

Ocean Reef Marina Improvement Scheme Report



Prepared for **DevelopmentWA**
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September 2020



ADVERTISING

The Ocean Reef Marina Improvement Scheme Report certified for advertising by resolution of the Western Australian Planning Commission on 21 January 2020.

.....
Secretary, Western Australian Planning Commission

Date:

ADOPTED

Western Australian Planning Commission resolved that the Ocean Reef Marina Improvement Scheme Report satisfied the requirement for a local planning strategy in accordance with Part 3 of the *Planning and Development (Local Planning Schemes) Regulations 2015* at its meeting on 18 August 2020.

.....
Secretary, Western Australian Planning Commission

Date.....

ENDORSEMENT

Endorsed by the Western Australian Planning Commission Day of 20.....

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Secretary, Western Australian Planning Commission

Date:



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LIST OF ACRONYMS

BMP	Bushfire Management Plan
CHRMAP	Coastal Hazard Risk Management and Adaptation Plan
DBCA	Department of Biodiversity, Conservation and Attractions
DC	Development Control policy
DPLH	Department of Planning, Lands and Heritage
DoT	Department of Transport
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986</i>
(O)EPA	(Office of the) Environmental Protection Authority
LPS 3	City of Joondalup Local Planning Scheme No. 3
LWMS	Local Water Management Strategy
MRS	Metropolitan Region Scheme
NPO	Negotiated Planning Outcome
OCERM	Ocean Reef Marina
PD Act	<i>Planning and Development Act 2005</i>
PER	OCERM s.38 Public Environmental Review Assessment No. 2012
Regulations	<i>Planning and Development (Local Planning Schemes) Regulations 2015</i>
SPP	State Planning Policy
WAPC	Western Australian Planning Commission

1 INTRODUCTION

This Improvement Scheme Report has been prepared on behalf of the Western Australian Planning Commission (WAPC) in support of the Ocean Reef Marina Improvement Scheme No. 1 (Improvement Scheme).

The Improvement Scheme Report provides the explanatory text in relation to the Improvement Scheme and planning framework for the Scheme area. It sets out the rationale and justification pertaining to the statutory planning framework that has been constructed to deliver upon the objectives and intent of Improvement Plan No. 51: Ocean Reef Marina (Improvement Plan 51).

This Report provides an outline of the planning arrangements for the Ocean Reef Marina, an overview of planning considerations and justification behind the content of the Improvement Scheme, and acknowledges matters relevant to the Improvement Scheme area. This Report does not form part of the Improvement Scheme, however it satisfies the requirement for a local planning strategy in accordance with Part 3 of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

1.1 REPORT STRUCTURE

This Improvement Scheme Report is separated into three parts relating to the following:

Part 1 – the Improvement Scheme incorporates the scheme aims, describes the reserves and precincts, explains the rationale behind land use, subdivision and development. Part 1 also explains the construction of the Improvement Scheme, management requirements, administration and review.

Part 2 – Context Analysis provides the relevant background to the Improvement Scheme area, including the site context and rationale and selection of the site, relevant matters such as traffic, services and opportunities and constraints, and the community and stakeholder engagement that has been undertaken.

Part 3 – Concept Plan also outlines the economic, environmental, social and sustainability considerations that were a part of the evaluation of the concept design review. Part 3 describes the key features of the Preferred Concept, including those carried over and retained from the previous Concept Plan 7.2A.



PART ONE THE IMPROVEMENT SCHEME

1.2 OCEAN REEF MARINA BACKGROUND

The Ocean Reef Marina location is currently used for an existing boat harbour. It is approximately 29 kilometres north of the Perth CBD; 12 kilometres south of the Mindarie Keys Marina; 6 kilometres west of the Joondalup strategic metropolitan centre; and 9 kilometres north of the Hillarys Boat Harbour.

In 1979 the City of Joondalup acquired Lot 1029 for pursuing development of a marina. The City has been a key landowner and land manager within the project area. The City was responsible for community and stakeholder consultation, formulation of a concept for the marina, and initiated planning and environmental approval processes.

In 2004, the City of Joondalup received a \$700,000 funding commitment from the State Government. This contributed to the City being able to progress a concept plan for a proposed mixed-use working marina enabling club, service commercial and marine industrial uses. In 2009, the City undertook a city-wide consultation process for its concept plan, which enjoyed broad community involvement and support. In 2014, the City submitted the project to the EPA and submitted a request to amend the Metropolitan Region Scheme (MRS) to the WAPC.

In 2016, DevelopmentWA was appointed as lead proponent on the project. MRS Amendment 1270/41 and the PER were publicly advertised between November 2016 and February 2017. The proponents were also undertaking various studies and activities relating to bush fire planning, preparing a negotiated planning outcome for Bush Forever site 325, coastal hazard risk management and adaptation planning, local water management, economic assessment, and traffic and transport assessment.

In September 2017, the State Government committed \$120 million towards the delivery of the Ocean Reef Marina project, over the life of the project, allowing for finalising planning and environmental approval processes and forward infrastructure works. A Memorandum of Understanding was signed on 27 March 2018 between DevelopmentWA and City of Joondalup to formalise a collaboration to develop the vision, and advance the detailed design and delivery of the marina (DPC, 2018).

DevelopmentWA undertook a concept design review in consultation with key stakeholders. The process produced a preferred Concept Plan which continues to provide the fundamental elements that made up the original vision, namely a:

- Retail and tourism oriented central node as a Mixed Use precinct;
- Residential precinct;
- Marine Enterprise precinct for marine services and industry to agglomerate; and
- Protected marina for boat pens, boat ramps, amenities and trailer parking.

The concept design has been the subject of public workshops and review (refer section 6.3).

Marina Timeline

1970's – the idea of a marina at Ocean Reef was first considered.
1987 – Marmion Marine Park declared.
1988 – Hillarys Boat Harbour and Mindarie Keys Marina opened.
2004 – \$700,000 commitment from State Government.
2008 – start of preliminary studies including engineering, environmental, financial feasibility, land assembly, and surveying. Concept Plan development.
2009 – City of Joondalup survey on Concept 7.
2014 – request to amend the Metropolitan Region Scheme (MRS) submitted to the WAPC. Environmental Protection Authority decided to assess the marine-based components via a Public Environmental Review (PER).
2016 – DevelopmentWA appointed as lead proponent on the project. PER and MRS amendment report released for public consultation.
2017 – State Government commits to project and allocates \$120 million.
2018 – Memorandum of Understanding signed between the State Government and City of Joondalup. Concept Plan review and refinement complete.
2019 – Community Reference Group formed to guide the design of the public spaces in the marina. Ministerial Statement 1107 published, that the Ocean Reef Marina proposal may be implemented. MRS Amendment 1270/41 gazetted and in effect.

Next Steps

mid 2020 – completion of detailed design phase.
end 2020/early 2021 – start of construction.

The preferred concept that emerged from the design review process has formed the basis of the Improvement Scheme, to align the vision for the marina with the statutory planning framework. The Improvement Scheme is prepared as the means of designating land into four precincts – Residential, Mixed Use / Waterfront / Recreation, Waterways and Marine Enterprise, and to apply appropriate development controls to this unique project.

On 7 August 2019 the EPA published the Ministerial Statement 1107 in relation to the Ocean Reef Marina Public Environmental Review (Assessment 2012). Pursuant to section 45 of the EP Act it had been agreed that the proposal may be implemented subject to conditions and procedures.

On 9 October 2019, the WAPC advised the City of Joondalup that the MRS Amendment 1270/41 had been endorsed by the Minister for Planning and approved by the Governor, and would be presented to both Houses of Parliament. The notice was published in the *Government Gazette* on 11 October 2019, and the amendment became legally effective in the Metropolitan Region Scheme on 29 November 2019.

1.3 LAND DESCRIPTION

The Ocean Reef Marina site is located on the Indian Ocean coastline in the City of Joondalup. The site is currently used for the existing Ocean Reef Boat Harbour and club facilities.

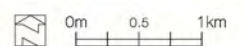
The Improvement Scheme area is predominately Crown land. The City of Joondalup and Water Corporation also own land in freehold. Table 1 below provides the legal description of the lots wholly or partly within the Improvement Scheme area. Figure 2 shows the cadastral details, current at the time of preparing this report.

Table 1 Land Tenure within Improvement Plan No. 51

Lot No.	C/T Details	Plan Number	Reserve Number	Primary Interest Holder
555	LR3166/566	P 402198	45122	City of Joondalup
9000	2701/335	P 54595	N/A	Water Corporation
1032	1667/921	P 13198	N/A	City of Joondalup
1029	1957/865	D 57604	N/A	City of Joondalup
15446	LR3133/571	P 40340	47831	City of Joondalup
15445	LR3133/570	DP 40340	47831	City of Joondalup
10098	LR3048/270	DP 216093	36732	Water Corporation
10518	LR3146/799	P 216093	39014	Minister for Transport
10519	LR3146/800	P 216093	39014	Minister for Transport
-	-	-	Marine Reserve 1 Marmion Marine Park	Marine Parks and Reserves Authority



Figure 1- Context Plan



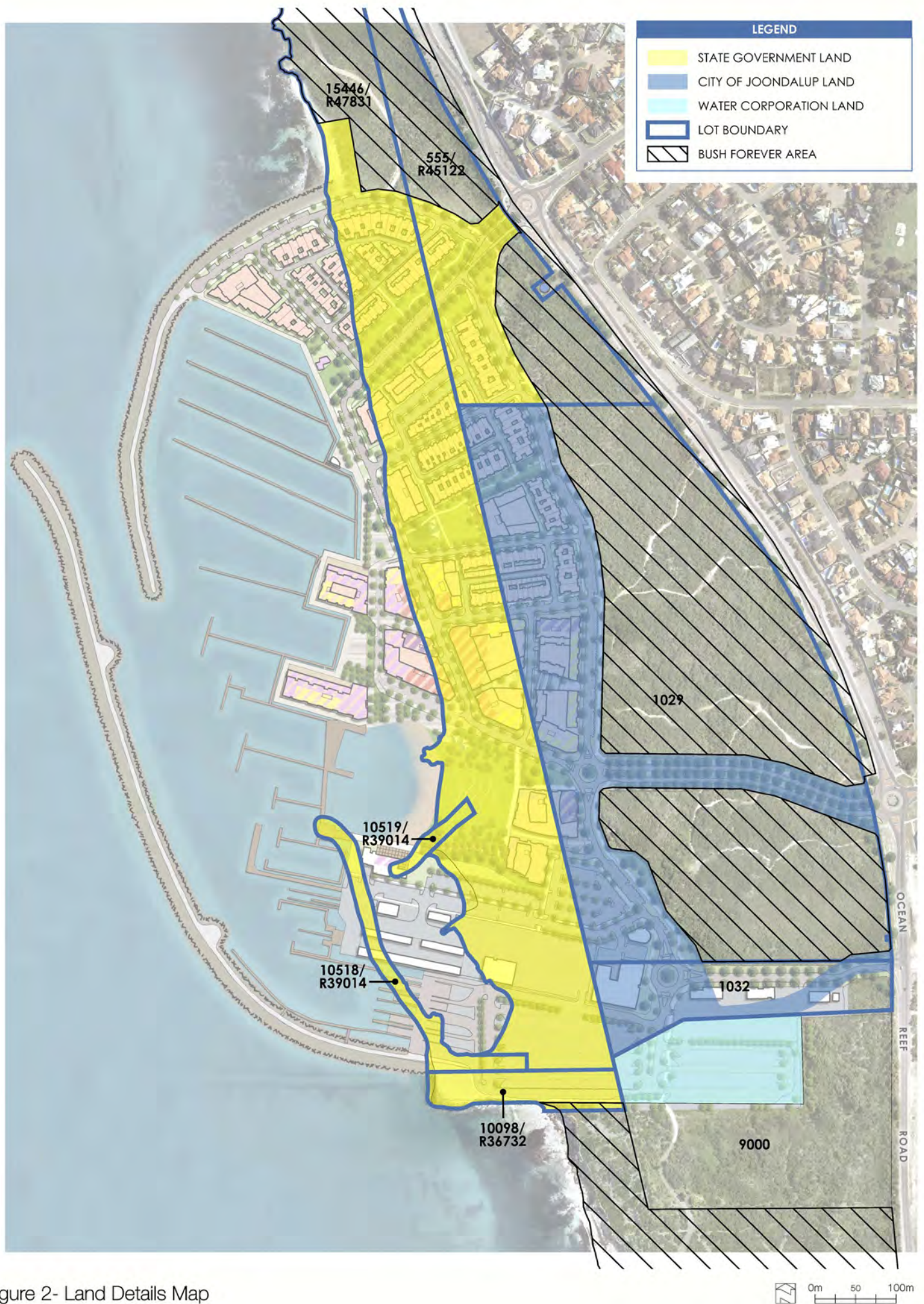


Figure 2- Land Details Map

1.4 IMPROVEMENT PLAN NO. 51: OCEAN REEF MARINA

Pursuant to Part 8 of the *Planning and Development Act 2005*, on 29 May 2019 the WAPC recommended to the Minister for Planning and Governor that the identified land area be dealt with and be the subject of Improvement Plan No. 51: Ocean Reef Marina (Improvement Plan 51). Improvement Plan 51 was gazetted and effective on and from 31 December 2019. Improvement Plan No. 51 is the head of power for the preparation of the Improvement Scheme. The purpose of Improvement Plan 51 is to:

- (a) Enable the WAPC to undertake all necessary steps to advance the planning and development of the Ocean Reef Marina site as provided for under Part 8 of the PD Act;
- (b) Establish the strategic planning and development intent for the Ocean Reef Marina site;
- (c) Provide the guidance for the preparation of statutory plans, statutory referral documentation and other subsidiary policy and development control instruments;
- (d) Provide for a strategic planning framework endorsed by the WAPC, Minister for Planning and the Governor; and
- (e) Authorise the preparation of an Improvement Scheme for the Ocean Reef Marina site and to establish its objectives.

Improvement Plan 51 confers authority to the WAPC to undertake the necessary tasks to plan for and facilitate the implementation of the project.

The preparation of the Improvement Scheme was informed by the Improvement Plan 51 objectives:

- (a) To develop the Ocean Reef Marina site in a co-ordinated manner;
- (b) To deliver a marina development in accordance with the State Government's strategic framework;
- (c) To provide additional capacity of boat pens and boat-stacking to meet future growth in demand in the Perth Metropolitan area;
- (d) To create a vibrant waterfront precinct featuring commercial uses and public open space that will provide recreational amenity and become a tourist attraction;
- (e) To create sustainable employment opportunities for local residents in food and beverage, retail, service commercial, tourism and marine related industries;
- (f) To provide diverse housing choices and densities that maximise opportunities for people to live in a high quality residential development;
- (g) To achieve high quality built form and public place design across the scheme area to establish a new benchmark for urban redevelopment within a Perth Metropolitan context;
- (h) To enhance and integrate key attributes of the Ocean Reef Marina site in a manner consistent with the overall redevelopment objective;
- (i) To facilitate the provision of effective, efficient, integrated and safe transport networks which provides for the needs of pedestrians, cyclists, public transport users and motorists;
- (j) To encourage use of sustainable technologies and design including best practices in energy efficiency, water sensitive urban design and bush fire safety requirements; and
- (k) Enable the delivery of land at a controlled rate over an appropriate period of time.

1.4.1 IMPROVEMENT PLAN AREA

The Improvement Plan No. 51 area is shown at Figure 3 and covers 213.12 hectares.

1.5 OCEAN REEF MARINA IMPROVEMENT SCHEME

The Improvement Scheme provides land use and development controls over the scheme area, and also provides heads of power to prepare Improvement Scheme policies (including design guidelines) and local development plans. Whilst the Improvement Scheme is in effect, the Metropolitan Region Scheme (MRS) and the City's Local Planning Scheme No. 3 (LPS 3) will be suspended and cease to apply to land within the Improvement Scheme area.

1.5.1 IMPROVEMENT SCHEME AREA

The boundary of the Improvement Scheme area is the same as Improvement Plan 51, and will wholly encompass the development footprint of the Ocean Reef Marina.

The scheme area is partly located in the City of Joondalup, and in state coastal waters.

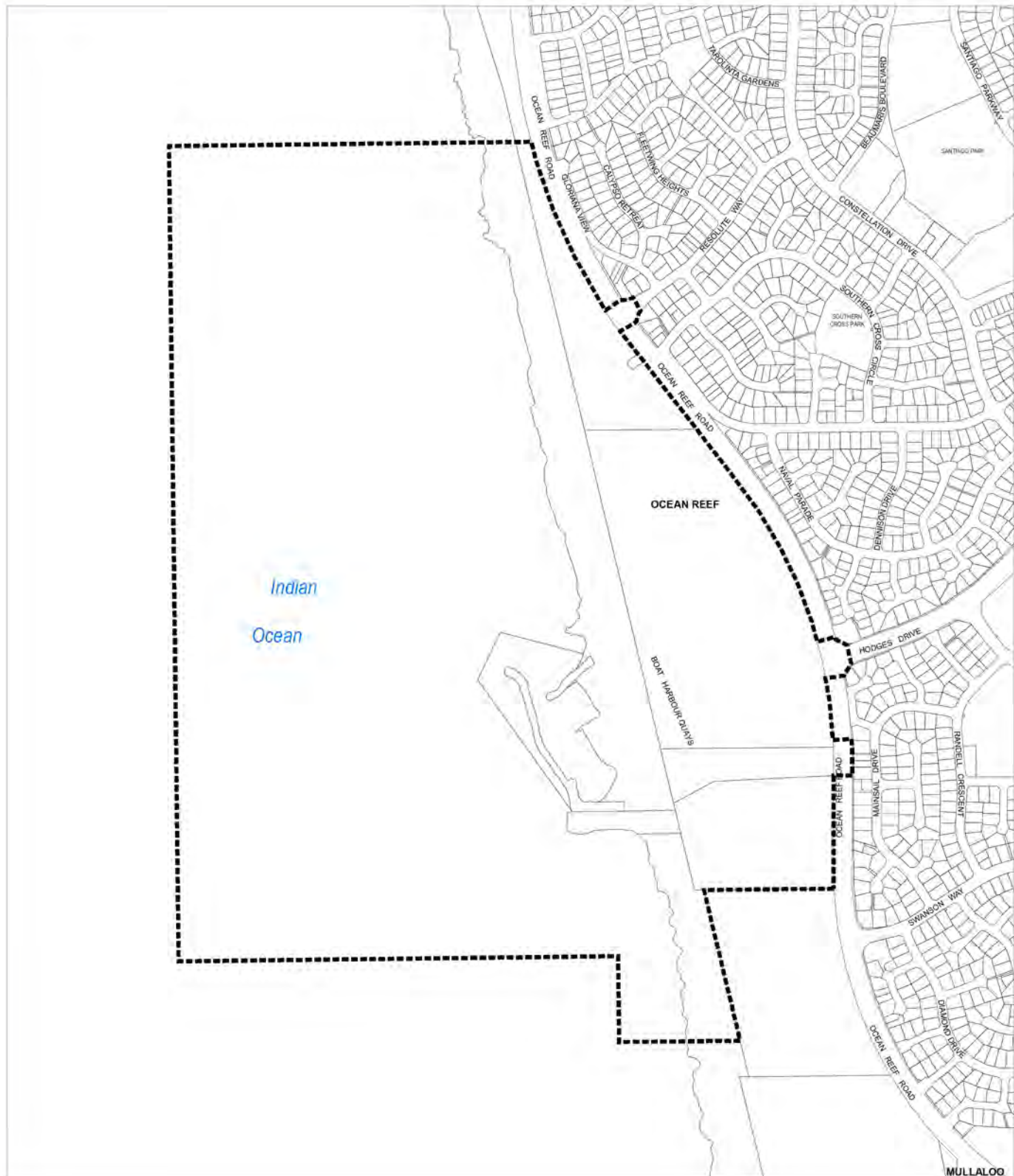
The Improvement Plan and Improvement Scheme boundary was defined by:

- The alignment of the gazetted road reserve for Ocean Reef Road. The intersections at Boat Harbour Quays, Hodges Drive and Resolute Way were also included in order to facilitate the coordinated design and construction of road junctions;
- Inclusion of the Water Corporation's Lot 9000 (CT 2701/335 on Plan 54595) to facilitate a coordinated land use and development response that ensures the ongoing protection of infrastructure associated with the Beenyup ocean outfall pipe within Lot 9000 and Crown Reserve 36732 (Lot 10098); and
- The excision boundary of the Development Area from the Marmion Marine Park as shown in Schedule 1 of the *Reserves (Marmion Marine Park) Act 2019*. 'Development Area' means Lot 500 on Deposited Plan 415585 comprising an area of approximately 143 hectares.

1.6 PROJECT DESCRIPTION

The preferred Concept Plan (refer Figure 15) for the development is described as:

- A mixed use 'working marina' including club, service commercial and marine industrial uses, and boating precinct including ramps, coastal amenities and parking in the south;
- A central retail, tourist and mixed-use precinct;
- A northern residential precinct;
- Capacity for up to 550 boat pens and 200 boat stackers; and
- Civic and community uses, including public open space (POS).



Improvement plan
No. 51

IMPROVEMENT PLAN NO. 51 - OCEAN REEF MARINA



Improvement Plan



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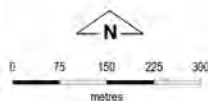
Geospatial Officer: A. Power

Examined: J. Ballarotta

Revised:

Version No: 1

Date:



Plan Number:

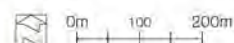
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File number: 819/02/34/0001

Plan reference:
Metropolitan Region Scheme
1:25000 sheets 7 & 11

Figure 3- Improvement Plan 51 area (WAPC 2019, Plan 3.2738)



2 IMPROVEMENT SCHEME

This section explains the construction of the Improvement Scheme. Development and land use planning within the Scheme Area will be guided by the Improvement Scheme and its related planning framework. The Improvement Scheme gives statutory effect to the Improvement Plan 51 and has been constructed to include the following main components:

- The aims of the Scheme to deliver the Ocean Reef Marina (refer section 2.2);
- Provisions for Improvement Scheme policies (including design guidelines) and local development plans;
- Establishing a number of scheme reserves;
- Establishing four precincts for Residential, Mixed Use / Waterfront / Recreation, Marine Enterprise, and Waterways, with associated land use permissibility at ground floor and above floor level (refer section 2.3). The ground floor uses are to contribute to activation whilst upper levels can be dedicated to office and other forms of commercial space, tourism accommodation, and residential use. The land use permissibility tables in the Improvement Scheme also includes conditions / qualifications that may apply to specific land uses;
- A local road reserve network based on the Ocean Reef Marina Transport Assessment Report (Arup, 2019) for marina related travel and parking across the site based on *Liveable Neighbourhood* policy standards;
- Land use classifications and definitions with interpretation from the *Planning and Development (Local Planning Schemes) Regulations 2015*;
- Providing land use and primary development control requirements for site planning and building height for different sub-precincts (refer sections 2.4 and 2.5); and
- Requirements for development approval.

The Improvement Scheme and planning instruments are briefly described in Table 2.

Table 2 Improvement Scheme framework

Planning Instrument	Explanation
Improvement Scheme text	The range of statutory provisions necessary to effectively achieve the planning and development intent of the Ocean Reef Marina.
Improvement Scheme map	Spatial definition of the reserves and precincts. Also includes sub-precinct maps.
Improvement Scheme policy	Guidance to articulate specific objectives and criteria on particular planning matters, and for the exercise of discretion provided by the Improvement Scheme.
Design guidelines	The design guidelines are adopted as an Improvement Scheme policy.
Local development plan (LDP)	Coordinate and assist in achieving better built form outcomes by linking lot design with future development. An LDP can supplement development standards contained in the Improvement Scheme, policies and design guidelines.

The structure of this Improvement Scheme is largely based on the Model and Deemed Provisions as set out in the *Planning and Development (Local Planning Schemes) Regulations 2015* and varied where relevant to suit the unique circumstances of the Scheme area. Unlike local planning schemes, an Improvement Scheme is not bound to adopt or reflect the Model and Deemed Provisions as the relevant sections of the PD Act – sections 256, 257A and 257B – do not apply to Improvement Schemes. Notwithstanding, the Model and Deemed Provisions do provide a legible and appropriate structure for the most part, and use of those provisions, where appropriate, will assist in maintaining a degree of consistency.

The Improvement Scheme addresses development approval requirements under the PD Act. These requirements do not negate requirements of other legislation including (but not limited to) the EP Act, Building Act 2011 and associated regulations.

2.1 IMPROVEMENT SCHEME AIMS

The aim of the Improvement Scheme is to create an iconic waterfront precinct providing a range of recreational, tourism, residential, boating facilities and employment opportunities, by:

- (a) The creation of a vibrant waterfront commercial precinct and public open space that will provide recreational amenity and a tourist destination for local residents and visitors to Perth;
- (b) The creation of sustainable employment opportunities in food and beverage, retail, service, commercial, tourism and marine related industries;
- (c) The provision of diverse housing density and choice, within high-quality residential precincts;
- (d) The delivery of an economically sustainable marina development including –
 - (i) Boat pens, boat stacking facilities, marine facilities and services to meet the future demands of a growing Perth metropolitan population;
 - (ii) Upgraded facilities for existing recreational marine-based clubs and users;
 - (iii) Marine related commercial activities; and
 - (iv) Public boat launching ramps and associated facilities, including trailer parking areas, while providing adequate separation between these activities and other land uses; and
- (e) The appropriate management of environmental values.

2.2 RESERVES

The Improvement Scheme establishes scheme reserves for a number of purposes. The reserves are described in the Improvement Scheme text and shown on the Scheme map.

The following four reserves are intended to replicate the 'Parks and Recreation', 'Public Purposes – Special Use', 'Other Regional Roads' and 'Waterways' reservations under the MRS. It is anticipated that these four reserves in the Improvement Scheme would inevitably return to the corresponding MRS reserves when the Improvement Scheme is concluded and the Scheme Area is 'normalised', meaning that the normal provisions of the MRS and the PD Act will resume:

- Parks and Recreation – which sets aside areas for parks, recreation and conservation. The reserve will provide for a range of active and passive recreation uses. It will apply to regionally significant open space within the Ocean Reef Marina scheme area, including land retained within Bush Forever Site 325.
- Public Purposes - Special Use – which relates to Water Corporation's landholding and can provide for their utility requirements, and potentially a range of other essential infrastructure purposes.
- Regional Road – this relates to the extent of Ocean Reef Road and Hodges Drive that fall within the Improvement Scheme area.
- Waterways – which relates to state coastal waters beyond the western extent of the breakwaters, to provide for a range of recreation uses that would be compatible with the adjacent Marmion Marine Park.

The following three reserves are intended to normalise into the City of Joondalup's local planning scheme:

- Local Distributor Road – to set aside land required for a local distributor road being a road classified as a Local Distributor under the Western Australian Road Hierarchy.
- Local Road – to set aside land for local roads being a road classified as an Access Road under the Western Australian Road Hierarchy.
- Public Open Space – to set aside areas for public open space, particularly those established under section 152 of the PD Act. The public open space is intended to define the key locations, based on the concept plan, for access, infrastructure and servicing, public open space, and view corridors. The view lines and view aspects are regarded to be important for the spatial framework of the marina and its precincts, to strengthen both a sense of arrival, the structure of the built environment, and to generate a strong sense of place with human-scale relationships between public place and built form.

2.3 PRECINCTS

Except for the reserves described in the previous section 2.2, the balance of the Improvement Scheme area is contained within four planning precincts. The Improvement Scheme inserts precincts instead of conventional zones as it enables a more comprehensive approach to land use and development control that is commensurate with the unique circumstances of the overall vision for the area.

The precincts (refer Figure 4) are as follows:

- 2.3.1 Residential Precinct;
- 2.3.2 Mixed Use / Waterfront / Recreation Precinct;
- 2.3.3 Marine Enterprise Precinct; and
- 2.3.4 Waterways Precinct.

A vision statement and set of objectives has been prepared for each precinct, outlined below.

2.3.1 RESIDENTIAL PRECINCT

The Residential Precinct is located in the northern sector of the Ocean Reef Marina. The intent of the Residential Precinct is to provide for a variety of permanent residential housing types, some tourist accommodation and related amenities, and local public open space. It will provide for flexibility for future residential development including high-density multiple dwellings, medium-density multiple dwellings and grouped dwellings, and some single residential townhouses. Limited convenience retail and compatible commercial uses may provide some activation, convenience and amenity for the population.

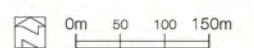
The objectives of the Residential Precinct are to:

- (a) Create public open spaces that provide high-quality landscape and leisure amenity for residents and visitors, and provide visual and physical connections to the waterfront.
- (b) Encourage a range of housing typologies, including high-density multiple dwellings, medium density single, multiple and grouped dwellings.
- (c) Ensure that the height and mass of buildings respects the outlook considerations from existing residential areas in the immediate vicinity.
- (d) Provide a high-quality interface between private development sites and public realm by ensuring that built form, private landscaped areas and edges along streets and open spaces respect and enhance the experience of streetscapes, connections and parks.

- (e) Allow for limited short-term accommodation in the form of serviced apartments or short-term holiday accommodation.
- (f) Enable a limited amount of hospitality and retail uses adjacent to the waterfront that is compatible with the surrounding residential area, to provide some activation and to service the needs of the population in this Precinct.
- (g) Encourage innovation and excellence in planning and design.



Figure 4- Improvement Scheme Precincts



2.3.2 MIXED USE / WATERFRONT / RECREATION PRECINCT

As the heart of the Ocean Reef Marina, it is envisaged that the Mixed Use / Waterfront / Recreation Precinct will be a world-class, premier destination for Perth. It is intended to be a high-quality mixed-use node, drawing on its attractive waterfront environment. The Precinct will offer tourism, recreation and community facilities, retail, hospitality, and commercial uses, residential and short-stay accommodation. The intent is for the Precinct to provide activity drawcards and a vibrant, safe and welcoming place to live, visit and work.

The Precinct will provide for open space features that include a safe swimming beach, integrated amphitheatre for community events, playground and parkland.

It is intended to create an active and walkable marina village atmosphere, with suitable retail and food and beverage offerings to encourage activation and interest throughout the day and night. The marina edge will provide a continuous, immersive and interactive public experience.

The objectives of the Mixed Use / Waterfront / Recreation Precinct are to:

- (a) Ensure that the height and mass of buildings respects the outlook considerations from existing residential dwellings in the immediate vicinity and, where possible, ameliorates the impact of the dominant winds on the public realm experience in the Precinct and along the waterfront.
- (b) Provide different public open spaces that accommodate a variety of water-based, passive, active and socialising activities and events.
- (c) Facilitate the growth of retail, commercial and hospitality uses over time whilst encouraging predominately active, non-residential uses at ground-floor level.
- (d) Provide a continuous, immersive and interactive public experience along the water-edge via a wide pedestrian pathway and the provision of retail and food and beverage offerings in key locations that would appeal to residents, workers, visitors and tourists.
- (e) Provide permanent and short-term accommodation in positions that are compatible with non-residential activities, and that overlook public realm environments to take advantage of views and provide natural-surveillance.
- (f) Encourage innovation and excellence in planning and design.

2.3.3 MARINE ENTERPRISE PRECINCT

The Marine Enterprise Precinct is intended to deliver a high-quality boating hub to accommodate marine services facilities including some industries relevant to marina or boating services, boat lifting, boat stacking, administrative office, all infrastructure required for boat launching, club houses and associated parking.

The Precinct will accommodate the Ocean Reef Sea Sports Club, Whitfords Volunteer Sea Rescue Group, and Marina Manager office. It will also accommodate some industry and commercial uses and tenancies that are related to marine or boating services as well as the public boat ramps, trailer parking and related facilities.

Given the nature of some of the uses intended within this Precinct, it is important to ensure that detailed planning provides a suitable interface with the adjacent Mixed Use / Waterfront / Recreation Precinct to ensure an appropriate level of visual presentation, integration for walking, cycling and vehicle movement, and mitigation against potential impacts of some of the more industrial-type uses, such as noise, lighting and odour.

The objectives of the Marine Enterprise Precinct are to:

- (a) Provide safe access to public boat ramps, trailer parking and related facilities as directly as possible from Ocean Reef Road.
- (b) Construct, operate and maintain facilities and services necessary in the interest of safe and effective boating.
- (c) Provide for protection of the Water Corporation's ocean outfall pipe and to ensure land uses and activities in this location are mutually compatible.
- (d) Facilitate safe and legible movement and circulation within the Precinct for all users including motorised machinery, vehicles, trailered vessels, pedestrians, cyclists and emergency transport.
- (e) Provide for the appropriate standards and clearly identified locations for vehicle parking, boat and equipment storage for all users of the Precinct and to ensure that height, mass and materiality of parking and storage facilities are aesthetically suitable for a world class marina.
- (f) Plan for the development of facilities for a Boat Club, Volunteer Sea Rescue and Returned and Services League of Australia (RSL).
- (g) Provide for a limited range of commercial and light industrial operations and complementary retail uses related to the provision of marine services.
- (h) Ensure there is a fitting interface between this Precinct and the adjacent Mixed Use / Waterfront / Recreation Precinct to provide an appropriate level of visual appearance, landscape amenity and pedestrian connectivity.
- (i) Ensure appropriate management of land uses and activities to avoid noise, odour, or other emissions or lighting impacts to the adjacent Mixed Use / Waterfront / Recreation, Residential, and Waterways Precincts.
- (j) Facilitate innovation and high standards of sustainability in all land uses and public areas.

2.3.4 WATERWAYS PRECINCT

The Waterways Precinct extends from the marina edge to the extent of the breakwaters, and includes the public and club jetties and boat pens. The Waterways Precinct is intended to accommodate water-based use and development, including jetties, boat pens, areas for swimming and leisure, and some aquatic-based commercial activities. The activity may include on-water entertainment facilities, maritime research, aquaculture facilities (although within the constraints of the infrastructure and the other primary uses within the Precinct).

The Precinct includes the safe swimming area adjacent to the beach. It also provides for the permanent mooring and berths for recreational and commercial vessels. Boat lifting facilities will be capable at the interface with the Marine Enterprise Precinct.

Public access will be provided along the breakwaters, and to public jetties. The pedestrian network will be designed to ensure continuous public access along the water edge, and other public facilities may be provided including fishing platforms, viewing spots, and related services or amenities.

The objectives of the Waterways Precinct are to:

- (a) Construct, operate and maintain facilities and services necessary in the interests of safe and effective boating.
- (b) Provide for permanent mooring of vessels and potentially berths for recreational and commercial vessels.

- (c) Provide an appropriate location for boat lifters adjacent to the Marine Enterprise Precinct.
- (d) Provide for appropriate standards and clearly identified locations for all water-based activities and user groups including a safe swimming beach, recreational fishing, motorised and non-motorised vessels, club and public facilities and limited commercial outlets.
- (e) Provide for public access to the breakwaters and public jetties, and controlled access to private jetties and pens.

2.4 LAND USE

Land use classifications and definitions have been primarily based on the City of Joondalup LPS 3 and the *Regulations*. This ensures consistency with current classifications for the majority of land uses in the Improvement Scheme. This will also ensure a streamlined process for future conformance, when the Improvement Scheme is concluded and the area is brought into LPS 3.

Some land use definitions in the *Regulations* were modified to fit with the design intent of the Ocean Reef Marina. Such modifications include:

- Convenience store – excluding reference to a service station and related facilities and activities. Changes in consumer habits and the service station model, has led to this use evolving into a more car-based convenience service. The traditional corner store or convenience store is being replaced by the convenience store integrated with a service station. While this is an appropriate definition for many urban environments, it does not fit with the vision for the Ocean Reef Marina Residential Precinct or the Mixed Use / Waterfront / Recreation Precinct. Therefore, the definition has been modified to exclude the car-based convenience store model, to ensure the marina village remains walkable and compact.
- Marina – the model definition has been restructured to describe the premises, the structures for the marina services and these have been expanded to include boat lifting structures and boat ramps. The definition has also been expanded for incidental retail, to have regard to the broader uses that are anticipated in the marina. Incidental retail could be for chandlery, seafood sales, tackle and bait, and the like, without needing to provide a specific definition for these types of activities. It is expected that fixtures incidental to the marina, such as sea bins, would be captured in the broader definition. Through the land use permissibility table, the Scheme intends to limit the extent of floorspace for office, retail and the like.
- Marine filling station – specifying exclusion of the repair or maintenance of marine craft.
- Service station – specifies limitation towards the convenience store component of not more than 15 square metres net lettable area, and maximum two bowzers. This is intended to limit the scale of any service station facility, and encourage its integration with other commercial uses. It is considered that there are full-scale service stations located within reasonable distance to the marina so as not to necessitate any such facility within the Improvement Scheme area itself.
- Tourist development – exclusion of caravan park. A caravan park is not an appropriate tourist use within the Improvement Scheme area.
- The definitions for Liquor store - large and Liquor store - small have been modified to reduce the defined threshold of the net lettable area from 300 m² to 200 m², to align with the intention of the marina village to deliver high quality, walkable streets framed by compact built form.
- Waste storage facility – the definition has been modified to exclude container deposit sites, as these would not be of a scale and nature consistent with the vision of the marina. It is considered as an incidental use in the Mixed Use / Waterfront / Recreation Precinct and the Marine Enterprise Precinct for collecting and storing waste from vessels, marina users, or from development. Solid and liquid waste would transfer to facilities outside of the Improvement Scheme area.

In addition to the above modifications, a number of other land uses have been introduced that are considered relevant to this particular Scheme area, including:

- Aquaculture – a definition has been inserted to be more relevant given the coastal location, whereas in the *Regulations* aquaculture forms a part of a broader ‘agriculture – intensive’ land use which is rural-oriented. Aquaculture refers to premises used for the intensive commercial production of aquatic-based animals and plants. Aquaculture may produce algae, aquatic plants, molluscs, crustaceans, finfish and the like. Feedback from the community and stakeholders suggested opportunities for research and development into aquaculture, and the Australian Centre for Applied Aquaculture Research (ACAAR) has been in discussion for potential space.
- Boat sales – a new land use is inserted for premises used to sell or hire boats. The *Regulations* have a definition for motor vehicle, boat or caravan sales, which is too broad and so has not been used.
- Supermarket – a definition has been inserted, as one is not in the *Regulations*. The vision for the Marina contemplates a supermarket within the Mixed Use / Waterfront / Recreation Precinct. A supermarket potentially up to 2,000 m² NLA is expected to be provided for the population, having regard to the Precinct having a sustainable mix of retail and commercial tenancies.
- Renewable energy facility – a definition has been inserted having regard to the meaning given in draft Position Statement *renewable energy facilities* (WAPC, 2018). The draft Position Statement pertains to renewable energy facilities that provide electricity to the grid (i.e. the South West Interconnected System), as opposed to small-scale power generation for use by the premises on the same site (i.e. photovoltaic cells or wind turbines attached to a building, or a small battery storage system associated with that domestic scale facility). Power generating (and battery storage) facilities providing electricity to the grid would warrant development approval. Given the rapid change of technology and growing acceptance of renewable energy facilities, the Improvement Scheme would facilitate such opportunities within the Ocean Reef Marina. The Marine Enterprise Precinct and Waterways Precinct are considered to be most suitable for such uses.

2.4.1 LAND USE PERMISSIBILITY BY PRECINCT

The Improvement Scheme include a land use permissibility table for uses within each precinct.

The Residential Precinct and Mixed Use / Waterfront / Recreation Precinct distinguish between the ground level and upper levels. Particularly for the Mixed Use / Waterfront / Recreation Precinct, the focus is for ground floor land uses to contribute and activate street frontages, whilst upper levels can be dedicated to office and other forms of commercial, tourism accommodation, and residential use. The table also includes conditions/qualifications that may also apply to specific land uses. The table provides the WAPC the ability to properly consider proposals against the objectives and development provisions for each Precinct.

Land use permissibility has adopted the ‘P’, ‘D’, ‘A’, ‘I’ and ‘X’ categories and their interpretation from the *Regulations*.

The following sections summarise the key land use permissibility considerations that have guided the formulation of land use controls for each of the Precincts.

2.4.1.1 RESIDENTIAL PRECINCT

The Residential Precinct is anticipated to deliver over 1,000 dwellings. Residential development will be delivered as a range of low, medium to high densities (single house, grouped dwelling, and multiple dwelling).

Similar to other local planning schemes, compatible uses can operate within a dwelling include home occupation, bed and breakfast, consulting room, and holiday accommodation. Short-term accommodation in the form of holiday houses and serviced apartments can be managed to mitigate amenity impacts on permanent residents. It is noted that strata management and bylaws can prohibit peer-to-peer accommodation to protect the amenity and character of the complex, and the quiet enjoyment of owners and occupiers.

Other uses may be compatible in a residential area where they are designed and integrated appropriately, such as a convenience store, residential age care facility, child care premises, etc. These uses would warrant careful consideration of its relationship to other land use and development within the Precinct, and its impact on the streetscape (including car parking). The availability of street parking may be considered in determining parking requirements for particular uses, acknowledging that using street parking as a credit towards development parking requirements needs to be well recorded to avoid overlapping claims between various proposals, and aligned with suitable parking management measures.

2.4.1.2 MIXED USE / WATERFRONT / RECREATION PRECINCT

In the context of a world class marina, the range of permissible uses is deliberately broad for the Precinct. It is intended that land uses will be complemented by a built form response that is conducive to a walkable, medium to high-density, safe and inviting urban environment. The marina should draw in people to enjoy the ambience of the location, its waterfront and high-quality spaces.

It is envisaged that the Precinct will deliver a range of tourism and entertainment related uses including a hotel, food and beverage, licensed venues, and entertainment facilities that would combine to create a vibrant hub attracting broad local, regional and international visitors.

Ground floor uses that generate interest and street activation are encouraged including retail, commercial, hospitality and tourism, food and beverage, entertainment and leisure.

Residential, short-term accommodation, and office/commercial uses are appropriate above the ground floor, whilst incidental elements for these uses may be provided at ground level (i.e. lobbies, access points). Upper floors should be dedicated to these land uses, to optimise the amenity uplift of views over the marina and ocean.

Place activation and management of the Precinct's spaces are important to add to the sense of vibrancy and inclusion. This could include, among other things, organised events, art / outdoor film / music / theatre / cultural events, competitions i.e. sailing regattas, sea sports championships, fun runs and the like.

2.4.1.3 MARINE ENTERPRISE PRECINCT

This Precinct provides for boat stacking, clubhouses, sea rescue, marina manager offices, hardstand, and other relevant marine service activities.

Any land use and development would need to protect the Water Corporation's Beenyup waste water treatment plant ocean outfall pipe, which is located under the trailer parking area. No structures may be built over the pipeline and the Scheme applies a restriction layer over the area to give effect.

Due to the interrelationship with the Waterways Precinct, a number of land uses are applicable across both Precincts such as aquaculture, civic use, club premises, community purpose, educational establishment, marina, marine filling station, recreation – private, and renewable energy facility.

There are potential impacts associated with operations in the Marine Enterprise Precinct, given its proximity to the marine environment. Collection of streams of waste from vessels and development is one example of activity that would need to be suitably managed.

2.4.1.4 WATERWAYS PRECINCT

This Precinct includes the breakwaters and internal waterbody. In addition to the marina itself, a limited range of other land uses compatible with the operations of the marina such as aquaculture, marine filling station, recreation - private and renewable energy facility are contemplated.

The Improvement Scheme would encourage innovative land use and development opportunities to be considered within the internal waterway and attached to the breakwaters.

Adjacent Precincts may benefit from activity to enhance the interaction, character and amenity of the urban environment. Uses that may be considered, where compatible with the surrounding use and development of land, could include brewery, small bar, civic use, club premises, community purpose, educational establishment (i.e. research and development, or trades or technical schooling, etc), restaurant/café, etc.

There are potential impacts associated with land use and activity in the Waterways Precinct, given its proximity to the marine environment. Collection of streams of waste from vessels and development is one example of activity that would need to be suitably managed.

2.4.1.5 EXEMPTIONS TO DEVELOPMENT APPROVAL

There are limited circumstances where development is exempt from approval. These circumstances are identified in Part 7 of the Scheme, and were comparable to those listed in clause 61 of the Deemed Provisions.

2.5 SUBDIVISION AND DEVELOPMENT APPROVALS

2.5.1 SUBDIVISION

Subdivision of land will follow the conventional application process and require approval of the WAPC pursuant to Part 10 of the PD Act.

A Crown land subdivision process may be pursued should it be advantageous to do so, such as for consolidation of Crown land or other land assembly outcomes that facilitate future subdivision and development within the Ocean Reef Marina.

Should Crown land be disposed of for sale as freehold title, the Crown land converts to freehold land prior to titles being issued by Landgate. Crown land subdivision generally does not have conditions in the same way that a private subdivision does, and lots do not necessarily require servicing. However, should Crown lots be subject to future private sale, Part 10 of the PD Act would then apply and services, headworks, etc would be expected to be provided for serviced lots.

2.5.2 ROAD MODIFICATIONS

The WAPC has, via subdivision, the ability to create roads in an Improvement Scheme area. The WAPC can close roads in Improvement Scheme areas as if they were the local government.

If relevant, a Crown land subdivision process can create roads pursuant to section 168 of the PD Act.

2.5.3 CLEARING

If a Crown land subdivision application for land assembly is undertaken, then works such as earthworks or services would require development approval. A clearing permit from DWER would be required as a Crown land subdivision is understood to not give an exemption to clearing under the EP Act.

Clearing as part of a Part 10 (freehold land) subdivision process would be exempt from needing a clearing permit from DWER.

2.5.4 DEVELOPMENT

Development applications would be lodged with the WAPC as the responsible authority for administering the Improvement Scheme. The WAPC would be the relevant decision-maker.

It is understood that some development approval within the Residential Precinct may be delegated to the City of Joondalup.

The following sections describe development provisions contained in the Improvement Scheme.

2.5.4.1 RESIDENTIAL DESIGN CODES

Design Guidelines have been prepared for the Residential Precinct and Mixed Use / Waterfront / Recreation Precincts. Elements of the Residential Design Codes (R-Codes) are adopted in those Design Guidelines. Otherwise, the R-Codes do not form a part of the Improvement Scheme, which is different to conventional local planning schemes.

Some words and expressions that are not defined in the Improvement Scheme or the PD Act, have the same meaning as given in the R-Codes. Examples include single house, grouped dwelling, multiple dwelling and residential building.

Residential development is controlled through the Improvement Scheme provisions and the relevant Design Guidelines. The Design Guidelines will be adopted as Improvement Scheme policy, and supplemented by local development plans.

2.5.4.2 HOUSING ON LOTS LESS THAN 100 M²

To deliver a range of housing typologies, the Improvement Scheme area will facilitate grouped dwellings and multiple dwellings. In this regard, development of single housing on lots less than 100 m² may be considered to be appropriate in suitable locations. Housing product on lots of this size would need to be carefully designed to integrate with the wider development area. Development would contribute to the street via:

- Built form appearance and activation;
- Not interrupting the character or amenity of the streets; and
- Enabling delivery of on-street visitor parking, street trees, paths, refuse collection, water management and utility services.

Lots that are less than 100 m² will be considered within the 'low/medium density residential' areas as shown on the preferred Concept Plan (refer Figure 5 and Figure 15). This land may be suitable on lots generally within 200 metres to 400 metres walkable catchment of the Mixed Use / Waterfront / Recreation Precinct. Lots would have access to public open space, and would be within walking distance of the amenity afforded by the internal waterway and associated public domain.

2.5.5 OPERATIONAL IMPACTS OF ACTIVITIES ON SENSITIVE RECEPTORS

From time to time, sensitive receptors / land uses may experience noise, odour, disturbance due to construction / dredging / maintenance, light spill and other factors that may arise from the normal operations of a busy commercial marina and mixed-use area. Sensitive receptors / land uses may be subject to impacts of noise and disturbances associated with the operation of a commercial / activity centre and a working marina. This should be taken into consideration in the design of development and placement of land uses.

2.6 ENVIRONMENTAL MANAGEMENT REQUIREMENTS

The Improvement Scheme was referred to the EPA under section 48A of the EP Act for a decision. On 3 March 2020, the EPA advised the Scheme was Not to be Assessed under Part IV of the EP Act 1986, and advice was given.

The Environmental Assessment and Management Strategy refer Table 3 and Appendix A, has been prepared to support the Improvement Scheme and outlines mitigation and management measures.

Table 3 Environmental mitigation and management measures (Strategen-JBS&G, 2019)

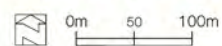
Potential Impact	Description of impact/issue	Management / Mitigation
Landform and topography	Avoid impacts to native vegetation into Bush Forever Site 325. Create appropriate and stable batter grades.	Earthworks contained within the Concept Plan boundary and some battering on the periphery. Vegetation clearing within the Concept Plan boundary, and implementation of the Negotiated Planning Outcome.
Soils and geology	Potential presence of karst. Localised dumping of material that contains potential asbestos containing material (PACM).	Geotechnical investigations carried out to determine compatibility of site soils and geology, and the development. Removal of PACM, site verification that soil is remediated.
Groundwater and surface water	Stormwater treatment prior to infiltration or discharge. Increasing sea levels on groundwater levels, which may influence building construction.	Implementation of the Ocean Reef Marina Local Water Management Strategy to ensure that water quality is maintained post-development. LWMS set a Design Groundwater Level (DGL) from which finished levels have been assessed, which influences designs for 'tanked' or waterproof basements.
Vegetation and flora	Mitigate impacts as a result of clearing for development.	Construction Environment Management Plan be prepared to support subdivision and include vegetation clearing protocols.
Bush Forever Site 325	Minimise impacts to Bush Forever Site 325 and mitigate the clearing of the development site.	Retention of a north-south linkage of remnant vegetation within Bush Forever Site 325. Rehabilitation Plan being prepared to address the 10% (5 ha) rehabilitation within Bush Forever Site 325, as per the Negotiated Planning Outcome.
Fauna	Ensure fauna are not injured. Improve the quality of habitat in the surrounding area.	Fauna spotter present on-site to identify and move ground dwelling fauna during clearing. Inspect for active breeding prior to ground disturbing activities. Rehabilitation of 10% (5 ha) vegetation as per the Negotiated Planning Outcome. Use appropriate native tree and shrub species which will create some habitat value, taking account of bushfire considerations associated with rehabilitation/planting.
Bushfire risk	Adequate separation between proposed habitable buildings and vegetation. Appropriate vehicle access for access/egress. Provide adequate water supply for firefighting purposes.	Asset Protection Zone (APZ) in the form of public roads, driveways and car parks. Location of habitable buildings in areas that have a BAL rating of BAL-29 or lower; construction standards where required as per AS3959. Vehicle access and water supply measures implemented in accordance with the Bushfire Management Plan.

Potential Impact	Description of impact/issue	Management / Mitigation
Construction management	Address construction aspects requiring management – noise and vibration; dust; vegetation clearing and fauna; surface and groundwater; waste; hydrocarbons and hazardous material; cultural heritage; fire; access and visual amenity.	Preparation and implementation of Construction Environmental Management Plan at the subdivision stage. Roles and responsibilities of the construction team for adherence to the protocols, including monitoring and reporting.

The environmental impacts of the terrestrial portion of the Improvement Scheme area are considered to be able to be managed through the mitigation and management measures described above.



Figure 5- Walkable Catchments - Concept Plan



2.7 MODEL AND DEEMED PROVISIONS NOT INCLUDED

As previously mentioned, while it is not a legislated requirement to comply with the *Regulations* in terms of the Model and Deemed Provisions, the Improvements Scheme has used these provisions as and where they are considered appropriate to maintain consistency with other planning control systems. However, to ensure the planning framework for the Improvement Scheme is fit for its specific purpose, and is appropriate for the unique circumstances of the project, a number of the Model and Deemed Provisions have been excluded, including:

- Special control areas – there are no special control areas on the Improvement Scheme map or addressed in the Improvement Scheme text;
- Heritage protection – there are no heritage areas, heritage listed sites, or heritage places in the Improvement Scheme area;
- Structure plans – there is no development zone nor identified requirement for structure plans or activity centre plans within the Improvement Scheme area;
- Development contribution plans – it is not envisaged that a development contribution plan would be established within the Ocean Reef Marina and therefore enabling provisions are not considered necessary; and
- Irrelevant or non-applicable terms contained in the *Regulations* have been omitted.

3 ADMINISTRATION AND REVIEW

This section explains the administration and governance of the Improvement Scheme.

3.1 ADMINISTRATION

The Improvement Scheme will be adopted and approved by the Minister for Planning, in accordance with clause 122B of the PD Act.

The WAPC is the responsible authority for implementing the Improvement Scheme, and any Improvement Scheme policies and local development plans that are prepared. The WAPC will ensure that the statutory planning framework is in line with the broader objectives for the Ocean Reef Marina.

Development Applications would be submitted, assessed and determined by the WAPC, as per its delegation register applicable to the Improvement Scheme area.

3.1.1 IMPROVEMENT SCHEME POLICIES

Improvement Scheme policies will provide guidance in relation to particular planning requirements. The policy documents will contain (but not be limited to) the policy purpose, policy objectives in context to the planning matter, details of the policy scope and its application, and outline the policy statements. Examples of planning matters that be guided by policy include (but not limited to) landscaping, car parking, and signage.

Design Guidelines will be prepared and adopted as Improvement Scheme policies.

The WAPC will adopt and approve Improvement Scheme policies, including the Design Guidelines, in accordance with the provisions of the Improvement Scheme.

3.1.2 LOCAL DEVELOPMENT PLANS

Local development plans (LDPs) are intended to be prepared for sites requiring special considerations in terms of built form, site orientation, parking and access arrangements, etc. LDPs will detail site-specific requirements.

Consistent with the WAPC's Position Statement: *Housing on Lots less than 100 m²* (WAPC, 2019), an LDP should be prepared and finalised prior to subdivision approval for any subdivision involving lots less than 100 m². The LDPs should address, and be consistent with, the design principles in SPP 7.0 *Design of the Built Environment* and also address the standards outlined in Appendix 2 of the Position Statement.

3.2 REVIEW

3.2.1 IMPROVEMENT SCHEME

Periodic review of the operation of the Improvement Scheme would provide the opportunity to assess the effectiveness of the Scheme in facilitating the objectives of the Improvement Plan 51. It also allows assessment of the efficiency of the scheme from a statutory planning and operational perspective.

Consistent with the PD Act, the Improvement Scheme would be intended to be reviewed after each five-year period of operation. This would ensure that the Improvement Scheme remains current, is appropriately serving the strategic objectives, and as a means of undertaking a 'Health Check'. This could also be coordinated with the relevant review of supporting technical documentation, and a holistic review of Improvement Scheme amendments that may have been gazetted, as well as Improvement Scheme policies and local development plans, in terms of a consolidation of the Scheme provisions.

Over time, parts the Improvement Scheme may be normalised into the MRS and the City of Joondalup's local planning scheme. At that time, it will be necessary to review the Improvement Scheme against the MRS and the City's applicable local planning scheme and proactively prepare scheme amendments, if necessary, for alignment of zones, reserves and other requirements between schemes.

3.2.2 ENVIRONMENTAL CONDITIONS

EPA Report 1629 (EPA, 2019) contains relevant environmental information including environmental conditions relevant to the marine component of the Ocean Reef Marina project. These conditions will require the publication of relevant information, compliance reporting and provision of publicly available data as required.

A change to the proposal was approved under section 45C of the EP Act 1986 on 6 January 2020. Implementation of the proposal, including the approved changes, remain subject to the conditions of Ministerial Statement 1107.

3.2.3 ENVIRONMENTAL MANAGEMENT PLAN

A Construction Environmental Management Plan will be prepared to address the management of terrestrial construction activities on the site, including clearing and earthworks.

The management framework would outline performance objectives and indicators, management measures, monitoring and reporting. Contingency plans would be identified and discussed in detail with relevant protocols.

Adherence to the protocols within the Construction Environmental Management Plan will be a condition of any construction contracts.

3.2.4 COASTAL HAZARD RISK MANAGEMENT AND ADAPTATION PLAN

Consistent with the requirements of State Planning Policy 2.6 *State Coastal Planning Policy*, a CHRMAP was prepared for the Ocean Reef Marina based on the concept plan for the MRS Amendment 1270/41 and the PER.

The CHRMAP was assessed by the DPLH and incorporated referral to the DoT. The CHRMAP was peer reviewed by a suitably qualified and experienced third-party consultant. Risk mitigation measures and strategies are documented in the CHRMAP.

In July 2018, correspondence from the DPLH advised that the 2016 CHRMAP and the development methodology and intentions noted therein, was acceptable for the initial planning of the marina and was sufficient to enable the finalisation of MRS 1270/41 and the PER. It noted that the 2016 CHRMAP was based on the City's conceptual design of the marina breakwaters, seawalls and internal edge treatments.

The DPLH correspondence advised that the CHRMAP will continue to be updated commensurate with detailed planning and engineering. The CHRMAP will need to be updated at some stage to reflect the final design conditions and intent. This will likely not happen until the detailed design has been completed and there is agency agreement on the responsibilities of assets – as the CHRMAP will need to include an implementation and responsibilities table. Until such time, the current version of the CHRMAP provides a framework for coastal risk management that is guiding the design.

It is proposed that recording and analysing future observed sea levels will enable comparison of future real-world trends with the projections outlined in the CHRMAP. It is proposed that the CHRMAP be reviewed every decade or so, to determine if the identified risk levels are still appropriate. This process of review would allow mitigation measures to be implemented as new information on climate change and sea level rise becomes available.

3.3 TECHNICAL DOCUMENTATION

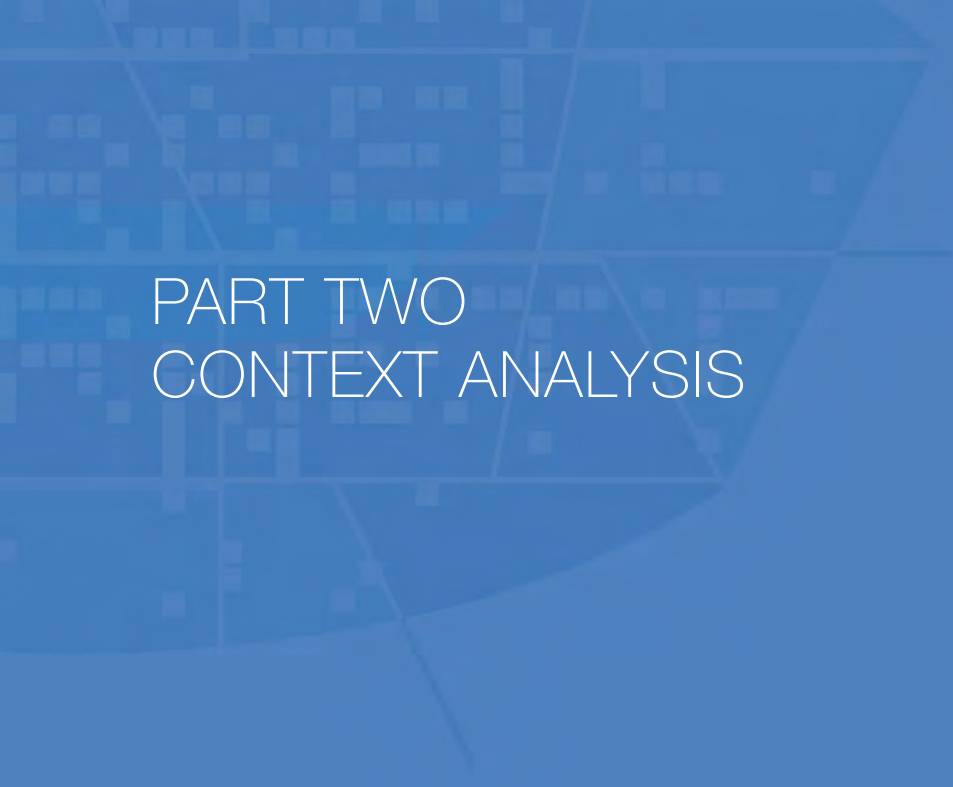
The Scheme provisions have been prepared having regard for a series of technical reports that are appended to this report. These reports and the matters addressed by each are summarised as follows:

- Environmental Assessment and Management Strategy (Appendix A);
- Local Water Management Strategy (Appendix B);
- Civil Engineering Utility Services Report (Appendix C);
- Transport Assessment Report (Appendix D);
- Coastal Hazard and Risk Management Adaptation Plan (Appendix E); and
- Bushfire Management Plan (Appendix F).

Note: Assessment and technical documents were based on the preferred concept, however, minor inconsequential changes have since been made to the concept plan and these may not in all instances be depicted in the appended technical documentation. Refer to the preferred concept in this report as the latest version.

Other relevant documentation includes:

- MRS Amendment 1270/41 documents published on the DPLH website; and
- Ministerial Statement 1107 documents published on the EPA website.



PART TWO CONTEXT ANALYSIS

4 PLANNING CONTEXT

This section provides an overview of the strategic and statutory planning context that formed the basis for preparing an Improvement Plan and Improvement Scheme as the primary enabling framework for the project.

4.1 STRATEGIC CONTEXT

The Ocean Reef Marina site is reflected in the WAPC's *North-West Sub-regional Planning Framework* and the City of Joondalup's *Strategic Community Plan 2012-2022* (CoJ, 2018), *Local Planning Strategy* (CoJ, 2017) and *Economic Development Strategy* (CoJ, 2017).

4.1.1 NORTH-WEST SUB-REGIONAL PLANNING FRAMEWORK

The *North-West Sub-regional Planning Framework* (WAPC, 2018) provides a spatial framework for delivering the objectives of *Perth and Peel @3.5million* strategy. The *Framework* links State and local government strategic planning, and applies dwelling targets to each local authority in the sub-region. The *Framework* map is shown at Figure 6.

The development of the Ocean Reef Marina will contribute towards the City's housing target and employment opportunities, whilst also providing boating and marine services for the sub-region and becoming a regionally significant tourism destination.

The *Framework* (WAPC, 2018) provides the following guidance:

- The City of Joondalup has a target of 20,670 additional dwellings;
- The Ocean Reef Marina was shown on the *Framework* map as a marina investigation area. The proposed Ocean Reef Marina development footprint is consistent with the location in the *Framework* (WAPC, 2018) and has been rezoned under the MRS (refer section 4.2.1);
- The Ocean Reef Marina is 6 kilometres to the west of the Joondalup City Centre. The Joondalup City Centre is recognised as a strategic metropolitan centre containing regional-level services and a diversity of retail, institutional, government, service and commercial land uses. Further growth of the centre would introduce a range of commercial and residential development. Employment opportunities in the Ocean Reef Marina would complement and support regional-level services, facilities and public transport; and
- Metropolitan attractors assist in achieving employment self-sufficiency targets, by providing local employment opportunities. The Ocean Reef Marina is identified as a local level attractor for dwellings and employment targets (CoJ, 2017). The Ocean Reef Marina aims to integrate residential and non-residential development in a coordinated manner to ensure the sustained delivery of retail, commercial, tourism, marine industry and housing.

Further information on employment is addressed in section 7.3.

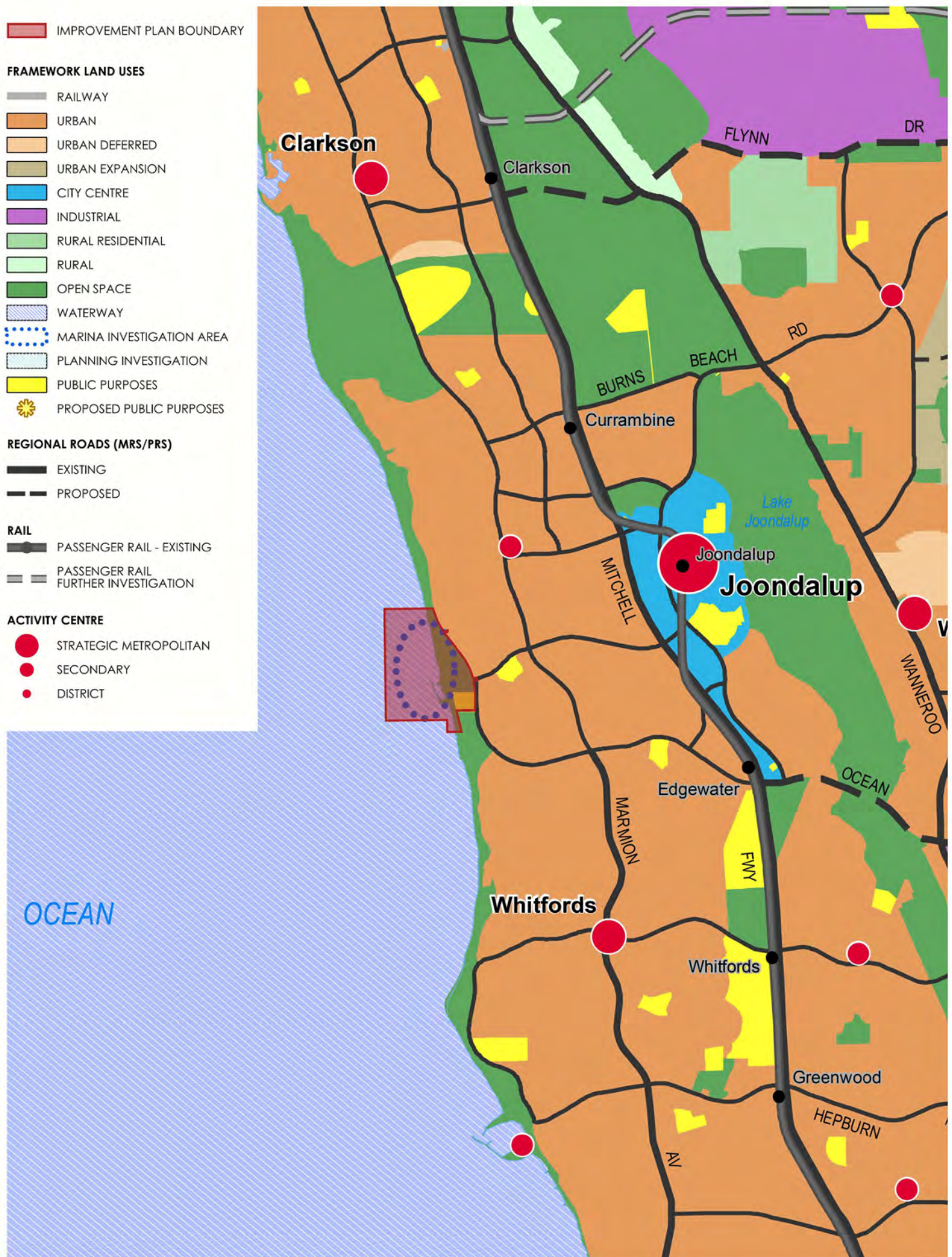


Figure 6- Extract from North-West Sub-regional Planning Framework (WAPC, 2018)



4.1.2 STRATEGIC COMMUNITY PLAN

The City of Joondalup's *Strategic Community Plan* (CoJ, 2018) recognised the project to be an "*essential catalyst for regional tourism development and the provision of diverse housing and accommodation options*". The Ocean Reef Marina Community Reference Group was part of the City's effective representation of the best interests of the community. The *Strategic Community Plan* recognises the Ocean Reef Marina as a priority transformational project and the City aims to continue its engagement with State Government on the delivery of the project.

The City notes that "*constructing a facility that is environmentally responsible, unique and complementary to existing nearby infrastructure will be a challenge*". The *Community Strategic Plan* states that "*the benefits that it will bring socially, economically and environmentally to the local and regional community is what will drive the City to continue pursuing the project into the future*" (CoJ, 2018). The Improvement Scheme has been prepared in close consultation with the City of Joondalup, and would help deliver upon the City's strategic plan.

4.1.3 LOCAL PLANNING STRATEGY

The City of Joondalup's endorsed *Local Planning Strategy* (CoJ, 2017) sets out the long-term planning direction for the local government; applies state and regional planning policies; and provides a rationale for the zones and other provisions of the City's local planning scheme.

The Strategy recognises that as part of the City's *Tourism Development Plan*, Ocean Reef Marina is proposed to become a significant tourism, recreational, commercial, and residential mixed-use node and is identified as a 'Future Strategic Tourism site' (refer Figure 7 of this report). This is the only future strategic tourism site identified within the local government area and therefore is regarded as the City's main focus for tourism growth. The Strategy acknowledges the proposal for developing the Ocean Reef Marina for commercial, residential, short-term accommodation uses, and public amenities.

Whilst identified for its tourism potential and employment opportunities, Ocean Reef Marina is also identified as a 'Future Development Site for Housing'. It is recognised to accommodate future residential land uses such as short-term accommodation and freehold residential lots (CoJ, 2017).

The Strategy also recognises future development opportunities at Ocean Reef Marina to potentially address the challenge of generating levels of employment across the local government area. The impetus is to improve employment self-sufficiency levels to improve the future sustainability of the City. The Ocean Reef Marina aims to maximise the opportunities and potential for commercial activities, job creation, and tourism attractors.

The aims of the Improvement Scheme are consistent with the City's *Local Planning Strategy*. The Ocean Reef Marina will be governed by a comprehensive planning framework that includes the Improvement Scheme and Improvement Scheme policies that will include Design Guidelines.

4.1.4 ECONOMIC DEVELOPMENT STRATEGY

A major aim of the City's *Expanding Horizons* economic development strategy (CoJ, 2017) is to increase local economic opportunities. A goal of the strategy is "*to encourage and promote vibrant activity centres, coordinate regional economic development and infrastructure planning, and enhance State and Federal Government and support*". The key areas of business growth and innovation, business clusters, employment and skills development, and city and regional infrastructure will be targeted for these opportunities.

This can be supported through planning and development that leverages and stimulates economic development. Ocean Reef Marina is considered as an attractor for the City and a driver of the local economy. As an infrastructure project and thereafter as an operating marina and tourism node, it will become an attractive activity centre for appropriate commercial, recreational and marine-based businesses and job creation. This was supported by the economic analysis that has been undertaken for the project, discussed further in section 7.3.

4.2 STATUTORY CONTEXT

4.2.1 METROPOLITAN REGION SCHEME

In July 2013, the City of Joondalup submitted a request to amend the Metropolitan Region Scheme (MRS Amendment 1270/41). MRS Amendment 1270/41 was initiated on 22 April 2014 to rezone part of the project area to 'Urban', with the remainder of the project area classified as 'Parks and Recreation' and 'Waterways' reserves. The amendment area was excised from Bush Forever Site 325 through a Negotiated Planning Outcome. The amendment is shown at Figure 8.

MRS Amendment 1270/41 was referred to the EPA pursuant to s.48A of the EP Act. On 9 June 2014, the EPA advised that it considered that the proposed scheme amendment should not be assessed under Part IV Division 3 of the EP Act, and provided a statement of reasons and public advice (EPA, 2014). For the purposes of Part IV of the EP Act, the MRS Amendment was defined as an assessed scheme amendment.

The WAPC's final decision on the amendment included a number of pre-requisites to be addressed:

- SPP 2.6: approval of the CHRMAP by the DPLH and DoT;
- SPP 2.8: finalisation of the Negotiated Planning Outcome by the proponent and the DPLH, DBCA, and OEPA;
- SPP 3.7: approval of the Bushfire Management Plan by WAPC/DFES;
- DC 1.8: identification of a waterways manager; and
- EP Act: approval and publication of Ministerial Statement 1107 by the Minister for Environment.

The MRS Amendment came into effect on 29 November 2019.

4.2.2 LOCAL PLANNING SCHEME

The City of Joondalup's Local Planning Scheme No. 3 (LPS 3) was gazetted on 23 October 2018 and covers the whole of the local government area. At the time of gazettal of the local planning scheme, the LPS 3 could not apply local zones or reserves to the whole of the Improvement Scheme area as the City's local government boundary had historically been aligned to the low water mark, and did not cover the part of the Improvement Scheme area to the west of the low water mark. A local government boundary adjustment will ultimately be undertaken to incorporate the whole of the Ocean Reef Marina project area into the local government area.

In the MRS Amendment 1270/41 report, the WAPC noted a concurrent local planning scheme amendment could not be undertaken and that a separate local planning scheme amendment would need to be prepared (WAPC, 2016).

The MRS Amendment 1270/41 came into effect in November 2019 and the 'Urban' zone applied to part of the area. 'Urban' zoned land would need to be appropriately zoned in the City's local planning scheme at the appropriate time. Whilst the Improvement Scheme is in effect both the MRS and the local planning scheme will be suspended and cease to apply to the site. In the longer term and once the land is normalised (i.e. the Improvement Scheme extinguished) a local planning scheme amendment will need to be undertaken to ensure conformance of zones and reserves between the two schemes. That process is detailed further in section 4.2.3.

4.2.3 RELATIONSHIP OF IMPROVEMENT SCHEME TO PLANNING SCHEMES

Whilst the Improvement Scheme is in effect, the MRS and local planning scheme are suspended and cease to apply to that land and to any development of that land commenced on or after the start day of the Improvement Scheme.

Should land be normalised in the future and removed from the Improvement Scheme area, the MRS and local planning scheme will again apply to that removed land. Prior to this occurring, it is possible to undertake amendments to the MRS and/or local planning scheme to ensure that appropriate zones/reserves will apply to the land upon normalisation. The process under Part 8 of the PD Act would be followed in respect of conformance of regional and local schemes with the Improvement Scheme.

This allows for further adjustments to zones and reserves etc. to be subject to detailed design and future amendments. Anomalies or inconsistencies between the Improvement Scheme and the MRS and local planning scheme would be resolved through future conformance.

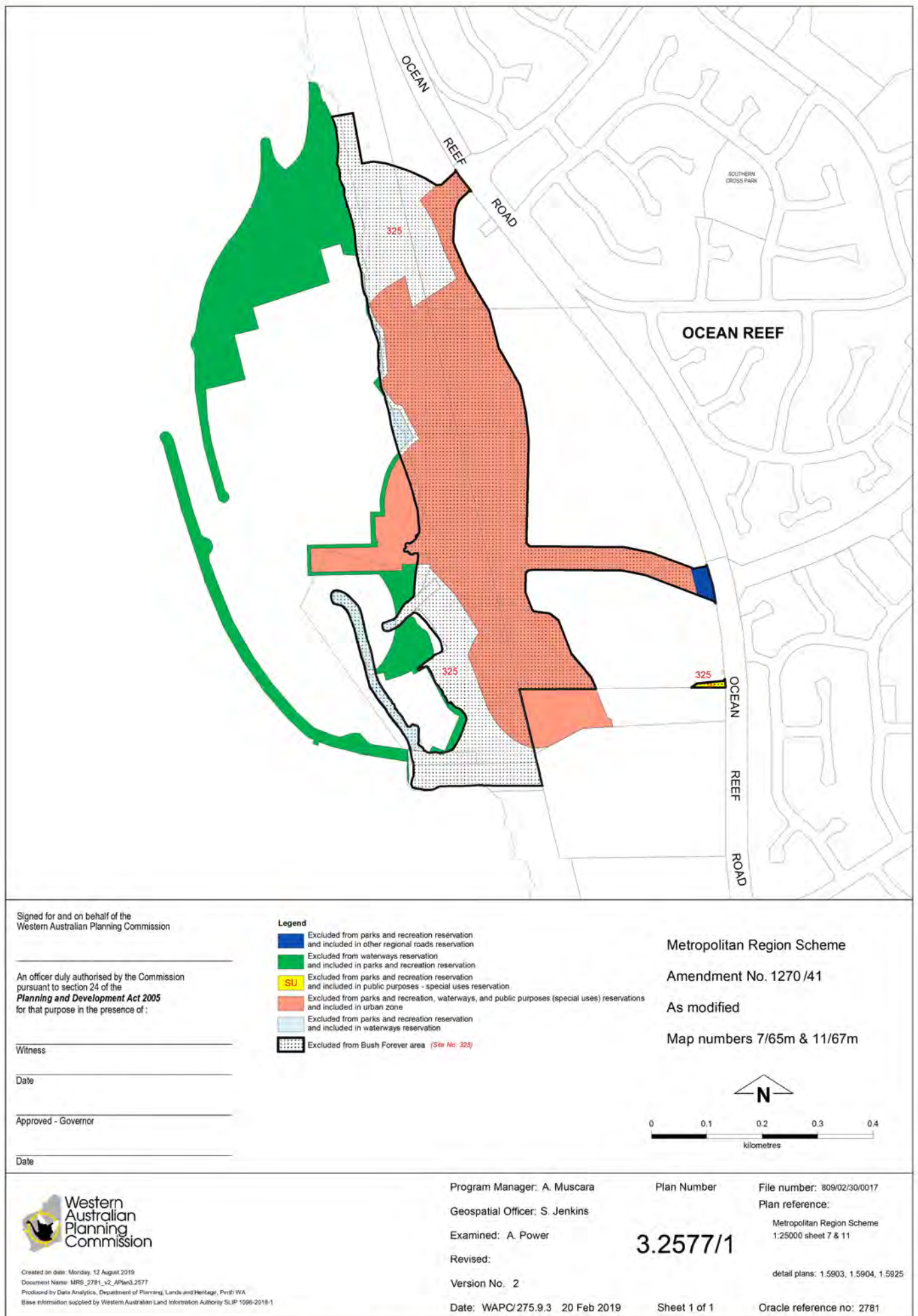
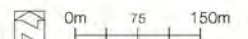


Figure 8- MRS Amendment 1270/41 (as modified)



4.2.4 STATE PLANNING POLICIES

State Planning Policies (SPPs) provide the highest level of planning policy control and guidance in WA. SPPs are prepared under Part 3 of the PD Act. Table 4 summarises the SPPs that have been given due regard in preparing the Improvement Scheme.

Table 4 State Planning Policy Matrix

State Planning Policy (SPP)	Overview	Implications
SPP 1: State Planning Framework (Variation 3 – November 2017)	<p>SPP 1 <i>State Planning Framework</i> is an overarching policy which sets the context for decision-making on land use and development in Western Australia. This SPP ratifies and expands upon the key principles of the <i>State Planning Strategy 2050</i> in planning for sustainable land use and development. SPP 1 gives statutory effect to regional strategies, regional and sub-regional structure plans, as well as strategic and operational policies.</p> <p>SPP 1 states that the primary aim of planning is to provide for the sustainable use and development of land, with six key principles of community, economy, environment, infrastructure, regional development and governance.</p>	<p>The policy principles of SPP 1 are supported by state and local government planning strategies and documents including <i>Perth and Peel @3.5million</i> and the <i>North-West Sub-regional Planning Framework</i>.</p>
SPP 2.6: State Coastal Planning Policy (July 2013)	<p>SPP 2.6 <i>State Coastal Planning Policy</i> is intended to control development along the coast, ensuring that coastal processes and hazards are taken into account. The policy allows for sustainable use of the coast for a range of uses. It provides for public coastal foreshore reserves and public accessibility.</p> <p>The Policy requires coastal and hazard risk management and adaption to be appropriately planned for, encouraging innovative approaches to managing coastal hazard risk.</p>	<p>The City of Joondalup and subsequently DevelopmentWA commissioned MP Rogers and Associates Pty Ltd to finalise the <i>Coastal Hazard Risk Management and Adaptation Plan</i> (CHRMAP). The CHRMAP was peer reviewed and assessed against SPP 2.6 and is suitable for the purposes of the Improvement Scheme.</p> <p>The Ocean Reef Marina represents an artificial development on the coastline, which has been considered as being 'appropriate' within SPP 2.6.</p> <p>Development would have regard to the CHRMAP, which is a live document and can be updated over time.</p> <p>The provision of a foreshore reserve in the form of breakwaters and a public boardwalk interface to the waters edge has been determined based on detailed assessment of coastal processes and coastal hazard risk management and adaptation. The breakwaters and waterfront will be accessible to pedestrians. The breakwaters are designed based on wave modelling.</p>
SPP 2.8: Bushland Policy for the Perth Metropolitan Region (June 2010)	<p>SPP 2.8 addresses the protection and management of regionally significant bushland identified for protection in Bush Forever. SPP 2.8 provides the policy and implementation framework for Bush Forever Protection Areas.</p> <p>Through the MRS Amendment 1270/41 the removal of land from Bush Forever Site 325 (BF 325) was subject to a Negotiated Planning Outcome (NPO).</p> <p>Whilst the emphasis is on protecting bushland, the NPO's land acquisition and rehabilitation package has been agreed in order to offset the impacts of clearing.</p>	<p>The impact can be managed as far as practicable through the following techniques:</p> <ul style="list-style-type: none"> • Retention of a north-south linkage of remnant vegetation, with the exception of three entry roads; • The concept plan was designed to avoid areas of 'Excellent' vegetation to the north-east of the existing boat harbour; • Minimise vegetation clearing where practicable; and • Preparation and implementation of a Construction Environmental Management Plan.

State Planning Policy (SPP)	Overview	Implications
SPP 2.9: Water Resources (December 2006)	SPP 2.9 applies throughout Western Australia and aims to conserve water resources, while ensuring the availability of suitable water resources and sustainable use of water resources.	The Improvement Scheme is supported by a Local Water Management Strategy.
SPP 3: Urban Growth and Settlement (March 2006)	<p>SPP 3 guides the planning of urban settlements that require additional guidance through growth strategies and subsequently local planning strategies. The overall aim of SPP 3 is to facilitate sustainable forms of urban growth and settlement.</p> <p>The policy sets out principles and considerations, which apply to planning for urban growth and settlements and of these, five of the seven policy measures can be considered to be applicable:</p> <ul style="list-style-type: none"> • Creating sustainable communities; • Managing urban growth and settlement across Western Australia; • Managing growth in Metropolitan Perth; • Planning for liveable neighbourhoods; and • Coordination of services and infrastructure. 	<p>Sustainable development within the Ocean Reef Marina would be delivered in the following manner:</p> <ul style="list-style-type: none"> • The Improvement Scheme includes sustainability as a fundamental aim of the scheme; • Sustainability and innovation are key objectives for the precincts; • The concept design has had regard to the fundamental principles and design considerations in <i>Liveable Neighbourhoods</i>. Community facilities and services will be accessed by walking, cycling and public transport through an efficient, interconnected movement network; and • Employment opportunities and economic sustainability are facilitated through a well-designed mixed use precinct.
SPP 3.4: Natural Hazards and Disasters (April 2006)	<p>SPP 3.4 addresses planning for natural disasters and minimising the adverse impacts of natural disasters on communities, the economy and the environment.</p> <p>SPP 3.4 addresses a number of natural hazards including floods, bush fire, landslides, earthquakes, cyclonic activity, coastal erosion, severe storms, storm surges, and tsunamis.</p> <p>Statutory and non-statutory planning documents should have regard to the natural elements that may contribute to the occurrence of natural hazards including climate, geology, soils, vegetation cover, slopes, landforms, and hydrology.</p>	The impact of the development site on the surrounding marine environment and its susceptibility to coastal processes and hazards has been considered by the CHRMAP, and fire has been considered through the Bushfire Management Plan.
SPP 3.5: Historic Heritage Conservation (May 2007)	This policy sets out the principles of sound and responsible planning for the conservation and protection of Western Australia's historic heritage.	There are no heritage places identified within the Improvement Scheme area.
SPP 3.6: Infrastructure Contributions (draft July 2019)	Consistency in the application of development contribution plans and to ensure that development contributions are necessary and relevant to the development.	The Improvement Scheme does not intend to introduce infrastructure contributions into the Ocean Reef Marina.
SPP 3.7: Planning in Bushfire Prone Areas (December 2015)	<p>SPP 3.7 directs how land should address bushfire risk management and seeks to guide the implementation of effective risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure.</p> <p>The policy is accompanied by <i>Guidelines for Planning in Bushfire Prone Areas</i> which provides advice on how bushfire risk is to be addressed when planning, designing or assessing a planning proposal within a designated bushfire prone area.</p>	The Improvement Scheme is supported by a Bushfire Management Plan.

State Planning Policy (SPP)	Overview	Implications
SPP 4.2: Activity centres for Perth and Peel (August 2010)	SPP 4.2 establishes an activity centre hierarchy and supports the preparation of activity centre plans.	SPP 4.2 does not identify the Ocean Reef Marina as an activity centre within the policy hierarchy. The Improvement Scheme outlines development provisions for commercial and mixed use development. It does not require preparation of an activity centre plan; however design matters will be addressed in the Design Guidelines and local development plans.
SPP 5.2: Telecommunications infrastructure (September 2015)	SPP 5.2 establishes a framework for preparation, assessment and determination of applications for telecommunications facilities to facilitate an effective state-wide telecommunications network.	The Improvement Scheme incorporates 'Telecommunications Infrastructure' as a discretionary land-use.
SPP 5.4: Road and Rail Noise (September 2019)	SPP 5.4 addresses transport noise from major transport corridors, including primary freight routes and its impact on nearby noise-sensitive land uses. SPP 5.4 and relevant guidelines, apply to proposals for new noise-sensitive developments. New railways or major roads, major redevelopments of existing railways or major roads, and new freight handling facilities.	The SPP 5.4 does not identify any nearby roads. The nearest identified road is Marmion Avenue as an 'Other significant freight/traffic route'.
SPP 7: Design of the Built Environment (March 2019)	SPP 7 sets out the principles, processes and considerations which apply to the design of the built environment across Western Australia. It provides an overarching framework for the State Planning Policies that deal with design related issues. SPP 7 is intended to guide and compliment other state planning policies, and apply to the design, review and assessment of activity centre plans, structure plans, local development plans, subdivisions. Residential development, institutional development and public works.	The Design Guidelines have regard to the 10 core design principles, and can inform future local development plans (if required).
SPP 7.3: Residential Design Codes (R-Codes) (March 2019) SPP 7.3: Volume 2 – Apartments (March 2019)	SPP 7.3 sets out residential development requirements to provide for a range of housing types and densities; local neighbourhood character; amenity; conservation of heritage values; and environmentally sensitive design. They must be given regard when assessing and determining development applications. Local variations can be approved subject to clear justification. The SPP 7.3 Vol.2 <i>Apartments</i> replaced Part 6 of the R-Codes.	The Improvement Scheme provides a head of power for the preparation of Improvement Scheme policies. Design Guidelines will be prepared for the precincts as Improvement Scheme policies, and would replace provisions of SPP 7.3. SPP 7.3 may be referenced and considered in the Design Guidelines.

4.2.5 DEVELOPMENT CONTROL POLICY 1.8: CANAL ESTATES AND ARTIFICIAL WATERWAYS

DC Policy 1.8 objectives focus on establishing ongoing management and maintenance responsibilities for artificial waterway developments, including marinas and harbours. This is generally achieved through preparing a management plan.

Consistent with the Policy, the Concept Plan for the Ocean Reef Marina has been subject to extensive community and stakeholder consultation (refer section 3).

The information in Table 5 below addresses the requirements under section 5.1 of DC Policy 1.8.

Table 5 Section 5.1 information for preliminary consultation

Requirements under section 5.1 of DC Policy 1.8 (summarised)	Documentation	Source of documentation
A costed 25-year maintenance plan	To be forthcoming.	N/A
A basic concept plan	The Concept Plan 7.A formed the basis for the MRS Amendment 1270/41 and DevelopmentWA's preferred concept has been instrumental to the formulation of the Improvement Scheme.	Section 7 and Figure 15
Preliminary hydrodynamic analysis (flushing rates).	Documented in the reports appended to the Public Environmental Review (PER); flushing rates updated in the section 45C request to the EPA for a change to proposal.	PER (Assessment No. 2012), EPA Report 1629
Basic hydraulic, environmental, geotechnical and ecological studies.	The Improvement Scheme is supported by a Local Water Management Strategy. Documented in the reports appended to the PER.	LWMS – Appendix B
Map showing natural and proposed waterways and drainage lines	No drainage lines.	LWMS – Appendix B
Relevant floodplain mapping	No floodplains.	LWMS – Appendix B
Map showing low-lying seasonally inundated areas	No low-lying seasonally inundated areas.	LWMS – Appendix B
Preliminary analysis and mapping of native vegetation, flora and fauna, etc.	Documented in the reports appended to the PER and in the EAMS.	EAMS – Appendix A
Preliminary Health Impact Assessment (Acid Sulphate Soils)	Low to nil risk of acid sulphate soils occurring within 3 m of the surface.	LWMS – Appendix B

5 SITE CONTEXT

This section describes the rationale behind the site selection for the development of a world class marina. It recognises the opportunities and constraints that were considered and evaluated as part of the site selection, and the relationships between the site characteristics and the preferred concept.

5.1 SITE SELECTION

The site has been identified since the 1970's as the preferred location for a marina development. The site is the location of the existing Ocean Reef Boat Harbour (boat ramps, parking, and groynes) and home to the Whitfords Volunteer Sea Rescue Group and the Ocean Reef Sea Sports Club, refer Figure 9. The site represents one of few marina sites within the Perth metropolitan region considered to be implementable under the EP Act. It is clearly preferable to expand upon an already disturbed area with existing infrastructure for future coastal development, rather than disturbing a new area. The reuse of the site will minimise the extent of coastal disturbance and overall environmental impact caused by the development.

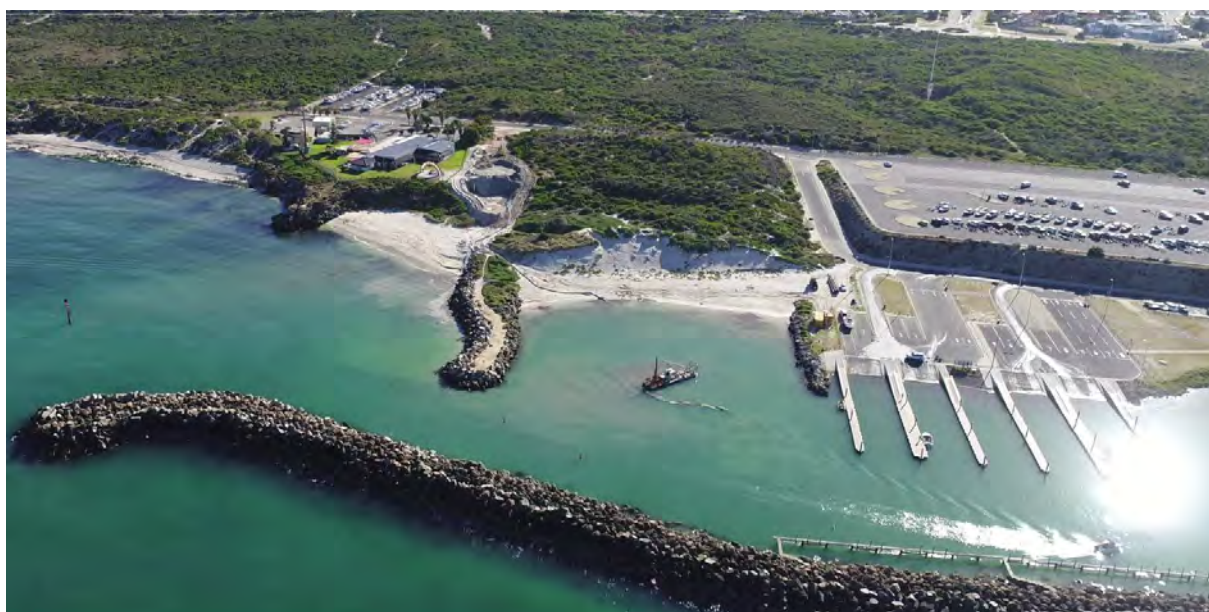


Figure 9 Existing boat harbour, groynes, and club facilities (Mettam, 2018)

The current location considered the coastal topography and landscape characteristics. The concept for the development integrates built form into the topography of the site and aims to maximise views for new development. This was to minimise potential impacts on the ocean outlook available to some of the existing residents in the adjacent Ocean Reef suburb. The development has also been designed to have regard to its picturesque bushland backdrop.

The location also provides potential for deep water moorings. Likewise, the rocky shoreline and nearshore reef provides an area in which the development can be sited with minimal impact upon the sandy beaches at Mullaloo (south) and Burns Beach (north), which are popular with beachgoers.

The location of the development provides for the main road entry intersecting with Ocean Reef Road and Hodges Drive, with Hodges Drive providing a direct east-west link to the Joondalup City Centre, and to the Joondalup train station. Hodges Drive and Ocean Reef Road also both provide direct access to the Mitchell Freeway.

5.2 PHYSICAL CHARACTERISTICS

The design of the Ocean Reef Marina has been influenced by the interrelationships between a range of fundamental characteristics and features. These have been considered and are addressed in this section.

The fact that the site already has an existing boat harbour offers a valuable opportunity for the construction of the breakwaters to be staged in a way that enables the existing boat ramps to continue operating during the construction phase.

The depth of the water adjacent to the Ocean Reef Marina is conducive to limiting the amount of dredging, and the rocky coastline also reduces impacts on sandy beaches to the north and south, providing a natural alignment for the marina waterbody. The material on-site is suitable for re-use in development to assist in working towards a cut-to-fill balance in bulk earthworks. The site is also deemed to be clear of environmental, heritage and other matters that could otherwise impede development.

5.2.1 RELATIONSHIP TO GEOLOGY, TOPOGRAPHY AND BATHYMETRY

The site generally consists of dune sediment deposits overlaying limestone. This is the common landform along the coast, and relevant to this particular coastal location, is consistent with that of a rocky coast and pocket beaches. The proposed Ocean Reef Marina is to be located on a section of shoreline that is dominated by limestone cliffs and rocky embayments. The rock on-site is Tamala limestone, which can offer significant protection from the processes of the ocean. The limestone on-site could also be used for earthworks for the development.

Karstic formations such as solution channels and caverns may occur in the limestone in the area, but the risk of these is considered to be manageable. Additional geotechnical investigations will be undertaken prior to subdivision to ensure that appropriate management measures and building design techniques are undertaken to manage geotechnical risks.

Modifications to topography have occurred on-site as a result of construction of the existing groyne, car park, boat ramps and club buildings. Given the availability of sand and limestone naturally occurring within the site, it can be developed in such a way that minimises the need to import basic raw materials. Armour rock for the breakwater would still need to be imported as this rock is not available on-site.

The site is located on a rocky shoreline that runs from Mullaloo Beach (to the south) through to Burns Beach (to the north). There is a mixture of sandy beach, shallow rock platforms, nearshore reefs and rocks. A rocky coastline provides a measure of protection against projected climate change impacts, such as sea level rise and coastal erosion.

The bathymetry of the location indicates that reef and submerged rock exists along the shoreline from south of the existing boat harbour through to Burns Beach in the north. Water depths range 2-4 m, and increase beyond the existing boat harbour groyne, to a depth of 6-8 m. The design has considered not extending too far into deeper water, as construction logistics and costs would become unviable.

Dredging will occur and silt curtains and other management techniques will be employed to minimise marine environmental impacts. These were subject to detailed studies and assessed as part of the PER. Overall, the shoreline is suitable for working to deliver the breakwaters and internal waterbody.

LEGEND

 Improvement Scheme Boundary

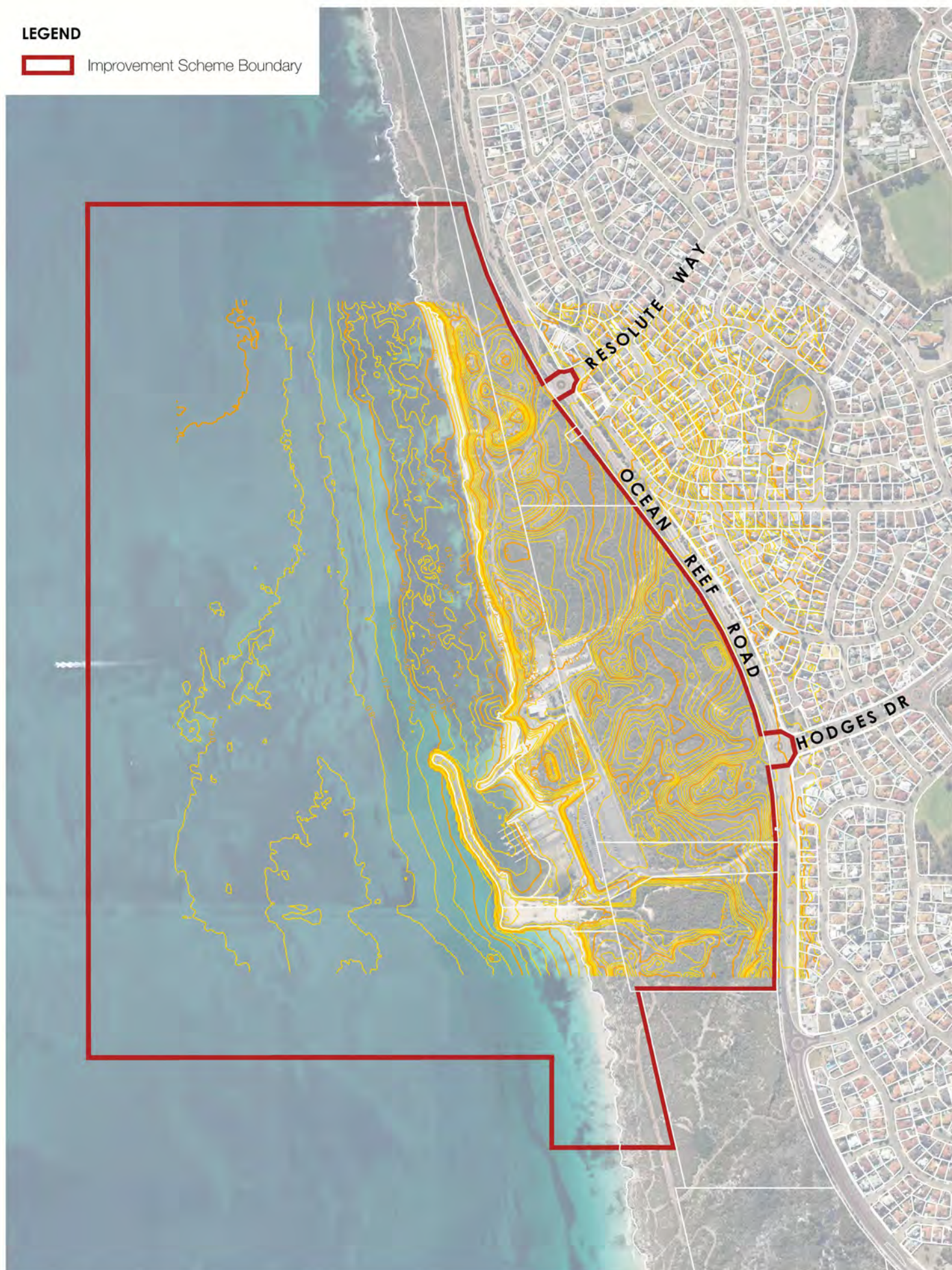
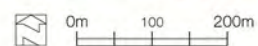


Figure 10- Site Details



5.2.2 RELATIONSHIP TO COASTAL PROCESSES

Seasonal movement of sand along the coastline follows a trend of beach formation during summer and erosion during winter / storm events. In Perth, longshore sediment transport is typically northwards in summer and southwards in winter. Sediment transport along rocky sections of shoreline such as at Ocean Reef is understood to be more complex, where channels exist allowing sediment to be transported offshore between the reefs.

Dredging records for the boat harbour indicate there is movement of sediment into the harbour. The existing harbour entrance is monitored and managed by periodic dredging. Sand may be moving south from the beaches to the north of the harbour during winter. The sand could deposit on the beach in the lee of the harbour entrance breakwater. As this area is largely sheltered from the effects of the sea-breeze waves, the sand becomes trapped and eventually affects the navigation of the harbour entrance. Consequently, the Department of Transport manages the harbour entrance by removing the accumulated sand from time to time.

The development of the Ocean Reef Marina would continue the present-day interruption of the movement of sand along the shore. The marina would have larger breakwaters in deeper waters. This could increase the extent of the wave shadows and would have the potential to change the dynamics compared to that presently experienced.

The proposed location of the marina is considered to be very good in terms of coastal sediment dynamics. The wave shadow caused by the proposed marina would be mainly on rocky coastlines, which will help to manage the sediment dynamics.

5.2.3 RELATIONSHIP TO MARMION MARINE PARK

The Marmion Marine Park, marine reserve no. 1 is an A class marine park and is an important destination for boating and recreation. It is popular for sailing, power boat use, and other recreational activities. The Marmion Marine Park lies offshore from Perth's northern suburbs, between Trigg Island and Burns Beach. Adjacent to the park are three recreational boating facilities: Hillarys Boat Harbour, Mindarie Keys Marina and the existing Ocean Reef Boat Harbour.

Community consultation during the planning of the project had raised matters in relation to Marmion Marine Park. It was also noted that there is little capacity remaining at Hillarys Boat Harbour and Mindarie and the importance of recreational boating requirements was raised. Relevant matters raised also included the potential for direct and indirect impacts to the Marmion Marine Park and the need to amend the park's boundary.

The Marmion Marine Park Excision Bill was put to the Parliament to excise approximately 143 hectares from the Marmion Marine Park for the development of the Ocean Reef Marina. Once excised a new reserve can be created over the excised area under powers from Part 4 of the *Land Administration Act 1997*. The excision is portrayed graphically within Schedule 1 of the *Reserves (Marmion Marine Park) Act 2019*.

The passing of the Bill in October 2019 marked a significant milestone (Government of Western Australia, 2019), and aligns with the environmental approval as well as the Improvement Plan and Improvement Scheme boundary.

5.2.4 RELATIONSHIP TO WATER CORPORATION LAND

The Improvement Scheme will protect the Water Corporation's ocean outfall pipe. It is understood that the land above the pipe is to remain accessible and no building structures will be permitted. However, the land can be used for activities such as trailer and car parking. The Improvement Scheme intends to apply a restriction layer to protect the ocean outfall pipe.

5.2.5 RELATIONSHIP TO MOVEMENT NETWORK

The Ocean Reef locality has limited public transport access. The nearest existing bus stops to the Improvement Scheme area would be approximately a 15-minute walk. With the development of a new urban community within the Marina, it will be appropriate to review public transport services. In this respect, there is significant capacity on the access road network of Ocean Reef Road and Hodges Drive for new public transport routes to be introduced and bus stops within the Ocean Reef Marina.

A formalised dual use path currently extends from Burns Beach to Hillarys Boat Harbour, which connects to the regional path network. The dual use path presently bisects the Improvement Scheme Area. Ultimately this will be replaced by paths integrated with the Ocean Reef Marina development.

The construction phase of the project may require detouring of pedestrian/cyclists around the project area, as a result of earthworks and other construction activity. An alternative route may be temporarily established, and the dual use path may reconnect from the dune path, the Ocean Reef Road path near the Swanson Way roundabout (to the south) and near the car park area near Volante Elbow / Rambler Green (to the north). At the earliest appropriate time during construction, north-south paths may be re-established within road reserves to accommodate walking and cycling. Further details in relation to the movement network are contained in sections 5.2.10, 5.2.11 and Appendix D.

5.2.6 RELATIONSHIP TO INFRASTRUCTURE SERVICES

The current site has limited connections to services, due to the relatively undeveloped nature of the Improvement Scheme area. The Ocean Reef Boat Harbour, Ocean Reef Sea Sports Club and Whitfords Volunteer Sea Rescue Group have reticulated water and on-site wastewater disposal facilities. The site is fed by overhead high voltage transmission lines located in Boat Harbour Quays. Telstra telecommunication infrastructure is also available. Currently there is no reticulated gas supply.

Proposed services will be capable of being provided to service future development, and these are outlined further in section 5.3 and Appendix C.

5.2.7 RELATIONSHIP TO CLUB FACILITIES

The Improvement Scheme area contains the existing Whitfords Volunteer Sea Rescue Group and Ocean Reef Sea Sports Club facilities, public car/trailer parking, boat ramps and associated facilities and amenities.

The project will temporarily displace the Whitfords Volunteer Sea Rescue Group and the Ocean Reef Sea Sports Club. Their facilities have been identified to be removed and new buildings and premises constructed within the new Marine Enterprise Precinct. The site, access, built form and operational requirements for both organisations are well understood, based upon ongoing consultation throughout the concept refinement process.

5.2.8 RELATIONSHIP TO BUSH FOREVER SITE 325

The MRS Amendment 1270/41, along with an associated NPO, resulted in lifting the Bush Forever layer so that it was not applicable to the 'Urban' zoned land. The Improvement Scheme has adopted the same boundary to define the area suitable for development under the Scheme.

Outside of the development area, the balance of the terrestrial landscape in the 'Parks and Recreation' reserve is anticipated to be retained as coastal vegetation. The Improvement Scheme area retains a green corridor of coastal vegetation between the site and Ocean Reef Road, which is within Bush Forever site 325. DPLH may close and rehabilitate informal tracks within the Bush Forever site.

In accordance with the NPO, coastal land has been purchased elsewhere for conservation to offset clearing within the area removed from Bush Forever site 325, and it is intended to rehabilitate some of the degraded areas within the remaining Bush Forever site area. This will help to maintain and enhance the contiguous green space along the coastline.

Environmental matters are addressed in more detail in section 7.4 and Appendix A.

5.2.9 RELATIONSHIP TO HYDROGEOLOGY

There are no naturally occurring permanent surface water bodies, wetlands or ephemeral streams within the Improvement Scheme area.

A key driver of circulation and flushing within the proposed Ocean Reef Marina is the outflow of low salinity groundwater from the coastline. Based on modelling, this low salinity groundwater mixes within the waterway, leading to the creation of density currents that assist in the flushing of the enclosed waterway.

A hydrogeological assessment undertaken to support the marina water quality study and included in the PER, highlighted that the hydraulic conductivity (the speed that groundwater flows through a substrate) is many times higher within Tamala Limestone than it is for the local sandy substrates. Consequently, the naturally higher rate of groundwater flow into the Marina through the adjacent limestone is a significant contributing factor to the strong flushing characteristics of the proposed Marina.

5.2.10 TRAFFIC MOVEMENT

The Transport Assessment Report (Arup, 2019) for the Ocean Reef Marina was undertaken to provide a basis for the internal transport network operations. The Transport Assessment Report is contained in Appendix D and considered trip generation for all modes, and parking analysis considering the regional and local attractions within the development.

The Scheme area will be connected to the external road network via three intersections with Ocean Reef Road at Resolute Way (northern access), Hodges Drive (central access) and Boat Harbour Quays (southern access). The internal road network is based upon a slow speed environment and on-street cycling rather than separated cycle lanes. The three access routes and north-south connector road alongside the Bush Forever Site 325 are recommended at a 50 km per hour speed limit, with roads along the waterfront and within the Mixed Use / Recreation / Waterfront Precinct at a 30 km per hour speed limit. The road network will be supplemented with wayfinding and urban design features that foster a slow speed environment that encourages walking and cycling.

The Transport Assessment Report recommends encouraging public transport use early on, to foster modal shift and influence behaviour of visitors/users/residents. Pick-up/drop-off zones may also favour public transport (buses, coaches, shuttles), taxis and rideshare, and autonomous vehicles. Public facilities (end of trip facilities, water fountains, wayfinding, bicycle maintenance, electric charge points) would all be considered for providing comfort and convenience.

5.2.11 PARKING

On-street parking will be provided to encourage street-level activation, and passive surveillance opportunities. On-street parking can help reduce the visual impact of large areas dedicated to off-street car parks throughout the Improvement Scheme area.

The Transport Assessment Report concluded that nearly a third of traffic generated will be associated with the marina (Arup, 2019). The report recommended the following:

- Long-stay parking (associated with the car and trailer parking area and stacker facilities) is provided on-site, adjacent to these facilities; and

- Short-stay pick-up / drop-off parking made available adjacent to the boat pens. Short-stay parking options would generally be a maximum 400 m walk from the boat pen access points.

The recommended parking response is the use of time limits and paid parking to encourage parking 'churn', and retain the availability for pick-up/drop-off parking within the marina and longer-term parking on the peripheries. This in turn provides opportunities for wayfinding, and indirectly encourages walking, cycling and public transport.

The project is capable of delivering an appropriate and balanced amount of parking for the residential and mixed-use components of the site, in addition to public beach parking and facilities for trailable boats.

5.3 SERVICES AND UTILITIES

The following Table 6 provides an overview of services and utilities relevant to the Improvement Scheme area. These are detailed in the Civil Engineering Utility Services Report in Appendix C.

Table 6 Services and Utilities

Category	Comment
Wastewater	Existing on-site wastewater disposal facilities will be removed. The project will require a permanent single Type 40 wastewater pump station to service the development, which will connect to the existing network. The wastewater pump station will require a 30 metre buffer.
Water Reticulation	Existing water mains connect the site. The site can be connected to the water main near Ocean Reef Road and near Resolute Way. The reticulation mains would be developer funded under typical arrangements.
Underground Power	Based on the preferred Concept Plan and Western Power's standard load requirements, it is understood there is sufficient capacity to service the project. Connection to the site would require the installation of a new underground high voltage cable to connect to the Mullaloo Zone substation.
Telecommunications	Existing infrastructure includes copper and fibre optic and infrastructure is provided by Telstra, Optus and NBN Co. Relocation and/or installation of infrastructure would be undertaken.
Gas	The site will be provided with a natural gas service supply, fed via a connection to the existing gas mains located in Ocean Reef Road.

5.4 OPPORTUNITIES AND CONSTRAINTS

The following Table 7 recognises the opportunities and constraints in relation to the project.

Table 7 Summary of opportunities and constraints

Category	Explanation
Flora	Vegetation condition ranged from completely degraded (cleared) to excellent in central/eastern shrubland and heath communities. Widespread and sustained weed invasions have impacted vegetation conditions. Clearing and development within the Improvement Scheme area will increase the likelihood of further weed invasion due to an increased urban edge. Implementation of weed management procedures would help mitigate potential impacts. The design of the site retains a north-south vegetation corridor for animals to traverse and for genetic flow.
Fauna	The main impact resulting from development of the Improvement Scheme area will be clearing, resulting in the loss of fauna habitat and individual fauna mortality through project development. Impacts will be minimised as much as possible through appropriate management techniques.
Geotechnical	Ground elevation varies from 25m AHD in the eastern portion adjacent to Ocean Reef Road, to sea level along the coast to the west. Existing views from ridgelines and focal points into good quality vegetation,

Category	Explanation
	<p>both within and external to the site can be retained and utilised to provide a backdrop (a strong and attractive visual edge to the site) to the proposed new development.</p> <p>The site classification is likely to be "Class A", appropriate for most Perth sand sites, and shallow pad and strip foots are likely to be suitable. Karst investigations were undertaken - no surface expressions of karst or cavernous features were identified on-site during investigations. The assessed likelihood of the occurrence of caves is considered to be "low".</p> <p>Earthwork activity is anticipated to include cut to fill, to obtain desired development levels. Excavations will generally be limited to the construction of sewer and drainage and other reticulated services. Subsoil drainage is not required.</p> <p>Contamination in the terrestrial portion of the area has isolated areas containing Potential Asbestos Containing Material (PACM) due to illegal dumping on the site. This contamination can be managed through the subdivision process.</p>
Coastal processes	<p>The CHRMAP noted that the development is unlikely to cause any significant changes to the shoreline, whether as a Marina or as the existing boat harbour. Minor changes to sand accretion and erosion would need to be managed at times. These changes are likely to be relatively small scale, and management recommendations are contained in the CHRMAP.</p> <p>In line with the recommendations of SPP 2.6, the CHRMAP calculated the minimum finished floor levels. Results showed that a total allowance for storm surge inundation of +2.7m AHD is appropriate for the 100 year planning timeline.</p>
Hydrology	<p>The Improvement Scheme area is located on the western side of the Gnangara Mound (South). The groundwater within the area would generally flow in a westerly direction towards the coastline.</p> <p>Groundwater occurs close to sea level, to a depth ranging between 0 metres and 23 metres.</p> <p>There are no naturally occurring permanent surface water bodies, wetlands, or ephemeral streams.</p>
Heritage	<p>No registered Aboriginal sites or European heritage sites have been identified in the Improvement Scheme area.</p>
Traffic movement	<p>There is spare traffic capacity on the local road network of Ocean Reef Road and Hodges Drive. Future road network upgrades would add capacity and improve traffic flow.</p> <p>Currently, there is existing limited public transport accessibility. The development presents the opportunity to improve public transport services in the locality.</p> <p>There are active transport routes servicing the site. Improving bicycle infrastructure including paths and end of trip facilities would work to achieve a large modal share of occupants and visitors travelling by bicycle.</p>
Bushfire	<p>No revegetation is expected to occur within the Improvement Scheme area. Future landscaping is likely to consist of low threat and managed gardens, public open space, and streetscaping. Bushfire hazard will be associated with remnant vegetation to the north, east and south of the development footprint.</p> <p>A public road and managed road reserve around the perimeter of the development will ensure that BAL-29 or lower can be achieved for habitable buildings in the development footprint.</p> <p>On completion, the public road network and internal roads will provide routes and access/egress points to the north, east and south.</p> <p>A bushfire management plan (refer Appendix F) confirms that development is capable of being undertaken in accordance with SPP 3.7 <i>Planning in Bushfire Prone Areas</i> and associated guidelines.</p>
Infrastructure	<p>The Improvement Scheme area is capable of being provided with relevant services including:</p> <ul style="list-style-type: none"> • Electricity; • Telecommunications; • Gas; • Reticulated potable water; and • Reticulated sewer. <p>Services would be installed as part of subdivision.</p>
Staging	<p>Construction staging will be an important consideration for understanding impacts on stakeholders during the construction phase. A staging strategy has been prepared which initially considers works commencing 2020/2021:</p> <ul style="list-style-type: none"> (a) Early works anticipated to commence early 2020; (b) Breakwater construction phase 1: 4 months; (c) Breakwater construction phase 2: 8 months;

Category	Explanation
	<ul style="list-style-type: none"> (d) Breakwater construction phase 3: 12 months; (e) Construct first four new boat ramp lanes and parking. All existing boat ramp lanes remain operational; (f) Construct second set of four new boat ramp lanes. Closure of four existing ramp lanes, whilst four existing boat ramp lanes remain operational; (g) Stage 1 bulk earthworks for the Residential Precinct, connecting to Resolute Way and the north breakwater. Sea wall is constructed along the water edge. Sea Sports Club earthworks undertaken; (h) Bulk earthworks continue to the Mixed Use / Waterfront / Recreation Precinct and south to the Sea Sports Club site (whilst avoiding the Whitfords Volunteer Sea Rescue Group. Sea wall is constructed along the water edge. New club facilities under construction; (i) Marine Enterprise Precinct earthworks. Closure of the remaining four existing ramp lanes, whilst the new eight boat ramp lanes are operational; (j) Stage 1 subdivisional works for the Residential Precinct, connecting to Resolute Way. Residential Precinct works complete; (k) Marine Enterprise Precinct car park works and southern road works completed. Southern access road to Ocean Reef Road completed, allowing for closure of the remnants of Boat Harbour Quays; (l) Sea Sports Club and Sea Rescue finished, relocation to new facilities; (m) Stage 2 bulk earthworks for the southern and central sectors, including new access road to Hodges Drive (third access road). Removal of old club facilities as part of earthworks; (n) Southern car parks completed. Southern sector works complete; (o) Stage 2 subdivisional works completed for central sector; and (p) Beach area completed. Central sector works complete.

5.5 SUMMARY OF SITE CONTEXT

The site's suitability for a marina has been the subject of extensive technical study and environmental assessment. The analysis of the site's characteristics and context confirm that it represents the most appropriate location for the development of a new marina within the general locality. There are no physical, cultural or environmental impediments to development being undertaken, and all impacts of the development have been found to be manageable. In fact, the nature of the landform (on- and off-shore) and the existence of existing infrastructure, make this site the most suitable site in the area.

6 COMMUNITY AND STAKEHOLDER ENGAGEMENT

This section describes the community and stakeholder engagement that has occurred, from the commencement of the project by the City of Joondalup, through to the preparation of the Improvement Scheme.

6.1 CONCEPT PLAN 7.2A

Concept planning for Ocean Reef Marina has been strongly informed by community and environmental values, as well as contemporary planning and urban design trends reflecting traditional coastal development and respecting the coastal environment.

Concept Plan 7.2A evolved from this consultative design process. The Concept Plan embodied the principles of traditional neighbourhood design, aiming to create a compact, walkable, mixed use village that could develop into a tourist, lifestyle and entertainment focal point in the north-west corridor with a strong sense of place, and an architectural and public domain vernacular reminiscent of many seaside villages.

Concept Plan 7.2A had broad community support and formed the basis for MRS Amendment 1270/41, the Public Environmental Review, and a preliminary draft structure plan. The Concept Plan was part of the advertised material published during November 2016 to February 2017 (refer section 6.2).

6.2 CITY OF JOONDALUP ROLE AS ORIGINAL PROPONENT

The City of Joondalup has managed the design, planning and consultation for the project from its inception until the proponent status was transferred to DevelopmentWA in 2017. The City consulted extensively with the community during the design formulation process, including surveys in 2002 and 2007.

The Ocean Reef Marina Community Reference Group was established by the City of Joondalup in 2008. In 2009, Council endorsed the Concept Plan 7.2A for public comment and surveys were sent out to 60,000 properties throughout the Joondalup municipality. The survey responses showed that 95.6% of respondents strongly supported or supported the proposal to develop the Ocean Reef Marina.

Liaison with State and Commonwealth departments occurred throughout the engagement process from 2011 until lodgement of the MRS Amendment Request in 2014. The City of Joondalup ensured that meaningful community engagement has continually informed the planning for the site.

With the backing of strong community and stakeholder support, the City actively pursued the MRS Amendment 1270/41 through the Western Australian Planning Commission (WAPC) and the Public Environmental Review Assessment No. 2012 (PER) through the Environmental Protection Authority (EPA).

City of Joondalup consultation

2002 and 2007 – community surveys.

2007 – Ocean Reef Marina Government Steering Committee established

2008 – Ocean Reef Marina Community Reference Group established.

2009 – Council endorsed the release of Concept Plan 7 for public comment. Concept Plan Survey distributed to 60,000 properties within Joondalup. Overall response showed that 95.6% of North Central Ward respondents supported the development. 91% of respondents from Ocean Reef indicated their support for the Marina.

2013 – City of Joondalup conducted forums to update the community about the project. Approximately 600 attendees.

2011-2013 – City of Joondalup undertook meetings with Department of Planning, Department of Transport, Water Corporation, Department of Lands, Public Transport Authority, Office of the EPA, Department of Environmental Regulation, Department of Fisheries, Commonwealth Department of the Environment.

2014 – request to amend the Metropolitan Region Scheme (MRS) submitted to the WAPC. Environmental Protection Authority decided to assess the marine-based components via a Public Environmental Review (PER).

2016-2017 – concurrent advertising of MRS Amendment 1270/41 and PER from 22 November 2016 to 24 February 2017.

6.2.1 MRS AMENDMENT 1270/41

Advertising for MRS Amendment 1270/41 was undertaken from 22 November 2016 to 24 February 2017. The amendment was concurrently advertised with the PER.

During the course of the advertising period, the City of Joondalup scheduled community forums to update the community about the project and explain the approvals process, how the community can have their say, and the involvement of the State Government. Forums were held at the Ocean Reef Sea Sports Club on 5 and 8 December 2018.

The Department of Planning, Lands and Heritage (DPLH) received 93 submissions on the amendment. Issues raised in the submissions ranged across financial, traffic, land use, environmental and process matters, and were all considered to be manageable matters. The WAPC held hearings for the amendment on 28 August 2018, and again on 20 February 2019.

On 9 October 2019, the WAPC advised the City of Joondalup that the MRS Amendment 1270/41 had been endorsed by the Minister for Planning and approved by the Governor, and was presented to both Houses of Parliament. The notice was published in the Government Gazette on 11 October 2019, and the amendment became legally effective in the Metropolitan Region Scheme on 29 November 2019. The amendment, report on submissions and related documents are available on the DPLH website.

6.2.2 PUBLIC ENVIRONMENTAL REVIEW

The amendment was referred to the Environmental Protection Authority (EPA) under s.48A of the EP Act, and the EPA determined that the terrestrial aspects of the amendment did not require formal assessment.

The EPA required assessment of the marine component as a Public Environmental Review (PER). The EPA prepared an Environmental Scoping Document in September 2014 which specified the work required by the Proponent and the potential impacts that needed to be assessed. Following its assessment of the PER the EPA authorised its advertising, which was undertaken from 22 November 2016 to 24 February 2017.

The EPA received 59 submissions in relation to the PER. The key issues raised in the submissions related to confidence in the modelling; predicted extent, severity and duration of impacts; and the proposed monitoring and management of environmental factors.

The PER for Assessment No. 2012 has been concluded and the EPA Report 1629 provides for implementation of the proposal in accordance with recommended conditions and procedures (EPA, 2019). A Ministerial Statement (1107) was published on 7 August 2019 stating that the proposal may be implemented, subject to implementation conditions and procedures.

A change to the proposal (EPA, 2020) was submitted following the ministerial statement, which:

- Increased the development envelope from 61 ha to 61.9 ha to allow for a revised footprint and reconfiguration of the entrance channel;
- Decreased the zone of high impact from 49.4 ha to 47.3 ha;
- Decreased dredging (within the indicative dredging area) from 4.5 ha to 3.5 ha; and
- Changed the wording in the short description of 'the development of 750 vessels' to 'will provide accommodation for up to 750 vessels'.

Changes to the proposal (refer Figure 11) were approved under s45C of the EP Act on 6 January 2020.

The report and ministerial statement are available on the EPA website.

6.2.3 EPBC ACT

The development area includes a small amount (0.43 ha) of Black-Cockatoo foraging habitat that would be cleared. The development area does not contain any trees suitable for Black-Cockatoo nesting hollows.

The project was referred to the Commonwealth Department of the Environment and Energy under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) because of impact of the loss of foraging habitat. The Department advised on 4 July 2014 that the project is not a controlled action and therefore does not require assessment under the EPBC Act (DoE, 2014).



Figure 11- Development Envelope, Proposal Footprint and Zones of Impact (EPA, 2020)

6.3 CURRENT PROPONENT

Noting there has been a transfer of proponent status from the City of Joondalup to DevelopmentWA, the project continues to have the community's support and government commitment.

6.3.1 GOVERNMENT STEERING COMMITTEE AND PROJECT WORKING GROUP

The Ocean Reef Marina Government Steering Committee (GSC) was established for the project in 2007 and continues to oversee the project. The GSC includes representatives from DevelopmentWA; Department of Transport; Department of Planning, Lands and Heritage; City of Joondalup; and the Member for Joondalup. The GSC receives regular updates on the timeframes, key project milestones for planning and environmental processes, and resolutions in relation to the concept plan. The GSC will continue to assist to optimise government agency coordination; and to help ensure timeframes are in line with government and community aspirations.

A Project Working Group (PWG) was also established. The PWG included representatives from DevelopmentWA; City of Joondalup; Department of Planning, Lands and Heritage; and the project planning & legal consultants. This team coordinated the finalisation of MRS Amendment 1270/41, preparation of Improvement Plan 51 and drafting of the Improvement Scheme and associated planning instruments. The PWG will continue to operate through the implementation phase to, among other things, address matters relating to land assembly and land tenure arrangements.

6.3.2 SOUTH WEST ABORIGINAL LAND AND SEAS COUNCIL

It is understood the South West Aboriginal Land and Sea Council may transition to the Central Services Corporation as a part of the future Noongar Governance Structure. DevelopmentWA has been liaising with the South West Aboriginal Land and Sea Council and the Whadjuk Working Group, including involvement on the project more generally and for the landscape masterplan and design guidelines.

In October 2018, the National Native title Tribunal registered all six Indigenous Land Use Agreements for the South West Native Title Settlement. The South West Native Title Settlement is yet to take effect, pending the resolution of the applications seeking judicial review of the National Native Title Tribunal's decision to register the six Indigenous Land Use Agreements.

Timing for the ultimate resolution of the Settlement will be affected by the time taken for the Full Court's decision to be delivered. The Settlement to take effect and the conclusive registration of the Indigenous Land Use Agreements is anticipated for some time in 2020.

6.3.3 CONCEPT REVIEW WORKSHOPS

Given the unique nature of the project and the government's desire to create a world-class marina (Government of Western Australia, 2019), it was considered appropriate to undertake a design-led process of review for the concept plan and as a result, the planning framework. DevelopmentWA commissioned the review exercise with the aim of ensuring the marina could balance the delivery of a world class marina, that would meet or exceed community expectations and that was commercially feasible.

The concept refinement process considered the arrangement, interrelationships and functionality of land use, development, infrastructure and facilities for a functional marina. The review considered matters including environmental, coastal engineering, civil engineering, water management, parking, traffic and transport, landscaping and open space, real estate and project feasibility.

Three design review workshops were held between February and April 2018. The workshops were attended by representatives from DevelopmentWA, the City of Joondalup, Department of Transport, DPLH, Metropolitan Redevelopment Authority, as well as a range of talented design professionals and specialist consultants. The workshop attendees were tasked with achieving the following goals:

- Improve the land use concept, to identify better outcomes in line with the project's vision to deliver a world class marina;
- Assist in cost savings through a quantified evaluation of the concept;
- Review the stakeholder expectations, opportunities and issues, and develop evaluation criteria; and
- Undertake a design review of concept scenarios to identify a preferred concept refinement outcome.

Figure 12 provides an overview for the concept design review process. The process ensured that the marina design was appropriate to the location, provided features expected by stakeholders, was environmentally responsible, and financially sustainable.

To address the key topics, participants were divided into three groups which focused on:

- Land use and built form – investigating consolidated residential development to the north. Intensifying the core by focusing retail, food and beverage and commercial use into a more identifiable marina village destination;
- Marina and marina facilities – investigating the spatial distribution of marine industry in the previous concept and the opportunities for consolidating the boat ramp and marine services into one southern precinct. This southern precinct is further away from residents. Considered a waterbody edge more aligned to the existing coastline to mitigate cut-to-fill along the coastline, and reorientation of jetties to have greater regard to prevailing winds; and
- Public realm including edge interface – considered the advantages of consolidated open spaces and important public linkages north-south and east-west throughout the concept area. Considered greater public connection to water.

The workshop attendees were provided with evaluation criteria for reviewing the concept scenarios. The criteria were based on five elements for sustainable development – community wellbeing, environmental leadership, economic health, design excellence, and governance. Through the evaluation of three concept scenarios, the preferred Concept Plan was developed and subject to further detailed design. In turn, the preferred concept was presented to the GSC for endorsement, prior to seeking feedback from the PWG and external engagement with the Whitfords Volunteer Sea Rescue Group and the Ocean Reef Sea Sports Club.

The preferred concept was similar to the City's Concept Plan but was subject to refinements including:

- Reduction in the urban footprint of the development area;
- Improved provision of local public open space as a percentage of the development area;
- Optimised shape of the internal waterway to reduce the extent of cutting into the coastline to create waterways, and a more efficient boat pen layout; and
- Reduction of land reclamation into the ocean, with the removal of a northern groyne and northern beach reclamation.

The design workshops identified similarities between the three concept options:

- Retention of a core area for mixed use, short-stay, festival retail, food and beverage, community uses, and car parking;
- Westerly push of the internal marina waterway edge to save on dredging costs and increase developable area without impacting further on Bush Forever site 325;
- Reorientation of jetties to address prevailing winds;
- Consolidation of residential into a northern precinct, improving staging and peak debt management;

- Retention of boat ramps and trailer parking to south, with retention of existing road access to Ocean Reef Road;
- Retention of the Bush Forever edge;
- Retention of the breakwater locations and reducing extent of reclaimed land in deeper water; and
- Recognising the northern beach will be seasonal and is not viable for protecting as an all-year beach.

Following the workshops the preferred Concept Plan was presented at meetings with the Department of Transport, Ocean Reef Sea Sports Club, and Whitfords Volunteer Sea Rescue Group to gain additional feedback and information.

The preferred concept maintained the delivery of stakeholder expectations, albeit in a reconfigured spatial layout to the previous City of Joondalup concept. The preferred concept is described in more detail in section 7.

6.3.4 COMMUNITY OPEN DAY

The preferred Concept Plan was released to the community for feedback (DevelopmentWA, 2018). DevelopmentWA held a forum for neighbouring residents, which had 140 attendees, and a further 2,000 people attended a Community Open Day on 7 October 2018. Feedback on the project and the preferred Concept Plan was generally positive.

Community and stakeholder engagement processes have been incorporated into the formulation of the landscape masterplan, refer section 7.4.3.

6.3.5 STATE DESIGN REVIEW

It has previously been mentioned that the planning framework for Ocean Reef Marina will include Design Guidelines to provide additional guidance and control over the form and standard of built form design. The development of the Design Guidelines (which will be adopted as an Improvement Scheme policy) will take into consideration the 10 core design principles in State Planning Policy 7 *Design of the Built Environment* (WAPC, 2019).

Given the regional significance of the project the process of formulating the Design Guidelines will include consultation with, and input from, the Office of the Government Architect (OGA), the DPLH and the City of Joondalup.

6.4 STAKEHOLDER ENGAGEMENT FOR IMPROVEMENT PLAN AND IMPROVEMENT SCHEME

6.4.1 IMPROVEMENT PLAN

The WAPC consulted with a range of stakeholders prior to the Minister receiving a recommendation for the adoption of the Improvement Plan. The following stakeholders were consulted:

- City of Joondalup – as a landowner, vested manager and lessor of land; as the local government; and as a signatory to the Memorandum of Understanding with DevelopmentWA;
- Government Steering Committee – as the oversight committee to the project;
- DPLH – as assessing agency of the MRS Amendment 1270/41, NPO, CHRMAP, Bushfire Management Plan, identification of waterways manager, and as future administrator of the Improvement Plan;
- Marine Parks and Reserves Authority (DBCA) – as primary interest holder of the Marmion Marine Park;

- Water Corporation – as a landowner and vested manager of land and infrastructure within the Improvement Scheme area;
- Department of Transport – as an experienced waterway manager; and as a vested manager of land; and
- The Ocean Reef Sea Sports Club and Whitfords Volunteer Sea Rescue – as existing and future club operators.

6.4.2 IMPROVEMENT SCHEME

The preparation of an Improvement Scheme generally follows the process for a local planning scheme and is governed by Part 8 of the PD Act. Therefore, in accordance with the *Regulations* it is necessary to:

- Consult with surrounding local governments;
- Seek the heritage council's advice in some cases (if required);
- Refer the Improvement Scheme to the EPA under section 48A of the *Environmental Protection Act 1986*;
- Undertake reasonable endeavours to consult with public authorities and persons likely to be affected; and
- Advertise the Improvement Scheme for a minimum 90 days.

6.5 OUTCOME OF CONTINUED ENGAGEMENT PROCESS

The State Government and City of Joondalup have ensured there has been continuing community and stakeholder engagement as the planning for the project progresses through design and implementation phases. This process has ensured that the project and its associated planning framework is well-considered in the context of community expectations, environmental responsibility and the various operational and commercial considerations needed to ensure the delivery of a world class marina.

The rigorous and inclusive approach to planning for the site has resulted in significant progress to implement the planning framework, to assess the project under the EP Act, and to deliver a concept that has strong stakeholder and community support. In particular, the detailed work on the MRS Amendment 1270/41 and the associated Public Environmental Review include extensive hydrological, coastal, civil engineering, environmental, servicing and utilities investigations, traffic and parking assessment and analysis, economic capability assessments.

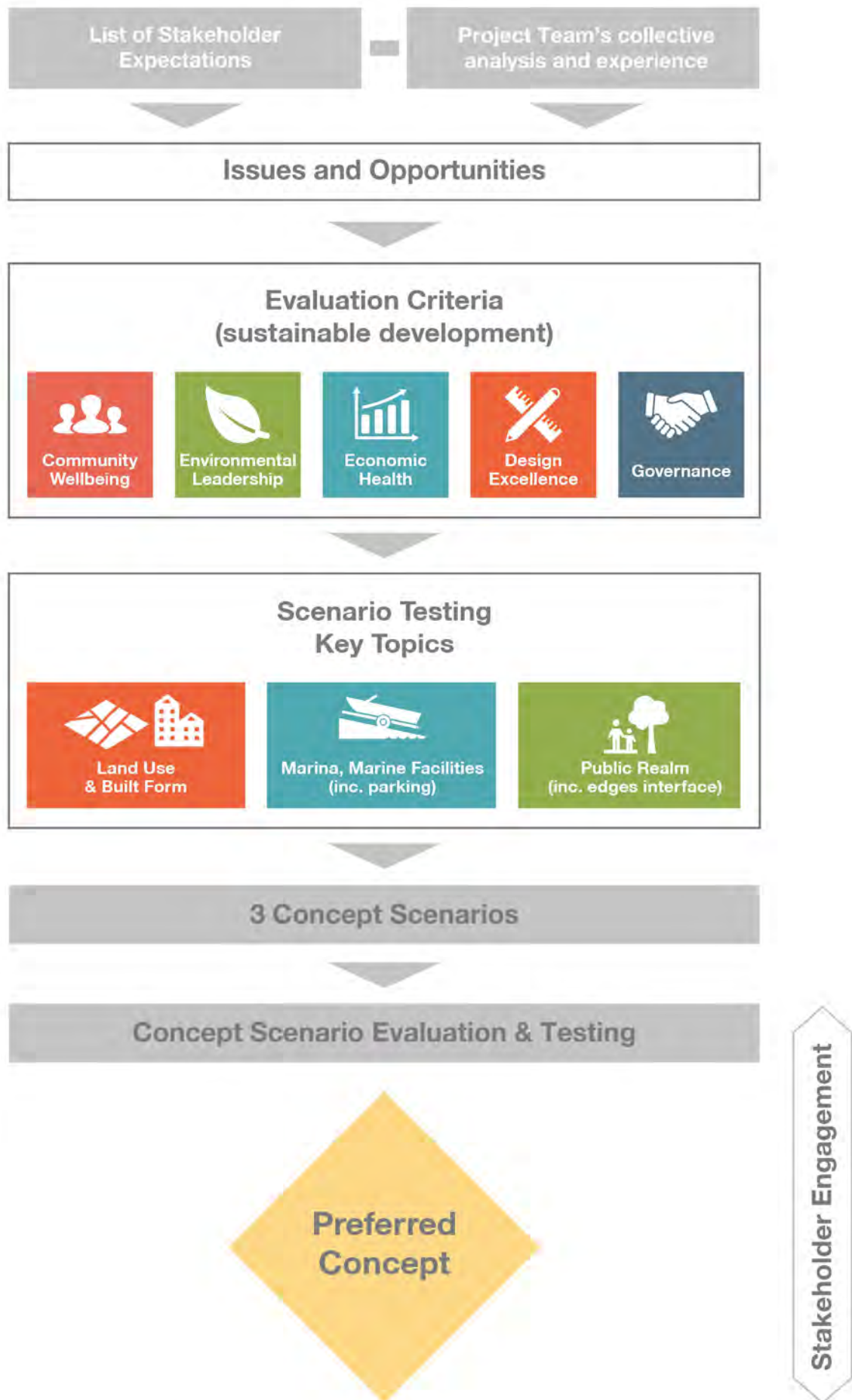


Figure 12- Concept refinement process

7 CONCEPT PLAN

This section explains the design process behind the collaborative review of the original City of Joondalup concept, delivery of the preferred Concept Plan, and its relationship to the Improvement Scheme.

7.1 KEY FEATURES

Key features of the preferred Concept Plan, refer Figure 13 and Figure 15, reflect stakeholder expectations as identified through previous concepts prepared by the City of Joondalup, and feedback from community and stakeholder engagement. The key features in the concept plan needed to meet the following expectations:

- Waterfront cafés and restaurants;
- 12,000 square metres of retail/commercial space;
- Public open space;
- Internal beach;
- Capacity for 550 boat pens and 200 boat stackers;
- 1,000+ dwelling units;
- Proposed 3,300 parking bays;
- Marine services located close to boat ramps and trailer parking;
- Club facilities integrated with the marine services, linked to a beachside park;
- Improved walkability; and
- Relocation of the ANZAC Memorial.

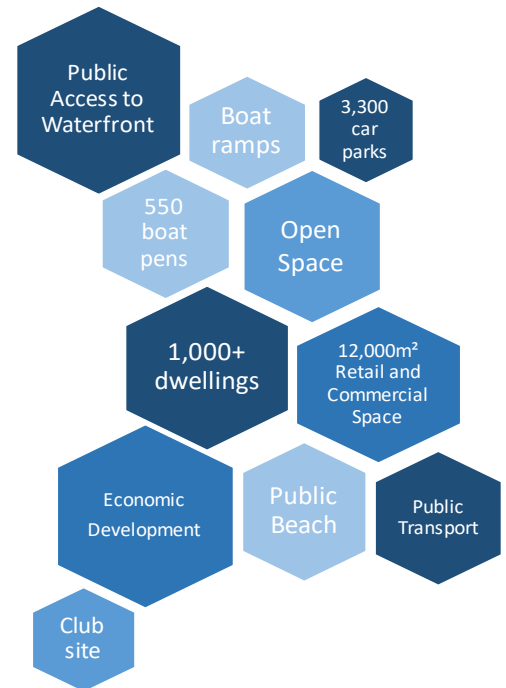


Figure 13 Stakeholder Expectations

In some cases, the concept plan can exceed the expectations listed above. There may be more commercial/retail space, parking bays, boat pens / boat stackers, and dwelling units, than what is listed above.

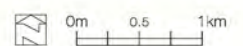
As demonstrated in Figure 14, dunal vegetation and landform is retained between the development footprint of the Ocean Reef Marina and the suburban area east of Ocean Reef Road.



**Figure 14 Artist impressions for indicative purposes only.
Images courtesy DevelopmentWA (DevelopmentWA, 2018)**



Figure 15- Preferred Concept Plan



7.2 CONCEPT PLAN BASIS AND RATIONALE

The refinement and delivery of the preferred Concept Plan has ensured that the project continues to deliver key community benefits including a publicly accessible beach, public open space, boat pens, boat ramp and trailer parking infrastructure, public promenade along the waterfront, and publicly accessible breakwaters.

Figure 16 demonstrates that the list of features from the City's Concept Plan 7.2A have been carried through to the preferred Concept.

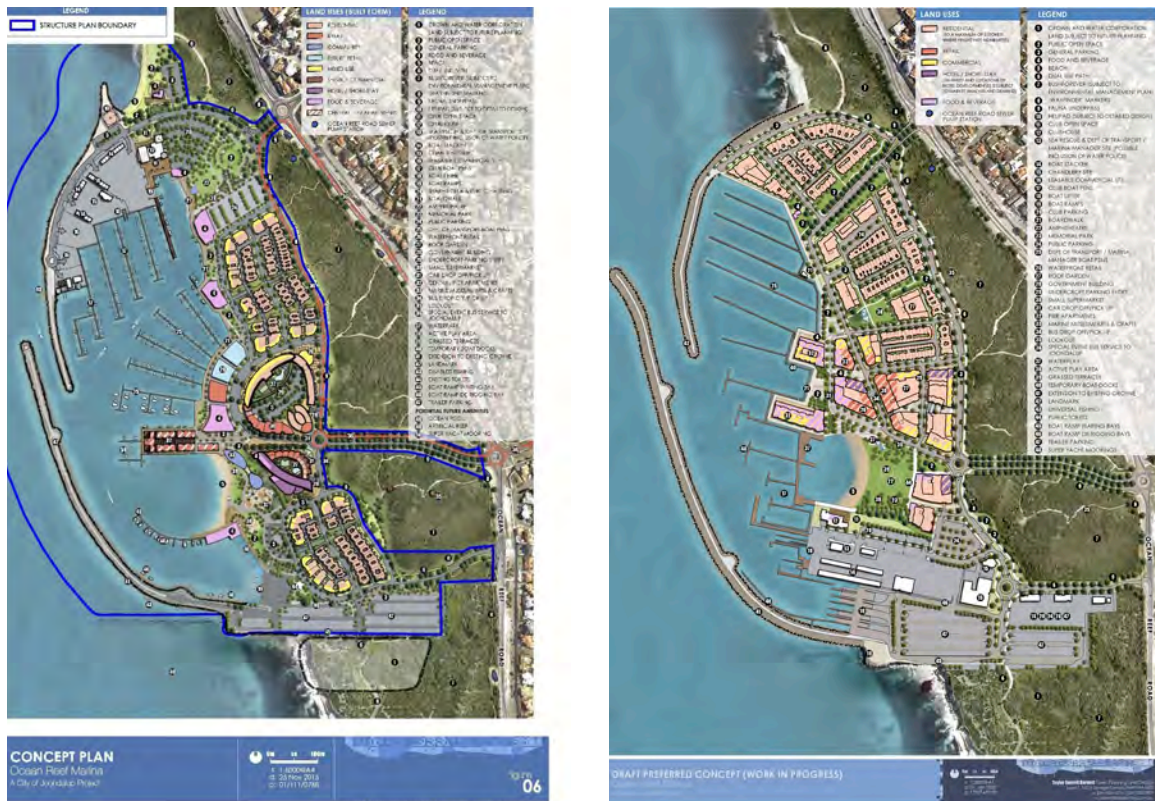


Figure 16 Concept Plan 7.2A (left) and preferred Concept Plan (right)

7.2.1 COMPARISON

A number of comparisons can be made in respect of the previous Concept Plan 7.2A and the preferred Concept Plan.

The consideration of land use vibrancy and fit has been compared as shown in Figure 17. The three concepts all considered a mixed use central core for the development, which would be accessed from the central access road from Hodges Drive. The design contemplated the sense of arrival from Hodges Drive into the mixed use precinct, and as a result the east west road was aligned to provide a straight line through to the waterbody, to strengthen the connection to the marina. With an alignment of the road, the frame of the mixed use precinct was also considered in terms of having strong north-south connectivity, and more regular shaped development sites.

In turn, the western-most north-south road has aspects into the marina to further strengthen the sense of place. It provides the opportunity for food and beverage uses along a main street environment and a mix of orientations for tenancies, to offer protected environments given the prevailing winds and proximity to the waterfront.

An important consideration was the agglomeration of the boat ramps and trailer parking, club facilities, access to the boat pens, and colocation of marina services. All activities relating to boating, trailer parking, marine services etc have been contained in a consolidated precinct at the southern end of project area, in order to mitigate any potential conflict between boating traffic and on-site activities and the balance of the marina uses and activities. Access to the marine services, club facilities and public boat ramp is gained from the southern access road to the marina, which enables movement of vehicles with boat trailers, and other marine related traffic to and from the precinct with minimal interference to the balance of the marina.



Figure 17 Land Use Vibrancy, Choice & Fit

The agglomeration of marina services to the south provides opportunities to provide residential development as a cohesive and integrated northern neighbourhood. This has enabled more residential land to be located in close proximity to local public open space, to give all residents convenient access to recreation and leisure space.

As demonstrated in Figure 18, key views and desire lines were a key component of the preferred concept to enhance the legibility and sense of place of the development. with clear sightlines through to the coastal dunes to the east and the waterbody to the west.

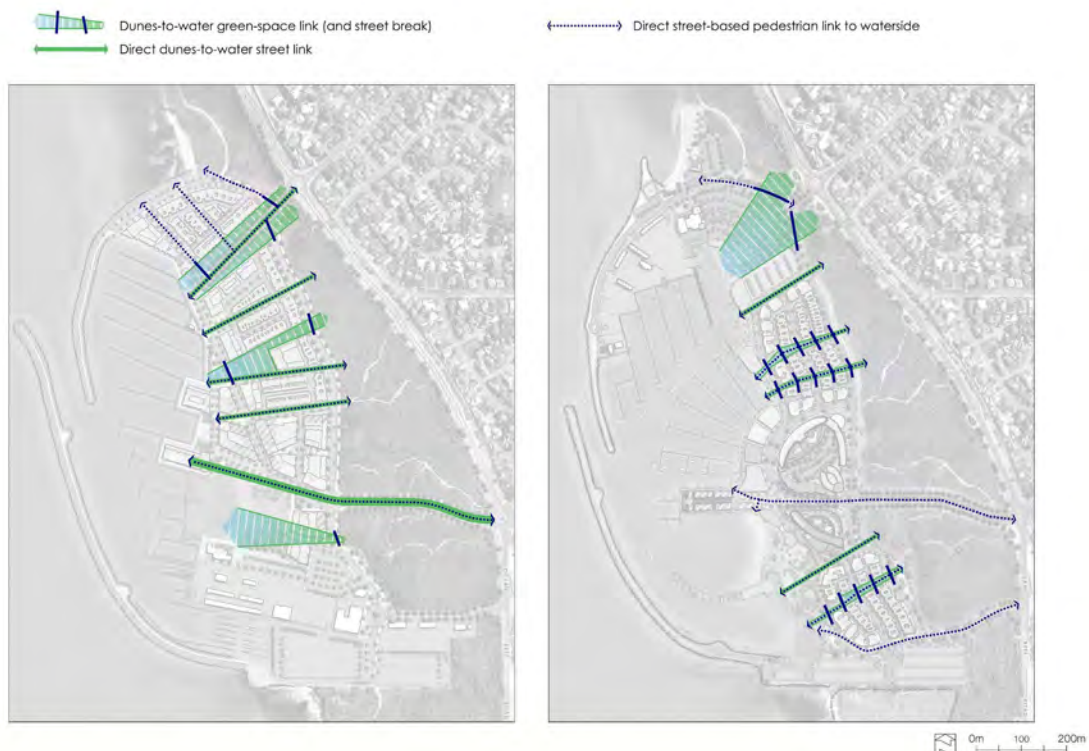


Figure 18 Pedestrian Green and Blue Links

A number of stakeholder expectations for the City of Joondalup's Concept Plan 7.2A were related to waterside play, including a public beach and pockets of public open space dotted along the water edge of the internal marina. Through the concept design review, it was recognised that the public beach was an important feature and so its relationship with the built form and adjacent public open space was enhanced.

The preferred concept retains the general size of the main public beach within the internal waterbody, and flushing studies were undertaken to confirm that water quality will be acceptable for public use. The beach is framed at both ends by development, giving a sense of enclosure, whilst a boardwalk would provide a safe barrier between boats and swimmers.

The preferred concept has consolidated regional open space adjacent to the beach. A playground and the amphitheatre have been relocated to the southern sector, which in part also addresses potential noise concerns associated with outdoor performances. The southern sector amphitheatre also takes advantage of level differences and views over the beach and internal waterway.

The public realm masterplan is discussed further in section 7.4.3.



Figure 19 Waterside Play

The waterfront edge will be a key feature of the marina environment and a publicly accessible edge was considered to be of paramount importance. As demonstrated in Figure 20 a public walkway would be provided along the breakwater(s) and link along the internal waterway edge throughout the Residential Precinct and Mixed Use / Recreation / Waterfront Precinct through to the Marine Enterprise Precinct. The preferred concept brings the 'socialising spots' closer together, adding to the vibrancy within the Mixed Use / Recreation / Waterfront Precinct. This is deemed preferable to the spreading out of activity, which could diminish its impact on the amenity and character of the marina village.

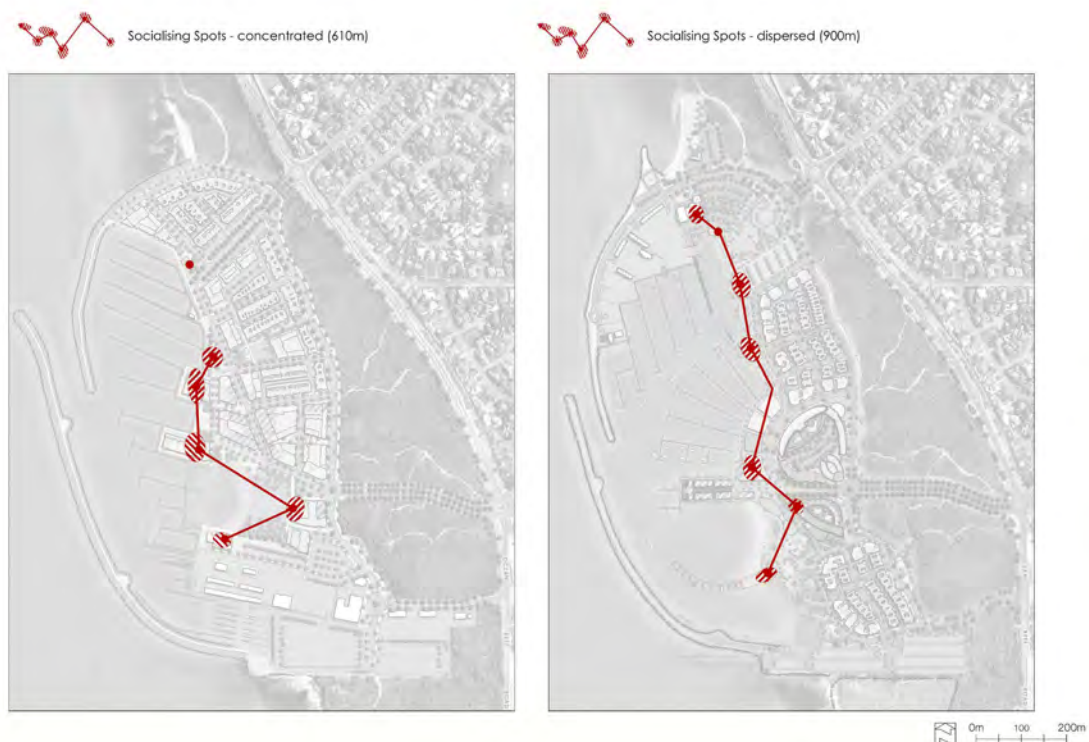


Figure 20 Waterfront Edge

7.3 ECONOMIC CONSIDERATIONS

The Ocean Reef Marina has the capacity to deliver tangible economic benefits. The concept plan was considered in relation to its economic capability. The economic analysis considered a potential yield of 1,155-1,762 dwellings. The analysis considered a mix of dwellings as houses and apartments. Within the surrounding catchment it was estimated that there were 11,000 residents within a two-kilometre radius, 75,000 people within a 5-minute drive, and 97,000 people within a 10-minute drive. Based on methodologies used in the analysis, this level of population potentially has a spending capacity of:

- \$500 million on food and beverage services; and
- \$3.3 billion in retail expenditure. Of this total, \$860 million was calculated to be available within a 5-minute drive radius and \$36 million available from the future residential population within the marina itself.

The concept considered a point of difference for the marina to provide sufficient diversity to be a premier eating and entertainment destination, and provide a unique festival retail offering.

Post-construction, the Ocean Reef Marina is anticipated to create 575-585 direct jobs, including 80-100 marina and marine service jobs; 60-70 retail jobs; 160 food and beverage jobs, and approximately 400 indirect jobs.

7.3.1 RETAIL AND COMMERCIAL FLOORSPACE DEMAND ANALYSIS

The expected influx and projected number of domestic daytrips by visitors is likely to aid the diversity and viability of retail within the Marina. By 2031, it is anticipated that between 16,500 m² and 17,750 m² of retail floorspace could be supported by resident expenditure, depending on the dwelling yield at the time. Further retail floorspace could be supported by daytrip visitors and overnight staying visitors, which would be dependent on visitation to the marina (and leakage via the market capture of Hillarys), and the success of the Ocean Reef Marina development as a tourist destination. The future mix of retail and commercial floorspace would be based on destination appeal and maturity of the development, and its market share and conditions.

The preferred concept contains the retail development to the level identified in the previous City of Joondalup concept. This level can currently be supported and there may be potential demand for additional development in the ultimate build taking into account population projections

7.4 ENVIRONMENTAL CONSIDERATIONS

An environmental evaluation of the marine portion and terrestrial portion of the Improvement Scheme area has been undertaken. The following relates to the terrestrial portion:

- Environmental Assessment and Management Strategy (EAMS) in Appendix A;
- Local Water Management Strategy (LWMS) in Appendix B;
- Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) in Appendix E; and
- Bushfire Management Plan (BMP) in Appendix F.

The Ministerial Statement 1107 applies conditions to the marine portion of the development.

7.4.1 S.48A REFERRAL

Pursuant to section 122B of the PD Act, the Improvement Scheme will be referred to the EPA pursuant to section 48A of the EP Act. This is a process that would typically be required for any improvement scheme or local planning scheme.

7.4.2 NEGOTIATED PLANNING OUTCOME – BUSH FOREVER SITE 325

The MRS Amendment 1270/41 removed the development area from the Bush Forever site 325.

The development will result in the clearing of approximately 16.79 ha of remnant vegetation that was in Bush Forever site 325. The development avoids the majority of vegetation in excellent condition, with over 60% of the vegetation to be cleared being in good to very good condition.

The Negotiated Planning Outcome (NPO) related to the clearing of land that was originally within Bush Forever site 325. The NPO included an offset of 90% and rehabilitation of 10% (5 ha). The NPO is the basis for the rehabilitation strategy that DevelopmentWA will prepare and implement.

KEY

1 Northern Entry Road POS &

2 Southern Entry Road POS

3 Northern Linear POS &

4 Southern Linear POS

5 Central POS

6 Promenade North POS (both)

Small POS with opportunity for interpretation nodes, access to path network, viewing platforms, respite points and infrastructure such as bike repair stations and drink fountains.

Creating a green entry to the site these POS create significant recreational opportunities for residents and draw the dune vegetation through to the water front.

The central residential POS will provide recreational and social opportunity that focuses on local community needs. This will include infrastructure such as play equipment, gathering spaces, informal sport facilities and passive recreation opportunities to support the health and well-being of users.

POS situated around proposed cafe/restaurant, providing an activation to the northern promenade, services the residential community and activities that may not be easily accommodated in larger POS, such as a dog park or community garden.

7 Triangle POS

The promenade allows for significant recreation opportunities, along with a connection to the water front and boats. This POS will facilitate more popular events and activities along the promenade.

8 Plaza POS

A highly functional urban plaza that will address the retail and commercial hubs providing infrastructure for markets, alfresco dining and events.

9 Beach POS

The beach park will be the 'jewel in the crown' of the site, a central recreational hub that will be a regional destination.

10 Bush Forever

A reality of the development will be the removal of bush-forever vegetation, the retained areas will be carefully considered to protect and enhance ecological value.

11 Breakwater

Breakwaters will present opportunity for increased, improved public realm through design approaches with the engineering team to include vegetation, seating nodes, recreational opportunities and art elements, where possible.

Significant Infrastructure

Playground

Youth Space

Fishing Platform

Lookout / Viewing Deck

Entry Statement

Water Slides / Pool (to be considered in detail design in consultation with managing statutory authority)

Beach

Key Themes and Approaches

1 Northern Arrival - Southern Arrival - 'Settled into the Dunes'

The dunes are fundamental to the identity of this site and as such the approach to the development from the dunes, and this interface is extremely important to the Marina's sense of place. The north-south arrival zones will bookend the site and will be connected through a green spine dunal interface.

2 Central Residential - 'A Marina Community'

The residential zone of the Marina is both linear (for a majority of the site) and thematically the transition between the dune system and the water edge. Streetscapes and POS utilize an east-west orientation to create visual and physical connections from water to dune.

3 Commercial Waterfront Precinct - 'Celebrating WA Marine Culture and Heritage'

The Ocean Reef Marina will be a celebration of WA maritime culture and heritage, with a central activated heart connecting out into the water through the breakwaters. This highly activated zone is to be an aspirational public realm that draws inspiration from the local vernacular stories and memories of WA boating, fishing, diving, surfing and maritime culture.

More detail on the Precincts and Overall Landscape Masterplan development and approach is available in the Public Realm Masterplan Document, UDLA, 2019.



OCEAN REEF MARINA PUBLIC REALM MASTERPLAN



PROJECT NAME:
Ocean Reef Marina

CLIENT:
Landcorp

DRAWN:
SH

SCALE:
1:2000 @A1

DRAWING:
MP - 01

ISSUE DATE:
January 2020

REVISION:
G

udla

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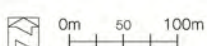


Figure 21- Landscape Masterplan

The consultants took the preferred Concept Plan to the community and as part of this, the public realm design was formulated. The engagement process included a community open day, community reference group workshops, and a school engagement process.

The public realm vision helped guide the landscape theme for the various components of the development. The masterplan responds to the dunes and their interface with the development. Together with the maritime culture and heritage of the size, there will be a strong coastal / dunal theme embedded across the Improvement Scheme area.

The public realm masterplan considered a total provision of over 4.5 hectares of public open space. The beach, breakwaters and Bush Forever site 325 were not included in the public open space calculation but are acknowledged to be important public realm spaces and are addressed in the public realm masterplan.

The public realm masterplan noted the water availability issue (refer section 7.4.6) and a range of water supply options will be investigated to determine the most viable solution.

The public realm masterplan will be the foundation from which a landscape Improvement Scheme policy can be prepared, landscape concept plans will be finalised, and detailed design and documentation for landscaping will be undertaken. This will ensure the public realm masterplan, as a policy, becomes a guiding document throughout the delivery of all work packages, to ensure strong alignment between the vision that was established through the engagement process, through to the delivery of outcomes on-site.

7.4.4 BUSHFIRE MANAGEMENT

It is noted that the terrestrial component of the Improvement Scheme area is within a bush fire prone area. The Bushfire Management Plan (BMP), refer Appendix F, has been prepared to support the Improvement Scheme and is based upon the preferred Concept Plan.

The vegetation within Bush Forever site 325 is considered to be the greatest source of bushfire threat to the proposed development as it abuts to the northern, eastern and southern boundaries of the development area. The BMP notes that the bushfire risk to the proposed development posed by hazards can be managed through standard application of acceptable solutions under the *Guidelines for Planning in Bushfire Prone Areas*.

Bushfire mitigation strategies are addressed in the BMP. The BMP outlines standard management responses to bushfire risks, and these responses will be factored into the proposed development to ensure a suitable, compliant and effective bushfire management outcome is achieved.

7.4.5 COASTAL PLANNING

The Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) was acceptable for the initial planning of the marina, and was acknowledged by the DPLH to be sufficient to enable the finalisation of MRS Amendment 1270/41 and the PER. A copy of the CHRMAP is contained in Appendix E.

The CHRMAP will need to be updated in future, as it is regarded to be a 'live document' and would be reviewed to reflect final concept intentions and final design conditions. This is likely to be undertaken in full knowledge of which agencies would be responsible for assets within the development area, as the CHRMAP will need to include an implementation and responsibilities table. The current version provides a framework for coastal risk management that has thus been guiding the design, including the Improvement Scheme and associated technical studies and documents and the Design Guidelines.

7.4.6 LOCAL WATER MANAGEMENT

The Local Water Management Strategy (LWMS) has been prepared to support the Improvement Scheme and is contained in Appendix B. The LWMS identifies and describes a range of design elements and management measures being considered for proposed development. The principal objective of the LWMS is to achieve better urban water management outcomes by specifying development that manages the total water cycle in a sustainable manner and meets objectives for water sensitive urban design. The LWMS was developed through the district water management strategic process and agreed by DWER and the City. The objectives are contained in the LWMS in Appendix B.

The LWMS notes that:

- Public open space would be designed to have a low water use;
- Small lot sizes and the use of Design Guidelines to reduce household and commercial water use;
- Infiltration of all stormwater on-site up to the 1 in 1 year event;
- Use of a range of measures including basins, swales, underground storage cells and open bottom manholes to treat and infiltrate stormwater; and
- Fill requirements will be managed through cut to fill within the development itself, without the need for groundwater control.

The LWMS notes that the site lies within the Whitfords Groundwater Subarea, which is a superficial aquifer that is currently over-allocated. It is understood that groundwater is not available for allocation in this subarea.

Approximately 40% of water demand in the Improvement Scheme area is anticipated to be from commercial and industrial users. A residential water demand target of 100 kilolitres per person per year is also employed, based on the State Water Plan.

The City has indicated that approximately 6,900 kilolitres per annum are currently used for on-site irrigation of turf and for boat washdown, which may be transferrable to future irrigation. Preliminary estimates of total non-potable water demand for public open space and streetscapes, tree pits, biofiltration and dune management is calculated to be 35,000 kilolitres per year. Given the over-allocation of groundwater, a range of options are being considered to obtain water for these demands, and will be investigated in detail to determine the most viable solution. Depending on water supply options, there may be the need to introduce more extreme demand management for water use.

7.5 SOCIAL CONSIDERATIONS

7.5.1 HERITAGE MANAGEMENT

Previous searches have been undertaken on the State Government Aboriginal Heritage Inquiry System (AHIS) and inHerit database search of the State Register of Heritage Places for Aboriginal and European heritage. These searches did not identify any Indigenous or non-Indigenous heritage sites within the Scheme area. In addition, five Aboriginal heritage surveys were undertaken over the Scheme area between 1970 and 2015 and no registered sites had been identified. The closest registered Aboriginal site is approximately 1km south of the site and will not be impacted by development in the Improvement Scheme area. Notwithstanding, as development may uncover unsurveyed sites, it is important to have regard to legislative obligations.

One potential non-indigenous heritage item within the Improvement Scheme area is the *Vergulde Draeck* rock inscription. The inscription is categorised as 'RHP – Does not warrant assessment' as it is considered to be a hoax. Consultation can be undertaken with the WA Maritime Museum and State Heritage Office prior to any removal or relocation of the inscription.

7.5.2 CONSTRUCTION MANAGEMENT

A Construction Environmental Management Plan will be prepared to address the management of construction activities on the site, including clearing and earthworks. This would be implemented throughout construction and subdivision stages.

7.6 SUSTAINABILITY CONSIDERATIONS

The Ocean Reef Marina has been designed to meet a high level of sustainability. It is intended that the project will be measured against the Infrastructure Sustainability rating system developed by the Infrastructure Sustainability Council of Australia (ISCA). ISCA is a member-based, not-for-profit peak body operating in Australia and New Zealand with the purpose of enabling sustainability outcomes in infrastructure.

The IS Tools cover broad sustainability themes of Governance, Economic, Environment, Social and Innovation. Detailed categories of credits under each of these themes are used to assess infrastructure projects and determine a weighted score with either a Silver, Gold or Platinum rating.

The marina design is intended to meet the requirements for a Gold rating for the Ocean Reef Marina. This rating covers the sustainability of the land and marina based infrastructure and public realm, by 2020. An IS design and as-built rating will follow once construction contractors are appointed.

8 BIBLIOGRAPHY

- Arup. (2019). *Ocean Reef Marina Transport Assessment Report*. Perth: Arup.
- CoJ. (2017). *City of Joondalup Local Planning Strategy*. Perth: Western Australian Planning Commission.
- CoJ. (2017). *Expanding Horizons: An Economic Development Strategy for a Global City*. Joondalup: City of Joondalup.
- CoJ. (2018). *Joondalup 2022 Strategic Community Plan 2012-2022*. Joondalup: City of Joondalup.
- DevelopmentWA. (2018). *Ocean Reef Marina*. Retrieved from Have Your Say: <https://haveyoursay.landcorp.com.au/ocean-reef-marina>
- DoE. (2014, July 04). *Referral Decision*. Retrieved from Department of the Environment: <http://www.environment.gov.au/epbc/notices/assessments/2014/7237/2014-7237-referral-decision.pdf>
- DPC. (2017, September 3). *Ocean Reef Marina transformation set to get underway*. Retrieved from Media Statements: <https://www.mediastatements.wa.gov.au/Pages/McGowan/2017/09/Ocean-Reef-Marina-transformation-set-to-get-underway.aspx>
- DPC. (2018, March 27). *Agreement brings Ocean Reef Marina closer*. Retrieved from Media Statements: <https://www.mediastatements.wa.gov.au/Pages/McGowan/2018/03/Agreement-brings-Ocean-Reef-Marina-closer.aspx>
- DPLH. (2015). *Liveable Neighbourhoods*. Perth: WAPC.
- DPLH. (2019, July 15). *PlanWA*. Retrieved from Department of Planning, Lands and Heritage: <https://espatial.planning.wa.gov.au/mapviewer/Index.html?viewer=planwa>
- DWER. (2019, May 30). *Contaminated Sites Database*. Retrieved from Department of Water and Environmental Regulation: <https://dow.maps.arcgis.com/apps/webappviewer/index.html?id=c2ecb74291ae4da2ac32c441819c6d47>
- EPA. (2014, June 9). Decision under Section 48A(1)(a) Environmental Protection Act 1986: Metropolitan Region Scheme Amendment 1270/41 - Ocean Reef Marina Redevelopment. Perth, Western Australia.
- EPA. (2019). *Report and recommendations of the Environmental Protection Authority: Report 1629 Ocean Reef Marina*. Perth: Environmental Protection Authority.
- EPA. (2020, January 6). *Ocean Reef Marina*. Retrieved from Environmental Protection Authority: <https://www.epa.wa.gov.au/proposals/ocean-reef-marina>
- Government of Western Australia. (2019, October 6). *New milestone brings Ocean Reef Marina closer to construction*. Retrieved from Media Statements: <https://www.mediastatements.wa.gov.au/Pages/McGowan/2019/10/New-milestone-brings-Ocean-Reef-Marina-closer-to-construction.aspx>
- Mettam, S. (2018, March 12). MAC_I_Ocean-Reef_Oblique1. Western Australia.
- State Heritage Office. (2017, January 1). *Rock Inscription, Ocean Reef Marina*. Retrieved from InHerit Database: <http://inherit.stateheritage.wa.gov.au/Public/Inventory/Details/f6de4ac2-b4c4-45f0-8359-1b912d308e28>
- Strategen-JBS&G. (2019). *Environmental Assessment and Management Strategy: Ocean Reef Marina*. Perth: Strategen-JBS&G.
- WAPC. (2010). *Local Planning Manual*. Perth: Western Australian Planning Commission.
- WAPC. (2014). *State Planning Strategy 2050*. Perth: Western Australian Planning Commission.
- WAPC. (2016). *Metropolitan Region Scheme Amendment 1270/41 Ocean Reef Marina Redevelopment Amendment Report*. Perth: Western Australian Planning Commission.
- WAPC. (2018). *Draft Position Statement: Renewable energy facilities*. Perth: Western Australian Planning Commission.
- WAPC. (2018). *North-West Sub-regional Planning Framework*. Perth: Western Australian Planning Commission.
- WAPC. (2019). *Position Statement Housing on Lots less than 100m2*. Perth: Western Australian Planning Commission.
- WAPC. (2019). *Residential Design Codes Volume 2 - Apartments*. Perth: Western Australian Planning Commission.
- WAPC. (2019). *State Planning Policy 7 Design of the Built Environment*. Perth: Western Australian Planning Commission.