Point Grey

Point Grey Development Company Pty Ltd

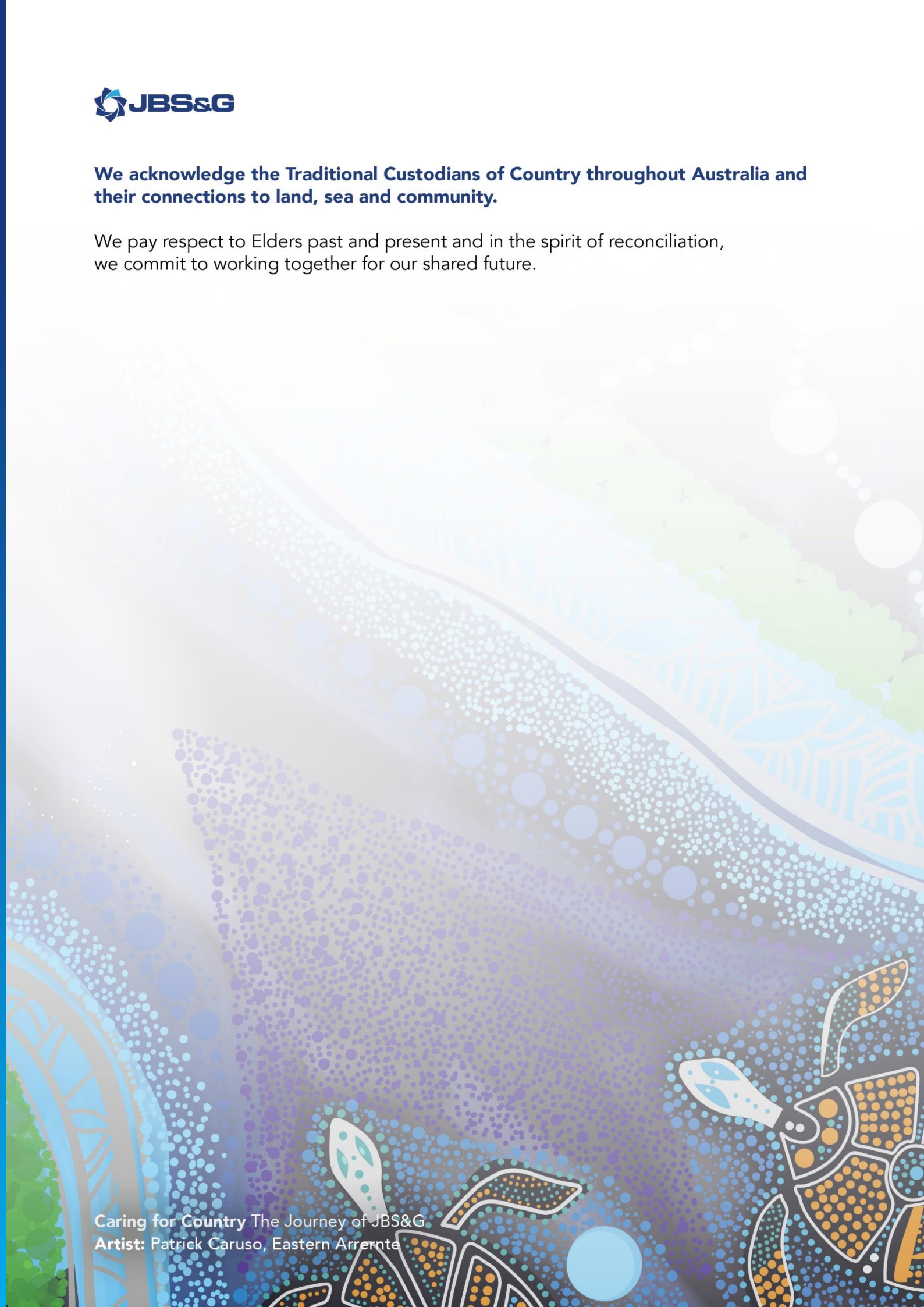
Environmental Sustainability Framework

JBS&G 66009 | 130,347

30 July 2024

We acknowledge the Traditional Custodians of Country throughout Australia and their connections to land, sea and community.

We pay respect to Elders past and present and in the spirit of reconciliation, we commit to working together for our shared future.



Caring for Country The Journey of JBS&G
Artist: Patrick Caruso, Eastern Arrernte

Table of Contents

Abbreviations ..... **iii**

Executive Summary **1**

1. Introduction **2**

1.1 Background 2

1.2 Scope and Purpose of the Environmental Sustainability Framework 5

2. Sustainability **5**

2.1 Guiding Sustainability Frameworks 5

2.1.1 Design WA 5

2.1.2 EnviroDevelopment 8

2.2 Sustainability at Point Grey 8

2.2.1 Vision 8

2.2.2 Objectives 8

2.2.3 Sustainability Reference Documentation 8

2.2.4 Implementation 9

3. Planning and Environmental Approvals History **9**

3.1 Planning Approval History – Residential Development 9

3.2 Environmental Approval History 9

3.2.1 Part IV of the *Environmental Protection Act 1986* 9

3.2.2 Environmental Protection Biodiversity Conservation Act 1999 11

4. Ecosystem Element **12**

4.1 Principles 12

4.2 Proposed Strategies 12

4.2.1 Water Quality 12

4.2.2 Landforms 12

4.2.3 Flora 13

4.2.4 Fauna 13

4.3 Documentation – Ecosystem Element 14

5. Waste Element **15**

5.1 Principles 15

5.2 Proposed Strategies 15

5.2.1 Site Preparation Phase 15

5.2.2 Construction Phase 15

5.2.3 Post-Construction Phase 16

5.3 Documentation – Waste Element 16

6. Energy Element **17**

6.1 Principles 17
6.2 Proposed Strategies 17
6.2.1 Energy Efficiency 17
6.2.2 Renewable and Reduced Emissions Sources 18
6.3 Documentation – Energy Element 18
7. Materials Element 19
7.1 Principles 19
7.2 Proposed Strategies 19
7.2.1 Environmentally Responsible Materials 19
7.3 Documentation – Materials Element 19
8. Water Element 21
8.1 Principles 21
8.2 Proposed Strategies 21
8.2.1 Water Reduction 21
8.2.2 Alternative Water Sources 21
8.3 Documentation – Water Element 21
9. Community Element 23
9.1 Principles 23
9.2 Proposed Strategies 23
9.2.1 Community Consultation 23
9.2.2 Transport 23
9.2.3 Community Design 24
9.2.4 Local Facilities 24
9.2.5 Indoor Environment Quality 25
9.3 Documentation – Community Element 25
10. Conclusion 26
11. Limitations 27
12. References 28
Appendix A Sustainability Reference Documentation 1
Appendix B High Quality Version of Figures 1

List of Tables

Table 2-1 Design WA Precinct Design Guidelines (December 2020) 7

List of Figures

Figure 1-1: Location of Point Grey 2
Figure 1-2: Local Structure Plan 4

Abbreviations

Term	Definition
ACP	Activity Centre Precinct
ESF	Environmental Sustainability Framework
LSP	Local Structure Plan
ODP	Outline Development Plan
PRS	Peel Region Scheme
ROS	Regional Open Space
UDIA	Urban Development Institute of Australia
WAPC	Western Australian Planning Commission

Executive Summary

This Environmental Sustainability Framework has been prepared in support of the proposed urban development of Point Grey as defined by the Local Structure Plan (LSP) (**Figure 1-2: Local Structure Plan**) by the Point Grey Development Company Pty Ltd (the Proponent). This report updates the original Environmental Sustainability Framework Reports for the Point Grey development prepared by ENV Australia in 2010 (ENV 2010) and JBS&G in 2020 (JBS&G, 2020 [not submitted]). This revision incorporates new standards and regulations as well as new sustainability approaches, technologies and directions since the 2010 and 2020 reports.

It is to be noted that this revision has been updated in response to an amendment to the local planning scheme following a recent recommendation from the Western Australia Planning Commission (WAPC) – this is referred to as Amendment 314. Amendment 314 effectively removed the potential for the 300-berth inland marina and associated 2.5km dredged channel through the Peel Inlet/Harvey Estuary to the Dawesville Channel as allowable uses. The marina and associated activity precinct has been replaced with a more traditional neighbourhood centre (including retail, tourism, and commercial uses), together with coastal parklands that lead to the foreshore.

The Proponent seeks to articulate its vision and objectives for sustainability at Point Grey through this framework. It is anticipated that more specific sustainability strategies will be prepared for further stages of the development.

Point Grey will embody a range of innovative approaches in the key elements of:

- ecosystems;
- waste management;
- energy;
- materials;
- water; and
- community.

This Environmental Sustainability Framework is largely informed by the technical standards from the EnviroDevelopment program offered by the Urban Development Institute of Australia (UDIA), and its structure is based on the six elements of the program. This report applies to the whole development and will therefore utilise the EnviroDevelopment Mixed Use technical standards which applies specifically to projects with a mix of commercial, residential and retail uses.

The strategies outlined in this framework, coupled with associated management plans, will ensure that sustainability is not just a goal but a measurable outcome of the development.

1. Introduction

1.1 Background

The Point Grey development site is located on the Swan Coastal Plain on a peninsula of land between the Peel Inlet and the Harvey Estuary, in the Shire of Murray. The subject land is approximately 20 km west of the Pinjarra Townsite and 12 km south of the Mandurah City Centre as shown in **Figure 1-1: Location of Point Grey.**

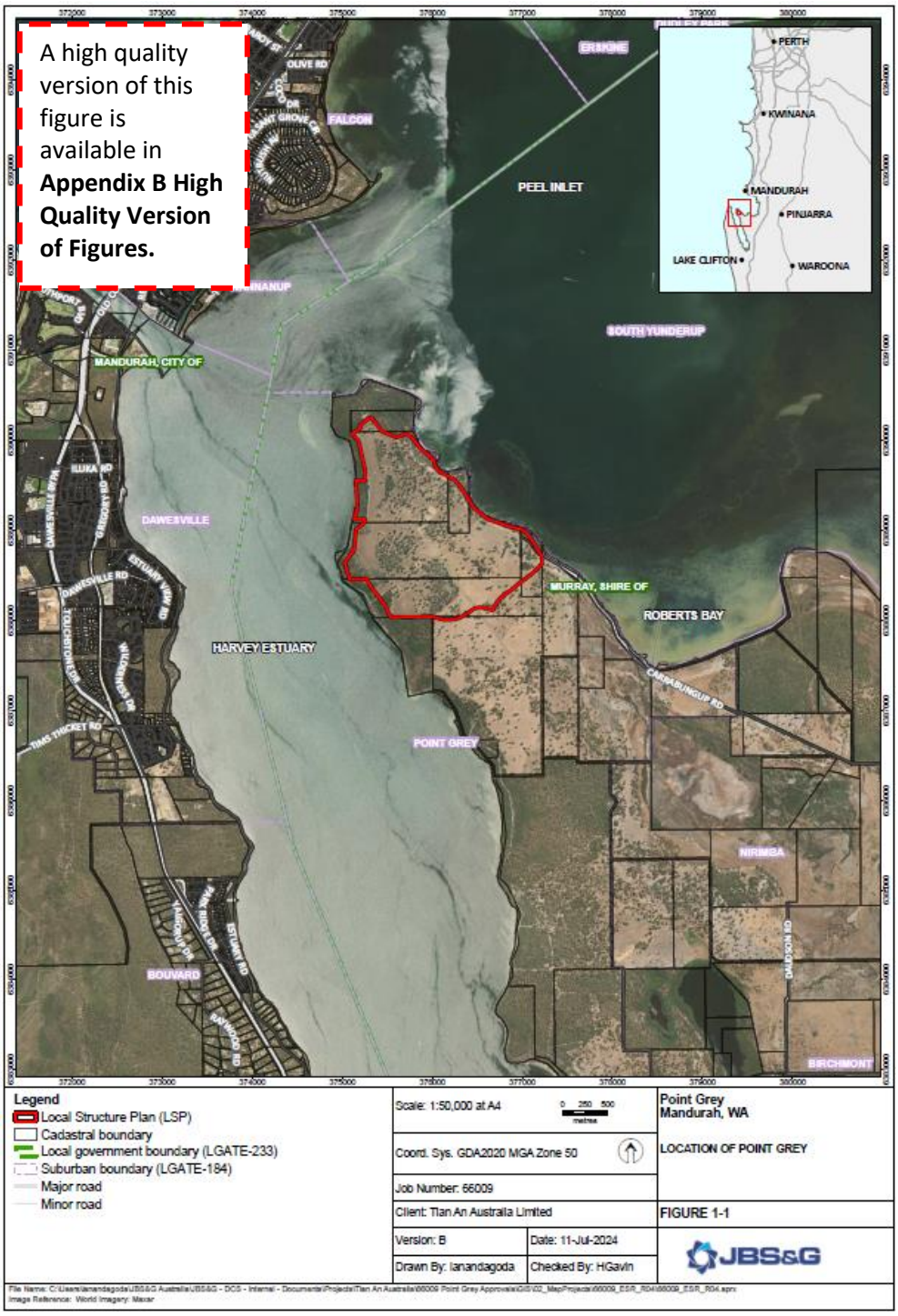


Figure 1-1: Location of Point Grey

The combined landholdings at Point Grey total over 500 ha. Only 270 ha of this land is zoned Urban under the Peel Region Scheme (PRS). Of this portion of Urban zoned land, the Proponent is the landowner of approximately 205 ha, with Plunkett Properties Pty Ltd being the owner of the balance. The remainder of the subject land is zoned Rural and reserved Regional Open Space.

The Proponent intends to develop the abovementioned land into a residential development. The Local Structure Plan (LSP) is provided in **Figure 1-2: Local Structure Plan** and details the proposed land uses.

It is to be noted that this revision has been updated in response to an amendment to the local planning scheme following a recent recommendation from the Western Australia Planning Commission (WAPC) – this is referred to as Amendment 314. Amendment 314 effectively removed the potential for the 300-berth inland marina and associated 2.5km dredged channel through the Peel Inlet/Harvey Estuary to the Dawesville Channel as allowable uses. The marina and associated activity precinct has been replaced with a more traditional neighbourhood centre (including retail, tourism, and commercial uses), together with coastal parklands that lead to the foreshore.

Figure 1-2: Local Structure Plan

1.2 Scope and Purpose of the Environmental Sustainability Framework

This document is to support the submission of the Local Structure Plan (LSP) to the Shire of Murray by outlining the proposed sustainability strategy for the development.

The Environmental Sustainability Framework (ESF) has been revised in accordance with current government and industry guidance, to provide guidance on how the Point Grey development can be built in an appropriate and sustainable manner.

2. Sustainability

2.1 Guiding Sustainability Frameworks

There are two guiding sustainability frameworks that have been considered in the preparation of this Environmental Sustainability Framework. These are the EnviroDevelopment technical standards (UDIA 2019) prepared by the Urban Development Institute of Australia (UDIA) and the sustainability Design Principle and associated Design Element guidance, of the Design WA framework prepared by the State Government of Western Australia (DPLH 2019, DPLH 2020, DPLH 2021).

2.1.1 Design WA

Design WA is a State Government initiative to ensure good design and is at the centre of all development in Western Australia. It focuses on aspects of design related to the built environment and how it affects the sense of place including community, character, and setting.

A number of new policies and guidelines have been developed as part of Design WA to inform and guide landowners, the Proponent, designers, reviewers, referral agencies and decision-makers to achieve good design outcomes in the built environment. The Design WA policies and guidance relevant to this project include:

- State Planning Policy 7.0 Design of the Built Environment (SPP 7.0 [DPLH 2019])
- State Planning Policy 7.2 Precinct Design (SPP 7.2 [DPLH 2021])
- State Planning Policy 7.2 Precinct Design Guidelines (SPP 7.2 [DPLH 2020])

SPP 7.0 and complementary State Planning Policies, including their objectives, design criteria and design guidance (where relevant) apply to the preparation, review and assessment of:

- Activity centre plans
- Structure plans
- Local development plans
- Subdivision
- Development applications
- Public works

SPP 7.0 outlines a set of performance-based Design Principles that have been developed from well recognised national and international precedents and adjusted to the Western Australian context. One of the Design Principles within SPP 7.0 is:

> *''Sustainability - Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes''.*

The SPP 7.2 Precinct Design Guidelines (DPLH 2020) reference 6 Design Elements that interact with the Sustainability Design Principle of SPP 7.0. These are:

1. Urban Ecology
2. Urban Structure
3. Public Realm
4. Movement
5. Land Use
6. Built Form

Table 2-1 Design WA Precinct Design Guidelines (December 2020) details the objectives of Design WA's Design Elements that relate to sustainability, as outlined in the SPP7.2 Precinct Design Guidelines (DPLH 2020). Those objectives that do not relate to sustainability have been *italicised*.

As a policy document, the objectives detailed in Design WA should be considered in the planning of the Point Grey development and where practical have been incorporated into this document.

Table 2-1 Design WA Precinct Design Guidelines (December 2020)

Objective No.	Objective
Design Element 1 – Urban Ecology	
O1.1	To protect, enhance and respond to the ecological systems of the precinct.
O1.2	To enhance sense of place by recognising and responding to Aboriginal, cultural and built heritage.
O1.3	To reduce the environmental and climate change impacts of the precinct development.
O1.4	To minimise resource use, energy consumption and greenhouse gas emissions from the precinct.
Design Element 2 – Urban Structure	
O2.1	*To ensure the pattern of blocks, streets, buildings and open space responds and contributes to a distinct, legible precinct character.*
O2.2	*To promote an urban structure that supports accessibility and connectivity within and outside the precinct.*
O2.3	*To ensure the urban structure supports the built form, public realm and activity intended for the precinct.*
O2.4	*To ensure an adaptable urban structure that can respond to and facilitate change within a precinct.*
Design Element 3 – Public Realm	
O3.1	To ensure the public realm is designed to promote community health and wellbeing.
O3.2	To enable local character and identity to be expressed in public realm design to enhance sense of place.
O3.3	To ensure that key environmental attributes are protected and enhanced within the public realm.
O3.4	To ensure the public realm is designed to be inclusive, safe and accessible for different users and people of all ages and abilities.
O3.5	To ensure public realm design is integrated with the built form, movement network and landscape of the precinct.
Design Element 4 - Movement	
O4.1	To ensure the movement network supports the function and ongoing development of the precinct.
O4.2	To ensure a resilient movement network that prioritises affordable, efficient, sustainable and healthy modes of transport.
O4.3	To enable a range of transport choices that meet the needs of residents, workers and visitors.
O4.4	To ensure the quantity, location, management and design of parking supports the vision of the precinct.
Design Element 5 – Land Use	
O5.1	*To ensure current and planned land uses respond to the needs and expectations of the community.*
O5.2	*To ensure the planned land use types contribute positively to the precinct character and amenity.*
O5.3	*To achieve a mix of land uses and activity that supports the precinct vision.*
Design Element 6 – Built Form	
O6.1	To ensure that the built form is responsive to the purpose, context and intended character of the precinct.
O6.2	To ensure building placement, scale and massing is appropriate for the intended precinct and streetscape character.
O6.3	To ensure that built form design reduces energy demand across the precinct by facilitating climate-responsive design.
O6.4	To ensure that built form design is responsive to the streetscape and contributes to a safe and comfortable public realm.

2.1.2 EnviroDevelopment

The UDIA launched its EnviroDevelopment program in Western Australia in 2009. A unique set of technical standards for Western Australia are now available and provide a useful reference point for sustainability initiatives in urban land developments. While seeking to raise the quality of sustainable urban land development in Western Australia, EnviroDevelopment provides awards across six elements where it can be verified that the associated benchmarks will be achieved. These elements and a summary of their objectives are provided below.

- **Ecosystems** - protect and enhance native ecosystems and ecological function and rehabilitate degraded sites
- **Waste** - implement waste management procedures and practices to reduce the amount of waste to landfill and facilitate recycling
- **Energy** - optimise energy reduction across the project beyond current regulatory requirements
- **Materials** - utilise environmentally responsible materials and construction methods to lower environmental impacts of material usage
- **Water** - implement measures which reduce potable water use across the project beyond current regulatory measures
- **Community** - encourage healthy and active lifestyles, community spirit, local facilities, alternative transport modes, and accessible and flexible design that welcomes a diversity of people and adapts to their changing needs

2.2 Sustainability at Point Grey

2.2.1 Vision

The Point Grey Residential Development will embody a range of innovative approaches in the key elements of ecosystems, waste management, energy, materials, water and community.

2.2.2 Objectives

1. Healthy, sustainable ecosystems based on natural processes and promoting native biodiversity.
2. Reduced waste sent to landfill, with waste management procedures and practices that facilitate recycling.
3. A 'low carbon' development through reduced usage of polluting and non-renewable energy sources.
4. Environmentally responsible material usage that lowers environmental impacts.
5. Best practice water use efficiency.
6. Optimising community development through vibrant, cohesive, adaptable and sustainable places.

2.2.3 Sustainability Reference Documentation

Documents have been prepared to support the proposed development, which will inform the sustainability strategies identified throughout this report. A list of these documents is provided in **Appendix A Sustainability Reference Documentation**.

Numerous proposed documents and reports are detailed in this report that are recommended to assist with the implementation of the sustainability strategies identified and ensure sustainability objectives are met. These documents and plans have also been collated in **Appendix A Sustainability Reference Documentation**.

2.2.4 Implementation

In line with the sustainability vision for Point Grey, the Proponent's intent is to provide a sustainable development. They will therefore investigate with intent, and as far as practical, to implement the strategies proposed in this framework. However, some strategies, after investigation, may not be practical and if so, may not be implemented. In some cases, the proposed strategies are not within the Proponent's control and therefore the Proponent cannot guarantee implementation. These strategies have been included for completeness and to promote the sustainability outcomes for the development.

3. Planning and Environmental Approvals History

3.1 Planning Approval History – Residential Development

In January 1997, the Shire of Murray initiated Amendment No. 104 (Amendment 104) to its Town Planning Scheme (TPS) No. 4 along with an Outline Development Plan (ODP) at Point Grey. Amendment 104 proposed to change the zoning from 'Rural' to 'Special Development' and included the following residential, tourism and recreation components:

- Tourism accommodation and associated facilities
- Marina and sailing club
- Residential village allotments
- Reserves for conservation, recreation and open space
- Low-density Special Residential and Rural-Residential lots
- Golf course
- Sewerage treatment plant and Eucalypt woodlands irrigated with treated effluent.

In parallel with the TPS Amendment 104 rezoning process, the Western Australian Planning Commission (WAPC) had commenced work on the Inner Peel Region Structure Plan and would provide the framework for the preparation of the Peel Region Scheme. The Point Grey area was identified as future 'Tourist' area, with a population of approximately 4,000 people.

Subsequently, when the Peel Region Scheme (PRS) came into effect in March 2003 it delineated the northern portion of Point Grey as 'Urban Deferred' and covered approximately 271 ha of the Point Grey land, with the balance of the land being zoned 'Rural' and reserved as 'Regional Open Space'. It is worthwhile to note that formal advice from the EPA on the ODP that the proposed marina would be best located along the western shoreline of the Point Grey area.

In April 2009, the 'Urban Deferred' zone was lifted, and the site was zoned 'Urban' under the PRS.

3.2 Environmental Approval History

3.2.1 Part IV of the *Environmental Protection Act 1986*

3.2.1.1 Town Planning Scheme No. 4 Amendment 104

Following Amendment 104 being initiated, and in accordance with section 48 of the *Environmental Protection 1986* (EP Act), the Shire of Murray referred the amendment to the EPA for its consideration. The EPA assessed Amendment 104 at the level of Environmental Review and released its assessment report (EPA Bulletin 899) in June 1998. In applying the EPA Statement of Environmental Principles, Factors and Objectives (2020) these factors are now represented by:

- Flora and Vegetation

- Terrestrial Fauna
- Inland Waters
- Marine Environmental Quality
- Marine Fauna
- Landforms
- Human Health

The EPA concluded in its advice and recommendations to the Minister for the Environment that Amendment 104 to the Shire of Murray Town Planning Scheme No. 4 to rezone the site from Rural to Urban Development can be modified to be capable of meeting the EPAs objectives if the site is developed and managed in accordance with the amended scheme provisions provided in Amendment 104 and the ODP, and through the implementation of additional conditions recommended by the EPA.

The EPA expressed its preference for the marina component to be located onshore and along the western shore of Point Grey. The EPA also advised that the development application for the proposed marina should be referred to the EPA for assessment under Section 38 of the EP Act.

The Minister for the Environment approved the scheme amendment for implementation on 30 July 1999 subject to the conditions of Ministerial Statement 519. The Minister for the Environment subsequently approved alterations to the conditions (Ministerial Statement 860) which allowed conditions to be incorporated into the Shire of Murray Town Planning Scheme No. 4 by insertion of provisions in scheme text, and that conditions 1 to 10 of Statement 519 be deleted and Amendment 104 (as modified) be implemented.

3.2.1.2 Point Grey Marina – Ministerial Statement 906

Point Grey Marina was referred to the Environmental Protection Authority (EPA) under Section 38 of the EP Act on 19 August 2008.

In July 2010, the EPA agreed to undertake an assessment under the Bilateral Agreement between the Commonwealth and the State. The EPA assessed the Point Grey Marina proposal at the level of Public Environmental Review and released its assessment report (EPA Report 1420) in December 2011. In applying the EPA Statement of Environmental Principles, Factors and Objectives (2020) these factors are now represented by:

- Flora and Vegetation
- Terrestrial Fauna
- Marine Environmental Quality
- Marine Fauna.

The EPA concluded in EPA Report 1420 that it “is likely that the EPA’s objectives would be achieved, provided there is satisfactory implementation by the Proponent of the recommended conditions.”

The Point Grey Marina was approved by the State Minister in August 2012 following extensive consultation with the community and the relevant decision-making authorities including the Office of the Environmental Protection Authority (OEPA, now Department of Water and Environment Regulation (DWER)), Department of Fisheries (now Department of Primary Industries and Regional Development) and the Department of Environment and Conservation (DEC. now Department of Biodiversity, Conservation and Attractions (DBCA)). Ministerial Statement 906 (MS 906) defines the statutory environmental conditions and procedures for the Point Grey Marina. Formal approval for an extension of Time Limit of Authorisation was provided on 21 September 2018 with the EPA granting Ministerial Statement 1082 (MS 1082)

The Point Grey Marina proposal is for the construction and operation of:

- Onshore marina and associated boating infrastructure (e.g. boat pens, jetties, navigational aids, entrance channel, protective groynes, public boat ramps and car parks) on the western side of the Point Grey peninsula.
- Construction of a 2.5 kilometre navigation channel across the Harvey Estuary from the Point Grey Marina to the Dawesville Channel.

It is to be noted that this revision has been updated in response to an amendment to the local planning scheme following a recent recommendation from the Western Australia Planning Commission (WAPC) – this is referred to as Amendment 314. Amendment 314 effectively removed the potential for the 300-berth inland marina and associated 2.5km dredged channel through the Peel Inlet/Harvey Estuary to the Dawesville Channel as allowable uses. The marina and associated activity precinct has been replaced with a more traditional neighbourhood centre (including retail, tourism, and commercial uses), together with coastal parklands that lead to the foreshore.

A Section 45C and Section 46 (under the *Environmental Protection Act 1986*) application is in progress to seek a change to the authorised activities for the Proposal and associated amendments to implementation conditions for MS 906.

3.2.2 Environmental Protection Biodiversity Conservation Act 1999

The Proponent has secured two approvals under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The Commonwealth assessed the marina proposal in accordance with the Bilateral Agreement between the Western Australia and Commonwealth governments. The proposal was assessed at the level of Public Environmental Review (PER) by the Commonwealth (RPS 2011a).

Formal approval was granted in 28 June 2014 by issuing EPBC 2010/5515. Condition 14 of EPBC 2010/5515 required the project to be substantially commenced by 28 June 2019 (RPS 2011a). On 28 November 2018 the Proponent formally requested under Section 145D (4) of the EPBC Act an extension of the period of approval for EPBC 2010/5515. Formal approval was received on 15 March 2019 granting an extension of the period of approval until 31 December 2057 (RPS 2011a).

The residential part of the project was referred to Department of Agriculture, Water and the Environment (DAWE, now Department of Climate Change, Energy, the Environment and Water (DCCEEW) in January 2011. EPBC 2011/5825 was approved on 24 April 2012 as a controlled action due to the following Matters of National Environmental Significance (MNES):

- Listed threatened species and communities
- Listed migratory species
- Wetlands

A variation to conditions for extension of period of effect of approval under section 143 of the EPBC Act was submitted and approved on 15 March 2015 and is valid until 31 December 2041.

The EPBC Act approvals were granted, subject to a number of conditions and associated management plans being developed and implemented, many of which will contribute to achieving sustainability outcomes. Where relevant, these plans have been listed within **Appendix A Sustainability Reference Documentation**.

It is noted that the EPBC Act referral for construction of the entrance road was determined 'not a controlled action'.

4. Ecosystem Element

4.1 Principles

Point Grey will sustain healthy ecosystems by implementing strategies in line with the following principles:

- Improve on the water and nutrient balance of the existing rural landscape through transition to a more sustainable urban landscape.
- Avoid water pollution and degradation of water quality in adjacent waterways and natural systems.
- Reduce disruption to landform and natural ecosystems on this previously cleared land for pasture.
- Protect native vegetation where existing and promote the use of local native species for landscape development.
- Protect existing habitats for native fauna and promote connectivity to reduce habitat fragmentation.

4.2 Proposed Strategies

4.2.1 Water Quality

The following strategies are proposed:

- Enhance the natural hydrological regime including foreshores and buffers.
- Incorporate Water Sensitive Urban Design (WSUD) principles into development design. This may include raingardens on roadsides, swales in Public Open Space and vegetated infiltration basins utilised as stormwater treatment devices.
- Minimise use of pesticides, herbicides and artificial fertilisers (can be achieved through choice of landscaping, physical termite barriers, systems pest management).
- Design appropriate drainage to protect both water cycle and development integrity.
- Make stormwater management provisions during and post construction to avoid risk of flooding and flood damage and to reduce pollution entering waterways.
- Put sediment and erosion control measures in place during construction and operation. Finished lots will be covered with seeded hydromulch or similar to stabilise surface layers of lots.

4.2.2 Landforms

Site analysis identified areas of prime significance for preservation, where clearing and/or major earthworks should specifically not occur, and the areas suitable for earthworks and construction.

The proposed subdivision works will retain the general landform outside of the foreshore footprint and there will be some cutting and filling occurring to create level (benched) lots. Existing primary landforms including ridges will be retained and lower, flatter portions of the site will likely be filled to provide for flooding clearance and to reduce steep gradients.

The following strategies are proposed:

- Retain natural landform and integrate development with topographic features, subject to engineering constraints.

- Build only on stable, non-flooding land.
- Use construction methods which will minimise disruption to landform and natural drainage contours.
- Design street layout and construction to fit with topography and minimise disruption.

4.2.3 Flora

The following strategies are proposed:

- Assess the ecology thoroughly to identify areas of significance for preservation and where clearing and/or major earthworks will not occur. This includes completing a Spring flora survey to ascertain biodiversity and populations of vulnerable or threatened species and communities and design development to facilitate the preservation of such species.
- Preparation of a bushfire management plan.
- Demonstrate that environmental weeds will not be utilised in landscaping works.
- Reduce creation of Heat Islands through minimisation of pavement, carparks, and roofs in combination with the use of different materials for their construction (e.g. open-grid pavement, light coloured surfaces), and increased use of vegetation or structures to shade surfaces).
- Use a minimum of 90% local native plant species through their incorporation in landscaping POS and private land prior to sale.
- Encourage local native plant use by purchasers through design guidelines.
- Incorporate community and productive gardens in the project including space for garden plots, communal or individual vegetable gardens.
- Plantings (including where appropriate streetscape plantings) increase canopy cover (when compared to the pre-developed site) by a minimum 20%.
- Include the use of mature trees in landscaping (height greater than 2 m).
- Contribute green space in excess of the requirements for a minimum of 10% of development, i.e. Public Open Space in excess of the 10% minimum.
- Light and noise pollution will be minimised during and post-construction (i.e. no direct beam light will be directed beyond the site boundaries or upwards, except where it is falling directly on a surface that it is intended to illuminate).

4.2.4 Fauna

The following strategies are proposed:

- Retain and enhance ecological corridors linking vegetated and open space areas.
- Protect terrestrial and aquatic habitats for native species, with particular focus on threatened or endangered species.
- Minimise fencing and other structures that restrict safe fauna movement.
- Employ traffic management strategies which will protect fauna.
- Where there is an ecological need, provide features that allow habitat and refuge for fauna.
- Protect native animals through maintenance of habitat and control of non-native predators or competing species.

- Implement the Mosquito Management Plan (RPS 2011).
- Create dog and/or cat exclusion and limitation zones to allow safe movement of native fauna, particularly in wildlife corridors.

4.3 Documentation – Ecosystem Element

The following is a list of the existing and proposed reports and documentation to support environmental sustainability initiatives at Point Grey for the Ecosystem element. A summary table detailing the existing and proposed documentation for all six elements is provided in **Appendix A Sustainability Reference Documentation**.

Existing documentation

- District Water Management Strategy, Point Grey (RPS, 2009b).Environmental Assessment Report, Point Grey Urban Development (RPS, 2009c).
- DEC Works Approval Application (ENV,2010a).
- Point Grey Development Local Water Management Strategy (ENV, 2010b).
- Local Water Management Addendum (Emerge, 2024).
- Waterbird Management Plan (Bowman Bishaw Gorham, 1999).
- Level 2 Flora and vegetation Survey (RPS 2009a).
- Vegetation Management Plan (Tranen Revegetation Systems, undated).
- Level 3 Hydrogeological Assessment (RPS, 2011b).
- Nutrient and Irrigation Management Plan (Bowman Bishaw Gorham, 2000).
- Level 2 Fauna Assessment (M.J. & A.R. Bamford, 2010).
- Fauna Risk Assessment and Management Strategy (RPS, 2011a).
- Climate Change Vulnerability Assessment (MP Rogers, 2010).
- Nutrient Balance (RPS, 2010).
- Mosquito Management Plan (RPS, 2011d).

Proposed documentation

- Local Development Plans for each stage (where necessary).
- Regional Open Space and Foreshore Management Plan.
- Urban Water Management Plan for each stage.
- Construction Environmental Management Plan.
- Public Open Space Landscape Plans.
- Building design guidelines.
- Acid Sulfate Soil and Dewatering Management Plan.
- Offsets Strategy.

5. Waste Element

5.1 Principles

Point Grey will reduce waste to land fill by embracing the following principles:

- Avoid damage and pollution during site preparation.
- Minimise onsite pollution and maximise resource recovery during construction.
- Promote and enable waste minimisation, recycling and composting for the occupancy phase.
- Promote occupancy awareness and access to recycling facilities.

5.2 Proposed Strategies

5.2.1 Site Preparation Phase

The following strategies are proposed:

- Prepare a project specific Site Waste Management Plan for the pre-construction and construction phases that describes sound practices for land clearing and site preparation.
- Ensure that a minimum of 40% (by volume) of demolition, land clearing and civil works materials/products will be recycled or reused on site (hazardous materials excluded). Where this target cannot be achieved through recycling on site, arrangements will be made for recycling off site. Specifically, the following materials can be reused at Point Grey:
    - where it is essential to fell trees, these will be milled for timber to be used on site in public works
    - cleared vegetation will be used for mulch
    - limestone rock will be recycled for road aggregate, retaining walls and landscape features.
- Recycle civil works construction materials via contractors off-site: cardboard, bricks, glass, metal, timber and concrete.
- Stockpile and reuse topsoil to best advantage on site.
- Treat any hazardous substances, pollutants, and contaminants, where found, on site to a safe standard according to a sanctioned remediation process or, if this is not feasible, removed from the site and treated according to a sanctioned remediation process (such as per Department of Water and Environment Regulation (DWER) Contaminated Sites Management Series).
- Recycle and reuse vegetative debris on site (i.e. for landscaping or composting purposes).
- Treat any potential Acid Sulphate Soils as per the DWER Acid Sulphate Soils Guideline Series with intent to reuse on the site.
- Manage the site in an appropriate and conforming manner to control erosion, runoff, dust, etc., through silt fencing and dust control.

5.2.2 Construction Phase

The Proponent will work in partnership with the Shire of Murray, contractors and the community to ensure that at least four of the following strategies are implemented:

- The Proponent will enter into agreements with sub-contractors and contractors with a clause requiring waste avoidance and minimisation practices for the reuse/recycling of waste in an environmentally responsible manner.

- The Proponent will utilise waste-recycling contractors or sub-contractors (e.g. Earthcare Recycling).
- Waste minimisation techniques, waste recycling and waste management plans and policies of sub-contractors will be considered and used as criteria during the tender/selection process.
- Provision on site of separate bins to recover timber, glass, metal, concrete and other recyclable materials from the waste stream.
- Waste minimisation techniques will be included as a part of the employee induction and/or ongoing training process.
- The Proponent will make use of suppliers who take off-cuts or excess materials for reuse.
- The Proponent will select materials and products which minimise and/or recycle packaging (e.g. avoid excessive packaging such as plastic wrapped fixtures or fasters). The Proponent will advise suppliers of preference for materials not to be over-packaged.
- The development will be designed to maximise use of standard sizes of materials wherever possible to minimise waste.
- The Proponent will require use of skip bins rather than cages.
- The Proponent will require use of skip providers who recycle or reuse waste.

5.2.3 Post-Construction Phase

The following strategies are proposed:

- The Point Grey development will facilitate access by trucks (e.g. minimum height clearance of 4.5 metres, width of 3 metres and sufficient space away from car parks or other obstacles to allow safe manoeuvring or as agreed with local waste and recycling collecting organisation) for collecting recyclable material and provision of recycling bins on site for use by occupants if there are collection facilities for recycling within a feasible distance (e.g. 20km) or if the development is within the catchment of an organisation (either public or private) undertaking recycling of the likely waste materials.
- A total waste management system will be proposed.

5.3 Documentation – Waste Element

The following is a list of the existing and proposed reports and documentation to support environmental sustainability initiatives at Point Grey for the Waste element. A summary table detailing the existing and proposed documentation for all six elements is provided in **Appendix A Sustainability Reference Documentation**.

Existing documentation

- Acid Sulphate Soils Management Plan (RPS, 2011c).

Proposed documentation

- Site Waste Management Plan.
- Written statement by Shire of Murray environment officer or the nominated contractor detailing the mechanisms in place to enable recycling.
- Documentation from Shire of Murray, waste contractor or engineer and developer to show achievement of the Waste strategies.

- Statement from Shire of Murray or waste contractor that there is sufficient access for the purposes of waste removal.
- Written statement by Shire of Murray environment officer or the nominated contractor outlining the maintenance plan for the compost facility.

6. Energy Element

6.1 Principles

Point Grey will reduce greenhouse gas emissions by applying the following principles:

- Reduce overall energy use by 40% from 'business as usual' through implementation of a wide range of energy efficiency strategies.
- Enable the uptake of renewable energy or low emission sources.

A combination of the strategies below will be selected and applied appropriately across the household, precinct, and total development scales, through energy balance and carbon footprint modelling, to achieve the 40% reduction in greenhouse gas emissions.

6.2 Proposed Strategies

6.2.1 Energy Efficiency

The following strategies will be promoted:

- Enable solar orientation of lots and solar access to buildings through appropriate town layout design, in order to optimise passive design of buildings.
- Enable shielding from hot summer sun, cross-ventilation and allowance for topography through appropriate town layout design.
- Reduce peak load through strategies which will include battery storage, use of off-peak energy or timers for uses such as pool filters, load limiting devices, direct load control or other hardwired interventions.
- Promote air conditioners that have a minimum 4.5 star heating and cooling energy rating and guidance will be provided on sizing.
- Maximise common area lighting efficiency through fluorescent and/or LED fittings.
- Achieve energy efficiency in buildings equivalent to BCA 6-star or better through design, fittings and features: insulation, cross ventilation, eaves, enhanced natural lighting, energy efficient design, very low energy water heating, solar powered room heating and cooling (e.g. solar powered fans), and design for passive climate control.
- Provide community and productive gardens including space for garden plots, communal or individual vegetable gardens, to have some proportion of onsite food production and reduce some overall transportation requirements for food from outside and its associated embodied energy.
- Use of energy efficient appliances, fixtures and fittings.
- Use of smart energy metering with in-house reporting to assist in behaviour management.
- Provide opportunities for passive clothes drying within communal spaces and/or private balconies.

6.2.2 Renewable and Reduced Emissions Sources

A selection from the following strategies will be considered in conjunction with the strategies above to achieve an overall 40% reduction in greenhouse gas emissions from previous business as usual:

- Onsite energy generation through solar and associated micro-grid.
- Provide solar photovoltaics on community buildings.
- Encourage solar photovoltaics and battery storage options in home incentive package.
- Provide energy efficient street lighting.
- Provide electric vehicle charging facilities.
- Design to include provision for future hydrogen fuel cell charging infrastructure.
- Encourage community transport, walking and cycling.
- Encourage up take of Greenpower accredited renewable energy product.

It should be noted that as the initial demand for power at Point Grey will be relatively low, it is intended that alternative power supply options will be utilised in the first instance. This could include solar power and a battery storage system with a generator backup. The intention, if needed, will be to utilise gas for the backup generator, however depending on engineering constraints, diesel may need to be utilised.

6.3 Documentation – Energy Element

The following is a list of the existing and proposed reports and documentation to support environmental sustainability initiatives at Point Grey for the Energy element. A summary table detailing the existing and proposed documentation for all six elements is provided in **Appendix A Sustainability Reference Documentation**..

Existing documentation

- N/A.

Proposed documentation

- Signed contract with the energy provider.
- Architectural Guidelines.
- Incentive package documents.
- Energy education package.
- Electrical plans with statement from engineer.
- Statement from engineer showing the energy requirements and the energy provision through alternative sources (i.e. calculations of the energy balance and carbon account).
- Long-term (greater than 5 years) contract document from energy retailer to meet the Greenpower requirements.

7. Materials Element

7.1 Principles

Point Grey will achieve a more sustainable approach to materials use by following these principles:

- Use environmentally responsible materials.
- Use non-toxic materials.
- Use low emission materials.
- Use locally sourced products where possible.
- Use products with minimal packaging.
- Improve indoor air quality through the choice of materials and finishes.

7.2 Proposed Strategies

7.2.1 Environmentally Responsible Materials

The following strategies are to be investigated:

- Reuse of material from the site.
- Use materials that have a high recycled product content, for example, in road construction.
- Use sustainable, renewable materials such as timber in roofing from sustainable forestry operations.
- Use materials with lower lifecycle energy, such as concrete made with a lower percentage of cement by substitution with alternative products such as coal fly ash, recycled glass, or tyres.
- Use products from manufacturers whose product manufacturing process uses less water or fossil fuel energy and reduces wastes and polluting by-products compared to industry standards or major manufacturers producing comparable products.
- Use non-toxic and low emission products in common areas and encouraged in private dwellings or commercial space and variously feature: non-emissive or low emission paints on internal painted surfaces; non-emissive or low emission floor coverings on indoor covered floors; low-emission sealants and adhesives; non-allergenic materials for furnishings where feasible.
- Use local manufacturers and/or suppliers where possible, or the most economical method of transportation with regard to fossil fuels.
- Use materials and suppliers that minimise and/or recycle packaging.
- Reduce use of PVC and/or source from a certified ISO 14001 certified supplier.
- Use of life cycle analysis (LCA) of construction materials in accordance with EN 15978 and/or ISO 14044.

7.3 Documentation – Materials Element

The following is a list of the existing and proposed reports and documentation to support environmental sustainability initiatives at Point Grey for the Materials element. A summary table detailing the existing and proposed documentation for all six elements is provided in **Appendix A Sustainability Reference Documentation**..

Existing documentation

- N/A.

Proposed documentation

- Statement from the Proponent outlining the mechanism by which materials qualify as being from sustainable, renewable sources.
- Certification (e.g. that timber comes from sustainable forestry practices).
- Research documentation from the Cooperative Research Centre on Sustainable Construction and others as to the specifications of materials having low lifecycle energy costs.
- Certification of environmental benefits compared to industry standards.

8. Water Element

8.1 Principles

Point Grey will achieve improved water efficiency (>40% potable water savings) by implementing the following principles:

- Use of water efficiency measures.
- Use of alternate water sources.

8.2 Proposed Strategies

8.2.1 Water Reduction

The following strategies are proposed:

- Use fittings and features which reduce potable water consumption, such as using a minimum of AAA or 3 stars WELS rated fittings and fixtures, low flow dual flush toilet, rainwater tanks and flow restrictors.
- Design high density, multi-apartment buildings not to need air-conditioning, or to use air-conditioning systems that are extremely water efficient and can be actively monitored.
- Use water efficient landscaping (through design, choice of plants or watering system).
- Centralised storage facility for stormwater or rainwater for reuse.
- Submetering of each residential unit and commercial tenancy to accommodate individual billing.
- Use of smart water metering with in-house reporting to assist in behaviour management.
- Efficient irrigation systems and low water use plants in POS areas.
- Soil amelioration in POS areas where required to assist in effectiveness of irrigation.
- Mulching of planted areas in POS areas.

8.2.2 Alternative Water Sources

The following strategies are proposed:

- Use recycled water: all wastewater will be treated at the onsite water recycling plant. This provides an excellent opportunity to reuse this water within the development. It is proposed that recycled water will be used as irrigation water for public open space, verge and residential irrigation areas.
- Use rainwater: rainwater harvesting tanks pumped to toilet cistern and washing machine will be promoted for lots of area greater than 300 m^2.

8.3 Documentation – Water Element

The following is a list of the existing and proposed reports and documentation to support environmental sustainability initiatives at Point Grey for the Water element. A summary table detailing the existing and proposed documentation for all six elements is provided in **Appendix A Sustainability Reference Documentation**.

Existing documentation

- District Water Management Strategy, Point Grey (RPS, 2009b).
- Environmental Assessment Report, Point Grey Urban Development (RPS, 2009c).
- Point Grey Development Local Water Management Strategy (ENV, 2010b).
- Preliminary Urban Water Balance Modelling Report, Point Grey Development (ENV, 2010c).
- Recycled Water Quality Management Plan (ENV, 2010d).
- Nutrient and Irrigation Management Plan (Bowman Bishaw Gorham, 2000).
- Nutrient Balance (RPS, 2010).

Proposed documentation

- Local Development Plans for each stage (where necessary).
- Regional Open Space and Foreshore Management Plan.
- Urban Water Management Plan for each stage.
- Construction Environmental Management Plan.
- Building design guidelines.
- Architectural Guidelines.
- Waterwise Landscaping Information Packages.
- Sustainability Information Kit.
- Resident education notices.

9. Community Element

9.1 Principles

Point Grey will enable vibrant, cohesive and sustainable communities through the following principles:

- Consult with surrounding community and traditional owners.
- Provide facilities, networks and community-minded subdivision design.
- Encourage community transport, walking and cycling.
- Provide a framework within which safe, accessible, comfortable housing and facilities can be delivered.
- Facilitate the use of public transport.

9.2 Proposed Strategies

9.2.1 Community Consultation

The following strategies are proposed:

- Raise awareness of stakeholders through billboards, targeted letter drops and open meetings.
- Collect and incorporate community feedback including traditional owners.
- Respectfully recognise indigenous cultural heritage.
- Establish a structure or framework for ongoing community involvement and establish ongoing partnerships with the broader community.

9.2.2 Transport

The following strategies are proposed:

- Provide bicycle parking for residents and visitors within a secure part of buildings and in a secure part of parks and gardens. Visitor bicycle parking in public view, easily accessible from the road.
- Connect safe, attractive, well-lit and efficient walking and cycling pathways running wholly in public spaces (including streets and open spaces), directly connecting all residential areas to local facilities and providing links between residential areas. Paths connecting neighbouring areas and bike parking at public transport stops and community facilities with areas of shade, shelter, water fountains and seating.
- Provide good access (e.g. accessible pathways and bikeways) to public transport.
- Provide higher density development and a good proportion of dwellings within 500 metres of a transport stop to local facilities or other service centres or connecting transport systems.
- Facilitate a community transport network such as carpool or community minibus to facilities.
- Provide facilities to encourage working from home, which will include: fast internet facilities, building design to facilitate office, and an adequately equipped community centre.
- Provide coordinated approach to on and off-street parking spaces and dedicated parking opportunities for small vehicles (2.3m wide and 5.0m long).
- Provide charging facilities for electric vehicles and the provision for infrastructure for hydrogen fuel cell vehicles.

9.2.3 Community Design

The following strategies are proposed:

- Develop houses overlooking public space to enhance community networking, passive surveillance and improve the views from living areas.
- Provide central facilities (recreation facilities, shops, café, restaurants, town hall, gardens, BBQ facilities etc) in village centre.
- Promote community communication systems (intranet, newsletter, community notice board).
- Provision of community structures (body corporate to run community facilities, community title, club, organisation, committee).
- Provide a diversity of housing types including a mix of dwelling sizes and densities of housing.
- Provide affordable housing interspersed in each development zone.
- Provide a community development officer.
- Facilitate community linkages to the unique environmental assets of the area.
- Support community spirit and networks.
- Consider design for crime prevention, according to Crime Prevention Through Environmental Design (CPTED) principles.
- Design the public realm for flexibility and multiple uses.

9.2.4 Local Facilities

The following strategies are proposed:

- Provision of the following facilities and services to service the local community:
    - Newsagent
    - Convenience store
    - Primary school
    - Kindergarten, preschool, or childcare
    - Medical and allied health
    - Pharmacy
    - Specialty stores
    - Cafes and/or restaurants
    - Parks and open space
    - Beach node
    - Information exchange medium e.g. community notice board, newsletter, website
    - Community accessible rooms, public areas, education centre
    - Educational interpretative signage, tours, open days, brochures
    - Youth zone (eg. Sea Scouts)
    - Playground and/or recreation facilities
    - Community centre
    - Public transport hub at the village centre
    - Bank or cash machine
    - Post office or post boxes facility
    - Emergency Services (eg. rural fire brigade)
    - Communication centre or business centre

9.2.5 Indoor Environment Quality

The following strategies are proposed:

- Provide good ventilation to all dwellings, offices and community facilities with thought given to noise and security issues to prevent occupants from feeling they need to keep windows closed.
- Provide good ventilation in mechanically ventilated buildings with fans and ductwork sized above standards and outdoor air intakes located away from air pollutant sources (such as traffic).
- Locate and shield air conditioning to prevent noise nuisance to occupiers of residential buildings or minimise noise transmission from external sources.
- Use non-toxic materials for healthy indoor environments.

9.3 Documentation – Community Element

The following is a list of the existing and proposed reports and documentation to support environmental sustainability initiatives at Point Grey for the Community element. A summary table detailing the existing and proposed documentation for all six elements is provided in **Appendix A Sustainability Reference Documentation**..

Existing documentation

- N/A.

Proposed documentation

- Local Development Plans for each stage (where necessary).
- Community Infrastructure Needs Assessment.
- Community Infrastructure Plan.
- Research report on local stakeholders and consultation results.
- Products to be used in awareness raising campaign.
- Plans and statement signed by engineer and the Proponent.
- Transport proposal to council and negotiations to date.
- Mechanisms for ongoing maintenance beyond the development and sales stages.
- Plans, or covenant or body corporate design guidelines and statement signed by the engineer and the Proponent stating how the requirements will be met.

10. Conclusion

The development and future implementation of this Environmental Sustainability Framework marks a significant commitment to integrating environmental, social, and economic considerations into the Point Grey development.

By prioritising ecosystem conservation, waste reduction, energy efficiency, sustainable materials management, water conservation, and community engagement, the Proponent is laying a robust foundation for sustainable development. These initiatives not only mitigate environmental impact but also enhance operational efficiency, reduce costs, and strengthens relationships with stakeholders.

The strategies outlined in this framework, coupled with associated management plans, will ensure that sustainability is not just a goal but a measurable outcome of the development.

11. Limitations

Scope of services

This report ("the report") has been prepared by JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, JBS&G has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, JBS&G has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. JBS&G has also not attempted to determine whether any material matter has been omitted from the data. JBS&G will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to JBS&G. The making of any assumption does not imply that JBS&G has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. JBS&G disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made, including to any third parties, and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

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12. References

Bamford 2010, *Level 2 Fauna Assessment*, M.J. & A.R. Bamford, Perth, WA.

Bowman Bishaw Gorham (BBG) 1999, *Waterbird Management Plan*, Bowman Bishaw Gorham, Perth, WA.

Bowman Bishaw Gorham (BBG) 2000, *Nutrient and Irrigation Management Plan*, Bowman Bishaw Gorham, Perth, WA.

DPLH 2019, *State Planning Policy 7.0 Design of the Built Environment*, Western Australian Planning Commission, Perth, WA.

DPLH 2021, *State Planning Policy 7.2 Precinct Design*, Western Australian Planning Commission, Perth, WA.

DPLH 2020, *State Planning Policy 7.2 Precinct Design Guidelines*, Western Australian Planning Commission, Perth, WA.

ENV Australia (ENV) 2010a, *DEC Works Approval Application*, ENV Australia, Perth, WA.

ENV Australia (ENV) 2010b, *Point Grey Development Local Water Management Strategy*, ENV Australia, Perth, WA.

ENV Australia (ENV) 2010c, *Point Grey Preliminary Urban Water Balance Modelling Report*, ENV Australia, Perth, WA.

ENV Australia (ENV) 2010d, *Recycled Water Quality Management Plan*, ENV Australia, ENV Australia, Perth, WA.

ENV Australia (ENV) 2010e, *Environmental Sustainability Framework*, Perth, WA.

Environmental Protection Authority (EPA) 2020, *Statement of Environmental Principles*, Factors and Objective, Government of Western Australia, Perth, WA.

MP Rogers 2010, *Climate Change Vulnerability Assessment*, MP Rogers, Perth, WA.

RPS 2009a, *Point Grey Level 2 Flora and Vegetation Survey*, RPS, Perth, WA.

RPS 2009b, *Point Grey District Water Management Strategy*, RPS, Perth, WA.

RPS 2009c, *Point Grey Urban Development Environmental Assessment Report*, RPS, Perth, WA.

RPS 2010, *Point Grey Nutrient Balance*, RPS, Perth, WA.

RPS 2011a, *Fauna Risk Assessment and Management Strategy*, RPS, Perth, WA.

RPS 2011b, *Level 3 Hydrogeological Assessment*, RPS, Perth, WA.

RPS 2011c, *Point Grey Acid Sulphate Soils Management Plan*, RPS, Perth, WA.

RPS 2011d, *Point Grey Mosquito Management Plan*, RPS, Perth, WA.

Tranen undated, *Vegetation Management Plan*, Tranen Revegetation Systems, Perth, WA.

Urban Development Institute of Australia (UDIA) 2019, *EnviroDevelopment National Technical Standards Version 3 – Mixed Use*, UDIA, Brisbane, QLD.

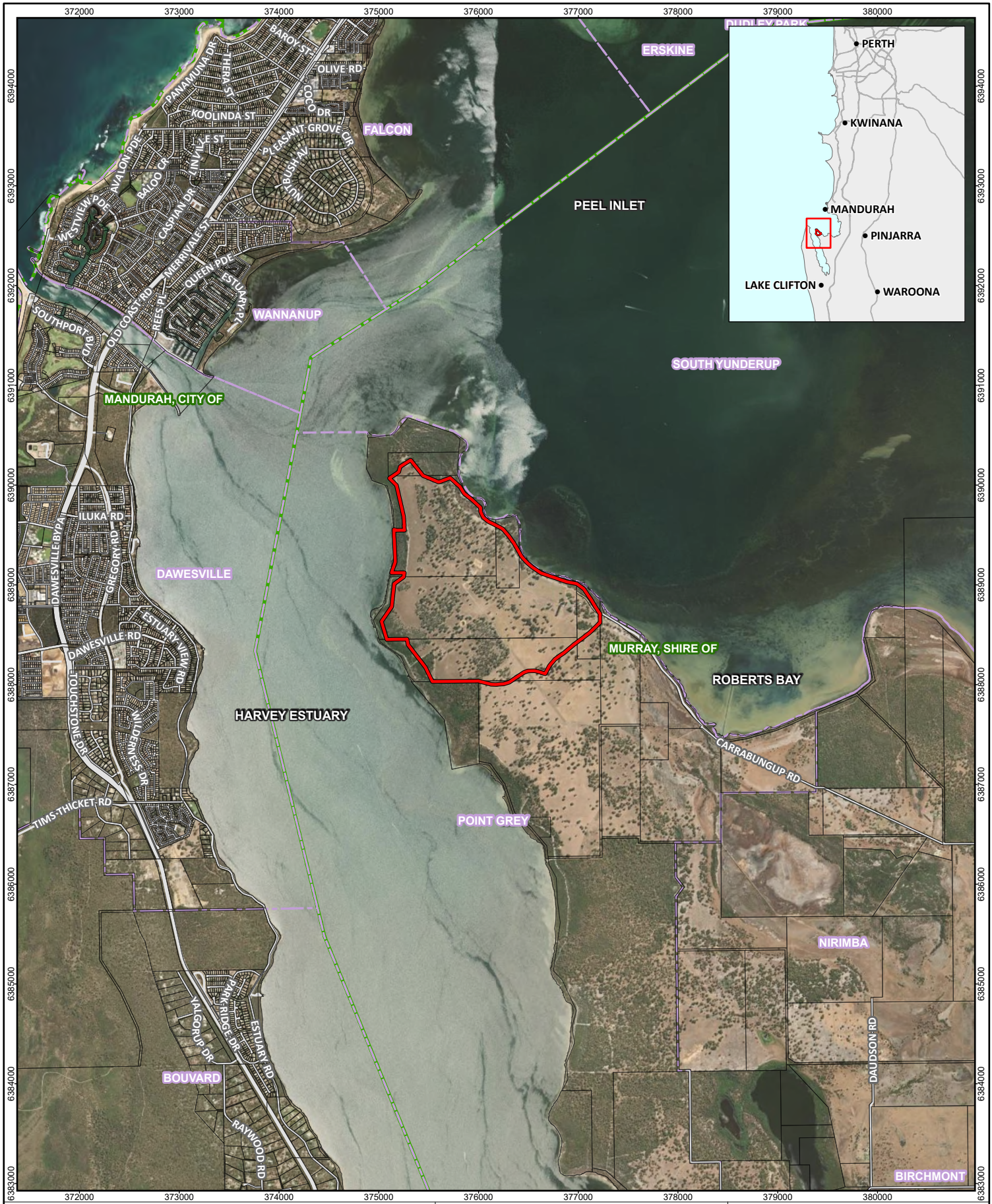
Appendix A Sustainability Reference Documentation

Reference Document	Applicable Sustainability Elements					
	Ecosystems	Waste	Energy	Materials	Water	Community
Existing Documentation						
District Water Management Strategy, Point Grey (RPS, January 2009b)	•				•	
Environmental Assessment Report, Point Grey Urban Development (RPS, November 2009)	•				•	
Point Grey Outline Development Plan and Report (Roberts Day, December 2009)	•				•	
Point Grey Development Local Water Management Strategy (ENV, August 2010)	•				•	
Local Water Management Strategy Addendum (Emerge, 2024)	•				•	
Preliminary Urban Water Balance Modelling Report, Point Grey Development ENV Australia, report number 10.025.003 (May 2010)					•	
Recycled Water Quality Management Plan, ENV Australia, report number 10/151 (August 2010)					•	
Nutrient and Irrigation Management Plan (Bowman Bishaw Gorham 2000)	•				•	
Nutrient Balance (RPS 2010)	•				•	
Waterbird Management Plan (Bowman Bishaw Gorham 1999)	•					
Level 2 Flora and vegetation Survey (RPS 2009)	•					
Vegetation Management Plan (Tranen Revegetation Systems undated)	•					
Level 3 Hydrogeological Assessment (RPS 2011)	•					
Level 2 Fauna Assessment (M.J. & A.R. Bamford 2010)	•					
Fauna Risk Assessment and Management Strategy (RPS 2011)	•					
Climate Change Vulnerability Assessment (MP Rogers 2010)	•					
Mosquito Management Plan (RPS, 2011)	•					
Acid Sulphate Soils Management Plan (RPS 2011)		•				

Reference Document	Applicable Sustainability Elements					
	Ecosystems	Waste	Energy	Materials	Water	Community
Proposed Documentation						
Local Development Plans for each stage (where necessary)	•				•	•
Regional Open Space and Foreshore Management Plan	•				•	
Urban Water Management Plan for each stage	•				•	
Construction Environmental Management Plan	•				•	
Building design guidelines	•				•	
Acid Sulfate Soil and Dewatering Management Plan	•					
Site Waste Management Plan		•				
Written statement by Shire of Murray environment officer or the nominated contractor detailing the mechanisms in place to enable recycling		•				
Documentation from Shire of Murray, waste contractor or engineer and developer to show achievement of the Waste strategies		•				
Statement from Shire of Murray or waste contractor that there is sufficient access for the purposes of waste removal		•				
Written statement by Shire of Murray environment officer or the nominated contractor outlining the maintenance plan for the compost facility		•				
Architectural Guidelines			•		•	
Town layout plan			•			
Signed contract with the energy provider			•			
Incentive package documents			•			
Energy education package			•			
Electrical plans with statement from engineer			•			
Statement from engineer showing the energy requirements and the energy provision through alternative sources (i.e. calculations of the energy balance and carbon account)			•			
Long-term (greater than 5 years) contract document from energy retailer to meet the Greenpower requirements			•			
Statement from the Proponent outlining the mechanism by which materials qualify as being from sustainable, renewable sources				•		
Certification (e.g. that timber comes from sustainable forestry practices)				•		
Research documentation from the Cooperative Research Centre on Sustainable Construction and others as to the specifications of materials having low lifecycle energy costs				•		
Certification of environmental benefits compared to industry standards				•		

Reference Document	Applicable Sustainability Elements					
	Ecosystems	Waste	Energy	Materials	Water	Community
Waterwise Landscaping Information Packages					•	
Sustainability Information Kit					•	
Resident education notices					•	
Community Consultation Plan						•
Community Infrastructure Needs Assessment						•
Research report on local stakeholders and consultation results						•
Products to be used in awareness raising campaign						•
Plans and statement signed by engineer and the Proponent						•
Transport proposal to council and negotiations to date						•
Mechanisms for ongoing maintenance beyond the development and sales stages						•
Plans, or covenant or body corporate design guidelines and statement signed by engineer and the Proponent stating how the requirements will be met						•
Community Infrastructure Plan						•

Appendix B High Quality Version of Figures



Legend

- Local Structure Plan (LSP)
- Cadastral boundary
- Local government boundary (LGATE-233)
- Suburban boundary (LGATE-184)
- Major road
- Minor road

Scale: 1:50,000 at A4 (0 250 500 metres)		**Point Grey** **Mandurah, WA**
Coord. Sys. GDA2020 MGA Zone 50		**LOCATION OF POINT GREY**
Job Number: 66009		
Client: Tian An Australia Limited		**FIGURE 1-1**
Version: B	Date: 11-Jul-2024	JBS&G
Drawn By: ianandagoda	Checked By: HGavin	

File Name: C:\Users\ianandagoda\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Tian An Australia\66009 Point Grey Approvals\GIS\02_MapProjects\66009_ESR_R04\66009_ESR_R04.aprx
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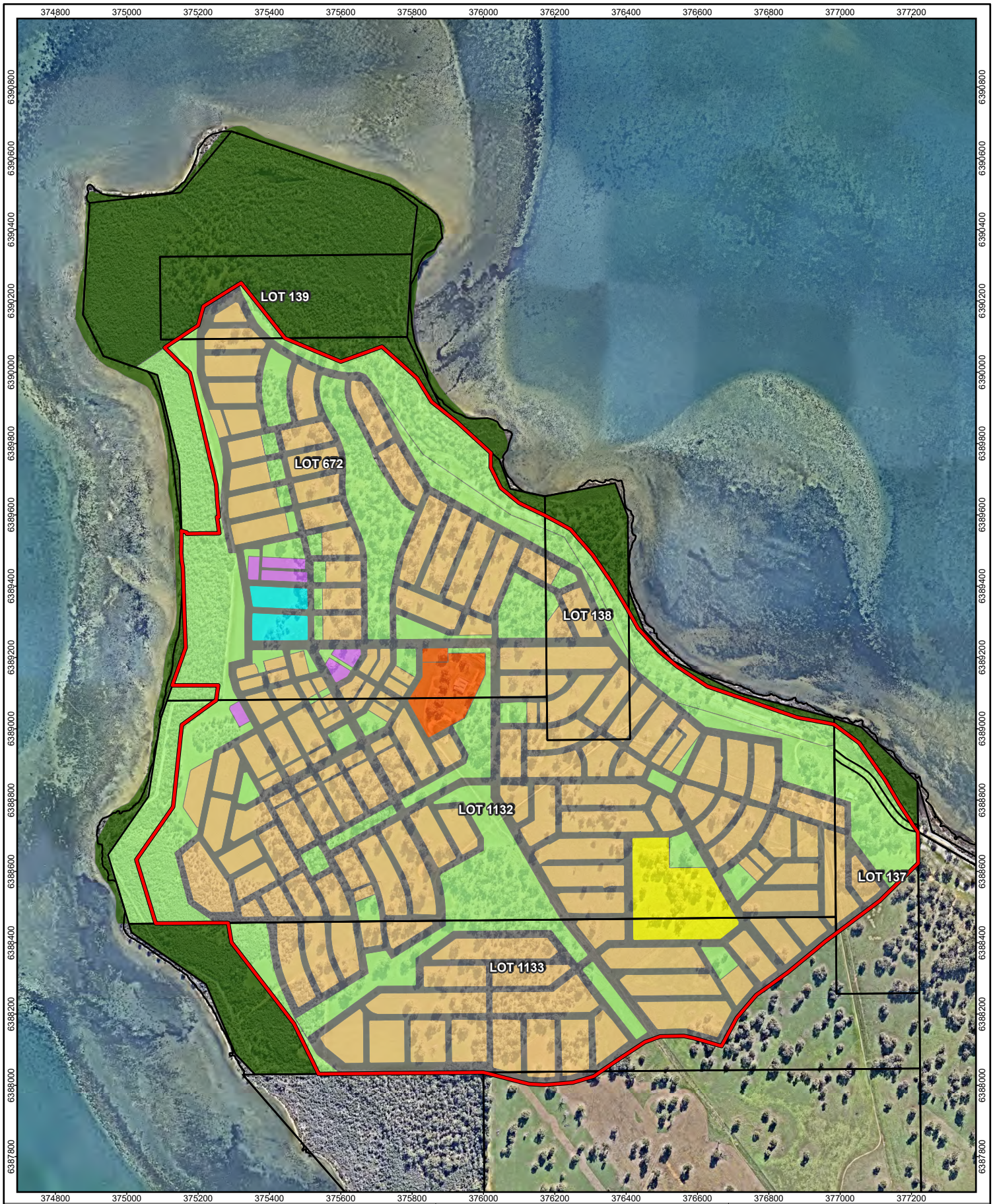

Legend

- Local Structure Plan (LSP)
- Cadastral boundary
- Minor road

Local Structure Plan Layout

- Village centre
- Mixed use
- Residential
- Community / Servicing
- Primary school
- Public open space
- Regional open space
- Roads

Scale: 1:14,000 at A4 (0 100 200 metres)	**Point Grey Mandurah, WA**
Coord. Sys. GDA2020 MGA Zone 50	**LOCAL STRUCTURE PLAN (LSP) FOR POINT GREY**
Job Number: 66009	
Client: Tian An Australia Limited	**FIGURE 1-2**
Version: B — Date: 22-Jul-2024	JBS&G
Drawn By: ianandagoda — Checked By: HGavin	

File Name: C:\Users\ianandagoda\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Tian An Australia\66009 Point Grey Approvals\GIS\02_MapProjects\66009_ESR_R04\66009_ESR_R04.aprx
Image Reference: www.nearmap.com© - Imagery Date: 13 June 2024.

1.1.1.1 Document Distribution

Rev No.	Copies	Recipient	Date
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1.1.1.2 Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
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