

Traffix Group

Beveridge North West PSP - Amendment C158

Date of Statement: 27 April 2022

Date of Inspections: 15 April 2022

Prepared For: Crystal Creek Properties Pty Ltd

Instructed By: Rigby Cooke Lawyers

Reference: G31121A-01A

STATEMENT TO THE MINISTERIAL ADVISORY COMMITTEE BY JASON LEE WALSH, TRAFFIC ENGINEER

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Introduction

- 1 I have been instructed by Rigby Cooke Lawyers on behalf of Crystal Creek Properties Pty Ltd to undertake a traffic engineering assessment of Amendment C158 pertaining to the Beveridge North West PSP.
- 2 In the course of preparing this statement, I inspected the PSP area and surrounds on 15 April 2022, reviewed background material, and assessed the traffic and transport matters of the amendment.
- 3 My qualifications and experience to undertake the following assessment are set out in Appendix A.

History of Amendment

- 4 Amendment C106 to the Mitchell Planning Scheme sought to introduce the Beveridge North West Precinct Structure Plan (PSP) which facilitated the use and development of the PSP area as a residential precinct comprising in the order of 16,000 new homes, local town centres and convenience centres, and schools.
- 5 Amendment C106 was subject to a panel hearing in July and August 2020. A Panel Report, dated 7th October 2020, included a number of recommendations including the recognition of Burrung Buluk (former Hanna Swamp) and the proposed quarry (resource extraction).
- 6 In response to the Panel's recommendations, the Victorian Planning Authority (VPA) prepared Amendment C158 which incorporates an amended Beveridge North West PSP.
- 7 In January 2022, Rigby Cooke on behalf of Crystal Creek Properties, lodged a submission. The submission is primarily focused on the following areas of concern:
 - The consideration of the Beveridge North West PSP separately from the Wallan South PSP.
 - The buffer distances applied to the Quarry, and
 - The inclusion of the area identified as "Burrung Buluk".

Crystal Creek Properties Landholdings

- 8 Crystal Creek Properties Pty Ltd has direct, or indirect, interest in:
 - Approximately 526 hectares of land within the Wallan South Precinct Structure Plan (PSP), located immediately north of the Beveridge North West PSP, and west of Northern Highway.
 - Approximately 8ha within the Wallan South PSP on the eastern side of Northern Highway.
- 9 Walter Mott has direct, or indirect, interest in:
 - Approximately 117 hectares of land located in the north-east corner of the Beveridge North West PSP area, inclusive of the land nominated for the quarry.

- 10 The landholdings of direct or indirect interest for Crystal Creek Properties and Walter Mott within the context of the Beveridge North West and Wallan South PSP's are illustrated in Figure 1.

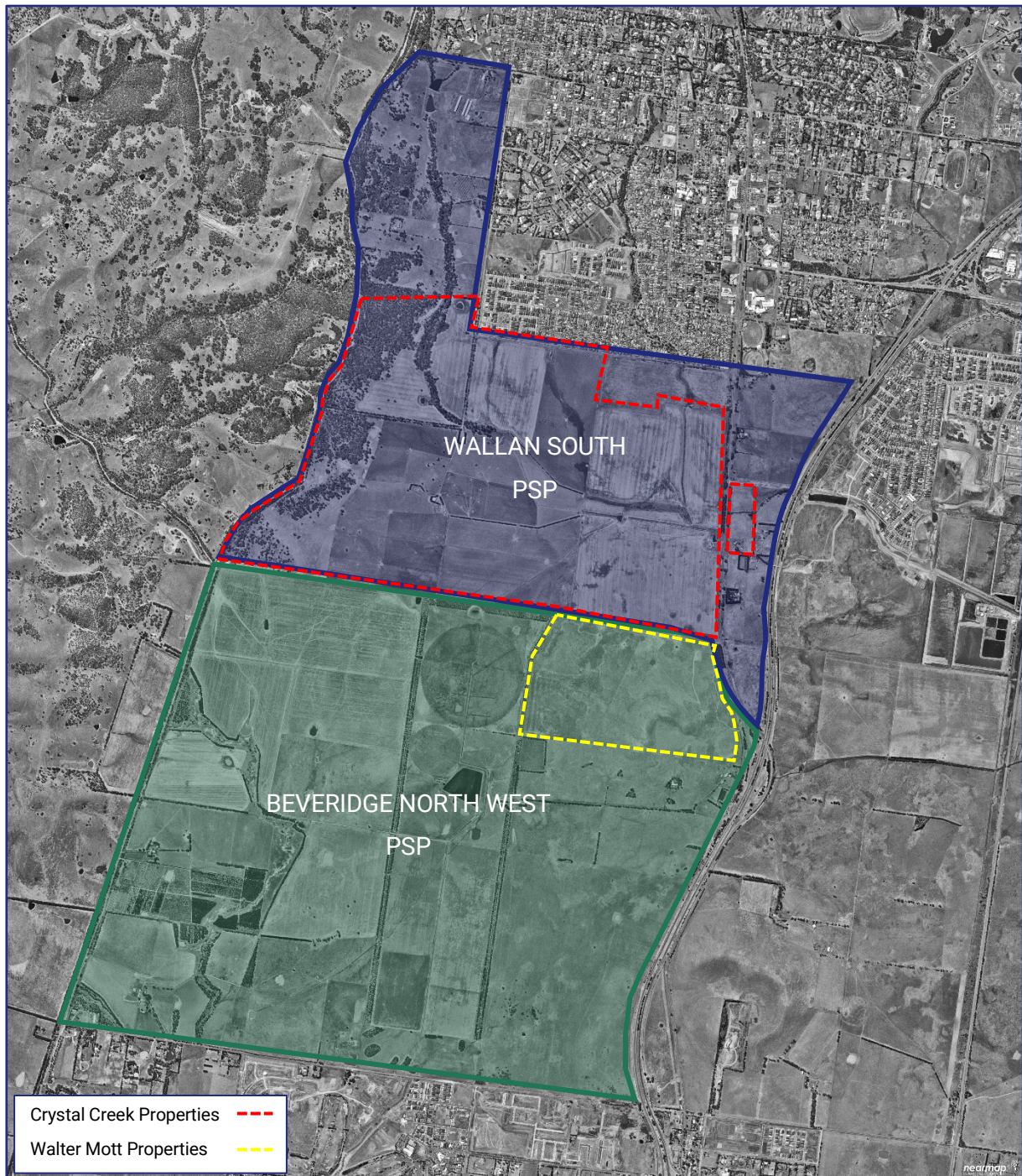


Figure 1: Crystal Creek Properties Locality Plan

Traffic Considerations

North Growth Corridor Plan

- 11 The Beveridge North West PSP road network is informed by the North Growth Corridor Plan. The corridor plan with the Beveridge North West area identified is illustrated as Figure 2.
- 12 The corridor plan shows 2 north-south arterials traversing through the Beveridge North West PSP area, as well as the Hume Freeway and Northern Highway forming the eastern abutment of the PSP.
- 13 In an east-west arrangement, the corridor plan highlights Camerons Lane and Hadfield Road as arterials and forming the southern and northern boundaries of the PSP respectively. The plan also shows another east-west arterial traversing through the PSP and continuing across (under or over) the Hume Freeway to connect to the future Beveridge North East PSP.

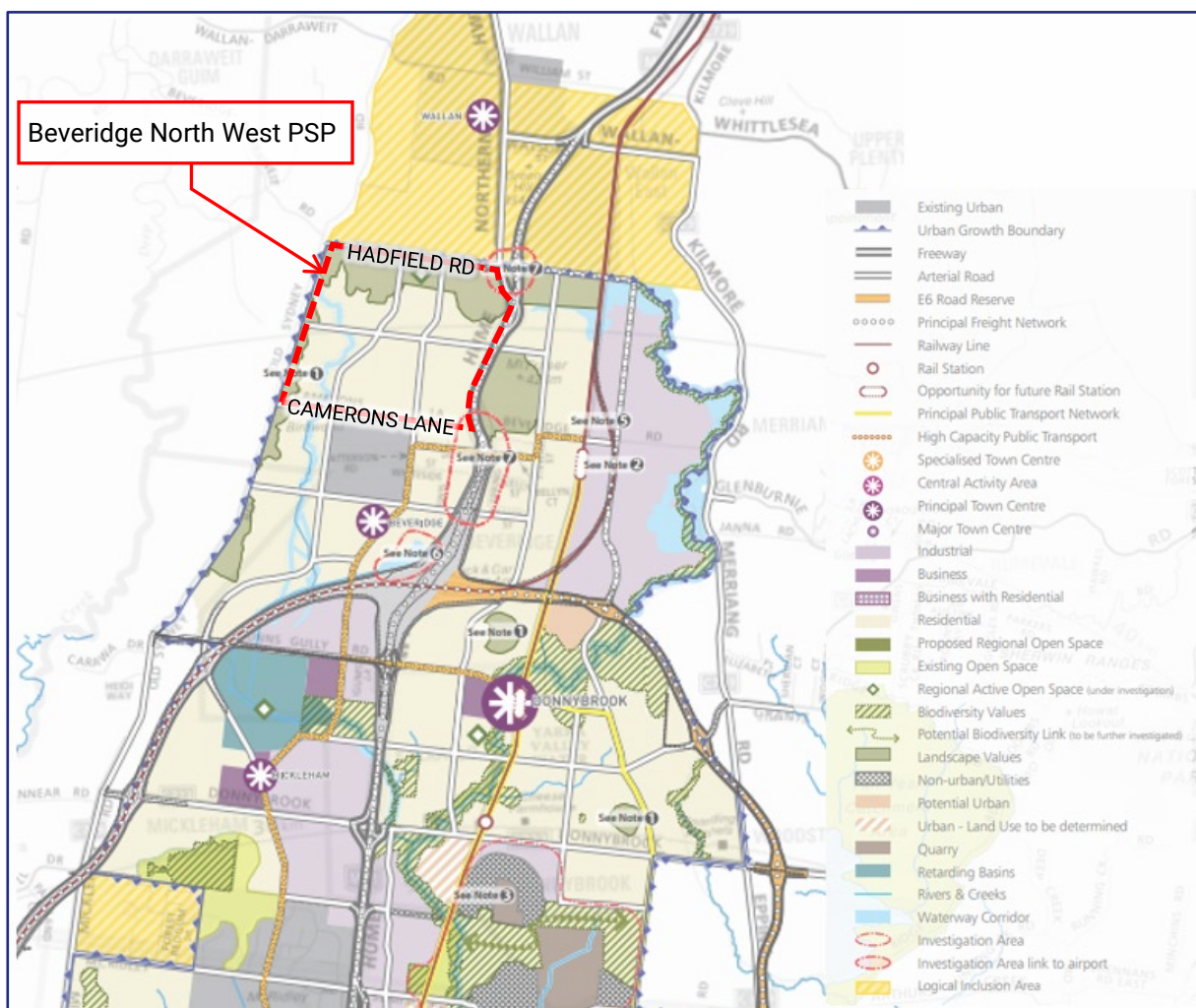


Figure 2: VPA North Growth Corridor Plan

Beveridge North West PSP – Road Network

- 14 The Beveridge North West PSP Road Network, illustrated as Figure 3, is largely consistent with the North Corridor Plan, however it replaces the east-west arterial with a connector street and notes the crossing of the Hume Freeway as a potential project subject to further investigation and funding.

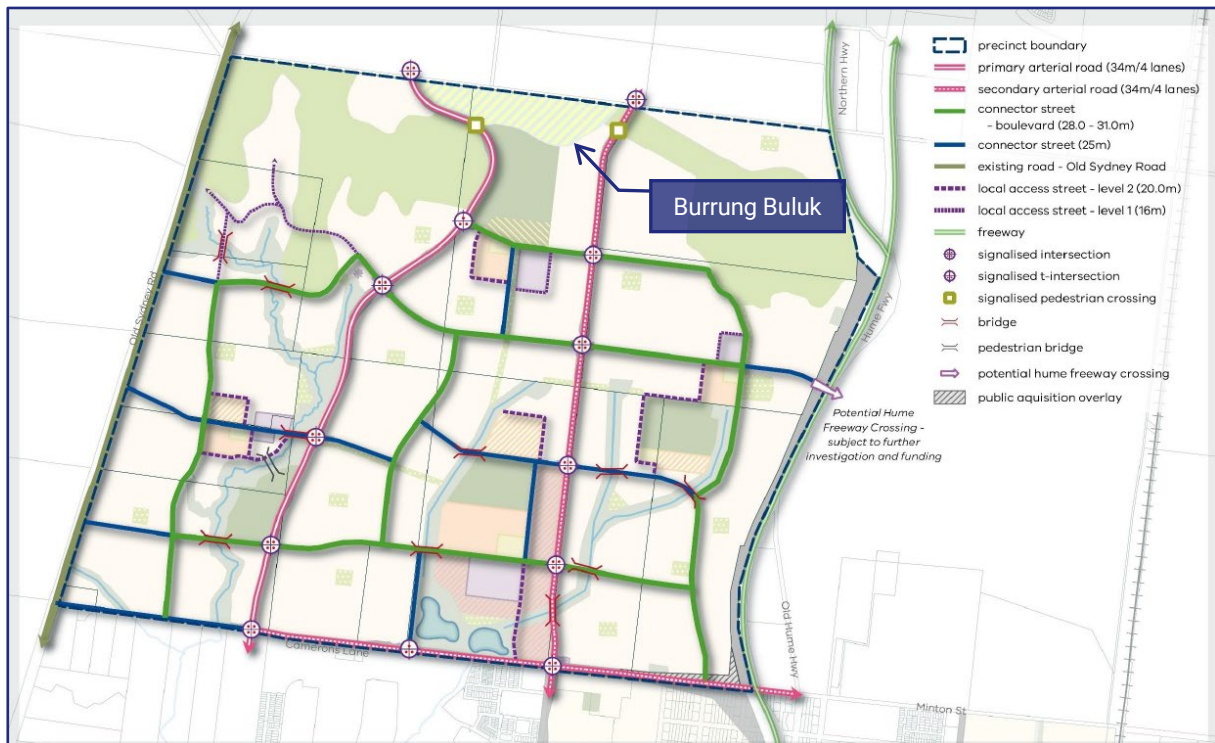


Figure 3: Beveridge North West PSP - Street Network

- 15 It is also evident the western north-south arterial in the northern part of the PSP has been realigned in a curvilinear nature to travel around steep topography and then pass to the west of the area identified as Burrung Buluk. This section of road has a relatively significant cost in the ICP, being \$16M.
- 16 I note at the closest point, in the northern part of the PSP, the 2 x north-south arterials are approximately separated by 600 – 700 metres.
- 17 In an east-west direction, the PSP has a separation of approximately 3.3km's between Camerons Lane in the south and the future Hadfield Road in the north.
- 18 The VPA Part A submission suggests a westerly translation of the northern part of the eastern north-south arterial by some 200 metres to be clear of the blast buffer of the quarry.
- 19 This translation means the 2 x north-south arterials will only have a separation of 400-500 metres.
- 20 I have prepared Figure 4 to diagrammatically show the potential realignment of the eastern north-south arterial as contemplated by the VPA.

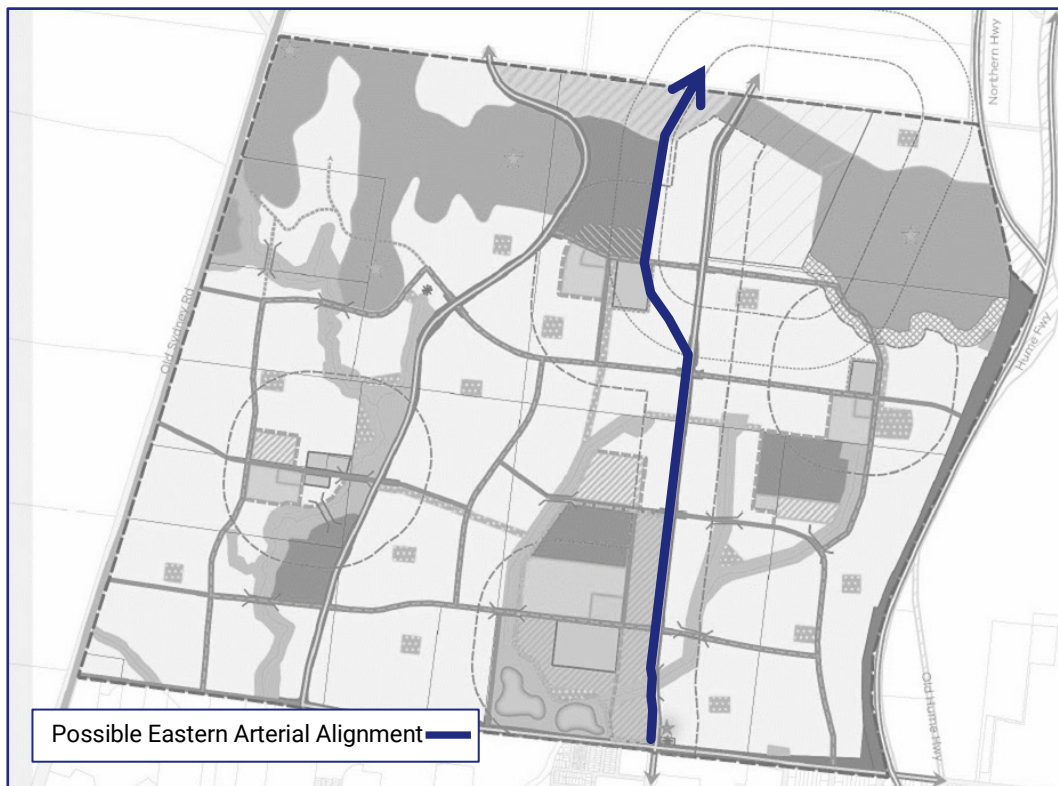


Figure 4: Possible Patterson Road Alignment based on VPA Part A Submission

- 21 I note the westerly translation will mean the arterial will necessarily traverse the eastern part of Burrung Buluk.

Traffic Modelling

- 22 The Beveridge North West PSP is informed by a GTA (now Stantec) modelling report, dated December 2018.
- 23 The report is premised on the road network that was exhibited for Amendment C106. That is, it does not account for the realignment of the western north-south arterial to travel around Burrung Buluk.
- 24 Additionally, the modelling does not allow for an east-west connection across the Hume Freeway, between Hadfield Road and Camerons Lane.

- 25 A summary of the expected 2046 daily traffic volumes, as expressed in Appendix B of the GTA report, for the key roads as they relate to Crystal Properties' landholdings is presented in Table 1.

Table 1: Beveridge North West - Projected Traffic Volumes (2046) from 2018 GTA Report

Road	Expected Daily Traffic Volumes
Western North-South Arterial - south of Hadfield Rd	12,120 vpd
Western North-South Arterial – north of Camerons Ln	18,890 vpd
Patterson Road (Eastern Arterial) – south of Hadfield Rd	8,400 vpd
Patterson Road (Eastern Arterial) – north of Camerons Ln	21,610 vpd
Hadfield Road (west of Hume Hwy)	10,770 vpd

- 26 These volumes are consistent with those cited within the VPA 2021 Background Report for Beveridge North West.
- 27 However, the GTA evidence for the C106 Panel presented updated modelling, which included significantly higher traffic projections.
- 28 A summary of the projected 2046 daily traffic volumes, as expressed in the GTA evidence, for the key roads as they relate to Crystal Properties' landholdings is presented in Table 2.

Table 2: Beveridge North West - Projected Traffic Volumes (2046) from 2020 GTA Evidence

Road	Expected Daily Traffic Volumes
Western North-South Arterial - south of Hadfield Rd	19,780 vpd
Western North-South Arterial – north of Camerons Ln	32,720 vpd
Patterson Road (Eastern Arterial) – south of Hadfield Rd	15,170 vpd
Patterson Road (Eastern Arterial) – north of Camerons Ln	27,640 vpd
Hadfield Road (west of Hume Hwy)	29,300 vpd

- 29 It is evident Hadfield Road plays a much more significant role in the latest modelling, such that its projected traffic volume goes from approximately 11,000 vpd to 29,000 vpd. This is largely to do with projected increases in population and larger employment projections associated with the Beveridge Intermodal Freight Terminal.
- 30 Similarly, the western north-south arterial has a significant increase in traffic, going from approximately 12,000 vpd to 20,000 vpd immediately south of Hadfield Road. This is due to the population and employment increases, but also an increased speed limit on this future arterial realising a greater attraction.

Wallan South PSP

- 31 I have been provided with the VPA Draft Place Based Plan for the Wallan South PSP, illustrated as Figure 5.

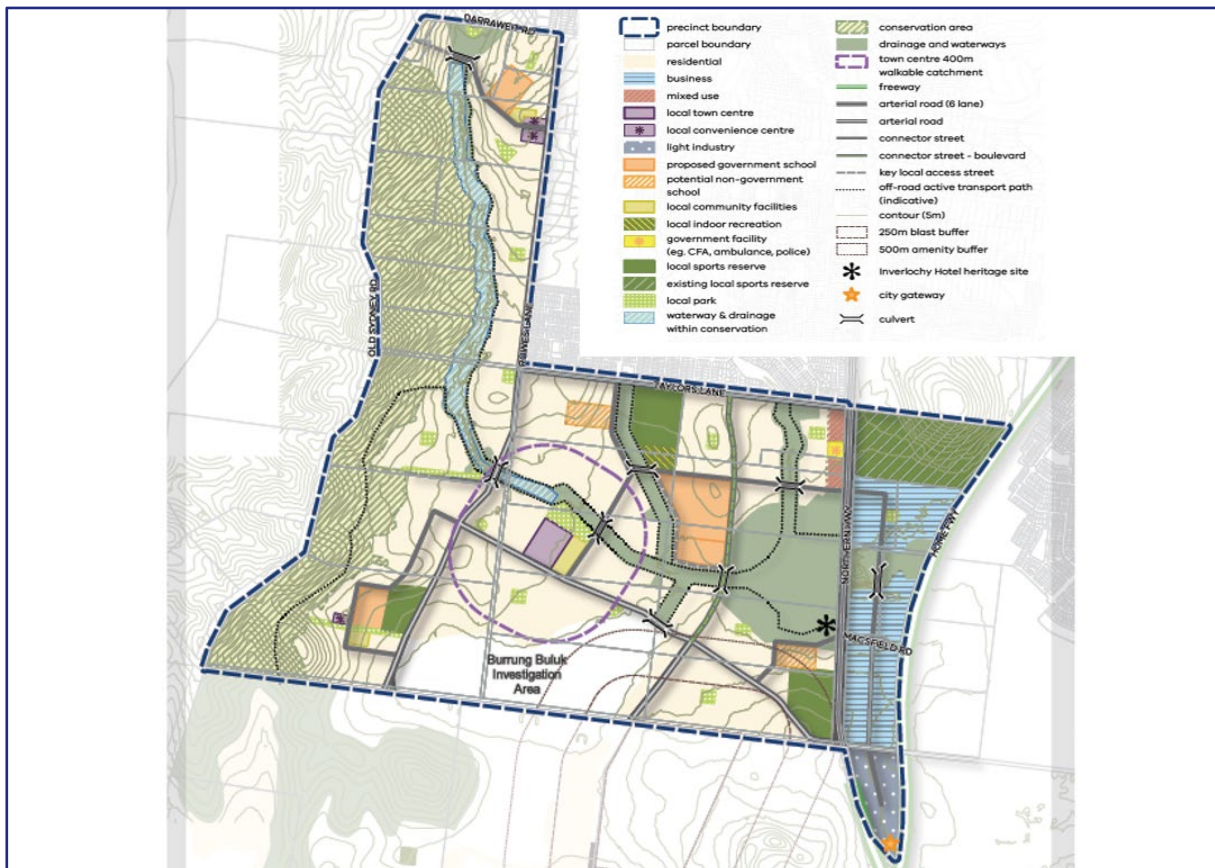


Figure 5: Wallan South Precinct Structure Plan – Draft Place Based Plan

- 32 Due to the recognition of Burring Buluk and the 250 metre blast buffer for the quarry, the draft plan shows an effective realignment of Hadfield Road. The realignment has Hadfield Road aligned at approximately 45 degrees from the north west (at the western north-south arterial) to connect at the existing reservation at Northern Highway at the south east.
- 33 The plan does not show the proposed re-alignment of Patterson Road (eastern north-south arterial) outside of the blast buffer.
- 34 To illustrate the combined road network across the two PSPs, I have overlaid the plans, attached as Appendix B.
- 35 I note the realignment of Hadfield Road results in a separation of the western section of Hadfield Road and Camerons Lane is approximately 4.4 kilometres.
- 36 It is also of note there is a significant conservation area in the western portion of the PSP, limiting the developable area in this area

Traffic Assessment

- 37 Arterial networks are generally developed as a 'one mile' grid.

East-West Roads

- 38 Camerons Lane is a planned arterial road and forms the southern boundary of the Beveridge North West PSP.
- 39 Hadfield Road has an existing reservation but no road exists. It forms the northern boundary of the Beveridge North West PSP.
- 40 The quarry application has identified there is limited sight distance to the north at the existing Hadfield Road reservation as it connects to the Northern Highway. This is due to a crest on the Northern Highway. On my site visit, I observed the intersection of the Hadfield Road reservation and agree the sight distance is limited.
- 41 A google street view image from the Hadfield Road reservation looking north is shown in Figure 6.



Figure 6: Google Street View – Looking North from Hadfield Road Reservation

- 42 To address this issue, the quarry application proposes an access further north such that sufficient sight distance is available to develop a safe intersection.
- 43 Beyond the connection to the Northern Highway, the Wallan South Draft Place Based Plan shows a northern translation of Hadfield Road to place it outside the blast buffer zone of the quarry and to deviate around Burrung Buluk.
- 44 There is a separation of approximately 3.3kms between the existing Hadfield Road reservation and Camerons Lane. This will increase to approximately 4.4kms at the western end of the proposed realigned Hadfield Road.

- 45 In view of this separation and the employment attraction of the Beveridge Intermodal Freight Terminal, I am of the opinion there is merit in providing for a midblock east west arterial road through the Beveridge North West PSP to connect across the Hume Freeway.
- 46 This connection would not be realised until development of the Beveridge North East PSP, but should be planned for nonetheless.
- 47 Provision of this arterial would be consistent with the North Growth Corridor Plan, lessen the reliance of Hadfield Road and Camerons Lane as providing the only east-west connections across the Hume Freeway, and most importantly provide for more convenient east-west accessibility for future residents.
- 48 The most significant part of this connection is between the western north-south arterial and Northern Highway, however there is also merit in providing for a continuation of the arterial road reservation through to Old Sydney Road. Whilst the western component of the connection is certainly not needed based on the traffic modelling, it would future proof a one-mile grid network in the east-west direction should the urban growth boundary ever be extended to the west.
- 49 If the reservation is not provided now, it would be lost beyond future acquisitions.
- 50 In relation to the future intersection of Hadfield Road and Northern Highway, the site distance issues can not be overcome without reconstructing the Northern Highway to remove the crest.
- 51 In this regard, it is more logical to translate Hadfield Road to the north such that reasonable sight distance can be afforded. The translation needs to be cognisant of the existing Macsfield Road intersection.
- 52 Beyond the sight distances issue, it would be a better road planning outcome to use the existing Hadfield Road reservation as the road progresses to the west. This is because the reservation exists and provides for better spacing between the existing Taylors Road reservation to the north. More particularly the spacing between Hadfield Road and Taylors Lane is approximately 1.8kms, generally aligning with the concept of a one mile grid.

North-South Roads


- 53 The Northern Highway and Hume Freeway form the eastern boundary of the Beveridge North West PSP.
- 54 Old Sydney Road forms the western boundary.
- 55 There is a separation of approximately 4.0kms between these roads at Camerons Lane, and the separation distance progressively reduces as one travels to the north.
- 56 Other factors influencing the provision of north-south roads include:
- The projected traffic volumes.
 - The encumbrance of Burrung Buluk.
 - The blast buffer zone for the quarry.

- The topography in the north west corner of the PSP, and the significant conservation area on the western side of the Wallan South PSP.
- The provision of east-west arterials.

- 57 The encumbrance of Burrung Buluk, the quarry and the topography will result in the proposed two north-south arterials in the northern section of the Beveridge North West PSP only having a separation of around 500 metres.
- 58 This separation is well below the typical one mile grid and diminishes the need for two arterials in the northern part of the Beveridge PSP, particularly considering the limited developable area adjacent in the north west corner of the PSP and conservation area adjacent to Old Sydney Road in the Wallan South PSP.
- 59 This seems to be given some consideration in the Wallan South PSP, with Patterson Road (eastern north-south arterial) ceasing approximately 500 metres to the north of Hadfield Road, then continuing as a 'Boulevard Connector'.
- 60 In my opinion, a more refined road network could be provided by the cessation of one of the north-south arterials from north of my suggested inclusion of a mid-block east-west arterial through the Beveridge North West PSP.
- 61 I think the extension of Patterson Road is the logical arterial to extend to the north given the difficulties with the encumbrances of Burrung Buluk and topography in the north west corner of the PSP. Additionally, Patterson Road is more central to the developable area within Beveridge North West and Wallan South than the western north-south arterial.
- 62 However, based on the 2020 projected traffic volumes, it would be prudent to plan for Patterson Road between Hadfield Road and my suggested east-west arterial to be able to operate as a primary arterial road, rather than a secondary arterial. This would require a 41 metre reservation for this section.
- 63 If the 2018 projected traffic volumes are preferred, then the need for a second north-south arterial road is further diminished and Patterson Road could be retained as a 34 metre reservation.
- 64 Based on the foregoing, my firm has prepared broad principles sketches of my suggested road network for the northern portion of the Beveridge PSP and the southern portion of the Wallan South PSP. Option A presumes Hadfield Road can be constructed through 'Burrung Buluk' whilst Option B presumes you can't.

Conclusions

- 65 Having undertaken a traffic engineering assessment of Amendment C158, I am of the opinion that:
- a) The inclusion of Burrung Buluk encumbers the provision of the road network within the Beveridge North West PSP and Wallan South PSP, particularly the alignment of Hadfield Road.
 - b) The VPA Part A submission proposes a westerly translation of Patterson Road to outside the quarry blast buffer zone. This will mean Patterson Road will traverse the eastern portion of the Burrung Buluk Investigation Area.
 - c) The Beveridge North West PSP road network should be modified to include a mid-block east-west arterial road with a future connection across the Hume Freeway.
 - d) The Beveridge North West PSP road network need only provide a single north-south arterial from north of the recommended east-west arterial. Patterson Road is the logical north-south arterial to extend.
- 66 I have made all the inquiries that I believe are desirable and appropriate and there are no matters of significance I regard as relevant, which to the best of my knowledge, have been withheld from the Committee.



JASON LEE WALSH
DIRECTOR
TRAFFIX GROUP
27 April 2022



Appendix A

Qualifications & CV

Name

Jason Lee Walsh - Director, Traffix Group Pty Ltd

Address

Level 28, 459 Collins Street

MELBOURNE

VICTORIA 3000

Qualifications

My educational qualifications and membership of professional associations are as follows:-

- Bachelor of Civil Engineering, Monash University
- Bachelor of Science, Monash University
- Fellow, Victorian Planning & Environmental Law Association

Experience

I have over 25 years experience in Traffic Engineering including:

- 1995-2000 at Turnbull Fenner (now Traffix Group), including short term placements at the cities of Bayside and Whittlesea,
- 2000-2011 at Grogan Richards Pty Ltd (now Cardno),
- 2011-present at Traffix Group.

Areas of Expertise

- Car parking and Traffic.
- Traffic advice and assessment of land uses and development proposals to planning authorities, government agencies, corporations and developers (including major residential, retail, food and drink, commercial, industrial, institutional and mixed use projects).
- Preparation and presentation of evidence before VCAT and Panels.

Expertise to Prepare this Assessment

My experience and expertise over the past 25 years, including involvement with varied forms of developments, qualifies me to comment on the traffic implications of the proposed amendment.

Instructions

I was instructed by Rigby Cooke Lawyers on behalf of Crystal Creek Properties Pty Ltd to undertake a traffic engineering assessment and prepare an evidence statement for Amendment C158.

Facts, Matters and Assumptions Relied Upon

- Beveridge North West PSP Strategic Transport Modelling Assessment prepared by GTA dated 10 December 2018.
- Mitchell Planning Scheme Amendment C106 - Panel Report dated 7 October 2020.
- Amendment C106 – Expert Evidence Statement prepared by Reece Humphreys (GTA) dated 6 July 2020.
- Draft Beveridge North West Precinct Structure Plan dated November 2021.
- VPA Northern Growth Corridor Plan.
- Draft Wallan South Precinct Structure Plan – Place Based Plan.
- Site inspection.
- Relevant experience.

Documents Taken into Account

See above.

Identity of Persons Undertaking Work

Jason Walsh as per the evidence statement.

James Cossins (Senior Traffic Engineer, Traffix Group) assisted with preparation of the evidence report.

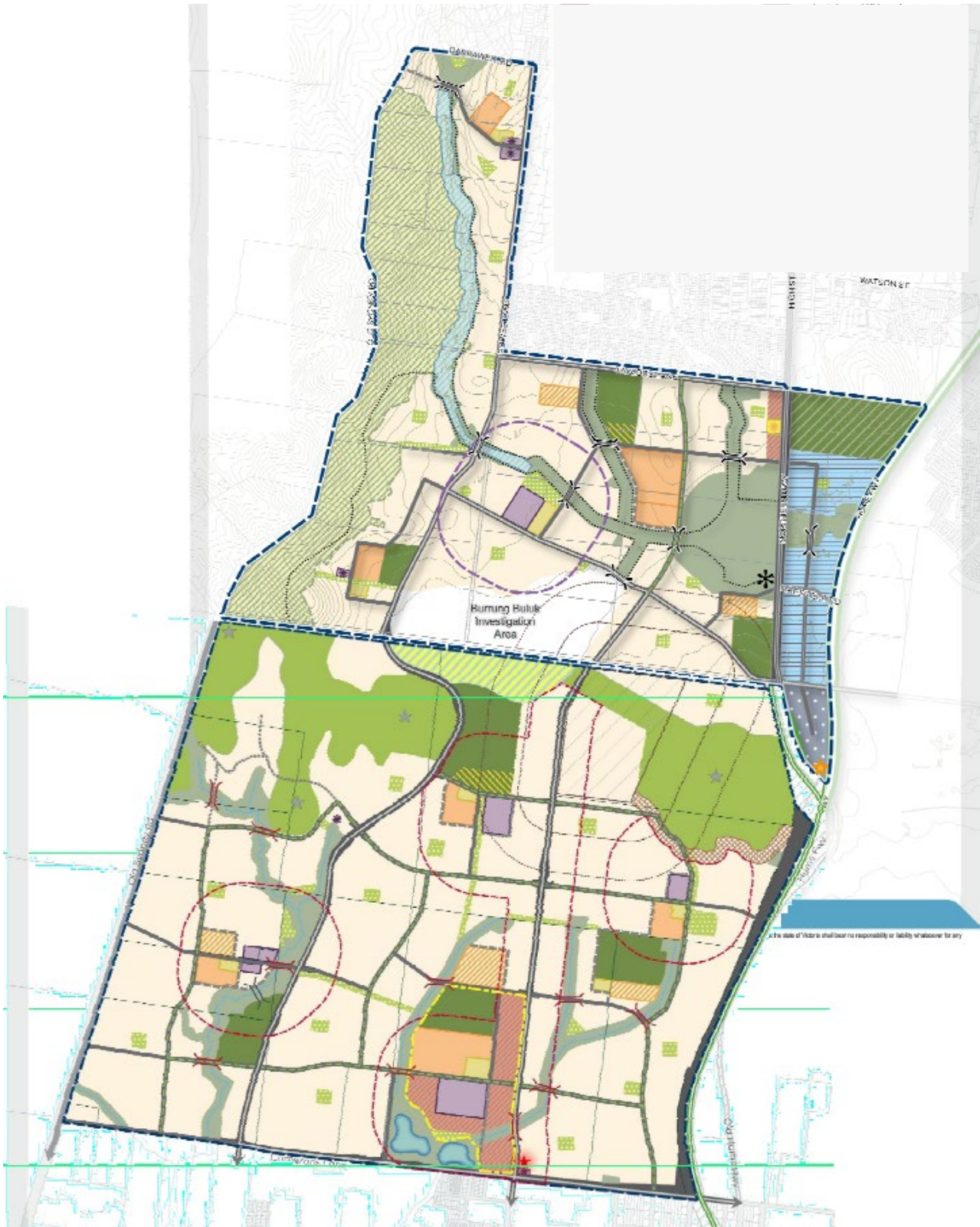
Summary of Opinions

See Conclusions section of the evidence statement.



Appendix B

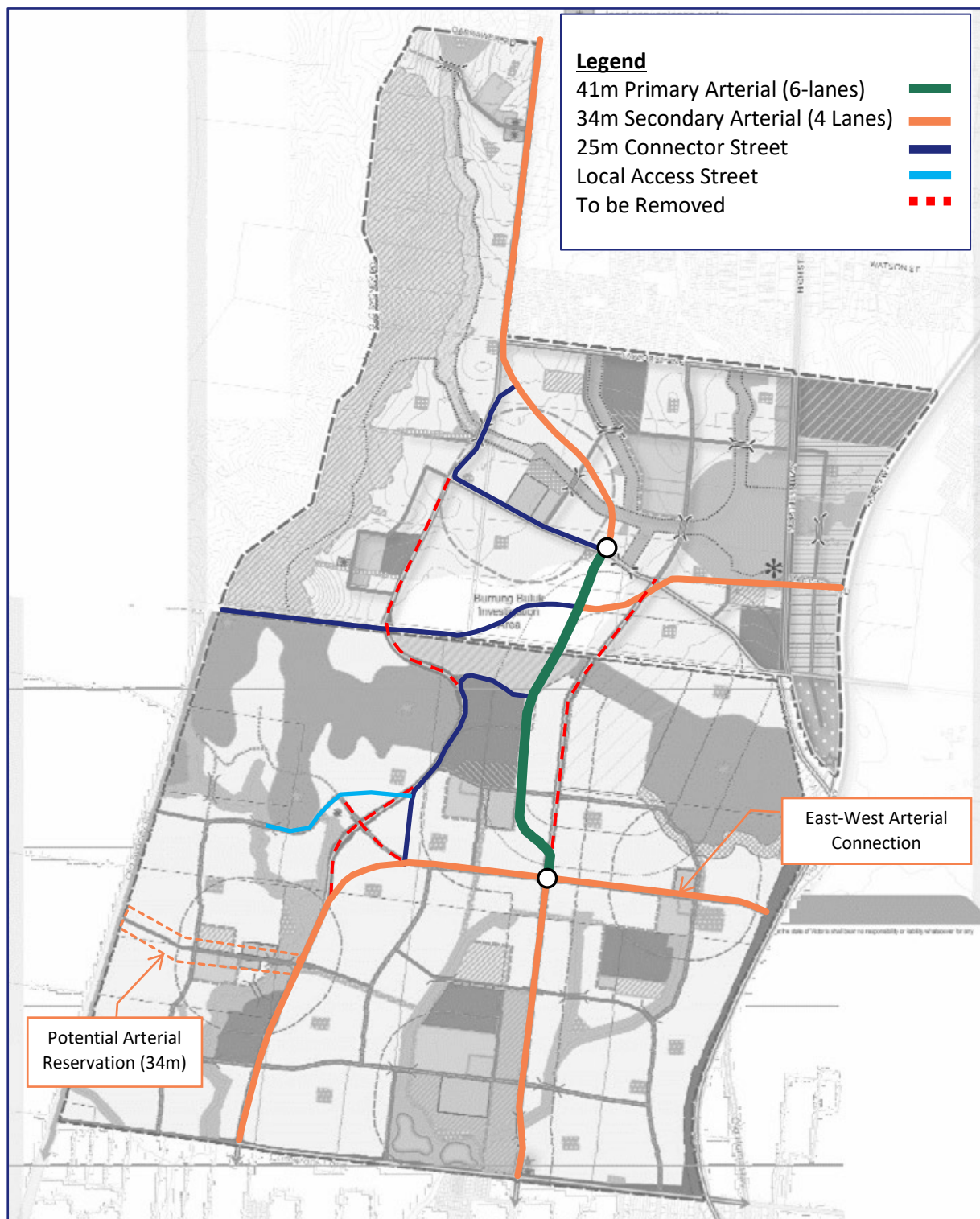
Combined Road Network Plan





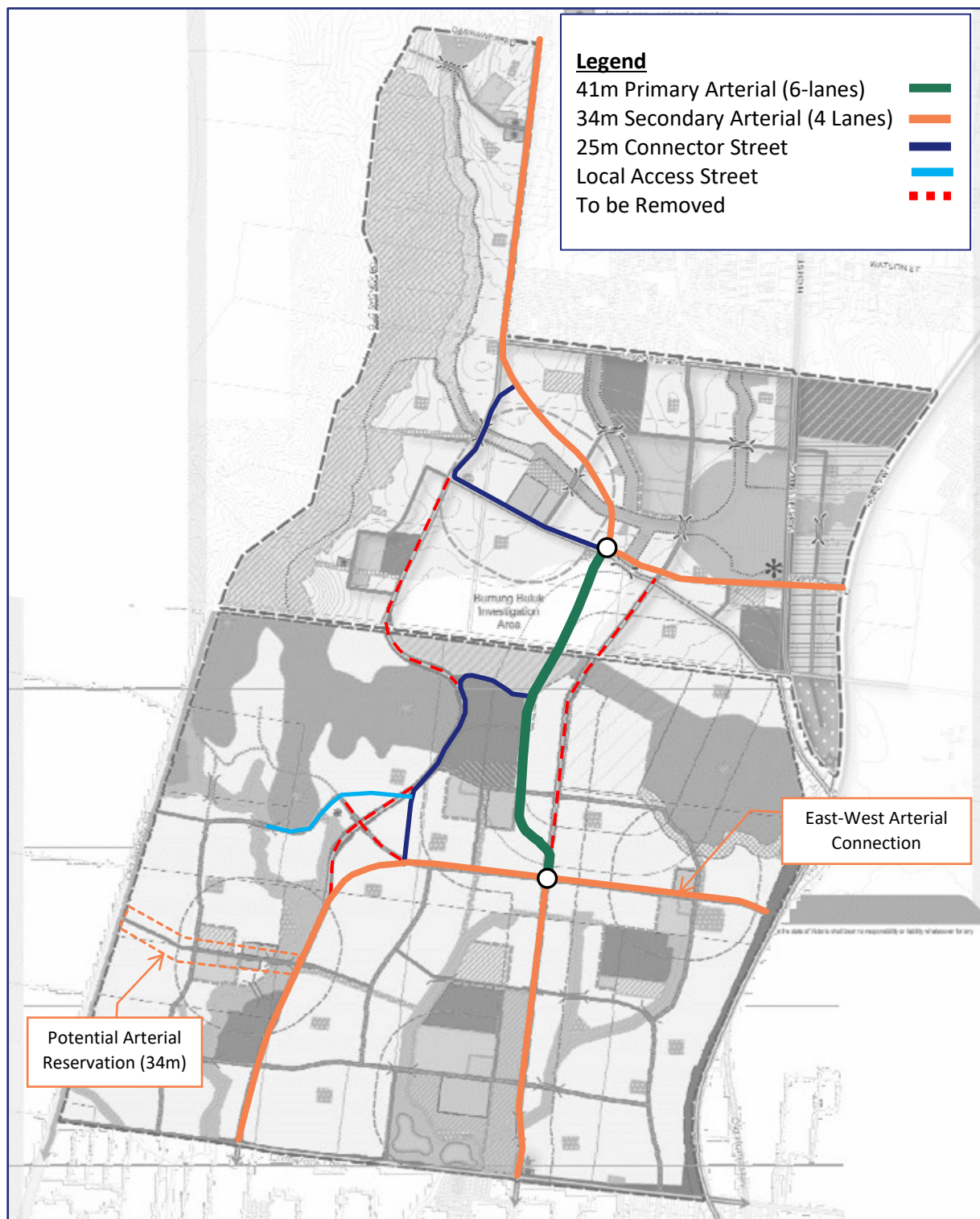
Appendix C

Recommended Road Network



Option A: Hadfield Road through Burrung Buluk





Option B: Remove Hadfield Road through Burrung Buluk

