

ratio:

Evidence prepared for
Mount Atkinson Holdings Pty Ltd

Prepared by
Hilary Marshall

2 September 2016

Traffic Engineering
Expert Evidence Statement

Amendment C162
Mt Atkinson and Tarneit Plains
Precinct Structure Plan

Traffic:evidence

r:

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Prepared for:

Mount Atkinson Holdings Pty Ltd



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1.1 Planning Panels Reference

Amendment C162

Mt Atkinson and Tarneit Plains Precinct Structure Plan

1.2 Name and Address

Hilary Anne Marshall

Senior Associate

Ratio Consultants Pty Ltd

9 Clifton Street, Richmond, VIC 3121

1.3 Professional Qualifications

Bachelor of Engineering (Civil) Hons, 1998, RMIT University

Bachelor of Business Administration (Management), 1998, RMIT University

1.4 Professional Experience

Senior Associate – Ratio Consultants	Jan 2016 – present
Associate – Cardno	Nov 2015 – Jan 2016
Senior Engineer – Cardno	Feb 2011 – Oct 2015
Associate – Urban Crossroads, Irvine, California USA	2004-2006
Senior Engineer – Grogan Richards	2002-2004
Engineer – Grogan Richards	1999 - 2001

1.5 Professional Expertise

- 1.5.1 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.
- 1.5.2 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 and parking implications of this proposal.

1.6 Instructions which defined the scope of this report

- 1.6.1 I have been instructed by Rigby Cooke Lawyers on behalf of Mount Atkinson Holdings Pty Ltd, to undertake a review of all relevant background material and prepare an expert evidence statement for submission and presentation at Planning Panels Victoria, in regards to Amendment C162 of the Melton Planning Scheme.
- 1.6.2 Specifically, I was instructed to prepare a witness statement, within the scope of your expertise and express your opinion as to whether the proposal is appropriate having regard to:
 - any regulatory framework applicable to the proposal which is within your expertise to examine and comment on;
 - your own judgement and experience; and
 - any other matter which you regard as relevant to the formulation of your opinion stating clearly the basis of your views.

1.7 Facts, Matters and Assumptions Relied Upon

1.7.1 In the course of preparing this report the facts, matters and assumptions I have relied upon are outlined as follows:

- Site visit, Sunday 28th August, 2016.
- 'Mt Atkinson & Tarneit Plains Precinct Structure Plan', prepared by the MPA, dated April 2016.
- 'PSP 1082 & 1085 Mt Atkinson & Tarneit Plains Precinct Structure Plan Background Report', prepared by the MPA, dated April 2016.
- Clause 56 of the Melton Planning Scheme.
- 'PSP 1082 Mt Atkinson and PSP 1085 Tarneit Plains, Transport Modelling Assessment', prepared by Jacobs, dated 4 July 2016.
- Melton Planning Scheme Amendment C162 Explanatory Report.
- Boral website www.boral.com.au
- The Public Transport Guidelines for Land Use and Development
- Submissions.

1.8 Further Information

1.8.1 During the process of preparing the following assessment the following documents were either unavailable or yet to be completed:

- Up to date Interim and Ultimate Broadscale VITM traffic modelling.
- The Mt Atkinson and Tarneit Plains Infrastructure Contributions Plan (ICP).
- Intersection concept designs for intersections identified in the Precinct Infrastructure Plan to demonstrate the ultimate land requirements and proposed configuration.

1.9 Identity of Persons Undertaking the Work

1.9.1 Hilary Marshall of Ratio Consultants.

1.10 Declaration

1.10.1 I have read the Planning Panels Victoria Guide to Expert Evidence and understand my duty to the Panel.

1.10.2 I have no relationship with the client other than a business engagement to comment on this matter.

1.10.3 My involvement in this matter commenced on 24th August 2016.

1.10.4 I have made all the inquiries that I believe are desirable and appropriate and that no matters of significance which I regard as relevant have to my knowledge, been withheld from the Panel.



Hilary Marshall
Senior Associate
Ratio Consultants

2 Introduction:

- 2.1.1 I have been retained by Mount Atkinson Holdings Pty Ltd, to provide my expert opinion in regards to Amendment C162 of the Melton Planning Scheme. Amendment C162 seeks to incorporate the Mt Atkinson and Tarneit Plains Precinct Structure Plan (PSP) into the Melton Planning Scheme.
- 2.1.2 This report has been prepared in accordance with the Planning Panels Victoria Guide to Expert Evidence. In the course of preparing this assessment, I have inspected the subject site and surrounding road network, reviewed the PSP and referred to the documents and plans outlined in Section 1.7.
- 2.1.3 My opinions with respect to the traffic related matters are set out in the following report.

3 Existing Conditions and Background:

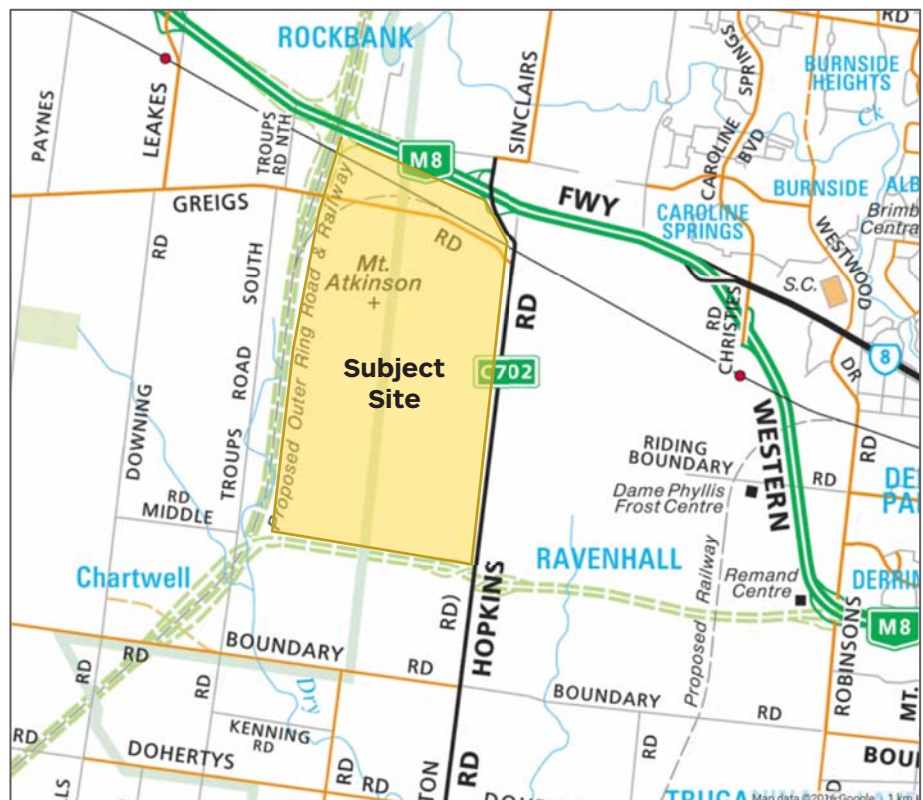
3.1 Background

- 3.1.1 The Mt Atkinson and Tarneit Plains Precinct Structure Plan (PSP) has been prepared by the Metropolitan Planning Authority (MPA) now known as the Victorian Planning Authority (VPA), in conjunction with the Melton City Council and other stakeholders.
- 3.1.2 Although Mt Atkinson (PSP 1082) and Tarneit Plains (PSP 1085) were originally identified as two separate precincts a single PSP covering both areas has been prepared by the VPA.
- 3.1.3 Amendment C162 seeks to incorporate the Mt Atkinson and Tarneit Plains PSP, into the Melton Planning Scheme.
- 3.1.4 It is noted that infrastructure requirements of the PSP area have been identified on the Precinct Infrastructure Plan (PIP), however it is proposed to adopt the State Government's new Infrastructure Contributions Plan (ICP) for the PSP. The ICP is yet to be approved by the Minister for Planning, after which time a further Amendment to the Melton Planning Scheme will need to be prepared in order to apply the ICP to the PSP area.

3.2 Location and Surrounds

- 3.2.1 The PSP area is generally bound by the Western Freeway to the north, Hopkins Road to the east, Middle Road (Proposed East West Bypass Link) to the south and the future Outer Metropolitan Ring Road (OMRR) to the west, as shown in Figure 3.1.

Figure 3.1: Precinct Structure Plan Area



Source: www.melways.com.au

- 3.2.2 The land is currently used primarily for agricultural purposes, with the Melbourne-Ballarat railway line located within the northern portion of the site.

- 3.2.3 The rail corridor serves the regional service to Ballarat as well as the Metropolitan serve to Melton
- 3.2.4 The Boral Deer Park Quarry is located to the east of Hopkins Road adjacent to the precinct. It is understood that the Boral site contains a quarry, asphalt and concrete plants, as well as landfill. With the access to and from the site via Hopkins Road, Middle Road and Christies Road.

3.3 Road Network

Hopkins Road

- 3.3.1 Hopkins Road is an arterial road generally aligned north south between Neale Road, just north of the Western Freeway and Boundary Road to the south. Hopkins Road continues south as Derrimut Road to the Princes Highway in Werribee.
- 3.3.2 Hopkins Road / Derrimut Road serve as the main North South Connection between Werribee and the Western Freeway.
- 3.3.3 Hopkins Road is within a Road Zone 1 (RZ1), under the control of VicRoads. The existing road reserve is 20 metres.
- 3.3.4 Hopkins Road has a posted speed limit of 70kph in the vicinity of Greigs Road, increasing to 100kph south of Greigs Road.

Greigs Road

- 3.3.5 Greigs Road is a rural road generally aligned east west between The Werribee River and Exford Road in Mt Cottrell to the west and Hopkins Road.
- 3.3.6 Greigs Road has an existing road reserve of approximately 60 metres.
- 3.3.7 The intersection of Hopkins Road and Greigs Road is controlled by give way control on Greigs Road.
- 3.3.8 Greigs Road is a Council owned road currently operating with a default speed limit of 100kph.

4 Mt Atkinson and Tarneit Plains PSP:

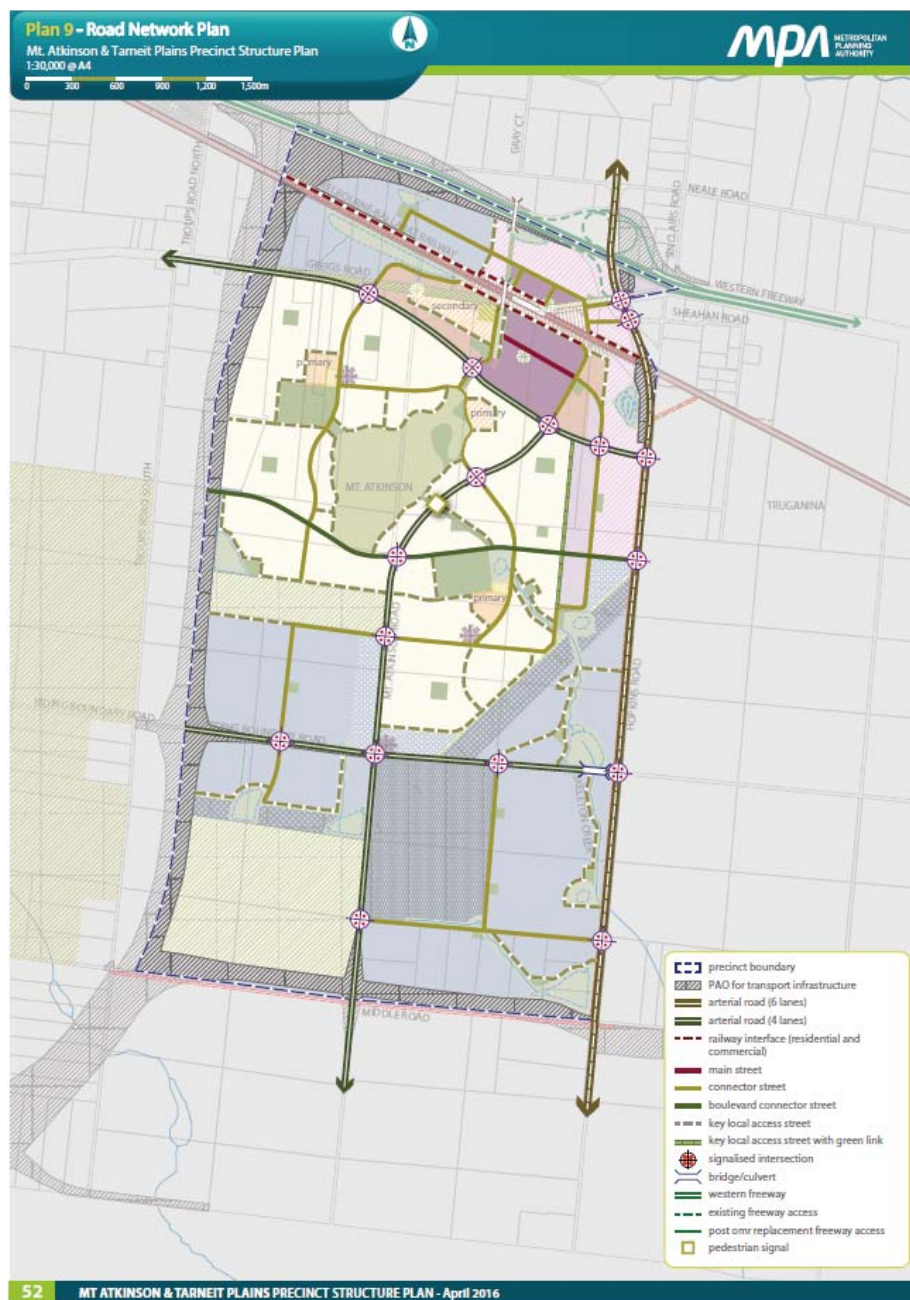
4.1 Overview

- 4.1.1 The PSP proposes a wide range of land uses, including residential, industrial, commercial, conservation, education and an activity centre.
- 4.1.2 I have reviewed the portions of the PSP relevant to my experience, which includes the road network, public transport and path network, the cross sections, intersections and specific concept plans included in the PSP. My comments in regards to the preceding areas of the PSP are outlined as follows:

4.2 Road Network

- 4.2.1 The proposed road network plan is shown in Plan 9 of the PSP and reproduced as Figure 4.2.

Figure 4.1: PSP Road Network Plan



- 4.2.2 The proposed road network identifies Hopkins Road as a Primary Arterial along the eastern edge of the PSP area. The primary road network within the PSP area is identified as Secondary Arterials of various cross sections.
- 4.2.3 The arterial road spacing south of Mt Atkinson follows a typical 1.6km grid, with Connector Roads shown approximately midblock.
- 4.2.4 The road network deviates somewhat in the northern half of the site, as the central North South Secondary Arterial diverts to the east to avoid the Mt Atkinson Conservation Area.
- 4.2.5 The proposed arterial road network is considered satisfactory. The connector road network is also considered satisfactory.

4.3 Issues with the Road Network Plan

- 4.3.1 Page 53 of the PSP outlines a number of requirements regarding transport and movement. I have undertaken a review of these requirements and the Road Network Plan and have the following comments:

Requirement R63

- 4.3.2 Requirement R63 states: *“Where a connector street crosses a waterway on Plan 9 - Road Network and is not listed in Table 9 - Precinct Infrastructure, the developer proponent must construct a connector street bridge prior to the issue of statement of compliance for the initial stage of subdivision on the opposite side of the waterway, whether or not that residential subdivision directly abuts the waterway.”*

- 4.3.3 The above requirement is considered too onerous and does not allow for alternative interim access arrangements. For example, if a plan of subdivision contains a Connector Road creek crossing as defined above but also has an alternative point of access to the arterial road network, then it would be unnecessary to construct bridge infrastructure prior to statement of compliance of the initial stage.

Requirement R65

- 4.3.4 Requirement R65 states: *“Any changes required to the design of roads and intersections in the PSP at the time of development must be accommodated within the land take identified in Plan 4 - Land Use Budget and Appendix A - Property Specific Land Use Budget.”*

This requirement seems overly restrictive given that intersection designs to my knowledge have not been prepared.

The requirement would be better presented as follows:

If land in addition to the areas identified in the Land Use Budget are required to satisfy the ultimate road and/or intersection requirements, land will be acquired from the affected land owner with ICP credit apportioned appropriately.

Local Road Network

- 4.3.5 A number of ‘Key Local Access Streets’ are shown on the Road Network Plan. There is no cross section in Appendix D or Appendix E that refers to such a cross section, this will lead to confusion and different interpretations as to what is a ‘Key Local Access Street’.
- 4.3.6 Regardless, the inclusion of Access Streets of any kind within the Road Network Plan, which is intended as an indicative guideline of the higher

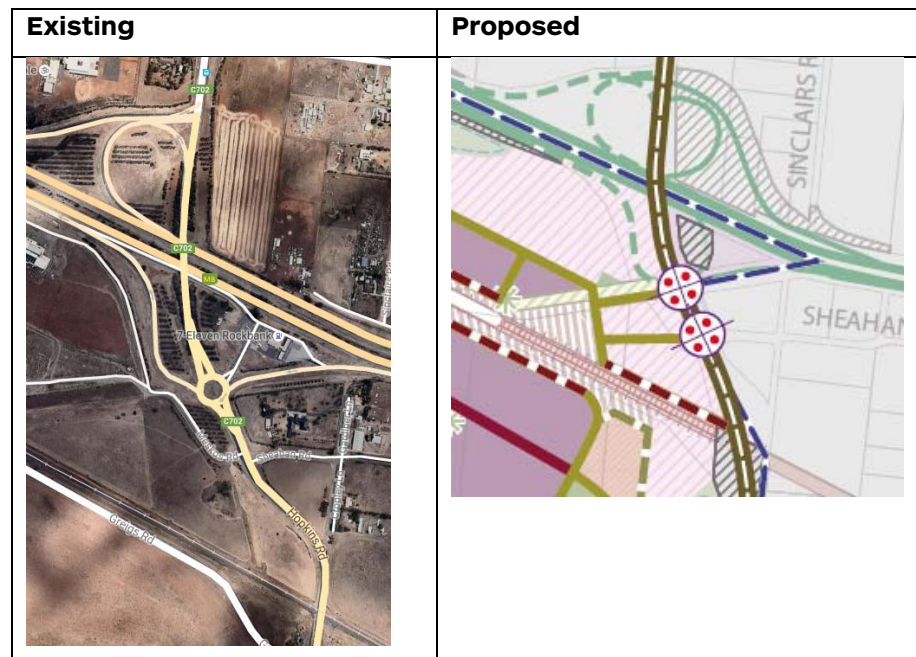
order road network, is in my opinion unnecessary and furthermore is inappropriate at this level of detail.

- 4.3.7 A number of the Access Streets are showing highly curved alignments that may not reflect good road design and are unlikely to be appropriate in some areas, such as the industrial use zone, which may require access by large trucks.
- 4.3.8 The alignment of access streets should be determined at the time of subdivision, when the topography of the site, the pattern of subdivision and other constraints are better understood.
- 4.3.9 Three of the key local access streets aligned east west, are shown as ending at their junction with the OMRR. Local Access streets will not intersect with the OMRR, therefore it is unclear whether the intention is to provide dead end streets or that an under / overpass will be constructed. The likelihood of three under / overpasses seems unlikely.
- 4.3.10 In my opinion the local roads should be removed from the plan, however if they are to remain, then the intention of the road connection should be clarified.

Intersection Spacing

- 4.3.11 The proposed traffic signal intersection spacing is generally considered satisfactory, with the exception of the two proposed traffic signals on Hopkins Road immediately south of the Western Freeway. The existing geometry and the proposed intersection spacing is shown in Figure 4.2.

Figure 4.2: Hopkins Road / Western Freeway Interchange



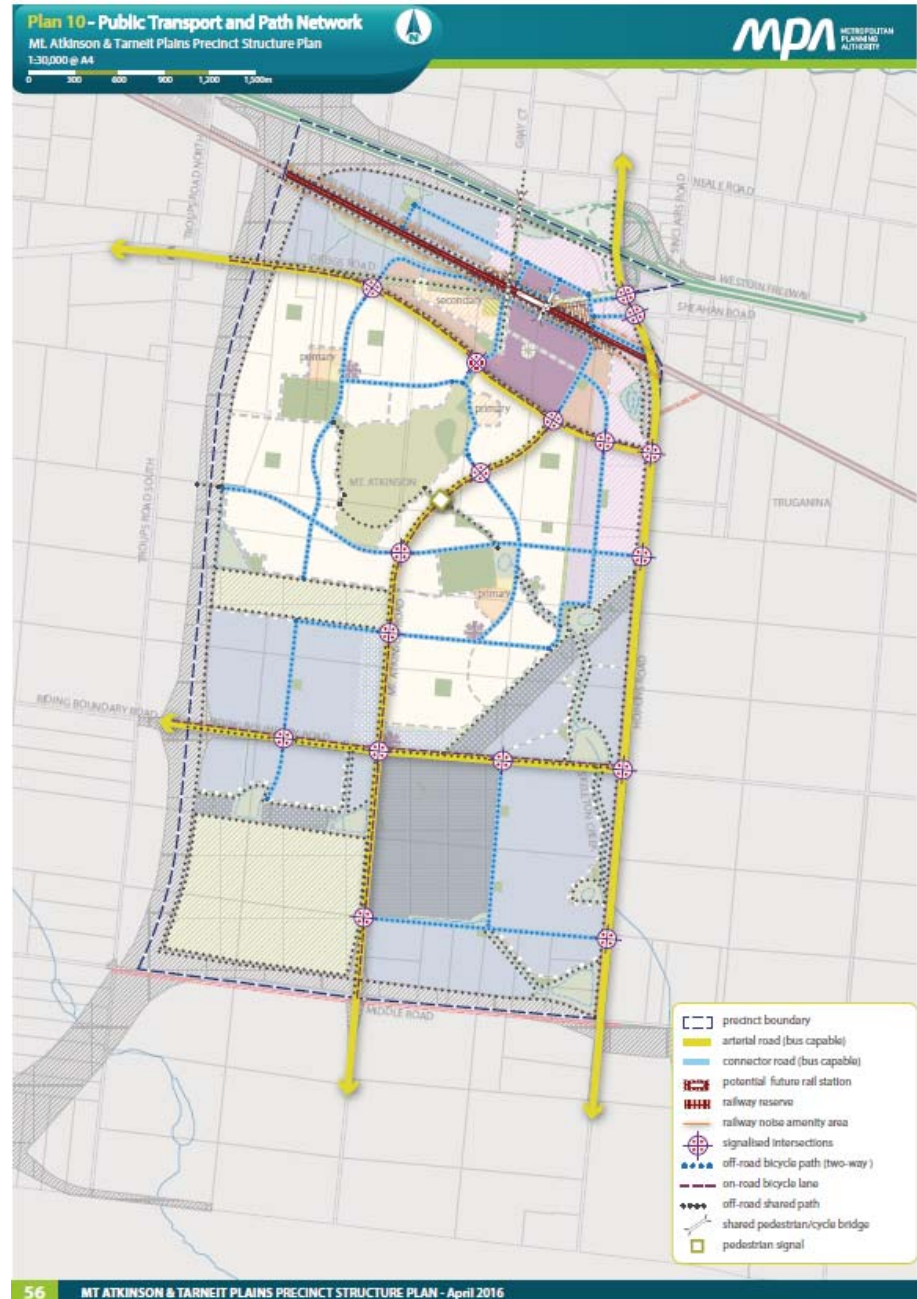
- 4.3.12 The existing intersection spacing between the Western Freeway westbound off ramp and Sheahans Road is approximately 170 metres.
- 4.3.13 The proposed intersection spacing in the PSP also appears to be 170m, which is undesirably close.
- 4.3.14 It is noted that in order to provide two way access to the west at the northern traffic signal, that the existing on ramp will need to be relocated to the eastern side of the intersection and through the service station site to the Western Freeway.

- 4.3.15 What this means in practical terms is that the northern traffic signal will be unable to be constructed without modifying the Western Freeway on ramp, which affects the existing service station land use.
- 4.3.16 The southern traffic signal of the two is only required in order to facilitate access to land use east of Hopkins Road. However the Road Network Plan doesn't show an eastern leg at this intersection, which should be amended.
- 4.3.17 In order to ensure future developers of land in the vicinity of the two traffic signals understand the implications regarding freeway access modifications, either the PSP should include additional discussion around these items or a clear diagram demonstrating the proposed changes to the Western Freeway on-ramp should be included.
- 4.3.18 The road shown as railway interface (residential and commercial) which is shown in the preceding figure as west of Hopkins Road immediately north of the railway line, should be removed from the Road Network Plan.
- 4.3.19 Assuming that the Hopkins Road railway crossing will be grade separated at some point, the proposed Rail Interface intersection with Hopkins Road will be difficult to include in any grade separation and as such should be removed from the PSP Road Network Plan. An appropriate local road network can be designed to the satisfaction of the Responsible Authority at the time of a planning application for the surrounding land uses.

4.4 Public Transport and Path Network Plan

4.4.1 Plan 10 of the PSP outlines the proposed public transport and path network throughout the PSP, which is reproduced as Figure 4.3.

Figure 4.3: Public Transport and Path Network Plan

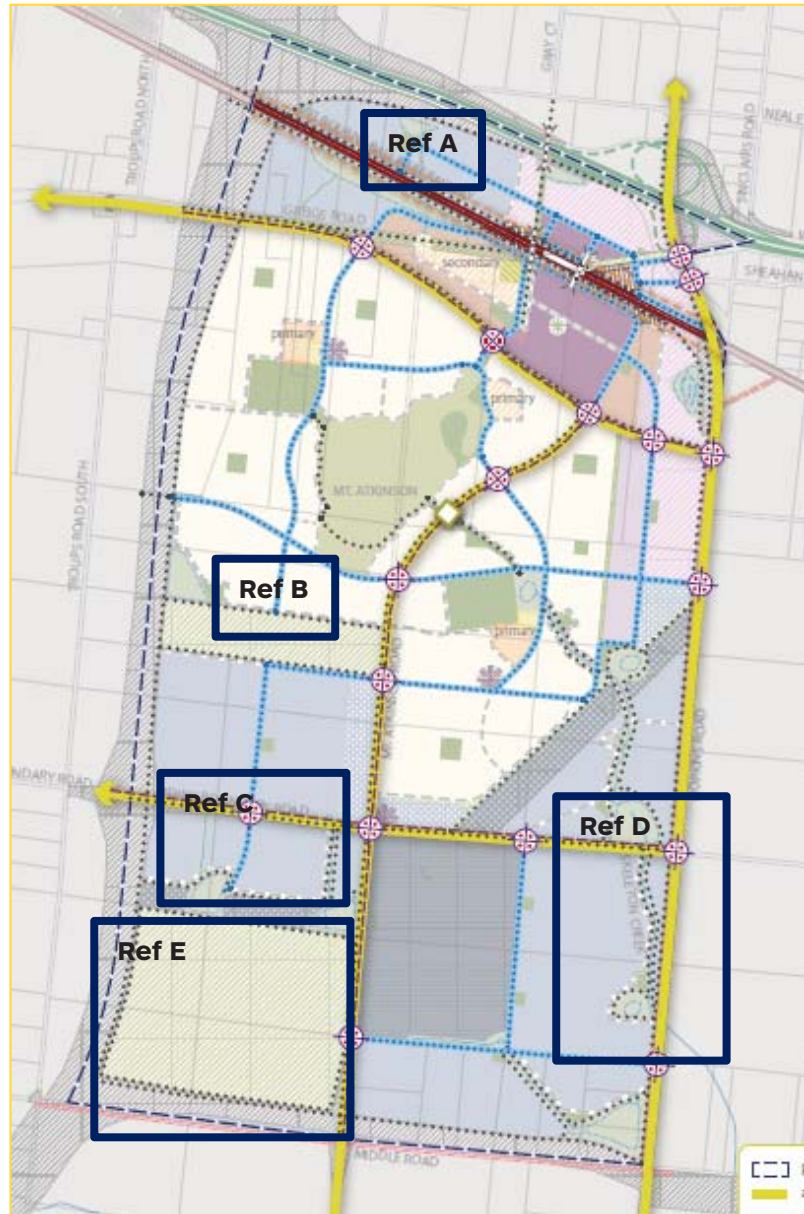


4.4.2 As shown in the above plan a comprehensive on road and off road path network is proposed. Each of the Secondary Arterial roads are proposed to have on road bicycle lanes, as well as an off road two way bicycle path.

4.5 Issues with the Public Transport and Path Network Plan

- 4.5.1 I have reviewed the proposed public transport and paths network diagram and have identified the areas highlighted on Figure 4.4 that need further clarification.

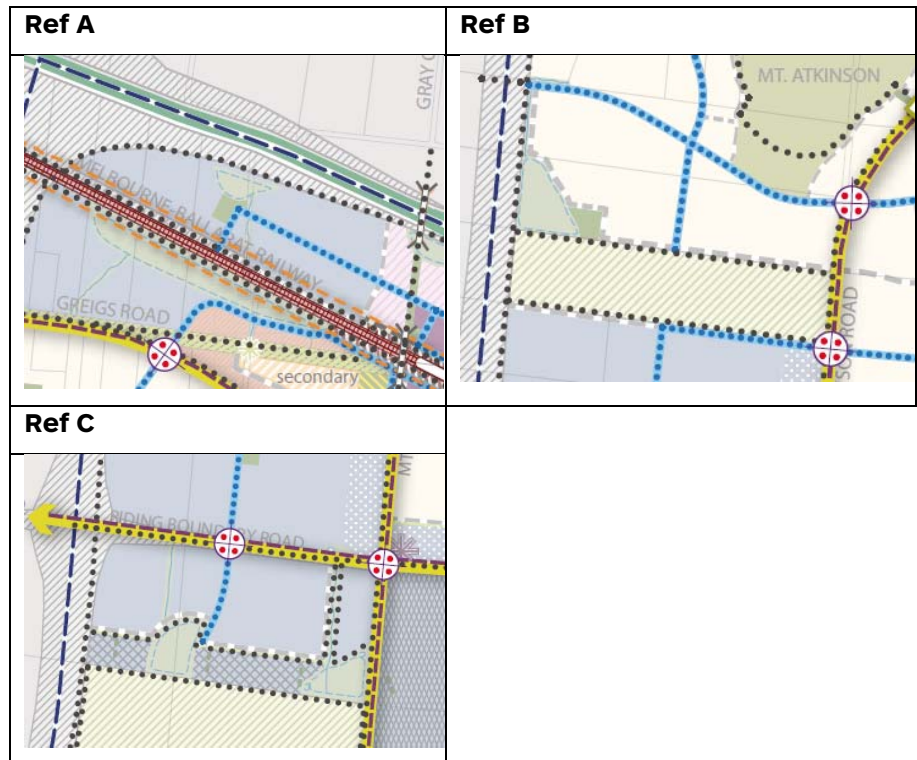
Figure 4.4: Public Transport and Path Network Plan Issues



Public Transport

- 4.5.2 A close up of the public transport issues identified in the preceding figure are shown in Figure 4.5.

Figure 4.5: Bus Routes shown as dead ends

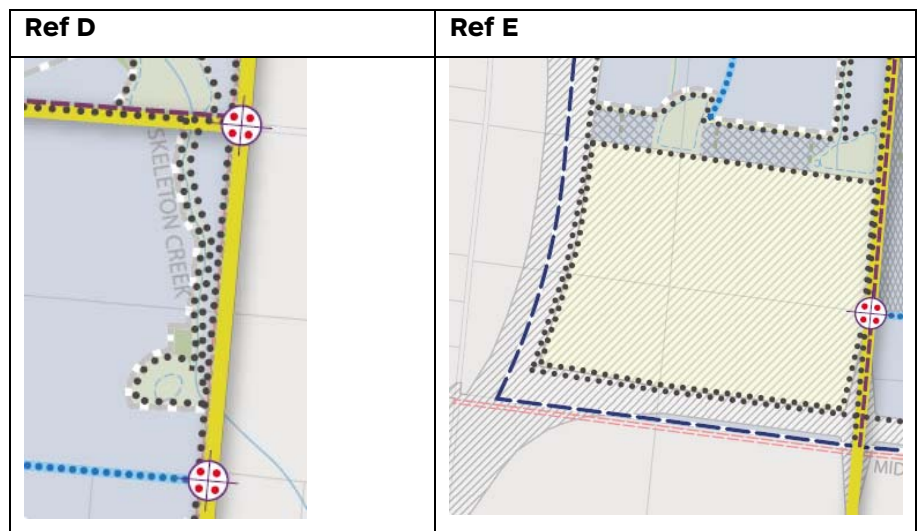


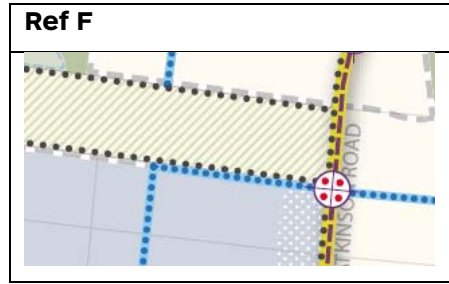
- 4.5.3 Several roads nominated as 'bus capable' are shown as dead ends. This is considered undesirable from a public transport network perspective, as buses would have to travel along these roads and complete a u-turn at the end, in order to get back to the circulatory road network.
- 4.5.4 It is considered highly unlikely that any of the dead ends would ever facilitate bus movements and as such should be removed from the Public Transport plan.

Path Network

- 4.5.5 A close up of the path network issues identified in Figure 4.4 is shown in Figure 4.6.

Figure 4.6: Unnecessary Duplication of Path Network





- 4.5.6 As shown in Reference D, it is proposed to have the off road bike path along the western side of Hopkins Road, plus an off road shared path within the High Pressure Gas Easement, as well as off road shared paths along both sides of Skeleton Creek.
- 4.5.7 Based on Nearmap the existing alignment of Skeleton Creek is approximately 170 metres west of Hopkins Road at the location of Riding Boundary Road. Therefore the PSP is proposing 4 paths within 170m or less all capable of accommodating bicycles.
- 4.5.8 The shared path on the eastern side of the Skeleton Creek south of Riding Boundary Road is considered unnecessary and should be removed from the path network.
- 4.5.9 As shown in Ref E, 2 shared paths seem to be shown on the eastern, southern and western sides of the conservation area. A single path around the perimeter of the conservation space within the abutting road reserves would be appropriate.
- 4.5.10 Providing the shared paths within the road reserve boundaries also ensures that the path network will be built as part of the surrounding road network and development of the PSP, rather than transferring the responsibility to Council.
- 4.5.11 Similar to the above, in my opinion there is no need to provide an off road bicycle path beside an off road shared path as shown in Ref F. In my opinion the north south off road bike path should end at the conservation area and transition into the off road shared path, up to the North South Secondary Arterial.

4.6 Road Cross Sections

- 4.6.1 I have reviewed the proposed road cross sections and have the following comments:

Cross Section 2 – Secondary Arterial Road 4 Lane (34m) - Standard Industrial Interface

Figure 4.7: Cross Section 2, Secondary Arterial

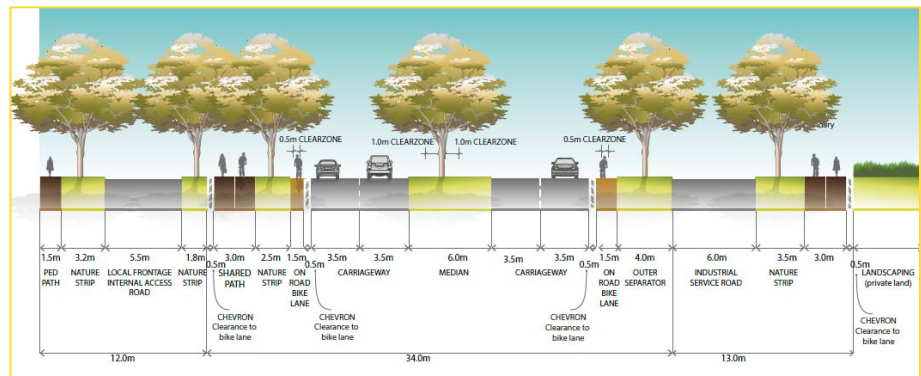
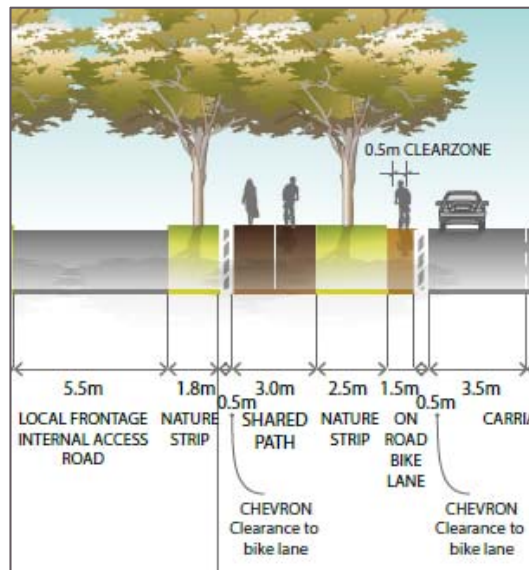


Figure 4.8: Cross Section 2, Detail of Shared Path



- 4.6.2 The preceding cross section indicates a 500mm chevron cross hatching on one side of the 3.0m shared path on both sides of the cross section shown in Figure 4.7. In my opinion the 3.0m width is sufficient for a shared path and does not need to be increased by a further 500mm.
- 4.6.3 The chevron linemarking also increases the required maintenance of the path and in my opinion provides no obvious benefit.

Cross Section 6 Secondary Arterial Road 4 lane (34m) inside 60m reserve (Greigs Road)

- 4.6.4 The PSP proposes to convert the existing 60 metre Greigs Road reserve as follows:
 - 34.0m Standard secondary arterial cross section
 - 20.5m Landscaped nature strip with shared path plus footpath
 - 5.0m of nature strip with 3.0m shared path
 - Total width equals 59.5m, therefore there is 0.5m unaccounted for.
- 4.6.5 It is recommended that the cross section be revised to reflect the full 60.0 metre road reserve.

Cross Section 8 – Connector Street – Residential (25.0m)

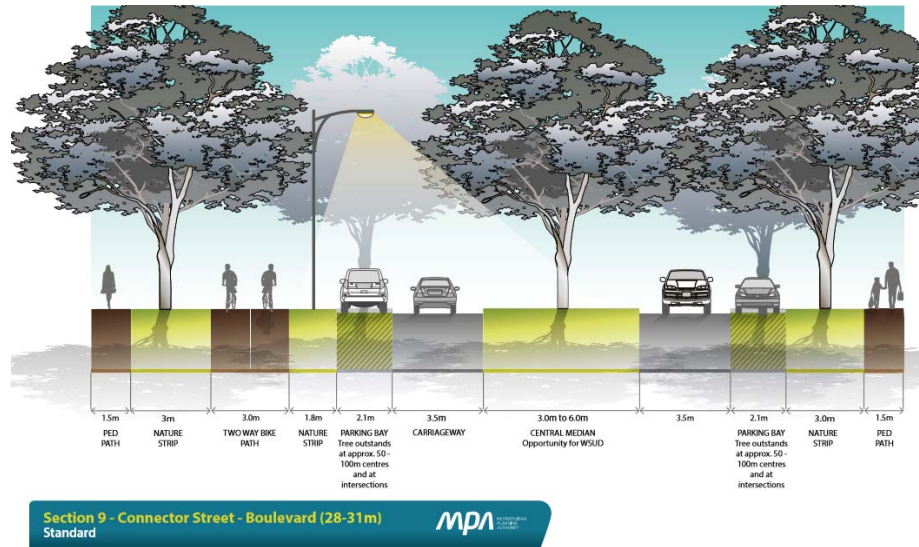
- 4.6.6 The proposed indented parking is only 2.1 metres in width, this does not accord with the Clause 52.06-8 of the Melton Planning Scheme which calls for a minimum dimension of 2.3m for parallel parking.
- 4.6.7 The additional width allows for a greater margin of error and more space for door opening between parked vehicles and passing traffic. This is especially important in high turnover areas such as the activity / commercial zones and high volume traffic roads.

Cross Section 9 – Connector Street – Boulevard (25-31m)

- 4.6.8 As per the comment above, the parallel parking should be increased to 2.3 metres in width.

- 4.6.9 The Boulevard Connector Road is identified on the path network as a bus capable Connector Road. The proposed cross section is shown in Figure 4.9.

Figure 4.9: Cross Section 9, Boulevard Connector Road



- 4.6.10 As shown in the cross section above it is proposed to have a single 3.5 m carriageway with indented parking separated by a central median of 3.0 to 6.0 metres.
- 4.6.11 The PTV design guidelines for a bus route with a median require a minimum lane width of 5.5 metres when there is no on road bike lane and a clear zone of 7.5 metres. On this basis and my experience with similar road cross sections, it is unlikely that PTV will support the proposed cross section as a bus route.

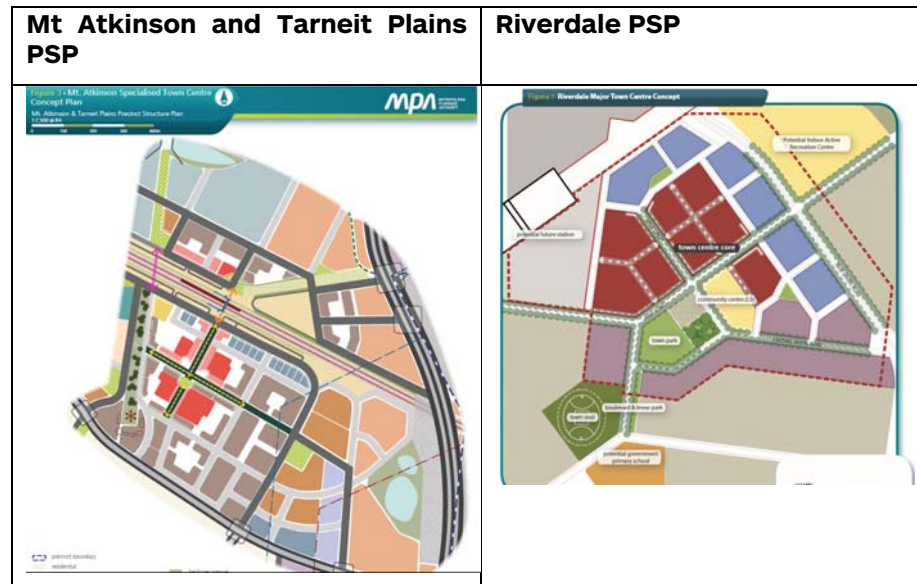
4.7 Southern Industrial Land Concept Plan

- 4.7.1 Figure 5 of the PSP outlines a recommended layout for the industrial land use in the southern portion of the site.
- 4.7.2 The concept plan is considered to be too prescriptive for the purpose of a PSP document.
- 4.7.3 The problem with providing too much detail is that the ultimate design of the industrial estate will be dictated by a number of factors including the type of end user anticipated, the topography of the land, the access and circulation required to accommodate large trucks if required and other such considerations.
- 4.7.4 Although a PSP is intended to be a guide for future development, I have found that once an application is lodged that concept plans within PSP's can be taken literally by the Council Officers, which then leads to debate about the intent of the concept and how far an application can deviate from the PSP concept plan.
- 4.7.5 On this basis, I recommend that the concept plan is revised such that there is no reference to building shapes and/or sizes and no road network should be shown other than arterial and connector roads which match the Road Network Plan.

4.8 Specialised Town Centre Concept Plan

- 4.8.1 As per the preceding discussion on the Industrial Land Concept Plan, it is my opinion that the Specialised Town Centre Concept Plan is also overly prescriptive.
- 4.8.2 The proposed PSP concept plan is shown in Figure 4.10 and compared to the Town Centre Concept Plan prepared for the Riverdale PSP area.

Figure 4.10: Activity Centre Concept Plans

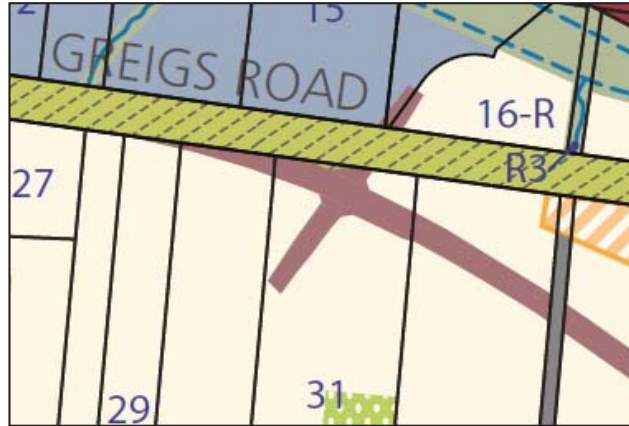


- 4.8.3 As shown in the preceding comparison considerably more detail is shown on the Mt Atkinson and Tarneit Plains Town Centre Concept Plan than in the Riverdale PSP.
- 4.8.4 In my opinion the Riverdale PSP example on the right, provides a better level of flexibility for future development.

5.1 Greigs Road / Connector Road Intersection

- 5.1.1 The indicative alignment of the proposed Greigs Road / Connector Road intersection is shown in Plan 4 Land Use Budget of the PSP and reproduced as Figure 5.1.

Figure 5.1: Proposed Greigs Road / Connector Road Intersection Alignment



5.2 Issues

- 5.2.1 The proposed PSP intersection is estimated to be displaced from the existing road reserve by in the order of 40 metres. The offset is insufficient to enable the proposed intersection to be constructed, whilst still maintaining through traffic on Greigs Road.
- 5.2.2 The angle of the proposed intersection also poses problems for anyone wishing to construct an interim intersection treatment. The angle of the proposed intersection, would result in a skewed approach, rather than 90 degrees (as per good design practice), to Greigs Road in an interim design that matched into the existing Greigs Road alignment.

5.3 Alternative Intersection Location

- 5.3.1 In order to address the preceding issues Ratio prepared an alternative alignment, which is shown in part as Figure 5.2.

Figure 5.2: Proposed Alternative Intersection Location



5.4 Benefits of Alternative Intersection Location

- 5.4.1 The proposed intersection design is considered to be a better option as it can be constructed in the interim, without reliance on the realignment of Greigs Road.
- 5.4.2 The intersection can be built within the existing road reserve.
- 5.4.3 Development within growth areas typically occurs in a segmented approach, with land being developed as it becomes available. A benefit of the proposed alternative location is that it places the southern leg of the intersection solely within a single land holding. Therefore if the landholder to the south wanted to proceed with a residential development, an interim intersection design could be facilitated within the existing road reserve without impact on adjacent land owners or requiring any additional land along the Greigs Road corridor.
- 5.4.4 Locating the intersection as shown in Figure 5.2, significantly reduces the amount of redundant works associated with the interim access arrangements.
- 5.4.5 The proposed design would allow the majority of interim works, whether they be an unsignalised intersection, a T-intersection or a combination of both, to be constructed in their ultimate location. Therefore, minimising the amount of future road works required to complete the full 4 way signalised intersection, contemplated with the PSP.

5.5 Summary of Opinion

- 5.5.1 Based on the preceding discussion it is my opinion that the proposed Connector Road intersection, east of the future OMRR, should be located within the existing Greigs Road, road reserve, to allow the construction of an interim intersection treatment, to facilitate residential development south of Greigs Road in the near future.

6.1 Summary of Traffic Modelling

- 6.1.1 Jacobs prepared a Transport Modelling Assessment for the MPA covering the Mt Atkinson and Tarneit Plains PSP area, dated 4th July 2016.
- 6.1.2 The study was primarily to determine the most appropriate Victorian Integrated Transport Model (VITM) to use for future traffic modelling of the Mt Atkinson and Tarneit Plains PSP area.
- 6.1.3 The findings indicate that the VITM used for the Rockbank PSP area to the west is appropriate for traffic modelling of the subject land and that although some updates to the VITM are recommended that they are unlikely to change the conclusions reached.
- 6.1.4 The Jacobs modelling indicates that the internal road network of the PSP area should still have capacity by buildout conditions in 2046, however the surrounding arterial road network will be approaching capacity, particularly the Western Freeway, Hopkins Road and Boundary Road. The 2046 analysis assumes that the OMRR is in place.
- 6.1.5 Although an Interim (2026) analysis was not undertaken, the Jacobs report assumed that if 75% of the PSP area was built out by 2026, it is recommended that Hopkins Road and Greigs Road are upgraded to 4 lane arterials by 2026.

7.1 Issues

- 7.1.1 Although the PSP area will be well served by significant road infrastructure in the long term including the OMRR and the East West Bypass Link, there is no indication of when these projects will be undertaken. Given the magnitude of the projects, it would be reasonable to assume that they will be medium to long term projects.
- 7.1.2 In the interim, the entire PSP area is dependent on Hopkins Road, with traffic expected to either head north to the Western Freeway or south towards Werribee, to access employment, shopping, education and other services.
- 7.1.3 The preamble to the table of Transport and Movement requirements within the PSP states the following:
 - 7.1.4 *"It should be noted that VicRoads will deliver the long-term widening of Hopkins Road adjacent to the PSP area when required by the strategic road network. One of the considerations for the timing of delivery will be the quarry operations, as land within the title boundary of the Deer Park Quarry may be required to facilitate the future road widening."*
- 7.1.5 The land acquisition and road widening for Hopkins Road is not included in the PSP.
- 7.1.6 The existing rail crossing on Hopkins Road is also excluded from any discussion within the PSP.
- 7.1.7 Submission number 17 states the following:
 - 7.1.8 *"Due to Boral Quarry advice about potential financial compensation for lost resource's with an eastern widening, VicRoads will not be acquiring the ultimate road widening until post-quarrying operations"*.
 - 7.1.9 The time frame of when post quarry operations may occur is not clear. However, the Boral website suggests that the land to the east will continue to be used for landfill purposes for the next 40-50 years. The Boral website also states that significant investment in new infrastructure has recently been undertaken by Boral.
- 7.1.10 Therefore, regardless of whether quarrying activity is occurring or some other activity on the Boral site, it is expected that a Public Acquisition Overlay (PAO) will incur some form of compensation.

7.2 Interim Solution

- 7.2.1 Submission number 17 requests that an interim Hopkins Road cross section be included in the PSP that utilises the existing 20 metre road reserve. The interim road design is proposed to accommodate two lanes in each direction plus a central 3.5 metre median for turning lanes where required.
- 7.2.2 The proposed change would require all services to be located outside of the 20m road reserve, as well as any pedestrian and/or bicycle paths. Furthermore the proposed interim cross section makes no allowance for bus stops, with additional road widening beyond the existing 20m reserve required to accommodate bus stops.
- 7.2.3 At intersections, both right and left turn deceleration lanes will be required. This results in at least 21 metres of road pavement (6 lanes x 3.5 metres). This doesn't include drainage, traffic signal pedestals and infrastructure, footpaths / bike paths as mentioned or bus stops.
- 7.2.4 Therefore any intersection constructed along Hopkins Road will require additional widening into the gas easement. This may not be acceptable

to the gas authority (APA) and will require additional cost and negotiations to achieve.

- 7.2.5 The Interim Hopkins Road proposal will prevent any new road infrastructure such as road widening and traffic signals, from being built in the ultimate location.
- 7.2.6 As the road widening and interim traffic signals will be largely redundant once the additional 21 metre widening is acquired, this will result in a significant amount of reconstruction when Hopkins Road becomes a 6 lane Primary Arterial as intended.

7.3 Discussion

- 7.3.1 Although duplication of Hopkins Road will be at the cost of VicRoads, the interim proposal seems short sighted, given that the preliminary traffic modelling undertaken by Jacobs, is suggesting that the Ultimate 6 lane arterial will be required and under pressure by buildout of the PSP area, even with the OMRR in place.
- 7.3.2 In regards to the Mt Atkinson PSP, the future developers of the land should not be penalised in terms of funding credits, during construction of the interim traffic signals due to any additional cost associated with widening into the gas easement or constructing infrastructure in locations that will ultimately be redundant

- 8.1.1 Based on the preceding discussion it is my opinion that a number of changes should be made to the Mt Atkinson and Tarneit Plains Precinct Structure Plan, prior to it being incorporated in the Melton Planning Scheme. A summary of the recommended changes from a traffic and transport perspective are outlined below:

Road Network

- Remove local access streets from the Road Network Plan.
- Change wording of Requirements R63 and R65.
- Traffic signals immediately south of Western Freeway need to be enlarged with details of the required changed to the Western freeway on-ramp clearly delineated.
- In addition to the above, the southern traffic signal of the pair needs to show an eastern approach.
- The Railway Interface Street should not intersect with Hopkins Road at the location of a future grade separation.

Public Transport

- Remove any dead end bus capable roads from the Public Transport and Path Network Plan.

Path Network

- Remove redundant shared paths as identified in Section 3.5 of this report.

Road Cross Sections

- All cross sections should adopt a minimum parallel parking width of 2.3 metres (rather than 2.1m currently shown).
- Cross Section 2. Remove 500mm chevron line marking from shared paths.
- Remove reference to Key Local Streets on Road Network Plan or provide a corresponding cross section.
- Cross Section 9. A Boulevard Connector Road with a median and a single traffic lane in each direction is generally not supported by PTV as suitable for a bus route.

Concept Plans

- Simplify all concept plans. Remove any reference to building shape and/or size from the plan, as well as the local road network, other than Connector Roads and Arterial Roads which match the Road Network Plan.

Greigs Road / Connector Road Intersection (east of OMRR)

- Relocate the proposed Greigs Road / Connector Road intersection to the west, so that an interim access can be constructed within the existing Greigs Road, road reserve.

Hopkins Road

- All reference to Hopkins Road land acquisition dependant on compensation to Boral should be removed from the PSP. Although

this may be the case, it is not appropriate to hinder the future development of the PSP area on the compensation.

- In my opinion land acquisition should be undertaken by VicRoads in the near future to eliminate the need for the VicRoads proposed interim cross section which results in a substandard road design and significant expenditure on redundant road infrastructure.