Local Structure Plan

on behalf of Geographe Developments Pty Ltd

Lot 59 Mortimer Road, Wellard



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Prepared by:

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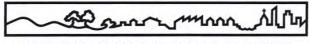


TABLE OF AMENDMENTS			
AMENDMENT NO.	SUMMARY OF THE AMENDMENT	AMENDMENT TYPE	DATE APPROVED BY WAPC

This Structure Plan is prepared under the provisions of the City of Kwinana Town Planning Scheme No. 2.

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON: 16 August 2019

Signed for and on behalf of the Western Australian Pl	anning Commission
- Carjee.	
an officer of the Commission duly authorised by the Commission duly author	
1augh Cox	Witness
19 August 2019	Date
16 August 2029 Date of Expiry	

EXECUTIVE SUMMARY

The Local Structure Plan Area (LSP Area) is described as Lot 59 Mortimer Road, Wellard with a total land area of 12.482 hectares. The land is situated on the south western corner of the intersection of Mortimer and Woolcoot Roads.

The LSP Area forms part of the City of Kwinana 'Wellard East (Urban) Cell', as defined by the draft District Structure Plan - Eastern Residential Intensification Concept. The 'Wellard East Cell' is bound by Kwinana Freeway to the west, Mortimer Road to the north, Millar Road to the south and Woolcoot Road to the east.

This Local Structure Plan (LSP) has been prepared to facilitate the urban development of the LSP Area. The subject site is located in the north eastern corner of the Wellard East Cell and is relatively isolated and independent of the surrounding land contained within this Urban Cell. It is therefore considered by the City of Kwinana that an LSP for this land is able to be progressed independently of the nearby landholdings.

A summary of the outcome for the LSP is detailed below in the Summary Table.

SUMMARY T	ABLE	
ITEM	DATA	STRUCTURE PLAN REF (Section No.)
Total area covered by the Structure Plan	12.48ha	
Area of each land use proposed:		
- Residential	2.22ha	
Special Use siteLifestyle Village for the Over 55 Years Community	3.0ha	
- Road and Drainage	1.19ha	
- Public Open Space (incl. Wetland)	6.07ha	
Estimated lot yield:		
- Freehold (single residential) lots	31	
- Grouped Dwellings (future survey-strata lots)	16	
- Special Use site (Lifestyle Village)	1	
Total estimated lot yield	48	
Estimated number of dwellings:		
- Residential	47	
- Special Use (Lifestyle Village)	120	
Total estimated number of dwellings	167	
Estimated Density Target		
Dwellings per gross urban hectare (South Metro Peel Sub-Regional Planning Framework) – includes Wetland	13.4 dwellings per gross ha	
Dwellings per site hectare (residential land use only,	31.99 dwellings per net	
including the Special use site and excluding Wetland)	residential ha	
Estimated population:		
- Residential (2.8 per household)	132	
- Special Use - Lifestyle Village (1.4 per household)	168	
Total estimated population	300	
Estimated area of public open space given over to:		
- Local Park	0.3404ha (2.73%)	
- Other Parks (Wetland Buffer)	1.1558ha (9.26%)	
- Other Parks (Restricted Use)	0.7954ha (6.37%)	
Estimated percentage of natural area	3.78ha (30.28%)	

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PART ONE – IMPLEMENTATION

1.0 STRUCTURE PLAN AREA

This Structure Plan applies to Lot 59 Mortimer Road, Wellard being the land contained within the inner edge of the line denoting the structure plan boundary on the Structure Plan Map. (Refer to **Plan 1**: Structure Plan Map.)

2.0 OPERATION

2.1	Operation	This Structure Plan commences operation on the date it is adopted by the Western Australian Planning Commission pursuant to Clause 22 of the <i>Planning and Development</i> (Local Planning Schemes) Regulations 2015.
2.2	Change or Departure from Structure Plan	Any change or departure from the Structure Plan is to be undertaken in accordance with Clause 29 of the <i>Planning and Development (Local Planning Schemes) Regulations</i> 2015.

3.0 STAGING

Stage 1:	The initial stage of development will involve the construction of the freehold residential lots; rehabilitation of the Wetland core; and development of the landscaped Wetland buffer and Public Open Space areas.
Stage 2:	The development of the Special Use site will be undertaken as a subsequent stage of development.

A plan depicting the indicative staging for the development is included at **Annexure 1**.

4.0 SUBDIVISION AND DEVELOPMENT REQUIREMENTS

4.1	Structure Plan Map	The uses, subdivision and development of the land are to generally to accord with the Structure Plan Map.
4.2	Residential Density	Residential densities applicable to the Structure Plan shall be those residential densities shown on the Structure Plan Map.
4.3	Public Open Space (POS) and	The areas of POS and Conservation Category Wetland shall be given up free of cost by the subdivider for public open

	Conservation Category Wetland (CCW)	space purposes and vested in the Crown as Reserves for Park, Recreation and Drainage.
		Public open space (POS) is generally to be provided in accordance with Plan 1 .
		The active POS area is to be constructed over the area of the land which is not classified as 'potentially contaminated'.
		An updated POS Schedule is to be provided at the time of subdivision for determination by the WA Planning Commission.
		Any shortfall of POS has been generally agreed to be provided as cash in lieu, as the City has recognised the difficulty in providing appropriate POS on the site. The method for determining the amount of cash in lieu of providing POS will be in accordance with S.153 the <i>Planning & Development Act 2005</i> .
		Refer to Table 1 : Public Open Space Schedule at Section 3.0 of Part Two - Explanatory Section of the LSP.
4.4	Other Regional Roads Reservation	The land identified on the LSP as being set aside as an Other Regional Road Reservation shall be given up free of cost by the subdivider for future road widening purposes and vested in the Crown as 'Reserve for Regional Roads'.
4.5	Retaining Wall Design	The retaining wall design is to be submitted and approved at subdivision application stage.
4.6	Contamination	Subdivision: Any soil and/or groundwater contamination must be remediated or managed and then validated to the satisfaction of the <i>Department of Water and Environmental Regulation</i> (DWER) prior to any development activities taking place on the site. This requirement specifically relates to the part of the site which has been identified as 'possibly contaminated – investigation required' pursuant to the provisions of the <i>Contaminated Sites Act 2003</i> . Special Use site: A geotechnical investigation is required to be undertaken prior to the submission of the Local Development Plan to confirm that the site is suitable for
		development of modular building construction and

		accessways. Alternatively, should conventional construction methods be proposed for the development of the site, appropriate remediation will be required to undertaken, to the satisfaction of the DWER.
4.7	Notifications on Title	 As a condition of subdivision approval, notifications are required on the lots identified as having a 12.5 BAL rating or higher advising of the increased building standards required in accordance with AS3959 (2009), in accordance with Section 70A of the <i>Transfer of Land Act 1983</i>. The Local Development Plan for the Special Use site is to include a requirement for notifications to be placed on the certificate of title binding the owner, their heirs and successors in title, to maintaining the occupancy restriction for at least one occupant to be over 55 years in age.

5.0 LOCAL DEVELOPMENT PLANS

5.1	Local Development Plans	Local Development Plans (LDP) are required to be prepared
		and implemented as a condition of subdivision approval,
		pursuant to Part 6 of the Planning and Development (Local
		Planning Schemes) Regulations 2015, for the lots as identified
		on the Structure Plan Map and detailed below.
		An LDP is required to be approved by the City of Kwinana for the Special Use (SU) site to be developed as a Lifestyle Village for the Over 55 Years Community, prior to Development Application approval being issued.
		The LDP shall address the following development requirements.
		 The permitted land use is 'Lifestyle Village for the Over 55 Years Community'.
		b. The overall design is to ensure the Lifestyle Village is developed in a coordinated and unified manner and managed into perpetuity, being retained in single ownership.

- c. The residential density for the site at Residential R40.
- d. A geotechnical investigation is required to be undertaken and submitted with the LDP to confirm that the site is suitable for development utilising modular building construction and accessways. Alternatively, should conventional construction methods be proposed for the development of the site, appropriate remediation will be required to be undertaken, to the satisfaction of the DWER.
- e. The development is to be supported by an approved Bushfire Management Plan (BMP).
- f. The built form of the development is to be designed for ageing in place, with dwellings to comply with the deemed-to-comply requirements of Part 5.5.2 of State Planning Policy 7.3 – Residential Design Codes (SPP 7.3).
- g. The LDP is to identity the construction method for the built form, i.e. light weight modular housing construction utilising above ground construction and limited ground disturbance; or traditional construction methods. The site remediation requirements are to be appropriately addressed to respond to the chosen construction method.
- h. The built form concept to be detailed on the LDP is to incorporate the following features:
 - The development is not to be provided in a gated street format. It is to maximise connection with the surrounding public street network and provide good linkages to the surrounding urban area.
 - The built form is to comprise of one (1) and two (2) bedroom, single storey, independent living dwellings with a small manageable area of private open space.
 - Each dwelling is to include a single bay carport or enclosed garage.

- A tandem visitor bay is to be provided for each dwelling, in front of each carport or enclosed garage.
- Each dwelling is to be accessed by an internal ten
 (10) metre wide vehicular accessway (including the provision of a footpath).
- High quality street lighting is required along the vehicle accessways to provide for a safe and secure living environment for the residents.
- The external perimeter of each dwelling, vehicle accessways and pedestrian paths are required to be appropriately landscaped with a range of plant species to provide visual interest and create a strong local character for the community.
- The internal design of each of the dwellings will include features which respond to the age group, such as: elevated stoves or wall ovens; grab rails in the toilets, showers and door thresholds; recessed sliding door sills; and elevated power points.
- The setback of the development on the SU site is to meet the requirements of SPP 7.3 and any specific requirements contained within the approved BMP.
- j. The development is to be designed with an appropriate interface to the adjoining Wetland buffer; POS and the surrounding road network, including the following features:
 - The Wetland Buffer is to be developed for passive recreational use associated with the SU site and the adjacent residential area. The Buffer is to incorporate a three (3.0) metre wide firebreak/path inside the Wetland buffer boundary, as part of the approved BMP requirements and to provide for passive recreational pursuits for the enjoyment of residential community.

- Visually permeable fencing is required along at least 50% of any dwelling boundary shared with the buffer to the Wetland and/or the area of active POS to allow for casual surveillance over the open space areas.

 A vehicle accessway is required to run along the southern edge of the Special Use site to provide
 - southern edge of the Special Use site to provide an appropriate interface to the area of active POS which adjoins the SU site, to the south.
 - 2. The lots which are suitable for grouped dwelling development.
 - 3. All lots subject to a BAL rating of 12.5 or higher.

OTHER REQUIREMENTS

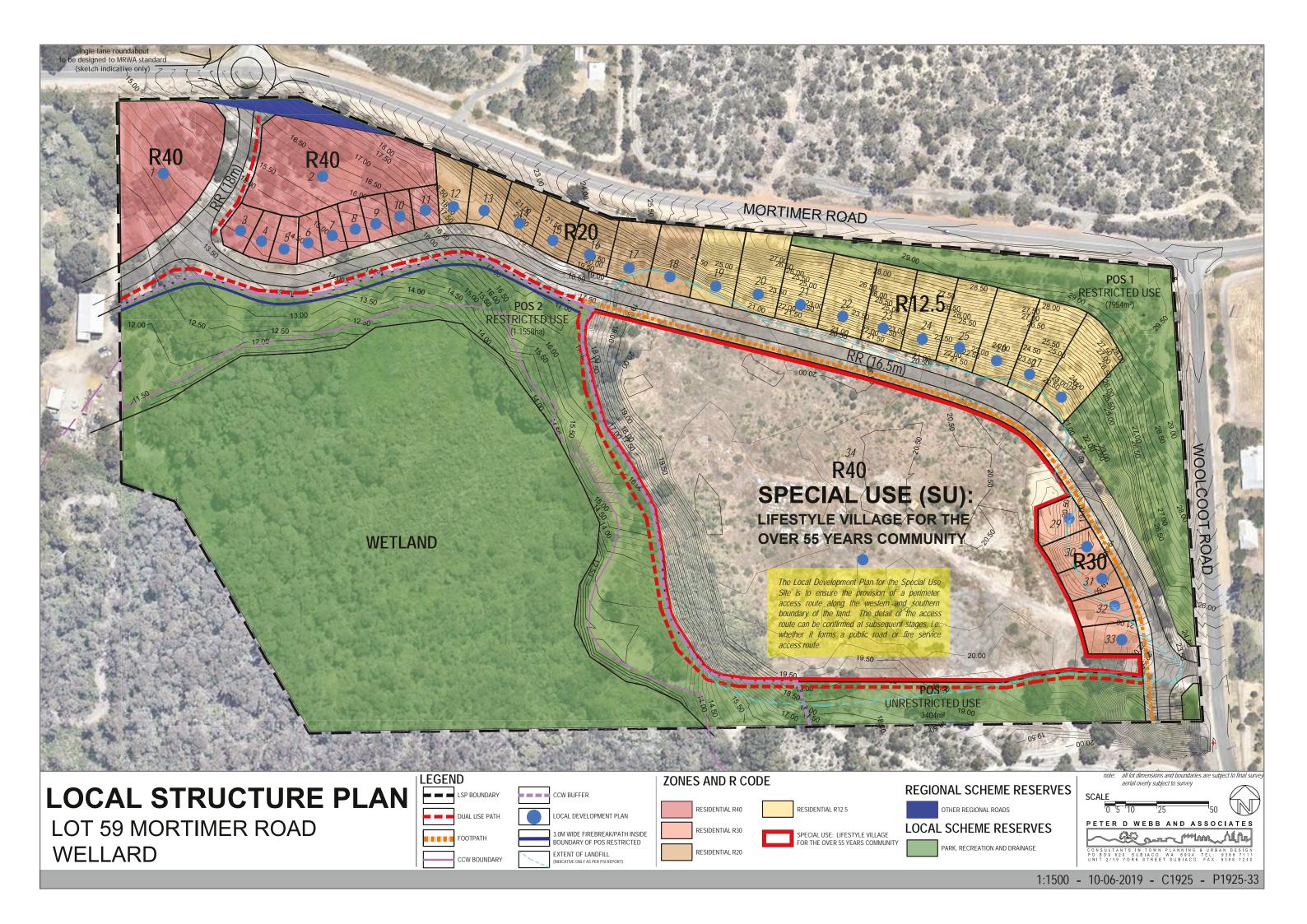
6.1	Construction of Buildings in Bushfire Prone Areas	This Structure Plan is supported by a Bushfire Management Plan (BMP). The development of the lots identified in the BMP as having a BAL 12.5 rating or higher are required to comply with the increased construction standards, pursuant to AS 3959-2009 Construction of buildings in bushfire prone areas.
6.2	Development Contributions	 Under the City of Kwinana Town Planning Scheme No. 2, the following development contribution arrangements are required: Development Contribution Plan 2 – Wellard East Standard Infrastructure. Development Contribution Plan 7 – Wellard/Bertram – Standard Infrastructure (District Sporting Ground). Development Contribution Plan 11 – Wellard East Community Infrastructure.

7.0 ADDITIONAL INFORMATION

7	' .1	Conditions of Subdivision	The Council shall recommend to the Western Australian
		Approval	Planning Commission that a condition be imposed on the
			granting of subdivision approval to respond to the following as
			identified by the structure plan.

Landscape Master Plan (City of Kwinana);		
Detailed Site Investigation (City of Kwinana);		
3. Urban Water Management Plan (City of Kwinana);		
 Mosquito and Midge Management Plan (City of Kwinana); and 		
5. Wetland Management Plan (City of Kwinana).		

PLAN 1 Structure Plan Map



PART TWO - EXPLANATORY SECTION

1.0 PLANNING BACKGROUND

1.1 INTRODUCTION AND PURPOSE

A Local Structure Plan (LSP) has been prepared to facilitate the urban development of Lot 59 Mortimer Road, Wellard. The subject site is located in the north eastern corner of the Wellard East Cell and is relatively isolated and independent of the surrounding urban land by an extensive Wetland, being referred to as the Mortimer Road Wetland and the bounding road network. It is therefore considered by the City of Kwinana that an LSP for this land can be progressed independently of the surrounding landholdings.

The LSP has generally been prepared in accordance with the fundamental objectives and principles of the overarching guiding strategic strategies, including (but not limited to) the *Jandakot Structure Plan* and the draft *Eastern Residential Intensification Concept District Structure Plan*.

The design of the LSP has been prepared to accord with the main objectives of *Liveable Neighbourhoods* (WAPC, 2009) and in doing so, responds to the natural and manmade physical attributes of the land.

The LSP proposes a high-quality medium density residential and special use development which is designed to provide for maximum interaction with, and passive surveillance over, the adjacent Wetland.

1.2 LAND DESCRIPTION

LOCATION

The Local Structure Plan Area (LSP Area) is located approximately 36 kilometres from the Perth Central Business District and forms part of the City of Kwinana 'Wellard East (Urban) Cell', as defined by the *draft District Structure Plan - Eastern Residential Intensification Concept*.

The 'Wellard East Cell' is situated in the South West Corridor of Perth and is bound by Kwinana Freeway to the west, Mortimer Road to the north, Millar Road to the south and Woolcoot Road to the east.

AREA AND LAND USE

The LSP Area has a total land area of 12.482 hectares and is situated on the south western corner of the intersection of Mortimer and Woolcoot Roads. The LSP Area enjoys a primary frontage to Mortimer Road of 518.77 metres, a secondary frontage to Woolcoot Road of 218.17 metres, a western side boundary of 339.37 metres and southern rear boundary length of 429.7 metres. (Refer to **Figure 1**: Location Plan.)

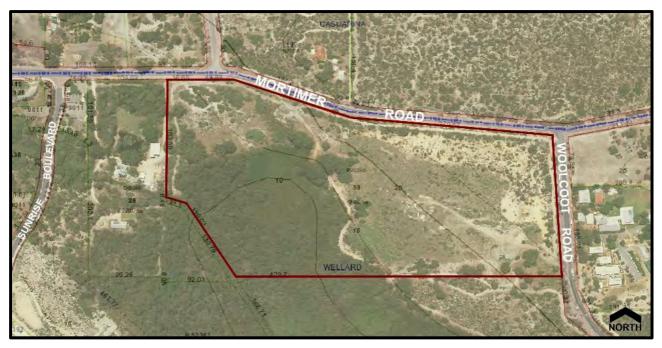


Figure 1: Location Plan

The LSP Area currently comprises of vacant land. It is known to have historically been used as a sand quarry and for a short while a portion of the site was used for landfill for construction and demolition waste only. The following list provides an understanding of the previous known uses of the site, which activities have been identified by *Emerge* as part of its review of historical aerial photography on the land.

- Prior to 1953 and up until 1965: The land was used for Rural Residential purposes involving agricultural use of the northern portion of the Wetland. A number of now demolished supporting buildings existed at that time.
- From 1965 to the early 1970s: There is no clear evidence of use on the land.
- By 1974 and completed sometime before 1985: Quarrying activities occurred on the land.
- Between 1985 and 2003: There is no visible evidence of land use.
- Between 2003 and completed sometime before 2006: Some landfilling operations (construction and demolition waste) occurred over portion of the site.
- 2007: Soil stockpiling was undertaken on the land. As a result of this stockpiling (the majority of which soil has since been removed), the site was classified by the then DEC as 'Possibly contaminated investigation required', pursuant to the provisions of the Contaminated Sites Act 2003.

The south western portion of the land comprises of Wetland, known as the Mortimer Road Wetland. The Wetland component of the land covers approximately 3.78 hectares of the overall site area. The Wetland forms part of the regional drainage network and is used for detention capacity for stormwater flowing through the Peel Sub N2 Drain, which drain runs along the southern section of

the western side boundary of the LSP Area. The water exits the Wetland to the south and continues further south connecting to the Peel Main Drain to the south west of the site. The Wetland is degraded in part and will be the subject of remediation and protection as part of the development of this land.

LEGAL DESCRIPTION AND OWNERSHIP

The LSP Area is owned by *Geographe Developments Pty Ltd* and is described on Certificate of Title Volume 2034, Folio 690 as Lot 59 (SN 136) Mortimer Road, Wellard on Deposited Plan No. 202645. (Refer to **Annexure 2**: Certificate of Title and Deposited Plan.)

1.3 PLANNING FRAMEWORK

ZONING AND RESERVATIONS

Metropolitan Region Scheme

The LSP Area is zoned 'Urban', pursuant to the Metropolitan Region Scheme (MRS).

A portion of Mortimer Road adjacent to the northern boundary of the LSP Area at its western end is classified as 'Other Regional Road'. A small portion of this reservation extends into the LSP Area. This area is identified on the LSP Map and is to be given up free of cost for vesting in the Crown for future road widening purposes.

City of Kwinana Town Planning Scheme No. 2

The LSP Area is zoned 'Development', pursuant to the City of Kwinana *Town Planning Scheme No. 2* (TPS 2). At Clause 6.15.2 - Development of TPS 2, it is stated that the subdivision, use and development of land is generally to be undertaken in accordance with a Structure Plan. The Structure Plan is required to be prepared in accordance with the provisions of Clause 16 of the *Planning and Development (Local Planning Schemes) Regulations 2015.* The Structure Plan meets with the principles of the Development Zone of TPS 2 and complies with the requirements of the Regulations.

A portion of the land is also identified as being contained within a Landscape Protection area. The extent to which the Landscape Protection area is delineated on the Zoning Map generally aligns with the boundaries of the Wetland located in the south western corner of the LSP Area. At Clause 6.16.2 – Areas of Landscape Protection of TPS 2, the City's objective is stated as being to '...conserve areas of natural ecological value or landscape amenity whilst at the same time allowing development as provided in the Zoning Table of the Scheme'. The design of the LSP recognises the need to conserve the Wetland and ensures it is protected.

The LSP Area is also identified as being included as part of the Wellard East Development Contribution Area 2 (DCA 2) for Wellard East Standard Infrastructure contributions; Development Contribution Area 7 for Wellard/Bertram Standard Infrastructure contributions (District Sporting

Ground); and Development Contribution Area 11 (DCA 11) for Wellard East community infrastructure contributions.

REGIONAL AND SUB-REGIONAL STRUCTURE PLAN

Jandakot Structure Plan (WAPC, August 2007)

The *Jandakot Structure Plan* provides strategic guidance for future development and management of environmental issues within the South West Corridor and specifically, the southern section of the land surrounding the Jandakot Underground Water Pollution Control Area.

The Structure Plan identifies the Wellard East Cell as being situated within the locality identified as 'Area 4: Casuarina/Wellard'. It is estimated that the ultimate population of 'Area 4' will comprise a total of 8190 people. Further, that 4990 (60%) of the total estimated population (8190) will be accommodated within this locality by 2026.

The majority of the Wellard East Cell is identified as being suitable for medium term urban development. However, it recognised that development in this location is occurring in the short term due to the recent progression of residential development on a number of landholdings within Wellard East.

The Structure Plan identifies the LSP Area as containing a portion of Conservation Category Wetland in the south western corner of the land, with the remaining area being identified as suitable for (medium term) residential development.

The proposed LSP is consistent with the objectives and intent of this Strategy.

Eastern Residential Intensification Concept District Structure Plan (ERIC)

The City's draft *Eastern Residential Intensification Concept District Structure Plan* (ERIC) provides a strategic planning framework for guidance in the preparation of Local Structure Plans, which further develops the recommendations of the *Jandakot Structure Plan*.

The design of the LSP Area generally accords with the design principles outlined in ERIC, which identifies the site as being suitable for Residential land use with density codes of R25 and higher; with the Wetland being reserved for conservation.

The main departure from the planning framework relates to the identification in ERIC of part of the land for Community Facilities and Local/District Recreation. The City advised through the LSP process that the District Playing Field was no longer required to be accommodated on the land due primarily to a reduced population forecast for the Wellard East Cell. Based on the reduced population predicted for the Cell, the City has determined that there is a sufficient amount of POS allocated without the need for this additional District level recreational area and the associated community facility.

The agreed alternative land use for this part of the site is Special Use (Over Lifestyle Village for the Over 55 Years Community).

Wellard East - Local Structure Plan (Cardno, August 2011)

A Local Structure Plan has been prepared for the Wellard East Cell, which Structure Plan provides Planning framework for the entire Cell with a specific focus on Lot 201 Mortimer Road and Lot 379 Millar Road. The Local Structure Plan identifies the land uses for the LSP Area incorporating the entire Wellard East Cell. These land uses identified for the LSP Area are similar to the City's ERIC, being that the site is identified for medium density residential development with an area identified for the now superseded requirement for part of the land to be developed as a District Oval.

It is noted that the layout for the LSP Area as shown on this LSP is indicative only.

PLANNING STRATEGIES

Directions 2031 and Beyond (WAPC, August 2010)

Directions 2031 and Beyond: Metropolitan Planning Beyond the Horizon (Directions 2031) was published in 2010 and outlines the Planning framework for the future growth of the Perth and Peel Regions of Western Australia.

The Wellard East Cell is identified in *Directions 2031* as forming part of the 'south west sub-region', which sub-region comprises the local government areas of the Cities of Kwinana, Cockburn and Rockingham.

Directions 2031 provides the spatial network for future urban expansion within the south west subregion which is focused on accommodating urban growth around the primary 'Activity Centre' of Rockingham. The LSP Area is identified as *'urban deferred zone undeveloped'* as it was released in 2010, prior to the MRS rezoning of the land to Urban.

The proposed LSP Area accords with the fundamental principles of *Directions 2031* by providing for residential development which connects to an existing interconnecting movement network and proposes Wetland retention and conservation.

It is projected that an additional 41,000 dwellings will be required in the south west sub-region to accommodate a forecast population of 278,000 by 2031.

Perth and Peel @3.5million and South Metropolitan Peel Sub-Regional Planning Framework

The LSP Area forms part of the *South Metropolitan Peel Sub-Regional Planning Framework* (WAPC, 2015) which identifies the land as 'Urban undeveloped land' and requires new areas to adhere to a target of 15 dwelling units per gross hectare of Urban zoned land, as established in *Directions* 2031.

The subdivision design concept is included on the LSP Map. The concept includes a range of density codes between Residential R12.5 and R40. It is anticipated that a total of 34 lots, which

will include with two (2) Grouped Dwelling sites (with the opportunity for up to 16 dwellings) and the Special Use site - Over 55 Years Lifestyle Development (with the opportunity approximately 120 dwellings). This suggests an approximate dwelling yield of 167.

The LSP Area therefore has the potential to create approximately 48 lots (including the SU lot). This reaches a residential density target of 13 dwellings per gross hectare of urban zoned land. The reason the density target is not reached is due to the land area required to be set aside for Reserves for Parks, Recreation and Drainage. Should this land not be included in the density target calculation, the LSP exceeds the requirement, arriving at 32 dwellings per net residential hectare.

STATE PLANNING POLICIES (SPP)

SPP 2 Environment and Natural Resources

A portion of the Mortimer Road Wetland extends into the LSP Area, which is classified as a Conservation Category Wetland. In accordance with the objectives at Part 4 of SPP 2 – *Environmental and Natural Resources*, the Wetland is to be conserved and enhanced through rehabilitation and protected into perpetuity as a Local Scheme Reserve (Parks, Recreation and Drainage).

A portion of the degraded part of the site and not encroaching into the Wetland Core is classified as potentially contaminated having been used in the past for landfill. This part of the site is to be appropriately remediated in accordance with the objectives of this Policy.

SPP 2.1 Peel-Harvey Coastal Plain Catchment

The LSP Area is located within the boundaries of the Peel-Harvey Coastal Plain Catchment. The objectives of SPP 2.1 – *Peel-Harvey Coastal Plain Catchment* are therefore relevant to this LSP. In particular, the objectives are addressed in the *Local Water Management Strategy* (LWMS) to ensure the land use change in this location does not adversely impact on the Peel-Harvey Estuarine System.

SPP 3 Urban Growth and Settlement

The LSP Area applies the relevant objectives of SPP 3 – *Urban Growth and Settlement* in regard to creating a sustainable residential development within a designated growth area. The LSP is designed to also ensure that the development creates an opportunity to protect and rehabilitate the section of the Mortimer Road Wetland which extends across the land, ensuring its high biodiversity values and natural environmental significance is preserved.

SPP 3.7 Planning in Bushfire Prone Areas

The LSP Area is identified as being within a 'bushfire prone area' on the *Department of Fire and Emergency Services* Mapping (2019) and is therefore subject to the requirements of SPP 3.7 – *Planning in Bushfire Prone Areas* and the respective Guidelines.

A Bushfire Management Plan (BMP) has been prepared in accordance with the current requirements. The BMP confirms that the post-development compliance is able to be achieved against all applicable bushfire related legislation, policy, standards and guidelines. The specific requirements of the BMP in relation to specific lots within the LSP Area are to be addressed as part of the LDP process.

SPP 5.4 Draft State Planning Policy 5.4 – Road and Rail Noise (September 2017)

A short section of the LSP Area frontage (approximately 136m) to Mortimer Road is classified as 'Other Regional Road' and therefore the objectives of draft SPP 5.4 and the associated Implementation Guidelines are required to be considered in relation to the LSP proposal.

The design of the LSP has taken into consideration the objectives of the draft Policy and the Implementation Guidelines. In particular, the Noise Exposure Forecast Worksheet at Annexure 1 of the Guidelines has determined that the Forecast Noise Level at the nearest future potentially noise sensitive premises is 55 or less (LAeq, Day). The outcome therefore being that potential noise exposure along the effected section of Mortimer Road does not warrant any measures being undertaken in relation to the Policy requirements.

Liveable Neighbourhoods (WAPC, January 2009)

The LSP Map is designed to respond to the principle aims, objectives and relevant requirements of *Liveable Neighbourhoods*.

In particular, the LSP incorporates the following *inter alia* design element requirements of *Liveable Neighbourhoods* in regard to road network design, lot density range and public open space.

- The proposed road network ensures maximum connectivity with the existing and proposed surrounding residential development within the Wellard East Cell.
- The minimum separation between road centre lines between Woolcoot Road and the proposed internal access road exceeds the standard Liveable Neighbourhoods requirements of 20m.
- A pedestrian footpath and dual use path network are proposed through the development to ensure the proposed development provides strong internal and external walkable linkages connecting Mortimer and Woolcoot Roads, the Wetland buffer and the area of public open space.

- The layout of the lots takes advantage of the elevated land along the northern and eastern boundaries with a number of lots overlooking the Wetland. This design offers a unique and attractive medium density housing option within the Well East locality.
- The residential lots and special use site are designed to orientate towards public open space and the Wetland, which enhances the amenity of the area and provides an opportunity for passive surveillance.
- The orientation of the lots allows for environmentally and energy efficient housing design.
- The area of land set aside for public open space is (in the circumstances) sufficient for the LSP area.
- A Local Water Management Strategy has been prepared, which includes appropriate
 measures to manage stormwater run-off to protect and enhance the environmental values
 and physical characteristics of the area. The key elements of the water management
 strategy are summarised at Section 3.0 of this report.
- The development of this site will ensure each lot is provided with essential infrastructure servicing, including underground power, sewer, water, public lighting and telecommunications.
- The LSP identifies the need for Local Development Plans (as a condition of subdivision approval) to be approved for all lots identified on the LSP Map; including the Grouped Dwelling (R40) sites, the Special Use site; and the lots subject to BAL-12.5 ratings or higher.

2.0 SITE CONDITIONS AND CONSTRAINTS

A number of site-specific investigations have been undertaken by *Emerge Associates* (Emerge) to identify the environmental characteristics of the site to support the LSP and inform the design to ensure the natural assets of the land are protected. The environmental assessments undertaken are listed below.

- Flora, Vegetation and Wetland Assessment, April 2012 (Annexure 4);
- Preliminary Site Investigation, May 2012 (Annexure 7);
- Groundwater Investigation, February 2013; and
- Landfill Extent Assessment, June 2013.

In addition to these investigations, Emerge obtained approval from the (then) Department of Environment and Conservation (DEC) on December 3, 2012 for a modification to the *Geomorphic Wetlands Swan Coastal Plain* Dataset for the Conservation Category Wetland UFI No. 12918. (Refer to **Annexure 3:** Revised Geomorphic Mapping of Wetland.)

2.1 BIODIVERSITY AND NATURAL AREA ASSETS

The Flora, Vegetation and Wetland Assessment characterises the LSP Area as comprising of Banksia low woodlands on leached sands, woodlands of tuart (Eucalyptus gomphocephala), jarrah (Eucalyptus marginata) and marri (Corymbia calophylla) on less leached soils and Melaleuca swamps.

The vegetation across the site is identified as ranging from 'Completely Degraded' to 'Excellent' Condition. The areas of 'Parkland Cleared' are 'Completely Degraded' and comprise 8.24 hectares (66%) of the total LSP Area. The mapped plant communities ranged from 'Degraded' to 'Excellent' condition and occupied the remaining 4.3 hectares (36%).

No priority or Threatened Flora were recorded on the site.

The LSP Area includes two (2) wetland systems which includes a Conservation Category Wetland (CCW) (Dampland) UFI No. 12918 which exists in the south west corner of the land and a small portion of Resource Enhancement Wetland (REW) (Sumpland) UFL No. 15801 which also exists in the west of the land. Emerge identified inconsistencies with the wetland boundaries and the mapped geomorphic wetland boundary of the Conservation Category Wetland with some areas no longer retaining native wetland vegetation due to clearing. As a result, Emerge obtained approval from the DEC in 2012 to revise the geomorphic mapped wetland boundary to reflect the extent of the existing wetland boundaries. (Refer to **Annexure 3**: Revised Geomorphic Mapping of Wetland.)

The following recommendations of the environmental investigations are to be actioned as part of the urban development of the LSP Area.

Retention and buffering of wetland dependent vegetation within CCW UFI No. 12918;

- Conduct a field survey in spring to verify presence or absence of *Diuris micrantha* (Threatened) and *Schoenus capillifolius* (Priority 3);
- Removal of disturbing factors within the wetland such as rubbish and aggressive weeds including Japanese Pepper, Tagasaste, Fig, Arum Lily and Blackberry; and
- Retention of remnant large Eucalyptus rudis and Corymbia caliophylla trees within the 'Parkland Cleared' areas, where possible.

2.2 LANDFORM AND SOILS

The topography of the LSP Area has a gradual rise in a south-westerly to north easterly direction from RL 10.0 metres AHD to RL 17.0 metres AHD and rises steeply to approximately RL 29.0 metres AHD along the northern and eastern boundaries of the land. (Refer to **Annexure 5**: Topography of LSP Area.)

The soil condition varies across the site, with different conditions identified within the Wetland (swamp) area; the area formerly used for land fill; and the natural sand areas. (**Annexure 6**: Geotechnical Investigation.)

The natural soil profile of the site is identified in the exposed batters of the former sand quarry excavations and is 'light yellow sand' which is consistent with the Bassendean Sand profile predicted by the geological mapping. (Refer to **Annexure 7**: Preliminary Site Investigation.)

Contaminated Site Investigations and Remediation

The site is classified as 'Possibly contaminated – investigation required' pursuant to the provisions of the Contaminated Sites Act 2003'. This classification is based upon information obtained by the (then) DEC relating to unauthorised filling/soil stockpiling activities undertaken by a previous owner of the site, although not directly associated with the historic operation of a licenced inert landfilling operation.

The LSP area has historically supported agriculture which involved the clearing of native vegetation from most of the site including part of the Wetland area, a sand quarry, an inert landfill and waste depot, and has been vacant supporting no active land use since around 2006. The current landowner acquired the site in 2010 with the intention of progressing residential development in accordance with its zoning and the strategic planning context available at the time.

Given the range of historic land uses within the site, and in order to understand the potential for soil and/or groundwater contamination, Emerge Associates was engaged to undertake the necessary investigations, including the *Preliminary Site Investigation* (PSI).

While the primary basis of the historic site contamination concerns related to the ASS stockpiling rather than the operation of the inert landfilling facility, given the site classification by the (then) DEC, future detailed contamination investigations are to be undertaken to address the contamination status of the entire site. In order to resolve the site classification and associated

Memorial, the investigation will consider the proposed change in land use (facilitated through the LSP and resultant subdivision) and specifically address the known occurrence of ACM within the site, in addition to a range of other potential contaminants.

Site specific contamination investigations undertaken to date indicate that site remediation is unlikely to require the full removal of historically landfilled materials. With some remediation to be undertaken by the current landowner as part of subdivision works, Lot 59 will be suitable for residential development and the development of the Special Use site without onerous ongoing management requirements.

Notwithstanding this, given the (then) DEC's classification and the associated Memorial on the Title, an auditor approved Detailed Site Investigation (DSI)) is to be undertaken, as a condition of subdivision approval. The contaminated site investigation and any remediation requirements are to be resolved to the satisfaction of a DWER accredited contaminated site auditor, and then ultimately to the satisfaction of DWER, prior to the issuing of the new Certificates of Title.

Acid Sulfate Soils

The Department of Water and Environmental Regulation classifies the risk of ASS over the LSP Area as:

- south western corner of the site (corresponding with the extent of the Wetland) as a Class
 1 risk with high to moderate risk of ASS being present within three (3.0) metres of the natural surface; and
- the remainder of the site as a Class 2 with a moderate to low risk of ASS occurring within three (3.0) metres of the natural surface.

Emerge indicates that the remaining area which is identified as being Class 2 is likely to be inaccurate as the depth to groundwater observed on the site and the original ground elevation prior to the sand mining and filling indicates that the ASS beneath the site is unlikely to have been disturbed as part of previous site activities.

2.3 Groundwater and Surface Water

Groundwater

The DWER Hydrogeological Atlas indicates that the groundwater beneath the site is described as a 'multi-layered system' comprising:

- Perth Superficial Swan aquifer;
- Perth Leederville (confined) aquifer; and
- Perth Yarragadee North (confined) aquifer.

The Perth Groundwater Atlas identifies the depth to groundwater is likely to be:

- 13.0 metres AHD (approx.) in the north eastern corner of the site;
- 11.0 metres AHD (approx.) at the western edge of the filled area; and
- 9.0 metres AHD (approx.) in the south western corner of the site.

Monitoring of the groundwater on site has been undertaken. In March 2012, *Emerge* inspected the wells and determined that the groundwater level was approximately 14.3 metres AHD in the north eastern portion of the site and reduced to approximately 10.7 metres AHD near the Wetland in the south of the site.

The groundwater flow direction inferred by the groundwater levels is south westerly, which is consistent with the regional groundwater flow direction.

The groundwater ultimately flows towards the Wetland located in the south west of the site which is connected to other interdunal wetlands via the PSN2D and subsequently the Peel Main Drain.

The site is located within the Serpentine Groundwater Area. However, it is not located in a Public Drinking Water Source Area (PDWSA). Further, no registered bores are identified within the site, as determined by *Emerge* in its search of the DoW Registered Groundwater Bore Database.

Surface Water

Surface water was not visible by *Emerge* during its site inspection in March 2012. It is however recognised that the Wetland in the south western corner may contain surface water which is not visible due to the presence of dense vegetation. *Emerge* did identify saturated soils within the Wetland during the vegetation assessment.

Emerge found no evidence of surface water flow paths within the site, other than the Wetland. Surface water flows are unlikely on the site because of the moderate to high permeability of the natural superficial soils. It is expected that surface water will only occur infrequently during excessive storm events. Any such surface water would potentially flow in a south westerly direction. It is noted that surface water may also pool during high rainfall as a result of the unknown properties of the fill area.

Emerge concludes that it is not expected that there will be any substantial surface water flow onto the site other than via the PSN2D.

2.4 BUSHFIRE HAZARD

A *Bushfire Management Plan* (BMP) has been prepared by Bushfire Prone Planning (September 2018) and approved by DFES and the City of Kwinana. A copy of the written approvals of both agencies are attached with the BMP.

The BMP confirms that post-development compliance can be achieved against all applicable bushfire related legislation, policy, standards and guidelines.

The Bushfire Attack Level (BAL) Contour Map contained within the BMP identifies that the lots as having indicative BAL ratings of R12.5 or higher. The lots are therefore subject to Local Development Plans to specific the requirements for individual lots in terms of building setbacks and requirements for increased construction requirements for dwellings in accordance with AS3959.

A copy of the BMP which includes the complete recommendations for fire management of the proposed LSP area is attached at **Annexure 8**.

2.5 HERITAGE

Aboriginal Heritage

A search of the *Department of Aboriginal Affairs* Inquiry System has been undertaken. No Registered Aboriginal Heritage Sites are identified as being present within the LSP Area.

The Department of Aboriginal Affairs has identified 'Another Heritage Place' (Site No. 3627) as being located on the eastern portion of the LSP Area which encompasses the eastern portion of the site as well as the adjacent property to the north and east of the site. The status of this site is identified in the Aboriginal Heritage Inquiry System as 'Stored Data' which means that it has been assessed as not being an Aboriginal Site under the *Aboriginal Heritage Act 1972*. (Refer to **Annexure 9**: Aboriginal Heritage Site Record.)

European Heritage

A search of the available heritage registers has been undertaken.

No European heritage sites have been identified as being located within the boundaries of the LSP Area.

3.0 LOCAL STRUCTURE PLAN

The LSP has been designed to appropriately respond to the opportunities and constraints of the site and importantly, seeks to rehabilitate and conserve the portion of the Mortimer Road Wetland as part of the urban development of the land.

LAND USE

The proposed land uses and subdivision design concept are illustrated on the attached LSP Map. (Refer to **Plan 1**: Local Structure Plan Map.)

The land uses include Residential (R12.5, R20, R30 and R40), Special Use site (at a density of R40 for development as an Over 55 Years Lifestyle development); and Parks, Recreation and Drainage Reservations.

The LSP design accords with the guiding principles of *Liveable Neighbourhoods*; the City's draft District Structure Plan (ERIC) and the *South Jandakot Structure Plan* by proposing a medium density residential development adjacent to and overlooking the Mortimer Road Wetland.

RESIDENTIAL

The subdivision design concept is included on the LSP Map. The concept includes a range of density codes between Residential R12.5 and R40. It is anticipated that a total of 34 lots, which includes two (2) Grouped Dwelling sites (with the opportunity for up to 16 dwellings) and the Special Use site - Over 55 Years Lifestyle Village development (with the opportunity approximately 120 dwellings). This suggests an approximate total dwelling yield of 167.

As illustrated on the LSP Map, the development is orientated towards the Wetland. The lot layout includes dwelling development on the area of the land comprising the banks of the former sand quarry. These banks of the former quarry provide an excellent and unique opportunity to create a residential development with elevated views, offering a high level of interaction with, and passive surveillance over, the adjacent Wetland and Special Use site. Sections and Perspectives of the proposed development have been prepared to illustrate the overall development outcome over this elevated section of the site. (Refer to **Annexure 10**: Sections and Perspectives.)

The land use and development requirements for the lots the subject of the LSP are to be the subject of Local Development Plans (LDPs). The LDPs will provide for further detailed guidance of the development of individual lots. The LDPs are required for various reasons being to inform the development of the two (2) grouped dwelling sites; address the BAL ratings assigned to the lots; and the detailed design layout for the Special Use site.

MOVEMENT NETWORK

The design incorporates a permeable road network which provides a strong connection between Mortimer and Woolcoot Roads and future development to the south. Further, the creation of the road connection to Mortimer Road will enable the permanent road connection to be established between Mortimer Road and the land currently being developed further south by Armana Holdings, in accordance with the earlier prepared Wellard East Local Structure Plan.

A dual use path is proposed along the buffer edge of the Wetland and adjacent to the Special Use site. This dual use path is to connect to the internal road network, extending south from Mortimer Road and to Woolcoot Road to the east of the land. In addition, a local pedestrian footpath system is proposed on one side of the internal road system. The proposed pathway system is illustrated on the LSP Map.

A **Transport Impact Assessment** (TIA) has been undertaken by *Shawmac* (September 2018). The assessment concludes that the transport and pedestrian movement network (internal and external) as illustrated on the LSP Map is capable of supporting the traffic flows generated from the development. A complete copy of the TIA is attached at **Annexure 11**.

PUBLIC OPEN SPACE

The LSP Map includes an appropriate amount of public open space (POS), taking into consideration the site constraints and requirements of the *City of Kwinana*.

The gross subdividable area, excluding the area of the Wetland (3.78ha) and excluding surplus restricted use open space, arrives at a total of 6.841 hectares.

The required public open space at 10% of the gross subdividable area arrives at **6841m**².

In order to meet the requirements of *Liveable Neighbourhoods*, the subdivision of the land is required to provide 8% active POS and 2% restricted POS, which based on 6.841 hectares arrives at a total of 5473m² of unrestricted (active) POS and 1368m² of restricted POS.

The LSP area provides 3404m² of unrestricted (active) use POS, located at the southern end of the LSP area.

The LSP area provides 1.9512 hectares of restricted use open space. The surplus restricted use open space (1.614ha) has been deducted from the gross subdividable area.

In total, the LSP area provides 4687m² of public open space. Therefore, the LSP area is 1729m² short of the public open space requirement. (Refer to **Table 1**: POS Schedule)

TABLE 1: PUBLIC OPEN SPACE SCHEDULE			
SITE AREA		12.482ha	
DEDUCTIONS:			
Environmental:			
CCW and REW Wetland	3.78ha		
Infrastructure:			
Other Regional Road Reservation, widening	0.0464ha		
Other:			
Surplus Restricted POS (not credited)	1.81441ha		
TOTAL DEDUCTIONS		5.641ha	
GROSS SUBDIVIDABLE AREA		6.841ha	
TOTAL POS Requirement (10%):		6841m ²	
8% unrestricted POS		5473m	
2% restricted POS		1368m	
Public Open Space contribution:			
POS – Restricted:			
- Wetland Buffer	1.1558ha		
 Landscaped Buffer Reservations to Mortimer and Woolcoot Roads 	0.7954ha		
Total Restricted use POS	1.9512ha		
Total Restricted POS credited to a maximum of 2%		1368m ²	
Surplus Restricted POS Not Credited	1.8144ha		
POS – Unrestricted:			
- Active POS	3404m²		
Total Unrestricted use POS:		3404m ²	
TOTAL POS PROVISION:		4687m ²	
Shortfall		1729m ²	

The shortfall of POS has been generally agreed to be provided as cash in lieu, as the City has recognised the difficulty in providing appropriate POS on the site. The method for determining the amount of cash in lieu of providing POS will be in accordance with S.153 the *Planning & Development Act 2005*.

The detailed management of the POS area to ensure no impact of nutrient runoff into the Wetland is to be addressed through the Wetland Management Plan, at subdivision stage.

WETLAND AND BUFFER

The LSP area includes a Conservation Category Wetland (CCW), referred to as the 'Mortimer Road Wetland'. The area that would comprise a generic 50 metre buffer surrounding this Wetland has been cleared of native vegetation, historically filled with materials associated with the operation

of the inert landfilling operation, and currently supports infestations of invasive exotic weed species. There are no wetland or conservation values which exist within the nominal 50m buffer to the Wetland.

The buffer to the Wetland as illustrated on the LSP Map is the outcome of extensive discussions with the City and the (then) *Department of Parks and Wildlife* (DPaW), now the *Department of Biodiversity, Conservation and Attractions* (DBCA). The outcome of these discussions being that the City and the now DBCA recognise that the buffer is devoid of any conversation value and as such, both agencies support the current edge of the Wetland as forming the boundary of the area to be managed exclusively for conservation purposes. On this basis, the City and the DBCA support the reduced Buffer area as illustrated on the LSP, which is to be landscaped with clumped native vegetation and mulched areas, providing an attractive area of restricted open space for the enjoyment of the future residents.

Given that the City is a key stakeholder in the long-term management of the Wetland and surrounding areas (including any Wetland buffer), specific consultation was undertaken regarding the LSP, the Wetland, and the City's view on an appropriate Wetland management approach. The following list provides a summary of the agreed management outcome for the Buffer area.

- 1. The current edge of the Wetland (as defined by the existing wetland mapping) is to form the boundary of the area to be managed exclusively for conservation purposes.
- 2. There are no wetland buffer or conservation values currently existing within the nominal 50 metre wetland buffer area given the extent of historic disturbance.
 - There is a strong preference against the buffer area (or any other area within the site other than the wetland) being rehabilitated/revegetated, as this is likely to present long-term management liabilities for the *City of Kwinana*.
- 3. The area that is to comprise the Wetland buffer under the LSP is to be landscaped adopting the following principles:
 - All obvious signs of waste and rubble to be removed and any site remediation works to be completed as per the contaminated site investigation and remediation process.
 - The existing landform be re-contoured, to be 'flattened out' and ideally aim to achieve a maximum 1 in 6 grade from the Wetland boundary to adjacent areas at the edge of the road reserve.
 - All areas (except for the Wetland) to be extensively 'scalped' and intensively targeted for ongoing weed control as part of the management program prior to handover.

- The Wetland buffer area is not to be turfed or irrigated, but sensitively landscaped with clumped native vegetation and areas potentially mulched. It is to reflect a manicured/managed landscape treatment (and not revegetation) that can be easily accessible and manageable in the long term.
- All wetland buffer area treatments to be open to maximise visual permeability and therefore opportunities for passive surveillance from adjacent residential dwellings and the Special Use site.

In order to address all of the above, a comprehensive *Wetland Management Plan* is required to be prepared as a condition of subdivision approval. The Management Plan will follow the agreed concept for the *Wetland Buffer Landscape Plan*, attached at **Annexure 12**.

WATER MANAGEMENT

A Local Water Management Strategy (LWMS) has been prepared by GHD (July 2019) in accordance with the Jandakot Drainage and Water Management Plan (WAPC 2009) and guiding documents including (but not limited to) Better Water Urban Management (WAPC 2008). This LWMS has been approved by both the DWER and the City of Kwinana, which written approvals are attached with the LWMS.

The water management strategies of the LWMS are to be implemented and refined in the subsequent Urban Water Management Plan, which is to be prepared at subdivision stage.

The key elements of the strategy are summarised below and detailed in the LWMS included at **Annexure 13**.

- 1. Achieve sustainable management of all aspects of the water cycle within the development and ensure efficient use and reuse of water resources.
- Maintain post-development annual discharge volumes and peak flows relative to predevelopment conditions, unless otherwise established through determination of ecological water requirements for sensitive environments, while simultaneously protecting infrastructure and assets from inundation and flooding.
- 3. Manage and minimise changes in groundwater levels following development.
- 4. Maintain surface and groundwater quality at pre-development levels and, if possible, improve the quality of water leaving the development area to maintain and restore ecological systems in the sub-catchment in which the development is located.

4.0 INFRASTRUCTURE COORDINATION, SERVICING AND STAGING

Reticulated Water

The Water Corporation has advised that the development will require a 250mm water main extension from existing 100mm mains within the LSP Area. (Refer to **Annexure 14**: Indicative Reticulated Water Mapping.)

Reticulated Sewer

The Water Corporation has confirmed that 300mm, 225mm and 150mm sewer mains will be required. Current planning is illustrated on the attached map. (Refer to **Annexure 15**: Reticulated Sewer Mapping.)

Power

Overhead power exists along both Mortimer and Woolcoot Roads. The power has been upgraded in the past to service the rural residential developments which have occurred to the east of the Site, however it is not expected to be of a sufficient capacity for urban development loads. Western Power will provide more detail on the requirements for upgrading of its services at subdivision stage.

Telecommunications

Telstra infrastructure is available in close proximately to the LSP Area, which can be extended to service the residential subdivision.

Gas

Natural gas is available and proposed to be extended to the land which is currently being developed to the west of the LSP Area by Amana Holdings.

5.0 CONCLUSION

This LSP document provides overwhelming support for the proposed urban development of the

LSP Area in accordance with the relevant State and Local Planning Strategy and Policy

requirements.

Further, it is noted that the site does not contain any constraints which cannot be effectively

managed through appropriate strategies to be comprehensively developed at subdivision stage

and that this site can be developed independently without compromising the development potential

of any nearby landholding.

The ability for the land to be developed in accordance with the LSP is further evidenced through

the support provided in the accompanying assessment reports, including the Flora, Vegetation and

Wetland Assessment; Preliminary Site Investigation; Groundwater Investigation; Landfill Extent

Assessment; Local Water Management Strategy; and the Bushfire Management Plan.

Accordingly, the approval of this LSP by the City of Kwinana and the Western Australian Planning

Commission (WAPC) is respectfully sought.

Peter D Webb and Associates