

Digital Photography : DJI December 2005

Structure Plan Boundary

BURNS BEACH
Prepared by City of Joondalup : 25/07/2006 - djt

PROPOSED AMENDMENTS TO BURNS BEACH STRUCTURE PLAN

PART 1

PAGE NO Existing, tracked (*)	PROPOSED AMENDMENT DETAILS	OFFICER COMMENTS
i, v,1, 10, 11, 12	Rename Special Design Precinct to Northern Residential Precinct.	Refer to comments in main report.
2 (2)	Change definition of "Ground Lot Level" to allow for a + 1 metre level difference between the front of the lot and the verge and a 2 metre difference between the front of the lot and the verge for lots that area accessed via a rear laneway.	Refer to comment in main report
3 (3)	Amend the wording of Clause 5.2	Statements regarding land use permissibility and the relationship of development of lots in this Precinct to the provisions of the Residential zone under DPS2 have been included to provide clarity for purchasers, and to facilitate the assessment process. The statement has been included at the City's request.
(4)	Insert Point 5 (fencing provision) in Clause 5.2	Refer to comment in main report
4 (4)	Rewording of Point 1 of Clause 6.1, to provide greater clarity of intent, with the provisions to relate to the sites identified by the Burns Beach Structure Plan.	The proposed amendment does not affect the objectives of the structure plan and is supported.
5 (5)	Amend the wording of Clause 6.2	Statements regarding land use permissibility and the relationship of development of lots in this Precinct to the provisions of the Residential zone under DPS2 have been included to provide clarity for purchasers, and to facilitate the assessment process. The statement has been included at the City's request.
5 (6)	Delete Point 1 of Clause 6.2 that permits 2m front setbacks so that this setback shall be in accordance with the R-Codes (3m)	The current provision proposes a lesser setback than is permitted under the R-Codes, which was sought by the developer. As the developer now wishes to delete the provisions and instead use the R-Codes provisions, the proposal is considered acceptable.

6 (6)	Reword Point 4 (now Point 3) of Clause 6.2, to remove "bedroom" and "fully enclosed swimming pool or patio" from the provision.	The proposed amendment would permit the approval of a bedroom at a standard setback from the side boundary, in accordance with the R-Codes, facilitating side windows opening onto internal courtyards. As the City did not require the current provision, the proposal is considered acceptable.
6 (6)	Reword Point 6 (now Point 5) of Clause 6.2, to reduce the minimum setback of dwellings to the rear boundary (including garages) from 1.5m to 1.0m.	A setback from laneways for garages is desirable for safety (sightlines) reasons. Where 7m laneways are provided instead of a 6m laneways, the additional width provided in the laneway accounts for the 0.5m reductions from the lot boundary.
6 (7)	Reword Point 8 (now Point 7) of Clause 6.2, To prohibit dwellings within these R60 sites from all gaining access to the road reserves which they may abut.	The rewording of this Clause is to cater primarily for the R60 sites. These sites may not necessarily be accessed via a laneway where access is to be controlled through a single crossover point and private driveway.
(7)	Insert Point 14 in Clause 6.2	Refer to comment in main report
8 (8)	Modify Clause 7.1 to reflect expansion of local shop site to include land on both (2) corners.	The expanded provision will provide greater opportunity for an additional shop on the opposite corner to the existing defined Local Shop, thus framing the corner and reinforcing this area as a community focal point.
(9)	Modify wording of Clause 7.2	It is proposed to replace the term "permitted" with "permissible" for consistency, and add a statement that limits permissible land uses to those specified. These modifications will add clarity for purchasers and assessors of development applications.
9 (9)	Reword Clause 7.3, to include the words 'small' and 'facility' to clarify the intent of this precinct.	The precinct is not intended to be a large-scale commercial area and will only be developed for land uses permitted within the Local Shop Precinct. The proposed amendment clarifies this intent.
9 (9)	Reword Clause 7.3 regarding rear garage setbacks	Refer to comment above in relation to page 6.
9 (9)	Reword Point 3 of Clause 7.3 with regard to car parking provisions	To provide greater clarity with regard to the intent of the provision, and how it relates to these sites being developed for residential dwellings. The provision relates to residential dwellings and <u>not</u> commercial/retail land uses.

9 (9)	Reword Point 7 of Clause 7.3 regarding rear garage setbacks	Refer to comment above in relation to page 6.
(11)	Modify wording of Clause 8.2	It is proposed to replace the term "permitted" with "permissible" for consistency, and add a statement that limits permissible land uses to those specified. These modifications will add clarity for purchasers and assessors of development applications.
11 (11)	Delete "Shop" as a permissible land use from Clause 8.2	A "Shop (includes Fish & Chip shop, take away pizza shop)" is currently included in the BBSP. The definition of a "Shop" under DDPS2 could include any type of retail outlet, such as a pharmacy, newsagents or florist. These are uses that are currently accommodated and intended in the Local Shop Precinct. The developer has confirmed that the intention for this site is that a café/restaurant (including a lunch bar) be developed, which is clarified by deletion of the "Shop" use.
11 (11)	Delete Point 2 of Clause 9.1 - "To provide a Special Design Precinct within which endeavours will be made to accommodate level differences within individual dwelling design."	This objective was proposed by the developer, however, opportunities to do this were investigated in more detail by the project team, and it was determined that lot sizes would need to be excessively large (+1,000sqm) than the lot sizes intended to achieve this. Since the State government is encouraging smaller lot development, removing the objective would be acceptable.
11 (11)	Insert the following objective in Clause 9.1 - "To provide a variety of lot sizes and dwelling types with selected sites identified at a maximum density of R60 as indicated on the Structure Plan."	The additional objective reflects the densities proposed within the Northern Residential Precinct and is therefore considered acceptable.
11 (11)	Insert an additional objective in Clause 9.1- "To provide home sites which overlook parkland areas and streets to maximise passive surveillance opportunities and promote attractive streetscape"	The additional objective clarifies the intent of the road layout and design for the northern precinct and is therefore considered acceptable.
(11)	Amend the wording of Clause 9.2	Statements regarding land use permissibility and the relationship of development of lots in this Precinct to the provisions of the Residential zone under DPS2 clarity for

		purchasers, and to facilitate the assessment process. The statement has been included at the City's request.
11 (11)	Modify Clause 9.2 to reflect the proposed densities in the Northern Residential Precinct and the relevant provisions.	The proposed amendment provides clarity and is therefore supported.
12 (12)	Add a new provision to Clause 9.2 allowing the plot ratio for R60 lots within the Northern Residential Precinct to be 0.85. (Point 1)	Refer to comment in main report
12 (12)	Modify Point 2, by replacing 2 storeys with 3 storeys.	Refer to comment in main report
12 (12)	Add a new provision to Clause 9.2 with regard to building height limits	Refer to comment in main report
13 (13)	Add a new provision to Clause 9.2 with regard to retaining wall heights	Refer to comment in main report

PART 2

PAGE NO	PROPOSED AMENDMENT DETAILS	OFFICER COMMENTS
21 (22)	Modify Section 9.1, to refer to new Public Open Space (POS) figures resulting from the redesign of the Northern Residential Precinct.	The areas stipulated reflect approved and proposed amended POS areas accurately to provide clarity and the proposal is acceptable.
25 (26)	Modify Section 10.2 and 10.3, to refer to R60 as the maximum density at nominated sites	The maximum density was previously R40. The required inclusion of and R60 are by the Western Australian Planning Commission, and the proposed inclusion of an area of R60 in the Northern Residential Precinct, necessitates the amendment.
26 (27)	Delete paragraph describing Special Design Precinct and insert new Section 10.4 describing the Northern Residential Precinct.	The proposed amendment is required to describe the new design philosophy utilised for the Northern Residential Precinct, which has been based on more accurate topographical, engineering and environmental assessment and provides clarity.
32 (34)	Modify Section 10.5 (10.6), to refer to new Public Open Space numbering and calculations.	The proposed amendment is a result of the redesign of the Northern Residential Precinct and approved subdivisions to date and is therefore acceptable.

34 (39)	Insert new POS Schedule.	The inclusion refers to new Public Open Space numbering and calculations resulting from the redesign of the Northern Residential Precinct. With regard to the deductions listed within the table, the drainage sump has been treated separately to the balance of the drainage area. This area was not available at the time of the original Structure Plan being approved and was therefore included in the overall drainage calculation. The amended areas are acceptable.
37 (43)	Add POS 2 to last sentence.	The design of the Northern Residential Precinct has been undertaken in a manner to retain several existing mature trees near the peak of the natural landform. These trees are to be retained within POS 2, as noted by the d addition.
41 (46)	Modify POS references.	The amendment is supported as it refers to new Public Open Space numbering resulting from the redesign of the Northern Residential Precinct, and minor amendments to the central open space areas within the Burns Beach Estate.
42/43 (48/49)	Insert new text for POS 1A, 1B, 1C, 2 and 3.	The inclusion reflects the redesign of the Northern Residential Precinct and POS 3 and is supported.
45 (50)	Modify heading from POS 8 and 9 to "POS 8A, 8B and 9".	This textual change reflects the new open space design that has been approved through the subdivision process and is currently being constructed.
56 (62)	Add text to Section 12.1 to describe retaining walls in the Northern Residential Precinct and the tree retention in POS 2.	Refer to comment in main report
59 (66)	Modify text relating to POS.	This text has been amended to reflect the new Public Open Space numbering and calculations resulting from the redesign of the Northern Residential Precinct.

BURNS BEACH STRUCTURE PLAN

BURNS BEACH STRUCTURE PLAN

STRUCTURE PLAN NO. 10

This Structure Plan is prepared under the provisions of Part 9 of the City of Joondalup District
Planning Scheme No. 2

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EXECUTIVE SUMMARY

The Burns Beach site is located north of Burns Beach Road, west of Marmion Avenue, immediately north of the existing Burns Beach townsite. The subject land is approximately 290 hectares in area and consists of vegetated coastal land and portions of coastal dune ridges and landforms.

Just less than half of the site (144 hectares), reserved as Parks and Recreation under the Metropolitan Region Scheme, is to be retained for conservation purposes. The remaining portion of the western cell, totalling 147.5316 hectares, is to be developed for urban land uses.

The Burns Beach Structure Plan has determined the overall land use and form of development for the subject land. The Structure Plan has divided the site into the following precincts:

- Residential R20 Precinct;
- Residential R40 Precinct;
- ~~Special~~ Northern Residential Precinct;
- Local shop precinct;
- Beach kiosk/restaurant precinct; and
- Parks and Recreation Reserve.

The overall vision embraced by the Structure Plan is to create a development which is environmentally, socially and economically sustainable. The design philosophy was to create a high quality residential environment with a strong community focus and a real sense of identity. Burns Beach will be a landmark, leading edge development.

The Structure Plan has emerged from a comprehensive community and stakeholder consultation process. The consultation process provided a range of opportunities for stakeholders input and engaged stakeholders in the preparation on the Structure Plan. The Structure Plan enjoys broad stakeholder support.

This Structure Plan is divided into two parts:

Part 1 – Statutory Planning

Part 2 – Explanatory Report

Part 1 of the report outlines the objectives and provisions for each precinct and reservation. Part 2 provides further explanation about the site and the rationale for the urban design.

PART 1 – STATUTORY PLANNING

As provided for under Part 9 of the Scheme, this part of the Structure Plan has the same force and effect as a provision, standard or requirement of the Scheme.

Part 1 of this Structure Plan is a general guide to future subdivision, zoning and development of the land included in the Burns Beach Structure Plan.

1.0 SUBJECT AREA

The Structure Plan area covers approximately 291 hectares of Lot 9017 on Deposited Plan 40143 and described on Certificate of Title Volume 2565 Folio 138 (refer Appendix 1). The land is bound by Marmion Avenue to the east, Burns Beach Road and the existing Burns Beach townsite to then south, the Indian Ocean to the west and vacant land to the north.

2.0 STRUCTURE PLAN PRECINCTS/RESERVATIONS

The Structure Plan divides the land into the following precincts:

- Residential R20 Precinct;
- Residential R40 and R60 Precinct;
- ~~Special~~ Northern Residential Precinct;
- Local shop precinct;
- Beach shop/lunch bar/restaurant precinct; and
- Parks and Recreation Reserve.

The Burns Beach Structure Plan is shown at Plan 1 attached to this part of the report.

3.0 DEFINITIONS

The terms used in this part of the Structure Plan Report shall be interpreted in accordance with the City of Joondalup District Planning Scheme No.2 and as set out hereunder:

“STOREY” shall mean the vertical space extending from one habitable floor of a building to the floor above (or if there is no floor above, between the floor level and the ceiling) and shall be deemed to be no more than 3.5 metres. A loft space within a roof shall not be defined as a storey, whether habitable or otherwise.

“LOFT” shall mean a habitable or non habitable space contained wholly within the roof of a building including a space served by dormer type windows which may project forward of the main roof pitch. A loft space is not permitted to have a balcony or terrace.

“BUILDING HEIGHT” shall mean the vertical distance at any point from natural ground level to the uppermost part of the building above that point (roof ridge, parapet or wall), excluding minor projections above that point. Minor projections include finials, chimneys, vent pipes, aerials or other appurtenance of like scale.

“GROUND LOT LEVEL” shall mean the finished level of the lot relative to the midpoint of the verge that it fronts (existing or established at subdivision stage) and immediately adjacent to the lot. The finished level of the lot shall be + 1 /- 0.5 metre from the level of the verge at the front of the lot, measured from the mid point of the frontage of the lots. Lots with rear laneway access that are required to be accessed from the rear lane may be permitted to substitute +/- 2 +/- 0.5 metres in lieu of the + 1 /- 0.5 metre.

“SINGLE DWELLING” shall mean a dwelling standing wholly on its own green title or survey strata lot, together with any easement over adjoining land for support of a wall or for access or services and excludes dwellings on Certificates of Titles with areas held in common property.

“R CODES” shall mean the Residential Design Codes of Western Australia, October 2002 or any such amendments or modifications thereto that may be current.

“THE SCHEME” shall mean the City of Joondalup District Planning Scheme No.2 (as amended) gazetted 28 November 2000 or such amendments or modifications thereto that may be current.

“PRIMARY STREET”, in the case of a lot located on a corner, shall mean that street which the lesser length boundary faces as demonstrated by Figure 1 below.

“SECONDARY STREET”, in the case of a lot located on a corner, shall mean that street which the greater length boundary faces by Figure 1 below.

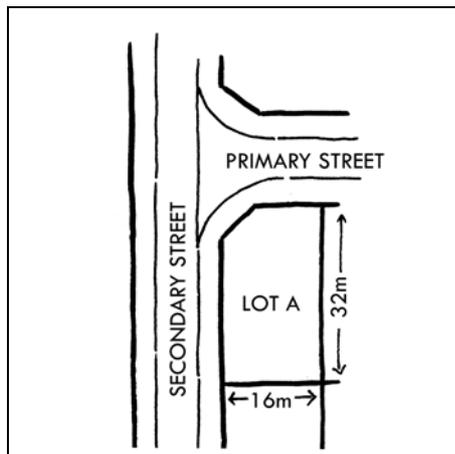


Figure 1: Primary & Secondary Street (not to scale)

“LOCAL SHOP” shall mean land and buildings used for the retail sale of convenience goods being those goods commonly sold in supermarkets, delicatessens and newsagents and operated during hours which may include or may extend beyond normal trading hours.

4.0 THE SCHEME

Unless provided for by specific requirements of this Structure Plan, all requirements shall be in accordance with the provisions of the City of Joondalup District Planning Scheme No.2 or such amendments or modifications thereto that may be current.

5.0 RESIDENTIAL R20 PRECINCT

5.1 Objectives

The objectives for the Residential R20 Precinct are:

- To provide for a variety of lot sizes and single residential dwelling types at a maximum density of R20.
- To provide residential homesites which have the correct solar orientation to facilitate the construction of energy efficient dwellings;
- To provide homesites with coastal proximity that derive benefit from ocean views and access to cooling sea breezes;
- To provide homesites which overlook parkland areas and streets to maximise passive surveillance opportunities and promote attractive streetscapes.
- To maintain a high level of pedestrian connectivity, amenity and safety.
- To ensure that the impact on the visual quality and aesthetics of the area are minimised, air conditioning or cooling units, hot water systems, solar panels, bin storage areas, TV antennae, satellite dishes and radio masts should be located such that they are screened from public view and they are located in a position to minimise noise impacts on neighbouring residences.

5.2 Land Use and General Provisions

Land use permissibility and general provisions in the Residential R20 Precinct shall be the same as those within the Residential zone under the City's District Planning Scheme No 2.

The R20 residential density codes shall apply to future development within the Residential R20 Precinct. All dwellings are required to comply with the Residential Design Codes 2002 unless otherwise provided for in this Structure Plan.

- I. Dwellings constructed on corner lots must be designed to address both the primary and secondary street. Dwellings should face both the primary and secondary street at the corner and should be design to 'turn the corner' rather than focus visually interesting elevations only on the primary street. This can be achieved by the following:
 - having habitable rooms and major openings facing both the primary and secondary street;
 - by reducing the fencing along the secondary street boundary so that it is located at least 4 metres behind the front building line;
 - having open style fencing along the front portion of the secondary street boundary rather than solid fencing.

Dwellings which address both the primary and secondary street are a superior urban design and streetscape solution and also increase the opportunity for casual surveillance of the street and the security of the area.

- II. The provisions of the City of Joondalup Policy 3.1.9 "Height and Scale of Buildings within a Residential Area" shall not apply.
- III. Dwellings shall be constructed to a maximum height of 2 storeys with loft areas within the roof space permitted.

IV. The maximum building height measured from natural ground level shall be:

Maximum wall height (with pitched roof) – 6.5 metres

Maximum total height to roof ridge – 9.5 metres

Maximum wall and total height (parapet wall with concealed roof) – 7.5 metres

V. The maximum height of non permeable front fencing, inclusive of retaining walls, is limited to 1.3m above the midpoint of the verge that it fronts and immediately adjacent to the lot.

6.0 RESIDENTIAL R40 AND R60 PRECINCT

6.1 Objectives

- To provide for diversity in lot sizes and single dwelling types at a ~~maximum~~ selected sites at densities of R40 and R60 as indicated on the Structure Plan;
- To provide lots that maximise the benefits of good solar orientation and facilitate the construction of energy efficient dwellings;
- To provide for smaller homesites around the parklands areas, adjacent to the coast and the local shop site.
- To provide homesites which overlook parkland areas and streets to maximise passive surveillance opportunities and promote attractive streetscapes.
- To maintain a high level of pedestrian connectivity, amenity and safety.
- To ensure that the impact on the visual quality and aesthetics of the area are minimised, air conditioning or cooling units, hot water systems, solar panels, bin storage areas, TV antennae, satellite dishes and radio masts should be located such that they are screened from public view and they are located in a position to minimise noise impacts on neighbouring residences.
- To promote subdivision and housing development which provides for housing at higher densities as the neighbourhood matures.



Indicative photos of R40 residential development

6.2 Land Use and General Provisions

Land use permissibility and general provisions in the Residential R40 and R60 Precinct shall be the same as those within the Residential zone under the City's District Planning Scheme No 2.

All dwellings are required to comply with the Residential Design Codes 2002—unless otherwise provided for in this Structure Plan.

~~I. Front setbacks shall be a minimum of 3 metres with an average of 4 metres.~~

- I. To maximise winter solar penetrations, solar accessible courtyards are required. A nil setback onto a nominated side boundary is permitted to facilitate this. For north-south orientated lots the nil setback shall be on the western boundary (Refer Figure 2). For east-west orientated lots the nil setback shall be on the southern boundary (Refer Figure 2).

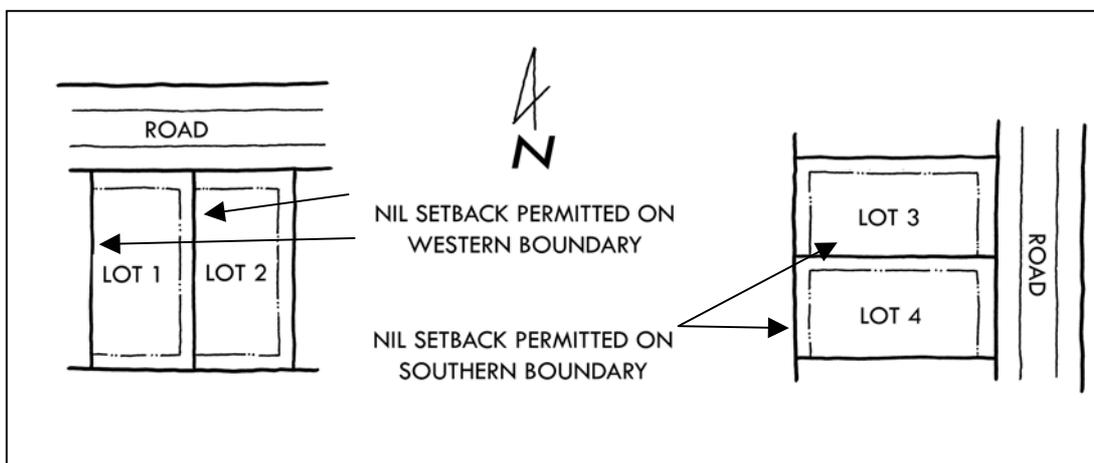


Figure 2: Nil Setback Provision (not to scale)

- II. Walls which have a nil setback shall not be higher than 3.5m for 2/3 of the length of the balance of the boundary behind the front setback permitted.
- III. For side boundaries not subject to a nil setback, and where a side wall contains a major opening to a habitable room (as defined in the R-Codes, but excluding bedroom and fully enclosed swimming pool or patio), the minimum side setback shall be 2 metres in order to maximise solar access.
- IV. Setback to a secondary street shall be a minimum of 1.5 metres.
- V. The ground floor of a dwelling, including the garage, must be setback a minimum of 1.5 metres from the rear boundary where the laneway is less than 7.0m in width. Where the laneway is 7.0m or wider the rear setback may be reduced to 1.0m. A 1.0 1-5m visual truncation to the garage opening must be provided. The first floor is permitted to have a nil setback to the rear boundary.
- VI. Each dwelling must provide a minimum of 2 on site covered car bays

- VII. Where vehicular access is available from a dedicated rear laneway or internal private driveway, vehicular access and garage location is required to **must** be from the rear laneway or internal access way private driveway.
- VIII. With the exception of corner lots, the dwelling is to be designed to address and face the primary street, with clearly defined pedestrian path to the front of the residence.
- IX. An outdoor living area with a minimum area of 20 sqm for R40 and 16 sqm for R60, and a minimum dimension of 4m which is directly accessed from a living area is to be provided in a location to best facilitate winter solar penetration. This may include space located in front of the street setback.
- X. A minimum of 35% of the lot area is required to be provided as open space.
- XI. The provisions of the City of Joondalup Policy 3.1.9 “Height and Scale of Buildings within a Residential Area” shall not apply.
- XII. Dwellings shall be constructed to a maximum height of 2 storeys with loft areas within the roof space permitted.
- XIII. The maximum building height measured from natural ground level shall be:
- Maximum wall height (with pitched roof) – 6.5 metres
Maximum total height to roof ridge –9.5 metres
Maximum wall and total height (parapet wall with concealed roof) – 7.5 metres
- XIV. The maximum height of non permeable front fencing, inclusive of retaining walls, is limited to 1.3m above the midpoint of the verge that it fronts and immediately adjacent to the lot.
- XIV:XV. Dwellings constructed on corner lots must be designed to address both the primary and secondary street. Dwellings should face both the primary and secondary street at the corner and should be design to ‘turn the corner’ rather than focus visually interesting elevations only on the primary street. This can be achieved by the following:
- having habitable rooms and major openings facing both the primary and secondary street;
 - by reducing the fencing along the secondary street boundary so that it is located at least 4 metres behind the front building line;
 - having open style fencing along the front portion of the secondary street boundary rather than solid fencing.

7.0 LOCAL SHOP PRECINCT

7.1 Objective

A local shop precinct is shown on the Structure Plan (refer Plan 1). A local shop precinct has been identified to allow for the development of a small retail facility in the centre of the Estate to cater for the daily needs of the local community. It is envisaged that a small lunch bar and/or restaurant/cafe would also be developed adjacent to opposite the local shop to frame the corner and to create a small mainstreet focus that enhances the vitality and vibrancy of the Estate and extends activity beyond the day light hours. Residential development will also be permitted. Shop top housing or shop top office style of development is encouraged.

Any exterior lighting for a shop, lunch bar or restaurant should be configured so as to minimise any detrimental impact on adjoining residential development through light overspill.

The provision of on-street car parking and parking areas within the central POS opposite the site, together with the fact that the site is in a highly accessible area for pedestrians and cyclists, on site car parking for the local shop/lunch bar/restaurant should be minimised. The number of car bays required on site will be determined by Council and assessed against the merits of the specific case as part of a development application. Any car parking provided on site should be located at the rear of the building and be accessed from the rear laneway in order to comply with Mainstreet design principles. Mainstreet design principles encourage active land use-street interfaces with building frontages to streets with minimal setbacks and parking and service areas to the rear of the building.

7.2 Land Uses

The permissible land uses ~~permitted~~ within ~~this~~ sites are as follows:

- Local Shop
- Shop
- Office
- Single Dwelling
- Group Dwelling
- Caretakers Flat/House
- Lunch Bar
- Restaurant

No other land uses are permissible in this Precinct.

7.3 General Provisions

A small local shop facility ~~site~~ is required to be provided in this precinct. Wholly residential or office development is not permitted to occupy the entire precinct.

All residential development is required to comply with the Residential Design Codes unless otherwise provided for in this Structure Plan.

- I. Non-residential development proposals within the local shop precinct shall be assessed in accordance with the District Planning Scheme, Council's policies, relevant Local Laws and the Building Codes of Australia, except where they have been varied in the following instances:
- II. Buildings shall be constructed to a maximum height of 2 storeys with loft areas within the roof space permitted.
- III. A minimum of two (2) on site car parking bays shall be provided for dwellings and shall be accessed from the rear laneway.
- IV. The maximum building height measured from natural ground level shall be:

Maximum wall height (with pitched roof) – 6.5 metres

Maximum total height to roof ridge – 9.5 metres

Maximum wall and total height (parapet wall with concealed roof) – 7.5 metres

- V. Setback from all street boundaries (primary and secondary) shall be a minimum of 2 metres. A larger setback is encouraged to cater for alfresco dining and footpath trading opportunities.
- VI. Setback from a side boundary shall be a minimum of 1 metre for the ground floor and 1.5 metres from the first floor.
- VII. Setback from the rear boundary shall be 1.5 metres for a garage or carport and 6 metres for the main building where the laneway is less than 7.0m in width. Where the laneway is 7.0m or wider the rear setback for the garage may be reduced to 1.0m. A ~~1.5m~~ 1.0 metre visual truncation to the garage opening must be provided.
- VIII. To ensure that the impact on the visual quality and aesthetics of the area are minimised, air conditioning or cooling units, hot water systems, solar panels, bin storage areas, TV antennae, satellite dishes and radio masts should be located such that they are screened from public view and they are located in a position to minimise noise impacts on neighbouring residences.
- IX. Buildings constructed on corner lots must be designed to address both the primary and secondary street. Buildings should face both the primary and secondary street at the corner and should be design to ‘turn the corner’ rather than focus visually interesting elevations only on the primary street. This can be achieved by the following:
- having habitable rooms and major openings facing both the primary and secondary street;
 - by reducing the fencing along the secondary street boundary so that it is located at least 4 metres behind the front building line;
 - having open style fencing along the front portion of the secondary street boundary rather than solid fencing.
 - Residential development within the local shop precinct shall be in accordance with the Mixed-Use Development Requirements of the Residential Design Codes 2002.

8.0 BEACH SHOP/LUNCH BAR AND RESTAURANT PRECINCT

8.1 Objective

A beach shop/lunch bar and restaurant are permitted within POS 6 as shown on the Structure Plan. The development of a shop/lunch bar and a restaurant is proposed to provide for opportunities for the local population and visitors to the area to enjoy the coastal environment and to increase the vibrancy of the area as a destination beyond day light hours.

The provision of on-street car parking and parking areas in the vicinity of the precinct, together with the fact that the precinct is in a highly accessible area for pedestrians and cyclists, on site car parking for the beach shop, lunch bar and restaurant should be minimised. The number of car bays required on site will be determined by Council and assessed against the merits of the specific case as part of a development application.

8.2 Land Use

The permissible land uses ~~permitted~~ within this precinct are as follows:

- Lunch Bar
- ~~Shop (includes Fish & Chip shop, take-away pizza shop)~~
- Restaurant/Cafe café

No other land uses are permissible in this Precinct.

8.3 General Provisions

Development proposals within this precinct shall be assessed in accordance with the District Planning Scheme, Council's policies, relevant Local Laws and the Building Codes of Australia.

9.0 ~~SPECIAL DESIGN~~ NORTHERN RESIDENTIAL PRECINCT

The land in this precinct is naturally very steep. Accordingly, special consideration must be given to the urban design and built form outcomes in the precinct.

9.1 Objectives

- To provide a ~~Special Design~~ Northern Residential Precinct within which endeavours will be made to maintain the general landform;
- ~~To provide a Special Design Precinct within which endeavours will be made to accommodate level differences within individual dwelling design~~ To provide a variety of lot sizes and dwelling types with selected sites identified at a maximum density of R60 as indicated on the Structure Plan;
- To provide homesites which ~~have~~ encourage the correct solar orientation and facilitate the construction of energy efficient dwellings;
- To provide homesites with ocean proximity that derive benefit from the cooling sea breezes;
- To maintain a high level of pedestrian connectivity, amenity and safety;
- To provide homesites which overlook parkland areas and streets to maximise passive surveillance opportunities and promote attractive streetscapes;

9.2 Land Use and General Provisions

Development of all lots within the ~~Special Design~~ Northern Residential Precinct shall be in accordance with the R20 residential density code, except where defined on the approved Structure Plan at a ~~higher density~~ R40 and R60, and development shall be assessed in accordance with the Residential Design Codes, District Planning Scheme, Council's policies, relevant Local Laws and the Building Codes of Australia, except where they have been varied in the following instances:

Land use permissibility and general provisions in the Northern Residential Precinct shall be the same as those within the Residential zone under the City's District Planning Scheme No 2.

For lots within the Northern Residential Precinct with a R20 residential density code, the provisions of the Residential R20 Precinct apply.

For lots within the Northern Residential Precinct with a R40 or R60 Residential Code, the relevant provisions of the Residential R40 and R60 Precinct apply, except where they have been varied below:

- I. For lots coded R60, the plot ratio shall be 0.85 for both single/grouped dwellings and multiple dwellings.
- II. Dwellings shall be constructed to a maximum height of 3 storeys with loft areas within the roof space permitted.
- III. The maximum building height measured from natural ground level shall be:

Maximum wall height (with pitched roof) – 9.5 metres

Maximum total height to roof ridge – 12.5 metres

Maximum wall and total height (parapet wall with concealed roof) – 10.5 metres

~~I. Dwellings constructed on corner lots must be designed to address both the primary and secondary street. Dwellings should face both the primary and secondary street at the corner and should be design to ‘turn the corner’ rather than focus visually interesting elevations only on the primary street. This can be achieved by the following:~~

- ~~having habitable rooms and major openings facing both the primary and secondary street;~~
- ~~by reducing the fencing along the secondary street boundary so that it is located at least 4 metres behind the front building line;~~
- ~~having open style fencing along the front portion of the secondary street boundary rather than solid fencing.~~

~~Dwellings which address both the primary and secondary street are a superior urban design and streetscape solution and also increase the opportunity for casual surveillance of the street and the security of the area.~~

~~H. Dwellings shall be constructed to a maximum height of 2 storeys with loft areas within the roof space permitted.~~

~~This precinct will be the subject of further detailed engineering design given the steep nature of the topography in the area. At the completion of this design process, additional provisions will be added to this Structure Plan, if necessary, through a modification to the Structure Plan.~~

IV Retaining walls within the Northern Design Residential Precinct are permitted up to a height of 4.0m in locations shown on Figure 3. Building Licence applications showing all details of the retaining walls are required to be submitted to Council for approval.

Retaining walls in excess of 4.0m may be approved by Council, with a Development Application for walls above 4.0m needing to be submitted for approval prior to the issuing of a Building Licence.

Access to the swimming beach located to the north of the ~~Special Design~~ Northern Residential Precinct will be accommodated from the perimeter road at some stage in the future. A Management Plan will need to be prepared by the relevant State and Local Government authorities in conjunction with the developer of the Burns Beach Structure Plan area for this area

of Park and Recreation reserve. The future formal access road to the swimming beach would need to connect at some point to the perimeter road separating the Parks and Recreation reserve and foreshore reserve from the developable area within the “Urban Development” zone proposed as part of this Structure Plan. It has therefore been indicated on Plan 1 of the Structure Plan that a future road providing formal vehicular access to the future northern swimming beach will be constructed in the future. However, the final alignment and form of this road and the facilities to be provided at the beach is subject to the Management Plan prepared by relevant State and Local Government authorities, in conjunction with the developer of the Burns Beach Structure Plan area.

10.0 PARKS AND RECREATION RESERVE

The area depicted on the Structure Plan as “Parks and Recreation” Reserve is Reserved under the Metropolitan Region Scheme. Development of this land shall comply with the provisions applicable to “Parks and Recreation” Reserved land under the Metropolitan Region Scheme and the City of Joondalup District Planning Scheme No.2.

11.0 MODIFICATIONS TO THE STRUCTURE PLAN

All subdivision and development on the subject land must be generally in accordance with the Structure Plan.

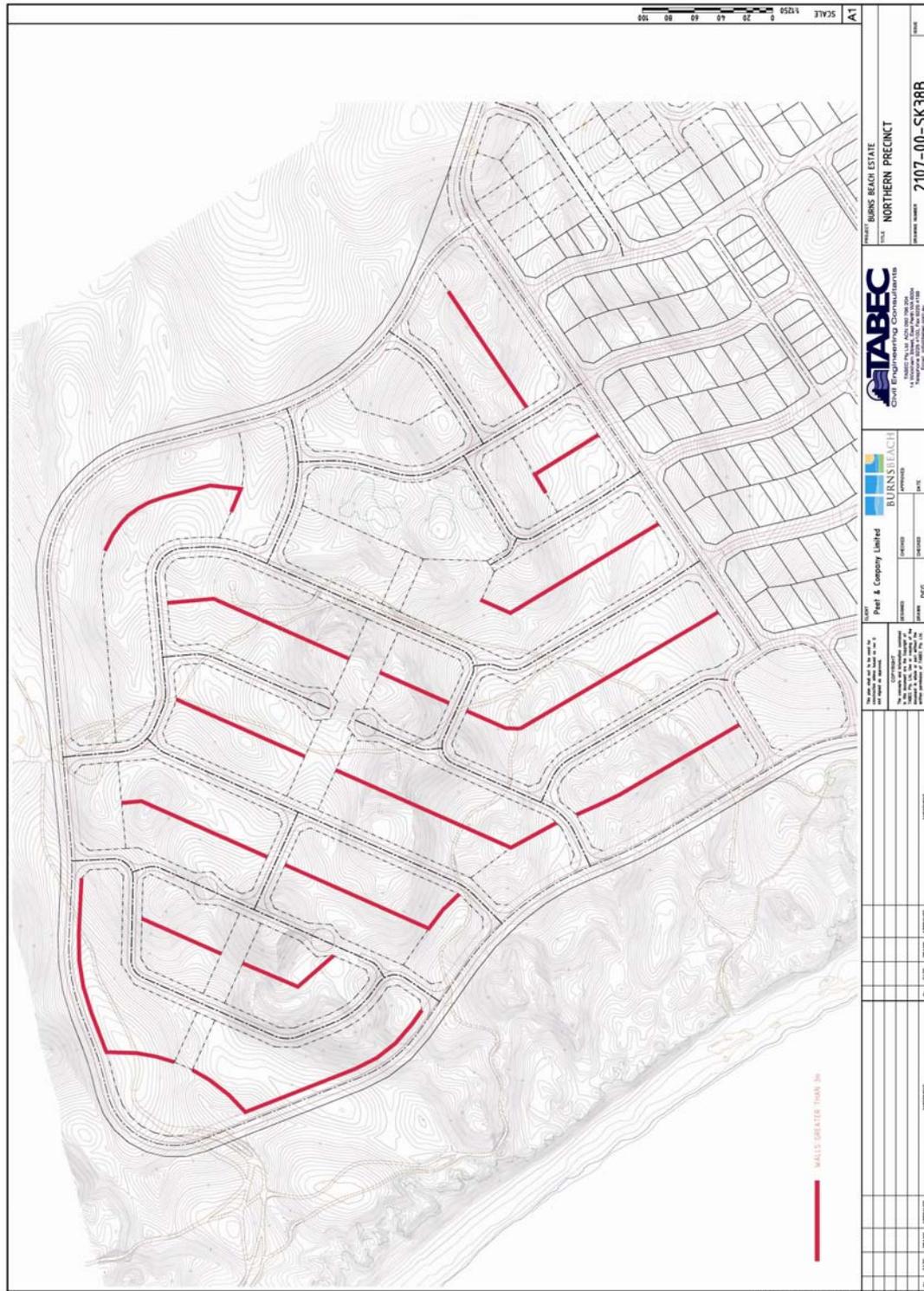


Figure 3: Retaining Walls Permitted to a Height of 4.0m

PART 2.0 - EXPLANATORY REPORT (EXTRACTS ONLY)

10.210.1 Proposed Land Use

The Burns Beach Structure Plan (refer Plan 1) proposes the following mix of land uses over the subject land:

- Parks and Recreation reserves, including a foreshore reserve;
- Residential development ranging from R20 to ~~R40~~ R60 densities;
- Local shop, café, kiosk and restaurant;
- Primary school; and
- Public open space.

In addition, an existing Telstra switch site is located in the north eastern corner of the site. This site, totalling an area of 428m² will be created as part of the subdivision of the adjacent land.

The following sections provide a discussion regarding of each of the proposed land uses.

10.310.2 Residential Development

It is forecast that the site will yield approximately 1,600 single residential lots ranging in density from R20 to ~~R40~~ R60.

The majority of the subject land is proposed for residential development at a density of R20. Within the R20 Code however, a variety of lot sizes will be produced. In the western portion of the site nearest to the coast, the majority of the lots will be large family sized lots in the order of 600m². Smaller lots between 500m² – 600m² will be developed in the eastern portion of the site.

Higher density residential precincts will be provided by the Structure Plan in order to facilitate and promote housing, socio-economic and demographic diversity and to contribute to sustainability and the minimisation of urban sprawl. It is proposed that higher density allotments, up to ~~R40~~ R60, will be provided in areas of high amenity near or adjacent to open space and the central corner store in response to market influences and demand. The small lots will be in the order of 400m².



Photos: examples of medium density housing product

10.410.3 Northern Residential Precinct

The Northern Residential Precinct is located in the north western area of the site where the land is characterised by extremely steep topography. The key objective in this precinct is to provide quality residential outcomes whilst retaining the general landform of the site. Within this objective, the opportunities and constraints presented by the Precinct were examined and a design response was then formulated.

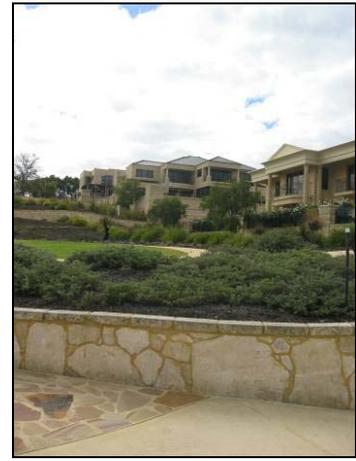
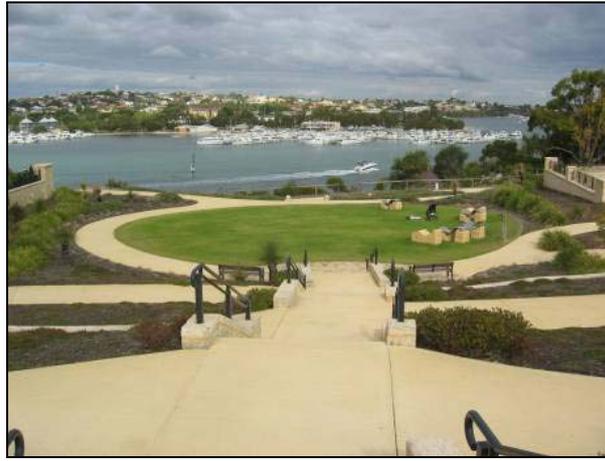
Philosophy

The topography of the Northern Residential Precinct with regard to slopes and grades is similar to that of the Minum Cove area in Mosman Park. Development of land which is to retain the general slope and height of the 'original' land form, will utilise retaining walls to help stabilise the natural landform, whilst providing for residential allotments that are capable of being developed upon in a standard manner.

A similar philosophy to that of Minum Cove has been utilised for the Northern Design Residential Precinct. Retaining walls are to be used in the development, to retain the natural height and general landform.

Whilst retaining walls are to be used, these walls are to be primarily situated along the common rear boundary of allotments. The retaining walls will be primarily obscured from the public realm, being screened by residential dwellings that will be located in front of the wall, minimising the impact that these walls will have on the surrounding street network, streetscape and public realm.

Photos from Minum Cove have been provided below to give an indication of the form of development envisaged.



Photos: Minum Cove

Open Space Spine

The Northern Residential Precinct has been designed around a central linear open space spine, traversing the precinct in a NW – SE direction. The alignment of the open space spine has been centred on a visual corridor to the northern beach area and foreshore reserve. The alignment of the spine also offers the gentlest grade within the open space area for pedestrian access, with the height difference between the foreshore reserve and the highest area within the precinct being distributed over the spine length of approximately 420 metres.

The open space spine which is to be a central focus of the Northern Residential Precinct links two relatively large areas of open space. These larger areas are primarily utilised for retention of remnant vegetation and also for drainage purposes. The central spine linking these, whilst proving a permeable open space network, have been incorporated within the urban fabric to be primarily utilised for passive recreation pursuits, with active pursuits to take place in the larger areas.

Solar Efficiency and Orientation

The road network and orientation of residential lots within the Northern Residential Precinct have been aligned to optimise the benefits gained by both solar orientation and natural wind directions.

The stepping of residential allotments through a terraced arrangement, will assist in ensuring the majority of dwellings receive direct sunlight from the northerly aspect, with the walls being terraced up the slope. The direction of the slope diminishes the impact of shadowing that would generally be associated with high retaining walls.

In addition to ensuring good solar orientation of lots as described in the below section, a critical design issue within the Northern Residential Precinct was the direction of prevailing winds. The design has ensured that the majority of residential lots have been orientated to maximise protection from the strong winds that occur at this coastal location.

The orientation of the internal road network on a north-northwest orientation assists with both enhancing sightlines of dwellings and commuters to the foreshore reserve, whilst also ensuring elements of the south west winds will flow throughout the built environment.

The open space spine, whilst providing a visual corridor within the precinct to the foreshore reserve, has also been orientated to provide some protection to any landscaping from the south west winds. This may assist with the establishment of new vegetation in the short-term and promote greater use of these areas with pedestrians being protected from the elements.

Retention of Natural Landform

The highest point in the Precinct is located generally at the eastern side of the Precinct. The land falls away from this high point in all directions. The lowest point in the Precinct is located in the north western corner, which is to be utilised to accommodate the drainage strategy for the Burns Beach Estate, and match in with the existing levels of the Foreshore Reserve.

In order to achieve the objective of maintaining the general overall landform and create quality homesites, development will be terraced from all boundaries of the Precinct to the natural high point in the centre of the Precinct. Retaining walls are required to terrace the residential lots, and maintain the general landform of the northern area.

Opportunities to accommodate the general landform within the residential lots and through alternative home construction techniques (rather than through the use of retaining walls at the lot boundaries) were investigated and researched by the project team. However, to be able to do this efficiently and effectively the lot sizes are required to be much larger than the average lot size desired by the current State and Local Governments. Current Government objectives require the achievement of higher density targets, sustainability criteria and a compact city. The State Government's Network City document requires the fuller use of urban land, limiting urban sprawl and encouragement to use public transport.

Greater residential densities are required to ensure that these Government initiatives are met. The provision of very large lots within the Northern Residential Precinct to accommodate level rises without the use of retaining walls directly conflicts with the Government’s sustainability objectives and Network City. The use of retaining walls as proposed allows for the general landform to be retained whilst also providing quality homesites and lots sizes consistent with current State and Local Government policy.

The cross sections attached within Appendix 7 illustrate the location of retaining walls, roads and residential street blocks proposed in the Northern Residential Precinct. Retaining walls at the rear boundary of properties are to be constructed at a height of approximately 4 metres.

With the design of the Northern Residential Precinct rising to a central high point within the site, in addition to the rear retaining walls it is acknowledged that terracing of side boundaries will also be required to facilitate the rise of the topography. The height of the side retaining walls is envisaged to be less than that at the rear boundaries, with the exception of where these walls/lots adjoin open space areas and road reserves.

Density

The bulk of the development in the Northern Residential Precinct will conform with the R20 Code. A number of smaller pockets of R60 and R40 development are proposed surrounding the large park at the high point of the Precinct, and also adjacent to the coastal road. These have been shown on the Structure Plan (Plan 1) and in the below extract from the Structure Plan. The increased amenity value of the open space areas and coastal proximity provides the opportunity for increased density in these areas.



The urban design within the Northern Residential Precinct will result in many lots having ocean and inland views and views will also be ensured from the linear public open space system. The creation of these views will play an important role in the establishment of a strong sense of place at the Northern Residential Precinct. The open space spine has further been utilised to facilitate the retention of several stands of remnant trees.

~~A Special Design Precinct is proposed over the north western area of the site as this land is characterised by extremely steep topography. The bulk of the development in this area will conform with the R20 Code to allow development to have regard for the natural landform. Some smaller pockets of R30 to R40 development may be proposed once more detailed design has been completed. A more intensive urban design and engineering response to this area will be undertaken in an endeavour to, where possible and practical, maintain the general landform of the area. This further design work will be undertaken in consultation with the City of Joondalup.~~

Solar Orientation

Liveable Neighbourhoods outlines that good solar orientation is achieved by maximising the number of allotments with the primary axis (length) orientated within the range N20°W to N30°E, or E20°N to E20°S.

The Burns Beach Structure Plan maximises the creation of lots with the correct solar orientation. The vast majority of lots will have the primary axis orientated between the angles outlined by Liveable Neighbourhoods. Accordingly, dwellings constructed at Burns Beach will be able to comply with the Design for Climate Requirements of the Residential Design Codes 2002.

Subdivision designs will aim to provide lot dimensions (width and length) that respond appropriately to the lot orientation and that facilitate the siting of residential dwellings in a manner that maximises the energy efficiency of dwellings.

10.510.4 Design Guidelines

Part 1 of this report has set out the statutory provisions for development within the land use precincts at Burns Beach. The intent of the statutory provisions in Part 1 of this report is to ensure that built form, particularly on the smaller lots, has a high level of visual amenity and is consistent with the objectives of the Structure Plan. The provisions relate to setbacks, garages, building height and corner lot treatments amongst other issues.

Indicative elevations and images to illustrate what the development on the higher density residential lots may look like have been provided above. These do not form part of Part 1 of this report and are indicative only.

Particular attention has been given to the design of dwellings and fencing on corner lots throughout the Estate. It is considered integral that dwellings constructed on corner lots are designed to address both street frontages in order to increase passive surveillance opportunities, increase aesthetic appeal and positively contribute to the neighbourhood streetscape. In addition, side fencing must be controlled to ensure that the secondary street frontage is active. Fencing will be controlled through design guidelines administered by Peet & Company and is not addressed by Part 1 of the Structure Plan. The below photos demonstrate good and bad examples of corner lot dwellings.



*Photo 1:
Unacceptable corner treatment*



*Photo 2:
Good example of addressing both streets*



*Photo 3:
Good example of address both streets and use
of open style fencing*

In addition to the statutory provisions contained in Part 1 of this report, design guidelines and protective covenants will be prepared for all lots within the Estate to address visual amenity and built form quality including building form, roof form, fencing and architectural character. In addition, sustainability issues such as waterwise and GreenSmart principles will be encouraged by Peet & Company.

10.5 Open Space

Public Open Space

The Public Open Space proposed at Burns Beach has been located and designed based on the following criteria:

- the POS has been located such as to provide legibility in the neighbourhood, community focus points and facilitate a sense of place and identity to each neighbourhood in accordance with accepted planning and urban design principles;
- the POS has been equitably spaced so as each resident will be able to walk to an area of open space from their home;
- a variety and range POS areas have been proposed, in contrast to one large active open space, in order to accommodate the needs of a wide range of people and user age groups and contribute to their quality of life;
- Liveable Neighbourhood states that a balance between neighbourhood parks and larger playing fields is favoured;
- the POS has been distributed throughout the Structure Plan area to facilitate its use for stormwater drainage as well as service the recreational needs of the future population;
- the vast majority of the POS areas proposed are of significant size, almost all being greater than 5000m², and will be able to be used by the future residents for active recreational pursuits whilst also not burdening the local government with inefficient maintenance programs and costs;
- an extremely large space of 3.9 hectares is proposed to contain a senior oval (shared with the primary school) to cater for the formal active recreational needs of the future community;
- there are two additional active playing field facilities in close proximity to the Burns Beach area (Iluka and Kinross); and
- the POS proposed within the Burns Beach Structure Plan is in accordance with all of the requirements of Element 4 - Public Parkland of Liveable Neighbourhoods.

Public open spaces areas have been evenly distributed throughout the Structure Plan area to ensure maximum accessibility for future residents and provide a neighbourhood focus. The open space provision will offer a range of active and passive recreational opportunities for residents of the estate.

In total ~~1915~~ areas of public open space are proposed, ranging in size from ~~0.5ha~~ 0.15ha to ~~3.93~~ha with the largest site co-located with the primary school proposed as a senior oval to accommodate formal active recreation requirements. The open space areas that will provide the most community focus for Burns Beach will be the central open space (POS ~~8a, 8b~~ and 9) and the coastal node (POS 6).

The Structure Plan has been designed to ensure that all future residents are within easy walking distance to a park and that each neighbourhood has its own park that functions as a community focus area. In addition, the POS areas have been designed to ensure that there is an equitable mix between active and passive recreation spaces.

As specifically requested by the City of Joondalup, POS 11 in the north eastern corner of the site directly abutting the Parks and Recreation Reserve has been reduced from that shown in the original concept plan in order to allow POS 15 in the south eastern corner of the site to be increased in size to protect the Christmas trees and native vegetation.

The street layout ensures easy pedestrian and cycle access to open space areas throughout the development and passive surveillance through the location of housing fronting open space.

There will be stormwater drainage accommodated in some of the POS areas (as shown in Table 1), typically in the form of landscaped dry swales and basins.

Car parking will also be provided at most of the POS areas to accommodate visitors to the parks. This has been indicatively shown on the Structure Plan.

All of the POS areas will be developed to a high standard. In order to facilitate the long term maintenance of the quality parkland areas, it is proposed to seek initiation of differential rating within the Burns Beach Estate to fund any additional resources and maintenance costs beyond that which may be considered the average. This matter will be discussed with the City of Joondalup further as a separate issue to the Structure Plan.

Table 1 on the following page shows the public open space calculations for the Structure Plan.

Table 1: Burns Beach Structure Plan Public Open Space Schedule

BURNS BEACH PUBLIC OPEN SPACE SCHEDULE			
TOTAL AREA (HECTARES)			147.5316
DEDUCTIONS			
•	Telstra Site		<u>0.0428</u>
•	Corner Store/Café (approximate area only)		<u>0.0800</u>
•	Primary School		<u>3.5000</u>
•	Drainage Sump		<u>0.1296</u>
•	Drainage (50% of 2.6310 = 1:10 year storm events)		<u>1.2305</u>
TOTAL			4.9829
NETT SUBDIVISABLE AREA			142.5487
10% Public Open Space Requirement			14.2549
PUBLIC OPEN SPACE			
POS 1A	PAW (no credit)	<u>0.0635</u>	-
-	Total POS Area	<u>0.4311</u>	
	<i>Drainage Swale = 0.3630 (Assumed 50% POS credit)</i>	<u>0.1815</u>	<u>0.2496</u>
POS 1B	Total POS Area	<u>0.1530</u>	<u>0.1530</u>
POS 1C	Total POS Area	<u>0.5447</u>	<u>0.5447</u>
POS 2	PAW (no credit)	<u>0.0675</u>	-
-	Total POS Area	<u>0.7580</u>	<u>0.7580</u>
POS 3	Total POS Area	<u>0.4718</u>	
	<i>Drainage Swale = 0.2770 (Assumed 50% POS credit)</i>	<u>0.1385</u>	<u>0.3333</u>
POS 4	Total POS Area	<u>0.0695</u>	<u>0.0695</u>
POS 5	Total POS Area	<u>0.7244</u>	-
-	Pos (Median) (no credit)	<u>0.1218</u>	-
-	POS (R.O.W)	<u>0.0601</u>	<u>0.7244</u>
POS 6	Total POS Area	<u>0.6447</u>	
	<i>Drainage Swale = 0.1930 (Assumed 50% POS credit)</i>	<u>0.0965</u>	<u>0.5482</u>
POS 7	Total POS Area	<u>1.1860</u>	
	<i>Drainage Swale = 0.4240 (Assumed 50% POS credit)</i>	<u>0.2120</u>	<u>0.9740</u>
POS 8A	Total POS Area	<u>0.7045</u>	
	<i>Drainage Swale = 0.4810 (Assumed 50% POS credit)</i>	<u>0.2405</u>	<u>0.4640</u>
POS 8B	Total POS Area	<u>0.4569</u>	<u>0.4569</u>

POS 9	<u>Total POS Area</u>	<u>0.6565</u>	<u>0.6565</u>
POS 10	<u>Total POS Area</u>	<u>0.5127</u>	
	<u>Drainage Swale = 0.3500 (Assumed 50% POS credit)</u>	<u>0.1750</u>	<u>0.3377</u>
POS 11	<u>Total POS Area</u>	<u>0.5330</u>	
	<u>Drainage Swale = 0.0920 (Assumed 50% POS credit)</u>	<u>0.0460</u>	<u>0.4870</u>
POS 12	<u>Total POS Area</u>	<u>1.2717</u>	<u>1.2717</u>
POS 13A	<u>Total POS Area</u>	<u>0.8617</u>	
	<u>Drainage Swale = 0.2810 (Assumed 50% POS credit)</u>	<u>0.1405</u>	<u>0.7212</u>
POS 13B	<u>Total POS Area</u>	<u>0.3367</u>	<u>0.3367</u>
POS 14	<u>Total POS Area</u>	<u>3.9339</u>	<u>3.9339</u>
POS 15	<u>Total POS Area</u>	<u>1.6627</u>	
	<u>Drainage Swale = 0.1296</u>	<u>0.1296</u>	<u>1.5331</u>
TOTAL			<u>14.5534</u>
SURPLUS			<u>0.2985</u>

Note: Surplus of Open Space may be amended through the preparation of Subdivision Applications. 10% POS shall be provided within the entire Structure Plan area.

Planting Themes and Locations

Background

Coastal plantings must contend with strong salt and sand-laden winds, high solar radiation levels and poor, sandy soils. The retention of the natural vegetation within the Foreshore Reserve of the Burns Beach development will assist in providing a protective barrier of salt tolerant front-line plants that will allow developing landscapes within the Public Open Space areas and streetscapes behind to survive and flourish.

Approach

Planting will typically consist of a mix of drought and salt tolerant Australian Native and Exotic species. Australian natives typically will be planted in informal arrangements to create a natural setting within Public Open Space areas. Where more structure is required, such as in streetscapes, inclusive of medians and verges, natives will be planted in single species mass planting arrangements. Areas of exotic plantings will almost predominantly occur within manicured areas of Public Open Space and will always be in single species mass planting arrangements.

Plantings within the Burns Beach development will broadly be categorised into three landscape zones.

- **Zone 1** (Primary Dune System), closest to the beach is where only the toughest plants will survive. Typically this zone can be considered as being between Foreshore Reserve extremity and 500 metres from the beachfront. Public Open Space areas broadly categorised as Zone 1 plantings include : POS **1a1, 2, 1b, 1c, 3 and 6.**

Zone 1 plants must survive wind blasting, direct salt deposits and sometimes sea-water droplets. Suitable plants include but is not limited to those with fleshy or leathery leaves and some grasses and sedges. **Calocephalus spp., Conostylis spp., Grevillea spp. and Gazania spp.** are tough front-line ground covers, useful for soil binding. **Carex spp. and Lomandra spp.** are suitable grasses and sedges.

Araucaria spp., Casuarina spp., Melaleuca spp. and Agonis spp. are suitable trees for this zone both as street trees and Public Open Space specimens. Exotic trees suitable for this zone include **Metrosideros and Olea.**

- **Zone 2** (Secondary Dune System) is directly behind the primary dunes, approximately 500 metres to one kilometre from the beachfront. Gently undulating hollows and the primary dune system provide protection for planting in this region. POS areas broadly categorised as Zone 2 plantings include : POS **2, 5, 8, 9 and 10.**

Zone 2 plants are typically less tolerant of salt exposure and need a protective barrier, which will be provided by the development of housing and the natural undulating topography of Zone 1. Suitable shrubs typically include **Adenathos spp., Brachycome spp., Callistemon spp., and Lechenaultia spp.**

Corymbia maculata, Eucalyptus spp., Melaleuca quinqernervia, are suitable Australian Native trees for this zone both within streetscapes and POS areas. Exotic trees suitable for this zone include **Erythrina spp., Platanus spp. and Liquidamber spp.**

- **Zone 3** (Tertiary Dune System) is broadly located between the secondary dune system, approximately one kilometre from the beachfront through to Marmion Avenue, approximately 1.5 kilometres from the beachfront. POS areas broadly categorised as Zone 3 plantings include : POS **11, 12, 13, 14 and 15.**

Zone 3 plants are the least salt and wind tolerant species. These plantings will occur far enough away from the beachfront where the establishing urban development and associated landscapes prior to zone 3 will redirect or capture salt laden winds over this zone. Suitable plant species typically include all natives species, **Hibiscus spp., Hebe spp., Phormium spp and Viburnum spp.**

All native trees, **Fraxinus raywoodii**, **Pyrus usseriensis**, **Sapium sebiferum** and **Tipuana tipu** and exotic trees considered suitable for this zone, both within POS areas and streetscapes.

Summary

It is possible, through appropriate design and plant selection, to have an attractive, thriving landscape in the harsh coastal environment that is a mix of Australian Native and Exotic species, to create natural and manicured settings to benefit of the local and wider community. The final selection of plant species for the Burns Beach Estate will take place at a later stage with detailed landscaping plans being prepared in close consultation with the City of Joondalup.

Landscape Visions

A description of the vision for each of the POS areas is provided below.

POS 1A

This area forms the North eastern extent of the development cell and as such is intended to provide a gateway into the adjacent recreation reserve and the northern beaches. In doing view and pedestrian corridors will be established. The shallow slope through this area will allow the development of passive recreational space, in combination with terraced garden beds. Planting will be hardy coastal species and in keeping with the proximity of the reserves will predominantly be indigenous species. The drainage requirement within this reserve will be addressed through the provision of grassed swales with the aim of maximising public use of the land area.

POS 1B

This area provides a landscaped corridor enabling continuous pedestrian access to the foreshore from this development precinct. Views along and across the corridor will be maximised to provide passive surveillance. Hardy coastal species will be planted in terraced gardens providing intimate seating and passive recreational areas. Disabled access will be reviewed to determine if a safe route is possible to Australian Standards without prejudicing the viability of the space as an attractive linear parkland.

POS 1C

This area is a continuation of the linear parkland that provides views to the north east and pedestrian access through to the foreshore. At a minimum width of 26m(approx) a variety of passive recreational spaces are proposed including the incorporation of public art, intimate seating areas and view points. The landscape will combine screening to limit the northerly wind and be relatively open in nature to ensure views into the area are maintained for passive surveillance. The linear parkland and the clear pedestrian links increase the legibility of the precinct and serves to connect the terraced road alignment.

POS 2

This area provides the opportunity to retain and protect an existing stand of eucalyptus. The levels and design of the surrounding area have been manipulated to ensure these trees form the essence of the POS design. The character of the park will be influenced by the existing trees and the extent of the understorey that is retained. The undulating topography of the existing dunal form will be reflected in the landscape to provide shelter to planting areas and users of the passive recreation areas provided. The area provides the South Eastern extent of a linear parkland that connects to the foreshore reserve. Continuity of plant species and landscape materials will assist in defining this link.



Northern Residential Precinct Open Space Concept

POS 3

The coastal location allows for a public area to be developed as a manicured parkland providing passive recreational facilities adjacent to the foreshore reserve. This POS will serve as an activity node that will allow the public the benefits of a parkland setting adjacent the foreshore reserve whilst protecting the foreshore reserve. The drainage requirement will be addressed as a grassed swale in order to maximise the public use of the area when dry. Uses within the area will extend to bbq and picnic facilities with shelter. Pedestrian links to the foreshore and surrounding residential areas will be provided.

POS 4

The character of this park is intended to be natural due to adjacent proximity to the Parks and Recreation Reserve. This POS will consist totally of native endemic species.

POS 5

The character of this park is intended to be manicured due to necessary earthworks in this area and the need to provide usable open space in close proximity to higher density housing types.

Preliminary landscape design proposals include the provision of manicured edge treatments, smaller level kickabout areas, seating, shade and pedestrian linkage to surrounding residential areas. Possible landscape hard scape treatments and public structures may be used to provide a more intimate environment and a higher level of public amenity. Some car parking is proposed.

POS 6 – Coastal Node

This area includes land which is located within the foreshore Parks and Recreation Reserve. The area within the foreshore reserve is degraded. The landscape design will extend the usable open space at this key node. It is considered essential to extend this open space area towards the coast to achieve the objective of providing a strong community focus point and bringing people into contact with the ocean environment in a controlled setting. The Foreshore Management Plan will provide details of how this area is to be developed and managed to ensure that environmental protection is well balanced with human access to the beach.

The character of the park area is intended to be a mix of natural and manicured due to proximity to the foreshore reserve and the need to provide usability and pedestrian linkages. The primary coastal activity node will include features such as a café/restaurant, beach kiosk, a landscaped park with BBQ's, shelters, grassed area, grassed swales to accommodate stormwater drainage, play equipment and also a lookout tower and boardwalk to the beach as well as public conveniences. Such features will be an integral part of the key activity node, providing the catalyst for activity and socialisation in this community focal point. Possible landscape hard scape treatments and public structures may be used to provide a more intimate environment and a higher level of public amenity.

The Structure Plan indicatively shows the proposed location of a restaurant, cafe and kiosk within the coastal node. It is envisaged that the coastal node will be similar to the open space and café/kiosk developments at Trigg Beach and Floreat Beach which have both proven to be extremely popular destinations.

Some car parking is proposed adjacent to the coastal node to accommodate people visiting the restaurant, kiosk, accessing the beach and other community facilities such as picnic facilities.

POS 7

The character of this park is intended to be manicured due to earthworks in the areas and the need to provide usable open space in close proximity to higher density lots.

Preliminary landscape design proposals include the provision of manicured edge treatments, smaller level kickabout areas, seating, shade and pedestrian linkage to surrounding residential areas. Possible landscape hard scape treatments and small public structures may be used to provide a more intimate environment and a higher level of public amenity. Some car parking is proposed adjacent to the POS.

POS 8A, 8B and 9 – Central Park

The character of this park is intended to be manicured as it is the central open space area functioning as the heart of the Estate. As such the need to provide usability and public facilities is paramount. Any proposed use within this open space areas should respond to the shelter partly provided by the rise in ground level on the western side.

Preliminary landscape design proposals include the provision of manicured edge treatments, larger level kickabout areas, seating, shade and pedestrian linkage to surrounding residential areas. Possible landscape hard scape treatments and small public structures may be used to provide a more intimate environment and a higher level of public amenity. Some car parking is proposed adjacent to the POS.

Adjacent land uses include a local shop and cafe to assist in the provision of public amenity to this central area. It is envisaged that the local shop/café and the central park will read as a fully integrated central focus of the Burns Beach Estate. Roads around this POS will be treated to reduce traffic speed on all edges and enable easy pedestrian access to the POS.

POS 10

The character of this park is intended to be a mix of natural and manicured.

Preliminary landscape design proposals include the provision of manicured edge treatments, smaller level kickabout areas, seating, shade and pedestrian linkage to surrounding residential areas. Possible landscape hard scape treatments may be used to provide a more intimate environment and a higher level of public amenity. Some car parking is proposed adjacent to the POS area.

POS 11

The character of this park is intended to be natural due to adjacent proximity to the Parks and Recreation Reserve. This POS will consist totally of native endemic species.



POS 12

The character of this park is intended to be manicured due to its proximity to high density lots, its function as a central feature and the need to provide usable open space. The circular area will be approximately 150m wide at any point as such provides ample space for informal recreation and safe public use.

Preliminary landscape design proposals include the provision of manicured edge treatments, smaller level kickabout areas, seating, shade and pedestrian linkage to surrounding residential areas. Possible landscape hard scape treatments may be used to provide more a intimate environment and a higher level of public amenity. A central feature set on axis from the entry boulevard would assist in the creation of sense of place. Some car parking is proposed adjacent to this POS area.

POS 13

The character of this park is intended to be a mix of retention of existing native tree species, natural plantings and manicured landscaping.

The entry boulevard is proposed to traverse the park to enable a landscape feel upon arrival. Manicured edge treatments, smaller level kickabout areas, seating, shade and pedestrian linkage to surrounding residential areas will be provided at the park. Possible landscape hard scape treatments may be used to provide a more intimate environment and a higher level of public amenity.

A central feature set on axis from the entry boulevard would assist in the creation of a sense of place. Some car parking is proposed adjacent to the POS area.

POS 14

The character of this park will be manicured due as it will function as a formal active recreation space. This creates the need for level earthworks and alteration to existing grades resulting in the loss of native vegetation. The provision of seating, shade and pedestrian linkages to surrounding residential areas is also proposed. Some car parking is proposed adjacent to the POS.

POS 15

The character of this park is intended to be wholly natural due to the retention of existing Christmas trees (*Nyctia floribunda*) and other remnant vegetation. The area will also function as an entry statement for the estate from Marmion Avenue.

The central boulevard and the open space areas provided along its length are critical elements in the vision for Burns Beach and the objectives for the Structure Plan. The central boulevard and POS 6, 8, 9, 12 and 13 will all be fully developed as part of Stage 1 of the Estate. The landscape quality and themes will set the tone for the Estate and will demonstrate Peet & Company's commitment to the development of a quality benchmark Estate. Future stages of development will all resonate the quality and tone that will be set up front as part of Stage 1 and the streetscape treatments along the central boulevard and the landscape designs within the open space areas.

12.0 Servicing Infrastructure

12.1 Siteworks

There is likely to be pockets of limestone encountered on the site due to its coastal location. If any limestone is encountered, it will be broken up prior to use as structural fill. The majority of limestone encountered should be broken up by bulldozers.

Towards the west of the site, Calcareous Sand of the Safety Bay Unit is present. This sand is often poorly cemented and very low strength but if reconstituted, can provide a suitable foundation material.

Earth working of the site may require areas of insitu rock to be ripped and relocated and compacted in deeper fill areas.

Sand will be used to fill required areas. In areas of cut, this will require over excavation of rock and replacement with sand.

Earthworking of the site will be required to create level lots for dwelling construction with changes in elevation being accommodated by the construction of retaining walls. The height of retaining walls will vary depending on the natural topography, as the general landform will remain, though benched. Retaining walls across the development will be limited in height as much as possible. Within the Northern Residential Precinct retaining walls are necessary to realise the desire to retain the general landform and create a terraced product that has a point of difference to the balance of Burns Beach and the majority of coastal developments in Perth. The retaining walls will have a maximum height of 4 metres dependant on the adopted provisions detailed in Part 1.

Retention of existing vegetation will be possible in some of the POS areas. A stand of Christmas Trees at the south-east corner of the site have been identified for retention and this will be accommodated in the bulk earthworks design. Existing stands of trees at the top of the ridgeline in the Northern Residential Precinct have also been specifically identified for retention within POS 2A. The proposed terracing of the lots in this precinct using retaining walls at the rear of lots has enabled the retention of these mature trees.

12.3 Service Infrastructure

Stormwater Drainage

All stormwater drainage generated from new road construction will be contained on site in accordance with City of Joondalup criteria.

Water sensitive urban design principles in the management of stormwater and the design of open space areas will be implemented at Burns Beach. This is an environmentally and aesthetically superior solution to the traditional drainage sumps as the stormwater infiltrates into the ground at source.

Drainage design will embrace best practise water sensitive design principles to ensure adequate management of first flush stormwater events and treatment of drainage waters particularly adjacent to foreshore areas to meet the objective of being consistent with the protection of natural drainage; treatment processes; and conservation of biodiversity. Implementation of water sensitive urban design and best management practices will reduce the risk of polluting the groundwater and assist to remove nutrients.

Conceptual design has been carried out for the purpose of calculating land area requirements for drainage. To ensure that the land requirement was not underestimated, Tabec assessed drainage requirements based on providing for 1 in 10 year events in maximum 0.9m deep shallow sided basins, designed in accordance with City of Joondalup criteria (being 1 in 8 side slopes). This approach is considered to be the option that has the greatest land requirement. Of the area required for the shallow sided basins, a 50% POS credit has been assumed.

Future detailed design of POS areas may necessitate that deeper fenced basins are appropriate, particularly in areas where shallow sided basins would consume a large portion of a POS (eg. POS 1, 3 and 10). In these instances, the area required for the deeper fenced basin would be less than 50% of the area required for a shallow sided basin. As such, there will be no reduction in effective (creditable) POS area. Typically, shallow swale type basins consume 3 to 4 times the land area that a deep basin consumes.

It is noted that the basin located in POS 15 could be constructed as a deeper fenced sump if a shallow basin can not be constructed without impacting significantly on the existing vegetation, particularly the Christmas trees.

Of the total POS provision of ~~16.0651~~^{15.5688} Ha, ~~14.2867~~^{14.3921} Ha is claimed as POS and the balance of ~~1.3155~~ Ha used for drainage has not been claimed as POS with an area of 1.6730 Ha not credited. Of this non-credited area 1.3601 Ha is used for drainage. Should the nature of the drainage basins be changed from shallow to deep, the provision of ~~14.2513~~^{14.3921} Ha of POS would not be reduced. The land area required for the deep basins would originate from the ~~1.3155~~^{1.3601} Ha area that has not been credited as POS.

Drainage reserves will be provided of sufficient area to accommodate deeper fenced basins in accordance with Council policy.

In all cases, the detailed design of both shallow and deep basins will be carried out in accordance with City of Joondalup criteria.

All roads will be kerbed and drainage water will be collected in a network of pits and pipes. The drainage networks have discharge points in basins constructed in open space areas.

Minor roads that abut public open space may utilise flush kerbing to allow direct infiltration rather than collecting stormwater and discharging to the drainage basins.

TABLE 1 (CLAUSE 3.2) – THE ZONING TABLE

ZONES USE CLASSES	RESIDENTIAL	MIXED USE	BUSINESS	COMMERCIAL	CIVIC & CULTURAL	PRIVATE CLUBS/RECREATION	SERVICE INDUSTRIAL	SPECIAL RESIDENTIAL	RURAL
Abattoir	X	X	X	X	X	X	X	X	X
Aged or Dependent Persons' Dwelling	D	D	D	D	X	X	X	X	X
Amusement Facility/Parlour	X	X	D	D	D	D	D	X	X
Ancillary Accommodation	D	X	X	X	X	X	X	X	X
Aquaculture	X	X	X	X	X	X	X	X	D
Art Gallery	X	D	P	P	P	P	X	X	A
Auction Room	X	D	D	D	X	X	P	X	X
Bakery	X	D	D	D	X	X	D	X	X
Bank	X	P	P	P	X	X	X	X	X
Beauty Parlour	X	P	P	P	X	D	X	X	X
Bed & Breakfast	D	P	D	P	X	D	X	D	D
Car Park	X	D	P	P	P	P	P	X	X
Car Wash	X	X	D	D	X	X	P	X	X
Caravan Park	A	X	X	X	X	P	X	X	X
Caretaker's Flat/House	D	D	D	D	D	D	D	X	X
Cattery	X	X	X	X	X	X	X	D	D
Child Care Centre	D	D	D	D	D	D	X	D	X
Cinema	X	X	D	D	D	D	X	X	X
Cinema Complex	X	X	X	X	X	X	X	X	X
Civic Building	D	D	D	D	P	D	X	X	X
Club (Non-Residential)	X	X	D	P	D	D	D	X	X
Communication Antenna - Domestic	P	P	D	D	X	X	X	P	D

ZONES USE CLASSES	RESIDENTIAL	MIXED USE	BUSINESS	COMMERCIAL	CIVIC & CULTURAL	PRIVATE CLUBS/RECREATION	SERVICE INDUSTRIAL	SPECIAL RESIDENTIAL	RURAL
Communication Antenna	D	D	D	D	X	X	D	X	D
Concrete Batching Plant	X	X	X	X	X	X	X	X	X
Consulting Rooms	D	P	P	P	D	X	X	D	X
Convenience Store	X	D	P	P	X	D	D	X	X
Corner Store	X	P	P	P	X	X	X	X	X
Costume Hire	X	D	P	P	X	X	D	X	X
Department Store	X	X	X	D	X	X	X	X	X
Drive In Theatre	X	X	X	X	D	D	X	X	X
Drive Through Food Outlet	X	X	D	D	X	X	X	X	X
Dry Cleaning Premises	X	X	D	P	X	X	P	X	X
Education Establishment	X	D	D	D	D	D	D	X	X
Equestrian Activity	X	X	X	X	X	D	X	X	X
Equipment Hire	X	X	D	D	X	X	D	X	X
Fuel Depot	X	X	X	X	X	X	D	X	X
Funeral Parlour	X	X	D	D	X	X	D	X	X
Garden Centre	X	X	P	P	X	X	P	X	X
Golf Course	X	X	X	X	X	D	X	X	X
Grouped Dwelling	D	D	D	D	X	X	X	X	X
Hairdresser	X	P	P	P	X	D	X	X	X
Hall	X	D	D	D	P	D	X	X	X
Hardware Store	X	X	D	P	X	X	D	X	X
Holiday Village/Resort	X	X	X	X	X	D	X	X	X
Home Business – Category 1	P	P	P	P	X	X	X	P	X
Home Business – Category 2	D	P	P	P	X	X	X	P	X

ZONES USE CLASSES	RESIDENTIAL	MIXED USE	BUSINESS	COMMERCIAL	CIVIC & CULTURAL	PRIVATE CLUBS/RECREATION	SERVICE INDUSTRIAL	SPECIAL RESIDENTIAL	RURAL
Home Business – Category 3	A	P	P	P	X	X	X	D	X
Hospital	X	X	D	D	D	X	X	X	X
Hotel	X	X	D	D	X	D	X	X	X
Industry – Extractive	X	X	X	X	X	X	X	X	X
Industry – General	X	X	X	X	X	X	X	X	X
Industry – Hazardous	X	X	X	X	X	X	X	X	X
Industry – Light	X	X	X	X	X	X	P	X	X
Industry – Rural	X	X	X	X	X	X	D	X	X
Kindergarten	D	D	D	D	D	D	X	X	X
Landscape Supplies	X	X	X	X	X	X	D	X	X
Laundrette	X	X	P	P	X	X	P	X	X
Laundry	X	X	D	D	X	X	P	X	X
Liquor Store	X	X	D	P	X	X	X	X	X
Lunch Bar	X	P	P	P	X	X	D	X	X
Market (Retail)	X	X	D	D	X	X	X	X	X
Market Garden	X	X	X	X	X	X	X	X	X
Medical Centre	X	P	P	P	D	X	X	X	X
Milk Depot	X	X	X	X	X	X	D	X	X
Motel	X	X	D	D	X	D	X	X	X
Multiple Dwelling	D	D	D	D	X	D	X	X	X
Night Club	X	X	D	D	X	D	D	X	X
Nursing Home	D	D	D	D	D	X	X	X	X
Office	X	P	P	P	X	X	X	X	X
Open Air Display	X	X	X	X	X	X	D	X	X

ZONES USE CLASSES	RESIDENTIAL	MIXED USE	BUSINESS	COMMERCIAL	CIVIC & CULTURAL	PRIVATE CLUBS/RECREATION	SERVICE INDUSTRIAL	SPECIAL RESIDENTIAL	RURAL
Park	D	D	D	D	D	D	D	D	D
Park Home Park	D	X	X	X	X	D	X	X	X
Place of Assembly	X	D	D	D	P	D	D	X	X
Place of Worship	X	D	D	D	P	D	D	X	X
Private Recreation	X	D	D	D	D	P	X	X	X
Public Exhibition Facility	X	D	D	D	P	P	X	X	X
Reception Centre	X	D	D	P	D	D	X	X	X
Recreation Centre	X	D	D	D	D	D	D	X	X
Residential Building	D	D	D	D	X	D	X	X	X
Restaurant	X	D	P	P	D	D	X	X	A
Restricted Premises	X	X	X	D	X	X	X	X	X
Retirement Village	D	D	D	D	X	D	X	X	X
Rural Use	X	X	X	X	X	X	X	X	P
Salvage Yard	X	X	X	X	X	X	D	X	X
Service Station	X	X	D	D	X	X	D	X	X
Shop	X	X*	X*	P	X	X	X	X	X
Showroom	X	X	P	P	X	X	P	X	X
Single House	P	P	D	D	X	X	X	P	P
Special Place of Assembly	X	X	X	X	D	D	X	X	X
Sports Ground	X	X	X	X	D	D	X	X	X
Stables	X	X	X	X	X	D	X	X	P
Storage Yard	X	X	X	X	X	X	D	X	X
Supermarket	X	X	X	P	X	X	X	X	X
Take Away Food Outlet	X	X	P	P	D	D	X	X	X

ZONES USE CLASSES	RESIDENTIAL	MIXED USE	BUSINESS	COMMERCIAL	CIVIC & CULTURAL	PRIVATE CLUBS/RECREATION	SERVICE INDUSTRIAL	SPECIAL RESIDENTIAL	RURAL
Tavern	X	X	D	D	X	D	X	X	X
Theatre	X	X	P	P	D	D	X	X	X
Trade Display	X	X	X	X	X	X	D	X	X
Transport Depot	X	X	X	X	X	X	P	X	X
Vehicle Repairs	X	X	X	X	X	X	D	X	X
Vehicle Sales/Hire Premises	X	X	D	D	X	X	P	X	X
Vehicle Wrecking	X	X	X	X	X	X	X	X	X
Veterinary Consulting Rooms	X	X	P	P	X	X	P	X	A
Veterinary Hospital	X	X	D	D	X	X	P	X	A
Warehouse	X	X	D	X	X	X	P	X	X

* - refer to Clause 3.5.2 and/or Clause 3.6.3 for further information

For Zones which have not been listed in this table refer to :

- 3.11 The Centre Zone
- 3.12 The Urban Development Zone
- 3.17 The Special Use Zone

Structure Plan Process

