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Report

Prepared for

Best Hooper on behalf of Golina
Holdings Pty Ltd

Prepared by:

Stephen Hunt

28 October 2020

Traffic Engineering Evidence
Statement

Amendment C241wsea
Whittlesea Planning Scheme

Shenstone Park Precinct
Structure Plan

Golina Holding Pty Ltd

570, 620 and 650 Summerhill
Road, Craigieburn

traffic:evidence

ratio:consultants

8 Gwynne Street
Richmond VIC 3121
ABN 93 983 380 225

Prepared for:

Golina Holding Pty Ltd
Our reference 17320TTRep001D1

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1 Statement of Witness:

Reference

- 1.1.1 Amendment C241wsea Whittlesea Planning Scheme
- 1.1.2 570 and 650 Summerhill Road, Craigieburn

Name

- 1.1.3 Stephen John Hunt

Position

- 1.1.4 Principal – Traffic, Ratio Consultants

Address

- 1.1.5 8 Gwynne Street, Cremorne, VIC 3121

Qualifications

- Bachelor of Engineering (Civil), 1975, Swinburne University of Technology.
- Graduate Diploma of Highway and Traffic Engineering, 1981, Chisholm Institute of Technology.

Experience

- 2017 – Present: Principal – Traffic, Ratio Consultants.
- 2010 – 2016 :Group Manager – Cardno Victoria
- 2007 – 2010: Consultant, Cardno Grogan Richards.
- 1988 – 2006: Director, Grogan Richards.
- 1975 – 1988: Traffic Engineer with Cities of Doncaster and Templestowe, Caulfield and Prahran.

Professional Expertise

- 1.1.6 I have worked in the area of Traffic and Transportation Engineering throughout my career. My area of expertise includes traffic advice and assessment of a wide range of land use and development proposals for planning authorities, government agencies, corporations and developers.
- 1.1.7 My training, qualifications and experience including involvement with a wide variety of developments over a number of years, qualifies me to comment on the traffic implications of this proposal.

Instructions which define the scope of this report

- 1.1.8 I have been requested by Best Hooper on behalf of the Golina Holdings Pty Ltd to review Amendment C241wsea to the Whittlesea Planning Scheme, which seeks to introduce the Shenstone Park Precinct Structure Plan into the Scheme and to prepare an expert evidence statement for submission and presentation to Planning Panel convened to consider the proposed Amendment.
- 1.1.9 My instructions are to prepare a traffic expert evidence statement detailing my opinions on the Precinct Structure Plan as exhibited and, in particular advise on the need or otherwise for a north south connector to be provided between the Shenstone PSP area and land to the south (570 Summerhill Road) as an extension of Langley Park Drive.

Facts, Matters and Assumptions Relied Upon

- 1.1.10 In the course of preparing this report the facts, matters and assumptions I have relied upon are outlined as follows:
- Whittlesea Planning Scheme Amendment C241 exhibited documents.
 - *Shenstone Park Precinct Structure Plan (September 2019)* (Exhibited Version)
 - *Shenstone Park Background Report (September 2019)*
 - *Strategic Transport Modelling Assessment – Shenstone Park PSP (September 2019 and October 2020)* - prepared by GTA Consulting for Whittlesea City Council
 - Submissions to the exhibited Amendment including Submission 6 prepared by Tract Consultants on behalf of Golina Holdings Pty Ltd dated 13th November 2019.

Identity of Persons Undertaking the Work

- 1.1.11 Stephen Hunt of Ratio Consultants.

Declaration

- 1.1.12 I confirm that I have read and that I understand the Planning Panels Victoria's 'Guide to Expert Evidence' and that I comply with the provisions of that guide.
- 1.1.13 I have no relationship with the client other than a business engagement to comment on this matter.
- 1.1.14 My involvement in this project commenced in June 2020 and I was not involved directly in the preceding preparation of the Amendment or submissions made to the exhibited Amendment on behalf of Golina Holdings Pty Ltd.
- 1.1.15 I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.



Stephen Hunt
Principal - Traffic
Ratio Consultants

2 Introduction and Background:

2.1 Instructions

- 2.1.1 I have been requested by Best Hooper Lawyers on behalf of Golina Holdings Pty Ltd Pty Ltd, to undertake a review of the traffic engineering implications of Amendment C241wsea to the Whittlesea Planning Scheme which proposes to introduce the Shenstone Park Precinct Structure Plan into the scheme.
- 2.1.2 The PSP proposes a long term plan for urban development for the area and sets out how the land in the proposed PSP area is expected to be developed and how and where services are planned to support the creation of the Shenstone Park Community.
- 2.1.3 In particular, I have been requested to review the traffic and transport infrastructure proposed within the Shenstone Park PSP area and to comment on traffic and access issues raised in submission to the Amendment by Tract Consultants on behalf of the owners of land at 570, 620 and 650 Summerhill Road, Craigieburn which is situated immediately south of the proposed PSP area as shown in Figure 2.1.

Figure 2.1 - 570, 620 and 650 Summerhill Road



- 2.1.4 This report has been prepared in accordance with the Planning Panels Victoria's 'Guide to Expert Evidence'. In the course of preparing this assessment, I have inspected the subject site and surrounding road network, reviewed the exhibited Precinct Structure Plan and supporting documentation and assessed submissions to the Amendment.
- 2.1.5 I have also reviewed an updated draft PSP prepared by the VPA in response to submissions to the Amendment, circulated by Harwood Andrews on 12th October 2020 and a memo from The VPA to Planning Panels Victoria dated 20th October 2020 in response to Panel Direction 16 b)
- 2.1.6 My opinions with respect to the traffic engineering issues related to the matters I have been asked to assess are set out in the following report.

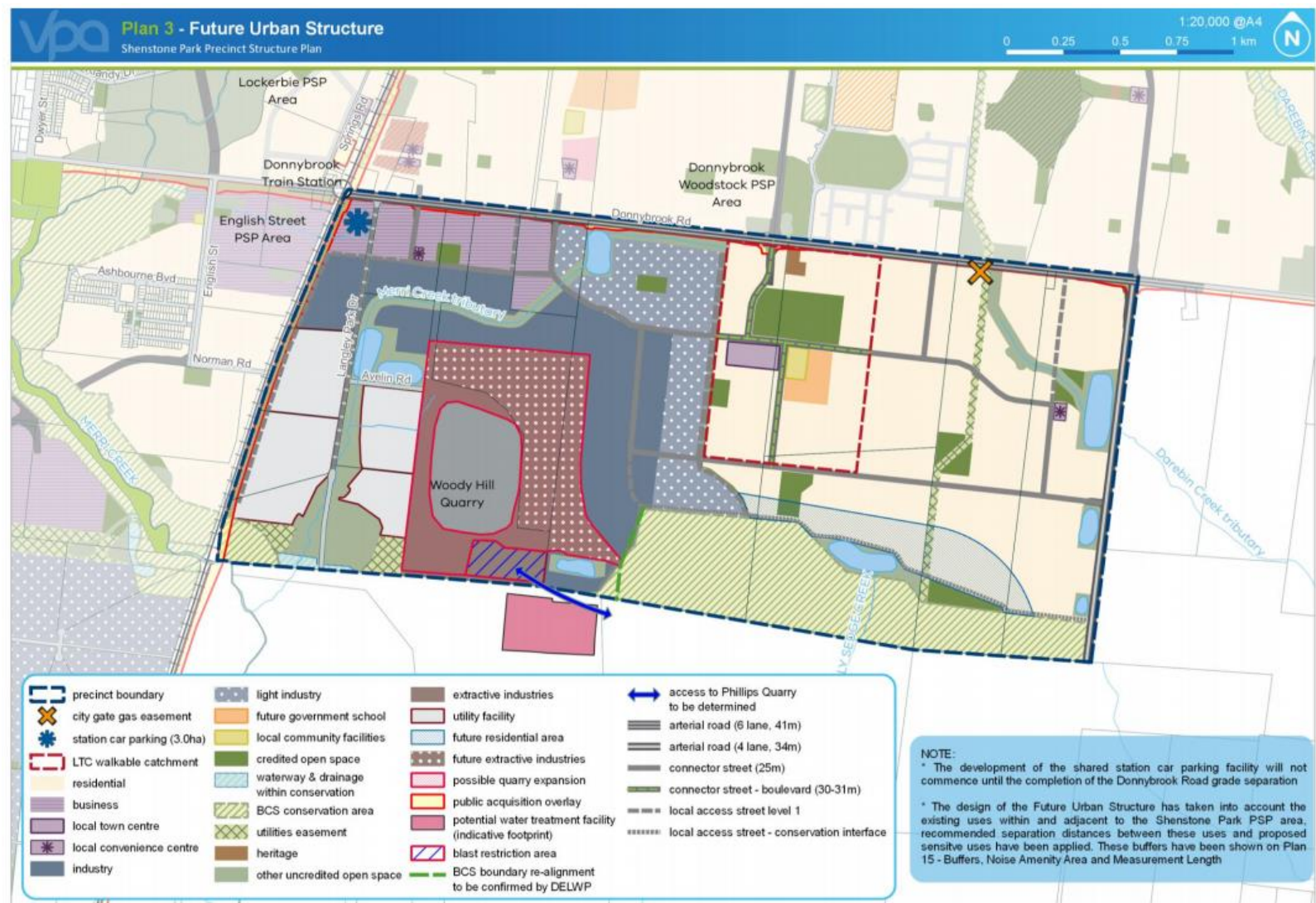
2.2 Amendments C241 to the Whittlesea Planning Scheme

- 2.2.1 The Victorian Planning Authority (VPA), in consultation with Whittlesea City Council have prepared the Shenstone Park PSP which is proposed to be introduced into the Planning Scheme through Amendment C241wsea.
- 2.2.2 Amendment C241wsea proposes to:
 - Incorporate the Shenstone Park PSP into the Scheme,
 - Rezone the land to the Urban Growth Zone,
 - Make related changes to the Scheme.

3.1 Shenstone Park Overview

- 3.1.1 The Shenstone Park Precinct Structure Plan area is situated to the south of the Donnybrook Woodstock PSP area, applying to approximately 628 hectares of land approximately 30 km north of Melbourne CBD, generally bounded by:
- Donnybrook Road to the north,
 - Urban Growth Boundary to the east,
 - Wollert Suburb boundary to the south, and
 - The Sydney Melbourne railway line to the west.
- 3.1.2 The exhibited Urban Structure Plan for the Shenstone Park PSP is shown in Figure 3.1.
- 3.1.3 The PSP is expected to result in a net developable area of 325 hectares of which 194 hectares will be residential, accommodating approximately 3,660 dwellings and 131 hectares employment / industry development predominantly located in the western portion of the area, in the vicinity of the existing Woody Hill Quarry.
- 3.1.4 The PSP makes provision for a new Local Town Centre to provide higher order retail, commercial and community services and two Local Convenience Centres.

Figure 3.1 Shenstone Park PSP – Exhibited Future Urban Structure



3.2 Street Network

Langley Park Drive

- 3.2.1 **Langley Park Drive**, is an existing local road running south from Donnybrook Road approximately 150m east of the Sydney Melbourne railway level crossing at Donnybrook Station.
- 3.2.2 Langley Park Drive has a 20.1m wide road reservation and is currently constructed with a 6.0m wide sealed pavement with gravel shoulders for a distance of approximately 1200m south of Donnybrook Road, terminating in a court bowl at the southern end.
- 3.2.3 The Langley Park Drive road reservation continues to the south beyond the currently constructed section, terminating at the southern boundary of the PSP area.

Figure 3.2 – Langley Park Drive – Looking South from Donnybrook Road
(Source:Nearmap Street view)

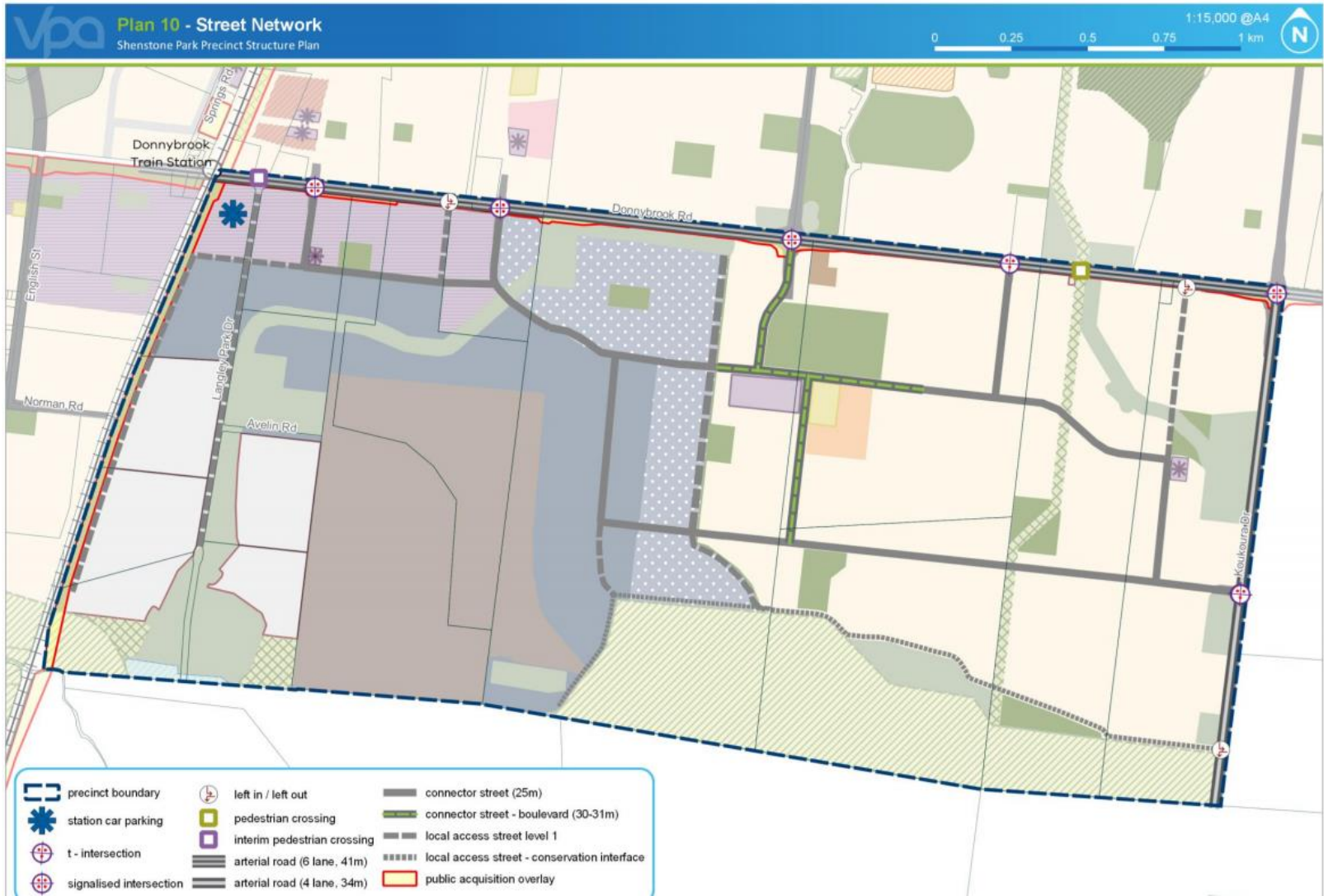


Exhibited Street Network Plan

- 3.2.4 The exhibited Shenstone Park PSP Street Network Plan is shown in Figure 3.3.
- 3.2.5 In association with the development of the PSP area, it is proposed to develop a local street network connecting to Donnybrook Road to the north and Koukoura Drive to the east. No street connections to the west across the Sydney Melbourne rail line or to the south to neighbouring land within the urban growth boundary are proposed.
- 3.2.6 A total of four signalized intersections are proposed along Donnybrook Road, three of which will be which will be developed in association with the Donnybrook / Woodstock area to the north, including at Patterson Drive and Koukoura Drive.
- 3.2.7 The exhibited Street Network Plan designates Langley Park Drive as an Access Street Level 1 terminating approximately 1200m south of Donnybrook Road, which is the extent of the existing formation of the road.

- 3.2.8 An “interim pedestrian crossing” is shown across Donnybrook Road at the Langley Park Drive intersection.

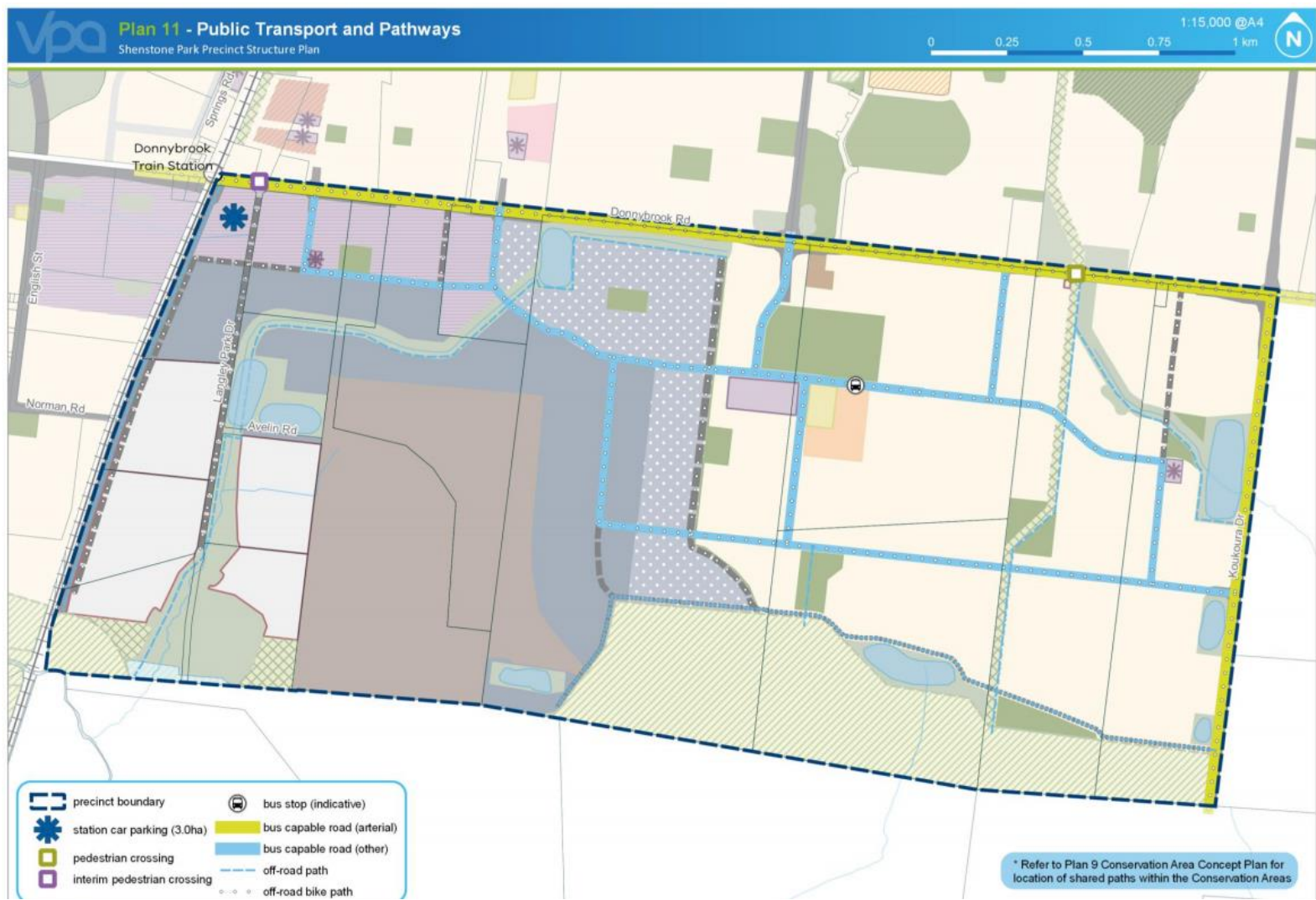
Figure 3.3 – Shenstone Park PSP – Exhibited Street Network Plan



3.3 Public Transport and Pathways Network

- 3.3.1 The proposed Public Transport and Path Network for Shenstone Park is shown in Figure 3.4.
- 3.3.2 The plan features a network of bus capable connector roads linking to Donnybrook Road and Koukoura Drive and to Patterson Drive to the north within the Donnybrook Woodstock PSP.
- 3.3.3 The plan also identifies the site for a new rail station car park at Donnybrook Station, situated on the south west corner of Donnybrook Road and Langley Park Drive.

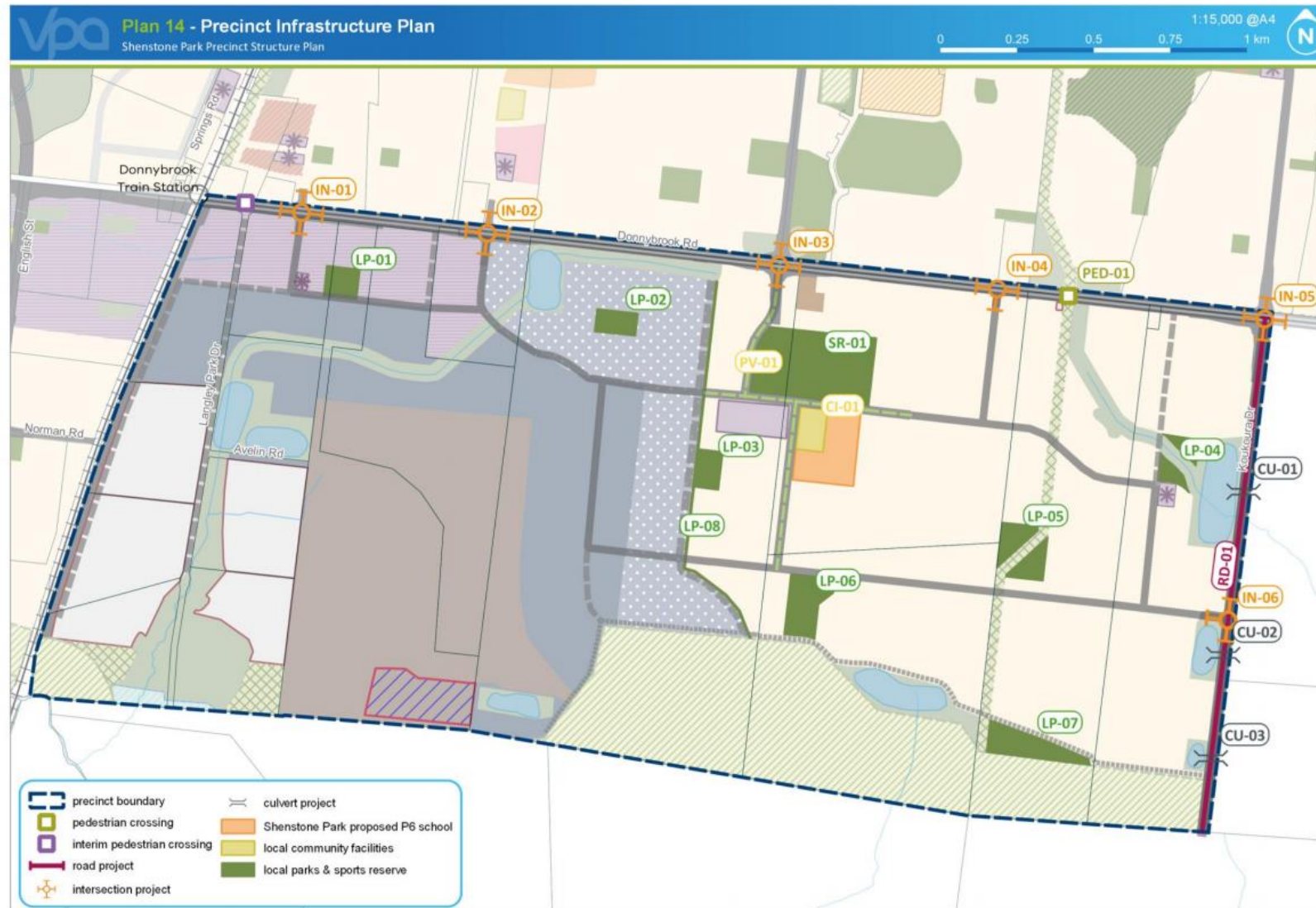
Figure 3.4 Shenstone Park PSP – Exhibited Public Transport and Path Network



3.4 Precinct Infrastructure Plan

- 3.4.1 The Precinct Infrastructure Plan (PIP) for the Shenstone Park PSP sets out the infrastructure items required to meet the needs of the proposed development within the precinct.
- 3.4.2 The proposed Precinct Infrastructure Plan is shown in Figure 3.5.
- 3.4.3 Notable traffic and transport inclusions in the PIP are as follows:
 - The provision of land to create a 34m wide reserve for the ultimate construction of Koukoura Drive between Donnybrook Road and the southern boundary of the PSP area and construction of an interim two lane 2-way carriageway. (RD01)
 - Interim construction of the fourth (southern) leg of signalized intersections along Donnybrook Road to an interim alignment as an ICP item, with land for the ultimate intersection also an ICP item. (IN01, 02, 03 and 04)
 - Interim construction of the fourth (southern) leg of the signalized arterial / arterial intersection at Donnybrook Road / Koukoura Drive and provision of land for the ultimate intersection as ICP items. (IN05)
 - Interim construction of signalized connector road / arterial intersection at Koukoura Drive and provision of land for the ultimate intersection as ICP items. (IN06)
 - Construction of culverts under Koukoura Drive at three locations as ICP items. (CU01,02 and 03)
 - Construction of a pedestrian crossing across Donnybrook Road at the gas pipeline easement as an ICP item (PED-01)

Figure 3.5 – Shenstone Park PSP –Exhibited Precinct Infrastructure Plan



4.1 GTA Strategic Modelling Assessment

- 4.1.1 GTA Consulting were commissioned by Whittlesea Council in association with the VPA to undertake strategic transport modelling of the Shenstone Park Precinct, with the results published in a report dated 25th September 2019 which was exhibited in association with the Amendment.
- 4.1.2 Subsequently, GTA was engaged by the VPA to update the 2019 modelling, with the updated outputs intended to:
 - Update the modelling undertaken for the September 2019 report to reflect the updated draft Shenstone Park PSP Future Urban Structure,
 - Inform the extent of road infrastructure to be constructed to support the Shenstone Park PSP at full development,
 - Assess the impacts of the station car parking in the Shenstone Park precinct.
- 4.1.3 The updated modelling was published in a report dated 15th October 2020.
- 4.1.4 Modelling was undertaken by adapting and building on the Victorian Integrated Transport Model (VITM) developed for the North Growth Corridor, with the work including refinements to reflect land use and transport planning in the Shenstone Park Precinct.
- 4.1.5 The study focused on the transport network requirements for full development of the PSP area by the year 2046, in association with parallel urban development elsewhere within the corridor (including Donnybrook Woodstock immediately to the north).
- 4.1.6 The modelling assumes the following development levels within the Shenstone Park PSP area.
 - 3660 households (540 more than in the 2019 report)
 - 4600 jobs
 - 480 student enrollments
- 4.1.7 The modelling also includes a “first principals” assessment of heavy vehicle activity associated with ongoing operation of Woody Hill Quarry up to and beyond 2046.
- 4.1.8 A number of key transport infrastructure items were considered and modelled, including the following:
 - Donnybrook Road constructed as a 6-lane arterial road with grade separation at the Sydney to Melbourne Rail Line
 - Koukoura Drive constructed as a 4-lane secondary arterial road running from Gunns Gully Road, Donnybrook to O'Herns Road, Epping.
 - Upgrading of the rail station at Donnybrook including extensions to existing commuter parking areas, including 1000 spaces south of Donnybrook Road.
 - Bus routes operating at 20 minute headways throughout the PSP area in accordance with the Public Transport Plan.
 - Construction of the OMR by 2046.
- 4.1.9 The travel demand analysis determined that the PSP area would generate 27,200 vehicle trips per day as well as attracting an additional 26,500 external trips to business and retail facilities.
- 4.1.10 The modelled 2046 daily volumes for key network links are detailed in Figure 4.10 of the report, with the modelled volumes shown in Figure 4.1.

Figure 4.1 –Modelled 2046 (Ultimate) Daily volumes - GTA September 2020



- 4.1.11 The modelling estimates that Donnybrook Road will carry in excess of 27,000 vehicles per day immediately east of the railway line, reducing to 15,600 vpd west of Koukoura Drive. Koukoura Drive is estimated to carry approximately 23,000 vpd at the southern boundary of the PSP area.
- 4.1.12 Connector roads to Donnybrook Road are modelled to carry between 3,500 and 8,000 vehicles per day at the proposed signalized intersections, with the signalized connector to Koukoura Drive carrying just over 8,000 vehicle per day.
- 4.1.13 GTA note that the volumes at some intersections to the arterial network are higher than previously modelled in 2019 and specifically recommend upgrading the southern leg of IN01 to a trunk connector as a consequence of the higher volumes.
- 4.1.14 Langley Park Drive is modelled to carry 3600 vpd south of the east west connector road, reducing to 800 vpd at the southern end.

4.2 Review of Transport Modelling

- 4.2.1 I have reviewed the transport modelling undertaken by GTA and consider that it generally provides a suitable basis for assessment of the adequacy of the transport network proposed to be developed in association with the Shenstone Park PSP.
- 4.2.2 Modelled daily volumes are generally consistent with the proposed function of each road, supporting the road classifications proposed and the transport infrastructure items identified in the Precinct Infrastructure Plan.
- 4.2.3 The modelled volumes at connector intersections are higher than originally modelled in the exhibited 2019 report, predominantly due to the increased residential yield assumed, but also partially due to revised street network.
- 4.2.4 It is noted however that the street network as modelled may change in response to submissions under consideration including potentially an additional connection to Koukoura Drive and extension of Langley Park Drive to the southern PSP boundary.
- 4.2.5 While I do not consider that the variations to resultant traffic volumes and network performance assessments are likely to be material, I recommend that prior to finalizing the street network plan and adoption of the PSP, updated modelling be undertaken to confirm satisfactory traffic conditions will result.

5.1 Overview of Traffic and Transport Related Submissions

- 5.1.1 A total of 32 submissions were received in response to the exhibited Shenstone Park PSP, including from:
- Whittlesea City Council,
 - Department of Transport,
 - the Barro Group who operate the operators of Woody Hill Quarry,
 - landowners within the PSP area, including Submission 12 by Tract Consultants on behalf of 1150 Donnybrook Road Pty Ltd, and
 - landowners in adjacent precincts potentially affected by the PSP.
- 5.1.2 I have reviewed submissions which have been lodged and note the following issues raised by landowners in relation to traffic, transport and accessibility.
1. The street network should be modified to provide for opportunity for future north south connectivity between Shenstone park PSP and land to the south, by extending road reserves of north south streets including Langley Park Drive and the connector road running south from Donnybrook Road to the east of Woody Hill Quarry.
 2. Modifications to the street network plan are required to provide further connections to Koukoura Drive.
 3. Intersection locations to Donnybrook Road should be modified to common boundaries as required to ensure each property has the opportunity for independent access.
- 5.1.3 The Department of Transport have sought for the PSP be modified to reinforce the arterial road status of Donnybrook Road and Koukoura Drive by:
1. Extending the PAO on Donnybrook Road to allow for the future grade separation of the railway line and the ultimate development of the Donnybrook Road / Koukoura Drive intersection as a primary arterial / primary arterial intersection including flaring for additional through lanes and double right turn lanes on each approach.
 2. Further controls to restrict midblock access, with any intersections between signalized intersections to be limited to left in left out only.
 3. Consideration of a separate stand-alone access to Woody Hill Quarry.
- 5.1.4 Whittlesea City Council have sought for the PAO for intersections along Donnybrook Road, beyond the widening to accommodate the ultimate duplication of Donnybrook Road to be removed, given the “challenges” with VicRoads acquisition within a PAO and the incorrect location of intersections.
- 5.1.5 Council also are seeking an additional left in / left out intersection to Donnybrook Road west of Patterson Drive to better serve the employment land in that area.

5.2 Golina Holdings (Submission 6)

- 5.2.1 Submission 6 prepared by Tract Consultants on behalf of Golina Holdings Pty Ltd dated 13th November 2019, while supporting the amendment, raised several matters in response to the exhibited PSP, including the future role and function of Langley Park Drive and access to the Phillips Quarry site.
- 5.2.2 Tract submit that Langley Park Drive should continue south to the boundary of the PSP area and that, having regard to the potential future development of the Northern Quarries PSP area to the south, Langley

Park Drive should be also upgraded to a connector street and rerouted to allow future access through intersection IN01.

- 5.2.3 The exhibited Future Urban Structure Plan denotes access to the Phillips Quarry site, south east of the existing Woody Hill towards the south east as shown in Figure 5.1

Figure 5.1 –Access to Phillips Quarry Site – Exhibited Future Urban Structure



- 5.2.4 Tract noted that the indicative access route would require acquisition of land controlled by Golina Holdings and that creation of a road on this alignment is strongly opposed.
- 5.2.5 It was submitted that an alternate access route should be designated, potentially by upgrading a proposed access street to the east of Woody Hill Quarry to a connector street. This connection would provide access to the Phillips Quarry site via connector roads through industrial and quarry land to Donnybrook Road.

6.1 Overview

- 6.1.1 In response to Panel Direction 5(b), Harwood Andrews on behalf of the VPA, advised on the 12th October 2020 that an updated draft PSP had been uploaded to Hubshare.
- 6.1.2 I understand that the updated draft PSP represents the VPAs current position.
- 6.1.3 The updated draft PSP includes amongst other things, revised Future Urban Structure and Street Network Plans copies of which are attached in Appendix A.

6.2 Langley Park Drive

- 6.2.1 The updated draft PSP proposes modifications to the street network to upgrade Langley Park Drive to a connector road and provide a connector link to Donnybrook Road via IN01 as shown in Figure 6.1

Figure 6.1 – Revised Street Network Plan



- 6.2.2 Although updated to a connector road, Langley Park Drive is not shown extending to the PSP boundary along the existing unconstructed road reserve.
- 6.2.3 It is noted that the updated Future Urban Structure Plan proposes changing the designated land use applying to Langley Park Drive adjacent to the PSP boundary from “waterway and drainage within conservation” to “BCS conservation area”.
- 6.2.4 It is unclear as to whether the change of land use is designed to facilitate the possible extension of the road to the boundary in the future, if a connection is identified as being required in association with development of Northern Quarries PSP area to the south.

6.3 Access to Phillips Quarry

- 6.3.1 The updated Future Urban Structure deletes the designated access from the Phillips Quarry Land to the south east and the accompanying note that the access is “to be determined”
- 6.3.2 The updated Street Network Plan does not alter the local road network to the east of Woody Hill Quarry and hence future access arrangements to the Phillips Quarry site remain uncertain.

7.1 Connection of Langley Park Drive to the South

- 7.1.1 In my opinion, it is desirable for the PSP to retain the opportunity for Langley Park Drive to be extended to the south to the PSP boundary, to enable possible connection to the future Northern Quarries PSP area.
- 7.1.2 The proposed modifications to the Street Network Plan to designate Langley Park Drive and the connection to IN01 as a connector route are considered appropriate, reflecting modelled volumes in the updated GTA modelling report.
- 7.1.3 The Street network plan should, in my opinion, also provide for the potential extension of Langley Drive to the PSP boundary, to accommodate a future connector standard road if required.
- 7.1.4 I understand that the alignment of a southerly extension of Langley Park Drive may require deviations from the existing reservation to avoid significant vegetation, potentially deviating the road marginally to the east.
- 7.1.5 With the inclusion of the identification of an appropriate 25m road reserve alignment south of the existing constructed section of Langley Park Drive to the PSP boundary, I am satisfied that the revised Street Network Plan is appropriate and would allow for an appropriate level of connection to the south as sought by Tract in Submission 6.

7.2 Access to Phillips Quarry Site

- 7.2.1 The exhibited (and updated) Street Network Plan appears to provide for a future connection between the Phillips Quarry site and Donnybrook Road as shown in Figure 7.1

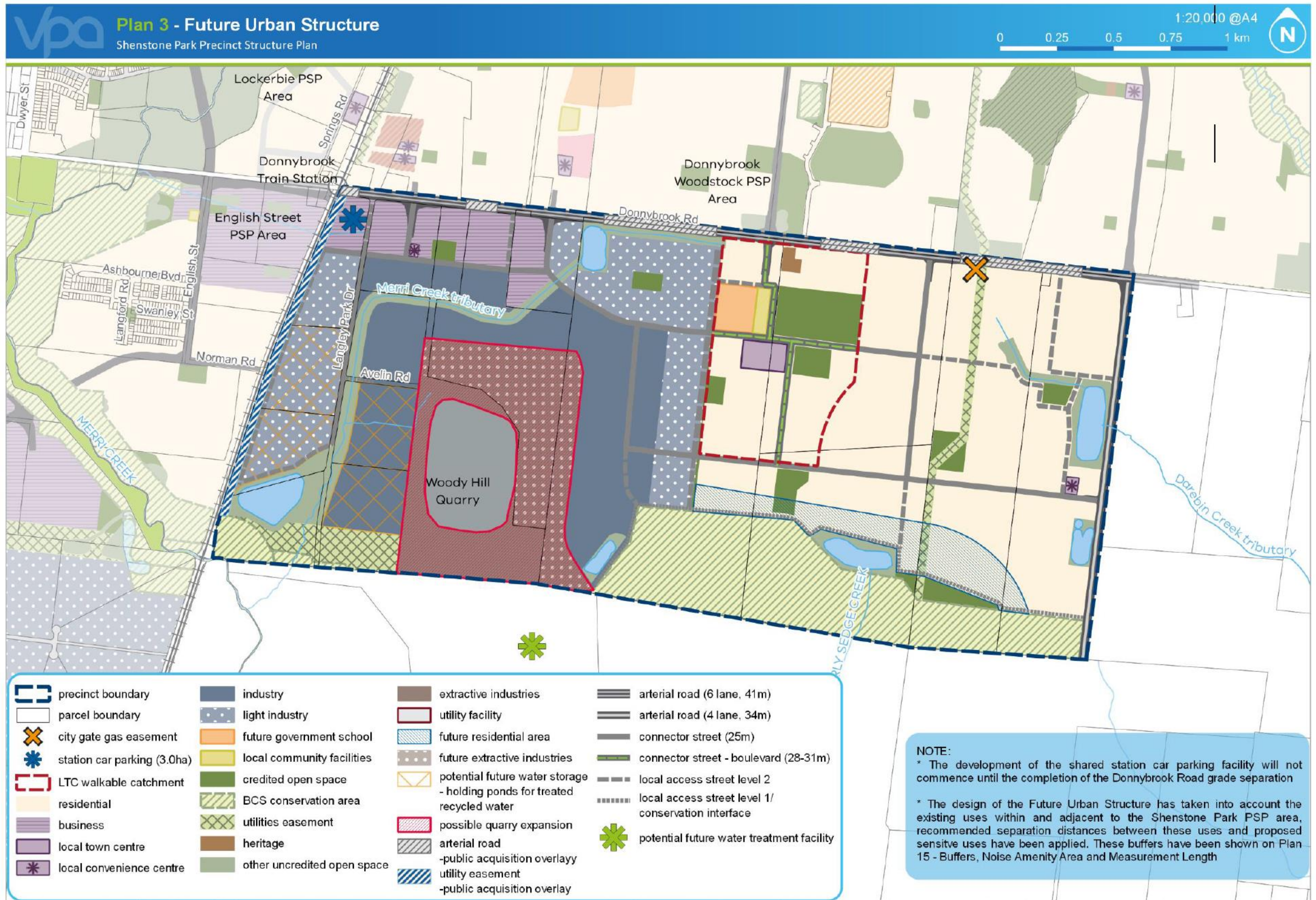
Figure 7.1 – Potential Access to Donnybrook Road from Phillips Quarry Site

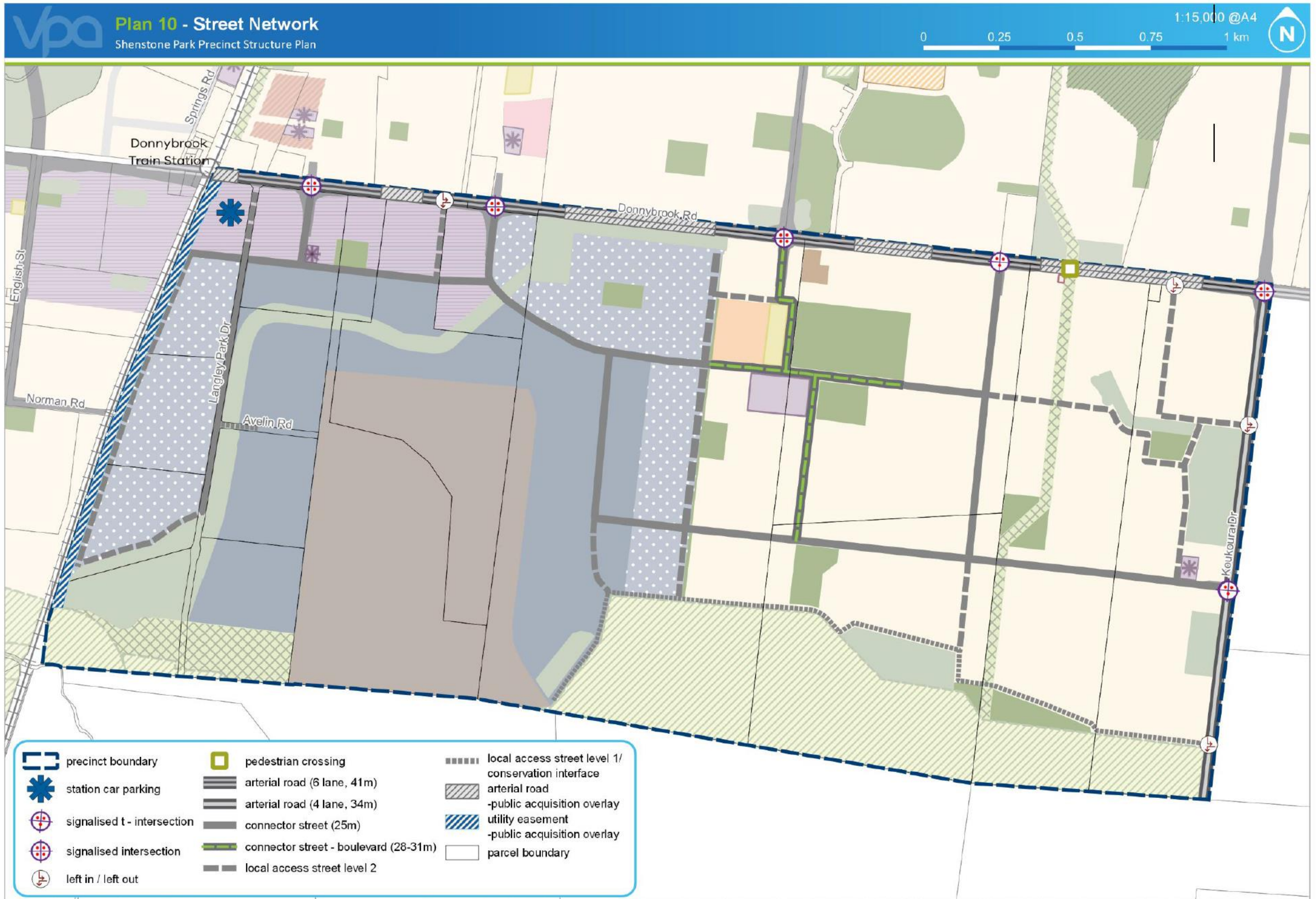


- 7.2.2 In my opinion, this is the most desirable access route to the Phillips Quarry site, utilising connector roads through designated industrial and quarry land to Donnybrook Road at IN02.
- 7.2.3 I consider it appropriate for the portion of the route south of the east west connector to be upgraded to a connector road, running to the southern boundary, ensuring the option for appropriate access to the Phillips

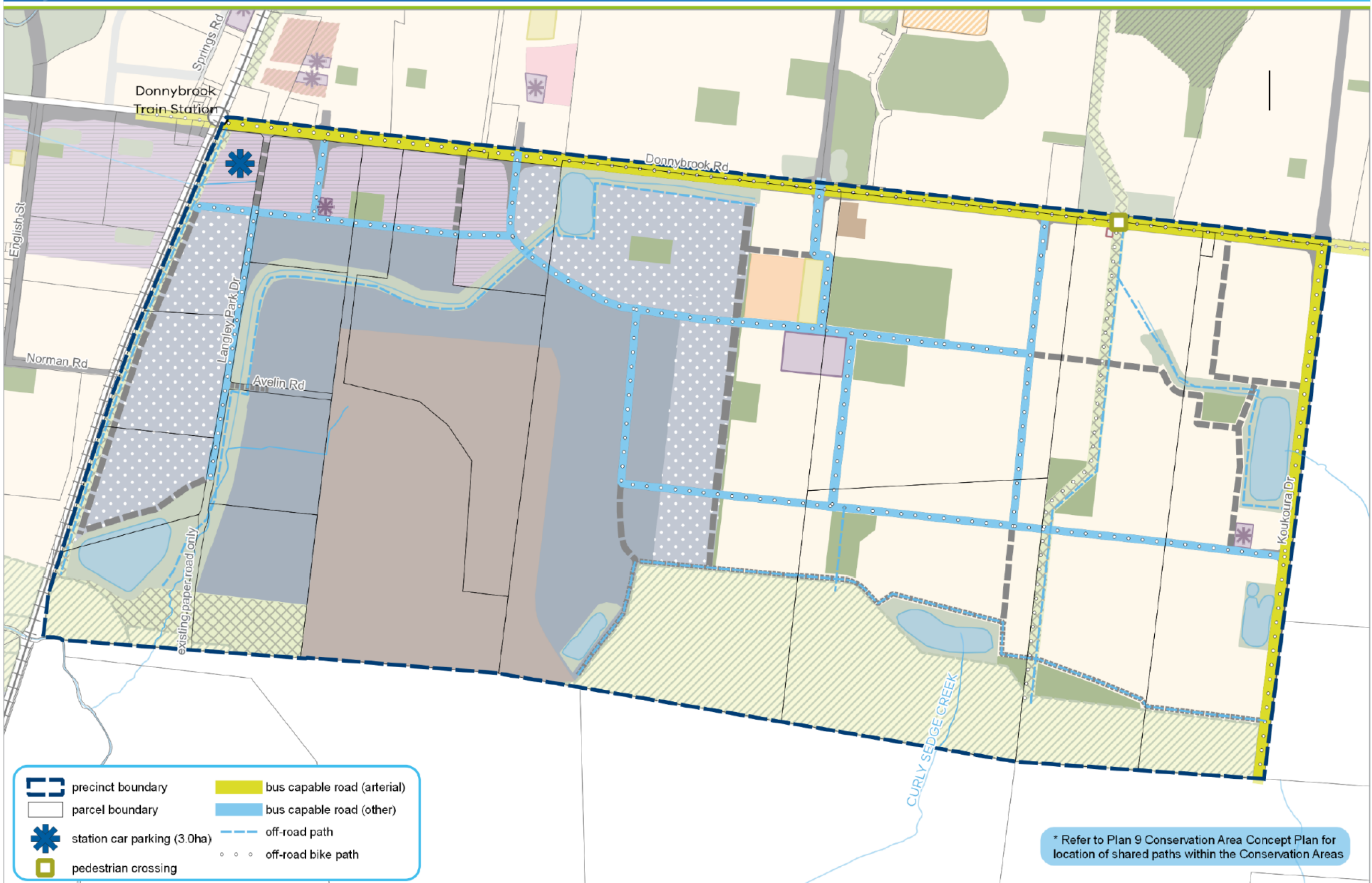
Quarry site to be retained, as well as proving for potential integration with land to the south.

Appendix A Updated PSP Plans





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