



Leighton Development Area

DESIGN GUIDELINES

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I INTRODUCTION

Vision

LandCorp, the City of Fremantle, and the Leighton Community Liaison Group have collaborated on the planning and design framework for a unique coastal community development at the former Leighton rail marshalling yards in North Fremantle (refer Figure 1).

The 4ha Leighton Development Area offers expansive views of the Indian Ocean and the regionally significant Leighton Beach; a location next to the North Fremantle Rail Station and major roads; and proximity to the beach and existing North Fremantle community.

LandCorp and selected Joint Venture partners will develop designs on different precincts within the Leighton Development Area. The overall aim is to create a high quality model transit orientated and mixed use urban village in this coastal zone that reflects design excellence, and is tailored to meet clear sustainability objectives.

The vision for the Leighton Development Area is an accessible village of contemporary design, with high quality landscape and buildings that address the streets and parks. The village will consist predominantly of residential use to accommodate at least 1000 people (the land is coded R-IC), retail/commercial use, and Public Open Space. Housing diversity and a range of prices for dwellings are elements required to support a lively social mix. Building heights are limited to three and five storeys to preserve key westward vistas from North Fremantle. A contemporary coastal aesthetic for the village that is informed by the context of the beach, North Fremantle, the port, and local industry is essential.

The developer's responsibility is to create a distinct coastal and community-orientated experience - one that contributes to the vibrancy of this special coastal place by maintaining access to public places, maintaining links across the highway and rail line with North Fremantle and by creating opportunities for appropriate new beachside businesses and shops that will attract residents and visitors alike.



Figure 1: Location Plan

(Source: Leighton Development Area Structure Plan by The Planning Group)

Development Area Objectives

The vision for the Leighton Development Area emerged from an extensive and rigorous period of community consultation. Initially, the consultation process helped to determine the amount and location of the developable land. Further community consultation helped to determine the form and basic parameters (such as the height of the development) that are defined in the Leighton Development Area Structure Plan [refer overleaf Figure 2: Development Context Plan (based on Approved Structure Plan)].

The Leighton Development Area Structure Plan provides the framework for the subdivision and development of the area for residential and commercial uses. It establishes the principles, land use and parameters for site development.

The objectives noted below are similar to those in the Structure Plan document:

- To establish a vibrant and attractive mixed use development that incorporates medium to high density residential and commercial development
- To promote housing choice by providing a range of apartment types and sizes, a range of prices including options for a public housing component
- To achieve a sustainable urban village with at least 1000 residents within the development to support commercial uses and generate a vibrant atmosphere
- To promote commercial uses that serve local residents and beach users
- To achieve transit orientated development on the site consistent with State Government planning policy that supports ridership from the North Fremantle railway station and the metropolitan rail network
- To achieve a financial return that will fund the construction of the North Quay rail loop and the rehabilitation of the 13ha balance of the Leighton Marshalling Yards
- To ensure that 25% of the site is dedicated to public spaces including public open space and access
- To provide a high level of pedestrian and cyclist amenity
- To maximise ocean views from the site and maintain significant vistas and view corridors to the ocean from the existing North Fremantle area
- To facilitate direct and improved access from the North Fremantle railway station to the beach
- To protect the regional road system including the removal of Port Beach Road and the construction of Curtin Avenue
- To maintain linkages between existing development in North Fremantle and the new community
- To minimise any conflicts between site development and surrounding land uses including the industrial and port activities to the south and the railway line to the east
- To promote a visually interesting built form that achieves a balance between the need to achieve a sustainable development outcome and the desires of the local community
- To facilitate development consistent with the Leighton Regional Guidelines.

Town Planning Scheme No. 3, Amendment No. 61

An amendment to the City of Fremantle's Town Planning Scheme (TPS) No.3 facilitates the implementation of the *Leighton Development Area Structure Plan*. Amendment No. 61 designated the land as Development Plan No.17 (DP17) with a land coding of R-IC. DP17 applies to the portion of Crown Reserve No 3730 North Fremantle. The use and development of land within the Leighton Development Area is to be consistent with the *Leighton Development Area Structure Plan* and the provisions of DP17. The City of Fremantle has discretion to approve minor variations to DP17 where they are consistent with the objectives of DP17.

Amendment No. 61 covers the following eight provisions:

1. General
2. Objectives (environmental; economic; and social)
3. Structure Plan
4. Precincts [*refer overleaf Figure 3: Precinct Development Plan (based on Detailed Precinct Plan)*]
5. Development controls (land use; building height; plot ratio; visual permeability; shadow generation; and car parking)
6. Design Guidelines
7. Environmental management (site contamination; noise and vibration; odour; and risk and hazard)
8. Other relevant policies.

DP17 Sustainability Objectives

DP17 includes sustainability objectives and principles under the headings of environmental, social and economic as follows:

Environmental

Energy

- Reduction in household energy demand.

Water sensitive design

- Minimise water use where practicable.

Waste minimisation

- Endeavour to reduce total per capita residential waste going to landfill by encouraging recycling.

Transportation

- Reduce private car use and encourage the use of public transport and pedestrian and bicycle movement.
- Provide reduced on-site parking requirements.
- Transport initiatives to be integrated into local and regional transport systems.
- Develop a comprehensive and accessible direct pedestrian and road system that connects the railway station to the beach.

Public health and safety and amenity

- Minimise potential risks to human health from contaminated land within the development area.
- Minimise potential amenity impacts from surrounding industrial land uses and transport infrastructure on future development and occupants.
- Minimise potential risks to public safety from surrounding industrial uses.

Social

- To create a proud and vibrant addition to the existing North Fremantle community.

Economic

- Achieve the highest level of economic activity and employment opportunities within the development by encouraging commercial and residential uses.

These Design Guidelines embrace the provisions of the Structure Plan and DP17 by setting out design guidelines for Precinct Development. The Design Guidelines include requirements that are prescriptive or performance-based, and examples of possible ways to achieve a desirable result.

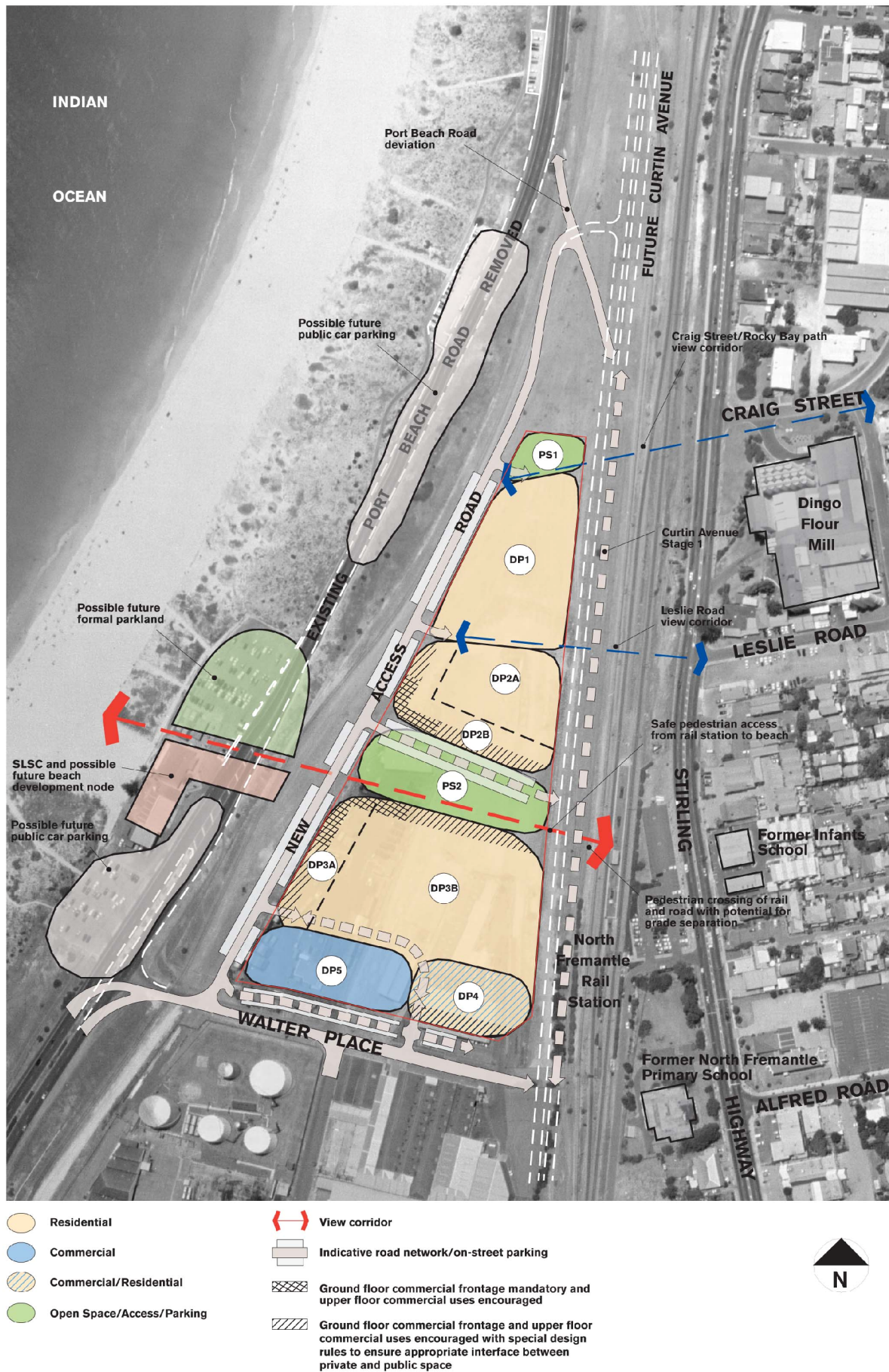


Figure 3: Precinct Development Plan (based on Detailed Precinct Plan)
 (Source: Leighton Development Area Structure Plan by The Planning Group)

The annotation on this Plan has been updated to reflect funding commitments to transport infrastructure since approval of the Leighton Development Area Structure Plan in December 2003.

II GENERAL INFORMATION

Area covered by the Design Guidelines

These Design Guidelines apply to the Leighton Development Area and shall be read in conjunction with, and comply with, the following:

- Leighton Development Area Structure Plan
- City of Fremantle Town Planning Scheme No.3, Amendment No. 61
- Current Residential Design Codes of Western Australia
- Current Building Code of Australia
- Any other relevant and current statutory document.

Purpose of the Design Guidelines

The purpose of these Design Guidelines is to ensure that development of the precincts within the Leighton Development Area is consistent with the Structure Plan, DP17, and the overall stated vision.

Development in the area requires the objectives of key stakeholders to be fulfilled. The key stakeholders are the community; the local government regulator (City of Fremantle); the state government agency landowner (LandCorp); and one or more Joint Venture (JV) development partners appointed by LandCorp. As such, the Design Guidelines help to ensure:

- Development that represents community values and is fully informed by the local context, protection of visual and physical access to key public places, and high quality amenity
- Prescriptive and performance based standards for the design of a sustainable and inclusive beach and rail side urban village
- High quality design for residential and commercial/retail use, and financial returns on publicly funded infrastructure
- Protection for each JV partners' interest and investment.

These Design Guidelines provide information, advice, and controls for the precincts by defining specific elements of the development and appropriate degrees of control.

Leighton Design Review Committee

The Design Guidelines shall be administered under the auspices of an independent Leighton Design Review Committee (LDRC) through a process that requires an endorsement of an acceptable design for each precinct *prior* to an application being submitted to the City of Fremantle for development approval. The LDRC is advisory only and provides non-statutory quality control guidance to assist LandCorp, its JV partners, and the Council.

The LDRC will comprise of the following members:

- Western Australian State Government Architect
- A community representative
- A consultant Urban Designer
- A consultant Landscape Architect
- A consultant Quantity Surveyor or Valuer
- Representatives from the City of Fremantle
- Representatives from LandCorp

The consultants on the Committee, appointed by LandCorp, will provide independent professional advice.

Precinct design endorsement process

LandCorp and one or more potential or selected JV partners will develop seven Development Precincts in the Leighton Development Area. Precinct design proposals shall meet the objectives and requirements of these Design Guidelines (and any other relevant and current statutory document), and be endorsed by the LDRC *prior* to an application being submitted to the City of Fremantle for development approval. Where discrepancies may occur in the Design Guidelines, the LDRC shall interpret the terms and concepts presented therein as part of the precinct design endorsement process.

Under the contract of sale conditions, each JV partnership shall attend Design Review Forums with the LDRC. The LDRC shall assist in guiding the quality of design proposals for each precinct and coordinate the best possible integrated design solution for all precincts in the Development Area. The precinct design endorsement process shall aim to be positive and iterative with the intent of achieving excellent site responsive and contemporary designs.

The LDRC shall convene Design Review Forums at least three times for each Development Precinct (or combination of precincts as appropriate). Specific meetings are required, including at the commencement of the design process, and immediately prior to an application for development approval. Meeting minutes will be distributed, and comments provided to the JV partnership within 14 days.

The LDRC may consider and endorse alternative design responses that differ from these Design Guidelines if the Committee is satisfied that the objectives of the Structure Plan and DP17 have been met. The Development Controls for each Development Precinct, however, shall not be varied (*refer Element 3*).

The LDRC's endorsement of a precinct design shall not imply or guarantee a development approval by the City of Fremantle. The City of Fremantle will be asked to consider the LDRC's endorsement of a precinct design as supporting advice included in the statutory planning process.

The four steps in the precinct design endorsement process for each Development Precinct are illustrated in Figure 4 below:

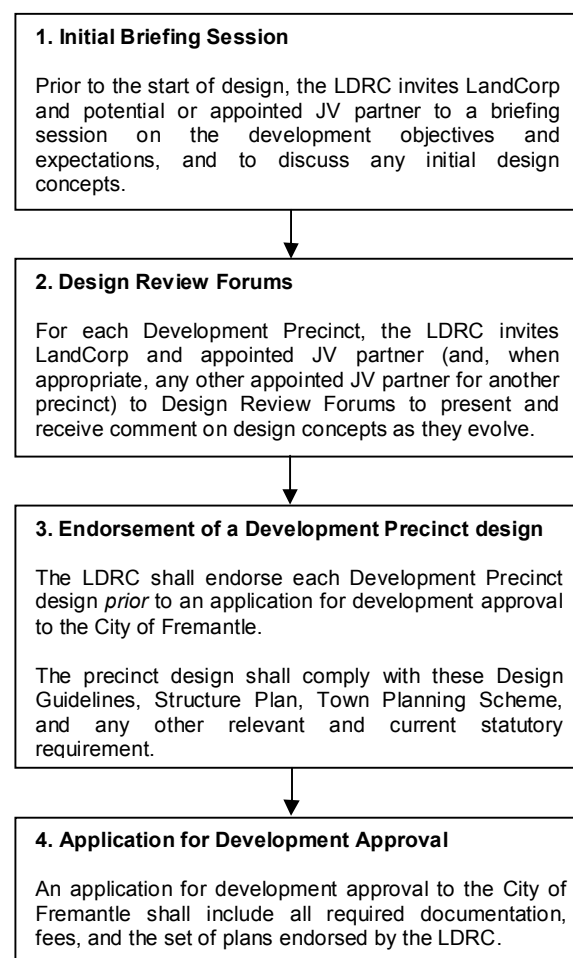


Figure 4: Precinct design endorsement process

III SUSTAINABILITY STRATEGY AND ENVIRONMENTAL MANAGEMENT

This section includes the environmental factors that are noted in TPS Amendment No.61 and will require addressing through development proposals. The environmental factors include conditions within and outside the Development Area.

Noise and vibration

A noise assessment report is required to accompany a development application for residential or community uses on land located within 80m of the railway line. The report must demonstrate compliance with the Satisfactory Recommended Design Sound Levels specified within Australian Standard AS 2107-2000 through the use of acoustic design of residential buildings or other appropriate acoustic barriers or treatments.

A vibration assessment report is required to accompany a development application for residential or community uses on land located within 60m of the railway line. The report must demonstrate compliance with Australian Standard AS 2670-1990. Notification of potential noise and vibration nuisance is to be stated on the title deeds of all development within the Leighton Development Area.

Odour

Notification of potential odour nuisance is to be stated on the title deeds for all development within the Leighton Development Area.

Risk and hazard

No residential development will be located within 70m of the site boundary that contains the existing fuel storage facilities south of Walter Place.

Residential development within 300m of the precinct boundary of the site that contains the existing fuel storage facilities south of Walter Place should be orientated to reduce potential human exposure to major accident events.

A 2m high wall, with appropriate landscaping, is to be constructed along the southern edge of the Development Area to provide a further barrier against radiation from fires associated with the fuel storage facilities.

Windows facing south should be avoided or should be fixed windows to avoid penetration of toxic gas from surrounding industrial development.

Air-conditioning units should be split-systems to preclude the entrapment of noxious and toxic gases and smoke as a result of a major accident event associated with surrounding industrial development.

To ensure future building owners are aware of particular adjacent environmental conditions and industrial uses, and the measures taken to mitigate any impacts, a notification is to be placed on the title deeds of all development in the Leighton Development Area.

Sustainability strategy and environmental management

An overall Sustainability Strategy and Environmental Management Plan that describes all aspects of sustainability initiatives, environmental and construction management including site protection; minimisation of energy and water use; and minimisation of waste and packaging, including accurate specifications for materials, specified targets for reuse and/or recycling of excess materials and potential savings shall be developed and submitted.

Stormwater management

All stormwater should be collected, reused and/or disposed of on-site. The preference is for reuse of water. Disposal of stormwater off-site shall be subject to approval by the relevant authorities.

Location

The Leighton Development Area is a 4ha site at the southern end of the 17ha former Leighton Marshalling Yards in North Fremantle. The 13ha balance of land is identified for coastal reserve. Cabinet has allocated funds from the sale of the vacant crown land to assist with the rehabilitation and remediation of some of the planned coastal reserve; construction of the North Quay rail loop into Fremantle Port; and removal of Port Beach Road and construction of Curtin Avenue Stage 1.

The Development Area is about 12.5km south-west of Perth's CBD, and 5.5km north of Fremantle's CBD. Triangular in shape, the site's location is north of Walter Place and between Port Beach Road and Leighton Beach to the west, and the Perth-Fremantle railway and North Fremantle rail station to the east.

Local context, pedestrian access and key view corridors

This section identifies features of the local context that shall inform designs for the Development Precincts, and key pedestrian access and view corridors. The local context is outlined in Figure 5 below:

Western area

The Development Area offers panoramic views of the foreshore and ocean. Conversely, from the ocean and beach, the new development will be an important part of a backdrop that includes the regionally significant Dingo Flour Mill, and North Fremantle roovescape.

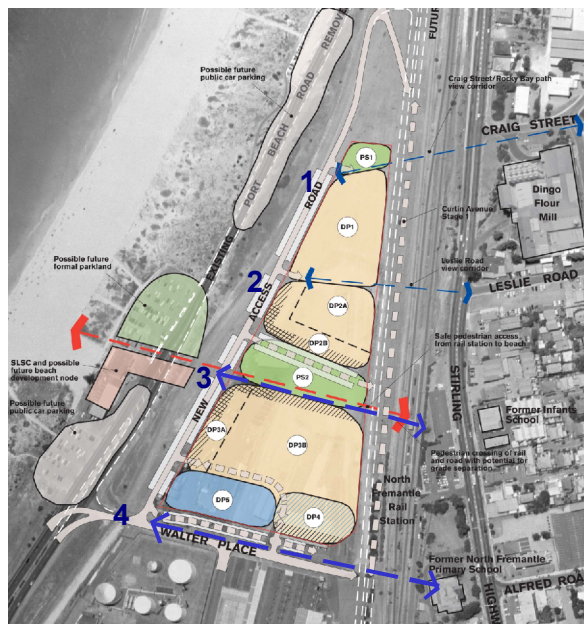
Port Beach Road will be removed and substituted by a traffic-calmed esplanade that will include public car bays, access to the Development Area, and a context for appropriate beachside building frontage and land uses.

Possible vehicle access points from the esplanade into the Development Area are defined on the Structure Plan.

The Surf Club complex is located within the foreshore opposite the proposed central POS in the Development Area. The northernmost building will be demolished, with possible relocation and upgrade of the main Surf Club building to create a new beach node. New beachfront car parking is proposed north and south of this area near the current Port Beach Road alignment.

Northern area

The land to the north of the Development Area is identified for coastal reserve, and includes the proposed new intersection between the new beachside esplanade on the western boundary of the Development Area.



Southern area

The port related industrial uses, and fuel storage tanks with associated 70m buffers are likely to remain in the foreseeable future.

A possible vehicle access point from Walter Place to the Development Area is noted on the Structure Plan.

Eastern area

The Development Area provides a highly visible public face to the planned Curtin Avenue extension; railway line; North Fremantle rail station; Stirling Highway and the North Fremantle community. From the upper levels, views from the development will include the regionally significant Dingo Flour Mill, and the North Fremantle roovescape.

The Structure Plan identifies a highly desirable road connection from the central POS in the Development Area to the future Curtin Avenue; however, any vehicular connection will be subject to approval by Main Roads WA.

No vehicle access points will be permitted from the future Curtin Avenue to the Development Precincts.

Figure 5: Local context, pedestrian access and view corridors

[Source: Precinct Development Plan (based on Detailed Precinct Plan) by The Planning Group]

Direct, clear and safe pedestrian access through the Development Area from North Fremantle rail station to the foreshore and beach is essential and is indicated by the red arrow in Figure 5 above. The view corridors protected in the Leighton Development Area are shown as blue arrows:

1. Along DP1's northern boundary where the vista is defined by the Rocky Bay path and Craig Street alignment
2. Between DP1 and DP2A where the vista is defined by the Leslie Road alignment
3. From North Fremantle rail station where beach and ocean views shall be framed
4. Along the southern boundary of DP4 and DP5 to maintain and enhance the vista along Walter Place.

Element 2 applies generally to the seven development precincts and is in three parts. Part A: Land use; Part B: Site design, which describes key external aspects of precinct development that form an interface with the public domain; and Part C: Building design, which focuses on key architectural elements and building performance.

Part A: Land use

Housing diversity

To encourage a range of prices for purchasers, and to encourage a broad cross section of people in the residential community, the residential product mix in each Development Precinct shall demonstrate a wide range of apartment types and sizes.

Commercial/retail use and mixed-use buildings

The retail elements within the Development Area are intended to consist of predominantly leisure and tourist orientated activities that create a vibrant beachside destination for use by visitors and local residents. Such activities are likely to be similar to those found along the Fremantle café strip i.e. cafes, restaurants and boutique shops but with a strong connection to the beachside location (for example swimming and surfing gear). Other forms of retail use, including local convenience stores, would also be expected but should not be the predominant form of retail use.

Whilst a tavern is identified in the structure plan as a potential use on DP2B, DP3A, DP3B, DP4, DP5, the preferred location is at the northern corner of DP3A.

The Structure Plan indicates locations where ground floor commercial frontage is mandatory and upper floor commercial uses encouraged, and where ground floor commercial frontage and upper floor commercial uses are encouraged. The total non-residential floorspace (GLA) in any precinct, other than DP5, shall consist of no more than 25% of the total floorspace of the precinct.

Where ground floor commercial frontage and upper floor commercial is encouraged, but the space not immediately used for that purpose, the built form shall be “future proofed” for commercial use to operate when viable, with minimal disruption to the building and existing occupants. Initially, the ground floor of the mixed-use building shall be designed with the following requirements to support commercial:

- Universal access from pavement level
- Sufficient on-site car parking bays for employees
- Utilities provided, with the potential to upgrade piped and wired services, toilet facilities and security requirements
- Robust internal building plan and section
- Robust external elevation that may change to a commercial “glazed shopfront appearance” (glazed frontage typically 3m minimum height), with pedestrian shelter provided (*refer Element 3: Development Precinct Design Guidelines*).

The design for a mixed-use building shall demonstrate compatibility between residential and commercial uses. Potential conflict areas include: access; parking; waste disposal; servicing; and noise and odour emissions.

Part B: Site design

Coastal conditions

Development proposals shall take into account the coastal conditions of the Leighton Development Area, such as: views; lifestyle opportunities; likelihood of strong sea breezes and storm events; air borne sand and salt water; and sun glare. Precinct design shall respond to coastal conditions by enhancing the relationship between interior and exterior spaces.

The design of a building and landscape proposals shall withstand severe coastal conditions with minimal damage to property and discomfort to occupants.

Streetscape

A development proposal shall:

- interface and respond to the public domain and expected activity
- assist with passive surveillance and security of the public domain by orientating openings and habitable living rooms towards this area. Avoid dark and deep recesses at ground floor level.
- provide an attractive and civic edge to the precinct boundary
- contribute towards amenity for building occupants and users of the public domain
- integrate with the landscape design.

Pedestrian access and shelter

Pedestrian access to Precinct Development shall take into account universal access requirements.

A shelter element for pedestrians is mandatory wherever there is a commercial use adjacent to the public domain. Where stipulated in Element 3: Development Precinct Design Guidelines, pedestrian shelter shall be provided in the form of a substantially continuous covered element. The shelter element shall be rigid and durable (no canvas or roof tiles are permitted). A projecting verandah or canopy shall extend beyond the building face by a minimum of 2.4m, with the minimum height from footpath level to the lowest part of a projecting element being 2.75m. Any signage hung from the shelter element shall have a minimum clearance of 2.4m.

Principal entry doors to buildings shall be protected from coastal weather conditions.

External plastic blinds and metal security shutters are discouraged, unless fully integrated as part of an acceptable architectural response.

Vehicular access and car parking

Vehicular access to on-site car parking shall be from the preferred location points. *Refer to Element 3 for specific precinct requirements.*

Minimum car parking bay requirements for preferred and potential uses for each Development Precinct are set out below:

- Multiple dwelling: 1 bay per one-bedroom apartment, otherwise 1.5 bays per apartment with 10% of total required bays dedicated as visitor parking.
 - Other: As per scheme.
- (Source: TPS Amendment No. 61)

Resident and employee car parking shall be provided on-site and fully screened from public view, for example as surface parking concealed behind buildings; fully concealed in a basement; or in a semi-basement where permitted (*refer Element 3 for specific precinct conditions*). Where parking is in a basement or in a semi-basement, pedestrian access from the car park shall be directly into the building.

The ground floor level of the building above any semi-basement car park shall be 1.2m maximum above the adjacent ground level at the precinct boundary. High quality screening shall be used to avoid a direct line of sight to parked cars and to provide security to the car park.

For mixed-use development, reciprocal car parking arrangements are encouraged between compatible land uses to maximise use of car bays throughout the 24-hour period, and to improve site efficiency.

Parking for visitors to the Development Area shall be in open and publicly accessible bays.

Landscape and art

This section pertains to landscape within the Development Precincts. A detailed landscape plan shall be included as part of the precinct design endorsement process.

Generally, no change will be permitted to landscape provided by LandCorp in the public domain. However, LandCorp and the City of Fremantle may consider an alternative design response if they are satisfied that the objectives of the Leighton Development Plan have been met. Relocation of any element shall be undertaken in accordance with a joint LandCorp/City of Fremantle specification at the precinct developer's expense.

Landscape designs shall respond to the coastal climate and environment of North Fremantle. Careful consideration shall be given to the selection of plants and trees for this coastal environment, particularly with regard to their seasonal appearance in maturity, relationship to the public domain, and CPTED principles (Crime Prevention through Environmental Design). Trees and shrubs shall be selected and positioned relative to buildings to maximise solar penetration in winter and minimise solar access in summer. Planting should be positioned to enhance cooling summer breezes and provide protection from hot summer and cold winter winds.

The availability of non-saline groundwater for landscape reticulation is likely to be limited in the Development Area. To reduce demand for scheme water, the landscape shall be designed to be 'water wise' with a reliance on hardy drought-tolerant plants, whilst still achieving a high quality outcome. Lawn moisture sensitive sensors shall be installed to conserve water use.

Ground materials shall coordinate with the public domain to ensure a harmonious interface. The ground materials shall be selected to assist with water absorption and to reduce run-off (for example permeable or segmental paving).

Precinct boundary fences that face public areas may be installed to a maximum height of 1.2m when measured from the adjacent footpath level. Proposed fences shall coordinate with the building and overall landscape design of the Development Area.

Developers shall include an artist as part of the development and design process, and integrate art into the fabric of the building or the landscape, particularly where it is visible and may contribute to the public domain.

Part C: Building design

Architectural character

The architectural character of buildings within the Development Area shall include design qualities that convey a contemporary coastal aesthetic. An overall village theme informed by the local context of the beach, North Fremantle, the port, and industrial uses is essential. Architectural diversity also is critical to achieve the desired aesthetic richness inherent in the vision.

Building performance

Key objectives for building performance are to:

- conserve energy and water
- minimise greenhouse gas emissions
- increase indoor environmental quality and amenity for occupants
- reduce, recycle and responsibly manage waste
- carefully select materials.

This section defines the expected minimum mandatory and performance-based requirements for the building design and materials, and energy and water use in each Development Precinct.

Building design and materials

- To encourage the capture of cooling breezes and to minimise use of air conditioning, at least 60% of accommodation units shall be capable of natural cross ventilation (i.e. with openings on more than one side).
- To encourage the use of natural heating in winter through solar gain, no more than 10% of accommodation units shall have a south-only orientation.
- Access of summer sun into openings and private open space shall be controllable and mandatory on the western and eastern elevations through the use of high quality design elements (eg. full height and moveable balcony screens with adjustable louvres).
- Draught seals/weather stripping shall be installed on openings.
- Use of rainforest timber shall not be permitted.
- An analysis of the lifecycle of materials shall be provided that includes an assessment of cost, durability, ease of construction, availability, and environmental impacts.
- A central waste collection space shall be included to accommodate bins for recyclable waste and other materials, or as required by the City of Fremantle, for the separation of waste at the source.

Energy use

- The overall building shall achieve at least an average 3.5 Star NatHERS rating. At the top floor level of the building, each unit shall achieve a minimum 3.5 Star NatHERS rating.
- Motion sensors shall be used for lighting in basement car parks, and other locations as appropriate.
- Where supplied, high star rated energy efficient appliances shall be installed (eg. fridge/freezer, clothes washer, dishwasher, hob, oven etc.)
- A demonstrated highly energy efficient hot water system shall be installed (eg. gas or solar boosted gas centralised hot water system).
- A "Building/Dwelling Management Manual", or similar user-friendly document, shall be produced to assist occupants to understand the intended performance of the building and specific operational requirements.

Water use

- Water saving devices shall be installed including flow regulators, AAAA rated shower heads, AAAA (4.5/3L) dual flush toilets.
- Other water saving strategies should be investigated eg. third pipe grey water reuse; use of rainwater; waterless urinals; urine separators etc.
- Provision for rainwater collection and reuse on site should be investigated.

Demonstration of innovation to achieve maximum efficiency in energy, water and materials, including potential savings shall be addressed in the overall Sustainability Strategy and Environmental Management Plan (*refer Section III Sustainability strategy and environmental management*).

Other initiatives and innovations associated with improving building performance shall be reviewed and addressed for incorporation into design briefs and proposals at the early design development stage and shall be evaluated within the commercial parameters of the project.

Roofscape

The roof area above the permitted number of storeys shall be non-habitable and contained within the building envelope. Design considerations include:

- The appearance of the roofscape from the local context of the beach, surrounding transport systems, and views from North Fremantle and beyond
- The impact at street level of the combined roof, eaves detail, and the building elevation
- Building occupants' requirements for light, shade and air
- Encourage use of roof areas as paved outdoor terraces and gardens with associated climate protection elements (contained within the Development Precinct specified building envelope).
- Integration of any roof mounted services with the building as a whole.

Materials and colours

Materials and colours shall convey a contemporary coastal aesthetic informed by the local context. Building products shall be durable, structurally robust, and noiseless particularly in the event of storm conditions; they should retain their integrity at a mature stage of development; and be constructed in accordance with any technical requirements for coastal conditions.

Open space

The location and design of private open space shall minimise the possibility of overlooking into neighbouring properties, and maximise privacy for the occupants of the open space. Private open space and communal open space shall be designed and provided in accordance with the Residential Design Codes of WA.

Storage and services

Essential storage and services for building users shall be integrated into the development in an attractive and unobtrusive way.

- Ensure that a part of each dwelling unit's required storage area shall be dimensioned to accommodate at least one adult size bicycle
- Piped and wired services, air conditioners, satellite dishes, clothes drying areas, storage tanks, waste disposal and communal bin storage/collection areas shall be visually screened from public view, and acoustically screened to minimise any noise intrusion
- Roof and wall mounted solar-energy use devices may be visible where they are integral to the architecture

Signage and ancillary equipment

Way finding in and around each Development Precinct for building occupants and visitors should be defined through design, rather than assisted by signage. Where signage and ancillary equipment is essential to support the use of the building, it shall be integrated with the building as a whole, or as part of the associated landscape design, to minimise a cluttered appearance and avoid appearing as an afterthought.

Particular consideration shall be given to:

Signage style and location

Signage shall be of high quality graphic design, simple in format and appropriately located and integrated with the building design, scale of the street and adjacent buildings. Separate development approval is required for any signage not included in the original submission.

Lighting

Building entrances and the ground floor elevation of any retail/commercial or mixed-use building facing the street shall be well lit for safe use for after dark.

Entry communication and mail delivery boxes

These elements shall be discreet and integral to the building design. Multiple Building development shall utilise a shared entry communication system.

Element 3 provides specific character statements and mandatory Development Controls. The controls for each Development Precinct, DP1 to DP5, are:

Land use

The preferred and potential land uses are set out for each precinct. Preferred uses are uses that are encouraged and are expected to be the predominant uses within the precinct. Potential uses are uses that may also be appropriate within the precinct and may be considered as part of a proposed development.

Development applications for other uses not categorised may be considered at the discretion of the City of Fremantle based on the merits of each application. The definitions of land uses are as per the Model Scheme Text definitions.

Note that land in the Leighton Development Area is coded R-IC. Although an R-IC coding assumes a base density of R80, it encourages flexibility to accommodate a higher density of residential development where it is appropriate to the site and context.

Building envelope

The permitted or mandatory building setbacks, and maximum height limit and number of storeys define the building envelope (the building form shall be contained within the defined envelope, note however that for specific precincts private open space may project beyond the building envelope but *not* beyond the precinct boundary). The building forms shown in the diagrams are indicative only.

Specific permitted or mandatory setback dimensions define the relationship between the various building elements, (building walls, car park and open space) and the precinct boundary/public domain. Refer also to Element 2 for general precinct requirements for car parks and open space.

Maximum building height is controlled by AHD height based on a current Development Area level of 7m to 8m (these Design Guidelines assume 7.5m). A maximum number of storeys is permitted within the height limit.

Maximum plot ratio

The maximum ratio of the gross total of the areas of all floors of buildings on a precinct, to the area of land within the precinct boundaries.

For this purpose, such areas shall include the area of any walls but not include the areas of lift shafts, stairs or stair landings common to two or more dwellings, machinery, air conditioning and equipment rooms, non-habitable space that is wholly below natural ground level, areas used exclusively for the parking of wheeled vehicles at or below natural ground level, lobbies or amenities areas common to more than one dwelling, or balconies or verandahs open on at least two sides.

Visual permeability

Limits are placed on the location and amount of taller development to ensure protection of key vistas westwards across the Leighton Development Area from North Fremantle. The Structure Plan states a requirement for a visual permeability of 70% across the whole of the 4ha Leighton Development area above three storeys when viewed from east to west. Where applicable, the overall visual permeability requirements are translated into a precinct requirement.

Shadow generation

All applications for development must be accompanied by a shadow analysis for dates and times required by Council.

Site 1 - DP1

Precinct character, preferred vehicular access and pedestrian shelter

Guidance is provided on the character for DP1, preferred vehicular access points and any mandatory pedestrian shelter requirements (refer Figure 6).

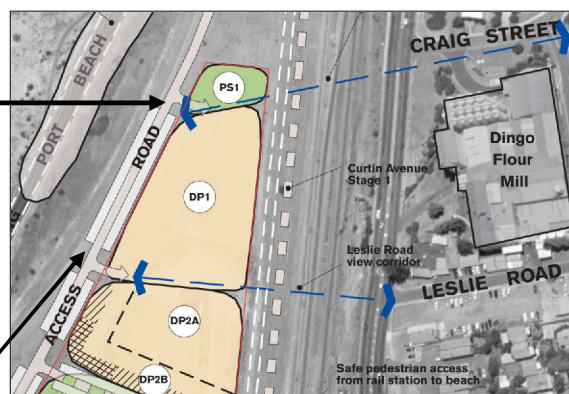
This precinct functions as a prominent northern entry statement to the new coastal village. Therefore, design qualities that suggest a welcoming entry shall be supported.

The northern boundary relates to PS1; it also frames the view corridor alignment with Craig Street/Rocky Bay path. A “softer” and highly modulated building edge and elevation will create an appropriate interface with the park setting. Larger openings and balconies shall enable private open living; maximise winter solar gain into dwellings; allow views and passive surveillance; and provide a high degree of architectural interest to suit this entry location.

Vehicular access shall be provided from the new esplanade via an access within the southern boundary of PS1.

The western boundary shall respond to the esplanade and the dunal landscape context with a public face and design quality that clearly indicates the predominant residential use.

Vehicular access shall be from the new esplanade via a shared access between DP1, DP2A and DP2B with reciprocal rights of access.



The southern boundary shall frame the view corridor from the end of Leslie Road, and respond in a neighbourly manner to the vehicular access route and DP2A and DP2B.

The development shall respond to its location next to North Fremantle and the regionally significant transport system, by orientating towards these areas in a civic and neighbourly manner.

Measures are required to mitigate any possible environmental effects of proximity to transport infrastructure. A design response that includes large expanses of blank walls and minimal articulation of the elevation; high fences; low quality landscape; and any “back of development” appearance (for example, exposed mechanical plant and servicing areas) will be unacceptable.

Figure 6: DP1 character, preferred vehicular access and pedestrian shelter

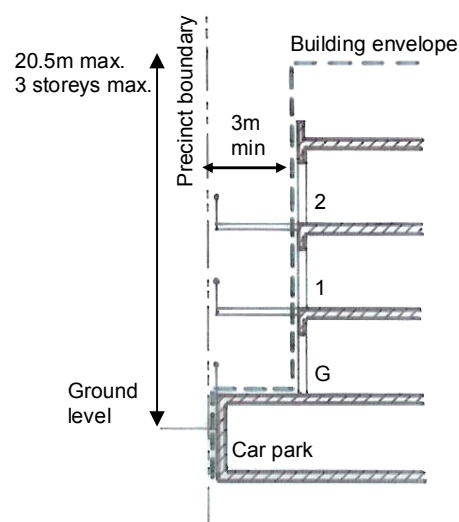
[Source: Image extracted from the Precinct Development Plan (based on Detailed Precinct Plan) by The Planning Group]

Land use

Preferred	Multiple dwelling
Potential	Hotel, Residential building

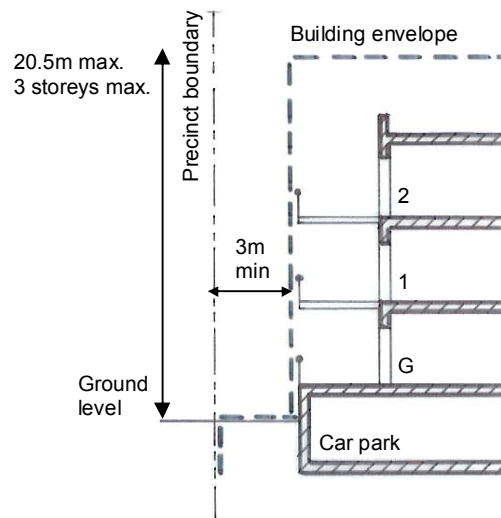
Building envelope

The diagrams below define the setbacks of building elements, and the maximum permitted height and number of storeys.



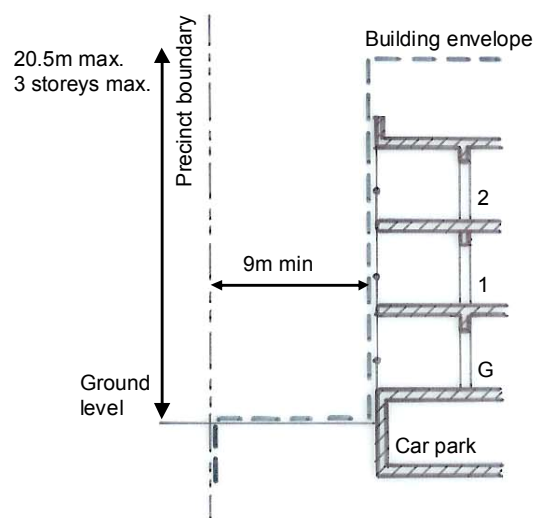
North boundary with PS1

Building: 3m min.
Balcony: Nil permitted.
Car park: Nil permitted.



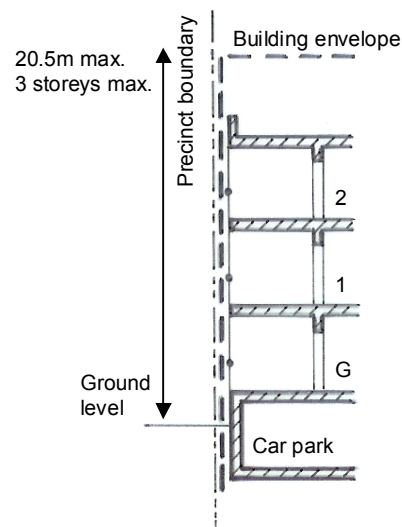
East boundary with Curtin Avenue

Building: 3m min.
Balcony: 3m min.
Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m min. soil depth).
Semi-basement, 3m min.



South boundary with DP2A and DP2B

Building: 9m min.
Balcony: 9m min.
Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m min. soil depth).
Semi-basement, 9m min.



West boundary with Esplanade

Building: Nil mandatory.
Balcony: Nil permitted.
Car park: Nil permitted.

Maximum plot ratio

- 2:1

Visual permeability

- No requirements.

Shadow generation

- Applications for development must be accompanied by a shadow analysis for dates and times required by Council.

Site 2 - DP2A

Precinct character, preferred vehicular access and pedestrian shelter

Guidance is provided on the character for DP2A, preferred vehicular access points and any mandatory pedestrian shelter requirements (refer Figure 7).

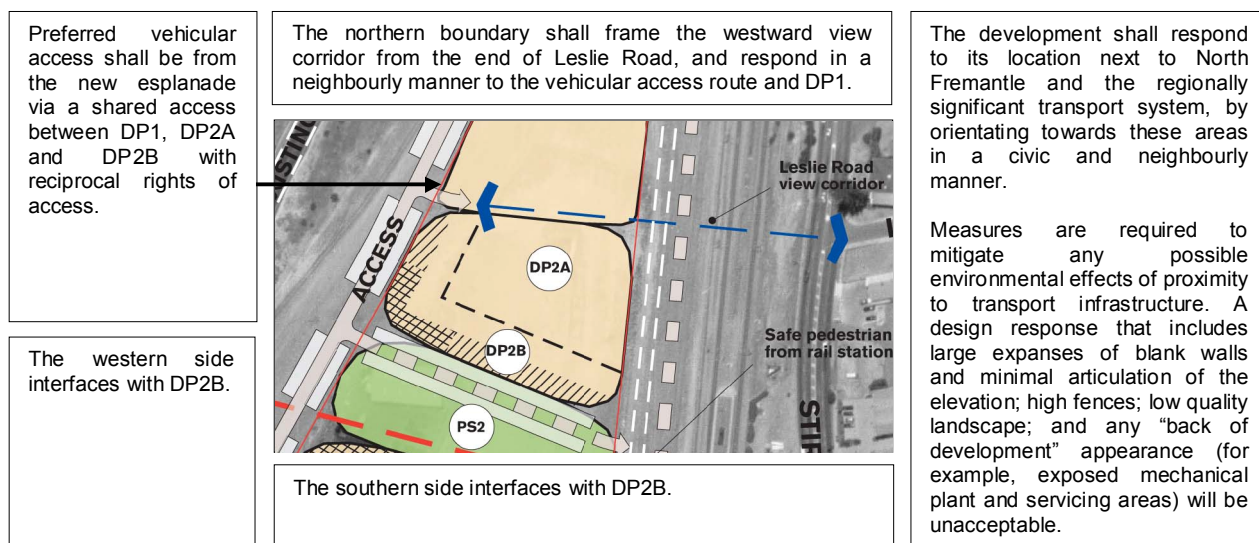


Figure 7: DP2A character, preferred vehicular access and pedestrian shelter

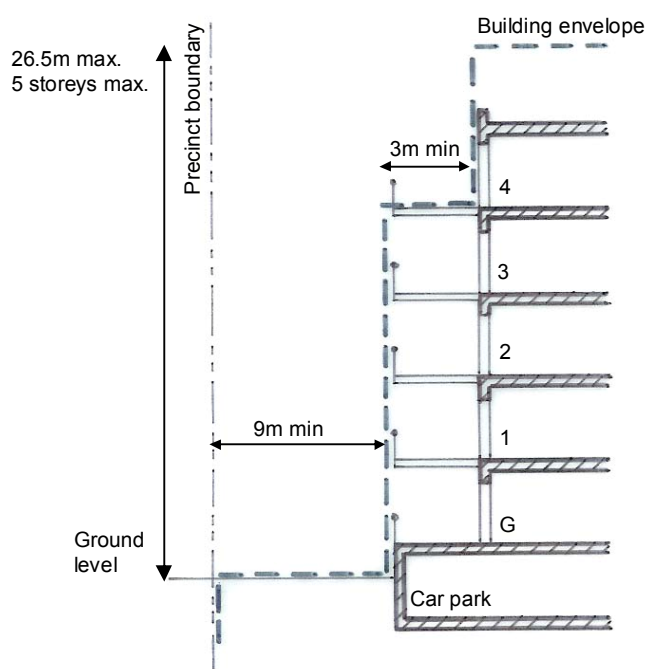
[Source: Image extracted from the Precinct Development Plan (based on Detailed Precinct Plan) by The Planning Group]

Use

Preferred	Multiple dwelling
Potential	Hotel, Residential building, Home occupation, Home office

Building envelope

The diagrams below define the setbacks of building elements, and the maximum permitted height and number of storeys.

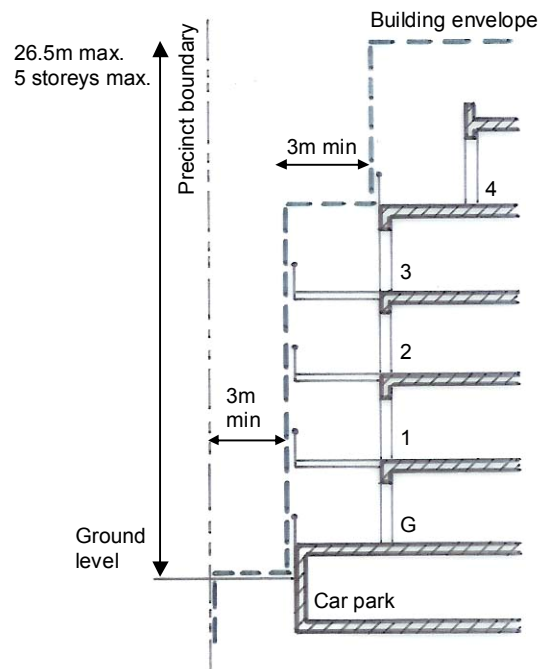


North boundary with DP1

Building: 9m min; 4th floor setback an additional 3m min.

Balcony: 9m min.

Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m soil depth).
Semi-basement, 9m min.



East boundary with Curtin Avenue

Building: 3m min; 4th floor setback an additional 3m min.

Balcony: 3m min; 4th floor setback an additional 3m min.

Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m soil depth).
Semi-basement, 3m min.

Maximum plot ratio

- 3:1

Visual permeability

- No requirements.

Shadow generation

- Applications for development must be accompanied by a shadow analysis for dates and times required by Council. The siting and design of five-storey building elements within DP2A must minimise any overshadowing of PS2.

Site 2 - DP2B

Precinct character, preferred vehicular access and pedestrian shelter

Guidance is provided on the character for DP2B, preferred vehicular access points and any mandatory pedestrian shelter requirements (refer Figure 8).

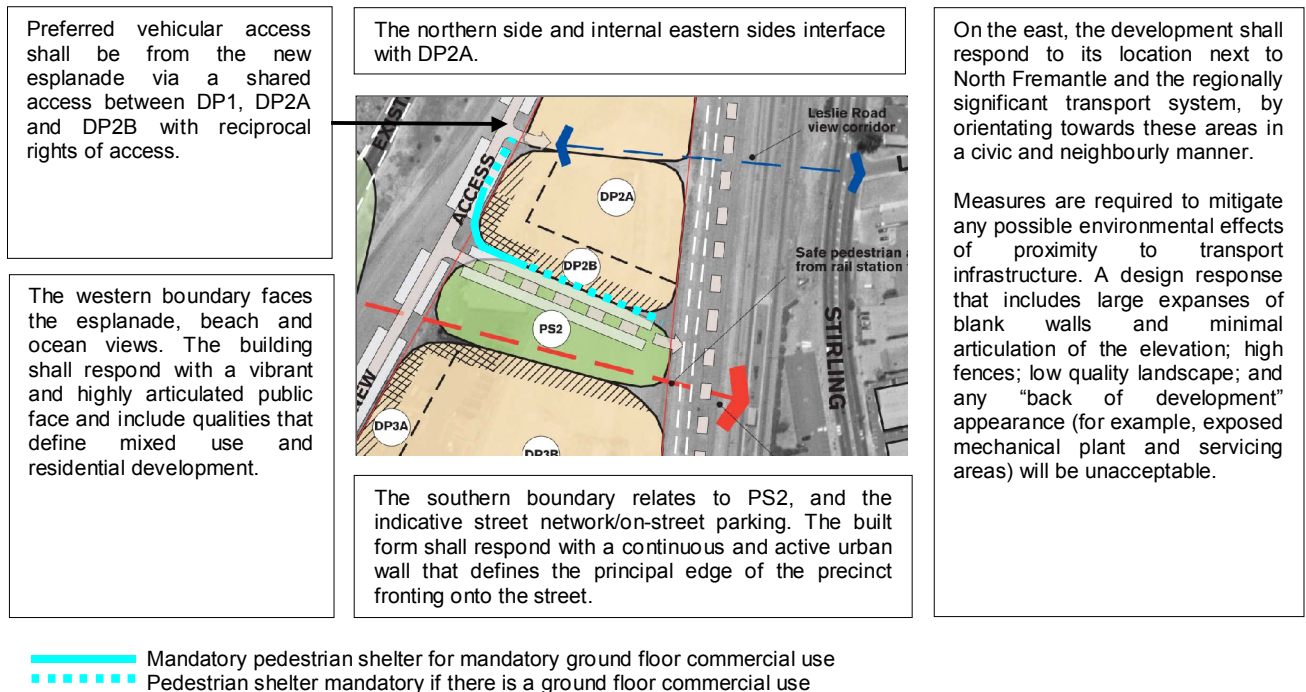


Figure 8: DP2B character, preferred vehicular access and pedestrian shelter

[Source: Image extracted from the Precinct Development Plan (based on Detailed Precinct Plan) by The Planning Group]

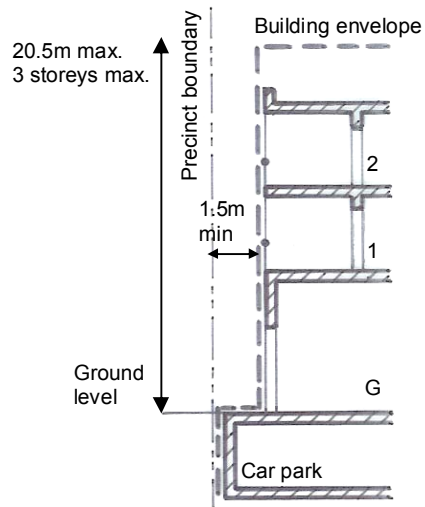
Land use

Preferred	Multiple dwelling, Restaurant, Shop, Office
Potential	Hotel, Residential building, Home occupation, Home office, Community purpose, Amusement parlour, Convenience store, Fast food outlet, Reception centre, Tavern, Cinema/Theatre, Medical centre, Consulting rooms
Other requirements	Ground floor commercial frontage mandatory and upper floor commercial uses encouraged within areas shown cross-hatched on plan above. Ground floor commercial frontage and upper floor commercial uses encouraged within areas shown hatched on plan above.

The total non-residential floorspace (GLA) shall consist of no more than 25% of the total floorspace of the precinct.

Building envelope

The diagrams below define the setbacks of building elements, and the maximum permitted height and number of storeys.

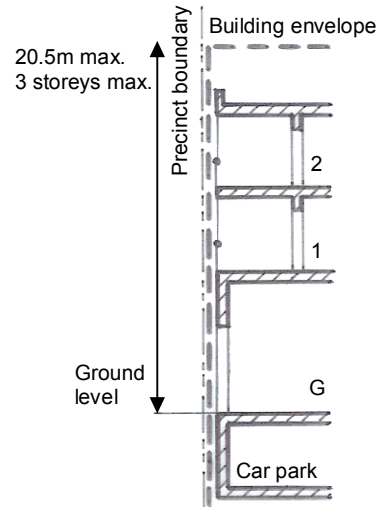


East corner hatched boundary with Curtin Avenue

Building: 1.5m min.

Balcony: 1.5m min.

Car park: Basement only, nil permitted.

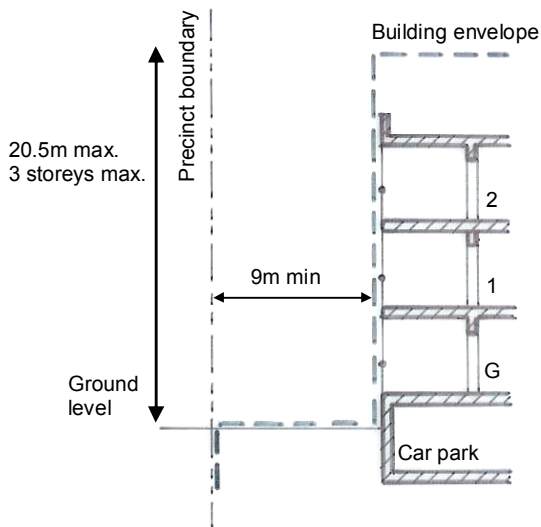


South boundary with PS2, and west with Esplanade

Building: Nil mandatory.

Balcony: Nil permitted.

Car park: Basement only, nil permitted.



North boundary with DP1

Building: 9m min

Balcony: 9m min.

Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m soil depth).

Semi-basement, 9m min.

Maximum plot ratio

- 2:1

Visual permeability

- No requirements.

Shadow generation

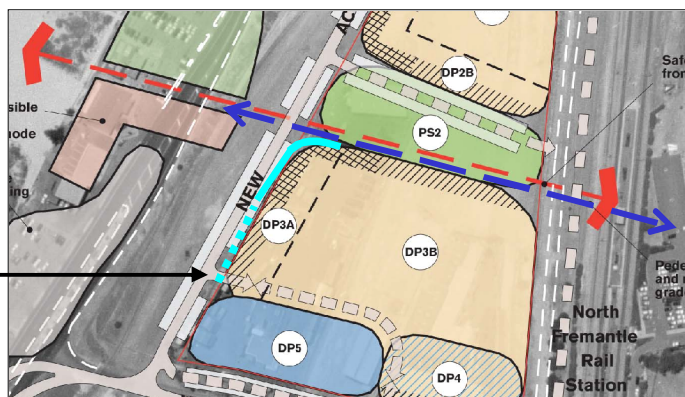
- Applications for development must be accompanied by a shadow analysis for dates and times required by Council.

Precinct character, preferred vehicular access and pedestrian shelter

The western boundary faces the esplanade, beach and ocean views. The building shall respond with a vibrant and highly articulated public face and include qualities that define mixed use and residential development.

Preferred vehicular access shall from the new esplanade via a shared access between DP3A and DP5 with reciprocal rights of access

The northwest corner is the preferred location for a tavern.



The southern boundary shall respond in a neighbourly manner to the vehicular access route and DP5.

The eastern boundary interfaces with DP3B.


-  Mandatory pedestrian shelter for mandatory ground floor commercial use
 Pedestrian shelter mandatory if there is a ground floor commercial use

Figure 9: DP3A character, preferred vehicular access and pedestrian shelter

[Source: Image extracted from the Precinct Development Plan (based on Detailed Precinct Plan) by The Planning Group]

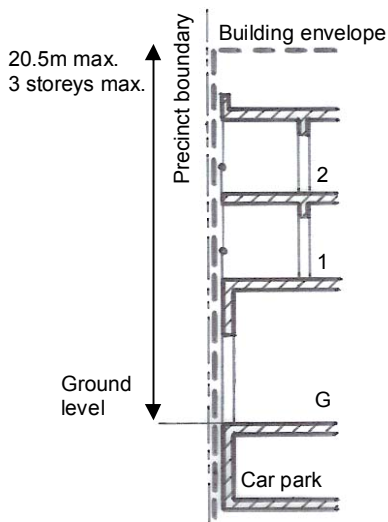
Land use

Preferred	Multiple dwelling, Restaurant, Shop, Office
Potential	Hotel, Residential building, Home occupation, Home office, Community purpose, Medical centre, Consulting rooms, Amusement parlour, Convenience store, Fast food outlet, Reception centre, Tavern, Cinema/Theatre
Other requirements	Ground floor commercial frontage mandatory and upper floor commercial uses encouraged within areas shown cross-hatched on plan above. Ground floor commercial frontage and upper floor commercial uses encouraged within areas shown hatched on plan above.

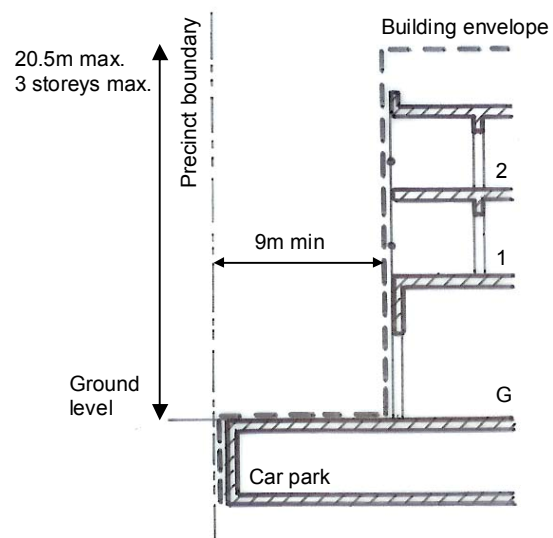
The total non-residential floorspace (GLA) shall consist of no more than 25% of the total floorspace of the precinct.

Building envelope

The diagrams below define the setbacks of building elements, and the maximum permitted height and number of storeys.



North boundary with PS2, and west with Esplanade
Building: Nil mandatory.
Balcony: Nil permitted.
Car park: Basement only, nil permitted.



South boundary with DP5
Building: 9m min.
Balcony: 9m min.
Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m soil depth).
Semi-basement, 9m min.

Maximum plot ratio

- 2:1

Visual permeability

- No requirements.

Shadow generation

- Applications for development must be accompanied by a shadow analysis for dates and times required by Council.

Site 3 - DP3B

Precinct character, preferred vehicular access and pedestrian shelter

Guidance is provided on the character for DP3B, preferred vehicular access points and any mandatory pedestrian shelter requirements (refer Figure 10).

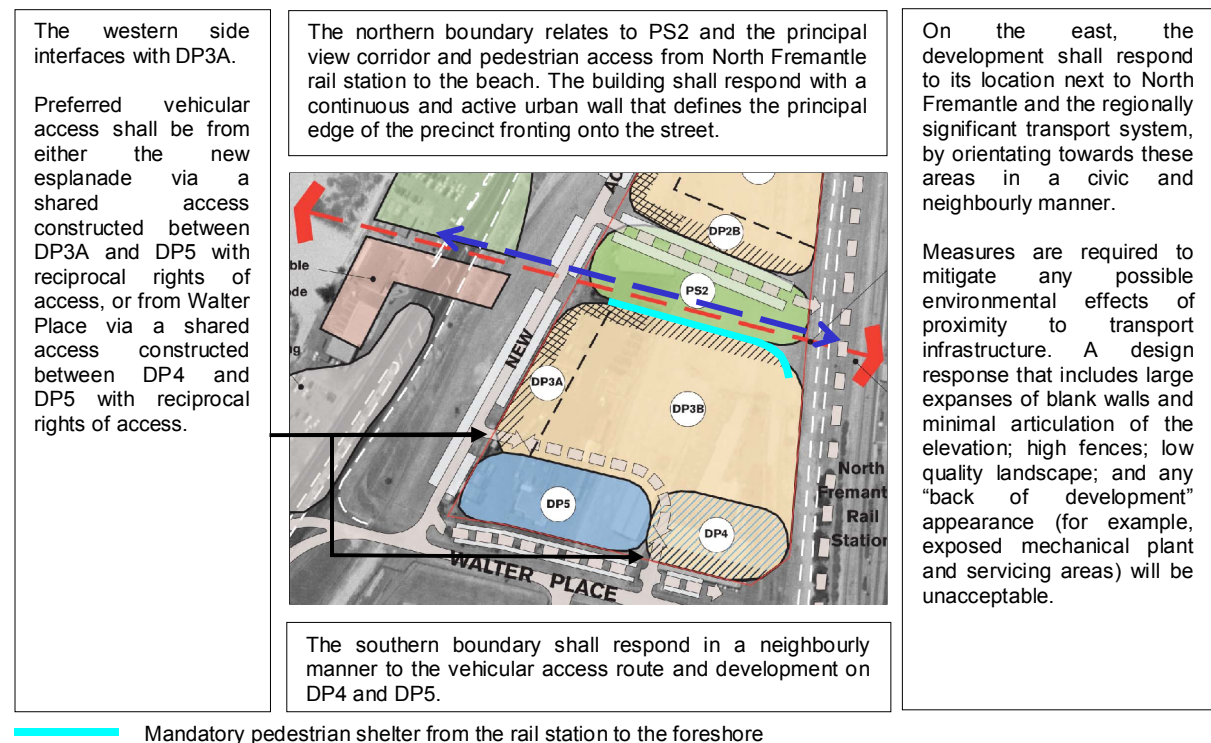


Figure 10: DP3B character, preferred vehicular access and pedestrian shelter

[Source: Image extracted from the Precinct Development Plan (based on Detailed Precinct Plan) by The Planning Group]

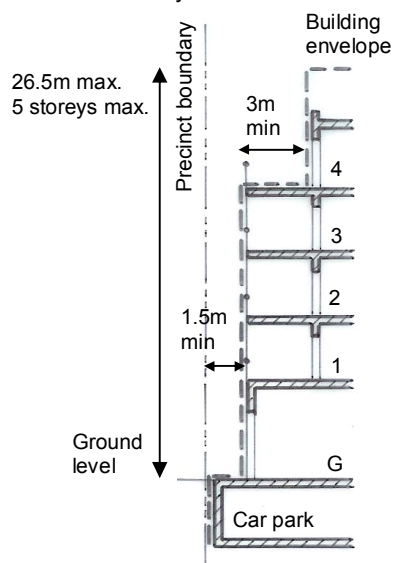
Land use

Preferred	Multiple dwelling, Restaurant, Shop, Office
Potential	Hotel, Residential building, Home occupation, Home office, Medical centre, Consulting rooms, Amusement parlour, Convenience store, Fast food outlet, Reception centre, Tavern, Cinema/Theatre
Other requirements	<p>Ground floor commercial frontage mandatory and upper floor commercial uses encouraged within areas shown cross-hatched on plan above.</p> <p>Ground floor commercial frontage and upper floor commercial uses encouraged within areas shown hatched on plan above.</p>

The total non-residential floorspace (GLA) shall consist of no more than 25% of the total floorspace of the precinct.

Building envelope

The diagrams below define the setbacks of building elements, and the maximum permitted height and number of storeys.

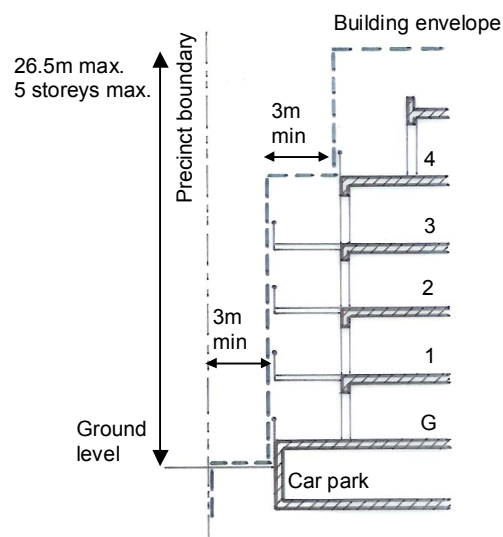


East boundary hatched corner with Curtin Avenue

Building: Frontage suitable for commercial facing PS2, 1.5m min; 4th floor setback an additional 3m min.

Balcony: 1.5 min.

Car park: Basement only, nil permitted.

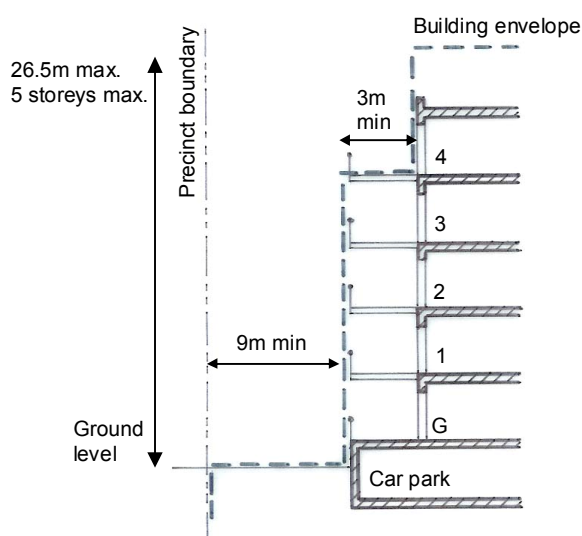


East boundary with Curtin Avenue

Building: 3m min; 4th floor setback an additional 3m min.

Balcony: 3m min; 4th floor setback an additional 3m min.

Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m soil depth).
Semi-basement, 3m min.

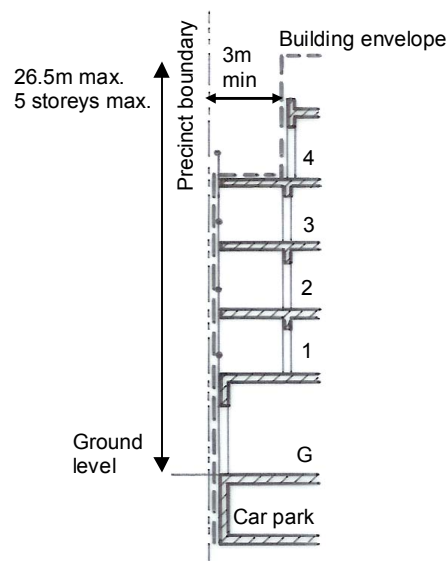


South boundary with DP4 and DP5

Building: 9m min; 4th floor setback an additional 3m min.

Balcony: 9m min.

Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m soil depth).
Semi-basement, 9m min.



North boundary with PS2

Building: Nil mandatory, 4th floor setback 3m min.

Balcony: Nil permitted.

Car park: Basement only, nil permitted.

Maximum plot ratio

- 3:1

Visual permeability

- The building envelope for development shall achieve a visual permeability of 67% above three storeys when viewed from east to west (that is, a minimum of 67% blue sky, or a maximum of 33% building).

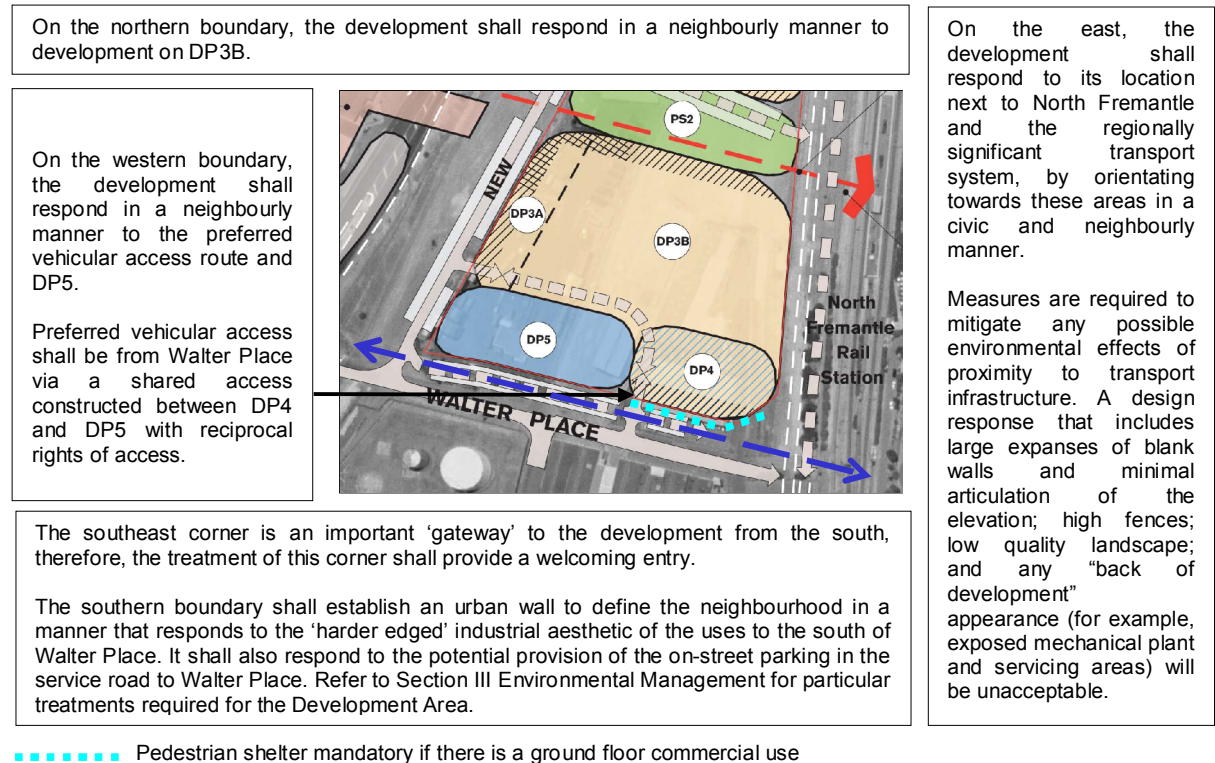
Shadow generation

- Applications for development must be accompanied by a shadow analysis for dates and times required by Council.

Site 4 - DP4

Precinct character, preferred vehicular access and pedestrian shelter

Guidance is provided on the character for DP4, preferred vehicular access points and any mandatory pedestrian shelter requirements (refer Figure 11).



■■■■■■■■■■ Pedestrian shelter mandatory if there is a ground floor commercial use

Figure 11: DP4 character, preferred vehicular access and pedestrian shelter

[Source: Image extracted from the Precinct Development Plan (based on Detailed Precinct Plan) by The Planning Group]

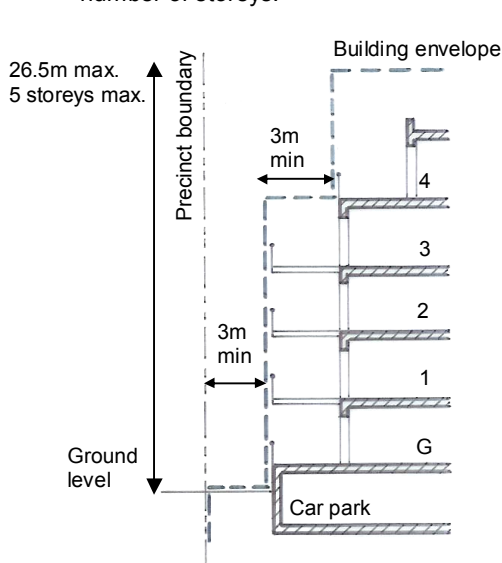
Land use

Preferred	Multiple dwelling, Office
Potential	Hotel, Residential building, Home occupation, Home office, Amusement parlour, Convenience store, Fast food outlet, Reception centre, Restaurant, Shop, Tavern, Cinema/Theatre, Medical centre, Consulting rooms
Other requirements	Ground floor commercial frontage and upper floor commercial uses encouraged within areas shown hatched on above plan.

The total non-residential floorspace (GLA) shall consist of no more than 25% of the total floorspace of the precinct.

Building envelope

The diagrams below define the setbacks of building elements, and the maximum permitted height and number of storeys.

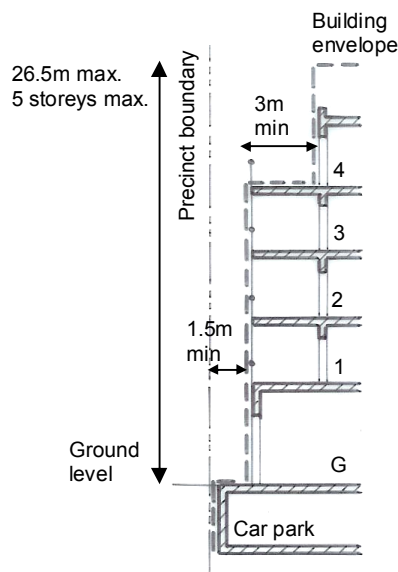


East boundary with Curtin Avenue

Building: 3m min; 4th floor setback an additional 3m min.

Balcony: 3m min.

Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m soil depth).
Semi-basement, 3m min.

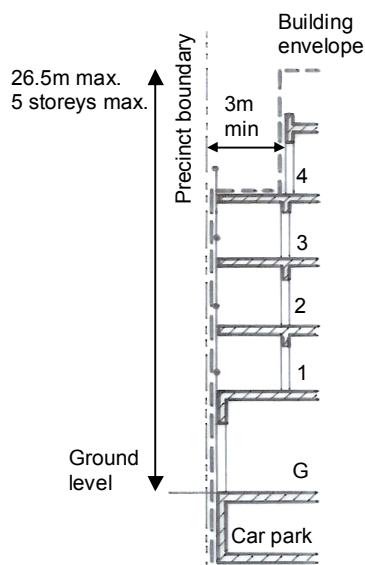


East corner hatched boundary with Curtin Avenue

Building: Frontage suitable for commercial facing Walter Place, 1.5m min; 4th floor setback an additional 3m min.

Balcony: 1.5m min.

Car park: Basement only, nil permitted

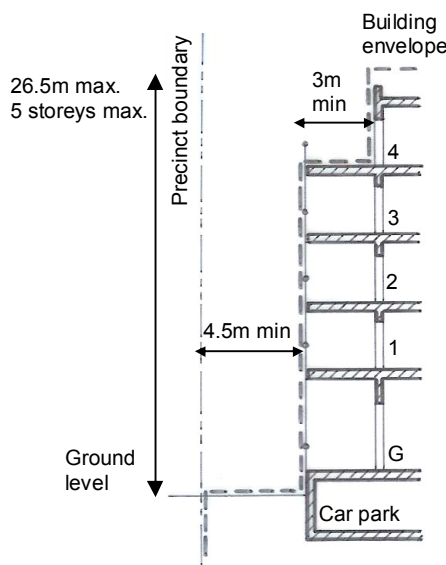


South boundary with Walter Place

Building: Nil mandatory for ground to 3rd floor, 4th floor setback 3m min.

Balcony: Nil permitted.

Car park: Basement only, nil permitted.

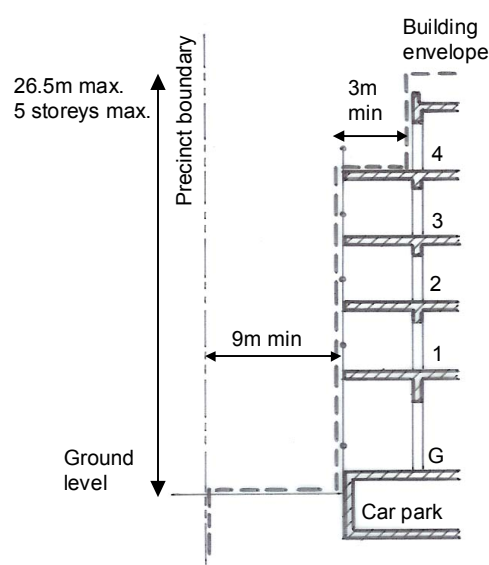


West boundary with DP5

Building: 4.5m min; 4th floor setback an additional 3m min.

Balcony: 4.5m min.

Car park: Basement, nil permitted.
Semi-basement, 4.5m min.



North boundary with DP3B

Building: 9m min; 4th floor setback an additional 3m min.

Balcony: 9m min.

Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m soil depth).
Semi-basement, 9m min.

Maximum plot ratio

- 3:1

Visual permeability

- No requirements.

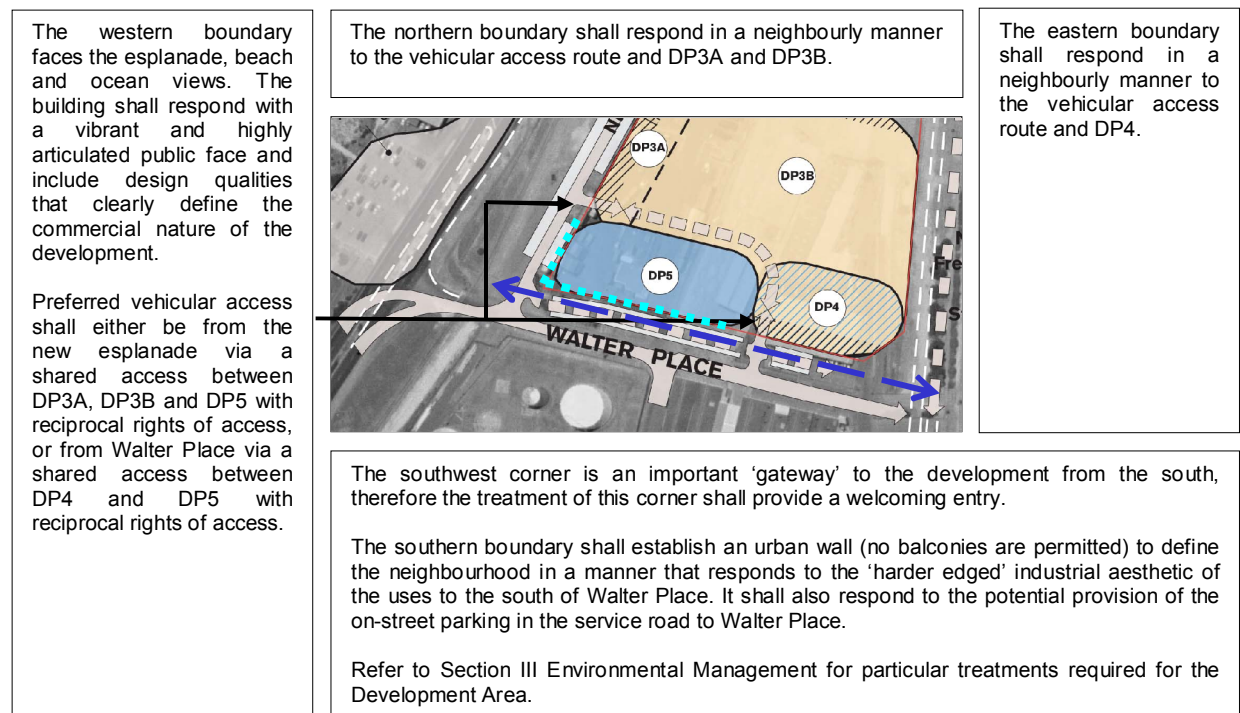
Shadow generation

- Applications for development must be accompanied by a shadow analysis for dates and times required by Council.

Site 5 - DP5

Precinct character, preferred vehicular access and pedestrian shelter

Guidance is provided on the character for DP5, preferred vehicular access points and any mandatory pedestrian shelter requirements (refer Figure 12).



■■■■■ Pedestrian shelter mandatory if there is a ground floor commercial use

Figure 12: DP5 character, preferred vehicular access and pedestrian shelter

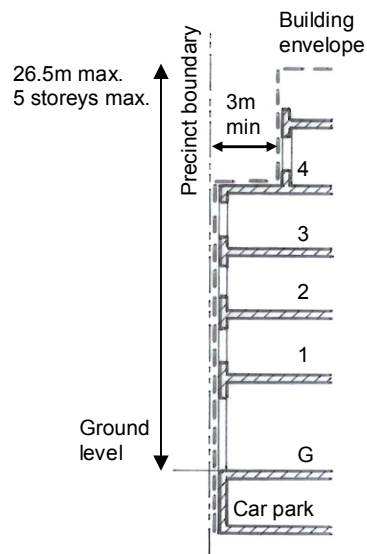
[Source: Image extracted from the Precinct Development Plan (based on Detailed Precinct Plan) by The Planning Group]

Land use

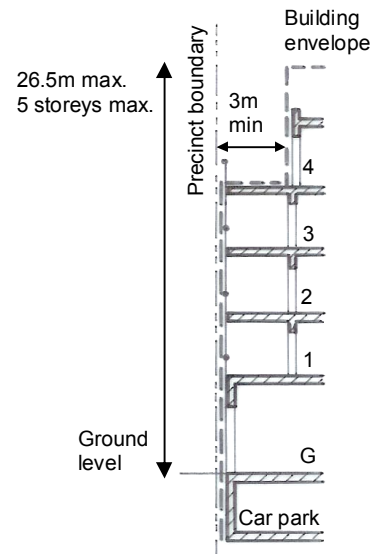
Preferred	Office, Multiple dwelling (subject to the fuel storage buffer being no longer required)
Potential	Amusement parlour, Convenience store, Fast food outlet, Reception centre, Restaurant, Shop, Tavern, Cinema/Theatre, Medical centre, Consulting rooms, Home occupation, Home office, Car park

Building envelope

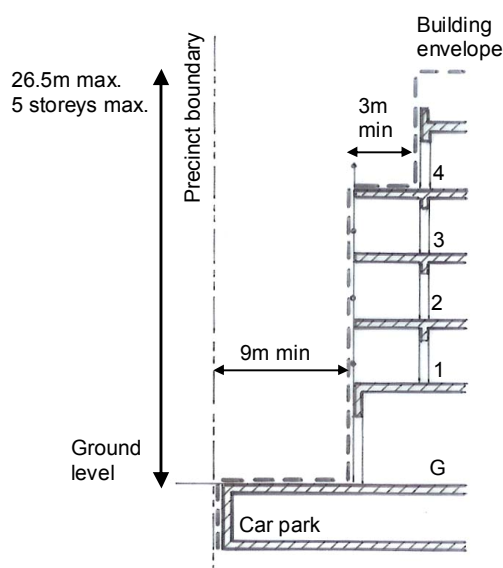
The diagrams below define the setbacks of building elements, and the maximum permitted height and number of storeys.



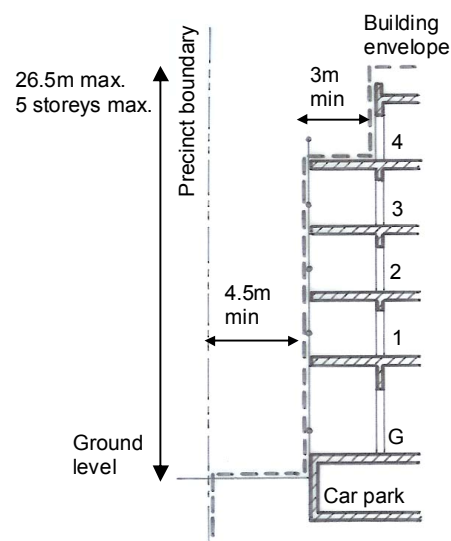
South boundary with Walter Place
 Building: Nil permitted, 4th floor setback an additional 3m min.
 Balcony: Not permitted.
 Car park: Basement only, nil permitted.



West boundary with Esplanade
 Building: Nil mandatory, 4th floor setback 3m min.
 Balcony: Nil permitted.
 Car park: Basement only, nil permitted.



North boundary with DP3A and DP3B
 Building: 9m min; 4th floor setback an additional 3m min.
 Balcony: 9m min.
 Car park: Basement, nil permitted. The design shall facilitate high quality landscape, including possible tree planting (1.5m soil depth).
 Semi-basement, 9m min.



East boundary with DP4
 Building: 4.5m min; 4th floor setback an additional 3m min.
 Balcony: 4.5m min.
 Car park: Basement, nil permitted.
 Semi-basement, 4.5m min.

Maximum plot ratio

- 3:1

Visual permeability

- No requirements.

Shadow generation

- Applications for development must be accompanied by a shadow analysis for dates and times required by Council.

APPENDIX 1 GLOSSARY

Communal open space:	open space set aside for the recreational use of the occupants of the dwellings in a common development, and does not include driveways or car parking areas
CPTED:	Crime Prevention through Environmental Design
GLA:	Gross leasable area
Legibility:	an urban quality that describes the ability of a movement network, land uses or built forms to provide a clear understanding of an area and sense of direction for residents and visitors alike
Mixed use:	the compatible mixing of a range of appropriate land uses, integrated in close proximity to each other to improve the efficiency and amenity of an area, reduce travel demand, increase walkability, and make more efficient use of available space and buildings
Model Scheme Text:	the framework for setting out town planning schemes as described in Appendix B to the Town Planning Amendment Regulations 1999
Multiple dwelling:	a dwelling in a group of more than one dwelling on a lot where any part of a dwelling is vertically above part of any other but does not include a Grouped Dwelling
Natural ground level:	the levels on a site established as part of subdivision of the land preceding development
Passive surveillance:	provision of opportunities for the occupants of a building to see out of an opening onto a public place to monitor activity. If people in public places know they can be seen, they are more likely to feel secure and/or less likely to partake in antisocial behaviour
Reciprocal rights of access:	a legal arrangement where a proportion of the land on private property is made available for shared use by others
R-IC:	residential inner-city housing code (refer to the Residential Design Codes of WA)
Robustness:	an urban quality that describes the flexible design of places and buildings to accommodate different purposes and uses over time with minimal demolition and disruption to occupants
Setback:	horizontal distance between a wall at any point and an adjacent boundary, measured at right angles (90 degrees) to the boundary
Storey:	that part of a building between floor levels. If there is no floor above, it is the part between the floor level and the ceiling
Transit orientated development:	development that mutually supports use of public transit, for example by direct visual connections, safe and secure access, appropriate land uses and built form around transit, and amenity
Universal access:	physical access by all people to public places and uses that does not require adaptation or specialised design
Urban wall:	the elevation of a building that defines the principal edge of the precinct that fronts onto the public street or place that adjoins the precinct. Building elements (such as entries and balconies) are clearly defined on the elevation by, for example, setbacks in the elevation

APPENDIX 2	REFERENCES
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Leighton Development Area Structure Plan, The Planning Group for LandCorp, WA 2003

Leighton Regional Planning Guidelines, Western Australian Planning Commission, September 2000

City of Fremantle's Town Planning Scheme No.3 Amendment No. 61 and Structure Plan

Residential Design Codes of Western Australia, Western Australian Planning Commission, October 2002

Building Code of Australia, Australian Building Codes Board