

RIVERSIDE ESTATE STRUCTURE PLAN

LOT 2349 GUARA DRIVE, SUNSET BEACH



Prepared For:
SunsetBeach Estate Pty Ltd

Prepared By:
Landwest Planning Consultants





APPROVAL OF STRUCTURE PLAN

This Structure Plan is prepared under the provisions of the
City of Greater Geraldton Local Planning Scheme No. 1
and in accordance with the
Planning and Development (Local Planning Schemes) Regulations 2015

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

.....Date

Signed for and on behalf of the Western Australian Planning Commission

.....

An officer of the Commission duly authorised by the Commission pursuant to section 16 of the
Planning and Development Act 2005 for that purpose, in the presence of:

.....Witness

.....Date

..... **Date of Expiry of this Structure Plan**



Schedule of Modifications

Modification No	Structure Plan Reference/Clause	Summary of Modification	Date Endorsed by WAPC
Structure Plan Map			
Part One			
Part Two			
Technical Appendices			



Project Detail

File	23130	
Client	Sunset Beach Estate Pty Ltd	
Prepared By	Landwest Planning Consultants	
	Civil Engineer	BuaBua Consulting
	Hydrologist	Oversby Consulting
	Traffic Engineer	Greenfields Technical Services
	Acoustic Engineer	Herring Storer
	Bushfire Consultant	BBS

Document Control

DATE	DOCUMENT NAME	DOCUMENT MANAGER	DETAIL
November 2023	23130 Ver1	Landwest	Application Lodgement
April 2024	23130 Ver2	Landwest	Additional Information

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Executive Summary

The Structure Plan “Riverside Estate” has been prepared to support and facilitate the residential subdivision and development of Lot 2349 Guara Drive. The structure plan responds to site-specific issues, amenity, housing diversity, and demand for residential land in Geraldton. It addresses the interface between existing residential development and the proposed residential estate.

The Structure Plan is intended to guide the future subdivision and development of the residential estate.

Executive Summary Table

Item	Data	Structure Plan Reference
Area covered by the Structure Plan	4.5768ha	Pt2 s2.2
Net Area of each land use Residential R20 R30	1.87ha 0.53ha	Pt1 s4.2.1
Estimated Lot Yield R20 R30	37 1	Pt1 s4.2.2 Pt2 s4.3.2
Estimated Dwelling Yield* Single Residential Grouped Housing	37 15-16	Pt1 s4.2.2 Pt2 s4.3.2
Estimated Residential Density	20-21 dwellings/ha (Residential zoned land)	Pt1 s4.2.2
Estimated Area of POS	0.86ha	Pt 1 s4.3 Pt2 s4.3.4

** Dwelling yield is based on preliminary calculations only and subject to detailed building design, lot layout for group housing development.*



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PART 1 IMPLEMENTATION



1.0 STRUCTURE PLAN AREA

This Structure Plan applies to Lot 2349 Guara Drive Sunset Beach, being the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan Map.

The Structure Plan is to be known as the Riverside Estate Structure Plan.

2.0 OPERATION

Pursuant to Clause 28 Part 4 Schedule 2 of the Deemed Provisions for Local Planning Schemes of the *Planning and Development (Local Planning Schemes) Regulations 2015*, the structure plan comes into effect on the date it is approved by the Western Australian Planning Commission (WAPC).

It remains valid for 10 years from the approval date unless the WAPC extends the period of approval in accordance with the Regulations.

When making planning and development decisions, the decision-making authority is to have due regard to the density of development, subdivision, and development requirements within this structure plan.

3.0 STAGING

Adoption of the Structure Plan will trigger the preparation of the subdivision application and accompanying additional requirements.

Subdivision and development will be implemented in a minimum of two (2) stages. The initial stage will occur over the southern extent of the landholding via an extension to Guara Drive. Secondary stage/s will occur via an extension to Nyrang Road. Lots will be developed and released according to market demand and the orderly extension of infrastructure.

4.0 LAND USE AND SUBDIVISION/DEVELOPMENT REQUIREMENTS

The Structure Plan Map designates the land use zones and reserves applicable to the Structure Plan area.

These provisions should be read in conjunction with those provisions contained in the City of Greater Geraldton Local Planning Scheme No1.

4.1 Land use permissibility

Land use permissibility within the Structure Plan area shall be in accordance with the corresponding Zone and Reserves under the City of Greater Geraldton Local Planning Scheme.

4.2 Residential

The structure plan map delineates the residential densities that apply to specific blocks within the structure plan area.

4.2.1 Residential density

- R20
- R30

4.2.2 Residential Dwelling Target

To provide a minimum dwelling density of 20-21 dwellings per hectare across the structure plan area.

4.3 Public Open Space

Public open space (POS) is to be provided generally in accordance with the structure plan Map and the following indicative only schedule.



Table 1 **Indicative** POS Schedule

Indicative Public Open Space Schedule		
Lot 2349 Area		4.5762ha
Less Other Zoned Lots		NA
Less Other Deductions		NA
Gross Subdivisional Area		4.5762ha
Minimum POS Contribution Required		10%
		4576m2
Actual POS Provision		
Restricted Use POS		
POS A	1190m2	
POS B	1104m2	
Restricted Open Space 2294m2 (to maximum 2% 915m2)		915m2
Unrestricted Use POS		
POS A	1825m2	
POS B	4540m2	
Unrestricted Open Space		6,365m2
Total Land Area Provided		7,280m2

In accordance with Liveable Neighbourhoods, a minimum of 10% of the gross subdivision area shall be provided as public open space by a combination of provision and cash-in-lieu contribution.

An updated Public Open Space Schedule will be provided at the time of subdivision application for determination by the local government and WAPC.

4.4 Road reserves

The structure plan delineates extension to the local road network with indicative road widths indicated. Final widths may vary at subdivision stage, subject to detailed engineering design and infrastructure requirements.

Direct vehicle access from the structure plan area to the North-West Coastal Highway will not be permitted.

At time of subdivision, the Local Government may require upgrading to the external road network due to the impact of development. Upgrading works may occur on a staged basis in accordance with the staging of the subdivision. An addendum to the Traffic Impact Assessment (TIA) may be required at that time to inform the final requirements and design of upgrades. Upgrades required due to changes to the existing road network accommodating traffic not local to the subdivision area, shall not be the sole responsibility of the developer/s in the structure plan area.

4.5 Drainage and stormwater management

The approved Local Water Management Strategy (LWMS) shall be implemented by the developer. The design of drainage infrastructure and land area/s will be subject to detailed design and/or updating at the subdivision stage. The objective is to maintain all generated stormwaters on site.

Basin and swale will be designed to detain, treat and infiltrate all flows up to and including the 1%AEP. Discharge to the Chapman River will be limited to the pre-development overland flow area only.

The design for basin and swale areas within the POS reserves will employ best practice strategies for design, construction, and ongoing management of the infrastructures. This includes the selection of vegetation species to create an appropriate environment while considering bushfire management requirements.

4.6 Local Development Plans

Local Development Plan/s to be prepared prior to development for:

- Any residential lots with a boundary abutting public open space to address interface, including dwelling orientation, visually permeable fencing, and passive surveillance.
- Any residential lot/s with access to a laneway to address interface and access requirements.
- Any residential lots identified in the Transport Noise Assessment as requiring Quiet House Design (QHD) noise management at the building stage, dependent on mitigation measure/s employed.
- Any other lot requiring detailed development standards identified by relevant agencies and/or developers.



4.7 Notifications on Title

The local government may require notifications on title to be imposed as part of a subdivision approval to advise the following:

- a) Lots impacted by traffic noise as identified in the Noise Assessment contained in Appendix 5 (dependent on noise mitigation method/s).
- b) A BAL rating (where applicable) as determined by bushfire assessment at the time of subdivision.

5.0 FURTHER DOCUMENTATION AND MANAGEMENT PLANS

To facilitate subdivision and/or development of the land, the following documentation and/or management plans may be prepared, as applicable, to the satisfaction of the relevant authority as outlined in Table 2.

Table 2: Further Documentation and Management Plans Required

Report/Additional Information	Approval Stage	Responsible Agency
Assessment and Bushfire Management Plan (BAL/BMP)	Subdivision application stage	DFES WAPC
<i>To reflect subdivision design and landscaping/revegetation of reserves that may increase fire risk.</i>		
Public Open Space Schedule	Subdivision application stage	Local Government WAPC
<i>Updated to reflect the detailed design and refinement of unrestricted POS and restricted POS function.</i>		
Noise Management Plan	As condition of subdivision	Local government
<i>Detailed mitigation measures to be employed, including Quiet House Packages and specifications and design/s where required.</i>		
Urban Water Management Plan	As condition of subdivision	Local Government DWER
Landscape & Public Open Space (POS) Management Plan	As condition of subdivision	Local Government
<i>To address tree retention (where viable), streetscape, street tree planting, and the design and landscaping of stormwater retention areas.</i>		
Addendum to Traffic Impact Assessment (TIA)	As condition of subdivision	Local Government
<i>Detailed requirements for external road upgrading requirements.</i>		
Local Development Plans	As condition of subdivision / Prior to Development on applicable lots.	Local Government
<i>For applicable lots only.</i>		



6.0 STRUCUTRE PLAN MAP



TITLE: STRUCTURE PLAN LOT 2349 GUARA DRIVE, SUNSET BEACH		LOCAL AUTHORITY: CITY OF GREATER GERALDTON		 LANDWEST URBAN AND RURAL PLANNING CONSULTANTS	8 Anzac Terrace Geraldton WA 6530 PO BOX 1597 Geraldton WA 6531 Email : info@landwest.net.au Phone : (08) 9965 0550 Fax : (08) 9965 0559	REV: DATE: DETAILS:		BY: APPROVED:	
CERTIFICATE OF TITLE(S) : -		DATE LAST MODIFIED: 22/03/2024				APPROVED:		PLAN: 23130-SP-03	
* This plan remains the property of Landwest and must not be used for any purpose other than which it was prepared for. in relation to the land duly described, Landwest accepts no responsibility for any losses or damages caused to any person/s who may use the information for a purpose for which it was not intended.		SCALE: 1:1500 @ A4		DESIGNED: GMB		DRAWN: DW			



PART 2 EXPLANATORY SECTION



1.0 BACKGROUND

1.1 Introduction and Purpose

Landwest acts on behalf of Sunset Beach Estate Pty Ltd, the owner of Lot 2349 Guara Drive Sunset Beach. The explanatory report supports the “Riverside Estate Structure Plan” (RESP).

The landholding was previously a Crown Reserve under a Management Order to the local government for open space purposes. The landholding was identified as surplus to requirements and prepared for sale, including conversion to a freehold landholding for disposal and rezoning from Public Open Space Reservation to Urban Development in the City of Greater Geraldton Local Planning Scheme No 1.

The Urban Development zoning requires preparing a structure plan to ensure the appropriate statutory framework for future subdivision and development is in place.

The structure plan has been prepared to reflect the strategic vision for the landholding and the broader area in which it is located. It will contribute to the availability of land for residential development in the City of Greater Geraldton and be of form and scale, which promotes both housing diversity and housing affordability.

1.2 Legal Description and Ownership

The subject land is a single freehold lot described as follows:

Table 3 Legal Description

Lot No	Land Parcel	Certificate of Title	Land Area
Lot 2349	Deposited Plan 416451	4027/642	4.5768ha
Registered Proprietor:		Sunset Beach Estate Pty Ltd	



2.0 SITE AND CONTEXT ANALYSIS

2.1 Location

The subject land is located in the suburb of Sunset Beach, adjoining North West Coastal Highway on its eastern boundary. It is served by Guara Drive and Nyrang Road from Chapman Road.

It is approximately 6km north of central Geraldton and 800m from Sunset Beach Neighbourhood Centre.

Refer Figure 1.

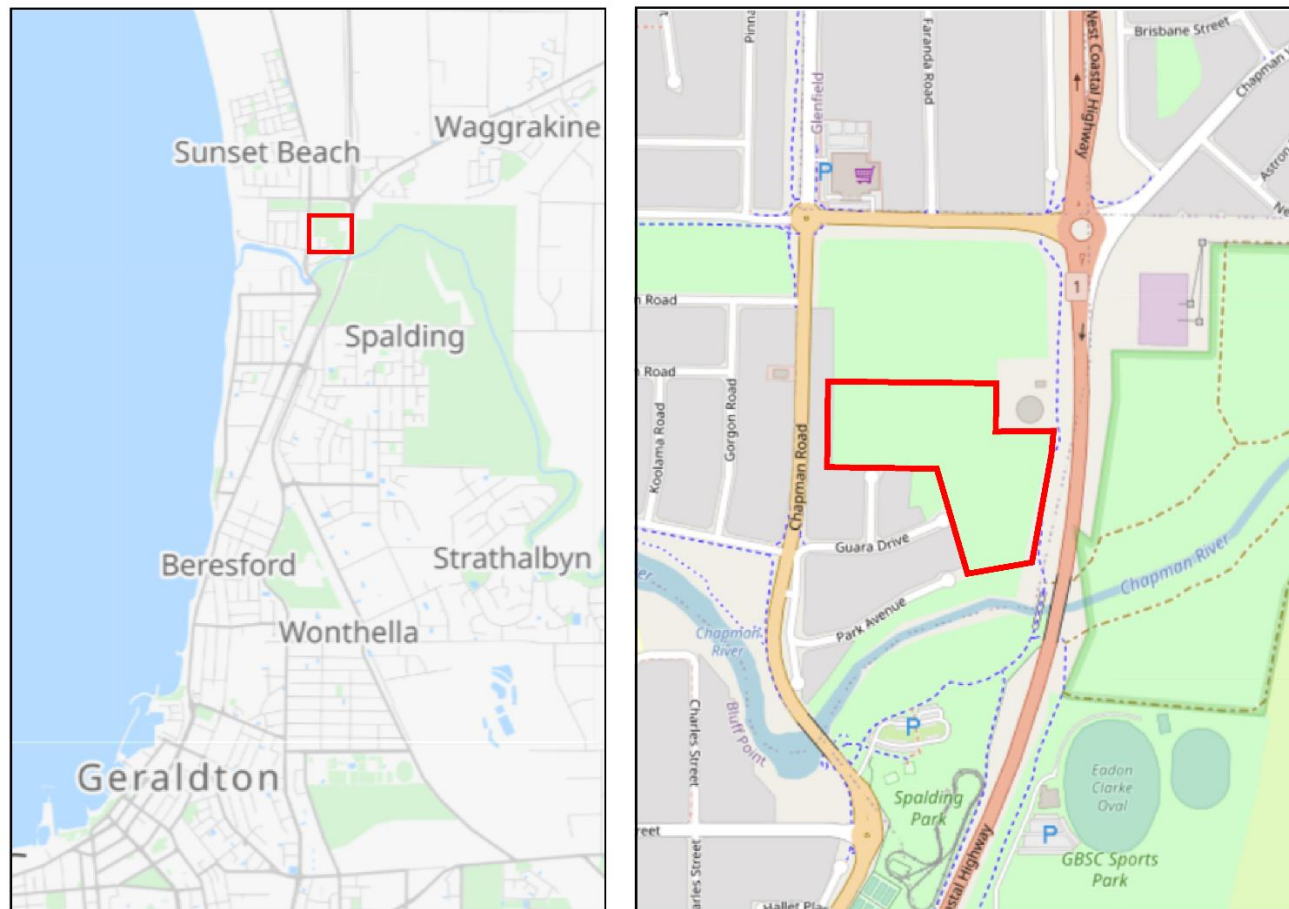


Figure 1 Location Plan (Source: OpenStreetMap)



2.2 Land Use

The land is vacant and is undeveloped. It is 4.57ha in size. It has access to Guara Drive and Nyrang Road, both of which are sealed urban roads. The land contains non-remnant vegetation.

A current aerial photograph is in Figure 2



Figure 2 Lot 2349 Aerial Photograph (Source: Landgate)



2.3 Adjoining Land Use

Lot 2349 adjoins residential development to the west, predominantly single residential with a grouped housing site on Guara Drive, owned by the Department of Housing.

Lots 2599 and 2652 (Reserve 31961) to the north of the subject land are reserved for POS and are leased by the local government to the Spalding Horse and Pony Club Inc. The open space reserves are not open to the public and the uses undertaken function as private recreation. Various local government strategic planning documents provide for relocating the Club's facilities to an alternative location funded by the local government to enable redevelopment of the lot/s. However, there is no known timeframe for this to occur.

Lots 2762 and 2712 on the northeast corner of Lot 2349 are Crown landholdings containing decommissioned Water Corporation infrastructure, which is planned for demolition.

Lot 2598 to the south is the Chapman River foreshore reserve.

The eastern boundary of Lot 2349 is the reserve for the North West Coastal Highway. The reserve contains a dual-use path that connects Sunset Beach and the areas to the north and provides pedestrian and cycling access across the Chapman River adjoining Lot 2349.

The Sunset shopping centre is located 300m north of the subject land and approximately 700m walking distance. The locational context is illustrated in Figure 3.



Figure 3 Adjoining Land Use



Lot 2488 Reserve 28903 is reserved for Public Open Space in the local planning scheme and is under a management order to the local government. It is undeveloped, and historical aerial photography (Figure 4) indicates it has never been developed since it was vested with the local authority for public open space in 1966 when Stage 1 of the residential estate was developed. There is no other local open space on the eastern side of Chapman Road.

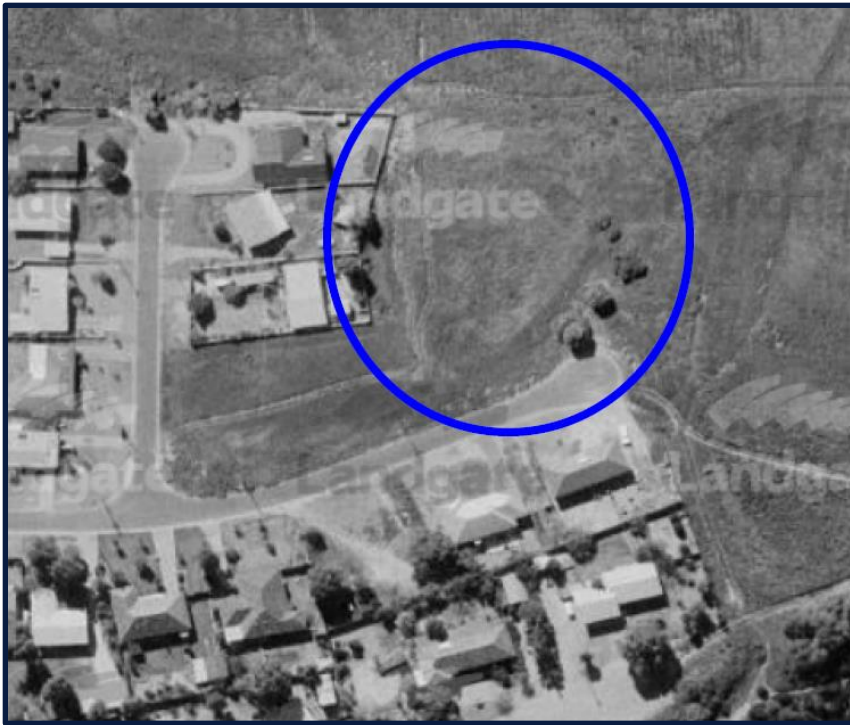


Figure 4 Historical Photography Extract Reserve 28903 (Date of photography July 1979)



Figure 5 Existing dual use path on eastern boundary



Figure 6 Existing dual use path to pedestrian bridge over Chapman River



2.4 Topography and Soils

The site is generally flat or undulating in nature, with the site levels between 9.8mAHD and 11.1mAHD, rising marginally in a south-easterly direction. The indicative layout of the structure plan area reflects natural landform as much as possible to minimise fill and site works whilst anticipating suitable levels for both stormwater and sewerage design.



Figure 7 View East across Lot 2349 from Guara Drive

Soil type is classified in the Local Planning Strategy as Limestone Hills, comprising:

“...mainly grey, yellow or red sad over limestone; deep and shallow soils with a mix of alkaline and neutral pH; water repellent.”

Whilst Lot 2349 itself is not identified as being at risk of Acid Sulphate Soils, as indicated by DWER ASS Risk Mapping (DWER-051 Geraldton), proximity to a corridor of potential risk along the Chapman River alignment may present a low risk associated with soil disturbance when associated with infrastructure works on Lot 2349 are undertaken. Depending on the depth and nature of the ground disturbance, an ASS management plan may be required before construction activities.

2.5 Hydrology

There are no water courses or wetlands on the subject land. The lot adjoins the Chapman River reservation, and the waterway itself is approximately 60m to the south. The Chapman River is generally tidal and estuarine at this location. The depth to groundwater on Lot 2349 is estimated at 5m (Source: DWER mapping extract). Proximity to the Chapman River means that any groundwater present would flow towards this. Groundwater would generally flow through the prevalent sandy soil type/s.

2.6 Vegetation

The lot contains some vegetation, generally larger tree species. The vegetation is not remnant or considered of conservation significance. Wherever possible, larger viable trees will be retained during the subdivision construction phase.



2.7 Heritage

2.7.1 Aboriginal Heritage

A search of the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Inquiry System has confirmed that no Registered Aboriginal Sites affect the subject site. However, the following site is identified to the south of the Lot 2349:

- Place 30063 Chapman River (Geraldton)

Development of the site is not constrained by proximity to the registered site.

2.7.2 European Heritage

A search of the Department of Planning, Lands and Heritage (DPLH) inHerit Inquiry System has confirmed no Registered Heritage Places affect Lot 2349. The following site is identified to the east of the lot:

- Place 12059 Geraldton-Northampton Railway Precinct

Development of the site is not constrained by proximity to the registered site.

2.8 Bushfire Hazard

The subject land is identified as having Low to Moderate Fire Hazard Risk. Refer to the Bushfire Hazard Level Assessment at Appendix 4. A detailed BAL/BMP will be prepared at the subdivision stage to address the construction and landscaping requirements for public open space reserves that may increase the bushfire risk profile in relation to overall design, lot layout and size etc.

2.9 Transport

Lot 2349 derives access to the existing road network via Nyrang Road and Guara Drive, with the latter connecting to the Chapman Road Service Road at its intersection with Chapman Road. See figures 8 & 9 adjoining.



Figure 8 Guara Drive



Figure 9 Nyrang Road



There are potential constraints to upgrading this intersection, which is addressed in detail in Section 4.3.3 of this report and Appendix 1 Traffic Impact Assessment. As a result, further detailed investigation and conceptual design of the external road network upgrades will be required, and the Structure Plan makes provisions for this to be addressed at the subdivision stage.

2.10 Engineering and Servicing Infrastructure

The Preliminary Engineering Services Report (PESR) in Part 3 Appendix 2 contains a full consideration of servicing and infrastructure requirements.

- Site works: the lot is relatively flat, and a balanced cut-to-fill program is envisioned with fill as required to achieve finished ground levels for wastewater and drainage.
- Stormwater Drainage: the management strategy required will be developed to ensure post-development flows and peak flows will be the same as pre-development levels via a best-practice approach to water management.
- Water: existing Water Corporation infrastructure is available but will require upgrading to achieve pressure and flow requirements to the development area.
- Wastewater: the existing sewer network has the capacity for the proposed lot yield.
- Power: the existing network has the capacity for the proposed lot yield with upgrading as required.
- Gas: natural gas is available to service the proposed development area.
- Telecommunications: the area is currently serviced with fixed-line optics; new development will require the installation of fibre-optic cabling.

2.11 Population and Suburb Characteristics

Australian Bureau of Statistics Dataset for Sunset Beach over the past two census periods indicates an increase in suburb population between the 2016 and 2021 censuses from 1466 to 1558 people. The increase is represented across all age groups with the exception of the 15 to 24-year-old and the 65 to 74-year-old age groups.

Family composition varied in the period with fewer couples with no children and a commensurate increase in couples with children. This corresponds with the increase in the number of younger children potentially born in the intervening period. There was a reduction in the number of one-parent families.

In the suburb, the number of single dwellings increased from 505 to 541 by approximately 7%. There was a 44% reduction in the number of unoccupied dwellings and an increase in non-traditional housing types of 20% eg, caravans and cabins, at the time of the census. This reflects increased occupancy levels due to strong housing demand.

The suburb has a high proportion of owner-occupied dwellings, some 60.5% in 2016, increasing to 65% in 2021.

Dwelling structure types in the suburb are consistent across the periods; in 2016, 90% of dwellings had either 3 or 4 bedrooms, and this increased to 92% in 2021. The number of two-bedroom dwellings decreased between 2016 and 2021 by 8 dwellings, some 53-percent.

In 2021, 84.9% of the population of Sunset lived in a separate house, directly comparable to 2016, at 85.9%.

The average household size reduced from 2.5 to 2.4 people in the same period.



The census data indicates a potential lack of housing type and diversity for smaller household sizes, which correlates with the decrease in 15-24 and 65-74 age groups potentially seeking smaller and more affordable housing types. This may also be attributed to retirees desiring to downsize from larger dwellings and lack of availability.

<https://abs.gov.au/census/find-census-data/quickstats/2021/LGA53800>

<https://abs.gov.au/census/find-census-data/quickstats/2021/LGA53800>

<https://www.abs.gov.au/census/find-census-data/quickstats/2016/SSC51408>



3.0 Planning Framework

3.1	State Planning Framework	Principles	Relationship to Proposal
	3.1.1 State Planning Strategy 2050	The Strategy seeks to build planning capacity and capability to deliver the State planning vision. The plan sets a broad strategy for sustained growth and prosperity. The strategy prioritises economic and population growth as the key drivers of land use and land development, which includes promoting sustainability of Regional Townsites, vibrant activities and supports zoning sufficient land for residential, commercial, and tourism.	The proposal will help deliver new residential development in a regional townsite context.
	3.1.2 SPP 3.0 Urban Growth and Settlement	The Policy sets out the principles and considerations which apply for urban growth and settlement in Western Australia. The Policy promotes a sustainable settlement pattern, supports building on existing communities, and seeks convenient access to employment and services. The key requirements for sustainable communities include: ▪ Diversified and sustainable economic base with assured access to jobs and employment. ▪ Making the most efficient use of land in existing urban areas by using vacant and under-utilised land and buildings. ▪ Co-ordinate development and the provision of infrastructure and services.	The Structure Plan is consistent with SPP3: the site was previously identified as excess to requirements as Crown land for disposal and rezoned to facilitate Urban Development. Residential development will utilise vacant land adjoining an established residential area and development of a previously undeveloped POS Reserve, and within proximity to a local activity centre and with good connections to the Greater Geraldton urban area. The Structure Plan's purpose is to facilitate orderly development with the progressive extension of existing services in accordance with best-practice models.



3.1	State Planning Framework	Principles	Relationship to Proposal
	3.1.3 SPP 3.7 Planning in Bushfire Prone Areas	The State Planning policy prescribes how land use should address bushfire risk and management and applies to all land identified by DFES as bushfire-prone.	A small portion of the lot is identified as being bushfire-prone. See section 3 Appendix 4 for Bushfire Hazard Level Assessment.
	3.1.4 SPP 5.4 Road and Rail Noise	State Planning Policy 5.4 and associated guidelines are the Western Australian Planning Commission (WAPC) policy for minimising the impact of road and rail noise on noise-sensitive land uses whilst protecting the function of the State's key transport routes.	The development area adjoins North West Coastal Highway and is within the trigger distance where a detailed assessment and management must be undertaken. See section 3, Appendix 5, for the Road and Rail Noise assessment, which assesses the noise that can be expected to be received within the development area and the mitigation that needs to be implemented.
	3.1.5 SPP 7.3 Residential Design Codes Vol1	SPP 7.3 (RCodes) is the state planning policy that applies to all residential development in Western Australia. The codes set out design provisions for residential developments based on the development type, density, and zoning. Residential areas are designated an RCode, which determines the density of development. The RCodes provide the development criteria that apply to each density. The Policy also aims to facilitate residential development, which will increase housing choice.	The Structure Plan designates residential density within the subject area, and the indicative subdivision plan demonstrates compliance with the deemed-to-comply criteria for lot size, average lot size, and minimum frontage requirements. The Structure Plan will facilitate housing choice by creating a variety of lot sizes in accordance with the denoted residential densities.

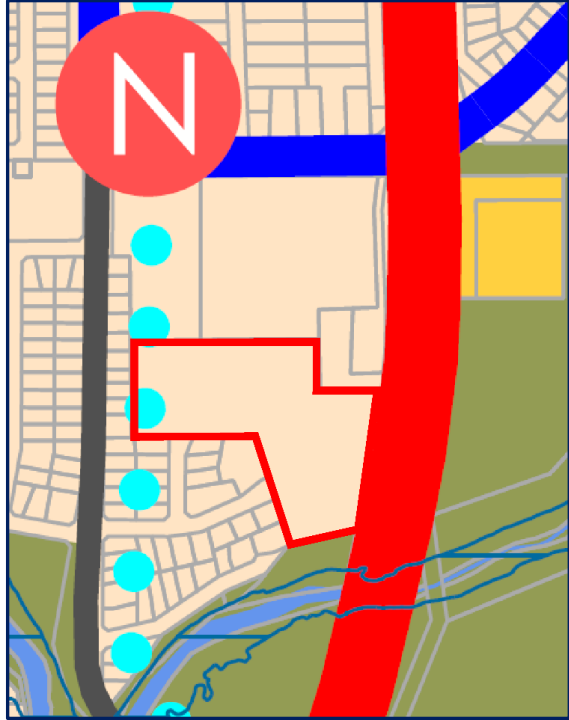


3.1	State Planning Framework	Principles	Relationship to Proposal
	3.1.6 Liveable Neighbourhoods	Liveable Neighbourhoods is the WAPC's policy to guide the design of structure plans and subdivision in urban areas. Community facilities and services are accessed by walking, cycling, and public transport through an efficient, interconnected movement network. Employment opportunities and economic sustainability are generated through access to activity centres. The Liveable Neighbourhoods document prescribes that structure plans are the preferred method to co-ordinate planning of urban areas before the subdivision of land.	The Structure Plan has been designed to address relevant principles of Liveable Neighbourhoods, including the urban form and layout, road hierarchy and design, public open space distribution, and urban water management. The Structure Plan is required to be endorsed before separate subdivision application/s.

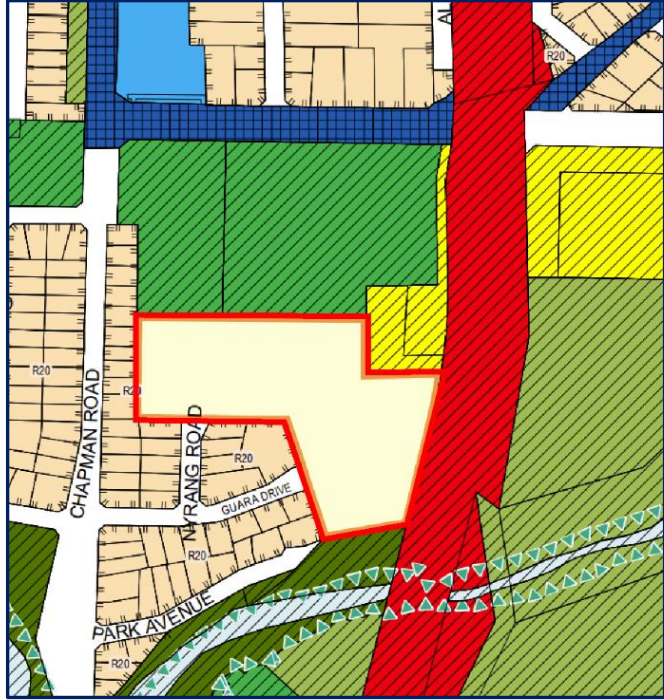


3.2	Local Planning Framework	Principles	Relationship to Proposal
	3.2.1 City of Greater Geraldton Local Planning Strategy, 2015	The Local Planning Strategy delineates the land use planning response to the local government's strategic vision for the community. The Strategy identifies the limits of the urban growth area whilst noting that sufficient land is available for the population growth estimates envisioned in various forward periods, through a "more efficient approach to future growth" via an increase in the density of development around activity centres along the north-south development spine near the coast. Residential density increase is preferred in locations offering a higher amenity level and access to activity centres. The subject land is identified as Urban in the Geraldton Urban Area Strategy Plan as shown in Figure 10. Specific actions to achieve the objectives of the Strategy in relation to residential development for the Structure Plan area include: ▪ Apply residential densities generally in accordance with the Residential Development Strategy Map. ▪ Permit increases in height for higher density coded areas near activity centres.	The Structure Plan delineates density codes of R20 and R30, generally in accordance with the Residential Development Strategy, which prescribes Single Residential in the range of R10-R25. Refer also section (c). A pocket of R30 development is provided for in the Structure Plan area as the location is contended to support the lower end of medium-density development due to proximity to an activity centre and the location offering a level of amenity and access to POS.



3.2	Local Planning Framework	Principles	Relationship to Proposal
		▪ Ensure that structure planning in Development zones considers the broader residential area. ▪ Discourage group/multiple dwelling developments that would prejudice the coordinated road pattern for the area or circumvent the provision of public open space.	 Figure 10 Local Planning Strategy Extract: Urban
	3.2.2 City of Greater Geraldton Local Planning Scheme No 1	<u>Zoning</u> Lot 2349 is zoned Urban Development in the Local Planning Scheme (LPS). It adjoins Residential zoned land which has a density of R20 denoted. It adjoins the following reserves: ▪ Primary Distributor Road ▪ Local Road	The Structure Plan is prepared in accordance with the scheme and the requirements of Schedule 2, Part 4 of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.

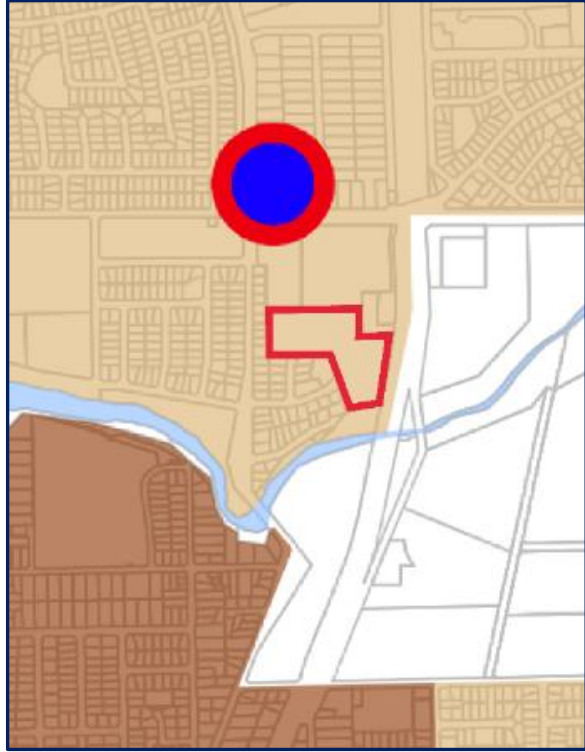


3.2	Local Planning Framework	Principles	Relationship to Proposal
		▪ Foreshore ▪ Public Open Space ▪ Public Purposes See Figure 11. <u>Scheme Provisions</u> The objectives of the zone are to: ▪ Identify areas that require comprehensive planning in order to provide for the coordination of subdivision, land use and development. ▪ Provide a basis for more detailed structure planning in accordance with the provisions of this Scheme. Provisions in the LPS for the 'Urban Development' zone require the preparation and endorsement of a Structure Plan before subdivision or development. Once endorsed, the structure plan will be given due regard in future decision-making.	 Figure 11 Local Planning Scheme Extract: Urban Development



3.2	Local Planning Framework	Principles	Relationship to Proposal
	3.2.3 City of Greater Geraldton Residential Development Strategy	The City's Residential Strategy was endorsed in 2013. The document delineates the objectives of the local government to address residential development based on a number of population growth scenarios. With respect to future residential development, the Strategy identifies the following key points: ▪ Opportunity for more medium-density housing development to accommodate a broader range of household types and price points. ▪ Greater diversity is encouraged within the established urban area. ▪ Residential intensification focused on activity centres, with areas of high amenity prioritised. ▪ Infill opportunities exist in central Geraldton and established suburbs. ▪ Infill development to be prioritised adjacent to or nearby recreation facilities and public open space. ▪ Liveable Neighbourhoods and Residential Design Codes are the guiding documents for the preparation and assessment of structure plans and development of large urban infill sites.	The land was previously Crown Land and disposed of to facilitate residential development. The existing residential area adjoining the structure plan area is generally single residential with lot sizes in the range of 800m² to 900m², with a small number of lots larger lots with single dwellings. The density of development would be on par with the R12.5 density. The residential development proposed by the Structure Plan is mostly single residential at the R20 density, with a single larger lot denoted at R30 for grouped housing. The Structure Plan KEIAC aims to achieve a dwelling density of 20-21 dwellings per hectare. Lot sizes are consistent with the density range prescribed in the strategy while maintaining the existing suburb's single residential form. The development area is within a 10m walk of Sunset Beach Neighbourhood Centre, adjoins the Chapman River foreshore reserve and additional POS is proposed.



3.2	Local Planning Framework	Principles	Relationship to Proposal
		The Strategy map details priority activity centres where residential density may be increased due to walkability and proximity. Sunset Beach Shopping Centre is identified as a Neighbourhood Centre, with Crown land to the south of the centre providing an opportunity for intensification. The Strategy Map identifies the subject land as a predominantly single residential area, with density in the range of R10-R25 as shown in Figure 12 adjoining.	 Figure 12 City of Greater Geraldton Residential Strategy Extract: R10-R25



3.2	Local Planning Framework	Principles	Relationship to Proposal
	3.2.4 Commercial Activities Centres Strategy	This Strategy provides the strategic framework for managing growth in commercial activity. The Strategy informs the scale of future retail and commercial development in existing and planned activity centres. Sunset Shopping Centre is identified as a Large Neighbourhood Centre. Such centres are focused on servicing residents' daily and weekly needs and providing community facilities and a small range of other convenience services. Their relatively small scale and catchment enables them to have a greater local community focus and provide services, facilities and job opportunities that reflect the particular needs of their catchment. The Strategy suggests an increase in residential density within the areas of influence of a Neighbourhood centre to 20 dwellings / hectare.	Lot 2349 is located within the catchment area of the Sunset Beach Neighbourhood Shopping Centre, with the potential to increase the services and facilities provided. The Structure Plan is consistent with the Strategy as it will facilitate future residential subdivision and development within the catchment of a neighbourhood centre. The Strategy proposes a density of development at 21-22 dwellings per hectare.



3.2	Local Planning Framework	Principles	Relationship to Proposal
	3.2.5 City of Greater Geraldton Public Open Space Strategy	The Strategy was endorsed in 2014. The objectives of the Strategy for POS in the Sunset Beach locality: ▪ Minimise inefficiencies from unsuitable public open space provision. ▪ Secure appropriate public open space contributions through future land development. ▪ Bring existing public open space areas aligned with their hierarchy and service level. ▪ Recognise and support conservation opportunities within the locality. ▪ Support the progressive improvements to Eastbourne Reserve as part of the development of the Sunset Beach Activity Centre. Rationale for the above objectives: ▪ Sunset Beach consists of local, neighbourhood, and regional open spaces and is just below its 10% requirement. ▪ The existing developed area of the locality is adequately covered by walkable catchments to existing facilities. The locality at its furthest is from 900m in the south to 500m in the north from the foreshore area to the west, which is a further significant recreational focus.	Lot 2488, the existing local open space reserve adjoining the subject land has never been developed by the local government. This deficiency has reduced opportunities for passive and active open space use by the local community over time. The local government have indicated this reserve continues to be identified for disposal. The SP area requires a stormwater management strategy that will capture, retain and treat stormwater, in order to protect and conserve the total water cycle. POS is required to accommodate this function, as demonstrated in the Indicative Guide Plan and LWMS. The location, configuration and size of each proposed POS reserve is cognizant of the requirements of the stormwater management strategy. Both proposed POS reserves can also have a local open space function servicing the immediate residential population and contributing to the landscape amenity of the locality. POS A is located and designed to allow its extension over landholdings to the north should they be developed, to increase the size and function of local open space with a stormwater management function, and for the ultimate POS area to be centrally located, as reflected in the Sunset Beach Precinct Plan. Wherever possible, mature trees will be retained in proposed open space reserves, which will assist with maintaining and improving vegetation corridors. The structure plan provides a connection between the residential estate to the Chapman River foreshore reserve.



3.2	Local Planning Framework	Principles	Relationship to Proposal
		▪ Access to the Chapman River to the south also expands the open space network. ▪ With the future development of residential areas and a future primary school, the range of open spaces will be enhanced. ▪ Although a large area of existing open space reserves are identified as being residual, it is not intended that all of the area will be disposed of. The detailed precinct planning will identify what areas are proposed to be retained as public open space. ▪ <u>Actions</u> to achieve the objectives: ▪ Continued development and maintenance of all public open space areas to ensure consistent service provision in line with their hierarchy. ▪ Implement the relevant components of the 'Sunset Beach Precinct Plan'. ▪ Dispose of residual public open space areas, being the Spalding Park Horse and Pony Club, as shown on the locality plan with portions of public open space being redeveloped in these areas.	



	3.2.6 Local Planning Policy Sunset Beach Precinct Plan	The Sunset Beach Precinct Plan was prepared in 2014 and adopted as a Local Planning Policy. The precinct plan was prepared to support planning for a future activity centre at Sunset Beach. The precinct plan is intended to guide future planning for the locality. An LPP is a due regard document only and does not prescribe mandatory requirements. The following principles inform the Plan: ▪ Make the street and path networks more interconnected and understandable. ▪ Encourage the redevelopment or improvement of unsightly, uncared-for spaces. ▪ Plan places to be friendly to pedestrians and cyclists, and to encourage motorists to slow down. ▪ Prioritise pedestrian amenities (such as footpaths and shade trees) to encourage walking as a pleasant and comfortable alternative to car use. ▪ Improve pedestrian and bike access to the beach and the Chapman River foreshore. ▪ Incorporate quality landscape, especially trees, into the design of streets and public spaces. ▪ Establish community spaces where members of the community can meet,	The structure plan proposes an interconnected road and pedestrian network, integrating with the existing residential area and ensuring extension to the road network in the future as required. The SP proposes street tree planting and landscaping of bio-retention areas and open space reserves. A landscaping management plan will be required at subdivision stage which will inform detailed civil construction drawings. The development will include pedestrian access to the existing dual use path system adjoining the subject land. This dual use path connects to Spalding Park to the south. Increasing residential development improves the viability of the existing local neighbourhood centre and provides opportunity for investment in the development of an improved and more diverse activity centre when land is available. The SP proposes an interconnected road network that can be extended as required to a future activity centre in the north. Open space provision in the subject land is located where contours suggest is best placed for stormwater management, and POS can be extended in the future generally following the intent of the LPP. Residential density and indicative lot sizes support housing diversity to improve choice. Streetscape improvements will be achieved through proposed street tree planting program and development of previously undeveloped open space reserve. Footpaths will be provided in the new development and connection to
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relax, interact with each other and hold community events.

- Establish places and activities that are worth walking to and will encourage pedestrian movement.
- Provide better play spaces for children and youths.
- Capitalise on the movement network to support the establishment of a greater range of local shops and services and the creation of more local jobs.
- Create a place that is better able to support a more frequent public transport service.
- Increase the diversity of homes within the area to provide different and relevant housing choices for different people.
- Focus development with higher residential densities in the core area adjacent to the village centre and close to public transport. Encourage redevelopment where it can provide passive surveillance opportunities to adjacent parkland.
- Reinforce the identity of Sunset Beach through the use of landscape or landmark buildings or both at the main entrances to the precinct.
- Utilise funds from the development of any public land to improve recreational infrastructure, including any relocated elements such as the Pony Club.

the existing dual use path network adjoining Lot 2349.

Growth in the suburb over time may increase the viability of public transport routes that better serve Sunset Beach.



Figure 13 City of Greater Geraldton LPP Sunset Precinct Plan Extract – Preferred Precinct Plan



4.0 Structure Plan

4.1 Objectives and Vision

The Structure Plan has been prepared in response to the planning framework, including the zoning of the landholding. Its primary purpose is a guiding framework for future subdivision and development over Lot 2349. The plan delineates residential development and associated public open space reserves. It envisions the creation of a modern residential estate that capitalises on positive locational characteristics whilst addressing minor site constraints. A high priority is given to integrating a new residential estate with the existing residential area. It also ensures that future development over adjoining landholdings would not be compromised.

4.2 Design of Structure Plan

The structure plan area is small, and the potential yield from the landholding is relatively fixed. As such, the structure plan layout, land use, and designation of residential densities are based on an Indicative Subdivision Plan (ISP). This ensures the structure plan outcomes are consistent with the scale of the development area.

4.3 Indicative Subdivision Plan (ISP)

The ISP is in Figure 14 and demonstrates the development outcome envisioned. It is indicative only but is consistent with the provisions of the structure plan contained in Part 1. Elements of the plan will be refined at the detailed subdivision stage.



Figure 14 Indicative Subdivision Plan (ISP) Landwest Plan 23130-01G

City of Greater Geraldton LPS No1 Zoning: Residential R30			Minimum Requirement	Actual Provision
Gross Subdivisional Area				4.5762ha
Indicative Lot Yield Comprising:				36 Single Residential
Residential	R20	Minimum Lot Size	350m ²	356m ²
		Average Lot Size	450m ²	506m ²
		Minimum Frontage	10m	12m
	R30	Minimum Lot Size	260m ²	Determined at Development Stage
		Average Lot Size	300m ²	Determined at Development Stage
Drainage Reserve				
Length of Proposed Road Reserve				780m
Area of Proposed Road Reserve				1.310ha
Public Open Space Reserve Refer POS Schedule			10%	8,659m ²

Public Open Space (POS) Schedule			
Lot 2349 Area			4.5762ha
Less Other Zoned Lots			NA
Less Other Deductions			NA
Gross Subdivisional Area			4.5762ha
Total POS Contribution	10%		4576m ²
To comprise Maximum	8% Unrestricted Use	6365m ²	
	2% Restricted Use	915m ²	
POS Provision Actual	Unrestricted Use	6365m ²	
	Restricted Use	2294m ²	
	Total POS Provision	8659m ²	7280m ²

Notes:

1. Subdivision Plan ***Indicative Only***.
2. The plan is prepared for discussion purposes only and should not be used for any other purpose. No liability will be accepted where the plan is used for purposes other than that indicated in (1) above.
3. Indicative Only Plan to be included in Structure Plan application/report for illustrative purposes only. Lot dimensions and areas subject to detailed design at subdivision stage.
4. POS/Stormwater retention areas indicative only.
5. All service information provided by relevant agencies.
6. This plan is prepared using information provided by Landgate. The data extracted from Geospatial Databases is intended for informational purposes only.
7. Survey Data: Quantum Surveys Ref: 22517

LEGEND

	- PROPOSED CADASTRAL		- SUBJECT LAND BOUNDARY		- NBN ALIGNMENT
	- SEWERAGE EASEMENT		- SEWER ALIGNMENT		- WATER ALIGNMENT
			- SEWER ALIGNMENT		- POWERLINE



TITLE: INDICATIVE SUBDIVISION LAYOUT PLAN LOT 2349 ON DEPOSITED PLAN 213800 GUARA DRIVE, SUNSET BEACH	CLIENT: SUNSET BEACH ESTATE PTY LTD	 LANDWEST URBAN AND RURAL PLANNING CONSULTANTS	8 Anzac Terrace Geraldton WA 6530 PO BOX 1597 Geraldton WA 6531 Email : info@landwest.net.au Phone : (08) 9965 0550 Fax : (08) 9965 0559	REV:	DATE:	DETAILS:	BY:	APPROVED:
CERTIFICATE OF TITLE(S) : 4027/642	DATE LAST MODIFIED: 18/03/2024		APPROVED:				PLAN:	23130-01-G
* This plan remains the property of Landwest and must not be used for any purpose other than which it was prepared for, in relation to the land duly described, Landwest accepts no responsibility for any losses or damages caused to any person/s who may use the information for a purpose for which it was not intended.	SCALE: 1:1250 @A3		DESIGNED: GMB	DRAWN: DW				



4.3.1 Lot Layout and Configuration

The layout creates a walkable and interconnected estate both internally and within the greater residential area. It maximizes the number of lots adjacent to and across existing and proposed POS reserves.

All lots are regular in shape, with lot frontages to facilitate front-loaded lot typology. A single battle-axe lot is proposed, a layout that assists in maintaining regular shaped lots and overcoming design impediments that would otherwise create several deep and narrow lots.

A grouped housing site of approximately 5306m² is proposed to be developed at the R30 density. The lot has a three (3) road frontage, which provides good design outcome opportunities and ensures all frontages are most likely to have residential development facing the streets. This will provide the opportunity for lots to overlook open space, which improves residential streetscape and opportunities for passive surveillance. The layout of the site will be determined at the development stage. Different dwelling typologies, including single-story, two-story townhouses, and mixed dwelling sizes, may be considered.

The subdivision layout minimises the number of lots with additional requirements at the development stage via Local Development Plans (LDP) for Quiet House Packages, bushfire planning requirements, and design outcomes for lots abutting POS.

4.3.2 Residential Development

The ISP indicates 37 single residential lots and one (1) grouped housing site, accommodating approximately 50 - 52 dwellings. The structure plan provisions contained in Part 1 provide an overall residential dwelling target of 20-21 dwellings per hectare.

The proposed residential densities of R20 and R30 are at the lower end of the medium-density category and meet the objectives of the City's Residential Strategy. They also increase the potential for dwelling diversity available in the suburb.

Single residential lots will be developed at the R20 density. Lot sizes range from 360m² to 668m², with an average lot size of 506m² and minimum frontages of 12m. The single battle-axe lot proposed will have a 4m wide access leg, and the proportion of the lot area as an access leg is within the deemed to comply criteria. R30 development will be applicable to the single grouped dwelling site.

Although the ISP does not have a statutory basis, it does demonstrate compliance with the deemed-to-comply criteria for lot size, average lot size, and minimum frontage requirements prescribed by the RCodes, which may be contemplated at the subdivision stage.

Design guidelines by way of Local Development Plan/s will be required for lots as identified in Part 1 Implementation of the Structure Plan.



4.3.3 Transport Network

4.3.3.1 Existing Road Network

The Traffic Impact Assessment in Appendix 1 by Greenfields Technical Services notes that full development of the structure plan area will generate up to 300 movements per day, based on six (6) movements per day for approximately 50 lots, with a peak hour volume of 50 movements.

As the structure plan area is limited and the indicative layout plan is for the whole of the structure plan area, there is no anticipated increase in traffic volume beyond peak capacity in the future.

The proposed road network within the structure plan area can accommodate the expected vehicle movements, and the layout of the internal road network and the orientation of lots are designed so that internal movements will be relatively evenly spread across the development area.

The development area proposes two connections to the existing road network, via Guara Road and Nyrang Road, which connect to Chapman Road via a service road arrangement. The impact may be significant on those roads and the Chapman Road/Chapman Road service road intersection.

Upgrading this intersection to ensure the function of Chapman Road as a District Distributor is not compromised may impact the existing road network and other intersections with Chapman Road in proximity. As a result, the TIA recommends assessing the overall road upgrade requirements in the vicinity of the Chapman Road/Chapman Road service road intersection. The Structure Plan acknowledges this with a requirement to assess these detailed requirements to inform an updated TIA at the subdivision stage.

No access is permitted nor proposed to the North West Coastal Highway, which is a primary distributor road.



4.3.3.2 Proposed Road Network

The street network indicated in the Indicative Subdivision Plan reflects Liveable Neighbourhood guidelines. The reserve and pavement widths for access streets will be refined at the detailed subdivision stage. The proposed roads within the development are classified as Access Street - Types C & D, refer to Figure 15.

Table 4 Indicative Road Reserve Width

A, B, C	Type C	17.2m - 20m	7m – 7.2m	2m
D, E, F	Type D	12.5 – 15.5m	5.5m – 6m	2m

Road type C roads (roads A,B,C) are proposed extensions to Nyrang Road and Guara Drive and may be up to 20m in width, corresponding with the existing road reserve widths. Roads A & B will have a predominant residential function but will potentially service an increased number of vehicle movements. The reserve widths can accommodate future extension/s of those roads to the north and will enable traffic management to be implemented as required to manage a potentially longer road length if that occurs.

Type D reserves will service local residents only, have a low traffic volume of less than 1000 vehicles per day, and only have lots on one side (with the exception of a small portion of road D).

Road D is proposed with a reserve width of 12.5m with the following characteristics:

- Adjacent to POS; verge adjacent to POS can be reduced in width as no requirements for underground services on the POS side of road reserve.
- Reserve width related to the size and function of POS A (predominantly stormwater).
- Small length of road reserve.
- Will service only a small number of grouped housing dwellings with direct frontage to the road reserve.
- Footpath on one side only.
- Low on-street parking demand, but which can be addressed within the verge area on a single side of the road.

The profile envisaged is 2m-2.5m verge (POS side), 6.5m – 7m pavement, and 3.5m verge. A verge width of 3m is sufficient for service infrastructure alignments on residential alignment. The final reserve and pavement width will be determined at the detailed design stage once the development configuration on the grouped housing lot is known. However, it is expected no more than 4 dwellings would front this road. It is expected that units would be developed along all street frontages A, B & D with access to internal dwellings within the complex via a driveway/s from roads A and/or B.

Intersection spacings are consistent with Table 5 of Liveable Neighbourhoods for access streets, with all intersections spaced greater than 20m apart. Intersection design and treatments, particularly integrating the existing road network and new roads, will be designed in detail at the subdivision stage.

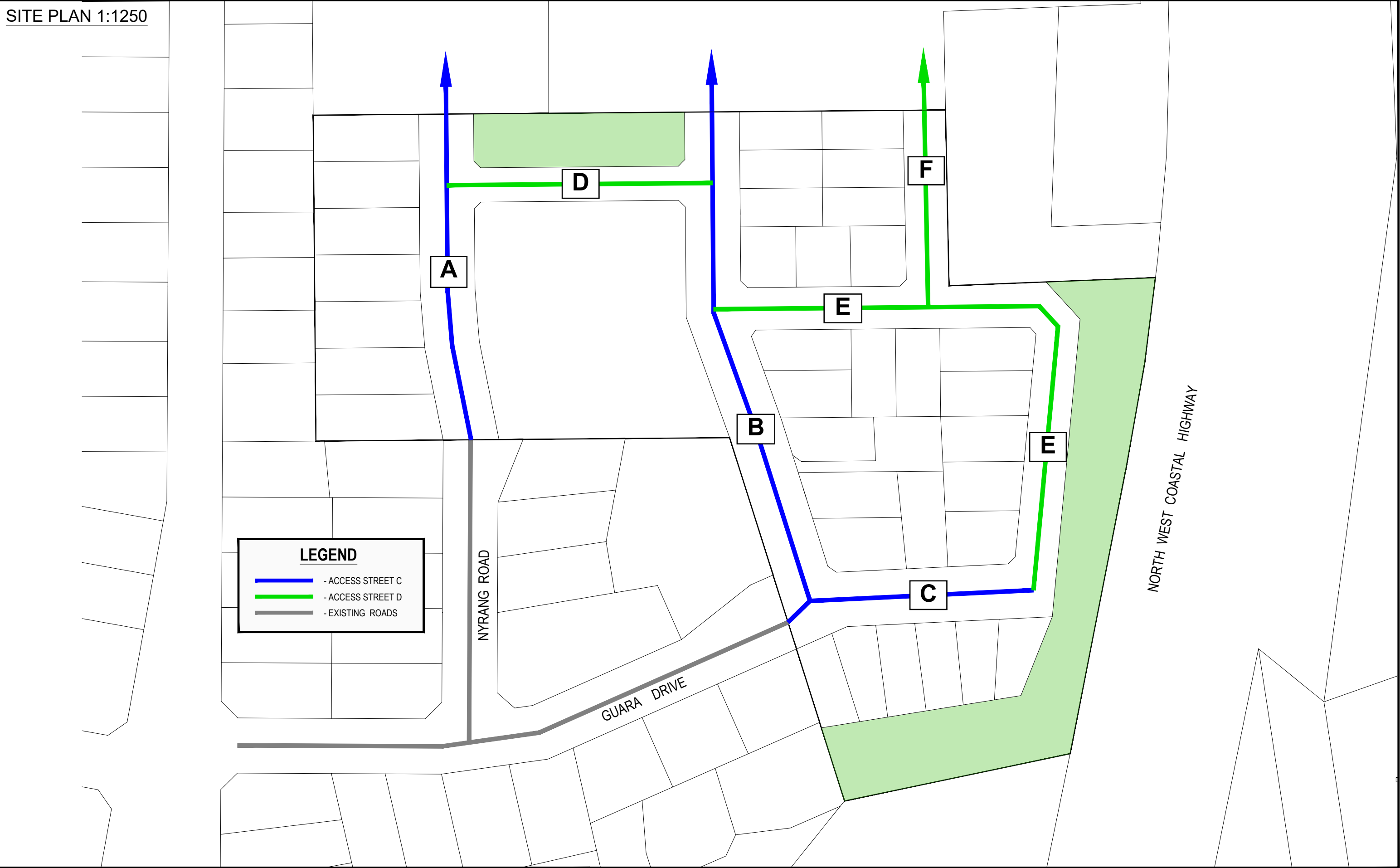
The Structure Plan references the development of a Landscaping Plan at the subdivision stage, which will include verge design, including street tree planting. Refer also to section 4.3.4



Pathways for pedestrians will be provided based on the Liveable Neighbourhood requirement of a footpath on at least one side of a local access street.

The expected traffic volume generated by the development is within road type and function limits, as prescribed in Liveable Neighbourhoods Element 2. The road reserve widths will accommodate service provisions, footpaths, on-street car parking in low-speed environments, and drainage requirements.

The road network broadly reflects the indicative street layout in the Sunset Beach Precinct Plan. The Precinct Plan proposes north-south linkages connecting the existing road network and the southern portion of the plan area to a northern connection with Chapman Valley Road and a future activity centre. The intent of the road network in the Precinct Plan is not compromised and can be achieved by extension to the proposed road reserves over adjoining landholdings.



TITLE: ROAD TYPE CLASSIFICATION		CLIENT: SUNSET BEACH ESTATE PTY LTD		 LANDWEST URBAN AND RURAL PLANNING CONSULTANTS	8 Anzac Terrace Geraldton WA 6530 PO BOX 1597 Geraldton WA 6531 Email : info@landwest.net.au Phone : (08) 9965 0550 Fax : (08) 9965 0559						
		CERTIFICATE OF TITLE(S) : 4027/642	DATE LAST MODIFIED: 11/11/2023								
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					DESIGNED: GMB		DRAWN: DW				



4.3.4 Public Open Space and Landscaping

The structure plan provides 8659m² of POS within the structure plan area comprising Area A 3015m² and Area B 5644m². The maximum 2% allowance for stormwater management function with a restricted use classification is used in the calculation.

The Indicative Public Open Space Schedule is based on the ISP. The final areas will be refined at the subdivision stage and may vary from that indicated in conjunction with the development of the Urban Water Management Plan.

Table 5 Indicative Public Open Space Schedule

Indicative Public Open Space Schedule		
Lot 2349 Area		4.5762ha
Less Other Zoned Lots		NA
Less Other Deductions		NA
Gross Subdivisional Area		4.5762ha
Minimum POS Contribution Required		10%
		4576m²
Actual POS Provision		
<u>Restricted</u> Use POS		
POS A	1190m ²	
POS B	1104m ²	
Restricted Open Space 2,294m ² (to maximum 20% 915m ²)		915m ²
<u>Unrestricted</u> Use POS		
POS A	1825m ²	
POS B	4540m ²	
Unrestricted Open Space		6,365m ²
Total Land Area Provided		7,280m²



The locations for multi-use reserves A & B are based on the following criteria:

- a) Ground levels and pre-development stormwater flows and catchment areas.
- b) Landscaped / vegetated bio-retention systems to be developed to address post-development flow and catchment areas by responding to existing ground levels and without significant earthworks.
- c) Landscaping to utilise nutrient and waterwise practices to prevent groundwater contamination. Details are to be included in detailed engineering/civil drawings for local government approval.
- d) Provide connection to the Chapman River foreshore reserve.
- e) The presence of vegetation which may be able to be retained in these areas.
- f) Maximise the number of lots with an aspect over POS.
- g) Increase separation distance to adjoining private recreation land use that is impact-generating (noise, dust, waste, odour).
- h) Increase separation distance between residential lots and noise source North West Coastal Highway.
- i) Visually frame the estate to the North West Coastal Highway.
- j) Connection between open space and the existing dual-use path system adjoining the land.
- k) Area A is located to enable its extension should development occur over landholdings to the north. It can form a larger open space reserve with a co-located stormwater function. This location for a potentially larger open space area (as opposed to the open space areas identified in the LPP SBPP) is based on ground levels and anticipated flow paths, which the LPP may not have considered in detail when delineating open space east of Road B.
- l) Its location does not compromise the outcome envisioned by the LPP but reflects more detailed planning and engineering considerations.

The development of the public open space areas will be complemented by landscaping of streets and paths with a street tree program. This is considered essential to contribute to the estate's amenity and the development of an urban tree canopy. Both Guara Drive and Nyrang Road have some mature street trees along their alignments, and a program in the new estate will expand on this.

Existing mature and viable trees will be retained in open space areas wherever possible. Viability will be determined based on species and whether an invasive species; the structure and health of the tree; where sufficient clearance can be achieved from services infrastructure; and whether clear sight lines for safety can be maintained.

As indicated in Part 1 of the Structure Plan, a detailed landscaping plan and management strategy will be required at the subdivision stage.

An indicative strategy is included at Figure 16 and comprises the following elements:

- a) Street tree planting on both sides of the road reserve.
- b) Co-located with services infrastructure/s on non-standard alignment where necessary.
- c) A Minimum rate of 1 street tree per lot frontage or other ratio agreed with the local government as part of the landscaping plan formulation at the detailed design stage.
- d) Street trees will be provided and included in detailed engineering/civil drawings for local government and/or service agency approval.
- e) Species subject to local government approval and agreed maintenance/bonding arrangements.
- f) The Species selected will mature to sufficient size and canopy to shade the footpath street verge area and footpaths.
- g) Access to the existing dual-use path network.
- h) Interface with open space reserve to the north.





4.3.5 Engineering and Servicing

The requirements for servicing the development area are detailed in the PESR at Appendix 2.

- a) Earthworks: the lot is relatively flat, and a balanced cut-to-fill program is envisioned with fill as required to achieve the required finished ground levels for both wastewater and stormwater drainage specifications.
- b) Potable Water: existing Water Corporation infrastructure is available but will require upgrading to achieve pressure and flow requirements to the development area. Proposed tie-in locations for new infrastructure have been determined in conjunction with the Water Corporation.
- c) Sewerage: the existing sewer network has the capacity for the proposed lot yield, as confirmed by the Water Corporation. Redundant mains which traverse Lot 2349 will need to be removed. Finished ground levels will be determined at the detailed design phase to inform sewerage design and levels.
- d) Power: the existing network has the capacity for the proposed lot yield. Upgrading, including a ground-mounted transformer, will be required. Subdivision infrastructure will be via the underground network to individual lots.
- e) Gas: natural gas infrastructure can be extended to service the development area; however, this will be dependent on cost feasibility as gas provision to new developments is not a mandatory requirement.
- f) Telecommunications: the area is currently serviced with fixed-line optics, but new development will require the installation of a fibre-ready pit and pipe system to allow the installation of fibre-optic cabling for individual lots.
- g) Landscaping: detailed construction drawings to include details of landscaping and street tree planting program based on Landscape Plan development at the time of subdivision.

4.3.6 Stormwater Management

The LWMSv3 at Appendix 3 outlines stormwater disposal and groundwater recharge with the following elements:

- a) 1EY treatment of road stormwater is achieved through bioretention basins/swales.
- b) On-lot detention systems are to be installed to store and infiltrate stormwater to the City of Geraldton guidelines.
- c) The bioretention basins/swales detain the 20% AEP, reducing flows below predevelopment rates.
- d) Flows off-site to the Chapman Road in events up to and including the 1%AEP will be at or below predevelopment from the same land area.
- e) All flows to the north will be contained on site and infiltrated for all events up to and including the 1%AEP.
- f) Water-sensitive urban designs (WSUD) will utilise bioretention systems and vegetated swales to capture sediments, large debris, and nutrients from all water runoff from impervious surfaces, reducing impacts on downstream systems.
- g) The landscaping will utilise nutrient and waterwise practices to prevent groundwater contamination.

The Stormwater Concept Strategy, as prepared by Oversby Consulting is included as an extract at Figure 17.





4.3.7 Bushfire Management

A Bushfire Hazard Level (BHL) assessment has been undertaken and is included in Section 3 Appendix 4. The assessment delineates a hazard level outcome of low to moderate. It identifies that future development can potentially achieve BAL12.5 to BAL29

The Structure Plan Part 1 Implementation requires a BAL and Bushfire Management Plan (BMP) assessment at the subdivision stage to determine BAL ratings which accurately reflect the post-development extent of vegetation and the resulting bushfire hazard. It will address the landscaping of the open space and drainage swales and the retention of existing vegetation.

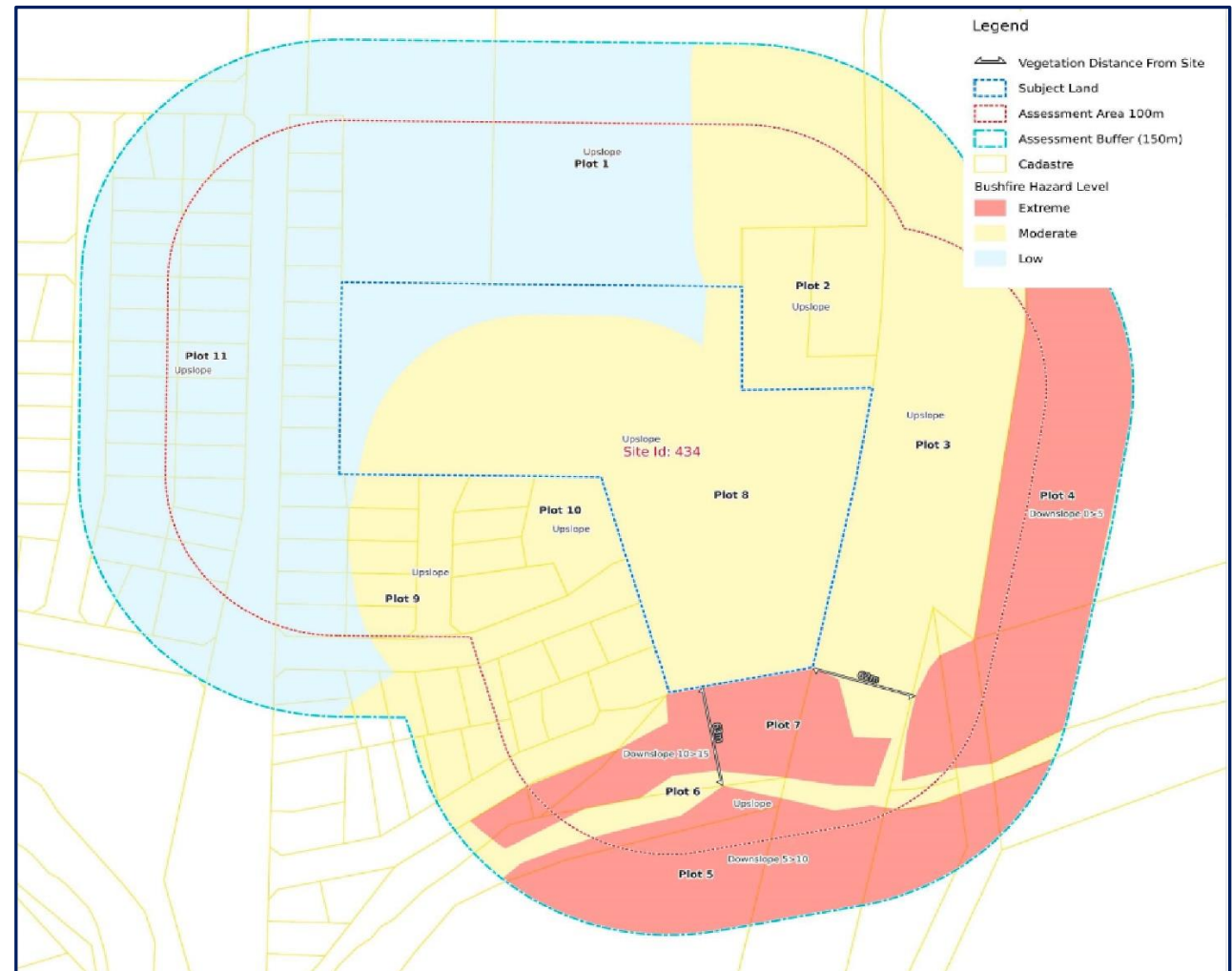


Figure 18 BHL Extract (Source: BHL Assessment BBS Consultants)



4.3.8 Road Noise Management

The development area adjoins North West Coastal Highway and is within the trigger distance where a detailed assessment and management must be undertaken to understand the impact noise from a significant transport route may have on the development area.

See Appendix 5 in Part 3 for Herring Storer Acoustics Road and Rail Noise assessment.

The findings of the acoustic assessment indicate that noise received at the development from traffic is expected to exceed the maximum noise levels for dwellings in a portion of the estate. Quiet House Packages (QHP) will be required for dwellings inside the respective noise contour levels.

The provisions in Part 1 of the Structure Plan require implementing the noise mitigation measures prescribed in the Noise Management Plan, including an LDP where QHP will be required.

Figure 19 indicates the anticipated noise level contours over Lot 2349, where no boundary wall is constructed, and lots requiring a QHP at building stage.

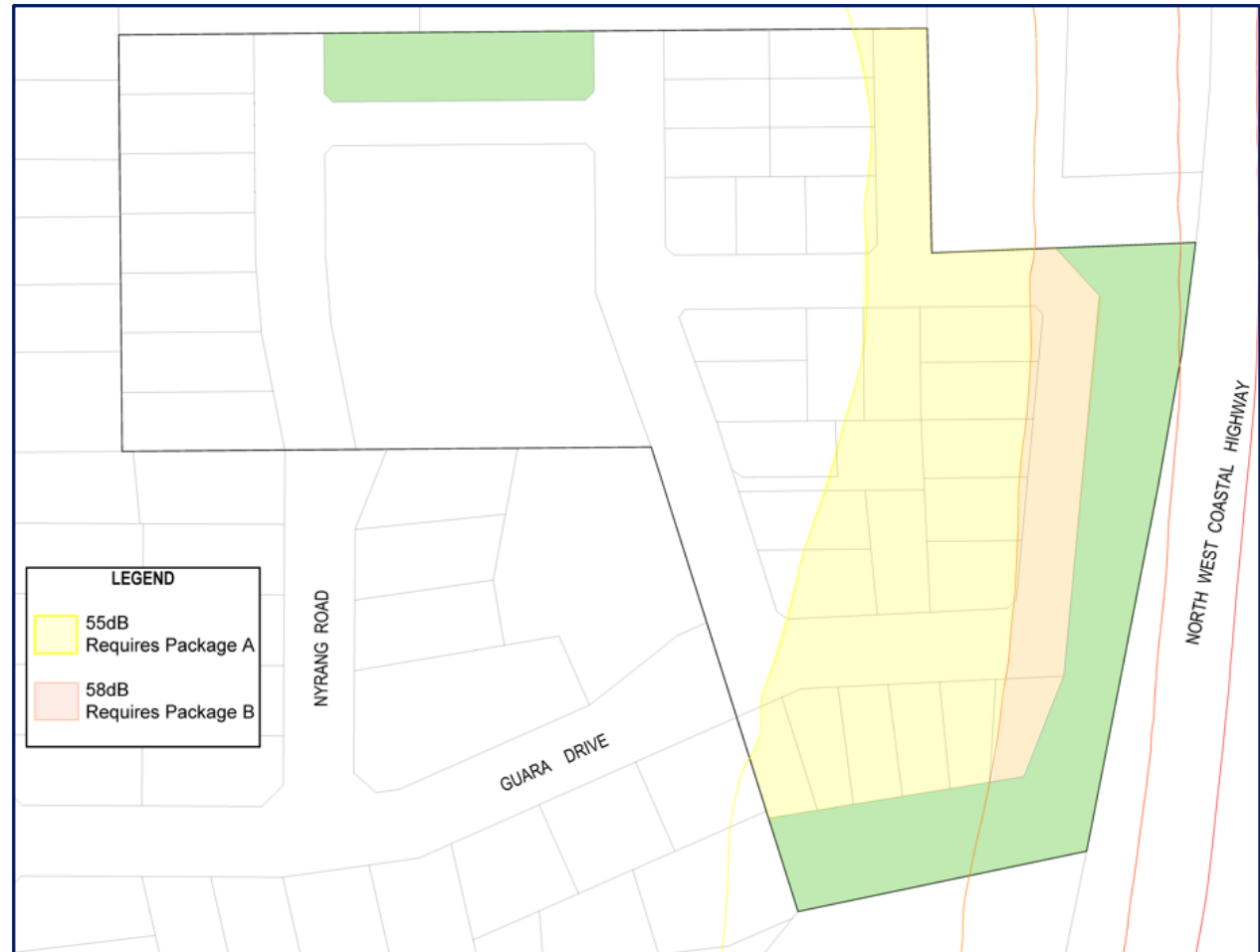


Figure 19 Noise contours levels and QHP requirements Extract (Source: Herring Storer Acoustics)



4.4 Staging

Development is expected over two (2) stages. Stage 1 will comprise 20-25 single residential lots and POS B in its entirety. The final number of lots will be determined at the subdivision stage and based on market demand and economic feasibility.



PART 3 TECHNICAL INFORMATION



Appendix 1
Traffic Impact Assessment
Greenfields Technical Services



Appendix 2
Preliminary Services Report
BuaBua Consulting



Appendix 3
Local Water Management Strategy v3
Oversby Consulting



Appendix 4
BHL Assessment v3
Baron Building Surveying and Bushfire Consultants



Appendix 5
Road and Rail Noise Assessment & Addendum
Herring Storer Acoustics

