (via Cape Naturaliste Road);
- several secondary routes along key urban roads around Old Dunsborough including Naturaliste Terrace, Gifford Road and Dunn Bay Road; and
- local routes linking residential areas to higher-order cycling facilities.

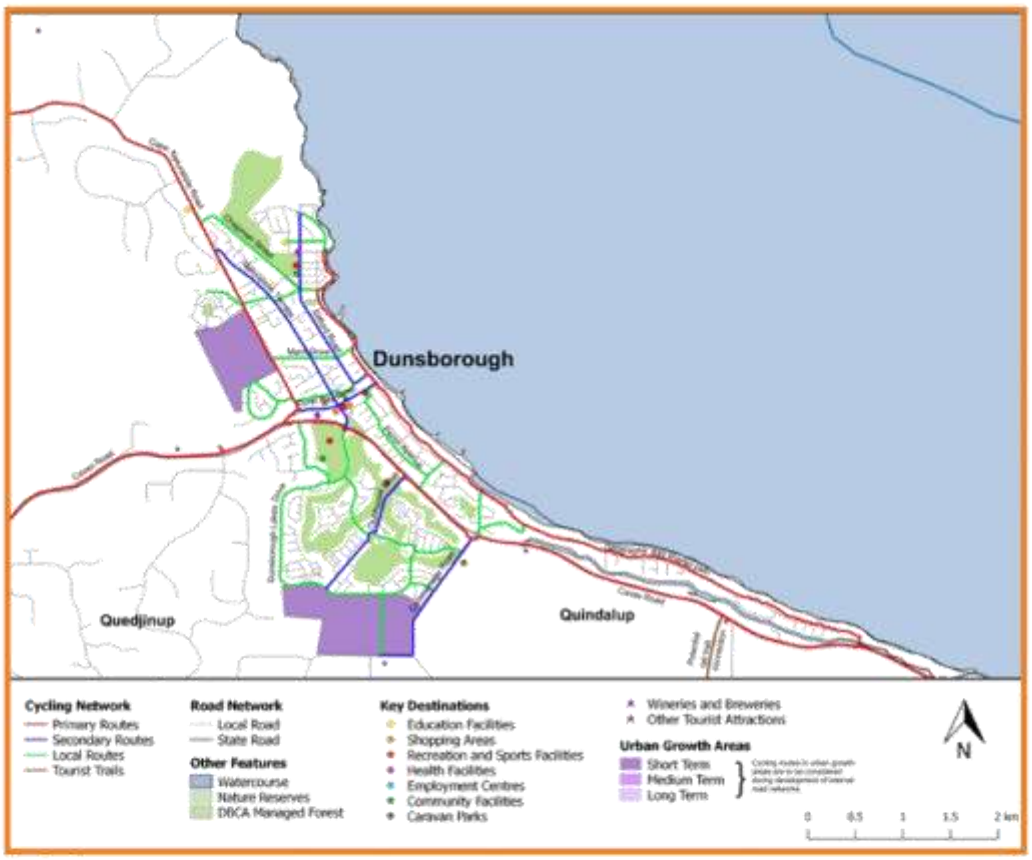


Figure 3.3 Proposed 2050 cycling network for Dunsborough.

3.4 Margaret River, Prevelly, Gnarabup and Witchcliffe

The key features of Margaret River, Prevelly, Gnarabup and Witchcliffe's proposed 2050 cycling networks are shown in Figure 3.4. These include:

- a 15 km long primary route loop encircling the Margaret River town centre which makes use of existing trails along River View Drive and Darch Road, as well as the section of the Wadandi Track located between Carters Road and Wilkes Road;
- a secondary route along Bussell Highway (extending from the Rotary Park to Rosa Brook Road) providing people with access to Margaret River's shops and community facilities;
- a primary route adjacent to Carters Road linking Margaret River's town centre to The Pines and Compartment 10 mountain biking trail heads (a feasibility study is required to determine the exact alignment given the terrain and potential impact on rare flora, endangered fauna habitats and native vegetation);
- secondary routes along key urban roads including Forrest Road, Willmott Avenue, John Archibald Drive and Station Road;
- extensions of the Margaret River-Prevelly Shared Path to Margaret River mouth and Gnarabup beach; and
- a number of local routes linking residential areas to higher-order cycling facilities.



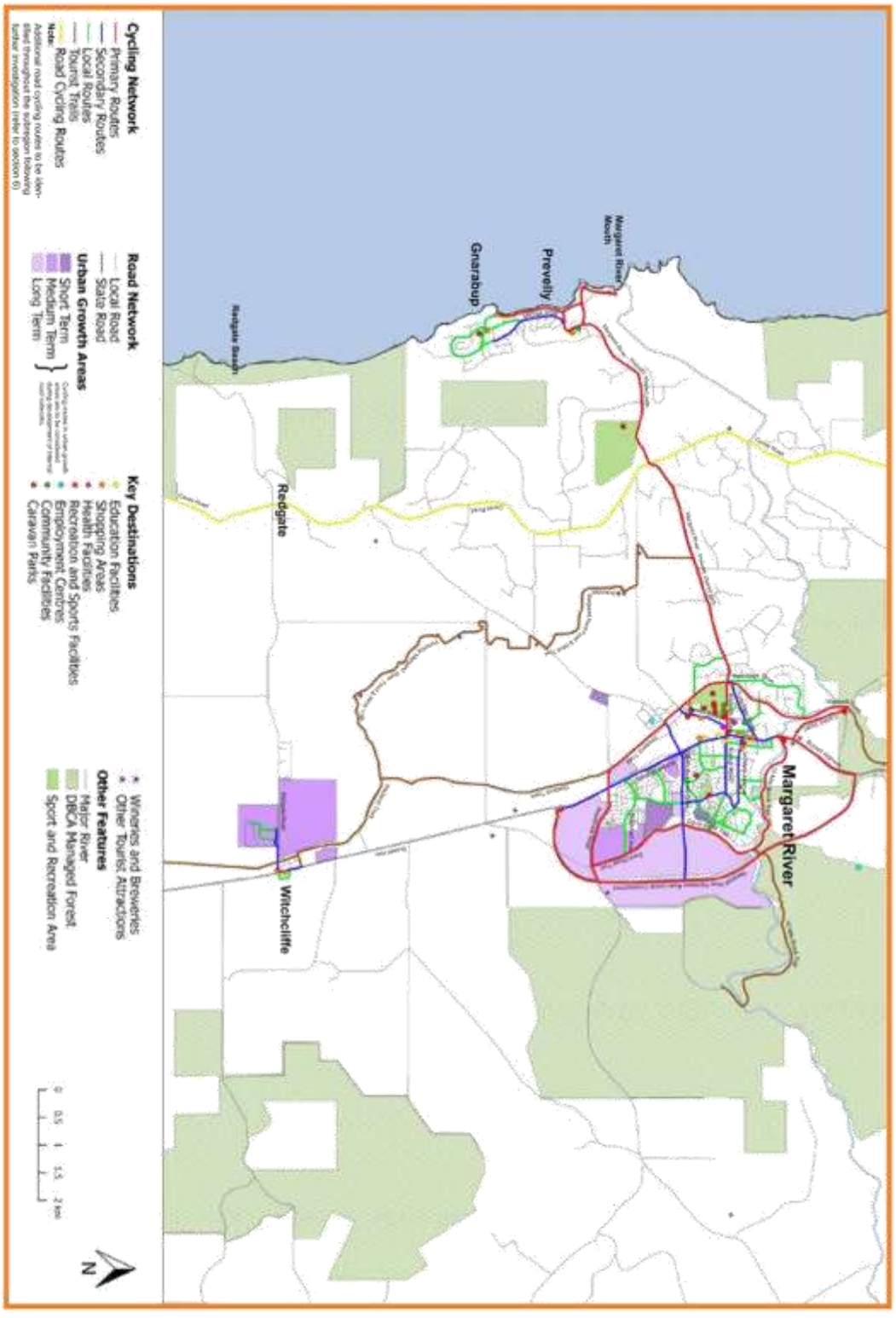


Figure 3.4 Proposed 2050 cycling network for Margaret River, Prevelly.

3.5 Cowaramup and Gracetown

The key features of Cowaramup and Gracetown's proposed 2050 cycling networks are shown in Figure 3.5. These include:

- a primary route linking Gracetown to the Wadandi Track along Cowaramup Bay Road - performing a similar function to the Margaret River-Prevelly Shared Path (a feasibility study is required to determine the exact alignment);
- a secondary route along the main street of Cowaramup (extending from Waverley Road to Roy Earl Drive) providing people with access to Cowaramup's shops and community facilities;
- a secondary route along Memorial Drive providing a safe link between the Cowaramup town centre and the town's western residential area (as well as the Wadandi Track); and
- two local route loops providing residents of east and west Cowaramup with access to higher-order cycling facilities.

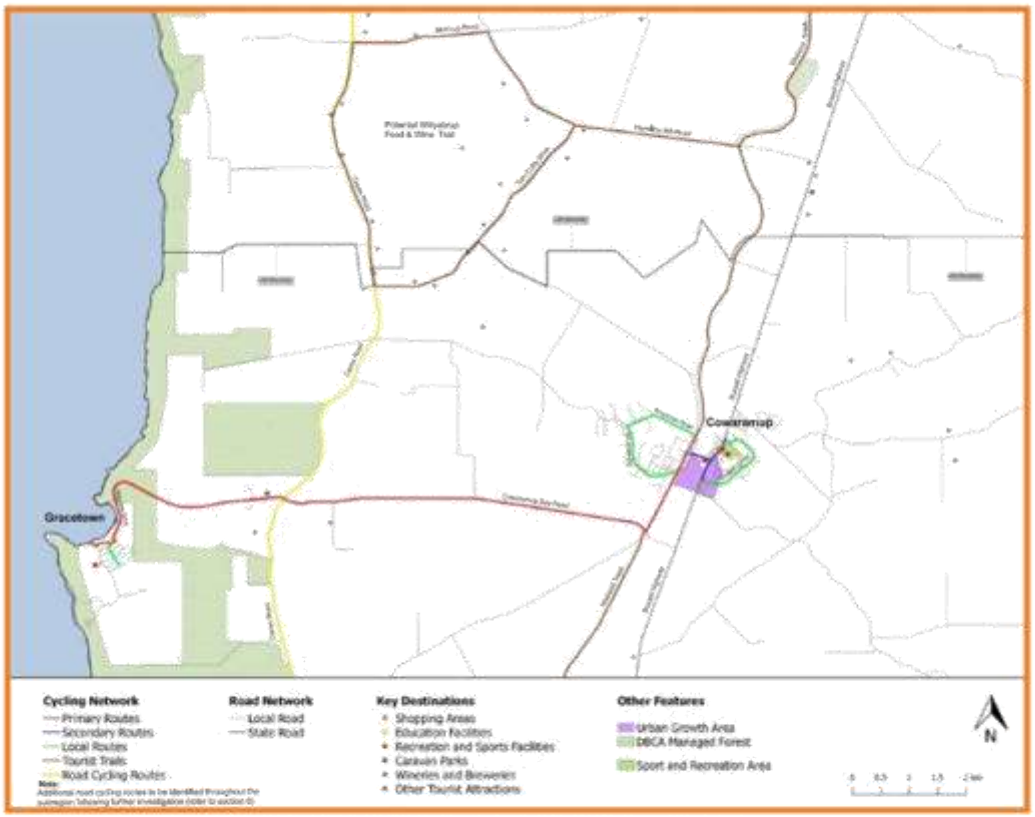


Figure 3.5 Proposed 2050 cycling network for Cowaramup and Gracetown.

3.6 Augusta

The key features of Augusta's proposed 2050 cycling network are shown in Figure 3.6. These include:

- a primary route extending from Augusta's town centre to the Cape Leeuwin Lighthouse. This link is proposed to follow the coast for the entire length and would provide access to Flinders Bay foreshore and caravan park (noting that the exact alignment and built form of this connection is still being determined);
- a secondary route along Bussell Highway/ Blackwood Avenue/Leeuwin Road extending from Caves Road to Davies Road, providing people with access to Augusta's shops and community facilities; and
- local routes providing people with access to higher-order cycling facilities (including the Wadandi Track).



Figure 3.6 Proposed 2050 cycling network for Augusta.

4. THE WAY FORWARD

4.1 Connecting people to places of education and employment

As the subregion's urban centres grow, it is imperative that activity nodes such as shopping centres, schools and industrial areas are serviced by safe and direct cycling facilities. The most direct way to connect activity centres is along arterial roads. Secondary routes (as defined in Section 2.2) are typically located along urban arterials and can take the form of either on-road (protected) bike lanes or off-road shared paths. In both cases, it is critical that they are of a standard which aligns with the "8 to 80" design philosophy.

4.1.1 Opportunity: improving cyclist safety within Busselton's town centre

Busselton has a flat topography and relatively compact layout which is well suited to cycling. Although there are some good existing linkages to the edge of the city centre, the CBD itself remains a relatively hostile environment for people on bikes. This lack of connectivity discourages many people from cycling for non-recreational purposes, which has a negative impact on cycling mode share across the entire city.

Providing a network of secondary routes along key streets in the Busselton town centre will help make cycling an attractive mode of transport for more people. It is particularly important that better access is provided to Queen Street and Kent Street, where many shops, services and community facilities are located – helping to boost the local economy. The analysis of the pedestrian and cyclist crash data highlighted how these streets are some of the subregion's most dangerous areas for vulnerable road users (see Appendix B1).



Figure 4.1 A system of secondary and local routes within Busselton's CBD would enable more people to cycle for utility and commuter purposes.

4.1.2 Opportunity: Reconfiguring Margaret River's main street

The construction of the Margaret River Perimeter Road (and associated downgrading of Bussell Highway) presents a unique opportunity to better cater for cyclists within Margaret River's town centre. The provision of dedicated cycling facilities along this important corridor has the potential to:

- improve safety for cyclists of all ages and experience levels, particularly children;
- reduce conflict between different groups of road users;
- provide a direct and legible connection between many important trip attractors including shops, schools and community facilities;
- increase support for local businesses and encourage additional business opportunities;
- improve the amenity of Margaret River's town centre by making it more about people; and
- reinforce Margaret River's reputation of being a leader in sustainability and eco-tourism.

The existing layout of Margaret River's main street (which consists of two traffic lanes, two on-street parking lanes and a central median) is wide enough to accommodate dedicated or protected cycling infrastructure.



Figure 4.2 Due to high traffic volumes and heavy vehicle traffic, the current configuration of Margaret River's main street is not conducive to cycling.

4.1.3 CASE STUDY: SCARBOROUGH BEACH ROAD AS A SECONDARY CYCLING ROUTE

Research shows that the biggest barrier preventing more people from cycling is safety. Major cities around the world – including New York, Vancouver and London – with large populations, high density land use and complex traffic issues, are now establishing dedicated and separated bike lanes to encourage more people to use bicycles for transport.

In 2015, the City of Vincent progressed with the installation of protected bike lanes along Scarborough Beach Road in Mount Hawthorn – a key arterial road connecting the Mount Hawthorn and North Perth activity centres. The project aimed to make the road safer and more pleasant for all users, while simultaneously improving the visual and social amenity of this important corridor.

The project involved the reallocation of two traffic lanes (one in each direction) between Fairfield and Charles streets in order to accommodate protected bicycle lanes, which are separated from traffic by kerbed median planting treatments. In addition, green pavement markings and head-start boxes[7] were provided at signalised intersections. A number of parking bays were embayed through reallocating verge space, while the provision of medians allowed over 100 street trees to be planted. Deciduous trees were chosen in order to help cool the streetscape in summer while providing access to sunlight in winter.



Figure 4.3 Protected bike lanes (such as these on Scarborough Beach Road) play an important role in enabling more people to cycle for non-recreational purposes.

[7] Head-start boxes are road markings at signalised intersections which allow cyclists to position themselves in front of other traffic

4.1.4 CASE STUDY: THE EMERGENCE OF E-BIKE TECHNOLOGY

Until recently, cycling has relied solely on human power. This has limited the distance and type of terrain most people are prepared to make on bicycle, especially when commuting to work or school.

E-bikes, or power-assisted bicycles, are fitted with small electric motors which provide mechanical assistance when pedalling. Under Australian road regulations, bikes sold for on-road use are limited to 250 watts, which enables them to travel at speeds up to 25 km/h.

In recent years, the popularity of e-bikes has increased significantly, with many people finding them a quick, affordable and convenient way of getting to and from work or school. What makes them especially appealing for commuting in Australia's hot climate is their ability to alleviate the need to take a shower or carry a change of clothes.

The 2050 bike network for the Leeuwin-Naturaliste subregion aims to capitalise on the potential of e-bikes, while recognising that regular (human-powered) cycling will continue to remain popular.



Source: RAC

Figure 4.4 E-bikes enable people to commute from further away without needing to take a shower or bring a change of clothes.

4.2 Harnessing the potential of rail corridors

The intrinsic characteristics of rail corridors make them especially appealing for cycling. Not only do they provide continuous and uninterrupted rights-of-way, they also have more gentle gradients and fewer street crossings compared to regular shared paths or on-road bike infrastructure.

Other benefits associated with co-locating cycling infrastructure within rail corridors include:

- highlighting the natural, cultural and heritage values of a local area;
- providing additional connections between towns and suburbs;
- increasing the profile of a region by opening up new business and tourism opportunities (which creates jobs and boosts local economies); and
- preserving historical transport corridors for potential future use, also known as railbanking.

The Leeuwin-Naturaliste subregion is home to several disused and closed railways. Opportunities to capitalise on these corridors include:

- linking Busselton to Augusta via the closed Busselton-Flinders Bay Railway, known as the Wadandi Track (refer to Section 4.2.1);
- linking Dunsborough to the Wadandi Track via the closed Yelverton Mill Tramway (refer to Section 4.2.1);
- linking Busselton to Capel (and beyond) via the disused Busselton-Bunbury Railway (refer to Section 5.1); and
- linking Busselton to Jarrahwood (and beyond) via the disused Nannup Branch Railway (refer to Section 5.2).

Rail trails are becoming increasingly popular in Australia and overseas, and have been proven to boost regional economies, create jobs and strengthen local communities.



Source: Rail Trails Australia

Figure 4.5 Providing walking and cycling facilities within or alongside railway corridors is a well-established concept in both Australia and overseas.

4.2.1 Opportunity: Completing the Wadandi Track

The Wadandi Track is a 23 km long, partially complete multi-use trail situated on the alignment of the former Busselton-Flinders Bay railway. The track, which currently extends between Cowaramup and Calgardup Road (just south of Witchcliffe) is becoming increasingly popular with both locals and tourists. A small section has also been constructed as part of the Vasse Newtown development.

Once complete, the track will extend all the way from Busselton to Augusta, providing a world-class recreational trail through the centre of one of Australia's largest and most scenic food and wine regions. There are currently more than 15 wineries located within 2 km of the track (refer to Section 4.2.1 which expands on the subregion's cycle-tourism potential) as well as many opportunities to showcase the area's cultural and heritage significance.

This strategy recognises the importance of the Wadandi Track in forming the north-south spine of the Leeuwin-Naturaliste subregion's future cycling network. In addition to linking the communities of Busselton, Cowaramup, Margaret River, Witchcliffe and Augusta, the completed Wadandi Track will help drive the development of spur trails providing connections to other towns in the subregion.

A potential alignment for one such spur trail is the Yelverton Mill Tramway. Established in the 1850s, the tramway was used to transport timber from Yelverton Mill to Quindalup Jetty until its closure in 1897.

An opportunity exists to repurpose the tramway's formation as a multi-use trail, providing a practical and historical connection between the Wadandi Track and Geographe Bay Shared Path.



Figure 4.6 When complete, the Wadandi Track will serve as the north-south spine of the Leeuwin-Naturaliste subregion's cycling network.

The 3.5 km link would extend north from Quindalup Siding, meeting Caves Road near the Xscape at the Cape Family Fun Park, approximately 5 km east of the Dunsborough town centre.

It is recognised that the land on which the tramway was formerly situated is mostly held by private landowners (some of whom are descendants of the tramway's original owner, Henry Yelverton). The City of Busselton's current position is that the wishes of these landowners be respected with regards to the ultimate use of this historical corridor.



Figure 4.7 The Yelverton-Quindalup Tramway formation could be used to provide an important connection between the Wadandi Track and the Geographe Bay Shared Path.

4.2.2 CASE STUDY: THE TOURISM POTENTIAL OF RAIL TRAILS

There is strong evidence supporting the economic and social benefits generated by rail trails for regional Australia. Although it is uncommon to charge access fees, users of rail trails contribute to the local economy in several other ways. In addition to food and hospitality industries, other businesses such as bike shops or those providing transport to and from trail heads can also benefit from the development of rail trails.

Rail trails also support slow travel – a term used to describe travellers who explore destinations more thoroughly, taking time to acquaint themselves with local people, culture and food. People who adopt the slow travel philosophy tend to report higher rates of spending compared to the average population.

As identified in the *Western Australian Cycle Tourism Strategy*, cycle-tourists are a highly valuable visitor due to their propensity to stay longer, travel outside of urban centres and spend more. In Australia, the average daily spend of a cycle-tourist is approximately $124 per day[5].

Some usage and economic statistics for a selection of Australia and New Zealand rail trails are provided in the below.

Rail trail example	Usage and economic statistics
Hauraki Rail Trail, New Zealand (opened in 2013)[7]	- Nearly 30,000 riders pass through Paeroa (a town on the trail) per annum. - It has been estimated that visitors spend an average of $172 per trip, up from $105 in 2012, with net expenditure between $2.1 and $3.3 million per annum. - Approximately 50 full time jobs have been created because of the trail. - 85 per cent of users are visitors to the region, with most being domestic visitors. - 80 per cent of users indicated that the rail trail was their main purpose of visit. - At least 50 per cent of users are in the 45 to 65 age bracket.
Otago Central Rail Trail, New Zealand (opened in 1994)[8]	- Nearly 15,000 people ride the trail end-to-end every year. In addition to this, it is estimated that 80,000 people use sections of the trail to commute or undertake short recreational rides. - The average age of riders is 45 for domestic and 37 for international. There is no significant difference between the number of male and female riders. - Most end-to-end users are first-time visitors to the area and spend an average of 3.8 nights in the region. - The largest international visitor market is from Australia, followed by Europe. Two thirds of domestic visitors are from the North Island of New Zealand. - In 2012 it was estimated that the trail created 120 full time jobs and contributed $12 million to the Central Otago economy per annum, creating business opportunities and energising small communities.
Murray to the Mountains Rail Trail, Victoria (opened in 2002)[8][9]	- Construction of the trail between Bright, Wangaratta and Beechworth was completed in 2002, with subsequent sections from Rutherglen to Wahgunyah and Wangaratta to Oxley completed in 2009 and 2011 respectively. - The trail attracts approximately 45,000 users per annum including walkers, with most people spending two or three days on the trail. - For the majority of visitors (59 per cent), cycling is the main reason for undertaking their trip to region. - In 2011 it was estimated that the trail contributed $26.2 million per annum in economic output to the region and created 23 full time jobs.

Usage and economic statistics of regional rail trails in Australia and New Zealand.

[5] *Western Australia Cycle Tourism Strategy (2018)*
[7] *Information on the HRT sourced from https://haurakirailtrail.co.nz/, https://www.tcdc.govt.nz, http://www.hauraki-dc.govt.nz*
[8] *Information on the OCRT sourced from http://www.otagocentralrailtrail.co.nz, http://www.northernriversrailtrail.org.au*
[9] *Information on the M2MRT sourced from https://www.railtrails.org.au, North East Victorian Tourism Gap Analysis (2012), North East Rail Trail Preliminary Demand and Economic Benefit Assessment (2014)*

4.3 Creating loops around urban centres

Loops are attractive for recreational cyclists as they enable people to undertake relatively long trips without doubling back. Loops also enable users to start and finish in the same location, which is especially important for people who do not have access to cars.

4.3.1 Opportunity: Busselton recreational loop

Busselton already has some excellent cycling infrastructure in the form of the Geographe Bay and Busselton Bypass shared paths, providing high-quality east-west connections across the city.

The completion of these paths presents an opportunity to create a 40 km loop which takes in the entire Busselton urban area.

This could be achieved by developing additional north-south linkages along Layman Road and the Buayanyup Drain (as shown in Figure 4.8) enabling people to ride safely between the two facilities.

This loop would serve the community by linking together old and new neighbourhoods as well as providing locals and visitors with a route which showcases the city's diverse range of coastal, forest, river and wetland landscapes, as well as tourist attractions and historical buildings, such as Wonnerup House.

Shorter loops could be created through the development of additional north-south connections along key corridors including Fairway Drive, Queen Elizabeth Avenue, the Vasse River Diversion Drain and Causeway Road.







Figure 4.8 A 40 km long recreational cycling loop could be developed around Busselton by linking together the Geographe Bay and Busselton Bypass shared paths.

4.3.2 Opportunity: Margaret River recreational loop

A similar opportunity to create a loop exists in Margaret River. This could be achieved by linking the Wadandi Track to existing trails along Darch Road and 10 Mile Brook. Such a route would take in some of the town's most popular tourist attractions including Rotary Park, 10 Mile Brook Dam and the The Pines mountain bike trail head, with possible links to wineries and other key attractions located on the outskirts of the town.

The footbridge being constructed as part of the Margaret River Perimeter Road will provide an important connection between the 10 Mile Brook and Darch Road Trails.

In the longer term, an outer-eastern loop could be developed along the Margaret River Perimeter Road (following further urban expansion in this area).

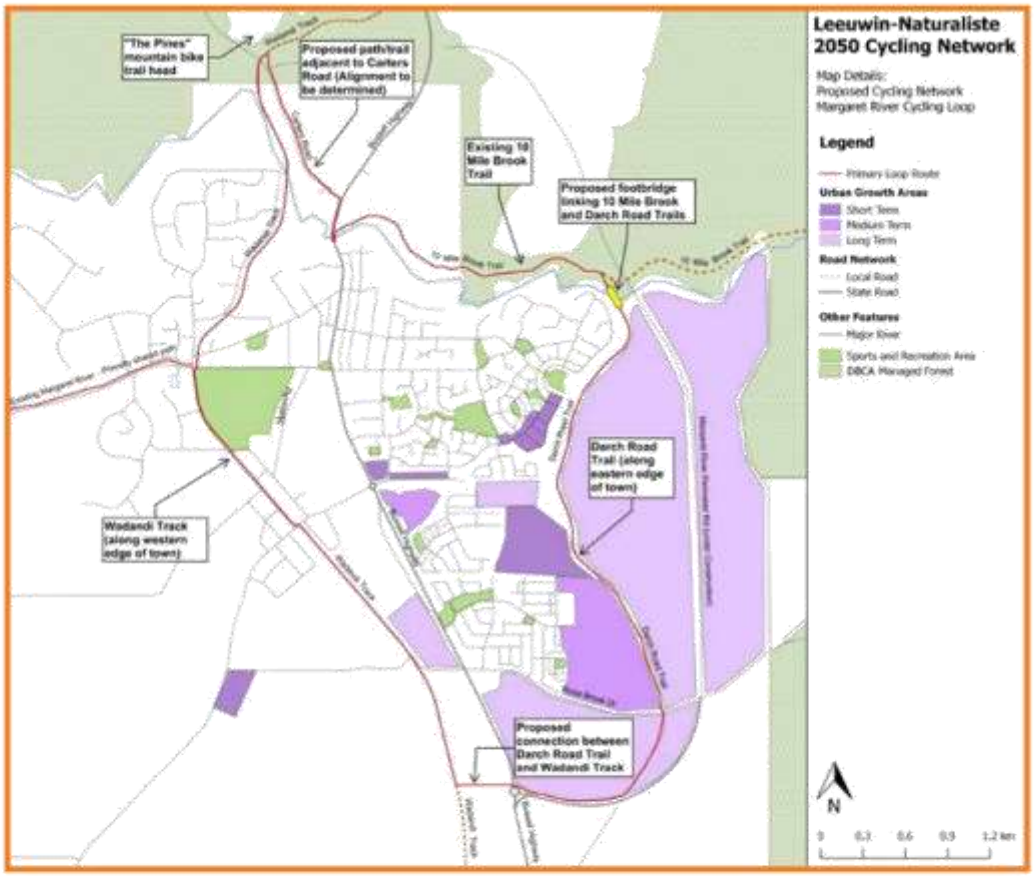


Figure 4.9 A 15 km long cycling loop around Margaret River could be achieved by linking the Wadandi Track to existing trails along Darch Road and 10 Mile Brook.

4.4 Making better use of drainage corridors

While urban stormwater drains and basins serve a functional purpose, they also have the potential to contribute to the urban amenity of local communities. The Drainage for Liveability Program is a joint initiative between the Water Corporation and Department of Water and Environmental Regulation which aims to enhance the community value of stormwater drains and basins across WA[12].

The development of walking and cycling infrastructure along drainage corridors is one of many ways in which these forgotten assets can help to improve the liveability of our suburbs and towns. Although a new initiative to WA, cycling infrastructure is commonly provided along drainage corridors both interstate and overseas.

4.4.1 Opportunity: Providing cycling infrastructure alongside Busselton's drainage corridors

Over the years, a number of drainage channels have been constructed around Busselton as a way of flood-proofing the city and making the surrounding farmland more productive.

An opportunity exists to make better of these corridors in creating key north-south linkages across Busselton. In addition to providing direct, flat and separated cycling connections, enhancing the visual amenity of the corridors will help achieve positive urban design outcomes for the city. The provision of all-weather paths along these drains may also help improve access for Water Corporation vehicles that occasionally require access for water-testing and maintenance purposes.

Key drainage corridors which may be suitable for cycling infrastructure include:

- the Vasse River Diversion Drain, providing a connection between Ambergate, Bovell, West Busselton and the Geographe Bay Shared Path;
- the Buayanyup Drain, providing a connection between Vasse Newtown, Abbey and the Geographe Bay Shared Path; and
- the Lennox River and/or Station Gully drain(s), providing a connection between the Wadandi Track and Geographe Bay Shared Path.





Figure 4.10 Busselton's urban drainage corridors provide a unique opportunity to create high-quality walking and cycling environments.

[12] https://www.watercorporation.com.au/water-supply/ongoing-works/drainage-for-liveability-program

4.4.2 CASE STUDY: MOONEE PONDS CREEK TRAIL

The Moonee Ponds Creek Trail (shown in Figure 4.11) is one of Australia's best-known examples of a shared path located within a drainage corridor. The trail, which runs through land managed by Melbourne Water and TransUrban starts in the Melbourne Docklands area and extends approximately 25 km north to Melbourne Airport, snaking its way under and around the City Link/ Tullamarine Freeway. The trail is popular with both commuters and recreational joggers and cyclists, with the lower section forming part of the Capital City Trail (a shared use path which circles Melbourne). Over 800 cyclists use the trail during a typical morning commute[13].

The trail takes in a range of different landscapes from urban and industrial areas to natural parkland. The trail surface is predominantly asphalt and concrete and is grade separated from the road network by a series of underpasses. While the path is occasionally closed due to flooding, it continues to evolve with revegetation programs enhancing the biodiversity and habitat of the original creek system. Further planned infrastructure upgrades to the trail include an express route to bypass indirect sections, a new bridge and additional shared path links providing more connections to the wider cycling network.







Figure 4.11 The Moonee Ponds Creek Trail follows the alignment one of Melbourne's most important urban drains.

[13] Bicycle Network Victoria

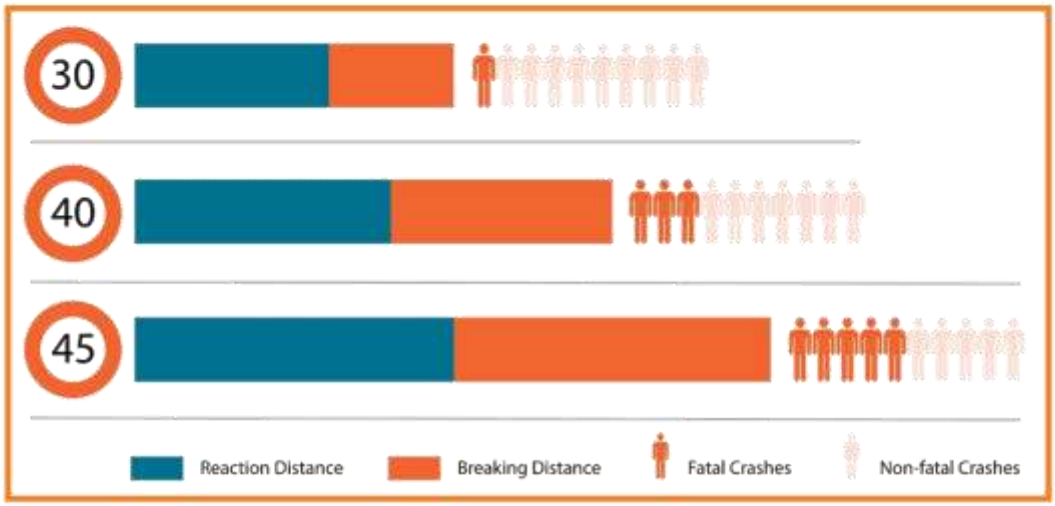
4.5 Re-engineering local streets to create low stress environments

Although relatively new to Australia, the concept of re-engineering local residential streets to reduce vehicle speeds to around 30 km/h is gaining traction in many parts of the world. Various studies have shown there is a clear relationship between 30 km/h speed limits and a significant reduction in the number, and severity, of accidents involving pedestrians and cyclists.

As shown in Figure 4.12, when impact speeds are less than 30 km/h the overwhelming majority of crash victims will survive, often sustaining only minor injuries. However, at 50 km/h, almost all crashes result in severe injuries and around half are fatal. At 70 km/h, more than 90 per cent of crashes involving vulnerable road users are fatal.

Other benefits of low speed residential street environments include:

- reducing rat-running[14] by non-local traffic;
- making crossing the road safer for children, the elderly, and people with disability;
- reducing noise and air pollution;
- increasing real estate values;
- improving the economic vitality of local areas; and
- creating a stronger sense of community.



Source: Auckland Transport

Figure 4.12 When impact speeds exceed 40 km/h the likelihood that a pedestrian or cyclist will survive a traffic crash reduces considerably.

It is expected that safe active streets will play an increasingly important role for cycling within residential areas. Safe active streets are local streets that have been modified in a way which makes on-road cycling a safe and attractive experience for people of all ages and experience levels. Sometimes called low stress cycling streets, this type of facility aims to provide a comfortable cycling experience while also returning local streets to the community.

[14] *A minor or local street used by motorists at peak times to avoid congestion on main roads*

The fundamental principles of safe active street design include:

- facilitating benign traffic conditions (using traffic calming measures to reduce traffic volumes and average vehicle speeds);
- creating filtered permeability (by strategically restricting some movements to just pedestrians and cyclists); and
- adopting self-explaining street principles (safe active streets should be designed in such a way that makes it intuitive to drive at low speeds, rather than relying on speed cameras or police enforcement).

In addition to reducing the urban heat-island* effect, trees and landscaping can also help pacify traffic in residential areas.





Road narrowing / lateral shift treatment



Mid-block road closure

Figure 4.13 In addition to making local residential streets quieter and more family-friendly, simple traffic calming treatments can encourage more people to walk or cycle for short trips.

* An urban heat island is an urban area or metropolitan area that is significantly warmer than its surrounding rural areas due to human activities

4.5.1 Opportunity: Linking the Vasse-Wonnerup Wetlands to the Geographe Bay Shared Path

A north-south safe active street corridor could be established to link the Geographe Bay and (potential future) Broadwater Nature Reserve shared paths. The proposed route (shown in Figure 4.14), consists of Dolphin Road, Dolphin Court and Grayteal Place, connected together with several short sections of shared path.

Consisting predominantly of wayfinding and minor upgrades, the corridor has the potential to be used as a demonstration project for further safe active street initiatives in the South West region. Much of the corridor is already paved with red asphalt, providing similarities with those demonstration projects recently undertaken in Perth. Careful consideration needs to be given to the crossing at Bussell Highway to ensure this is safe for cyclists and pedestrians.



Figure 4.14 A safe active street along Dolphin Court would provide a logical north-south connection between the Broadwater Nature Reserve and Geographe Bay shared paths.

4.5.2 CASE STUDY: SHAKESPEARE STREET, MOUNT HAWTHORN

WA's first safe active street - the Shakespeare Street Bike Boulevard - was completed in 2018. The facility runs for around 3 km between Shakespeare Street and Scott Street in Mount Hawthorn and includes connections to other cycle paths via Bourke Street and Richmond Street at the southern end of the route. The project was undertaken in two stages. The first stage, between Green Street and Scarborough Beach Road, was officially opened in December 2016, while the second stage south of Scarborough Beach Road to Richmond Street, was constructed in mid-2018.

Key elements of the project include:

- a new 30 km/h speed limit complemented by one-way slow points and speed cushions aimed at reducing vehicle speeds and traffic volumes;
- red asphalt with safe active street and 30 km/h pavement markings;
- reversal of stop or give way controls along the route to provide priority to cyclists where possible;
- improved crossing facilities, including at Scarborough Beach Road where wider traffic islands and a central median treatment are used to increase safety and highlight the presence of cyclists; and
- landscape enhancements to provide shade and improve the overall amenity of the street.

Connecting schools, parks and activity centres to higher-order cycling facilities, the Shakespeare Street project has been well received by the local community as well as cyclists travelling through the area on their way to Mount Hawthorn, Leederville and onwards towards the Perth CBD.

Project evaluation is ongoing however initial monitoring and data collection has shown a reduction in vehicle speeds and traffic volumes, and an increase in the number of cyclists and pedestrians using the street. The number of cyclists using the road (instead of footpaths) has also increased, indicating improved amenity for pedestrians.



Figure 4.15 The Shakespeare Street Bike Boulevard corridor connects schools, parks and other trip generators to higher-order cycling facilities.

4.6 Developing safe routes for road cyclists

There is an emerging need to develop road cycling routes for the subregion's local and visiting road cyclists. Road cycling routes (as described in Section 2.5) are typically conducive to rural and semi-rural roads which have low traffic volumes, scenic landscapes and changes in elevation. The road cycling user group does not typically require (or use) dedicated or protected cycling infrastructure along these routes, such as shared paths. There is an opportunity to review the key routes being used by road cyclists in order to improve safety and user-experience, as identified in the action plan (refer to Section 6).

4.6.1 Opportunity: Caves Road

One such route is Caves Road, linking Yallingup to Augusta is one route that is popular with cycling groups. The route runs through some of the most scenic parts of the Leeuwin-Naturaliste subregion and provides access to a number of wineries, caves and other tourist attractions.

Potential safety enhancements for Caves Road could include shoulder widening (particularly on uphill sections) and advisory signage. There may also be opportunities to consider other, more sophisticated measures such as time/day activated warning lights (similar to school zone signage) and button activated warning lights.

It should be noted that Main Roads has advised that it proposes to conduct a planning study (and form a community reference group) to investigate safety improvements to Caves Road (south of Yallingup). Sealing of shoulders has been suggested as a possible outcome.

Further consultation is required to identify the location and preferred treatments for road cycling routes throughout the Leeuwin-Naturaliste subregion, as outlined in Section 6 of this strategy.



Figure 4.16 Advisory measures such as warning lights could help improve cyclist safety along routes frequently used by road cyclists.

4.6.2 CASE STUDY: THE WOLF PACK ROUTE (GERALDTON)

The Road Safety Commission is currently working with the City of Greater Geraldton and Shire of Chapman Valley to improve outcomes for sports cyclists along the Wolf Pack Route as shown in yellow in Figure 4.17.

The initiative has involved installing static "Share the Road" signage along sections of the route to help raise awareness of cyclists and prevent and reduce conflict between cyclists and drivers.

Outcomes of the initiative will be evaluated by the Road Safety Commission and may result in the signage being installed along the entire route.

There may also be opportunities to install more sophisticated measures in the future, such as shoulder widening (particularly on uphill sections) and activated warning lights.







Source: Road Safety Commission

Figure 4.17 In Geraldton, a formalised road cycling route is in the early stages of development.

4.7 Capitalising on cycle-tourism

The popularity of outdoor and adventure tourism is increasing all over the world, with cycle-tourism identified as a key growth area[15]. In the year ending June 2016, 68 per cent of international visitors to Australia engaged in some form of nature-based activity, contributing $23 billion to the national economy[16]. The *South West Regional Planning and Infrastructure Framework* aims to broaden tourism opportunities in the South West by maximising the region's natural, cultural and economic resources.

By leveraging the growing popularity of cycle-tourism, the region can help to achieve this vision and position the area as a world-class outdoor and adventure tourism destination.

There are a number of factors which make the Leeuwin-Naturaliste subregion particularly conducive to cycle-tourism, including:

- picturesque scenery encompassing a diverse range of landscapes;
- a mild mediterranean climate, making outdoor recreation possible year-round;
- an abundance of wineries, breweries and other attractions (refer to section 4.7.1 below);
- short distances between towns, enabling people to undertake cycle touring without needing to carry camping equipment or food supplies;
- several existing mountain bike hubs, as well as a strong and active mountain biking community;
- the beginnings of a world-class rail trail, in the Wadandi Track; and
- several high-profile cycling events (including the Busselton Ironman, Cape to Cape MTB, X-Adventure and Pedal-Prix) which already attract cycling enthusiasts from both interstate and overseas.

This section demonstrates how cycle-tourism has been used successfully in diversifying tourism industries in other parts of Australia. While infrastructure is an important part of attracting visitors, marketing and promotion also play an integral role, as does the availability of information such as maps, wayfinding and digital resources.





Figure 4.18 The Leeuwin-Naturaliste subregion has the right ingredients to become a world-class cycle-tourism destination.

[15] *Global Report on Adventure Tourism (2014)*
[16] *WA Strategic Trails Blueprint (2017-2021)*

4.7.1 Opportunity: Developing a food and wine trail

With over 95 cellar doors, the Leeuwin-Naturaliste subregion is one of the largest and most concentrated premium wine producing regions in Australia[17]. The subregion also has a growing reputation as a gourmet produce and food destination.

Unlike some other wine regions, the Leeuwin-Naturaliste subregion is yet to capitalise on the potential of cycle-tourism and its ability to complement the food, wine and hospitality sectors. Currently, access to most producers is via either Caves Road or Bussell Highway, neither of which are conducive to safe cycling due to their high posted speed limits and traffic volumes.

As mentioned in Section 4.2.1, the Wadandi Track (although incomplete) has the potential to form the backbone of a world-class food and wine trail, with heritage interpretation, which weaves its way through the entire subregion. Providing access to the heart of the wine growing area, there are numerous wineries and breweries located either on, or within a short distance of the trail.

As the Wadandi Track is progressively developed, it is important that local government works closely with local businesses in determining how to fully capitalise on the cycle-tourism potential. This could involve the development of spur trails to enable people to ride safely to those wineries which are not directly adjacent to the track (refer to Willyabrup example in Figure 4.19). Other options may involve facilitating agreements between neighbouring businesses in creating links between cellar doors via internal roads, driveways or fire breaks.

A second potential food and wine trail has been identified to the south west of Margaret River. This trail, which makes use of existing tracks, driveways and firebreaks, connects the Wadandi Track (near Witchcliffe) to the Margaret River-Prevelly Shared Path (near Kevill Road), forming a 20 km loop. The trail's potential is highlighted in the network maps contained in Section 3. Further consultation with local businesses and tour operators is required.



Figure 4.19 Spur trails such as this one around Willyabrup could be developed to provide people with better access to areas with high concentrations of cellar doors.

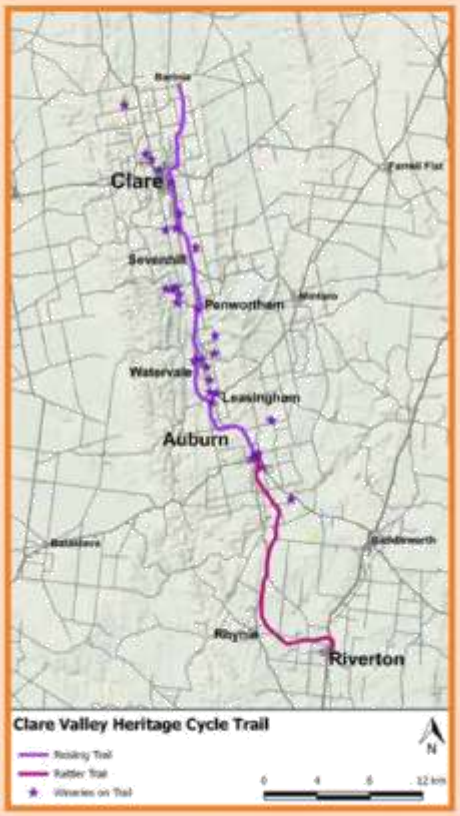
[17] https://www.margaretriver.com/eat-drink/wineries/

4.7.2 CASE STUDY:
BAROSSA AND CLARE VALLEY WINE TRAILS (SOUTH AUSTRALIA)

In recent years, two of South Australia's food and wine regions have developed world-class trails, enabling them to add another dimension to their tourism industries.

The Barossa Trail is a 42 km walking and cycling trail which links the towns of Tanunda and Gawler in South Australia. The trail is comprised of a combination of disused rail corridors, cycle paths and short on-road sections. The trail benefits from the Barossa Cycling Hub in Tanunda which provides bike hire, interpretive maps and end-of-trip facilities including toilets, change rooms and showers. The trail has averaged 320 trips per day since the hub's opening in 2015 and now supports several bike tour operators[18].

The Clare Valley Heritage Cycle Trail (also known as the Riesling Trail) is a 35 km walking and cycling trail in South Australia's Clare Valley wine region. The trail, which follows the alignment of the former Adelaide-Spalding Railway, connects Barinia to Auburn, passing through dozens of wineries and vineyards along the way. The trail has recently been extended 19 km south to Riverton, with this section known as the Rattler Trail. In 2016, the most popular parts of the trail recorded over 3000 users per month[19].



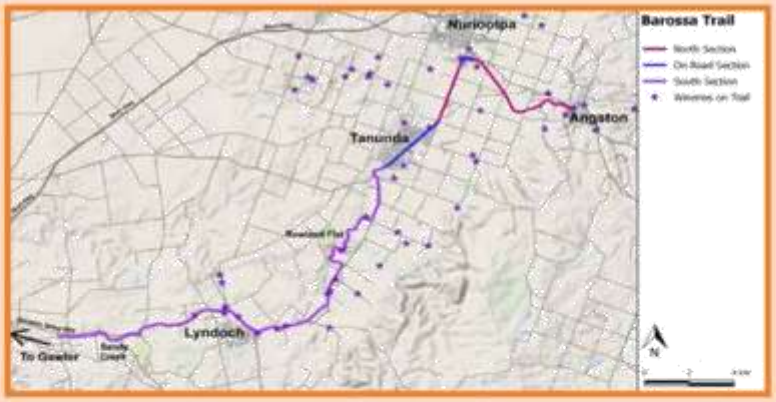


Figure 4.20 Cycle-tourism has added another dimension to South Australia's two most popular wine regions.

[18] http://theleadsouthaustralia.com.au/industries/tourism/cycling-trails-meet-grape-expectations-in-top-wine-region/
[19] http://rieslingtrail.com.au/wp-content/uploads/2014/09/NEWSLETTER-PRINTED.pdf

4.7.3 CASE STUDY: TASMAN GREAT TASTE TRAIL (NEW ZEALAND)

The Tasman Great Taste Trail is a 175 km walking and cycling loop located near Nelson on New Zealand's South Island. The trail opened in 2010 and is classified as one of New Zealand's 22 great rides. Marketed as a gourmet experience, there are over 30 wineries, restaurants and cafes on or in close proximity to the trail.

In 2016, approximately 96,000 people used the Tasman Great Taste Trail (of which 80 per cent were non-commuters), generating over NZ$6 million in revenue for the region. It is estimated that around 75 per cent of this economic activity was generated by the domestic tourism market[20]. In response to this success, the trail is being gradually extended.



Source: https://www.newzealand.au

Figure 4.21 The Tasman Great Taste Trail in New Zealand is heavily geared around promoting the region's food and wine industries.

[20] NZ Cycle Trail Evaluation Report (2016)

4.8 Getting cycling infrastructure right from the start

Retrofitting cycling infrastructure to existing urban areas can be slow and expensive. Due to this it is critical that new urban growth areas incorporate dense and interconnected cycling networks from the outset. When planning the street networks of urban developments, consideration should be given to:

- providing primary routes alongside all main roads, railways and watercourses;
- providing secondary routes along all urban arterials which is important for providing access to local shops, schools and community facilities; and
- providing local routes along all local access streets.

In terms of future greenfield developments, key opportunities for the Leeuwin-Naturaliste subregion include Ambergate, Bovell, Yalyalup East and Carbunup River, as well as various urban growth areas to the south and east of Margaret River.









Figure 4.22 When new developments adopt a safe and interconnected network of primary, secondary and local routes, cycling becomes an attractive and natural part of everyday life.

4.8.1 Opportunity: Vasse New Town

Over the next three decades it is likely that a number of new greenfield developments will take place in the Leeuwin-Naturaliste subregion. One such development is Vasse Newtown, located in the City of Busselton, approximately 10 km south-west of the Busselton town centre. Vasse Newtown has various features which will enable cycling to become a key mode of transport. These include:

- the Wadandi Track, which runs east-west through the centre of the development;
- proximity to the Busselton Bypass Shared Path (section of the Wadandi Track), providing a connection to the Busselton town centre;
- the Buayanyup Drain, which could be used to provide a north-south connection between the development and the Geographe Bay Shared Path; and
- the proximity of future major transport corridors such as the Busselton Outer Bypass and Vasse-Dunsborough Link.

DoT is working closely with the Department of Planning, Lands and Heritage and Western Australian Planning Commission to ensure that the new Design WA guidelines consider contemporary best-practices when it comes to the planning and design of cycling infrastructure in new developments.





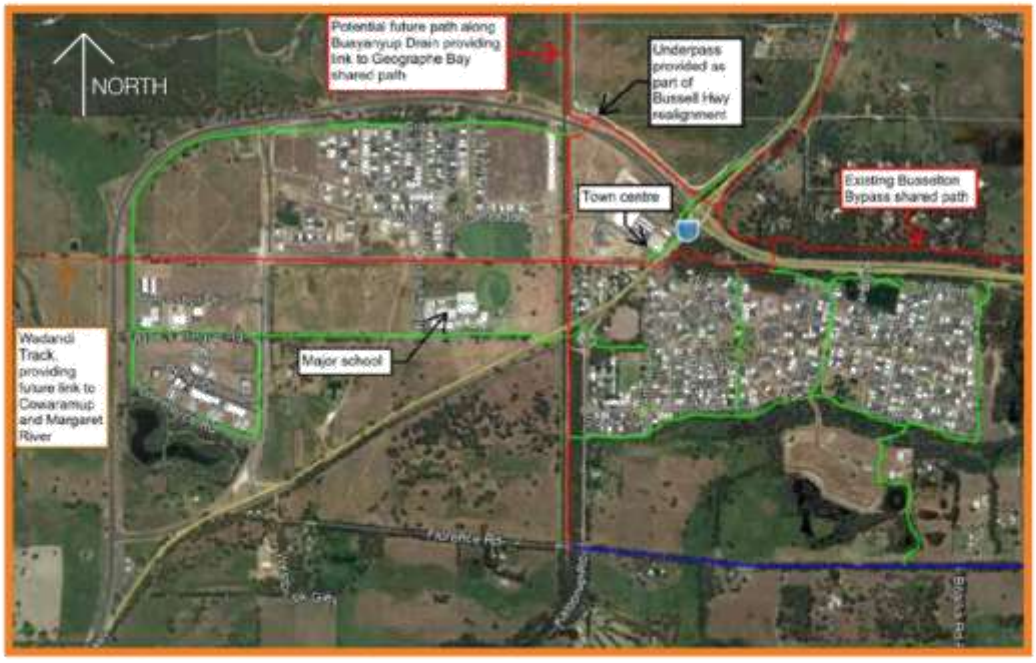


Figure 4.23 Vasse development and proposed cycling network.

4.8.2 CASE STUDY: LEARNING FROM THE BEST – DUTCH APPROACHES TO SUBURBAN DEVELOPMENT

Australia's suburbs (and particularly those developed from the 1960s onwards) have typically been designed in a way which makes car use the dominant mode of transport, even for very short trips. Design features such as 50 km/h speed limits along local streets, intersections with large radii and streets with non-contiguous or no paths contribute to reducing the appeal of walking and cycling.

Houten, a city in the province of Utrecht in the Netherlands is an exemplary model of low-density, suburban development. In the late 1960s, Dutch government officials recognised Houten – then a small town of a few thousand people – as a potential area for major population growth. Unlike other suburban developments taking place at that time planners carefully prioritised pedestrians and cyclists over cars.

The defining feature of Houten is the extensive use of filtered permeability which discourages people from making unnecessarily short trips by car.

The city is divided into a number of smaller residential districts, each of which are only accessible to cars via a peripheral ring road which encircles the city. To get to another district by car, you must use the ring road.

The rest of the city is covered by an extensive network of high-quality walking and cycling routes. Importantly, these routes provide direct access between the residential areas and key destinations such as shops, schools and community facilities. This feature makes walking and cycling the most attractive way to get to and from most local destinations.

Houten's innovative design (and corresponding mode share) has resulted in numerous measurable benefits, including better air quality, fewer incidents of road trauma and higher levels of population health and well-being when compared to other similarly sized cities.



Map of Houten highlighting peripheral ring road (needed for most car-based journeys)



Map of Houten highlighting the dense network of protected cycling routes

Figure 4.24 Houten, a modern but low density suburban development in the Netherlands has been designed in such a way where it simply makes sense to walk or cycle for local trips.

5. INTER-REGIONAL OPPORTUNITIES

Cycle-tourism is a growing industry worldwide, with people becoming increasingly interested in challenging, unique and eco-friendly tourism experiences. Due to the relative proximity of towns and settlements, the South West region is better suited to long-distance cycle-tourism than most parts of WA.

Key inter-regional opportunities for the Leeuwin-Naturaliste subregion include:

- linking Busselton to Bunbury (and the Bunbury-Wellington subregion), refer to Section 5.1;
- linking Busselton to Nannup (and the Warren-Blackwood subregion), refer to Section 5.2; and
- linking Boranup to Nannup (and the Warren-Blackwood subregion), refer to Section 5.3.



Figure 5.1 The Leeuwin-Naturaliste subregion, and the South West region more generally, is well positioned to become one of Australia's best destinations for cycle-tourism.

5.1 Linking Busselton to Bunbury

Feedback received during the community consultation process indicated a strong desire to link Bunbury and Busselton with cycling facilities. Linking two of Western Australia's largest regional centres, located approximately 50 km apart, could be achieved in several ways.

In the short-term, a low-cost wayfinding strategy which helps cyclists navigate their way along low volume rural roads could be considered (refer to Section 5.1.1).

Over the longer term it would be prudent to strive for a cycling route which is completely separated from motorised traffic (in the form of a trail, or ideally, sealed shared path). Sections 5.1.2, 5.1.3 and 5.1.4 explore potential options for such a facility.

In deciding how best to connect Bunbury and Busselton, a dedicated feasibility study would help quantify the costs and benefits associated with potential alignments.







Figure 5.2 There are several schools of thought on how best to link Bunbury to Busselton with cycling facilities.

5.1.1 Option 1: Connecting local roads

The concept of linking Bunbury to Busselton by connecting a series of local back roads (including Maidment Parade, Minninup Road, Fishermans Road and Mangles Road) is already well established and outlined in the *Greater Bunbury Regional Bicycle Master Plan (2012)*. Although unlikely to cater for novice or inexperienced user groups, linking these roads together with short sections of shared path would provide more confident cyclists with a safer and less hostile alternative to Bussell Highway.

The concept of linking up local roads may be an important first step in formalising a route between Busselton and Bunbury. Over time, this route could be progressively upgraded and/or realigned until it becomes entirely separated from motorised traffic. The EuroVelo case study provided in Section 5.4 demonstrates how a similar approach has been used in the development of the European bicycle-touring network.



Figure 5.3 In the short-term there is an opportunity to create a cycling route between Bunbury and Busselton along local back roads, avoiding Bussell Highway.

5.1.2 Option 2: Along the coast

Developing a coastal path between Bunbury and Busselton would build on the success of the existing Geographe Bay Shared Path linking Dunsborough and Busselton. Such a path would help position the Peppermint Grove Beach community as a desirable stopping location due to its position roughly halfway between Bunbury and Busselton.

Possible disadvantages associated with a coastal alignment include exposure to the wind, land-ownership issues and potential inundation resulting from climate change. Further investigation is required to determine whether appropriate setbacks are available.



Figure 5.4 A route which hugs the coast may be the most scenic option for linking Bunbury and Busselton with cycling facilities.

5.1.3 Option 3: Through the Tuart Forest

Located between Busselton and Dalyellup is a narrow strip of remnant Tuart Forest. Important to the early European settlers and local indigenous groups, the area is both historically and ecologically significant.

Using the Tuart Forest corridor to link Bunbury and Busselton would be beneficial in terms of providing protection from the weather as well as tourism opportunities, particularly around the old Ludlow Mill and Limekilns recreation sites. Constraints in this corridor include the area's environmental and aboriginal heritage sensitivity, passive surveillance concerns, and ongoing maintenance issues resulting from branches and leaf litter falling onto the path.



Figure 5.5 Offering protection from the sun and wind, a route through the Tuart Forest would offer a high-level of amenity.

5.1.4 Option 4: Along the former rail corridor

The railway line between Capel and the Ludlow Forestry Settlement has been closed since 1985. This corridor links to other dormant rail lines between Capel and Bunbury (in the Bunbury-Wellington subregion) which have been non-operational since 1998 (Capel to Boyanup) and 2005 (Boyanup to Bunbury).

As described in Section 4.2, disused railways make excellent corridors for multi-use trails. Advantages of this corridor include the ability to capitalise on the area's rail heritage, as well as potential synergies with other existing/proposed rail trails in the South West (such as the Wadandi Track linking Busselton to Augusta and a potential future rail trail linking Wonnerup to Nannup).

The primary challenge associated with this alignment pertains to land-tenure. The corridor is currently leased by Arc Infrastructure from the PTA and it is understood that both parties are firm on maintaining the corridor for future use. It is recognised however that a 20 m wide road reserve runs parallel to the rail corridor which may prove to be a feasible alternative.



Figure 5.6 Closed and dormant rail corridors provide another opportunity to connect Bunbury and Busselton.

5.2 Linking Busselton to Nannup

Jarrahwood is a small historical timber mill community located in the City of Busselton's south-eastern corner. Until the mill's closure in 1984, the town was connected to Busselton and Nannup via the Nannup Branch Railway. While the section of railway south of Jarrahwood has been transformed into the popular Sidings Rail Trail (which also forms part of the Munda Biddi Trail), the section north of Jarrahwood is yet to be formally designated as a trail.

Known as the Ruabon-Tutunup Corridor, this thin strip of remnant bushland is a significant biodiversity hotpot. The corridor provides an important environmental link between the jarrah forests of the Whicher Scarp and the internationally recognised (and Ramsar listed) Vasse-Wonnerup Wetlands System.

The development of a rail trail along the Ruabon-Tutunup Corridor would create an important cycle link between the Leeuwin-Naturaliste and Warren-Blackwood subregions. It would also connect the subregion to the Munda Biddi Trail, helping the Jarrahwood community to realise its potential as a cycle-tourism hub, and create additional cycle-tourism opportunities for the South West more generally.

While the corridor's environmental sensitivity may present some challenges, the corridor's recreational potential has been recognised in the *Ruabon Tutunup Management Plan (2007)*. The plan highlights how any such development would need to be appropriately planned and managed to ensure that access does not degrade the conservation values of the reserve.







Figure 5.7 The Ruabon-Tutunup rail reserve could be used to connect the Leeuwin-Naturaliste and Warren-Blackwood subregions, and potentially position Jarrahwood as a cycle-tourism hub.

5.3 Linking Boranup to Nannup

Another long-distance opportunity involves linking Boranup (located between Margaret River and Augusta) to Nannup. This route, known locally as the Coast to Nannup Track, would involve formalising a series of existing forest trails and firebreaks which follow the Blackwood River Valley. Extending for approximately 108 km, the route takes in a diverse range of landscapes, ranging from karri and jarrah forest to farmland and Blackwood River frontage.

Importantly, the development of this trail has the potential to form part of a wider long-distance cycling loop linking Busselton, Margaret River and Nannup. Taking in the Wadandi Track, Munda Biddi Trail and a future Ruabon-Tutunup rail trail (discussed in Section 5.2 above) the 200 km loop would offer users a multi-day touring experience, easily accessible from each of the townsites along the route.

This route could also potentially form part of a longer Blackwood Valley Trail linking from the coast to Nannup, Bridgetown and Boyup Brook (a concept which is discussed further in the *Warren-Blackwood 2050 Cycling Strategy*).



Figure 5.8 Formalising a long-distance trail between Boranup and Nannup would enable the creation of a 200 km long loop trail linking Busselton, Margaret River and Nannup.[21]

[21] *Photos and "Coast to Nannup Trail" alignment courtesy of www.margaretriverfindthefun.com.au*

5.4 CASE STUDY: EUROVELO

The European Cycle Route Network, known as EuroVelo, is a network of 15 long-distance cycling routes that traverse the European continent. Substantial completion is scheduled by 2020 and when finished, the network will exceed 70,000 km[22].

The network is comprised of a combination of low traffic roads and car free infrastructure, including shared paths, dedicated cycleways and unsealed trails such as rail trails. As infrastructure is upgraded to a higher standard, or new and safer alignments are delivered, EuroVelo routes are formalised and corresponding branded signage installed.

Although investment in cycling infrastructure is pivotal to the success of EuroVelo, spending on bicycle-friendly public transport connections, supporting services and comprehensive marketing and promotion are also essential. This includes providing up-to-date and easily accessible information and promotional tools. Providing wayfinding that is complete, consistent and clearly themed is also critical to EuroVelo's success.

The total economic impact of cycle-tourism in Europe is estimated to be €44 billion per year, with an approximate direct economic benefit of €100 per year per inhabitant[23].



Source: EuroVelo

Figure 5.9 The South West region of Western Australia is well positioned to develop a cycle-tourism network similar (but smaller in scale) to that found in Europe.

[22] *NZ Cycle Trail Evaluation Report (2016)*
[23] *The European Cycle Route Network EuroVelo – Study (2012)*

6. ACTION PLAN

This section outlines the strategic priorities to be progressed over the next five years. While not possible to develop a cycling network that reflects the "8-80" design philosophy immediately, this approach will help enable the Leeuwin-Naturaliste subregion to realise its long-term cycling potential over time. The priorities identified have been informed by community and stakeholder consultation undertaken throughout the project, as summarised in Appendix C.

6.1 The existing cycling network

To inform the action plan's priorities, each route within the 2050 cycling network was classified as one of the following:

- **Existing (adequate)** – the level of service provided reflects current best practices for this type of cycling route (as defined in the route hierarchy);
- **Existing (needs improving)** – although possible to cycle along this corridor, the level of service provided does not reflect current best practices for this type of cycling route (as defined in the route hierarchy); or
- **Non-existent (proposed)** – it is not currently possible to cycle along this route due to the corridor being either non-existent or because road conditions are far too hostile.

These classifications are reflected in the maps on the following pages, with each route considered in the context of the five-year timeframe of this action plan.



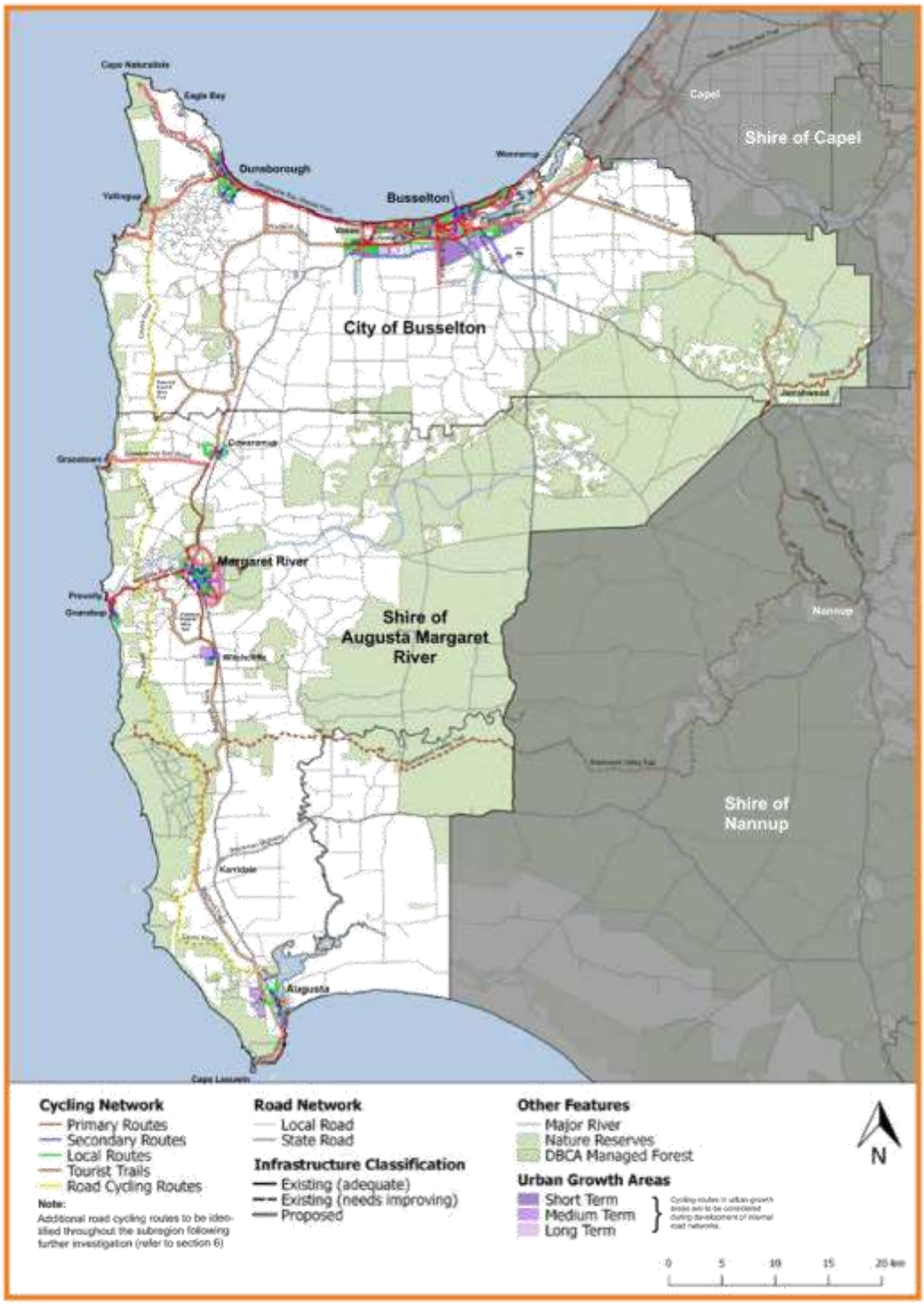


Figure 6.1 The overall 2050 cycling network for Leeuwin-Naturaliste subregion, with each route classified as either existing (adequate), existing (needs improving) or proposed.

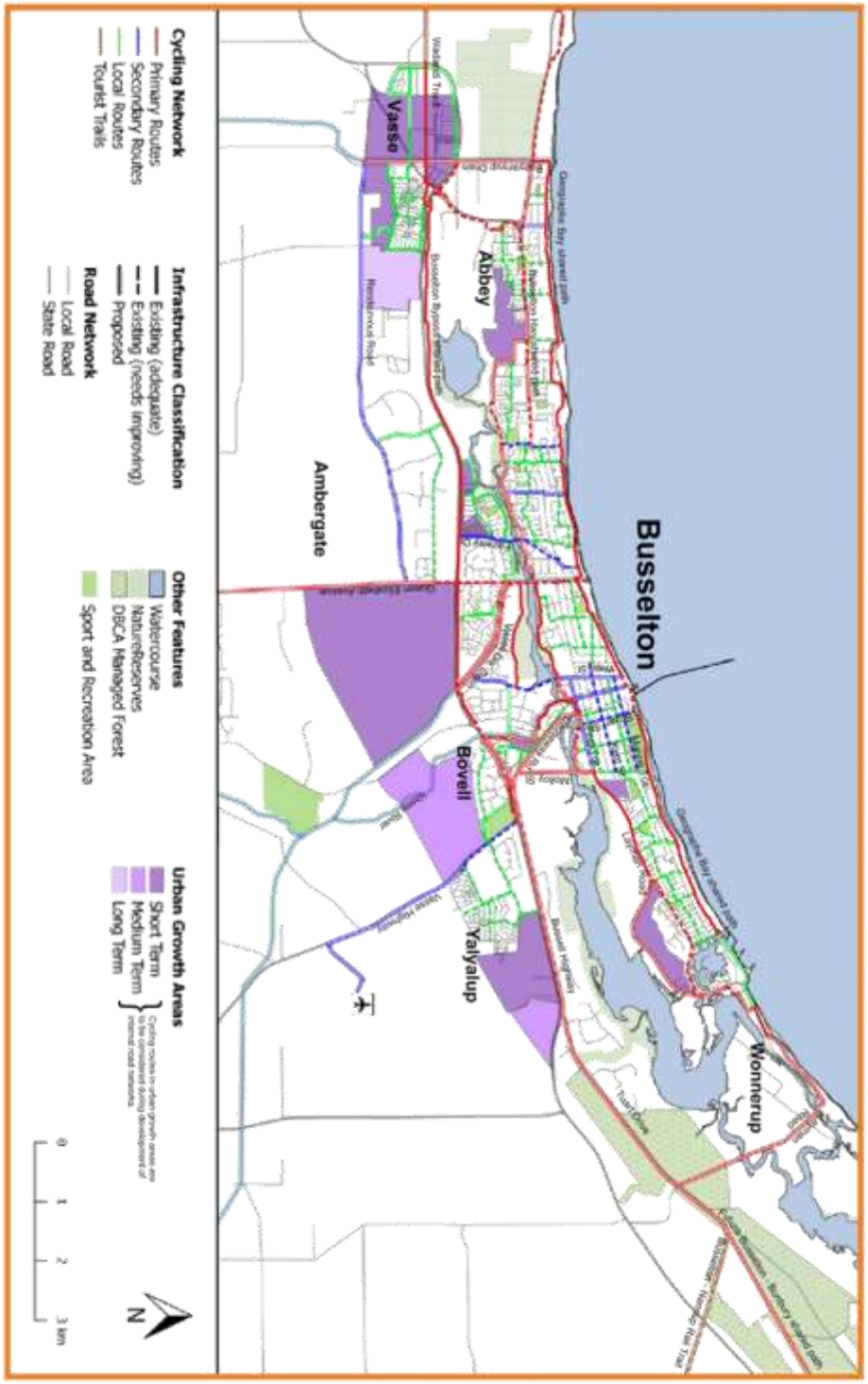


Figure 6.2 Proposed 2050 cycling network for Busselton, with each route classified as either existing (adequate), existing (needs improving) or proposed.

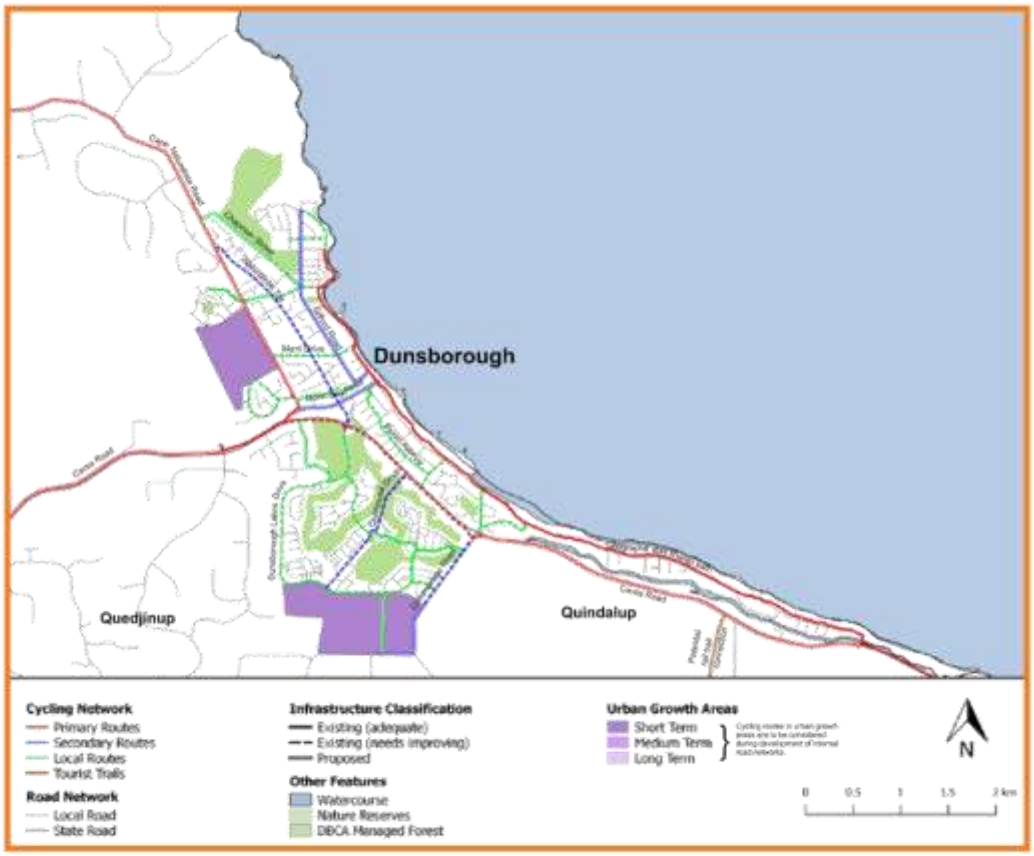


Figure 6.3 Proposed 2050 cycling network for Dunsborough, with each route classified as either existing (adequate), existing (needs improving) or proposed.



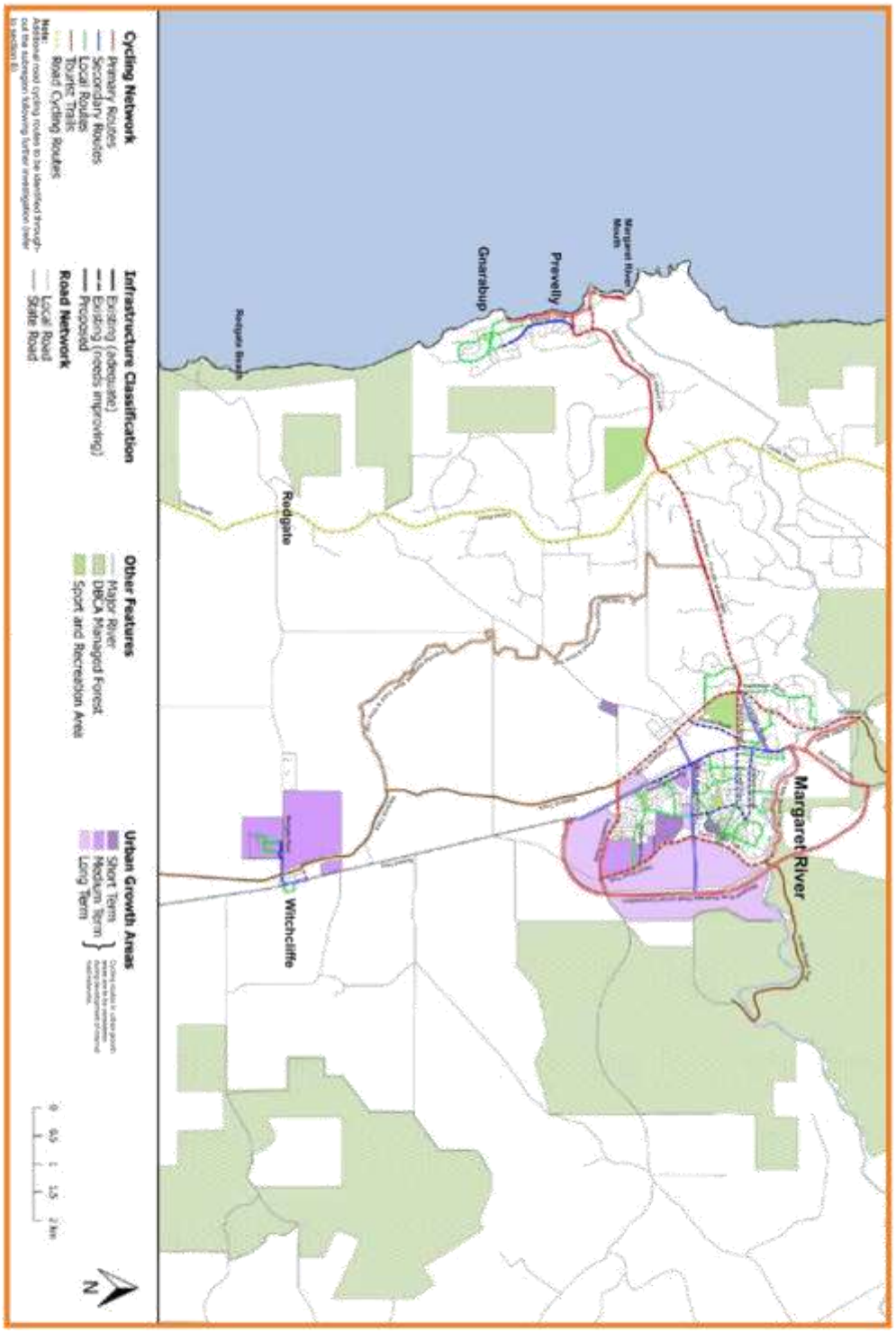


Figure 6.4 Proposed 2050 cycling network for Margaret River, Prevelly, Gnarabup and Witchcliffe, with each route classified as either existing (adequate), existing (needs improving) or proposed.

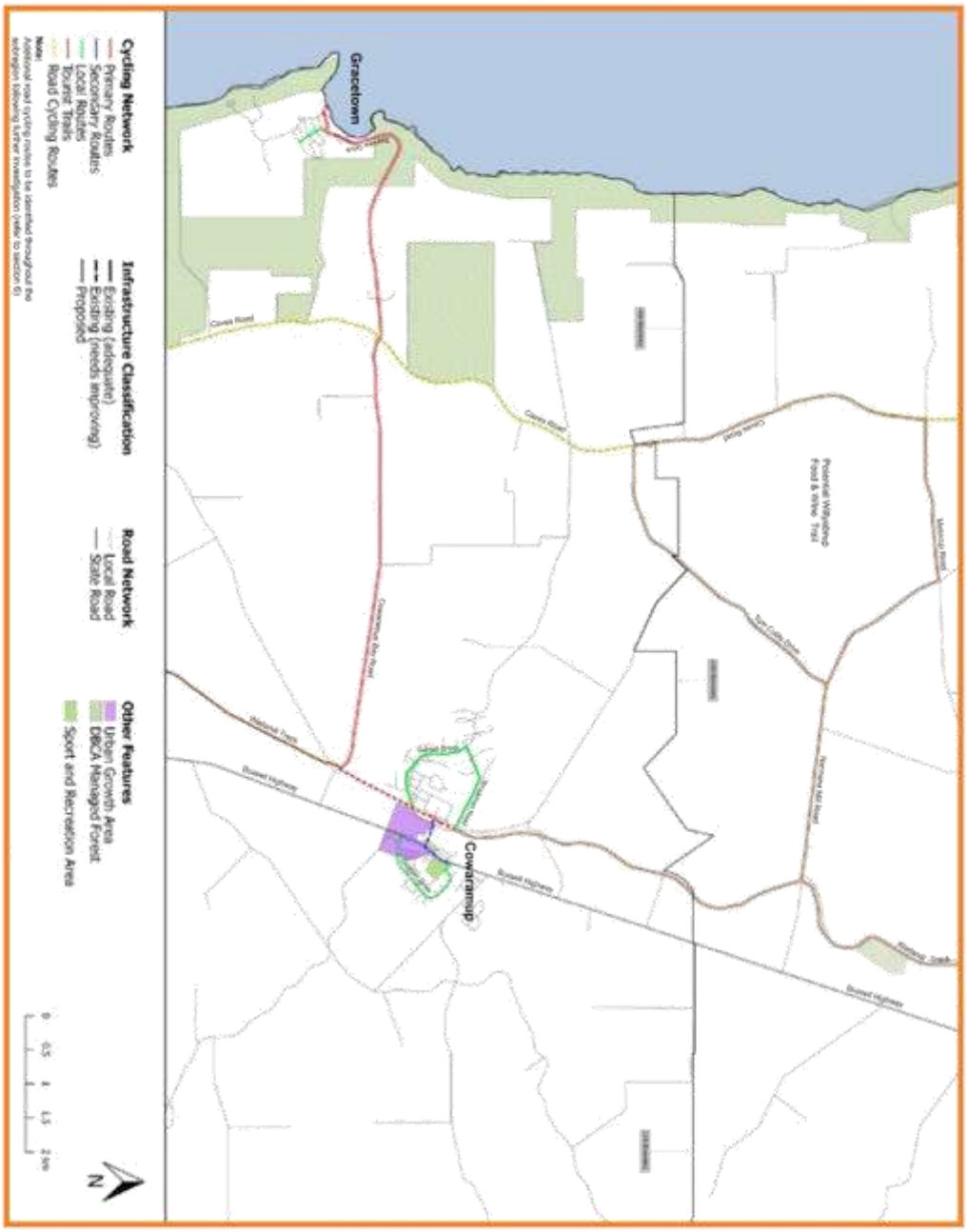


Figure 6.5 Proposed 2050 cycling network for Cowaramup and Gracetown, with each route classified as either existing (adequate), existing (needs improving) or proposed.

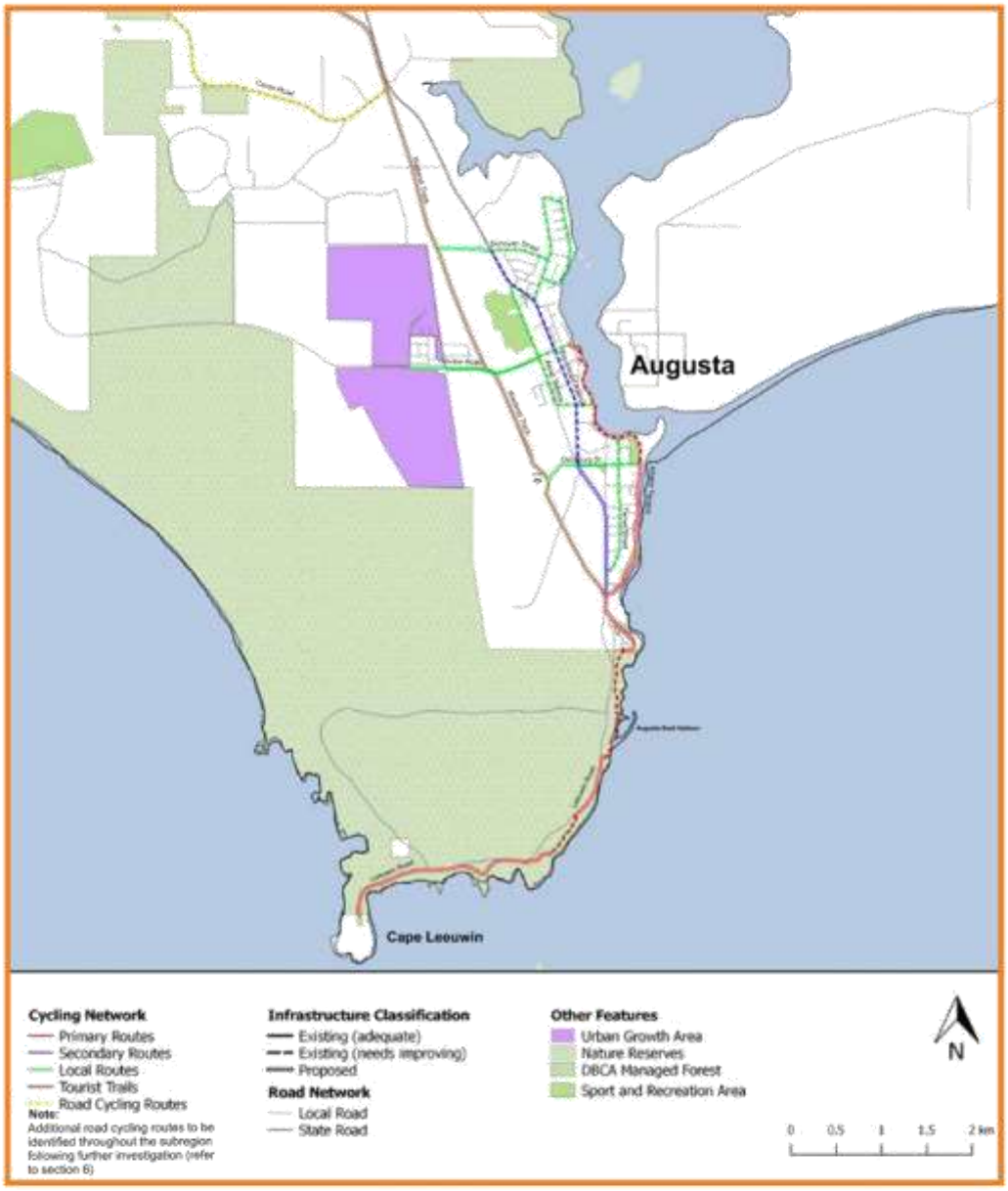


Figure 6.6 Proposed 2050 cycling network for Augusta, with each route classified as either existing (adequate), existing (needs improving) or proposed.

6.2 Priority projects

The following tables identify the strategic priorities for cycling in the Leeuwin-Naturaliste subregion over the next five years.

6.2.1 Developing the primary network

N°	Action (what?)	Type	Objective (how?) / Justification (why?)	Lead agency (or agencies)	Timeframe
1	Investigate the development of a cycling link between Dunsborough and Cape Naturaliste	Planning and feasibility	**Objective:** City of Busselton to undertake preliminary planning surrounding the development of a high-quality cycling link between Dunsborough and Cape Naturaliste. Potential alignments include Cape Naturaliste Road or upgrading the existing Meelup Trail. **Justification:** This route would form a logical extension of the Geographe Bay Shared Path, catering for both locals and tourists. There is strong community support for this project particularly for the coastal alignment.	City of Busselton Department of Biodiversity, Conservation and Attractions	Within 2 years
2	Develop a shared path along Layman Road	Planning and feasibility	**Objective:** City of Busselton to investigate the development of a shared path along Layman Road, extending from Navigation Way to Tuart Drive. **Justification:** In addition to providing a safer cycling link to Wonnerup, this path will also help achieve the goal of creating a cycling loop around Busselton's urban area, providing locals and visitors with a route which showcases the city's diverse range of coastal, forest, wetland and river landscapes.	City of Busselton	Within 5 years
3	Develop a shared path along the Buayanyup Drain	Delivery	**Objective:** City of Busselton to work with land developers in creating a north-south connection between the Wadandi Track and Geographe Bay Shared Path along Buayanyup Drain. **Justification:** Provides a link between the Vasse Newtown development and the beach. This path will also help achieve the goal of creating a cycling loop around Busselton's urban area, providing locals and visitors with a route which showcases the City's diverse range of coastal, forest, wetland and river landscapes.	City of Busselton	Within 5 years
4	Continue developing the shared path parallel to Busselton Bypass / Bussell Highway	Delivery	**Objective:** City of Busselton to work with Main Roads in ensuring that the shared path along Bussell Highway / Busselton Bypass is extended east. **Justification:** Extending this path further east will help improve connectivity to Bovell, Yalyalup and Reinscourt. In addition, it will help achieve the goal of creating a cycling loop around Busselton's urban area, providing locals and visitors with a route which showcases the City's diverse range of coastal, forest, wetland and river landscapes.	City of Busselton Main Roads	Ongoing
5	Create a connection between the Wadandi Track and 10 Mile Brook Trail	Planning and design	**Objective:** Shire of Augusta Margaret River to finalise alignments and undertake designs for a high-quality cycling link connecting the Wadandi Track to the western end of the 10 Mile Brook Trail. **Justification:** Providing an important connection between Rotary Park and the nearby mountain bike trail heads, this connection will play a key role in the development of a cycling loop around Margaret River's urban area.	Shire of Augusta Margaret River	Within 2 years
6	Create a connection between the Darch Road Trail and Wadandi Track	Planning and design	**Objective:** Shire of Augusta Margaret River to investigate potential opportunities to link the Wadandi Track to the Darch Road Trail, south of the Margaret River townsite. **Justification:** Providing improved accessibility to the Wadandi Track for local residents, this connection will play a key role in the development of a cycling loop around Margaret River's urban area.	Shire of Augusta Margaret River	Within 5 years

7	Investigate potential cycling links between Busselton and Bunbury	Planning and feasibility	**Objective:** City of Busselton to work with the Shire of Capel to undertake a feasibility study for the development of a high-quality cycling facility linking Busselton and Bunbury. **Justification:** Feedback received during the Leeuwin-Naturaliste and Bunbury-Wellington community consultation periods indicated a strong desire for this connection. Potential options include along the coast, along the Busselton-Capel rail corridor, or through the Tuart Forest.	City of Busselton Shire of Capel	Within 5 years
8	Undertake planning for a shared path linking Cowaramup to Gracetown	Planning and feasibility	**Objective:** Shire of Augusta Margaret River to work with the National Trust and LandCorp in determining potential land access and funding requirements for the development of a shared path linking Cowaramup and Gracetown. **Justification:** This project will cater for both locals and tourists, performing a similar function to the existing Margaret River-Prevelly Shared Path. Phase 2 of the community consultation process indicated strong support for this connection.	Shire of Augusta Margaret River	Within 5 years
9	Construct a safe walking and cycling facility linking Augusta to the Cape Leeuwin Lighthouse	Planning and feasibility	**Objective:** Shire of Augusta Margaret River to deliver a safe walking and cycling facility (or potentially separate facilities) linking the Augusta townsite to Cape Leeuwin Lighthouse. **Justification:** Leeuwin Road is currently considered too hostile for most people to cycle confidently to the lighthouse. There is significant community support for this connection.	Shire of Augusta Margaret River	Within 5 years
10	Improve/realign sections of the Geographe Bay Shared Path	Planning and feasibility	**Objective:** City of Busselton to progressively upgrade or realign substandard sections of the Geographe Bay Shared Path, potentially commencing with the heavily used section located in Abbey. **Justification:** As one of the subregion's most popular cycling routes, there is scope to upgrade sections of this path to improve both safety and amenity.	City of Busselton	Ongoing
11	Develop a shared path along the Vasse River Diversion Drain	Planning and feasibility	**Objective:** City of Busselton to work with the Department of Water and Environmental Regulation in assessing the feasibility of developing a shared path along the Vasse River Diversion Drain. **Justification:** This path would provide an important north-south connection between the Busselton Bypass and Geographe Bay shared paths, and has the potential to greatly improve the visual and social amenity of the local area.	City of Busselton Department of Water and Environmental Regulation	Within 5 years
12	Develop a shared path along the northern side of the Vasse-Wonnerup Wetlands System	Planning and feasibility	**Objective:** City of Busselton to assess the feasibility of constructing a shared path along the northern side of the Vasse-Wonnerup Wetlands System. **Justification:** This path (which is partially complete) will provide a third east-west corridor for walking and cycling in Busselton.	City of Busselton	Within 5 years
13	Assess viability of shared path along Causeway Road	Planning and feasibility	**Objective:** City of Busselton to assess the viability of delivering a new shared path parallel to Causeway Road (potentially utilising the former rail embankment). **Justification:** This connection will provide improved cycling access between the Bussell Highway Shared Path and Busselton town centre.	City of Busselton, Main Roads, PTA	Within 5 years

6.2.2 Developing the secondary network

N°	Action (what?)	Type	Objective (how?) / Justification (why?)	Lead agency (or agencies)	Timeframe
1	Review Leeuwin-Naturaliste's secondary cycling routes and prioritise the delivery of improvement projects.	Planning and delivery schedule	**Objective:** City of Busselton and Shire of Augusta Margaret River to review the proposed secondary cycling routes to determine what type of infrastructure is best suited to each corridor. The study must take into consideration a range of factors (including safety, legibility, continuity and accessibility) and should be used as a roadmap for prioritising/funding the transformation of these corridors into attractive cycling routes over the coming years. DoT to provide advice where necessary. **Justification:** Currently many of the subregion's secondary routes are made up of highly inconsistent/ disconnected infrastructure which in addition to being unsafe, has a negative impact on cycling uptake. Providing all-ages cycling infrastructure along busy urban corridors is critical for getting more people cycling for non-recreational purposes.	City of Busselton Shire of Augusta Margaret River DoT	Within 3 years
2	Ensure cycling facilities are included in Margaret River's main street redevelopment	Delivery	**Objective:** The provision of dedicated cycling facilities along this important corridor has the potential to improve safety for cyclists, reduce conflict between different groups of road users and provide a direct and legible connection between many important trip attractors including shops, schools and community facilities. **Justification:** The construction of the Margaret River Perimeter Road (and associated downgrading of Bussell Highway) presents a unique opportunity to better cater for cyclists within Margaret River's town centre.	Shire of Augusta Margaret River DoT	Within 12 months
3	Develop a secondary route along Cape Naturaliste Road	Delivery	**Objective:** City of Busselton to construct a 2.5 km long path along Cape Naturaliste Road linking the Dunsborough Town Centre to Our Lady of the Cape Primary School. **Justification:** Provides an important connection for students as well as residents travelling from north Dunsborough to the centre of town.	City of Busselton DoT	Within 2 years
4	Development of Shared Path to Margaret River Education Campus	Delivery	**Objective:** Shire of Augusta Margaret River to construct a shared path along Bussell Highway linking the Margaret River Education Campus to the existing Wallcliffe Road Shared Path. **Justification:** Provides an important connection for students, as well as a commuter route for residents of south Margaret River.	Shire of Augusta Margaret River DoT	Within 12 months

6.2.3 Developing the local network

N°	Action (what?)	Type	Objective (how?) / Justification (why?)	Lead agency (or agencies)	Timeframe
1	Review Leeuwin-Naturaliste's local cycling routes and prioritise the delivery of improvement projects	Planning and delivery schedule	**Objective:** City of Busselton and Shire of Augusta Margaret River to identify and develop a delivery schedule for a series of improvements which enhance the safety, attractiveness and legibility of local cycling routes. **Justification:** Minor improvements to local residential streets and connecting paths have the potential to greatly improve cycling amenity and legibility.	City of Busselton Shire of Augusta Margaret River DoT	Within 5 years
2	Plan for a safe active street pilot project in the Leeuwin-Naturaliste subregion	Planning and design	**Objective:** City of Busselton and Shire of Augusta Margaret River to work with DoT in identifying a suitable corridor in which to trial a Safe Active Street. **Justification:** Going forward it is expected that safe active streets will play an increasingly important role for cycling within residential areas. Safe active streets are local streets that have been modified in a way which makes on-road cycling a safe and attractive experience for people of all ages and experience levels.	City of Busselton, Shire of Augusta Margaret River DT	Within 5 years



6.2.4 Developing tourist trails

N°	Action (what?)	Type	Objective (how?) / Justification (why?)	Lead agency (or agencies)	Timeframe
1	Complete the Wadandi Track between Calgardup Road and Augusta (approximately 37 km)	Delivery	**Objective:** Secure necessary funding and approvals needed to deliver the southern section of the Wadandi Track. **Justification:** The Wadandi Track, when complete, will form the backbone of the subregion's cycling network. There is significant (and growing) community support to see its completion fast-tracked.	Shire of Augusta Margaret River	Ongoing
2	Complete the Wadandi Track between Cowaramup and Vasse (approximately 33 km)	Delivery	**Objective:** Secure necessary funding and approvals needed to deliver the northern section of the Wadandi Track. **Justification:** The Wadandi Track, when complete, will form the backbone of the subregion's cycling network. There is significant (and growing) community support to see its completion fast-tracked.	City of Busselton Shire of Augusta Margaret River	Ongoing
3	Undertake planning for additional rail trails	Planning and feasibility	**Objective:** Work with relevant stakeholders to undertake preliminary planning for potential rail trails linking Busselton to Capel, and Wonnerup to Jarrahwood. **Justification:** Rail trails present a key opportunity to develop inter-town and inter-regional connections for walkers, cyclists and horse-riders.	City of Busselton, Shire of Capel PTA DoT	Within 5 years
4	Commence planning for a food and wine trail	Planning and feasibility	**Objective:** Work with local business owners and tour operators in assessing the feasibility of a food and wine cycle trail. Potential locations include the clusters of wineries located north west of Cowaramup (Wilyabrup) and southwest of Margaret River. **Justification:** Unlike some other wine regions, the Leeuwin-Naturaliste subregion is yet to capitalise on the potential of cycle-tourism and its ability to complement the food, wine and hospitality sectors. Currently, access to most producers is via either Caves Road or Bussell Highway, neither of which are conducive to safe cycling due to their high posted speed limits and traffic volumes.	City of Busselton, Shire of Augusta Margaret River DoT Tourism WA, South West Development Commission Local business owners Local tour operators	Within 5 years
5	Carters Road underpass	Planning, design and construction	**Objective:** Plan, design and construct an underpass where the Wadandi Track crosses Carters Road. **Justification:** Carters Road is currently one of the busiest and most dangerous road crossings on the Wadandi Track. With the growing popularity of mountain biking, it is important that a safer connection between Margaret River townsite and the nearby mountain bike trail heads is provided.	Shire of Augusta Margaret River, Main Roads	Within 3 years
6	Formalise a tourist trail linking the Leeuwin-Naturaliste subregion to Nannup	Feasibility	**Objective:** Shire of Augusta Margaret River to work with the Department of Biodiversity, Conservation and Attractions and Shire of Nannup in determining the feasibility of upgrading/sign-posting the series of firebreaks and forestry tracks which link Boranup to Nannup (known informally as the Coast to Nannup Track). **Justification:** The development of this trail has the potential to form part of a wider long-distance cycling loop linking Busselton, Margaret River and Nannup. Taking in the Wadandi Track, Munda Biddi Trail and a future Ruabon-Tutunup rail trail.	Shire of Augusta Margaret River Shire of Nannup Department of Biodiversity, Conservation and Attractions	Within 5 years

6.2.5 Developing road cycling routes

N°	Action (what?)	Type	Objective (how?) / Justification (why?)	Lead agency (or agencies)	Timeframe
1	Identify a series of formalised road cycling routes, both throughout the Leeuwin-Naturaliste subregion and linking to adjoining subregions.	Feasibility	**Objective:** Work with the City of Busselton, Road Safety Commission, Main Roads and local cycling clubs to identify road cycling routes which could be formalised and potential safety enhancements to be implemented. This may include shoulder widening (particularly on uphill sections), advisory signage, or more sophisticated measures such as time/day or button activated warning lights. Once these routes have been identified, maps in this strategy will need to be updated accordingly. **Justification:** Road cycling is a popular and growing activity in the Leeuwin-Naturaliste subregion. There are a number of commonly used routes throughout the region, necessitating more specific consultation outside the scope of this strategy.	City of Busselton Shire of Augusta Margaret River Road Safety Commission Main Roads Local cycling clubs	Within 2 years
2	Improve safety of cyclists using Caves Road	Advocacy and liaison	**Objective:** Work with Main Roads to deliver safer cycling conditions along Caves Road (south of Yallingup). **Justification:** City of Busselton and Shire of Augusta Margaret River recognise there are numerous attractions along this stretch of road which mean it will continue to remain a popular cycling route.	City of Busselton Shire of Augusta Margaret River Main Roads Road Safety Commission	Within 5 years



6.3 Activation, consultation and evaluation (ACE)

This strategy outlines how new cycling infrastructure can support greater participation in cycling in the Leeuwin-Naturaliste subregion. However, planning and building infrastructure in isolation will not necessarily lead to significantly more people riding.

There needs to be an emphasis on creating inclusive infrastructure projects so that the product delivered fully serves the needs of local communities as well as people visiting the region. This can be achieved through a range of engagement and monitoring activities as projects are planned, designed and constructed, and as the infrastructure continues to be used after construction.

Ongoing engagement and evaluation starts by incorporating three essential elements into project delivery- activation, consultation and evaluation. This approach is outlined in the following framework:



Activation includes promotions and programs designed to encourage people onto the infrastructure by raising awareness and appeal. This can be anything from highlighting the new facilities in media releases and creating local maps, to making cycling trips more pleasant through added amenities such as end-of-trip facilities, bike parking, natural landscaping, art works, and other initiatives. Activation can take place throughout all phases of an infrastructure project – starting well before a project is built – and can be temporary (one-off activities), intermittent (such as a monthly group ride) or permanent (such as wayfinding signage).

Consultation is a crucial part of the delivery of inclusive cycling infrastructure to ensure that the facilities meet the needs of users, stakeholders and the local community. Consultation can be undertaken in a variety of formats, and is informed by a local government's Community Engagement Policy.

Evaluation of the infrastructure is essential to measure the impact it is having, both for people using the infrastructure and for the wider community experiencing the outcomes of increased transport mobility. These outcomes may include better local liveability, improved congestion and parking management, growth in cycle tourism and increased spending at local businesses. Ongoing monitoring will ensure facilities are well maintained and that the planning and delivery of cycling initiatives undergo continuous improvement.

All three of these elements are inherently linked and some activities will deliver outputs for more than one, such as a community workshop where people are asked to review existing facilities (evaluation), help prioritise new ones (consultation), and participate in the delivery and promotion of new facilities and amenities (activation).

At its core, this approach acknowledges that cycle networks are part of a richer local landscape and should be delivered in an inclusive way that invites participation and supports a range of community outcomes.

6.4 Plan maintenance

The strategic priorities identified in the action plan will be reviewed every five years to ensure current conditions are reflected and relevant projects are prioritised. This review will include reassessing each route's classification as either existing (adequate), existing (needs improving), or non-existent (proposed) and updating the existing network maps.

The 2050 Leeuwin-Naturaliste cycling network should remain consistent over the medium term. A review of the whole strategy every 8-10 years will allow any new opportunities to be identified and incorporated into a revised document.





APPENDIX A
ROUTE HIERARCHY

A1. ROUTE HIERARCHY SUMMARY

NETWORK PRINCIPLES

The Cycling Network Hierarchy is arranged by route function. The function pertains to the type of activities that take place on the route. A routes' built form is based on the physical characteristics of the location. Each form, apart from those supporting training routes, is designed with the "8 to 80" design philosophy in mind.

1 PRIMARY ROUTE

Function

Primary routes are high demand corridors that connect to major destinations. They provide high quality, safe, convenient (and where possible) uninterrupted) routes that form the spine of the cycle network.

These routes are conducive to medium or long distance commuting/utility, recreational, training and tourism trips.

Form

Primary routes are high quality cycle only or shared paths, located adjacent to major roads, rail corridors, rivers and ocean foreshores.

Where the environment allows, these are in the form of a Principal Shared Path (PSP). A PSP is a fully lit and separated facility. In locations where vehicles have been grade separated the cycle route will also be grade separated. PSPs are to be designed in accordance with the WA Transport Portfolio's PSP Policy.

2 SECONDARY ROUTE

Function

Secondary routes have a lower demand than primary routes, but provide similar levels of quality, safety and convenience.

These routes provide connections between primary routes and major activity centres such as shopping precincts, industrial areas or major health, education, sporting and civic facilities.

Form

Secondary routes can take on a number of forms and are designed to suit the environment in which they are located.

These forms include:

- High quality shared paths;
- Bi-directional protected bike lanes;
- Protected on-road bike lanes; and
- Safe Active Streets (Bicycle Boulevards).

3 LOCAL ROUTE

Function

Local routes are low demand and are predominantly located in local residential areas.

They provide access to higher order routes and local amenities and recreational spaces.

Form

Local routes can take on various forms depending on the environment in which they are located.

These forms include:

- Shared paths;
- Bi-directional protected bike lanes;
- Protected on road bike lanes; and
- Safe Active Streets (Bicycle Boulevards).

In some locations, quiet residential streets incorporating signage and wayfinding may be appropriate for local routes.

COMPLEMENTARY NETWORK

While not all areas will include Road Cycling Routes and Tourist Trails, they play an important part in the overall network. These routes are typically used by smaller and more select user groups for recreational purposes.

ROAD CYCLING ROUTE

Function

Road cycling routes are designated routes for training, sports or recreational cyclists to undertake long distance rides in on-road environments.

Form

Road cycling routes are predominantly located on lower order, rural or semi-rural roads on the outskirts of cities and towns. Sections may follow busier roads, particularly as road cycling routes typically begin and end in built up areas and often follow scenic roads popular with other road users.

These routes support cyclists undertaking challenging longer distance rides by raising awareness and encouraging safe behaviour by all road users.

This is achieved through advisory signage, warning technology and other road safety initiatives.

TOURIST TRAIL

Function

Tourist trails provide long-distance, off-road (predominantly unsealed) riding experiences through natural settings, away from motorised traffic. They often support recreational and tourism trips between regions.

Form

Trails are typically located within underutilised transport and service corridors in rural areas. Due to their relatively gentle gradients, former railways make excellent candidates for trails. Purpose built trails may be constructed to connect existing corridors.

Trails should be constructed from well drained, compacted gravel with supporting infrastructure such as way-finding signage. They can be sealed when they run through towns, busy road crossings or in special circumstances.

Dedicated cycling infrastructure - five typologies of route						
		Primary Routes	Secondary Routes	Local Routes	Tourist Trails	Road Cycling Routes
Type of trips	Commuting	✓	✓	✓	×	×
	Utility	✓	✓	✓	×	×
	Recreation	✓	×	×	✓	×
	Touring	✓	×	×	✓	✓
	Training	✓	×	×	×	✓
Responsible agencies (planning, delivery and support):		Department of Transport Main Roads Public Transport Authority Local Government	Department of Transport Main Roads Local Government	Department of Transport Main Roads Local Government	Department of Biodiversity, Conservation and Attractions Local Government Public Transport Authority Department of Transport Department of Local Government, Sport and Cultural Industries LotteryWest Main Roads	Department of Local Government Sport and Cultural Industries Road Safety Commission Department of Transport Main Roads Local Government
Infrastructure should be designed for:		8 to 80 design philosophy	8 to 80 design philosophy	8 to 80 design philosophy	8 to 80 design philosophy	Confident cyclists

Other supporting cycling infrastructure – footpaths	
Footpaths	Since April 2016 all cyclists, irrespective of age, are permitted to ride on footpaths in Western Australia (unless otherwise signposted). Footpaths support low speed, low-volume cycling, and are particularly important for young and inexperienced user groups. However there are some reasons why people choose to not ride on footpaths. These include: - Speed: Footpaths are rarely afforded priority across intersecting side roads, riding on footpaths is slow, and stop-start. The geometric design of footpaths at many intersections often results in cyclists needing to deviate from their intended desire lines. - Ride quality: As footpaths are typically constructed from concrete slabs or bricks, the ride quality is lower than that of parallel roadways, or purpose-built (asphalt) shared paths. - Blind driveways: Riding on footpaths can be dangerous, particularly on streets which contain large numbers of driveways. At walking speed this isn't normally a problem however for cyclists it is often impossible to see reversing vehicles until the last minute, particularly where paths butt-up against property boundaries. Despite footpaths not forming part of the official cycling network, it is important that developers and local governments design, construct and maintain footpaths that provide a safe alternative for people who prefer to ride at low speeds and away from motorised traffic.



Figure A.1 Poor ride quality, parked vehicles, blind driveways and unfavourable intersection designs make riding on footpaths unattractive for some people.

Other supporting cycling infrastructure – roads without dedicated cycling infrastructure	
Roads without dedicated cycling facilities	Cyclists are, and will continue to remain, legitimate users of all roads in Western Australia (with the exception of freeways and controlled access highways). It is important to remember that roads without purpose-built cycling facilities serve an important function for some cycling journeys. Wayfinding signage can be a valuable tool to direct cyclists (particularly novice cyclists) to the most suitable streets or corridors.



APPENDIX B
DESKTOP ANALYSIS SUMMARY

B1. ANALYSIS OF PEDESTRIAN AND CYCLIST CRASH DATA (2013-2017)

B1.1 City Of Busselton crash analysis

A breakdown of pedestrian and cyclist crashes by severity in the City of Busselton is provided in Figure B.1. The key findings from the crash data are as follows:

- Two fatal crashes involving cyclists were recorded in the five years to 2017.
- There were six crashes where cyclists required hospitalisation and a further 14 where cyclists required medical treatment.
- In general, cyclists have been involved in more recorded crashes than pedestrians. However, there have been more severe crashes involving pedestrians (with eight hospitalisations).
- Most crashes have occurred in Busselton town and surrounds which is to be expected given the area's high population density.
- Bussell Highway through Busselton was noted as being a hotspot for cyclist crashes, with eight crashes occurring in the five-year period to 2017, six of which required hospitalisation or medical treatment.
- Another hotspot was the Busselton town centre (and in particular, Queen Street).
- There were two crashes involving cyclists along Caves Road between Busselton and Dunsborough in the five years to 2017, with a further fatal crash involving a pedestrian on Caves Road in Dunsborough.

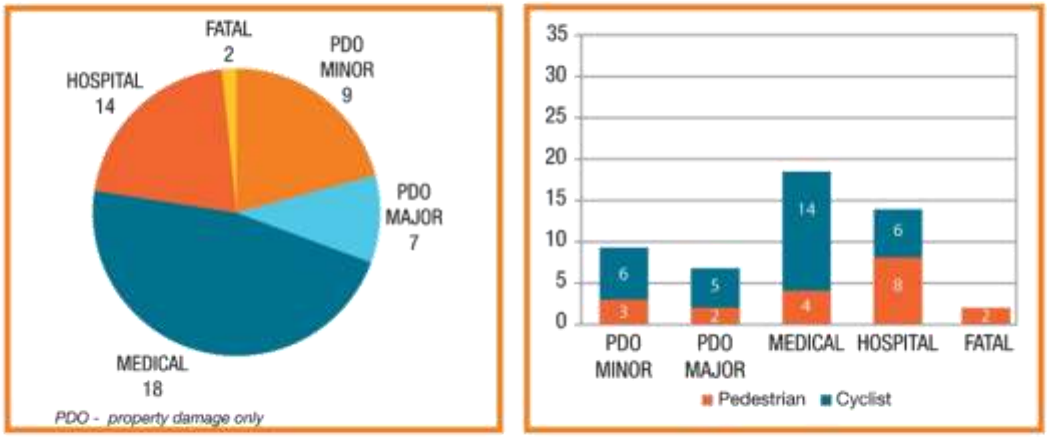


Figure B.1 City of Busselton cyclist and pedestrian crashes by severity (2013-2017).

B1.2 Shire of Augusta Margaret River crash analysis

A breakdown of pedestrian and cyclist crashes by severity in the Shire of Augusta Margaret River is provided in Figure B.2. No property damage major incidents were recorded, with the following key points noted:

- The majority of pedestrian and cyclist crashes occurred in the town of Margaret River.
- There was one fatal cyclist injury recorded in the five-year period to 2017, which occurred on Bussell Highway in Margaret River itself.
- There were two reported crashes where cyclists required hospitalisation and a further two where medical assistance was required.

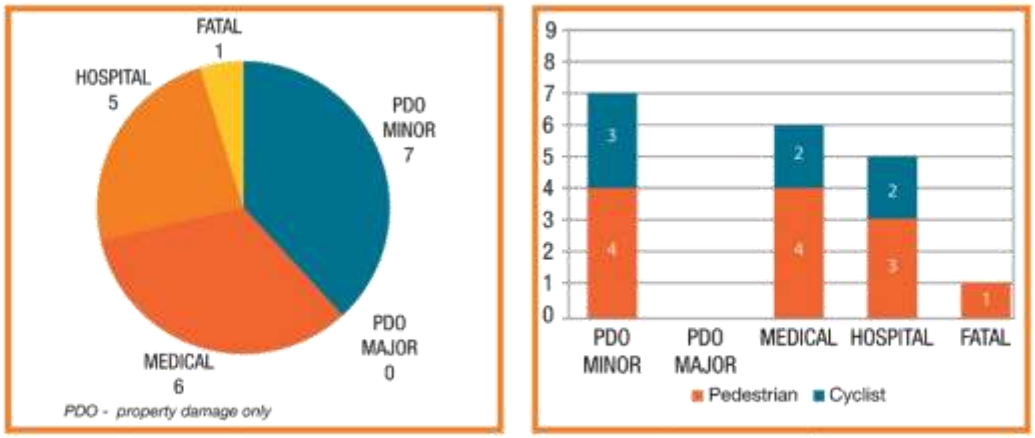


Figure B.2 Shire of Augusta Margaret River cyclist and pedestrian crashes by severity (2013-2017).



Figure B.3 Leeuwin-Naturaliste pedestrian and cyclist crashes by severity and year (2013-2017).



Figure B.4 Leeuwin-Naturaliste pedestrian and cyclist crashes by severity and type (2013-2017).

B2. ANALYSIS OF GPS TRAVEL DATA

The GPS mapping tool, Strava Labs, was employed to better understand which parts of the Leeuwin-Naturaliste's road and path networks are most heavily utilised by cyclists. Strava is a website and mobile app used to track athletic activity via GPS. Despite the usefulness of this information, it should be noted that GPS travel data is typically representative of people who cycle for training or high-intensity recreational purposes.

B2.1 City of Busselton GPS Travel Data

The heat maps for the City of Busselton are shown in Figure B.5 and Figure B.6. The key points to note from this data are:

- the existing Geographe Bay Shared Path linking Busselton and Dunsborough experiences high levels of patronage;
- very few people are prepared to cycle on Bussell Highway south of Vasse;
- the roads in the Busselton and Dunsborough CBDs are heavily used by cyclists, suggesting that many cycling trips are made for non-recreational purposes; and
- There are a number of popular on-road cycling routes including:
  - Busselton to Ludlow and Peppermint Grove Beach (via Tuart Drive);
  - Dunsborough to Eagle Bay and Cape Naturaliste (via Cape Naturalist Road);
  - Sues Road; and
  - Various semi-rural roads loaded to the east of Yallingup.





Figure B.5 2016 GPS heatmap for Busselton urban area.



Figure B.6 2016 GPS heatmap for City of Busselton.

B2.2 Shire of Augusta Margaret River GPS Travel Data

The heat maps for the Shire of Augusta Margaret River are shown in Figure B.7 and Figure B.8. These maps indicate that:

- the high-quality shared path linking Margaret River and Prevelly is well utilised;
- Caves Road is a popular route for cyclists despite its high speed limit (however it is noted that this data could be skewed by cycling events which sometimes take place on this section of road);
- Leeuwin Road linking Augusta the Cape Leeuwin Lighthouse is popular with cyclists;
- the popularity of the mountain bike trails around Margaret River is clear, as well as the Pines, 10 Mile Brook and Darch Road trails;
- despite its high speed limit and dangerous corners Carters Road is very popular with cyclists, being the most direct way for people to access the mountain biking trails located to the north west of the Margaret River townsite;
- the walking trail to the south of Carters Road is also popular, which is known to cause some conflict with bushwalkers;
- within Margaret River townsite the most popular cycling routes include Bussell Highway, Boodjidup Road, Rosa Brook Road and Wallcliffe Road; and
- the completed section of the Wadandi Track is also very popular (particularly the section between Margaret River and Cowaramup).



Figure B.7 2016 GPS heat map for Shire of Augusta Margaret River.



Figure B.8 2016 GPS heat map for Margaret River townsite.

B3. DOCUMENT REVIEW

A number of documents have been considered as part of the background review undertaken to develop this strategy. This includes, but is not limited to the following:

- Augusta Margaret River Local Planning Strategy (2015)
- Austroads National Cycling Strategy (2010)
- Busselton to Flinders Bay Rail Trail Development Plan (2013)
- City of Busselton Draft Local Planning Strategy (2016)
- Cycling Aspects of Austroads Guides (2017)
- Draft Leeuwin-Naturaliste Subregional Strategy (2017)
- Future Busselton 2050 – Strategic Growth Scenarios (no date)
- Margaret River Super Town – Townsite Growth Plan (2012)
- Our Bike Path 2014 – 2020 (2014)
- Shire of Busselton Bike Plan (2010)
- South West Mountain Bike Master Plan (2015)
- South West Regional Blue Print (2014)
- South West Regional Planning and Infrastructure Framework (2015)
- Western Australian Mountain Bike Strategy 2015-2020 (2015)
- WA Bicycle Network Plan 2014-2031 (2014)



APPENDIX C
COMMUNITY CONSULTATION SUMMARY

C1. PHASE 1 (DROP-IN SESSIONS)

In April 2017, four community consultation drop-in sessions were undertaken in the Leeuwin-Naturaliste subregion including two in the City of Busselton and two in Shire of Augusta Margaret River. The sessions were promoted through online and print media, with assistance from the two local governments and the South West Development Commission. Several cycling groups and bike shops were also contacted and asked to promote the drop-in sessions through their internal networks. Approximately 40 people attended the two sessions in Busselton, with around 50 in Margaret River.

The sessions involved talking with community members in an informal, roundtable setting. Participants were encouraged to highlight routes which they currently made on bike as well as ideas they had for expanding or improving the existing network. Feedback was sought on everything from missing local links to inter-regional routes. Examples of these mapping outputs are shown in Figure C.2.

To gain a better understanding of the community's ideas for future cycling routes, the facilitators posed several what if scenarios; emphasising the long-term nature (2050) of the cycling strategy and how significant changes to the built environment are possible over a 30-year period. Participants were also given the opportunity to record what they considered to be the most important small, medium and large scale projects via a prioritisation exercise.

During Phase 1 members of the public were also given the opportunity to put forward written submissions. This was to ensure that community members who were unable to attend the drop-in sessions could still voice their ideas and opinions, and allow attendees of the drop-in sessions to have further time to structure written responses.

C1.1 City of Busselton Consultation

There were several key themes that were evident from Phase 1 of the community consultation process in the City of Busselton as detailed below:

Linking Dunsborough to Yallingup:
Phase 1 of the consultation process made it evident that there is strong community support for linking the towns of Dunsborough and Yallingup with cycling infrastructure. Respondents felt the connection was a natural extension of the Geographe Bay Shared Path. The path had support from residents of Busselton, Dunsborough, and Yallingup and was viewed as a key recreational route that would be attractive for both the local community and tourists. Some noted the gradient as being challenging but an alignment away from Caves Road was seen as the most direct and achievable solution.

Completing the Wadandi Track:
Completing the Wadandi Track was mentioned by many of those attending the drop-in sessions. The track was viewed as providing large benefits to the Capes region, both for locals and tourists alike. The priority section for most attendees appeared to be the section between Busselton and Cowaramup. A number of attendees had cycled the existing section (between Cowaramup and Witchcliffe) and firmly believed that a similar result could be achieved further north.

Improve bike parking in Busselton town centre:
A common theme among respondents was that bike parking in Busselton town centre was inadequate. The parking around the jetty was mentioned as being particularly inadequate for the number of visitors in peak holiday periods. A common response was that bike parking is a measure that could be provided at low cost to improve cycling uptake.

Improve north-south linkages to the Geographe Bay Shared Path:
Many attending the community consultations session noted that the Busselton to Dunsborough cycle path was a great asset but that links to the path could be improved. Connections from and to the town centre were particularly popular as well as links to suburbs to the south and west.

Creating an east-west cycling link along the north side of Broadwater reserve:
This link (which is currently being investigated by the City of Busselton) was suggested by a number of people attending the drop-in sessions. The route was viewed positively and would be particularly attractive for children, providing them with a safe route to get to and from several schools.

Providing cycle lanes in Busselton's town centre:
Community members felt that while links to town were often adequate there remained no safe route through town. The town centre does not currently have any provision for cycling and factors such as on-street parking, volume of tourists and circulating traffic make cycling in Busselton's town centre quite unattractive.

Improve wayfinding to existing cycling routes:
There was a general feeling among those attending the community consultation sessions that, while there is a great deal of high-quality cycling infrastructure, wayfinding is lacking. Areas mentioned were to and from the Busselton to Dunsborough path as well as the Busselton Bypass path.

Adding links to connect existing cycle paths around town sites:
Suggestions included links in the town sites of Busselton and Dunsborough to maximise the benefit of existing cycle paths and enable the community to get to key destinations such as shops and community facilities.

Figure C.1 below shows all suggestions for cycling improvements in the City of Busselton that achieved two or more responses.

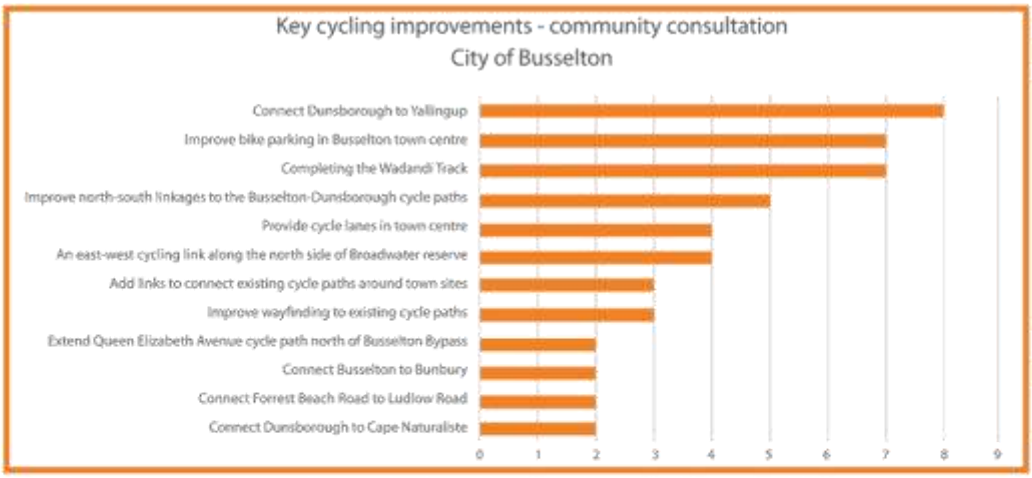


Figure C.1 Cycling issues identified in written submissions during phase 1 of the community consultation process (categorised by number of times mentioned).



Figure C.2 Example of mapping output generated by community members at the City of Busselton drop-in session.

C1.2 Shire of Augusta Margaret River Consultation

The most popular suggestions from the Shire of Augusta Margaret River drop-in sessions were as follows:

Completing the Wadandi Track:
A desire to see the Wadandi Track completed was common to both the City of Busselton and the Shire of Augusta Margaret River's drop-in sessions. The community were positive about the current connection to Cowaramup but there was interest in extending the track the full length to maximise its potential (north to Busselton and south to Augusta). Several of those attending the sessions felt the tracks potential could also be better leveraged by improving links to and from nearby towns and wineries.

Linking Cowaramup to Gracetown:
A link from Cowaramup to Gracetown had a lot of support amongst those attending the drop-in sessions. This was viewed as an important connection from the Wadandi Track and would serve a similar function to the existing Margaret River-Prevelly Shared Path.

Provide protected cycling lanes through Margaret River's town centre:
Many residents attending the drop-in sessions felt that the current layout of the main street in Margaret River was not conducive to cycling, especially during peak holiday periods. This view was shared by cyclists and motorists, with the bypass seen as an opportunity to improve cycling in the main street.

Improving cycling safety along Carters Road to mountain bike trail heads:
There was strong representation from local mountain bikers who wanted a safe way to get to and from The Pines and Compartment 10 mountain bike trail heads, from the town centre, Rotary Park, the Old Settlement and the existing trails to the east of Bussell Highway. Existing conditions along Carters Road were considered by many as being dangerous due to the road's 80 km/h speed limit and poor sightlines. Further, bushwalkers attending the sessions were concerned about the increasing numbers of mountain bikes using the walking trails located on the southern side of Carters Road, and the potential for conflict between user groups.

Develop longer cycling routes to key destinations:
There was enthusiasm for the creation of longer cycling routes/loops to key destinations around the Shire of Augusta Margaret River including towns, wineries, beaches and other key destinations. Given that Margaret River is a popular holiday destination there was also a suggestion to link up caravan parks to provide safe touring routes for visitors and to encourage cycling over driving.

Deliver improved signage and wayfinding:
The community session highlighted a lack of signage in Margaret River as a weakness that could easily be addressed. This could help both local residents and tourists to access town, the Wadandi Track and mountain bike trails (given their increasing popularity). Signage on biking etiquette was also suggested to limit the conflicts between pedestrians and cyclists promoting shared paths and trails.

Improve links to mountain bike trails:
There was a great deal of support for mountain biking amongst those attending the drop-in sessions. Popular links to trails included connections between the Wadandi Track, Rotary Park and South Carters. The walking track to the south of Carters Road is also very popular with mountain bikers, which created tension with some bushwalkers due to it being a narrow track with many blind corners.

Establishing cycle paths along the coast:
Feedback received from the community indicated that there are currently very few cycling opportunities along the coast. Suggestions ranged from smaller scale projects such as a coastal path connection between Prevelly and Gnarabup beaches to a full equivalent of the Cape to Cape Track for cyclists. However, there was an acknowledgement that not all areas would be suitable due to environmental and geographical factors.

Figure C.3 below shows all written suggestions submitted for improvements in the Shire of Augusta Margaret River which achieved two or more responses.

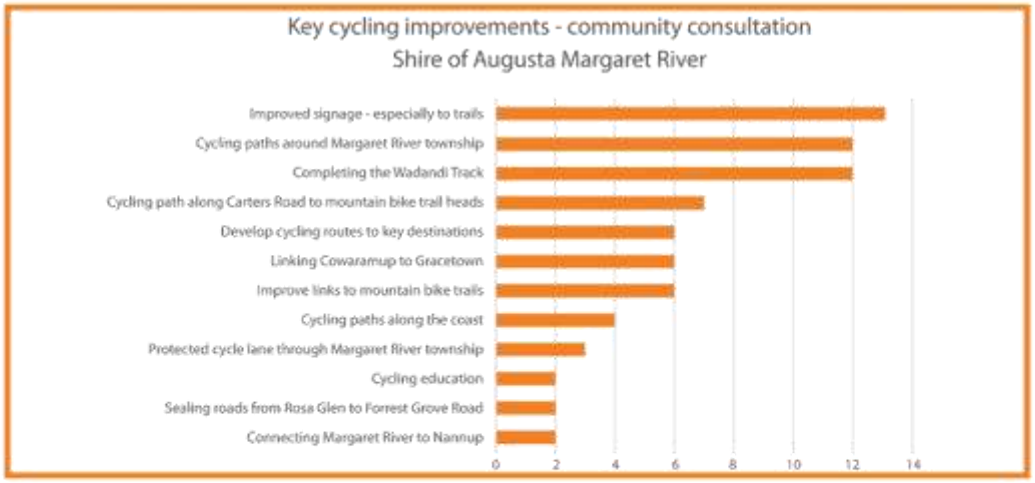


Figure C.3 Cycling issues identified in written submissions during Phase 1 of the community consultation process (categorised by number of times mentioned).

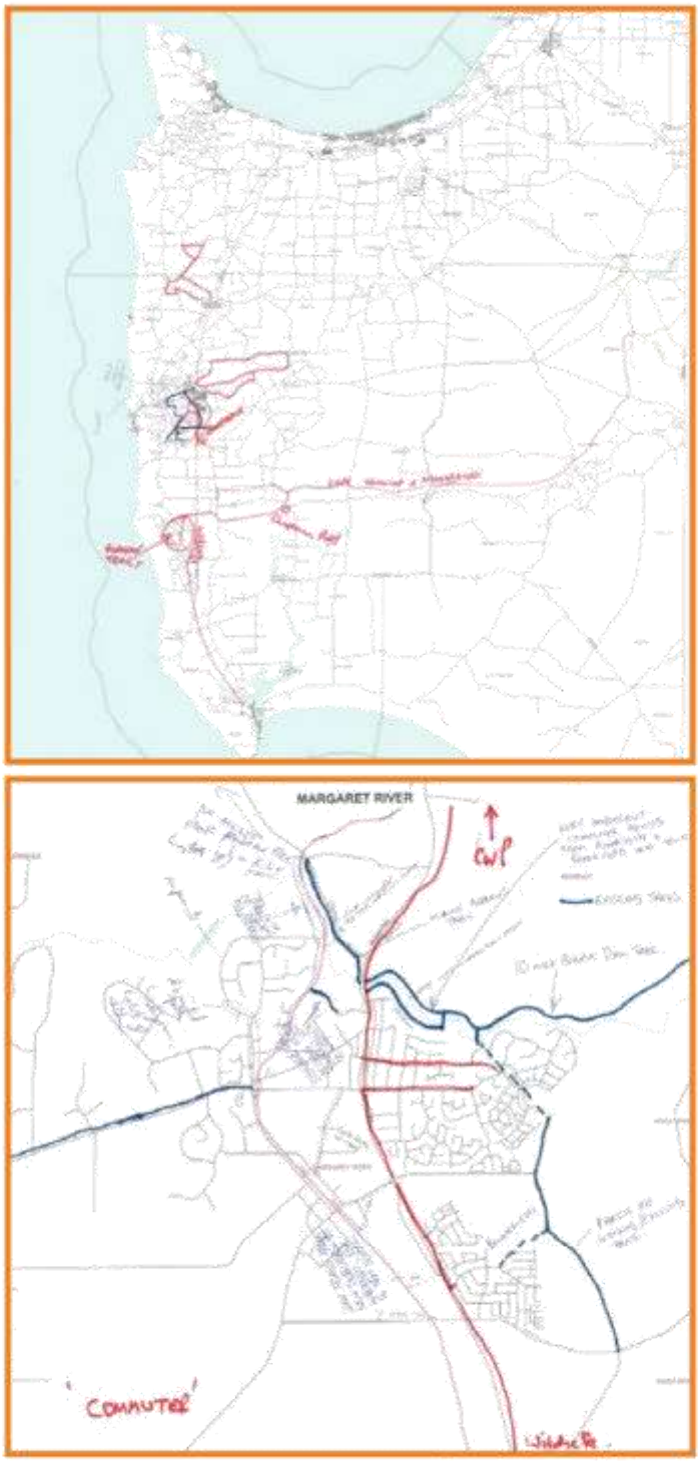


Figure C.4 Example of mapping output generated by community members at the City of Busselton drop-in session.

C2. PHASE 2 (PUBLIC COMMENT PERIOD)

Local community members and key stakeholders were invited to provide feedback on the draft ***Leeuwin-Naturaliste 2050 Cycling Strategy*** over a three-week period commencing on 19 March 2018. The draft document was made available online, hosted on both the City of Busselton and Shire of Augusta Margaret River YourSay websites and promoted through online and print media channels. A total of 175 submissions were received which were grouped into 40 "themes". These themes are summarised in Table C.1, in order of the frequency with which they arose in the submissions.

Table C.1 Summary of community consultation themes.

Community consultation theme	Response
Upgrade/widen the coastal trail linking Dunsborough to Eagle Bay/ Cape Naturaliste to cater for bike riders. Many respondents consider Naturaliste Road too dangerous/hilly and strongly believe that a coastal option be developed instead	While it is noted there is considerable support for the development of an off-road coastal cycling route linking Dunsborough and Cape Naturaliste, the City of Busselton cannot endorse its inclusion in the strategy at this point in time due to conflicts with the ***Meelup Regional Park Management Plan.*** DoT support the reconsideration of this concept in the next version of the strategy.
Complete the Wadandi Track. Consider upgrading/sealing heavily used sections	The City of Busselton and Shire of Margaret River appreciate how many parts of the community would like to see the Wadandi Track's completion fast tracked, noting that this route will form the spine of the Leeuwin-Naturaliste subregion's ultimate cycling network. - The short-term priority is to complete the track (in gravel) between Busselton and Augusta. - The medium-term priority is to consider sealing heavily used sections through towns. - The long-term priority is to consider sealing heavily used inter-town sections (such as Margaret River - Cowaramup), taking care not to undermine the natural experience afforded by the track.
Consider developing formalised routes for road cyclists (sealed shoulders, advisory signage, flashing lights, etc.) as this is a large and growing demographic in the Leeuwin-Naturaliste subregion A route extending from Dunsborough to the Yallingup Hills was mentioned by several respondents, including local cycling clubs	The DoT, The City of Busselton and Shire of Margaret River are supportive of making improvements to popular on-road cycling routes in a sustainable manner which addresses the uniqueness of the individual sites/roads while limiting environmental impacts. Support from Main Roads WA in reducing speed limits on certain roads will be critical for maximising safety opportunities. The action plan mentions the need to undertake a feasibility study regarding potential road cycling routes, working with Main Roads, the Road Safety Commission and local cycling clubs.
Support for developing a shared path linking Cowaramup to Gracetown (similar to that linking Margaret River to Prevelly/Gnarabup)	While the Shire of Margaret River supports this idea in principle, finding a suitable alignment may prove challenging. The Shire of Margaret River will liaise with National Trust WA and LandCorp regarding potential land access requirements and funding opportunities. The action plan mentions the need to undertake a planning/feasibility study regarding a potential cycling link between Cowaramup and Gracetown.
Support for Dunsborough-Yallingup shared path connection	Primary route already included in strategy along Caves Road.

Support for food and wine tourism - creating paths/trails which link clusters of wineries together. Developing spur trails linking wineries to the Wadandi Track will help facilitate this	The City of Busselton and Shire of Margaret River agree that the Wadandi Track's completion will help accelerate food and wine cycle-tourism throughout the subregion. In addition to the potential Wilyabrup loop mentioned in Section 4.7.1, another potential food and wine trail has been identified which links together the cluster of wineries located to the south west of Margaret River. Consultation and collaboration with local business owners and tour operators will be essential to realising these facilities.
Ensure the strategy considers the needs of horse-riding community (new trails should be multi-use wherever possible)	Supported in principle but subject to identifying a suitable surface which will not be eroded by horses, as well as an appropriate design standard and code of conduct. Separate bridle facilities to be considered in high conflict areas. Commentary outlining how tourist trails can cater for horse riders when planned/ designed appropriately has been included in Section 2.4.
Improve the safety of cyclists using Caves Road (especially between Yallingup and Karridale)	The City of Busselton and Shire of Margaret River note that there are numerous attractions along this stretch of road and that it will remain a popular cycling route. Main Roads has advised that it proposes to conduct a planning study (and form a community reference group) to investigate safety improvements to Caves Road (south of Yallingup). Sealing of shoulders has been suggested as a possible outcome. The need for both local governments to work with Main Roads on the planning study is noted in the action plan.
Ensure that new or upgraded cycling infrastructure does not impact negatively on region's natural beauty or environment	Noted. This is mentioned throughout the strategy.
Additional connection along Caves Road from Elmore Road to Toby's inlet footbridge (existing coastal path is of no use to Quindalup Residents living on southern side of Toby's Inlet)	The City of Busselton supports the inclusion of this within the strategy (already included as part of aspirational 2050 cycling network) noting that it will also provide access to the 'Escape Fun Park'. The delivery of this will largely be reliant on the construction of the Vasse-Dunsborough Link and de-proclamation of Caves Road.
Support for formalising the trail linking Boranup and Nannup. Forms an important link between Munda Biddi Trail and Capes Region	Noted. Already included as part of the aspirational 2050 cycling network.
Link Dunsborough to Simmo's Ice Cream via Commonage Road	The City of Busselton support this inclusion and it is already identified in the future network. It may be possible to deliver this away from Commonage Road as part of a nearby subdivision.
Concerns about "sports cyclist" terminology	Terminology has been updated throughout the strategy to road cyclists. This change is supported by local cycling groups and WestCycle.
Concerns about "8 to 80" terminology	This terminology has been retained but explained more clearly to clarify this is a design philosophy rather than a user group.
Support for creating safe walking/ cycling link between Augusta and Cape Leeuwin Lighthouse	Cape Leeuwin Lighthouse connection is already included as part of the aspirational 2050 cycling network. Maps have been updated to include Town Jetty, Colourpatch and Augusta Boat Harbour as key attractions.
Link E21 and E25 routes together in West Busselton, potentially along Pennyworth Ramble	Beyond scope of this strategy. City of Busselton to consider rationalising the number of paths and linkages to/along the Busselton Bypass.
Concerns about "training route" terminology	Terminology has been updated throughout the strategy to road cyclists. This change is supported by local cycling groups and WestCycle.
Questions about rationale for defining "primary routes" and "tourist trails" in some situations	Where a primary route and tourist trail follow the same alignment, a primary route would be shown on the map.
Support for Busselton - Nannup connection (Ruabon - Tuturup rail corridor)	Noted. No action required.
Happy that e-bikes are considered in this strategy	Noted. No action required.
Support for Margaret River recreational loop	Noted. No action required.

Support for Busselton - Bunbury connection	Noted. No action required.
Widen/seal cape-to-cape track between Yallingup and Sugarloaf, enabling high-quality coastal loop path between Dunsborough, Cape Naturaliste and Yallingup	City of Busselton advises this is unlikely to be feasible in short term due to conflicts with Cape to Cape policy and ***Meelup Regional Park Management Plan***.
Improve cycling facilities along West Street, Busselton	Already captured in strategy. No action required.
Improve cycling facilities along Queen Street, Busselton	Already captured in strategy. No action required.
Improve cycling facilities along Harris Road, Busselton	Already captured in strategy. No action required.
Improve cycling facilities along Layman Road, Busselton	Already captured in strategy. No action required.
Complete the Busselton recreational loop (linking Layman Road to Bussell Highway shared paths)	Already captured in strategy. No action required.
Create link along Ford Road reserve linking Bovell and Yalyalup communities to the coast	Already captured in strategy. No action required.
Improve cycling facilities along Marine Terrace and/or Geographe Bay Road to cater for faster cyclists	City of Busselton notes that this road environment does not allow for the inclusion of dedicated cycling infrastructure. Some concessions may be achievable in reducing the speed limit.
Improve cycling facilities along Rendezvous Road, Busselton	Already captured in strategy. No action required.
Improve pedestrian/cyclist safety where Wadandi Track intersects with Carters Road	The Shire of Augusta Margaret River is considering an underpass for this crossing point. Outlined in action plan.
Support for traffic calming and signage along quiet residential streets. Trees can also help pacify hoon behaviour	Noted. Additional commentary added to Section 4.5.
Consider new path extending north along Caves Road between Wallcliffe Road and Peirce Bridge	The Shire of Augusta Margaret River note there is already a trail on the west side from Wallcliffe Road to Onshore Crest which was constructed as part of a subdivision when 10 m road of land was ceded to Min Roads. Shire officers have recently investigated the potential for extension of this trail to Pierce Bridge. Some of the adjoining properties have also ceded 10m of land to Main Roads for road widening. However a continuous trail cannot be created unless the remaining properties also cede land for the trail as there is inadequate space and other constraints with the existing road reserve.
Action plan should be reviewed every 5 years (rather than 8-10)	Agreed. Incorrect in draft Strategy and has been updated.
Provide a better connection between Causeway Road and Queen Street	Already captured in strategy. No action required.
Deliver E13 route (King Street)	Already captured in strategy. No action required.
Realign Geographe Bay Shared Path along coast near Siesta Park (rather than Caves Road)	Already captured in strategy. Mentioned in action plan.
Connect Vasse to Middle Earth mountain bike trails along Kaloorup Road	Not supported by City of Busselton as these trails are currently unsanctioned.
Include more infrastructure around Witchcliffe, including potential connection to Redgate Beach	Additional detail on Witchcliffe has been included in the strategy. Shire of Augusta Margaret River note that there is a lot of land close to the town centre that is zoned for future residential development. Discussions have been held with the Ecovillage developer about links to the Wadandi Track, which would facilitate walking and cycling to/from Margaret River. A link to Redgate Beach is considered a very long-term objective and has not been included in this version of the strategy.



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The information contained in this publication is provided in good faith and believed to be accurate at time of publication. The State shall in no way be liable for any loss sustained or incurred by anyone relying on the information. 05022016

15. COMMUNITY AND COMMERCIAL SERVICES REPORT

15.1 Proposed Disability Access and Inclusion Plan 2018-2022

SUBJECT INDEX:	Disability Access and Inclusion
STRATEGIC OBJECTIVE:	A friendly safe and inclusive community with a strong community spirit.
BUSINESS UNIT:	Community Services
ACTIVITY UNIT:	Community Services
REPORTING OFFICER:	Community Development Officer - Naomi Davey
AUTHORISING OFFICER:	Director, Community and Commercial Services - Naomi Searle
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Proposed City of Busselton Disability Access and Inclusion Plan 2018-2022⇩

PRÉCIS

The *Disability Services Act (1993)* contains the requirement for Local Government Authorities to develop and implement a Disability Access and Inclusion Plan that will further both the principles and the objectives of the Act.

The City of Busselton's proposed Disability Access and Inclusion Plan 2018-2022 (DAIP) provides a planned approach to improving the physical access for those with disability to services and facilities, as well as incorporating inclusion at a participatory and service level. Understanding that individuals have varied needs and expectations, the City has the resources and capabilities to make a difference on the quality of life of the people with disability, who live, work and spend time in our community.

This report seeks Council approval for the DAIP to be publicly advertised for a period of twenty one (21) days for community comment.

BACKGROUND

The City of Busselton (then Shire) first prepared an Access & Inclusion Plan in 2006, which reflected the amended legislative requirements of the *Disability Services Act (1993)*, amended in 2004. Prior to the current statutory requirement for a DAIP, the City had a Disability Services Plan.

The City's current Disability Access and Inclusion Plan was finalised in 2014, and reflects identified opportunities to remove or reduce barriers, encourage participation in a wide range of activities and functions in the community and make information, services and facilities accessible to all where possible. This plan has over the last five years provided direction for implementing accessibility improvements to City and community facilities as well as the inclusiveness of services, events and community life.

The Disability Services Commission provides a structured framework to identify and overcome the challenges faced in all aspects of access and inclusion; the seven (7) outcomes identified are:

1. People with disability have the same rights and opportunities as other people to access the services of, and any events organised by, City of Busselton.

2. People with disability have the same opportunities as other people to access the buildings and other facilities of City of Busselton.

3. People with disability receive information from the City of Busselton 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 at the City of Busselton as other people receive from the staff at City of Busselton.

5. People with disability have the same opportunities as other people to make complaints to the City of Busselton.

6. People with disability have the same opportunities as other people to participate in any public consultation by the City of Busselton.

7. People with disability have the same opportunities as other people regarding employment practices (recruitment and retention) by the City of Busselton.

The DAIP identifies overarching strategies that will guide the development of tasks in annual implementation planning from 2018 to 2022.

The purpose of this report is to request the DAIP be adopted for formal community consultation for a period of twenty one (21) days.

STATUTORY ENVIRONMENT

The Western Australian *Disability Services Act (1993)* requires all local governments to develop a Disability Access and Inclusion Plan, the purpose being to provide strategic direction for the implementation of improvements to access and inclusion across seven outcome areas. The City's DAIP has been prepared in accordance with these requirements, and reflects the City's intention to partner with the community to achieve the improvements captured in the DAIP.

There is a range of other legislation that guides and directs the City's delivery of services and facilities, including:

Equal Opportunity Act 1984 (WA)	The *Equal Opportunity Act* recognises that people with disability require and are entitled to the same level of service as is available to other members of the community. This Act makes it unlawful for a person to discriminate against any person on the grounds of impairment.
Disability Services Act (1993)(WA)	The *Disability Services Act* states that a person with a disability has the right to be respected for their human worth and dignity and has the same human rights as other community members, regardless of the degree and nature of their disability.
Disability Discrimination Act 1992 (Commonwealth)	The *Disability Discrimination Act (DDA)* is a Commonwealth Act that provides protection against discrimination based on any form of disability (i.e. Physical, Intellectual, Sensory, Psychiatric and Neurological) for everyone in Australia. Under the Act it is unlawful to discriminate against a person or their associates (partner, carers, friend, family member or business partner), if they have a disability.
United Nations Convention on the Rights of People with Disability	Australia is one of 50 countries to have both signed and ratified the *UN Convention of the Rights of Persons with Disability*, which came into effect in May 2008. As a party to the Convention, Australia is required to promote, protect, and ensure the full enjoyment of human rights by people with disability, and ensure that they enjoy full equality under the law.

RELEVANT PLANS AND POLICIES

The City has an Access and Inclusion Policy. The purpose of the policy is to recognise that people from diverse backgrounds are equally valued members of society and make a unique and valuable contribution to community wellbeing, community vibrancy and way of life. The policy acknowledges the varied needs and expectations of individuals and demonstrates the City's commitment to provide equal access to services and facilities, regardless of their backgrounds, beliefs or abilities. The policy is realised through the City's DAIP.

FINANCIAL IMPLICATIONS

Many of the actions in the DAIP will be funded from existing resources, with City staff incorporating the strategies into core business. The implementation of the strategies forms part of annual implementation planning and will be further reviewed and prioritised as part of the City's ongoing future financial and corporate planning. External funding may be sought for projects that are not able to be resourced by municipal funds.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

Implementation of the strategies will be prioritised as part of the City's future financial planning.

STRATEGIC COMMUNITY OBJECTIVES

The Officer's recommendation aligns primarily to the following Key Goal Area and Community Objective of the Strategic Community Plan 2017:

Key Goal Area 1 – Community – Welcoming, friendly, healthy

1.1 A friendly safe and inclusive community with a strong community spirit

RISK ASSESSMENT

An assessment of the potential implications of implementing the Officer recommendations has been undertaken using the City's risk assessment framework. The assessment identifies 'downside' risks only, rather than 'upside' risks. Risks are identified where the residual risk, once controls have been identified, is identified as 'medium' or greater. There are no such risks identified.

CONSULTATION

In developing the DAIP community engagement was undertaken with key stakeholders including:

- City of Busselton Disability Access & Inclusion Reference Group
- Agencies and organisation working with or supporting people with disability or aged and their carers who live or work in the City of Busselton.
- People with disability or aged and their carers who live or work in the City of Busselton.

Comment was also sought from residents and ratepayers by way of written submissions, public workshops or by appointment. The opportunity to comment was promoted through media releases, public notices, the City's website and direct mail to identified stakeholders. Officers held two open meetings for community members and services providers attracting twenty five (25) participants and held four (4) one on one consultations with key stakeholders.

OFFICER COMMENT

Meeting the requirements of the *Disability Services Act (1993)*, the DAIP aims to remove or reduce barriers to participation in activities and functions of the community and to make information, services and facilities accessible where possible. It identifies how the City will initiate and implement strategies that align with the seven (7) outcomes mandated by the Disability Services Commission.

From the consultation conducted to date, the City has recognised the community priorities and has incorporated them into the strategies outlined in the DAIP. The City's DAIP provides the planned strategic direction to improving the physical access and inclusion to services and facilities at a participatory and service level.

CONCLUSION

The DAIP will assist the City to enhance and promote services that facilitate increased independence, opportunities and inclusion for people with a disability in our community.

Officers recommend the Council approve the DAIP to be publicly advertised for a period of twenty one (21) days, such that community feedback can be sought to further inform the completion of the plan. Any public comments that would significantly alter the outcomes and strategies identified in the DAIP will be reported back to Council for consideration.

OPTIONS

Should the Council not agree with the Officer Recommendation the following options are outlined:

Option 1: Not approve the DAIP for advertising.

Option 2: Approve the DAIP to be advertised subject to modifications as required.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

The DAIP will be advertised to the public within three (3) weeks of the Council resolution and be advertised for a period of twenty one (21) days with any public comments that would significantly alter the outcome strategies identified in the DAIP to be reported back to Council for their consideration

OFFICER RECOMMENDATION

That the Council:

1. Endorses the proposed City of Busselton Disability Access and Inclusion Plan 2018-2022 to be advertised for public comment for a period of 21 days.

2. Subject to there being no adverse submissions received through the advertising process being referred back to Council for consideration, adopts the City of Busselton Disability Access and Inclusion Plan 2018-2022.


Disability Access and Inclusion Plan
2018-2022
Draft
Where environment lifestyle and opportunity meet!
City of Busselton
Geographe Bay

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This plan is available in alternative formats upon request

From the Mayor

The City of Busselton acknowledges the traditional custodians, the Wardandi Bibbulmum people, on whose land we are living, and pay our respects to their Elders, past and present.

I am pleased to present the City of Busselton Disability Access and Inclusion Plan 2018-2022 (DAIP), a plan that meets the statutory requirements of the Western Australian *Disability Services Act 1993* and focuses on delivering the City of Busselton goal of '*a friendly and safe community with a strong community spirit*'.

The City's population has grown by 21.7% over the past five years and is now around 38,000 with the population is expected to reach 55,000 by 2026. This makes the City of Busselton the fastest growing regional centre in the State. Council has a focus on ensuring the current and future population is engaged and connected within community irrespective of ability. Over the last five years, the City has made measurable outcomes in improving the capacity for people with a disability to access our services, facilities and information.

The plan encompasses the thoughts, opinions and ideas from key stakeholders, City of Busselton DAIP Reference group and the community, collected in various workshops, open meetings and forums. The DAIP will assist the City to determine the strategies needed to enhance and promote services that facilitate opportunity and inclusion for people with a disability in our community.

The City will continue to explore and investigate opportunities to remove or reduce barriers to participation in a wide range of activities and functions, with the intention of making a difference in the quality of life for people with a disability who live, work and spend time in our community.



Our City

CITY OF BUSSELTON LAND AREA	DISTANCE FROM PERTH	CITY OF BUSSELTON POPULATION
1,454km	230kms	38,300*
POPULATION IDENTIFIED AS HAVING A DISABILITY	**AVERAGE ANNUAL POPULATION GROWTH**	**PERSONS NEEDING ASSISTANCE WITH CORE ACTIVITIES**
18.3%^	3.3%*	4.1%*

* Source, Australian Bureau of Statistics Busselton (LGA) (51260) ABS Regional data 29/5/18
^ Australian Bureau of Statistics (ABS) Survey of Disability, Aging and Carers (2015)



Universal Access Ramp at Old Dunsborough Beach

Forward

The Western Australian Disability Services Act (1993) requires all local governments to develop a DAIP. The purpose of the DAIP is to provide strategic direction and framework for the City to plan and implement improvements to access and inclusion across seven outcome areas. The City's DAIP has been prepared in accordance with these requirements, and reflects the City's intention to partner with the community to achieve the improvements captured in the Plan.

In addition to the City's DAIP, the following legislation assists in guiding the delivery of services and facilities, including;

- Western Australian Equal Opportunity Act 1984
- Commonwealth Disability Discrimination Act 1992 (DDA)
- Disability (Access to Premises Buildings) Standards 2010

Background

What is Disability?

The *Disability Services Act (1993)* defines 'disability' as meaning a disability:

- which is attributable to an intellectual, psychiatric, cognitive, neurological, sensory or physical impairment or a combination of those impairments
- which is permanent or likely to be permanent
- which may or may not be of a chronic or episodic nature
- which results in substantially reduced capacity of the person for communication, social interaction, learning or mobility and a need for continuing support services

Previous Access & Inclusion Plans

The City of Busselton has had an Access & Inclusion Plan since 2006. Initially the plan reflected a broader consideration of inclusion including cultural diversity, however following the adoption of the City's Social Plan in 2012 the 2014 DAIP specifically focused on disability access and inclusion and the wide range of functions, facilities and services within the district that the City provides.

Key Achievements - Disability Access and Inclusion Plan 2014-2018

The City's previous DAIP was finalised in 2014 and reflected contemporary trends and best practice in the area of Disability Access and Inclusion. The Plan has provided direction for the City

to implement improvements for inclusion and accessibility in a range of functions, facilities and services within the district.

The City's achievements under the previous Disability Access and Inclusion Plan 2014-2018 include:

- Universal Access Ramp at Old Dunsborough Beach
- Universal Access Ramp at Bunker Bay
- Update and Reprint of the 'Need a Hand' support services directory
- Audit of ACROD parking spaces in the Busselton and Dunsborough City Centre
- Disability awareness training for new staff
- Numerous upgrades to footpaths and ramps completed in the Busselton and Dunsborough towns centre
- Universal Access Viewing platform in the location of Abbey
- Universal Access Viewing platform in Point Picot



Busselton Jetty Swim

Development of the 2018-2022 DAIP

Review

In preparing the City's DAIP, a review of the Disability Access & Inclusion Plan 2014 was undertaken to provide commentary on the progress against each key action and to determine relevant or ongoing strategies that might be carried forward into this Plan.

In order to investigate contemporary trends and best practice in the area of access and inclusion, a review of DAIPs from various other local governments was completed. It was also necessary to examine other City plans and reports, in particular the *Strategic Community Plan (2017)* and the *Social Plan (2015- 2025)*.

Engagement

In developing the *DAIP* 2018-2022, the following sectors of the community were engaged to share their thoughts, ideas and experiences:

- City of Busselton Disability Access & Inclusion Reference Group
- Agencies and organisation working with or supporting people with disability or aged and their carers who live or work in the City of Busselton.
- People with disability or aged and their carers who live or work in the City of Busselton.
- Residents and ratepayers of the City of Busselton.
- City of Busselton Staff

Comment was sought on the City's *DAIP* by way of written submissions, public workshops or by appointment. The opportunity to comment on the City's *DAIP* was promoted through media releases, public notices, the City's website and direct mail to identified stakeholders.

Council Policy

The City of Busselton Council has a formally adopted Access and Inclusion Policy which articulates the City's position and demonstrates the outcomes desired for access and inclusion within its community:

"The City of Busselton is committed to creating and encouraging universally accessible and socially inclusive services, facilities and functions for all people within the community"

The purpose of this policy is to recognise that people from diverse backgrounds are equally valued members of society and make a unique and valuable contribution to community wellbeing, community vibrancy and way of life.

This policy acknowledges the varied needs and expectations of individuals and demonstrates the City's commitment to providing equal access to services and facilities, regardless of their background, beliefs or abilities.



Geographe Community Landcare Nursery Volunteers

The underpinning principles and values of this policy are:

- A commitment to access and inclusion for all citizens in the delivery of services through leadership by adapting, changing and proactively seeking new opportunities;
- A commitment to the progressive removal of physical and emotional barriers to access and inclusion in the following areas: physical access, communication, service provision and participation achieved through partnerships and communication;
- A commitment to being accountable and in touch with relevant community matters by consulting and engaging people with differing physical and intellectual abilities, carers, advocacy groups, culturally and linguistically diverse groups and service providing agencies in the community.

Realisation of this Policy will be achieved throughout the City's operations, broadly through the City's Social Plan, and specifically through the strategies outlined in the City's DAIP.

Outcomes

Achieving improvements in access and inclusion means different things to different people, depending on background, experiences and the barriers faced by people with different types of disability. To provide a structured framework to identify and overcome the challenges faced in all aspects of access and inclusion, the Disability Services identifies the following seven outcomes:

1. People with disability have the same rights and opportunities as other people to access the services of, and any events organised by, City of Busselton.

2. People with disability have the same opportunities as other people to access the buildings and other facilities of City of Busselton.

3. People with disability receive information from the City of Busselton 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 at the City of Busselton as other people receive from the staff at City of Busselton.

5. People with disability have the same opportunities as other people to make complaints to the City of Busselton.

6. People with disability have the same opportunities as other people to participate in any public consultation by the City of Busselton.

7. People with disability have the same opportunities as other people to obtain and maintain employment with the City of Busselton.

These outcomes represent the various areas of challenge to accessibility and inclusiveness that are relevant to the City of Busselton, and provide the framework by which the City's DAIP recommends strategies to improve in relation to each particular aspect.

Strategies

The seven desired outcomes provide a basis for improving access and inclusion for people with disability in the City of Busselton The following strategies will guide tasks, reflected in the Implementation Plan, that the City of Busselton will undertake from 2018-2022 to improve access to its services, buildings and information.

Outcome 1 - People with disability have the same opportunities as other people to access the services of, and any events organised by the City of Busselton	
Strategy	
1.1	Coordinate a Disability Access and Inclusion Plan Reference group to guide the implementation of the Disability Access and Inclusion Plan strategies
1.2	Promote and encourage events that are organised to accommodate people with a disability
1.3	City services are delivered in an accessible and inclusive manner

Outcome 2 – People with disability have the same opportunities as other people to access the buildings and other facilities of the City of Busselton	
Strategy	
2.1	Ensure where appropriate and practical, that all buildings and facilities are physically accessible to people with disability
2.2	Continue to provide and maintain public spaces and pedestrian walkways to meet universal access requirements
2.3	Advocate to local business and tourist venues the requirements for the provision of accessible venues
2.4	Include in all new and redeveloped playgrounds, design features that consider accessibility and inclusion for children with disability
2.5	Ensure the location and quantity of ACROD parking spaces meets the needs of people with disability and relevant statutory planning standards

Outcome 3 - People with disability receive information from the City of Busselton in a format that will enable them to access the information as readily as other people are able to access it	
Strategy	
3.1	Improve community awareness that City information can be provided in alternative formats upon request
3.2	Ensure all promotional materials and documentation regarding services, facilities and customer feedback are in an accessible format using clear and concise language wherever possible.

Outcome 4 - People with disability receive the same level and quality of service from the staff at City of Busselton as other people receive from the staff at the City of Busselton	
Strategy	
4.1	Improve staff awareness of access and inclusion issues
4.2	Provide training for staff and Councillors to have the knowledge, skills and confidence to be able to offer quality customer service to people with disability
4.3	Ensure that people with a disability are provided with an opportunity to comment on access to services
4.4	Monitor the City's Disability Access and Inclusion Policy to ensure it supports equitable access to services throughout the various functions of the City of Busselton

Outcome 5 - People with disability have the same opportunities as other people to make complaints to the City of Busselton	
Strategy	
5.1	Ensure that current grievance mechanisms are accessible for people with disability
5.2	Ensure that grievance mechanism processes and outcome satisfaction survey forms are available in formats to meet the needs of people with disability

Outcome 6 - People with disability have the same opportunities as other people to participate in public consultation by the City of Busselton	
Strategy	
6.1	Provide opportunities for people of all abilities to comment on facilities, services and events delivered by the City of Busselton
6.2	Promote the consultative processes that the City of Busselton uses to the community

Outcome 7 - People with disability have the same opportunities as other people to obtain and maintain employment with the City of Busselton	
Strategy	
7.1	Implement the City of Busselton's Equal Employment Opportunity Management Plan 2015-2018
7.2	Fostering an organisational culture that values and is responsive to the diversity of the City's staff and councillors
7.3	Implementing fair and inclusive management and administrative practices that enable broader and more diverse participation in employment
7.4	Provide support for employees with a disability

Implementation and Review

Annual DAIP Implementation Plan

An internal working document (DAIP Implementation Plan) outlining the actions to deliver the strategies identified for each of the outcomes is developed annually with the assistance of the City of Busselton Disability Access and Inclusion Reference Group. This plan will allow the City to monitor progress and actions within City of Busselton Disability Access and Inclusion Plan 2018-2022. The Implementation Plan will be reviewed and amended annually

DAIP Reference Group

The Disability Access and Inclusion Plan Reference Group meet on a bi-monthly basis. As part of each meeting, the group will initially develop and then review the progress of the annual implementation plan and any associated issues. The group will be comprised of the following City and community representatives:

- At least one (1) Councillor
- At least one (1) staff member from each Directorate.
- Up to three (3) Community members
- Up to three (3) Community Organisation members

Annual Reporting

The *Disability Services Act (1993)* describes the minimal reporting requirements for public authorities in relation to the City's DAIPs as:

1. Submitting an annual progress report to the Disability Services using the supplied template; and
2. Reporting on the implementation of the City's DAIP in the City's Annual Report.
3. The strategies used to advise agents and contractors employed by the City of Busselton.

Review Frequency

This plan will be reviewed in accordance with the DAIP requirements. At the end of each financial year the progress of the Disability Access and Inclusion Plan is documented in each local government's Annual Report and this is forwarded to the state government.

Legislation outlines that Disability Access and Inclusion Plans (DAIP) will be reviewed at least every five years, a copy of the plan must be lodged with the Disability Services.



City of Busselton
Geographe Bay

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Adopted by Council:

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15.2 COMMUNITY BIDS 2018/19 ROUND 2 ALLOCATIONS

SUBJECT INDEX:	Donations, Contributions and Subsidies
STRATEGIC OBJECTIVE:	A community with access to a range of cultural and art, social and recreational facilities and experiences.
BUSINESS UNIT:	Community Services
ACTIVITY UNIT:	Community Services
REPORTING OFFICER:	Community Development Officer - Naomi Davey
AUTHORISING OFFICER:	Director, Community and Commercial Services - Naomi Searle
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Nil

PRÉCIS

Each year the City of Busselton provides financial assistance to community groups and not-for profit organisations through the Community Bids funding program. This assistance is provided for specific activities or projects proposed to be undertaken by that group or organisations within the forthcoming financial year.

This report provides a summary of the outcomes from a Councillor workshop held 7 November 2018, and seeks formal endorsement of the Community Bid submissions to be funded in the second round of the 2018/19 financial year.

BACKGROUND

In March 2011 the Council resolved (*C1103/097)* to allocate funding to the Community Bids program as follows:

1. *Council allocate a total of 0.5% of estimated rates to be levied to Major Project Assistance Grants to be determined as part of the Community Bids assessment process advertised in the first quarter of each year.*

2. *Allocate a total of $50,000 to Minor Project Assistance Grants to be determined twice each year, once as part of the Community Bids process, and once again in September each year.*

3. *Increases the maximum amount of Minor Project Assistance Grants from $3,000 to $5,000 for any one project.*

Applications for the second round of Community Bids funding for the 2018/19 financial year opened in October 2018 and a total of sixteen (16) applications were received. This included five (5) applications for minor bids ($5,000 and under) requesting a total of $15,982 and eleven (11) applications for major bids ($5,001 and over) requesting a total of $242,559.

Applications were assessed by an officer working group, in accordance with the Community Bids guidelines, and recommendations were discussed with Councillors at a workshop held on 7 November 2018. The outcomes of the workshop forms the basis of the officer recommendations in this report.

STATUTORY ENVIRONMENT

Nil

RELEVANT PLANS AND POLICIES

The Community Bids funding program is an opportunity for community based organisations to seek assistance to implement initiatives that benefit the wider community and is a program contained within the City of Busselton Social Plan 2015-2025.

FINANCIAL IMPLICATIONS

Based on the current funding model, the total funds available for allocation for round two of the Community Bids program for 2018/19 is $173,650. The proposed funding allocations detailed in the officer recommendation totals $173,650 for minor and major projects for round 2 in 2018/19.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

There are no long term financial implications associated with the officer recommendation.

STRATEGIC COMMUNITY OBJECTIVES

The officer recommendation aligns primarily to the following Key Goal Area and Community Objective of the Strategic Community Plan 2017:

Key Goal Area 1 – Community – Welcoming, friendly, healthy:

1.3 A community with access to a range of cultural and art, social and recreational facilities and experiences

RISK ASSESSMENT

An assessment of the potential implications of implementing the officer recommendation has been undertaken using the City's risk assessment framework. The assessment identifies 'downside' risks only, rather than 'upside' risks as well. Risks are identified where the residual risk, once controls have been identified, is identified as 'medium' or greater. There are no such risks identified.

CONSULTATION

The Community Bids funding program was advertised in the Council for the Community page on 26 September, and 3 and 10 October 2018 and on the City of Busselton website. Recognised community groups and sporting clubs in the City of Busselton were also notified of the Community Bids program via email.

OFFICER COMMENT

Applications were initially assessed by an officer working group, who considered the following criteria:

- Does the project, program or activity meet the Community Bids criteria?
- Has the applicant outlined why the projects, programs or activities are needed by the community?
- Is there an expectation or risk to the community if the project, program or activity does not proceed?
- Did the organisation or group state the level of cash or in kind contribution they will make to the project, program or activity?
- Has the applicant demonstrated attempts at seeking funding from other sources?
- Has the applicant been successful in previous community bids applications and what was the funded amount?

- Does the project align with the City of Busselton's Strategic Community Plan?

Officers presented the applications to Councillors at a workshop on 7 November 2018, where the following recommendations were made:

	APPLICANT	PROJECT TITLE	REQUEST	RECOMMENDATION	SPECIAL CONDITIONS
Minor Application					
1	Geographe Bay Table Tennis Club	Junior Table Tennis	$5,000	$3,000	
2	Woodturners Association of WA Inc, Busselton Group	Defibrillator	$1,840	$1,840	
3	Cape Mountain Bikers Inc.	Dunsborough Mountain Bike Trails Master Plan	$4,000	$4,000	
4	Geographe Community Landcare Nursery	Weather Proofing Volunteers Area	$3,000	$3,000	
5	Australian Breastfeeding Association Capes Group	Replacement Breast Pump	$1,740	$1,740	
Major Application					
1	Ludlow Tuart Forest Restoration Group	Ludlow forestry settlement and sawmill restoration.	$7,000	$7,000	
2	Geographe Community Landcare Nursery Inc.	Perimeter Fencing	$16,000	$16,000	
3	Dunsborough and Districts Country Club Inc.	Access for all	$28,600	$28,600	
4	Busselton & Sportsman's Football Club Inc.	Female Change Room	$35,000	$35,000	In the event of the change rooms no longer being needed, ownership of the change rooms will revert to the City of Busselton
5	Busselton Hockey Stadium Club Inc.	Electronic Scoreboard	$10,590	$10,590	
6	Capecare	Cycling for the Aged	$10,850	$10,850	
7	Busselton Community Garden	New Shed	$10,000	$10,000	
8	Busselton Aero Club	Upgrade of Technam Aircraft Engine	$20,000	$10,000	
9	Busselton Bowling Club	Busselton Bowling Club Enhancement	$54,892	$10,000	For the purpose of installing Solar Panels only
10	Busselton Population Medical Research Institute	Equipment for the Busselton Health Study	$23,622	Nil	

11	Smiths Beach Surf Lifesaving Club	Ablutions Block	$26,000	$22,030	Subject to meeting statutory requirements, all City approvals and secured tenure of land
			TOTAL	$173,650	

CONCLUSION

The Community Bids funding program is constantly evolving and aims to meet community needs, with funding available to further priority goals and objectives identified in the City of Busselton Strategic Community Plan 2017.

It is recommended that Council adopts the funding allocations as outlined in the officer recommendation.

OPTIONS

Council may wish to consider different levels of funding proposed for all or some of the Community Bid applications. In pursuing this option the Council needs to consider budget availability and the immediacy for some funding items, and the effect this delay could have on organisations being able to finalise their plans and budgets for the 2018/19 year.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

All Community Bid applicants will be individually advised in writing of the outcome of the Council decision within 21 days. Successful applications will be required to sign a grant agreement with the City and meet any specific conditions of funding.

City officers will continue discussions with the various applicants regarding eligibility for other grant funding opportunities.

OFFICER RECOMMENDATION

That the Council:

1. Endorses the provision of funding for round two of the 2018/19 Community Bids funding program as outlined in the table below, subject to the specific conditions as stated:

	APPLICANT	PROJECT TITLE	RECOMMENDATION	SPECIAL CONDITIONS
1	Geographe Bay Table Tennis Club	Junior Table Tennis	$3,000	
2	Woodturners Association of WA Inc, Busselton Group	Defibrillator	$1,840	
3	Cape Mountain Bikers Inc.	Dunsborough Mountain Bike Trails Master Plan	$4,000	
4	Geographe Community Landcare Nursery	Weather Proofing Volunteers Area	$3,000	

5	Australian Breastfeeding Association Capes Group	Replacement Breast Pump	$1,740	
1	Ludlow Tuart Forest Restoration Group	Ludlow forestry settlement and sawmill restoration.	$7,000	
2	Geographe Community Landcare Nursery Inc.	Perimeter Fencing	$16,000	
3	Dunsborough and Districts Country Club Inc.	Access for all	$28,600	
4	Busselton & Sportsman's Football Club Inc.	Female Change Room	$35,000	In the event of the change rooms no longer being needed, ownership of the change rooms will revert to the City of Busselton
5	Busselton Hockey Stadium Club Inc.	Electronic Scoreboard	$10,590	
6	Capecare	Cycling for the Aged	$10,850	
7	Busselton Community Garden	New Shed	$10,000	
8	Busselton Aero Club	Upgrade of Technam Aircraft Engine	$10,000	
9	Busselton Bowling Club	Busselton Bowling Club Enhancement	$10,000	For the purpose of installing Solar Panels only
10	Busselton Population Medical Research Institute	Equipment for the Busselton Health Study	Nil	
11	Smiths Beach Surf Lifesaving Club	Ablutions Block	$22,030	Subject to meeting statutory requirements, all City approvals and secured tenure of land
		TOTAL	$173,650	

16. FINANCE AND CORPORATE SERVICES REPORT

16.1 VETERAN CAR CLUB OF WA (INC) LEASE

SUBJECT INDEX:	Leasing
STRATEGIC OBJECTIVE:	Assets are well maintained and responsibly managed.
BUSINESS UNIT:	Corporate Services
ACTIVITY UNIT:	Property Management Services
REPORTING OFFICER:	Property Coordinator - Ann Strang
AUTHORISING OFFICER:	Director Finance and Corporate Services - Tony Nottle
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Existing Lease Plan⇩
	Attachment B Concept Plan Lot 384⇩
	Attachment C Lot 384 Site Plan Development Application ⇩

PRÉCIS

The Veteran Car Club of WA (Inc.) (VCC) currently leases a portion of Lot 503 (formerly Lot 3001), part Reserve 38558 adjacent to the existing Busselton Tennis Club's premises. The Busselton Branch of the larger Veteran Car Club of WA (BVCC) occupies the premises. The land is identified in the Busselton Foreshore Masterplan for redevelopment. The City has been in discussions with the VCC and the BVCC in relation to the relocation of their clubhouse to allow for the progression of the Busselton Foreshore Redevelopment Project (Foreshore Project).

The purpose of this report is to seek endorsement of the fundamental terms of the proposed surrender of the VCC's existing lease and grant a new lease on an alternative site and the means by which the development of, and relocation to, the new site will be facilitated. The report seeks endorsement to ratify the method by which funds will be allocated during the relocation project.

BACKGROUND

The BVCC clubhouse is located on the corner of Queen Street and Marine Terrace, Busselton. In 1998, the Council resolved to enter into a lease with the VCC to formalise the BVCC's occupation of this building. Their current lease commenced in 2010 for a term of 5 years with a further 5 year option, the second term is due to expire on the 14 March 2020 (Existing Lease). Under the Existing Lease the VCC holds exclusive possession over the clubhouse (outlined red) and a non-exclusive licence over the grassed area surrounding the clubhouse as shown outlined blue on Attachment A.

In order for the City to progress with the Foreshore Project within this area, it is essential that the BVCC relocate to an alternative location. To facilitate the relocation, the Existing Lease will need to be surrendered.

The City has been in communication with the BVCC since early 2014 regarding the relocation of the BVCC clubhouse and in December 2016 formed a working group to progress the relocation project. The working group included three (3) representatives from the BVCC and two (2) from the City. The primary role of the working group was to assist with the relocation of the BVCC from the existing site at the Busselton Foreshore to a new site working on; site identification and feasibility, relocation timeline and identification of potential funding or grant opportunities. The group has continued to meet regularly and work through the various aspects of the project.

The City formally wrote to the BVCC in November 2017 proposing a portion of Reserve 14519, Lot 384, H84 Causeway Road, Busselton (Lot 384) as the preferred site for the new BVCC clubhouse, which the BVCC accepted in correspondence dated 20 December 2017.

This parcel of land is crown land vested with the City for the purpose of 'Recreation and Community'. The City has a management order over this land with power to lease or licence for up to 21 years subject to obtaining prior written approval of the Minister for Lands.

The relocation to Lot 384 would be subject to the VCC entering into a lease of a portion of Lot 384 and entering into a Funding Agreement prior to the building construction, then surrendering their Existing Lease when the new clubhouse is suitable for occupation (Certificate of Occupancy). The terms and conditions of the proposed new lease is detailed in the Officer Recommendation section of this report.

STATUTORY ENVIRONMENT

When disposing of property whether by sale, lease or other means, a Local Government is bound by the requirement of section 3.58 of the Local Government Act which requires giving local public notice when disposing of property. There are exemptions to this process under Regulation 30 (2)(b) (i) and (ii) of the Local Government (Functions & General) Regulations which states "disposal of land to incorporated bodies with objects of benevolent, cultural, educational or similar nature and the members of which are not enlisted to receive any pecuniary profit from the body's transactions, are exempt from the advertising and tender requirements of section 3.58 of the Local Government Act". The constitution of the VCC is such that this exemption applies. The City is not able to enter into a lease direct with the BVCC as they are not an entity as such, but a sub-committee of the VCC.

The land proposed to be leased to the VCC is Lot 384, H84 Causeway Road, Busselton on Deposited Plan 214760, Volume LR3140, Folio 200, Reserve 14519. The land is Crown Land vested with the City. The City has the power to Lease for a term not exceeding 21 years for the designated purpose of 'Recreation and Community Purposes' subject to the consent of the Minister of Lands.

The land is identified in the City's town planning scheme as 'Reserve for Recreation'. The proposal is considered to be consistent with that purpose. As the works are intended to be undertaken by the Club and not the City, a development approval will be required – and at the time of writing, an application has been lodged and is being assessed.

RELEVANT PLANS AND POLICIES

The recommendation to enter into a lease with the VCC is generally consistent with the principles of the Leases of City Land and Buildings Policy, adopted by Council on 27 July 2016. Due to the need to terminate their Existing Lease early, it is proposed that the term of the lease be consistent with that offered to the Busselton Tennis Club (BTC) over their new site. On the 27 September 2017; the Council resolved (C1709/235) to enter into a 21 year lease with the BTC. The relocation is also consistent with the Busselton Foreshore Master Plan.

FINANCIAL IMPLICATIONS

When the Existing Lease was entered into, the annual rent charged to community and sporting groups leasing City owned and managed land was $130 per annum. Further there was no annual rent review as part of standard lease terms. Effective from 1 July 2018, rent applied to community and sporting groups is $220 per annum increased by $5 on each anniversary (all amounts are inclusive of GST). It is recommended that this rental amount is applied to the new lease.

There would be no other financial implication in relation to the lease, as the VCC would remain responsible for all outgoings and the costs of managing and maintaining their leased premises.

The total cost of the redevelopment project is estimated to be $290,000 exclusive of GST. The City's intended monetary contribution is $250,000 exclusive of GST; the monies are contained in the current budget. The BVCC's intended monetary contribution is $40,000; along with in kind

contributions. The City has committed to the construction of the cross over; funds have been allocated in this financial years' budget for this purpose.

LONG-TERM FINANCIAL PLAN IMPLICATIONS

The proposal is consistent with the Long-Term Financial Plan.

STRATEGIC COMMUNITY OBJECTIVES

The recommendation in this report reflects Key Goal Area 6 of the City's Strategic Community Plan 2017 and specifically the Community Objective 6.4 – Assets are well maintained and responsibly managed.

RISK ASSESSMENT

There are no identified risks assessed as being of a medium or greater level associated with the Officer recommendation with the recommendation serving to mitigate the risks associated with the Existing Lease not being surrendered.

CONSULTATION

The BVCC has played an integral part in the community consultation undertaken for the Foreshore Project. As mentioned previously, the City and the BVCC have worked together for a number of years to identify an alternative location for their clubhouse. Lot 384 was identified as their preferred site. The BVCC and the City worked together to develop concept plans for Lot 384. An offer was presented to the BVCC in November 2017 and the BVCC wrote to the City in December 2017 accepting the offer in accordance with the concept plan shown on Attachment B.

OFFICER COMMENT

Under the Existing Lease, as shown outlined red on Attachment A, the VCC leases approximately 475m2 which includes their clubhouse, veranda and enclosed outdoor area. The area shown outlined blue on Attachment A is used as a non-exclusive parking area, this area is approximately 900m2.

The offer proposes that the City lease 2206m2 on Lot 384 to the VCC. The concept shows sufficient space for them to conduct their activities, with room for a clubhouse, undercover area and exclusive car parking area. It also provides for a non-exclusive licence area for the purpose of overflow parking during special events.

The agreement between the City and the VCC is for the construction of a like for like clubhouse. As mentioned the City has allocated $250,000 for the purpose of building a new clubhouse including head works and utility connections on Lot 384.

The BVCC however are seeking to construct a clubhouse that will cater for future growth. The BVCC wish to construct a 225m2 clubhouse with a veranda of approximately 300m, estimated to be in the vicinity of $290,000 exclusive of GST. The additional costs associated with this will be funded by the BVCC. They have advised that they will provide in kind works and commit $40,000 towards the project.

A Development Application has been submitted for the larger clubhouse. The location of the proposed clubhouse is different to that shown on the concept plan however still within their proposed leased area. The proposed new Site Plan is shown as Attachment C.

It is proposed to enter into a Lease and Licence agreement with the VCC over a portion of Lot 384. The approximate extent of the area to be leased is referred to as Site 1 on Attachment B. The proposed licence area is shown hatched on Attachment B. It is proposed that the lease be for a term of 21 years, commencing as soon as practical following the resolution of Council, but no later than 30 March 2019.

Other than the variations mentioned above, such as the annual rent, rent increments and the term, it is proposed that all other terms and conditions of VCC's Existing Lease remain the same, including that they are to remain responsible for maintenance obligations of the leased area.

The VCC would be required to execute a surrender of their Existing Lease, the surrender to take effect 60 days following the issue of the Certificate of Occupancy of their new clubhouse or 31 December 2019, whichever is the earlier.

The project will involve works contracted by the BVCC. It is recommended that the allocation of funds be embodied in a Funding Agreement. This will enable funds to be drawn down by the VCC as and when required but subject to controls and parameters outlined in that agreement. The Funding Agreement will also require a commitment from the VCC to execute the surrender of their Existing Lease.

CONCLUSION

With less than 2 years left on their Existing Lease, the grant of a new lease to the VCC for 21 years is recommended to provide the VCC with security of tenure over Lot 384. The relocation to Lot 384 will provide greater opportunities for the VCC to expand their facilities and provides additional land to show case their cars.

OPTIONS

Council can resolve to enter into different lease terms with the VCC, however the term is limited to a maximum of 21 years under the management order.

TIMELINE FOR IMPLEMENTATION OF OFFICER RECOMMENDATION

The proposed Funding Agreement, Deed of Surrender of the Existing Lease and grant of new Lease will be entered into as soon as practical following the date of the resolution.

OFFICER RECOMMENDATION

That the Council;

1. Delegates to the that CEO the power to negotiate and authorises the CEO to enter into a lease, subject to the consent of the Minister for Lands, with the Veteran Car Club of WA (Inc.)for a portion of Lot 384, Deposited Plan 214760, Volume LR3140, Folio 200, 84 Causeway Road Busselton, as referred to as Site 1 (approximately 2206m2) on Attachment B, subject to the following terms:

    a) The grant of the lease will be conditional upon the surrender by the Veteran Car Club of WA (Inc.) of their lease of land comprising of a portion of Lot 503 (formerly Lot 3001), part Reserve 38558, dated 30 June 2010 between the City of Busselton and Veteran Car Club Inc. and the Veteran Car Club of WA (Inc.) entering into a Funding Agreement referred to in point 3 below.

    b) The term of the lease to be 21 years commencing no later than 31 March 2019.

c) The rent to commence at $220.00 inclusive of GST per annum and increased by $5.00 on each rent commencement anniversary;
d) The permitted use will allow the Tenant to hire the Premises to other community groups, with hire to be incidental to the primary purpose of the lease. Additionally the Tenant are to ensure that their insurance covers such use; and
e) Other terms to be consistent with the City's standard community group lease.

2. Delegates to the CEO the power to enter into a Deed of Surrender of the Lease dated 30 June 2010 between the City of Busselton and the Veteran Car Club of WA (Inc.) in respect of land comprising Lot 503 (formerly Lot 3001), part Reserve 38558, the surrender to take effect 60 days following the issue of the Certificate of Occupancy of the new clubhouse on Lot 384, Causeway Road, Busselton or 31 December 2019, whichever is the earlier.

3. Authorises the CEO to enter into a Funding Agreement with the Veteran Car Club of WA (Inc.) up to a maximum of $250,000 exclusive of GST which details the means by which funds can be drawn down by the Veteran Car Club of WA (Inc.) for the purpose of construction of the new veteran car club clubhouse.



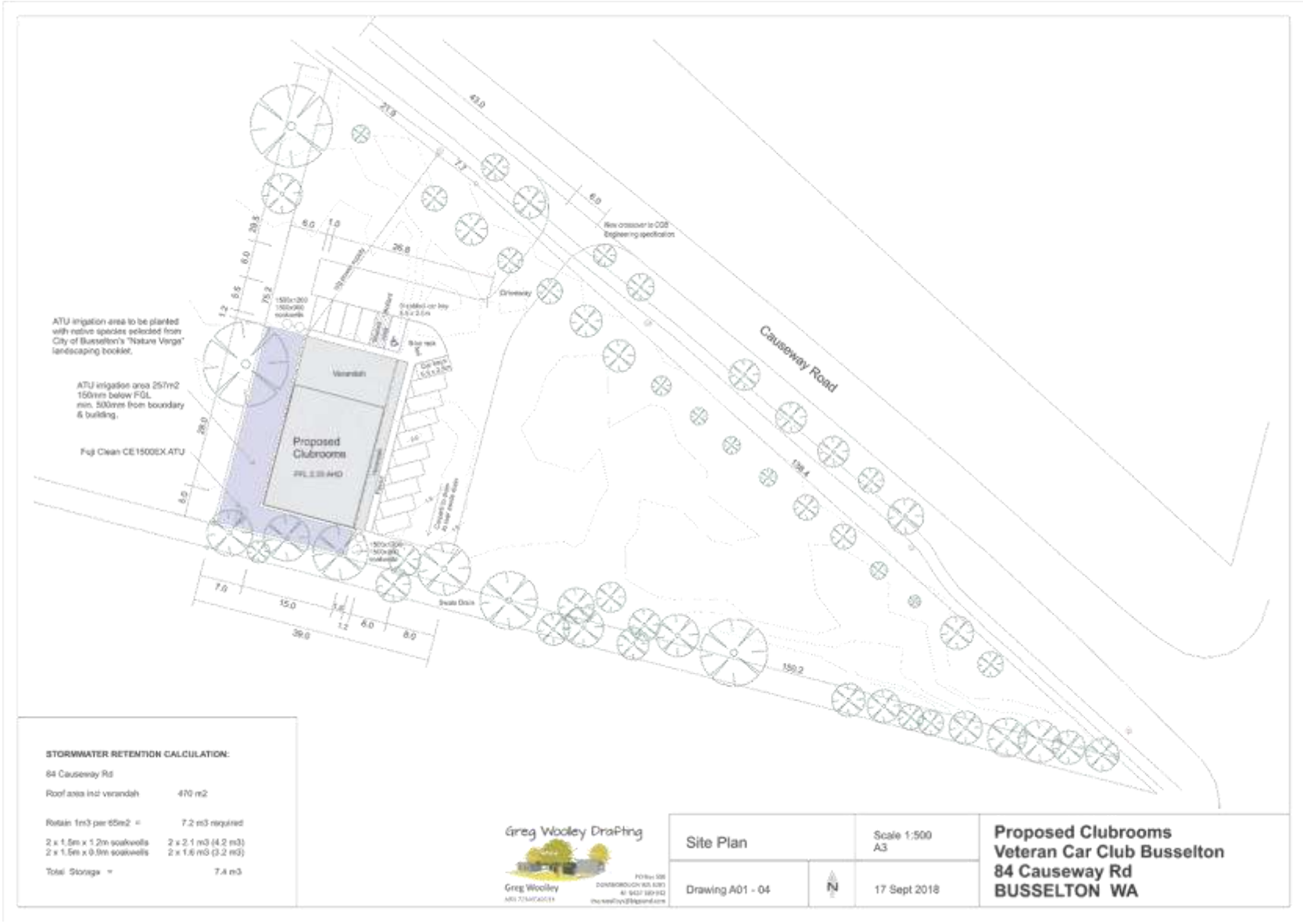
Disclaimer: Every effort has been made to make the information displayed here as accurate as possible. This process is ongoing and the information is therefore ever changing and can not be disseminated as accurate. Care must be taken not to use this information as correct or legally binding. To verify information contact the Shire of Busselton office.

Shire of Busselton IntraMaps Map.

Printed: Tuesday, April 14, 2009

N


CAUSEWAY ROAD
LANDSCAPING
6.0
NON EXCLUSIVE
LICENCE AREA
794m²
SITE 2
BLOCK SIZE
2803m²
INDICATIVE GOVERNMENT
AGENCY BUILDING
PROPOSED
VISITOR'S
CARPARK
LOT 384
PROPOSED VETERAN
CAR CLUB BUILDING
10.0
LOT 6
PROPOSED STAFF
CARPARK
LANDSCAPING
PROPOSED 15m x 10m SHED
10.0
SITE 1
BLOCK SIZE
2206m²
1:500
DIAL BEFORE
YOU DIG
www.1100.com.au
B 12.10.17 NON EXCLUSIVE LIC AREA ADJUSTED CBC CKD
A 11.10.17 RE ISSUED FOR COMMENT (NON EXCLUSIVE LICENCE AREA ADDED) JF CKD
REV DATE ISSUE/AMENDMENT DRN CKD
DRN JF
DESIGNED DS
CHECKED CKD
APPROVED APP
City of Busselton
CAUSEWAY ROAD (1103)
GOV. AGENCY AND VETERAN CAR CLUB BUILDING RELOCATION
LAYOUT PLAN
SHEET 1 OF 1
ORIGINAL SHEET SIZE A3
SCALE: 1 : 500
C/CODE
C/CODE
PLAN CONCEPT 9
ISSUE B


Causeway Road
Proposed Clubrooms
Verandah
Driveway
ATU irrigation area to be planted with native species selected from City of Busselton's "Nature Verge" landscaping booklet.
ATU irrigation area 257m2 150mm below FGL min. 500mm from boundary & building.
Fuji Clean CE1500EX ATU
New crossover to CDB Engineering specification
STORMWATER RETENTION CALCULATION:
84 Causeway Rd
Roof area incl verandah 470 m2
Retain 1m3 per 65m2 = 7.2 m3 required
2 x 1.5m x 1.2m soakwells 2 x 2.1 m3 (4.2 m3)
2 x 1.5m x 0.9m soakwells 2 x 1.6 m3 (3.2 m3)
Total Storage = 7.4 m3
Greg Wooley Drafting
Greg Wooley
Site Plan
Scale 1:500
A3
Drawing A01 - 04
N
17 Sept 2018
Proposed Clubrooms
Veteran Car Club Busselton
84 Causeway Rd
BUSSELTON WA

17. CHIEF EXECUTIVE OFFICERS REPORT

17.1 Councillors' Information Bulletin

SUBJECT INDEX:	Councillors' Information Bulletin
STRATEGIC OBJECTIVE:	Governance systems, process and practices are responsible, ethical and transparent.
BUSINESS UNIT:	Governance Services
ACTIVITY UNIT:	Governance Services
REPORTING OFFICER:	Administration Officer - Governance - Kate Dudley
AUTHORISING OFFICER:	Director Finance and Corporate Services - Tony Nottle
VOTING REQUIREMENT:	Simple Majority
ATTACHMENTS:	Attachment A Planning Applications received by the City between 1 November, 2018 and 15 November, 2018⇩ Attachment B Planning Applications determined by the City between 1 November, 2018 and 15 November, 2018⇩ Attachment C State Administrative Tribunal Reviews ⇩

PRÉCIS

This report provides an overview of a range of information that is considered appropriate to be formally presented to the Council for its receipt and noting. The information is provided in order to ensure that each Councillor, and the Council, is being kept fully informed, while also acknowledging that these are matters that will also be of interest to the community.

Any matter that is raised in this report as a result of incoming correspondence is to be dealt with as normal business correspondence, but is presented in this bulletin for the information of the Council and the community.

INFORMATION BULLETIN

17.1.1 Planning & Development Services Statistics

Planning Applications

Attachment A is a report detailing all Planning Applications received by the City between 1 November, 2018 and 15 November, 2018. A total of 45 formal applications were received during this period.

Attachment B is a report detailing all Planning Applications determined by the City between 1 November, 2018 and 15 November, 2018. A total of 23 applications (including subdivision referrals) were determined by the City during this period with 23 approved / supported and 0 refused / not supported.

17.1.2 State Administrative Tribunal Reviews

Attachment C is a list showing the current status of State Administrative Tribunal Reviews involving the City of Busselton as at 20 November, 2018.

OFFICER RECOMMENDATION

That the items from the Councillors' Information Bulletin be noted:

- 17.1.1 Planning & Development Services Statistics

- 17.1.2 State Administrative Tribunal Reviews

Applications Received Report								
Application Number	*Description*	*Primary Property Address*	*Primary Property Legal Desc*	*Application Received Date*	*Estimated Cost*	*Primary Property Owners*	*Applicant Name*	*Clock Days*
Development Applications								
DA18/0751	Single House (R-Codes)	31 Serpentine Bend~YALYALUP WA 6280	Lot 46 PLAN 404829	1/11/2018	306611	Daniel Anthony Schoenmakers & Alexandra Lee Taylor	Ventura Home Group Pty Ltd	14
DA18/0764	Single House (R-Codes)	2 Canola Grove~BUSSELTON WA 6280	Lot 1 PLAN 400477	1/11/2018	233973	Kevin Bruce James & Nolene Marjorie Collins	Tangent Nominees Pty Ltd	13
DA18/0765	Tourist Accommodation (Alterations/Additions)	3/32 Marshall Street~QUINDALUP WA 6281	Lot 3 STPLN 38163	1/11/2018	100000	Aaron Justin Lindquist & Marika Helena Landahl	Patricia Ingrid Spelman	14
DA18/0772	Storage Sheds, Water Tank, and Rural Pursuit/Hobby Farm Use (Landscape Value Area)	6 Cowrang Lane~YALLINGUP SIDING WA 6282	Lot 76 PLAN 20531	1/11/2018	35000	Susanian Pty Ltd	R&R Sheds Pty Ltd	14
DA18/0776	Outbuilding (Landscape Value Area)	Wildwood Road~YALLINGUP WA 6282	Lot 206 PLAN 409262	1/11/2018	25000	Mark Douglas Nelson	Mark Douglas Nelson	15
DA18/0777	Bulk Earthworks (Site Cleanup & Relocation of Surcharge Stockpiles)	Pavilion Crescent~GEOGRAPHE WA 6280	Lot 9002 PLAN 413784	1/11/2018	395000	Aigle Geographe Pty Ltd	Tabec Pty Ltd	4
DA18/0778	Retaining Wall (Yallingup Special Character Area)	12 Elsegood Avenue~YALLINGUP WA 6282	Lot 9 PLAN 8037	1/11/2018	20000	Anthony Harold Harris & Lois Julia Harris	Mark Webster Design	0
DA18/0775	Use not Listed (Dairy Effluent System Upgrade)	628 Hairpin Road~JINDONG WA 6280	Lot 2394 PLAN 203037	2/11/2018	30000	Suzanne Tasma Evans & Peter David Evans	GeoCatch	7
DA18/0781	Outbuilding (Landscape Value Area)	208 Quedjinup Drive~QUEDJINUP WA 6281	Lot 2 PLAN 409135	2/11/2018	31200	Patrick John Bloomer & Gaylene Ann Johnston	R&R Sheds Pty Ltd	13
DA18/0754	Garage (Over-height Wall Constructed up to Lot Boundary)	2/17 Maryllia Road~BROADWATER WA 6280	Lot 2 STPLN 26101	5/11/2018	15000	Helen Margaret Mackinnon	TR MacKinnon & Company	0
DA18/0768	'Change of Use' to Holiday Home (Single House) 10 people	2 Peppermint Drive~DUNSBOROUGH WA 6281	Lot 60 PLAN 52318	5/11/2018	0	Shohan Asiri Seneviratne & Natasha Sherifa Moussa	Shohan Asiri Seneviratne, Natasha Sherifa Moussa	11

Applications Received Report								
Application Number	*Description*	*Primary Property Address*	*Primary Property Legal Desc*	*Application Received Date*	*Estimated Cost*	*Primary Property Owners*	*Applicant Name*	*Clock Days*
Development Applications								
DA18/0779	Single House (Vehicle Access)	28 Harbeck Drive~KEALY WA 6280	Lot 1227 PLAN 407112	5/11/2018	218174	Aidan James Shields Smith & Caitlin Elizabeth Bower	WA Country Builders Pty Ltd	10
DA18/0782	Single House (Boundary Wall)	112 Geographe Bay Road~DUNSBOROUGH WA 6281	Lot 1 PLAN 49469	5/11/2018	473163	Annette Roberta Whittaker	Ventura Home Group Pty Ltd	11
DA18/0780	Use not Listed (Wine Tasting and Sales Facility) - Extension to licensed area and sale of wine by the glass	248 Tom Cullity Drive~METRICUP WA 6280	Lot 1685 PLAN 201659	6/11/2018	0	Gregory Philip Bettenay & Terri Anne Bettenay	Gregory Philip Bettenay, Terri Anne Bettenay	8
DA18/0722	Front Fence (R-Codes)	47 Kawana Boulevard~DUNSBOROUGH WA 6281	Lot 1581 PLAN 412045	7/11/2018	15000	Elizabeth Nunn	Elizabeth Nunn	8
DA18/0728	Modified Building Envelope to Accommodate Water Tank (Landscape Value Area)	5 Koorabin Drive~YALLINGUP WA 6282	Lot 54 PLAN 23510	7/11/2018	10000	Jane Thea Airas Page	Jane Thea Airas Page	5
DA18/0789	Single House & Reduced Setback to Building Envelope (Landscape Value Area)	Woodbridge Vale~YALLINGUP SIDING WA 6282	Lot 101 DIAGRAM 98521	7/11/2018	359169	Marcus Anthony Savill & Estelle Louise Coremans	Tangent Nominees Pty Ltd	0
DA18/0785	'Change of Use' to Holiday Home (Single House) - 8 people	40 Willmott Street~GEOGRAPHE WA 6280	Lot 506 DIAGRAM 97223	8/11/2018	0	Michael Peter Taylforth & Helen Taylforth	Michael Peter Taylforth, Helen Taylforth	0
DA18/0792	New Classrooms, Science Rooms & Music Extensions (St Mary MacKillop College)	1 MacKillop Avenue~WEST BUSSELTON WA 6280	Lot 197 PLAN 21438	8/11/2018	3400000	Roman Catholic of Bunbury	Franco Carozzi Architects Pty Ltd	4
DA18/0790	'Change of Use' to Bed & Breakfast (Single House) 7 people	231 Lagoon Drive~YALLINGUP WA 6282	Lot 2 PLAN 24227	9/11/2018	0	Melanie Tara Redman Carr	West Coast Designs Pty Ltd	6
DA18/0791	Patio Addition (Special Character Area)	49 Gifford Road~DUNSBOROUGH WA 6281	Lot 16 PLAN 9656	9/11/2018	4000	Valma Rose Della Vedova	Southwind Construction	7

Applications Received Report								
Application Number	*Description*	*Primary Property Address*	*Primary Property Legal Desc*	*Application Received Date*	*Estimated Cost*	*Primary Property Owners*	*Applicant Name*	*Clock Days*
Development Applications								
DA18/0796	Patio Addition (Landscape Value Area)	307 Hayes Road~YALLINGUP SIDING WA 6282	Lot 3 PLAN 18682	9/11/2018	10000	John Lucien Prevost	John Lucien Prevost	7
DA18/0799	Veteran Car Club	84 Causeway Road~BUSSELTON WA 6280	Lot 384 PLAN 214760	9/11/2018	290000	City of Busselton	Veteran Car Club of WA (Busselton Branch)	12
DA18/0798	Patio Addition (Reduced Setback)	21 Capstan Place~GEOGRAPHE WA 6280	Lot 6 SSPLN 74194	12/11/2018	6530	Russell Neil Foale	CPR Outdoor Centre	5
DA18/0805	Modified Building Envelope to Accommodate Water Tank (Landscape Value Area)	Okapa Rise~DUNSBOROUGH WA 6281	Lot 423 PLAN 49084	12/11/2018	0	Kylie Gorbach & Harald Gorbach	Kylie Gorbach, Harald Gorbach	6
DA18/0793	Existing Tavern (Disposal of Treated Wastewater on Adjacent Lot)	133 Gale Road~METRICUP WA 6280	Lot 131 PLAN 32067	13/11/2018	20000	Julia Helen Atkins	Miles Levinson	0
DA18/0793	Existing Tavern (Disposal of Treated Wastewater on Adjacent Lot)	Gale Road~METRICUP WA 6280	Lot 130 PLAN 32067	13/11/2018	20000	Julia Helen Atkins	Miles Levinson	0
DA18/0802	Over-height and Oversize (aggregate area) Outbuilding	3 Furphy Place~WEST BUSSELTON WA 6280	Lot 412 PLAN 75010	13/11/2018	19954	Shannon John Dempster & Stephanie Dempster	Shannon John Dempster, Stephanie Dempster	5
DA18/0804	Single House (R-Codes)	1 Crab Lane~KEALY WA 6280	Lot 1456 PLAN 413534	13/11/2018	173737	Chelsea Lee Fitzpatrick	Tangent Nominees Pty Ltd	6
DA18/0703	'Change of Use' to Holiday Home (Single House) - 10 people	575 Metricup Road~WILYABRUP WA 6280	Lot 1678 PLAN 201657	14/11/2018	0	Alford Bay Pty Ltd	Thomas Hill	0
DA18/0766	Single House (Vehicle Access)	28 Mellidonis Crescent~KEALY WA 6280	Lot 1265 PLAN 413534	14/11/2018	156962	Perron Developments Pty Ltd & Stawell Pty Ltd	BGC Residential Pty Ltd	6
DA18/0788	Single House- Reduced Front Setback	12 Murdoch Way~ABBEY WA 6280	Lot 69 PLAN 41567	14/11/2018	330802	Darryl Jon Rayner & Josephine Mary Rayner	Kevin Daff Building Pty Ltd	0
DA18/0800	Single House (Landscape Value Area)	Sylvan Rest~QUINDALUP WA 6281	Lot 54 DIAGRAM 100217	14/11/2018	360000	Glen Arthur Ewen & Carol Marie Ewen	Pro Living Pty Ltd	0

Applications Received Report								
Application Number	*Description*	*Primary Property Address*	*Primary Property Legal Desc*	*Application Received Date*	*Estimated Cost*	*Primary Property Owners*	*Applicant Name*	*Clock Days*
Development Applications								
DA18/0808	Single House (Landscape Value Area)	110 Kinross Loop~QUINDALUP WA 6281	Lot 243 PLAN 68461	14/11/2018	359690	Stephen Paul Kent & Tracie Anne McKeon	Ventura Home Group Pty Ltd	0
DA18/0809	'Change of Use' to Holiday Home (Single House) - 8 people	23 Grasstree Place~YALLINGUP WA 6282	Lot 103 PLAN 39416	14/11/2018	0	Lisa Corser	Lisa Corser	0
DA18/0810	'Anglican Campsite' - Extension to Existing Managers Residence	212 Caves Road~SIESTA PARK WA 6280	Lot 5303 PLAN 220583	14/11/2018	150000	The Bunbury Diocesan Trustees	Linct	0
DA18/0811	Water Tank (Reduced Setback)	345 Payne Road~JINDONG WA 6280	Lot 2 DIAGRAM 68717	14/11/2018	11050	Thomas Isaac Lawrance	R&R Sheds Pty Ltd	0
DA18/0755	Single House (R-Code Variations)	46 Lanyard Boulevard~GEOGRAPHE WA 6280	Lot 82 PLAN 59251	15/11/2018	660000	Benjamin Andrew Beven & Giuseppina Beven	Dale Alcock Homes South West Pty Ltd	1
DA18/0767	'Change of Use' to Holiday Home (Single House) - 8 people	6 Locke Street~ABBEY WA 6280	Lot 70 PLAN 8764	15/11/2018	0	Violet Georgina Jenkins	Violet Georgina Jenkins	0
DA18/0794	Single House (Vehicle Access)	13 Harvey Street~YALYALUP WA 6280	Lot 815 PLAN 404829	15/11/2018	164324	Jacob Peter Barry Gaspar & Harriet Anne Hole	Plunkett Homes 1903 Pty Ltd	0
DA18/0812	Single House (R-Codes)	5 Medinah Street~DUNSBOROUGH WA 6281	Lot 1332 PLAN 62623	15/11/2018	221126	Sally Roger & Martin George Hopkins	Dale Alcock Homes South West Pty Ltd	0
DA18/0813	Ancillary Accommodate (Reduced Setback)	39 Lindsay Drive~YALYALUP WA 6280	Lot 214 PLAN 47535	15/11/2018	115000	Paul Andrew Blachford & Claire Jane Blachford	Modular WA	4
DA18/0814	'Change of Use' to Holiday House (Single House) - 7 people	14 Smith Street~DUNSBOROUGH WA 6281	Lot 72 PLAN 206061	15/11/2018	0	Darryl Margaret Seward & David Andrew Seward	Darryl Margaret Seward, David Andrew Seward	0
DA18/0816	Single House (Landscape Value Area)	Okapa Rise~DUNSBOROUGH WA 6281	Lot 407 PLAN 49084	15/11/2018	434110	Christopher Rowan Conn	Dale Alcock Homes South West Pty Ltd	0
DA18/0818	Single House (R-Codes)	9 Crab Lane~KEALY WA 6280	Lot 1489 PLAN 413534	15/11/2018	143713	Carole Ann Cole	Plunkett Homes 1903 Pty Ltd	0

Applications Determined Report									
Application Number	*Description*	*Primary Property Address*	*Primary Property Legal Desc*	*Applic Determined Date*	*Application Determined Result*	*Clock Days*	*Estimated Cost*	*Primary Property Owners*	*Applicant Name*
Development Applications									
DA18/0689	'Change of Use' from Ancillary Accommodation to Single House	128 Biddle Road~YALLINGUP WA 6282	Lot 56 PLAN 62117	1/11/2018	Approved	28	0	Jack Mason	Jack Mason
DA18/0654	'Change of Use' to Holiday Home (Grouped Dwelling) 6 People	7/22-24 Thomas Street~WEST BUSSELTON WA 6280	Lot 2 SSPLN 45698	2/11/2018	Approved	47	0	Arthur David Graham & Patricia Margaret Graham	Arthur David Graham, Patricia Margaret Graham
DA18/0733	Alterations/Additions (Grouped Dwelling)	8/864 Geographe Bay Road~WEST BUSSELTON WA 6280	Lot 8 STPLN 25772	5/11/2018	Approved	12	60000	Ellen Marie Stonehouse	BEN TARBOTTON BUILDING CO.
DA18/0642	'Change of Use' to Veterinary Centre	3/14 Trumper Drive~BUSSELTON WA 6280	Lot 3 STPLN 68141	5/11/2018	Approved	64	20000	Darren Bradley Kirkham & Deborah Sharron Kirkham	Andrew David Pollock
DA18/0705	Single House (Port Geographe Development Area)	23 Headstay Cove~GEOGRAPHE WA 6280	Lot 29 PLAN 57392	6/11/2018	Approved	12	247843	Raymond Lawrence Clarke & Heather Rose Clarke	Dale Alcock Homes South West Pty Ltd
DA18/0732	Facade Refurbishment	237 Naturaliste Terrace~DUNSBOROUGH WA 6281	Lot 1 DIAGRAM 29927	6/11/2018	Approved	13	58000	Eloise Kathleen Jennings, Andrew John Hopkins, Jennings Hopkins Discretionary Trust	Jennings Hopkins Discretionary Trust
DA18/0585	Carpark Structure for Solar Collection	55 Dunn Bay Road~DUNSBOROUGH WA 6281	Lot 107 PLAN 36824	6/11/2018	Approved	85	509214	DCSC Pty Ltd	Infinite Energy
DA18/0729	Deck (Special Character Area)	212 Geographe Bay Road~QUINDALUP WA 6281	Lot 2 DIAGRAM 36963	6/11/2018	Approved	12	8000	Anna Teresa Carger	Anna Teresa Carger
DA18/0567	Single House with Reduced Setbacks (Port Geographe Development Area)	13 Freycinet Drive~GEOGRAPHE WA 6280	Lot 401 PLAN 21949	6/11/2018	Approved	7	567856	Deborah Isla Daly & Sean David Daly	BGC Residential Pty Ltd
DA18/0695	One Grouped Dwelling	56 Capstan Place~GEOGRAPHE WA 6280	Lot 17 SSPLN 74194	6/11/2018	Approved	34	165637	Ozzieplant Pty Ltd	Tangent Nominees Pty Ltd

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Development Applications									
DA18/0480	Short-Stay Accommodation and Garage/Studio	9/22 Valley Road~YALLINGUP WA 6282	Lot 9 STPLN 11964	6/11/2018	Approved	77	380000	Christopher Allan Binns	OX Studio
DA18/0637	Modified Building Envelope, Single House Addition and Masonry Front Boundary Wall	210 Rendezvous Road~VASSE WA 6280	Lot 7 PLAN 13355	6/11/2018	Approved	40	15000	Joel Victor Lawrance & Michelle Ashley Lawrance	Joel Victor Lawrance, Michelle Ashley Lawrance
DA18/0656	Retrospective Storeroom Addition to Grouped Dwelling	9/4 Court Street~WEST BUSSELTON WA 6280	Lot 9 STPLN 11291	6/11/2018	Approved	2	6000	Sally Vaughan & Trevor Stephen Vaughan	Sally Vaughan, Trevor Stephen Vaughan
DA18/0707	Single House (Port Geographe Development Area)	20 Burgee Cove~GEOGRAPHE WA 6280	Lot 8 PLAN 57392	7/11/2018	Approved	22	406760	Raymond Ellis & Moira Sarah Pearman	Tangent Nominees Pty Ltd
DA18/0641	Proposed Signage (Drive Through Liquor Sales)	30-38 Marine Terrace~BUSSELTON WA 6280	Lots 20 & 300	7/11/2018	Approved	62	2500	EHB Holdings Pty Ltd	John Bell Building Company
DA18/0544	Additions to a Single House (Special Character Area)	23 Hammond Road~YALLINGUP WA 6282	Lot 202 DIAGRAM 96586	7/11/2018	Approved	84	100000	Arthur Lindsay Phillips & Jasmine Beth Phillips	Mark Webster Design
DA18/0771	Retaining Wall (Port Geographe Development Area)	23 Headstay Cove~GEOGRAPHE WA 6280	Lot 29 PLAN 57392	8/11/2018	Approved	7	9000	Raymond Lawrence Clarke & Heather Rose Clarke	Raymond Lawrence Clarke, Heather Rose Clarke
DA18/0581	Additions to Single House (Landscape Value Area)	2 Atherden Court~QUEDJINUP WA 6281	Lot 751 PLAN 402177	9/11/2018	Approved	89	200000	Timothy Donald Rechichi & Rebecca Caroline Rechichi	Timothy Donald Rechichi, Rebecca Caroline Rechichi
DA18/0570	Aged Care Facility / Independent Living Units / CWA Hall	171 Naturaliste Terrace~DUNSBOROUGH WA 6281	Lot 600 PLAN 403383	9/11/2018	Approved	86	28350000	Ray Village Aged Services Inc	Gary Batt Associates Architects
DA18/0710	Single House (R-Code Variations)	23 Craig Street~WEST BUSSELTON WA 6280	Lot 65 PLAN 8195	9/11/2018	Approved	28	213988	Stephen Roy Gianola	Stephen Roy Gianola, Plunkett Homes
DA18/0715	Patio (Reduced Setback)	20 Cezanne Way~YALYALUP WA 6280	Lot 1 SSPLN 64454	13/11/2018	Approved	28	7090	Reece Michael Mazure & Bree-Anne Lee Harbeck	CPR Outdoor Centre

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Development Applications									
DA18/0690	Single House with reduced setback (Port Geographe Development Area)	13 Pennant Boulevard~GEOGRAPHE WA 6280	Lot 545 PLAN 410845	14/11/2018	Approved	13	234438	Rodney Keith Blair & Denise Shirley Blair	Dale Alcock Homes South West Pty Ltd
WAPC18/0034	6 Lot Subdivision	78 Biddle Road~YALLINGUP WA 6282	Lot 9004 PLAN 404280	7/11/2018	Support	48	0	Ernest George Nominees Pty Ltd	LB Planning

As at 20 November 2018

APPLICATION (Name, No. and City File Reference)	PROPERTY	DATE COMMENCED	DECISION BEING REVIEWED	RESPONSIBLE OFFICER	STAGE COMPLETED	NEXT ACTION AND DATE OF ACTION AS PER SAT ORDERS	DATE COMPLETED / CLOSED
CITY OF BUSSELTON							
Threadgold vs City of Busselton	Lot 75 No 157 Haag Road, Yelverton	4 May, 2018	Review of a decision under a local planning scheme as to the classification of a use or the permissibility of a non listed use	Jo Wilson	• Directions hearing on the 25 May, 2018 against the City of Busselton decision to refuse the application, the following orders were made: - Respondent is to provide additional information by 6 July, 2018; - Applicant to provide supporting documentation by 6 July, 2018 - Mediation to commence 20 July, 2018. • Mediation on the 23 July, 2018, the following orders were made: - Applicant to provide additional information in respect of traffic and workforce - Respondent is to review the documentation submitted and provide a comprehensive outline of the additional information that is required to be submitted, in particular in relation to the hydrology and ecological information; - Based on the traffic and workforce information, the proponent is to advise if a BMP is required to be submitted; - Applicant to consider whether a clearing permit/federal approval is submitted concurrently with the appeal or submit a flora/fauna report to the City for assessment. - Mediation on 23 Oct, 2018. • Mediation on the 23 October, 2018, the following orders were made: - Applicant to provide additional information in respect of: - Hydrology - Traffic and workforce information - Submit clearing permit to DWER and obtain Federal Approvals if required - Respondent is to review the documentation submitted, seeking advice from DWER as	Mediation 25 February, 2019.	

APPLICATION (Name, No. and City File Reference)	PROPERTY	DATE COMMENCED	DECISION BEING REVIEWED	RESPONSIBLE OFFICER	STAGE COMPLETED	NEXT ACTION AND DATE OF ACTION AS PER SAT ORDERS	DATE COMPLETED / CLOSED
					required; - Based on the traffic and workforce information submitted and a clearing permit being obtained the respondent is to advise if a BMP is required to be submitted; - Mediation on 25 February, 2019.		
JOINT DEVELOPMENT ASSESSMENT PANEL							
DCSC vs Southern JDAP	Lot 108 No 57 Dunn Bay Road, Dunsborough	July, 2018	Appeal against supreme court decision	State Solicitors Office / Paul Needham	• JDAP has appealed the Supreme Court decision. • Supreme Court Hearing on the 5 November 2018.	• Decision is reserved to be handed down in the coming weeks.	**DCSC vs Southern JDAP**
WESTERN AUSTRALIAN PLANNING COMMISSION							
Nil							

18. MOTIONS OF WHICH PREVIOUS NOTICE HAS BEEN GIVEN

Nil

19. URGENT BUSINESS

20. CONFIDENTIAL MATTERS

Nil

21. CLOSURE