



Design Guidelines

Draft - Stage 1 Residential Precinct
Ocean Reef Marina

Document Information

Design Guidelines

DRAFT - Stage 1 Residential Precinct

Ocean Reef Marina

DevelopmentWA

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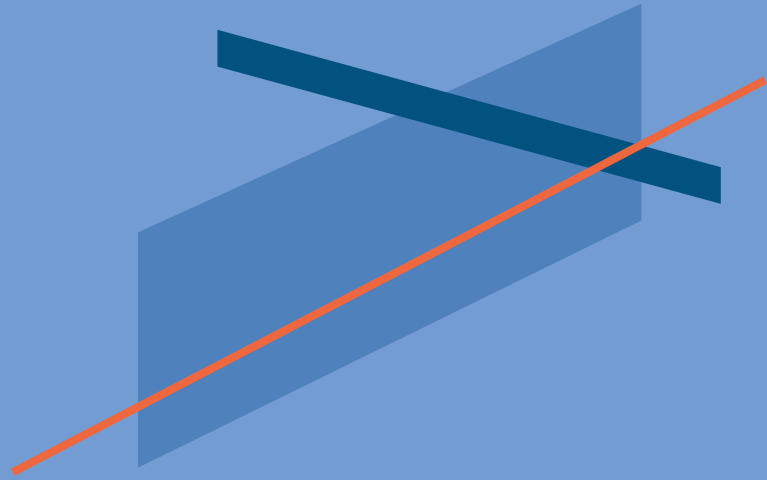
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1.0

Introduction



1.0 Introduction

1.1 Marina Vision, Aims and Objectives

The overall vision for the Ocean Reef Marina is to be a world class waterfront precinct providing recreational, tourism, residential uses and boating facilities. The aims for the Ocean Reef Marina are:

- 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;
- The creation of sustainable employment opportunities in food and beverage, retail, service commercial, tourism and marine related industries;
- The provision of diverse housing density and choice, within a high-quality residential environment;
- The delivery of an economically sustainable marina development to include boat pens and boat stacking facilities to meet the future demands of a growing Perth metropolitan population;
- Delivery of a marina development and marine related commercial activities providing upgraded facilities for existing recreational marine-based clubs and users, while providing adequate separation between these activities and other land uses; and
- The appropriate management of environmental values.

The overall plan for the marina as a world class and innovative development includes:

- Two new outer breakwaters;
- Around 550 wet boat pens;
- At least 200 boat stacker spaces;
- More than 1,000 houses/apartments;
- Approximately 12,000m² of retail, food and beverage floorspace in the Mixed Use Precinct;
- Approximately 7,000m² of Commercial floorspace in the Marine Enterprise Precinct;
- Marine services area inclusive of eight boat ramps and facilities associated with the marina, boating and recreation;
- A protected swimming area, beach, parks and open spaces for the local community and visitors; and
- Boat trailer and car parking to service the development and its visitor attractions.

The Ocean Reef Marina Improvement Scheme (Improvement Scheme) identifies a number of Precincts, including the Residential Precinct (Precinct). Design Guidance is provided within this document for Stage 1 of the Residential Precinct (Precinct) (Figure 1). Development within the Precinct should be consistent with the Aims of the Ocean Reef Marina and the intent and objectives for the Precinct as set out in the



Image 1: Ocean Reef Marina - Preferred Concept

Improvement Scheme.

The Residential Precinct is intended to deliver a world class, high amenity area accommodating a mix of housing typologies and sizes. Innovative high-quality streetscapes interweave with linear parkland experiences to achieve unique character areas that encourage high quality architectural responses.

The objectives for the Precinct as set out in the Ocean Reef Improvement Scheme are to:

- 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;
- Encourage a range of housing typologies, including high density multiple dwellings and medium density single and multiple dwellings;
- Ensure that the height and mass of buildings respects the outlook considerations from existing residential areas in the immediate vicinity;
- Provide a high-quality interface between private development sites and the 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;
- Allow for limited short stay accommodation in the form of serviced apartments or short-term holiday accommodation;
- 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; and
- Encourage innovation and excellence in planning and design.

1.2 Purpose of these Design Guidelines

The Stage 1 Residential Precinct Design Guidelines (Design Guidelines) provide guidance on built form, development and the preferred location of land uses within the Precinct (Figure 1). In accordance with clause 16(3) of the Improvement Scheme these Design Guidelines make reference to and adopt other documents of the WAPC in respect of built form and development elements, in particular State Planning Policy 7.0 and State Planning Policy 7.3 volume 1 and 2 (where identified as appropriate). Refer to section 1.9 of these Design Guidelines for more information.

These Design Guidelines will assist proponents in the preparation of development applications and the Western Australian Planning Commission with the determination of proposals.

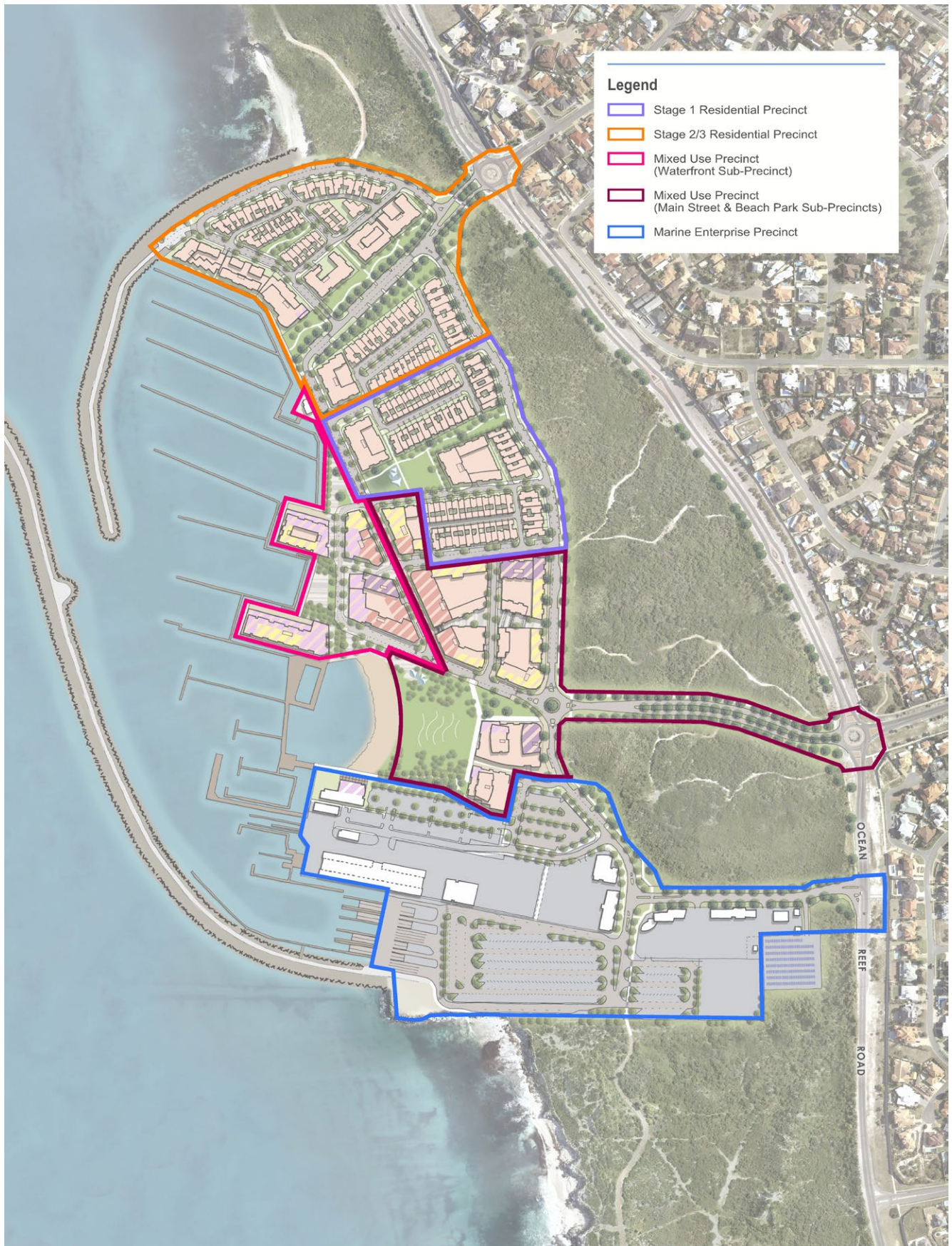


Figure 1: Ocean Reef Marina - Precinct Locations

1.3 Site Context and Description

The Ocean Reef Marina (the site) is a coastal location within the City of Joondalup's northern growth corridor and is approximately 25 kilometres north from the Perth CBD, 12 kilometres south of the Mindarie Keys Marina, 6 kilometres west of the Joondalup strategic metropolitan centre, and nine kilometres north of the Hillarys Boat Harbour.

The Joondalup City Centre is the CBD of the north west corridor with over 500,000m² net lettable area of retail and commercial floor space, and home to the Joondalup Health Campus, Edith Cowan University Joondalup Campus and the Western Australia Police Academy.

This coastal area is adjacent to developed residential areas and approximately 2.5 kilometres south of Iluka and four kilometres south of Burns Beach. The site is home to the existing Ocean Reef Boat Harbour, Marine Rescue Whitfords, the Ocean Reef Sea Sports Club and Joondalup City Returned and Servicemen League Sub-branch, including the ANZAC Memorial, and these facilities will all be incorporated into the new marina development.

The location and the concept for the development integrates built form into the topography of the site and aims to:

- Maximise views for new development;
- Minimise potential impacts on the ocean outlook of the existing residents in the Ocean Reef suburb; and
- Settle the development into the landscape.

The Precinct has been designed having regard to the Bush Forever backdrop with a sensitive development interface proposed along the southern, eastern and northern boundary.

The location 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), and the surrounding residential development of the Ocean Reef suburb.

Primary access to the site will be via three points from Ocean Reef Road including:

- A southern gateway at Boat Harbour Quays to provide the main access to the Marine Services Precinct;
- A central gateway via an extension of Hodges Drive, providing a direct link to the Mitchell Freeway, Joondalup City Centre and Joondalup Train Station; and
- A northern gateway providing the main access to the Residential Precinct.

In addition, active transport access includes a continuation of the north-south coastal Principal Shared Path, the Sunset Coast Path, for cyclists and pedestrians, connecting links to the local network of footpaths and cycleways, and design considerations for legible circulation and safe movement within the marina and the key visitor destinations.

1.4 Local Climate and Conditions

The site has a typically Mediterranean climate with hot, dry summers through December to February with average air temperatures range from 17.5 – 30°C (63.5 – 86°F), and mild wet winters through June to August with average air temperatures ranging from 8 – 19°C (46.4 – 66.2°F).

In summer the average sea temperature ranges from 20.9 – 22.8°C (70 – 73°F). Temperatures reach their peak in March with an average of 23.4°C (74°F), and dip in winter to 19.4 – 21.3°C (67 – 70°F).

December experiences the most hours of daylight with sunrise at approximately 5am and sunset at 7:30pm. June has the least hours of daylight with sunrise at approximately 7:15am and sunset at 5:20pm.

The wind regime is dominated by the effects of the land-sea interface where offshore land breezes (easterly) are common in the morning and afternoon sea breezes (south-southwest) are common in the warmer months (Figure 2).

1.5 Site Features and Natural Environment

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 shallow rock platforms, nearshore reefs and rocks. The geological setting and subsurface units within the development envelope comprises of calcareous sands that form sandy beaches and Tamala Limestone outcrops that form the cliffs along the coast.

The majority of the subject land contains undulating dunal topography which varies in height up to approximately 12 metres. Modifications to the natural topography have occurred on-site as a result of construction of the existing groyne, car park, boat ramps and club buildings.

The site is bounded to the west by the Indian Ocean including the Marmion Marine Park 'A' Class reservation. The Marine Park has a high habitat diversity and conservation amenity.

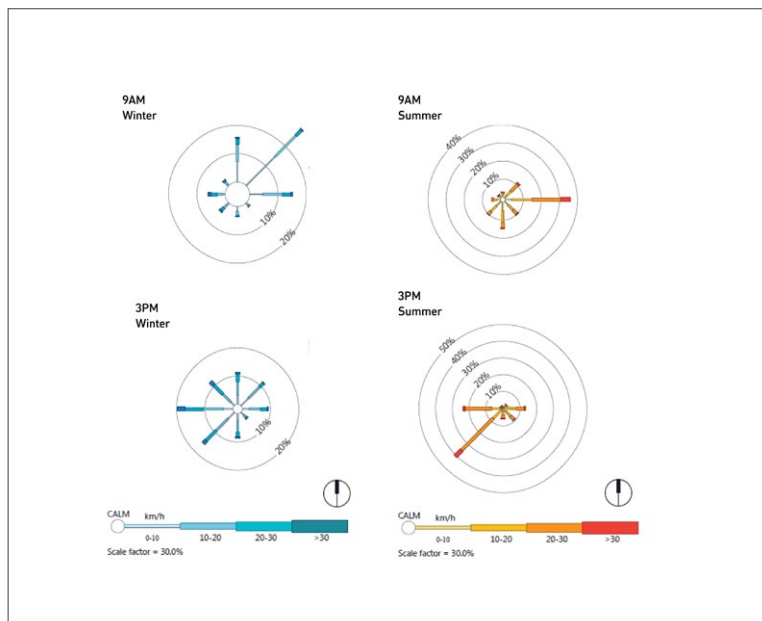


Figure 2: Wind Rose

A new and protected man-made beach with a safe swimming area is proposed in a central location of the site.

The site will be bounded on the landward side by the Bush Forever site 325 (BF 325) which spans between Burns Beach and Hillarys. Impacts to BF 325 will be minimised through management techniques including but not limited to:

- Retention of a north-south linkage of remnant vegetation between Ocean Reef Road and the site area (except where entry roads are provided);
- A Construction Environmental Management Plan will be prepared to address the management of terrestrial construction activities on the site, including clearing and earthworks;
- Rehabilitation of identified areas of remnant vegetation within the BF 325;
- Fencing and formalised access tracks through BF 325 (using existing cleared areas) to prevent unauthorised access to retained vegetation; and
- Interpretive signage to inform the community of the environmental and heritage values of the area.

The groundwater within the Improvement Scheme area flows in a westerly direction towards the coastline. There are no naturally occurring permanent surface water bodies, wetlands, or ephemeral streams within the Improvement Scheme area.

Water run-off will be captured on-site and treated, ensuring pollutants and nutrients in the water are stripped prior to returning to groundwater utilising Water Sensitive Urban Design principles. The inclusion of rocks, trees, crossing points, information signage and art will provide an opportunity to tell the 'story' of and celebrate water movement across site. Drainage and swale basins will be designed in a way that improves the community's experience of the public realm. Further information is contained in the Local Water Management Strategy for the Ocean Reef Marina.

There is a grade change across the marina site. Whilst some sites and areas of public realm may require retaining structures the aim of the Design Guidelines is to ensure that level changes are integrated into the built form wherever possible and that wall heights in the new works are minimal and that all edges are activated with building or vegetation as opposed to having blank walls.

1.6 Topography and Soil Condition

Existing views from ridgelines and focal points into good quality vegetation, both within and external to the site can be retained and utilised to provide a backdrop to the proposed new development.

The Department of Mines and Petroleum geological mapping indicates that Safety Bay Sand and Tamala Limestone are expected on-site. Based on the results of the Preliminary Geotechnical Investigation for the site, the land is generally sand and limestone and is likely to be underlain by these materials to depths greater than 70 metres. No surface expressions of karst or cavernous features were identified on-site during investigations. The assessed likelihood of the occurrence of caves within the terrestrial component is considered to be "low". The site classification is likely to be "Class A", appropriate for most Perth sand sites, and shallow pad and strip footings are likely to be suitable. The soil types present do not represent a risk of acid sulphate soils within the terrestrial or marine components of the location.

Development is anticipated to include cut to fill, to obtain desired development levels. The site can be developed in such a way that the cut to fill balance is approximately equal.

Desired Urban Character

For any development within the Precinct, priority shall be given to achieving high quality built form, public access and characterful landscape outcomes in open space areas. The desired urban character of the Precinct is:

- Promote high quality-built form and landscaping befitting of a world class marina environment;
- Enhance all public realm experiences through appropriate architectural edging and design interface responses;
- Achieve a distinctive architectural character that celebrates the unique physical and environmental qualities of the place; and
- Reflect the demands of the harsh coastal conditions through high quality, attractive, innovative and sustainable materials and construction techniques which harmonise with the surrounding setting.



Image 2: Coastal Townhouses - Shell Cove

1.7 Sub-Precincts

The Precinct is further defined as sub-precincts (Figure 4). The specific sub-precinct objectives are as follows:

Stage 1 Subdivision Sub-Precincts

Apartments

Objectives:

- The predominant form of development is to be apartment development
- Single dwelling(s) or grouped dwelling development is discretionary in this sub-precinct;
- Facilitates a diversity of housing choices in the Ocean Reef Marina;
- Facilitates an appropriate level of housing density and population intensity to support project sustainability goals;
- Optimises passive surveillance over key public realm areas; and
- Provides a built form scale and presence that supports the vision for the Ocean Reef Marina.

Hill view

Objectives:

- Facilitates a diversity of residential and lifestyle opportunities;
- Provides views from dwellings to the ocean and/or bushland;
- Facilitates larger homes; and
- Provides good surveillance over the coastal path along the Bush Forever edge.

Laneway

Objectives:

- Facilitates a diversity of residential and lifestyle opportunities;
- Contributes to a high-quality streetscape experience; and
- Optimises passive surveillance and activation of streetscapes.

Park edge

Objectives:

- Facilitates a diversity of residential and lifestyle opportunities;
- Contributes to a high-quality park and public realm edge; and
- Optimises passive surveillance and activation over key public realm areas.

Transition

Objectives:

- Facilitates a diversity of residential and lifestyle opportunities;
- Provides a compatible land use interface with the Mixed Use Precinct;
- Provides a complimentary built form relationship with the Mixed Use Precinct; and
- Supports business enterprise, diversity and growth.

1.8 Design Principles

The guiding principles of *State Planning Policy 7 Design and the Built Environment* (SPP 7) and the 10 principles of good design provide for the minimum design requirements for development within the Precinct. To achieve design excellence, development applications must demonstrate a higher standard across all principles. Any buildings which are required to meet design excellence shall be identified on a local development plan (LDP).

Table 1 identifies what good design means in the Precinct and establishes how design excellence shall be considered by a design review panel process.

SPP7 Design Principle	Evaluation	Applicability to Ocean Reef Marina Residential Precinct	Design Excellence
Context and character	Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.	<p>Transition from Mixed Use Precinct, urban development to conservation bushland.</p> <p>Response to local topography including the bushland backdrop, with lots oriented to have views via important corridors within the development area.</p>	<ul style="list-style-type: none"> delivers an intelligent and highly legible site-specific response to the characteristics of a local area. is highly responsive to the features and qualities of the natural and built environment. is highly responsive to Aboriginal culture and history, and significant post settlement heritage. plays a key role in enhancing a distinctive and memorable identity for the area. makes a significant positive contribution to the current and intended character of the locality.
Landscape quality	Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.	<p>Development shall fittingly respond to the adjacent public domain.</p> <p>Building setbacks will provide landscape framing to all public realm interfaces.</p> <p>Mature trees are achievable through designated areas on all lots.</p>	<ul style="list-style-type: none"> demonstrates that the enhancement and improvement of local environmental systems, flora and fauna is a priority. provides significant external amenity by exceeding requirements for establishing habitat and supporting mature trees. delivers highly-integrated, memorable public and private places that make a significant contribution to local identity and streetscape character. complements and enhances the current and intended future character of the local area. is supported by clear and sustainable management arrangements that will maintain or enhance the quality of constructed and natural landscapes over time.

SPP7 Design Principle	Evaluation	Applicability to Ocean Reef Marina Residential Precinct	Design Excellence
Built form and scale	Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.	Low scale, medium density residential development responds appropriately to future character of the Precinct whilst retaining a viewshed from existing Ocean Reef suburban development.	<ul style="list-style-type: none"> delivers a highly considered built form outcome (mass and height) that carefully and successfully negotiates between existing local character and an intended future character. intelligently mitigates negative impacts on the amenity of neighbouring properties. delivers exceptional and tangible amenity to the public realm.
Functionality and build quality	Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.	A diverse mix of housing typologies, sizes and configurations will be delivered to meet the needs of the future community.	<ul style="list-style-type: none"> employs innovation and creativity to meet the current and future needs of users. demonstrates functional benefits over the full life-cycle of the development by enhancing operational efficiency, minimising maintenance and incorporating futureproof aspects. achieves excellent build quality and demonstrates durability of materials, systems and finishes that are well-integrated with the overall design intent and responsive to climactic conditions.
Sustainability	Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.	Building resilience and response through climate responsive design principles in the Design Guidelines, and requiring development to demonstrate its environmental performance.	<ul style="list-style-type: none"> demonstrates that the sustainability of the built environment is a priority. delivers ambitious environmental, social and economic outcomes that will assist promote the identity of the local area as a sustainability hub. legibly employs passive solar design principles and active sustainability mechanisms across the development and site. positively contributes to the broader context of natural features and ecological processes.
Amenity	Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.	Beachfront location provides high visual amenity to be celebrated through appropriate building orientation, outdoor living locations and pedestrian network.	<ul style="list-style-type: none"> exceeds standard requirements for internal and external amenity for occupants and visitors. delivers spaces that are generous, welcoming and universally accessible. makes a significant contribution to the amenity of the public realm. intelligently mitigates any negative impacts on the amenity of neighbouring buildings and places.

SPP7 Design Principle	Evaluation	Applicability to Ocean Reef Marina Residential Precinct	Design Excellence
Legibility	Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.	Create distinctive and recognisable building edges throughout, with high quality façades to enhance public realm interfaces.	<ul style="list-style-type: none"> establishes a very high degree of implicit legibility – at building, site and precinct scales - through built form and landscape design, without reliance upon active mechanisms such as signage systems. delivers seamless physical and visual integration with broader existing movement networks.
Safety	Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.	Dwelling orientation, lighting to the adjacent public realm and carefully located vehicle entries will support a safe and secure environment.	<ul style="list-style-type: none"> establishes a very high degree of implicit safety through built form and landscape design.
Community	Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.	A wide and diverse community will evolve through a mix of household living opportunities.	<ul style="list-style-type: none"> offers an inclusive and equitable response to local community needs and broader social context, now and into the future. strengthens communities by promoting active, diverse and vibrant places and spaces.
Aesthetics	Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.	The local coastal landscape will influence the materials and colour selection for future development, creating a distinctive, attractive and contemporary place.	<ul style="list-style-type: none"> results in a sophisticated, elegant and coherent design solution at all scales. establishes a distinctive and memorable identity. makes a significant contribution to the character of the locality.

Table 1: Application of State Planning Policy 7.0 within the Precinct

1.9 Relationship to Other Planning Documents

These Design Guidelines have been prepared under Clause 16(4) of the Ocean Reef Marina Improvement Scheme. These Design Guidelines are intended to be read with State Planning Policy 7.3 Residential Design Codes Volume 1 (SPP 7.3 Vol 1) for low and medium density development and State Planning Policy 7.3 Residential Design Codes Volume 2 (SPP 7.3 Vol 2) for high density development. Both SPP 7.3 Vol 1 and Vol 2 are adopted as written (as amended) and are supplemented by Chapters 2 – 5.

Due regard shall be given to the Design Guidelines in the determination of any subdivision and development applications.

If the provisions of these Design Guidelines are at variance with a requirement of an Improvement Scheme policy, the Design Guidelines provisions shall prevail.

If the provisions of these Design Guidelines are at variance with a requirement of a LDP, the LDP provisions shall prevail.

If the provisions of these Design Guidelines are at variance with a requirement of the Improvement Scheme, the Improvement Scheme provisions shall prevail.

If the provisions of these Design Guidelines are at variance with a requirement of SPP 7.3 Vol 1 or SPP 7.3 Vol 2, the Design Guidelines provisions shall prevail.

1.10 Design Review and Approval Process

This section is divided into the process for single house and grouped dwellings, and separately, multiple dwellings.

Single house(s) and grouped dwelling development proposals

Prior to commencing the formal approval process for the design of new homes DevelopmentWA has arranged for one meeting (at no cost) with the Ocean Reef Marina Estate Architect to discuss these Design Guidelines and the process that the applicant, architect or builder should follow to ensure you receive design endorsement in a timely manner.

Multiple dwelling and non-residential development proposals

For Multiple Dwelling and Non-residential development proposals, the design approval process (including Design Review) shall follow the process identified in Figure 3.



Figure 3: Design Review and Approvals Process

1. Pre-lodgement Stream 1 (Single Dwellings)

- Applicant submits proposal to **DevelopmentWA** for assessment by the **Estate Architect**
- **DevelopmentWA/Estate Architect** endorse plans
- Move to Stage 3.

2. Pre-lodgement Stream 2

- Applicant submits proposal to **DevelopmentWA** for assessment by the **Estate Architect**
- **DevelopmentWA/Estate Architect** undertake to review the plans through the nominated **Ocean Reef Marina Design Review Panel**, comprised of nominated professionals and government representatives
- **DevelopmentWA/Estate Architect** endorse plans and provide written support to **DPLH** to allow lodgement of a Development Application.
 - Up to three reviews may be required to achieve final endorsement

3. Development Application

- Development Application is lodged with **DPLH**, in accordance with the requirements of the Ocean Reef Marina Improvement Scheme.
- **DPLH** formally receives the Development Application and undertakes consultation with government stakeholders for 42 days
- The **WAPC** determines the application within 60 days (if not publicly advertised) or 90 day (if publicly advertised). Advertising is at the discretion of **DPLH**.
- The **WAPC** issues determination, approval, approval subject to conditions or refusal. Determination is issued to all stakeholders that were consulted.
- Should the applicant be aggrieved by the decision, the applicant has a right to request **SAT** review the decision.

4. Building Permit Review

- Building Permit drawings are submitted to **DevelopmentWA/Estate Architect** for approval.
- **DevelopmentWA/Estate Architect** approves Building Permit drawings for submission to the **City of Joondalup**.

5. Building Permit

- Building Permit drawings are submitted to the **City of Joondalup** for approval.
- **City of Joondalup** approves Building Permit drawings.

1.11 Document Structure and Use

These Design Guidelines apply to all development within the Precinct, and are presented as a series of design elements, each dealing with a different aspect of building siting and design. Each design element includes the following sections to assist proponents in preparing their designs and applications:

*A statement of **intent** explains the intended outcome and its relevance to the achievement of the Precinct's vision, aims and objectives.*

*The **element objectives** define the intended outcome underpinning the mandatory acceptable outcomes. Development is to achieve each Element Objective.*

*The **acceptable outcomes** will collectively ensure that the Intent and Element Objectives are met, however are not a comprehensive 'deemed-to-comply' list. The Acceptable Outcomes must be met for all residential development proposals.*

*The **design guidance** section recommends some additional measures by which a development can achieve a higher level of sustainable design, community interaction, and architectural character and are recommendations which assist the achievement of applicable Acceptable Outcomes.*

The type of development that is being proposed will dictate the specific sections of the Design Guidelines that are applicable. As a general rule, all Chapters are relevant to single houses and grouped dwellings, and Chapters 2 - 4, and 6 are relevant to Apartments.

Outlined below is a visual reference to assist in the use of these Design Guidelines:

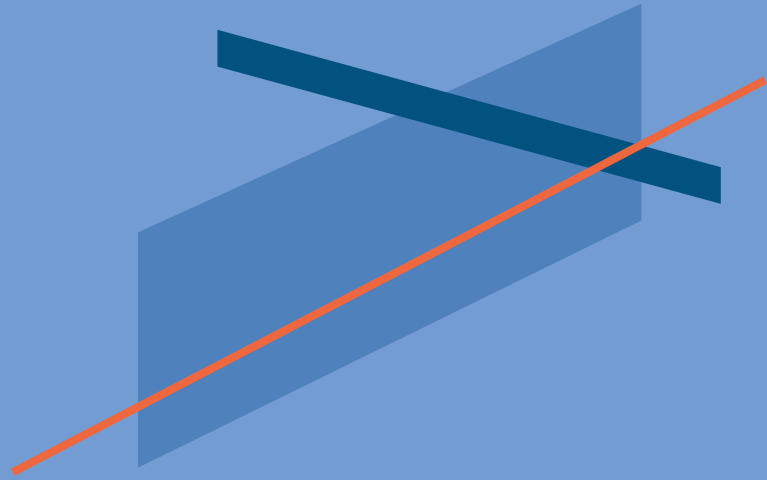
DEVELOPMENT TYPE	DESIGN GUIDELINES				
	Chapter 2 Primary Controls	Chapter 3 Common Design – Siting the Development	Chapter 4 Common Design – Designing the Building	Chapter 5 Single Lot Building Design Elements	Chapter 6 Appendices
Apartments	✓	✓	✓	✗	✓
Single House(s) and Grouped Dwellings	✓	✓	✓	✓	✓

Table 2: Application of Design Guidelines



2.0

Primary Controls



2.0 Primary Controls

2.1 Primary Controls

Apartment Development

The controls identified in the Design Guidelines Primary Controls Table (Table 3) are applicable to all apartment development within the Precinct and replaces SPP 7.3 Vol.2 - Primary Controls Table 2.1 in its entirety.

Single House and Grouped Dwelling Development

The controls identified in the Design Guidelines Primary Controls Table (Table 3) are applicable to all single house(s) and grouped dwelling development within the Stage 1 Residential Precinct and supplements SPP 7.3 Vol.1 - Table 1 and Tables 2a and 2b prior to 1 September 2023. From 1 September 2023 onwards SPP 7.3 Vol. 1 Table C and D is replaced by Table 3 below. Elements of the below are consistent with Ocean Reef Marina Improvement Scheme.

Key Controls	STAGE 1 SUB-PRECINCTS				
	Apartments – Type B	Laneway	Hill-view	Park-edge	Transition
PRIMARY CONTROLS					
Apartments	D	D	D	D	D
Grouped Dwellings	D	D	D	D	D
Single House(s)	D	P	P	P	P
SITE PLANNING					
Development Site Frontage Minimum (taken from the frontage(s) permitted for vehicle access shown on the relevant LDP)	25.0m	6.0m	10.0m	6.0m	6.0m
Development Site Area Minimum (m ²)	1,000m ²	80m ²	250m ²	180m ²	150m ²
Average Multiple Dwelling Size Minimum (for multiple dwelling sites; based on residential plot ratio area)	75m ²	90m ²	90m ²	90m ²	90m ²
Plot Ratio Maximum	1.0	1.0	1.0	1.0	1.0
Open Space – Ground Level Minimum ⁽¹⁾ Subject to Clause 3.1	20%	30%	30%	30%	20% ⁽¹⁾ - 30%

Key Controls	STAGE 1 SUB-PRECINCTS					
	Apartments – Type B	Laneway	Hill-view	Park-edge	Transition	
Deep Soil Area Minimum ⁽¹⁾ Subject to Clause 3.1	As per SPP 7.3 Vol.2	18m ²	18m ²	18m ²	9m ² ⁽¹⁾ - 18m ²	
BUILDING HEIGHT						
Tops of External Walls – Minimum (at the building line of the Primary Interface or Mixed-Use Interface)	9.0m (3 storeys)	3.0m (1 storey)	6.0m (2 storeys)	6.0m (2 storeys)	6.0m (2 storeys)	
Tops of External Walls Maximum	Refer to Building Height Plan (Figure 5)					
Roof Height Maximum (inclusive of structures and projections)	Refer to Roof Height Plan (Figure 7)					
Building Height Envelope for Third-Storey and above	Refer to Building Height Plan for specific dimensions. Otherwise, as per SPP 7.3 Vol 2.	N/A	Within the Building Setbacks of the First Level	Refer to Building Height Plan for specific dimensions. Otherwise, only within the Building Setbacks of the First Level for up to 20.0m from one Primary Interface boundary.	Refer to Building Height Plan for specific dimensions.	
BUILDING SETBACKS – Minimum Dimensions (Refer to Building Interface Plan, Figure 6)						
Primary Interface Building Setback	3.5m	3.5m	Dwelling: 3.5m Garage: 4.5m	Dwelling: 3.5m Garage: 4.5m	N/A	
Primary Interface Projections Setback	2.0m	2.0m	2.0m	2.0m	N/A	
Secondary Interface Building Setback	Ground and Upper Levels	2.0m	2.0m	2.0m	2.0m	
Secondary Interface Projections Setback		nil	nil	nil	nil	
Side Street Interface Building Setback	N/A	1.5m	1.5m	1.5m	N/A	
Side Street Interface Projections Setback	N/A	nil	nil	nil	N/A	
Laneway Interface Type 1 Building and Projections Setbacks	Ground Level	Dwelling: 2.0m Garage: 0.5m	Dwelling: 1.0m Garage: 0.5m	N/A	Dwelling: 1.0m Garage: 1.0m	Dwelling: 1.0m Garage: 0.5m
	Upper Levels	0.5m	0.5m	N/A	0.5m	0.5m
Laneway Interface Type 2 Building and Projections Setbacks	Ground Level	N/A	N/A	Dwelling: 3.5m Garage: 1.0m	N/A	N/A
	Upper Levels	N/A	N/A	3.5m	N/A	N/A

Key Controls		STAGE 1 SUB-PRECINCTS				
		Apartments – Type B	Laneway	Hill-view	Park-edge	Transition
Laneway Interface Type 3 Building and Projections Setbacks	Ground Level	N/A	N/A	N/A	Dwelling: 2.0m Garage: 4.0m	N/A
	Upper Levels	N/A	N/A	N/A	2.0m	N/A
Side Boundary Setbacks	Ground Level and Upper Levels	3.0m	<p>One side: Nil setback for 100% of distance between minimum setbacks for Primary Interface/Mixed Use Interface and Primary Interface/Laneway Interface/Rear Boundary;</p> <p>Second side (to abutting site): Nil setback for 65% of distance between minimum dwelling setbacks for Primary Interface/Mixed Use Interface and Primary Interface/Laneway Interface/Rear Boundary;</p> <p>Non-nil boundary walls to have a minimum setback of: 1.0m with no openings; 1.2m with minor openings; and, 1.5m with major openings.</p>			
Rear Boundary Setbacks	Ground Level and Upper Levels	N/A	N/A	N/A	N/A	N/A

Table 3: Primary Controls Table

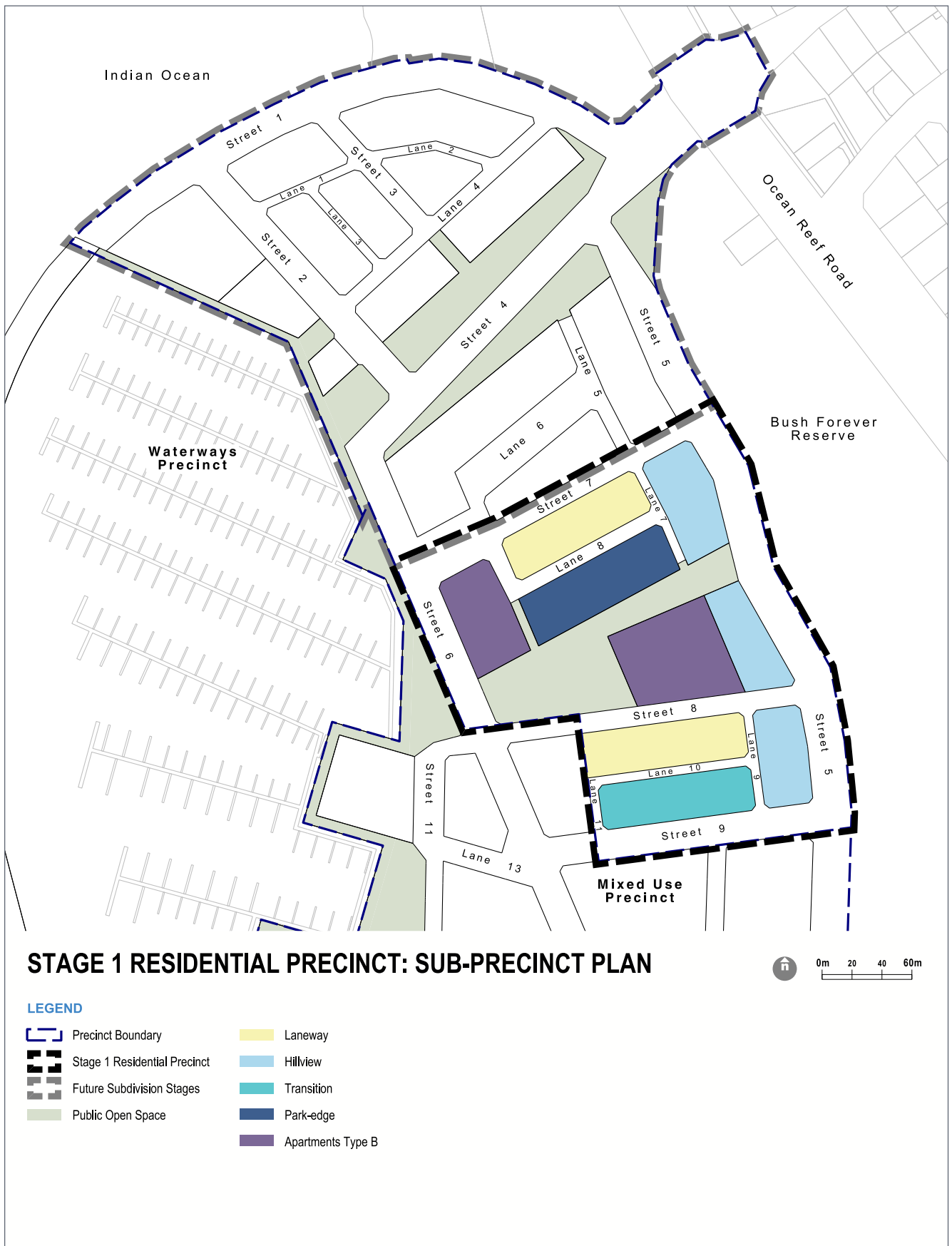


Figure 4: Sub-Precinct Plan

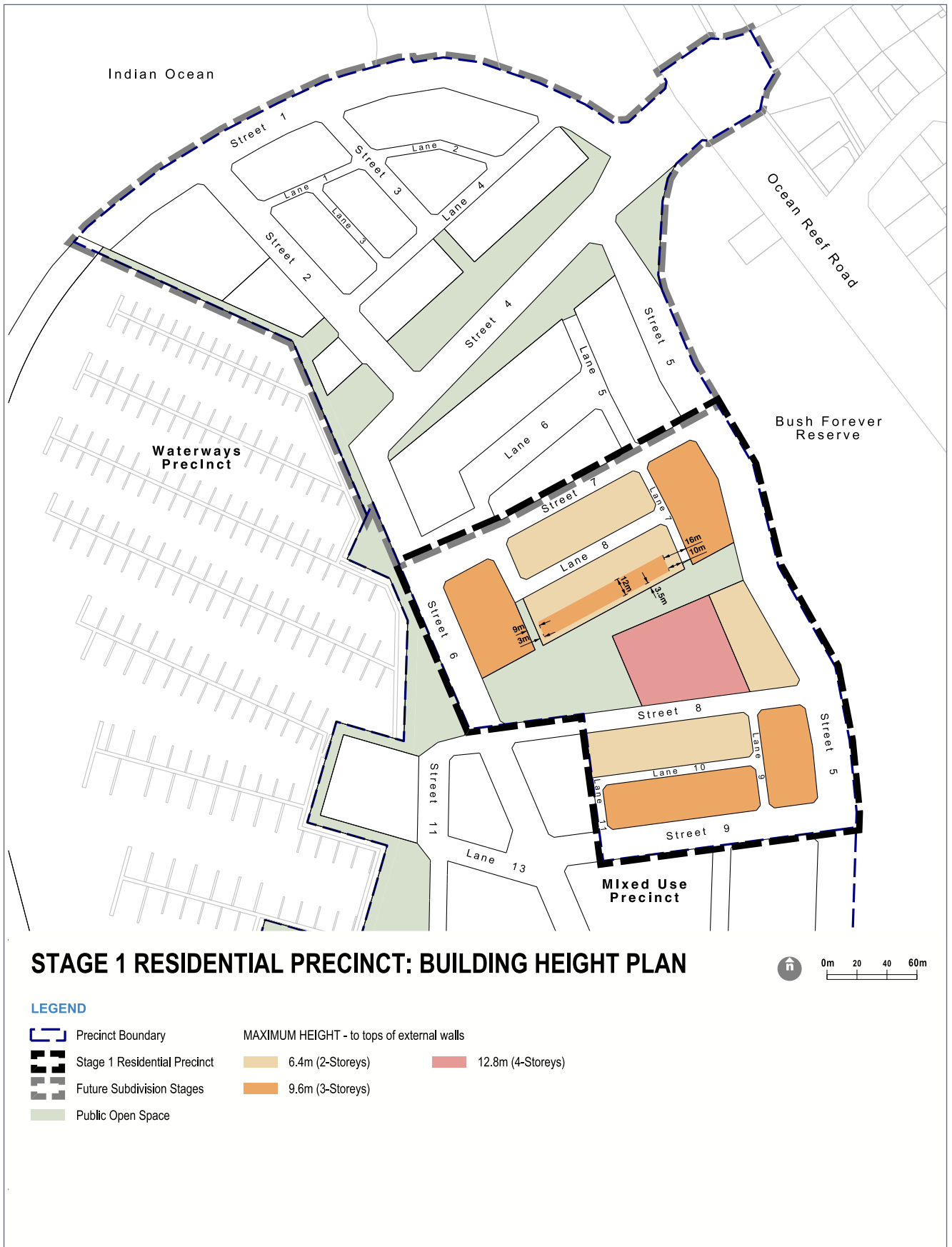
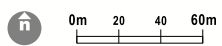


Figure 5: Building Height Plan



STAGE 1 RESIDENTIAL PRECINCT: BUILDING INTERFACE SETBACK PLAN



LEGEND

- | | | |
|------------------------------|-----------------------|----------------------------|
| Precinct Boundary | Primary Interface | Laneway Interface - Type 1 |
| Stage 1 Residential Precinct | Secondary Interface | Laneway Interface - Type 2 |
| Future Subdivision Stages | Side Street Interface | Laneway Interface - Type 3 |
| Public Open Space | Mixed Use Interface | |

Figure 6: Building Interface Setback Plan

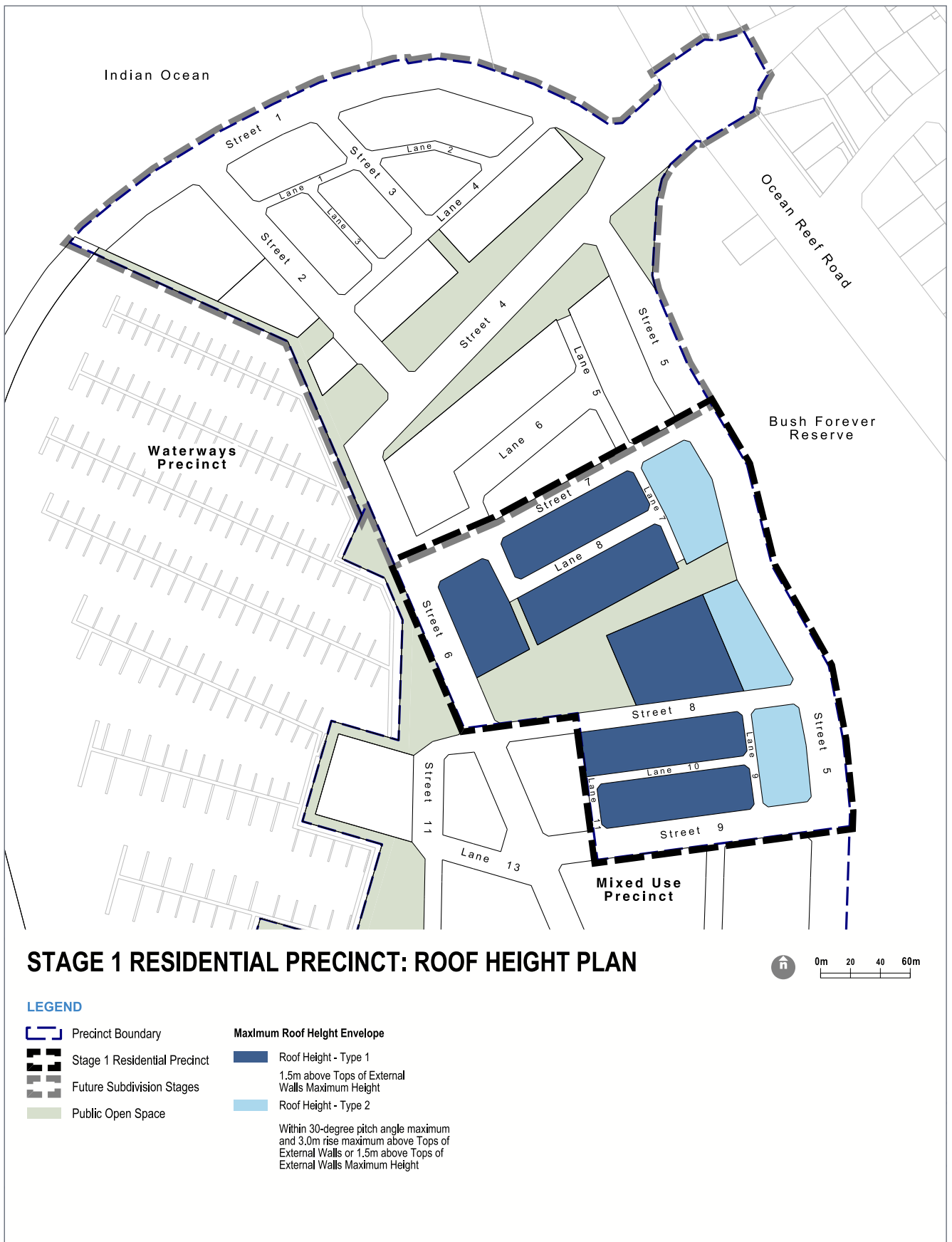
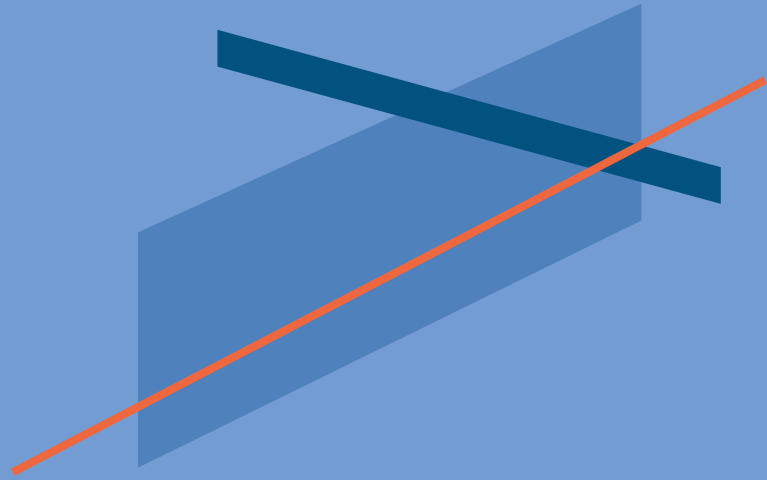


Figure 7: Roof Height Plan



3.0

Common Design -
Siting the Development



3.0 Common Design – Siting the Development

All development within the Precinct shall reference these Design Guidelines, the Improvement Scheme and where silent, Part 3 of SPP 7.3 Vol 2 for all intent, related elements, element objectives, acceptable outcomes and design guidance for all sections listed under Chapter 3.

The following sections of Part 3 of SPP 7.3 Vol 2 are adopted within these Design Guidelines without amendment:

- 3.1 Site analysis and design response
- 3.2 Orientation
- 3.4 Communal open space
- 3.5 Visual privacy

3.1 Tree Canopy and Deep Soil Areas

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 3.3 Tree Canopy and Deep Soil Areas are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 3.3.

Element Objectives

1. Ensure the provision of trees and gardens will contribute to the ecology, character and amenity of the Ocean Reef Marina.
2. Contribute to the quality and amenity of the adjacent public realm through the development of quality private landscaping.

Acceptable Outcomes

1. For lot areas measuring between 80m² to 700m² – a minimum provision of two small trees and a minimum deep soil area width of 2m is applicable. This requirement can be achieved in two separate locations or as a combined area. The required deep soil area per tree is 9m² (this area shall be open to the sky with no building overhang). This provision is applicable to all types of development.
2. For lots within the Transition sub-precinct where a development incorporates an adaptable/robust ground floor building design component, a minimum provision of one small tree is applicable.
3. For lot areas greater than 700m² – Tables 3.3a and 3.3b of SPP 7.3 Vol.2 apply.



Figure 8: Possible Landscape Area Configurations

3.2 Public Domain Interface

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 3.6 Public Domain Interface are applicable to all developments.

AO 3.6.5 of SPP 7.3 Vol 2 is replaced by AO 3.2.6 of these Design Guidelines. The following provisions supplement the detail within SPP 7.3 Vol 2 Part 3.6.

Element Objectives

1. Promote the activation and vitality of the public realm.
2. Buildings shall enhance the hierarchical system of landscaped streets and public spaces that give expression and character to the public domain.
3. To ensure materials/finishes are consistent with, and complement, building design.
4. To ensure fencing and balustrades contribute positively to the quality of the area and enable surveillance of the public realm.
5. The dwelling front elevation must include a major opening with transparent/clear glass, configured for passive surveillance. Roller shutters are not permitted on front facade windows.



Image 3: Building form and materiality achieve engaging outcome

Acceptable Outcomes

1. Developments on corner lots shall address both the primary and secondary streets and/or public realm and include strong architectural expression.
2. Blank walls, vehicle access and building services (e.g. bin store, booster hydrant) shall not exceed 20% of the total lot frontage to the public realm, except for developments on corners where no blank walls will be permitted.
3. A dwelling's front entry door is to be visible from the primary street and include glazing within the door or a sidelight provided adjacent to the door.
4. Respond to the coastal and natural aspects of the Ocean Reef Marina locale.
5. Respond appropriately to the topography and adjoining public realm.
6. Finished Ground Level shall not be altered by more than 200mm.
7. Front fencing and balustrades shall be designed to complement the built form design, utilising materials and colours that are consistent with the primary elevation.
8. Letterboxes shall be designed and finished in materials and natural colour tones to complement the dwelling appearance. Novelty letterboxes are not permitted.



Image 4: Dwelling design has direct interaction with the adjacent public open space

3.3 Pedestrian Access and Entries

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 3.7 Pedestrian Access and Entries are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 3.7.

Acceptable Outcomes

1. Private development shall provide lighting to the adjoining lane and public open space
2. Lighting shall be provided under awnings to illuminate the footpath below.
3. Front outdoor/security lights shall be operated via a timed motion sensor with manual over-ride.
4. Rear outdoor areas adjacent to laneways shall be well lit and incorporate motion activated light fittings.
5. Pedestrian access ways shall provide adequate lighting and natural surveillance to meet the *Safer Places by Design - CPTED Guidelines (WAPC)*.



Image 5: Vehicle access points that are legible

3.4 Vehicle Access

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 3.8 Vehicle Access are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 3.8.

Acceptable Outcomes

1. Vehicle access points are designed and located to enable convenient, efficient and safe vehicle access and egress within a functional and attractive landscape.
2. Driveway locations shall be in accordance with the LDP (where specified).
3. Driveways and crossovers shall be constructed of materials and colour tones to complement the dwelling appearance.
4. Car park entries shall be positioned to minimise their visual impact on the public realm and located away from main pedestrian entries.
5. Footpaths shall be maintained as the priority movement, with crossovers and car park entries terminating at the footpath.

3.5 Car and Bicycle Parking

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 3.9 Car and Bicycle Parking are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 3.9.

Objectives

1. Provide a component of visitor parking on-site for the convenience of accessibility.

Acceptable Outcomes


1. For multiple dwellings, up to 50% of the required visitor parking provision is permitted to be located within adjoining street embayments that are not greater than 100m from the development. Location of bays and occupancy use details to be assessed with application for individual sites for appropriateness.
2. For single houses visitor parking is satisfied within adjoining street embayments for all sub-precincts and are not required to be located on the lot, although this is permitted.
3. Integration of Electric Vehicle (EV) charging should be provided for both resident and visitor parking. It is recommended that electricity supply account for a minimum of 20% of total bays.



Image 6: Vehicle access points located from laneways and mews streetscapes

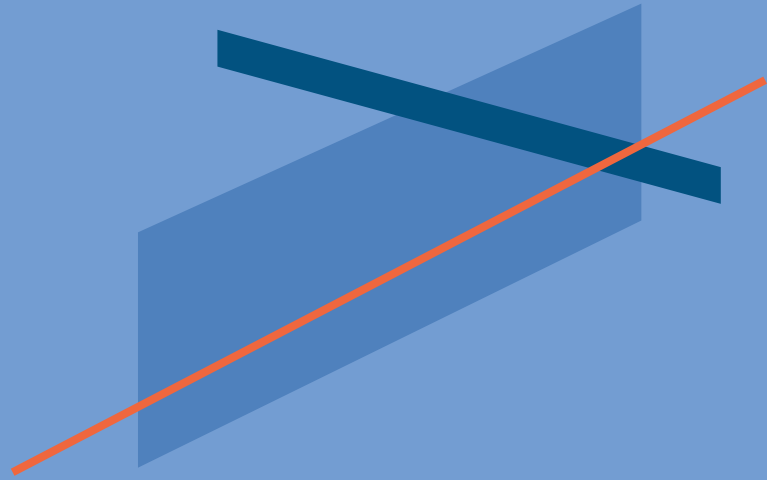


Image 7: Vehicle access arrangements that do not dominate the building design



4.0

Common Design -
Designing the Building



4.0 Common Design – Designing the Building

Development within the Precinct shall reference these Design Guidelines, the Improvement Scheme and where silent, Part 4 of SPP 7.3 Vol 2 for all intent, related elements, element objectives, acceptable outcomes and for all sections listed under Chapter 4.

The following sections of Part 4 of SPP 7.3 Vol 2 are adopted within these Design Guidelines without amendment:

- 4.3 Size and Layout of Dwellings
- 4.4 Private open space and balconies
- 4.5 Circulation and common spaces
- 4.6 Storage
- 4.7 Managing the impact of noise
- 4.8 Dwelling mix
- 4.9 Universal design
- 4.11 Roof Design
- 4.13 Adaptive Reuse
- 4.17 Waste management
- 4.18 Utilities



Image 8: Shading of outdoor spaces at ground or in the form of roof top terraces

4.1 Solar and Daylight Access

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 4.1 Solar and Daylight Access are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 4.1.

Element Objectives

1. Ensure indoor and outdoor living areas have adequate access to sun during winter and effective shading in summer.

Acceptable Outcomes

1. Eaves must be a minimum depth of 600mm for north facing walls that are setback 1.2m or more from the boundary. Eaves overhangs to walls adjacent to side boundaries must be a minimum 450mm.
2. All nil setback walls must be parapet walls and extend 300mm above the gutter.
3. Openings not shaded by eave overhangs, such as ground floor windows on a two-storey building, must be shaded with an appropriate shading device e.g. awning or louvre.
4. Glazing to habitable rooms facing east and west must have vertical protection, such as louvered solar-shutters, blinds, or screening devices. Roller shutters are not permitted.

Design Guidance

1. Consider minimising the extent of glazing to the east and west, except where adequate shading is provided as an integral part of the architecture of the built form.

4.2 Natural Ventilation

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 4.2 Natural Ventilation are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 4.2.

Element Objectives

1. Achieve effective passive ventilation through the house.

Acceptable Outcomes

1. Breeze paths must not crank more than 35 degrees in their passage through the house plan.
2. An operable window with a minimum area of 1m² must be provided for habitable rooms.

Design Guidance

1. Consider increasing the operable area of windows for greater ventilation.
2. Consider the use of operable non-glazed materials in window openings where improved ventilation and the control of solar penetration is required.
3. House plans with narrow footprints to assist with breeze path access and cross ventilation are encouraged.
4. Consider providing two external openings to each habitable room to improve cross flow ventilation.

5. Louvre-type windows are encouraged to increase ventilation.
6. Installation of security screens to ventilation openings is recommended to encourage opening of windows and doors.
7. Place smaller openings to the windward side of the home and larger openings to the downwind side for optimal breeze intake.
8. When breeze-blocked areas are unavoidable, locate non-habitable rooms in these areas.



Image 9: Orientation of outdoor spaces to maximise ventilation opportunities

4.3 Façade Design

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 4.10 Façade Design are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 4.10.

Element Objectives

1. Create a coastal built form character specific to Ocean Reef Marina via a consistent palette.
2. To ensure long life and ease of maintenance for the development which is cognisant of environmental conditions.
3. Promote the use of materials and colours which minimise heat gain in summer and improve thermal comfort in winter.

Acceptable Outcomes

Primary Elevation

1. Development shall incorporate a variety of materials and colours that respond to the Precinct's desired character and avoid highly reflective materials that could cause glare and discomfort.
2. Homes should have well-articulated façades by providing at least one indentation or projection to the building frontage. The projection or indentation should be at least 450mm deep (excludes garages).
3. Parapet walls to side boundaries must not protrude forward of the fascia or above the soffit line of the roof (unless covering off the eaves line of the front façade).

Secondary Elevations

1. Homes located on a corner or with the side boundary adjacent a street or park shall provide a secondary elevation.
2. Secondary elevations shall be an extension of the primary elevation building features (i.e. colours, materials and other building design features such as windows, verandahs etc). The treatment of the secondary elevation shall continue back from the corner of the home (nearest the secondary street/park/public access way) for at least 3m.
3. Where open fencing is proposed for the full length of the secondary elevation, front elevation materials and finishes shall be continued for the full length of the secondary elevation or to all areas visible from public view.

Design Guidance

1. Use a lighter colour on unshaded walls that are facing east and west to reduce solar heat absorption.
2. Consider using reverse-brick or stud framed walls for east and west elevations to avoid ambient heat build-up.
3. Consider selecting primary building materials and finishing treatments that have low-embodied energy.
4. Consider using certified plantation timber as a structural timber.
5. Consider using reflective insulation fabric in the cavity brick walls (installed to manufacturer's specifications).
6. Consider selecting materials based on their thermal mass and their lifecycle costs.
7. Select façade and roof materials which are durable and resistant to impacts of a coastal environment.

4.4 Design Excellence Façades

The following provisions are applicable where identified on an Local Development Plan (LDP).

Intent

Buildings that are identified as requiring design excellence façades shall be well designed and in their context should be memorable, inspirational and appealing. They should serve a purpose beyond ornamentation and create a sense of place by contributing to the public realm.

Element Objectives

1. Nominated building façades depicted on the LDP exhibit design excellence, as determined by the Estate Architect or Design Review Panel.
2. The design of nominated buildings will define and reinforce the public realm and hierarchy of spaces within the Ocean Reef Marina.

Acceptable Outcomes

1. Quality, articulation of the façade, proportion, scale and massing, material selection and detailing all contribute to the achievement of design excellence.
2. Buildings shall be designed to be unique and memorable, representing a point of difference to other buildings in the Ocean Reef Marina.
3. In considering an application, the following principles and performance criteria to assist in determining the design excellence of nominated building facades:

Character – a development with its own identity

- achieves an iconic approach for the creation of the sense of place or vision for Ocean Reef Marina;
- new development integrates seamlessly into the coastal setting and reinforces local distinctiveness;
- building materials, construction techniques and details enhance local character; and
- new development promotes the re-establishment of local distinctiveness that builds on the past and reinvigorates locally distinctive patterns of development, landscape and culture to provide the area with a 'sense of place'.

Continuity and enclosure – A development where public and private spaces are clearly distinguished

- continuous building frontages and open spaces with few gaps that could leave streets lifeless and uninteresting;
- buildings are used to enclose spaces and separate private from public areas;
- new developments have open spaces and routes that are well-designed, attractive, safe and uncluttered;
- building materials are of a high quality, durable and easy to maintain;
- where applicable, well-designed communal open space relate to adjacent buildings; and
- the design of open spaces takes account of the microclimate conditions.

Legibility - A place that is easy to navigate

- The built form response is recognisable to help people understand where they are and find their way around;
- Design excellence facade buildings are visible at street level and be distinctive and memorable;
- The scale of the buildings and the design of the street interface inform the public about the nature of the route; and
- Well-designed building corners enhance legibility by creating visual interest and contribute to a distinctive identity.

Design Guidance

1. The merits of built form that warrant 'design excellence' need not be size related nor an overt and extravagant design language. However, there should be a uniqueness and authenticity that makes the building stand out to the point where it is different and befits its location.
2. Design excellence is achievable through the architectural expression of:
 - Building orientation.
 - Balconies and entrances.
 - Unique materials.
 - Architectural features.
 - Height differentiation.
 - Variation in building massing.



Image 10: Facade Design - Coastal built form character with a harmonious palette of materials and colours



Image 11: Facade Design - Examples of single house facades that are articulated through design and material diversity

4.5 Roof Design

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 4.11 Roof Design are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 4.11.

Acceptable Outcomes

1. Roofs, and roof decks, of multiple dwellings shall be designed to maximise functionality and amenity, integrating communal open space, utilities and infrastructure in an efficient manner that also considers surrounding context.
2. As much roof area as practical shall be finished to an acceptable standard which enables the use of roof space for solar panels that are able to be used as a component of the Precinct micro grid.
3. Orient functional roof top space in a manner which minimises exposure to prevailing winds.

4.6 Landscape Design

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 4.12 Landscape Design are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 4.12.

Element Objectives

1. To achieve a high-quality landscape outcome that enhances the character of the Ocean Reef Marina development and contributes to a unique sense of place.
2. To maximise the effectiveness of hardscape elements improve permeability and minimise the negative aspects of heat gain.
3. Hard landscape elements should complement building design in material, texture and colour. The incorporation of low-embodied energy materials such as local stone and timber is encouraged to reinforce sense of place.
4. Incorporation of native species and planting techniques which maximise water efficiency and reduce maintenance requirements.

Acceptable Outcomes

1. Paved areas must be planned to direct rainwater run-off onto garden areas. Paving must be limited to useable spaces such as paths, BBQ areas, and shaded outdoor living areas.
2. Tree species planted in the front gardens of north facing properties must consider solar passive design principles for the building.
3. Turf/lawn is to be limited to a maximum of 50% of the landscaped area of the site (excluding building area). All turf/lawn is to be of a waterwise variety.

4. A range of vegetation is required to be implemented that enhances the opportunity for the creation of wildlife habitat. Landscape plans should, where possible, consider adjacent landscaped areas with a view to increasing overall biodiversity.
5. Artificial turf is not permitted in front gardens or verges.

Design Guidance

1. Use trees and extended eaves to provide shading to external paving to reduce reflected heat load.
2. Minimise hard surfaces such as paving or concrete and maximise softscaped areas to reduce heat absorption and radiation during the summer months.
3. Where hard surfaces are needed, consider permeable surfaces such as gravels or permeable paving in order to reduce stormwater run-off.
4. Within landscape features, incorporate natural low embodied energy materials including local timber and stone.
5. Consider native ground covers as an alternative to lawn.
6. Consider planting trees, shrubs, and climbers to maximise shading to walls, windows and outdoor living areas.
7. Consider trees that have a high canopy and clear mid-storey to maintain natural ventilation and air movement.
8. Consider neighbours when selecting the type and location of trees to prevent loss of solar access into their homes during winter.
9. To assist in plant establishment, plant from May to August.
10. Consider incorporating trees within the property as this is the most economical and effective method of cooling.
11. Consider waterwise native or endemic planting in your garden.
12. Plant deciduous trees on the northern side of your property to protect your home from the summer sun whilst allowing sun to warm your house during winter.



Image 12: Tree lined car parks

4.7 Mixed Use

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 4.14 Mixed use are applicable to all Mixed Use developments in the Transition Sub-Precinct.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 4.14.

Element Objectives

1. Achieve longevity and flexibility in the performance of buildings by ensuring ground floor uses can adapt and transition over time.
2. To promote development in the Transition sub-precinct as appropriate for ground level activation via retail and commercial opportunities.

Acceptable Outcomes

1. Design separate entries for the adaptable non-residential component(s) and the residential component(s).
2. Adaptable buildings shall have a minimum ground floor to first floor ceiling height of 4.0m in their residential form.
3. Minimum floor area required for adaptable residential/non-residential use is 20m² (excluding non-habitable floorspace components).
4. Where Multiple Dwellings are to occur at the ground floor, development applications shall demonstrate how the design will enable conversion from residential to commercial or retail use in the future. This includes the street elevations, which shall be designed in the first instance as commercial/retail type frontages rather than domestic in scale and design aesthetic.

Design Guidance

1. Where a development provides an integrated component of non-residential development or adaptable building design at the ground floor level within a building, a nil setback to the street/lot boundary is permitted.



Image 13: Mixed Use Primary Interface

4.8 Energy Efficiency

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 4.15 Energy Efficiency are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 4.15.

Element Objectives

1. To provide high-performance housing that minimises energy use and maximises the comfort for occupants.

Acceptable Outcomes

1. Houses must achieve a 7-star NatHERS rating.
2. Energy rating must be undertaken by an accredited energy assessor with NatHERS Software.
3. Reflective sisalation (minimum R1.5) must be installed under roof sheeting to all outdoor living areas.
4. A solar hot-water or heat pump hot-water system with a minimum energy rating of 5-stars must be installed.
5. For single dwellings, a photovoltaic system or alternative renewable energy systems providing minimum 4kW per dwelling must be installed.
6. Multiple dwellings shall give preference to connecting to, both contributing and benefitting from, the solar panel micro grid.
7. Air conditioning systems must be minimum 3-star energy rating and sized appropriately for the space.
8. Clothes dryers shall have an energy consumption of no greater than 175kWh per annum.

Design Guidance

1. Consider utilising thermal mass within the insulated envelope of the building located in north-facing rooms with winter solar access.
2. Consider localised heating and cooling.
3. Consider insulating thermal mass including slab edges.
4. Position hot-water systems as close as possible to the area of most use (generally the main bathroom).
5. Consider the inclusion of evaporative air conditioners with a salinity level monitoring system or periodic/timed drain off system.
6. Where installed, electrical appliances are encouraged to be a minimum 4-star rating.
7. Consider insulating all hot water pipes.
8. Consider the installation of a 'master switch' to enable all appliances to be turned off simultaneously or install 'stand by' power switches.

4.9 Water Management and Conservation

The intent, related elements, element objectives, acceptable outcomes and design guidance described for this element at SPP 7.3 Vol 2 Part 4.16 Water Management and Conservation are applicable to all developments.

The following provisions supplement the detail within SPP 7.3 Vol 2 Part 4.16.

Element Objectives

1. The adoption of water efficient technologies will help to establish a successful water efficient and low maintenance garden.

Acceptable Outcomes

1. All toilets and washing machine cold taps are to be installed with dual plumbing to allow for the future connection to an alternative water source (e.g. rainwater), if available.
2. Provide sufficient space for future installation of a rainwater tank (minimum capacity of 3,000L) close to a rainwater down pipe/s, an external power outlet, a garden tap or mains water tank off point, and the dual plumbing pipe work. Water reuse infrastructure should be positioned to minimise visual impact on the public realm.
3. All shower fittings to be minimum 3-star WELS (Water Efficiency Labelling and Standards) rated maximum 7.5L/minute consumption.
4. All WCs to be minimum 4-star WELS rated.
5. All basin taps are to be 6-star WELS rated.
6. All other taps excluding outdoor and bath taps to be 4-star WELS rated.
7. All dishwashers have a 4.5-star WELS rating and all washing machines have a 4-star WELS rating.

8. An automatic irrigation system including a rain sensor using a programmable controller.
9. Water efficient in-line drip irrigation, or suitable alternative method, must be installed for all garden beds.
10. Private water bores are not permitted.
11. Any outdoor swimming pool or spa must be supplied with a cover that reduces water evaporation and is accredited under the Smart Approved WaterMark scheme.
12. Spray irrigation may be used on turf areas only.

Design Guidance

1. Install a 3,000L rainwater tank with pump and mains water backup valve connection to the dual plumbing as an alternative water source.
2. Consider establishing irrigation for the first two summers and then for extended dry-hot periods only.
3. Consider adopting hydrozoning principles which involves grouping plants with similar water needs together in an effort to be more water efficient.
4. Consider incorporating irrigation control technologies such as evapotranspiration sensors or soil moisture sensors to ensure efficient watering of landscaping
5. Consider grading to create micro swales and basins to help to recharge the soil moisture and reduce run-off from stormwater.

4.10 Construction and Materials

It is envisaged that Ocean Reef Marina will exemplify sustainable development principles which collectively contribute to the achievement of a six leaf EnviroDevelopment rating. In addition to environmentally sustainable development practices multiple dwelling development within the Precinct shall also use sustainable materials and construction methodologies, as outlined by the following Acceptable Outcomes

Acceptable Outcomes

1. All building construction to engage a reputable Waste Management Recycling Company who can commit to achieving an >80% recycling rate, and can monitor and verify recycling rates.
2. All concrete is to be composed of no less than 30% supplementary cementitious materials (SCM). Additionally, two of the following are required:
 - Steel with a recycled content of no less than 15%;
 - Pre-cast panels with no less than 15% supplementary cement materials;
 - Certified structural timber;
 - Bricks containing a recycled content of no less than 25%; and/or
 - Reused materials are utilized for no less than 30% of the structure.
3. The building envelope uses one or more of the following four materials:
 - Timber window frames which are Programme for the Endorsement of Forest Certification (PEFC) (eg. Australian Forest Standard (AFS) or Forest Stewardship Council (FSC) accredited);
 - Aluminum windows which contain less than 20% recycled aluminum or glass by mass;
 - Plasterboard consists of less than 10% recycled gypsum; and/or
 - Plasterboard consists of recycled paper.
4. Building services shall achieve one of the following:
 - 25% of the total cost of Polyvinyl Chloride (PVC) content is reduced through replacement with alternative materials;
 - PVC content is sourced from an International Organisation for Standardisation (ISO) 14001 certified supplier; and/or
 - Alternative products are used in preference of sheet metal.
5. Furniture, fixtures, equipment and finishes uses shall achieve one of the following:
 - Underlay consists of 95% recycled product;
 - Minimum 50% of the carpet has a rating of level 2 or greater under the Australian Carpet Environmental Classification Scheme;
 - Joinery is PEFC or FSC certified;
 - Materials which have a recycled content of no less than 60%

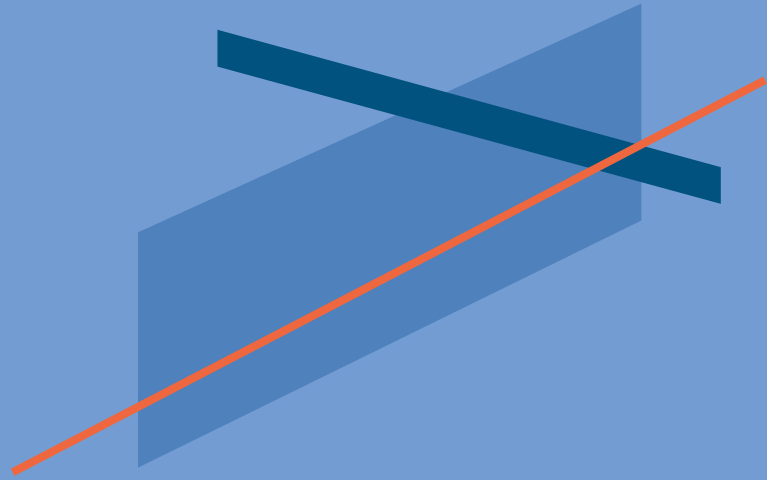
6. Emissions shall be reduced by achieving two credits of the following:

- Use low emission paints on no less than 95% (1 credit) or 100% (2 credits) of internal and external painted surfaces.
- Use lot emission sealants on no less than 95% (1 credit) or 100% (2 credits) of internal and external painted surfaces.
- Use low emission adhesives on no less than 95% (1 credit) or 100% (2 credits) of internal and external painted surfaces.
- All composite and engineered wood products (including exposed and concealed applications) comply with the following formaldehyde emission levels (or equivalent):
 - Panels with Particleboard base: E1 or better;
 - Panels with MDF base: E0 or better;
 - Other engineered wood products (LVL Glulam, Cross Laminated Timber (CLT), plywood etc) better than E0.



5.0

Single Lot Building Design Elements



5.0 Single Lot Building Design Elements

Development within the Precinct shall reference these Design Guidelines, the Improvement Scheme, Improvement Scheme Policies and where silent, SPP 7.3 Vol 1 will apply.

SPP 7.3 Vol. 1 Part C is replaced by the Single Lot Building Design Elements below. Where the Single Lot Building Design Elements are not specified below, the applicable SPP 7.3 Vol. 1 Part C R80 code design element requirements would apply.

5.1 Parking (Garages)

Intent

Garage forms and locations require careful consideration in the design phase to ensure they do not detract from the overall design intent or the intended character of the streetscape.

Element Objectives

1. Provide a diverse and attractive streetscape where the garage design does not dominate the building façade.
2. Achieve crossovers and on-site parking areas that do not have a negative visual and environmental impact on amenity and the streetscape

Acceptable Outcomes

1. The colour and material of the garage door must match or compliment the main dwelling.
2. The roof and design features of garages and carports must be consistent with the main dwelling.
3. The height and scale of garages must not dominate the primary elevation. Where the roof height of a garage is increased the remainder of the elevation should be modified to provide a consistent storey edge

4. Where an enclosed garage faces a street and adjoins a dwelling, the garage shall be at least 0.5m behind the dwelling alignment.
5. Garages must be located for access from the rear laneway where one is provided.
6. Carports may be permitted on design merits and where separate storage facilities are provided on the lot.

Design Guidance

1. Consider maximising the use of the garage by including additional space for storage, workspace or bin recess.
2. Consider providing a weather proof bicycle storage area.

5.2 Private Open Space and Balconies

Intent

Well-designed balconies, terraces and courtyards support indoor-outdoor living options. The appropriate configuration of private open space will vary according to site orientation and relationship to views and landscape. The configuration and detailing of private open space is also a significant design element of building façades and can be used in the articulation and materiality of the building to improve streetscape outcomes.

Element Objectives

1. Ensure that all houses include a well-designed, northern aspect outdoor living area.
2. Encourage multiple outdoor living areas, located around the site to facilitate seasonal use.
3. Balconies are integrated into the overall architectural form and detail of the building.

Acceptable Outcomes

1. All homes shall incorporate a balcony to its primary interface, with a minimum area of 10m².
2. Each dwelling has private open space accessed directly from a habitable room.

Design Guidance

1. Balconies located to the secondary frontage on corner lots are encouraged.

5.3 Storage

Intent

Site planning and dwelling design should include provision for storage proportionate to the size of the dwelling. Storage should be secure, fit for purpose, weatherproof and safely and easily accessed.

Element Objectives

1. Well designed, functional and conveniently located storage is provided for each dwelling.

Acceptable Outcomes

1. All dwellings must provide storage area under the main roof or within the garage area at the following minimum areas:
 - 1 and 2 bedroom dwellings - 4m² minimum
 - 3 bedroom dwellings (and greater) - 5m² minimum
2. Bin storage areas must be provided and screened from public view. No bins shall be stored in or adjacent to the laneways.

5.4 Roof Design

Intent

Considered design of the roof of the dwelling is an important element of the overall design and can contribute significantly to local identity.

The design of the roof should facilitate the use, or future use, of sustainable elements such as green roofs, wind generation, natural ventilation, photovoltaic applications and other future innovative design solutions.

Element Objectives

1. Roof forms are well integrated into the building design and respond positively to the street.
2. To consider the roof design as viewed from afar as part of a skyline.
3. Roofs are consistent with Figure 7 - Roof Height Plan

Acceptable Outcomes

1. The roof form complements the façade design and desired streetscape character.
2. A range of roof designs are permitted (i.e. hip, gable, skillion, partly flat).
3. Pitched roofs such as hipped or gable end roofs should be a minimum of 25 degrees pitch.
4. Skillion roofs should be a minimum pitch of 5 degrees, maximum pitch of 15 degrees. There must be a visible overhang to the skillion roof.
5. Sections of flat roof are permitted provided that the roof and gutter are concealed behind parapet walls.
6. Roof colours must have a solar absorption rating less than 0.5.
7. Roof ventilation to all roof spaces (not applicable to skillion roofs) is required in the form of vented gables, 'E' vent or similar appropriate alternative roof ventilators.

8. Minor projects such as verandahs and canopies may have shallower pitches. Curved roofs and flat roofs concealed by parapets shall also be permitted.
9. A 'Solar Collector' (photovoltaic solar panel or solar hot water system) that is attached to a residential building must be parallel to and within 300mm of the roof surface.



Image 14: Skillion roof form



Image 15: Gable roof form

5.5 Utilities

Intent

The early planning, co-ordination and design of utilities ensures that the siting and appearance of essential services do not compromise design outcomes.

Element Objectives

1. All utilities are located such that they are integrated into the design of the building and landscape so that they are not visually obtrusive from the adjacent public realm.

Acceptable Outcomes

1. Utility areas such as bin storage and service areas shall be screened from view from streets and public open spaces.

Telecommunication

1. If required, TV antennas must be located within the roof space or concealed from public view. Satellite dishes will be considered based on their location and view from the public realm.

Plant and Equipment

1. All service elements such as hot water units (including solar), rain water tanks, clothes drying areas and downpipes should be hidden from public view.
2. Solar panel collectors are the exception to this standard and should be located to maximise their effectiveness, while minimising nuisance on neighbours.

3. Air conditioning units must match the colour of the roof.
4. Meter boxes must match the wall colour.
5. The installation of security shutters is not permitted. To reduce impact on the streetscape, alternatives such as security mesh or protective film to glazing should be considered.

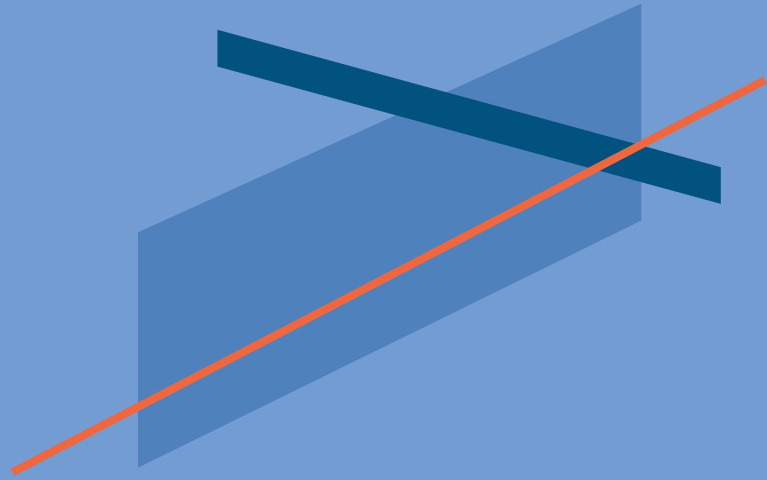
Design Guidance

1. Underground telecommunications connections are available to your home, eliminating the need for TV antennas and satellite dishes.



6.0

Appendices



6.0 Appendices

6.1 Staged Development

Intent

Built form development may progress over a period of time. It is important to consider how blank walls in larger staged developments are presented and viewed from the public realm and neighbouring development.

Careful consideration of setbacks, articulation and appearance of façades in the early stages is required. The use of landscaping and public art can assist with the presentation of incomplete development.

Element Objectives

1. To ensure that incomplete and staged development presents well to the public realm.
2. To ensure the amenity of adjoining properties is protected from unsightly and incomplete built form.

Acceptable Outcomes

1. Blank walls to be further developed as part of a later stage of development shall be considered as a designed elevation. Measures to ensure an acceptable 'interim' appearance shall be utilised.
2. Any nil setback to a side boundary, where adjoining development has not begun, shall be finished to a suitable standard to match the main building or to provide visual interest.

Design Guidance

1. Any staged development shall provide an overall masterplan to demonstrate an appreciation of, and commitment to, completing the built form. Subsequent development shall demonstrate compliance with, or justify appropriate changes to, the overall masterplan.

6.2 Lot Re-subdivision

Intent

To ensure that diversity in the area is preserved and enhanced by providing choice in accommodation that is suitable to a broad range of residents.

Element Objectives

1. Contribute to the neighbourhood character by facilitating suitable building typologies and street interfaces in particular sub-precincts.
2. Achieve appropriate standards for specific sub-precincts to set desirable streetscape attractiveness.

Acceptable Outcomes

1. Where re-subdivision is proposed of an existing titled lot, a minimum lot frontage of 10m is required for all development, measured at the primary interface and laneway interface (type 1-3) setback lines.
2. No battle-axe re-subdivision is permitted.

6.3 Glossary

The Definitions listed at SPP 7.3 R-Codes Volume 1 and Volume 2, are augmented with the following details:

Architectural Element	A structure designed as a separate identifiable part of a building.
Articulation	Variation in the elevation through projections and indentations in the floor plan and mirrored in the roof design to create shadows and add visual interest to the façade.
Awning/Canopy	A roof structure supported by a frame and located over a window to provide sun shading.
CLT/LVL	Cross Laminated Timber and Laminated Veneer Lumber
Corner Lots	A lot which is located at the junction of two streets or at the junction of a street and public reserve.
Construction Zone	A 'construction zone' of 2.0m width has been allowed for in the design of the public open space areas. This zone is available for temporary use by the building developer to facilitate the building construction process. At the end of the construction process, the land owner will be responsible for landscape construction within the construction zone.
Front Fencing	All fencing forward of the main building line.
Gable	The triangular top section of an end wall that fills the space beneath where the slopes of a two sided pitch roof meet. Gables can be in the wall material or another feature material eg: weatherboard cladding or timber.
Gambrel	A triangular feature within a hipped roof structure most commonly finished in a lightweight cladding such as painted weatherboard or timber.
Habitable/Non- Habitable Room	All bedrooms, kitchens or living rooms. Non habitable rooms include bathrooms, laundry, stairs or circulation spaces.
Hip Roof	A roof with sloping ends as well as sides.
Laneway	A narrow road located at the rear or side boundary of the property for the chief purpose of vehicle access.
Living Areas	Rooms designed for living in especially for relaxation, social and recreational activities.
Main Building Line	The main building line is measured from the front most habitable room on the primary façade (this excludes minor projections or features).
Mews	A narrow street with no verge. A mews usually contains small houses with the main entry and vehicle access both facing the mews.
Finished Ground Level	The levels on a site which precede a development application, established through a Local Development Plan or set in a contract of sale.
Porch	A covered shelter at the front of the home located adjacent the entry.
Portico	A covered walkway leading to the main entrance that consists of a separate roof structure to the main dwelling and is supported by piers or pillars.
Primary Elevation	The elevation of the home which is usually inclusive of the main entry and the majority of architectural features.
Public View	An area in view from common spaces such as public reserves or streets.
Public Reserve	A public reserve is any parkland, bushland, wetland, public access way or any other space designated for public purposes within the residential community.
Secondary Elevation	The elevation of the home which is exposed to public view but does not usually consist of the main entry or majority of architectural features.
Skillion Roof	A mono pitch roof of gentle slope generally between 5o-15o pitch.
Storey	In addition to the definition given in SPP 7.3 Vol 2, the ground floor shall be measured from Finished ground Level.
Verandah	A covered shelter at the front of the home which has its own separate roof and is supported by pillars, posts or piers.

6.4 Development Control Checklist

Mark 'Y' (Yes) in the Compliance section if the proposal complies with the relevant Acceptable Outcomes. Mark 'P' (Performance) if the proponent believes that an alternative approach achieves the relevant Objective via an alternative design solution.

SPP 7.3 V.1/V 2 Reference	Design Guidelines Reference	Title	Compliance
Chapter 2 - Primary Controls			
2.1	2.1	Primary Controls	
2.2	2.1	Primary Controls	
2.3	2.1	Primary Controls	
2.4	2.1	Primary Controls	
2.5	2.1	Primary Controls	
2.6	2.1	Primary Controls	
2.7	2.1	Primary Controls	
2.8	N/A	N/A	
Chapter 3 - Common Design - Siting the Development			
3.1		Site Analysis and Design Response	
3.2		Orientation	
3.3	3.1	Tree Canopy and Deep Soil Areas	
3.4		Communal Open Space	
3.5		Visual Privacy	
3.6	3.2	Public Domain Interface	
3.7	3.3	Pedestrian Access and Entries	
3.8	3.4	Vehicle Access	
3.9	3.5	Car and Bicycle Parking	
Chapter 4 - Common Design - Designing the Building			
4.1	4.1	Solar and Daylight Access	
4.2	4.2	Natural Ventilation	
4.3		Size and Layout of Dwellings	
4.4		Private Open Space and Balconies	
4.5		Circulation and Common Spaces	

SPP 7.3 V.1/V 2 Reference	Design Guidelines Reference	Title	Compliance
4.6		Storage	
4.7		Managing the Impact of Noise	
4.8		Dwelling Mix	
4.9		Universal Design	
4.10	4.3	Facade Design	
N/A	4.4	Design Excellen Facades	
4.11	4.5	Roof Design	
4.12	4.6	Landscape Design	
4.13		Adaptive Reuse	
4.14	4.7	Mixed Use	
4.15	4.8	Energy Efficiency	
4.16	4.9	Water Management and Conservation	
4.17		Waste Management	
4.18		Utilities	
N/A	4.10	Construction Materials	
Chapter 5 - Single Lot Building Design Elements			
5.1.1		Site Area	
5.1.2		Street Setback	
5.1.3		Lot Boundary Setback	
5.1.4	5.3	Open Space	
5.1.5	5.3	Communal Open Space	
5.1.6		Building Height	
5.2.1	5.2	Setback of Garages and Carports	
5.2.2	5.2	Garage Width	

SPP 7.3 V.1/V 2 Reference	Design Guidelines Reference	Title	Compliance
5.2.3		Street Surveillance	
5.2.4		Street Walls and Fences	
5.2.5		Sight Lines	
5.2.6		Appearance of Retained Dwelling	
5.3.1	5.3	Outdoor Living Areas	
5.3.2		Landscaping	
5.3.3	5.2	Parking	
5.3.4	5.2	Design of Car Parking Spaces	
5.3.5		Vehicular Access	
5.3.6		Pedestrian Access	
5.3.7		Site Works	
5.3.9		Stormwater Management	
5.4.1		Visual Privacy	
5.4.2		Solar Access for Adjoining Sites	
5.4.3		Outbuildings	
5.4.4	5.4 and 5.6	External Fixtures, Utilities and Facilities	
5.5.1		Ancillary Dwellings	
5.5.2		Aged or Dependent Persons' Dwellings	
5.5.3		Single Bedroom Dwellings	

