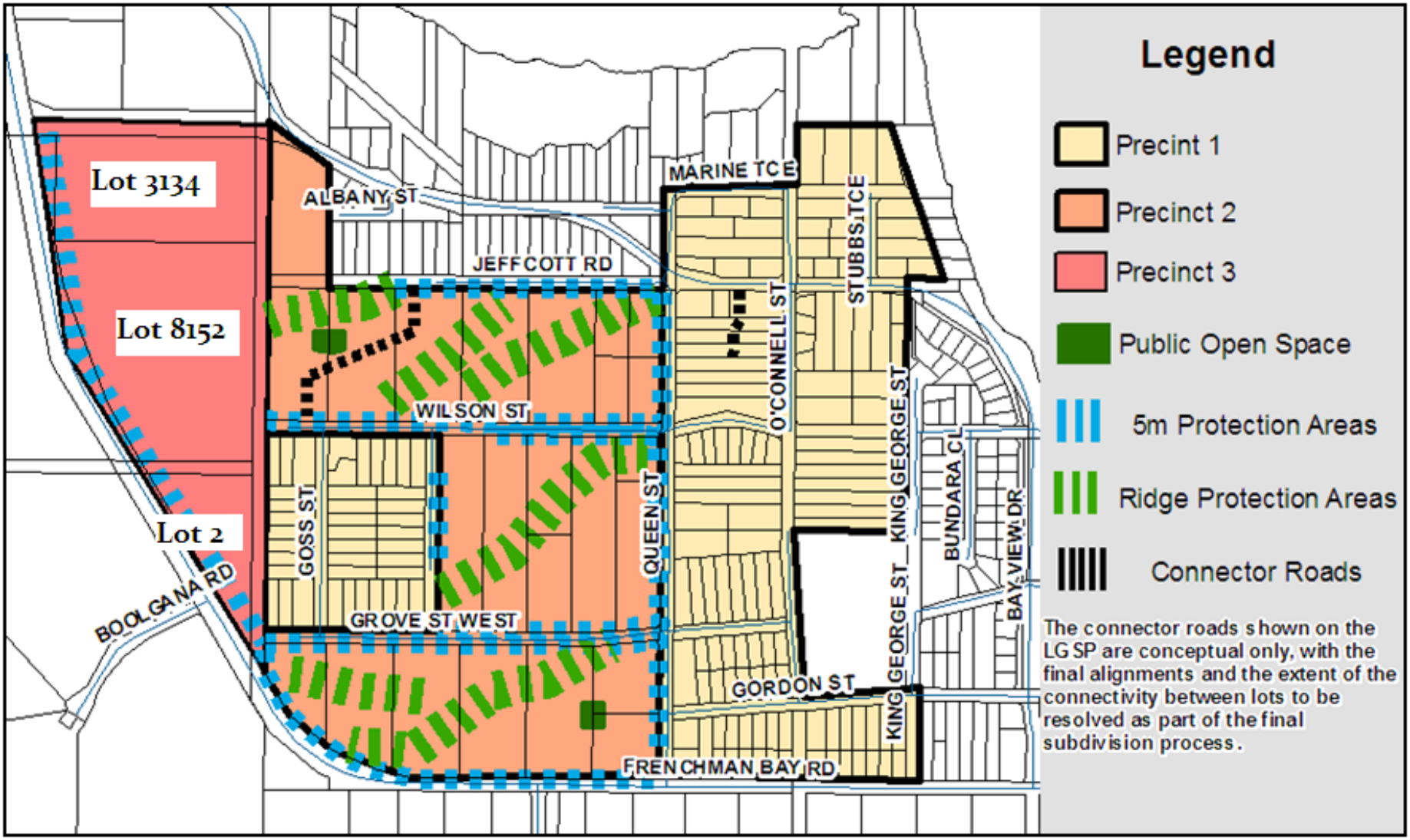
Little Grove
Structure Plan Map
2009



Little Grove Structure Plan

(FINAL)

Adoption Date (Local Government): 15 Dec 2009
Adoption Reference: Item 8.4
Endorsed by WAPC: 4 Jan 2010
Maintained By: Executive Director of Development Services
Document Reference: LGSP Dec 2009

102 North Road, Yakamia WA 6330
PO Box 484, Albany WA 6331
Tel: (+61 8) 9841 9333
Fax: (+61 8) 9841 4099
staff@albany.wa.gov.au
www.albany.wa.gov.au

TABLE OF CONTENTS

TABLE OF FIGURES

1. INTRODUCTION

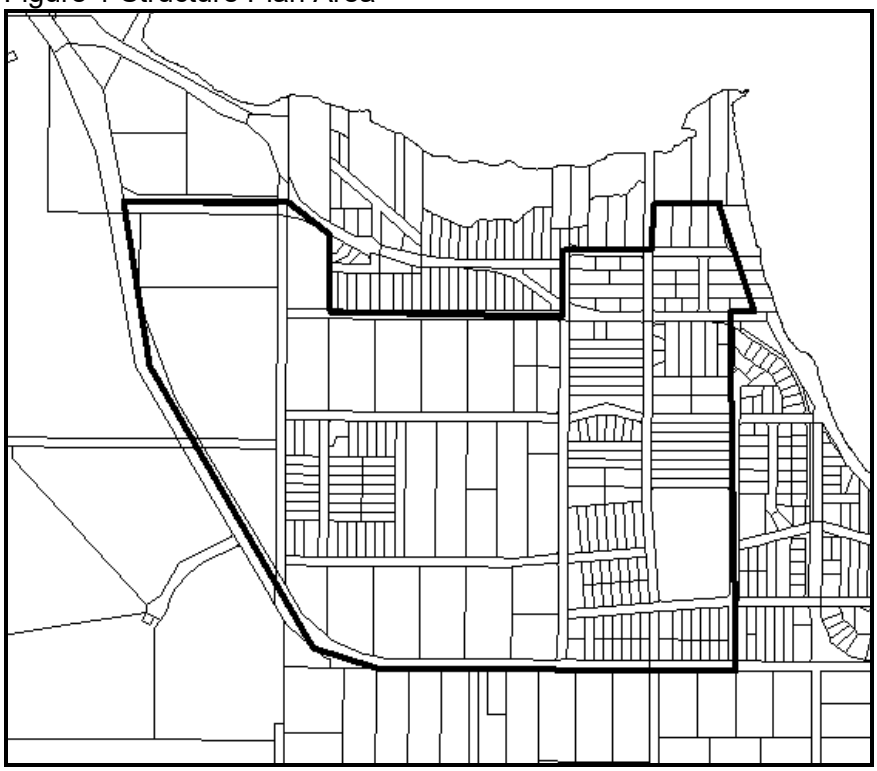
1.1 PURPOSE

This Structure Plan has been prepared to facilitate residential subdivision and development in a manner that responds to its environmental context, protects and enhances the character of the area, and utilizes and extends the existing infrastructure within the plan area.

1.2 STRUCTURE PLAN AREA

The Structure Plan area is bounded by Frenchman Bay Road to the west and south, King George Street to the east and Jeffcott Street and Marine Terrace to the north.

Figure 1 Structure Plan Area



1.3 PLANNING CONTEXT

The Structure Plan Area falls within the jurisdiction of the City of Albany's Town Planning Scheme No 3 and is zoned "Residential Development". Section 5.5 of the Scheme requires the preparation of an outline development (structure) plan, approved by Council and the WAPC prior to the endorsement of an application for subdivision or development. Clause 5.5.1 requires that the plan include matters such as topography, environment, population, residential densities, retail, commercial, infrastructure (roads, civic/public facilities), open space and recreation.

The subject land has been identified as "Future Urban" in the draft Albany Local Planning Strategy (Map 9B), the City's 20 year land use and development plan.

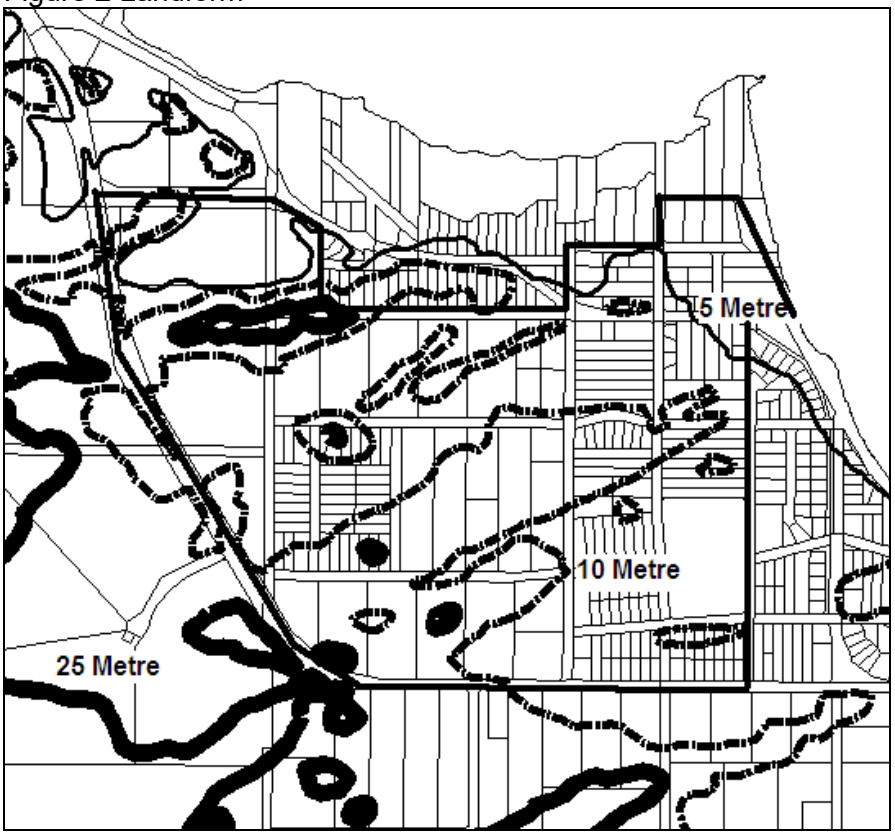
2. OPPORTUNITIES & CONSTRAINTS

2.1 ENVIRONMENT

2.1.1 Landform

In the locality the land falls towards the Princess Royal Harbour and is characteristic of second phase dunes (Rolling landscape with some steep slopes). The highest areas reach 25m above sea level on which residential buildings and building envelopes have already been developed.

Figure 2 Landform



2.1.2 Soils

The soil types within the plan area are 'Meerup' units (Mf and Mp), characterised by high risk wind erosion (sandy soils), low risk pollution and flooding (high filtration ability) and a high capability of excavation, soil absorption (effluent and drainage) and foundation stability.

The Mf Unit is characteristic of flat or gently undulating areas enclosed by dunes and with podzol (leached) soils.

The Mp Unit is characteristic of second phase dunes with steep slopes, sharp irregular crests and pale brown calcareous sands (high calcium content).

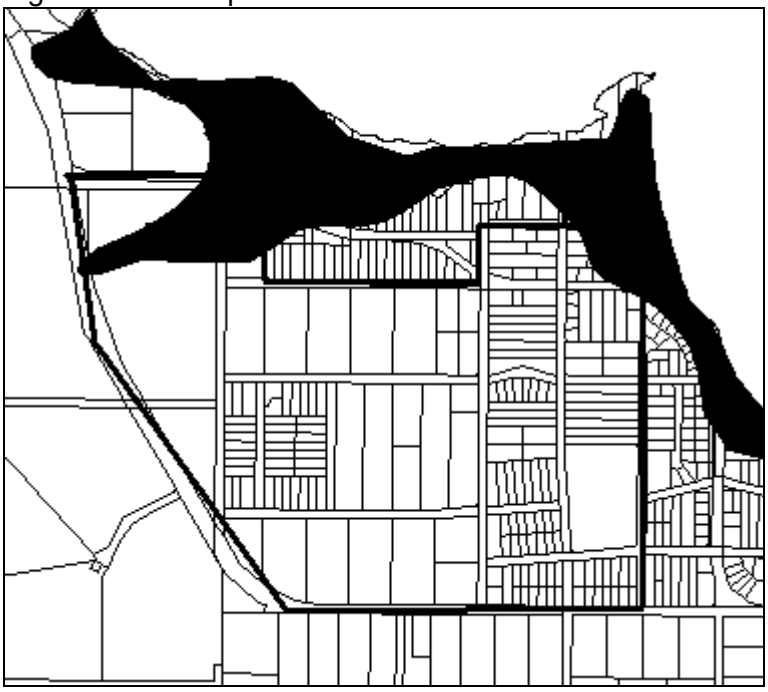
Recommendation:
Steep slopes require management to minimize erosion.

Figure 3 Soils

Figure 4 indicates the likely extent of acid sulphate soils in the locality.

Recommendation:
Development within these areas needs to determine the extent of the existence of acid sulphate soils and how they are to be managed.

Figure 4 Acid Sulphate Soils



2.1.3 Vegetation

In December 2005 a field survey was undertaken and report prepared for the City of Albany by Ellen J Hickman.

Vegetation Communities

The survey identified the following six different vegetation communities and six classifications of remnant vegetation condition ranging from pristine to completely degraded as shown in Figures 5, 6 and 7.

Tea-Tree Swamp: This vegetation is found in the north-west corner of the Study Area and comprises tall shrub land in pristine condition.

Banksia Swamp: This vegetation association occurs in small pockets across the LGCSP and is classified as completely degraded.

Dune Heath: This is the third most dominant vegetation association in the Study Area and found on the higher points of the landscape i.e. dune systems. Most is in pristine condition with larger stands found in the west of the Study Area.

Yate Woodland: This vegetation is found in the lower portions of the landscape, mainly in the north-west sector of the LGCSP and in pristine condition.

Closed Peppermint Woodland: This vegetation association is scattered across the Study Area and is the second most dominant community within the LGCPSD. Its condition varies from pristine to degraded.

Open Peppermint Heath: This is the most common vegetation association found within the Study Area. It is also the most diverse consisting of over 60 different species with large areas classified as pristine to very good.

The report concluded that the above vegetation communities “are typical components of the Torndirrup and Albany Systems, which are common habitats in the Region, not classified as threatened communities and well represented in reserves”.

Threatened Flora

Only one species was found within the Study Area, Adenanthos cunninghamii, a priority four species found in four separate locations with only one or two plants present and associated with dune heath vegetation communities.

Weeds

The study found that the presence and impact of weeds was highly evident throughout the Study Area, including Sydney Golden Wattle, Victorian Tee-Tree, Taylorina, Blackberry and Flatweed. Even though vegetation was degraded by weeds there was no evidence of dieback.

The remnant vegetation is the most dense and least disturbed in the western portion of the plan area and more scattered and degraded to the east. The least dense degraded vegetation areas also correspond with the highest density of residential development.

The most significant area of pristine vegetation within the survey area is to the west of the line running through Goss Street and east of the busy tourist route, Frenchman Bay Road. Because of its significant size and the density of vegetation, there is the good potential for fauna habitation. Fortunately the majority of this area is under reservation or subject to inundation and therefore unlikely to be developed.

Figure 5 Species List for the Little Grove Structure Plan Vegetation Survey, December 2005

MONOCOTYLEDONS

ANTHERIACEAE
Thysanotus gracilis
Tricoryne tenella

COLCHICACEAE
Burchardia umbellata

CYPERACEAE
Cyathochaeta equitans
Ficinia nodosa
Gahnia trifida
Lepidosperma costale
Lepidosperma gladiatum
Lepidosperma squamata
Lepidosperma tenue
Luzula meridionalis
Schoenus caespititius
Schoenus grandiflorus

DASYPOGONACEAE
Dasypogon bromeliifolius

HAEMODORACEAE
Anigozanthos flavidus
Conostylis aculeata

IRIDACEAE
Patersonia occidentalis

JUNCACEAE
Juncus caespiticius

POACEAE
Avena fatua *****
Briza maxima *****
Cortaderia selloana ***PP**
Lagurus ovatus *****
Pennisetum clandestinum *****
Poa poiformis
Poa porphyroclados
Stenotaphrum secundatum *****

RESTIONACEAE
Anarthria prolifera
Desmocladus flexuosus
Leptocarpus tenax
Lyginia barbata

DICOTYLEDONS

APIACEAE

EPACRIDACEAE
Acrotriche cordata
Andersonia depressa
Astroloma ciliatum
Leucopogon parviflorus
Leucopogon reflexus
Leucopogon revolutus
Lysinema ciliatum
Sphenatoma gracile

EUPHORBIACEAE
Amperea ericoides
Phyllanthus calycinus

GERANIACEAE
Pelargonium capitatum *****

GOODENIACEAE
Dampiera linearis
Lechanaultia expansa
Scaevola globulifera
Scaevola nitida

LAURACEAE
Cassytha poiformis

LOBELIACEAE
Lobelia alata

LOGANIACEAE
Logania vaginalis

MENYANTHACEAE
Villarsia parnassifolia

MIMOSACEAE
Acacia colchearis
Acacia hasulata
Acacia littorea
Acacia longifolia *****
Acacia pulchella

MYRTACEAE
Agonis flexuosa
Eucalyptus cornuta
Leptospermum laevigatum *
Melaleuca incana
Melaleuca thymoides
Taxandria juniperina

PAPILIONACEAE

PLANTAGINACEAE
Plantago lanceolata *****
POLYGALACEAE
Comesperma virgatum
Comesperma volubile

PRIMULACEAE
Anagallis arvensis var. arvensis *****

PROTEACEAE
Adenanthos cuneatus
Adenanthos cunninghamii **P4**
Adenanthos obovatus
Adenanthos sericeus
Banksia grandis
Banksia ilicifolia
Banksia littoralis
Dryandra nivea
Dryandra sessilis
Hakea ceratophylla
Hakea linearis
Hakea oleifolia
Hakea prostrata
Hakea ruscifolia
Isopogon formosa

RANUNCULACEAE
Clematis pubescens

RHAMNACEAE
Spyridium globulosum

ROSACEAE
Rubus fruticosus ***DP**&**PP**

RUBIACEAE
Opercularia hispidula
Opercularia vaginata

RUTACEAE
Boronia crenulata
Rhadinothamnus anceps

STYLIDIACEAE
Stylidium hirsutum
Stylidium violaceum

THYMELAEACEAE
Pimelea ferruginea
Pimelea rosea

TREMANDRACEAE

Platysace compressa ASTERACEAE Dimorphotheca ecklonis * Hypochaeris glabra * Olearia axillaris CASUARINACEAE Allocasuarina humilis Allocasuarina lehmanniana CONVOLVULACEAE Ipomoea cairica * DILLENIACEAE Hibbertia cuneformis Hibbertia furfuracea Hibbertia racemosa	Bossiaea linophylla Chorizema ilicifolia Gompholobium confertum Gompholobium tomentosum Hardenbergia comptoniana Jacksonia horrida Kennedia coccinea Psoralea pinnata * Pultenea reticulata PITTOSPORACEAE Billardiera drummondiana Billardiera fusiformis	Tremandra setigera

Figure 6 Remnant Vegetation

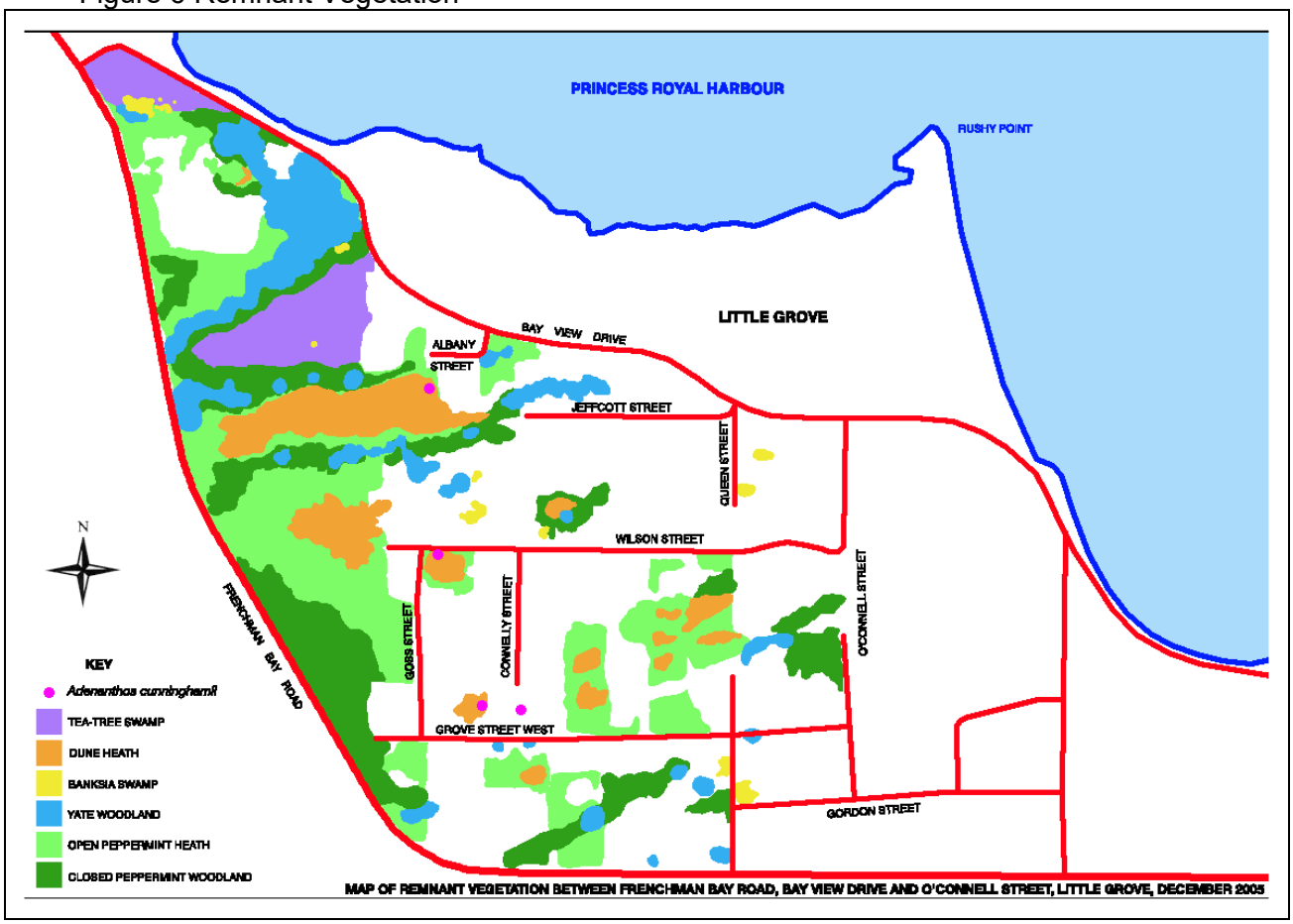
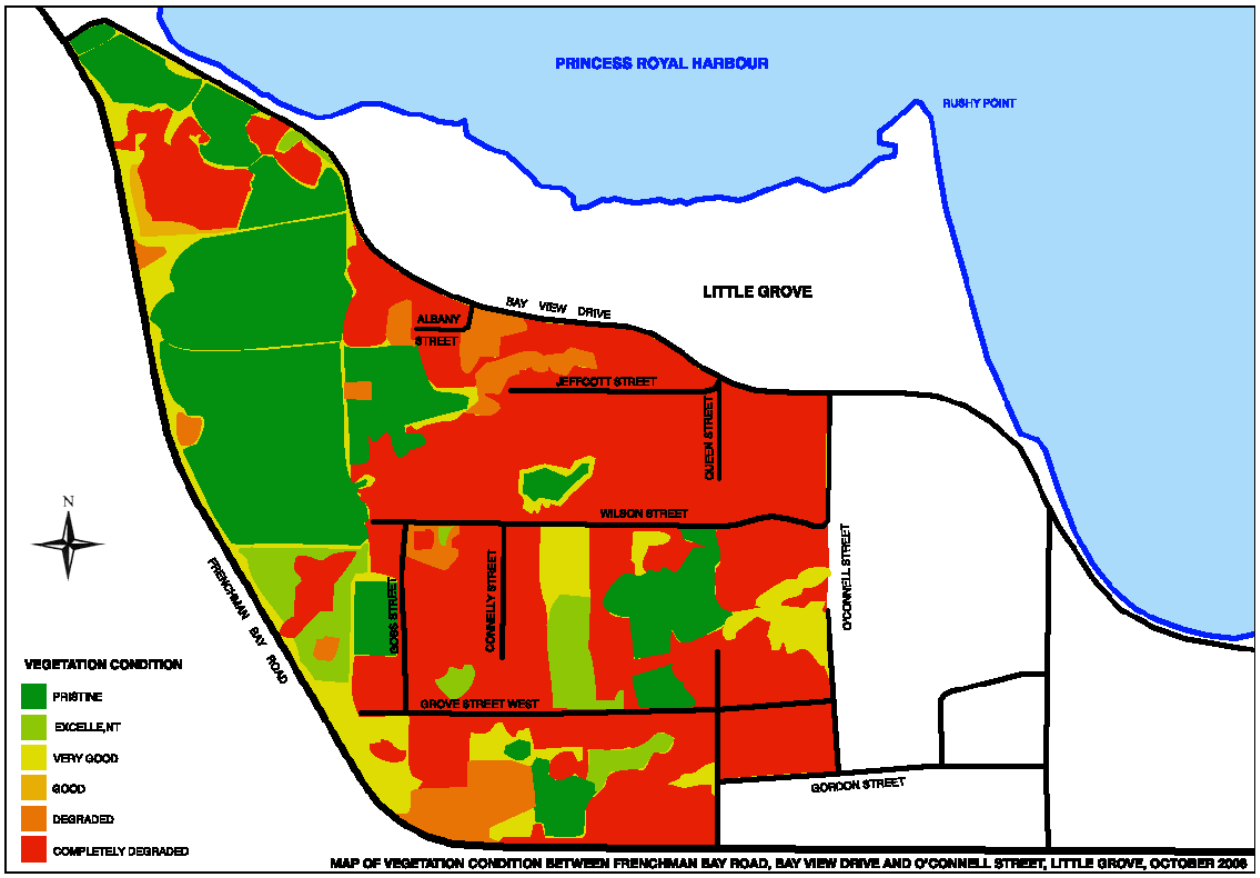


Figure 7 Vegetation Condition



Vegetation Significance

Although not identified as vegetation communities in good condition, vegetation alongside the existing roadsides and on the steep slopes combined with stands of remnant vegetation on dominant ridgelines ('Peppermint Woodland') in pristine condition, combine to establish a character for the area dominated by vistas framed by remnant vegetation. These vistas work well to limit the view to and dominance of the built form, and to stabilise the soil structure. Refer to Figure 8.

Figure 8 Roadside Vegetation

Fauna

The structure plan area, in particular the denser areas of vegetation located in the western precinct, provide habitat for native fauna including: many varieties of birds

such as Honey Eaters, Blue Wrens and Willy Wagtails; Ring Tail Possums, Bandicoots, Bobtails and other lizards and carpet snakes that feed on the Mardo Bush Marsupial.

Non native fauna include cats and foxes, which are having a detrimental impact on the numbers and habits of the native fauna.

Recommendations:
The substantial areas of denser vegetation need to be protected and where possible vegetated links between vegetated areas need to be maintained or established as a means to protect the native fauna. Public education on the impact of domestic animals on native fauna, sterilisation of cats and culling of foxes needs to occur.

Much of the 'Peppermint Woodland' located alongside the roads are within the property boundaries and also need to be protected. The 'Peppermint and Yate Woodlands' located on the ridges and steep (1:10) dune slopes needs to be protected. The areas to the west of Goss Street which are substantially vegetated also need to be protected.

The threatened flora that is under threat from clearing and weeds requires liaison with the local Department of Conservation and Land Management office prior to any proposed development work.

Care should also be taken to ensure that where development is taking place measures are put in place to minimise the potential of transferring plant and soil diseases.

2.2 SOCIAL

2.2.1 Land-use

With the exception of a pocket of urban development between Wilson Street and Grove Street West, the land uses within the plan area comprise urban residential living to the east and rural residential living to the west. The rural residential lots are used for animal grazing, horse breeding and market gardening (orchards).

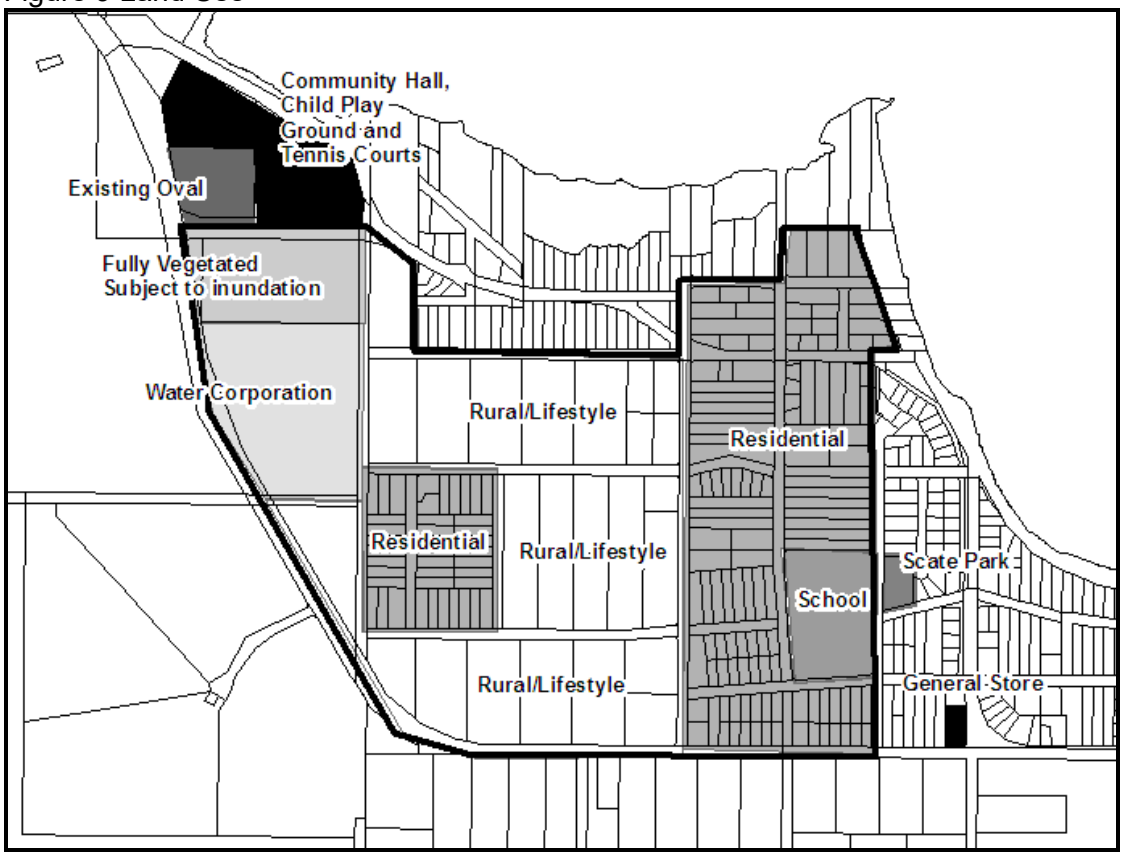
Considering the current Residential Development zoning of the area and the recently developed deep sewerage infrastructure, redevelopment to urban densities of the rural/residential area is certain. New urban residential sized lots need to provide for an acceptable standard of development with suitable access, car parking, set-backs, solar penetration and private open space within the environmental parameters and character of the site, and its locality.

Recommendation:
New urban residential sized lots need to provide for an acceptable standard of development with suitable access, car parking, set-backs, solar penetration and private open space within the environmental parameters and character of the site, and its locality.

Approximately 415 people reside within the structure plan area. The structure of which is old age/retired (25%), young families (35%) and middle aged/older families (40%).

The area is serviced by the Little Grove Primary School, a local shop/service station and a skate park to the south east. The current standard of primary schools according to WAPC (Liveable Neighbourhoods) policy is one primary school per 1,500 lots. The number of projected households within the Study Area and other residential zoned land in the catchment is estimated to be between 1,100 and 1,300. Therefore, an additional primary school is not required within the study area.

Figure 9 Land Use



2.3 ECONOMIC

The median weekly income for the area is higher than that for the median of the City of Albany. People are residing in the area for its character and are commuting to other areas within the City to work.

A general store is located at the corner of Frenchman Bay Road and Bay View Drive (refer to Figure 9) which is central to the Little Grove area, and provides consumer items including fuel, alcohol, videos/DVDs and food.

Short term 'bed and breakfast' accommodation has been previously developed in the plan area.

Recommendation:
Additional bed and breakfast or other residential scaled holiday accommodation which is responsive to the character of the area is also supported in the plan area.

2.4 INFRASTRUCTURE

2.4.1 Road Hierarchy

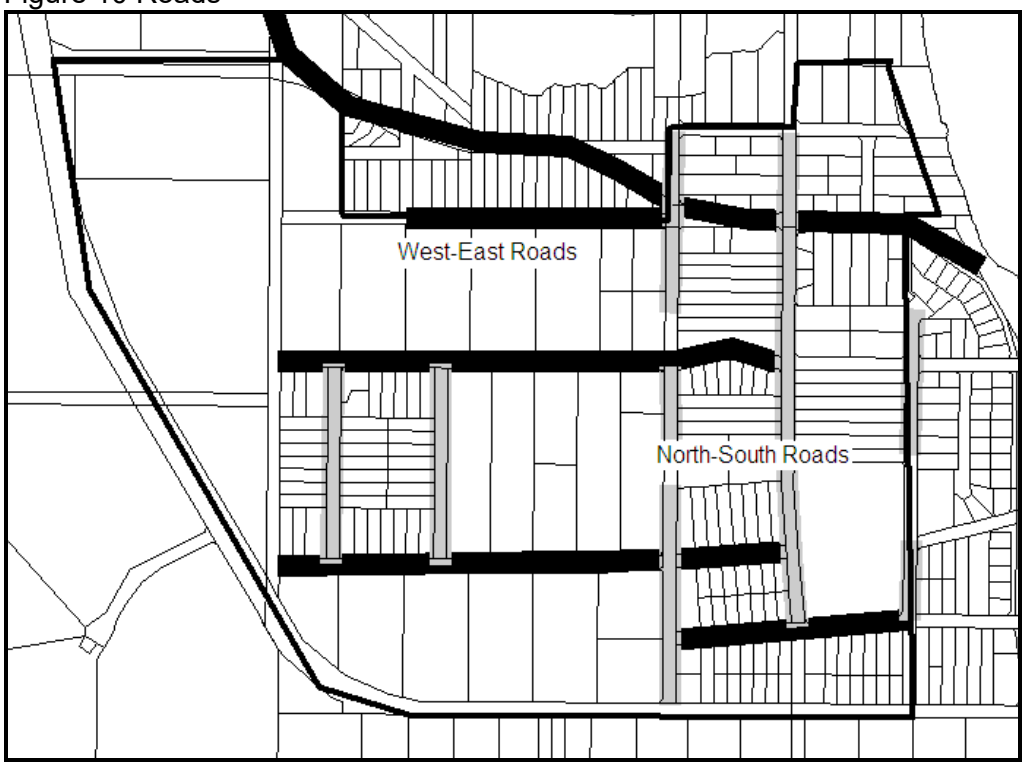
Frenchman Bay Road, Bay View Drive/Chipana Drive and Queen Street are classed as the Local Distributor Roads within the study area.

Connelly Street and sections of Queen Street and George Street have recently been upgraded. Most of the local road system has been sealed apart from the Green Island Road Reserve and a connecting reserve to Frenchman Bay Road.

Due to the steep topography in parts, the road network is fragmented meaning that linkages north and south and east and west are constrained.

Recommendation:
Future development will need to improve the connectivity through the area.

Figure 10 Roads



2.4.2 Public Transport

There are currently school and commuter buses servicing Little Grove. All services are provided twice daily to correspond with school commencement and completion hours.

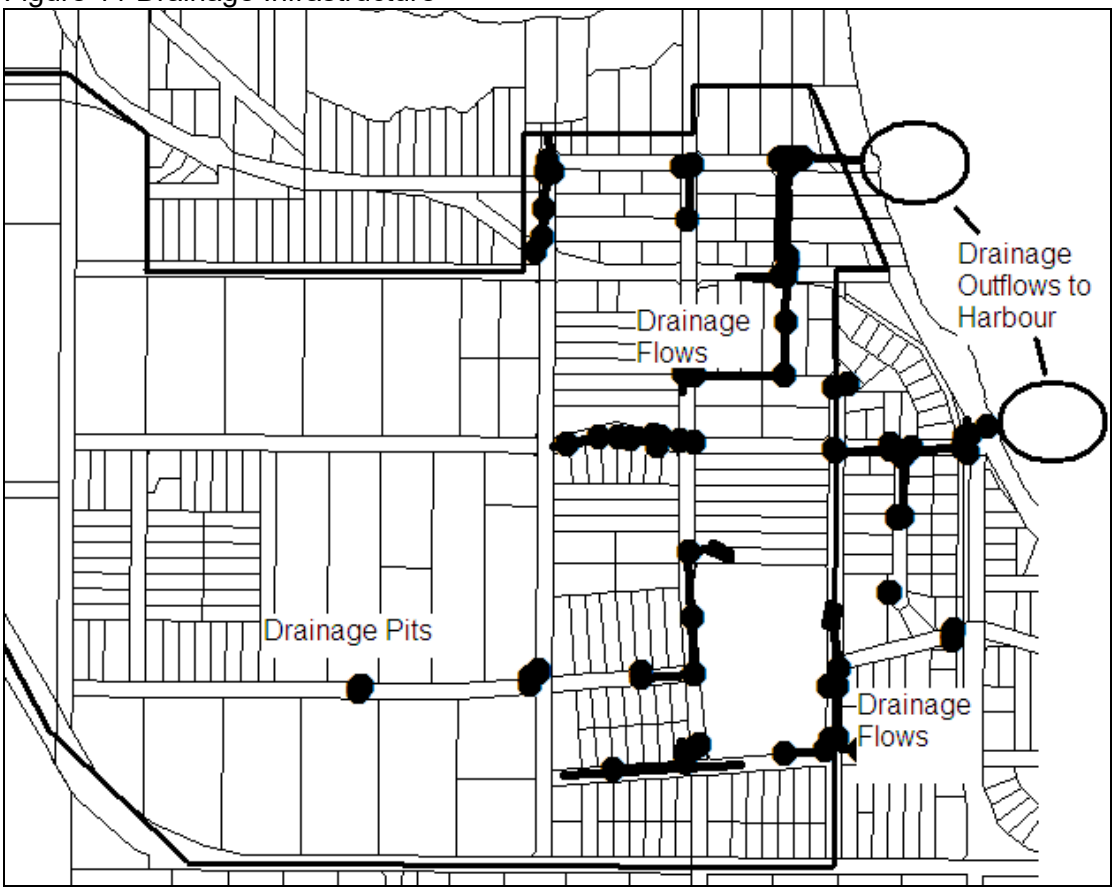
2.4.3 Stormwater Drainage

The plan area is located adjacent to the Princess Royal Harbour's sensitive ecosystem.

The sandy soil structure is relatively porous, however because of the nature of the built drainage system of open drains, constructed such that erosion is minimised and sediment and nutrients are filtered via rock build up and channelled via swales into pits, and the city's street cleaning programme, nutrients entering the harbour via

surface water runoff is minimal. The majority of the nutrients entering the groundwater and eventually the harbour have filtered down through the soil.

Figure 11 Drainage Infrastructure



Recommendations:
Land use and development needs to address as a priority the nutrient levels entering the harbour and the groundwater'.

It is very important that nutrients are either restricted from entering the soil, or as a means to maximise filtration, nutrients enter the soil as far away from the groundwater or the harbour as possible. There are a number of ways this can be achieved:

- *Educate the residents to; filter contaminants during cleaning activities and to stop using fertilisers and chemicals on gardens and lawns (DoW, CoA and Developer);*
- *Continue to employ design techniques in accordance with the Stormwater Management Manual for Western Australia (e.g. Restrict the creation of artificial lakes or permanent open water bodies that artificially expose groundwater to contamination, develop rainwater tanks incidental to a residence or shed and reduce the construction of impervious areas); and*
- *Periodically monitor the groundwater and surface water in the locality.*

2.4.5 Pathways

There is an existing pathway system in the plan area. This includes shared paths on Bay View Drive, O'Connell Street, King George Street, Grove Street West, Gordon Street and Frenchman Bay Road. There is a dual use path partly developed and

planned to link Frenchman Bay to the north-west and the foreshore, shop and Frenchman Bay Road to the east and south-east.

Recommendation:
Paths are ideally developed on the busy roads as a means to separate the pedestrians from the cars and ultimately to ensure safety of movement.

Figure 12 Existing Paths

2.4.6 Sewerage

To address adverse environmental impacts from existing on-site waste water disposal systems, Water Corporation have recently constructed infill sewerage infrastructure in the Little Grove locality, including within the plan area. A pumping station is located outside the plan area at the end of O'Connell Street near Marine Terrace transferring effluent to the Timewell Road Wastewater Treatment Plant. Some existing lots however were not connected to the infill system.

Recommendation:
Connection of future subdivision and development to the new infill sewerage infrastructure will minimize environmental impacts from waste disposal within the plan area.

2.4.7 Electricity and Lighting

All of the land within the plan area is supplied with or has the potential to be supplied with reticulated power.

Recommendation:
All subdivision will be required to be connected to reticulated electricity.

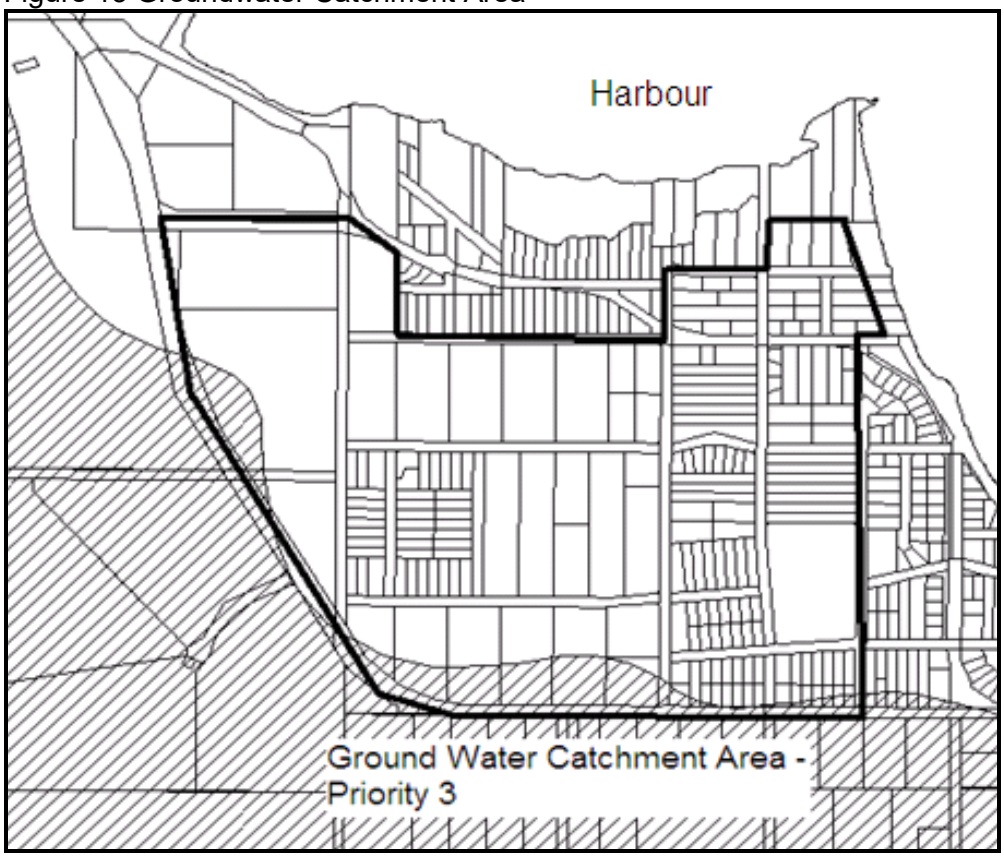
2.4.8 Gas

Gas supply (on tap) is not expected to be extended to the Little Grove area.

2.4.9 Potable Water

The plan area is located adjacent to the city's underground drinking water source area. A portion of the Priority 3 classified drinking water protection area is located on the southern portion of the plan area as shown in Figure 13.

Figure 13 Groundwater Catchment Area



Recommendation:
To maximize protection of this water resource, the plan will require any development, particularly urban residential development, within the 'Priority 3' area to be connected to the reticulated sewerage system, in accordance with Department of Water Guidelines for Water Protection Areas.

All of the plan area is serviced by reticulated water with the capacity to be extended to cater for additional development at the developer's cost.

Recommendation:
All subdivision and development is to be connected to the Water Corporation's potable reticulated water system.

2.4.10 Communications

The provision of telecommunications is the responsibility of Telstra with the developer paying for the cost of installation of the cabling within the subdivision as part of the common trenching with other utilities such as electricity and gas.

2.4.11 Public Open Space

The West Australian Planning Commission makes the following requirement (Policy DC 2.3) for residential areas: *where practical, 10% of the gross subdivisional area be given up free of cost by the subdivider and vested in the Crown…as a reserve for recreation.* The 10% requirement is derived from the recommendations contained in

the Stephenson-Hepburn Plan, which states that for most areas a standard of 3.36 hectares per 1,000 population (excluding school playing fields) is recommended as sufficient for POS. Little Grove has approximately 1,300 residents (2006). This population is expected to expand with the opportunity for infill development. Not including the school playing fields, there is currently approximately 1600m^2 of tennis courts and 2000m^2 of children's play and community meeting place at the Town Hall, 5000m^2 of active space at Mills Park and an oval (1.2ha approx) at Reserve 24747. This amounts to approximately 2.6ha, which is 2/3 that recommended by the Stephenson-Hepburn Plan.

The West Australian Planning Commission's Liveable Neighbourhoods document also recommends the allocation of a neighbourhood park and at least two local parks within 400m of a dwelling(s) (refer to the Liveable Neighbourhoods Parkland Model and Little Grove Parkland Model at Figure 14). The same document recommends the allocation of a neighbourhood park of between 3000m^2 and 6000m^2 within a neighbourhood.

The West Australian Planning Commission Policy document 2.3 states the following: *in terms of the location and distribution of public open space, the Commission favours an overall balance between incidental open space, readily accessible to all residents, and recreational open space in larger units suitable for active leisure pursuits.*

Recommendation:
The provisions of WAPC policy 2.3 and the Liveable Neighbourhoods Parkland Model be applied to determine POS requirements.

Fig 14. Public Parkland Model (Liveable Neighbourhoods Document 2007, Element 4)

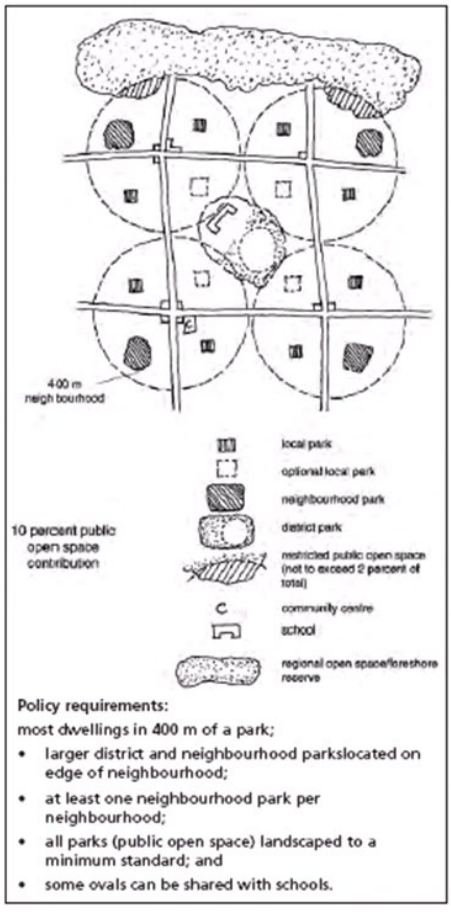
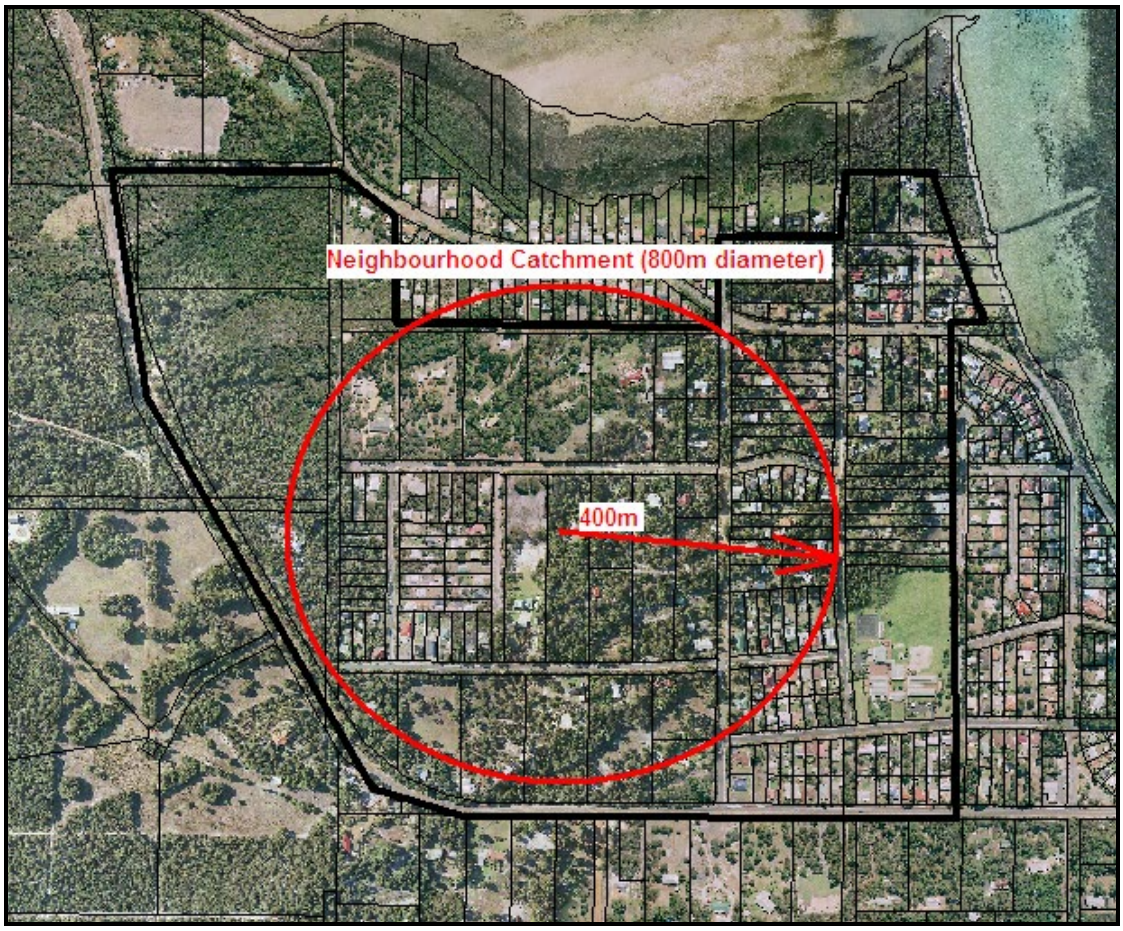


Fig 15 Little Grove POS parameters



2.5 BUSH FIRE

There is a risk that bush fire may affect life and/or properties within the Structure Plan Area. This is due to the proximity of buildings to vegetation of high fire risk, the density and type of vegetation in the area, and the history of bush fires in the area. There is also an identified need to preserve significant portions of the remnant vegetation to minimise erosion and to preserve flora and fauna.

The South Coast Volunteer Bush Fire Brigade is located adjacent to the north of the Structure Plan area and there is good access to most properties with bitumen roads and adequate reticulated water supplies.

Recommendation:
That a balance between bush fire mitigation and vegetation conservation is achieved by ensuring that further building development and subdivisions comply with the requirements outlined in 'Planning for Bush Fire Protection'.

3. OBJECTIVES

The objectives of the plan have arisen from the opportunities and constraints analysis. The objectives of the plan are:

A To support development and subdivision that provides for housing within the environmental parameters and character of the site and locality;

B To protect existing vegetation, and promote revegetation, as a means of maintaining the character of the area and minimising impact on native flora and fauna values;
C To provide safe and convenient vehicle and pedestrian access;
D To provide a stormwater system that minimises risk to public health and amenity; protects the built environment from flooding and water logging; and is economically viable in the long term;
E To efficiently utilize and extend existing water and waste water infrastructure;
F To provide active open space central to the locality;
G To discourage the re-contouring of land and promote building and development outcomes that complement the natural features; and
H To mitigate the threat of bush fire to life, property and the environment within the plan area.

4. SUBDIVISION AND DEVELOPMENT REQUIREMENTS

As a means of achieving the objectives, all subdivisions, land use and development within the plan area shall be required to comply with the following requirements, which should be read with reference to the Structure Plan Map.

4.1 GENERAL

A At the time of subdivision and/or development Council may request the submission of a detailed area plan to be adopted under the Scheme, as a Local Planning Policy, to define the positioning of building envelopes, vegetation protection and rehabilitation areas, visual amenity protection areas, fencing, vehicle access points and private open space.
B In addition to requirement 4.1A above, Council may request the submission of a wider subdivision concept plan, which is to be referred to the landowners affected, to be satisfied that the proposed subdivision/development will not adversely affect the subdivision and development of adjacent land parcels.
C Applications for group dwellings are to be referred to the Water Corporation to assess the strategic planning of sewer infrastructure.
D Reports for acid sulphate soils management, flood management and fire management need to accompany applications for development and subdivision in precinct 3.

4.2 LAND USE

A The predominant land use throughout Precincts 1, 2 and 3 should be Single Houses.
B Group Dwellings, Multiple Dwellings and small scale holiday accommodation may also be considered having regard to their potential impacts on adjacent land uses and infrastructure in the locality.
C Residential Development or Subdivision is not supported within Lot 8152, which is located within precinct 3 and vested with the Water Corporation.
D Development at Lot 3134 Frenchman Bay Road may only be supported in the area above the 5m contour line. Development of Lot 3134 is conditional on the following:
- The balance of the lot (area below 5m contour) being ceded to the Crown free of cost for reservation;
- The retention of ridge top vegetation as a visual backdrop to development;
- Minimal impact on flora and fauna values;
- Addressing fire safety;
- Ensuring solar access for passive solar buildings; and
- Providing surveillance to the adjacent oval area.

E Development at Lot 2 Frenchman Bay Road is to be located within one building envelope of a size and in a location that retains vegetation adjacent to Frenchman Bay Road and Lot 8152.

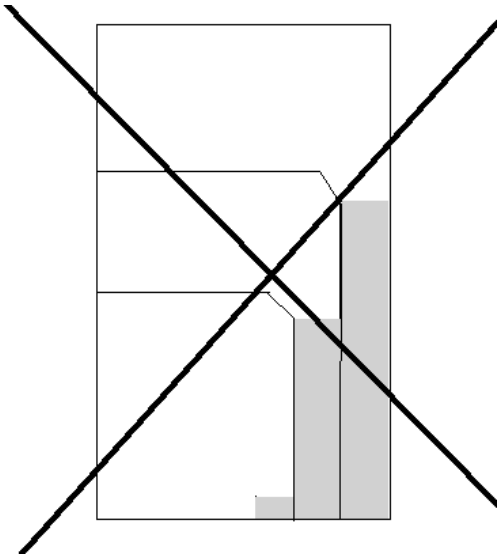
4.3 DENSITY

The density provisions as conferred by the Town Planning Scheme are hereby varied such that the following density provisions apply:

A The Council will support land within Precincts 1 and 2 being subdivided into lot sizes not less than 300m2 with a min average of 500m2;

B Land within Precincts 1 and 2 may be developed for residential purposes at a density of one dwelling per 500m2;

C To minimise the appearance of sealed areas, the Council will not support land being subdivided where the outcome will be or has the potential to result in more than two access legs or crossovers;



4.4 ACCESS

A The road network is to be safe in design and provide suitable connectivity north-south and east-west onto the existing road infrastructure.

B The minor roads shown on the Structure Plan Map are conceptual only, with the final alignments and the extent of the connectivity between lots to be resolved as part of the final subdivision proves.

C The provision of land for roads is to occur as part of normal subdivision process.

D Battleaxe access legs are to be developed on the northern boundary of a lot where possible to help solar access to the lot.

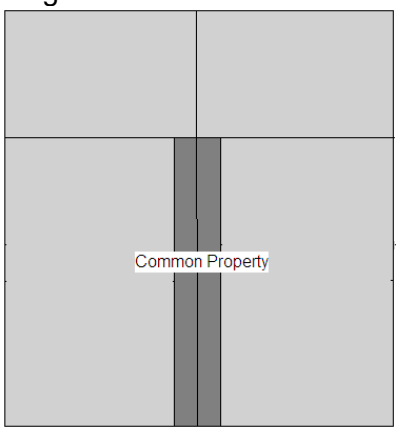
E In the cases where access legs are immediately adjacent to each other, a 3m width for each leg may be accepted.

F Access arrangements involving more than 2 legs will not be accepted.

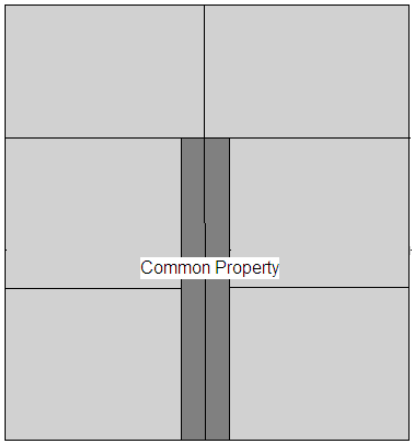
G Common property access lots are favoured in order to minimise the number of access legs and crossovers onto the street.

H Where an access leg adjoins a neighbouring property, consultation with the neighbour is encouraged as a means to provide common access.

Stage 1



Stage 2



I Access onto Frenchman Bay Road (main distributor) is to be limited where possible.

4.5 FLORA AND FAUNA

A Vegetation which is within road reserves, within 5 metres of lot boundaries facing a road reserve, and on ridgelines is to be protected as part of a development or subdivision of the land. Mechanisms to ensure protection include dedication to the Crown as public open space, incorporation into Common Property in a strata titles subdivision, or via a Section 70A notice (record of factors affecting the use and enjoyment of land) on the title.

B Where necessary revegetation in the road reserve verge or the land within 5 metres of the lot boundary may be required.

C Clearing of road side vegetation shall be limited and is only supported as a means to access lots. Lots may be required to share crossovers and to locate building envelopes in cleared areas or areas with relatively sparse vegetation as a means to protect existing vegetation.

D Prior to the clearing of vegetation an applicant shall consult with the Department of Environmental and Conservation.

E In future when the tea tree swamp on Lot 3134 is ceded as a reserve (and possibly combined with the adjacent Water Corporation Reserve to form an important conservation area) the LG will prepare a management plan to provide for strategic public access and public awareness and appreciation, and protection, of the area's flora and fauna values.

4.6 RETICULATED SEWERAGE, POTABLE WATER AND UNDERGROUND ELECTRICITY

A All new lots and development of land, other than for a Single House on a lot existing at the time of Council's adoption of this plan, are to be connected to reticulated sewer. Single Houses exempted by this clause are required to provide onsite waste water treatment units and demonstrate compliance with the draft Country Sewerage policy.

B All lots and development are to be connected to potable reticulated water, and underground power.

4.7 DRAINAGE

A Storm-water management systems shall be designed in accordance with the objectives, principles and delivery approach outlined in the *Storm-water Management Manual for Western Australia*.

B Drainage management plans are required on application for development and subdivision.

C Prior to design, developers shall consult with the Department of Water (DoW), local government authorities and other relevant stakeholders.

D As a means to manage nutrient inputs, subdivision and development is required to retain the post development hydrology as close as possible to the pre-development hydrology. Adequate field investigations shall be undertaken to determine the appropriate hydrological regime for the site.

E Runoff from constructed impervious areas (e.g. roofs and paved areas) is to be retained or detained on site through the use of tanks, soak wells, pervious paving, vegetated swales and/or native gardens.

F The creation of artificial lakes or permanent open water bodies will not be supported when they involve the exposure of the groundwater.

4.8 EARTHWORKS

A The maximum height of a standalone retaining wall is to be no higher than 1.0m, with a maximum change in the height of the natural ground level being limited to 500mm.

B Compliance with condition 4.8A is not required where the walls of a building are being used to retain material.

C Where a proposed retaining wall is to be constructed on the outer boundary of a lot, and it abuts an existing developed land parcel, the proponent shall consult with the adjoining landowner to ensure the amenity of the neighbour's property is not compromised, that any drainage issues are resolved prior to the construction of the retaining wall, and any overlooking of the neighbouring property is adequately addressed.

4.9 BUILDINGS

A Buildings are to be developed within a building envelope allocated as part of an approved Detailed Area Plan or Planning Scheme Consent.

B Where limitations on cutting and filling produce a building located on a podium, the exposed underside of the building is to be screened utilising materials that compliment the remainder of the building and demonstrate connectivity of the building to the site.

C Development needs to be setback 6 metres from the front boundary of a lot and located off the dominant ridgelines, as depicted on the structure plan.

4.10 FENCING

A Rural standard fencing is supported around a building envelope.

B Non visually permeable fencing is not supported within the front 6m of a lot/strata lot/building envelope boundary.

C Fencing is not supported on the ridge lines or where it dissects stands of vegetation. The purpose being to protect the vegetation and to allow the movement of fauna. Marker pegs (bollards) can be used to illustrate boundaries.

4.11 PUBLIC OPEN SPACE

A A minimum of 10% of a development or subdivision area is to be provided as either land or cash for the purpose of POS upon the subdivision of a lot.

B Land identified for the purpose of POS in the structure plan map is to be ceded to the Crown at the time of subdivision or development in accordance with figure 17. Variations may be supported to the satisfaction of the Western Australian Planning Commission and subject to complying with the objectives of the Structure Plan.

1.Nominal areas of 1000m^2 shared between Lots 11 and 12 Wilson Street and 23 and 1 Grove Street West and 2 Frenchman Bay Road and have been identified for the purpose of local parks (2 in total).

C Unless POS is required in accordance with clause 4.11B, cash for the purpose of developing and maintaining POS and for compensating developers that provide more than the minimum 10%, is to be provided where the development or subdivision of more than three (3) dwellings or lots occurs within the structure plan area.

D Contiguous and centrally located active areas of public open space (3000-5000m^2) additional to those shown in Figure 17 may be required through 10% POS requirements by the Western Australian Planning Commission in accordance with Liveable Neighbourhoods policy.

4.12 ACID SULPHATE SOILS

A Prior to supporting development and/ or subdivision within the area that may contain acid sulphate soils (refer to Figure 4), a soil assessment shall be undertaken and a report submitted to clarify the extent of acid sulphate soils and the management of any acid sulphate soils to cater for the proposed development.

4.13 RESIDENTIAL DESIGN CODES

A Unless stated otherwise in the plan, all development within the plan area shall comply with the adopted Residential Design Codes (2008) or any Act/order/document revoking or re-enacting the Residential Design Codes 2008.

4.14 BUSH FIRE PROTECTION

A Building development and subdivisions in the area must comply with the requirements of 'Planning for Bush Fire Protection'.

B Fire response shall be provided by the South Coast Volunteer Bush Fire Brigade.

C The design and construction of developments and subdivisions in the Structure Plan Area must include adequate access for fire response and fire escape.

E Water supply for fire protection is to be maintained with appropriate provision of hydrants connected to the reticulated water supply.

F The design of developments and subdivisions within the Structure Plan Area must consider the siting of buildings in relation to bush fire protection. Appropriate Hazard Separation Zones must be incorporated into the design of developments/subdivisions and all buildings must be surrounded by a Building Protection Zone. Where the desirable Hazard Separation Zone distance cannot be achieved, buildings must be constructed to the Australian Standard for the Construction of Buildings in Bushfire-Prone Areas (Australian Standard 3959). Buildings must not be constructed within 15m of an Extreme Bush Fire Hazard.

Figure 16 Aerial Photograph (2007)

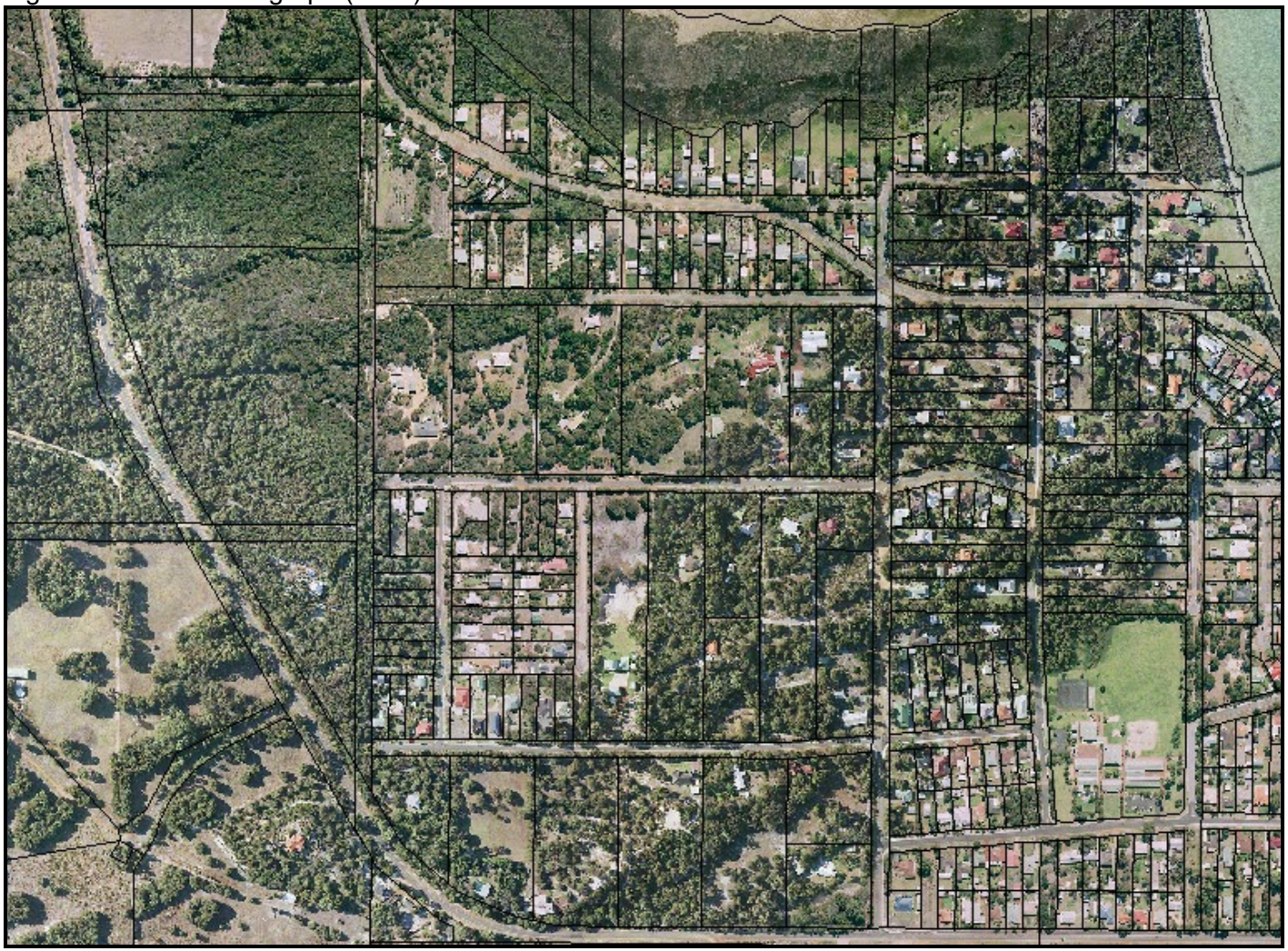


Figure 17 Structure Plan Map