

Our ref: 23-186

25 January 2025

Shire of Serpentine-Jarrahdale
6 Paterson Street
Mundijong WA 6123

Attention: Planning Services

**AMENDMENT REPORT (AMENDMENT 3)
DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN**

Apex Planning acts on behalf of the landowner of Lot 34 (1299) Orton Road, Byford (hereafter referred to as the **amendment site**). In accordance with the *WAPC's WA Planning Manual Guidance for Structure Plans*, the following submission serves as an 'amendment report' to form part of the application to amend the Doley Road Precinct Local Structure Plan (**LSP**). With regard to the application, please find enclosed:

- A summary of the amendment, outlining the proposed textual changes in a table format.
- The proposed Part 1 – Implementation structure plan document, as amended.
- An explanatory report that provides the planning justification/rationale for the amendment and the proposed changes, in the form of an addendum to the Part Two – Explanatory Report of the original LSP.
- Technical reports (retail Needs Assessment and Transport Impact Assessment), which are appended to the explanatory report.

This application to amend the Doley Road Precinct LSP seeks to modify the structure plan by rezoning a 2.4ha portion of Lot 34 to Neighbourhood Centre. As part of this, the portion of the old Orton Road reserve adjoining the site currently zoned Mixed Use R80 is also to be rezoned to Neighbourhood Centre for logic and consistency.

The proposed amendment is supported by an explanatory report which forms an addendum to Part Two – Explanatory Report of the structure plan, addressing the applicable strategic and statutory town planning framework and relevant constraints/considerations. Expert assessments in the form of a retail Needs Assessment and Transport Impact Assessment have been prepared to demonstrate the suitability and acceptability of the amendment.

We look forward to collaborating with the Shire and the Department of Planning, Lands and Heritage through the structure plan amendment process.

**ALESSANDRO STAGNO
APEX PLANNING**

1 LIST OF MODIFICATIONS

Refer to the below table, which outlines the modifications to the operative version of the Doley Road Precinct Local Structure Plan Part 1 Implementation Section.

#	SECTION/PROVISION	MODIFICATION	COMMENT
1	Table 1: Land Use Summary	<p><u>Area of each land use proposed</u></p> <ul style="list-style-type: none"> - Change 'Residential' to 68 hectares. - Replace 'Commercial' with 'Neighbourhood Centre' and change to 3.2 hectares <p><u>Total estimated lots yield</u></p> <ul style="list-style-type: none"> - Change to 1,800-1,900 lots. <p><u>Estimated number of dwellings</u></p> <ul style="list-style-type: none"> - Change to 1,775-1,875 dwellings. <p><u>Estimated residential site density</u></p> <ul style="list-style-type: none"> - Change to '15.6 dwellings per gross hectare'. - Change to '27.6 dwellings per residential site hectare'. <p><u>Estimated population</u></p> <ul style="list-style-type: none"> - Change to '4,970-5,250 people @ 2.8 people per household'. <p><u>Estimated commercial floorspace</u></p> <ul style="list-style-type: none"> - Change to 5,000sqm 	To reflect change in zoning from 'Residential R25-R40', 'Residential R40-R60', and 'Mixed Use R80' to 'Neighbourhood Centre'.
2	Section 6 Land Use and Subdivision	<ul style="list-style-type: none"> - Add an additional section for the Neighbourhood Centre zone, numbered as 6.3 and renumber Public Open Space, Roads, and Noise Attenuation. - Include specific provisions for the Neighbourhood Centre. 	To provide appropriate provisions applicable to land zoned Neighbourhood Centre.
3	Plan A: Structure Plan Map	<ul style="list-style-type: none"> - Change the legend by replacing the 'Mixed Use R80' zone with the 'Neighbourhood Centre' zone. - Change zoning of a 2.4ha portion of Lot 34 (1299) Orton Road and the adjoining old Orton Road reserve to 'Neighbourhood Centre'. 	<p>Neighbourhood Centre zone adopted for alignment with Local Planning Scheme No.3.</p> <p>Old Orton Road reserve rezoned for logic and consistency as it forms part of planned neighbourhood centre.</p>

2 BACKGROUND

The amendment site forms part of the Doley Road Precinct Local Structure Plan (**LSP**) and is located at the north-western corner of the intersection of Orton Road and Doley Road.

The Doley Road Precinct LSP area covers approximately 120.5 hectares of land and is one of two major structure plans covering an urban precinct west of Byford and south of Abernethy Road. The other major structure plan is The Glades, Byford LSP which surrounds the Doley Road Precinct LSP at its northern, western, and southern sides.

As urbanisation of the locality progresses in accordance with these structure plans, the delivery of dwellings and associated increases in population are driving demand for essential urban support services.

As part of the planned urbanisation of the area, a range of upgrades to the road network will occur, both at a regional and localised level. These include the planned extension of Tonkin Highway (anticipated commencement mid 2025 based on information published by Main Roads WA) which will include an intersection with Orton Road, and the upgrade / realignment of both Orton Road and Doley Road. These road network improvements will significantly enhance local connectivity.

The Shire's strategic planning framework, which includes its Local Planning Strategy and the Byford District Structure Plan, has recognised the need for population growth to be appropriately supported through the delivery of activity centres to serve the needs of the community.

With regard to Byford, the Shire's strategic instruments have envisaged this to occur through a District Centre (ie the Byford townsite), and three neighbourhood level activity centres, of which one is notionally located at the intersection of Orton Road and Doley Road.

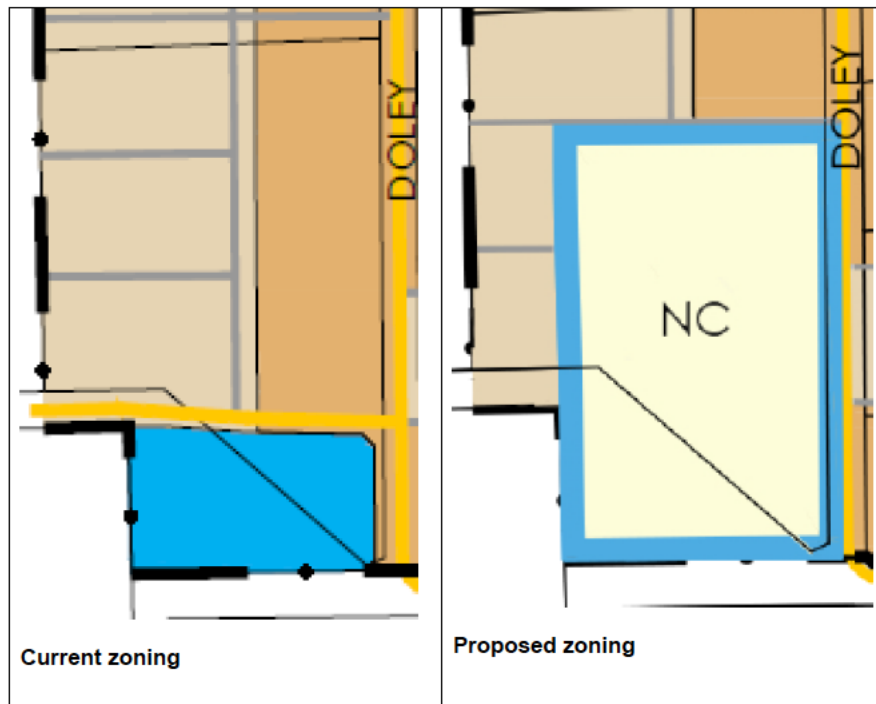
The proposed amendment to the Doley Road Precinct LSP seeks to achieve the intent of the strategic framework by formalising the planned neighbourhood centre through local structure plan zoning allocation and provisions.

2 PURPOSE AND EXPLANATION OF AMENDMENT

The purpose of the proposed amendment is to establish a Neighbourhood Centre zoning allocation to a 2.4ha portion of the amendment site, and change the zoning of the adjoining old Orton Road reserve from Mixed Use R80 to Neighbourhood Centre.

The selection of the Neighbourhood Centre zone ensures alignment with the Shire's LPS3, and also formalises the intent for the LSP to deliver the planned neighbourhood centre in this location.

The proposed rezoning is depicted on the following page:



The change in zoning would facilitate the future delivery of a neighbourhood level shopping precinct which would include a full-line supermarket and associated speciality stores to provide for the daily and weekly household shopping needs of the existing and growing local population.

The Shire's recently endorsed strategic planning framework, which includes its Local Planning Strategy and Byford District Structure Plan envisages the provision of a neighbourhood level activity centre to service the needs of a rapidly growing population in the southern section of Byford. Both instruments have notionally depicted the neighbourhood centre at the corner of Orton Road and Doley Road. Both instruments reference a notional retail floorspace allocation of 5,000sqm NLA, which has been demonstrated to be viable through a retail Needs Assessment prepared in support of this amendment.

At the time of applying for this amendment, no Neighbourhood Centre zone exists within the Doley Road Precinct LSP (a Mixed Use zone had historically been used) and there is insufficient land allocated to enable the Neighbourhood Centre to be established, with the majority of the Mixed Use zone falling within a road reserve which is not under private ownership.

Relevantly, it is understood that separate amendments to the Doley Road Precinct LSP and The Glades, Byford LSP (Amendment 2 and Amendment 11, respectively) are currently in the process of being finalised.

Amendment 2 to the Doley Road Precinct LSP relates to a minor modification to the shape and size of a Public Open Space parcel, and this proposed amendment has been formulated as an extension of Amendment 2 to ensure consistency in structure plan materials.

Amendment 11 to The Glades, Byford LSP involves a rationalisation, consolidation, and reconfiguration of non-residential land to establish a number of local 'nodes' and a service commercial precinct. Evidently, the sites proposed for retail development under Amendment 11 are intended to provide for small convenience style offerings and are not large enough to consider or facilitate even a small supermarket-based offering.

As the main role and typical attributes of a neighbourhood level activity centre is to act as an important local focal point which provides for the daily and weekly household shopping needs, the delivery of a full-line supermarket is considered imperative to support the planned population growth in the locality which is already occurring and will continue in accordance with the range of local structure plans which are in place.

A retail Needs Assessment was prepared in support of the amendment, which has considered demographic data, contextual considerations, and the composition of existing, planned, and approved activity centres within the defined trade area. The result of the Needs Assessment is that 5,000sqm of shop/retail NLA is viably supportable at the amendment site and is important to deliver, as it will prevent avoidable leakage to other centres which are outside of the trade area.

An indicative master plan has been prepared and is included within the explanatory report for the amendment, which shows a notional layout of the neighbourhood centre. This includes provision for a full-line supermarket, specialty shops, a significant provision of landscaping and tree planting, and the upgrade of Doley Road to a boulevard style Neighbourhood Connector A road with existing mature trees integrated into its central median. The indicative master plan is conceptual and would be refined at a later date, at planning approval stage.

Considerations surrounding design and amenity have been addressed within the explanatory report, and these have also been captured through specific provisions to be included within Part 1 of the local structure plan.

3 CONCLUSION

The proposed amendment is evidently consistent with the intent of the Shire's strategic planning framework and responds to the evolving nature of the surrounding locality.

Neighbourhood level activity centres are an important community focal point and are intended to support population growth by providing essential daily and weekly household shopping services, as well as additional speciality and community uses. These positive town planning outcomes are clearly capable of being achieved through this proposed amendment.

The materials put forward as part of this structure plan amendment demonstrate a significant level of town planning merit, and its favourable consideration is warranted.

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN

PART ONE - IMPLEMENTATION

Doley Road Precinct Local Structure Plan

Part One - Implementation

DOCUMENT CONTROL

DESCRIPTION	DATE
250125 23-186 LSP amendment - Doley Road Precinct LSP (rev0).docx	25 January 2025

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DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN
PART ONE - IMPLEMENTATION

TABLE OF AMENDMENTS

AMENDMENT NO.	SUMMARY OF THE AMENDMENT	AMENDMENT TYPE	DATE APPROVED BY WAPC
1	Minor changes to LSP in area bound by Lawrence Way, Warrington Road, Allanson Drive, and Orton Road	Minor	14 March 2022
2	Minor changes to LSP within Lot 32 Doley Road	Minor	TBC
3	Proposed rezoning of a portion of Lot 34 (1299) Orton Road and old Orton Road reserve	Minor	TBC

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN
PART ONE - IMPLEMENTATION

TABLE OF DENSITY PLANS

DENSITY PLAN NO.	AREA OF DENSITY PLAN APPLICATION	DATE APPROVED BY WAPC
3410-51F-01	Area between Doley Rd, Lawrence Way and Orton Rd	30 September 2021
3410-97D-01	Parent Lot 131 Doley Road	20 October 2021
3410-111C-01	Area west of Warrington Rd	11 May 2023
3410-123A-01	Parent Lot 33 Doley Road	20 December 2023

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN
PART ONE - IMPLEMENTATION

TABLE 1: LAND USE SUMMARY

ITEM	STRUCTURE PLAN	SECTION NUMBER REFERENCED IN STRUCTURE PLAN REPORT
Total area covered by the structure plan	120.5ha	1
Area of each land use proposed: Zones (as per LPS3) <ul style="list-style-type: none"> - Residential - Neighbourhood Centre Reserves (as per LPS3 and the MRS) <ul style="list-style-type: none"> - Road reserves - Parks and Recreation - Public Purpose 	68ha 3.2ha 34.3 ha 10.8ha 4.0ha	3
Total estimated lot yield	1,800-1,900 lots	3
Estimated number of dwellings	1,775-1,875 dwellings	3
Estimated residential site density <ul style="list-style-type: none"> - Dwellings per gross urban zoned hectare (as per Perth & Peel @ 3.5 million) - Dwellings per site hectare (as per Liveable Neighbourhoods) 	15.6 dwellings per gross hectare 27.6 dwellings per residential site hectare	3
Estimated population	4,970-5,250 people @ 2.8 people per household	3
Number of Primary Schools	1 (4.0 hectares)	3
Number of Secondary Schools	None	3
Estimated commercial floorspace	5,000sqm	3
Public Open Space	11.7ha (total creditable POS) 10% 11.1ha (unrestricted) 88% 0.2ha (restricted) 12%	3

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN
PART ONE - IMPLEMENTATION

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PART ONE - IMPLEMENTATION

PART ONE

IMPLEMENTATION

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN

PART ONE - IMPLEMENTATION

1 STRUCTURE PLAN AREA

This Local Structure Plan applies to the land within the inner edge of the line denoting the structure plan boundary on Plan A: Local Structure Plan.

The Structure Plan is identified as the Doley Road Precinct Local Structure Plan.

2 STRUCTURE PLAN CONTENT

This Local Structure Plan comprises:

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

Part One of the Local Structure Plan comprises the structure plan map and planning provisions. Part Two of the Local Structure Plan is the planning report component which can be used to interpret and implement the requirements of Part One.

3 OPERATION

The Doley Road Precinct Local Structure Plan comes into effect on the date that it is endorsed by the Western Australian Planning Commission.

4 INTERPRETATION AND RELATIONSHIP WITH STATUTORY PLANNING FRAMEWORK

The Doley Road Precinct Local Structure Plan constitutes a Local Structure Plan pursuant to Part 4 – Structure Plans contained within Schedule 2 - Deemed provisions for local planning schemes of the Planning and Development (Local Planning Schemes) Regulations 2015. The Structure Plan Map (Plan A) outlines future land use, zones and reserves applicable within the structure plan area.

Pursuant to the Planning and Development (Local Planning Schemes) Regulations 2015, a decision maker of an application for development approval or subdivision approval is to have due regard to the provisions of this Local Structure Plan, including the Structure Plan Map, Implementation Report, Explanatory Report and Technical Appendices.

5 STAGING

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

6 LAND USE AND SUBDIVISION

6.1 LAND USE AND ZONES

Land use permissibility within the Structure Plan area shall be in accordance with the corresponding zone or reserve under the Scheme, or as otherwise outlined in this Structure Plan.

6.2 RESIDENTIAL

6.2.1 DWELLING TARGET

In accordance with the requirements of Liveable Neighbourhoods, subdivisions are to achieve an average residential density of 22 dwellings per site hectare across the Structure Plan area.

6.2.2 DENSITY

- a. Plan A defines the broad residential density ranges that apply to specific areas within the Structure Plan. Lot specific residential densities, within the defined residential ranges, are to be subsequently assigned in accordance within a Residential Code Plan approved by the WAPC.
- b. A Residential Code Plan is to be submitted at the time of subdivision to the WAPC and shall be consistent with the Structure Plan, and the Residential Density Ranges identified on Plan A and locational criteria contained in Clause 6.2.3.
- c. The Residential Code Plan is to include a summary of the proposed dwelling yield of the subdivision.
- d. Approval of the Residential Code Plan shall be undertaken at the time of determination of the subdivision application by the WAPC. The approved Residential Density Code Plan shall then form part of the Structure Plan and shall be used for the determination of future development applications.
- e. Variations to the Residential Code Plan will require further approval of the WAPC, with a revised Residential Code Plan submitted generally consistent with the approved plan of subdivision issued by the WAPC. The revised Residential Code Plan shall be consistent with Residential Density ranges identified on Plan A and the locational criteria contained in Clause 6.2.3.
- f. A revised Residential Code Plan, consistent with Clause 6.2.2 (e) will replace, wholly or partially, the previously approved Residential Code Plan, and shall then form part of the Structure Plan as outlined in Clause 6.2.2 (d).
- g. Residential Code Plans are not required if the WAPC considers that the subdivision is for one or more of the following:
 - i. The amalgamation of lots;
 - ii. Consolidation of land for 'superlot' purposes to facilitate land assembly for future development;

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PART ONE - IMPLEMENTATION

- iii. The purposes of facilitating the provision of access, services or infrastructure; or
- iv. Land which by virtue of its zoning or reservation under the Structure Plan cannot be developed for residential purposes.

6.2.3 LOCATIONAL CRITERIA

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

- a. The R25 density code shall apply as the base code to all 'Residential' zoned lots, with the exception of those lots coded R40 or R60 as set out in (2) below.
- b. The R40 density code may apply to all 'Residential' zoned lots where one or more of the following applies:
 - i. The lot is located on a street corner or at the end of a street block; or
 - ii. Considered to be in an area of high amenity including within 400m of a commercial centre / neighbourhood node, around public open space, primary school and adjacent to major public transport routes.
- c. The R60 density code may apply to 'Residential' zoned lots that meet one or more of the criteria set out in (b) above or where the lot measures 900m² or greater.

6.3 NEIGHBOURHOOD CENTRE

The Neighbourhood Centre zone depicted on Plan A is to correspond with the Neighbourhood Centre zone of the Scheme. The following provisions apply to the subdivision and development of land allocated as Neighbourhood Centre:

- a. Shop-retail floorspace is limited to 5,000sqm Net Leasable Area (**NLA**). Any application for planning approval which seeks to exceed this shop-retail floorspace allocation is required to demonstrate compliance with the provisions of *State Planning Policy 4.2 Activity Centres*.
- b. The existing mature vegetation within the Doley Road reserve is required to be retained and integrated into the ultimate design/configuration of Doley Road, where it adjoins the Neighbourhood Centre.
- c. Car parking provision is to be guided by the WAPC's *WA Planning Manual – Non-Residential Car Parking Rates in Perth and Peel*.
- d. Any application for planning approval which involves noise-generating land uses in close proximity to existing or planned residential uses is to demonstrate compliance with the *Environmental Protection (Noise) Regulations 1997* by way of an acoustic assessment.
- e. The Neighbourhood Centre is afforded a full movement crossover to Doley Road. The precise location, design, and specification of the crossover is to be resolved at development approval stage in accordance with a traffic assessment, to the satisfaction of the Shire of Serpentine-Jarrahdale.

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN

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6.4 PUBLIC OPEN SPACE

- a. The provision of a minimum 10% public open space being provided generally in accordance with Plan A.
- b. As a condition of subdivision approval for Lot 61 Lawrence Way, Byford, the subdivider will be required to make payment to the Shire of Serpentine-Jarrahdale for the sum equivalent to 700sqm, being that portion of the land that would otherwise be provided as open space prior to Amendment 1 of the structure plan.

6.5 ROADS

The road reserves should include the installation of street trees and landscaping, parallel street parking bays, dual-use paths, shared-paths, stormwater retention and infiltration systems, and street lighting to the satisfaction of the Shire and their adopted policies and planning framework. The width of and number of crossovers shall be kept to a functional minimum in accordance with the R-Codes and the Shire's adopted Local Planning Policies, to minimise the extent of hard surface, and reduce vehicle conflict.

- a. Orton Road, a future Other Regional Road, is to be widened from 20 metres to 32 metres (6 metres to be ceded by landholdings north and south of the road).
- b. Soldiers Road, a future Other Regional Road, is to be widened from 20 metres to 30 metres (10 metres to be ceded by landholdings abutting Soldiers Road).
- c. Land is required to accommodate a roundabout at the intersection of Orton and Soldiers Road. The land to be ceded and the design of the roundabout is to be to the satisfaction of the Shire on advice from the Department of Planning, Lands and Heritage.
- d. Direct access to Soldiers Road is not permitted and an internal road will be required between residential lots and Soldiers Road to provide appropriate access and frontage. Double storey, rear-loaded and dual frontage lots are not permitted in this location due to interface and noise attenuation objectives.
- e. Notwithstanding the Shire's endorsed LSP Map, intersections to Orton Road shall be:
 - i. restricted and rationalised where possible in accordance with Development Control Policy 1.4 and Liveable Neighbourhoods;
 - ii. reduced from six to three intersections between Warrington and Soldiers Roads; and
 - iii. left-in-left-out only at the intersection with Road 82 unless a roundabout is coordinated with the LSP area south of Orton Road (whichever is preferred by the Shire).
- f. Direct lot access is generally not permitted to lots abutting Orton Road and residential lots abutting Doley Road, and rear laneway arrangements shall be provided.

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN

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- g. The construction of Recreation Road is not supported due to BF 321 and TECs. Closure of Recreation Road is recommended and its management and restoration is expected to be outlined and ensured within the Draft Brickwood Reserve Management Plan (authored by the Shire of SJ) currently being assessed by the Department of Planning, Lands and Heritage.
- h. Road paving is not permitted to straddle lot boundaries unless a subdivision application is received that is signed by all landowners.
- i. The lots fronting the proposed road which straddles Lot 50 (No. 124) Warrington Rd and Lot 20 (No. 142 Warrington Rd) will not be supported for creation (via subdivision) until such time as the entire road is created/constructed".
- j. The land subject of the 'Neighbourhood Centre' classification shall not be created or developed until such time as the Orton Road realignment is finalised, to the satisfaction of the Shire of Serpentine-Jarrahdale.

6.6 NOISE ATTENUATION

Noise attenuation treatments as per the recommendations outlined in the Lloyd George Acoustics Acoustic Assessment dated 17 June 2016 including notifications on title, and quiet house design within Local Development Plans, but excluding the construction of a noise wall, shall be implemented as conditions of subdivision approval for any lots adjacent to Soldiers Road unless an updated and more accurate Acoustic Assessment is provided with, and approved for, any future subdivision application for the lots in closest proximity of the railway.

7 LOCAL DEVELOPMENT PLANS

7.1 LOCAL DEVELOPMENT PLANS

The preparation of a Local Development Plan in accordance with Part 6 of the Deemed Provisions may be required by the Western Australian Planning Commission (WAPC), on the advice of the Shire of Serpentine-Jarrahdale, as a condition of subdivision approval where deemed necessary for land comprising, but not limited to:

- a. Lots abutting areas of Public Open Space; and
- b. At the discretion of the developer where there are additional development considerations or site constraints that need to be addressed through an LDP to enable coordinated development of the site.

8 OTHER REQUIREMENTS

8.1 CONDITIONS OF SUBDIVISION APPROVAL

The following technical reports / strategies are to be prepared and submitted as a condition of subdivision approval (where applicable):

- Urban Water Management Plan.
- Bushfire Attack Level Assessment and/or Bushfire Management Plan.

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- Acid Sulphate Soils Management Plan.

8.2 BUSHFIRE RISK MANAGEMENT

The landowner / developer is to ensure compliance with *State Planning Policy 3.7: Bushfire* and the related Guidelines, for each stage of subdivision and development.

8.3 DEVELOPMENT CONTRIBUTIONS

The Local Structure Plan is subject to the Byford Development Contribution Plan, pursuant to *Schedule 7 – Development Contribution Plans* of the Shire of Serpentine-Jarrahdale *Local Planning Scheme No. 3*.

LEGEND

ZONES

- Residential R25-R40
- Residential R40-R60
- Residential R60
- NC Neighbourhood Centre

LOCAL RESERVES

- Public Open Space
- Public and Community Purposes

OTHER

- Structure Plan Boundary
- Neighbourhood Connector
- Access Street

NOTES

1. Public Open Space areas are indicative only and subject to further detail design and drainage considerations.
2. All access streets are indicative only and are subject to refinement as part of the detailed subdivision process.
3. Orton Road, a future Other Regional Road, is to be widened from 20 metres to 32 metres (6 metres to be ceded by landholdings north and south of the road).
4. Soldiers Road, a future Other Regional Road, is to be widened from 20 metres to 30 metres (10 metres to be ceded by landholdings abutting Soldiers Road).
5. Land is required to accommodate a roundabout at the intersection of Orton and Soldiers Road. The land to be ceded and the design of the roundabout is to be to the satisfaction of the Shire on advice from the Department of Planning.
6. Direct access to Soldiers Road is not permitted and an internal road will be required between residential lots and Soldiers Road to provide appropriate access and frontage. Double storey, rear-loaded and dual frontage lots are not permitted in this location due to interface and noise attenuation objectives.



Source: Urbanista - Amendment 1 - Doley Road Precinct ALSP (15.02.2022)

3410-22C-01 8.01.2025 1:10,000 @A4
Rev 1

Drawing sourced from CLE Town Planning + Design drawing: 3410-22C-01 05.04.2024

PLAN A: LOCAL STRUCTURE PLAN

Orton Road, Byford

ADDENDUM TO PART TWO

JUSTIFICATION REPORT (AMENDMENT 3)

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EXECUTIVE SUMMARY

The Doley Road Precinct Local Structure Plan (**LSP**) comprises approximately 120.5ha of land, generally located along the northern side of Orton Road, Byford, within the Shire of Serpentine-Jarrahdale (**Shire of SJ**). The structure plan area is zoned Urban under the Metropolitan Region Scheme and Urban Development under the Shire of SJ Local Planning Scheme No.3 (**LPS3**).

The LSP allows for the creation of a residential neighbourhood that responds to the surrounding environment, whilst accommodating a range of residential dwelling opportunities consistent with State government density targets.

The LSP is consistent with the applicable strategic planning framework, which includes Perth and Peel @ 3.5 million, the South Metropolitan Peel Sub-regional Planning Framework, the Shire's Local Planning Strategy, and the Byford District Structure Plan (**DSP**).

Based on the residential densities allocated under the LSP, a residential target of approximately 27.6 dwellings per residential site hectare can be delivered to achieve State government density targets, with medium density housing located around key areas of public open space, planned retail/commercial centres, a primary school site, and key transport routes. The issues of residential density, public open space, movement network, and infrastructure delivery are addressed within the LSP.

Amendment 3 of the Doley Road Precinct LSP achieves the objectives and intended outcomes of the strategic planning framework (including the Shire's Local Planning Strategy and Byford DSP) by rezoning land located at the north-western corner of the Doley Road / Orton Road intersection to Neighbourhood Centre, to facilitate the future delivery of a neighbourhood level shopping precinct to serve the daily and weekly needs of the rapidly growing population of southern Byford.

The change in zoning would facilitate the future development a local shopping facility of maximum 5,000sqm shop-retail floorspace at the Neighbourhood Centre site, which increase the provision of local urban support services for the current and future residents of the Doley Road Precinct and surrounding area, creating local employment opportunities, and contributing to a more sustainable neighbourhood.

In addition to the technical reports previously prepared for the Doley Road Precinct LSP, Amendment 3 is supported by a retail Needs Assessment and a Transport Impact Assessment which comprehensively address the relevant town planning considerations and demonstrate the suitability of the proposed change in zoning to establish a neighbourhood centre at the location of the amendment site.

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ADDENDUM TO PART TWO

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APPENDICES

APPENDIX 1:	RETAIL NEEDS ASSESSMENT
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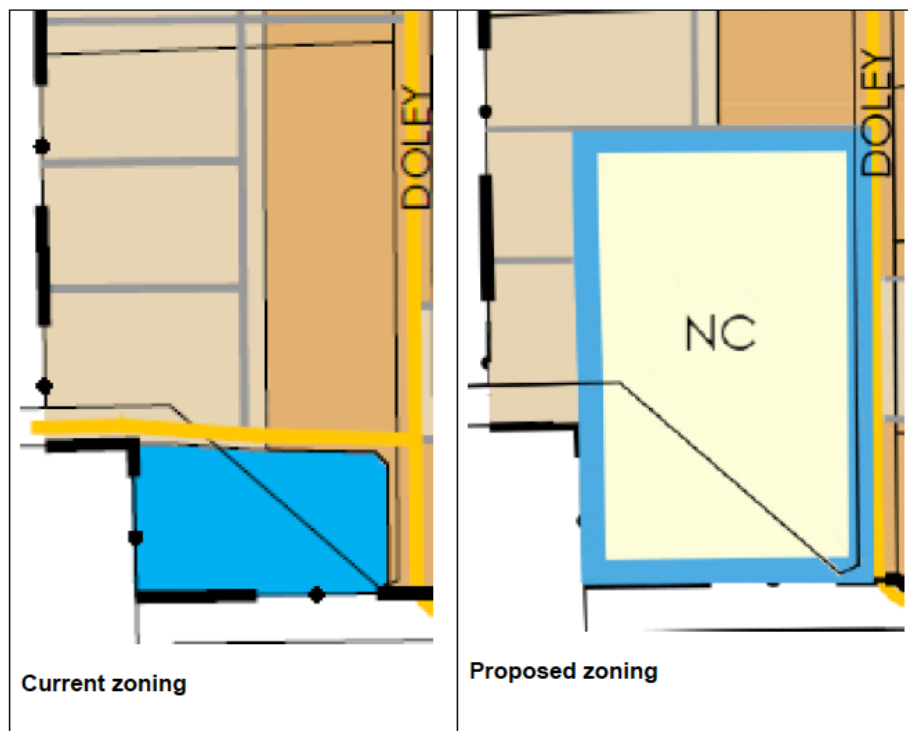
1 PLANNING BACKGROUND

1.1 INTRODUCTION AND PURPOSE

Apex Planning has formulated this structure plan amendment on behalf of Ladybug Twenty Three Pty Ltd, the landowner of Lot 34 (1299) Orton Road, Byford (hereafter referred to as the **amendment site**).

This report is an addendum to Part Two of the Doley Road Precinct Local Structure Plan (**LSP**), to explain and justify Amendment 3 having regard for the strategic and statutory town planning framework and relevant constraints/considerations.

It is proposed to amend the Doley Road Precinct LSP by changing the zoning of an approximate 2.4ha portion of the amendment site and adjoining portion of the old Orton Road reserve to Neighbourhood Centre. The proposed zoning change is depicted below:



The proposed amendment will bring the LSP into alignment with the Shire's Local Planning Strategy, Byford District Structure Plan, and Local Planning Scheme No.3, and will also secure the delivery of a planned neighbourhood centre by ensuring there is sufficient land allocated for that purpose under the LSP.

The amendment will facilitate the future delivery of a neighbourhood level shopping precinct to service the rapidly growing population of the surrounding communities in Byford. The amendment site forms part of a growing urban area and is strategically located for the provision of essential urban support services to meet the daily and weekly needs of the surrounding communities. This structure plan amendment is supported by an expert retail needs assessment which is provided at **Appendix 1** and a traffic impact assessment which is provided at **Appendix 2**.

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN

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1.2 LAND DESCRIPTION

1.2.1 LOCATION

As outlined and illustrated in Part Two of the LSP, the structure plan area is located at the southern section of Byford within the Shire of Serpentine-Jarrahdale. The structure plan area is generally bounded by Orton Road to the south, Soldiers Road and Recreation Road to the east, and The Glades Byford structure plan area to the north and west. The Doley Road Precinct LSP area comprises approximately 120.5ha.

Lot 34, the main amendment site, is located at the north-western corner of the intersection of Doley Road and Orton Road, and is approximately 2.5km south-west of the Byford Town Centre.

The amendment site is indicated in relation to the wider structure plan area in **Figure 1 – Location Plan** below:

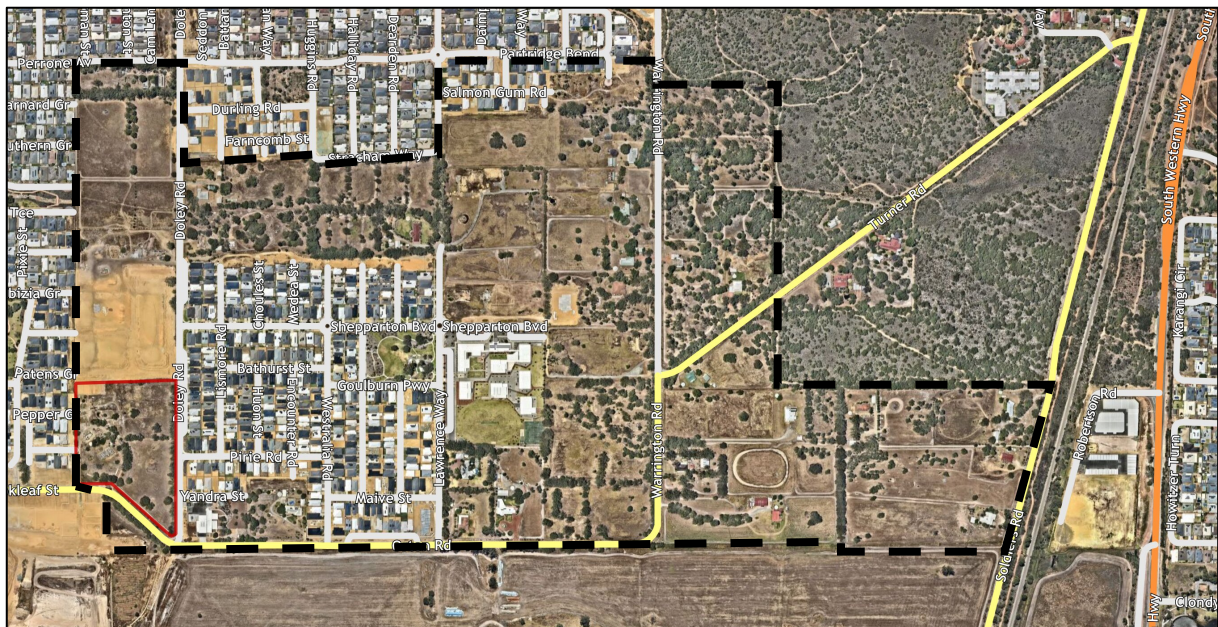


Figure 1: Location Plan

1.2.2 DESCRIPTION OF AMENDMENT SITE AND SURROUNDING CONTEXT

The amendment site is an irregularly shaped 4.172ha lot located at the south-western corner of the LSP area. The site is currently undeveloped.

The amendment site currently has road frontage to Doley Road to the east, old Orton Road to the south, and Linum Way & Pepper Grove to the west.

Orton Road is currently identified as a Neighbourhood Connector under the LSP and is a key thoroughfare for the southern Byford locality which will eventually connect to the future extension of Tonkin Highway. Works associated with the partial upgrade and realignment of Orton Road are currently underway. At the completion of its full upgrade and realignment, Orton Road will be classified as an Integrator B Road.

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ADDENDUM TO PART TWO

A triangular portion of the Orton Road reserve along the site's southern boundary has been historically zoned Mixed Use R80 and is not under private ownership.

Doley Road is identified as a Neighbourhood Connector A road and is currently a key thoroughfare linking between Orton Road and Abernethy Road. Doley Road south of Orton Road is also planned for realignment and upgrade, eventually providing the established and future residential communities with a north-south connection through the Byford and Cardup localities.

At completion of their respective upgrades, Orton Road and Doley Road will include a roundabout intersection located at the south-eastern corner of the amendment site.

Linum Way and Pepper Grove are local residential roads which are planned to extend into the amendment site as part of future subdivision/development.

The amendment site forms part of the southern areas of Byford, which is largely encompassed by the following structure plans:

- Doley Road Precinct LSP.
- The Glades, Byford LSP.

The locality is undergoing continual urbanisation, with significant residential subdivision and road network upgrades planned to occur in accordance with the strategic planning framework and established structure plans.

Urbanisation is currently well-progressed on the northern side of Orton Road, with existing residential land uses to the west and east of the amendment site and some land still in the process of subdivision/development. The Beenyup Grove Estate is located immediately north of the amendment site and at the time of producing this amendment is in the process of being established. The Glades estate forms the wider portion of the surrounding locality and includes The Glades Village shopping precinct which is located approximately 1km north of the amendment site.

Works are currently underway to deliver further residential lots within a portion of the planned urban land at the southern side of Orton Road in accordance with The Glades, Byford LSP. At completion, The Glades, Byford LSP will result in the development of the entirety of land south of Orton Road, located between the future Tonkin Highway extension (west), Soldiers Road (east), and Cardup Brook (south). This will include mostly residential land uses, a service commercial precinct, and a District Open Space facility.

1.2.3 LEGAL DESCRIPTION AND OWNERSHIP

The amendment site comprises a single landholding of approximately 4.172ha, identified as Lot 34 (1299) Orton Road, Byford. Lot 34 is legally described as follows:

Lot	Plan	Volume	Folio	Lot area	Ownership
34	14324	1652	230	4.172ha	Ladybug Twenty Three Pty Ltd

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN ADDENDUM TO PART TWO

1.3 PLANNING FRAMEWORK

1.3.1 ZONING AND RESERVATIONS

The structure plan area and amendment site are zoned Urban under the Metropolitan Region Scheme (**MRS**).

The structure plan area and amendment site are zoned Urban Development and located within Special Control Area 6 (**SCA6**) under Local Planning Scheme No. 3 (**LPS3**).

The MRS and LPS3 zoning is depicted in **Figures 2** and **3** below.

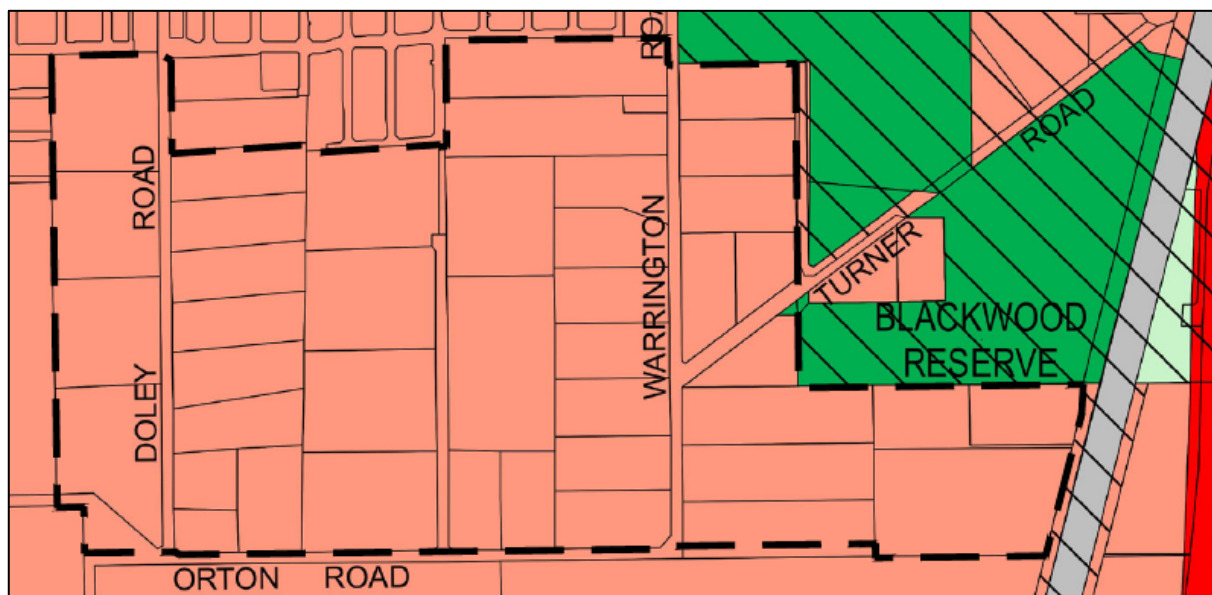


Figure 2: MRS zoning.

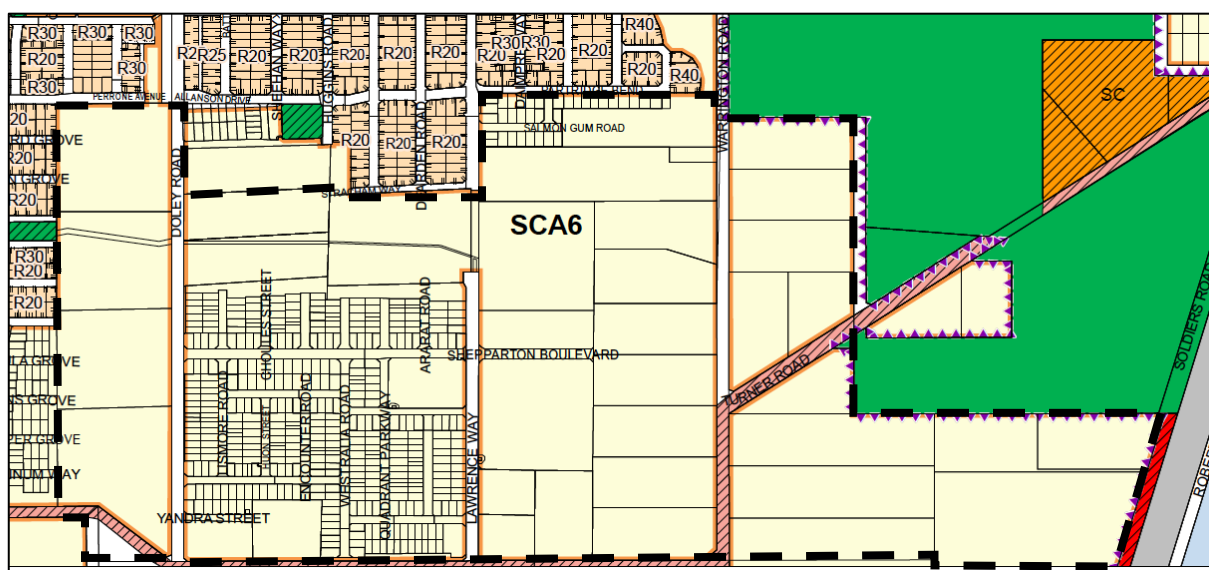


Figure 3: LPS3 zoning.

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN

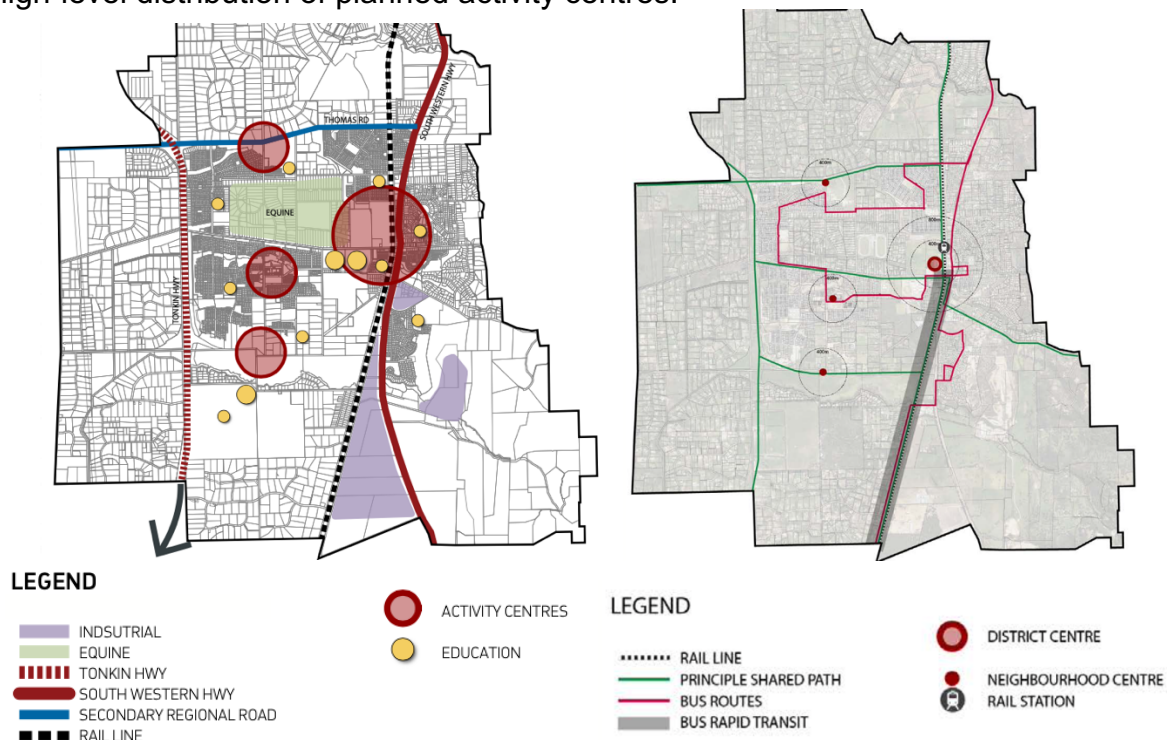
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1.3.2 DISTRICT STRUCTURE PLAN

The LSP is within the area covered by the Byford District Structure Plan (**DSP**), which was endorsed by the WAPC in 2023. The Byford DSP provides high-level strategic guidance on future planning and development in the Byford locality.

Overall, the DSP estimates a population of 50,957 people and 17,817 dwellings. To accommodate this estimated urban growth, the DSP recognises the need to integrate urban development and employment nodes with transport infrastructure and services. The Byford DSP notes that as residential development expands further south within the DSP area, new neighbourhood centres will be required.

Under Section 3.2.2 of the DSP, three neighbourhood centres are identified within the DSP area which are distributed throughout the major urban growth areas, and each neighbourhood centre is envisaged to accommodate approximately 5,000sqm of retail NLA. The below extracts of Figure 21 and Figure 22 from the Byford DSP shows the high-level distribution of planned activity centres:



The DRP envisages a neighbourhood centre in a location consistent with the amendment site. The amendment site is the ideal location to accommodate the planned neighbourhood centre, noting its highly accessible position to the immediate and surrounding communities by virtue of future road network upgrades, and easy walkable access. Additionally, the establishment of a local supermarket with specialty stores and any additional commercial uses would drastically improve the growing community's local amenity and availability of local employment opportunities (noting Retail Trade is the third most popular industry in the Byford DSP area).

The proposed amendment is therefore appropriate in the context of the DSP and will contribute toward the achievement of its strategic objectives.

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1.3.3 PERTH AND PEEL @ 3.5 MILLION AND SOUTH METROPOLITAN PEEL SUB-REGIONAL PLANNING FRAMEWORK

Perth and Peel @ 3.5 million is a high level strategic plan which sets a framework for the Metropolitan and Peel regions to manage population growth through density targets and the identification of areas suitable to sustain growth through housing, infrastructure and key services.

The suite of documents includes four sub-regional planning frameworks. The structure plan area and amendment site are located within the South Metropolitan Peel region.

The LSP area and amendment site are identified as Urban under the P&P framework, and the land is zoned Urban under the MRS.

The South Metropolitan Peel Sub-region is anticipated to experience significant economic and population growth, with population increase estimates of 44% (676,600 people) by 2050. The framework notes that a significant amount of this urban development will occur within emerging urban areas including Byford, which is reflected by the Shire's Local Planning Strategy and the Byford DSP, and the various local structure plans in the area (including the Doley Road Precinct LSP and The Glades, Byford LSP).

This significant population growth is required to be supported by sufficient local urban support services to meet the needs of the population. The establishment of a neighbourhood level activity centre at the amendment site as envisaged by the Local Planning Strategy and Byford DSP will create a local focal point for the growing community, as well as a driver of new local jobs which is consistent with the intent of activity centres as set out by the P&P framework.

1.3.4 SHIRE OF SERPENTINE-JARRAHDALE LOCAL PLANNING STRATEGY

The Shire's local planning strategy was endorsed in 2022 and is the key high-level strategic planning instrument for the municipality which has informed the local planning scheme and other local planning instruments.

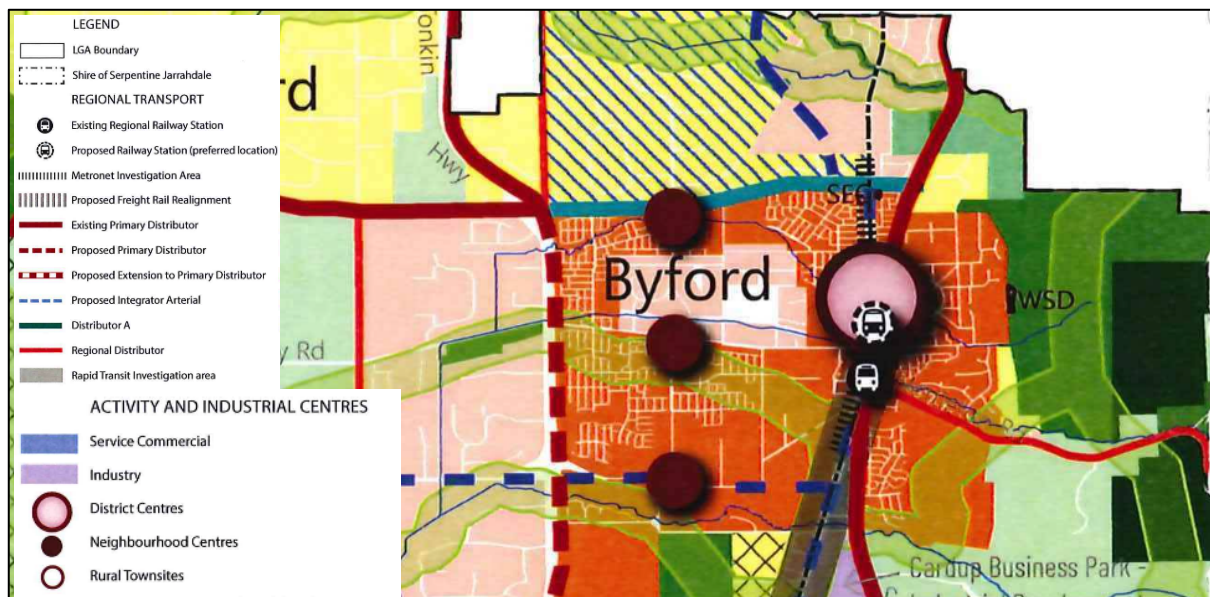
The strategy is informed by the Shire's SJ2050 Spatial Framework, which allocates Byford as Urban Core and Medium Density, with a proposed population of 50,000 people and a gross housing density of 9.9.

The local planning strategy identifies the Byford area as an Urban Settlement and establishes a hierarchy of activity centres to service the Byford locality, comprised of the Byford District Centre (located at the town site), as well as three neighbourhood centres which are consistent what has been envisaged by the Byford DSP.

In this regard, the strategy envisages a neighbourhood level activity centre being established in the vicinity of the amendment site. The strategy nominates this activity centre as the Orton Road neighbourhood centre, and indicates a nominal retail floorspace allocation of 5,000sqm NLA.

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN ADDENDUM TO PART TWO

An extract of the LPS map is below which shows the planned Tonkin Highway extension, Orton Road upgrade/realignment, and location of the planned Orton Road neighbourhood centre.



The strategy recognises the importance of neighbourhood centres to service neighbourhood catchments, providing the local population with important daily and weekly urban support services, and to support the larger planned district centres.

The proposed amendment to the Doley Road Precinct LSP is consistent with the strategy. The amendment would support population growth by delivering a planned neighbourhood centre in a location where it has been envisaged by multiple strategic instruments, providing essential support services on land which is suitably located, highly accessible, and of an appropriate size.

1.3.5 SERPENTINE JARRAHDALE – ACTIVITY CENTRES STRATEGY

The Shire's local activity centres strategy was prepared in 2012/2013 to bring the Shire's approach to activity centre planning in line with the version of State Planning Policy 4.2 which was in force at the time.

The Byford DSP (which was endorsed in 2023 after the local planning strategy) has consolidated a number of previous strategic instruments, including the activity centres strategy, to provide an updated framework to guide planning and development for the district of Byford.

The Byford DSP envisages a population catchment of 55,000 people 32,900sqm of retail floorspace to be distributed between the Byford District Centre, three neighbourhood centres, and various "local nodes". The proposed amendment demonstrates compliance and consistency with the Shire's strategic planning framework where activity centre and retail planning is concerned, by seeking to provide a neighbourhood centre in the location envisaged by both the local planning strategy and district structure plan.

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN

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The supporting retail needs assessment provided at **Appendix 1** demonstrates the appropriateness of the amendment, taking into consideration demographic data, the performance/viability of existing and planned retail centres within the defined trade area, and the key opportunities/constraints of a neighbourhood centre at the amendment site. The results show the provision of 5,000sqm of retail floorspace at the site is viable and acceptable.

1.3.6 LOCAL PLANNING POLICY 2.5: SERPENTINE JARRAHDALE ACTIVITY CENTRES

The current version of the Shire's LPP2.5 was endorsed in 2023 and provides local planning guidance in relation to the orderly development of district and neighbourhood level activity centres throughout the Shire.

LPP2.5 includes objectives which seek to facilitate the development of a network of district and localised activity centres with a mix of retail, commercial, leisure and community activities, whilst discouraging "ad hoc" activity centre development which is inconsistent with the Shire's local planning strategy and activity centre strategy.

The proposed amendment will facilitate the development of a neighbourhood centre within a suitable location which is consistent with higher order strategic planning for the locality, providing the growing population with essential daily and weekly urban support services.

The amendment site is strategically located for optimised accessibility, noting its corner location with frontage to the future roundabout intersection of Orton Road & Doley Road, the wider regional road network upgrades set to occur in the locality, and the fact there are higher residential densities planned within its walkable catchment as per the applicable existing local structure plans.

The Shire's LPP2.5 will be addressed in detail at development application stage, once the precise layout and built form of the neighbourhood centre is determined.

1.3.7 STATE PLANNING POLICY 3.7 BUSHFIRE

State Planning Policy 3.7 Bushfire seeks to implement effective, risk-based land use planning and development practices to preserve life and reduce the impact of bushfire on property and infrastructure.

The structure plan area is identified as 'bushfire prone'. A bushfire management plan and bushfire hazard assessment were prepared as part of the structure plan for the area which remains relevant/applicable. The proposed change in zoning does not affect these assessments.

A further bushfire assessment can be prepared at development application stage when the development layout is formalised, which demonstrates compliance with SPP3.7 and the associated guidelines.

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1.3.8 STATE PLANNING POLICY 4.2 ACTIVITY CENTRES

SPP4.2 and its associated implementation guidelines were endorsed in 2023. SPP4.2 aims to ensure planning and development adequately considers the distribution, function and broad land use options for activity centres to meet local community needs, and provide social, economic and environmental benefits to the community.

In accordance with SPP4.2 implementation guidelines, local planning strategies must identify the neighbourhood centres and local centres within a local government area.

As outlined in the previous sections of this report, the Orton Road neighbourhood centre is identified both by the Shire's local planning strategy and the Byford District Structure Plan, with an anticipated retail floorspace allocation of 5,000sqm NLA.

In accordance with the policy measures of SPP4.2, where a local planning strategy does not have a Needs Assessment or the Needs Assessment has not been updated for more than five years, a new Needs Assessment may be prepared in support of a "standard" structure plan at the district or local level.

As the Shire's local planning strategy was mostly informed by the Activity Centres Strategy which was endorsed in the early 2010s, a Needs Assessment has been prepared in support of this local structure plan amendment and is provided at **Appendix 1**.

The Needs Assessment has been prepared in accordance with approach and methodology outlined within the implementation guidelines, and demonstrates:

- Retail and commercial demand in Byford is likely to increase due to localised growth. The number of dwellings within the defined trade area is projected to increase by 83% to 16,007 dwellings by 2039, with some of these dwellings already in the process of being established near the amendment site.
- Shop/retail expenditure in the defined trade area is expected to increase by 52% by 2034, which is a large increase and reflects the significant expansion in residential dwellings over the next 10-15 years.
- The amendment site will play an important role in catering for population growth in the near future, as the Lot 33 Hopkinson Road small (unplanned) neighbourhood centre will incorporate limited floorspace over a long-term period and the existing Glades Village Neighbourhood Centre north of the site has reached its expected retail capacity. The current amount of available floorspace leads to a high level of retail expenditure leakage to areas outside the trade area, which would be reduced through the delivery of the Orton Road Neighbourhood Centre.
- A shop/retail floorspace allocation of up to 5,000sqm NLA is viable and supportable at the amendment site, both in the short term and the long term, with proper consideration of existing, approved, and planned activity centres and activity centre expansions.

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN

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SPP4.2 also includes additional provisions pertaining to the land use mix, urban form, and desirable composition of activity centres.

The purpose of this amendment is to facilitate the delivery of a neighbourhood centre development at the amendment site which would be anchored by a supermarket and include speciality shops and other commercial uses to serve the daily and weekly needs of the community, consistent with the role and characteristics of neighbourhood centres as set out in Appendix 1 of SPP4.2.

The amendment site is in a highly accessible position and has the capability to serve as an important community focal point for the growing population of the locality. The layout and configuration of the neighbourhood centre will ensure it is pedestrian oriented and designed to invoke a sense of place. These considerations will be addressed at development application stage, once the precise layout and design has been formulated.

In view of the above, the proposed change in zoning to facilitate a neighbourhood centre on the site is consistent with the policy measures of SPP4.2.

2 SITE CONDITIONS AND CONSTRAINTS

The information presented in relation to site conditions and constraints within Section 2 of Part Two of the LSP remain relevant/applicable, demonstrating the structure plan area and amendment site are suitable for urban development.

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN ADDENDUM TO PART TWO

3 LAND USE AND SUBDIVISION REQUIREMENTS

The original structure plan Part Two report assesses and explains the key land use and subdivision requirements pertaining to the LSP. The following sections address land use and subdivision requirements as they relate to the proposed amendment, serving as an addendum to the information contained within Part Two.

3.1 LAND USE

An indicative master plan has been prepared to notionally depict how the future neighbourhood centre could be arranged and is provided as **Figure 4** for reference:

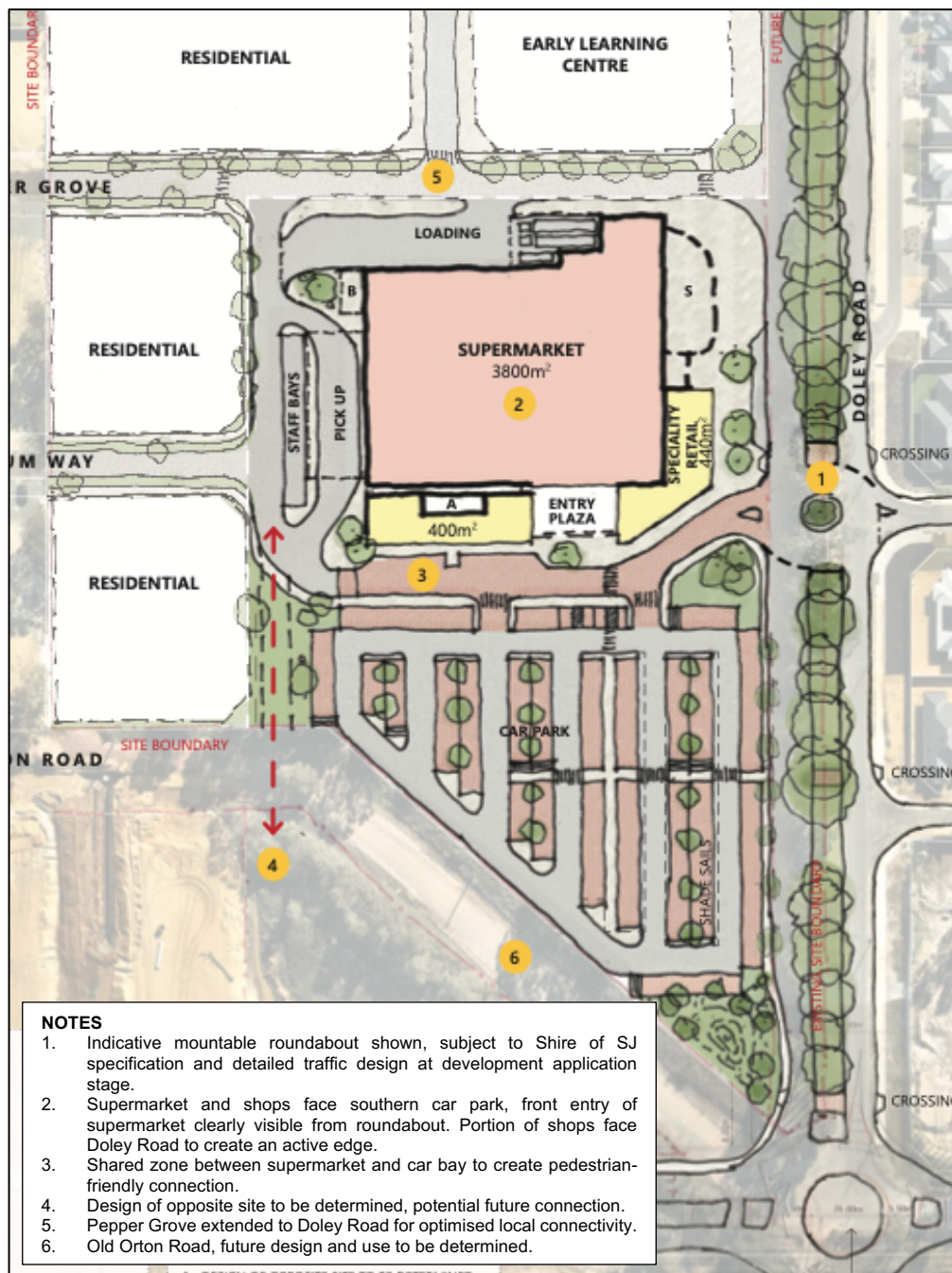


Figure 4: indicative master plan of neighbourhood centre

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The key principles which have informed the indicative master plan are as follows:

- The development provisions pertaining to the Neighbourhood Centre zone within the Shire's LPS3.
- Full-line supermarket to anchor the neighbourhood centre and to serve the daily and weekly needs of the surrounding community. Supermarket to achieve a high standard of architectural design and rear service areas to be appropriately screened.
- Specialty shops and commercial uses to integrate with the entry plaza and 'wrap around' the supermarket and create an active edge, including to Doley Road.
- Creation of an internal shared zone along the primary frontage of the supermarket to establish a pedestrian-friendly connection to the wider pedestrian network.
- Car park provided within the irregularly shaped triangular section of the site, which is generally away from existing and planned residential uses and adjoins the old Orton Road reserve which may form part of a neighbourhood centre extension in the future (land tenure arrangements to be resolved).
- Covered and acoustically attenuated rear loading area and grocery pick up area to protect the amenity of planned residential uses.
- Defined pedestrian movement areas and connection points, and the use of paving or red concrete to delineate shared zones for ease of pedestrian movement.
- Ultimate Doley Road configuration to achieve a 30m wide road reserve and designed to a Liveable Neighbourhoods Neighbourhood Connector A standard. Existing mature trees to be integrated into wide central median to establish an attractive 'boulevard' style road design similar to its northern sections near Abernethy Road.
- Full movement access to Doley Road, ensuring optimised accessibility for the community from all directions. The precise location, specification, and design of the full movement access to be determined at development application stage through consultation with the Shire of SJ.
- Extension of Pepper Grove to form a left turn only intersection with Doley Road, allowing traffic to easily disperse to the wider locality.
- Significant provision of soft landscaping and tree planting throughout the neighbourhood centre to improve amenity, streetscape response, and to provide shade to parking areas.

It is important to note that the indicative master plan is conceptual in nature and will be refined at development application stage.

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3.2 NEIGHBOURHOOD CENTRE ZONE

The purpose of this structure plan amendment is to change the zoning of a 2.4 hectare portion of the amendment site to Neighbourhood Centre, replacing former zoning allocations of Mixed Use and Residential.

The remainder of the amendment site will be zoned Residential R25-40 and Residential R40-60, retaining the capability for medium density housing to be established.

The proposal will bring the Doley Road Precinct LSP into alignment with the Shire's strategic planning framework and LPS3 by:

- Seeking to providing a neighbourhood centre in a location where it has been envisaged by the local planning strategy and district structure plan.
- Utilising the correct type of zone for its purpose, being the Neighbourhood Centre zone which corresponds to the same zone in LPS3.
- Ensuring there is sufficient land allocated as Neighbourhood Centre to secure the delivery of a neighbourhood level shopping facility which fulfills its purpose.

The objectives of the Neighbourhood Centre zone as set out by *Table 2 – Zone Objectives* of LPS3 are extracted below for reference:

Neighbourhood Centre	<ul style="list-style-type: none">• Provide services for the immediate neighbourhoods that are easily accessible, which do not adversely impact on adjoining residential areas.• Provide for neighbourhood and/or local centres to focus on the main daily household shopping and community needs.• Encourage high quality, pedestrian-friendly, street-orientated development.• Provide a focus for medium density housing.• Ensure the design and landscaping of development provides a high standard of safety, convenience and amenity and contributes towards a sense of place and community.
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Schedule 4 – Additional Site and Development Requirements of the Shire's LPS3 contains provisions specific to the Neighbourhood Centre zone, which are extracted and/or summarised below:

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Clause 4.1 – Zone Development Requirements

Neighbourhood Centre	<ul style="list-style-type: none"> Residential development within the Neighbourhood Centre zone shall have a density coding of R60 in accordance with the R-Codes unless otherwise specified in the Scheme or an approved structure plan. Residential development shall only be supported where it is above or behind commercial or retail development on the same site. Building setbacks shall be determined with regard to the streetscape and the surrounding development in the area, in accordance with the objectives of the Neighbourhood Centre zone and to the satisfaction of the local government. The maximum external building wall height on street frontages shall not exceed 10.5 metres. Components of buildings with a height greater than 10.5 metres shall be setback a minimum of 3 metres from the primary building line. The external building shall be adequately articulated with varying colours and materials, major openings and awnings to the satisfaction of the local government in accordance with the objectives of the Neighbourhood Centre zone. End of trip bicycle facilities must be provided in new developments in accordance with the requirements of Schedule 4.4 of the Scheme.
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Clause 4.2 – Setbacks, Site Coverage and Plot Ratio

Zone	Landscaping %	Maximum Site Coverage %	Maximum Plot Ratio	Setback			
				Front	Secondary Street	Side	Rear
Neighbourhood Centre	10% in total, comprised of 5% of the front setback	50**	1.0**	**	**	**	**

The above provisions will remain relevant and applicable to any neighbourhood centre development eventually proposed on the amendment site.

In addition to the provisions of LPS3, this structure plan amendment seeks to incorporate a number of provisions into Part 1 – Implementation (Section 6.3 refers) to ensure a number of key site-specific outcomes are achieved. This includes:

- Limiting the extent of shop-retail floorspace to 5,000sqm NLA, consistent with the retail needs assessment undertaken in support of the amendment.
- Requiring the existing mature vegetation within the Doley Road reserve to be retained and integrated into the ultimate design/configuration of Doley Road, ensuring this important streetscape outcome is secured.
- Allowing car parking provision to be guided by the WAPC's *WA Planning Manual – Non-Residential Car Parking Rates in Perth and Peel*, (endorsed by the Commission in November 2024) which offers guidance regarding the minimum and maximum parking rates for uses within neighbourhood centres.
- Requiring any application for planning approval which involves noise-generating land uses in close proximity to existing or planned residential uses to demonstrate compliance with the *Environmental Protection (Noise) Regulations 1997* by way of an acoustic assessment. This highlights the importance of ensuring amenity considerations are appropriately considered by virtue of its reference in structure plan provisions.
- Confirming that the neighbourhood centre is afforded a full movement access point to Doley Road, and noting that its precise location, design, and specification is to be resolved at DA stage through consultation with the Shire of SJ with expert traffic input. The amendment site's vehicular connection to

DOLEY ROAD PRECINCT LOCAL STRUCTURE PLAN

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Doley Road is a critical consideration and directly informs the level of accessibility the community will have to the future neighbourhood centre development. It is important to ensure the higher order (and higher capacity) road network is used as the principal entry and exit into the neighbourhood centre.

3.3 RESIDENTIAL

Based on the range of densities and the extent of residential land allocated throughout the structure plan area, the original structure plan had the potential to create approximately 1,850-1,950 residential lots and 1,875-1,975 dwellings.

This equated to approximately 16.4 dwellings per gross hectare and 28.2 dwellings per site hectare.

The change in zoning proposed by this amendment which would replace Mixed Use and Residential land to Neighbourhood Centre would only marginally change the estimated yields under the original structure plan, with 15.6 dwellings per gross hectare and 27.6 dwellings per residential site hectare which remain compliant with the targets established by the State strategic framework.

3.4 BUSHFIRE MANAGEMENT

The structure plan was supported by a bushfire management plan and bushfire hazard assessment. The original structure plan report provided a description of the bushfire risk reduction strategies for the area.

The proposed change in zoning to Neighbourhood Centre does not change the outcomes of the bushfire assessment, and does not prevent the ability for any of the risk reduction measures to be completed or adhered to on an ongoing basis.

Further bushfire assessment(s) will be prepared at the development application stage, once a development proposal is formulated for the neighbourhood centre site.

3.5 MOVEMENT NETWORK

The structure plan was supported by a Traffic Impact Assessment, which forecast traffic volumes and set out a recommended road network hierarchy to support the growth of the structure plan area.

The proposed change in zoning for the amendment site has been considered through the preparation of an additional TIA, which is provided at **Appendix 2**. The TIA prepared for this amendment has reviewed and referenced the TIA prepared for the original structure plan as appropriate.

In addition, the TIA prepared for this amendment has also addressed traffic considerations relevant to other subdivisions and structure plan amendments occurring in the wider area as relevant to the proposal, and the impending changes to the road network (ie the realignment and upgrade of Doley Road and Orton Road).

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The TIA prepared for this amendment considers the proposed rezoning in context of the ultimate road network conditions for the locality and assesses the estimated change in traffic generation from what was formerly Mixed Use and Residential to a neighbourhood centre with an assumption of 5,000sqm shop-retail floorspace.

The conservative traffic generation assessment contained in the TIA shows that net additional primary trips (after considering pass-by trips) would be about 141vph and 162vph during the AM and PM peak hour respectively. The TIA demonstrates this level of traffic generation is capable of being sustained by the road network around the amendment site.

An intersection capacity analysis (known as 'SIDRA') was undertaken for the Doley Road / Orton Road intersection, demonstrating it would operate satisfactorily under the conservative scenario of adopting the 2041 assessment year when it is anticipated the local structure plans would be fully delivered. The SIDRA demonstrates an overall Level of Service (**LOS**) B during peak traffic periods.

The TIA therefore undertakes a conservative assessment and demonstrates an acceptable traffic and access outcome for the proposed change in zoning to Neighbourhood Centre for the amendment site.

3.6 WATER MANAGEMENT

The LWMS originally prepared for the local structure plan establishes the key principles for the management of stormwater runoff and groundwater quality. The proposed change in zoning does not fundamentally change the outcomes of the LWMS and the subsequent phases of development and subdivision will include the requisite level of hydrological and stormwater expert assessments which demonstrate consistency with the principles of the LWMS.

3.7 ACTIVITY CENTRES

The change of zoning to Neighbourhood Centre would facilitate the future establishment a neighbourhood level shopping precinct on the amendment site, with a shop-retail floorspace allocation of 5,000sqm NLA.

It is noted that the Shire's strategic planning instruments (ie the local planning strategy and district structure plan) envisaged a neighbourhood centre at the intersection of Doley Road and Orton Road which aligns with the location of the amendment site.

The neighbourhood centre in this location has been recognised as important to serve the daily and weekly needs of a rapidly growing population, and in a position with optimised accessibility due to the evolving road network and its connectivity to its surrounding residential catchment.

In previous versions of the Doley Road Precinct Local Structure Plan, some land in this location had been allocated as Mixed Use R80 – but it is noted that the majority of the Mixed Use land is within a road reserve which is not under private ownership

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ADDENDUM TO PART TWO

and the Mixed Use zone itself is not in direct alignment with the zoning arrangements established by the Shire's LPS3.

Amendment 3 will replace the Mixed Use zone with the Neighbourhood Centre zone to ensure consistency with the Shire's LPS3 and to demonstrate the clear intent for the neighbourhood centre to be established in accordance with the objectives and provisions for that zone under LPS3.

In support of Amendment 3, a retail Needs Assessment has been produced by Pracsys, provided at **Appendix 1**. The Needs Assessment has been prepared in accordance with the approach and methodology set out by SPP4.2 and demonstrates that the proposed neighbourhood centre can viably accommodate up to 5,000sqm of shop/retail floorspace without impacting on existing, planned, and approved activity centres within the defined trade area (which includes the wider Byford locality and the area covered by the Lot 33 Hopkinson Road structure plan).

3.8 EDUCATION

The proposed amendment has no effect on existing and planned education facilities.

3.9 INFRASTRUCTURE COORDINATION, SERVICING AND STAGING

The structure plan is supported by an engineering servicing report which outlined the arrangements associated with earthworks, sewer, water, gas, and telecommunications. This included servicing for the amendment site.

The delivery of essential services infrastructure is a key component of the development contribution framework for the structure plan area, which is addressed in the subsequent section of this amendment report.

3.10 DEVELOPER CONTRIBUTIONS

In accordance with the Shire of SJ LPS3, the structure plan area is within the following development contribution areas:

- Area A of Development Contribution Area 1 – Byford.
- Development Contribution Area 4 – Byford and Mundijong Community Infrastructure Development Contribution Plan.

APPENDIX 1

RETAIL NEEDS ASSESSMENT



Doley Road Needs Assessment

Ladybug Twenty Three Pty Ltd

Document Control				
Document Version	Description	Prepared By	Approved By	Date Approved
v1.0	Draft Report	Jason Cook	Michael Chappell	11/10/2024
v2.0	Final Report	Jason Cook	Jason Cook	30/10/1024

Disclaimer

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1 INTRODUCTION

1.1 Background

Jarra Property Pty Ltd. is seeking an amendment to the Doley Road Precinct Local Structure Plan to allow for expansion of the commercial zoning at Lot 34 (1299) Orton Rd, Byford (the subject site). This expansion will facilitate the establishment of the Doley Road Neighbourhood Centre in accordance with the Byford District Structure Plan (DSP). This is necessary for the DSP area as the approved retail developments south of Orton Rd are dispersed nodes that will not effectively fulfil the function of a neighbourhood centre. The Shire of Serpentine-Jarrahdale (the Shire) is receptive to the amendment, subject to appropriate investigations being undertaken.

This report includes the work undertaken in the Retail Context Memo; an assessment of the demographic factors affecting the demand for, and supply of, activity centres and the broader strategic context that is required as part of the Needs Assessment for Lot 34 Orton Rd. The Retail Context Memo also involved a critical assessment of the subject site's suitability for retail uses based on economic principles and the socio-economic profile of the development's potential users. A Needs Assessment using a gravity model has been used in this report to assess a viable level of floorspace at the Lot 34 Orton Rd considering the level of demand and supply in the potential activity centre's catchment.

1.2 Retail Needs Assessment Purpose and Objectives

According to the State Planning Policy 4.2 Activity Centre 2023 (SPP4.2): *'The need for activity centre uses refers to the scale and mix of residential and non-residential uses likely to be needed within a catchment area over the plan period (10 years for Precinct Structure Plans).'*

The Needs Assessment measures demand in an identified trade area and identifies the scale of supply necessary to appropriately accommodate this demand in square metres Net Lettable Area (NLA) of the Department of Planning, Land Use and Heritage's (DPLH) Planning Land Use Category (PLUC), Shop/Retail (SHP)¹.

This Needs Assessment follows the requirements of SPP4.2 Implementation Guidelines to consider and assess demand for activity centres uses. The assessment should be based on facts and unbiased evidence². The key objectives of the report are to:

- Define the catchment area of the proposed development application request
- Review drivers of floorspace, including forecast population growth and socio-economic characteristics, employment and changing expenditure patterns
- Evaluate the competitive environment including existing and planned floorspace supply (including expansions and new developments)

¹ Please see Appendix I: LUES Glossary for more detail regarding DPLH Land Use and Employment Survey Categories

² WAPC, 2023, *State Planning Policy 4.2 Activity Centre Implementation Guidelines*, Government of Western Australia

- Develop a net demand assessment
- Assess the level of Shop/Retail floorspace supportable at the site

1.3 Gravity Model Methodology

Pracsys uses a retail gravity model to analyse the supply of and demand for retail floorspace within an estimated catchment and estimate the potential impact of proposed retail developments. The retail gravity model (also known as Huff's Gravity Model) is a modified version of Sir Isaac Newton's Law of Gravitation and is widely used in international trade modelling, transport modelling and regional planning. Retail gravity modelling studies retail supply, and the probability of a customer (demand) visiting each of a network of centres. The model accounts for the distribution and attractiveness of competing centres, along with the distance customers will have to travel to each centre. Floorspace quantum (m^2) is used to represent the attractiveness of retail centres. Customers are willing to travel farther to shop at large centres, representing a higher level of attraction (they can generally satisfy multiple needs in one trip to a larger centre, which also contains a higher proportion of comparison goods).

The model provides an objective method of distributing expenditure among centres. To optimise the predictive accuracy of the model, the calculated distribution is calibrated to match published turnover levels for each centre in the network. Having established a baseline distribution of expenditure, new floorspace can be introduced and changes in expenditure distribution across time can be examined, allowing for various retail centre transformations such as planned expansions and new developments. This comprehensive approach creates a distribution of expenditure that is fundamentally unbiased, as it is based on explicit mathematical rules. It is a widely used approach that has been accepted by the Department of Planning, Lands and Heritage and Western Australian Planning Commission (WAPC) through the review of a wide range of Structure Plans, Local Commercial Strategies and Retail Sustainability Assessments. For more information on the gravity modelling methodology, please see Appendix II: Gravity Model Methodology.

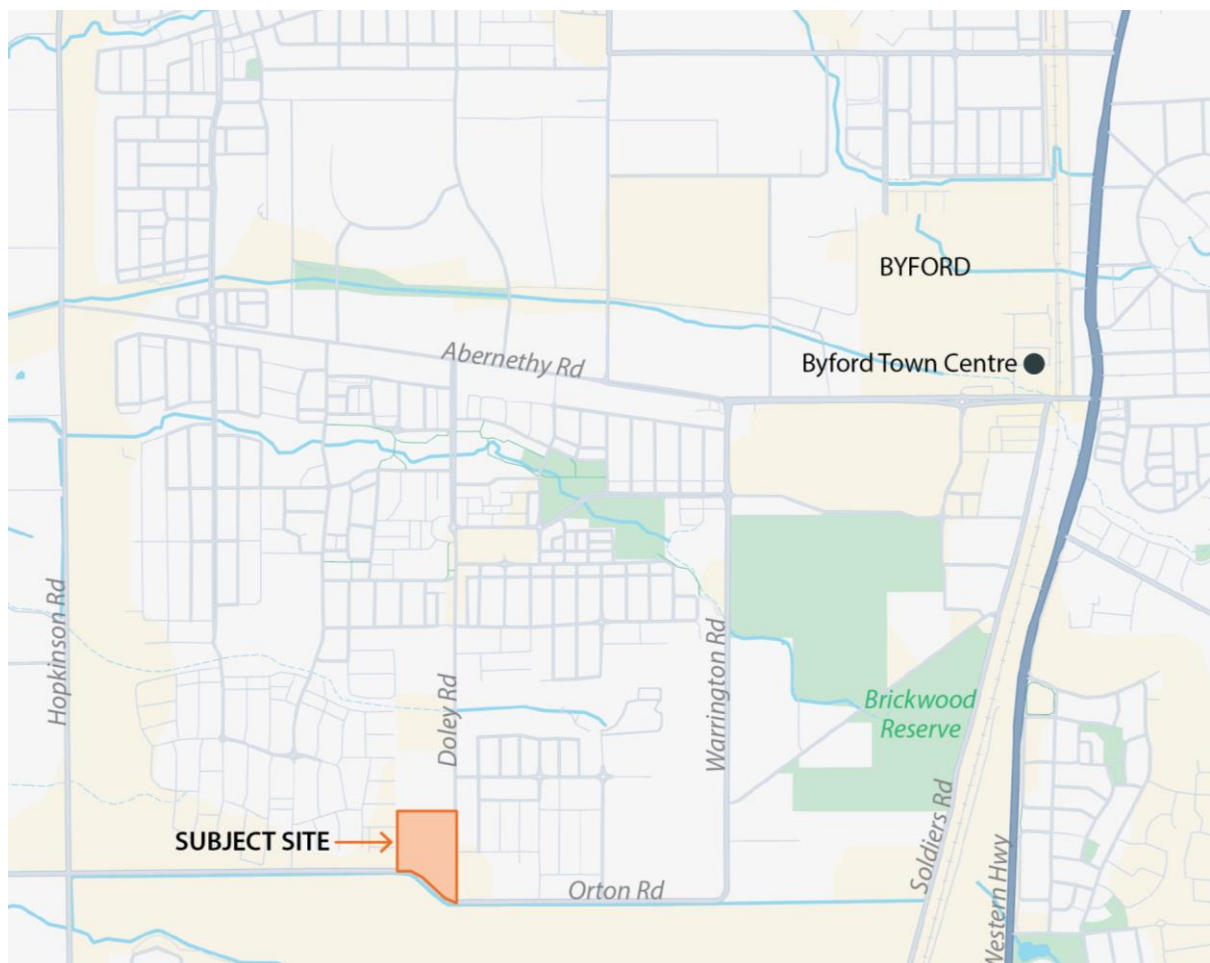
2 DEVELOPMENT CONTEXT

2.1 Site Location

The subject site is located along Orton Rd. The subject site is bordered by undeveloped land to the south and residential developments to the east and west. Doley Rd connects the subject site to Abernethy Rd which serves as a neighbourhood connecting route through Byford to South Western Hwy. The following map identifies the approximate location of the subject site (Figure 1).

Notable, there are approximately 200 residential lots that are under construction south of Orton Rd with another 200 lots planned just east of this development. The realignment of Orton Rd as part of the Tokin Hwy extension will see the development of the roundabout at the intersection of Doley Rd and Orton Rd. This is expected to advance the development of the 1,500 residential lots associated with Lot 33 Hopkinson Rd and improve connectivity between current and future communities. The three 4 hectare lots of undeveloped land north of the subject site along Doley Rd are expected to begin development soon.

Figure 1. Subject Site Context



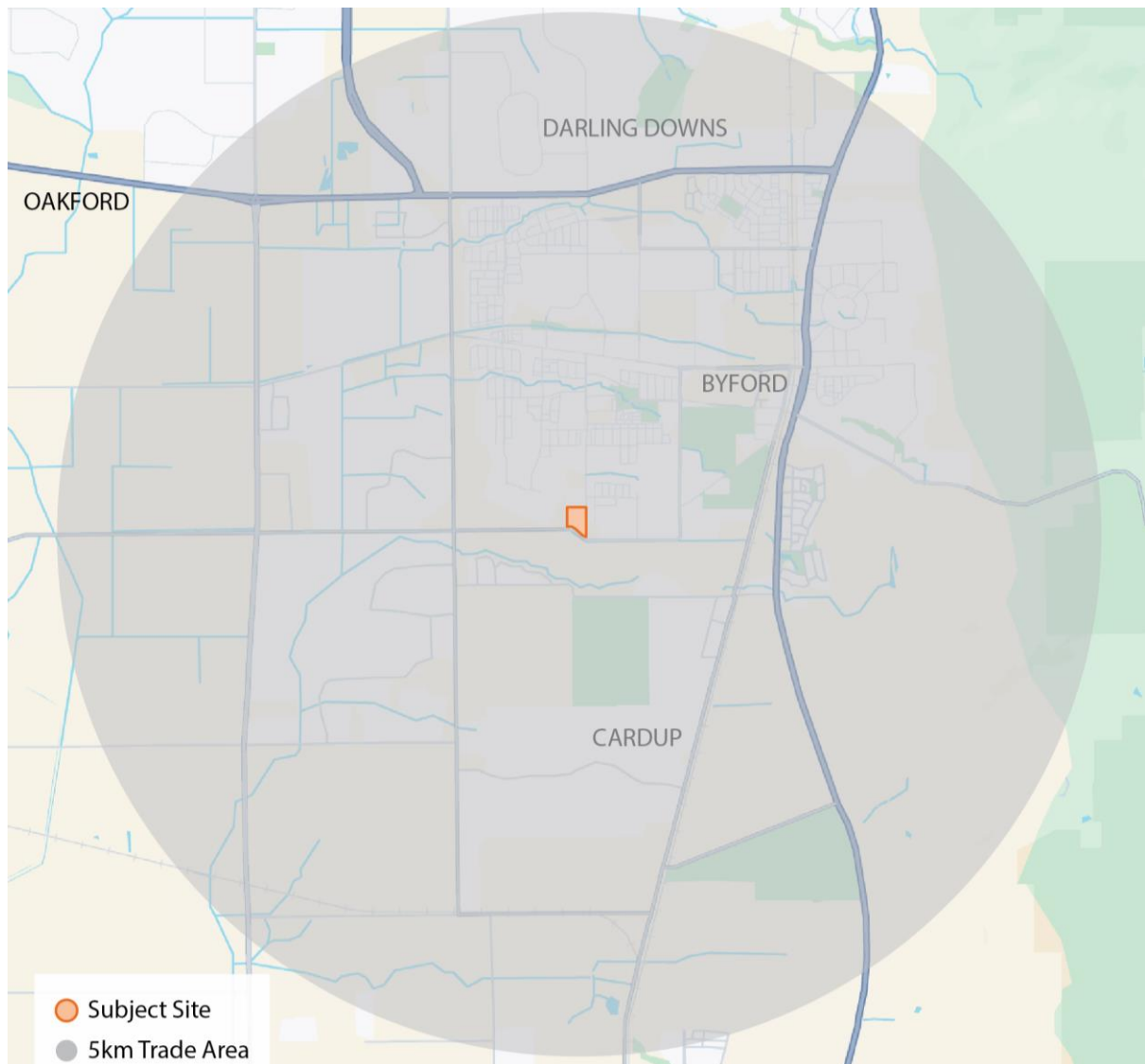
Source: Pracsys 2024

According to the Shire of the Serpentine-Jarrahdale Local Planning Scheme (LPS) No.3, the subject site is located within an area that is currently zoned 'Urban Development', which is a combination of residential developments and undeveloped land.

2.2 Trade Area Definition

A trade area is the spatial boundary from which commercial floorspace generates most of its customers. The trade area definition allows for the measurement of the number of potential customers, their demographics and expenditure potential, as well as an assessment of the competitive environment. SPP4.2 states that neighbourhood centres provide for the day-to-day needs of local communities, playing an important role in the activity centre hierarchy by providing access to services and facilities for local communities. The modelled trade area of the proposed commercial area is comprised of a five-kilometre catchment area. The 5km catchment will be used in the gravity model and ensures that all centres that could reasonably influence the viability of the prospective centre are included in the Needs Assessment (Figure 2). The demographic analysis utilised the 5km trade area to identify and assess likely users of the development. The modelled trade area encompasses Byford, part of Cardup to the south and Darling Downs to the north.

Figure 2. Trade Area



Source: Pracsys 2024

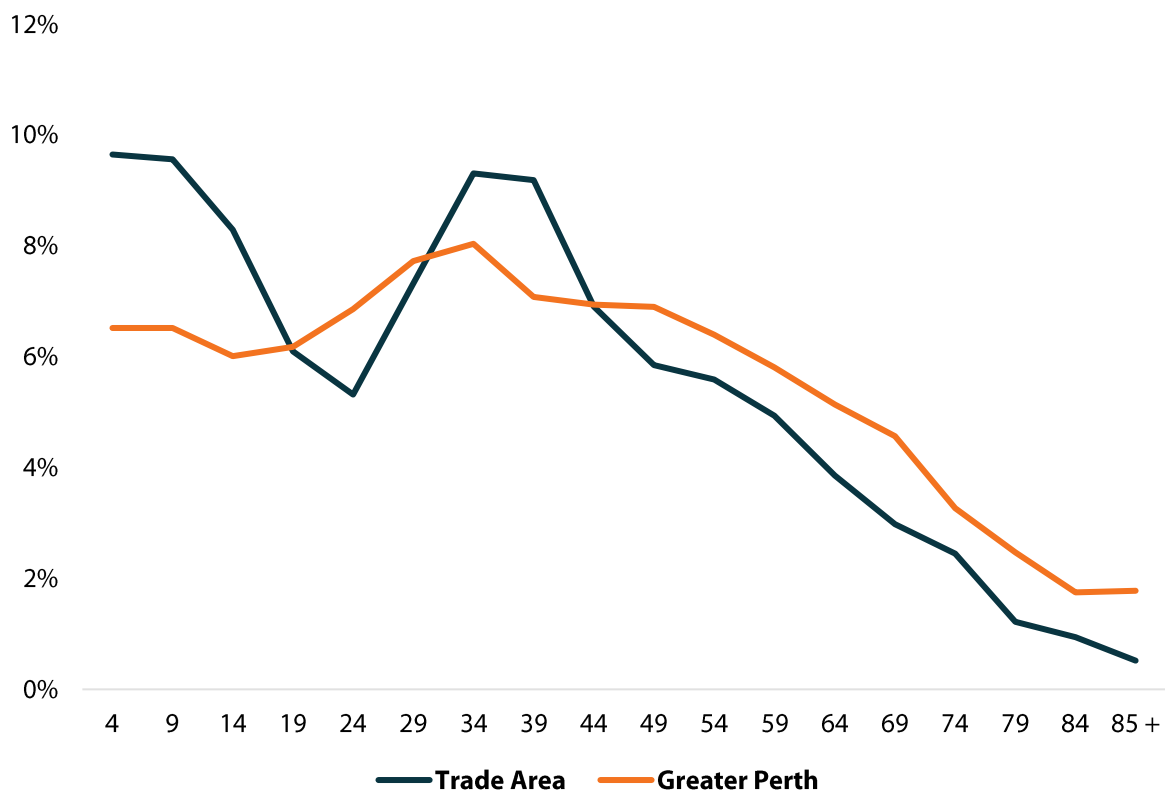
3 RETAIL DEMAND

Understanding local demographics and expected market growth is vital for assessing the need for retail floorspace in the estimated trade area. This section provides an overview of age, current and future dwellings, income and the expenditure profile of the trade area.

3.1 Age Profile

The trade area exhibits a younger and family-oriented age profile relative to the Greater Perth benchmark (Figure 3), with a lower proportion of people aged 65- to 69-year-olds (3% versus 4.6%) and a higher proportion of both 0- to 4-year-olds (9.7% versus 6.5%) and 5- to 9-year-olds (9.6% versus 6.5%) than in Greater Perth. This reflects that the trade area is comprised of a higher concentration of working-age adults with young children than the Greater Perth average. This may indicate increased expenditure on childcare and certain convenience retail goods and services.

Figure 3. Trade Area Age Profile

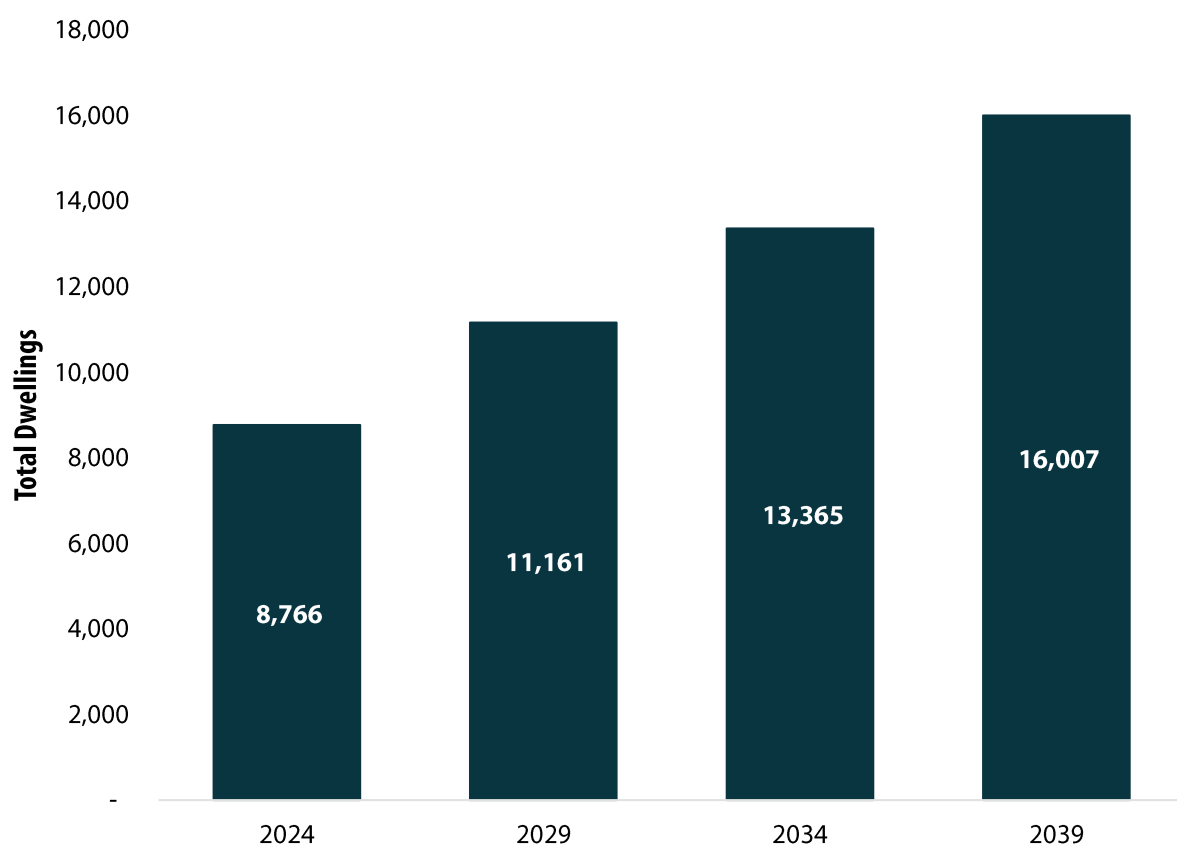


Source: ABS Census 2021

3.2 Trade Area Households

Settlement data for the Shire from the Urban Development Institute of Australia's (UDIA) monthly Urban Intelligence report was used to update WA Tomorrow dwelling forecasts for 2023. The approximate trade area of the proposed commercial area is estimated to contain 8,766 dwellings in 2024 (Figure 4)³. Based on dwelling growth forecasts, the number of dwellings in the trade area is expected to increase to 13,365 by 2034, reflecting a forecast increase in dwellings of 52 per cent. The number of dwellings in the trade area is projected to reach 16,007 by 2039, reflecting an 83 per cent increase from the current level. This significant dwelling growth will necessitate the additional provision of Shop/Retail uses in the trade area.

Figure 4. Trade Area Dwelling Growth Forecast



Source: ABS Census 2021, DPLH WA Tomorrow 2018

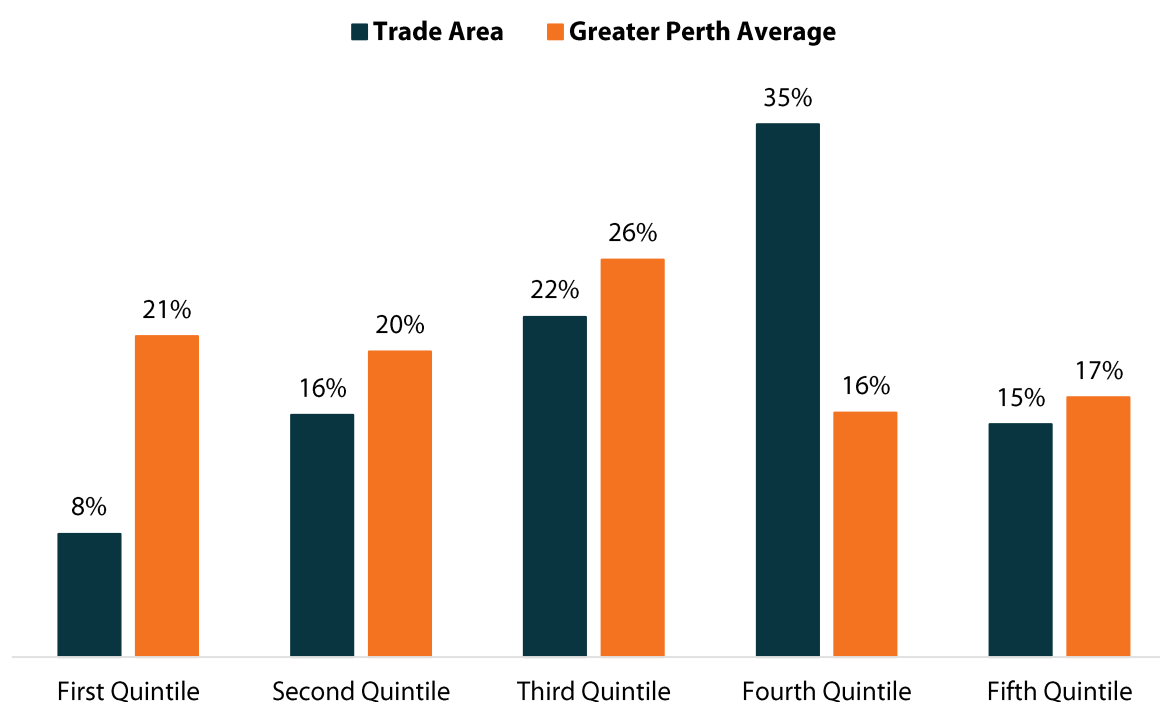
³ The ABS Census 2021 dwelling count by SA1 areas augmented by WA Tomorrow population projections (median band).

3.3 Trade Area Household Income

Trade area household income levels contribute directly to the success of retail developments, as the level and composition of spending on retail goods and services is primarily determined by household income. Generally, lower-income quintiles spend a higher proportion of their income on basic goods and services; upper-income quintiles have more disposable income available to spend on comparison retail items.

2021 ABS Census data has been used to assess the distribution of household income within the trade area (Figure 5). Incomes in the trade area have a less represented across the first, second, third and fifth quintiles, with a significantly higher proportion of households in the fourth quintile (35% versus 16%) relative to the benchmark. This is likely reflective of the high economic resilience of households in the trade area against the negative impacts of COVID-19, which has likely contributed to a significant variation in the composition of household income in Greater Perth as of the 2021 Census.

Figure 5. Trade Area 2021 and Greater Perth 2021 Weekly Income Profile

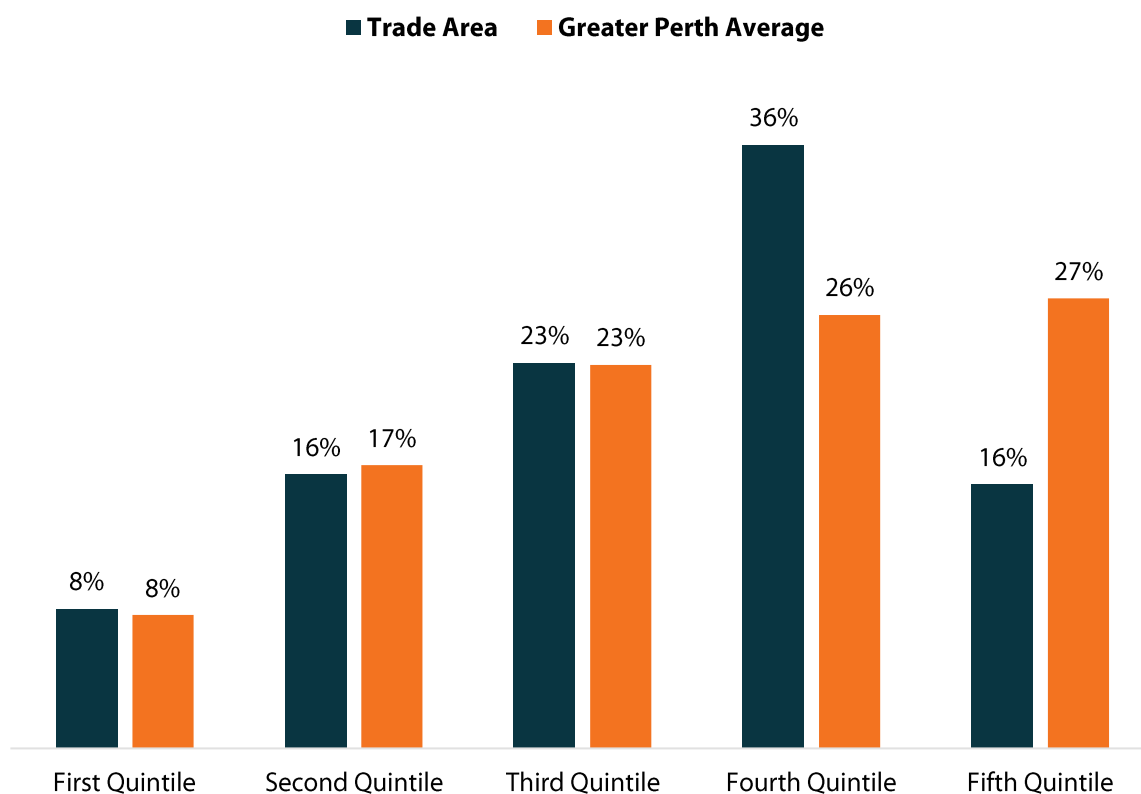


Source: ABS HHES Survey 2017/2018, ABS Census 2021

2016 ABS census data for Greater Perth has been compared with 2021 trade area data for a more accurate comparison without the effect of COVID-19 (Figure 6). Incomes in the trade area are like the Greater Perth benchmark in the first quintile (8% versus 8%), the second quintile (16% versus 17%) and the third quintile (22% and 23%) with a higher proportion of households in the fourth quintile (36% versus 26%). The difference in the fifth quintile accurately reflects the demographic analysis, as the trade area has a higher proportion of residents between the 30-34 and 35-39 age brackets who have likely not yet reached their maximum earning potential. However, the relatively higher proportion of household incomes in the fourth quintile indicates a

strong level of discretionary spending within the catchment, which will stimulate demand for retail goods and services provision.

Figure 6. Trade Area 2021 and Greater Perth 2016 Weekly Income Profile

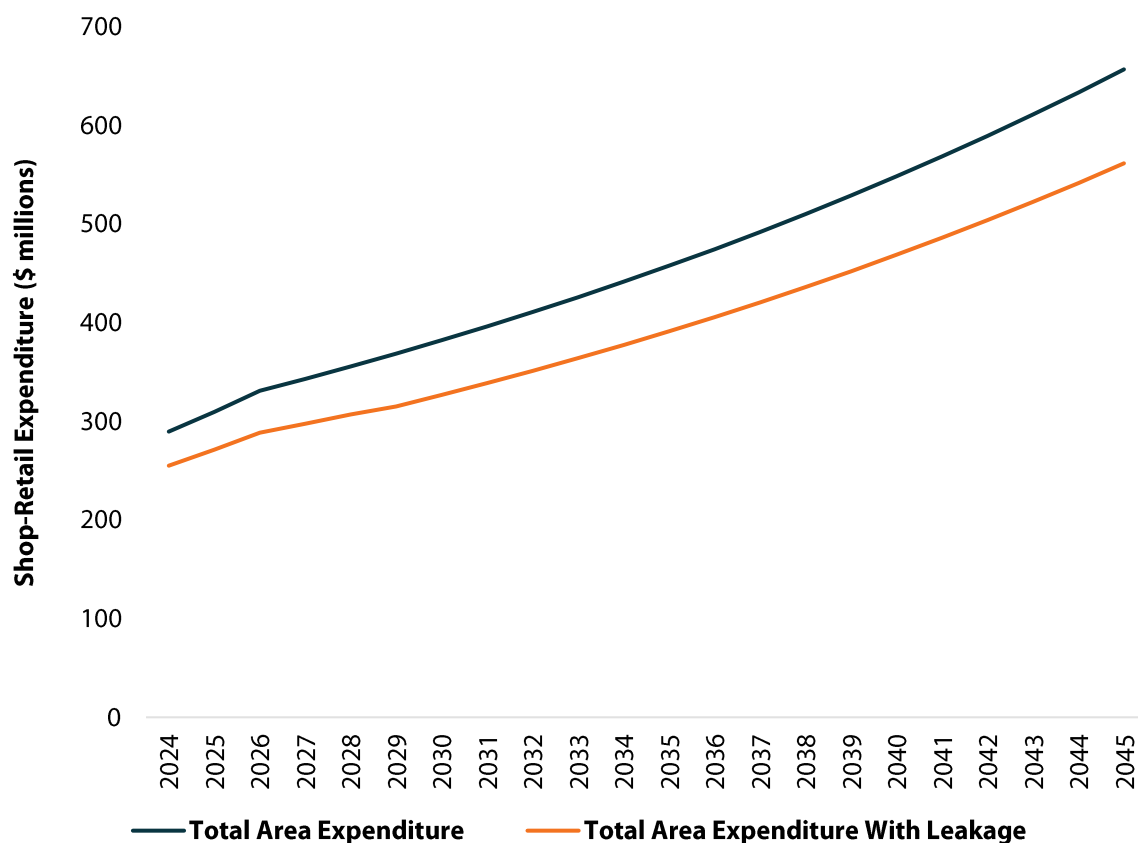


Source: ABS HHES Survey 2017/2018, ABS Census 2021, ABS Census 2016

3.4 Estimated Retail Expenditure

ABS Household Expenditure Survey data was used to estimate the average spend per household by income quintile, from which the total expenditure pool of the catchment has been derived. The model combines the propensity to spend on commodities based on household income quintiles to derive the total Shop/Retail expenditure in the area. Given projected household growth, Shop/Retail expenditure is estimated to increase from \$290 million in 2024 to \$442 million in 2034, reflecting growth of 52 per cent without leakage (Figure 7). Shop/Retail expenditure in the trade area is predicted to reach \$529 million by 2039, an increase of 83 per cent from current levels. This large increase in catchment expenditure reflects the significant expansion in residential dwellings expected to occur within the trade area over the next 10–15 years. Some of this turnover is projected to be lost to online leakage; however, this is expected to be less prominent with respect to convenience retail than other types, such as comparison retailing. The effect of online leakage on the viability of the subject site is expected to be minimal.

Figure 7. Trade Area Shop/Retail Expenditure Pool 2022-2045



Source: ABS HHES Survey 2017/2018, ABS 2021, Pracsys 2024

3.5 Retail Trends

An activity centre should be development in line with current retail trends to maximise expenditure and overall demand. The identified trends highlight the fast-changing nature of retail that businesses need to adapt to. It is key to ensure that planning for activity centres allows for flexibility in uses and floorspace areas. The following trends are worth considering as activation and development opportunities arise (Figure 8)⁴.

Figure 8. Retail Trends and Drivers

Trend	Description	Drivers
Conscious Retail	Conscious retail is increasingly keeping customers loyal to a brand /distributor.	Many consumers have made a lifestyle choice to have a smaller global footprint, support brands that provide better conditions for factory workers in developing countries or support local products. Consumers are often willing to pay a premium for these products.
Data Retail	'Big Data' is being used to continually monitor and respond to changing consumer desires, shortening the product cycle.	Collecting and analysing data on retail sales is being used to inform all parts of the retail sale process, from supply chain to understanding customer satisfaction with their purchase. Retailers who don't use data to inform their decisions are much less likely to understand their customer's preferences or forecast demand and may find it difficult to remain competitive with those who do.
International Retail	The last few years have seen an influx of international brands penetrating the Australian market.	An untapped Australian market and Australian's demanding goods they can see online but cannot purchase locally. Additionally, the ability to geoblock products and charge higher prices in the Australian market has driven demand.
Omnichannel Retail	Digital marketing has been used to keep customers loyal to a brand/distributor.	The emergence of digital marketing across a range of devices, platforms and applications have provided multiple channels for retailers to market their products. Physical stores need an online presence to be competitive, as a consumer may shop using both means at different times.
Mobile Devices	Accessing retail via mobile devices and integrating mobile devices.	Mobile devices are providing unprecedented 24/7 access to retail offerings.
Subscription retail	Subscription retail allows retailers to encourage increased loyalty and connection to their brand.	Retailers need a business model that 'locks in' customers to increase the threshold of switching brand
Fast Retail	Business models comprised of virtual stores accessible	Technology has enabled customers to decide when, how and where to go. Consumers are no longer beholden to opening times or physical geography,

⁴ <http://www.smartcompany.com.au/industries/retail/top-five-retail-trends-watch-2017/>;
<https://www.rangeme.com/blog/6-trends-that-will-reinvent-retail-in-2017/>;
<https://www.appearhere.co.uk/inspire/blog/the-retail-trends-with-staying-power>; <http://digitalmainstreet.ca/retail-trends-10-experts-share-their-predictions-for-2017/>; <https://www.vendhq.com/au/university/retail-trends-and-predictions-2017>; <https://www.digitalpulse.pwc.com.au/retail-trends-2017-paul-zahra/>;
<https://www.forbes.com/sites/bernardmarr/2015/11/10/big-data-a-game-changer-in-the-retail-sector/#63dc4fbd9f37>

Trend	Description	Drivers
	from anywhere with fast distribution networks.	consumer desires rather than retailers are driving consumption.
Retailtainment	Entertainment as an integral part of the retail experience.	The popularity of online retail channels has resulted in physical retailers needing to provide a retail experience or social experience as a point of difference. Millennials integrate retail and entertainment as a single social experience.
Small Retail	Speciality shops and smaller floorplates are becoming more popular.	Smaller stores with more curated selections, and specialty shops with niche products and more knowledgeable staff are predicted to be more competitive than larger stores where products can be harder to find.
Personal Retail	Consumers are increasingly desiring products that can be personalised.	Consumers are going shopping with a strong idea of what they want, rather than shopping to see what is available and fits their needs. They want to find a product that reflects their personal brand and is tailored to their needs rather than generic and mass-produced.
Ethical Consumerism	Consumers are considering the ethical and environmental impact of their purchases; where the product was produced and if it reflects their values.	This has been driven by a range of factors such as COVID-19, social media raising awareness around working conditions and environmental impact, news, Oxfam and other organisations that rate brands.
Ecommerce	The rise of online shopping coincides with a rise in e-commerce. Online shopping provides the ability of consumers to stay home and e-commerce has revolutionised who can be a retailer.	This has been driven by fast-paced lives, the rise of social media, more people starting online businesses. Online shopping is what customers are doing and ecommerce is what businesses are doing. This also means in-store shopping has to be enticing or convenient enough to attract consumers.
Buying Local	Supporting local businesses and individuals	Consumers are becoming increasingly willing to purchase from small businesses and locally. This has been accelerated through COVID-19 to support small, struggling businesses and due to a lack of imported goods.
Open Air Shopping Experiences	People are starting to prefer outdoor malls rather than enclosed malls.	People wanting to be in nature, prefer to walk between shops outside rather than in a shopping centre, however, the trade area pull is larger for indoors than outdoors
Circular Fashion	More consumers are turning to be a part of a circular economy model in which they consume and give away items in a more sustainable manner.	This has been driven by second-hand ecommerce like Etsy, people both buying and selling as individuals or small 'brands' and the growth of the sharing economy.
Authenticity	Customers are increasingly wanting to feel a personal connection with brands and	Increased availability of information is making consumers more aware of marketing tactics. This is

Trend	Description	Drivers
	are becoming more aware of manipulative advertisements.	making consumers more inclined to purchase from brands/retailers they feel are authentic.
Virtual Reality	Retailers are increasingly looking to differentiate themselves through the integration of technology with the customer experience.	Augmented Reality (AR) and Virtual Reality (VR) technologies have had a significant impact on the retail sector. AR and VR provide immersive and engaging experiences for customers, enabling them to visualize and interact with products in new ways such as virtual storefronts. This trend can reduce the footprint required of physical stores.

Source: Pracsys 2024

4 RETAIL ANALYSIS

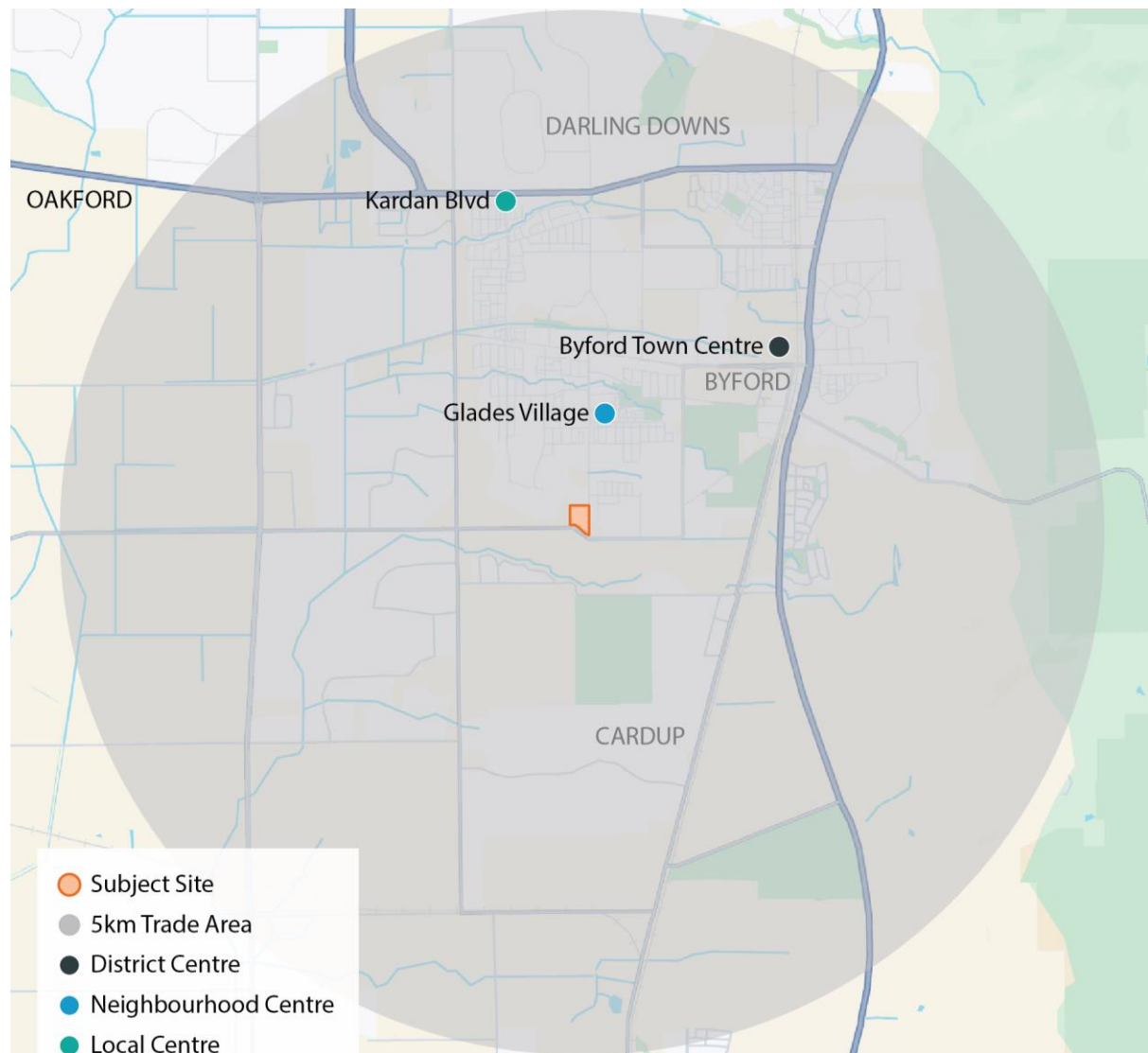
This section provides an overview of the competitive environment facing the proposed development at Lot 34 Orton Road, Byford. Being a neighbourhood centre, the proposed development is likely to compete principally with those centres in proximity.

4.1 Current Supply

Existing retail floorspace supply within the trade area has been derived through data from multiple sources, including:

- The Department of Planning Land Use Survey (2016)
- Property Council Shopping Centre Directory (2021)
- Local Government documentation (District Structure Plans, Local Structure Plans etc.)
- Secondary research (manager websites etc.)

A total of three current centres containing Shop/Retail floorspace within five kilometres of the proposed development were included in the analysis to ensure a comprehensive assessment of current competing retail supply (Figure 9). The trade area includes a wide range of retail offerings, from the Byford Town Centre to various neighbourhood and local-level centres such as the Glades Village.

Figure 9. Current Trade Area Retail Supply Network

Source: Byford DSP 2023, Google Maps 2024, The Glades Village Centre Local Planning Policy 3.6 2023, Pracsys 2024

The total current Shop/Retail Floorspace offering within the 5km trade area and surrounds has been estimated at 14,552m² (Figure 10). Secondary research was largely utilised to determine the floorspace of existing centres as reliable data sources outlined in SPP4.2, such as DPLH LUES 2015/17, are not contemporary. The supportable floorspace for Byford Town Centre outlined in the Byford District Structure Plan (DSP) 2023 has been utilised to ensure that level of supply in the trade area is not underestimated.

Figure 10. Current Trade Area Shop/Retail Floorspace

Centre	Shop/Retail Floorspace (m ²)
Byford Town Centre	8,952
Glades Village	4,500
Kardan Blvd	1,100
Total	14,552

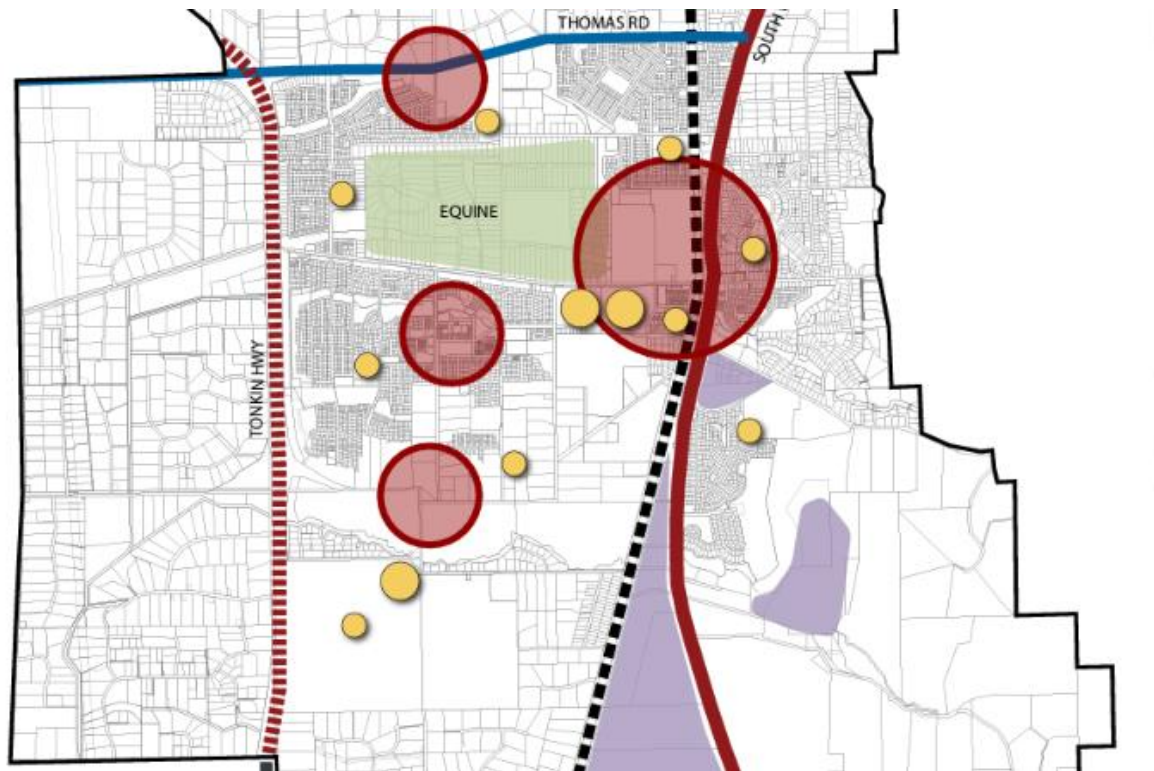
Source: Byford DSP 2023, Google Maps 2024, The Glades Village Centre Local Planning Policy 3.6 2023

4.2 Expansions and Planned Developments

A desktop analysis and review of planning documentation within the City of Serpentine-Jarrahdale local government area was undertaken to identify any planned future Shop/Retail floorspace developments or expansions within the trade area. This review identified potential expansions and developments approved in local structure plans for the Byford area. The Byford DSP outlines that the broader area can support a total of 32,900m² of Shop/Retail floorspace based on the Shire's Activity Centre Strategy 2012 (Figure 11). The Byford DSP establishes three neighbourhood centres, one district centre and local nodes:

- Byford District Centre – existing town centre with a supportable Shop/Retail floorspace of 14,700m²
- Malarkey Rd Neighbourhood Centre – planned centre at the future intersection of Malarkey Rd and Thomas Rd with an allocation of 5,000m² Shop/Retail floorspace
- Glades Village Neighbourhood Centre – existing centre off the intersection of Doley Rd and Gallant Turn with an allocation of 5,000m² Shop/Retail floorspace
- Doley Rd Neighbourhood Centre – planned centre at the intersection of Doley Rd and Orton Rd with an allocation of 5,000m² Shop/Retail floorspace
- Various local nodes with a total allocation with 3,200m² of Shop/Retail floorspace

The development of the Byford DSP area has not followed this exact framework. Existing and developing local nodes and centres are expected to account for more than the allocated floorspace while the neighbourhood centres are expected to account for less than the allocated floorspace.

Figure 11. Byford DSP Activity Centres

Source: Byford DSP 2023

Local structure plans and their Needs Assessments informed the floorspace and timeline of Shop/Retail developments in the trade area (Figure 12). A conservatively high estimate for Byford Town Centre was assumed, reaching its recommended supportable floorspace by 2031. Where no development timeline was provided, centres were expected to expand based on high-level assumptions. Planned Whitby District Centre, located outside the trade area, has been excluded from the analysis along with the significant population growth expected in the Mundijong area.

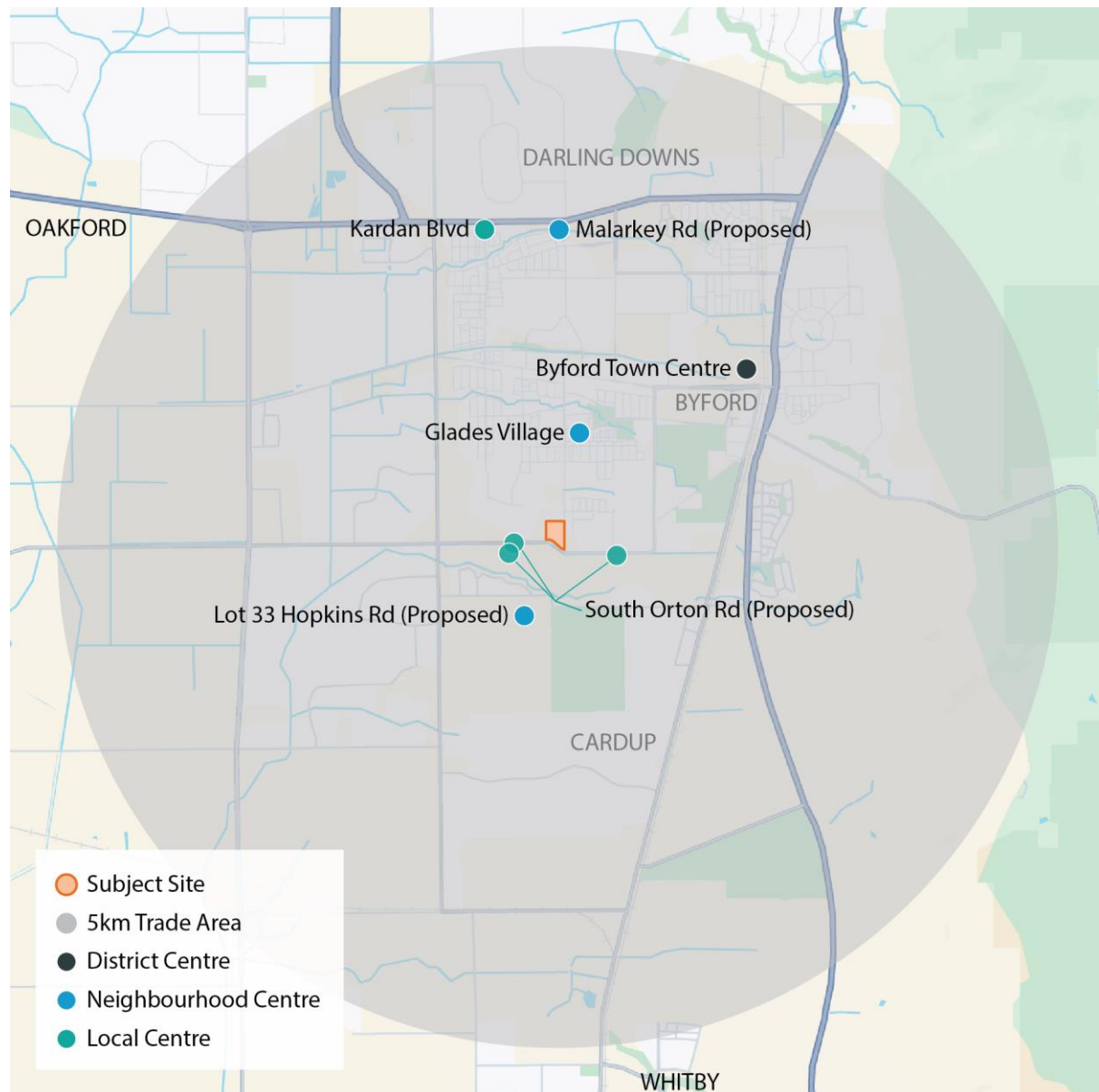
Figure 12. Trade Area Shop/Retail Floorspace Expansions and Developments

Centre	Previous NLA (m ²)	Expanded NLA (m ²)	Additional NLA (m ²)	Year of Expansion
Byford Town Centre	8,952	14,700	5,748	2031 (14,700)
Lot 34 Orton Rd (subject site)	-	See Section 5.3		2026
Lot 33 Hopkinson Rd	-	5,000	5,000	2026 (1,500) 2036 (3,000)
Malarkey Rd	-	5,000	5,000	2031
South Orton Rd	-	2,700	2,700	2026

Source: Byford DSP 2023, Lot 33 Hopkinson Road Cardup Structure Plan 2022, The Glades – Local Structure Plan Amendment No. 11 (Cardup Brook Precinct & Icaria Stages 13-14) 2022, Pracsys 2024

At full buildout this assessment includes a total of 33,000m² (exclusive of Lot 33 Hopkinson Rd which is outside the DSP area) of Shop/Retail floorspace which aligns with the total floorspace outlined in the Byford DSP. The location of the proposed centres and the subject site have been included in the following map (Figure 13).

Figure 13. Anticipated Trade Area Retail Supply Network



Source: Byford DSP 2023, Google Maps 2024, The Glades Village Centre Local Planning Policy 3.6 2023, Lot 33 Hopkins Road Cardup Structure Plan 2022, The Glades – Local Structure Plan Amendment No. 11 (Cardup Brook Precinct & Icaria Stages 13-14) 2022, Pracsys 2024

5 NEEDS ASSESSMENT

5.1 Gravity Modelling Calibration

Gravity model estimates of centre turnover were calibrated against known or modelled turnover data where possible. Where centres were on the border or outside of the trade area, the approximate proportion of their expenditure expected to be derived from the trade area was used to adjust their turnover. Where published data was not available, a scan for outliers (centres where the gravity model may have distributed too much or too little expenditure) were undertaken. Turnover productivity levels were applied in these cases based on benchmarked productivity averages.

5.2 Expenditure Leakage

The trade area appears to be experiencing a relatively high level of leakage outside of the region. The gravity model was used to compare expected turnover at identified centres with modelled expenditure in the catchment in 2024. Expected turnover is based on activity centre size, approximate mix of uses, viable floorspace productivity (\$/m²) and the proportion of turnover drawn from the catchment. It is estimated that there is up to approximately \$113 million in leakage (47% of total expenditure) from the catchment due to the current level of retail being less than what is required. The test was undertaken again in 2026 with new and expanded centres; leakage is reduced to approximately \$67 million (25% of total expenditure). The results indicate that there is a need for additional retail in the catchment (Figure 14). The extent of the leakage will decrease as the supply of Shop/Retail floorspace increases because less residents will leave the immediate area to address their shopping needs.

Figure 14. Estimated Turnover and Target Turnover

Year	Floorspace	Estimated Turnover (\$)	Target Turnover (\$)	Leakage (\$)	Leakage (%)
2024	14,552	\$239,348,777	\$126,045,786	\$113,302,991	47%
2026	23,752	\$273,285,299	\$205,733,886	\$67,551,413	25%

Source: Pracsys 2024

5.3 Supportable Floorspace

The viability of Shop/Retail floorspace at the site was tested by assessing whether a benchmark level of productivity could be achieved at different levels of floorspace over the next 15 years. A high-level estimate of the likely breakdown of Shop/Retail floorspace by category was utilised as the benchmark productivity level for the Needs Assessment (Figure 15).

Figure 15. Retail Benchmark Productivity

Retail Category	Productivity (\$/m ²)	Subject Site Breakdown (%) ⁵
Take Home Food (i.e. supermarket)	\$13,078	45%
Take Home Liquor (i.e. liquor store)	\$11,770	10%
Dine Out Food (i.e. restaurant)	\$8,500	10%
Convenience Retail (i.e. service station)	\$9,154	0%
Comparison Retail	\$6,539	35%
Subject site viable productivity	\$10,201	

Source: Colliers 2017, escalated to 2024 dollars

The expected floorspace productivity of Lot 34 Orton Rd is \$11,641 at a Shop/Retail floorspace of 5,000m² NLA in 2026; this is well above the average floorspace productivity level of \$10,201 (Figure 16). The subject site's productivity is impacted in the year Byford District Centre is assumed to expand however, this is quickly mitigated. A Shop/Retail floorspace of 5,000m² is supportable at Lot 34 Orton Rd.

Figure 16. Lot 34 Orton Road Productivity (\$/m²) at 5,000m² Shop/Retail Floorspace

Floorspace (m ²)	2026 (\$/m ²)	2031 (\$/m ²)	2036 (\$/m ²)	2041 (\$/m ²)
5,000m ²	\$11,642	\$10,279	\$11,534	\$13,761

Source: Pracsys 2024





⁵ A potential breakdown of the type of retail offered at the subject site has been assumed. Notably, no official concept plan has been approved by the Client. This breakdown allows for a transparent calculation of the viable floorspace productivity benchmark used to assess Lot 34 Orton Rd, Byford.



6 ECONOMIC ACTIVATION ASSESSMENT

6.1 Summary of the Principles of Economic Activation

Principles of economic activation can be applied to support the development of vibrant and viable activity centres. Pracsys uses Six Principles of Economic Activation to assess the relative performance of centres from an economic perspective. This includes how key anchors such as supermarkets drive pedestrian traffic (activation), how businesses can benefit from this pedestrian traffic, and suitable locations for less high traffic uses such as other retail. The principles can also be applied to other commercial uses based on their drivers and access considerations. The following table (Figure 17) provides a summary of the six principles to give context to the assessment of the subject site. For 34 Orton Road, the principles of economic activation will be applied to assess the appropriateness of commercial land uses.

Figure 17. Summary of Six Principles of Activation

Principle	Summary
1. Purpose of Place 	The role of the Centre based on its size and classification: Addresses the question – what does this place represent to its target user population (residents, workers, visitors)? This should link to the SPP4.2 identified roles of centre classifications.
2. Access – Arrival Points 	This refers to how centres are accessed and the arrival points: <ul style="list-style-type: none"> • Decisions about access begin 5km from the place • Transport networks should be planned to travel through centres (not bypass them) – ensure the design funnels people and traffic into the core • Congestion and a mix of transport nodes is beneficial • It is better to arrive at the “front door” of the place, not around the back
3. Origins – Car Parking and Transport Nodes 	Origins are areas from which pedestrian movements begin: <ul style="list-style-type: none"> • Parking and transport nodes are the drivers of pedestrian movement • Strategic distribution of car parks and transport nodes will maximise pedestrian movement • Location is more important than numbers • Space the car parks around the periphery of the centre • Street parking is important (for commercial areas) <ul style="list-style-type: none"> ○ Use fees to ensure turnover of parking but not so much that consumers do not park ○ Relax time limits in appropriate areas to ensure customers have time to undertake shopping trips relevant to proximate uses
4. Exposure – Pedestrian Movement 	Exposure indicates Active Frontages that are exposed to high levels of pedestrian traffic: <ul style="list-style-type: none"> • Economic activation is driven by the frequency and concentration of transactions • Channel movements <ul style="list-style-type: none"> ○ Concentrate transactions by pushing people past as many shop windows as possible

Principle	Summary
	<ul style="list-style-type: none"> ○ Rents and sales are directly related to pedestrian traffic (e.g. a butcher will pay higher rent to be at supermarket entry) • Minimise possible routes from origin to destination points (e.g. car park to main attraction) as architectural “permeability” is not always a good thing
5. Destinations – Major attractions 	Destinations are areas that attract high concentrations of customers/people: <ul style="list-style-type: none"> • Identify main destination – what will bring users into the core? • Assess user behaviour <ul style="list-style-type: none"> ○ Number of visits ○ Timing of visits (time of day, seasonality) • Give major destinations special treatment <ul style="list-style-type: none"> ○ Understand what they need ○ Build a centre around them • Amplify the impact of attractions by creating support amenities and infrastructure to maximise frequency, length of stay and expenditure
6. Control – Strategic Sites 	Key Sites are locations that could be considered future destinations and/or suitable sites for anchor tenants (i.e., supermarkets). Tenure control is a significant advantage for overall development success <ul style="list-style-type: none"> • Tenure control is vital for overall development success – determine which sites (supporting what uses) will suit which types of tenants • Identify active frontages and take control of key sites or implement appropriate planning measures (i.e., a set of preferred uses for a site) • Corner sites drive uses on either side (more appropriate for high turnover uses such as a café where there is high pedestrian traffic) • Not all areas in a place need to be active – be selective

Source: Pracsys 2023

6.2 Lot 34 Orton Road, Byford

Lot 34 Orton Rd, Byford is located at the intersection of Doley Rd and Orton Rd. The subject site is located south of the Glades Village and is bordered by residential areas and undeveloped land. The Shire of Serpentine-Jarrahdale Local Planning Scheme (LPS) No.3 zones the subject site as ‘Urban Development’. The scheme amendment that this report informs intends to rezone the site as an expansion of the commercial area to deliver a planned neighbourhood centre in this location in accordance with the Byford DSP. The six principles of economic activation have been applied to the subject site that is expected to consist commercial land uses to identify potential opportunities and constraints (Figure 18).

Figure 18. Subject Site Analysis

Principles of Economic Activation	Constraints	Opportunities
Purpose of Place The Byford DSP identifies a neighbourhood centre with a floorspace of 5,000m ² around the subject site to provide the retail needs of the residential population. The proposed expansion will allow the	Residential development around the subject site is still occurring; demand for the full neighbourhood centre will likely require	The location of the subject site is suited to a neighbourhood centre as it is located at the intersection of Orton Rd and Doley Rd. The planned upgrade and realignment of Orton Rd as part of the Tokin Hwy extension will increase

Principles of Economic Activation	Constraints	Opportunities
subject site to meet the planned floorspace for the neighbourhood centre and achieve its intended purpose. The proposed amendment to the Doley Road Precinct LSP will ensure that there is sufficient commercially zoned land to deliver a neighbourhood centre.	development of residential land to the east, west and south of the site.	the connectivity of the subject site to surrounding residential developments. The delivery of residential lots north and south of the subject site have been approved and is underway. The expansion of commercial zoning will be necessary to support this level of population growth.
Access Users of the subject site are expected to come from within the west Byford area using cars or by foot. The subject site will provide suitable levels of access to retail goods for residents north and south of Orton Rd.	Public transport is currently not available to the subject site, contrary to SPP4.2 objectives.	The subject site is close to service commercial and convenience uses proposed to the south of Orton Rd. This will encourage multi-purpose visits. Orton Rd will also have an intersection with the Tonkin Hwy extension that is likely to support increased passing traffic; this will further support the viability of the neighbourhood centre. Public transport networks are expected to be planned and established in future following updates to the road network and the release of residential lots.
Origins The subject site provides high levels of walkable access for nearby residential development. The expansion of the site will provide additional room for parking to support vehicle access to the centre.	There is a lack of non-car-based origins for the centre such as bus stops. Public transport networks are expected to be planned and established in future following updates to the road network and the release of residential lots.	The subject site will provide ample land to strategically position points of origin that will benefit the land uses to the greatest extent. Place opportunities to improve the economic viability of the subject site based on exposure include: <ul style="list-style-type: none"> • Locating car parking on the periphery of activity centre uses to encourage visitors to move past as many store fronts as possible • Street parking implementation to the increase liveliness of the development and the level of spatial activation for the future commercial uses
Exposure This usually refers to pedestrian traffic in front of store fronts. The location of the centre on Orton Rd and Doley Rd will provide a high level of visibility to passing traffic that supports high levels of activation. The design of the centre needs to capitalise on this activation and encourage consumers to walk in front of stores.	Active frontages along Orton Rd may not be attractive to pedestrians should traffic along Orton Rd increase with additional residential development and access via Tonkin Hwy.	Opportunities to improve the economic viability of the Lot 34 Orton Rd based on exposure factors include: <ul style="list-style-type: none"> • Controlling pedestrian movement to ensure users pass by shop frontages • Minimising routes from origin to destination points to channel movement

Principles of Economic Activation	Constraints	Opportunities
Destinations <p>The expanded commercial area will allow the neighbourhood centre to support a supermarket that can act as an anchor to attract consumers to the centre.</p> <p>Proponents of the Glades, Byford Local Structure Plan have indicated that their potential 2,700m² of NLA mixed use areas will not be able to support a neighbourhood centre due to their size and distribution. The expansion is therefore critical to a functioning neighbourhood centre.</p>	<p>The Orton Rd and Doley Rd intersection redesign needs to occur to allow the neighbourhood centre to develop.</p>	<p>Opportunities to improve the economic viability of the subject site based on control include:</p> <ul style="list-style-type: none"> Positioning the major destinations in the core of the centre to draw pedestrians through the centre Considering the trade area's demographic profile to meet user demand with a destination e.g. presence of young families and the need for childcare
Control <p>Expanding the commercial area will allow Jarra Property to provide a neighbourhood centre on their land.</p>		<p>Allowing for a larger area to be developed for commercial uses can allow greater opportunity for the integration of non-retail commercial uses (i.e. childcare) and even high-density residential uses as part of the centre.</p> <p>Opportunities have been provided for the subject site as no information has been provided layout of future commercial uses:</p> <ul style="list-style-type: none"> Identify what parts of the development will be key sites, activated fronts and destinations Utilise corner sites on the intersections of larger roads to attract drivers and pedestrians passing by

Source: Pracsys 2023

6.3 Results

The subject site is identified as the location of a neighbourhood centre in the Byford DSP. The expansion of proposed amendment is necessary for the location to fulfil its purpose as a neighbourhood centre as there is currently insufficient commercially zoned land. The subject site provides high levels of access for surrounding residents and its location on Orton Rd will support activation, particularly when Tonkin Hwy is extended and has an intersection with Orton Rd. The commercial expansion is also required to enable delivery of a suitably sized supermarket to act as an anchor that supports a vibrant centre. Providing a larger commercial area enables greater opportunities for retail, non-retail commercial uses and potentially high-density residential uses to be integrated with the neighbourhood centre.

7 CONCLUSION

The following findings have been identified through the Retail Context Memo and the Needs Assessment:

- There is a higher proportion of persons between 30 and 39 years of age in the Shire compared with Greater Perth; this demographic is in the workforce and likely has a strong level of discretionary spending, which will stimulate demand for goods and services provision
- Retail and commercial demand in Byford is likely to increase because of localised growth in surrounding areas in the Shire. The number of dwellings in the trade area is projected to increase by 83 per cent to 16,007 dwellings from the current level by 2039. The development of residential lots bordering the subject site is currently underway
- The Shire has a greater proportion of residents in the fourth highest income quintile compared to Greater Perth. These residents are likely to have greater discretionary spend and will spend more on comparison retail items (i.e. clothing, footwear). The Shire also has a similar proportion of persons in the lowest three income quintile to Greater Perth; these residents are likely to spend a greater proportion of their income on convenience retail goods and services (i.e. groceries)
- Shop/Retail expenditure in the trade area is expected to increase from \$290 million in 2024 to \$442 million in 2034, reflecting growth of 52 per cent. This large increase in catchment expenditure reflects the significant expansion in residential dwellings expected to occur within the trade area over the next 10 – 15 years
- Lot 34 Orton Rd provides high levels of access to retail uses for surrounding residents and its location on Orton Rd will support activation, particularly when Tonkin Hwy is extended and has an intersection with Orton Rd

The Glades LSP development to the south of Orton Rd (South Orton Rd) will provide mixed use lots that support up to 2,700m² of convenience retail uses, indicating that these mixed-use lots will not be suitable to provide a neighbourhood centre as planned in the Byford DSP. The expansion of commercial zoning to Lot 34 Orton Rd will therefore be necessary to deliver essential retail uses, such as a supermarket. The subject site will play an important role in catering for population growth in the near future as Lot 33 Hopkinson Rd Neighbourhood Centre will expand to a limited floorspace over a longer period of time and the Glades Village Neighbourhood Centre has reached its expected retail capacity. The Needs Assessment indicated that the current amount of floorspace leads to a high level of retail expenditure leakage to areas outside the trade area; the proposed floorspace will provide a more appropriate level of provision in the trade area and reduce leakage. The Needs Assessment identified that a floorspace of up to 5,000m² NLA of Shop/Retail floorspace is viable at Lot 34 Orton Rd. The proposed expansion of commercial zoning over Lot 34 Orton Rd is therefore critical to providing a planned neighbourhood centre in an area with high expected population growth.

8 APPENDIX I: LUES GLOSSARY

Information regarding Planning Land Use Category (PLUC) descriptions and Western Australian Standard Land Use Classification (WASLUC) can be obtained from the Department of Planning, Land and Heritage (DPLH) Land Use and Employment Survey (LUES) Information Sheet.⁶

PLUC Glossary

SHP – Shop/Retail

Any activity which involves the sale of goods from a shop located separate to, and/or in, a shopping centre other than those included in Other Retail.

RET – Other Retail

Many of these activities are not normally accommodated in a shopping centre. By virtue of their scale and special nature the goods of these activities separate them from the Shop/Retail category (for example car sales yard or carpet showroom).

OFF – Office/Business

Administrative, clerical, professional and medical offices are activities which do not necessarily require the land area/floor space or exposure of other land uses. Although offices require building and parking facilities, these needs are quite distinct from those of commercial uses and service industries.

HEL – Health/Welfare/Community Services

Government, government-subsidised and non-government activities that provide the community with a specific service, including hospitals, schools, personal services and religious activities.

ENT – Entertainment/Recreation/Cultural

Activities which provide entertainment, recreation and culture for the community and which occur in buildings and/or on land, such as passive and active sports venues, museums, amusements and gambling services.

RES – Residential

Includes all types of residential land use ranging from single housing to nursing homes for the aged, residential hotels, motels, other holiday housing, institutions and religious housing.

MAN – Manufacturing/Processing/Fabrication

This category includes land use activities involving the manufacture, processing and fabrication of all general goods. Both the scale and associated environmental impact of these activities separate them from other land use categories.

STO – Storage/Distribution

⁶ DPLH, 2017, *Land Use and Employment Survey Information Sheet*, Government of Western Australia, https://www.wa.gov.au/system/files/2021-07/LUES_Glossary.pdf

Any land use activity which involves the storage, warehousing or wholesaling of goods usually conducted from large structures, or involving large bulk goods, but does not include activities that attract the general retail trade activities.

SER – Service Industry

This category includes service industries offering a range of services. The scale and environmental impact of such activities require their separation from other land uses. These services include film processing, cleaning, motor vehicle and other repair services, and other servicing activities, including some construction activities.

UTE – Utilities/Communications

All forms of local, state, national and international communication, transportation and other utilities (for example, electricity, gas, water, sewerage, roads, parking and other transport or communications related activities) covering the public and private sectors.

VFA – Vacant Floor Area

This category accounts for vacant floor areas of buildings, including both non-residential and residential.

WASLUC Glossary

The following table contains select examples from over 700 WASLUCs across all PLUCs (Figure 19).

Figure 19. WASLUC Examples

PLUC	WASLUC Example
PRI	Agricultural and Related Activities
PRI	Ferrous Metal Mining
MAN	Motor Vehicle Manufacturing
MAN	Cabinet Making and Shopfitting
STO	Clothing - Wholesale/Warehousing
STO	Building Materials - Retail
SER	Motor Vehicle Panel Beating Service
SER	Plumbing, Heating, and Air Conditioning Services
SHP	Department Stores - Retail
SHP	Takeaway Food
RET	Motor Vehicles - Retail
RET	Furniture - Retail
OFF	Banking Services
OFF	Engineering Services
HEL	Secondary Schools
HEL	Churches, Synagogues and Temples
ENT	Gymnasiums, Health Clubs and Martial Arts Club
ENT	Cultural Activities

PLUC	WASLUC Example
RES	Hotels NEC
RES	Housing Units
UTE	Communication
UTE	Rubbish Disposals

Source: DPLH LUES 2015/17

Abbreviations: NEC, 'Not Elsewhere Classified' and MFG, 'Manufacturing'

9 APPENDIX II: GRAVITY MODEL METHODOLOGY

Gravity Model Calculations

Gravity models allow for the measurement of spatial interaction as a function of distance to determine the probability of a given customer shopping at a centre and provide an approximation of trade area and sales potential for a development. This modelling technique uses the distance between a household and each centre, and a measure of 'attractiveness' to define the probability model. The 'attractiveness' of a centre has been defined by total floorspace and the distance has been calculated by measuring straight-line distances between each centre and population. The gravity model probability formula is shown in Figure 20.

Figure 20. Gravity Model Probability Formula

$$P_{ij} = \frac{\frac{A_{jk}^a}{D_{ij}^\beta}}{\sum_{j=1}^m \frac{A_{jk}^a}{D_{ij}^\beta}}$$

P_{ij} = Probability of customer living/working in statistical area i shopping at complex j.
 A_i = Area of floorspace in centre, j in square metres, according to the type of supply, k.
 D_{ij} = Distance between statistical area of households, i and complex j.
 a = Area exponent
 β = Distance exponent
 k = Type of supply or expenditure, either Convenience or Comparison
 i = Statistical area ($i=1, \dots, n$)
 j = Complexes ($j=1, \dots, m$)

Source: Carter, C (1993) 'Assumptions Underlying the Retail Gravity Model', *Appraisal Journal*, Vol 61, No 4, pp510; Pracsys (2020)

Figure 21 shows that the demand for retail category k^7 , at centre j , is equal to the sum of the probabilities of customers living in statistical areas i to n , multiplied by the expenditure pool of statistical area i . In other words, the demand for retail is a function of the probability of customer from particular statistical area attending the centre multiplied by the expenditure pool of that statistical area. The expenditure pool is derived through the population multiplied by its income distribution.

Figure 21. Gravity Model Demand Formula

$$D_{kj} = \sum_{i=1}^n (P_{ij} * E_i)$$

D_{kj} = Demand for retail category k , at centre j .
 E_i = Expenditure pool of statistical area i .

Source: Carter, C (1993) 'Assumptions Underlying the Retail Gravity Model', *Appraisal Journal*, Vol 61, No 4, pp510; Pracsys (2020)

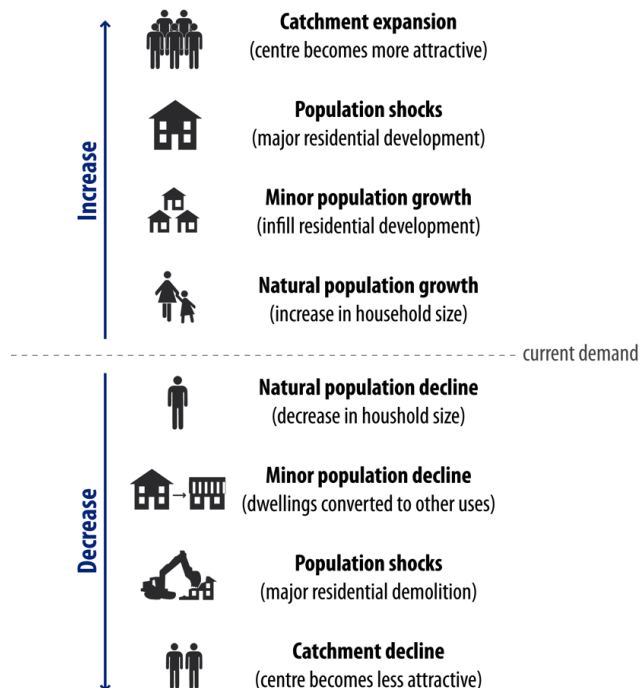
In its core form, gravity modelling provides a clearer, reproducible outcome that can be easily assessed. However, it does not consider local factors, including:

- The comparative value proposition of centres (e.g. the presence of an 'anchor' attractor that draws significant market share);
- The brand preference of users; or
- The efficiency of transport networks, as well as geographical barriers (e.g. in some cases it may be easier for customers to access a centre that lies physically further away).

Drivers of Retail Floorspace Supply and Demand

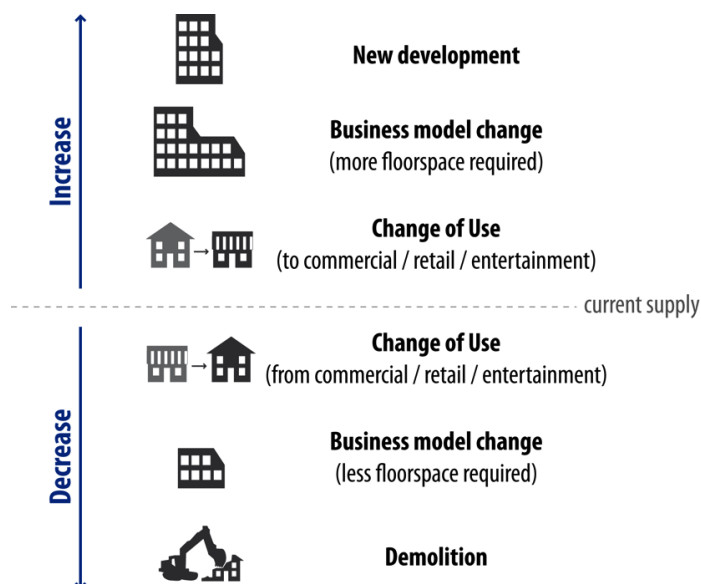
Demand changes can result in increased or decreased expenditure. The potential causes of demand changes are shown in Figure 22. These largely show that an increasing population increases demand, and vice versa. There are significant amounts of commercial floorspace, especially office floorspace, flagged for the central sub-region of Perth and beyond. There will also be significant numbers of new dwellings provided across Perth. This increase in residents has the potential to boost demand for goods and services in the area. Demand can also increase from rising incomes, or wealth, because people have more disposable income to spend on retail. Demand can also be increased by reducing leakage. Leakage for retail is largely caused by online retail, as well as travelling.

⁷ Retail categories are determined by their PLUC code and whether they are convenience or comparison goods. Convenience goods are day-to-day items such as groceries, pharmaceuticals and fast food. Comparison goods are items where consumers are willing to travel further distances, and are bought less frequently such as clothing, furniture, electronics, or other household items.

Figure 22. Drivers of Retail Floorspace Demand

Source: Pracsys 2020

Supply changes can result in increased or decreased retail floorspace. The potential causes of supply changes are shown in Figure 23.

Figure 23. Drivers of Retail Floorspace Supply

Source: Pracsys 2020

APPENDIX 2

TRANSPORT IMPACT ASSESSMENT

Lot 34 Orton Road, Byford

Structure Plan Amendment

Transport Impact Assessment

PREPARED FOR:

Jarra Property

January 2025

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1 Introduction

This Transport Impact Assessment (TIA) report has been prepared by Transcore on behalf of Jarra Property. The subject of this report is the proposed amendment to the Doley Road Precinct Local Structure Plan (LSP) for Lot 34 Orton Road in Byford.

A copy of the approved Doley Road Precinct Local Structure Plan for Lot 34 Orton Road is provided in **Appendix A**.

The TIA for the approved LSP was prepared in March 2017 (Rev D) by others, however this report has been reviewed and referenced in the preparation of this TIA as appropriate.

Transcore also acted as the traffic engineers for the Glades Local Structure Plan Amendment (WAPC ref SPN/0112M-5) and prepared several technical notes for the proposed subdivisions within this amendment, including the Cardup Brook Precinct 1 Subdivision, which encompasses Lot 34 Doley Road and Lots 9001 and 9060 Orton Road in Byford (WAPC Ref. 164642).

The findings from the traffic modelling and analysis for the Cardup Brook Precinct 1 Subdivision are detailed in Transcore's Technical Note 5, dated March 27, 2024. This note provides traffic projections for Orton Road and Doley Road for the year 2041, assuming full development of both the Glades Local Structure Plan Amendment and the Doley Road Precinct Local Structure Plan for Lot 34 Orton Road.

For this TIA, the traffic projections from the March 2017 TIA and Transcore reports were reviewed and evaluated, and for a conservative assessment, the higher projections were utilized to analyse the traffic operation at the roundabout intersection of Doley Road and Orton Road.

This TIA report reflects the proposed amendment and establishes the traffic impact of the proposed amendment. The location of the site in the approved Local Structure Plan is shown in **Figure 1**. The site location in the context of Metropolitan Region Scheme Map (MRS) is shown in **Figure 2**.

Both Orton Road and Doley Road are currently in the process of being realigned and upgraded. This is a relevant consideration to the amendment and the traffic assessment.

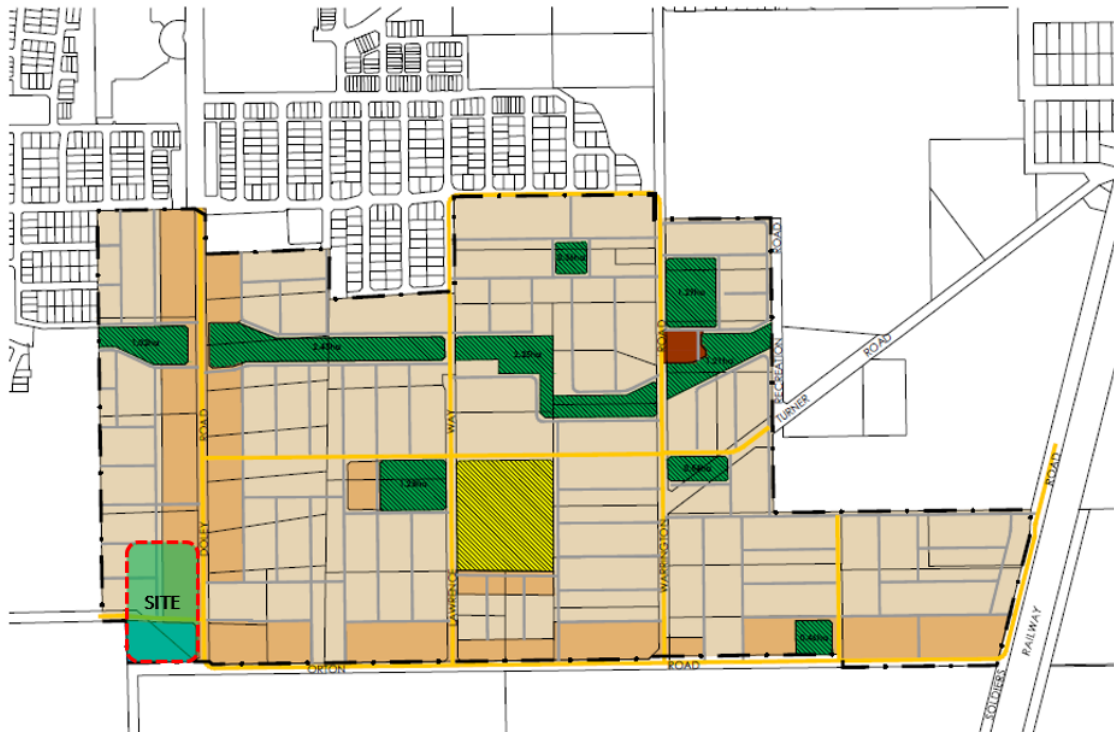


Figure 1: Location of the subject site within the approved LSP

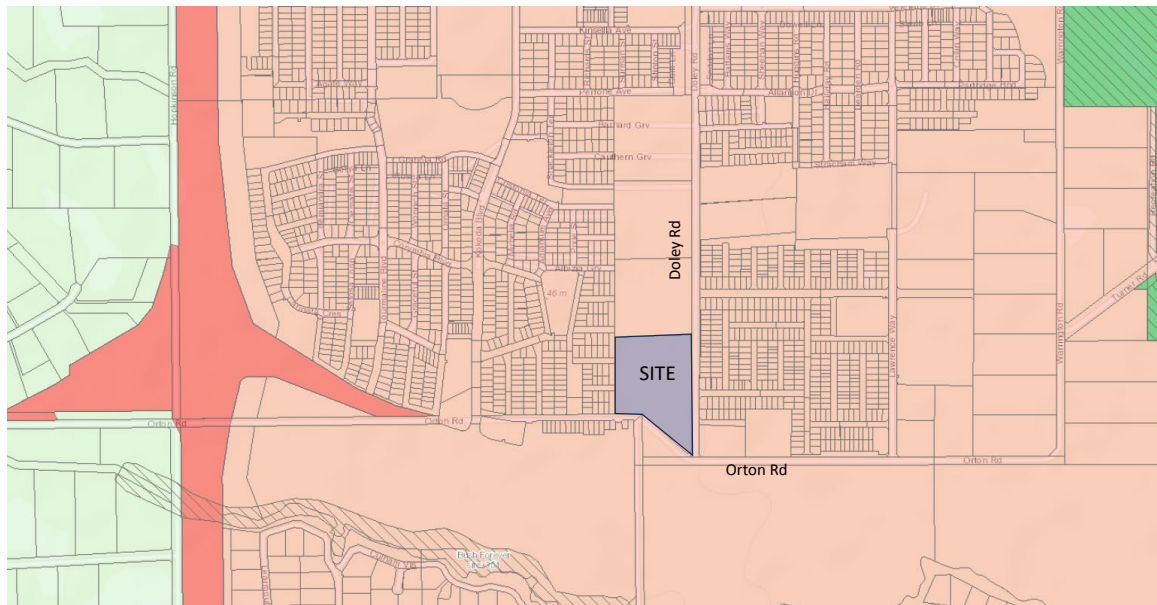


Figure 2. Site location within metropolitan region scheme

2 Proposed Amended Structure Plan

The proposal involves an amendment to the Doley Road Precinct Local Structure Plan that will change existing 'Mixed Use' zoning to 'Neighbourhood Centre', and expand the 'Neighbourhood Centre' zoning into Lot 34. According to the Byford District Structure Plan, this Neighbourhood Centre is designated to include 5,000sqm of shop-retail. The details of the zoning change are illustrated in **Figure 3**.

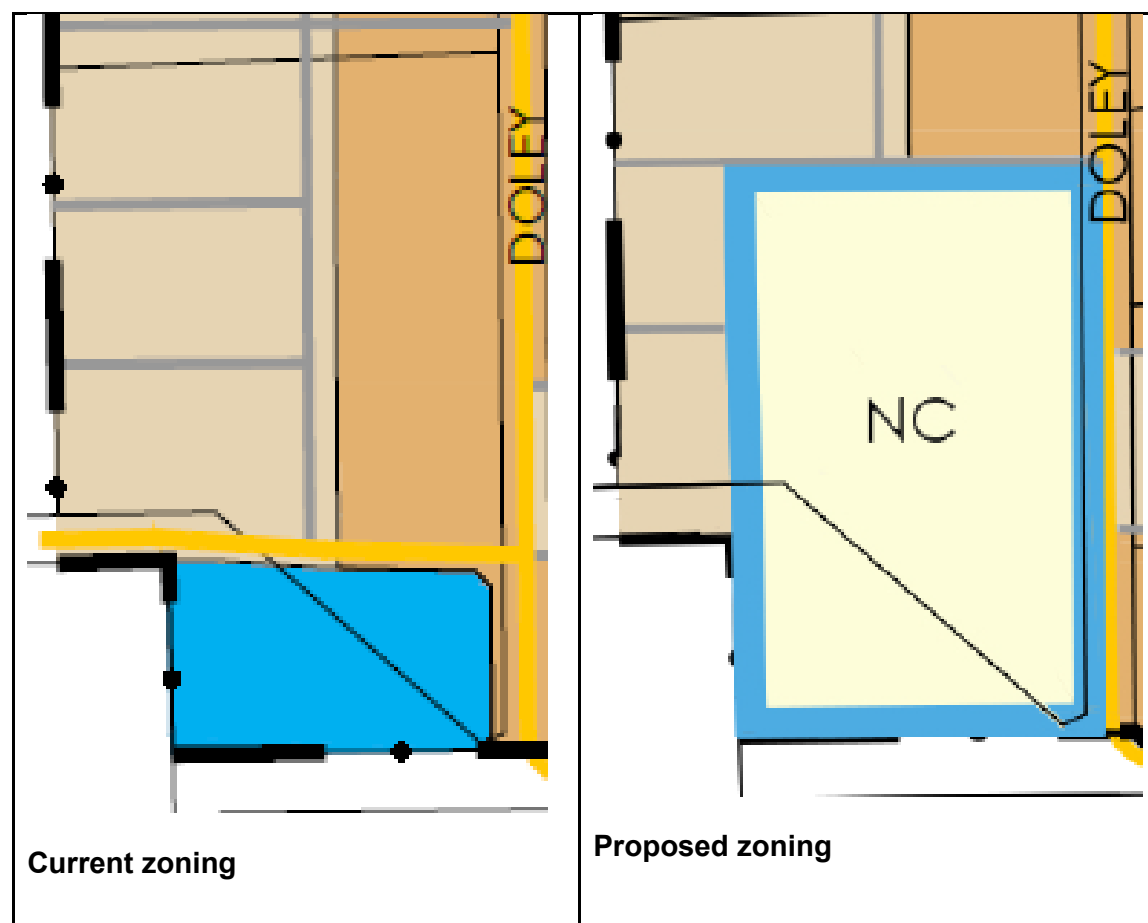


Figure 3: Current against proposed zoning of Lot 34 Orton Road

Based on a conservative calculation of land area zoned for residential purposes and taking into consideration planned road reserves, the approved LSP allowed for construction of a total of approximately 106 dwellings based on the R25-R40 and R40-R60 densities applicable to the subject land. This will be replaced with a neighbourhood centre zoning of approximately 2.4ha comprising 5,000sqm of shop-retail NLA allocated by the Byford District Structure Plan.

The proposed amendment would not change the road hierarchies and road standards within the approved Structure Plan.

3 Existing Situation

3.1 Existing Land Use

The subject land is currently mainly vacant. Residential dwellings are currently existing on both sides of the site as shown in **Figure 4**.



Figure 4: Existing site location

3.2 Existing Road Network

The existing road network and its classification in accordance with Main Roads WA functional road hierarchy is illustrated in **Figure 5**.

Orton Road is currently a two-way undivided roadway classified as a Rural Local Road / Local Distributor. At present, there are no bus services operating on this road, and pedestrian paths are absent. The speed limit on Orton Road is set at 70kph.

Doley Road is a two-way undivided road classified as an Urban Local Road / Access Road. It has a width of 3.5 meters south of Allanson Drive, with a road reserve of 20 meters. The speed limit on this road is 50kph. Additionally, a shared path is available near the subject site.



Figure 5: Existing road hierarchy

3.3 Existing Traffic Volumes on Roads

Available traffic counts on Orton Road and Doley Road are reported below.

Orton Road (300m East of Hopkinson Road, April 2015):

- AM Peak (08:00 - 09:00): Approximately 8.02% of total daily volumes.
- PM Peak (15:00 - 16:00): Approximately 11.14% of total daily volumes.

Doley Road:

South of Abernethy Road (June 2014):

- Total Daily Volume: 2,743
- AM Peak (08:00): 232
- PM Peak (16:00): 239

300m North of Orton Road (April 2015):

- Total Daily Volume: 164
- AM Peak (08:00): 16
- PM Peak (16:00): 14

3.4 Existing RAV Network

Restricted Access Vehicle (RAV) Network routes are designated for access by large heavy vehicle combinations, which is managed by Main Roads WA.

Orton Road and Doley Road currently are not part of RAV network as shown in **Figure 6**.

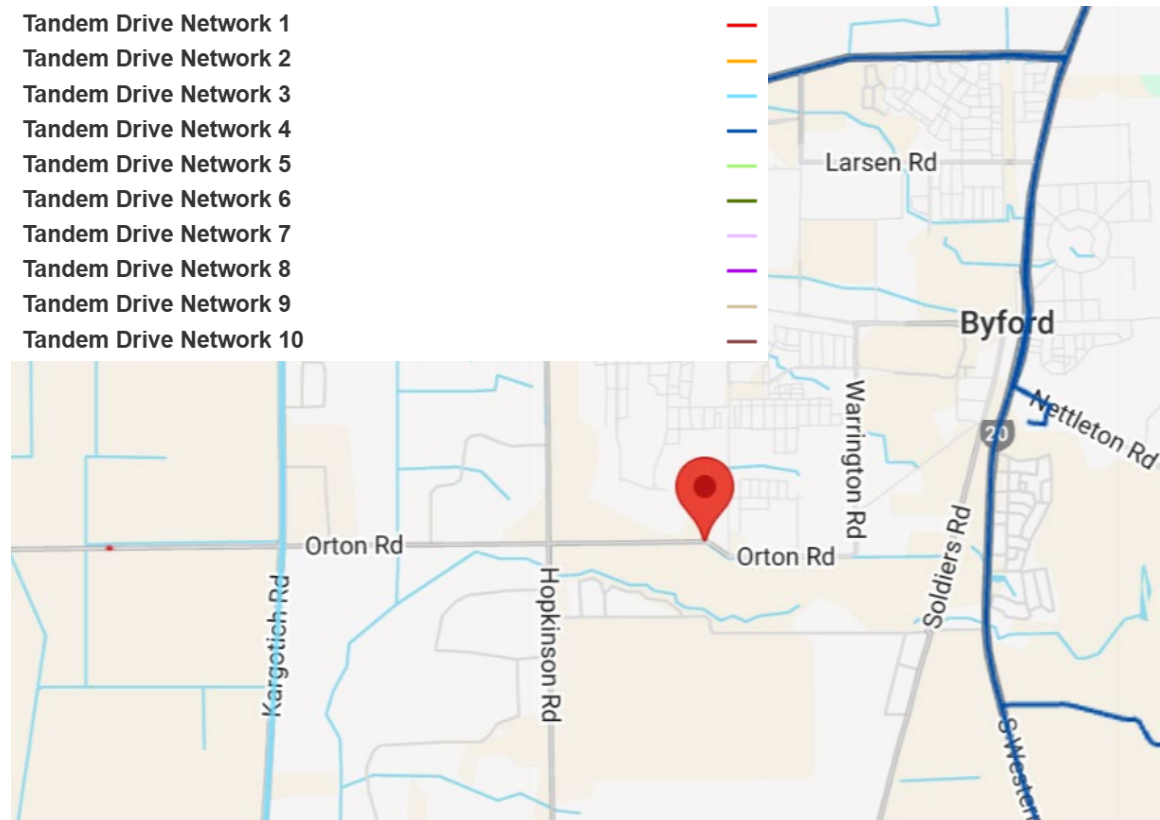


Figure 6. Existing heavy vehicle road network classification (RAV)

3.5 Public Transport

Available nearby transport services are presented in **Figure 7**.

- Route 254 offers the most frequent service, particularly during peak hours on weekdays.
- Routes 251 and 252 provide regular service to Mundijong and Jarrahdale, with Route 251 maintaining service on weekends, although less frequently on Sundays.
- Route 253 is limited to a single daily trip on weekdays, with no weekend service.

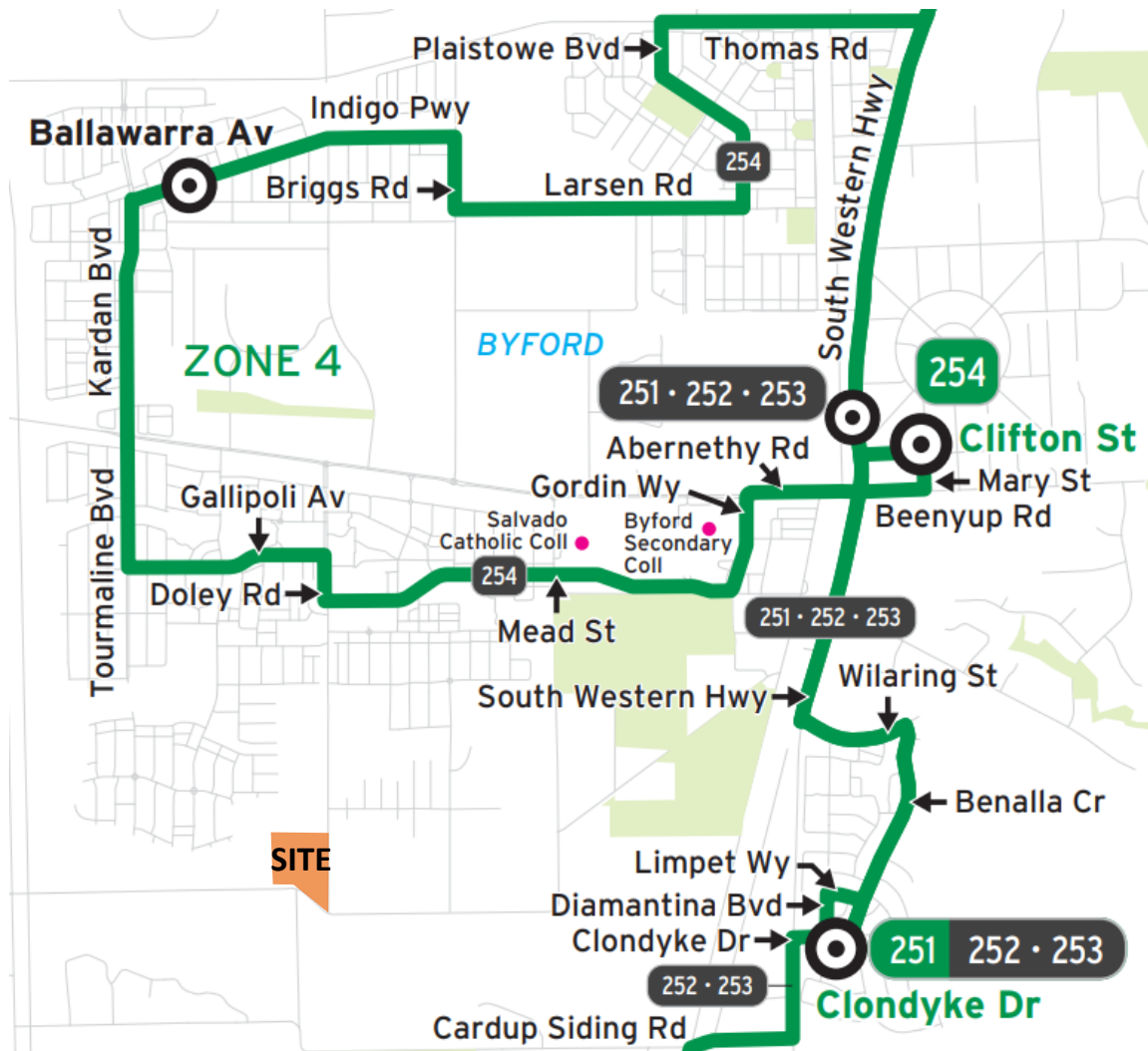


Figure 7: Existing bus routes (source: Transperth)

3.6 Pedestrian and Cyclist Facilities

Currently, there is a 2.5m shared path on the eastern side of Doley Road in the vicinity of the subject site. It is expected that after realignment of Orton Road and construction of the proposed Neighbourhood Centre shared paths would be available on both Orton Road and Doley Road adjacent to the proposed Neighbourhood Centre.

3.7 Changes to the surrounding road network

3.7.1 Tonkin Highway Extension Stage Three

The Tonkin Highway Extension Stage Three is a significant infrastructure development extending the highway by about 14 kilometres from Thomas Road in Oakford to the South Western Highway near Mundijong. This project aims to create a four-lane dual carriageway to improve connectivity, safety, and traffic flow in Perth's south-east corridor, reducing travel times and enhancing access to employment areas. Key

features include bridges over rail lines, grade-separated interchanges at Bishop Road, and intersections with Orton Road, Mundijong Road and South Western Highway.

3.7.2 *Tonkin Highway/ Orton Road intersection*

The draft concept design of the Tonkin Highway/ Orton Road intersection has been sourced from Main Roads WA and is shown in **Figure 8**.

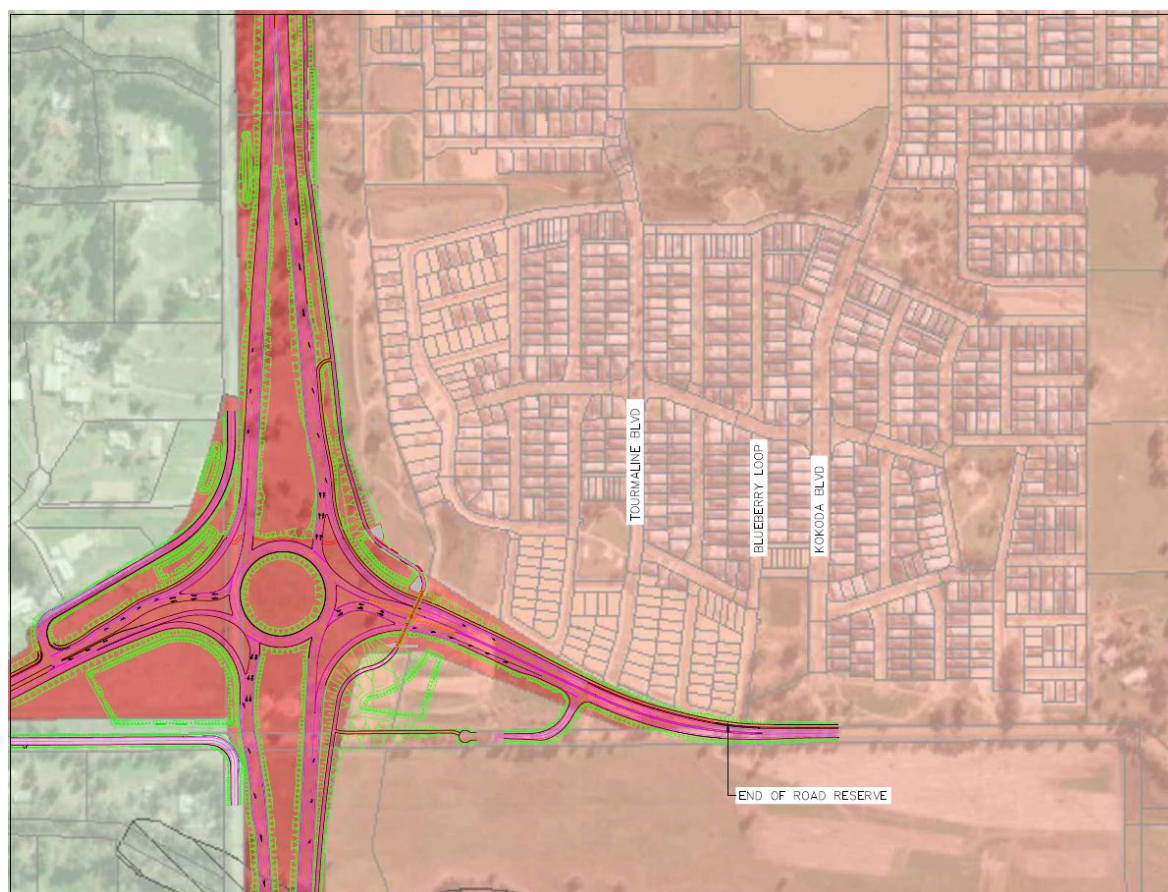


Figure 8: Main Roads WA draft concept design for Tonkin Highway/ Orton Road intersection

3.7.3 *Orton Road/ Doley Road intersection*

Both Orton Road and Doley Road are currently in the process of being realigned and upgraded. As part of the proposed realignment a 4-way roundabout intersection will be constructed at Orton Road/ Doley Road intersection.

3.8 Road Hierarchy

Traffic modelling and analysis conducted for the proposed local structure plan amendment indicate that the proposed amendment will not affect the road hierarchy or the standards of the approved local structure plan road network, including Doley Road. As a result, the road hierarchy and standards established in the approved local structure plan remain valid.

3.9 Pedestrian and Cyclist Facilities

Currently, there is a 2.5-meter shared path on the eastern side of Doley Road near the subject site. Following the realignment of Orton Road and the construction of the proposed Neighbourhood Centre, it is anticipated that shared paths will be installed on both Orton Road and Doley Road adjacent to the proposed Neighbourhood Centre.

3.10 Integration with Surrounding Area

The proposed amendment aligns with the Doley Road Precinct Local Structure Plan for Lot 34 Orton Road, as well as the Byford District Structure Plan. The proposed neighbourhood centre is intended to serve the residential developments in the surrounding area.

4 Analysis of the Transport Network

4.1 Assessment Period

The assessment year that has been adopted for this analysis is 2041. Conservatively, by this time it is assumed that the amended Structure Plan would be fully developed.

4.2 Traffic generation and distribution

To establish the net traffic change resulting from the proposed amendment, the trip generation of Lot 34 has been calculated based on both the approved and the proposed amended structure plans. **Table 1** summarises the trip generation of Lot 34 according to the approved structure plan, which allowed for construction of a total of approximately 106 dwellings based on the R25-R40 and R40-R60 densities applicable to the subject land. All trips associated with the approved residential development within Lot 34 are considered primary trips, with no pass-by trips (refer **Table 2**).

The amended plan for Lot 34 includes approximately 5,000m² of Net Lettable Area (NLA) for shop/ retail generating approximately 6,050 vehicle trips per day, with the following peak hour trip estimates (refer **Table 3**):

✚ 151 vph (AM)

✚ 605 vph (PM)

The trip rate used for the proposed retail/ commercial was sourced from RTA NSW conservatively for Supermarket. Therefore, the net traffic change due to the proposed amendment is calculated as follows (refer **Table 3**):

✚ +5,202 vpd (daily)

✚ +66 vph (AM)

✚ +520 vph (PM)

Based on ITE 11 guidelines, it is estimated that about 36% of the trips associated with Lot 34 (as per amended LSP) would be pass-by trips on the surrounding road network, primarily on Orton Road and Doley Road. The net additional primary trips (after removing pass-by trips) would be less than 100 vph for AM peak period and about 141vph and 162vph during the AM and PM peak hour respectively (refer **Table 4**). According to the Western Australian Planning Commission (WAPC) guidelines, the traffic impact of the proposed amendment is considered moderate during the morning peak hour, with minimal impacts on the traffic operations of the surrounding road network and intersections. However, for the completion of the assessment traffic operation of the Doley Road/ Orton Road intersection has been assessed for both AM and PM peak hours in this TIA.

Table 1: Trip generation of the residential development for Lot 42 as per the approved LSP

Land use	Quantity	Daily Rate	AM	PM	Cross Trade	Daily Trips	AM	PM	AM		PM	
			Peak	Peak			trips	trips	IN	OUT	IN	OUT
Residential	106	8.00	0.80	0.80	0.00	848	85	85	21	64	53	32
Total traffic						848	85	85	21	64	53	32

Table 2: Passing trade and primary trips component of Lot 34 trips as per the approved LSP

Passing Trips				Primary Trips			
AM		PM		AM		PM	
IN	OUT	IN	OUT	IN	OUT	IN	OUT
0	0	0	0	21	64	53	32

Table 3: Trip generation of the proposed retail/ commercial development at Lot 42 as per the proposed amended LSP

Land use	Quantity	Daily Rate	AM	PM	Cross Trade	Daily Trips	AM	PM	AM		PM	
			Peak	Peak			trips	trips	IN	OUT	IN	OUT
Retail/shop	5000	1.21	0.030	0.121	0.00	6050	151	605	76	76	303	303
Total traffic						6050	151	605	76	76	303	303

Net traffic change	5,202	66	520	54	12	250	271
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Table 4: Passing trade and primary trips component of Lot 42 as per the proposed amended LSP

Passing Trips				Primary Trips			
AM		PM		AM		PM	
IN	OUT	IN	OUT	IN	OUT	IN	OUT
27	27	109	109	48	48	194	194

Net traffic change	27	27	109	109	27	-15	141	162
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The additional trips generated by the proposed amendment were then added into these projections (refer **Figure 11**).

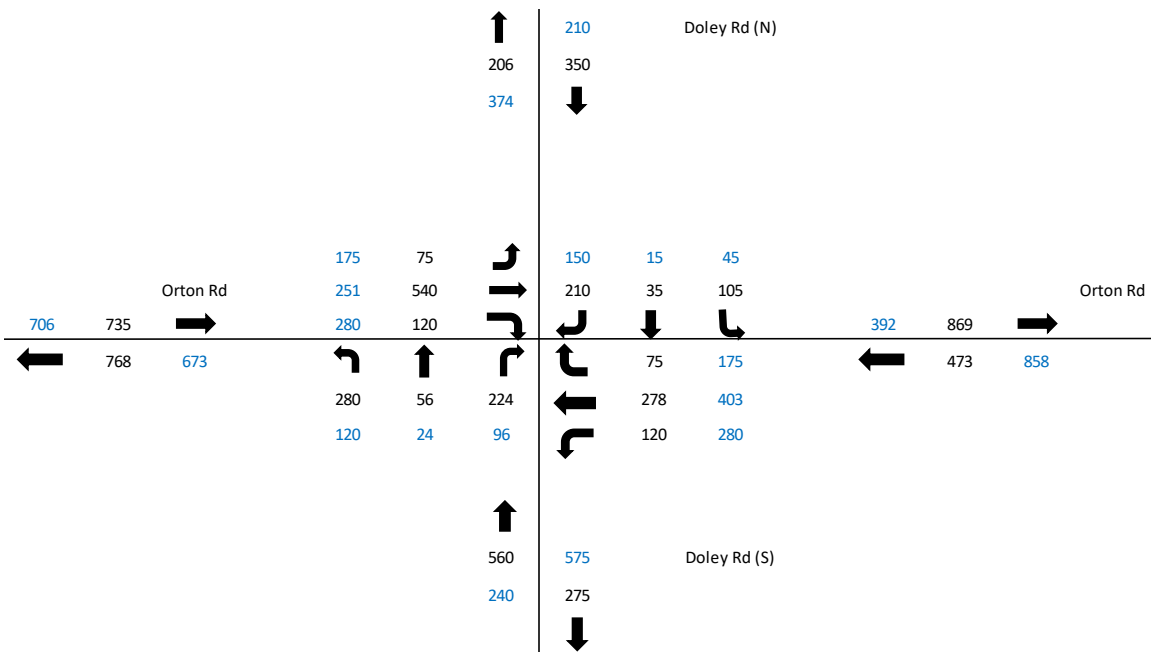


Figure 10: Approved structure plan – 2041 peak hour trips AM Weekday, PM Weekday (source Transcore)

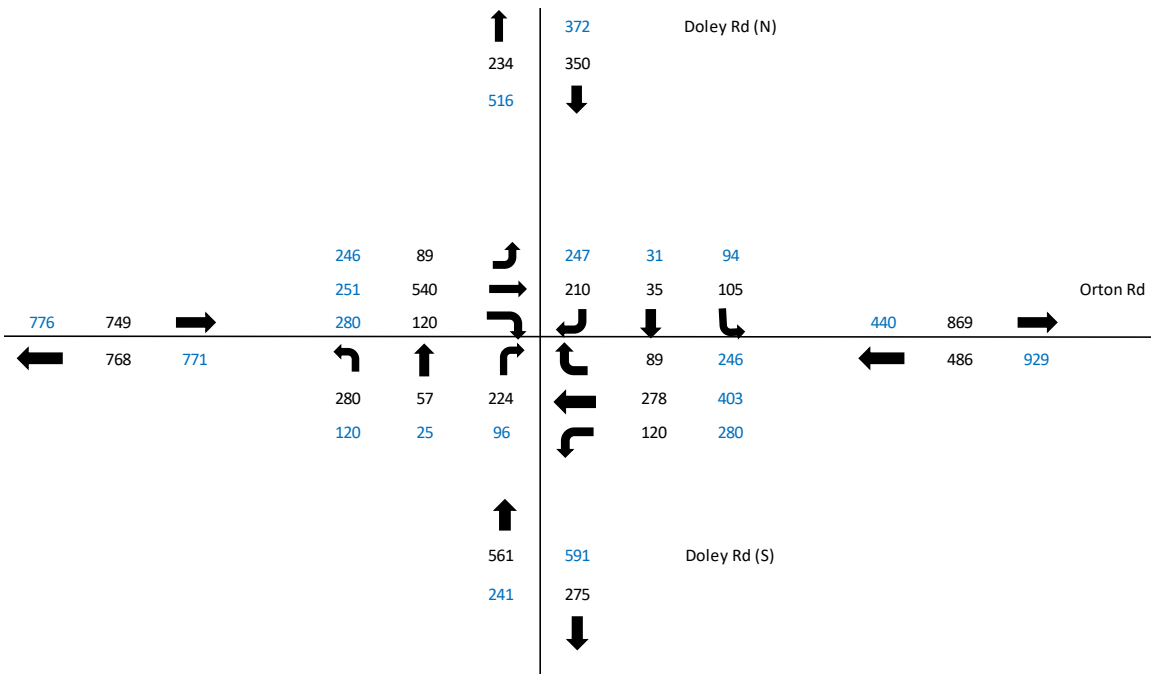


Figure 11: Total (2041) traffic for the proposed amended structure plan– AM Weekday, PM Weekday

4.4 Intersection Analysis

Capacity analysis was undertaken using the SIDRA computer software package for year 2041. SIDRA is an intersection modelling tool commonly used by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics are defined as follows:

- ✚ Degree of Saturation is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for infrequent traffic flow up to one for saturated flow or capacity.
- ✚ Level of Service is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e., free flow) and Level of Service F the worst (i.e., forced or breakdown flow).
- ✚ Average Delay is the average of all travel time delays for vehicles through the intersection.
- ✚ 95% Queue is the queue length below which 95% of all observed queue lengths fall.

Intersection layout modelled in SIDRA is shown in **Figure 12**. The results of the SIDRA analysis are summarised in **Appendix C**.

The SIDRA intersection models were coded with reference to Main Roads WA Operation Modelling Guidelines. All relevant parameters such as heavy vehicle groups, PCU factors etc. were coded as per the Main Roads WA Guidelines.

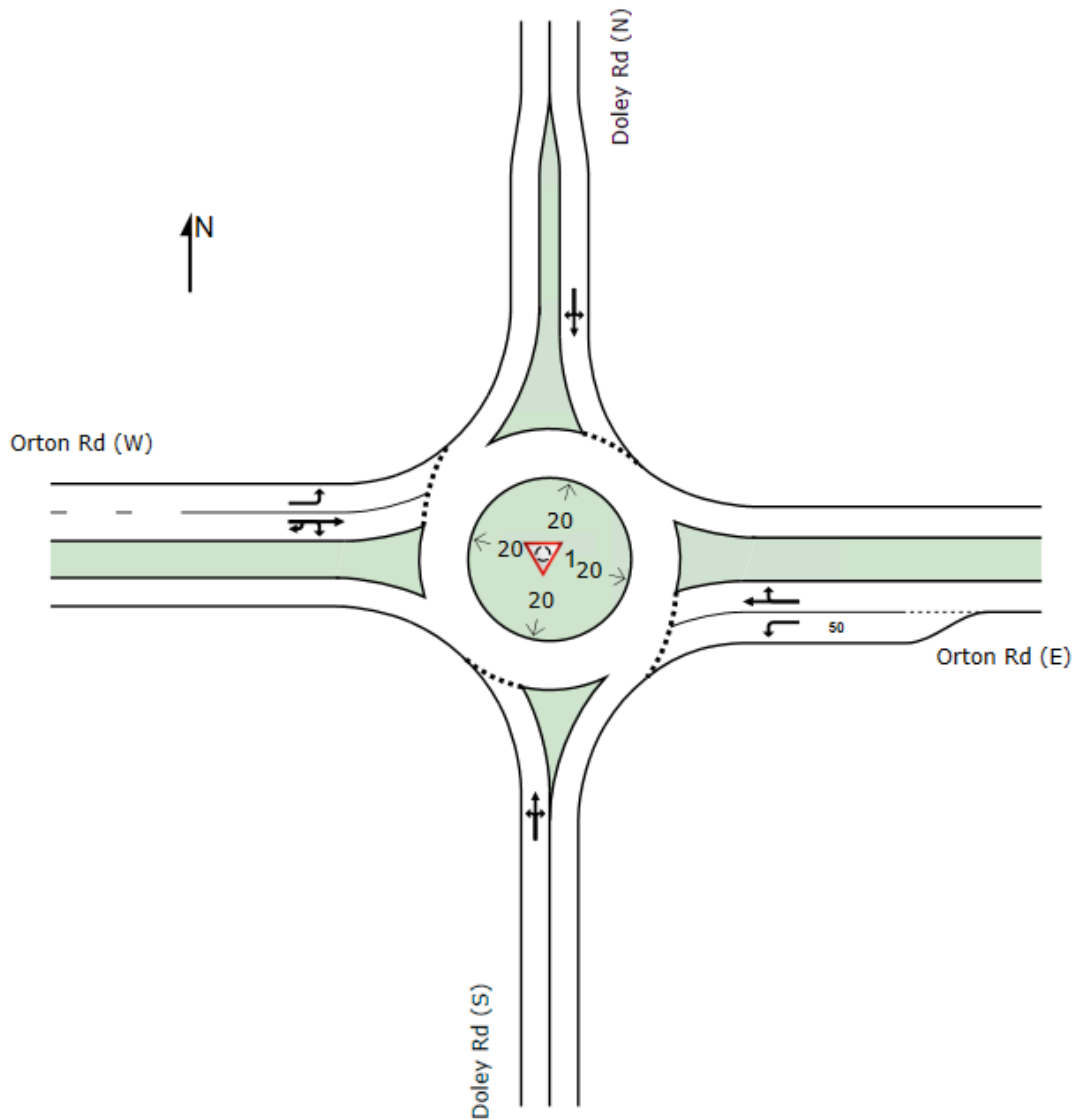


Figure 12: SIDRA Model – 2041

The SIDRA analysis indicates that the roundabout intersection is expected to operate satisfactorily in 2041, achieving an overall Level of Service (LoS) of B during both the AM and PM peak hours. It's important to note that the traffic projections used for the 2041 assessments are conservative and significantly higher than those utilized in the 2017 TIA for the approved LSP. Consequently, it is anticipated that the queues, delays, and LoS reported in the SIDRA assessments in Appendix C would be notably lower if the 2017 projections were applied instead.

5 Conclusion

The Transport Impact Assessment (TIA) prepared by Transcore for Jarra Property addresses the proposed amendment to the Doley Road Precinct Local Structure Plan (LSP) for Lot 34 Orton Road in Byford.

The amendment seeks to change a portion of the site's zoning from Residential to Neighbourhood Centre, facilitating the development of a Neighbourhood Centre, as outlined in the Byford District Structure Plan.

Based on a conservative calculation of land area zoned for residential purposes and taking into consideration planned road reserves, the approved LSP allowed for construction of a total of approximately 106 dwellings based on the R25-R40 and R40-R60 densities applicable to the subject land. This will be replaced with a neighbourhood centre zoning of approximately 2.4ha comprising 5,000sqm of shop-retail NLA allocated by the Byford District Structure Plan.

Traffic modelling and analysis confirm that these changes will not adversely impact the established hierarchy or standards of the approved local structure plan road network, ensuring that Doley Road and the surrounding network would not be adversely affected by the proposed amendment.

The conservative traffic projections established by Transcore were applied in the SIDRA intersection analysis, which demonstrates that the proposed roundabout intersection of Doley Road/ Orton Road would operate satisfactorily in 2041, achieving an overall Level of Service (LoS) of B during the peak hours.

The traffic modelling and analysis results support the conclusion that the proposed amendment can be accommodated within the existing and proposed transportation infrastructure without detrimental effects.

Appendix A



APPROVED LOCAL STRUCTURE PLAN

LEGEND

ZONES

- Residential R25-R40
- Residential R40-R60
- Residential R60
- Mixed Use R80

LOCAL RESERVES

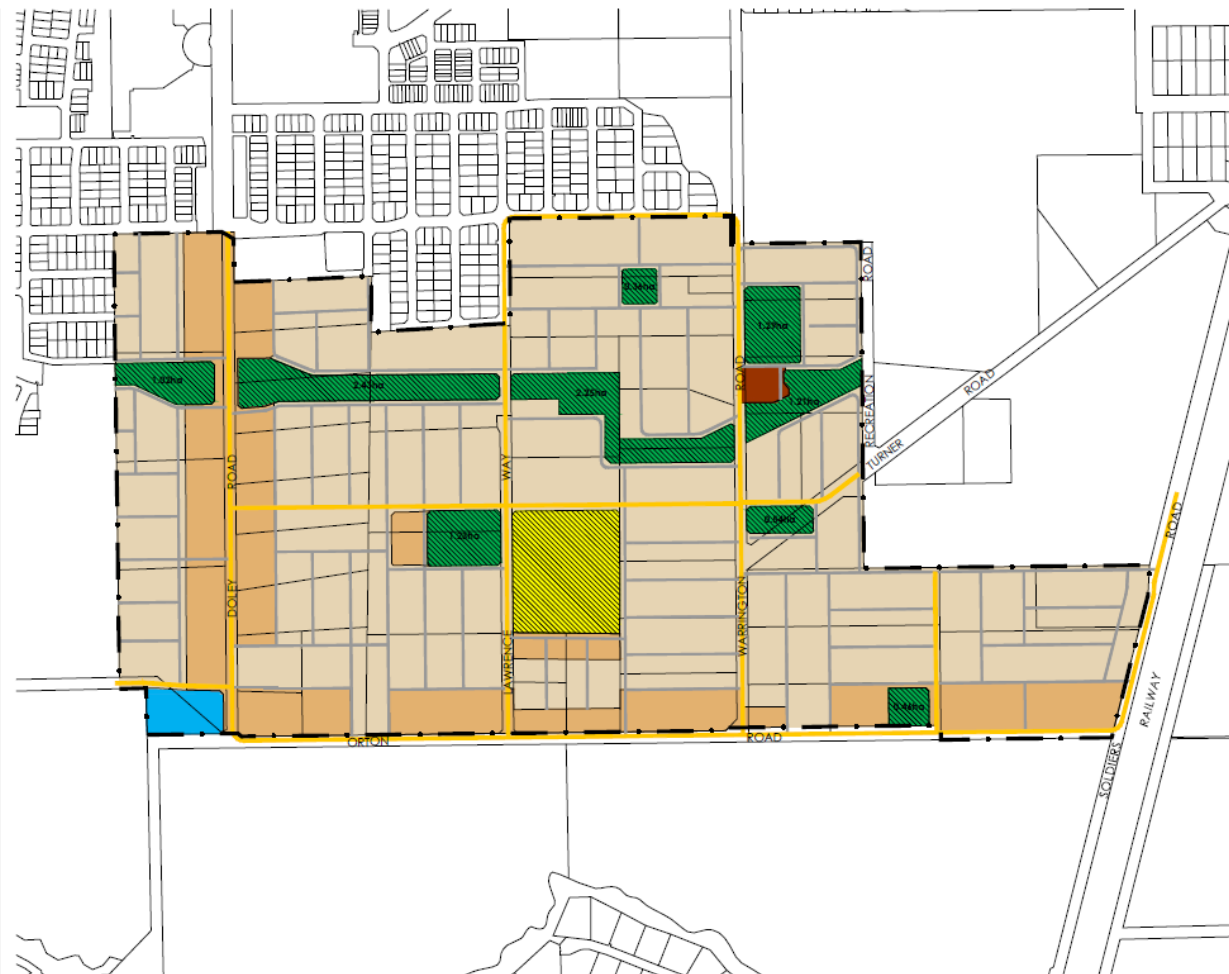
- Public Open Space
- Public and Community Purposes

OTHER

- Structure Plan Boundary
- Neighbourhood Connector
- Access Street

NOTES

- Public Open Space areas are indicative only and subject to further detail design and drainage considerations.
- All access streets are indicative only and are subject to refinement as part of the detailed subdivision process.
- Orton Road, a future Other Regional Road, is to be widened from 20 metres to 32 metres (6 metres to be ceded by landholdings north and south of the road).
- Soldiers Road, a future Other Regional Road, is to be widened from 20 metres to 30 metres (10 metres to be ceded by landholdings abutting Soldiers Road).
- Land is required to accommodate a roundabout at the intersection of Orton and Soldiers Road. The land to be ceded and the design of the roundabout is to be to the satisfaction of the Shire on advice from the Department of Planning.
- Direct access to Soldiers Road is not permitted and an internal road will be required between residential lots and Soldiers Road to provide appropriate access and frontage. Double storey, rear-loaded and dual frontage lots are not permitted in this location due to interface and noise attenuation objectives.



Source: Urbaniste - Amendment 1 - Doley Road Precinct ALSP (15.02.2022)

Appendix B

PROPOSED AMENDED LSP MAP

LEGEND

ZONES

- Residential R25-R40
- Residential R40-R60
- Residential R60
- NC Neighbourhood Centre

LOCAL RESERVES

- Public Open Space
- Public and Community Purposes

OTHER

- Structure Plan Boundary
- Neighbourhood Connector
- Access Street

NOTES

1. Public Open Space areas are indicative only and subject to further detail design and drainage considerations.
2. All access streets are indicative only and are subject to refinement as part of the detailed subdivision process.
3. Orton Road, a future Other Regional Road, is to be widened from 20 metres to 32 metres (6 metres to be ceded by landholdings north and south of the road).
4. Soldiers Road, a future Other Regional Road, is to be widened from 20 metres to 30 metres (10 metres to be ceded by landholdings abutting Soldiers Road).
5. Land is required to accommodate a roundabout at the intersection of Orton and Soldiers Road. The land to be ceded and the design of the roundabout is to be to the satisfaction of the Shire on advice from the Department of Planning.
6. Direct access to Soldiers Road is not permitted and an internal road will be required between residential lots and Soldiers Road to provide appropriate access and frontage. Double storey, rear-loaded and dual frontage lots are not permitted in this location due to interface and noise attenuation objectives.



Source: Urbanista - Amendment 1 - Doley Road Precinct ALSP (15.02.2022)

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Drawing sourced from CLE Town Planning + Design drawing: 3410-22C-01 05.04.2024

PLAN A: LOCAL STRUCTURE PLAN

Orton Road, Byford

Appendix C

SIDRA ANALYSIS

MOVEMENT SUMMARY

Site: 1 [Orton Road & Doley Rd - AM (Site Folder: Transcore Projection)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA

Site Category: (None)

Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV]		Arrival Flows [Total HV]		Deg. Satisf	Aver. Delay	Level of Service	95% Back Of Queue [Veh. Dist]		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Doley Rd (S)															
1	L2	All MCs	295	4.0	295	4.0	0.802	19.4	LOS B	12.5	97.7	1.00	1.19	1.71	40.1
2	T1	All MCs	60	4.0	60	4.0	0.802	19.2	LOS B	12.5	97.7	1.00	1.19	1.71	38.6
3	R2	All MCs	236	4.0	236	4.0	0.802	23.8	LOS C	12.5	97.7	1.00	1.19	1.71	36.2
Approach			591	4.0	591	4.0	0.802	21.1	LOS C	12.5	97.7	1.00	1.19	1.71	38.5
East: Orton Rd (E)															
4	L2	All MCs	126	4.0	126	4.0	0.159	6.9	LOS A	0.9	7.3	0.61	0.63	0.61	45.8
5	T1	All MCs	293	4.0	293	4.0	0.343	6.1	LOS A	2.5	19.6	0.66	0.60	0.66	48.7
6	R2	All MCs	94	4.0	94	4.0	0.343	10.8	LOS B	2.5	19.6	0.66	0.60	0.66	44.5
Approach			513	4.0	513	4.0	0.343	7.1	LOS A	2.5	19.6	0.64	0.61	0.64	47.1
North: Doley Rd (N)															
7	L2	All MCs	111	4.0	111	4.0	0.822	36.7	LOS D	12.1	94.6	1.00	1.41	2.05	29.7
8	T1	All MCs	37	4.0	37	4.0	0.822	36.5	LOS D	12.1	94.6	1.00	1.41	2.05	32.5
9	R2	All MCs	221	4.0	221	4.0	0.822	41.1	LOS D	12.1	94.6	1.00	1.41	2.05	33.3
Approach			368	4.0	368	4.0	0.822	39.3	LOS D	12.1	94.6	1.00	1.41	2.05	32.3
West: Orton Rd (W)															
10	L2	All MCs	94	4.0	94	4.0	0.140	7.6	LOS A	0.8	6.5	0.64	0.65	0.64	48.2
11	T1	All MCs	568	4.0	568	4.0	0.652	8.7	LOS A	7.6	59.6	0.88	0.74	1.00	48.1
12	R2	All MCs	126	4.0	126	4.0	0.652	13.4	LOS B	7.6	59.6	0.88	0.74	1.00	46.7
12u	U	All MCs	1	4.0	1	4.0	0.652	13.7	LOS B	7.6	59.6	0.88	0.74	1.00	46.7
Approach			789	4.0	789	4.0	0.652	9.3	LOS A	7.6	59.6	0.85	0.73	0.96	47.8
All Vehicles			2261	4.0	2261	4.0	0.822	16.8	LOS B	12.5	97.7	0.87	0.93	1.26	41.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

[View Diagram](#)

MOVEMENT SUMMARY

Site: 1 [Orton Road & Doley Rd - PM (Site Folder: Transcore Projection)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA

Site Category: (None)

Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV]		Arrival Flows [Total HV]		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [Veh. Dist]		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Doley Rd (S)															
1	L2	All MCs	126	4.0	126	4.0	0.574	19.1	LOS B	5.5	42.9	1.00	1.01	1.34	40.2
2	T1	All MCs	26	4.0	26	4.0	0.574	19.0	LOS B	5.5	42.9	1.00	1.01	1.34	38.7
3	R2	All MCs	101	4.0	101	4.0	0.574	23.6	LOS C	5.5	42.9	1.00	1.01	1.34	36.3
Approach			254	4.0	254	4.0	0.574	20.9	LOS C	5.5	42.9	1.00	1.01	1.34	38.7
East: Orton Rd (E)															
4	L2	All MCs	295	4.0	295	4.0	0.414	9.3	LOS A	2.9	22.4	0.80	0.73	0.82	44.0
5	T1	All MCs	424	4.0	424	4.0	0.705	12.4	LOS B	9.2	71.8	0.95	0.91	1.29	44.3
6	R2	All MCs	259	4.0	259	4.0	0.705	17.1	LOS B	9.2	71.8	0.95	0.91	1.29	40.9
Approach			978	4.0	978	4.0	0.705	12.7	LOS B	9.2	71.8	0.91	0.86	1.15	43.3
North: Doley Rd (N)															
7	L2	All MCs	99	4.0	99	4.0	0.607	12.9	LOS B	6.1	47.9	0.96	0.93	1.24	39.4
8	T1	All MCs	33	4.0	33	4.0	0.607	12.8	LOS B	6.1	47.9	0.96	0.93	1.24	40.9
9	R2	All MCs	260	4.0	260	4.0	0.607	17.3	LOS B	6.1	47.9	0.96	0.93	1.24	42.2
Approach			392	4.0	392	4.0	0.607	15.8	LOS B	6.1	47.9	0.96	0.93	1.24	41.5
West: Orton Rd (W)															
10	L2	All MCs	259	4.0	259	4.0	0.317	7.3	LOS A	2.1	16.7	0.69	0.64	0.69	48.4
11	T1	All MCs	264	4.0	264	4.0	0.521	6.9	LOS A	4.5	35.0	0.77	0.66	0.78	48.0
12	R2	All MCs	295	4.0	295	4.0	0.521	11.5	LOS B	4.5	35.0	0.77	0.66	0.78	46.6
12u	U	All MCs	1	4.0	1	4.0	0.521	11.9	LOS B	4.5	35.0	0.77	0.66	0.78	46.6
Approach			819	4.0	819	4.0	0.521	8.7	LOS A	4.5	35.0	0.74	0.66	0.75	47.5
All Vehicles			2442	4.0	2442	4.0	0.705	12.7	LOS B	9.2	71.8	0.87	0.82	1.05	43.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).