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**MARGARET RIVER WA 6285**

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Attention: Mat Cuthbert

Dear Ms Addison-Brown

**LOCAL PLANNING SCHEME No. 1 AMENDMENT No. 70 – LOTS 501, 502 AND 504 REEF DRIVE AND Lot 503 SEAGRASS PLACE GNARABUP**

Please find attached the Instructions for the Environmental Review of the above proposed scheme amendment. These Instructions specify the scope and content of Environmental Review and provide for the preparation of the Environmental Review Document (ERD).

During the preparation of the ERD you are encouraged to consult with the Department of Water and Environmental Regulation.

Please do not hesitate to contact Teresa Bryant (08) on 6364 6421 or via email with any queries.

Yours sincerely



Matthew Tonts  
**CHAIR**

15 December 2021

Encl. Instructions for Environmental Review Assessment No. 2298

## INSTRUCTIONS FOR ENVIRONMENTAL REVIEW

<b>Proposed scheme amendment:</b>	<b>Local Planning Scheme 1 Amendment 70</b>
<b>Responsible Authority:</b>	<b>Shire of Augusta – Margaret River</b>
<b>Assessment number:</b>	<b>2298</b>
<b>Location:</b>	<b>Lots 501, 502 and 504 Reef Drive and Lot 503 Seagrass Place, Gnarabup</b>
<b>Local Government Area:</b>	<b>Shire of Augusta – Margaret River</b>
<b>Public review period:</b>	<b>Environmental Review Document – timing and procedure in accordance with the <i>Planning and Development Act 2005</i></b>

### 1. Introduction

Environmental Review Instructions (Instructions) are provided to the Shire of Augusta – Margaret River as the responsible authority (RA) to define the scope and content of the Environmental Review (ER) required by s.48C(1)(a) of the *Environmental Protection Act 1986* (EP Act). These instructions have been prepared by the Environmental Protection Authority (EPA) in consultation with the Shire of Augusta – Margaret River.

These instructions are available on the EPA website ([www.epa.wa.gov.au](http://www.epa.wa.gov.au))

#### **Context**

The EPA has determined that the above proposed amendment to the Shire of Augusta – Margaret River Local Planning Scheme 1 (LPS 1) is to be assessed under Part IV of the EP Act. The scheme amendment is being assessed because the implementation of the scheme through future development has the potential to have a significant effect on environmental factors including Terrestrial Fauna, Flora and Vegetation, Landforms, Marine Environmental Quality, Coastal Processes and Social Surroundings.

The purpose of this assessment is to determine the environmental acceptability of the scheme amendment, whether it should be implemented and if so, the conditions to which the scheme should be subject to ensure appropriate environmental management.

The scheme amendment is being assessed on aspects that relate to the proposed change in zoning of the land from 'Future Urban' to 'Tourism'.

#### **Environmental Value**

This LPS amendment is being assessed because the proposed scheme amendment has the potential to have a significant effect on the environmental values within the amendment area and nearby, including but not limited to:

- Habitat for conservation significant terrestrial fauna species, including the Western Ringtail Possum listed under the *Biodiversity Conservation Act 2016* and *Environment Protection and Biodiversity Conservation Act 1999*;
- Marine water quality;
- Subterranean fauna habitat in limestone karst;
- Aboriginal heritage places; and
- Visual amenity.

In addition, the clearing of native vegetation has potential to cause greenhouse gas emissions.

The preliminary key environmental factors related to these environmental values and impacts which need to be addressed in the ER are identified in Section 3.

### **Procedure**

The EPA requires the RA to undertake the ER according to these instructions.

### **Next step in the assessment process**

The next step in the assessment process is the release of the ER. When the EPA is satisfied that the ER document has been prepared in accordance with the instructions, the RA can proceed to advertise the ER and proposed scheme amendment and release the ER and scheme report for a public review period as prescribed by the *Planning and Development Act 2005* (PD Act) **sections 84 and 87(1)**.

To facilitate adequate public input, the ER document should be made available as widely as possible and at a reasonable cost. The advertising period and process for the scheme amendment and the ER are to be done in accordance with the PD Act.

Appendix 1 of this document describes in detail the process for assessment of planning schemes.

### **Scope and Content**

The scope and content of the environmental review is outlined in sections 2 to 5 of these instructions. The EPA requires the form of the document to be prepared according to the [Environmental Review Document template](#).

### **Timing**

Table 1 sets out the timeline for the assessment of the scheme amendment.

**Table 1 Assessment timeline**

<b>Key assessment milestones</b>
EPA issues instructions to the responsible authority (60 days after referral)
Responsible authority submits Environmental Review to EPA

EPA authorises advertising of Environmental Review and scheme for public review (30 days from RA submission of ER)
Responsible authority advertises scheme amendment and Environmental Review for public review in accordance with the <i>Planning and Development Act 2005</i>
Close of public review period
Responsible authority provides copies of submissions related to environmental issues to the EPA (7 days from close of public review period)
Responsible authority provides Response to Submissions to EPA (42 days from close of public review period)
EPA reports to the Environment Minister on environmental factors and recommended scheme conditions (60 days after end of public review period or 30 days after receiving RA's Response to Submissions, whichever is longer, but no more than 72 days from the end of the public review period)

## 2. The scheme amendment

The subject of these instructions is the Shire of Augusta – Margaret River Local Planning Scheme 1 Amendment 70. The amendment is to rezone Lots 501, 502 and 504 Reef Drive and Lot 503 Seagrass Place, Gnarabup from 'Future Urban' to 'Tourism' by amending the scheme map. The site is approximately 4.3 hectares (ha).

The location of the scheme amendment is shown in Figure 1 and a summary of the scheme amendment is set out in Table 2.

**Table 2 Summary of the scheme amendment**

<b>Scheme amendment</b>	Local Planning Scheme 1 Amendment 70
<b>Responsible authority</b>	Shire of Augusta – Margaret River
<b>Location</b>	Lots 501, 502 and 504 Reef Drive and Lot 503 Seagrass Place, Gnarabup
<b>Short description</b>	The amendment is to rezone Lots 501, 502 and 504 Reef Drive and Lot 503 Seagrass Place, Gnarabup from 'Future Urban' to 'Tourism' by amending the Scheme map. The site is approximately 4.3 hectares.

## 3. Preliminary key environmental factors and required work

The preliminary key environmental factors for the environmental review are:

1. Coastal Processes
2. Marine Environmental Quality
3. Landforms

4. Flora and Vegetation
5. Terrestrial Fauna
6. Subterranean Fauna
7. Social Surroundings
8. Greenhouse Gas Emissions

Table 3 outlines the work required for each preliminary key environmental factor and contains the following elements for each factor:

- **EPA factor** and **EPA objective** for that factor.
- **Relevant activities** – the development activities that may have a significant impact on that factor.
- **Potential impacts and risks** to that factor.
- **Required work** for that factor.
- **Relevant policy and guidance** – EPA (and other) guidance and policy relevant to the assessment.

**Table 3 Preliminary key environmental factors and required work**

Coastal Processes	
<b>EPA objective</b>	To maintain the geophysical processes that shape coastal morphology so that the environmental values of the coast are protected.
<b>Relevant activities</b>	<ul style="list-style-type: none"> <li>• Future development in proximity to Gnarabup Beach and Gas Bay.</li> </ul>
<b>Potential impacts and risks</b>	<p>Future development of the amendment area has the potential to cause:</p> <ul style="list-style-type: none"> <li>• Increased erosion caused by uncontrolled public access to beachfront areas and removal of remnant vegetation.</li> <li>• Alteration of drainage during extreme flooding events, with possible implications on the foreshore environment and dune stability.</li> <li>• Risk to public safety and future infrastructure due to coastal inundation, sea level rise, and coastal erosion.</li> </ul>
<b>Required work</b>	<ol style="list-style-type: none"> <li>1. Characterise the environment by describing the current coastal processes in proximity to the scheme amendment. This is to include, but not be limited to:               <ol style="list-style-type: none"> <li>a) spatially quantify the coastal morphology by presenting beach profiles and aerial imagery for the historic duration of available data which may include a present day more detailed representation (e.g. unmanned aerial vehicle survey); and</li> <li>b) characterise erosion and inundation provided by extreme events as well as during the required planning timeframe per State Planning Policy 2.6 (SPP 2.6).</li> </ol> </li> </ol> <p>The spatial and temporal scales must be adequate to address all coastal processes and patterns likely to be affected as a result of the scheme</p>

	<p>amendment. Assessment shall be undertaken in accordance with Schedule One of SPP 2.6.</p> <ol style="list-style-type: none"> <li>2. Identify elements of the future development and associated infrastructure which may potentially affect coastal processes, including direct, indirect and cumulative impacts and for both construction and operation.</li> <li>3. Address the requirements of SPP 2.6, particularly the coastal foreshore reserve requirements. The coastal foreshore reserve should include allowance for physical processes (as per Schedule One) and be an appropriate width to ensure a coastal foreshore reserve is maintained should the coastal physical process impacts be realised over the planning timeframe (SPP 2.6 cl. 5.9 (i) and (ii)). It should be demonstrated the current values, uses and functions of the coastal foreshore reserve are to be maintained.</li> </ol> <p>The relevant values, functions and uses prescribed include biodiversity and ecosystem integrity, visual landscape, public access, and recreation values. The location and size of the coastal foreshore reserve should be responsive to the environment. The coastal foreshore reserve should include landforms and landscapes of ‘amenity value’ and the resultant coastal foreshore reserve may vary in depth from the coastal processes allowance relative to the nature of coastal dunes and their relationship with topographic features.</p> <ol style="list-style-type: none"> <li>4. Further to the requirements of item 3, prepare a coastal foreshore reserve report including a map which demonstrates the identified coastal foreshore reserve complies with SPP 2.6.</li> <li>5. Describe any proposed avoidance, mitigation and management measures that demonstrate the EPA’s objectives can be met.</li> <li>6. Predict the residual impacts (direct, indirect and cumulative) from the scheme amendment, after outlining any avoidance, mitigation and management options that will be applied. Impact predictions are to: <ol style="list-style-type: none"> <li>a) Be informed by monitoring undertaken in the local area.</li> <li>b) Address the requirements of State Planning Policy 2.6.</li> </ol> </li> <li>7. Describe the planning mechanisms that are to be applied to ensure impacts are managed to meet the EPA’s objectives.</li> </ol>
<p><b>Relevant policy and guidance</b></p>	<p><b><i>EPA Policy and Guidance</i></b></p> <p><i>Statement of Environmental Principles, Factors and Objectives, EPA, 2018</i></p> <p><i>Environmental Factor Guideline – Coastal Processes, EPA, December 2016</i></p> <p><b><i>Other policy and guidance</i></b></p> <p><i>State Planning Policy No. 2.6, State Coastal Planning Policy, Western Australian Planning Commission, 2013</i></p>

	<p><i>State Coastal Planning Policy Guidelines</i>, Western Australian Planning Commission (2013, to be replaced in early 2021 by update).</p> <p><i>Sea Level Change in Western Australia – Application of Coastal Planning</i>, Department of Transport Coastal Infrastructure, Coastal Engineering Group, 2010</p> <p><i>Coastal hazard risk management and adaptation planning guidelines</i>, Department of Planning, Lands and Heritage and Western Australian Planning Commission, July 2019.</p>
<b>Marine Environmental Quality</b>	
<b>EPA objective</b>	To maintain the quality of water, sediment, and biota so that environmental values are protected.
<b>Relevant activities</b>	<ul style="list-style-type: none"> <li>• Future development in proximity to Gnarabup Beach and Gas Bay.</li> </ul>
<b>Potential impacts and risks</b>	<p>Future development of the amendment area has the potential to cause:</p> <ul style="list-style-type: none"> <li>• Impacts to water quality through construction, clearing of vegetation, nutrient application and effluent disposal.</li> <li>• Impacts to benthic communities and habitats due to changes in water quality.</li> </ul>
<b>Required work</b>	<ol style="list-style-type: none"> <li>8. Conduct a desktop study and monitoring as necessary to characterise the existing marine environmental quality (baseline water and sediment quality) in the area potentially affected by the future development. The characterisation needs to be informed by an assessment of threats and pressures to marine environmental values, both ecological and social.</li> <li>9. Assess and manage potential impacts to water quality to protect benthic communities and habitats in Gnarabup Beach and Gas Bay.</li> <li>10. Predict the extent, severity, and duration of any impacts from future development, after outlining any avoidance and mitigation options that will be applied. Predicted impacts should also be presented spatially.</li> <li>11. Identify management and mitigation measures to ensure residual impacts are not greater than predicted. The ER is to include the procedures for monitoring of key environmental quality indicators (for example turbidity, nutrients and visual record) and management of environmental quality to ensure that future development achieves the proposed environmental outcomes.</li> <li>12. Describe any proposed avoidance, mitigation and management measures that demonstrate the EPA's objectives can be met.</li> <li>13. Describe the planning mechanisms that are to be applied to ensure impacts are managed to meet the EPA's objectives.</li> </ol>

<b>Relevant policy and guidance</b>	<p><b><i>EPA Policy and Guidance</i></b></p> <p><i>Statement of Environmental Principles, Factors and Objectives</i>, EPA, 2018</p> <p><i>Environmental Factor Guideline – Marine Environmental Quality</i>, EPA, December 2016</p> <p><i>Technical Guidance – Protecting the quality of Western Australia’s marine environment</i>, EPA, December 2016</p>
<b>Landforms</b>	
<b>EPA objective</b>	To maintain the variety and integrity of significant physical landforms so that environmental values are protected.
<b>Relevant activities</b>	<ul style="list-style-type: none"> <li>• Clearing of vegetation for future development</li> <li>• Physical presence of future development</li> </ul>
<b>Potential impacts and risks</b>	<p>Future development of the amendment area has the potential to cause destruction or alteration of karst landform by:</p> <ul style="list-style-type: none"> <li>• Filling, compaction and ground disturbance.</li> <li>• Recreational pressure and damage over time.</li> <li>• Structural alteration of limestone karst and/or coastal dune systems.</li> <li>• Impacts to the ecological function and environmental values of the limestone karst system.</li> <li>• Movement of unstable dunes (blowouts) owing to cut and fill works.</li> </ul>
<b>Required work</b>	<p>14. Characterise the landform system, including limestone karst and any dune systems, in terms of variety, integrity, ecological importance, scientific importance, rarity and social importance. Please consult with appropriate experts as necessary to assist in the identification of these systems.</p> <p>15. Describe and assess the significance of potential direct, indirect and cumulative impacts to the system within and directly adjacent to the development envelope. Include an analysis of the nature, magnitude and duration of the impacts (temporary and permanent). Discuss cumulative impacts including the impacts from other existing and potential approvals/developments.</p> <p>16. Apply the mitigation hierarchy. Discuss how future development may be designed to avoid and minimise impacts to the geomorphology and structure of the system through the design and location of future development. Detail proposed specific monitoring, management and mitigation measures.</p> <p>17. Predict the residual impacts and the significance on the system after considering and applying the mitigation hierarchy.</p>

<b>Relevant policy and guidance</b>	<p><b><i>EPA Policy and Guidance</i></b></p> <p><i>Statement of Environmental Principles, Factors and Objectives</i>, EPA, 2018</p> <p><i>Environmental Factor Guideline – Landforms</i>, EPA, December 2016</p>
<b>Flora and Vegetation</b>	
<b>EPA objective</b>	To protect flora and vegetation so that biological diversity and ecological integrity are maintained.
<b>Relevant activities</b>	<ul style="list-style-type: none"> <li>• Clearing of vegetation for future development, including for bushfire mitigation and the construction of road and other infrastructure.</li> </ul>
<b>Potential impacts and risks</b>	<p>Future development of the amendment area has the potential to cause:</p> <ul style="list-style-type: none"> <li>• Direct loss of flora and vegetation of up to 4.3 ha.</li> <li>• Indirect impacts on flora and vegetation from: <ul style="list-style-type: none"> <li>- dust during construction;</li> <li>- the introduction and spread of weeds;</li> <li>- the introduction and spread of phytophthora;</li> <li>- fragmentation of vegetation; and</li> <li>- changes to surface or ground water hydrology and quality.</li> </ul> </li> </ul>
<b>Required work</b>	<p>18. Identify and characterise the flora and vegetation species present and likely to be present within the amendment area, in accordance with <i>Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment</i>, December 2016. Demonstrate how surveys are relevant, representative and demonstrate consistency with current EPA policy and guidance set out below. Include a summary of survey findings and an analysis of the significance of flora and vegetation in local and regional context in accordance with relevant guidelines set out below.</p> <p>Note: If surveys were undertaken at the referral stage, survey results and a demonstration of how the guidance has been followed are to be included in the ER. Ensure species database searches and taxonomic identifications are current. IBSA data packages should be provided in accordance with EPA guidance.</p> <p>19. Identify and describe the vegetation and significant flora species present and likely to be present within the scheme amendment area, and any areas that may be indirectly impacted by the scheme amendment area. Include an analysis of the significance of flora and vegetation in local, regional and state contexts as appropriate in accordance with the relevant guidance set out below</p>

	<p>20. Provide maps depicting the survey effort in relation to the study area, recorded locations of significant flora, ecological communities, and vegetation and vegetation condition in relation to the amendment area in accordance with the relevant guidelines set out below. Clearly show any areas unable to be surveyed. Ensure species database searches and taxonomic identifications are up to date. Provide vegetation condition mapping.</p> <p>21. Identify and assess the potential direct, indirect and cumulative impacts of future development on the identified environmental values. Include a quantitative assessment of levels of impact on significant flora, listed ecological communities and all vegetation units. Describe and assess the extent of any cumulative impacts within local and regional contexts as appropriate. Provide a map(s) depicting areas of flora and vegetation detailing communities, units, and quality, to be retained and protected.</p> <p>22. Provide a quantitative assessment of impact: For significant flora, this includes;</p> <ul style="list-style-type: none"><li>• number of individuals and populations in a local and regional context;</li><li>• numbers and proportions of individuals and populations directly or potentially indirectly impacted, and</li><li>• numbers/proportions/populations currently protected within the conservation estate (where known).</li></ul> <p>For all vegetation units (noting threatened and priority ecological communities and significant vegetation) this includes;</p> <ul style="list-style-type: none"><li>• area (in hectares) and proportions directly or potentially indirectly impacted, and</li><li>• proportions/hectares of the vegetation unit currently protected within conservation estate (where known).</li></ul> <p>23. Describe any proposed avoidance, mitigation and management measures that demonstrate the EPA's objectives can be met.</p> <p>24. Identify, describe, and quantify the potential residual impacts (direct, indirect, and cumulative) that may occur after considering and applying avoidance and minimisation measures.</p> <p>25. Determine and quantify any significant residual impacts by applying the Residual Impact Significance Model (page 11) and WA Offset Template (Appendix 1) in the <i>WA Environmental Offsets Guidelines</i> (2014). Where significant residual impacts remain, propose an appropriate offsets package that is consistent with the WA Environmental Offsets Policy and Guidelines. Spatial data defining the area of significant residual impacts for each environmental value should be provided (e.g. vegetation type, vegetation condition, specific fauna species habitat.)</p> <p>26. Describe the planning mechanisms that are to be applied to ensure impacts are managed to meet the EPA's objectives.</p>
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<b>Relevant policy and guidance</b>	<p><b><i>EPA Policy and Guidance</i></b></p> <p><i>Statement of Environmental Principles, Factors and Objectives</i>, EPA, 2018</p> <p><i>Environmental Factor Guideline – Flora and vegetation</i>, EPA, December 2016</p> <p><i>Technical Guidance: Flora and vegetation surveys for environmental impact assessment</i>, EPA, December 2016</p> <p><i>Instructions and Form: IBSA Data Packages</i>, EPA, June 2018</p> <p><b><i>Other policy and guidance</i></b></p> <p><i>WA Environmental Offsets Policy</i>, Government of Western Australia, 2011.</p> <p><i>WA Environmental Offsets Guidelines</i>, Government of Western Australia, 2014.</p>
<b>Terrestrial Fauna</b>	
<b>EPA objective</b>	To protect terrestrial fauna so that biological diversity and ecological integrity are maintained.
<b>Relevant activities</b>	<ul style="list-style-type: none"> <li>• Clearing of fauna habitat for future development, including for bushfire mitigation and the construction of road and other infrastructure.</li> <li>• Movement of machinery and vehicles.</li> <li>• Increased presence of artificial light, noise, and human activity.</li> </ul>
<b>Potential impacts and risks</b>	<p>Future development of the amendment area has the potential to cause:</p> <ul style="list-style-type: none"> <li>• Loss of fauna habitat including for conservation significant fauna species.</li> <li>• Direct loss of terrestrial fauna from vehicle movements and strikes.</li> <li>• Indirect impacts to fauna habitat as a result of: <ul style="list-style-type: none"> <li>- barrier effects of the physical presence of development and fragmentation of habitat and populations;</li> <li>- degradation of habitat from introduction and increased spread of weeds/dust;</li> <li>- alteration of fire regimes; and,</li> <li>- altered fauna behaviour due to noise, light and human presence.</li> </ul> </li> </ul>
<b>Required work</b>	<p>27. In accordance with the requirements of EPA guidance conduct a desktop study to identify and characterise the fauna and fauna habitats to inform local and regional context; and based on the results of the desktop study:</p> <ul style="list-style-type: none"> <li>• conduct a basic survey and fauna habitat assessment; and/or</li> <li>• conduct a detailed survey; and/or</li> </ul>

- conduct targeted surveys for significant fauna that may be directly or indirectly impacted.

This should include sampling inside and outside the impact areas and consider cumulative impacts. For identified significant fauna, this must include information on:

- the abundance, distribution, ecology, and habitat preferences, together with baseline information and mapping of local and regional occurrences.
- population size and importance of the population from a local and regional perspective; and
- information on conservation value of each habitat type (e.g. breeding, migration, feeding, resting etc.) from a local and regional perspective, including the percentage representation of each habitat site in relation to its local and regional extent.

Note: Surveys should include both Terrestrial Vertebrate Fauna and Short-range Endemic (and/or other significant) Invertebrate Fauna. Survey design should ensure that adequate local and regional contextual data are collected and should consider cumulative impacts. Distance sampling should be considered as a survey technique for Western Ringtail Possums where appropriate. Survey results and a demonstration of how the requirements have been met are to be included in the ER. If multiple surveys have been undertaken to support the assessment, a consolidated report should be provided including the integrated results of the surveys. Where surveys were undertaken at the referral stage, survey results and a demonstration of how the guidance has been followed are to be included in the ER. Ensure species database searches and taxonomic identifications are current. IBSA data packages should be provided in accordance with EPA guidance. Multiple surveys should be combined in one report. Separate reports are required for Short-range Endemic Invertebrate Fauna and Vertebrate Fauna. Ensure species database searches and taxonomic identifications are up to date.

Where results from previous surveys are relied on for context, justification should be provided to demonstrate that they are relevant and consistent with EPA Guidance.

28. Provide a map of the survey effort applied in relation to the fauna habitats, the study area and amendment area, identifying the direct and indirect impact areas.
29. Identify and describe the fauna assemblages present and likely to be present that may be impacted by the amendment.
30. Identify and describe the characteristics of the fauna habitats identified by the desktop study and surveys, including a map of their extents in relation to the study area, the amendment area, and potential direct, indirect and cumulative impact areas. Describe significant habitats,

	<p>including but not limited to: refugia, breeding areas, key foraging habitat, movement corridors and linkages.</p> <p>31. Identify significant fauna and describe in detail their known ecology, likelihood of occurrence, habitats, and known threats. Map the locations of significant fauna records in relation to the fauna habitats, the study area, the scheme amendment area, and potential direct, indirect, and cumulative impact areas.</p> <p>32. Identify, describe and quantify the potential residual impacts (direct, indirect and cumulative) to fauna assemblages, habitats and significant species, that may occur following implementation of the amendment after considering and applying avoidance and minimisation measures, in a local and regional context. This should include an assessment of the risk posed to any listed species as a result of the scheme amendment. For significant species, this should be done on a species-by-species basis. Identify and map areas of fauna habitat proposed for retention and provide a table of the proportional extents of each habitat within the study area and scheme amendment area, and the predicted amount to be directly and indirectly impacted.</p> <p>33. Describe any proposed avoidance, mitigation and management measures that demonstrate the EPA's objectives can be met.</p> <p>34. Identify, prescribe, and quantify the potential residual impacts (direct, indirect, and) to terrestrial fauna after considering and applying avoidance and minimisation measures. Determine and quantify any significant residual impacts by applying the Residual Impact Significance Model (page 11) and WA Offset Template (Appendix 1) in the WA Environmental Offsets Guidelines (2014).</p> <p>35. Where significant residual impacts remain, propose an appropriate offsets package that is consistent with the WA Environmental Offsets Policy and Guidelines. Spatial data defining the area of significant residual impacts for each environmental value should be provided (e.g. specific fauna species habitat.)</p> <p>36. Describe the planning mechanisms that are to be applied to ensure impacts are managed to meet the EPA's objectives.</p>
<p><b>Relevant policy and guidance</b></p>	<p><b><i>EPA Policy and Guidance</i></b></p> <p><i>Statement of Environmental Principles, Factors and Objectives</i>, EPA, 2018</p> <p><i>Environmental Factor Guideline – Terrestrial Fauna</i>, EPA, December 2016</p> <p><i>Technical Guidance: Terrestrial vertebrate fauna surveys for environmental impact assessment</i>, EPA, December 2016</p> <p><i>Technical Guidance: Sampling of short range endemic invertebrate fauna</i>, EPA, December 2016</p> <p><i>Instructions and Form: IBSA Data Packages</i>, EPA, June 2018</p>

	<p><b>Other policy and guidance</b></p> <p><i>WA Environmental Offsets Policy</i>, Government of Western Australia, 2011.</p> <p><i>WA Environmental Offsets Guidelines</i>, Government of Western Australia, 2014.</p> <p><i>Western Ringtail Possum (Pseudocheirus occidentalis) Recovery Plan</i>, Western Australia Department of Parks and Wildlife February 2017.</p> <p><i>Western Ringtail Possum Pseudocheirus occidentalis Regional Surveys for Main Roads Western Australia</i>, Biota Environmental Sciences, 2020. (Available on request from DBCA)</p> <p>Relevant recovery plans, conservation advices and/or threat abatement plans for conservation significant species that are known to occur, or are likely to occur, in the vicinity of the amendment area.</p>
<b>Subterranean Fauna</b>	
<b>EPA objective</b>	To protect subterranean fauna so that biological diversity and ecological integrity are maintained.
<b>Relevant activities</b>	<ul style="list-style-type: none"> <li>Development on subterranean fauna habitat, and water abstraction for future development.</li> </ul>
<b>Potential impacts and risks</b>	<p>Future development of the amendment area has the potential to cause:</p> <ul style="list-style-type: none"> <li>Mortality and loss of habitat from development of buildings and associated infrastructure.</li> <li>Impacts to subterranean fauna from: <ul style="list-style-type: none"> <li>development impacting habitat.</li> <li>changes to hydrological regimes and water quality.</li> <li>abstraction of groundwater.</li> <li>groundwater contamination.</li> </ul> </li> </ul>
<b>Required work</b>	<p>37. In accordance with EPA guidance:</p> <ol style="list-style-type: none"> <li>conduct a desktop study, incorporating existing regional subterranean fauna surveys and databases; and</li> <li>undertake surveys to identify and characterise subterranean fauna and subterranean fauna habitat at a local and regional scale that may be impacted directly and indirectly by the implementation of the scheme amendment. This should include sampling inside and outside the impact areas and consider cumulative impacts.</li> </ol> <p>Where results from previous surveys are relied on for context, justification should be provided to demonstrate that they are relevant and consistent with EPA Guidance.</p> <p>38. Provide figure(s) showing the extent of subterranean fauna habitat in relation to the scheme amendment area and species distributions.</p>

	<p>39. Describe and assess the extent of direct, indirect and cumulative impacts as a result of future development and associated infrastructure to subterranean fauna, taking into consideration the significance of subterranean fauna and subterranean fauna habitat.</p> <p>40. Predict the residual impacts from the future development and associated infrastructure on subterranean fauna after considering and applying avoidance and minimisation measures.</p> <p>41. Describe any proposed avoidance, mitigation and management measures that demonstrate the EPA's objectives can be met.</p> <p>42. Describe the planning mechanisms that are to be applied to ensure impacts are managed to meet the EPA's objectives.</p>
<b>Relevant policy and guidance</b>	<p><b><i>EPA Policy and Guidance</i></b></p> <p><i>Statement of Environmental Principles, Factors and Objectives</i>, EPA, 2018</p> <p><i>Environmental Factor Guideline – Subterranean Fauna</i>, EPA, December 2016</p> <p><i>Technical Guidance – Subterranean fauna survey</i>, EPA, December 2016</p> <p><i>Technical Guidance – Sampling methods for subterranean fauna</i>, EPA, December 2016</p> <p><i>Instructions and Form: IBSA Data Packages</i>, EPA, June 2018</p> <p><b><i>Other policy and guidance</i></b></p> <p>Relevant recovery plans, conservation advices and/or threat abatement plans for conservation significant species that are known to occur, or are likely to occur in the vicinity of the scheme amendment area.</p>
<b>Social Surroundings</b>	
<b>EPA objective</b>	To protect social surroundings from significant harm.
<b>Relevant activities</b>	<ul style="list-style-type: none"> <li>• Clearing of vegetation for, and future development and associated infrastructure.</li> <li>• Physical presence of future development and associated infrastructure.</li> </ul>
<b>Potential impacts and risks</b>	<p>Future development of the amendment area has the potential to cause:</p> <ul style="list-style-type: none"> <li>• Disturbance to Aboriginal heritage places and/or cultural associations within the scheme amendment area.</li> <li>• Temporary and/or permanent constraint on access and traditional cultural activities.</li> <li>• Changes to the environment which may impact on Aboriginal heritage places.</li> <li>• Impacts to amenity values of the amendment area it supports.</li> </ul>

<b>Required work</b>	<ol style="list-style-type: none"><li>43. Characterise the heritage and cultural values of the proposed amendment area, including areas that may be indirectly impacted, to identify sites of significance and their relevance within a wider regional context.</li><li>44. Conduct appropriate Aboriginal heritage surveys to identify Aboriginal sites, values and/or cultural associations.</li><li>45. Conduct appropriate consultation to identify concerns in regard to environmental impacts as they affect heritage matters.</li><li>46. Provide a detailed description and figure(s) of the proposed disturbance and impacts to heritage sites, values and/or cultural associations associated with the scheme amendment.</li><li>47. Assess the impacts on heritage sites, values and/or cultural associations as a direct result of the future development and associated infrastructure, including those resulting from changes to the environment which may impact on cultural and heritage significance or values.</li><li>48. Predict the residual impacts on heritage sites, values and/or cultural associations, for direct, indirect and cumulative impacts after considering the mitigation hierarchy.</li><li>49. Outline the mitigation and management measures to ensure impacts to heritage sites, values and/or cultural associations (direct and indirect) are minimised, and not greater than predicted.</li><li>50. Characterise the environment by providing a description of the visual landscape character and scenic quality values and provide maps of the visual landscape units that may potentially be visually affected. This should include, but not be limited to: landforms; vegetation; and waterways/bodies and can be undertaken by way of 3-dimensional modelling and/or photographs.</li><li>51. Characterise the current, and any other reasonably foreseeable, land and recreation uses and amenity values of the scheme amendment area.</li><li>52. Identify and discuss the potential sources and impacts of noise, dust, light-spill and alteration to landscape from the proposed scheme amendment.</li><li>53. Design and undertake a visual impact assessment (VIA) for the future development and associated infrastructure to assess the impacts of it on visual amenity in accordance with the Western Australian Planning Commission (2007) Visual Landscape Planning in Western Australia: a manual for evaluation, assessment, siting and design.</li><li>54. The VIA will identify and describe the aspects of the future development and associated infrastructure which may potentially affect the visual landscape character and scenic quality values both temporarily and permanently, using agreed (by the EPAServices)</li></ol>
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	<p>reference and vantage points of surrounding areas and use area's viewer positions and perceptions.</p> <p>55. Predict the residual amenity impacts from the future development on the landscape, land and recreation use and amenity values after considering and applying avoidance and minimisation measures. Impact predictions are to include, but not be limited to:</p> <ol style="list-style-type: none"> <li>a) the likely extent, severity and duration of the impacts; and</li> <li>b) simulations/modelling of the predicted residual impacts from the scheme amendment, including changes to the landscape from the agreed reference and vantage points. Include the cumulative impacts on amenity from the scheme amendment area and other currently approved developments.</li> </ol> <p>56. Identify management and mitigation measures for the scheme amendment to ensure residual impacts to land and recreation uses, and amenity are not greater than predicted.</p> <p>57. Describe any proposed avoidance, mitigation and management measures that demonstrate the EPA's objectives can be met.</p> <p>58. Describe the planning mechanisms that are to be applied to ensure impacts are managed to meet the EPA's objectives.</p>
<p><b>Relevant policy and guidance</b></p>	<p><b><i>EPA Policy and Guidance</i></b></p> <p><i>Statement of Environmental Principles, Factors and Objectives</i>, EPA, 2018</p> <p><i>Environmental Factor Guideline – Social Surroundings</i>, EPA, December 2016</p> <p><b><i>Other policy and guidance</i></b></p> <p><i>Aboriginal Heritage Due Diligence Guidelines – Version 3.0</i>, Department of Aboriginal Affairs and Department of Premier and Cabinet, 2013</p> <p><i>Visual Landscape Planning in Western Australia: a manual for evaluation, assessment, siting and design</i>, Western Australian Planning Commission, 2007</p>
<b>Greenhouse Gas Emissions</b>	
<p><b>EPA objective</b></p>	<p>To reduce net greenhouse gas emissions in order to minimise the risk of environmental harm associated with climate change.</p>
<p><b>Relevant activities</b></p>	<ul style="list-style-type: none"> <li>• Clearing of native vegetation for future development.</li> </ul>
<p><b>Potential impacts and risks</b></p>	<ul style="list-style-type: none"> <li>• Greenhouse gas emissions through clearing and decomposition of vegetation.</li> </ul>
	<p>59. Estimate the expected Scope 1 (direct) and Scope 2 (indirect) net greenhouse gas emissions (i.e. quantity of carbon dioxide equivalent</p>

	<p>(CO<sub>2</sub>-e)) on an annual basis and over the life of the proposal inclusive of changes to land use (clearing of vegetation). Breakdown estimated emissions by source (e.g. changes to land use, clearing of vegetation). Detail the methods used to estimate the net greenhouse gas emissions.</p> <p>60. Describe the considered and proposed mitigations that demonstrate all reasonable and practicable measures have been applied at each step of the mitigation hierarchy to avoid, reduce and/or offset greenhouse gas emissions over the life of the proposal.</p> <p>61. Where scope 1 emissions are estimated to exceed 100,000 tonnes per year, develop a Greenhouse Gas Management Plan in accordance with the EPA's <i>Environmental Factor Guideline: Greenhouse Gas Emissions</i> and demonstrate how the EPA's objective for this factor can be met.</p>
<b>Relevant policy and guidance</b>	<p><b><i>EPA Policy and Guidance</i></b></p> <p><i>Statement of Environmental Principles, Factors and Objectives</i>, EPA, 2018</p> <p><i>Environmental Factor Guideline – Greenhouse Gas Emissions</i>, EPA, April 2020</p>

These preliminary key environmental factors must be addressed by the ER for the public to consider the impacts of future development resulting from the scheme amendment, and proposed management, and make comment to the EPA. The EPA anticipates addressing these factors in its report to the Minister for Environment. All technical reports, modelling, and referenced documents (not currently in the public domain) used in the preparation of the ER document should be included as appendices to the ER document. Documents used in the preparation of the ER must not contain disclaimers that preclude their public availability.

#### 4. Other environmental factors or matters

It is important that the responsible authority be aware that other factors or matters may be identified during the course of the environmental review that were not apparent at the time that these instructions were prepared. If this situation arises, the responsible authority must consult with the EPA to determine whether these factors and/or matters are to be addressed in the ER, and if so, to what extent.

#### 5. Relevant Ministers and Interested agencies

**Table 4 Relevant Ministers and interested agencies**

<b>Minister/agency</b>	<b>Interest</b>
Minister for Planning	<p><i>Planning and Development Act 2005.</i></p> <p><i>Environmental Protection Act 1986.</i></p> <p>Minister's agreement needed with Minister for Environment on the conditions.</p>
Minister for Environment	<i>Environmental Protection Act 1986.</i>

	<i>Biodiversity and Conservation Act 2016.</i>
Minister for Water	<i>Rights in Water and Irrigation Act 1914.</i>
Shire of Augusta – Margaret River	<i>Planning and Development Act 2005.</i>
Department of Biodiversity, Conservation and Attractions	Presence of significant fauna and flora.
Department of Water and Environmental Regulation	Part V of the <i>Environmental Protection Act 1986</i>
Water Corporation	Waste Water Treatment Plant
Department of Planning Lands and Heritage	<i>Planning and Development Act 2005.</i> State Planning Policy 2.6 <i>State Coastal Planning Policy</i>
Department of Transport (Maritime)	<i>State Planning Policy 2.6 State Coastal Planning Policy.</i> Coastal processes and coastal hazards risk management advice.

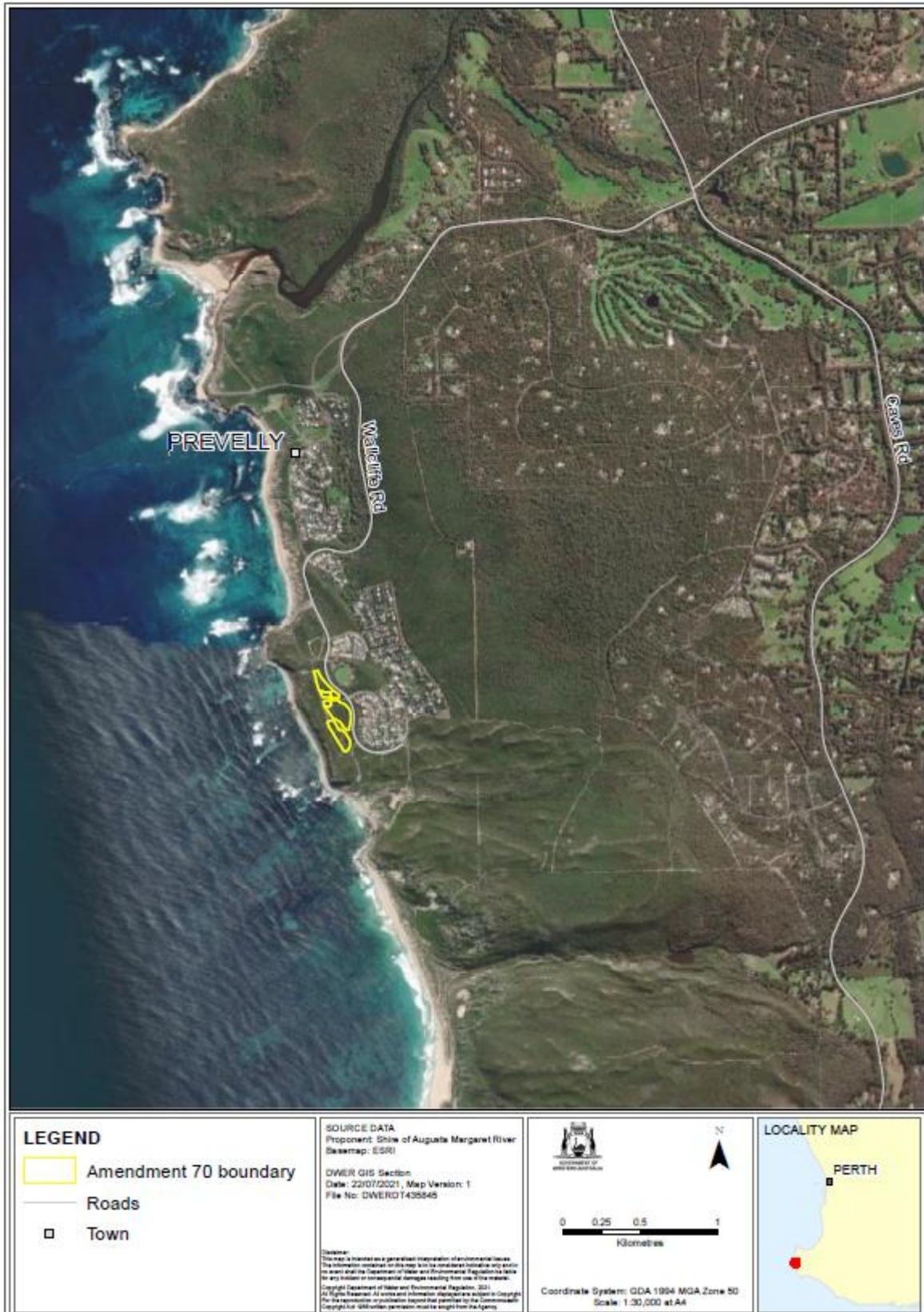
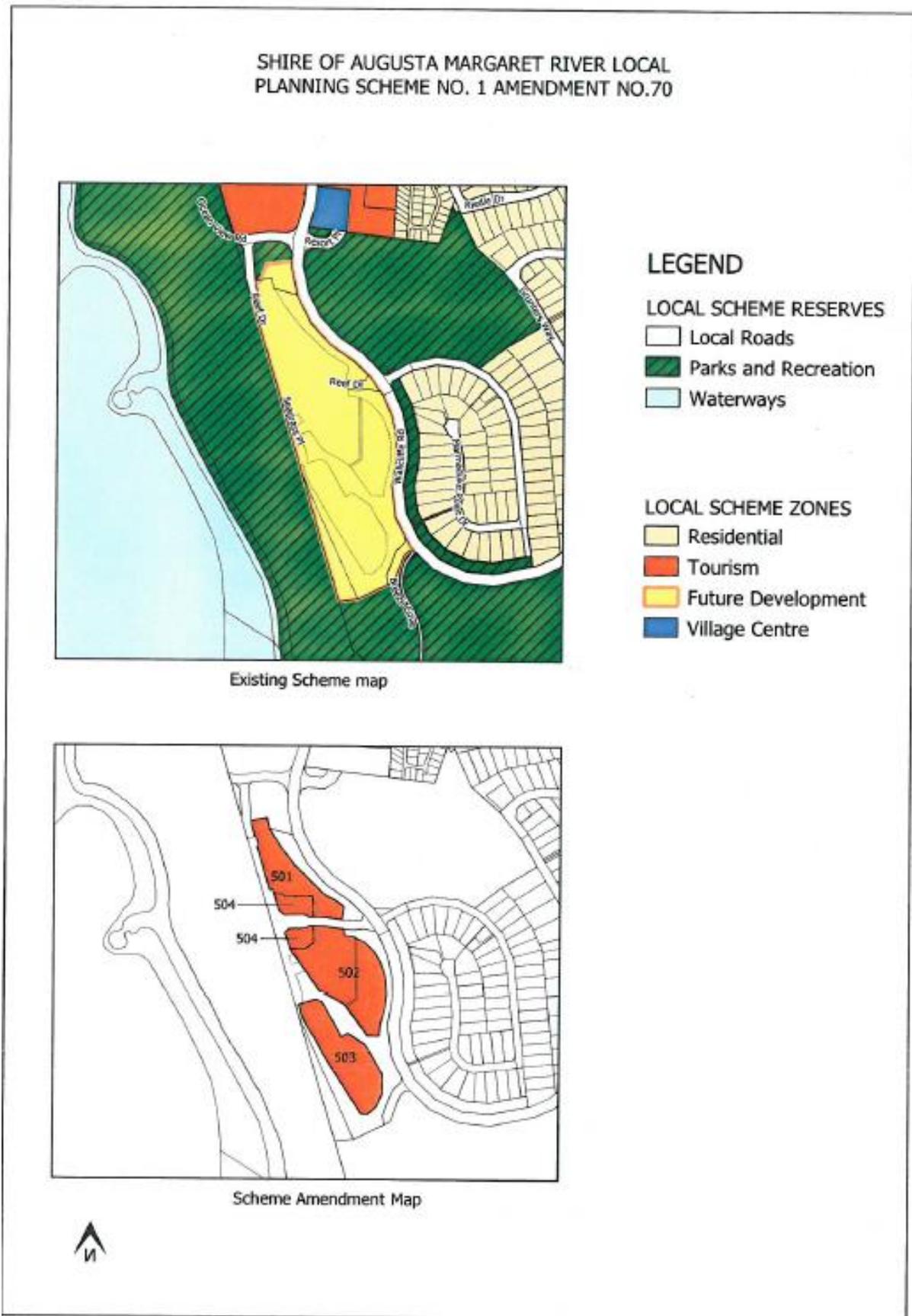


Figure 1 – Location



**Figure 2 – Zoning Map**