

PART TWO (EXPLANATORY SECTION)

1.0 INTRODUCTION

1.1 Purpose

This report provides the planning rationale for the Structure Plan (SP) prepared for the various landholdings being Lots 5 – 8 Kerosene Lane, Baldivis (herein referred as the “SP area”). **Figure 1** shows the location of the SP area in the context of the locality of Baldivis and proximity to Rockingham and the Kwinana Freeway. An SP is generally required to be prepared and approved prior to subdivision and development of the land in a ‘Development’ zone under TPS 2 and in accordance with the *Planning & Development (Local Planning Schemes) Regulations 2015*.

The SP has been prepared taking into consideration the relevant planning framework and structure planning taking place to the east and south of the SP area. The proposed SP will integrate with the Structure Planning that has already taken place within the DSP area. This will be discussed in further detail in the report.

2.0 LAND DESCRIPTION

2.1 *Location*

The land the subject of this Structure Plan (SP) comprises (4) lots located approximately 10 kilometres east of Rockingham and approximately 42 kilometres south-west of Perth Central Business District. The SP area is within the Perth Metropolitan South-West Corridor and is situated within the municipality of the City of Rockingham and the locality of Baldivis.

2.2 *Land ownership*

The SP area contains (4) land parcels (refer to Table 1) with an approximate area of 8.11 hectares in private ownership. **Figure 2** shows the boundaries of the lots that form the SP area and neighbouring context.

Table 1. Land description and area of lots comprising subject site

Lot	Plan/Diagram	Volume	Folio
5	31197	15	95A
6	31197	308	79A
7	31197	1895	381
8	31197	1907	259

2.3 *Existing Land Use*

The following table provides a brief description of the existing land use for each lot within the SP area. The aerial image provided in Figure 2 shows the subject site and existing development. The proposed SP requires the demolition and removal of existing dwellings and outbuildings to facilitate subdivision for urban development.

Table 2. Existing development within SP area

Lot	Existing Development
5	Existing dwelling, two outbuilding (sheds), parkland cleared in front portion with existing trees (approximately 70% foliage cover) and some understorey grass/tall shrubs in rear area.
6	Parkland cleared in front portion with existing trees (approximately 70% foliage cover) and some understorey grass/tall shrubs in rear area.
7	Existing dwelling and two outbuildings (sheds), parkland cleared for most of lot with existing trees (approximately 30% foliage cover over site) and some scattered understorey grass/tall shrubs throughout.
8	Paddocks and parkland cleared with existing trees (approximately 25% scattered foliage cover) and some scattered understorey grass/tall shrubs.

2.4 Surrounding Context

The SP area is within the locality of Baldivis. **Figure 3** provides an overview of the SP in relation to surrounding development. To the north is remnant vegetation contained in Reserve 22429 on the opposite side of Kerosene Lane. This land is unlikely to be developed and has been reserved as 'Parks and Recreation' under the Metropolitan Region Scheme and identified as Bush Forever Site 356.

To the east is Lot 299, which was historically used as a market garden, and which is currently being urbanised as part of the new *Paradiso Estate*. Approximately 300m to the east of Lot 5 is a newly planned Neighbourhood Commercial Centre, which will include a supermarket (Spudshed), café, offices and shops. Within approximately 6 metres of the eastern boundary of Lot 5 is the Parmelia Gas Pipeline, which is a high pressure ethane gas trunk pipeline operated by APA Group. The 12m wide gas pipeline easement corridor is located wholly within the neighbouring Lot 299.

To the west and south, the mostly cleared semi-rural lots (Lot 9 & Lot 1) are proposed to be developed for urban development and is currently undergoing structure planning in consultation with the Proponent. Further to the south is the newly developed (and developing) *Tuart Lakes Lifestyle Village*.

3.0 PLANNING FRAMEWORK

STATE & REGIONAL PLANNING

3.1 *Draft South Metropolitan Peel Sub-Regional Planning Framework*

The Draft South Metropolitan Peel Sub-Regional Planning Framework (SMPSRPF) is an overarching strategic planning instrument that broadly sets out the future settlement pattern for Perth & Peel regions for the next 35 – 40 years to accommodate an expected population of 3.5 million people. The SMPSRPF compliments Directions 2031 by providing four draft sub-regional planning frameworks. The sub-regional frameworks for each sector of the Perth and Peel regions clearly identifies future land uses through urban consolidation, integrated infrastructure and development, co-location of services and the strategic location of employment opportunities.

Under the South Metropolitan Peel Sub-Regional Planning Framework the SP area is identified as 'Urban' with anticipated urban staging within 'Short Term (2015 – 2021)'. The proposed Structure Plan is consistent with the draft SMPSRPF.

3.2 *Directions 2031*

Directions 2031 establishes the vision for the future growth of Perth and Peel regions. It provides a framework in which population growth is to be accommodated. Directions 2031 seeks a 50% increase in the current average residential density of 10 dwellings per gross urban zoned hectare; and has set a target of 15 dwellings per gross urban zoned hectare of land in new development areas. This proposed Structure Plan achieves the targets set by Directions 2031 and this will be discussed further in this report.

3.3 *Metropolitan Region Scheme*

The SP area is zoned 'Urban' under the Metropolitan Region Scheme (MRS). The land directly neighbouring the SP area to the south, west and east is also zoned 'Urban' under the MRS. The bushland to the north on the opposite side of Kerosene Lane is reserved as 'Parks and Recreation'.

3.4 *Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy*

The Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy identifies the SP area as part of the “BA1” precinct with an estimated potential for future 3900+ dwellings. The SP area will thus contribute to the overall ‘BA1’ expected dwelling yield in the metropolitan urban expansion strategy. The proposed Structure Plan meets the target density of 15 dwellings per hectare, providing for an estimated 136 dwellings.

3.5 *Liveable Neighbourhoods*

Liveable Neighbourhoods (LN) has been prepared to guide the sustainable development of communities. It addresses both strategic and operational aspects of structure planning and subdivision for both ‘greenfield’ and urban infill sites.

The SP has been designed in accordance with the principles of Liveable Neighbourhoods, in particular, the layout of roads and POS. Consistent with LN, the SP provides a high level of connectivity with good external linkages to cycle, pedestrian and proposed future public transport networks (i.e. Kerosene Lane bus route). The road design in the SP is legible and reduces car travel distances by creating alternative routes. These aspects are further addressed in the report when referring to the indicative Subdivision Concept Plan (**Plan 2**) for the SP area.

LN encourages walkable access to activity nodes and POS. Within the SP, all lots are within 400 metres walking distance from POS areas. This provides residents in the SP with opportunities for active lifestyle and recreation within 5 minutes walking distance from residences.

Consistent with LN, it is important for the SP design to respond to site characteristics and site context. The SP design has taken into consideration the natural topography, surrounding land uses, solar orientation and existing developments. Proposed lots can achieve an E-W or N-S orientation, which provides good opportunity for solar orientation for dwelling design and outdoor living areas. East – west orientated lots are shown in the Subdivision Concept Plan to have lot frontages generally 12.5m – 13.0m, which provides opportunity for dwellings to setback from northern boundary to allow opportunities for natural light and solar access.

Within the SP, lots that face parkland increase opportunity for passive surveillance and interaction with public spaces. Lot shape and proportion of width to depth is considered important and the lots in the SP have been designed to be rectangular in shape with a greater depth than width wherever possible. This ensures ability to develop the lots with high quality housing and builtform and conformity with the Residential Design Codes of Western Australia. Other aspects of LN principles, such as local water management and, diversity of lot sizes and target residential density are addressed further in the SP report.

LOCAL PLANNING

3.6 *City of Rockingham Town Planning Scheme No. 2*

The SP area is zoned 'Development – DA30' under TPS2. As the subject land is englobo undeveloped urban zoned land, it is considered that proper and orderly planning requires the preparation and approval of a Structure Plan, prior to any subdivision and development.

The 'Deemed Provisions' of the *Planning and Development (Local Planning Schemes) Regulations 2015* set out the procedures for the preparation and approval of Structure Plans. This proposed SP has been prepared in accordance with the Regulations and WAPC *Structure Plan Framework 2015*.

Although the Parmelia Gas Pipeline is not located within the SP area, the pipeline is in proximity to the eastern boundary of Lot 5 and the TPS2 requirement for a 32m setback from the centerline to sensitive land uses applies. This has been accommodated for in the proposed SP, where the 32m setback area forms part of POS and road reserve.

3.7 *City of Rockingham Urban Growth Programme*

The City's Urban Growth Programme (UGP) was finalised in 2009 to provide an understanding of the likely pattern of urban growth within the City's municipality consistent with the State's planning direction. The UGP considers existing established areas, population and dwelling statistics, approved Structure Plans and future structure planning areas. The SP area forms part of the urban growth area anticipated by the City for 'Precinct 2' (Baldivis North) area being south of Kerosene Lane.

3.8 *Baldivis North District Structure Plan*

The Baldivis North District Structure Plan (DSP) was finalised in July 2000 and provides for a district level structure plan which provides the framework and sets out the principles for the residential and urban development of Baldivis north of Safety Bay Road. The DSP has been designed with regard to the principles of Liveable Neighbourhoods, including walkable catchments around activity centre nodes.

The DSP identifies a Local Centre to the south-east approximately 400m from Lots 5 & 6 as a key centre that can potentially service the SP area. However, the City has also since the inception of the DSP, approved the redevelopment of the Spudshed supermarket and associated commercial development, which is to form the new *Spudshed Neighbourhood Centre*. The Neighbourhood Centre is located approximately 300m east of Lot 5 and can also service the SP area.

No community infrastructure (i.e. schools or centres) are proposed in the DSP for the SP area. However, the DSP identifies and sets aside a public open space linear north-south parkway which proposes to accommodate the Parmelia Gas Pipeline easement and buffer within POS.

A public primary school site is proposed to the east of Lot 5 within Paradiso Estate. The proposed SP is consistent with the DSP and provides for POS within the 32m setback from the pipeline centerline as required to create the north-south linear parkway.

The DSP proposes a Neighbourhood Connector road (being an east-west and then north-south road through Lots 7 & 8) connecting the relatively small street corner commercial centre planned approximately 400m south-east of Lot 5. This intended neighbourhood connector road is no longer possible due to the development of the Tuart Lakes Lifestyle Village, which does not provide for the neighbourhood connector road.

The proposed SP provides for the extension of the east-west Neighbourhood Connector Road that abuts the *Spudshed Neighbourhood Centre* and links with the McDonald Road Neighbourhood Connector Road (as per the DSP). This will be the main internal collector road running parallel with Kerosene Lane. In all other aspects, the proposed SP is consistent with the DSP.

3.9 *Lots 14, 15 & 299 Kerosene Lane Structure Plan*

A Structure Plan has been approved for Lots 14, 15 & 299 Kerosene Lane (*Paradiso Estate*), which neighbours the SP to the east. No direct interface is necessary with this Structure Plan, except that both SPs share (and create) the north-south linear POS parkway which accommodates the *Parmelia Gas Pipeline* easement (and buffer). This is consistent with the DSP. The proposed SP also continues the east-west internal collector road, which will ultimately connect McDonald Road with Kerosene Lane to the west (via proposed road along western boundary of Lot 8). The proposed SP internal collector road gradually downgrades from a Neighbourhood Connector B (17.9m road width) to a Local Access Road C (16.4m road width), as development within the SP is proposed on one side of the road only (north side).

4.0 SITE CONDITIONS & ENVIRONMENT

4.1 *Topography*

The topography of the SP varies in the range of 22m AHD in the NW portion of Lot 8 to a low area of approximately 8.0m AHD in the south-east corner of Lot 5. Generally the SP area is undulating and sloping to the south of Kerosene Lane, with the sloping topographical feature continuing further south through the SP area into Lot 302.

4.2 *Geology and Soils*

The SP area is located on the Swan Coastal Plain and is described in the Environmental Geology Map (Geological Survey of WA) as 'S7 being sand derived from Tamala Limestone' and 'LS1 Tamala Limestone'. The geology and soil types found within the SP area are compatible with and can support the proposed urban development.

4.3 *Hydrology*

Groundwater

Based on the Department of Water *Perth Groundwater Atlas* (2003), the groundwater generally flows in a westerly direction towards the coast and the groundwater table contours are at approximately 3.5m AHD across the middle of the site. Groundwater is approximately 4.5m below the lowest site natural ground level of 8.0m AHD at the south eastern corner of the SP area. This low area is proposed to be filled in order to provide adequate cover for the sewer extension to a minimum 10.0m AHD. This will achieve a minimum approximate 6.5m separation distance to the highest natural groundwater level. The overall depth to groundwater across the SP area ranges approximately 6.5m – 17m AHD.

Surface Water & Wetlands

There are no permanent surface water bodies within the SP area. Sheet drainage across the development site is generally from the north to south, but is limited due to the high permeability and infiltration at source which is characteristic of SP soil geological characteristics.

There are no wetlands within the SP area identified in the DEC database *Geomorphic Wetlands of the Swan Coastal Plain*. Accordingly the SP area is unaffected by any localised surface water features.

4.4 Acid Sulfate Soils

A desktop assessment to determine the presence of Acid Sulfate Soils (ASS) indicates it is unlikely that there be any ASS affecting the SP area. Notwithstanding, any development within the SP will require a preliminary site investigation to be undertaken prior to any subdivision and or development.

Should any development be proposed within areas identified to contain ASS, a detailed geotechnical ASS investigation would be carried out to inform the preparation and approval of an ASS management plan, prior to works being undertaken. This would generally be undertaken as a condition of subdivision approval.

4.5 Flora & Vegetation

The SP area has been semi-cleared and in some places 'parkland cleared' to provide for residential development and semi-rural use. As a result, the vegetation condition of the pre-development vegetation community has been significantly degraded by human activity.

Vegetation condition assessed to the following criteria (Keighery, 1993):

Classification	Vegetation Condition
Pristine	Pristine or nearly so, no obvious signs of disturbance
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species
Very Good	Vegetation structure altered, obvious signs of disturbance
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate to it
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as being 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs

Keighery, B (1994) *Bushland Plant Survey, Guide to Community Survey for Community, Wildflower Society WA*

In classifying the existing vegetation condition using Keighery (1993), the vegetation within the subject site is classified as being 'Completely Degraded' or 'Degraded to Completely Degraded'.

A Flora & Vegetation Survey (refer to **Appendix 1**) was carried out in Spring 2015. The results of the survey indicated the following:

Flora Values

- There are no conservation significant flora species recorded within the SP area.

Vegetation Values

- Vegetation on the site is considered to be too degraded to have any conservation significance as a vegetation type or complex.
- There is a large presence of non-local native and exotic species, and in particular understorey is generally dominated by weeds.
- There is better quality vegetation of similar ecological type immediately to the north between Kerosene Lane and Kulija Road, which is protected within Bush Forever Site 356.
- The trees and tall shrubs provide some habitat for native fauna, but are not considered significant habitat (this is further discussed in the Fauna Survey).
- The vegetation within the SP area is not considered to form part of an ecological corridor due to urban development to the south and east.

4.6 *Tree Survey*

A Tree Survey (refer to **Appendix 2**) was conducted in June 2015 to provide an inventory of any significant trees (i.e. trunk >0.5m dia at breast height) within the SP area. Approximately 98 trees were recorded with >0.5m diameter comprising 81 Tuarts, 9 Jarrahs and 8 Standing Dead Trees. Four of the trees contained hollows or sprouts, however only two of the trees contained hollows or sprouts potentially large enough for breeding by Black Cockatoos. In general, Tuarts are the dominant trees within the SP area, with some scattered Jarrahs and non-native trees.

4.7 *Fauna*

A Level 1 Fauna Survey (refer to **Appendix 3**) was conducted with an initial reconnaissance survey carried out in June 2015, followed by a Black Cockatoo breeding survey in September 2015. In general the entire SP area was considered to consist of Disturbed Fauna Habitat due to the absence of an understorey over large sections, altered understorey over the remaining sections, limited connectivity and the presence of dogs which would deter fauna. The results of the Fauna Survey are as follows:

General Fauna

- Biodiversity value of the SP area is considered to be low.
- Southern Brown Bandicoots are present on the site and a trapping and relocation program will be required prior to clearing at subdivision stage.

Targeted Search – Black Cockatoo Habitat

- SP area contains approximately 5.6 hectares of foraging habitat which was classified as Poor Quality Foraging Habitat.
- During September survey no evidence of roosting, breeding or foraging was observed on the site and there is no known evidence of these activities occurring on the site. The risk of a significant impact on quality foraging habitat is considered to be low.
- The northern Bush Forever Site 356 provides a large amount of higher quality foraging and potential breeding habitat immediately to the north of the SP area. The retention of the Bush Forever Site vegetation would lower any impact that clearing of the site would have on local Black Cockatoo population.
- The degree of impact to Forest Red-tailed Black Cockatoos and Carnaby's Black Cockatoos local populations, as a result of clearing and urban development of the SP area, is considered to be low.

4.8 *Bushfire Management*

A Bushfire Management Plan (**Appendix 4**) has been prepared to outline the Bushfire mitigation procedures which are recommended to apply to the proposed subdivision and development of the SP area.

The Bushfire Management Plan (BMP) provides guidance for recommended Bushfire Attack Level (BAL) construction standards at the development stage. At the detailed subdivision stage proposed lots would be designed to ensure that residential development can be provided with a >20m Bushfire Protection Zone.

In accordance with the WAPC draft Guidelines for *Planning in Bush Fire Prone Areas*, the risk of bush fire can be managed in terms of the following:

- A detailed BMP being prepared and implemented by the developer at the subdivision stage;
- Fire hydrants being installed by the developer in accordance with Australian Standards (i.e. fire hydrants every 200m apart on all roads);

- Proposed residential dwellings on individual lots within proximity of bush fire risk areas being constructed to the appropriate BAL in accordance with an approved BMP and AS3959-2009 ("Construction of Houses in Bush Fire Prone Areas") construction standards;
- Detailed assessment for changes to the BAL Assessment can be undertaken by individual owners at development stage due to changes in the landscape. For instance, introduction of new development (i.e. housing and/or clearing of neighbouring properties) which thereby increases opportunities for 'shielding' or reduces the bushfire hazard risk. This may be undertaken at construction stage by an accredited Fire Management Consultant with approval from the local authority;
- Developer undertaking fuel loading controls within future staging areas by managing vegetation (i.e. firebreaks, slashing and mowing);
- Public open space areas will be irrigated by sprinklers;
- Recommended Section 165A of the *Planning and Development Act 2005* notifications on title advising prospective purchasers of the BMP;
- Local Development Plans to refer to BMP and will require affected dwellings to be constructed to the appropriate BAL standard specified in accordance with AS3959-2009.
- A Building Protection Zone (i.e. low fuel loading) of minimum 20 metres is recommended wherever possible from any external housing walls to external vegetated areas with moderate - high bushfire risk;
- Multiple emergency access for residents is provided to the north and east as shown in the Subdivision Concept Plan.
- Developer providing a copy of Bush Fire Management Plan and a copy of the document '*Homeowners Bushfire Survival Manual Guidelines*' to each prospective purchaser affected by bush fire planning requirements.

4.9 *Parmelia Gas Pipeline*

There is a high pressure trunk gas pipeline (Parmelia Gas Pipeline) located approximately 6m east of the western property boundary of neighbouring Lot 299. The pipeline is protected by a 12m wide easement with the pipeline in the centreline of the easement. The easement is wholly contained within the neighbouring Lot 299.

Although the Parmelia Gas Pipeline is not located within the SP area, the pipeline is in proximity to the eastern boundary of Lot 5 and the TPS2 requirement for a 32m setback from the centerline to sensitive land uses applies. This has been accommodated for in the proposed SP, where the 32m setback area forms part of POS and road reserve, and no residential lots are proposed within the 32m setback area.

An AS2885 Pipeline Protection Plan (PPP) (**Appendix 5**) was prepared was the *Lots 14, 15 & 299 Kerosene Lane Local Structure Plan* for Paradiso Estate on the eastern neighbouring land. The PPP does not preclude residential development in proximity to the pipeline up to the 32m setback area.

5.0 STRUCTURE PLAN

5.1 *SP Proposed Land Uses*

The proposed land uses are identified in the SP Statutory Map (Plan 1) and defined under Part One Clause 4.1 'Land Uses & Permissibility'. This will guide future subdivision and development of the land. Once the SP is adopted 'Deemed Provisions' require the SP be given 'due regard' by decision makers with respect to future subdivision and/or development within the SP area.

5.2 *Residential Densities and Yield*

The SP ultimately provides for approximately 135 dwellings (at ultimate development) with a base density coding of R30. Proposed development as provided by the SP could accommodate up to approximately 378 people based on an average household of 2.8 persons.

The proposed R30 density provides opportunity for a mix of single dwellings on medium density sized lots, typically ranging 350m² – 390m², with some larger lots above 400m². Table 1 outlines the estimated dwelling yield based on the Subdivision Concept Plan (SCP) shown in **Plan 2**.

Table 1. Estimate of the residential dwelling yield of the SP

RESIDENTIAL LOT TYPE	DENSITY	YIELD	HOUSING TYPES
Medium density residential	R30	135	Single Dwellings
SP Estimated Potential Dwelling Yield		135	

Table 2 provides a snapshot of development statistics based on the SCP and analyses the effectiveness of the based density code of R30 in terms of achieving set target densities under Directions 2031 and Liveable Neighbourhoods.

Although the SCP is indicative only at this SP level of planning (and not the subject of approval), the SP technical reports have been based on the SCP. The SCP provides a point of reference to demonstrate the capability of the proposed SP design over the SP area. The technical investigations undertaken for the SP proposal could therefore provide the basis for future subdivision of the SP area, based on the SCP.

Table 2 demonstrates that the SP design and base density code of R30 delivers approximately 27 dwellings per *site hectare*, which meets the Liveable Neighbourhoods density expectations for the site's locational context with regard to activity centres and major transport networks. Similarly, the SP delivers approximately 17 dwellings per gross urban hectare, which meets the target density of 15 dwellings per gross urban hectare under Directions 2031.

Table 2 Development Statistics (based on Subdivision Concept Plan)

	Site Outcomes	Target Density
Total SP Area	81,110m ²	-
Area set aside for roads, drainage & POS	32,019m ²	-
Balance area for residential development	49,091m ²	-
Estimate ultimate number of dwellings	135 dwellings	-
Estimated number dwellings per <i>site hectare</i> ¹	27 dwellings/site hectare	Liveable Neighbourhoods 12 – 20 dwellings per site hectare for standard lot layouts; or 20 – 30 dwellings per site hectare for areas within 400m of neighbourhood centres
SP target density per <i>gross urban hectare</i> ²	17 dwellings/hectare	Directions 2031 15 dwellings per gross urban hectare

¹ Liveable Neighbourhoods definition of *site hectare* is the area available for residential development excluding roads, non-residential uses, public open space and drainage areas.

² Directions 2031 definition of *gross urban hectare* is the gross area available for urban development.

5.3 *Housing Typologies*

The SP provides opportunity for low density - medium density housing, with primarily front loaded design, as topographical constraints restrict the development of rear loaded (laneway) lots. Rear loaded lot typology was initially explored in preliminary planning designs, but was dismissed due to difficulties in achieving appropriate grade for laneways servicing rear loaded lots, due to topographical challenges and meeting housing affordability.

Level sites that are terraced reflect the ideal building site to reduce housing cost and create more affordable housing. The use of retaining walls within development will allow for the general landform to be retained, whilst also providing quality homesites and lot sizes consistent with optimal and viable lot yield.

The SCP essentially provides mainly for single dwelling type (front loaded) development on low to medium density size lots, ranging predominantly 350m² – 390m². This range of lot size is sufficient to accommodate a variety of housing built form, including 4 x 2 and 3 x 2 single dwellings, of which can accommodate a diversity of household types, including families, young couples or retirees.

There is a relatively high diversity of existing and proposed housing stock within the Baldivis North area. For instance, immediately to the east of the SP area is the Spudshed Neighbourhood Centre, of which surrounding the centre will be a diversity of housing typologies. These include single, grouped and multiple dwellings mainly catering for smaller household types. Further south neighbouring Lot 302 is the Tuart Lakes Lifestyle Village, which caters for aged and retirement accommodation.

The Paradiso Estate contains a high proportion of low density lots, within the range 400m² – 500m². Paradiso Estate also includes grouped housing (and potential multiple dwelling) sites around the neighbourhood centre. The proposed lots sizes in the SCP provide a complimentary mix towards the overall delivery of new housing in the Baldivis North area.

5.4 *Use of Local Development Plans*

A Local Development Plan (LDP) is likely to be required for certain lots within the SP, such as lots abutting POS, to achieve a desired residential built form outcome. LDPs will provide the mechanism to enable lot design to be linked to a future dwelling, without building development plan/s being submitted at subdivision. This has particular application where design coordination is required to ensure that buildings are suitable for the occupier and the streetscape amenity.

An LDP for the SP can be prepared and approved at subdivision stage, to provide the mechanism for built form development controls to be put in place for a high quality development outcome which maximises the site's potential and makes efficient use of urban zoned land.

5.5 Variations to Residential Design Codes

Variations to the deemed-to-comply provisions of the Residential Design Codes (R-Codes) for medium density single dwelling(s) in the 'Development' zone (as per the WAPC Planning Bulletin 112/2016) is provided under City of Rockingham Planning Policy No. 3.3.22 'Medium-Density Single House Development Standards – Development Zones' (PP 3.3. 22).

PP 3.3.22 makes provision for the WAPC Planning Bulletin 112/2016 'Medium-density single house development standards – Structure Plan areas' (R-MD standards) to be applied, in approved Structure Plans, as a replacement of existing R-Code deemed-to-comply provisions for:

- Building and garage setbacks (clauses 5.12, 5.13 and 5.2.1)
- Open Space (clause 5.14)
- Parking (clause 5.3.3)
- Visual privacy (clause 5.4.1)
- Solar access (clause 5.4.2.

All other R-Code standards will continue to apply, where relevant to single houses. The Structure Plan is included in PP 3.3.22 and the policy provisions will be applied in the assessment of applications for single dwellings.

5.6 Street Layout

The SP proposes a site responsive street network that provides access from proposed structure planning road infrastructure to the east and to existing Kerosene Lane from the north. Connection to the proposed neighbourhood connector road in the east structure planning area will create internal connectivity with external linkages for local vehicle, pedestrian and bicycle modes of transport.

The proposed local access roads is consistent with the local road hierarchy and reinforces legibility once these roads are linked with future development to the south and west under future structure planning.

The SP design provides adequate connections for urban englobo Lots 9 & 302 to the west and south to connect to the existing and proposed street network. Initial discussions with the western and southern landowner have led to the preparation of the SCP. These discussions have also laid down the concepts for provision of necessary infrastructure to facilitate urban development of Lots 9 & 302, which is substantially dependent upon roads and services being brought through the SP area to service Lots 9 & 302.

The wide east-west local access road in the SP meanders around the central POS area, which will be a key centre-piece of development within this area. The location of the POS has been discussed and agreed between the Proponent and the neighbouring landowner of Lot 302.

Due to the location for connection with the neighbourhood connector road in Paradiso Estate, and the desire to provide an east-west internal collector road running parallel with Kerosene Lane, it is necessary to meander the road around the POS. The curve in the road will provide for slowing of traffic and create direct sightlines to the POS for road users. This will assist in breaking up any long stretches of straight road, which can encourage traffic speeding and may be monotonous for road users.

To maximise efficiency of urban zoned land suitable for residential development, within Lot 5 the eastern local access road is located within the pipeline 32m buffer, allowing maximisation of the land for residential lots.

Slip roads have been provided adjacent to Kerosene Lane to increase passive surveillance of Kerosene Lane by orientating some of the lots towards the road. This assists in breaking up any solid boundary fencing along Kerosene Lane and increases permeability for pedestrians and cyclists.

Orientation of roads to create north-south neighbourhood blocks will substantially assist efficient urban water management, as the topography and SP area generally slopes from north to south. In addition, the provision of north-south roads provides more direct access to Kerosene Lane (bus route) and opportunity to create east-west orientated lots. For narrow residential lots, with frontage generally 12m – 13m wide, east-west orientated lots are considered superior than north-south orientated lots, as the longer north facing boundary provides for solar access and passive solar design along the full length of the dwelling north side.

The SP proposed roads will ultimately function as a multi-purpose public space, designed to accommodate and balance traffic management with other functions such as community space, safe pedestrian environment, vehicle parking and as an entrance into the residential environment. The width of the proposed roads (to be determined at subdivision stage) will allow for the construction of footpaths consistent with Liveable Neighbourhoods.

5.7 Population & Employment

Based on an average household size of 2.8 persons per dwelling, the SP would result in a residential population of approximately 378 people for the proposed 135 dwellings that could be developed, as shown in the SCP.

The SP area forms the northern-most edge of a new *greenfield* growth area in Baldivis north area. There is an expectation for new urban growth areas to provide for opportunities for local employment, promoting concepts of self-sufficiency as those stated in Liveable Neighbourhoods.

No commercial, community, public use or mixed use land is proposed in the SP, as these land use types have not been identified to be provided in the SP area under the Baldivis North District Structure Plan (DSP).

In terms of local employment opportunities (i.e. within 400m – 800m walking distance) there are areas provided in the DSP, such as the local activity centre to the south-east and future public primary school within the neighbouring Paradiso Estate to the east. In addition, the Spudshed Baldivis Neighbourhood Centre is currently under construction within 400m of Lot 5 to the east, fronting Kerosene Lane within the Paradiso Estate.

Within 10km to the north-west is the Rockingham Regional Centre, which is a strategic employment centre outside of Perth CBD. Opportunities for home-based employment within the SP would exist under the provisions of TPS2 in a 'Residential' zone.

6.0 MOVEMENT NETWORK

6.1 *Existing Movement Network*

Regional & District Road Network

The SP area is approximately 500m east of Mandurah Road to the west, which is reserved as 'Other Regional Roads' under the Metropolitan Region Scheme and approximately 2.4 kilometres west of Baldivis Road. Mandurah Road and Baldivis Road are both classified under the Main Roads WA (MRWA) regional hierarchy as 'Regional Distributor' roads.

The Kuliya Road interchange with Kwinana Freeway ('Primary Distributor') is approximately 4 kilometres east of the SP area. There is good accessibility to the subject site via these regional and district level roads.

Local Road Network

The SP area currently can only be accessed from the north via Kerosene Lane, with no local access road connections to the south, west or east. Kerosene Lane is classified as an 'Access Road' under the MRWA regional hierarchy and has a posted speed limit of 60km/hr (recently reduced from 80km/hr due to urbanisation along Kerosene Lane).

Kerosene Lane is a single undivided carriageway with an 8 metre wide seal and 3 metre wide unsealed shoulders. No kerbing or formal drainage infrastructure is provided within Kerosene Lane section abutting the SP area.

6.2 *Proposed Movement Network - Roads*

A Transport Assessment (TA) (**Appendix 6**) has been prepared for the proposed Structure Plan. The TA has been based on the Subdivision Concept Plan contained in this report, which proposes approximately 135 dwellings. Traffic modeling undertaken as part of the TA indicates that intersections with proposed local access roads with Kerosene Lane require no specific treatment of intersections (including turning pockets). There are no safety or unacceptable risks to road users, or operational issues identified as a result of traffic modeling and transport assessment, that cannot be managed through appropriate design protocols.

Roads

Kerosene Lane is proposed to function as a single carriageway (urban standard) 'Neighbourhood Connector A' road connecting the SP development with the regional, district and local road network. The proposed SP will have a Local Access Road C connection to the east linking with Paradiso Estate development and two local road access points from Kerosene Lane (via Lot 8 and via Lot 5).

The Road Hierarchy for the proposed SP (as well as indicative Cross Sections for proposed road types) is provided for in the Transport Assessment (Appendix 6). As shown in the Transport Assessment, proposed roads are to be as follows:

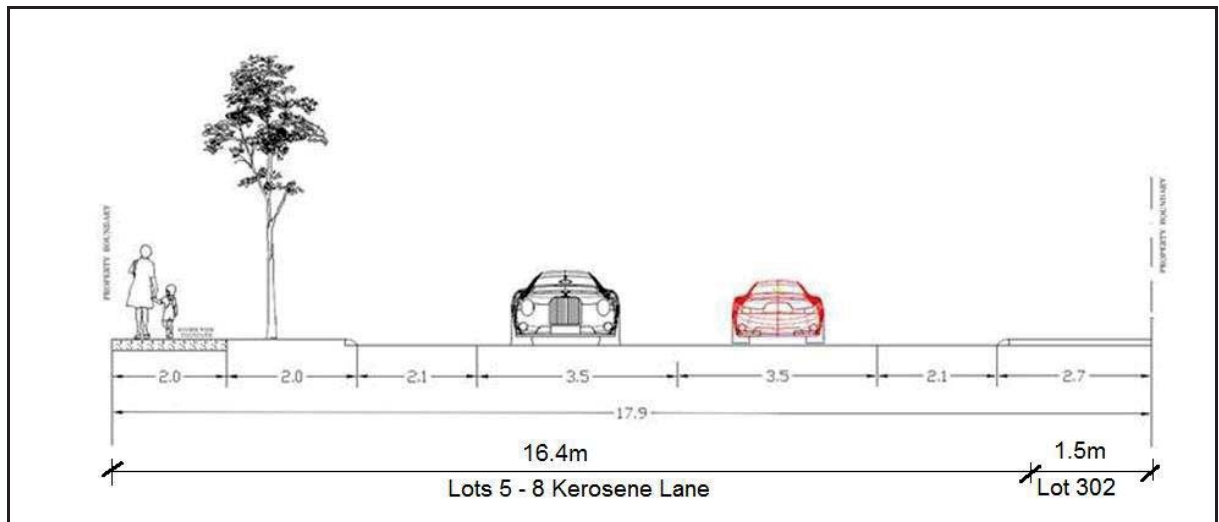
Road Type	Indicative Road Reserve Width
Neighbourhood Connector	17.9m
Local Access Road C	16.4m
Local Access Road D	14.2m
Local Access Road D (one-side development only)	12.9m

The City's standard width for new local access roads is for a minimum 14.2m wide road reserve to accommodate pavement, kerbing, servicing & drainage infrastructure, paths and landscaping. The short slip road connected to the cul-de-sac head in the NW area of the SCP is proposed to be a minimum of 6.0m wide.

The road reserve widths in the SP provide for more land efficient street reserves, including narrower pavement that concurrently promote reduced vehicle speeds, reduced kerb radii and provision for pathways, landscaping, verge treatments, street parking and street trees. Wherever possible, common trenching of services will be provided for, subject to approval by the utility service providers. This can enable the width of road verges to be narrowed by reducing the width of the utilities corridor.

Neighbourhood Connector Road

Provision for the proposed Neighbourhood Connector road, as shown in the Structure Plan, is ultimately to be provided from the Structure Plan landholdings and the southern neighbouring Lot 302. Plate 1 shows the road reserve width arrangements within Lots 5 – 8 Kerosene Lane and the southern abutting lot.



Intersection Treatments

6.3 Proposed Movement Network – Pedestrian/Cyclists

The exact location of pathways will be determined in liaison with the City of Rockingham at the subdivision stage. In general, pathways are proposed to be provided on all streets in accordance with the requirements of Liveable Neighbourhoods.

6.4 *Proposed Movement Network – Public Transport*

No public transport facilities are presently located within 400m of the SP area. The nearest bus stop is located in Fifty Road, approximately 2.7km from the SP area. This bus stop services Transperth Route 568 which runs between Warnbro Transit Station and Baldivis.

The Baldivis North District Structure Plan proposes extension of public transport as the suburb of Baldivis becomes increasingly urbanised and matures. It is noted that McDonald Road and Kerosene Lane have been identified (in the *Lots 14, 15 & 299 Kerosene Lane Local Structure Plan*) as a primary bus route in the future.

6.5 *Street Parking*

At this Structure Planning level, no specific provision of on-street parking embayments have been shown within the SP, however, the standard pavement width of local access roads could allow for localised on-street parking, whereby vehicles must pass around parked vehicles. This has been found to assist in traffic calming of streets and is generally acceptable in most residential neighbourhoods where speed limits are between 40 – 50km/hr.

Appropriate consideration for the provision of street parking (where considered suitable) will be given at detailed subdivision design stage and in consultation with the City of Rockingham. In particular, opportunities for formalised on-street parking will be considered around areas of high amenity, such as opposite or adjacent to public open space.

7.0 PUBLIC OPEN SPACE

7.1 *Public Open Space Provision*

The SP provides for 0.679 hectares of public open space (POS) contained solely within the SP area. This constitutes approximately 8.4% POS, which does not meet the minimum 10.0% POS required by WA Planning Commission under Liveable Neighbourhoods. There is a shortfall of 0.129 hectares in the SP area POS provision, which is to be provided from the surplus POS in the neighbouring approved structure plan to the east.

As outlined in the WAPC endorsed *Lots 14, 15 & 299 Kerosene Lane Local Structure Plan* for Paradiso Estate (neighbouring the SP area to the east), there is a surplus of POS provided within that Structure Plan which could be utilised by the Proponent.

The Proponent of this SP proposal and the proponent of Paradiso Estate have discussed and agreed upon the utilisation of surplus POS within Paradiso Estate for the Proponent's SP for Lots 5 – 8 Kerosene Lane. The area of surplus POS that can be made available for the Proponent's Lots 5 – 8 Local Structure Plan is shown on the Structure Plan Map (Plan 1) and in **Figure 4a** & **Figure 4b** landscaping concept plans for Paradiso Estate. Through the provision of surplus POS from the Paradiso Estate, the SP can meet the required provision of 10% POS, as outlined in Table 4 POS schedule.

Consistent with the DSP, POS within the proposed SP (refer to **Plan 5**) has been provided as a linear parkway (containing the pipeline easement and buffer) which will serve to form a substantial recreational corridor for future residents. The POS linear parkway within Paradiso Estate surplus POS area can be used by future residents within the SP area. For instance, the surplus POS is within 400m of the majority of proposed lots within the SP area. The western-most lots in the SCP have access to a local park within Lot 8. Thus all lots within the SP area have access to POS facilities within 400m walking distance.

Where individual lots within the SP area cannot provide (independently) the required 10% POS quota, a legal agreement between the Proponent and other relevant landowner/s will cover arrangements for the provision and compensation for surplus POS provided for the SP. The minimum 10% POS requirement per landholding within the SP area will be further assessed as part of detailed subdivision design and will negate the requirement for a cash in lieu contribution, for each landowner as applicable, for any shortfall in provision of POS.

7.2 *Public Open Space Typologies*

With the inclusion of surplus POS from Paradiso Estate (approximately 0.153ha), the SP provides for 0.645 hectares of POS, satisfying the 10% POS requirement. POS areas are proposed to be developed in stages as land is subdivided, with the final design for POS to be determined in liaison with the City as part of subdivision works.

Local Parks

Two local parks are proposed within the SP area as shown in the SCP. The local park POS within Lot 8 is proposed to satisfy the 10% POS requirement for Lot 8 subdivision. This park will contain relatively limited drainage infrastructure comparative to its size and can be developed for active recreation. Wherever possible, retention of significant trees will be provided for in POS areas.



Example of retention of significant trees within POS

The POS within Lots 6 & 7 will form part of a larger local park in future when adjacent Lot 302 to the south is developed. This park will ultimately be relatively large (i.e. almost 1 hectare) in size and can be developed for both active and passive recreational use. The park will serve a multi-purpose function of POS and drainage.

Linear Parkway

The POS parkway incorporating the pipeline easement and buffer to the eastern boundary is proposed with a north-south orientation as per the DSP. The parkway is approximately 40 metres wide. The parkway concept is effective in providing a linear 'greenbelt' interfacing with the Paradiso Estate to the east. It is envisaged that the parkway will contribute towards pedestrian/cyclist movement, recreational pursuits and visual amenity. In addition, the parkway will assist in urban water management by incorporating drainage infrastructure within the pipeline buffer. The parkway will not specifically serve as an ecological corridor for native fauna movement, due to it being "parkland cleared". The SCP shows the potential for the pipeline parkway to extend further south well beyond the SP area as identified in the DSP. The small portion of POS in the SE corner of Lot 5 will form part of this POS parkway.

7.3 Public Open Space Schedule

Table 4. Lots 5 – 8 Kerosene Lane POS Schedule

Calculation of Required POS Provision		
Lot 5	2.026	
Lot 6	2.029	
Lot 7	2.027	
Lot 8	2.029	
Total Site Area (ha)		8.111
Deductions		
Dedicated drainage reserve		
Lot 5 (1:1yr site area basin) – DD1	0.009	
Lot 8 (1:1yr site area basin) – DD3	0.023	
Total Deductions		0.032
Gross Subdivisible area (total area minus deductions)		8.079
Required POS (10%)		0.808
Breakdown of POS Provided		
May comprise:		
- minimum 80 per cent unrestricted POS	0.646	
- Maximum 20 per cent restricted use POS	0.162	
Restricted Public Open Space		
Pipeline easement – Portion Lot 299 (Galati) – PE1	0.129	
Turf/Landscaped Drainage Swale (Lot 6) – DS2	0.017	
Total Restricted POS Credited to a maximum of 20%		0.146
Unrestricted Public Open Space : by function		
<u>Local Park</u>		
Lot 5 – LP1	0.249	
Lot 6 – LP2	0.189	
Lot 7 – LP3	0.028	
Lot 8 – LP4	0.196	
Total Unrestricted POS		0.662
Public open space provision provided		0.808
POS Provision as Percentage of Gross Subdivisible Area		(10%)

Notes

- 1) Final POS calculations will be subject to detailed survey and approved Urban Water Management Plan. A minimum of 10% POS land contribution to be provided at Survey Deposited Plan final approval stage.
- 2) WAPC requires that the POS Schedule calculate the pipeline easement as restricted POS (100% credit) and the pipeline buffer as unrestricted POS (100% credit)
- 3) Pipeline easement restricted use POS (Portion Lot 299) PE1 surplus available 0.236 ha whereas 0.129 ha used by Lots 5 – 8 Kerosene Lane LSP

8.0 LOCAL WATER MANAGEMENT

8.1 Local Stormwater Drainage

A Local Water Management Strategy (LWMS) (**Appendix 7**) has been prepared for the proposed SP based on the SCP. The SP development site has highly permeable sandy soils and adequate separation to ground water. In this instance, the development site is suitable for urban development and on-site infiltration to maximise groundwater recharge.

The proposed development will have the potential to increase the proportion of impervious areas across the site. This in turn will lead to an increase in the volume of stormwater runoff during rainfall events, thereby altering the natural hydrological behaviour of the site.

The proposed roads in the SP have been designed to assist in providing for effective urban water management by facilitating overflow paths towards stormwater infrastructure within POS areas.

All future residential development will be required to contain stormwater on-site. This can be undertaken using standard soak wells and other stormwater disposal techniques, such as directing water run-off to garden beds or use of rainwater tanks.

The LWMS will be used to guide the design and construction of the proposed drainage infrastructure at subdivision stage, under an approved Urban Water Management Plan.

8.2 1 year, 5 year and 100 year ARI events

Table 6 outlines the specific local water management principles for the 1 year, 5 year and 100 year Average Recurrence Interval (ARI) events.

8.3 Groundwater Management

Given the characteristics of the development site (i.e. soil type, hydrology, depth to groundwater etc) the proposed development will not result in any specific requirement for groundwater level controls, such as sub surface drainage and/or fill to be imported, to achieve minimum separation distances to groundwater levels where reticulated sewerage is provided.

The relatively deep groundwater level below the natural sandy surface of the land provides for direct infiltration of stormwater, as close as source as possible. Notwithstanding, as part of the UWMP, adequate pre-treatment measures prior to infiltration to groundwater will be provided to protect groundwater quality.

Table 6 1yr & 5yr & 100yr ARI stormwater management

ARI Event	Local Water Management Principles
1 Year	Accommodated in piped drainage design directed to drainage detention infrastructure in POS areas; and Stormwater contained within each lot prior to discharge/infiltration to groundwater via conventional methods, such as soakwells.
5 Year	Accommodated in piped drainage design directed to drainage detention infrastructure in POS areas.
100 Year	Swale basins constructed within POS areas designed for maximum infiltration; Finished lot levels will be a minimum of 0.5m above the top of 100yr drainage basin infrastructure; and Major storm 100yr stormwater directed away from lots and into POS detention areas.

9.0 LANDSCAPING

The underlining concepts guiding future landscape design within the proposed SP roads and POS areas of the SP are:

- Provision of public facilities which cater primarily for recreational activities to suit the predicted demographic for the locality, including but not limited to active uses and passive uses such as picnics, nature observation, passive contemplation, walking exercise etc;
- Where employed, bio retention swales to collect stormwater runoff, planted with fringing vegetation to provide a nutrient stripping function;
- Integrated path systems to link and create areas suitable for walking, dog walking, cycling, skating and similar;
- Planting in POS and street verges will consist of a mixture of turf, native and dry tolerant species, with an emphasis wherever possible on using indigenous plantings;
- Where verge areas provide opportunity for plantings, diversity of street tree plantings to form strong avenue and high amenity streetscapes; and
- Retention of existing significant trees only wherever possible within POS and road reserves.

A detailed landscaping design and management plan for public open space areas is to be provided as part of subdivision works. Landscape design will minimise water use, with shrub planting to be native or similar. Water harvesting from direct urban stormwater runoff or other sources (i.e. swales, weirs and drainage channels) will be used where possible for passive irrigation purposes. Also where considered appropriate, the use of organic mulches and 'amended earth' techniques will assist in water conservation and reduced irrigation dependency.



Example of retention of significant trees within road reserve

10.0 INFRASTRUCTURE & SERVICING

An Engineering Services Report has been prepared following preliminary investigation and planning for infrastructure and servicing of the SP. The following is a general summary of the report. For the full report refer to **Appendix 8**.

10.1 Wastewater

The SP area is currently not connected to reticulated sewer. Existing dwellings on Lots 5 & 7 are serviced by septic tanks for on-site effluent disposal. Water Corporation sewer infrastructure is currently being extended as part of Paradiso Estate and ultimately sewer extension will be provided to the eastern boundary of Lot 5.

The SP area can be served from the Water Corporation's Baldivis North Pump Station 'McDonald Road' located SE of the SP area. Connection to the pump station would be via extension of the 225mm gravity sewer along the future Maranca Street alignment coming from the eastern adjacent Paradiso Estate.

Water Corporation policy requires developers to extend sewer services to the boundary when extension is planned. Fill will be required to provide cover to the sewer extension across the southern portion of Lot 5 & 6. This sewer will also connect to the neighbouring structure planning area of Lot 9 to the west and Lot 302 to the south.

10.2 Water Supply

At present there is no Water Corporation reticulated water main serving the site. Water supply for the existing dwellings and development is currently from rainwater tanks collected by roof catchment and from groundwater bores.

Water Corporation reticulated water supply infrastructure is currently being extended as part of Paradiso Estate and ultimately reticulated water extension will be provided to the eastern boundary of Lot 5. Similarly with sewer infrastructure, Water Corporation policy requires developers to extend water services to the boundary when extension is planned. Further water extensions through the SP area will ultimately provide reticulated water supply for other structure planning areas within Lots 9 & 302.

10.3 Power

There is existing high and low voltage aerial power lines within the southern verge of Kerosene Lane. Preliminary investigations indicate that there is sufficient power supply capacity in the area to service the proposed SP development.

It is likely that as a requirement of subdivision the existing aerial power lines in the southern verge of Kerosene Lane will need to be relocated and sunk underground along the frontage of the SP site. Underground power reticulation will be extended from the adjacent Paradiso Estate to the east. Any requirements for upgrading and provision of transformer and switch station sites can be determined as part of subdivision works.

10.4 Telecommunications

The SP area can be serviced by the existing telecommunications infrastructure within Kerosene Lane. This infrastructure will need to be extended to service the proposed development, with some upgrading likely to be required. The developer is also required to install National Broadband Network (NBN) 'pipe and pit' to allow for future installation of cables for the NBN. This can be accommodated within common telecommunications trenching.

10.5 Gas

The SP area can potentially be serviced with reticulated gas via extensions to gas infrastructure in the eastern adjacent Paradiso Estate. Reticulated gas infrastructure would be extended to the SP area by ATCO under standard developer arrangements. Arrangements for the provision of reticulated gas supply to the SP area will be further investigated at detailed design stage in consultation with ATCO, as part of subdivision works.

10.6 Earthworks

Substantial earthworking of the site will be required to create level, free draining lots for dwelling construction and provision of roads and services. Extensive low (<1m) to medium height (<3m) retaining walls will be required due to the undulating site.

Earthworks will involve removal of topsoil, localised cut and fill, followed by stabilisation of finished design levels. Some importation of fill is anticipated to fill the lower southern areas of Lots 5 & 6 for sewer cover. Fill is also likely to be required to raise proposed lots abutting Kerosene Lane to the level of the road. Lots abutting Kerosene Lane will be constructed to the same level as Kerosene Lane to provide amenity and outlook.

Due to the natural fall of the land from north (Kerosene Lane) to south, changes in elevation will be provided for by construction of either retaining walls or batters. The height of retaining walls will vary due to natural ground level differences and wherever possible, the natural topography will remain, though benched. A preliminary Earthworks Plan is provided in **Plan 4**.

Level sites that are terraced reflect the ideal building site to reduce housing cost and create more affordable housing. Retaining walls will be used to provide terraced lots and absorb level differences. Wherever possible, the height of retaining walls will be kept to a minimum and may vary due to natural ground level differences. All retaining walls will be constructed to the City's satisfaction.

10.7 Roads & Pathways

In accordance with City's engineering standards, the roadways will generally be constructed in the conventional manner, with asphalt wearing coarse on a granular base coarse and cast-in-situ concrete kerbing with piped drainage and provision of footpaths. Roads will generally consist of two way single carriageways, with widths of 3.2m – 3.3m. Further geotechnical investigations can confirm the exact design of the roads and drainage infrastructure in consultation with the City.

10.8 Drainage

Stormwater management for the SP development site will be designed to be self-contained. The SP area soils will allow for site soakage, based on its geological characteristics and suitable depth to groundwater. The entire SP area can be accommodated within three drainage catchments, with the low point for each catchment being provided within POS areas. Within the SP drainage design some allowance will be made for stormwater drainage generated in Kerosene Lane.

All urban water management infrastructure will be designed to the standards of the City, with a storage facility to contain the 1 in 100 year stormwater runoff, to be located in proposed POS areas. The Local Water Management Strategy (**Appendix 7**) details the stormwater drainage management plan.

The details for stormwater drainage regarding Urban Water Management flows for the proposed residential development of the SP area will be undertaken at the subdivision and development stage, consistent with the principles of the LWMS.

11.0 STAGING

11.1 Staging and Anticipated Timeframes

It is envisaged that the whole SP landholding area will be earthworked in one contract so as to provide efficiencies in cut to fill and importation of fill. The City has an earthworks embargo during the months of November to March so any substantial earthworks operations should be undertaken outside of the earthworks embargo period, pending timing of approvals. Subdivision and development is likely to be influenced by market demand, however the SP area could be subdivided immediately or in the short term with road access provided from Kerosene Lane through Lots 5 & 8. In discussions with the Proponent of Paradiso Estate, road connection is also proposed to be provided via connection with the east-west neighbourhood connector road (17.9m road reserve) in Paradiso Estate to the east with the proposed SP Local Access Road C.

11.2 Development Contributions

A Development Contribution Plan for the SP area is not required for the provision of key infrastructure as the landowners of Lots 5 – 8 have agreements in place regarding the shared cost and delivery of infrastructure. This includes any pre-funding and construction of all necessary infrastructure and standard necessary upgrades. The landowner of Lots 5 – 8 have also approached the landowners of neighbouring Lots 9 & 302 to the west & south and Lot 299 to the east regarding the coordination of necessary infrastructure provision for new urban development. Thus landowner private agreements will cover the shared cost and timely delivery of infrastructure necessary for urban development.

The SP area is within Development Contribution Area as shown on the TPS 2 Scheme Map as DCA 2. Development Contribution Plan No.2 (DCP 2) applies to all land within the City which is capable of being developed for residential dwellings. The SP area more specifically is contained within the Baldivis North Sub-Area of DCP 2. Contributions towards DCP 2 is applicable for future subdivision and/or development within the SP area.

11.3 Services & Infrastructure

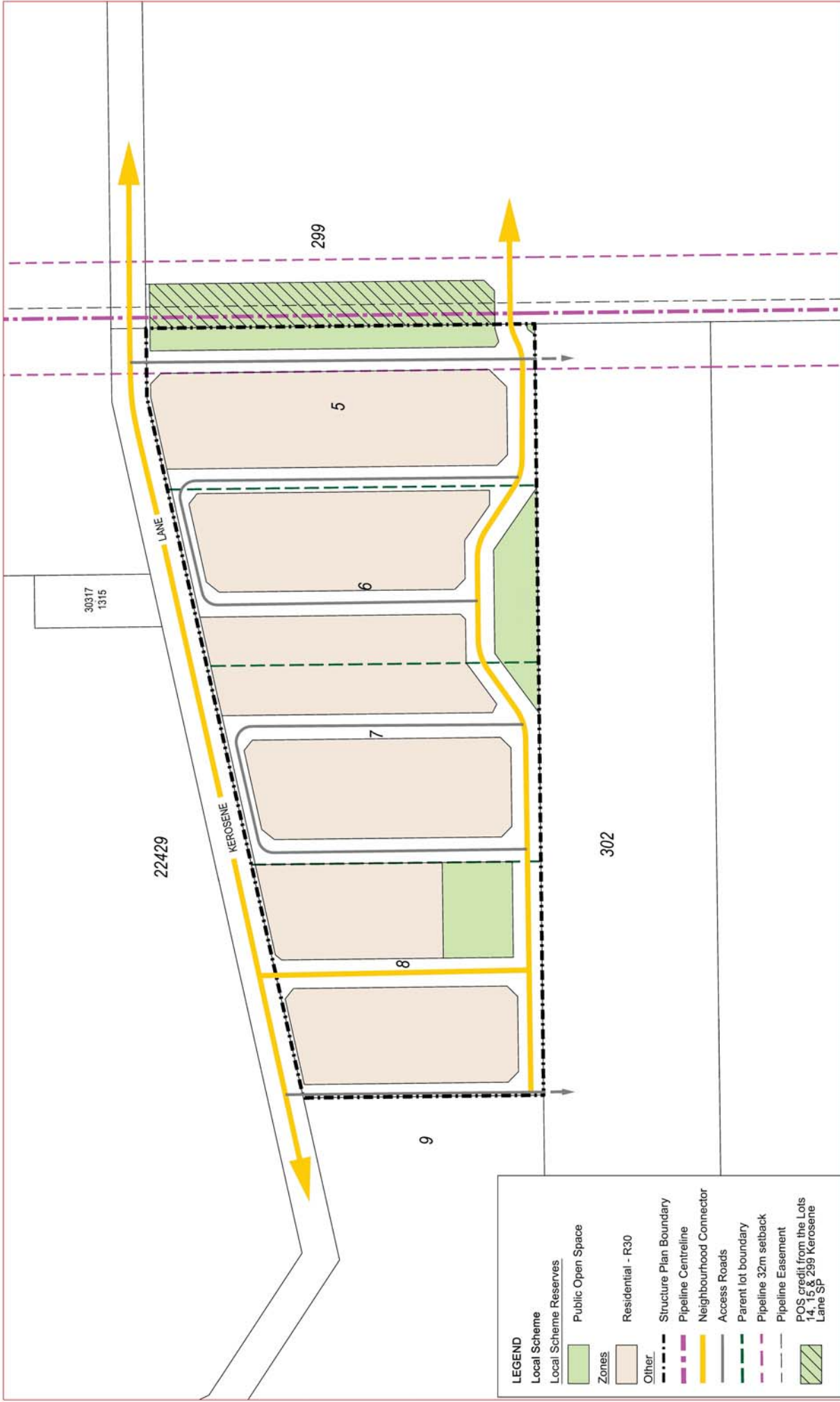
Lots have been designed, wherever possible, to allow development by respective landowners to be undertaken relatively independently. There is general agreement amongst the various landowners within the SP area that earthworks and provision of major trunk services would be undertaken in a single stage to maximise efficiencies and reduce development costs. Should the landowners of the SP area proceed to subdivide concurrently, coordination and sharing of costs for provision of infrastructure (i.e. POS, drainage, roads etc) and servicing would be under a cost sharing agreement. This agreement could be entered into by each landowner and managed by the landowners' project manager as part of the land subdivision process.

PLANS

STRUCTURE PLAN LOTS 5-8 KEROSENE LANE BALDIVIS

PLAN 1

DATE DRAWN: 20/06/2017
DRAWN BY: RM
CHECKED BY: JF
FILE: 170617 structure plan LOTS 5-8 Kerosene Lane.dwg
V:\CADD\RM
V:\CADD\BODWIN\RM



LEGEND	
Local Scheme	
Local Scheme Reserves	
Local Scheme Reserves	
Zones	
Other	
Structure Plan Boundary	
Pipeline Centreline	
Neighbourhood Connector	
Access Roads	
Parent lot boundary	
Pipeline 32m setback	
Pipeline Easement	
POS credit from the Lots 14, 15 & 299 Kerosene Lane SP	

Plan No.: 20684-4

Revision: REV.1

Scale: 1:2000@A3

Scale 4 First Floor 40 Maitly Road Osborne Park WA 6107 www.veris.com.au

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**SUBDIVISION CONCEPT PLAN
LOTS 5 - 8 KEROSENE LANE
BALDIVIS**

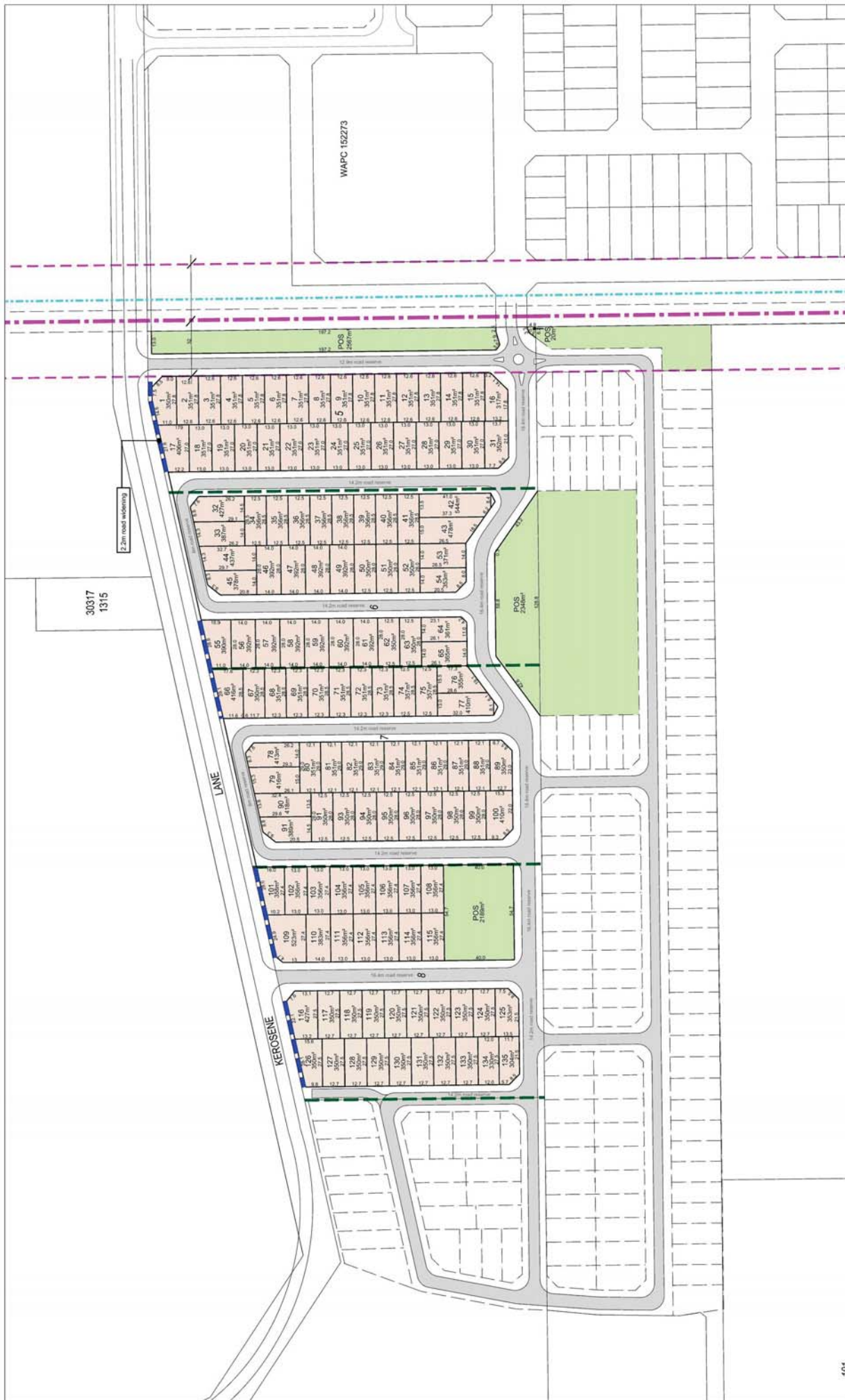
PLAN 2

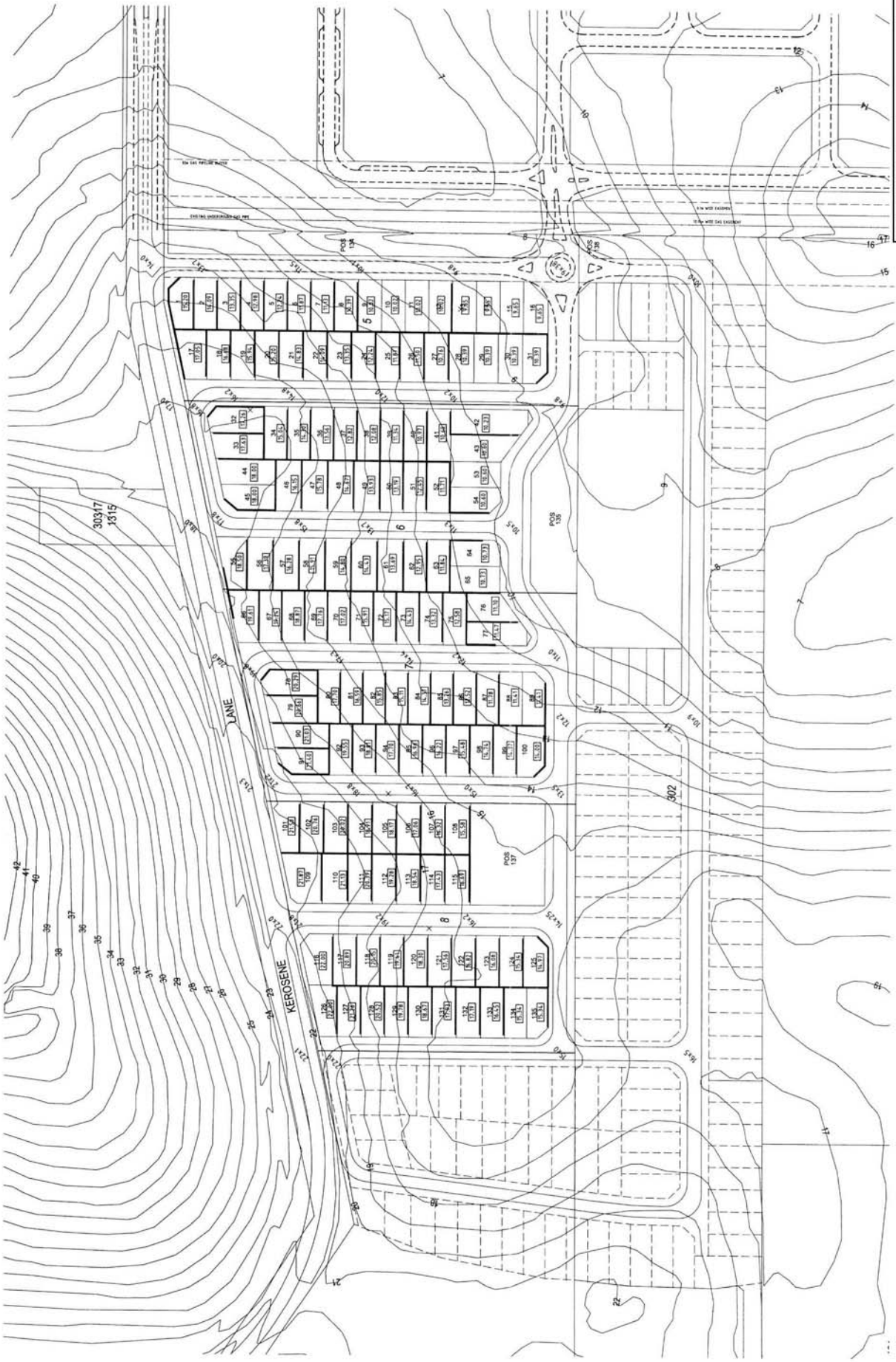
DATE DRAWN: 21/02/25
DRAWN BY: OAL
CHECKED BY: JP

FILE: 19506 sub concept plan 2.dwg
V DATUM: AOD
H DATUM: MGSN (N)

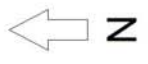
- LEGEND**
- Solid Wall
 - Dwelling Orientation
 - Structure Plan Boundary
 - Pipeline
 - Existing parent lot boundary
 - Pipeline 32m setback

Plan No.: 20684-3
Revision: REV/8
Scale: 1:200 @ A3 1:1000 @ A1
Scale 4 First Floor 48 Meter Road Osborne Park WA 6017 www.whelans.com.au

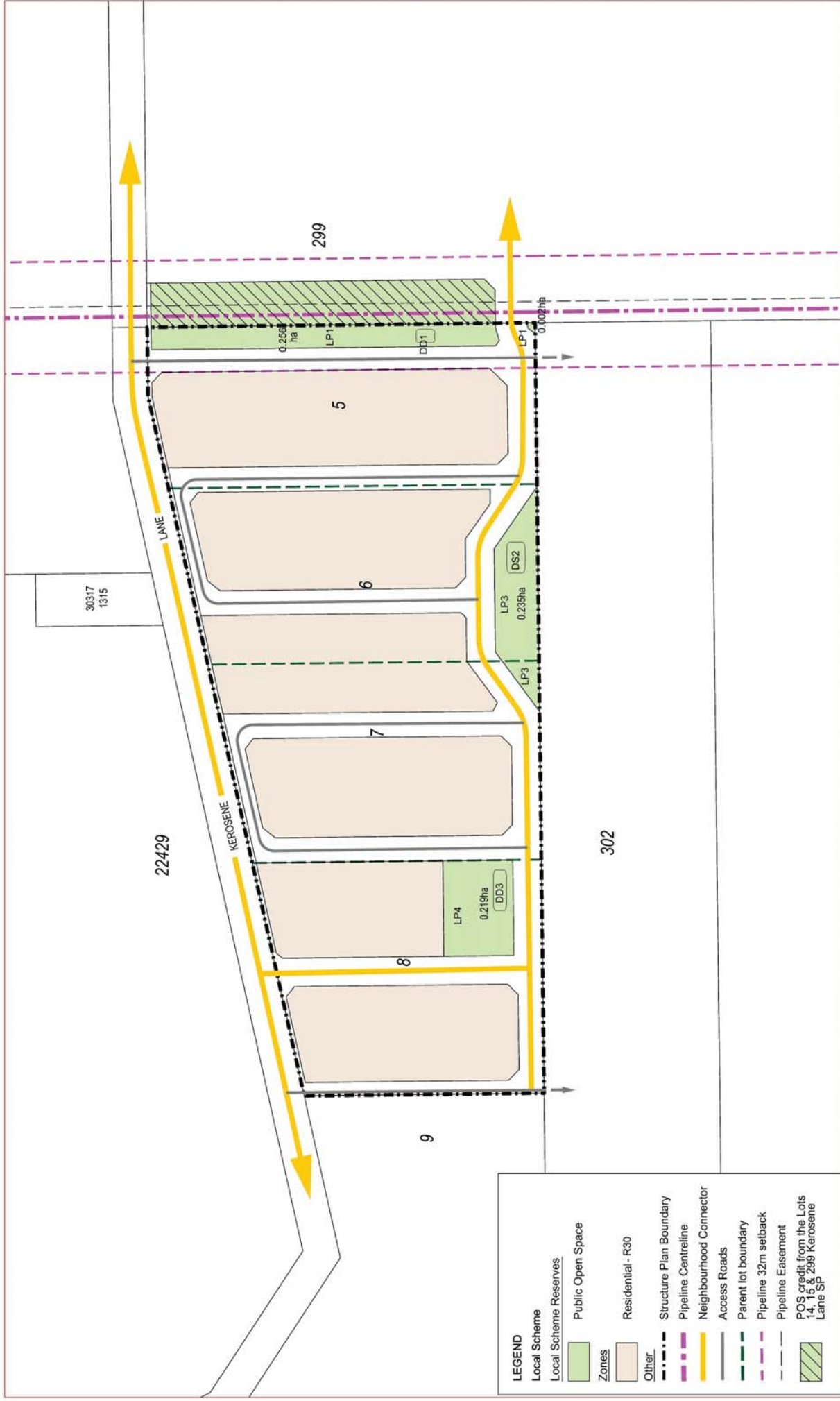




Preliminary Earthwork Plan
Lots 5 - 8 Kerosene Lane
PLAN 4

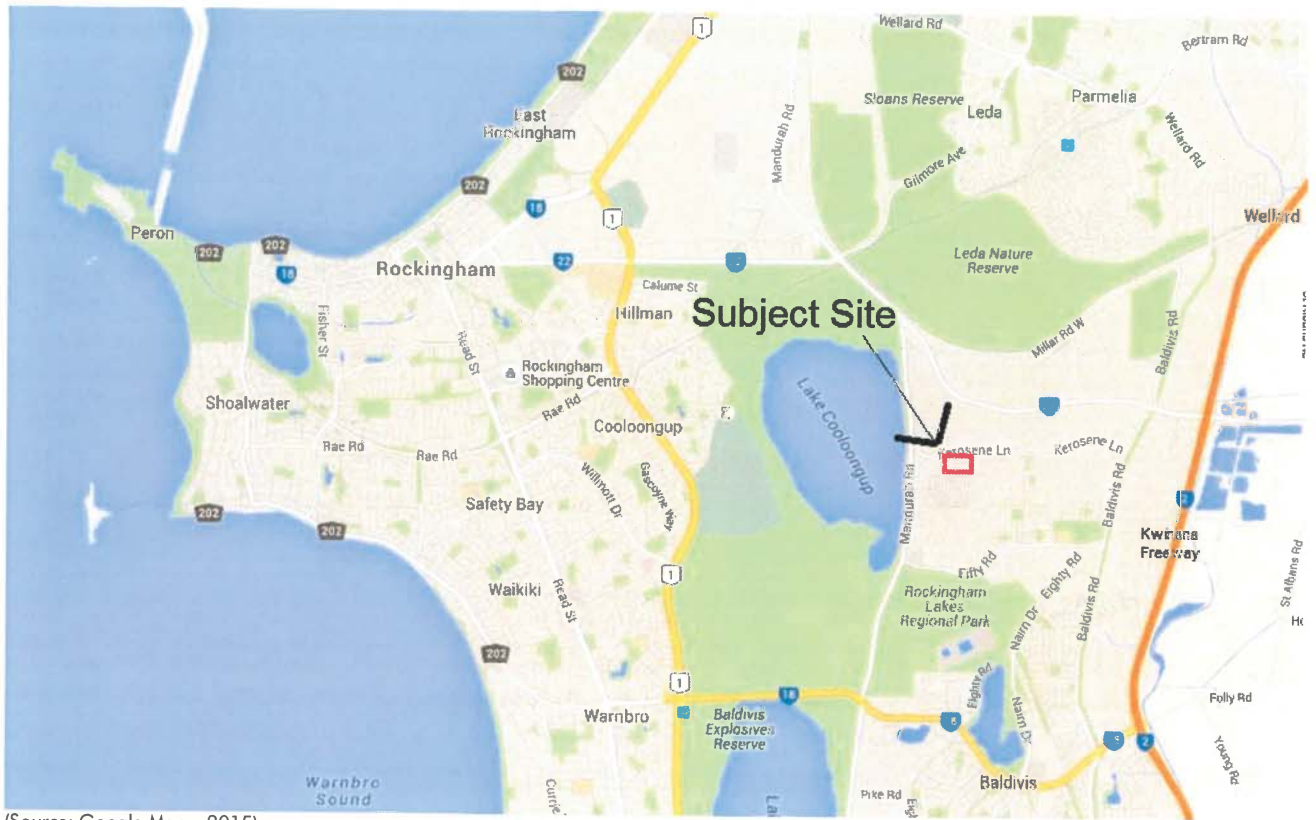


Scale 1:2000 @ A3



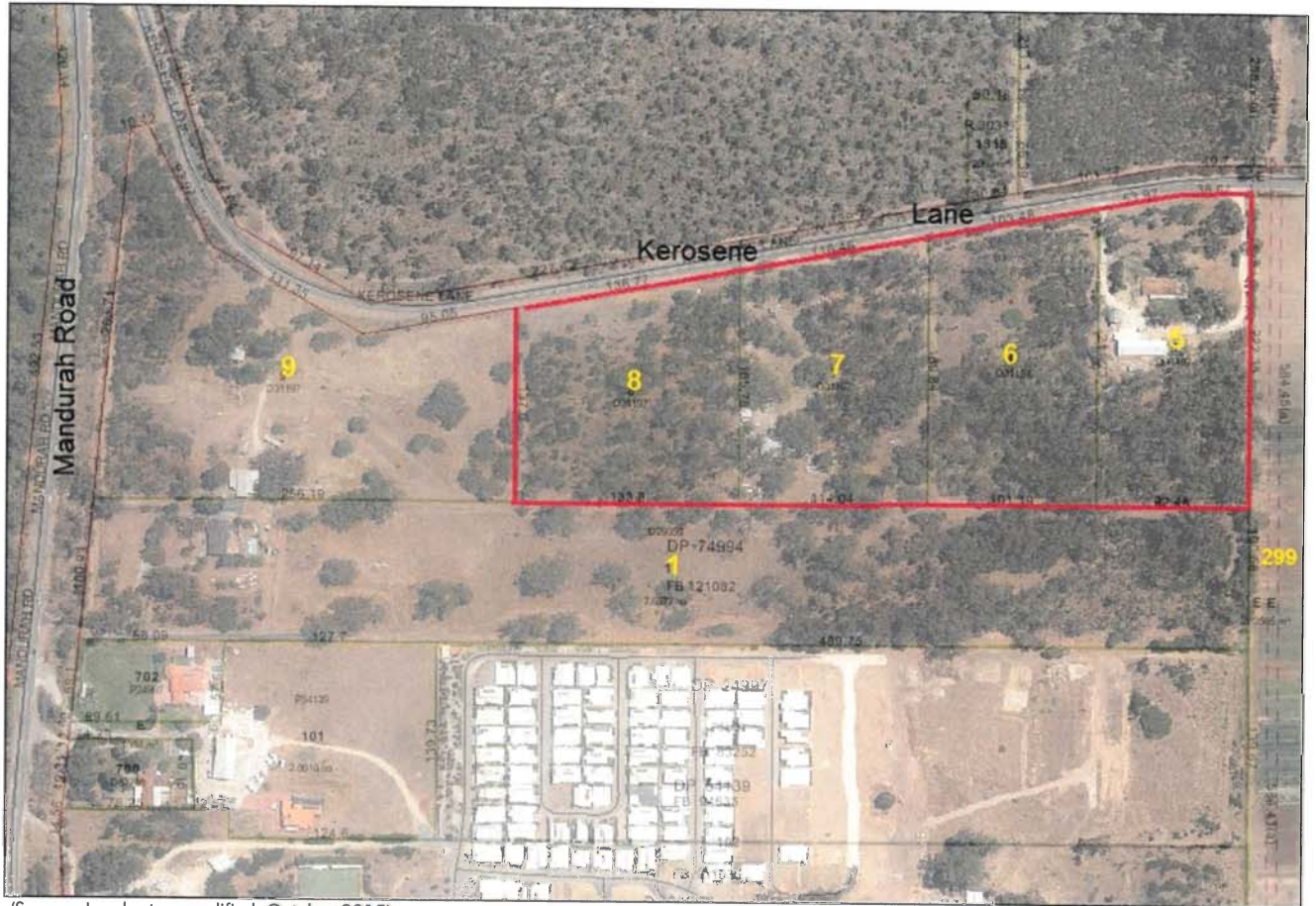
LEGEND	
Local Scheme	Local Scheme Reserves
Local Scheme Reserves	Public Open Space
Zones	Residential - R30
Other	Structure Plan Boundary
Structure Plan Boundary	Pipeline Centreline
Pipeline Centreline	Neighbourhood Connector
Neighbourhood Connector	Access Roads
Access Roads	Parent lot boundary
Parent lot boundary	Pipeline 32m setback
Pipeline 32m setback	Pipeline Easement
Pipeline Easement	POS credit from the Lots 14, 15 & 299 Kerosene Lane SP

FIGURES



(Source: Google Maps, 2015)

FIGURE 1
LOCATION PLAN



(Source: Landgate - modified, October 2015)

FIGURE 2
CADASTRAL/AERIAL PLAN



(Source: Landgate - modified, 2015)

FIGURE 3
SURROUNDING CONTEXT



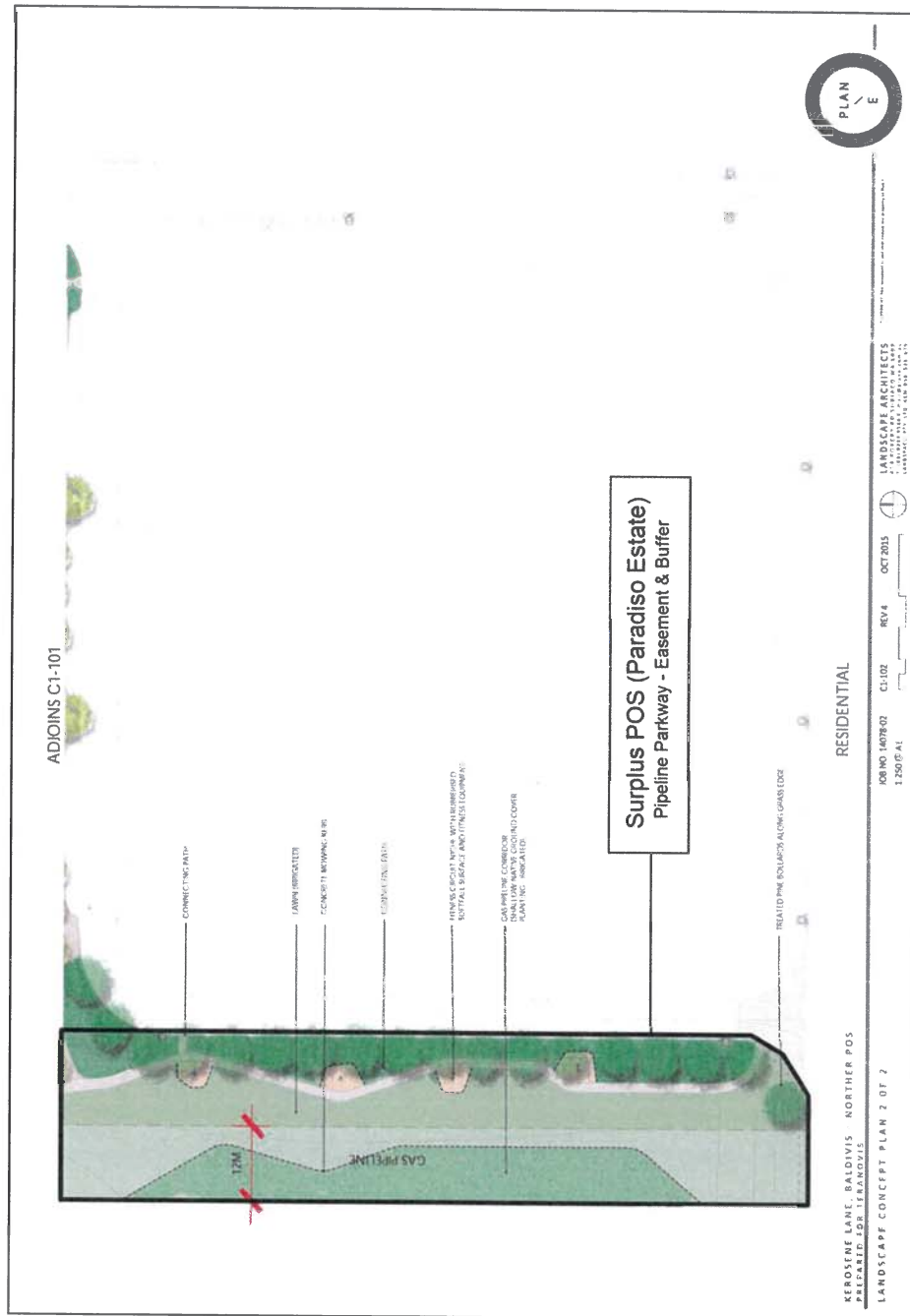


FIGURE 4B
SURPLUS POS – PARADISO ESTATE