Shire of Donnybrook-Balingup

Lot 102 South Western Highway

# Structure Plan Report

Section 16 of the Planning and Development Act 2005

For: Meldene

Martin Richards.

Town Planning + Urban Design

August 2018

### **Endorsements**

This structure plan is prepared under the provisions of the Shire of Donnybrook-Balingup Local Planning Scheme No. 7.

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

1 August 2018

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an officer of the Commission duly authorised by the Commission pursuant to
Section 16 of the Planning and Development Act 2005 for that purpose, ir
the presence of:

Signed for and on behalf of the Western Australian Planning Commission:

## **Table of Amendments**

Amendment No.	Summary of the Amendment	Amendment type	Date Approved by WAPC

## **Table of Density Plans**

Density Plan No.	Area of plan application	Date endorsed by WAPC

### **Executive Summary**

#### Location

The Structure Plan area is located on the southern side of the South Western Highway in the western portion of the Donnybrook townsite.

#### **Proposed Land Use**

Proposed land uses advocated by the Structure Plan are low density residential, public open space and drainage reserves.

#### Association with Approved Structure Plans

The Structure Plan (Appendix A) represents an evolution of the planning framework and land use allocation provided for by the Site's inclusion in the "Residential R5/10" zone and Schedule 11 – DIA 6 of the Shire of Donnybrook-Balingup Local Planning Scheme No.7.

There are no existing approved structure plans applicable to the Site.

### Summary Table

ltem	Data	Structure Plan Ref (Part 2 - section no.)
Total area covered by the structure plan	17.7976 hectares	3.1
Area of each land use proposed:	Hectares Lot Yie	eld
<ul> <li>Residential</li> </ul>	14.7 85	
<ul> <li>Commercial</li> </ul>	Nil	
<ul> <li>Industrial</li> </ul>	Nil	
Rural Residential	Nil	
Total estimated lot yield	85	6.4
Estimated number of dwellings	85	6.4
Estimated residential site density	4.8 dwellings per hecto (total site area)	ire 6.4
Estimated Population	240 persons	
Number of high schools	nil	
Number of primary schools	nil	
Estimated commercial floor space	0m²	
Estimated area and percentage of public open space given over to:		6.5
Regional open space	nil	
District open space	nil	
Neighbourhood parks	nil	
<ul> <li>Local parks</li> </ul>	2.33ha	
Estimated percentage of natural area	13.9%	6.5

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### Part 1: Implementation

This Structure Plan comprises:

- Plan 1 Structure Plan Map. The Plan outlines the land use classifications applicable within the Structure Plan boundary.
- Part One Implementation. The provisions, standards and requirements specified under Part One of this Structure Plan, shall be given due regard in any planning decision making.
- Part Two Explanatory Section including Technical Appendices. The Explanatory section of this Structure Plan and all Appendices are to be used as a reference only to clarify and guide interpretation and implementation of Part One.'

#### 1.0 The Structure Plan Area (Appendix C)

The Structure Plan includes all of, and only, Lot 102 South Western Highway, Donnybrook.

#### 2.0 Operation

This Structure Plan outlines the land use classifications applicable within the Structure Plan boundary. Due regard is to be given to these land use classifications when determining subdivision and development applications applicable to the Structure Plan.

The date the Structure Plan takes effect is the date the Structure Plan is approved by the Western Australian Planning Commission (refer Endorsements page).

### 3.0 Staging (Appendix B)

Given the number of lots proposed by the Structure Plan, it is envisaged that the Structure Plan area will be subdivided in stages, corresponding with market conditions.

The first stage of subdivision will be to create approximately 40 residential lots in the central and southern portion of the Site as an extension of Orchid Court. It is intended that this

subdivision will be implemented immediately following the adoption of the Structure Plan and approval of a subdivision application.

Subsequent stages will involve the completion of the internal road system to link with Marginata Drive in the north of the Site.

The timing of further stages will be dependent upon market conditions.

#### 3.1 Residential Element

Other than the requirement for standard statutory approvals, including approval of this structure plan and subdivision approvals, there are no servicing or other impediments to the implementation of the residential elements of the Structure Plan.

#### 3.2 Public Open Space

The public open space element will be ceded to the Shire of Donnybrook-Balingup as part of the first stage of subdivision.

#### 4.0 Subdivision and Development Requirements

The subdivision and development of the land within the Structure Plan area is to be generally in accordance with the Structure Plan that applies to the land.

The Structure Plan demonstrates the intended subdivision configuration, including allocation of POS, buffers and drainage reserves, and imposes a number of requirements to be addressed at the subdivision stage.

#### 4.1 Structure Plan Provisions

The following Provisions are applicable to the Structure Plan.

- 1. Subdivision and development shall be generally in accordance with this structure plan.
- 2. There shall be no further subdivision of lots identified on this structure plan.
- 3. Upgrading the Marginata Drive and South Western Highway intersection and construction of the existing road reserve along the northern edge of the land.
- 4. Road design and provision of pedestrian and cyclist facilities to reflect Liveable Neighbourhoods. A dual use path plan is to include the provision of path linkages to existing and planned path networks external to the structure plan area.
- 5. Management of stormwater in accordance with the Decision process for stormwater management in WA (DoW 2017) and the Stormwater Management Manual for Western Australia (DoW 2004–2007), to be provided by engineering drawings.
- 6. Provision of a Landscaping Plan addressing:
  - a) buffer planting,
  - b) stormwater management areas;
  - c) verge treatments;
  - d) drainage reserve and street tree planting with ongoing maintenance to the satisfaction of the Shire; and
  - e) limiting subdivision construction traffic to the proposed northern access to protect the residential amenity of residents on Leschenaultia Circle and Marginata Drive.
- 7. A Wildlife Protection Management Plan to be prepared, approved and implemented to protect the Black Cockatoo habitat from development impacts.
- 8. Provision of a POS management plan that is prepared and implemented to the satisfaction of the Shire. The Plan is to include active areas suitable for nature based play and ball sports with consideration of the Wildlife Protection Management Plan measures.
- 9. Provision of uniform fencing abutting POS/drainage areas and addressing internal/external fencing standards to the satisfaction of the Shire.
- 10. Notifications relating to agricultural emissions (eg. bird-pest deterrent noise, odours and dust) and absence of reticulated sewer provision.

- 11. Water supply arrangements to include provision for a future water service line connecting to the south of the estate area.
- 12. A Staging Plan submitted at the time of subdivision to include and address the following issues:
  - a) POS provision;
  - b) bushfire management (dual road access);
  - c) drainage and footpath provision within the Structure Plan area;
  - d) water service connections; and
  - e) protection of residents' amenity on Leschenaultia Circle and Marginata Drive by restricting construction traffic to the northern access (Road A) of the subdivision.
- 13. Implementation of the endorsed Bushfire Management Plan.
- 14. Development of habitable buildings is not permitted in areas of BAL FZ/40 on any lot, as identified in the BMP and depicted by the APZ exclusion area on the Structure Plan.

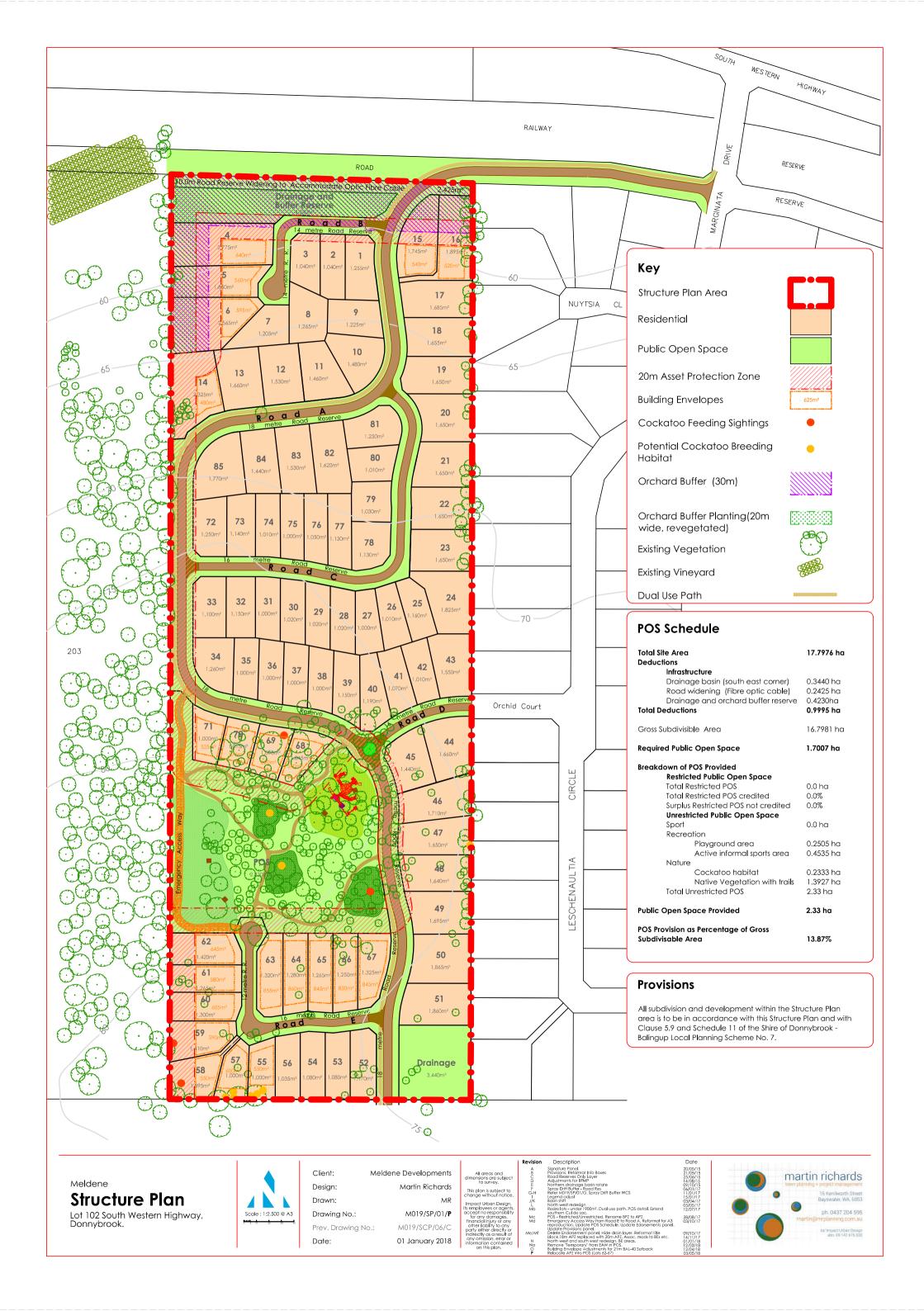
#### 5.0 Additional Information

Additional Information	Approval Stage	Consultation Required

## Appendix A

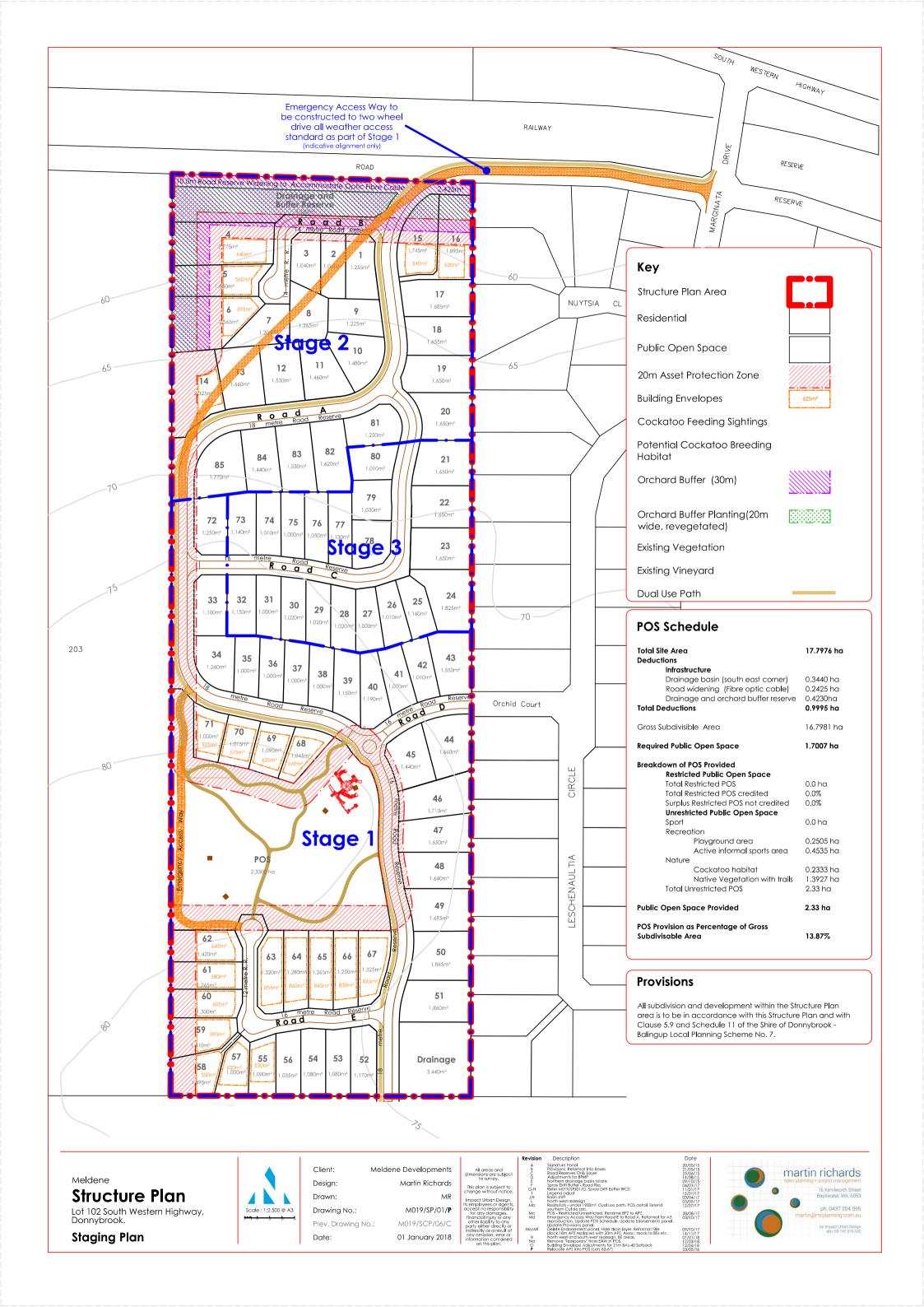
## **Proposed Structure Plan**

Dwg No. M019/SP/01/P Revision P Dated 03/05/18



## **Appendix B**

## **Indicative Staging Plan**



### **Part Two: Explanatory Report**

The Structure Plan area is Lot 102 South Western Highway, Donnybrook ('the Structure Plan area'). This area comprises the DIA 6 area pursuant to the Shire of Donnybrook-Balingup Local Planning Scheme No. 7 ("the Scheme").

The Scheme requires that a structure plan be approved by the Western Australian Planning Commission prior to subdivision being permissible.

#### 1.0 Location (Appendix C)

The Structure Plan Area is located immediately to the south of South Western Highway approximately 1.5 kilometres to the west of the Donnybrook townsite.

#### 2.0 Land Use

A railway reserve, unconstructed (and unnamed) road reserve and private property separates the Site from South Western Highway.

The recent residential subdivision of the land immediately to the east of the Site provides a single road access (Orchid Close) approximately mid distance along the Site's eastern boundary.

The northern portion of the Site has previously been cleared and developed for intensive farming purposes (organic orchard). The orchard has not been managed as a commercial property for the past 10 years, and all orchard plantings have been removed. The central ridge and much of the south facing slope remains naturally vegetated.

Recently, fire breaks have been constructed around the periphery of the site. With the exception of residential standard fencing on the eastern boundary, and rural standard fencing on the remaining boundaries, the Site is free of any other significant improvements.

The land to the west is utilised for intensive agricultural purposes. The orchard plantings are largely separated from the site by remnant vegetation which, like the remnant vegetation on the Site, is situated on rocky ground unsuitable for cultivation.

To the south of the Site the land is heavily cleared and used for broad acre agricultural purposes. The land to the east (Meldene Estate) has been subdivided and developed for residential purposes to a density of R5.

#### 3.0 Land Description

#### 3.1 Technical Description (Appendix D)

The Site is described as Lot 102 on Certificate of Title Volume 2578, Folio 72 and on Deposited Plan No. 24333 and is owned by Louie and Helen Tuia and John and Jean Wringe as tenants in common.

The Structure Plan area comprises a single land holding; viz,

Lot 102 South Western Highway: 17.7976 hectares

#### 3.2 Physical Description (refer also Section 5.0)

#### 3.2.1 Topography

The Site exhibits gentle to moderate slopes in both a southerly and northerly direction. The highest area of the site coincides with the stand of remnant Marri and Jarrah woodland in the central – southern portion of the Site, from where the land slopes moderately towards South Western Highway in the north, and falls gently southwards towards Location 2934.

The Site rises from its northern boundary at approximately 60m AHD to a peak of 80m AHD in the central southern portion before falling gently to approximately 75 metres along the southern boundary.

Accordingly, slopes are moderate, at around 1:20 (with the steepest portion being around 1:10) although the elevated nature of the Site provides expansive views, particularly to the north.

#### 3.2.2 Soils

The Site exhibits soil characteristics typical of the Donnybrook locality such as loamy slopes evident within its northern portions and gravel ridges and slopes evident within the central and southern portions.

Soils of the Site include sandy gravels, deep sands and shallow gravels. The most common soil profile is sand with lateritic gravels present, often overlying lateritic rock.

#### 2.3.3 Flora (Appendix E)

A stand of remnant Marri Jarrah woodland in very poor to good condition (Ekologica 2009) occupies the southern central portion of the Site.

A spring flora survey, undertaken by Ekologica Pty Ltd in 2009 (Appendix E) identified forty six species of native vascular flora within the remnant woodland, none of which are declared rare or priority list flora.

The survey also identified two different vegetation types within the remnant woodland, neither of which correspond to any threatened or priority ecological communities.

#### 2.3.4 Fauna (Appendix F)

A survey undertaken by Ecoedge in 2013 (Appendix F) found the remnant woodland to be a "quality foraging habitat" for 3 types of Black Cockatoos known to be in the area. The survey identified those trees which had potential to provide a breeding habitat, and those which showed signs of recent feeding by Cockatoos.

#### 3.2.5 Contamination (Appendix G)

Given the previous use of the Site for intensive agricultural purposes, the proponents commissioned the preparation of a soil contamination survey and report. This survey, undertaken in early 2015, found no evidence of contamination on the Site.

#### 3.2.6 Land Capability (Appendix H)

In May 2010 "360 Environmental" undertook a Land Capability Assessment of the property (see Appendix D) to determine the ability of the Site to accommodate lots below 2000m<sup>2</sup> using on-site effluent disposal. The report confirms that the amendment area can support on-site effluent disposal, although some management will be required.

In July 2014, 360 Environmental reviewed a subdivision concept plan, similar to the Structure Plan for the Site, advocating a range of lot sizes from approximately 1,000m<sup>2</sup> to 4,000m<sup>2</sup>. The review concluded that the change in lot density did not affect the relevance of the 2010 Land Capability Assessment (Appendix I).

Mr John Silcock undertook an independent agricultural analysis of the capability of adjoining Lot 203 to accommodate further intensive agricultural development in February 2010 (Appendix J). Lot 203 forms part of an orchard operation comprising Lots 2, 164, 165, 202 and 203. The main orchard plantings are established on Lots 2, 164 and 165, with a relatively large irrigation dam straddling Lots 2 and 164. Lots 165, 202 and 203 remain largely undeveloped, approximately 50% of Lot 202 being under native vegetation and over 70% of Lot 203 remaining uncleared.

The purpose of the assessment was to determine if the area adjoining the Site to the west would be likely to be put to intensive agricultural pursuits, and accordingly inform the analysis for any buffer requirements. The assessment concludes that clearing of the remnant vegetation would be unlikely to be approved, that the soils are largely unsuitable, and/or cost prohibitive, to be developed, and that irrigation water availability is limited.

Accordingly, adjoining Lot 203 is considered unlikely to be developed for intensive agricultural pursuits, particularly those uncleared portions. Only the cleared area in the northern portion of Lot 203 is readily capable of being further developed for intensive

agricultural pursuits, and accordingly only the north western portion of the Site need be considered for any buffer requirements.

#### 4.0 Statutory Framework

#### 4.1 Shire of Donnybrook – Balingup Local Planning Scheme No 7.

The Site is zoned "Residential" with a density code of R5/10 pursuant to the Shire of Donnybrook-Ballingup Local Planning Scheme No. 7 (Appendix K). It is included in a Special Control Area (Division B of the Scheme), indicated on the Scheme Maps as "SCA8", a 'Structure Plan Area' nominated as "SPA17" and as DIA 6 under Schedule 13 of the Scheme (Clause 6.9 and Schedules 11 and 13 of the Scheme refer).

The designation of the land in the SCA8/SPA17/DIA 6 areas pursuant to the Scheme require the preparation of a structure plan in accordance with the requirements of Clause 6.9 and Schedule 15.

Division B - Clause 6.9 of the Scheme sets out the general mechanisms and requirements for the preparation, adoption and endorsement of Structure Plans within the 'SCA8' area.

Schedule 11 of the Scheme (Structure Plan Areas), insofar as it relates to the Site (SPA17) requires the following matters to be considered;

- Survey identifying Black Cockatoo habitat and any areas, trees, tree hollows that require retention.
- Site contamination survey.
- Site survey to determine buffer width and other design solutions to sensitive land uses and existing orchard operations.
- Fire management plan.
- Road network promoting a strong north/south linkage and place a lower status access role onto orchard Court.
- Road design and provision of pedestrian and cyclist facilities to reflect Liveable Neighbourhoods.

- Upgrading the Marginata Drive and South Western Highway intersection and construction of the existing road reserve along the southern edge of the land,
- Suitable water supply arrangements.
- Minimum lot sizes to be addressed to the satisfaction of relevant agencies.
- Public open space is suitably configured and located to best meet the needs of residents and protect natural features.
- Strategic connections to adjacent Development Investigation Areas and Structure Plan Areas.
- Provide larger lots to adjoin neighbouring land to increase buffer distances.
- Provision of a landscaping plan which addresses buffer planting and stormwater management.

The land immediately to the west is zoned "Priority Agriculture", and the land immediately to the south "General Agriculture". This land is included in a 'Development Investigation Area ("DIA6") for which the Scheme enables the consideration, subject to rezoning, of residential development of lots of between 2,000 and 4,000 square metres.

The land to the immediate east (Meldene Estate) is zoned "Residential R5". To the immediate south of Meldene Estate, the land is zoned 'Residential R5 and is included in a Special Control area, indicated on the Scheme Maps as "SCA8" and a 'Structure Plan Area' nominated as "SPA3" (Schedule 15 of the Scheme refers).

The Structure Plan requirements for DIA 6, which also applies to a portion of Lot 2934 Bentley Road, as specified by Schedule 13 of the Scheme, are similar to those for SPA17 (the Site), and are as follows;

- Investigate land capability and suitability for residential subdivision/development including;
  - provision of on-site buffer to adjoining priority agriculture;
  - lot sizes between 2000-4000m<sup>2</sup>;
  - pedestrian and vehicular movement systems that facilitate accessibility and integrate with existing development;
  - public open space provision;
  - landscaping and vegetation plan;
  - provision of on-site buffer to adjoining agricultural land;

- effluent disposal and servicing; and
- development contributions.
- The protection of native vegetation that has been identified as worthy of protection by the Department of Parks and Wildlife and the local government.
- Appropriate fire management measures

#### 4.2 Shire of Donnybrook-Balingup Local Planning Strategy (2007)

The Shire of Donnybrook-Balingup's Local Planning Strategy includes the Site in an area classified as "Residential Investigation". The Strategy Plan is notated to indicate that residential development is to provide an appropriate buffer to adjoining agricultural uses.

The Local Planning Strategy describes land identified as 'Residential Investigation' as;

land which appears to be suitable for future urban development but first needs to be assessed against relevant environmental, servicing, land use compatibility and landscape considerations;

This classification has been recognised and consolidated in the recently gazetted Amendment 2 to Local Planning Scheme No. 7, and the land is now zoned 'Residential R5/10'.

#### 4.3 Shire of Donnybrook-Balingup Townsite Expansion Strategy

Endorsed by the Western Australian Planning Commission in 2009, the Shire's Townsite Expansion Strategy identifies the Site in a 'Development Investigation Area'.

Requirements (Planning Policy Statements) specific to the Development Investigation Areas include;

This Plan serves as a guide to future detailed structure planning and rezoning amendments.

Subdivision and development within the identified Development Investigation Areas (DIA's) shall not occur until such time as the land as appropriately zoned in the Local

Planning Scheme and a detailed Structure Plan has been endorsed by the Shire and the Western Australian Planning Commission.

Structure Plans are to be prepared in accordance with the provisions of Local Planning Scheme No 4 applicable to 'Structure Plan Areas' and where applicable – 'Liveable Neighbourhoods' design policy.

Structure Plans are to be accompanied by the following documents:

- I. A Fire management Plan (FMP) or confirmation from the responsible agency that the Structure Plan meets fire protection requirements and that a FMP is not necessary;
- II. A Sustainability Outcomes and Implementation plan which details the targets and method of delivery in respect to 'Sustainability Outcomes' inclusive of;
  - On-site power generation;
  - On-site water capture and re-use;
  - Re-use of grey water;
  - Correct housing orientation for passive heating and cooling;
  - Provision of affordable housing.
- III. A Local Water management Strategy

Relevant Provisions of the Townsite Expansion Policy include;

11. Shire to promote flexible implementation of the draft Country Towns Sewerage Policy, and where necessary require exemptions due to wider economic and social considerations.

#### 4.4 Draft Country Sewerage Policy

The W.A. Health Department's Draft Country Sewerage Policy suggests that lots greater 2000m<sup>2</sup> need not be serviced by a reticulated sewerage system. Notwithstanding, the Shire's Townsite Expansion Strategy introduces a planning framework (refer above) which supports a flexible implementation of the draft Policy, in terms of minimum lot sizes for 'unsewered' residential lots where there is a demonstrated wider social and economic benefit.

#### 4.5 Liveable Neighbourhoods – Western Australian Planning Commission Jan. 2009 Update 02

Liveable Neighbourhoods states that for structure plans, the primary measure of compliance is achieving the objectives and requirements of Element 1 – community design. Given the broad, general nature of the Structure Plan, it is considered that compliance with Element 1's objectives is relevant at this juncture, with the demonstration of compliance with the 'Requirements' of Element 1 being appropriate at the more detailed planning stages.

#### 4.5.1 Element 1 – Community Design – Objectives

The objectives of Element 1 are;

01 To facilitate a sustainable approach to urban development by minimising nonrenewable energy use and car dependence. Encouraging greater local selfcontainment of neighbourhoods and towns and protecting key natural and cultural assets.

**Comment:** The Structure Plan area is within easy walking distance of the Nannup Town Centre (approximately 400 metres from the corner of Warren Road and Kearney Street to the Post Office).

The Structure Plan also provides for the protection, management and potential enhancement of the remnant area.

02 To provide safe convenient and attractive neighbourhoods and towns that meet the diverse and changing needs of the community and offer a wide choice of housing, leisure, local, employment opportunity and associated community and commercial facilities.

**Comment:** The Structure Plan provides the opportunity for low density (R5 to R10) housing types, in accordance with the Site's zoning, together with a significant area of public open space.

Careful consideration has been given to the internal road layout, to discourage extraneous through traffic and excessive speeds whilst providing appropriate linkages to both existing and future road networks.

Given the zoning and planning framework applicable to the Site, there are no, or very limited opportunities for employment and commercial activities.

03 To develop a coherent urban system of compact walkable neighbourhoods which cluster to form towns with relatively intense, mixed-use town centres that are capable of catalysing a broad range of employment and social opportunities.

**Comment:** The Structure Plan area forms part of the Donnybrook townsite's urban structure, and will consolidate the townsite by providing for a logical extension of the residential component.

04 To ensure a site-responsive approach to urban development that supports and enhances the context in which it is located, strengthens local character and identity, integrates with its context and promotes a sense of community.

**Comment:** The Structure Plan recognises its locational context and provides for housing densities reflective of both the existing adjoining urban form and its location within the Donnybrook townsite.

05 To provide a movement network which has a highly-interconnected street network that clearly distinguishes between arterial routes and local streets, establishes good internal and external access for residents, maximises safety,

encourages walking and cycling, supports public transport and minimises the impact of through traffic.

**Comment:** The proposed road system provides for appropriate connections to the existing and future street network. In particular, the structure plan's layout ensures extraneous traffic generation and excessive speeds are minimised whilst maintaining an appropriate network hierarchy which discourages through traffic using established low order residential roads.

06 To provide a network of well-distributed parks and recreation areas that offer a variety of safe, appropriate and attractive public open spaces.

**Comment:** The structure plan provides for an allocation of public open space in excess of the normal 10% requirement. This POS will protect an area of remnant native vegetation on the highest portion of the property, whist proving for passive recreational opportunities.

07 To ensure that the design of neighbourhoods takes into account environmental constraints including soil erosion, flooding and bushfire risk, and protects areas of natural or cultural significance.

**Comment:** The structure plan recognises the remnant vegetation as an environmental constraint and contains it in public open space. Given the proposed lot configuration, end land use and road alignments soil erosion is not considered a significant risk. The bushfire risk has been addressed by ensuring appropriate building setbacks and road connectivity in accordance with the Bushfire Management Plan.

08 To ensure that new urban areas incorporate best-practice urban water management techniques relating to stormwater quality and quantity, water conservation and re-use, ecosystem health, economic management and public health.

**Comment:** The provisions of the Structure Plan require all detailed matters in relation to stormwater management to be addressed at the more detailed

planning stages, including the requirement for a Water Management Strategy as part of the subdivision process.

09 To balance provision of a sustainable and efficient urban structure with protection and enhancement of environmental attributes.

**Comment:** The structure plan recognises those portions of the Site which are potentially capable of being developed and those which should be precluded from urban development. Those areas to be protected are included in public open space, the management and potential enhancement of which are provided for in the Structure Plan provisions.

10 To structure urban areas to enable public transport systems to provide a viable alternative to private cars.

**Comment:** There are very limited public transport opportunities available in Donnybrook. In any event, the Structure Plan area relies primarily on the existing road network, which provides excellent access opportunities, including any future public transport initiatives, to the town centre and its community and commercial infrastructure.

11 To equitably provide public utilities in a timely, cost-efficient and effective manner.

**Comment:** The development of the Structure Plan area will rely on the extension of nearby public utilities already in place (refer Section 5.6).

#### 4.3.2 Element 1 – Community Design - Requirements

The Liveable Neighbourhoods 'Requirements' are typically applicable to regional and district level structure plans. These Requirements predominantly assume broad scale structure planning and advocate the establishment of interconnected neighbourhoods, the latter generally defined as areas within 400 metres walking distance of a neighbourhood centre.

Given that it represents the logical extension of Donnybrook's urban form, it is evident that the Structure Plan area forms part of an existing neighbourhood, the road structure, open space provision and public and private infrastructure of which is already well established.

Many of the 'Requirements' of Element 1 are therefore considered already satisfied, or irrelevant. Those of relevance have, in the main, been addressed in the preceding section of this report.

#### 5.0 Site Conditions and Constraints

To support and inform the structure plan, a number of environmental and technical assessments have been undertaken, including;

- Land Capability Assessment 360 Environmental
- Spring Flora and Vegetation Assessment Ekologica Pty Ltd
- o Black Cockatoo Habitat Assessment Ecoedge Environmental Pty Ltd
- o Contamination Report Department of Agriculture and Food
- o Geotechnical Assessment WML Consultants Pty Ltd
- Bushfire Management Plan Smith Consulting
- o Transport Impact Statement KCTT

Furthermore, detailed information was provided to the Western Australian Health Department to satisfy its requirements for lot sizes and buffers for spray drift.

#### 5.1 Biodiversity and Natural Asset Areas

The Structure Plan area has been predominantly cleared and (previously) used for agricultural pursuits. The agricultural activity on the Site has ceased and all plantings removed. The cleared areas consist primarily of grasses which are regularly slashed.

A stand of (regrowth) native vegetation occupies the central, and highest portion of the land, coinciding with an area of rock outcropping. Evidence of Barnaby's Red Tailed Black Cockatoos foraging in this area has been observed and potential nesting sites identified by Ecoedge (Appendix F).

The area of remnant native vegetation is identified on the Structure Plan as being contained within an area of public open space. The structure plan provisions ensure that appropriate management plans be prepared for both the implementation and maintenance of the public open space and the protection of the Black Cockatoo's habitat.

#### 5.2 Landform and Soils (360 Environmental – Appendix H)

The topography of the area consists of isolated ridges and hillcrests of moderate to steep valley slopes with the geology characterised by colluvium over gneiss and granite (Department of Agriculture and Food (DAF), 2010). The site gently slopes north toward the Preston River

Soil types at the site include sandy gravels, deep sands and shallow gravels (DAF, 2010).

The Australian Soil Resource Information System (ASRIS) describes the area as "C4 Extremely Low Probability/Very Low" (CSIRO, 2006) which is the lowest risk category within the National Acid Sulfate Soils (NatASS) database.

#### 5.3 Hydrology (360 Environmental – Appendix H)

There is no permanent surface water on the site. One farm dam and two reservoirs exist to the west; however, these are not expected to be impacted by any development at the site. The Preston River may be impacted as it is situated down gradient of the site, approximately 400 m to the north.

Based on the topography and geology of the site, it is likely that local groundwater flow will be towards the Preston River to the north.

The results of a search of the Department of Water (DoW) WIN database for groundwater bores within a 3 km radius of the site indicated that there are 101 groundwater bores located within this radius, although the majority occur at distances greater than 1 km

from the subject site. The closest of these with available information have recorded depths of groundwater between:

approximately 1.3m below ground level (bgl) (WIN Site ID 20010310) 92m to the east of the site;

approximately 4.5m bgl (Win Site ID 20010160) 301m north-east of the site; and

approximately 27m bgl (WIN Site ID 20010219) 198m north-west of the site.

#### 5.4 Flora and Fauna

#### 5.4.1 Flora (Ecologica Pty Ltd - Appendix E)

Forty six species of native vascular flora were identified within the remnant vegetation on Lot 102. None of these were declared rare or priority list flora. The number of species is relatively low for an area of vegetation of about 4 ha, but previous grazing by livestock and other disturbances have reduced floristic diversity.

Two different vegetation types are present within the remnant vegetation on Lot 102. Neither of these corresponds to any threatened or priority ecological communities. On the more gravelly soil:

"Woodland of jarrah and marri over Persoonia longifolia and Xylomelum occidentale over Xanthorrhoea preissii, Macrozamia riedlei, Bossiaea eriocarpa, Bossiaea ornata, Hakea amplexicaulis and Hovea elliptica."

On the sandier soil mainly at the southern end of Lot 102:

"Woodland to open woodland of jarrah, marri and Nuytsiafloribunda over Xylomelum occidentale over Xanthorrhoea preissii Adenanthos meisneri, Dasypogon bromeliifolius, Phlebocarya ciliata and Stirlingia latifolia."

Many years of grazing by livestock as well as more recent activities have caused degradation of the remnant vegetation. In general the degree of degradation is related to the vegetation type.

The jarrah-marri forest on gravelly soil is generally of "Fair to Good" condition (Kaesehagen, 1995), while that on the sandier soil is in "Poor" to "Very Poor" condition.

#### 5.4.2 Fauna (Ecoedge Pty Ltd – Appendix F)

A survey for Carnaby's, Baudin's and Forest Red-tailed Black Cockatoo habitat was undertaken by Russell Smith and Tiffany Bennett on Lot 102, South Western Highway, Donnybrook on the 11th September 2013.

The remnant vegetation in the study area was inspected for signs of foraging, breeding or roosting by Black Cockatoos (BCs). Each tree over 500 mm1 was measured and coordinates were recorded by a GPS. The following observations were made during the visit:

- A total of ten trees (eight marri and two jarrah) over 500 mm DBH were identified and their positions recorded using GPS. While no hollows or other signs of black cockatoo nesting was observed in any of the trees at the time of the visit, trees of this size have the potential to develop hollows suitable for BC breeding in the long term. One large jarrah of about 1500 mm DBH and over 18 m high had several dead limbs rising above the living canopy and showed early signs of development of a hollow.
- Signs of recent feeding on seeds from marri fruit, mainly by the Forest Red-tailed Black Cockatoo, were observed at a number of locations. A small number of marri fruits showed evidence of feeding by Carnaby's black cockatoo.
- Apart from marri trees, other native species in the study area such as jarrah, Banksia grandis, Persoonia longifolia and Xylomelum occidentale (which is particularly abundant) may provide sources of food for BCs.
- Black cockatoos, probably Forest Red-tailed Black Cockatoos, were heard and observed in bushland near to the study area during the survey.

The Ecoedge assessment identified and mapped those trees demonstrating potential breeding habitat qualities as well as those areas showing recent feeding signs. These have

been recognised by the structure plan, and are proposed to be protected by their inclusion in POS, or exclusion from development by building setbacks and building envelopes.

#### 5.5 Bushfire Hazard – Bushfire Management (Harris Consulting – Appendix M)

A Bushfire Management Plan prepared by Smith Consulting informed the preparation of the structure plan for the Site by identifying appropriate Asset Protection Zones, building envelopes and access arrangements, including the need for temporary and permanent emergency access ways, and minimisation of battleaxe lots and long driveways.

The bushfire hazard assessment for this site is moderate and has a bushfire attack level of BAL–12.5 when considered against the requirements in *Guidelines for Planning in Bushfire Prone Areas* (2017), AS 3959 and the Building Code of Australia (BCA) and the creation of an asset protection zone of 20 metres. This determination is based on the observation of the predominant vegetation type on the Site and adjacent assessable lands and aligning that to the published criteria.

All vegetation within 150 metres of the lot boundaries or building have been considered in accordance with the Western Australian Government criteria. AS 3959 only requires consideration of 50 metres between the vegetation and the lot boundary or building for grassland and 100 metres for other vegetation types.

For AS 3959 to be applicable requires the formal declaration of the site to be bushfire prone. This site is declared in part as bushfire prone.

The Bushfire Management Plan has informed the design outcomes of the Structure Plan and incorporates the following measures to mitigate bushfire risk in accordance with SPP 3.7 – Planning in Bushfire Prone Areas and the Guidelines for Planning in Bushfire Prone Areas V1.3 ("the Guidelines");

#### 5.5.1 Access Arrangements.

The proposed road network extends from the existing sealed road system and will be further connected on the future development of the land to the south of the Site. Specifically, the proposed roads will be sealed and drained, and maintained to a high standard by the local

authority. Two access points will be created, one representing the extension of Orchid Ct and the other via the establishment of Road A in the unconstructed road reserve on the northern boundary of the Site. This road will connect the Site to Marginata Drive and, accordingly, the South Western Highway.

#### 5.5.2 Emergency Access Ways

Two temporary emergency access tracks are to be implemented by the subdivider as part of stage one of the development. One of these will create a link from the northern extent of Road A in Stage 1 to Marginata Drive. This will be replaced by the

completion of Road A as part of Stage 2 of the subdivision. The other emergency access track will link Road E to Road A, which will be necessary until such time as Road A is extended to the south and connected to the external road network as part of the future development of the land to the south of the Site.

#### 5.5.3 Asset Protection Zones.

In accordance with the Guidelines, 20 metre wide Asset Protection Zones ("APZs") are to be implemented, by the subdivider, on areas of the Site that are adjacent to the remnant vegetation to the east, the Public Open Space (which contains remnant vegetation) and the area of the northern portion of Lot 102 to be rehabilitated as an orchard (spray drift) buffer.

The APZs will be established by the subdivider at the time of subdivision, and will comply with the requirements of Schedule 1 of the Guidelines.

The land within the APZs is classified as BAL-FZ and BAL-40, development within which will be restricted via Provision 11 of the Structure Plan, which states "Development of habitable buildings is not permitted in areas of BAL FZ/40 on any lot, as identified in the BMP and depicted by the APZ exclusion area on the Structure Plan".

The APZs will be implemented as part of subdivisional works by the developer and will comply with the standards of Schedule 1 of the Guidelines.

The ongoing maintenance of the APZ within the Public Open Space will be the responsibility

of the local authority. The Shire of Balingup-Donnybrook has accepted this responsibility. APZs within individual lots will be maintained by the lot owners.

#### 5.5.4 Building Envelopes

Building envelopes have been imposed on those proposed lots which have a component of the lot affected by a (post development) BAL rating of BAL-FZ or BAL-40. This will ensure that the dwellings will only be constructed in the area of the lot with a BAL-29 or lower rating.

#### 5.6 Spray Drift Buffer (Appendix N & O)

In the preparation of the structure plan, the Health Department of WA was consulted to determine an appropriate strategy to address possible impacts on future residents associated with potential horticultural spray drift.

This consultation resulted in the structure plan adopting a 20 metre wide spray drift buffer reserve (within a 30 metre wide buffer area) adjoining the northern boundary of the Site, and a 30 metre wide spray drift buffer within private lots in the north western portion of the structure plan area.

This buffer area is to incorporate a 20 metre wide revegetated area containing random plantings of a variety of tree and shrub species of differing growth habitats, at spacings of 4 to 5 metres.

The plantings will include species with long, thin (needle-like) and rough (furry/hairy) foliage which facilitates the more efficient capture of spray droplets and which are fast growing and hardy.

By way of correspondence dated 17 May, 2017 (Appendix O), the Health Department stated;

"Further to our meeting on 10 March 2017 and the confirmation of those discussions in your letter dated 24 March 2017, I can confirm that the proposed buffer distances and treatments for this particular case are acceptable to the Department of Health."

#### 5.7 Land Capability and Geotech (360 Environmental and WML – Appendices H & P)

In May 2010 "360 Environmental" undertook a Land Capability Assessment of the property to determine the ability of the Site to accommodate lots below 2000m<sup>2</sup> adopting on-site effluent disposal (Appendix H). The report confirms that the structure plan area can support on-site effluent disposal, although some management will be required.

The 360 Environmental assessment was based on analysis of 25 bore logs taken across the structure plan area.

In July 2014, 360 Environmental reviewed a subdivision concept plan, similar to the Structure Plan for the Site, advocating a range of lot sizes from approximately 1,000m<sup>2</sup> to 4,000m<sup>2</sup>. The review concluded that the change in lot density did not affect the relevance of the 2010 Land Capability Assessment.

In determining the suitability of the structure plan area for on-site effluent disposal, the Health Department of WA expressed concern with the land capability of specific portions (bore logs) of the land. These areas were subsequently the subject of further geotechnical assessment by WML and found to pose no limitations to the use of on-site effluent disposal systems (Appendix P).

Accordingly, the Health department advised that there is no physical impediment to the use of on-site effluent disposal systems within the structure plan area.

#### 5.8 Transport Impact Statement (KCTT – Appendix Q)

During the advertising of the structure plan a number of residents in the neighbouring "Meldene Estate" made submissions expressing concern that traffic would be excessive as a result of the structure plan being adopted in its current form.

It was anticipated by the residents that Orchid Court would be used as a short cut to South Western Highway by the residents of the future subdivision of Lot 102. Accordingly, KCTT was commissioned to prepare a Transport Impact Statement to quantify these concerns and found that the new subdivision will not generate excessive amounts of traffic onto the existing road network.

Residents north of Orchid Court will most likely utilise road 1 and road 3 to access South Western Highway. Residents south of Orchid Court may use Orchid Court and Leschenaultia Circle to access South Western Highway. Maximum number of traffic movements would be expected to be 32 in the peak hour, and 360 for the whole day. Given that Orchid Court can be classified as Access Street D, its capacity will be approximately 1,000 vehicular movements per day. The anticipated traffic volumes are well within the design capacity, therefore no adverse impact is expected.

#### 5.9 Heritage – Aboriginal Sites (Appendix R).

According to the Department of Indigenous Affair's online Aboriginal Heritage Inquiry System, there are no registered Aboriginal Sites within the Structure Plan area.

#### 6.0 The Structure Plan (Appendix A)

Prior to the subdivision of the Site being supported by either the Council or the Western Australian Planning Commission, a structure plan is required to be adopted and approved in accordance with Schedule 15 of the Scheme.

The Structure Plan has been prepared in accordance with the requirements of the Scheme and in consultation with the Shire of Donnybrook-Balingup.

#### 6.1 Structure Plan Criteria

This structure plan addresses the following criteria (as per Schedule 15 of the Scheme);

- Survey identifying Black Cockatoo habitat and any areas, trees, tree hollows that require retention.
- Site contamination survey.

- Site survey to determine buffer width and other design solutions to sensitive land uses and existing orchard operations.
- Fire management plan.
- Road network promoting a strong north/south linkage and place a lower status access role onto orchard Court.
- Road design and provision of pedestrian and cyclist facilities to reflect Liveable Neighbourhoods.
- Upgrading the Marginata Drive and South Western Highway intersection and construction of the existing road reserve along the southern edge of the land,
- Suitable water supply arrangements.
- Minimum lot sizes to be addressed to the satisfaction of relevant agencies.
- Public open space is suitably configured and located to best meet the needs of residents and protect natural features.
- Strategic connections to adjacent Development Investigation Areas and Structure Plan Areas.
- Provide larger lots to adjoin neighbouring land to increase buffer distances.
- Provision of a landscaping plan which addresses buffer planting and stormwater management.

#### 6.2 Structure Plan Area

The Structure Plan applies to all of Lot 102 south Western Highway, Donnybrook.

#### 6.3 Structure Plan Elements

The essential elements of the Structure Plan are as follows;

- Where possible and practical, lots oriented in a north south direction to facilitate passive solar access and in recognition of the Site's topography.
- The inclusion of the remnant marri jarrah woodland in Public Open Space (approximately 13%) to preserve the potential cockatoo breeding and foraging habitat and provide limited passive recreational opportunities. This POS will also act as a strong landscape element within the estate, providing visual relief from the built form.
- The provision of a strong north south road link. Whilst this road link creates a direct link from the north to the south of the Site it deliberately meanders for the following reasons;
  - o It enables the majority of the proposed lots to enjoy a north-south orientation.
  - o It provides for variety and interest in the developed form.
  - It will discourage speeding and extraneous traffic and encourage walking and cycling.
- The inclusion of a minor road link to Orchard Court.
- A 10 metre road widening on the northern boundary to accommodate an existing optic fibre cable.
- Road connectivity to Marginata Drive/South Western Highway via the existing unconstructed road reserve to the north of the Site.
- A road link to the southern boundary of the Site to enable pedestrian and cyclist permeability, whilst precluding the creation of a defacto Donnybrook bypass via any road connections from the future development to the land to the south.
- Two culs-de-sac aligned to facilitate north-south lot orientation.

- A 30 metre spray drift buffer to the intensive agriculture land (orchard) to the west and north.
- 20 metre wide Asset Protection Zones on those areas of the structure plan area that
  are adjacent to the remnant vegetation to the west, the proposed pubic open
  space and the area to be rehabilitated as a spray drift buffer.
- Building envelopes on those proposed lots that are affected by a fire hazard rating of BAL 40 or higher.
- Lot sizes and density distribution based on the following;
  - Transition of lots sizes from smaller properties in the higher reaches of the site to larger lots towards the northern boundary, reflecting the more desirable locations in terms of views and proximity to the POS and enabling preservation of those views.
  - A cluster of smaller (minimum 1,000m²) lots on the upper reaches of the Site where soil conditions and depth to ground water are more likely to suitable for a higher density of development.
  - A cluster of smaller lots in the southern portion of the Site. This area is ideally suited to smaller lots given its gently undulating nature, soil types and proximity to the proposed POS. The lots immediately adjoining the southern boundary are deliberately long to adequately provide for the preservation of the stand of trees along this boundary.
  - Lot sizes consistent with those established at the adjoining Meldene Estate along the eastern boundary of the Site.
- Drainage reserves at the two lowest points of the Site.

#### 6.4 Lot Yields and Density

Consistent with the "Residential 5/10" zoning of the structure plan area, the draft structure plan advocates a total of 85 residential lots ranging in size from 1,000m<sup>2</sup> to 2,775m<sup>2</sup>.

Given a total site area of 17.7976ha, the density of development proposed is approximately one dwelling/lot per 2,094m<sup>2</sup> (17.7976 / 85) or approximately 4.8 dwellings/lots per hectare.

The actual average lot size is as per the following;

Total Site Area:	17.7976ha
Deductions;	
Road Widening (10m):	0.2425ha
Drainage and buffer reserve:	0.7570ha
POS (@10%):	1.6798ha
Net Subdividable Area:	15.1183ha
Lot/Dwelling Density:	1 per 1779m²
Road Content:	2.9335ha
Balance Area:	12.1848ha
Actual Average Lot Size:	1,433m²

Where practical, a maximum of 1899m<sup>2</sup> lot size has been adopted to preclude second dwellings being developed on lots intended for only single homes. In some areas, this has not been possible due to the setback and separation requirements of the Bushfire Management Plan. On these lots, a relatively small building envelope has been imposed to discourage the development of second dwellings.

#### 6.5 Public Open Space

The proposed public open space incorporates and protects a stand of remnant vegetation in the southern central portion of the Structure Plan area.

The POS allocation is as per the following table;

Total Site Area (ha)		17.7976
Deductions		
Infrastructure		
Drainage Basin (south east corner)	0.334	
Road widening (Fibre optic cable)	0.2425	
Drainage and Orchard Buffer Reserve	0.423	
Total Deductions	į	
Total Deductions		0.9995
Gross Subdivisible Area (total area minus deductions)		16.7981
Required Public Open Space		1.67981
Breakdown of POS Provided		
Restricted Public Open Space		(*
Total Restricted POS	0	
Total Restricted POS Credited to a maximum of 20%		0
Surplus Restricted POS Not Credited	0	
Unresticted Public Open Space: by function	i i	
Sport	0	
Recreation		
Playground area	0.2505	
Active informal sports area	0.4535	
Nature		
Cockatoo habitat	0.2333	()
Native vegetation with footpath trail	1.3927	
Total Unrestricted POS	2.33	2.33
Total Unrestricted POS		
Total		2.33
POS Provision as Percentage of Gross Subdivisable Area		13.87062

Formatted as per Table 17 of Draft 2015 Liveable Neighbourhoods

Table 1: POS Provision

#### 6.6 Servicing

The development of the Structure Plan area will require the extension of essential civil infrastructure such as reticulated water, power and telecommunications infrastructure.

#### 6.6.1 Reticulated Water

Existing Water Corporation reticulated water mains are located in the road reserves of Orchid Court and Marginata Drive.

Extensions of this infrastructure will be required to service the residential elements of the structure plan area, as part of the subdivision process.

#### 6.6.2 Sewer and Earthworks (Fill)

Sewer will be by way of appropriate on-site effluent disposal units installed as part of the house construction process.

Given the relatively large lot size, generally moderate slopes and appropriate lot orientation it is anticipated that earthworks undertaken during subdivision will be limited to the road reserves as part of road works and services installation.

#### 6.6.3 Power

Underground power connections are available at Orchid Court and Marginata Drive.

Approvals for subdivision will require that all internal power lines be installed underground.

#### 6.6.4 Telecommunications

Any development or subdivision within the Structure Plan area will require the installation of telecommunications infrastructure.

Provided that Donnybrook is within the NBN footprint at the time of any proposal, current Federal legislation will require the installation of conduits and related infrastructure in readiness for the NBN roll out.

Existing telecommunications infrastructure in the area includes copper line and mobile phone access.

#### 6.6.5 Stormwater Management (Appendix S)

DVN Consulting Engineers has prepared a Stormwater Management Plan for the structure plan area.

Stormwater runoff will be directed through a tree pit and soakwell, piped and open swale network to two treatment and recharge basins in the lowest extremities of the structure plan area.

#### 6.7 Provisions

The structure plan includes a suite of provisions intended to guide the subdivision and development of the structure plan area.

The provisions are largely self-explanatory and are as follows;

- 15. Subdivision and development shall be generally in accordance with this structure plan.
- 16. There shall be no further subdivision of lots identified on this structure plan.
- 17. Upgrading the Marginata Drive and South Western Highway intersection and construction of the existing road reserve along the northern edge of the land.
- 18. Road design and provision of pedestrian and cyclist facilities to reflect Liveable Neighbourhoods. A dual use path plan is to include the provision of path linkages to existing and planned path networks external to the structure plan area.
- 19. Management of stormwater in accordance with the Decision process for stormwater management in WA (DoW 2017) and the Stormwater Management Manual for Western Australia (DoW 2004–2007), to be provided by engineering drawings.
- 20. Provision of a Landscaping Plan addressing:
  - f) buffer planting,
  - g) stormwater management areas;
  - h) verge treatments;
  - i) drainage reserve and street tree planting with ongoing maintenance to the satisfaction of the Shire; and
  - limiting subdivision construction traffic to the proposed northern access to protect the residential amenity of residents on Leschenaultia Circle and Marginata Drive.
- 21. A Wildlife Protection Management Plan to be prepared, approved and implemented to protect the Black Cockatoo habitat from development impacts.
- 22. Provision of a POS management plan that is prepared and implemented to the satisfaction of the Shire. The Plan is to include active areas suitable for nature based play and ball sports with consideration of the Wildlife Protection Management Plan measures.
- 23. Provision of uniform fencing abutting POS/drainage areas and addressing internal/external fencing standards to the satisfaction of the Shire.

- 24. Notifications relating to agricultural emissions (eg. bird-pest deterrent noise, odours and dust) and absence of reticulated sewer provision.
- 25. Water supply arrangements to include provision for a future water service line connecting to the south of the estate area.
- 26. A Staging Plan submitted at the time of subdivision to include and address the following issues:
  - f) POS provision;
  - g) bushfire management (dual road access);
  - h) drainage and footpath provision within the Structure Plan area;
  - i) water service connections; and
  - j) protection of residents' amenity on Leschenaultia Circle and Marginata Drive by restricting construction traffic to the northern access (Road A) of the subdivision.
- 27. Implementation of the endorsed Bushfire Management Plan.
- 28. Development of habitable buildings is not permitted in areas of BAL FZ/40 on any lot, as identified in the BMP and depicted by the APZ exclusion area on the Structure Plan.