



NORTH ANKETELL

STRUCTURE PLAN AMENDMENT REPORT

Prepared for Anketell Trust

September 2019



TABLE OF AMENDMENTS

AMENDMENT No.	SUMMARY OF THE AMENDMENT	AMENDMENT TYPE	DATE APPROVED BY WAPC
1	Structure Plan modifications including: <ul style="list-style-type: none">- Lifting of the 'Investigation Area1' boundary over Lots 2 & 3 Anketell Road to provide for residential and service commercial land uses;- Minor modifications to residential density (R-coding) and road layout within predominantly Lots 2 & 3 Anketell Road.	Standard	23 April 2019
2	Structure Plan modifications including: <ul style="list-style-type: none">- Lifting of the 'Investigation Area1' boundary over Lot 4 Anketell Road to provide for residential and service commercial land uses; and- Minor modifications to residential density (R-coding) and road layout and open space within Lot 4.	Standard	10 July 2019
3	Structure Plan modifications including: <ul style="list-style-type: none">- Lifting of the 'Investigation Area1' boundary over Lot 188 Treeby & Lot 652 Anketell Road to provide for residential and service commercial land uses; and- Minor modifications to residential density (R-coding), POS design and road layout within predominantly Lot 188 Treeby & Lot 652 Anketell Road.	Standard	

TABLE OF DENSITY PLANS

DENSITY PLAN No.	AREA OF DENSITY PLAN APPLICATION	DATE APPROVED BY WAPC

DOCUMENT STATUS

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ABBREVIATIONS

ASS	Acid Sulfate Soils
AS	Australian Standard
BMP	Bushfire Management Plan
CBD	Central Business District
DFES	Department of Fire and Emergency Services
DPLH	Department of Planning, Lands and Heritage
ERIC	Eastern Residential Intensification Concept
Ha	Hectare
LDP	Local Development Plan
LWMS	Local Water Management Strategy
MRS	Metropolitan Region Scheme
MRWA	Main Roads Western Australia
OBRM	Office of Bushfire Risk Management
OMSRS	Draft Outer Metropolitan Perth & Peel Sub Regional Structure Plan
POS	Public Open Space
PTA	Public Transport Authority
RMD Codes	Residential Medium Density Codes (WAPC Bulletin 112/2016)
SPP	State Planning Policy
TPS2	City of Kwinana Town Planning Scheme No.2
UWMP	Urban Water Management Plan
vpd	Vehicles per day
WAPC	Western Australian Planning Commission



PART ONE

IMPLEMENTATION



1 Structure Plan Area

This Structure Plan shall apply to the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan Map (**Plan 1**).

2 Operation

The date the Structure Plan comes into effect is the date the Structure Plan is approved by the Western Australian Planning Commission as set out in the Structure Plan - Certification Page.

3 Staging

The development of the subject land will be implemented in stages. The staging plan is indicative as timing, location and composition of the future stages will be dependent on market demand.

4 Subdivision and Development Requirements

4.1 Land Use Permissibility

The Structure Plan Map outlines the Zones and Reserves applicable within the Structure Plan Area and these will guide future subdivision and development of the land.

Land use permissibility within the Structure Plan Area shall generally be in accordance with the corresponding Zone under the City of Kwinana Town Planning Scheme No.2 (TPS 2).

The zones in the Structure Plan will not have statutory effect as it is currently not included in TPS 2.

Pursuant to Clause 27 of Schedule 2 - Deemed Provisions for Local Planning Schemes under the Planning and Development (Local Planning Schemes) Regulations 2015:

- a) A decision-maker for an application for development approval or subdivision approval in an area that is covered by a structure plan that has been adopted by the Commission is to have due regard, but is not bound by, the structure plan when deciding the application.

4.2 Residential Density

Residential densities for the Structure Plan Area are the residential densities shown on the Structure Plan Map.

4.3 Public Open Space

Public Open Space is to be provided in accordance with the Structure Plan Map.

4.4 Limitations or Restrictions Affecting Subdivision and/or Development

Notifications on Title

The City of Kwinana shall recommend to the Western Australian Planning Commission that a condition be imposed on the grant of subdivision approval for a notification to be placed on the Certificate of Title to suitably respond to the following:

- The Bushfire Management Plan for lots with a bushfire attack level (BAL) rating of 12.5 or higher;
- Transport noise for lots that are the subject of noise levels exceeding the noise targets as per State Planning Policy 5.4 - *Road and Rail Transport Noise and Freight Considerations in Land Use Planning*.

4.5 Local Developments Plans

Prior to the granting of Development Approval, a Local Development Plan (LDP) shall be prepared and approved for lots within one or more of the following attributes:

- a) Residential lots abutting Service Commercial use;
- b) Service Commercial use (also refer to Clause 4.9);
- c) Vehicles having access from rear of the lot;
- d) Having the potential for grouped and/or multiple dwellings;
- e) Frontages of less than 12m;
- f) The subject of a notification on titles; and
- g) Having a R10 density coding.

With regard to (a) above the following key relevant considerations are to be addressed in the LDP(s):

- Access;
- Height and orientation of dwellings;
- Noise requirements under State Planning Policy 5.4- *Road and Rail Transport Noise and Freight Considerations in Land Use Planning*;
- City of Kwinana Local Planning Policy No.7 - *Uniform Fencing*; and
- City of Kwinana Local Planning Policy No.8 - *Designing Out Crime*.

With regard to (b) above the following key relevant considerations are to be addressed in the LDP(s):

- Noise - built form to shield/block vehicle noise from Anketell Road;
- Orientation - built form to orientate towards Anketell Road; and
- Positioning of service areas and access ways to minimise impacts abutting residential development such as from noise and light emissions.

A Traffic Noise Assessment (TNA) is to be prepared prior to the preparation of Local Development Plan(s).

4.6 Bushfire Management

This Structure Plan is supported by Bushfire Management Plan(s), Fire Management Plan - Anketell North Local Structure Plan (March 2015), as amended, Bushfire Management Plan Lots 2 & 3 Anketell Road (January 2017), Bushfire Management Plan Lot 4 Anketell Road, Anketell (September 2017) and Bushfire Management Plan Lot 652 Anketell Road and Lot 188 Treeby Road, Anketell (October 2017). Any land falling within 100m of a bushfire hazard identified in the BMP is designated as a Bushfire Prone Area for the purpose of the Building Code of Australia.

4.7 Management Plans

The City of Kwinana shall recommend to the Western Australian Planning Commission that a condition be imposed on the subdivision approval to respond to the following:

- The preparation of a Landscape Feature and Tree Retention Plan in accordance with the City of Kwinana Local Planning Policy No. 1 - *Landscape Feature and Tree Retention*.
- The preparation, approval and implementation of a wetland interface management plan providing for the protection of the adjoining wetland located in Bush Forever Site 470 Part C; and
- A mosquito and midge management plan.

4.8 Other Requirements

a) Development Contribution Arrangements

Under the City of Kwinana Town Planning Scheme No. 2, the following development contribution arrangements apply and/or are contemplated:

- Development Contribution Area 9 for the funding of community infrastructure; and
- Development Contribution Area 4 for 'hard' infrastructure.

b) Anketell Road Widening

A condition may be imposed by the Western Australian Planning Commission on the grant of subdivision approval for land to be set aside as a separate lot(s) pending acquisition for the necessary road widening of Anketell Road. An easement may be required over all of the lot(s) to be set aside for the benefit of the remaining lot(s) for the purpose of providing right of footway, water, sewer, drainage, gas electricity, telecommunications and other necessary service infrastructure, pending construction of the future road widening.

c) Road Intersections

The intersection of the proposed new internal north-south road and Anketell Road to be constructed left-in/left-out only, in accordance with Main Roads WA's Vehicle Access Strategy for Anketell Road.

4.9 Service Commercial Land Use

a) Consolidated Development Guide Plan

All development within the area designated as Service Commercial shall generally reflect the Service Commercial Concept Plan (Appendix 7), which shall be used to guide decision making for the subdivision and/or development.

b) Easement in Gross (Right of Carriageway)

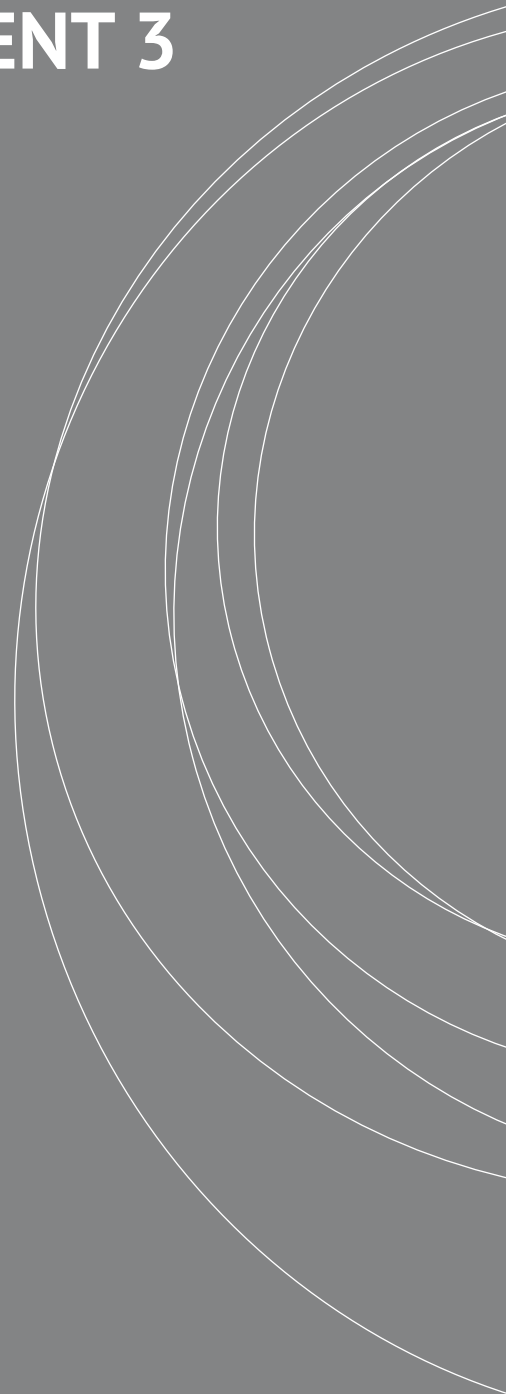
The City may require as either a condition of development approval or a recommendation to the Western Australian Planning Commission for subdivision approval, the requirement for the creation and registration on title(s) of an Easement in Gross (Right of Carriageway) over portions of land deemed necessary to facilitate a consolidated transport and pedestrian movement for the Service Commercial land.

c) Traffic and Pedestrian Management

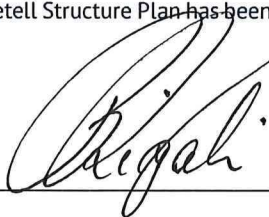
A Traffic and Pedestrian Management Plan (TPMP) is to be prepared and submitted within an Application for Development Approval for the Service Commercial land use. The TPMP will be required to demonstrate how the design of the development and its proposed access arrangements will minimise impacts on nearby residential development, including but not limited to:

- Identification of access points;
- Location of parking areas;
- Siting of loading areas;
- Management of operations to minimise adverse impacts on abutting residential development; and
- Provision for safe pedestrian/cycle connectivity between Anketell North Local Structure Plan and Wandi District Centre.

ADDENDUM 3 - **STRUCTURE PLAN AMENDMENT 3**



Amendment No 3 to the North Anketell Structure Plan has been approved by the Western Australian Planning Commission on the 4 October 2019.



Signed by an officer duly authorised by the Western Australian Planning Commission pursuant to Section 16 of the Planning and Development Act 2005.

Executive Summary

This Structure Plan Amendment has been prepared to modify the Anketell North Local Structure Plan endorsed by Western Australian Planning Commission (WAPC) on 18 December 2015.

This Structure Plan Amendment has been prepared on behalf of Anketell Trust by the following specialist consultant team:

- Creative Design + Planning – *urban design, town planning*
- A.KHosravi Eng Services – *engineering*
- Water Resources Engineering – *hydrology*
- Eco Logical – *bushfire management*
- Herring Storer Acoustics – *noise management*
- GTA Consultants – *traffic and transport analysis*

PURPOSE

The Structure Plan amendment provides an over arching planning framework to guide and facilitate the development of the subject land for urban purposes and has been prepared in accordance with the provisions under *Schedule 2 Part 4 of the Planning and Development (Local Planning Scheme) Regulations 2015*.

The proposed amendment is to allow for commercial and residential uses within the area identified as 'Investigation Area 1' on the approved Structure Plan. Through the design process for the Investigation Area, a number of small design modifications are proposed to the road network and density to provide the best planning outcomes for the subject lots.

The Structure Plan amendment has been submitted for approval by the Western Australian Planning Commission

Executive Summary Table

ITEM	DATA
Structure Plan Amendment Area	5.62ha
Area of each land use proposed (approx.):	
Residential:	1.72ha
Commercial/Mixed Use:	2.0ha
Public Open Space:	0.66ha
Anketell Road Widening:	0.34ha
Roads (internal):	0.90ha
Total estimated lot yield	76
Estimated number of dwellings	76
Estimated residential site density	~12 + dwellings/gross urban zone ¹ ~25 + dwellings/site hectare ²
Estimated population (based on 2.8 persons per dwelling)	212
Estimated commercial floor space	0.59ha
Estimated number and % of public open space given over to: Neighbourhood Parks (>3,000m ²):	13%

FOOTNOTES:

- 1 Gross Urban Zone' refers to the definition under WAPC's Directions 2031 and supporting documents.
- 2 'Residential Site Hectare' refers to the definition under Element 1 of WAPC's Liveable Neighbourhoods.

1 Planning Background

1.1 Introduction & Purpose

This report provides the background, context and justification for a proposed amendment to the Anketell North Local Structure Plan (Structure Plan). The proposed amendment seeks modifications for Lot 188 Treeby Road and Lot 652 Anketell Road, Anketell and involves an extension of the Structure Plan boundary and change to the zoning.

The purpose of this amendment is to bring forward the delivery of commercial land uses to the area and proposed a small amount of design modifications to the road network and densities to provide

1.2 Land Description

1.2.1 Location

The subject land is located south of Anketell Road, approximately 28km south of the Perth Central Business District (CBD) and 16km north east of the Rockingham Strategic Metropolitan Activity Centre (refer **Figure 1**).

Lot 188 is bound by Anketell Road to the north, Treeby Road to the east and rural uses to the south and west. The Kwinana Freeway is located less than 1 km to the west of the subject land. Lot 652 is

bound by Anketell Road to the north, Parks and Recreation to the west and rural uses to the east and south.

1.2.2 Area and Land Use

The subject land is 5.62ha and has been historically used for rural purposes.

1.2.3 Legal Description and Ownership

The subject lots are described in the table below:

Table 1: Title Details and Land Ownership

Lot	Owner	Vol/Folio	Area (ha)
	on Pty	2037/444	
188	Qumars Meshgin, Chuen Shiung Chai and Hoa Thuy Tien Nguyen	2506/479	3.61ha
		Total Area	5.62ha

Certificate of Titles are attached as **Appendix 1**.

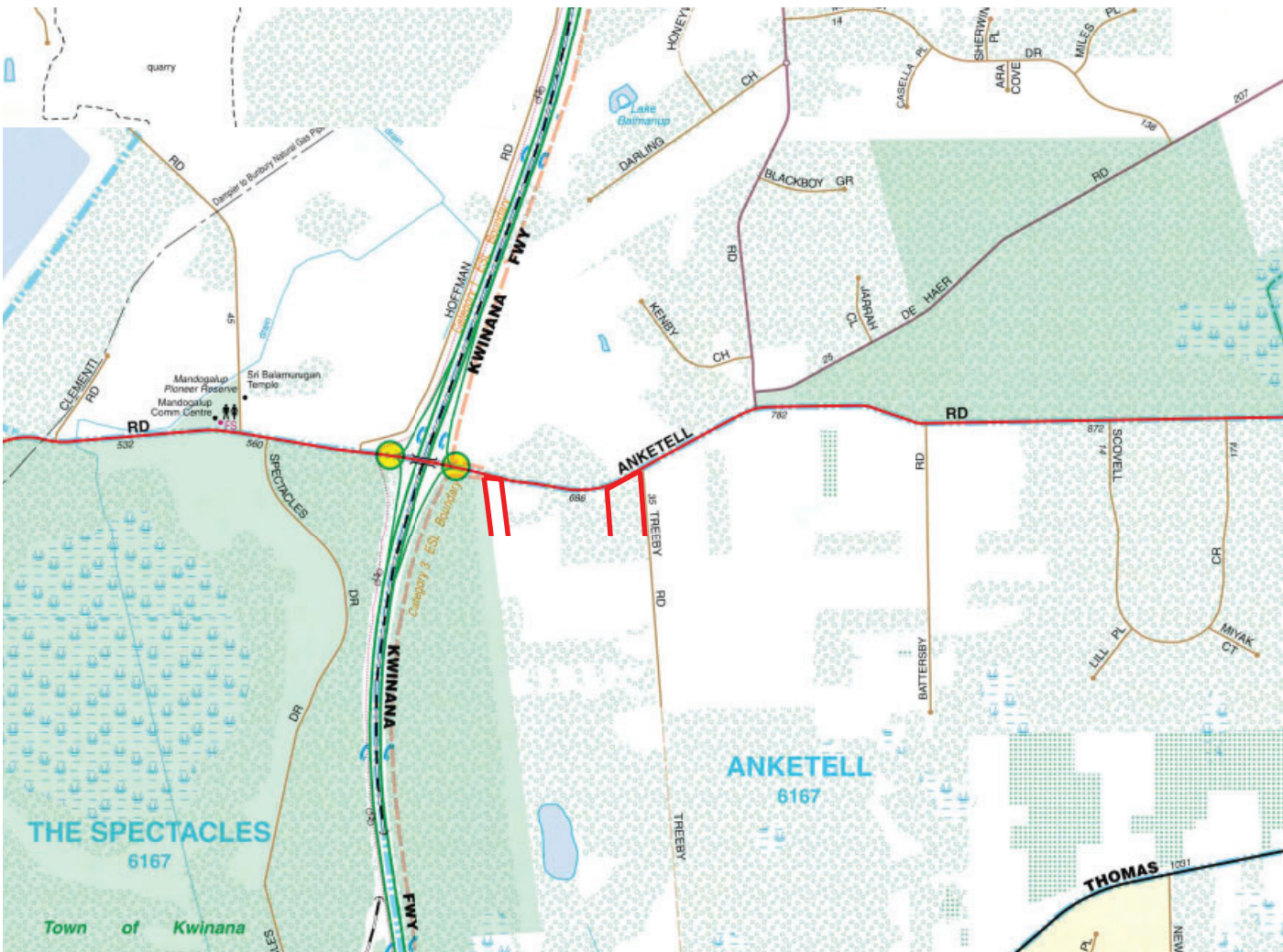


Figure 1: Location Plan

1.3 Planning Framework

1.3.1 Zoning and Reservations

1.3.1.1 METROPOLITAN REGION SCHEME

Pursuant to the Metropolitan Region Scheme (MRS), the majority of the subject land is zoned 'Urban' (Figure 2 refers). The most northern portion of the subject land is zoned 'Urban Deferred' consistent with the ultimate Anketell Road reservation required for 'Other Regional Roads' and subject to reservation by the WAPC.

1.3.1.2 CITY OF KWINANA TOWN PLANNING SCHEME NO.2

Under the City of Kwinana Town Planning Scheme No.2 (TPS2) the subject land is zoned 'Development'. The northern portion of both Lots is zoned 'Rural A' consistent with the 'Urban Deferred' zone under the MRS; this is subject to the ultimate Anketell Road reservation (Figure 3 refers).

The subject land forms part of Development Contribution Area 9 and is subject to the development contribution requirements outlined in Clause 6.16 and Schedule 5 of TPS2.

1.3.2 Regional and Sub-Regional Structure Plan

The subject land is located within the Jandakot Structure Plan area. The Jandakot Structure Plan provides a strategic direction to coordinate the development of the region and identifies the subject land for 'medium-term urban'.



Figure 2: MRS Plan

1.3.2.2 EASTERN RESIDENTIAL INTENSIFICATION CONCEPT (ERIC)

The ERIC provides strategic direction and refinement of the future urban areas identified under the Structure Plan. The ERIC identifies the subject land as 'Residential R25 and higher'. The ERIC also shows the Wandi District Centre positioned further north than the LCACS.

1.3.3 Anketell North Local Structure Plan

The subject land is encompassed by the Anketell North Local Structure Plan (Structure Plan) (Figure 4 refers).

City of Kwinana advice notes that the subject land was originally included as Commercial, however subsequently withheld from the Structure Plan by the WAPC subject to a Noise Management Plan and further detailed planning progressing for the Wandi District Centre due north.

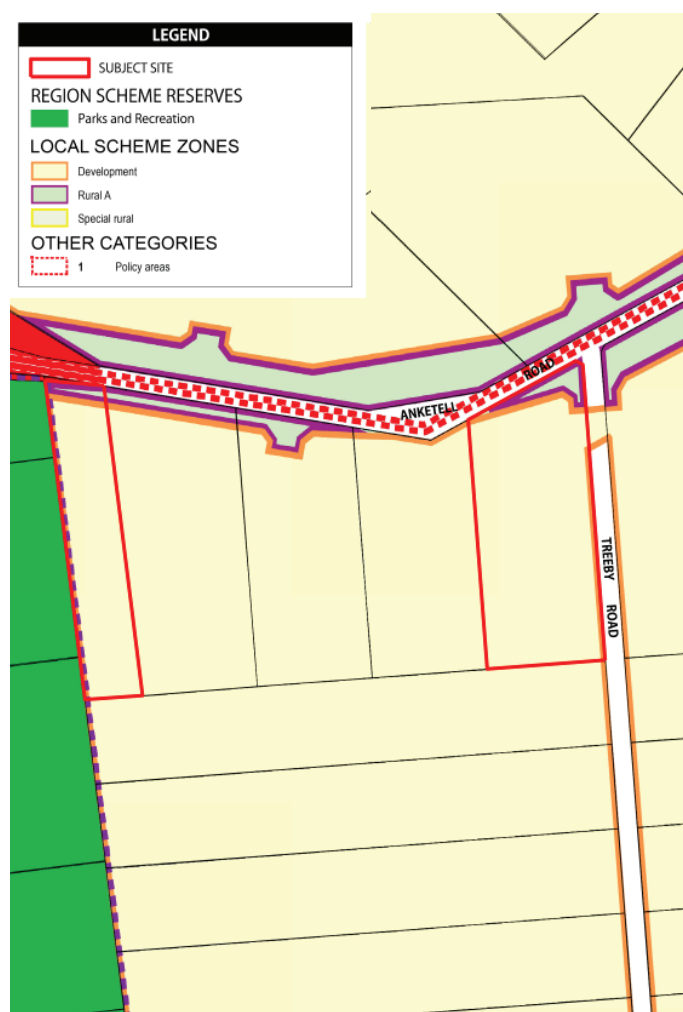


Figure 3: Town Planning Scheme



Figure 4: Approved Anketell North LSP (current Feb 2018)

1.3.4 Policies and Strategies

1.3.4.1 STATE PLANNING POLICY (SPP4.2) ACTIVITY CENTRES FOR PERTH AND PEEL

SPP4.2 provides a framework for the planning and development of new activity centres and redevelopment of existing centres in Perth and Peel.

SPP4.2 identifies the Wandi District Centre as the primary centre serving the ERIC Urban Corridor.

1.3.4.2 DRAFT STATE PLANNING POLICY (SPP5.4) ROAD AND RAIL NOISE

Under the both the current and draft State Planning Policy (SPP5.4) *Road and Rail Noise*, Anketell Road is identified as a 'Primary Freight Road'. The proposed amendment will facilitate future commercial development adjacent to Anketell Road.

A portion of the subject land was excluded from the approved Structure Plan as a result of potential noise impacts associated with Anketell Road; albeit the majority of commercial land uses do not fall within the definition of noise sensitive land uses. The proponent is not seeking to develop the subject land for any uses which are classified as noise sensitive and it's inclusion now is supported by a noise management plan.

1.3.4.3 CITY OF KWINANA DRAFT LOCAL PLANNING STRATEGY (LPS)

The draft LPS identifies the subject land as 'Future Residential Areas'. The land to the north of Anketell Road is identified as the future Wandi District Activity Centre.

1.3.4.4 CITY OF KWINANA LOCAL COMMERCIAL AND ACTIVITY CENTRES STRATEGY (LCACS)

The LCACS provides the hierarchy of activity centres for the City of Kwinana based on comprehensive research and analysis. The Strategy Map identifies two (2) future activity centres in close proximity to the subject land; being the Wandi District Activity Centre and the Anketell Local Centre.

The future Wandi District Activity Centre is planned directly north of Anketell road. It is not expected to commence development until 2021 and is forecast to ultimately deliver between 16,000m² and 20,000m² Shop/Retail Nett Lettable Area (NLA).

A potential Local Centre is located to the south of the subject land (Anketell Local centre). The Anketell Local Centre will deliver a maximum of 800m² NLA.

2 Site conditions and Constraints

2.1 Environmental Assessment

An Environmental Assessment was undertaken for the original approved Structure Plan, this inclusive of the proposed amendment area.

The Environmental Assessment indicated the following relative to the subject land within the Structure Plan amendment area:

- The predominant soil type within the Structure Plan amendment area is Spearwood S2a Phase (211Sp_S2a) which is suitable for urban development;
- The mapping indicates that the subject land has no known risk of ASS occurring;
- There are no geomorphic wetlands are identified as occurring within the subject land;
- There are no hydrological (surface water or groundwater) constraints to urban development of the subject land.
- There is no presence of Protected (Declared Rare and Priority) Flora or Threatened Ecological Communities;
- The majority of the Structure Plan area was historically cleared for semi-rural land uses. The remaining predominant vegetation complex surveyed is (Hh) *Low Forest A of Banksia attenuate, Banksia menziesii and Allocasuarina fraseriana over Open Scrub of Kunzea glabrescens over Heath B dominated by Hibbertia hypericoides* in grey sand. The condition of the vegetation was classified as 'Degraded' to 'Completely Degraded'.
- There are no Bush Forever sites.
- There are no known Aboriginal or Other Heritage Sites on or near the subject land.
- There are no known contaminated sites identified on the subject land.

2.2 Movement Network

A technical note has been prepared by GTA Consultants to assess the impact of the proposed Structure Plan amendment to allow for commercial and residential uses within Lot 188 Treeby Road and Lot 652 Anketell Road, Anketell (**Appendix 2** refers). The key findings of the existing movement network are as follows:

- A new left in/left out (LILO) is to be provided from Anketell Road, servicing the subject amendment area in the north-west portion of the Structure Plan area (Lot 652), approximately 195m west of the originally planned and approved LILO.
- The proposed commercial development within Lot 652 is expected to generate 400 trips daily or 80 trips in the peak hour. This is considered marginal and does not change the outcomes of the previously recommended road hierarchy or intersections forming the concurrent Lot 2 and 3 Structure Plan Amendment amendment.
- The proposed commercial and mixed-use development within Lot 188 is expected to generate some 1,685 trips daily or 119 trips in the peak hour. This estimate, as distributed per the trip assignments in the approved Structure Plan, has been determined not to change the outcomes of the previously recommended road hierarchy or intersection forms.

2.2.1 Anketell Road

Anketell Road is classified a '*District Distributor A*' under the Main Roads WA Functional Road Hierarchy and currently is constructed as a two-lane undivided road of a rural standard. Anketell Road remains an '*Integrator A*', consistent with previous studies whereby it is expected to carry between 12,000 and 20,000 vehicles per day (vpd). The intersection of Anketell Road and Treeby Road is proposed as a traffic signal controlled intersection.

2.2.2 Treeby Road

The projected traffic volume for Treeby Road is estimated to marginally increase from 8000vpd to 9400vpd as a result of the proposed uses within the Structure Plan amendment area. However, Treeby Road will remain an '*Integrator B*' consistent with the previous road hierarchy classification.

2.2.3 Existing Pedestrian and Cycle Networks

Anketell Road is identified as a 'Good Road Riding Environment' according to the Department of Transport's Perth Bike Map series. Anketell Road also provides a connection to the 2.5m wide Principal Shared Path on the Western side of the Kwinana Freeway that functions as a major north south connector for modes of active transport.

2.2.4 Existing Public Transport Network

At present, the closest bus route to the Structure Plan amendment area is Route 257, 2 kilometres to the north-east and servicing new development north of Anketell. It is proposed that the Public Transport Authority (PTA) plans to extend Route 257 south to service the Structure Plan area, thus connecting patrons to Aubin Grove and Kwinana Stations.

3 Land use and Subdivision Requirements

3.1 Design Philosophy

The Structure Plan amendment proposes a mix of commercial and residential land uses within the amendment area that details the expansion of the Structure Plan boundary. Design has taken consideration of the accessibility and functionality of the amendment area to ensure that it appropriately connects with the remainder of the Structure Plan area. Opportunities to include commercial land uses directly adjacent to Anketell Road have been maximised in an effort to mitigate potential noise management issues associated with Anketell Road.

The design philosophy has been predicted upon the following objectives:

- provision of a range of lot sizes according with the density targets of Directions 2031 to encourage diversity of lot product, built form and affordability measures;
- to provide suitable interface to Anketell Road to address noise mitigation;
- to provide a suitable interface to external and internal boundaries;
- to deliver a safe pedestrian and cyclist environment within the immediate Structure Plan area and ensure external connectivity to strategic community nodes and major public transport stations; and
- to implement sound engineering and drainage solutions for the Structure Plan area.

3.2 External Design Influences

3.2.1 Bushfire Management

A Bushfire Management Plan has been prepared by Eco Logical Australia to support this Structure Plan Amendment (**Appendix 3** refers).

Both Lot 652 and Lot 188 are within a designated bushfire prone area as per the *Western Australia State Map of Bush Fire Prone Areas (DFES 2017)*, this triggers bushfire planning requirements under State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP 3.7 [WAPC]; 2015).

Bushfire fuel types (i.e. vegetation class), and bushfire hazards were assessed in accordance with methodology contained within the *Guidelines for Planning in Bushfire Prone Areas v 1.2 (WAPC 2017)*. The on-site vegetation extent is proposed to be cleared to enable development of a significant urban built footprint amongst areas of landscaped/managed POS and various easements. Therefore, for the purposes of strategic level planning, it is not considered that the current on-site vegetation extent to be a bushfire hazard issue post-development, since these hazards can be managed through a staged clearing process, adequate separation of future built assets from classified vegetation, and ongoing fuel management that can be undertaken in and around individual development stages.

The planning proposal was assessed against bushfire protection criteria contained within the Guidelines (Location, Siting and Design of Development, Vehicular Access, and Water Supply). All criteria are able to be met using acceptable solutions outlined in the Guidelines.

It is considered that the bushfire hazards within and adjacent to Lot 652 and Lot 188 and the associated bushfire risk is readily manageable through standard management responses outlined in the Guidelines and AS3959-2009. Implementation of the proposed management measures will enable Lot 652 and Lot 188 to be developed with manageable level of bushfire risk whilst maintaining full compliance with the Guidelines and AS3959-2009. As such, the proposed development is consistent with the aim and objectives of SPP 3.7 and associated guidelines and is recommended for approval.

3.2.2 Noise Management

An Acoustic Assessment has been prepared by Herring Storer to identify the level of noise that would be received at the proposed residential development within the Structure Plan amendment area (**Appendix 4** refers). A summary of the key findings is outlined within the acoustic assessment is conveyed below.

Anketell Road is likely to be undergo a major upgrade and re-alignment in the future, which would affect noise levels associated with the adjacent Structure Plan area. Therefore, the acoustic assessment is based on forecasted traffic volume and noise levels associated with the future road alignment.

SPP 5.4 *Road and Rail Transport Noise and Freight Considerations in Land Use Planning* outlines that where a major road project is to be constructed in the vicinity of a future noise sensitive land use, the infrastructure provider and developer are both responsible for ensuring that the noise criteria objectives are achieved.

SPP 5.4 outlines appropriate noise criteria for noise-sensitive development that can be used to assess if the development is compliant. The acoustic assessment is guided by noise criteria contained within SPP 5.4 and the outcomes indicate that without any noise amelioration measures, noise received at residential lots in the future would exceed the “Noise Target” as outlined within SPP 5.4.

The acoustic assessment indicates that the commercial land uses adjacent to Anketell Road would provide a significant barrier to the residential lots located to the rear. Despite this, in some locations noise received at residential lots does exceed the “Target” and therefore these lots would require further noise amelioration methods, which would potentially include Noise barriers and “Quiet House” design; this addressed in detail as part of the subdivision phase.

3.3 Land Composition

The subject land will be predominantly developed for ‘Residential’ purposes and supported by the ‘Commercial’ land uses fronting Anketell Road.

The land use composition ‘Urban’ area includes as follows:

Table 2: Land Composition

Land Uses	Area (Ha)	Percentage
Residential	1.72	30.70%
Commercial	1.67	29.72%
Mixed Use	0.33	5.86%
Public Open Space	0.66	11.72%
Anketell Road Widening	0.34	6.02%
Road Reserves	0.90	15.98%
Total	5.62ha	100%

3.4 Dwelling Forecasts

3.4.1 Directions 2031

The subject land comprises 5.62ha of which majority of the land area is zoned 'Urban'. The exception being the northern portion zoned 'Urban Deferred' under the MRS, this is subject to the ultimate Anketell Road reservation required for 'Other Regional Roads' by the WAPC. With the exclusion of the 'Urban Deferred' portion, the subject land has a gross urban zone of 5.28ha. Based on the dwelling projections of Directions 2031 and accompanying Outer Metropolitan Perth and Peel Sub-Regional Strategy (OMSRS), it is projected that the subject land will generate the following dwelling yields:

Table 3: Directions 2031 Dwelling Targets

Directions 2031 Scenario	Projected Dwellings
'Connected City' @ 15 dwellings per gross urban zone	79 dwellings
'Business as usual' @ 10 dwellings per gross urban zone	52 dwellings

Preliminary subdivision concept plans and yield projections prepared over the subject land estimate approximately ~77 dwellings will be accommodated based on lot averages and development potential (refer **Plans 2 & 3**).

The dwelling yield projections fall marginally short of the 15 dwellings per gross urban zone target of Directions 2031. The reason for this shortfall is the allocation of 1.67ha of commercial uses and 0.66ha of POS which exceeds the minimum 10% under WAPC's Liveable Neighbourhoods (refer section 3.6) within the subject land. The subject land will potentially accommodate a population in the order of 212+ people, calculated at a rate of 2.8 persons per household.

The dwelling yield projections are subject to the final design for respective subdivision stages, including review of detailed drainage and environmental constraints. Preferred lot mix and market demand at the time of land release will also influence final dwelling yields.

3.4.2 Liveable Neighbourhoods Forecasts

Based on the *Liveable Neighbourhoods* 'Site Hectare' definition the 'developable area' of the subject land equates to 2.05ha. As such the overall *Liveable Neighbourhoods* density for the subject land will be in the order of 77 dwellings which equals 37 dwellings per site hectare.

The projected densities will fulfil the Liveable Neighbourhoods target of an average of 22 dwellings per site hectare for the overall development.

The subject land has been assigned a base coding of 'Residential R40', with a portion of the subject land allocated 'Residential R30'.

3.5 Local Development Plans

Local Development Plans are to be prepared for the Structure Plan area pursuant to the WAPC's *Local Development Plan Framework* and Schedule 2, 'Deemed Provisions for Local Planning Schemes' of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

3.5.1 Prescribed Requirements

Local Development Plans are to be prepared and implemented for lots comprising one or more of the following site attributes:

- Lots affected by noise which exceeds the noise target as defined by State Planning Policy 5.4 in relation to Kwinana Freeway and Anketell Road;
- Lots within a 100m catchment of 'Classified Vegetation' (Bushfire Hazard Zone) thus deemed at risk from bushfire pursuant to Australian Standards;
- Commercial and/or Mixed-Use Lots;
- Lots with rear laneway access;
- Lots with a common boundary to an area of Public Open Space
- Lots designated as grouped or multiple dwelling sites; and
- Lots with a frontage of less than 12m.



Plan 2: Subdivision Concept Plan - Lot 188



Plan 3: Subdivision Concept Plan - Lot 652

3.6 Public Open Space

The provision of Minimum 10% POS is provided in accordance with the WAPC's *Liveable Neighbourhoods*. All figures are rounded up for the purpose of calculations and will be reviewed in detail at the Subdivision Design phase.

The POS proposed within the subject land is designed to connect with other POS areas planned throughout the approved Structure Plan. The POS will be developed and landscaped to a high standard by the proponent for the benefit of future residents.

The POS Schedule for the entire Structure Plan Area is contained below:

Anketell North Local Structure Plan - Amended Public Open Space Schedule - Amendment 3			
10.09.2019			
Site Area (Local Structure Plan Boundary and 150m Exclusion Area)			98.40
Less			
Western Power Easement	4.31		
Net Site Area			94.09
Deductions			
Service Commercial	4.17		
Drainage (1:1yr) * See below	1.20		
Primary School	4.00		
Total		9.37	
Gross Subdivisible Area			84.72
POS @ 10%			8.47
Public Open Space Contribution			
May Comprise:			
Min 80% unrestricted POS		6.78	
Min 20% restricted use POS		1.69	
Total Required POS			8.47
POS Reference Number (area within urban zone/LSP boundary only)	1:1yr Drainage (m2) Deduction from Net	Unrestricted Urban POS sites (m2)	1:5yr Restricted POS (m2)
1 - Neighbourhood Park	2,085	2,375	352
2 - Neighbourhood Park	540	1,330	934
3 - Neighbourhood Park	2,000	3,507	265
4 - Neighbourhood Park	850	3,838	749
5 - Local Park	350	1,681	55
6 - Anketell Playing Fields	-	49,781	-
7 - Neighbourhood Park	1,800	3,375	74
8 - Neighbourhood Park	1,500	10,634	530
9 - Local Park	365	1,371	248
10 - Local Park	443	2,336	1,106
11 - Neighbourhood Park	-	4,227	-
12 - Neighbourhood Park	2,200	3,815	1,180
Community Site		16,720	
Total (m2)	12,133	104,990	5,493
(ha)	1.21	10.50	0.55
Percentage of gross subdivisible area		1.4%	12.4%
			0.6%

Lot No	Address	Total Site Area (m2)	Deductions (m2)						Gross Subdivisible Area (m2)	Percentage of Total Gross Subdivisible Area	
			Service Commercial	Primary School	Water Protection	Western Power Easement	Anketell Road Widening	Subtotal			
652	656 Anketell Road	20,100	6,406					950	7,356	12,744	1.5%
2	664 Anketell Road	39,836	10,141					2,346	12,487	27,349	3.3%
3	676 Anketell Road	33,614	9,924					2,303	12,227	21,387	2.6%
4	686 Anketell Road	30,630	11,493					108	11,601	19,029	2.3%
7	734 Anketell Road	59,641				15,824		6,891	22,715	36,926	4.4%
89	748 Anketell Road	68,384			6,085			4,782	10,867	57,517	6.9%
90	758 Anketell Road	84,623			59,923			3,505	63,428	21,195	2.6%

188	28 Treeby Road	36,064	10,277			2,431	12,708	23,356	2.8%
189	19 Anketell Road	50,649			892	6,412	7,304	43,345	5.2%
36	35 Treeby Road	50,687		16,693	3,952		20,645	30,042	3.6%
30	36 Treeby Road	48,385					-	48,385	5.8%
31	48 Treeby Road	48,006					-	48,006	5.8%
37	49 Treeby Road	50,181		15,926	4,969		20,895	29,286	3.5%
38	55 Treeby Road	49,675		14,961	4,437		19,398	30,277	3.6%
32	56 Treeby Road	47,626					-	47,626	5.7%
39	63 Treeby Road	49,169		12,546	4,197		16,743	32,426	3.9%
33	64 Treeby Road	47,222					-	47,222	5.7%
40	73 Treeby Road	48,663		16,027	4,613		20,640	28,023	3.4%
34	74 Treeby Road	46,868	5,595				5,595	41,273	5.0%
35	82 Treeby Road	46,311	18,337				18,337	27,974	3.4%
41	83 Treeby Road	48,100		21,184	4,205		25,389	22,711	2.7%
100	96 Treeby Road	102,000	16,068				16,068	85,932	10.3%
13	140 Treeby Road	48,760						48,760	5.9%
TOTAL		1,155,194	48,241	40,000	163,345	43,089	29,728	324,403	100.0%

3.7 Stormwater Management

Lot 188 and Lot 652 Anketell Road were encompassed by the approved Local Water Management Strategy (LWMS). A Storm Water Management Plan was prepared by Water Resources Engineering in support of the proposed Structure Plan amendment (refer, **Appendix 5**). This report has been prepared to detail stormwater management in response to the changes made to the Structure Plan with key findings outlined below.

The report addresses LWMS catchments 8.1.1, 8.1.2 and 8.1.3 as the subject land is contained to these respective catchment zones. The stormwater management for the subject land remains practically unchanged from the approved LWMS, with the exception being the location and size of the basin within Catchment 8.1.1. The basin 8.1.1b has been moved further south from the approved LWMS.

The proposed stormwater management system is capable of maintaining the 1 in 100-year Average Recurrence Interval (ARI) event runoff on site, including infiltration basin. Soakwells are proposed to retain and infiltrate up to 1 in 1-year ARA event runoff from the lots on the subject land.

3.8 Infrastructure Coordination, Servicing and Staging

An engineering servicing assessment was conducted by A. Khosravi Engineering Services (refer **Appendix 6**).

3.8.1 Earthworks

Earthworks will be limited to those necessary for the major distributor roads and remoulding of various areas within Lot 652 to fulfil drainage requirements along the southern boundary. Earthworking is proposed to be minimal so that the natural topography can be retained where possible.

A pre-development site visit has revealed that site classification across the subject land should be "Class A".

3.8.2 Roadworks

All subdivision roads will be constructed to the City's standard. and generally designed as follows (unless otherwise nominated by a traffic engineer):

- Neighbourhood Roads: 20m wide road reservation, 3m wide carriageway lanes and on-road cycling accommodated within the 6m wide pavement.
- Access Roads: 14.2 – 15.4m wide road reservation with 6m wide carriageways.

Pavement widths will be in accordance with *Liveable Neighbourhoods* criteria and dual use paths and footpaths will also be provided in accordance with the Department of Planning and Infrastructures requirements.

3.8.3 Power

All electrical power reticulation required to service the subject land will be underground in accordance with WAPC policy.

An existing high and low voltage aerial network extends along Anketell Road and Treeby Road. The introduction of transformers and the associated upgrade of arials where deemed necessary the subject land could be serviced with underground power.

3.8.4 Water Supply

All lots created can be serviced with the construction of proposed water reticulation mains varying in size from 250mm, 200mm and 150mm diameter.

3.8.5 Wastewater Disposal

Wastewater generated from the subject land will gravitate through proposed future gravity pipe network along Treeby Road and Anketell Road into the existing Thomson's Lake Pumping Station M-174.

3.8.6 Telecommunication

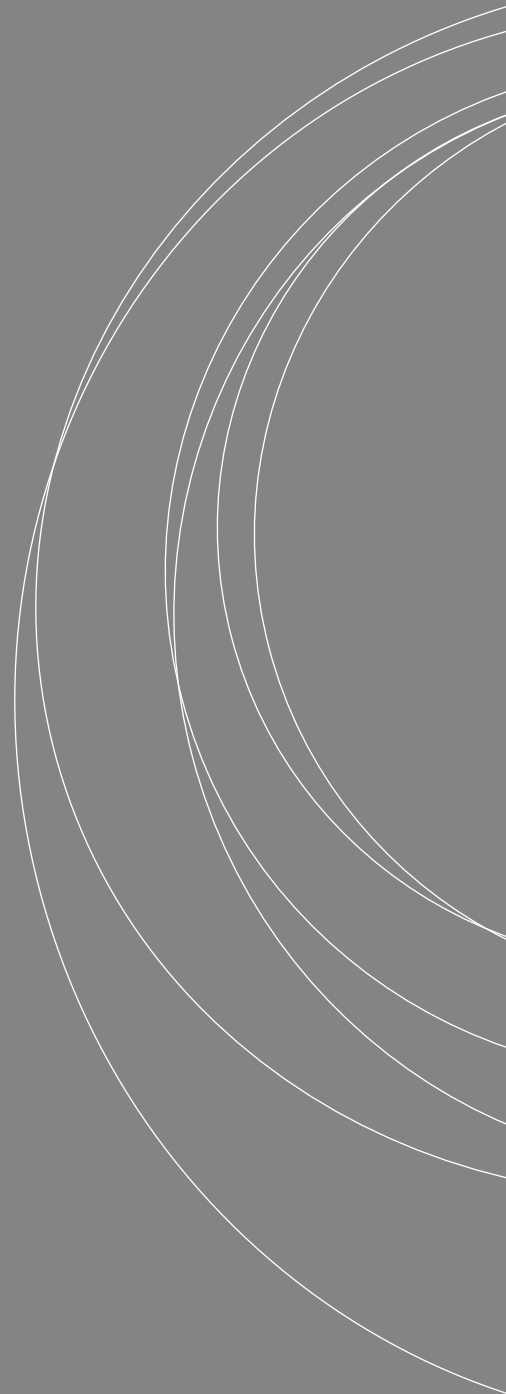
The existing telecommunication infrastructure within Anketell Road and Treeby Road has the capacity to be extended to service the subject land.

3.8.7 Gas

The proposed 160HP, ATCO gas main infrastructure within Anketell Road can be extended to service the subject land.

Appendix 1

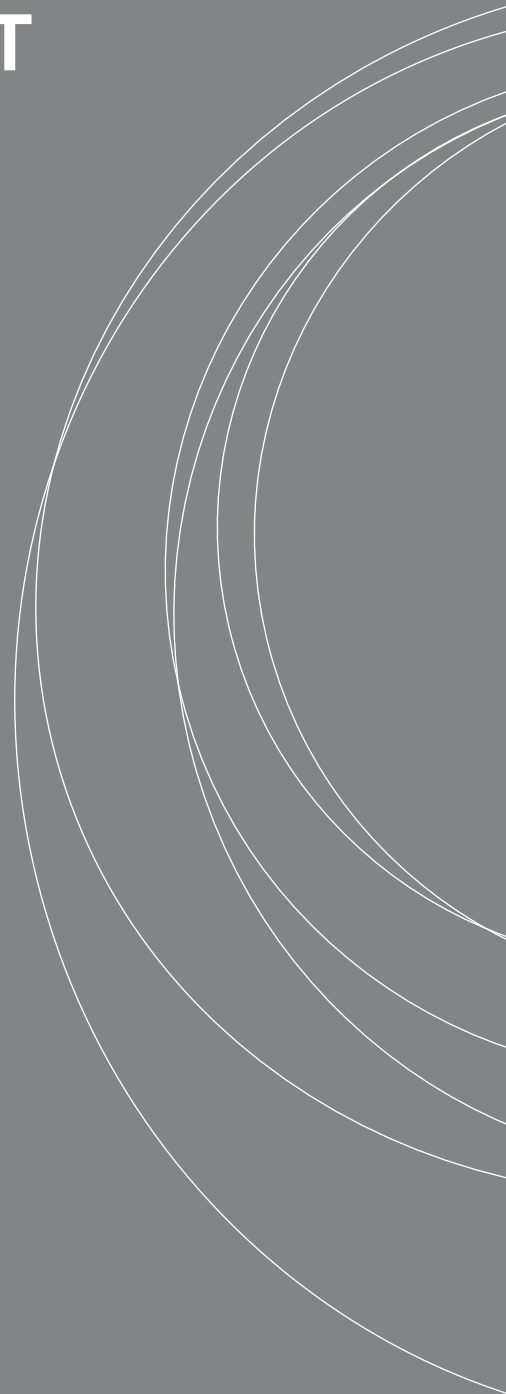
CERTIFICATES OF TITLE



Appendix 2

TRANSPORT ASSESSMENT TECHNICAL NOTE

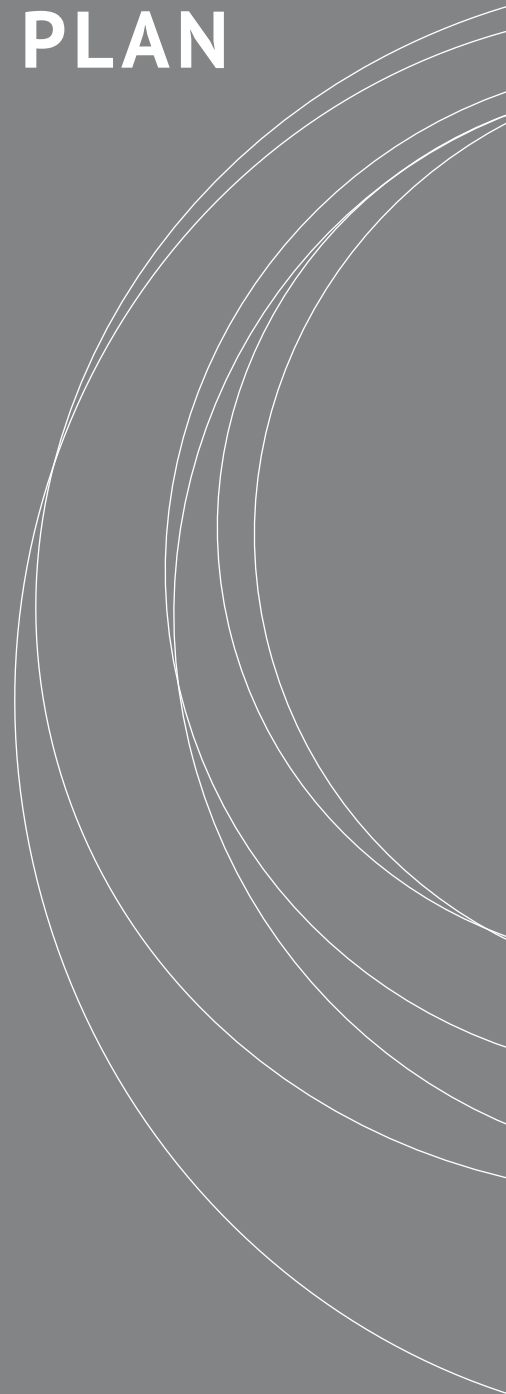
(GTA CONSULTANTS)



Appendix 3

BUSHFIRE MANAGEMENT PLAN

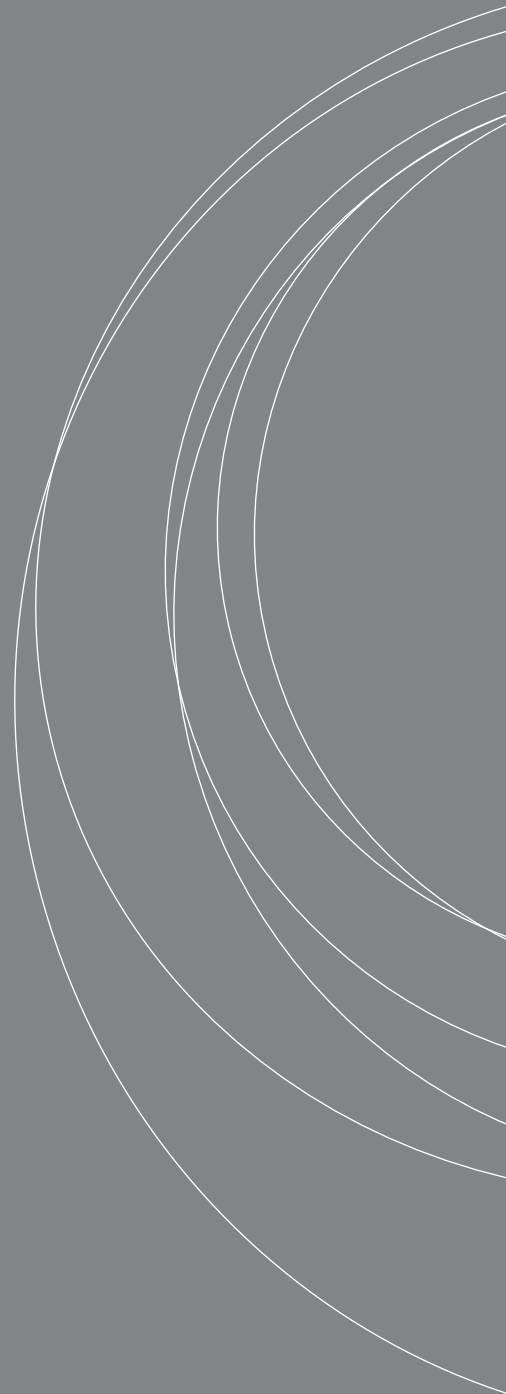
(ECO LOGICAL AUSTRALIA)



Appendix 4

ACOUSTIC ASSESSMENT

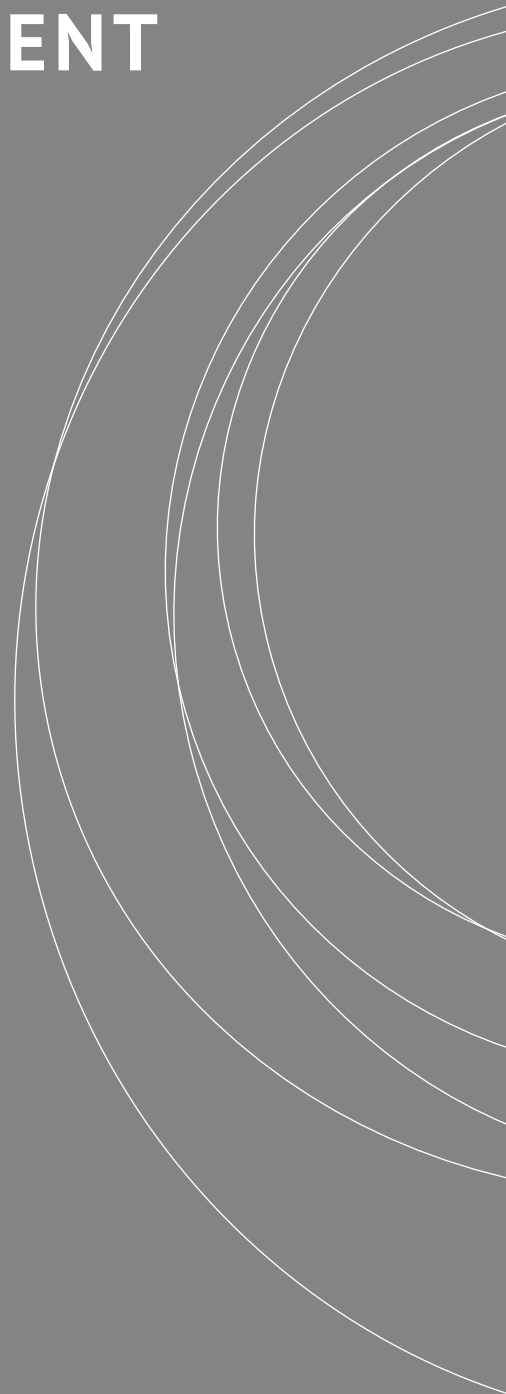
(HERRING STORER ACOUSTICS)



Appendix 5

STORMWATER MANAGEMENT REPORT

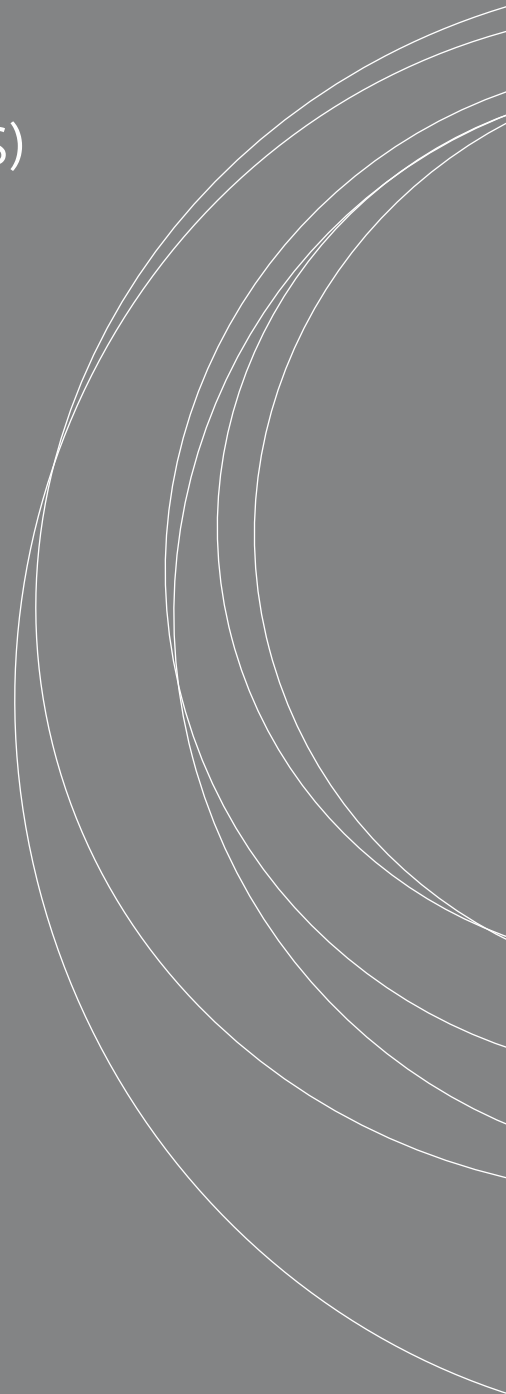
(WATER RESOURCES ENGINEERING)



Appendix 6

SERVICING REPORT

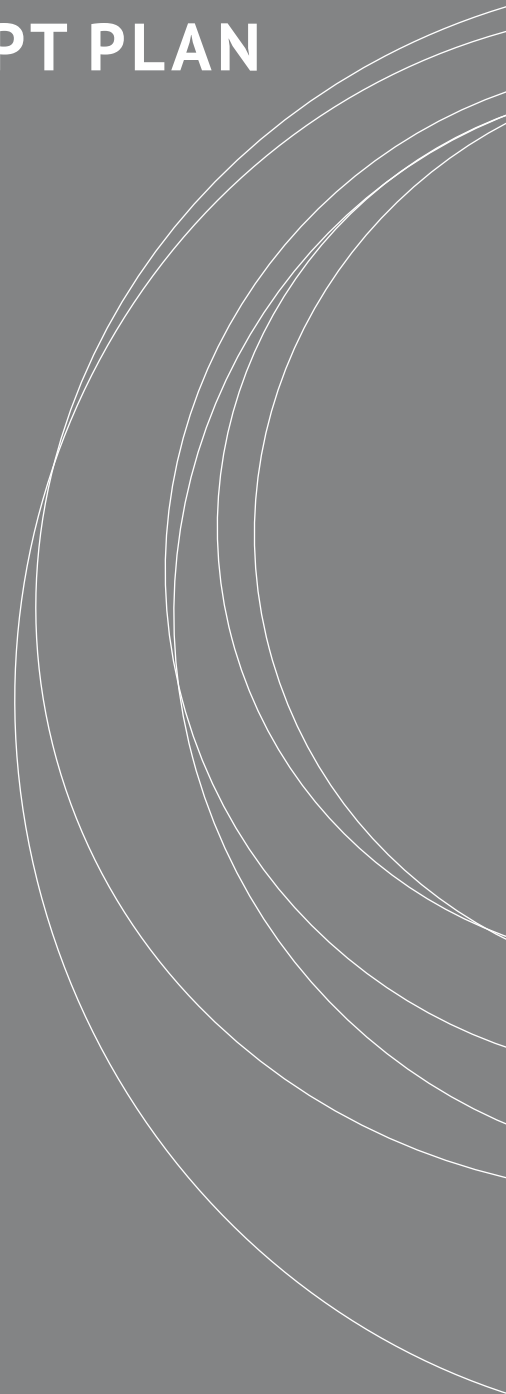
(A. KHOSRAVI ENGINEERING SERVICES)



Appendix 7

SERVICE COMMERCIAL CONCEPT PLAN

(VERIS)





SERVICE COMMERCIAL CONCEPT PLAN
LOTS 2, 3, , 188 & 652 ANKETELL ROAD
ANKETELL












PLAN 4

DATE SUBMITTED: 27/05/2018
SUBMITTED BY: RM
RECEIVED BY: JP
FILE: 100077 Submission List 2.3 Revised 2007-10.xls
V DA TAP: AND
W DA TAP: MCM: 003

Plan No.: 620932-19
Revision: REV.5
Scale: 1:1500@A3



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All drawings are subject to survey.

- LEGEND**
- | | | | | | |
|---|---|---|--|---|--|
|  | Landscaping (indicative only) |  | Service Commercial
Practical Boundary |  | Primary orientation
of development |
|  | Service Commercial
Working envelope
(indicative only) |  | Original lot boundary |  | Design details for access points
to be undertaken at development
approval stage. |
|  | Residential (Rpg) of Vaj
Exemption (indicative only) |  | Full Movement |  | No Vehicular Access |
|  | Parking & Access
(indicative only) |  | Restricted Movement | | |

PLAN NOTES

- Right-of-Carriageway (Easement in Gross) to be designed to be capable of accommodating the anticipated vehicles associated with Service Commercial land use and development (i.e. service vehicles).
- Landscaping, Parking & Access is subject to the requirements of the City of Kwinana Town Planning Scheme No. 2 (TPS 2).
- In general the areas shown for Right-of-Carriageway (Easement in Gross) is to be delivered as a condition of subdivision and/or development approval.



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