

**Report**

**Prepared for**

Best Hooper on behalf of 1150  
Donnybrook Road Pty Ltd

**Prepared by:**

Stephen Hunt

28 October 2020

Traffic Engineering Evidence  
Statement

Amendment C241wsea  
Whittlesea Planning Scheme

Shenstone Park Precinct  
Structure Plan

1150 Donnybrook Road Pty Ltd

**ratio:**consultants

8 Gwynne Street  
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ABN 93 983 380 225

**Prepared for:**

1150 Donnybrook Road Pty Ltd  
Our reference 16798TRep001Final

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|   |           |
|---|-----------|
| <b>1 Statement of Witness:</b>                            | <b>5</b>  |
| <b>2 Introduction and Background:</b>                     | <b>7</b>  |
| 2.1 Instructions  | 7         |
| 2.2 Amendments C241 to the Whittlesea Planning Scheme     | 7         |
| <b>3 Shenstone Park PSP:</b>                              | <b>8</b>  |
| 3.1 Shenstone Park Overview                               | 8         |
| 3.2 Street Network  | 10        |
| 3.3 Public Transport and Pathways Network                 | 12        |
| 3.4 Precinct Infrastructure Plan                          | 14        |
| <b>4 Strategic Transport Modelling:</b>                   | <b>16</b> |
| 4.1 GTA Strategic Modelling Assessment                    | 16        |
| 4.2 Review of Transport Modelling                         | 19        |
| <b>5 Submissions to Exhibited PSP:</b>                    | <b>20</b> |
| 5.1 Overview of Traffic and Transport Related Submissions | 20        |
| 5.2 1150 Donnybrook Road Submission (Submission 12)       | 20        |
| 5.3 VPA Response to Submission                            | 22        |
| <b>6 Updated Draft PSP:</b>                               | <b>23</b> |
| 6.1 Overview  | 23        |
| 6.2 Connections to Koukoura Drive                         | 23        |
| 6.3 Relocated Local Convenience Centre                    | 24        |
| <b>7 Opinion on Issues:</b>                               | <b>25</b> |
| 7.1 Connections to Koukoura Drive                         | 25        |
| 7.2 Location of Local Convenience Centre                  | 27        |

## Appendices:

### Appendix A Updated PSP Plans

#### List of Figures:

|   |    |
|---|----|
| Figure 3.1 Shenstone Park PSP – Exhibited Future Urban Structure                                      | 9  |
| Figure 3.2 – Shenstone Park PSP – Exhibited Street Network Plan                                       | 11 |
| Figure 3.3 Shenstone Park PSP – Exhibited Public Transport and Path Network                           | 13 |
| Figure 3.4 – Shenstone Park PSP – Exhibited Precinct Infrastructure Plan                              | 15 |
| Figure 4.1 – Modelled 2046 (Ultimate) Daily volumes - GTA October 2020                                | 18 |
| Figure 5.1 – Street Network Connections to Koukoura Drive   | 21 |
| Figure 6.1 – Revised Street Network Plan  | 23 |
| Figure 7.1 – Donnybrook Woodstock ICP – Donnybrook Road / Koukoura Drive Interim Intersection Concept | 26 |



# 1 Statement of Witness:

## Reference

- 1.1.1 Amendment C241wsea Whittlesea Planning Scheme
- 1.1.2 1150 Donnybrook Road, Donnybrook

## 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 1150 Donnybrook Road 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 comment on traffic and transport related issues raised in submission by 1150 Donnybrook Road Pty Ltd to the exhibited Amendment to assist the Planning Panel convened to consider the Amendment.

### **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)* - prepared by *GTA Consulting* for Whittlesea City Council
  - Submissions to the exhibited Amendment including Submission 12 prepared by Tract Consultants on behalf of Donnybrook Road Unit Trust dated 15<sup>th</sup> November 2019.

### **Identity of Persons Undertaking the Work**

- 1.1.11 Stephen Hunt assisted by Hilary Marshall also 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 December 2019 and I was not involved directly in the preceding preparation of the Amendment or submissions made to the exhibited Amendment on behalf of 1150 Donnybrook Road 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**

### 2.1 Instructions

- 2.1.1 I have been requested by Best Hooper Lawyers on behalf of 1150 Donnybrook Road 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 1150 Donnybrook Road, Donnybrook which is situated within the proposed PSP area.
- 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 amendment 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 20<sup>th</sup> 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.

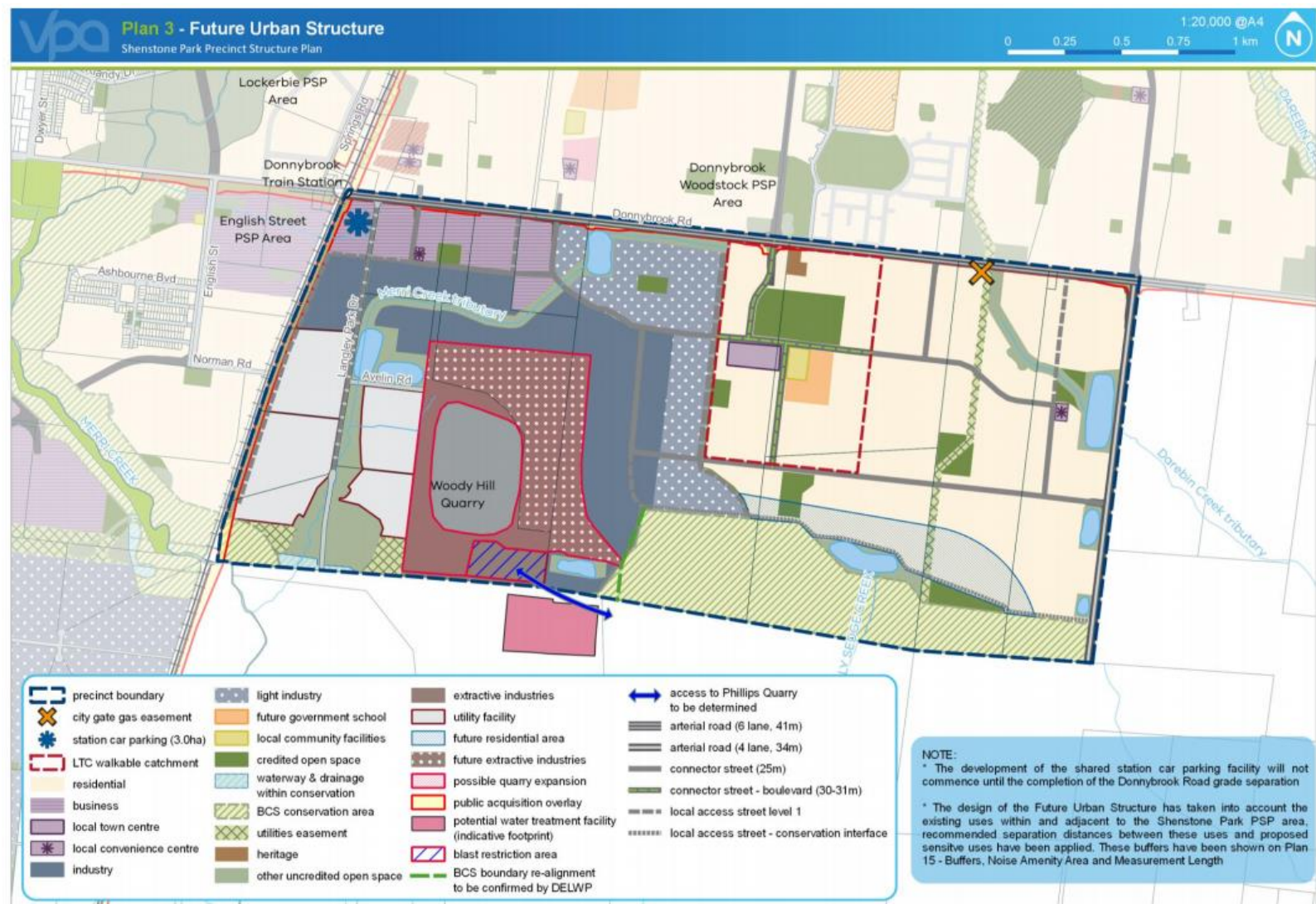
### 2.2 Amendments C241 to the Whittlesea Planning Scheme

- 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, 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 (LCC), including one serving residential precincts in the eastern portion of the PSP area, located within Property 17 (1150 Donnybrook Road).

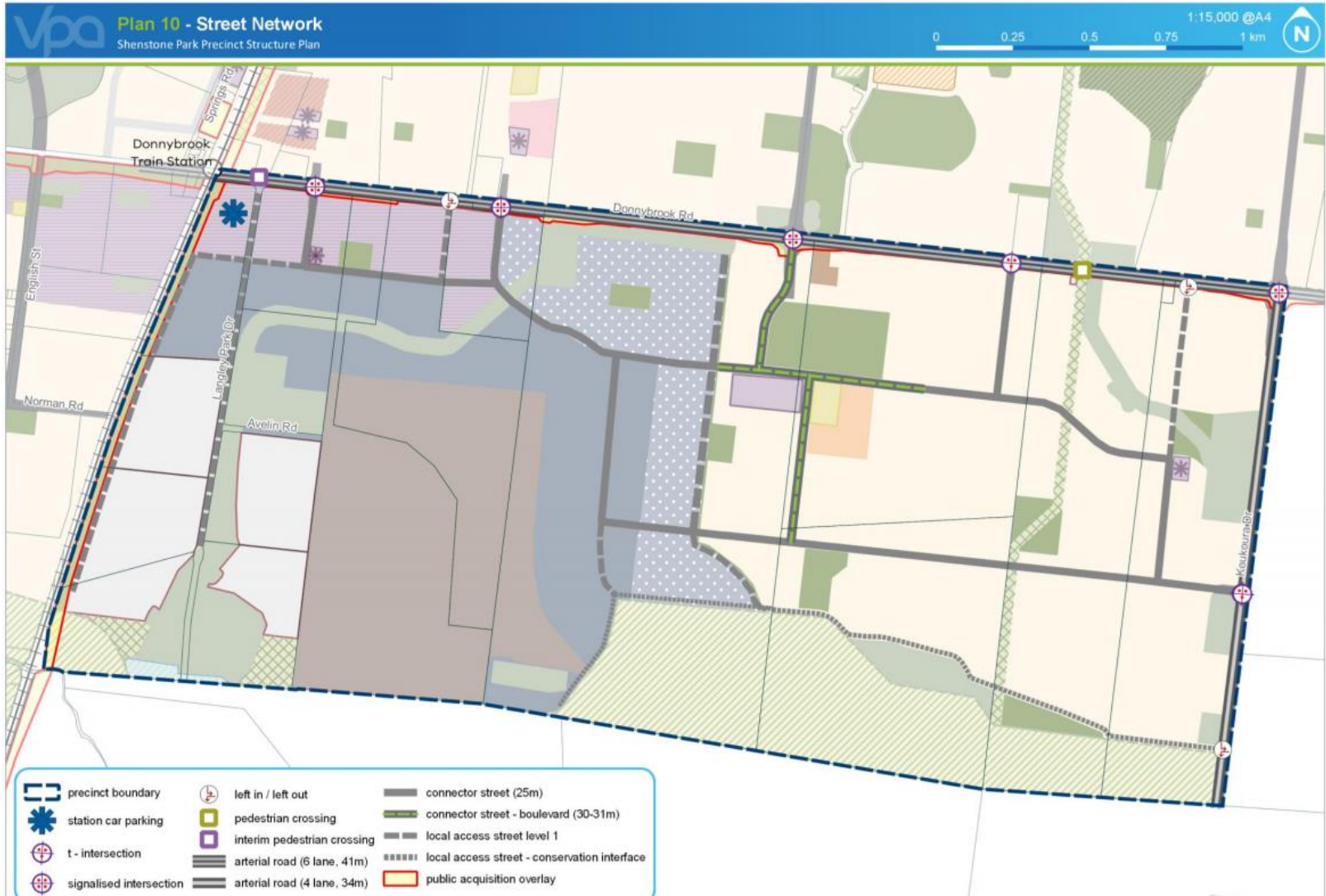
Figure 3.1 Shenstone Park PSP – Exhibited Future Urban Structure



## 3.2 Street Network

- 3.2.1 The proposed Shenstone Park PSP Street Network Plan is shown in Figure 3.2.
- 3.2.2 It is proposed to develop an integrated and safe street network in conjunction with the development of the PSP area, which will connect to the arterial road network serving the region, principally via Donnybrook Road which runs east west along the northern boundary of the land, and a future north south arterial (Koukoura Drive) which will run north south along the eastern boundary of the land, ultimately connecting to existing and developing areas to the south in the Wollert and Epping area.
- 3.2.3 A total of four signalized intersections are proposed along Donnybrook Road, three of which will be developed in association with the Donnybrook / Woodstock area to the north, including at Patterson Drive and Koukoura Drive.
- 3.2.4 The Shenstone Park area is proposed to be served by a network of connector and access streets, with access to the broader regions via signalized intersections to Donnybrook Road and Koukoura Drive.
- 3.2.5 Conservation areas along the southern portion of the PSP area preclude the need or requirement for local connections to the south, although I understand that the opportunity to preserve a connection to the south via Langley Park Drive to the west of Woody Hill quarry is under consideration.
- 3.2.6 Connections to the west across the Sydney Melbourne railway line are not proposed, other than at Donnybrook Road which will ultimately be upgraded to a grade separated crossing.
- 3.2.7 The PSP proposes that Donnybrook Road will be developed as a six lane primary arterial road, accommodated within a 41m reservation, forming a continuous arterial link to the west to the Hume Freeway and to the east, to the future Outer Metropolitan Ring Road (OMR).
- 3.2.8 Koukoura Drive is proposed to be developed as a 4-lane arterial road within a 34m reservation.

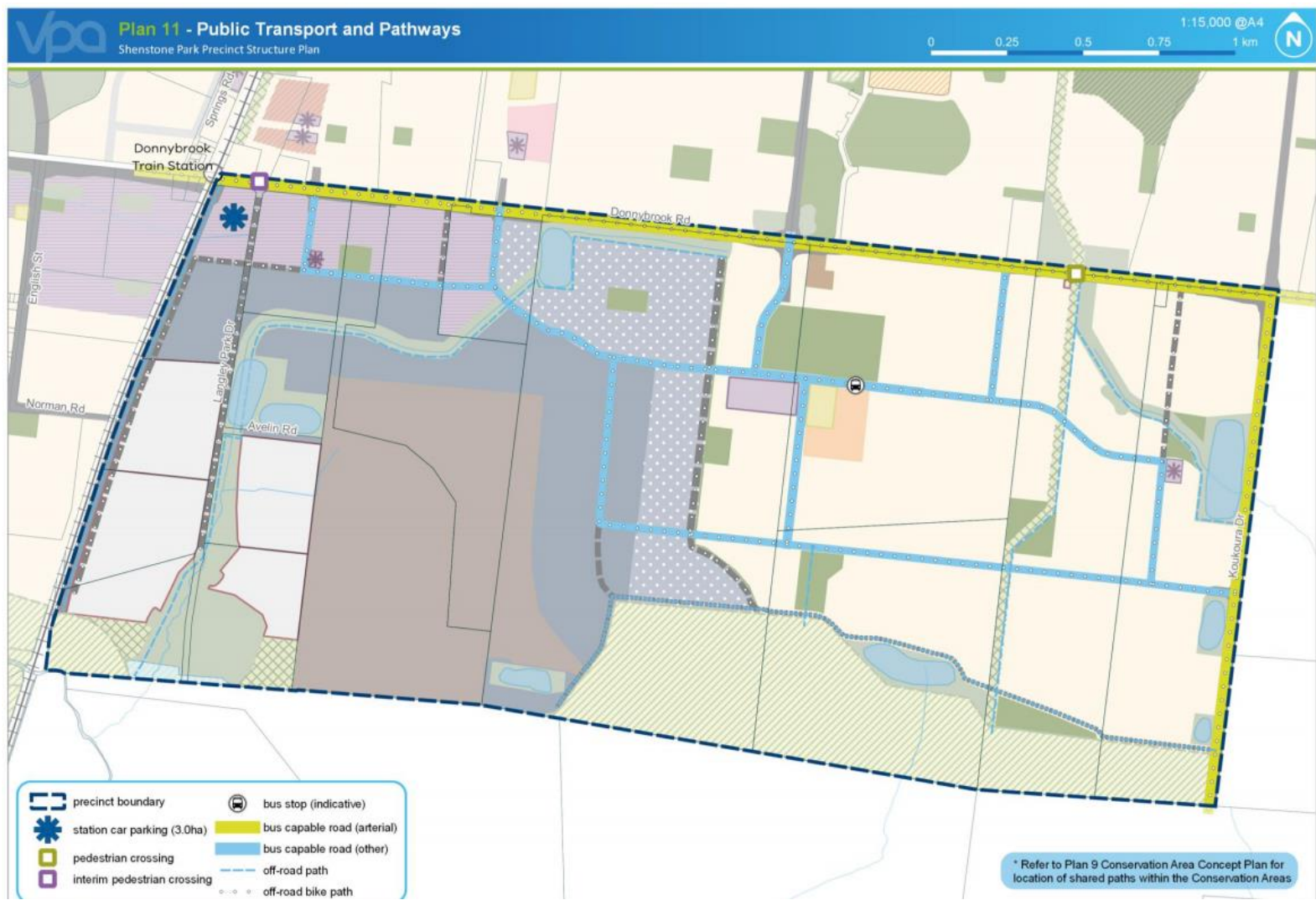
Figure 3.2 – Shenstone Park PSP – Exhibited Street Network Plan



### **3.3 Public Transport and Pathways Network**

- 3.3.1 The proposed Public Transport and Path Network for Shenstone Park is shown in Figure 3.3.
- 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 and a network of off road and bike paths throughout the precinct.

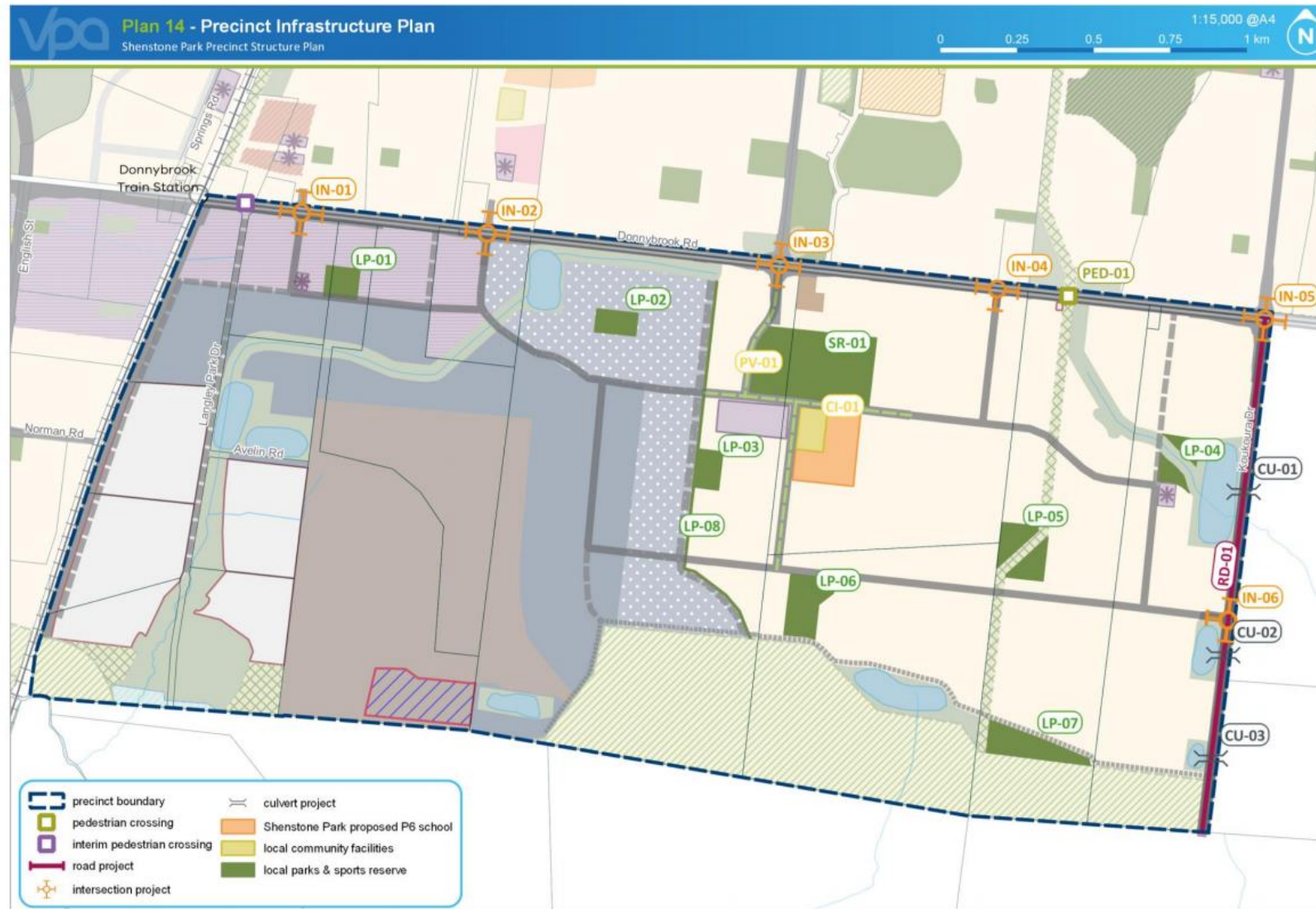
Figure 3.3 Shenstone Park PSP – Exhibited Public Transport and Path Network



### **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 3.4.
- 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 3.4 – 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 25<sup>th</sup> 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 15<sup>th</sup> 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 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 20minute 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 October 2020 report, with the modelled volumes shown in Figure 4.1 below.

- 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 It is also noted that the modelled network includes a second connection to Koukoura Drive at the southern boundary modelled as carrying 1440 vpd (all westbound) .

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



## **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 1150 Donnybrook Road Submission (Submission 12)

- 5.2.1 Submission 12 prepared by Tract Consultants on behalf of 1150 Donnybrook Road Pty Ltd dated 15<sup>th</sup> November 2019, while supporting the amendment, raised several matters in response to the exhibited PSP, including the following related to my areas of expertise.

### East West Connector Road

- 5.2.2 The Street Network Plan in the exhibited PSP proposes two connector roads running east from the southerly extension of Patterson Boulevard, of which only one connects through to Koukoura Drive at a signalized intersection approximately 1 km south of Donnybrook Road as shown in Figure 5.1

**Figure 5.1 – Street Network Connections to Koukoura Drive**



- 5.2.3 Tract on behalf of 1150 Donnybrook Road Pty Ltd suggest in Submission 12 that the east west road, which terminates at the Local Convenience Centre, should be re-aligned so the route can continue to Koukoura Drive as an additional left in / left out intersection.

### Local Convenience Centre Location

- 5.2.4 Tract also submitted that the proposed Local Convenience Centre (LCC) is not viable economically in the location as shown and should be relocated to the north east to the south west corner of the future intersection of Donnybrook Road / Koukoura Drive.
- 5.2.5 If not supportable in that location, it was submitted that the LCC be removed entirely from the PSP, with the facilities incorporated into a larger Local Town Centre.

## 5.3 VPA Response to Submission

- 5.3.1 I have been provided with a spreadsheet prepared by the VPA detailing their initial response to Submission 12, including the following responses to the issues I have been asked to consider.

### East West Connector Road

Partial change supported.

Safety Management Study (SMS) requires perpendicular crossing to gas main. Additional connection to Koukoura Drive not supported. Discuss with infrastructure and transport consultant.

Transport consultant advised - V/C ratios in the modelling do not identify the need for an additional connection to Koukoura Drive. Notwithstanding, it would be possible to provide a local connection to Koukoura Drive as part of the Subdivision stage in the form of Service Road access and/or left-in/left-out arrangement. The proposed location is less than the desired 800m from Donnybrook Road and a full intersection at this location would compromise the operation of the Koukoura Drive / Donnybrook Road intersection. We note that there is an off street path which also is able to provide adequate access.

### Local Convenience Centre

Partial Change supported.

The eastern LCC is required to provide convenience facility to the residential catchment to the east of the precinct and has been justified in the background studies. The location of the LCC (east) has been updated to sit outside the gas measurement length as a result of the findings from the Safety Management Study

- 5.3.2 My understanding is that the VPA do not consider that an additional east west connector intersection to Koukoura Drive is required based on the traffic modelling undertaken by GTA. Additional access street connections to Koukoura Drive are however supported in association with subdivision stages in the form of left in left out intersections or connections to service roads serving properties fronting the western side of Koukoura Drive.
- 5.3.3 The eastern LCC is proposed to be retained to serve the eastern portion of the PSP area, but in an alternate location to the south, related to buffer zones and a Safety Management Study.

## 6.1 Overview

- 6.1.1 In response to Panel Direction 5(b), Harwood Andrews on behalf of the VPA, advised on the 12<sup>th</sup> 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, Street Network and Public Transport Plans copies of which are attached in Appendix A.

## 6.2 Connections to Koukoura Drive

- 6.2.1 The updated draft PSP proposes modifications to the street network to provide for an additional access street connection to Koukoura Drive, intersecting as a left in left out intersection approximately 500m south of Donnybrook Road as shown in Figure 6.1

**Figure 6.1 – Revised Street Network Plan**

Exhibited Plan

Updated Plan



- 6.2.2 In effect, the updated plan achieves an additional connection by downgrading the northern connector street to an Access Street Level 2 and establishing a link around the open space and drainage reserve to form an Access Street Level 2 connection to Koukoura Drive.
- 6.2.3 The north south access street running from a left in / left out intersection to Donnybrook Road has also been upgraded from an Access Street Level 1 (as exhibited) to an Access Street Level 2, continuing to the south to intersect with the east west Connector Road.
- 6.2.4 It is noted that the north south connector running south from the signalized T intersection with Donnybrook Road is proposed to be extended to the south of the east west connector, continuing to the conservation zone as an Access Street (and potentially providing a future connection to the south).

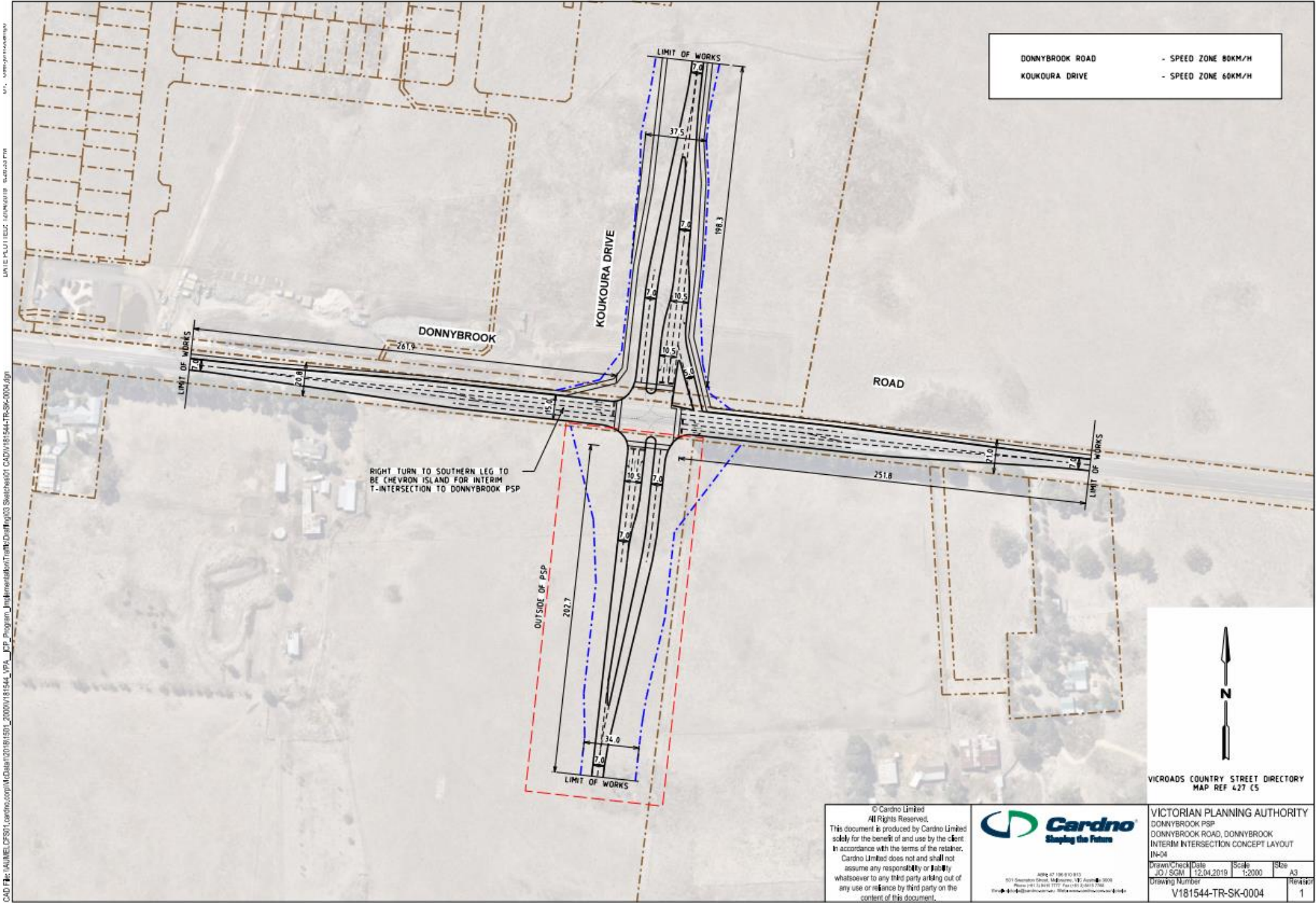
## **6.3 Relocated Local Convenience Centre**

- 6.3.1 In association with the revised street network within the eastern section of the PSP area, the updated PSP proposes to relocate the LCC to the south east, to the north east corner of the Connector Road / Access Street intersection, approximately 250m west of the Koukoura Drive signalised intersection.

## 7.1 Connections to Koukoura Drive

- 7.1.1 In my opinion, an additional connection to Koukoura Drive is desirable to ensure greater permeability within the network and reduce potential concentration of traffic to the east west connector road.
- 7.1.2 In the interim it also provides the option for initial access to development at 1150 Donnybrook Road via:
  - construction of the southern leg of the Donnybrook Road / Koukoura Drive intersection (IN05) as proposed in the Precinct Infrastructure Plan, and
  - interim construction of Koukoura Drive between Donnybrook Road and the access street as a 2- lane road.
- 7.1.3 In my opinion, the construction of the southern leg of IN05 as may be required to facilitate initial access to the Shenstone Park PSP area via Koukoura Drive, should be undertaken in accordance with the Interim Intersection Concept Plan for the Donnybrook / Koukoura Drive intersection as contained in the approved Donnybrook Woodstock ICP shown in Figure 7.1
- 7.1.4 This plan, as prepared by Cardno provides for the construction of the southern leg of the intersection as contemplated in the proposed Shenstone Park PIP allowing the addition of the southern leg as an adjunct to the initial construction of a signalised T junction to serve land to within the Donnybrook / Woodstock PSP, prior to the duplication of Donnybrook Road through acquisition of land through the PAO along the south side of Donnybrook Road.
- 7.1.5 Koukoura Drive will ultimately operate as a 4-lane primary arterial road running south from Gunns Gully Road, carrying in the order of 16,000 vpd in south of Donnybrook Road, increasing to 22,000 vehicles per day the PSP boundary.
- 7.1.6 Department of Transport is seeking strict access controls along Koukoura Drive, including:
  - Fully directional access permitted only at designated signalised intersections, at spacings of at least 800m,
  - All movements not at designated intersections to be restricted to left in / left out only, and
  - Midblock access controls such as loop roads and service roads with no direct access.
- 7.1.7 I consider that these controls are appropriate in the ultimate, given the future function of the road.
- 7.1.8 The Shenstone Park PSP has a frontage of approximately 1500m to the future Koukoura Drive with the PSP proposing establishment of a signalised connector road intersection approximately 1 kilometre south of Donnybrook Road. As such any additional intersections will be limited to left in / left out control.
- 7.1.9 In the interim however, prior to the establishment of a southerly extension of Koukoura Drive to Wollert and Epping, the road will have a considerably lower traffic function essentially only providing access to Shenstone Park. In my opinion, fully directional access at the proposed Koukoura Drive / Access Street intersection can be safely managed, with ultimate left in left out control only required when Koukoura Drive is constructed to the south and duplication of the road occurs.

Figure 7.1 – Donnybrook Woodstock ICP – Donnybrook Road / Koukoura Drive Interim Intersection Concept

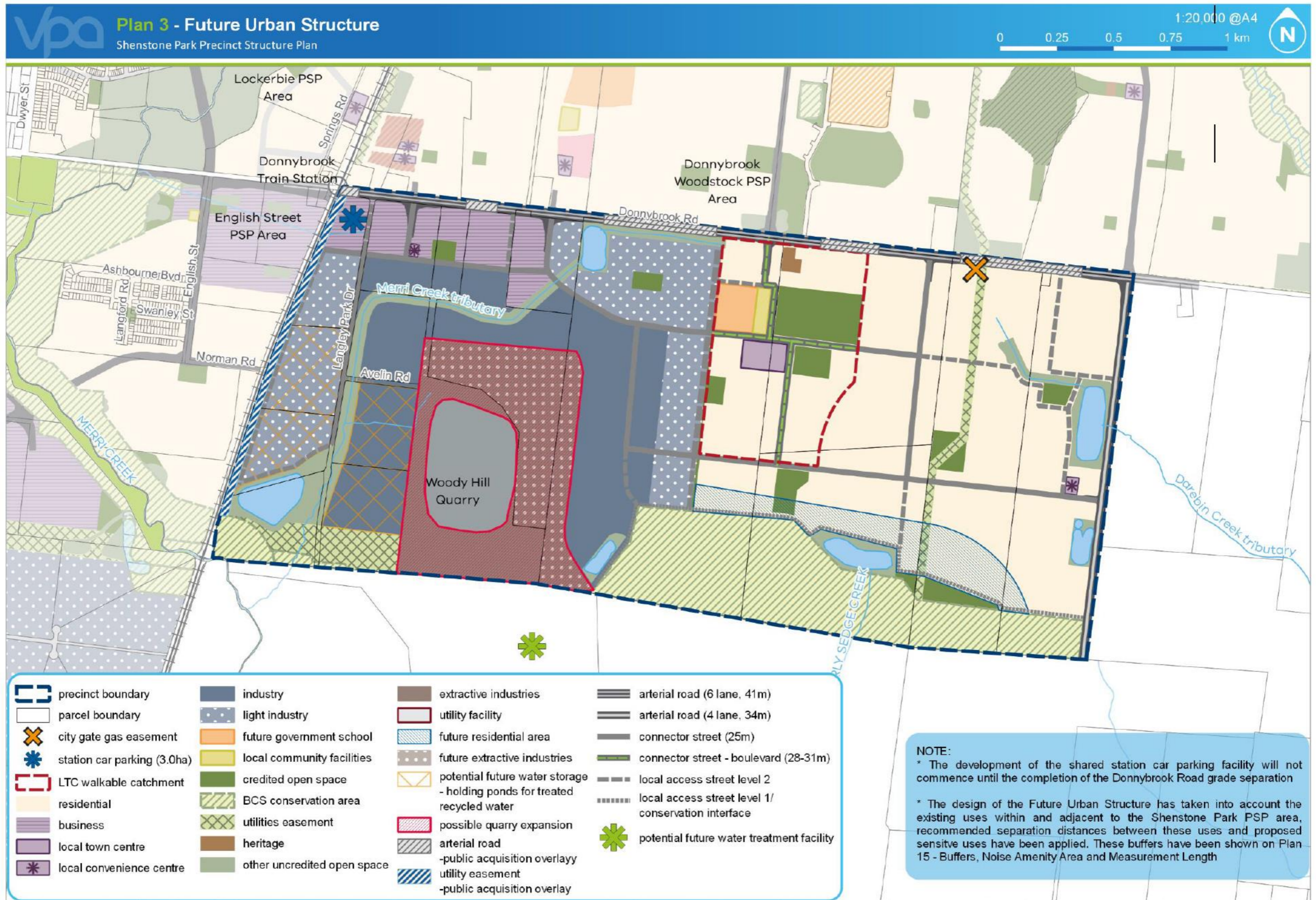


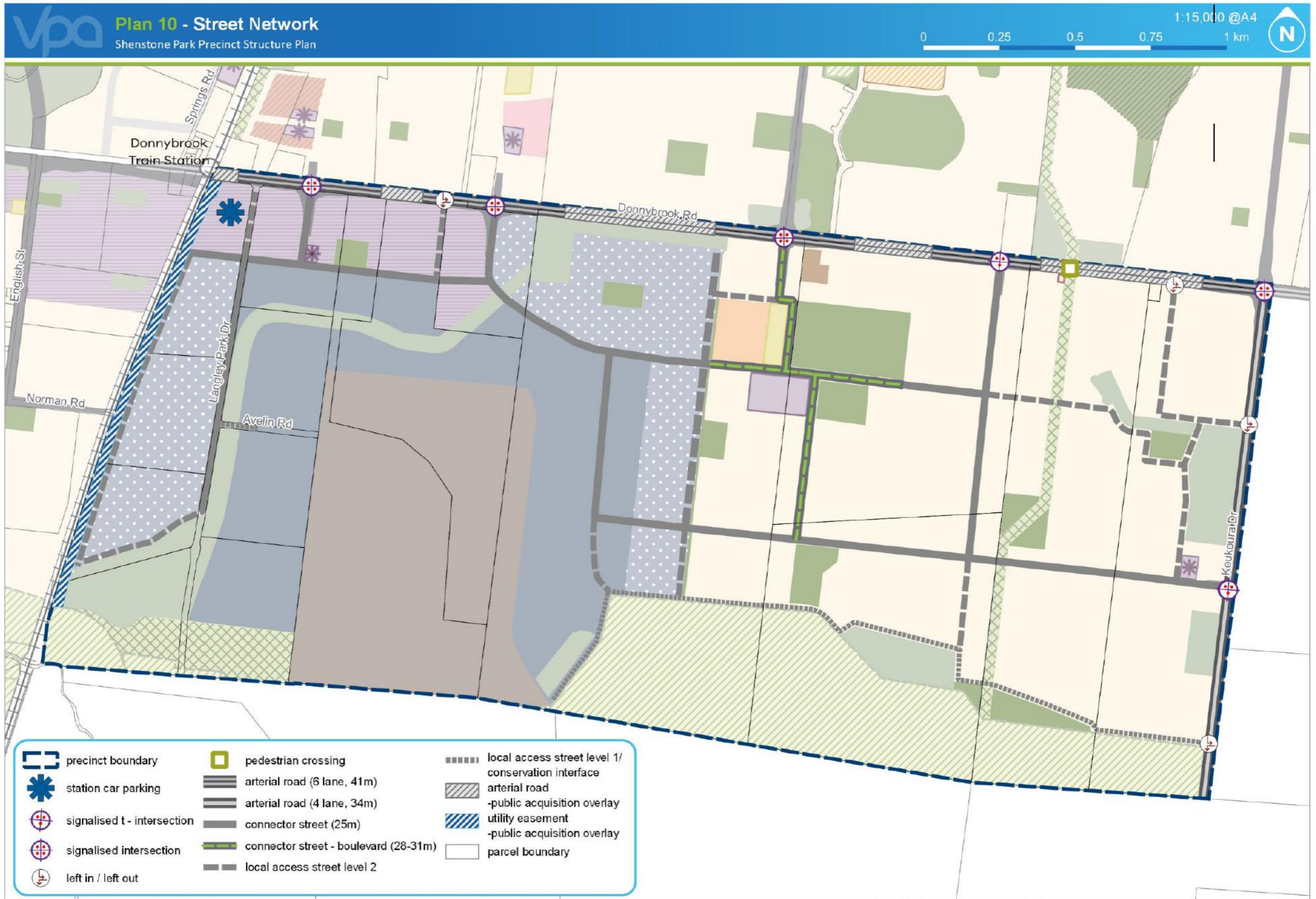
- 7.1.10 Strategic modelling undertaken by GTA suggest that the PSP area will generate approximately 9,000 vpd to Koukoura Drive. Volumes of this magnitude can be efficiently accommodated by a single signalised intersection, augmented by left in left out access street intersections.
- 7.1.11 As such, I consider that a second connector road intersection to Koukoura Drive is neither feasible or necessary, with the establishment of the additional connection as an Access Street Level 2 comfortable providing for the required function of the link, both prior to and following establishment
- 7.1.12 In my opinion, the revised street network plan proposed by the VPA responds appropriately to the submissions seeking improved connections and is a preferable network than the exhibited version.

## **7.2 Location of Local Convenience Centre**

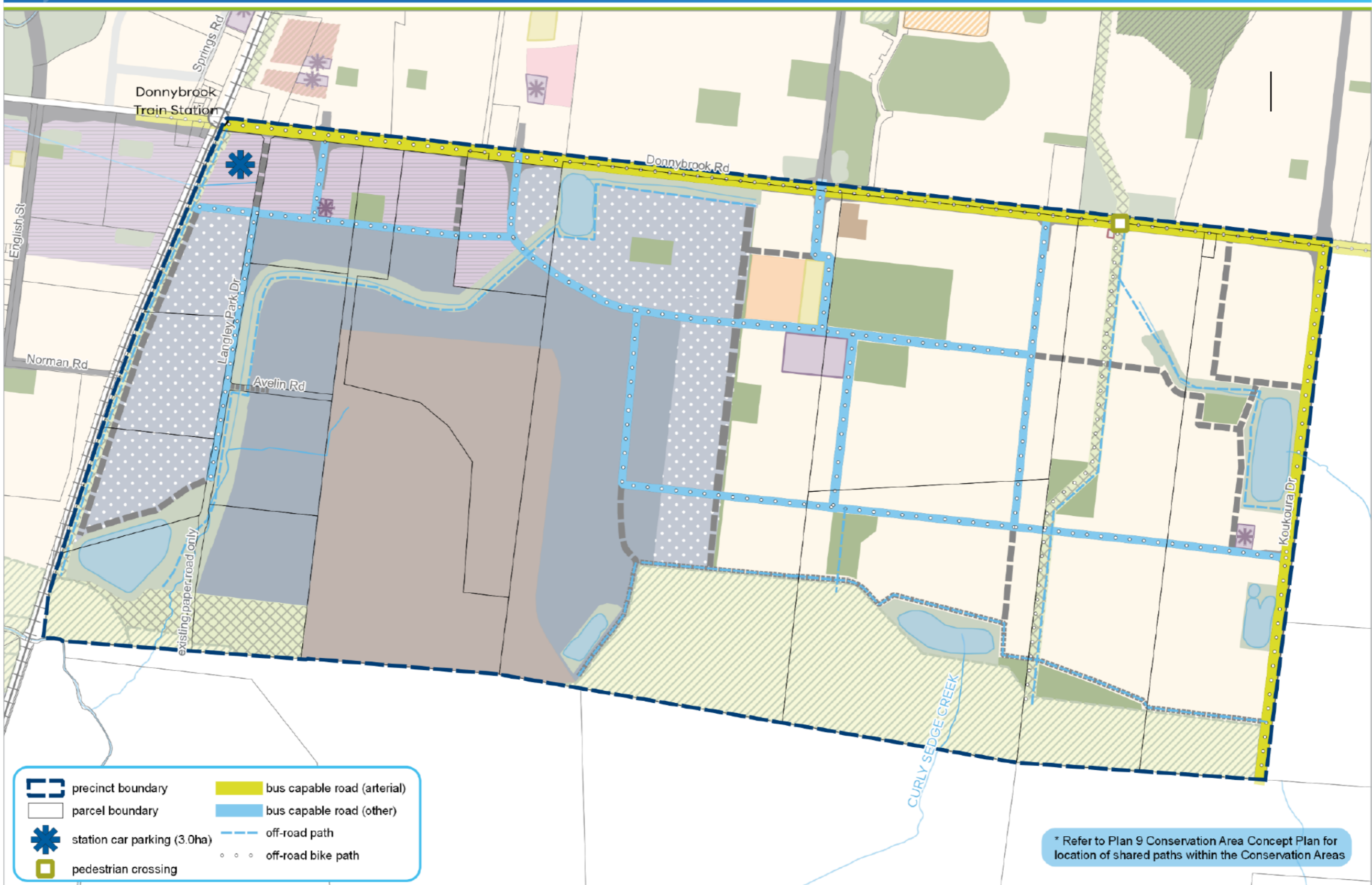
- 7.2.1 The VPA have confirmed there view that a LCC is required to support the Local Town Centre and have proposed that it be relocated to the south east to the east west connector road, approximately 250m west of Koukoura Drive.
- 7.2.2 Tract have submitted that, for viability reasons the centre should be located to the south west corner of the Donnybrook Road / Koukoura Drive intersection, where it will benefit from higher levels of passing trade.
- 7.2.3 In my opinion, if the centre is located at the arterial road intersection, access will be severely restricted due to the proximity to the major signalised intersection, with at a minimum, left in left out access only permitted. As such, access from passing trade will be restricted, at least partially negating the benefits of increased exposure. In addition, access to the centre from the residential communities within the PSP area will be circuitous and inconvenient.
- 7.2.4 As such, in traffic and access terms, I do not support the relocation of the centre to the south Donnybrook Road / Koukoura Drive intersection.
- 7.2.5 In my opinion, the location as proposed in the updated PSP provides for appropriate access from neighbouring residential precincts.
- 7.2.6 If greater levels of arterial exposure are required to ensure the viability of the centre, in my opinion, relocation to the north west corner of the Koukoura Drive / Connector road intersection could be considered.

## Appendix A Updated PSP Plans





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