Roe Estate Structure Plan

Part One - Implementation Report

APRIL 2025

CLE Town Planning + Design

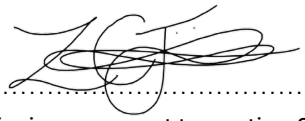
ENDORSEMENT PAGE

This Structure Plan is prepared under the provisions of the City of Swan Local Planning Scheme No. 17.

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

05 November 2025

Signed for and on behalf of the Western Australian Planning Commission



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An officer of the Commission duly authorised by the Commission pursuant to section 24 of the *Planning and Development Act 2005* for that purpose, in the presence of:

Rhianne Fiander Witness

06 November 2025 Date

06 November 2035 Date of Expiry

CLE Town Planning + Design

Title	Roe Estate Structure Plan Part One - Implementation Report
Prepared for	John Septimus Roe Anglican Community School
Date	14 April 2025
Status	Final
Prepared by	CLE Town Planning + Design
CLE reference	3711Rep19C

Table of Amendments

Amendment No.	Summary of Amendment	Amendment Type	Date Approved by WAPC

Executive Summary

The Roe Estate Structure Plan (the Structure Plan) comprises approximately 5ha of land, being generally bound by Beechboro Road North to the east, Blackboy Way and a Western Power substation to the south and established residential development to the north and west.

The Structure Plan represents an infill project that aligns with state and local government planning and policy objectives and supports housing supply within the Perth metropolitan area. The Structure Plan will guide future subdivision and development of the land, and is informed by the following vision:

At the heart of Roe Estate is community connection and accessibility. Situated near the Noranda Metronet transport hub, it serves as a gateway to the wider region, facilitating effortless movement for residents. Through excellence in design and execution, Roe Estate will enhance the local area and cultivate a legacy of community and connectivity.

The Structure Plan area is zoned 'Urban' under the Metropolitan Region Scheme (MRS) and is zoned 'Residential Development' under the City of Swan (City) Local Planning Scheme No. 17 (LPS 17). The site was previously zoned 'Private Clubs and Institutions' under LPS 17, which reflected the use of the site as a private primary school (John Septimus Roe Anglican Community School Beechboro Campus). Following a decision to close the campus at the end of the 2022 school year Scheme Amendment No. 211 was progressed to rezone the Structure Plan area to 'Residential Development'. The amendment was approved by the Minister for Planning and gazetted on 17 November 2023.

This Structure Plan is lodged in accordance with the objectives of the Residential Development zone, which require a structure plan to be prepared for future residential areas to guide development and/or subdivision in a coordinated manner.

The Structure Plan has been prepared in accordance with the objectives of the relevant planning framework, including *Liveable Neighbourhoods* as the applicable guiding document for large infill sites.

The Structure Plan will support the creation of a residential neighbourhood with densities ranging from R30-R40 and is estimated to deliver approximately 100 dwellings, which equates to 19.92 dwellings per gross urban zoned hectare and 29.94 dwellings per residential site hectare. This exceeds the targets set out in *Liveable Neighbourhoods* and will support the City in achieving its 47% infill target set out under the *Perth and Peel @ 3.5 million* sub regional planning framework.

Beechboro is identified as an infill precinct with dual density codes of R20-35, R20-R40 and R20-R50. Whereas, land immediately south of the Structure Plan, within the City of Bayswater, is coded R25. The R30-R40 densities within the Structure Plan align with the surrounding density codes and will deliver medium density development that is in-keeping with both the existing and planned character of the area.

The Structure Plan demonstrates coordinated development of the site via a logical extension to the existing road networks of Blackboy Way and Flametree Place. Blackboy Way is located outside of the Structure Plan area, within the City of Bayswater. The Structure Plan map demonstrates a coordinated extension of Blackboy Way with the Structure Plan, which can be delivered through future subdivision.

The public open space has been carefully sited to retain a stand of Marri trees in the north-western corner of the Structure Plan, whilst also serving a local drainage function. The POS extends in a linear fashion to the proposed east-west local road centrally within the Structure Plan to .integrate the public open space with the future development.

The site can be readily serviced, with reticulated sewer, reticulated water and power all available immediately adjacent to the Structure Plan area.

To support and inform the Structure Plan the following technical reports have been prepared, and are summarised in the Part 2 – Explanatory Report, with complete copies included as technical appendices:

- Acoustic Report
- Engineering and Servicing Report
- Environmental Assessment Report
- Landscape Masterplan
- Local Water Management Strategy
- Transport Impact Assessment

The abovementioned technical reports comprehensively address all of the relevant planning and technical considerations and demonstrate that the land is suitable for urban development in the form proposed.

Land Use Summary

Table 1 provides a land use summary of the Structure Plan area.

Item	Data	Section Number
Total area covered by the structure plan	5.02ha	Plan A
Area of each land use proposed: Zones · Residential Reserves · Parks and Recreation · Road Reserves · Public Purpose - Drainage	 3.34ha 0.51ha 1.10ha 0.07ha	Part 1 - Section 4.1 and Plan A
Estimated number of dwellings	100	Part 2 – Section 5.3.1
Estimated residential density *Liveable Neighbourhoods and Perth & Peel @ 3.5 million*	19.92 dwellings per gross urban zoned hectare & 29.94 dwellings per residential site hectare	Part 1 – Section 4.2 Part 2 – Section 5.3.1
Estimated population	280 (2.8 people per household)	
Number of high schools	0	Part 2 – Section 5.8
Number of primary schools	0	Part 2 – Section 5.8
Amount of Public Open Space	0.49ha (10%) Unrestricted – 0.47ha Restricted – 0.02ha	Part 1 – Section 4.1.4 Part 2 – Section 5.4

***Table 1**: Land Use Summary*

Existing Trees to be retained on site

Contents

Figures

Part One - Implementation Report

1. Structure Plan Area & Operation

1.1 Application Area and Approval

This Structure Plan shall apply to Lot 24 (463) Beechboro Road and Lot 385 (18) Blackboy Way, Beechboro being the land contained within the inner edge of the line denoting the structure plan boundary on the Structure Plan Map (**Plan A**). The Structure Plan is identified as the Roe Estate Structure Plan.

The Structure Plan is in effect from the date stated on the cover and for a period of 10 years.

1.2 Relationship with Statutory Planning Framework

The Structure Plan has been prepared as required by Part 5A of the City's LPS 17 and the *Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 2 - Deemed provisions for local planning schemes* (Deemed Provisions). The Structure Plan is in accordance with the objectives of *Liveable Neighbourhoods* and supporting state and local planning policies to outline future zones, reserves, public open space and supporting infrastructure.

Pursuant to the Deemed Provisions, a decision maker of an application for development approval or subdivision approval is to have due regard to the provisions of this Structure Plan, including the Structure Plan Map, Implementation Report, Explanatory Report and Technical Appendices.

1.3 Structure Plan Content

The Structure Plan comprises:

- Part One – Implementation Report
- Part Two – Explanatory Report
- Appendices – Technical Reports

Part One of the Structure Plan comprises the Map and supporting planning provisions. Part Two of the Structure Plan is the explanatory report component, which can be used to interpret and implement the requirements of Part One.

Roe Estate Site

3. Purpose

The purpose of the Structure Plan is to coordinate subdivision and development of the former John Septimus Roe Anglican Community School Beechboro Campus. The Structure Plan will present as an extension of the existing Beechboro neighbourhood and contribute to the City achieving its 47% residential infill target set out under *Perth and Peel @ 3.5 million*.

The vision for the Structure Plan is as follows:

At the heart of Roe Estate is community connection and accessibility. Situated near the Noranda Metronet transport hub, it serves as a gateway to the wider region, facilitating effortless movement for residents. Through excellence in design and execution, Roe Estate will enhance the local area and cultivate a legacy of community and connectivity.

The vision is delivered through the following three key principles:

- **Community Design– Provide an estate that integrates seamlessly with the surrounding neighbourhood, contributing to the existing and planned suburban character of the area, and the objectives of the City's Urban Housing Strategy.**

- **Urban Ecology – Deliver a sustainable development that supports tree retention and water sensitive urban design principles with access to various amenities to encourage active travel.**

- **Affordability – Support the delivery of affordable housing to meet the needs of future occupants and provide a framework that facilitates infill development and housing opportunities in line with the City's Local Planning Strategy.**

The Structure Plan will achieve these principles through the delivery of an estate that seamlessly connects with the existing community in a clear and legible manner, makes provision for public open space that prioritises tree retention and provides for a variety of dwelling typologies to cater for the existing Beechboro demographic.

2. Staging

Staging will generally commence from the Structure Plan's western and southern boundaries with access to existing services via Blackboy Way and Flametree Place, progressing in both a northern and westerly direction.

Development staging will follow an orderly sequence and shall not exceed the extension of essential service infrastructure or constructed road access.

4. Subdivision & Development Requirements

4.1 Land Use Zones & Reserves

4.1.1 Structure Plan Zones

Plan A is the Structure Plan Map, which designates the proposed zones and reserves applicable to land within the Structure Plan.

Subdivision and development of land is to be generally in accordance with the Structure Plan Map. Refinements to the zones and reserves is permitted at subdivision stage subject to submission of an appropriate level of supporting technical justification.

The Structure Plan proposes the following zone/s as set out in **Table 2**, which accords with the City's LPS 17. Land use permissibility for land within the Structure Plan area shall be in accordance with the corresponding zone, as set out in the zoning table of LPS 17.

Zone	Objectives
Residential	· Provide for a range of forms and densities of residential development to meet the needs of the wide variety of households which make up the community; · Promote a residential environment in each locality consistent with the form and density of residential development permissible in the locality, so as to enhance a sense of place and community identity; · Preserve and enhance those characteristics which contribute towards residential amenity, and to avoid those forms of development which have the potential to prejudice the development of a safe and attractive residential environment; · Provide for a limited range of ancillary development compatible with the form and density of residential development, and complementary to the needs of local communities, but which will not compromise residential amenity; and · Avoid development of land for any purpose or in any manner that would detract from the viability or integrity of development in either the Strategic Regional Centre or the Commercial zones.

***Table 2**: Structure Plan Zones*

4.1.2 Movement Network

The Structure Plan is subject to the following key movement network considerations:

- Road connections to the surrounding local area shall be generally in accordance with Plan A and shall connect seamlessly to the neighbouring community.
- Road reserves and the supporting cross sections should be developed in accordance with the objectives of *Liveable Neighbourhoods*, with all Access Street D reservations to achieve a minimum width of 15 metres (but can be reduced to a minimum width of 13 metres in locations where it adjoins a public open space or drainage reserve).
- Pedestrian linkages, including a dual-use path, will be in accordance with the **Figure 10** Movement Strategy Plan in Part 2, the recommendations of the supporting Transport Impact Assessment (**Appendix 6**) and the City's standards.
- Residential lots adjoining Lot 11210 (Crown Reserve 41129), should have regard to:
  - The potential dedication of Crown Reserve 41129 as a road reserve pursuant to s.56 of the *Land Administration Act 1997* for vehicular access; and
  - *Operational Policy 1.1: Subdivision of Land - General Principles* provisions related to vehicular access which requires all new lots to be provided with direct frontage access to a constructed public road, which is connected to the road system of the locality.

4.1.3 Other Reserves

The **Plan A** Structure Plan Map identifies a 0.49ha local open space and 0.07ha drainage reserve.

4.1.4 Public Open Space

The provision of public open space will be provided generally in accordance with the Structure Plan Map and **Table 3** of this Structure Plan. An updated public open space schedule may be required at the time of subdivision for determination by the WAPC.

The Structure Plan makes provision for 10% of the site to be set aside as creditable public open space,as set out below and in accordance with **Plan A**.

Public Open Space Schedule (all areas are in hectares)		
LSP Site Area		5.0200
Existing Deductions		
Drainage Reserve (southeast corner)	0.0700	
Drainage 1:1 year event (as per Hyd2o LWMS)	0.0188	
Total existing deductions	0.0888	
Net Site Area	4.9312	
Structure Plan Deductions		
Total Structure Plan Deductions	0.0888	
Gross Subdivisible Area		**4.9312**
POS @ 10%		0.4931
Public Open Space Requirement		
May Comprise:		
Min 8% unrestricted POS	0.3945	
Max 2% restricted POS	0.0986	
TOTAL POS REQUIRED		**0.4931**
Public Open Space Provided	Unrestricted POS	Restricted POS
POS 1 - North-west	0.4685	0.0247
TOTAL (ha)	**0.4685**	**0.0247**
Additional Deductions		
Restricted Open Space Surplus		0.0000
Restricted Public Open Space Contribution		
Unrestricted POS Provided	0.4685	9.50%
Restricted POS Provided	0.0247	0.50%
Total Creditable POS Provided	**0.4932**	**10.00%**

***Table 3**: Public Open Space*

4.2 Density & Development

Plan A designates the R-Code ranges applicable to subdivision and development of the Structure Plan. Subdivision and development shall exceed a dwelling target of 22 dwellings per site hectare across the entire Structure Plan area in accordance with *Liveable Neighbourhoods*.

4.2.1 Density & R-Codes

This Structure Plan adopts a density code range of R30-40.

An R-Code Plan is to be submitted at the time of subdivision to allocate a specific R-Code for the proposed lots for approval by the WAPC. The R-Code Plan:

a. Shall be consistent with density ranges and locational criteria set out in this Structure Plan;

b. Is to include a summary of the proposed lot yield of the subdivision application to which it relates; and

c. May be varied subject to the further approval of the WAPC. A varied R-Code Plan will replace (entirely or partially) the previously approved R-Code Plan.

Once approved by the WAPC, the R-Code Plan forms part of this Structure Plan.

An R-Code Plan may not be required if the WAPC considers that the subdivision application is for one or more of the following:

- Amalgamation of lots, including for land assembly;
- Provision of access, services or infrastructure;
- Non-residential use, with reference to the zone/reserve indicated on this structure plan; or
- In accordance with an already-approved R-Code Plan.

4.2.2 Locational Criteria

The allocation of residential densities shall be in accordance with the following criteria:

a. A base residential density code of R30 shall apply; and

b. An R40 coding may apply for lots that are located at the end of a street block or generally within 100m of public open space or a high frequency public transport service as defined by the Residential Design Codes.

4.2.3 Local Development Plans

The preparation of a Local Development Plan may be required by the Western Australian Planning Commission (WAPC) as a condition of subdivision approval where deemed necessary for land comprising, but not limited to:

i. Lots abutting areas of Public Open Space to address:

   a. built form orientation and passive surveillance; and

   b. uniform visually permeable fencing.

In addition, a Local Development Plan may be required to implement quiet house design standards in accordance with an Acoustic Report.

4.3 Other Requirements

4.3.1 Notifications on Title

In respect of applications for the subdivision of land, in accordance with the Lloyd George Acoustic Report dated 30 March 2024 (**Appendix 1**) or an updated report provided at subdivision stage, the City shall recommend to the WAPC that a condition be imposed as part of a subdivision approval for a notification to be placed on the Certificates of Titles of applicable lots. The notification is to advise the following:

- *This lot is situated in the vicinity of a transport corridor and is currently affected, or may in future be affected by transport noise. Additional planning and building requirements may apply to development on this land to achieve an acceptable level of noise reduction.*

5. *Additional Details*

5.1 Information to be Submitted with a Subdivision Application

The following technical reports/strategies are to be prepared in support of any future subdivision application:

Additional Information / Purpose	Approval Stage	Responsible Agency
R-Code Plan	To depict final R-Codes for individual lots in accordance with the locational criteria set out in Part 1.	WAPC

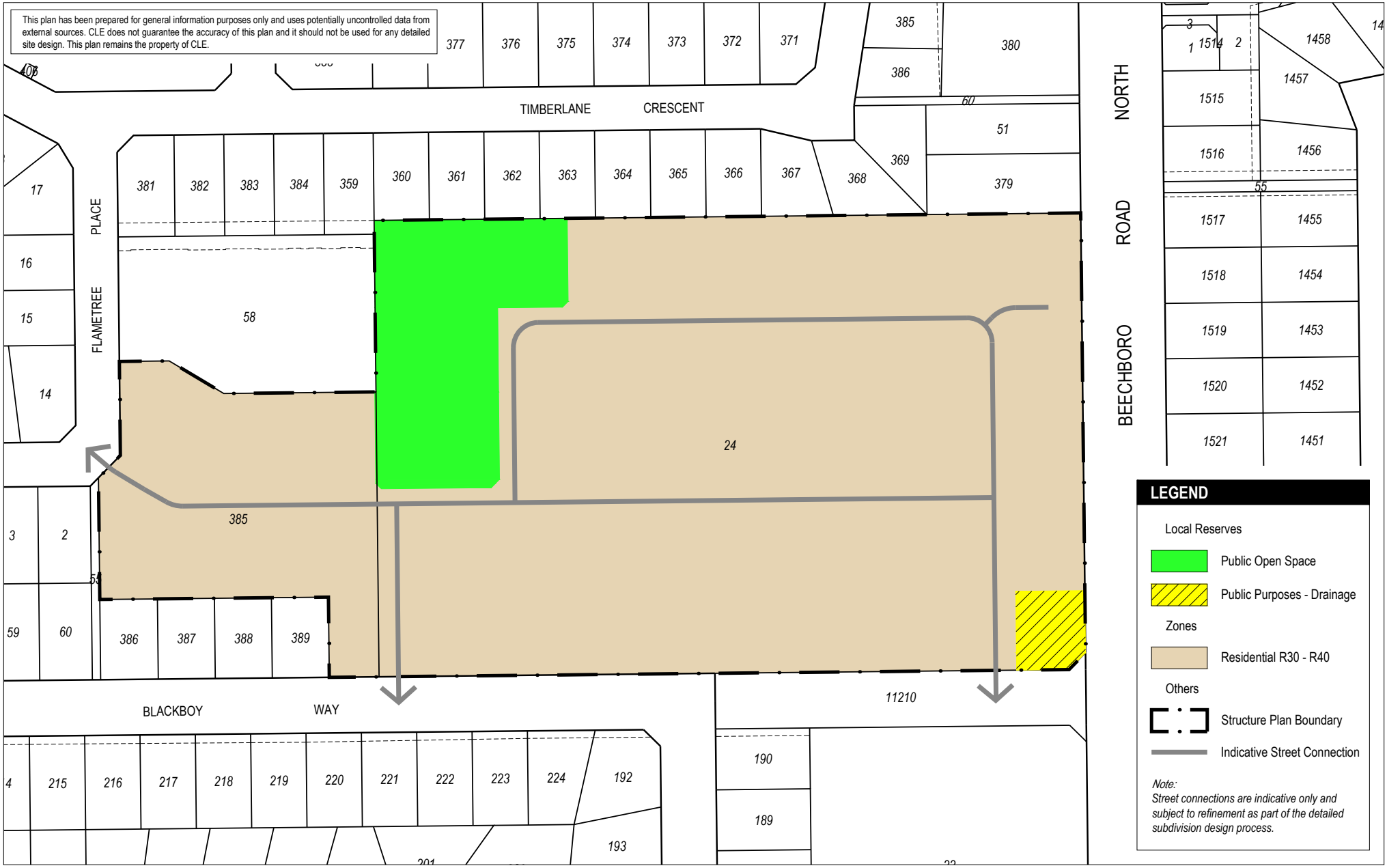
***Table 4**: Information to be submitted with a subdivision or development application*

5.2 Studies to be Required Under a Condition of Subdivision Approval

The following technical reports/strategies are to be prepared in accordance with a future subdivision approval (as applicable):

Additional Information / Purpose	Approval Stage	Responsible Agency
Urban Water Management Plan	To detail the management of stormwater both on and off site in accordance with the WAPC's Better Urban Water Management Guidelines.	City of Swan
Tree Retention Plan	To detail the strategy for retaining the existing Marri trees on site as part of subdivision works.	City of Swan

***Table 5**: Information to be submitted pursuant to approval conditions, if relevant*



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LOCAL STRUCTURE PLAN MAP

Lot 385 Blackboy Way and Lot 24 Beechboro Road North, Beechboro

plan no: **3711-18D-01**
date: 31 March 2025
scale: NTS @A4

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Roe Estate Structure Plan

Part Two - Explanatory Report

APRIL 2025

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Title	Roe Estate Structure Plan Part Two - Explanatory Report
Prepared for	John Septimus Roe Anglican Community School
Date	14 April 2025
Status	Final
Prepared by	CLE Town Planning + Design
CLE reference	3711Rep20C

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Part Two - Explanatory Report

1. Introduction & Purpose

The Roe Estate Structure Plan ('the Structure Plan') has been prepared on behalf of the Anglican Schools Commission and covers Lot 24 (463) Beechboro Road and Lot 385 (18) Blackboy Way, Beechboro.

The Structure Plan is lodged in accordance with the City of Swan (City) Local Planning Scheme No. 17 (LPS 17), which requires a structure plan to be prepared for land zoned 'Residential Development'. The purpose of the Structure Plan is to provide a planning framework to guide future subdivision and development across the site in a coordinated manner. This represents the next logical step in the planning process following the sites rezoning from 'Private Clubs and Institutions' via Scheme Amendment No. 211, which was gazetted in November 2023.

The Structure Plan has been prepared in accordance with the objectives of the relevant planning framework, including Liveable Neighbourhoods as the applicable guiding document for large infill sites.

The format of the Structure Plan generally follows that set out in the Western Australian Planning Commission's (WAPC) WA Planning Manual – Guidance for Structure Plans, comprising three parts:

Part 1 – Implementation Report: Contains the Structure Plan map and outlines the requirements that will be applied when assessing subdivision and development applications.

Part 2 – Explanatory Report: Discusses the key outcomes, planning implications of the background and technical reports and more detailed planning framework. Part 2 is based on a site-specific analysis of opportunities and constraints and the following technical reports and strategies:

- Acoustic Assessment (Lloyd George Acoustics)
- Engineering and Servicing Report (Tabec)
- Environmental Technical Note (Emerge)
- Landscape Masterplan (Plan E)
- Local Water Management Strategy (Hyd2o)
- Transport Impact Assessment (Transcore)

Part 3 – Technical Appendices: Includes the technical reports and supporting plans and maps as prepared by the technical consultants in support of the proposal.

2. Site & Context Analysis

2.1 Physical Context

Set out below is a high-level contextual analysis of the Structure Plan's various locational and physical characteristics. Where relevant, this analysis has been used to inform the opportunities and constraints within Section 3 and the Design Response within Section 5 of this report.

2.1.1 Location

The Structure Plan is located in the City of Swan, approximately 7.5km north-west of the Swan Strategic Metropolitan Centre and 11km north-east of the Perth CBD. The Noranda Metronet Station, which is currently under construction, is located approximately 450m west of the Structure Plan.

The Structure Plan area is generally bound by: Beechboro Road North to the east; Blackboy Way and Lot 11210 to the south; Timberlane Crescent and existing residence to the north; and Flametree Place, a Pedestrian Access Way and existing residence to the west.

The site was originally developed as the John Septimus Roe Anglican Community School Beechboro Campus and operated as a school until its closure at the end of 2022. The services offered by the school campus have been integrated into its Mirrabooka campus, which offers a whole of school life service (Kindergarten to Year 12) which is the preferred model by customers. The former use of the site as a private school resulted in the site being extensively developed, with almost none of the natural environment remaining.

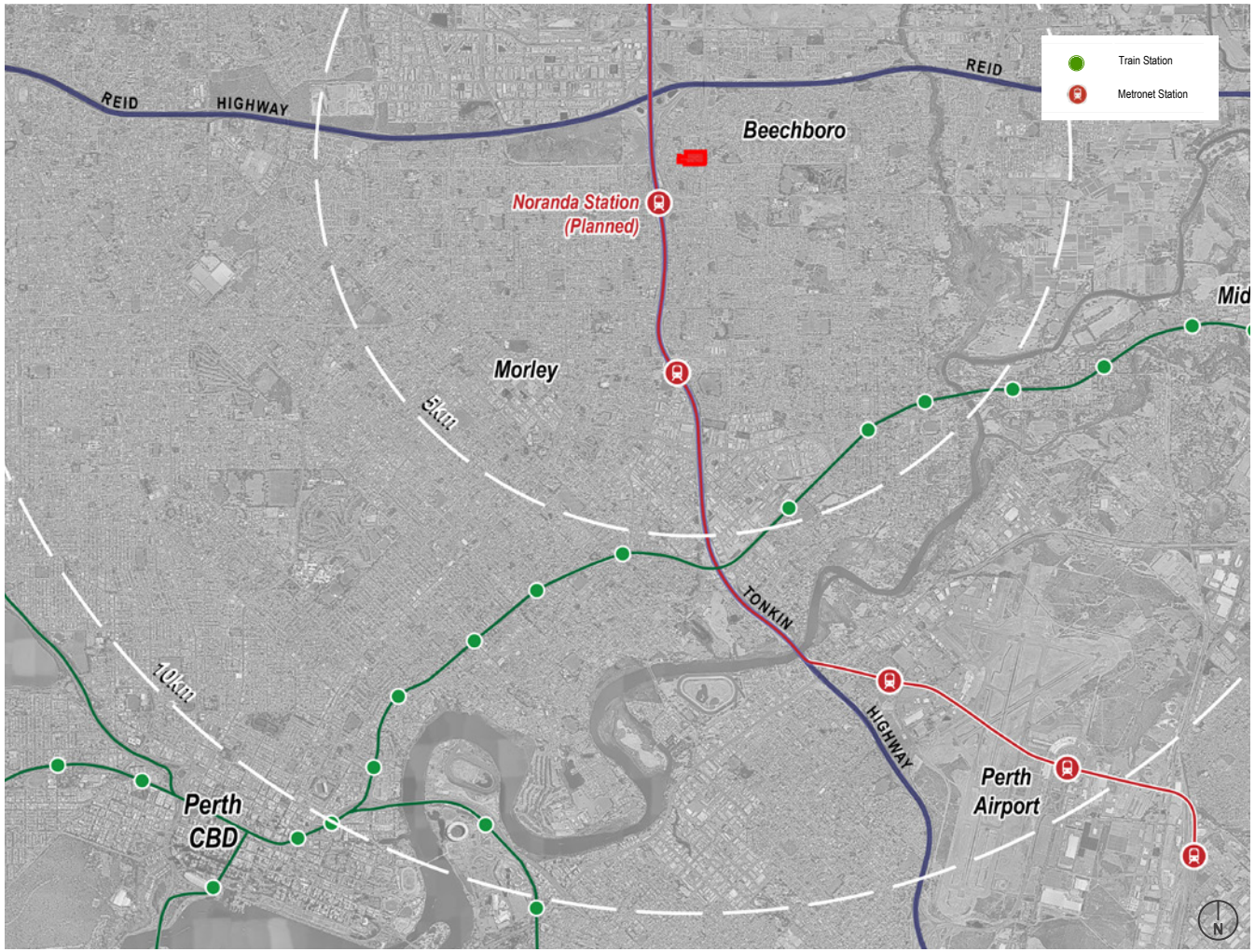


***Figure 1**: Location Plan*

***Figure 2**: Site Plan*

2.1.2 Surrounding Area & Land Use

The Structure Plan applies to a 5.02ha landholding located in the western portion of the City, adjacent to the City of Bayswater. To the north and west of the site is existing residential development and a Childcare Centre accessed via Beechboro Road, to the east is the West Beechboro Primary School and to the south is a Western Power substation and further residential development.

On the sites southern boundary is Lot 11210 which is reserved for 'Public Purpose' in the adjoining City of Bayswater Local Planning Scheme No. 24. The land is owned by the Department of Planning, Lands and Heritage (DPLH) with a management order vesting it to the landowner of the Structure Plan for the purpose of 'Parking and Public Utilities'. The reserve was used as the primary access point into the school via Beechboro Road North. Whilst immediately external to the Structure Plan area, the intent is to gazette this reserve as a public road so it can form part of an integrated development outcome with the Structure Plan, as an extension of Blackboy Way. This approach has in-principle support from both DPLH and the City of Bayswater.

The surrounding area currently comprises of predominantly low-density residential development with supporting public open spaces in a suburban neighbourhood context. Lots typically average in size from approximately 600m²-700m². However, the surrounding area is identified as an urban infill precinct within the City's Urban Housing Strategy and applies a dual density code to lots within the localities of Beechboro, Kiara and Lockridge of either R20-R35, R20-R40 or R20-R50. This is likely to contribute to a change in the current low-density context and character of the area over time into a medium density neighbourhood, although there has been limited uptake of higher density development within these areas to date. The land immediately south of the site is located within the suburb of Morley in the City of Bayswater and is coded R25 and not subject to a dual density code.

Bluegum Park is located approximately 75m north-west of the Structure Plan, which is a large grassed open space suitable for a range of active recreational uses, whilst approximately 235m south is Mahogany Park, which contains several mature native trees and is more suitable to passive recreational uses in addition to light kick-about activities.

The Structure Plan has access to a range of commercial offerings with Beechboro Central located approximately 450m south of the site, Beechboro North Central approximately 150 metres to the north and the Beechboro Local Centre approximately 500m to the north-east. The Structure Plan will support additional density in proximity to these commercial offerings to support the ongoing viability of local businesses, while providing excellent access to a variety of services for future residents.

There are existing public transport services adjacent to the Structure Plan along Beechboro Road and the Noranda Metronet Station, which is currently under construction, is located approximately 450m west of the site. The station will be accessible from either Benara Road or a pedestrian access point via Blackboy Way/Acacia Court. The Structure Plan will optimise use of existing and planned transport infrastructure.

Above: View of Lot 11210 adjoining the south east site boundary

Above: Bus stop on Beechboro Road North

View of site facing west

2.1.3 Tenure, Ownership and Buildings

The Structure Plan comprises two titles, being legally described as set out in **Table 1**.

Landowner	Lot Number	Diagram/Plan	Volume	Folio
The Anglican Schools Commission	24	18010	1216	417
The Anglican Schools Commission	385	76813	1854	526

***Table 1**: Certificate of Title Details*

The site had previously been extensively developed with school buildings and playing fields. The buildings have since been demolished and the playing fields earth worked in anticipation of the site being redeveloped for residential purposes.

2.1.4 Environment

2.1.4.1 Flora and Fauna

The site was developed back in the late 1970's and early 1980's to support the use of the site as a private school campus. Subsequently, it has been largely cleared to support buildings and playing fields for school purposes and comprised of predominantly non-native species. No threatened or priority flora were recorded during a site visit, and none are considered to occur due to lack of suitable habitat.

A stand of Marri trees does exist in the north-western corner of the site. The trees do not contain an understorey and were mapped as being in a 'degraded' condition, however they do present as potential nesting trees and foraging habitat for threatened Black Cockatoo species. The Structure Plan has been designed to retain this stand of Marri trees within an area of public open space.

Above: Retained stand of Marri Trees (Source: Emerge)

2.1.4.2 Topography, Soils and Groundwater

The Structure Plan has the following topographical, groundwater and soil characteristics:

- The site is generally flat at 28m Australian Height Datum (AHD).
- Groundwater flows in an easterly direction across the site and there are no natural waterways or open drains located within the Structure Plan.
- Department of Water and Environmental Regulation's groundwater mapping indicates a maximum groundwater level across the site of approximately 28m AHD, with typical end of summer levels between 21m-22m AHD.
- The site is generally characterised by Bassendean Sands of the Guildford Formation which are suitable for urban development. Some coffee rock was identified through on-site field investigations at depths of 1.5m-2.4m, which has informed the drainage strategy.
- The site is mapped as having a 'moderate to low' risk of Acid Sulphate Soils occurring within 3m of the natural surface.
- The Department of Biodiversity, Conservation and Attractions geomorphic wetlands dataset maps the entire site as a Multiple Use Wetland. Multiple Use Wetlands have no natural or human use attributes, and therefore this classification poses no constraint to redevelopment.

2.1.5 Physical Infrastructure & Services

An analysis of the site identified the following infrastructure and utility characteristics:

- There is an existing Water Corporation main drain line that runs along the full length of the Structure Plan's northern boundary and is protected by an easement. Development will need to be set back so as not to affect the existing easement.
- There is an existing overhead and underground Western Power network located on the southern side of Blackboy Way and west side of Beechboro Road North. Based on the estimated lot yield the Structure Plan may be required to underground parts of the existing network and install a new transformer, which will need to be sensitively located within the Structure Plan to minimise amenity impacts.
- The Structure Plan can be connected to reticulated water, with existing mains located in the verge of Blackboy Way, Beechboro Road North and Flametree Place, with adequate capacity in the network.

2.1.6 People Movement

The site currently has existing frontage to Beechboro Road North, Flametree Place and Blackboy Way. Key features of these roads forming the boundary of the Structure Plan include:

- **Beechboro Road** is classified as a Distributor A local road under Main Roads Road Hierarchy mapping. The Structure Plan has approximately 160m of frontage to Beechboro Road, however no road or lot access is proposed given it serves a higher order function. Pedestrian connections will be made available through the Structure Plan to Beechboro Road North to provide access to the existing public transport services. The existing vehicle access and egress is proposed to be removed.
- **Blackboy Way** and **Flametree Place** are both local access roads that serve the immediate locality. Blackboy Way connects at its western end to Acacia Court, where access is available to the Tonkin Highway shared path and subsequently the Noranda Metronet Station. Flametree Place is a cul-de-sac road with low vehicle volumes and pedestrian movements.

The Structure Plan is located within an established suburb that contains a typically suburban street network comprising of numerous cul-de-sac roads. Footpaths are typically provided on one side of local roads that provide connectivity through the area, such as Bluegum Road, Timberlane Crescent, Banksia Road and Blackboy Way. Footpaths are not provided on cul-de-sac roads.

The Structure Plan area will be serviced by the Public Transport Authority's (PTA) bus service number 345, which runs along Beechboro Road North approximately four to five times per hour during peak periods. Public transport will be improved in the area in the near term, with the Noranda Metronet Station anticipated to be operational by late-2024. This will provide future residents with direct access to the Perth CBD and Ellenbrook Town Centre, in addition to a new bus interchange on Benara Road to support more efficient PTA services for the area.

2.2 Community Context

The Structure Plan is located within the suburb of Beechboro which contains an established community and housing context. Data from the most recent Australian Bureau of Statistics (ABS) census in 2021 provides information on the demographic characteristics of the area, whilst the City's Local Planning Strategy (Strategy) provides guidance on the City's projected demographic trends and housing objectives.

Key contextual observations as they relate to the Structure Plan include:

Population

The Strategy outlines that the City is expecting rapid population growth, with an additional 175,000 residents by 2050 in accordance with *Perth and Peel @ 3.5 million*. Most of these residents will be accommodated within the City's 'Urban Growth Corridor' where there is a significant amount of undeveloped and unconstrained land to accommodate population growth. Notwithstanding this, the City has also identified 16,500 sites across 16 established residential suburbs for a mix of medium and higher density redevelopment to meet the State governments 47% infill target, which includes the suburb of Beechboro. The long-term redevelopment of these areas over the next 30 years will see an increase in the City's population in several established residential areas, whilst supporting the City achieving its residential infill target.

The Strategy projects key demographic trends and will see the majority of the population remain within the 0-15 age group, which reflects the City's position as a metropolitan growth area that caters to first home buyers and young families. However, the largest proportional increase is observed within the 85+ age bracket, suggesting a need to provide development outcomes that further support ageing in place. These demographics are reflected in the current and projected household composition, which compromise predominantly of 'families with dependents', 'families without dependents' and 'lone person/empty nesters'.

Table 2 below provides a snapshot of the current demographic characteristics of Beechboro as of 2021, in comparison to the Perth metropolitan area. The data demonstrates that, consistent with Greater Perth, the majority of the population currently comprises of families with children.

	Beechboro	Greater Perth
Male	4,5777 (50.2%)	49.4%
Female	4,537 (49.8%)	50.6%
Median Age	38	37
Family Composition	2,433 families, average of 1.9 children per household.	Average of 1.8 children per family.
Average number of people per household	2.7 people	2.6 people

***Table 2**: Beechboro Demographics (Source: ABS)*

Housing Context

There were approximately 3,449 dwellings within Beechboro as of 2021, with 91.6% of dwellings having a minimum of three bedrooms. The dwelling typologies currently comprise of:

Housing Typology	No.
Single detached house	90.3%
Semi-detached house	8.4%
Apartments	1%

***Table 3**: Dwelling Typology (Source: ABS)*

Established housing in Beechboro typically dates between 1979 to the late 1980's. The existing dwelling typologies reflect the traditional suburban context and character of the area, with low density housing on blocks typically between 600m²-700m² in size. The City's Urban Housing Strategy (UHS), which supports the Strategy, included an infill plan that resulted in the suburbs of Beechboro, Kiara and Lockridge being dual coded between R35-R50 (in addition to retaining a base density code of R20). The dual coding is intended to support medium density housing near services and public transport. The Strategy also sets objectives for the delivery of housing diversity to support an ageing population, consistent with the population trends outlined above, as well as an increasing demand for small households in established areas.

The Structure Plan is not identified as an infill site within the UHS, given its historical use at the time as a private school. However, the site is appropriate for the delivery of medium density housing in line with what is envisaged under the Strategy and will be consistent with the dual coding applied to the surrounding area. This will provide opportunities to deliver previously unaccounted for medium density dwelling typologies to support the dominant family composition both existing and projected for the area, in addition to opportunities for ageing in place through the delivery of smaller lot sizes and lower maintenance housing stock.

Income and Property Values

The most recent ABS data suggests that Beechboro has a lower median weekly household income than Greater Perth. Property values within the Perth market are currently volatile and are subject to strong growth and demand, however they are aligned with the household income data with REIWA figures from March 2024 suggesting the median house price is approximately $530,000, which is below the $708,000 median price for Greater Perth.

The lower than median household incomes and property values within the area have been acknowledged and informed a key principle of the Structure Plan, which is to provide affordable and accessible housing to both existing and future residents.

	Beechboro	Greater Perth
Median Weekly household income	$1,426	$1,865
Median house price	$530,000	$620,000
Median weekly rent (house)	$620	$650

***Table 4**: Household Income and Property Values (Source: ABS)*

Above: Local housing. Blackboy Way in the foreground.

2.3 Planning & Governance Context

2.3.1 Strategic Planning Framework

2.3.1.1 Perth and Peel @ 3.5 Million (March 2018)

The *Perth and Peel @ 3.5 million* and Beyond suite of policies forms the spatial framework and strategic plan for the Perth and Peel regions. Its purpose is to establish a blueprint for supporting a population of 3.5 million by 2050 through the implementation of four sub-regional planning frameworks.

Perth and Peel @ 3.5 million includes the Structure Plan area within the North-East Sub-regional Planning Framework, which forecasts this sub-region to experience relatively strong population growth, more than doubling from 209,150 people in 2011 to 450,580 by 2050 with most of this growth to be accommodated within the City.

2.3.1.2 North-East Sub-regional Planning Framework (March 2018)

The North-East Sub-regional Framework (the Framework) provides an additional level of detail regarding the implementation of *Perth and Peel @ 3.5 million* at the sub-regional level, including information about the level of expected population growth, servicing, infrastructure and housing demand. The Framework sets an urban infill target for local governments and identifies a dwelling target for the city of 25,690 to house an estimated population of 56,510 new residents in established areas by 2050. The Structure Plan will deliver additional and previously unaccounted for infill given the historic use of the site as a private school.

The Structure Plan area has been identified in the Framework as 'Urban', recognising its current zone under the MRS.

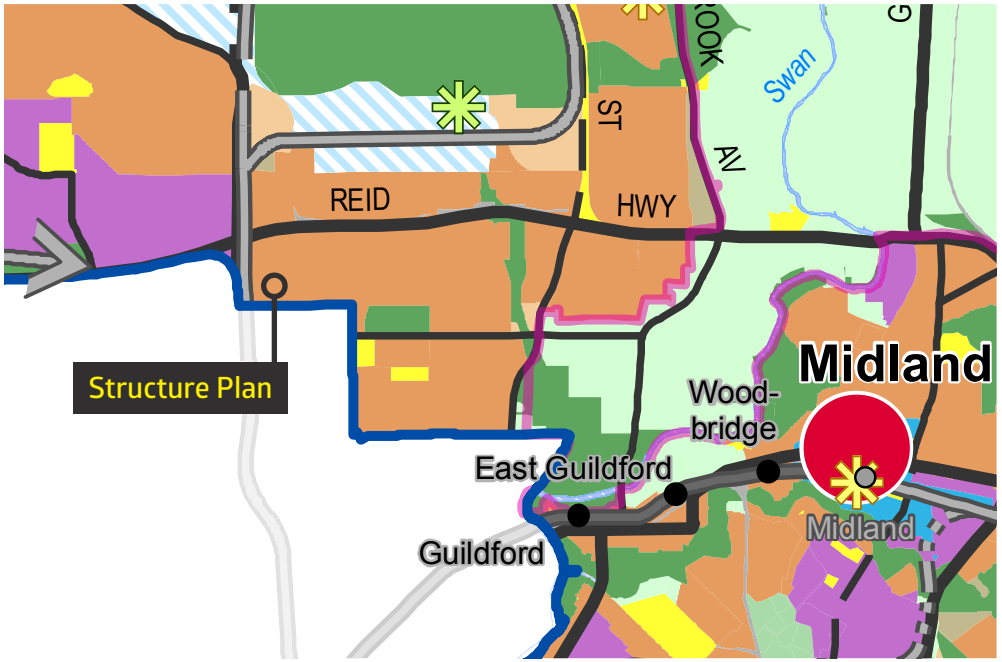


***Figure 3**: North-east Sub-regional Planning Framework Extract (Source: DPLH)*

2.3.1.3 City of Swan Local Planning Strategy (August 2020)

The City's Strategy identifies the site within a 'Residential Infill Area', which is consistent with the outcomes of the City's Urban Housing Strategy and further confirms the suitability of the site for residential development.

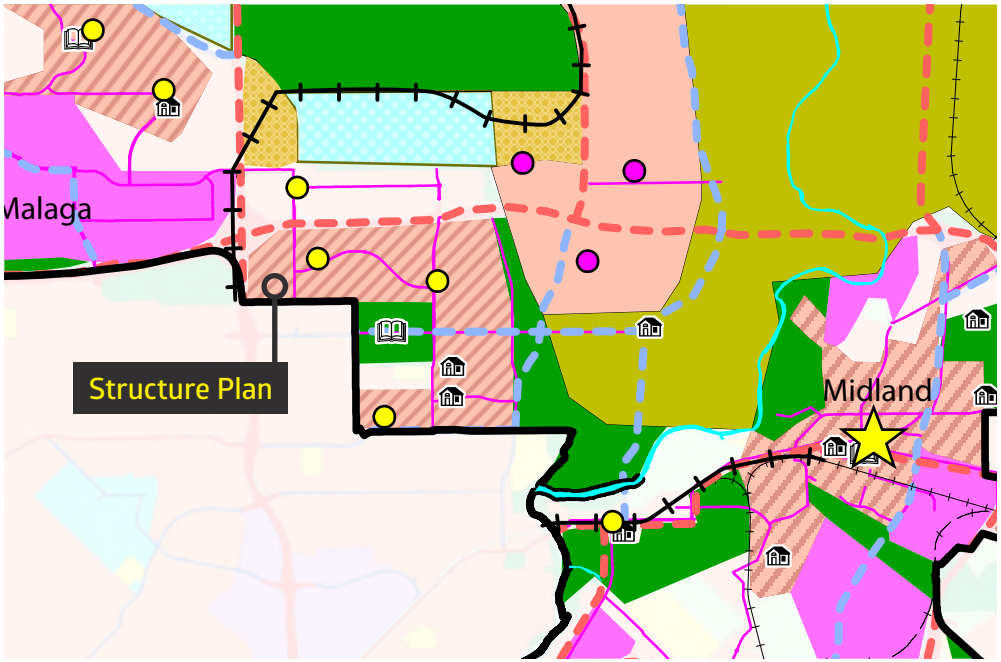


Figure 4: *City of Swan Local Planning Strategy Extract (Source: City of Swan)*

2.3.2 Statutory Planning Framework

2.3.2.1 Metropolitan Region Scheme Zoning

The Structure Plan area is zoned 'Urban' in the Metropolitan Region Scheme (MRS). The Urban zone identifies land suitable for a range of activities, including residential and commercial uses.

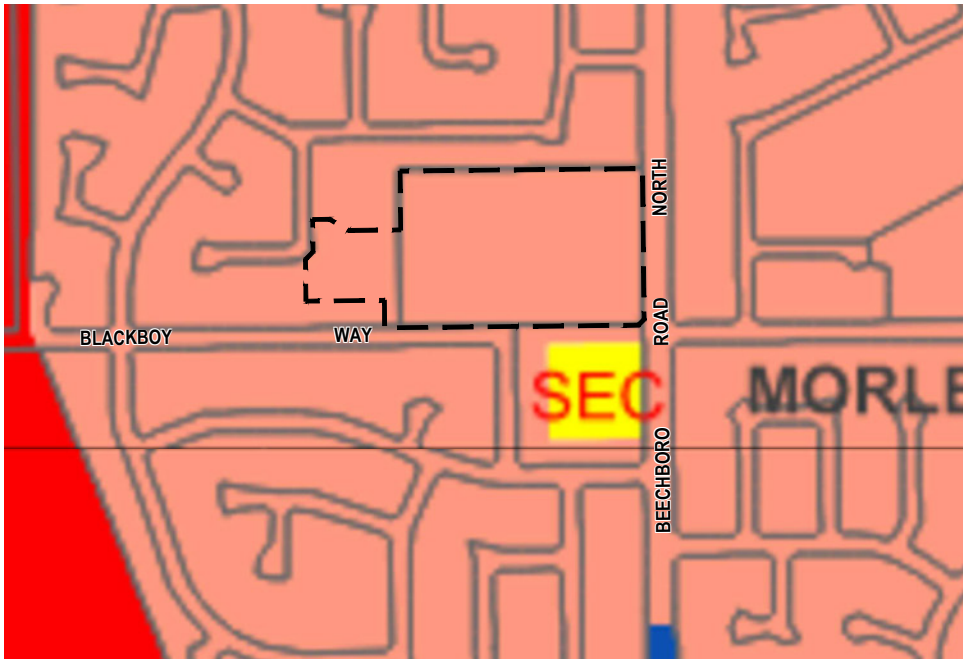
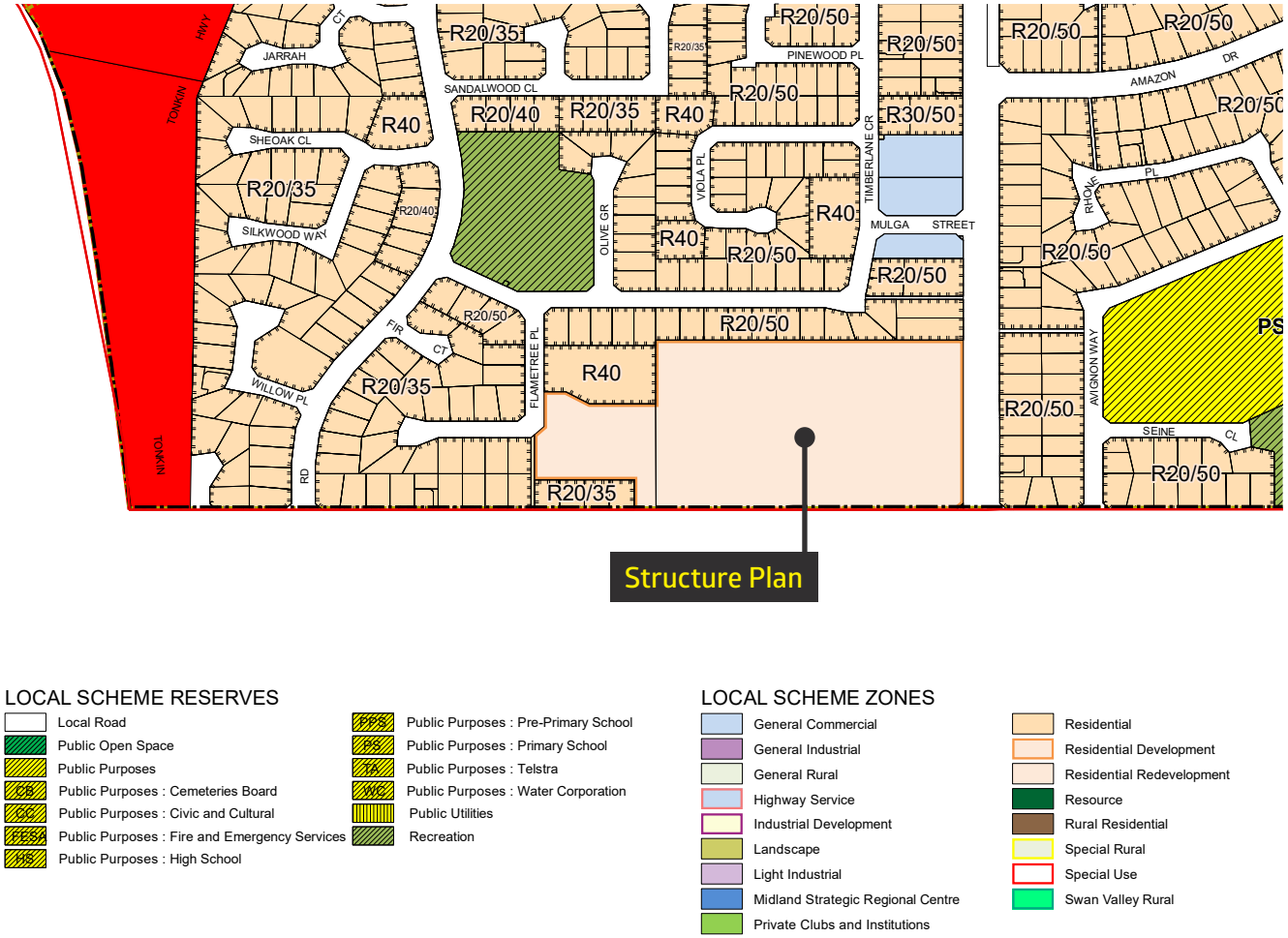


Figure 5: *MRS Zoning Extract (Source: DPLH)*

2.3.2.2 City of Swan Local Planning Scheme No. 17

The Structure Plan area is zoned 'Residential Development' under the City's LPS 17. The site was historically zoned 'Private Clubs and Institutions' reflecting the former use of the site as a private school. In September 2022, Council initiated Amendment No. 211 to LPS 17 to rezone the site to Residential Development following the closure of the John Septimus Roe Beechboro Primary School campus. Given the site is no longer being used as a private school, the Residential Development zone represents a more logical classification for the site. On 17 November 2023, Amendment No. 211 was gazetted, formally establishing the 'Residential Development' zone over the site to facilitate progression of this Structure Plan.



LOCAL SCHEME RESERVES

- Local Road
- Public Open Space
- Public Purposes
- CB — Public Purposes : Cemeteries Board
- CC — Public Purposes : Civic and Cultural
- FESA — Public Purposes : Fire and Emergency Services
- HS — Public Purposes : High School
- PPS — Public Purposes : Pre-Primary School
- PS — Public Purposes : Primary School
- TA — Public Purposes : Telstra
- WC — Public Purposes : Water Corporation
- Public Utilities
- Recreation

LOCAL SCHEME ZONES

- General Commercial
- General Industrial
- General Rural
- Highway Service
- Industrial Development
- Landscape
- Light Industrial
- Midland Strategic Regional Centre
- Private Clubs and Institutions
- Residential
- Residential Development
- Residential Redevelopment
- Resource
- Rural Residential
- Special Rural
- Special Use
- Swan Valley Rural

Figure 6: *LPS Zoning Extract (Source: City of Swan)*

2.3.3 State Planning Policies / Planning Codes

Liveable Neighbourhoods Operational Policy

Liveable Neighbourhoods is WAPC's operational policy for residential development in Western Australia, including large infill sites such as this. Liveable Neighbourhoods sets out the key considerations for the planning of communities, including subdivision layout and movement networks, the location of open space, community facilities, schools and activity centres. The Structure Plan has been prepared in accordance with Liveable Neighbourhoods and best practice urban design principles, creating an extension of the established neighbourhood supported by an interconnected network of local roads and pathways with good access to services and infrastructure.

The Structure Plan's consistency with the objectives of the eight 'Elements' of Liveable Neighbourhoods is set out below in Section 5.0 Design Response.

State Planning Policy 3.0: Urban Growth and Settlement

State Planning Policy 3.0: Urban Growth and Settlement sets out the principles and considerations that guide the location of urban growth and settlements. The Policy strongly focuses on consolidating residential development in existing urban areas and prioritises infill development in established urban areas where future residents will have good access to employment, services and transport infrastructure.

The Structure Plan is consistent with SPP 3.0 as it supports urban consolidation within Beechboro. Further, the site has excellent access to existing road networks, commercial services, planned infrastructure and schools.

State Planning Policy 5.4: Road and Rail Noise

State Planning Policy 5.4: Road and Rail Noise (SPP 5.4) acts in conjunction with the Implementation Guidelines to inform planning decision making and ensure the amenity of future residents is not compromised by transport noise. The Policy requires consideration of transport noise for sensitive land uses abutting major transport and strategic freight routes to avoid or mitigate the potential for land use conflict.

Whilst Beechboro Road is not currently subject to SPP 5.4 in accordance with DPLH's mapping, the policy requires consideration of the 20-year planning horizon. Future traffic volumes obtained from Main Roads indicate Beechboro Road North will carry approximately 26,614 vehicles per day in 2046, and accordingly an acoustic assessment is required. A report has been prepared by Lloyd George Acoustics in accordance with the SPP 5.4 Implementation Guideline, with the outcomes discussed in further detail in Section 5.0 Design Response.

Development Control Policy 2.3 Public Open Space in Residential Areas

This policy provides guidance on the distribution of public open space to ensure a reasonable distribution of land is provided in each locality for active and passive recreational functions. The policy outlines the requirement for 10% of the gross subdivisible area to be given up free of cost for public open space purposes. The Structure Plan proposes to provide 10% of creditable public open space, which is outlined in further detail in Section 5.4 Public Parkland.

Residential Design Codes

The Residential Design Codes (R-Codes) form the basis for the assessment of all single, grouped and multiple-dwelling developments in Western Australia. They are applicable to the structure plan area by virtue of the proposed Residential zone.

The R-Codes can be varied through Local Planning Policies and Local Development Plans. Standard departures to the R-Codes will be available to the structure plan area given its underlying 'Residential Development' zoning and being subject to this approved structure plan. This is in accordance with the City's Local Planning Policy POL-LP-11 Variation to deemed-to-comply requirements of the R-Codes – Medium-density single house development standards (R-MD Codes).

2.3.4 Local Planning Policies

Local Planning Policy 1-12: Public Open Space and Community Buildings

The Policy sets out the City's expectation for the provision of open space through structure plans and any subsequent proposals for subdivision and development. Planning for new open spaces must be in accordance with the City's Open Space and Community Buildings principles, which are as follows:

- Sustainability;
- Quality and Enjoyment;
- Diversity, Flexibility and Innovation;
- Access and Equity;
- Financial Responsibility;
- Integration;
- Consultation and Collaboration; and
- Safety.

A single area of public open space is proposed, as identified within **Plan A**. The public open space has been designed to retain a stand of Marri trees in the north-western corner of the site, following feedback from the City through the scheme amendment process. To demonstrate compliance with the objectives of this policy, Plan E has prepared a Landscape Masterplan for the public open space, which is discussed in further detail in Section 5.0 Design Response.

POL-LP-11 Variation to deemed-to-comply requirements of the R-Codes – Medium-density single house development standards (R-MD Codes)

The policy sets out variations to the R-Codes to support the delivery of medium density housing standards through a set of alternate development criteria known as the 'MD Codes'. The policy is applicable to land zoned 'Residential Development' within the City and will therefore be applicable to the Structure Plan to facilitate the delivery of a variety of medium density housing product consistent with current market demand.

POL-C-104 Environmental Planning

This policy sets out the City's expectations for the management of the natural environment in urban growth areas and requirements to be addressed within structure plans. The Structure Plan is supported by an Environmental Technical Note prepared by Emerge, which assessed the environmental characteristics of the site. The report concluded that given the previous use and development of the site there is almost no natural environment remaining, with only a stand of Marri trees in the north-western corner.

The conclusions of the technical advice, which were informed by advice from the City, recommends that the stand of trees be retained. This advice has subsequently informed the Structure Plan layout.

Water sensitive urban design management will be adopted by the Structure Plan with drainage partially to be accommodated within the public open space, as well as a separate drainage reserve which is required in response to the topography and soil conditions of the site. A Local Water Management Strategy has been prepared by Hyd2o to further demonstrate the approach to drainage management in accordance with water sensitive urban design principles.

Above: View facing south along Beechboro Road North

Above: View facing north along Beechboro Road North

3. Opportunities & Constraints Analysis

3.1 Site Assessment

Contextual analysis and assessment undertaken by the project team has identified important site features that have influenced the design, as well as future subdivision and development of the Structure Plan. Key findings from technical assessments are illustrated in **Figure 7**, and a summary of the key considerations is set out below:

- The Structure Plan area comprises 5.02ha of largely cleared land, broadly bound by Beechboro Road North to the east, Blackboy Way to the south, Flametree Place to the west, and suburban development to the north.
- Native Corymbia calophylla (marri) trees have been retained on site following bulk earthworks, including a distinctive stand of trees in the north-western corner.
- The site is generally flat at approximately 28m AHD.
- Groundwater flows in an easterly direction across the site, and it is considered that the site is suitable for on-site infiltration of stormwater.
- There are no natural waterways or open drains located within the site.
- An existing drainage pipe runs east-west internally along the northern boundary, which is protected by an existing 10m wide easement.
- An existing sewer pipe runs north-south internally, which will need to be retained and will be subject to a formal easement (3m).
- The site has direct access to Beechboro Road North, Blackboy Way, and Flametree Place, which will allow development to be easily integrated into the local road network.
- Opportunity to gazette Lot 11210 as a public road to enhance local permeability. This approach has in-principle support from both DPLH and the City of Bayswater.
- An Acoustic Report has been prepared to assess the potential impact of traffic noise from Beechboro Road North. The report recommends the construction of a noise wall (1.8-2.4m), and Quiet House Packages where dwellings are exposed to noise above the outdoor target. Subdivision shall be delivered in accordance with the recommendations of the report.
- Based on infrastructure and servicing review, the site is able to be serviced in order to support the proposed development.
- A Western Power substation is located to the south-east of the site adjoining Lot 11210, with access via Beechboro Road North.

Above: Retained stand of Marri Trees

Above: View of the site from Flametree Place

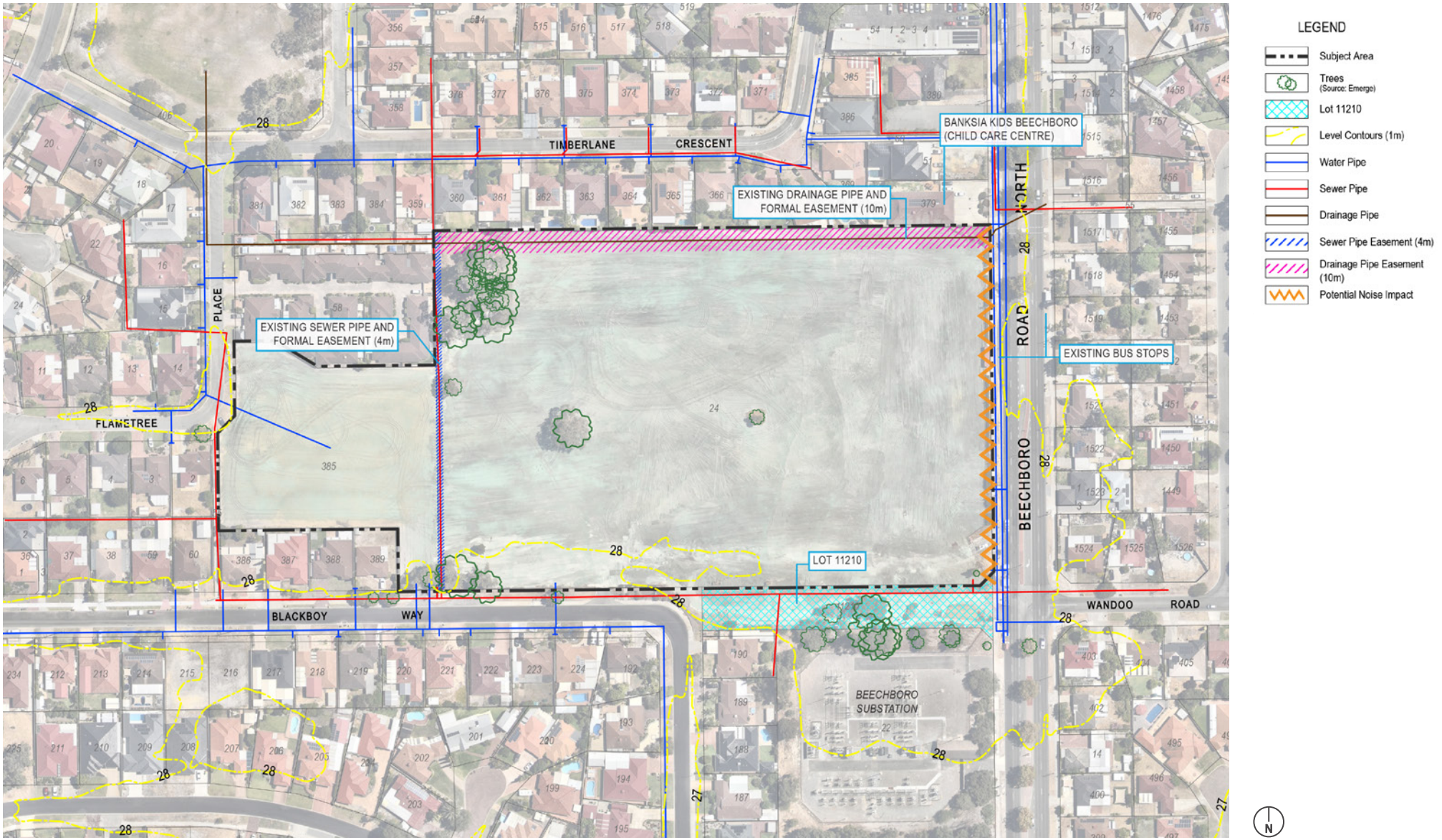


***Figure 7**: Opportunities & Constraints Plan*

3.2 Local Amenity

The Structure Plan is located within an established area, where new development can be fully integrated into the existing neighbourhood. There are a wide range of facilities and services that are sustainably accessible to the site within the local area, as shown in **Figure 8**.

The Structure Plan lies in close proximity to Beechboro Central Shopping Centre, Beechboro North Central, and Beechboro Local Centre, Banksia Kids Beechboro Child Care Centre, and West Beechboro Primary School.

There are several local green spaces that provide attractive places to meet, play, and enjoy nature, including Mahogany Park, Seine Park, and Bluegum Park, which are all within 300m of the site. Further to the west, Lightning Park provides a large sporting reserve with a clubroom, changerooms, floodlighting, and play space.

The Structure Plan is located within an accessible and well-connected area that has excellent pedestrian, cycle, and public transport links. Paths are provided on both sides of Beechboro Road North, with most other local roads providing footpaths on at least one side. Bus stops are located close to the site on both sides of Beechboro Road North. The Noranda Metronet Station is located within walking distance of the Structure Plan area, providing passengers with an 18-minute journey to the Perth CBD.

Above: View to Noranda Metronet Station and Lightning Park

Above: Beechboro North Centro

Above: Bus stops on Beechboro Road North

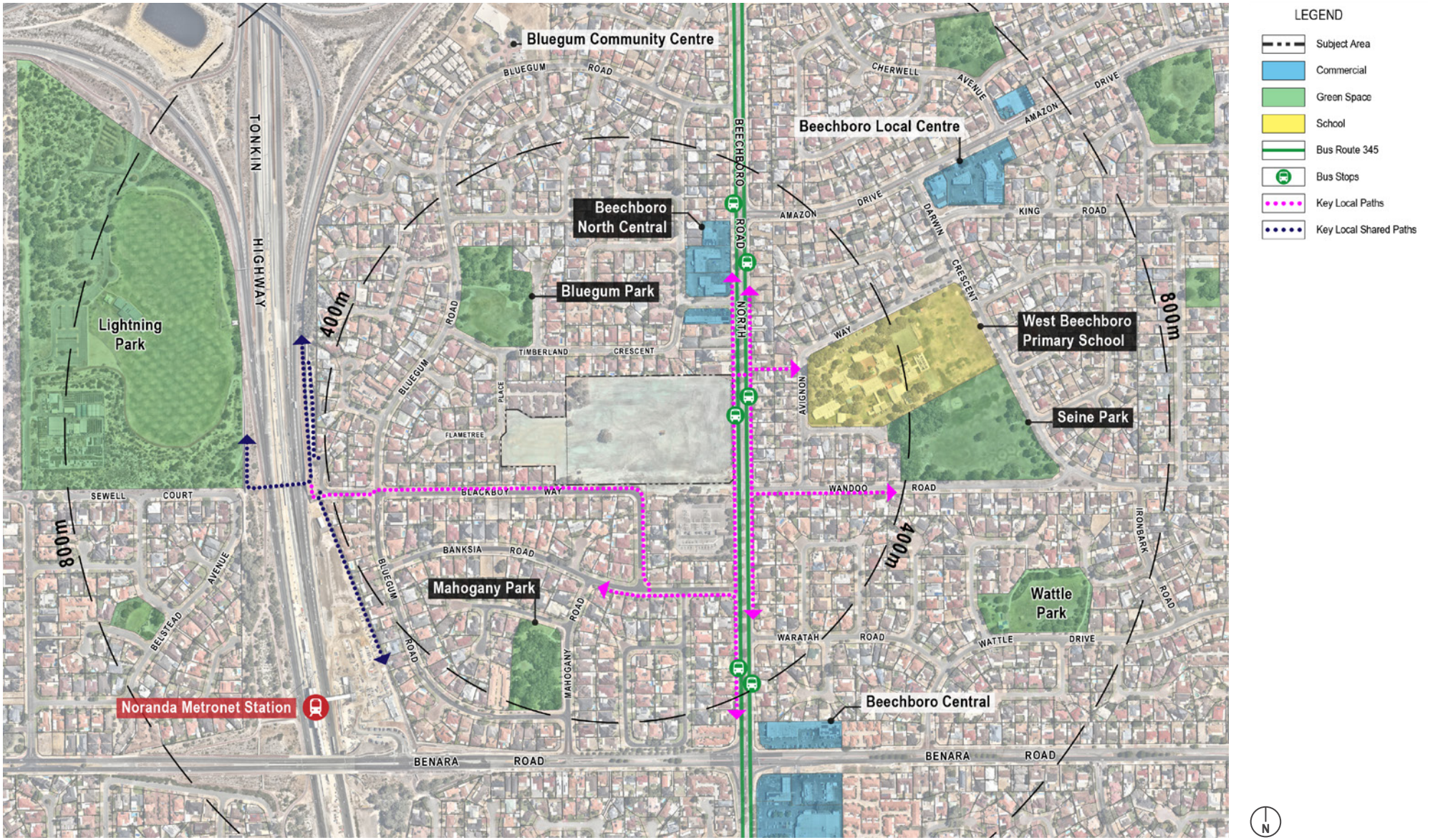


Figure 8: *Local Context Plan*

4. Stakeholder & Community Engagement

Liveable Neighbourhoods and the WAPC's Structure Plan Guidelines promote a participatory approach to structure planning and recommend stakeholder engagement prior to, and in addition to, the formal consultation requirements. The following table sets out a summary of the key stakeholder engagement.

Engagement will continue with stakeholders and surrounding community through the post-lodgement consultation phase as required by the *Planning and Development (Local Planning Schemes) Regulations 2015*. Consultation will then continue with stakeholders, as required, during the implementation stage of the Structure Plan to ensure any concerns or constraints identified are addressed collaboratively, enabling subdivision to occur in a timely manner.

Agency	Summary of Consultation
City of Swan	There has been ongoing engagement with City officers as part the scheme amendment process to rezone the site to facilitate residential development following the decision to close the school campus, which occurred both prior to, and during, the scheme amendment for the site being progressed.
City of Bayswater	City officers have been consulted and provided in-principle support for the gazettal of the adjoining Lot 11210 as a public road, which will facilitate access to lots within the Structure Plan. Discussions with the City of Bayswater are ongoing separate to this Structure Plan.
Department of Planning, Lands and Heritage	DPLH officers were consulted on the rezoning for the site and recommended support for the amendment to the WAPC, who subsequently recommended approval to the Minster for Planning.
Service Authorities (Water Corporation, Western Power, ATCO Gas)	Key servicing agencies were consulted as part of the preparation of the engineering and services response to ensure the site could be connected to all necessary infrastructure and utilities.
Agencies consulted on Scheme amendment No. 211	In addition, the City referred the scheme amendment to rezone the site from 'Private Clubs and Institutions' to 'Residential Development' to ten government agencies for comment. No agency objected to the proposed rezoning indicating a level of support to develop the site for residential purposes.

***Table 5**: Stakeholder Consultation Summary*

5. Design Response

The design response has been developed through a comprehensive masterplanning process and is underpinned by a clear vision.

The vision and supporting principles for Roe Estate were developed by the project team in consultation with key stakeholders, which aim to maximise the opportunities identified.

At the heart of Roe Estate is community connection and accessibility. Situated near the Noranda Metronet transport hub, it serves as a gateway to the wider region, facilitating effortless movement for residents. Through excellence in design and execution, Roe Estate will enhance the local area and cultivate a legacy of community and connectivity.

The vision is delivered through the following three key principles:

- Community Design– Provide an estate that integrates seamlessly with the surrounding neighbourhood, contributing to the existing and planned suburban character of the area, and the objectives of the City's Urban Housing Strategy.
- Urban Ecology – Deliver a sustainable development that supports tree retention and water sensitive urban design principles with access to various amenities to encourage active travel.
- Affordability – Support the delivery of affordable housing to meet the needs of future occupants and provide a framework that facilitates infill development and housing opportunities in line with the City's Local Planning Strategy.

The following sections of this report demonstrate how the vision for Roe Estate could be realised to deliver a sustainable residential development that presents as a logical growth of the existing neighbourhood.

5.1 Community Design

The Structure Plan provides the framework for the delivery of a residential estate that will act as an extension of the established Beechboro community.

A Masterplan Concept, refer **Figure 9**, has been prepared to demonstrate how residential development could occur based on the Structure Plan principles and requirements, noting that this represents only one possible development outcome. The design and lot layout will be refined at the time of subdivision.

The key principles of the plan are to:

- Allow for the delivery of medium density housing product that appeals to a wide market segment and is in-keeping with both the established and planned built form for the locality.
- Provide an open space that supports native vegetation retention and the delivery of a high-quality space for passive recreational activities.
- Deliver a permeable, interconnected road and pedestrian network that provides logical connections to the established movement linkages.
- Support the logical extension of necessary services and infrastructure in a coordinated manner.

Based on these key principles, the Structure Plan provides a framework for the delivery of:

- A total of approximately 100 dwellings with residential densities from R30 to R40.
- The R-Code range of R30-R40 will support a diverse selection of traditional front loaded dwelling typologies. R30 will apply as the base coding across the structure plan area, with higher R40 densities possible at the end of street blocks, in proximity to the open space, and the high frequency public transport network along Beechboro Road. The proposed density ranges generally align with the dual density codes assigned within the broader Beechboro area, in accordance with City's Urban Housing Strategy.
- A road network that connects seamlessly into the existing road network in the area (Blackboy Way and Flametree Place) and provides for pedestrian infrastructure with access to established public transport services along Beechboro Road.
- Delivery of 10% gross public open space to contribute to the numerous public open spaces within the locality, with a focus on tree retention and passive recreational uses.
- A strategy supported by technical appendices to ensure all lots are serviced by necessary infrastructure and utilities.

The Land Use summary table below (**Table 6**) sets out the designations of land across the Structure Plan to achieve the described principles.

Item	Data
Total area covered by the structure plan	5.02ha
Area of each land use proposed: Zones · Residential Reserves · Parks and Recreation · Road Reserves · Public Purpose - Drainage	 3.34ha 0.51ha 1.10ha 0.07ha
Estimated number of dwellings	100
Estimated residential density *Liveable Neighbourhoods and Perth & Peel @ 3.5 million*	19.92 dwellings per gross urban zoned hectare & 29.94 dwellings per residential site hectare
Estimated population	280 (2.8 people per household)
Number of high schools	0
Number of primary schools	0
Amount of Public Open Space	0.49ha (10%) Unrestricted – 0.47ha Restricted – 0.02ha

***Table 6**: Land Use Summary*

***Figure 9**: Masterplan Concept*

5.2 Movement Network

A Transport Impact Assessment (TIA) has been prepared by Transcore in support of the Structure Plan to demonstrate that the proposed and established road network can accommodate the traffic estimated to be generated by the future development. The TIA concludes that the Structure Plan is anticipated to generate approximately 1,050 daily vehicle trips, with approximately 84 vehicles per hour (vph) during the AM peak period and 84 vph during the PM peak period.

Whilst the former school campus was estimated to generate a lower number a daily vehicle trips at approximately 580, all trips were made during the AM and PM peak periods, being 290 in each respective period. Comparatively, the proposed development will significantly reduce the number of vehicle trips on the surrounding road network during the critical AM and PM peak period, and will instead distribute the vehicle volumes more evenly across the network throughout the day. As such, the proposed development will improve the operation of the surrounding road network.

This section provides a summary of the key elements of the TIA, including details of the existing and proposed road network, the road hierarchy and traffic generation. Further consideration is also given to public transport, cyclist and pedestrian network provision.

5.2.1 Existing Movement Network

The Structure Plan is supported by an existing road network that provides convenient access to local, district and regional destinations, primarily via Beechboro Road North and Benara Road.

The key characteristics of the roads adjoining the site are as follows:

Beechboro Road North is a local distributor running north-south along the western boundary of the Structure Plan with a posted speed limit of 60km/h. Beechboro Road North previously provided access and egress to the school site via the adjoining Lot 11210. The existing access is proposed to be removed as part of the redevelopment, with no vehicle access proposed onto Beechboro Road given its higher order local road classification.

Blackboy Way is a local access road that provides access onto Beechboro Road North and Benara Road, via Banksia Road and Mahogany Road respectively. The Structure Plan proposes a local road connection to Blackboy Way in addition to front loaded lots with direct vehicle access.

Flametree Place is a local access road with a cul-de-sac at its western end. Flametree Place connects to Timberlane Crescent, which ultimately provides access onto Beechboro Road North via both Mulga Street and Bluegum Road. The Structure Plan proposes a mid-point connection to Flametree Place.

5.2.2 Proposed Movement Network

The road configuration proposes a series of local access streets that respond to the context and character of the Structure Plan. The Concept Masterplan suggests a series of 'Access Street D' roads generally in accordance with Liveable Neighbourhoods. The key aspects of the proposed movement network are as follows:

- Removal of the access and egress on Beechboro Road North that was previously utilised by the former school campus;
- Integration of the proposed local road network with the established local roads through seamless connections onto Flametree Place and Blackboy Way; and
- Gazettal of Lot 11210, adjacent to the Structure Plan, as a public road to provide an extension of the existing Blackboy Way.

All road reserves and street cross sections will be determined at subdivision stage and will satisfy the objectives of Liveable Neighbourhoods.

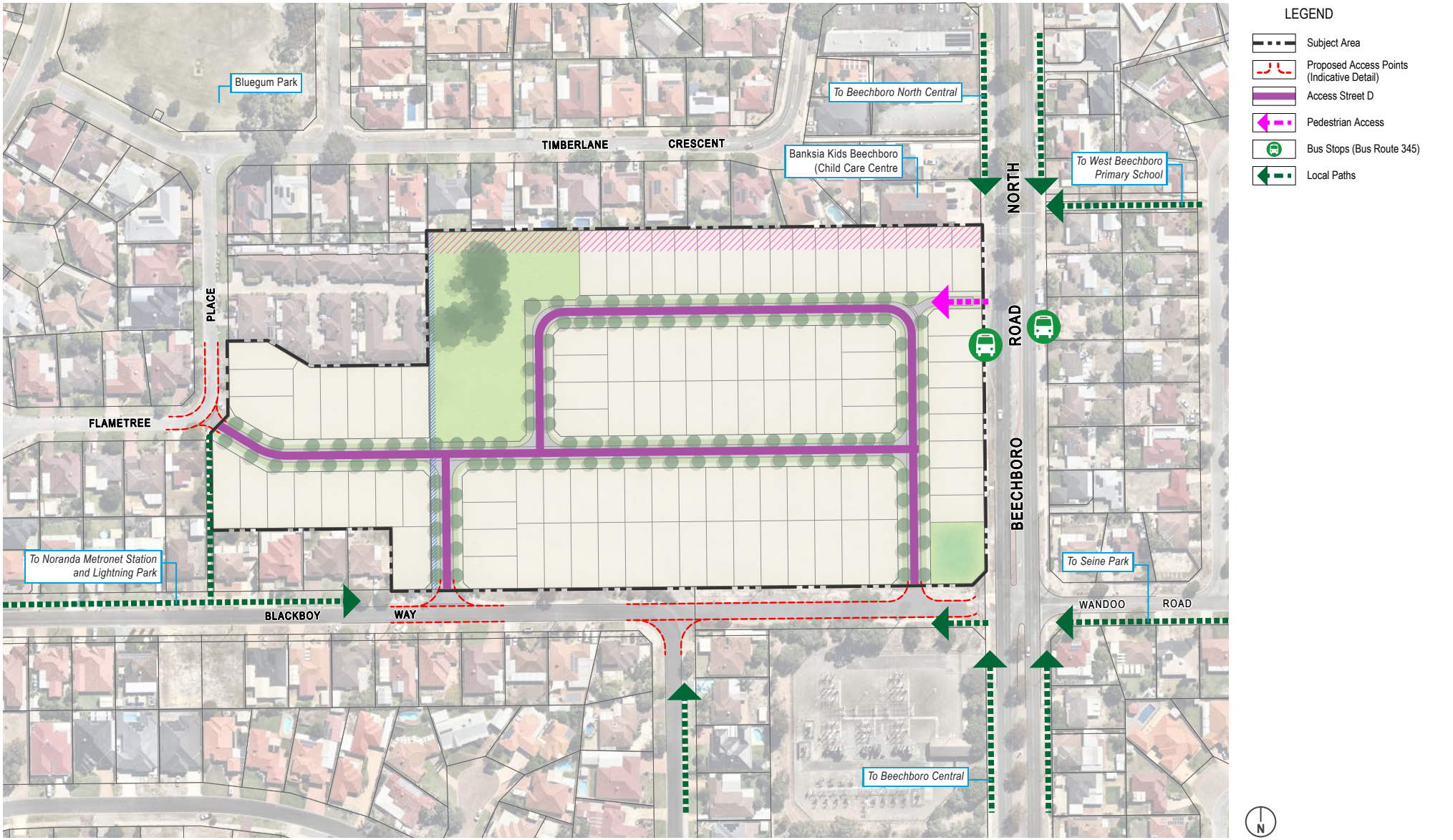


Figure 10: Movement Strategy Plan

5.2.3 Pedestrian and Cyclist Network

There are existing paths provided along both sides of Beechboro Road North, with the majority of other roads surrounding the site having a footpath on one side, excluding cul-de-sac roads where footpaths are typically not provided.

The Structure Plan will integrate with the existing pedestrian and cyclist network in the area, including the provision of footpaths on at least one side of all access streets. Strategic pedestrian connections are also proposed from the Structure Plan to Beechboro Road to provide connectivity to nearby amenities, including public transport, shops and the West Beechboro primary school.

The final location of footpaths will be determined in consultation with the City as part of the detailed design and engineering stages of the planning process.

5.2.4 Public Transport

The Structure Plan is in proximity to the Noranda Metronet Train Station, which is currently under construction and is anticipated to be operational by late 2024. The station will be located immediately north of Benara Road, with the platform located in the median of Tonkin Highway and a new bus bays located along Benara Road. Once operational, passengers will be able to access the Perth CBD via an 18-minute train ride. The configuration of the Station is outlined in **Figure 11**.

Future residents of the Structure Plan will be able to access the train station via bus services along Beechboro Road North, pedestrian connections along Benara Road or via the existing Tonkin Highway principal shared path that is accessible via Blackboy Way/ Acacia Court. Whilst the Structure Plan is located approximately 450m from the train station the pedestrian routes are indirect, with pedestrians required to travel a minimum of 800m-850m to access the station platform.

Figure 11: Noranda Train Station Masterplan (Source: Metronet)

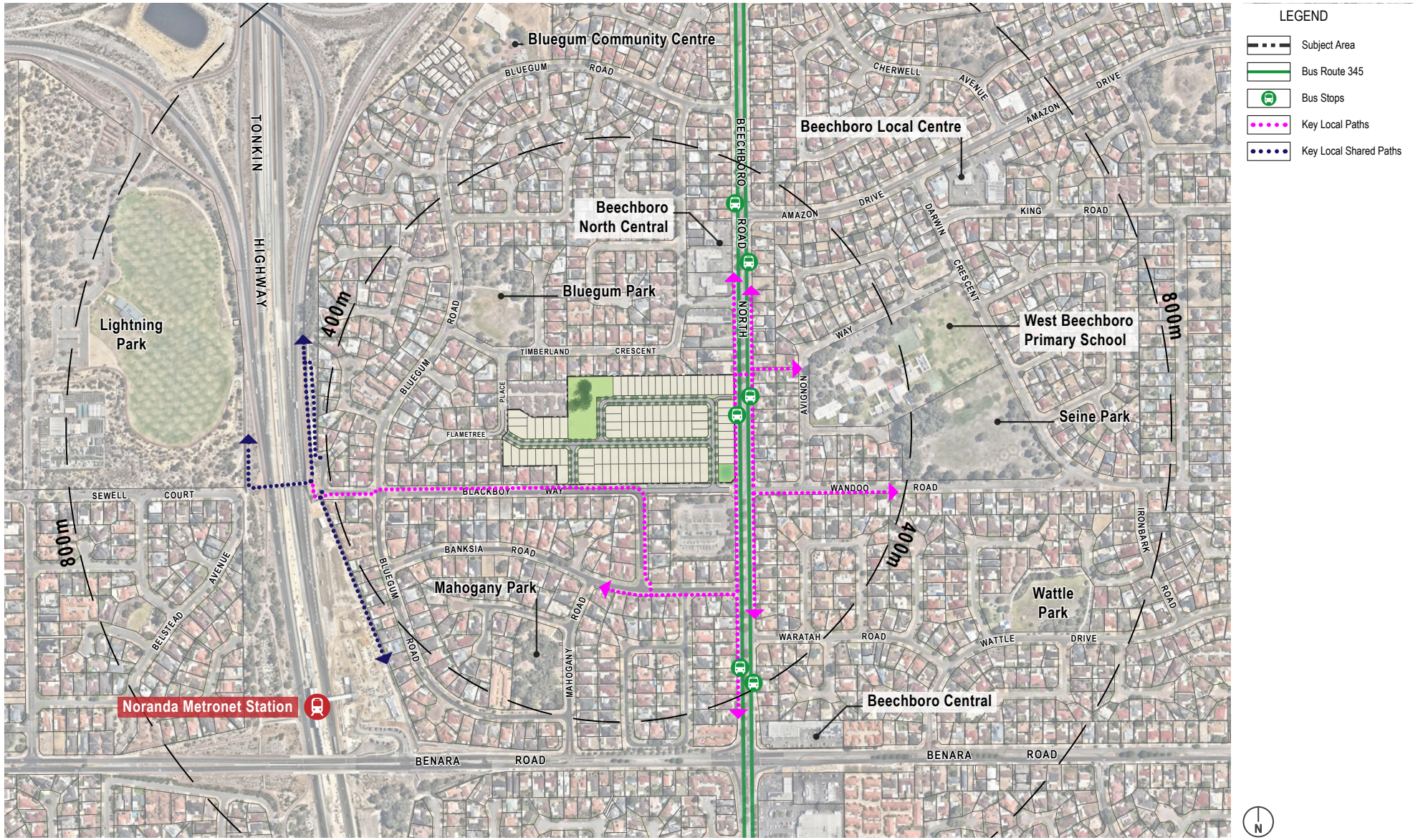


Figure 12: *Local Connectivity*

5.3 Lot Layout

5.3.1 Dwelling Yields & Density Targets

The Structure Plan provides the framework to deliver medium density housing types and facilitate residential yields commensurate with the strategic and statutory planning framework, as well as the site's location within the established suburb of Beechboro.

The Structure Plan has the potential to yield approximately 100 dwellings to accommodate approximately 280 people (at 2.8 people per household).

Densities range from R30 to R40, based on the following principles:

- A base coding of R30 applies across the structure plan to provide opportunities for traditional medium density lot typologies to satisfy the prevailing market demand, with lot sizes typically ranging in size from 300m² to 450m².
- Medium density R40 may be delivered on cell ends and in proximity to the planned public open space and high frequency public transport network provided along Beechboro Road. This will provide some flexibility for higher density cottage style housing and contemporary compact lot typologies, subject to market demand.

The allocation of an R30-R40 density range is consistent with the *WA Planning Manual: Guidance for Structure Plans* and will provide flexibility for density allocation at subdivision stage, whilst reflecting dwelling typologies that are in-keeping with both the existing and planned locational characteristics of the surrounding area.

The proposed density range is also generally consistent with the dual coded ranges applicable to lots within the surrounding Beechboro area in accordance with the City's Urban Housing Strategy.

The allocation of specific densities across the site could result in unnecessary and time-consuming structure plan modifications to make minor updates to an R-Code boundary in response to market demand and consumer preference.

5.3.2 Medium Density Housing Standards

The City's Local Planning Policy POL-LP-11 'Variation to deemed-to comply requirements of the R-codes - Medium-density single house development standards (R-MD Codes)' sets out acceptable variations to the deemed-to-comply provisions of the R-Codes for lots coded R25 to R60. The variations set out in the R-MD Codes Policy will apply to the Structure Plan area and thereby constitute acceptable development. This will avoid the need for Local Development Plan's over much of the Structure Plan area to deliver widely accepted medium density housing product. This will improve efficiencies and minimise costs allowing lots to be developed in a timely manner whilst reducing administrative work for the City.

5.3.3 Local Character

The Structure Plan is located within an established suburban neighbourhood, with urban infill identified within Beechboro to the north and west, and R25 lots within Morley to the south, which are not identified for infill. The surrounding area comprises mostly of single detached homes built during the 1970's and 1980's and supports high amenity streetscapes that provide many positive contextual references for future development proposals. This is exemplified by housing on Mahogany Road and Bluegum Road, which feature generous front gardens, wider building frontages and attractive street trees.

Whilst the dual density coding applied to the surrounding lots within Beechboro may contribute to a change in the character of the area in the longer term, the proposed R30-R40 density code will support medium density housing outcomes that compliment both the existing and planned character, and will be in-keeping with established streetscapes.

Single dwelling on Hakea Court

Single dwelling with wide frontage providing passive surveillance

Mahogany Park and attractive streetscapes including pavement treatments

Established housing on Bluegum Road

5.4 Public Parkland

5.4.1 Public Open Space Provision & Schedule

The Structure Plan will deliver an area of public open space that prioritises tree retention, whilst also supporting integrated areas of drainage.

The following briefly summarises the area of open space as developed through the Landscape Masterplan. Whilst the landscape design has been informed by the site characteristics and constraints it remains conceptual only and will be refined as part of the subsequent planning phases, in consultation with the City.

The key aspects of the public open space network include:

- Excellent access to a variety of passive and active recreational parks within 300m of the Structure Plan, refer **Figure 13**.
- The Structure Plan provides 0.49ha of open space with the primary function being to retain the existing Marri trees in the north-western corner of the Structure Plan.
- Approximately 188m² of open space will receive drainage from the first 15mm storm event (1:1 year) which is not creditable and has been set aside as a deduction from the public open space calculation.
- The remaining area of public open space is either unrestricted or restricted in accordance with *Liveable Neighbourhoods* and will support passive recreational activities and provide local amenity for residents. This results in the provision of 10% of creditable open space.

A separate drainage reserve has been provided in the south-eastern corner of the site. This responds to the topography of the site as well as favourable soil conditions that maximise infiltration.

Public Open Space Schedule (all areas are in hectares)		
LSP Site Area		5.0200
Existing Deductions		
Drainage Reserve (southeast corner)	0.0700	
Drainage 1:1 year event (as per Hyd2o LWMS)	0.0188	
Total existing deductions	0.0888	
Net Site Area	4.9312	
Structure Plan Deductions		
Total Structure Plan Deductions	0.0888	
Gross Subdivisible Area		**4.9312**
POS @ 10%		0.4931
Public Open Space Requirement		
May Comprise:		
Min 8% unrestricted POS	0.3945	
Max 2% restricted POS	0.0986	
TOTAL POS REQUIRED		**0.4931**
Public Open Space Provided	Unrestricted POS	Restricted POS
POS 1 - North-west	0.4685	0.0247
TOTAL (ha)	**0.4685**	**0.0247**
Additional Deductions		
Restricted Open Space Surplus		0.0000
Restricted Public Open Space Contribution		
Unrestricted POS Provided	0.4685	9.50%
Restricted POS Provided	0.0247	0.50%
Total Creditable POS Provided	**0.4932**	**10.00%**

***Table 7**: Public Open Space Schedule*

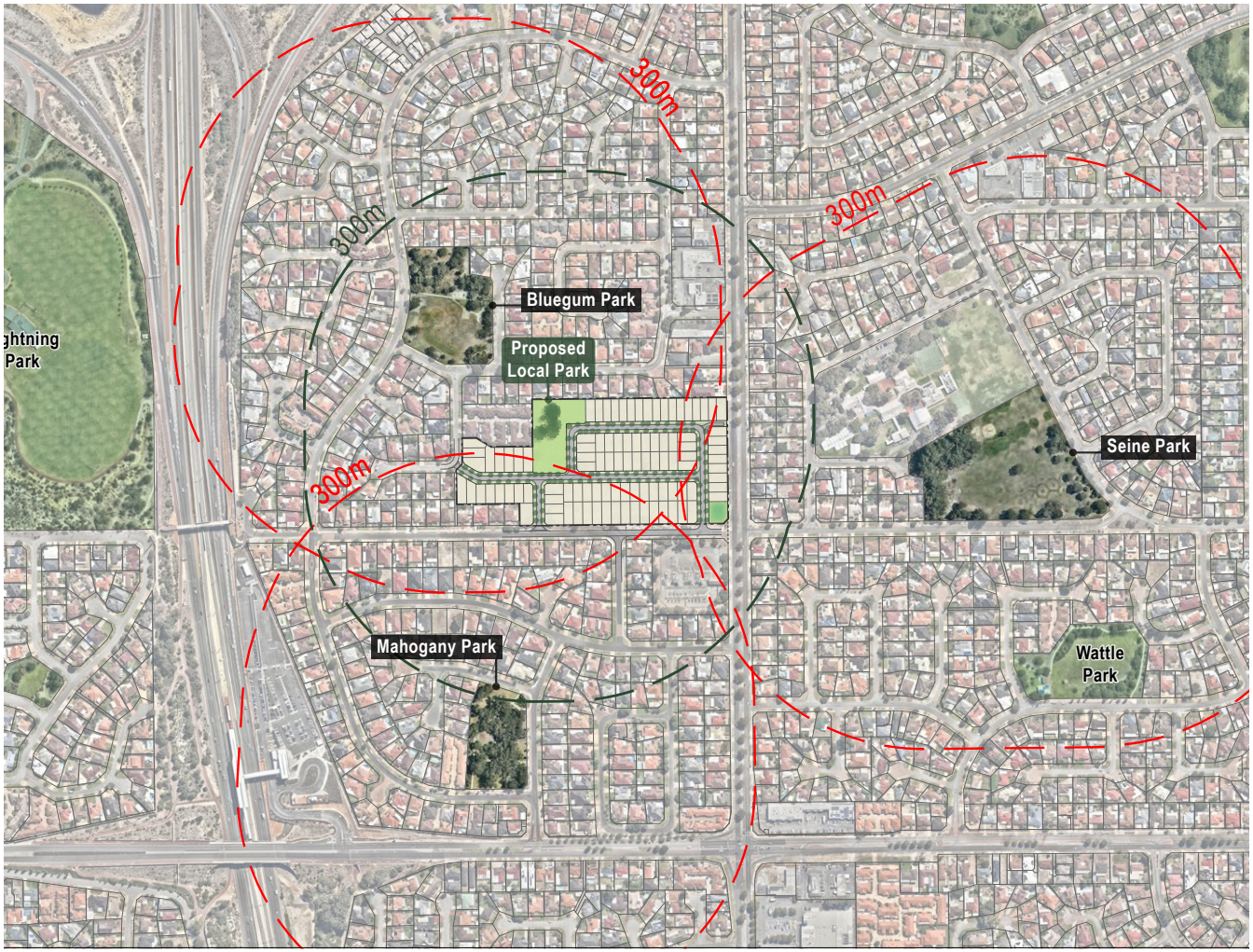


***Figure 13**: Local Green Spaces*

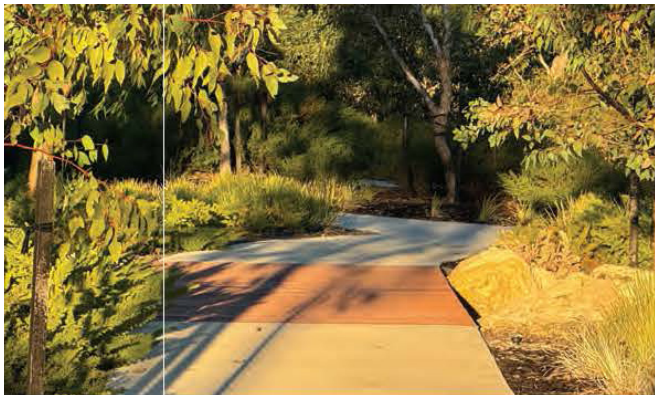
Above: Mahogany Park

Above: Play facilities at Mahogany Park

5.4.2 Landscape Masterplan

A Landscape Masterplan has been prepared by Plan E (refer **Appendix 4**) to illustrate how the public open space can be developed to support passive recreational activities, tree retention and key drainage functions. The Landscape Masterplan is included as **Figure 14** with a summary of the key features of the open space set out below:

- Integrated swale for drainage.
- Footpath for universal access around the periphery of the park.
- Retention of existing mature Marri trees.
- Irrigated native plants integrated with swale planting.
- Small open areas of turf to provide space for passive recreational use.



Above: Pedestrian path & Native Plantings (Source: Plan E)

Above: POS 1 - Extract from Landscape Masterplan (Source: Plan E)

LEGEND

- TURF
- NATIVE PGROUNDCOVERLANTING
- LOW SHRUB PLANTING
- DRAINAGE BASIN OR SWALE
- SCREEN PLANTING
- PROPOSED TREE PLANTING
- PROPOSED STREET TREE
- EXISTING TREE TO BE RETAINED

01 PROPOSED ROADS WITH DETAIL TO THRESHOLDS, REFER TO CIVIL DRAWING
02 PROPOSED PEDESTRIAN PATH
03 VERGE AND PROPOSED STREET TREES
04 1 YR BASIN WITH PROPOSED TREES
05 3M WIDE TRAFFICABLE PATH FOR MAINTENANCE ACCESS
06 5YR OR 100 YR BASIN WITH PROPOSED TREES IN POS
07 OPEN TURF AND EXISTING TREES TO BE RETAINED
08 SHADE STRUCTURE WITH TABLE SETTING
09 PASSIVE TURF AREA AND PROPOSED TREES AS A BUFFER TO BASIN
10 PROPOSED PEDESTRIAN PATH, CONNECTED TO EXISTING NETWORK
11 BENCH SEAT
12 SCREEN PLANTING WITH EXISTING AND PROPOSED TREES
13 NATIVE GROUNDCOVER WITH EXISTING TREES TO BE RETAINED

***Figure 14**: Landscape Masterplan (Source: Plane E)*

5.5 Urban Water Management

The Structure Plan has been designed to accommodate best practice urban water management principles and has been supported by a Local Water Management Strategy (LWMS) prepared by Hyd2o (refer **Appendix 5**). The LWMS has been prepared in accordance with the principles and objectives of WAPC's Better Urban Water Management Guidelines and the previous Drainage Management Plan (Hyd2o, April 2022) provided in support of the scheme amendment to rezone the site to Residential Development under LPS 17.

5.5.1 Stormwater Management

The stormwater management strategy will be undertaken in accordance with water sensitive urban design practices and will consist of soakwells, piped road drainage, underground storage cells and bioretention and ephemeral storage areas within the public open space and drainage reserve.

The Structure Plan has been delineated into five catchment areas, with stormwater storage to be managed as follows to achieve the objectives of the LWMS:

- All runoff from the 15mm event will be retained on site via soakwells for individual lots;
- Minimum side slopes of 1:6 for major event flood storage in the public open space and drainage reserve with a maximum storage depth of 1.2m;
- Select underground cell systems with cell heights to achieve structural clearance requirements to the natural surface;
- Bioretention areas within the public open space and drainage reserve to accommodate the first 15mm event from roads to a maximum depth of 0.3m; and
- Use of public open space/drainage reserve to provide ephemeral flood storage areas to provide detention of the 1:100-year major storm event.

5.5.2 Groundwater Management

Development levels within the site will be determined by the levels of adjacent infrastructure and fill requirements to achieve adequate separation to groundwater, given the proximity of groundwater levels to the natural surface. Indicative engineering drawings prepared by Tabec suggest finished lot levels will range from 28.20m AHD to 28.80m AHD, providing a clearance to groundwater ranging from approximately 1.5m to 3.3m.

Lot levels and earthworks plans will be refined as part of an Urban Water Management Plan (UWMP) as a condition of subdivision approval based on further groundwater monitoring and mapping refinements.

5.5.3 Monitoring & Implementation

The implementation of the LWMS will largely occur through the preparation and implementation of a more detailed UWMP, which will be prepared at the subdivision stage as a condition of approval. This will consolidate the recommendations of the LWMS and guide detailed design and subsequent construction of drainage infrastructure and implementation of management programs and initiatives. A monitoring program is also proposed within Section 8 of the LWMS, which outlines post-development outcomes and impacts in line with the LWMS.

5.6 Noise

An Acoustic Assessment was prepared by Lloyd George Acoustics in support of the Structure Plan to assess the potential impact of traffic noise from Beechboro Road North (refer **Appendix 1**). Whilst Beechboro Road is not currently mapped by DPLH as being subject to State Planning Policy 5.4: Road and Rail Noise, the policy requires consideration of the 20-year planning horizon. Future traffic volumes obtained from Main Roads indicate Beechboro Road North will carry approximately 26,614 vehicles per day in 2046, these volumes exceed the threshold for considering acoustic impacts and accordingly an acoustic assessment was required.

The assessment concluded that road traffic noise impacts can be managed through the following measures:

- Construction of a noise wall along the western boundary of the Structure Plan, ranging in height from 1.8m to 2.4m. The wall is to have a minimum surface mass of 15kg/m^2; and
- Where dwellings are exposed to noise above the outdoor target, notifications are to be placed on titles and 'Quiet House Design' packages are to be incorporated within the construction of the dwellings.

Subdivision shall be implemented in accordance with the recommendations of the Acoustic Report, or a further acoustic report provided in support of any future application for subdivision to confirm any noise attenuation measures that may be required.

5.7 Utilities

An Engineering and Servicing Report has been prepared by Tabec to demonstrate the Structure Plan can accommodate residential development and a logical extension of existing infrastructure within the area. The following summarises the key considerations:

5.7.1 Earthworks Strategy

The Structure Plan area is generally flat given the previous use of the site as a private school, with a slight undulation west to east. The earthworks strategy will set out to provide for fully earth worked level lots, with finished levels across the site to accommodate the following:

- Retention of existing Marri trees in the north-western corner of the site.
- Seamless integration of roads with the surrounding road network.
- Maintaining the existing clearances to the average annual maximum groundwater level to accommodate drainage via infiltration within the public open space and proposed drainage cells.
- Undertaking necessary preparatory work to achieve a 'Class A' soil classification for the site.
- Contouring of earthworks levels to deliver drainage catchment areas consistent with the Hyd2o LWMS.

The earthworks strategy will accommodate the above-mentioned site considerations in addition to the requirements of servicing authorities.

5.7.2 Sewer

Water Corporation has advised that the existing sewer infrastructure present in the area is sufficient to accommodate the Structure Plan. This includes an existing DN225 sewer main within Blackboy Way and a DN150 sewer main within Flametree Place. The connection points will be determined at detailed design stage in accordance with the specifications of Water Corporation.

There is also an existing DN225 sewer main running north-south within the Structure Plan that services existing development north of Timberlane Crescent. This infrastructure will need to be protected and maintained during subdivisional works. The Masterplan Concept demonstrates how the development can be implemented without compromising this existing infrastructure, which is protected by an easement and will be contained within a future road reserve.

5.7.3 Water Supply

Water Corporation advised that there is no specific planning for the Structure Plan area, given it is located within an infill precinct. There is an adequate supply for water reticulation within existing infrastructure, noting the final design will be dependent on site specific requirements. It is anticipated that the Structure Plan will be connected to the existing infrastructure within Blackboy Way and Flametree Place.

5.7.4 Gas

There are existing gas mains in the vicinity of the proposed development which will provide opportunities for future lots to connect to reticulated gas.

Detailed connection requirements and design detail can be provided by ATCO Gas at the time of development.

5.7.5 Power

The site has access to existing high voltage power and an existing transformer is located within the site adjacent to Blackboy Way that will require relocation to accommodate residential development.

The Structure Plan will require connection to the high voltage lines located within Blackboy Way, which may necessitate the removal of the existing overhead power. This would require an additional transformer to be located within the Structure Plan. Further discussion with Western Power on the requirements for undergrounding existing services will be required at subsequent planning stages, this will inform future subdivision design and ensure an appropriate location for any transformers to minimise potential amenity impacts.

5.7.6 Telecommunications

The site is within the National Broadband Network's (NBN) fixed line footprint with existing NBN assets currently located along the northern side of Blackboy Way, providing connections to existing lots. The Structure Plan will pay a per lot deployment charge to NBN in addition to providing pit and pipe infrastructure throughout the subdivision, which will subsequently be installed by NBN Co. Subsequent broadband services can then be provided by either NBN or an alternative service provider, enabling access for all lots to a high-speed telecommunications network.

5.8 Activity Centres & Employment

The Structure Plan is in proximity to a number of existing activity and commercial centres, ensuring immediate and excellent access to employment opportunities, as well as retail, commercial and community services. This includes Beechboro Central located 450m to the south, Beechboro North Central located 150m to the North and the Beechboro Local Centre approximately 500m north-east, located on Amazon Drive.

This range of commercial services will ensure the Structure Plan has suitable access to a variety of amenities, whilst also supporting the local economy with an increased consumer base.

5.9 Schools

There are no educational facilities planned or required as part of the Structure Plan, with the area already well serviced by a number of existing educational facilities. Within a 2km radius of the site there are four government schools and one private school, being:

- Noranda Primary School;
- Beechboro Primary School;
- West Beechboro Primary School;
- Kiara College Secondary School; and
- Beechboro Christian School (Kindergarten to Year 6).

As such, there are sufficient education facilities within the surrounding area to cater for the proposed population of the Structure Plan.

6. Development Staging

Staging will generally commence from the Structure Plan's western and southern boundaries with access to existing services via Blackboy Way and Flametree Place, progressing in both a northern and westerly direction.

Development staging will follow an orderly sequence and shall not exceed the extension of essential service infrastructure or constructed road access.

7. Development Contributions

The Structure Plan is not subject to any Development Contribution Plan within the City's LPS 17. The landowner will be responsible for the Beechboro Road North intersection modifications, maintenance of public open space for two summers in accordance with *Liveable Neighbourhoods* and connecting the Structure Plan footpaths with the existing network in accordance with the City's Cycle and Pathway Design Specification.

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