

GEELONG RING ROAD SECTION 4C

ADVISORY COMMITTEE REPORT

9 JUNE 2011

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Nick Wimbush, Chair



Richard Horsfall, Member



Trevor McCullough, Member



William O'Neil, Member

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1. Executive Summary

Section 4C of the Geelong Ring Road is proposed to run from the Geelong Bypass at Waurm Ponds in an east–west direction to the Surf Coast Highway.

This Advisory Committee was appointed by the Minister for Planning under Section 151 of the *Planning and Environment Act 1987* with three primary purposes as detailed in the Terms of Reference:

- To advise on the planning consultation and approval arrangements for Section 4C of the Geelong Ring Road;
- To make recommendations on the relative merits and impacts of the approved alignment of Section 4C compared with other known alignments; and
- To make recommendations on additional remedial measures to be included in the further design and development of Section 4C to address environmental and amenity issues.

To assist the Advisory Committee with this task, the Department of Planning and Community Development called for submissions from interested persons. This process included extensive advertising and a large scale direct mail out to properties that may be affected, Government agencies, and development companies in the Armstrong Creek Urban Growth Area.

As a result of this process 87 submissions were received and 27 of these submitters addressed a Public Hearing held from 9-12 May 2011 in Geelong.

The main issues raised in opposing submissions included:

- Lack of consultation and notice for the approved alignment of Section 4C;
- The preference for alternative alignments, particularly those further south than the approved alignment;
- Amenity issues related to the approved Section 4C alignment being located proximate to Grovedale and Waurm Ponds including: noise; landscape impact; and air quality issues.

Other submitters supported the approved Section 4C alignment, including all Government agencies, most Armstrong Creek developers and some submitters from the Mount Duneed area.

The Advisory Committee has considered all the original written submissions and further verbal and written material presented at the Hearing in framing its findings and recommendations.

In relation to the key outcomes required by the Terms of Reference, the Advisory Committee has concluded the following.

Community consultation

The Advisory Committee has considered the processes for the Environmental Effects Statement for the Geelong Bypass and key amendments to the Greater Geelong Planning Scheme affecting the alignment since 2005, including amendments C113, C138, C212 and C232.

The Advisory Committee has concluded that, whilst the statutory requirements for advertising and notice were met, there were some weaknesses in the consultation for some of these individual processes related to extent of notice and clarity of exhibited material. The Advisory Committee does not consider those weaknesses amount to a failure of process, but it is understandable that it has left some members of the community in Grovedale and Waurin Ponds with the impression they have been excluded from consultation.

Alignment options

The Advisory Committee has considered the various alignments put forward through the above planning processes and concludes that the corridor and alignment selection has followed a reasonable process and that the current approved Section 4C alignment is acceptable.

The Advisory Committee has some concerns with the role proposed for Section 4C and believes that, whilst it can adequately fulfil the local and sub-regional roles, it is unlikely to adequately fulfil the regional role of a strategic link between the Geelong Bypass and Torquay.

The Advisory Committee has recommended that planning for a southerly route in addition to Section 4C should commence as a matter of priority.

Remedial measures

The Advisory Committee has considered the remedial measures for Section 4C proposed by VicRoads and considers that they are generally suitable. Recommendations for a rigid application of the VicRoads Traffic Noise Policy are made to ensure that the higher standards relating to increases above background noise as proposed in that document are applied.

Detailed findings and recommendations on these issues are contained within the issue chapters in the report and consolidated in Chapter 7.

2. Background

2.1 The Advisory Committee

2.1.1 Appointment

This Advisory Committee was appointed on 1 March 2011 under Section 151 of the *Planning and Environment Act 1987*. The purpose of the Advisory Committee was to hear and consider submissions in respect of the planning, consultation and approval arrangements for Section 4C of the Geelong Ring Road and the relative merits and impacts of the approved alignment of Section 4C of the Geelong Ring Road with other previously considered alignments.

The Advisory Committee consisted of:

- Chairperson: Nick Wimbush;
- Member: Richard Horsfall;
- Member: Trevor McCullough; and
- Member: William O'Neil.

2.1.2 Terms of Reference

The Terms of Reference (shown in Appendix A) were approved by the Minister for Planning on 22 February 2011.

Paragraph 38 of the Terms of Reference states that the Advisory Committee must produce a written report for the Minister for Planning providing:

- A summary of the statutory planning process undertaken and the strategic context of the alignment of Section 4C of the Geelong Ring Road, including Amendments C113, C114, C115, C116, C117, C138, C170, C210, C212, C206, C207, and C232 to the Greater Geelong Planning Scheme.
- An assessment of the community consultation undertaken when determining the alignment of Section 4C of the Geelong Ring Road.
- Recommendations on:
 - The relative merits and impacts (economic, environmental and social) of the approved alignment of Section 4C of the Geelong Ring Road compared with any other alignments previously considered by VicRoads, the City of Greater Geelong, or any other relevant government strategic planning investigation, having regard to the function of the road to provide an east-west arterial

road connection and Barwon River crossing to service the southern suburbs of Geelong and Armstrong Creek, as well as the Bellarine Peninsula.

- Any additional remedial measures that could be incorporated into the design and development of Section 4C alignment to address environmental and amenity impacts on existing and future residents.

2.1.3 Hearings and inspections

A Directions Hearing was held on 18 April 2011 at Skilled Stadium, South Geelong. The Public Hearing was held on 9-12 May 2011 at Skilled Stadium, South Geelong.

The Advisory Committee inspected the approved Section 4C alignment and surrounding areas on a number of occasions, making unaccompanied visits together or in smaller groups including to the following locations:

- Anglesea Road;
- Surf Coast Highway;
- Ghazeepore Road;
- Boundary Road;
- Whites Road;
- Mount Duneed Road;
- Bickford Road;
- Riatta Avenue;
- Mulholland Court;
- Euroka Court;
- Bieske Road;
- Heyers Road;
- Wingarra Drive;
- Lehmann Avenue; and
- Rossack Drive.

2.2 Consultation process for the Advisory Committee

The Department of Planning and Community Development (DPCD) carried out public notification with respect to the review of Section 4C of the Geelong Ring Road as follows:

- Notice in the Geelong Advertiser on 12, 19, 26 March and 2 and 9 April, and the Geelong Independent on Friday 11, 18, 25 March and 1 and 8 April 2011;

- Letters to all landowners and occupiers located with the area shown on Map 1 (Attachment 8) of the Terms of Reference;
- Notice to City of Greater Geelong, VicRoads, Department of Transport, Department of Sustainability and Environment, Corangamite Catchment Management Authority, Aboriginal Affairs Victoria, Country Fire Authority, Surf Coast Shire, Barwon Water, Powercor, South Grovedale Action Group, Mount Duneed Ring Road Action Group, Landowners within Armstrong Creek Growth Area, and Developer consortiums within the Armstrong Creek Growth Area.

2.3 Submissions and Hearing

A total of 87 written submissions were received and 27 submitters appeared at the Hearing.

A list of those who made submissions at the Hearing is listed in order of appearance in Table 1 and a complete list of submitters is attached in Appendix B.

Submitter	Represented By
Department of Planning and Community Development	Mr Mark Gregory and Ms Susan Barker
VicRoads	Mr Rod Cottrill and Mr Robin Miles
City of Greater Geelong	Mr Peter Bettess and Mr Terry Demeo
Ms Astra Kirsanovs	
Mr Harry Roberts	
Barwon Water	Mr Shaun Cumming and Mr Peter Morgan
Carter Group	Mr Geoff Underwood of Spade Consultants
Horseshoe Bend Landowners Group	Mr Mark Beaufoy of DLA Piper, on behalf of St Quentin Consulting
Australian Property Partnership Pty Ltd	Mr Anthony Stafford
Armstrong Creek West Consortium	Mr Chris De Silva of Mesh Pty Ltd
Keystone Business Park	Mr Trent Kiernan
Mount Duneed Progress Association Inc.	Mr John Threlfall, Mr Simon Townsend and Mr Don Grimmer
Public Transport Users Association – Geelong Branch	Mr Paul Westcott
D & D Trifilo	Dr Ignatius Calderone of Calderone and Associates Pty Ltd
Mr Peter Bright	

Submitter	Represented By
Mr Jurg Schutz	
Mr Ray Gladwell	
Mrs Lee Gladwell	
Mr Phil Cranny	
Mrs Dorothy Pearce	
Mr Anthony Collins	
Mr Kent Fuller	
Mrs Margarita Kumnick	
Mr Paul Kumnick	
Mr Horst Pfeifer	
Ms Nerida Gillam	
South Grovedale Action Group	Mrs Margarita Kumnick and Dr Katrina Alford

Table 1: Parties heard at the Advisory Committee Hearing

2.4 Submission summary

This section contains an overview of the written and verbal submissions to the Advisory Committee. Assessment of the key issues raised in submissions is undertaken against each major issue chapter and particularly:

- Chapter 4: Previous community consultation;
- Chapter 5: Assessment of Section 4C and alignment options; and
- Chapter 6: Remedial measures for Section 4C.

Submissions to the Advisory Committee covered issues such as the consultation process, the suitability of the proposed road alignment, noise, traffic, pollution and amenity, safety, and whether the proposed alignment would meet its stated objectives.

A significant proportion of submissions were focused on the issue of consultation and the process behind which residents were notified of the proposed road alignment. Central to this discussion were the City of Greater Geelong Planning Scheme Amendments C113, C138, C212 and C232.

DPCD, VicRoads and the City of Greater Geelong provided background to the amendment process. South Grovedale Action Group and a number of other submitters argued that they were not adequately informed of the location of the proposed East - West Link Road, and that the detail had been hidden in the Armstrong Creek Urban Growth Plan.

Whether the proposed Section 4C alignment would achieve its stated purpose as a local, sub-regional and regional road was raised by many submitters throughout the Hearing. A stated purpose of the road was to provide a sub-regional connection to the Bellarine Peninsula and a regional connection between Anglesea Road and the Surf Coast Highway in order to access Torquay and the Great Ocean Road. It was argued by several submitters that the road would not meet this objective. This is because traffic would have to travel north in order to travel south, and up to 11 sets of traffic lights would be encountered on Section 4C and the Surf Coast Highway. Surf Coast Shire supported a seamless high speed transition from Anglesea Road to the Surf Coast Highway south of Mount Duneed Road, stating that the proposed road alignment would not provide an efficient ring road around Geelong.

In relation to the Section 4C alignment serving the purpose of a local road, Ms Kumnick for the South Grovedale Action Group questioned whether a new local road in the form of Section 4C was in fact required if an alternative high speed link was to be constructed in the future. Several submitters such as developers and the City of Greater Geelong argued that alternative alignments such as Boundary Road would result in an isolated area of land that would be bounded by the new road alignment, the railway line and the Surf Coast Highway.

Throughout the Hearing, various alternative road alignments were put forward and discussed at great length. Alignments supported by the South Grovedale Action Group and other submitters involved alternative roads further south based on existing road reserves. These included Boundary Road, Whites Road and Mount Duneed Road. During the Hearing VicRoads provided an assessment of these and other road alignment options against a set of criteria related to the overarching and broader project objectives. Mount Duneed Progress Association commented that Mount Duneed Road was not a desirable alternative, describing how the recent upgrade to the Road had impacted on safety and amenity. The City of Greater Geelong and VicRoads considered that Whites Road and Mount Duneed Road would not service traffic movements to and from Armstrong Creek.

A large number of submitters who reside near the approved Section 4C alignment raised amenity and lifestyle concerns such as noise, traffic pollution and health effects that would potentially arise from the location of a 'freeway' near their homes. Many of these residents submitted that they had opted for a 'rural' lifestyle and believed the proposed alignment would impact on their health and wellbeing. Some residents argued that their own lifestyle would be compromised in order to benefit future residents from the Armstrong Creek Urban Growth Area and that their property values would decrease.

During the Hearing VicRoads clarified that the proposed road would be a two lane two-way arterial road initially, and then a four lane two-way medium speed (80km/h maximum) arterial road at full development, and not a four to six lane freeway. This did not allay concerns by some residents that the road could be upgraded to a freeway status in the future.

Issues in relation to safety were raised by a number of submitters, who stated that the proposed road alignment, with close proximity to the railway level crossing on Surf Coast Highway, would potentially result in vehicles queuing over the railway line. VicRoads submitted that mitigation measures would be put in place to prevent this situation from arising.

Submitters, who included developers in Armstrong Creek such as Newland on behalf of Armstrong Creek Development Corporation, St Quentin for Horseshoe Bend Landowners Group, Mesh for Armstrong Creek West Consortium, and Keystone Business Park, along with Barwon Water, indicated that reconsidering alternative road alignments would involve significant financial implications, and building infrastructure had already commenced. They stressed that a change to the alignment would require a complete re-write or review of the Armstrong Creek Urban Growth Plan. Delays involved in reassessing the alignment would create uncertainty within the development industry, and potentially jeopardise investment. They submitted that the costs involved in reassessing the alignment could be tens of millions of dollars and a reassessment would take up to two years to complete.

The proposed realignment of Anglesea Road was discussed at the Hearing, with Spade Consultants for the Carter Group seeking certainty about this issue, as the proposed alignment shifts Section 4C further north than shown on the Armstrong Creek Urban Growth Plan. Consequently, this would have implications on the connections of Sections 4B and 4C and consequential links to the Western Employment Precinct. VicRoads advised that the proposed realignment of Anglesea Road was still under discussion.

2.5 Issues not taken further in this report

A range of issues were raised in submissions and at the Hearing that the Advisory Committee wishes to acknowledge without necessarily exploring in depth.

Public transport

In particular, the issue of public transport was raised clearly by Mr Paul Westcott of the Public Transport Users Association and Mr Kumnick. The obvious passion of these submitters in ensuring that the future community of

Armstrong Creek has access to good public transport is noted by the Advisory Committee.

The Advisory Committee considers that the heavy rail station at Armstrong Creek, coupled with the precinct planning process underway for Armstrong Creek, provides the opportunity to ensure integrated public transport is provided to an appropriate standard.

Whichever alignment is eventually chosen or confirmed for Section 4C, integrated public transport planning will be an important component of planning.

The City of Greater Geelong also indicated that they had commenced investigations into a light or heavy rail connection through Armstrong Creek to Torquay.

East-West Link Road east of Surf Coast Highway

The Advisory Committee heard a submission from Mr Pfeifer (Submission no 33) that there were still outstanding issues in relation to the alignment of the proposed East-West Link Road east of Surf Coast Highway. Mr Pfeifer is concerned about the impact of the proposed road on his property and he submits that there has been a lack of consultation with regard to the alignment. Council advised that further consultation will occur on this alignment once the review of Section 4C is completed.

3. History of Section 4C

3.1 Chronology of planning processes

There have been a number of planning processes over the past ten years or so that have led to the approved alignment of Section 4C of the Geelong Ring Road. The Environment Effects Statement (EES) for the Geelong Bypass and relevant Amendments are shown below in Table 2.

For Amendments these are shown in order of date of Gazettal, not necessarily sequential amendment number.

Process	Details	Date Gazetted
EES and Amendment C113 (Geelong Bypass)	<p>The EES for the Geelong Ring Road Section 3 assessed the effects of a number of alignments between the Hamilton Highway and the Princes Highway. It also looked at possible routes for an east – west link road.</p> <p>Amendments C113, C114 and C115 were jointly exhibited to identify a number of options for the alignment of Section 3 of the Geelong Ring Road.</p> <p>Amendment C113 Introduced the Public Acquisition Overlay (PAO3) for Section 3 of the Geelong Ring Road which has since been constructed. Amendments C114 and C115 were abandoned.</p> <p>Development Plan Overlay (DPO8) was approved as part of Amendment C113 as an interim measure to protect a broad corridor from Princes Highway to Surf Coast Highway. For Section 4C, DPO8 covered an area east of Anglesea Road and south of the Geelong – Warrnambool rail line.</p>	26.10.2006
Amendment C114	Abandoned – refer C113	
Amendment C115	Abandoned – refer C113	
Amendment C116	<p>Updated the status of planning for the Geelong RR Section 4A.</p> <p>Rezone an area of land on the proposed Geelong RR alignment from Public Conservation and Resource Zone (PCRZ) to Road Zone Category 1.</p> <p>Amend the map description of the Heritage Overlay (HO374) applying to the Waurn Ponds Creek Bridge to provide consistency with the protection afforded by the State Heritage Register.</p>	17.7.2008

Process	Details	Date Gazetted
Amendment C138 (Armstrong Creek)	<p>Replaced Clause 21.08 and introduces a new Clause 21.40 "Armstrong Creek Urban Growth Area"; replaces and applies the Environmental Significance Overlay Schedule 1 (ESO1) to sites in the Armstrong Creek area; applies the Environment Significance Overlay Schedule 2 (ESO2) to wetland buffer areas; replaces and applies Vegetation Protection Overlay Schedule 1 (VPO1) to roadside vegetation; applies the Floodway Overlay (FO), Land Subject to Inundation Overlay (LSIO) and Special Building Overlay (SBO) to flood prone land in the Armstrong Creek Urban Growth Plan study area; introduces and applies Schedule 1 to the Incorporated Plan Overlay (IPO1) to the Armstrong Creek Urban Growth Plan Area; amends clause 81.01 to include "Armstrong Creek Urban Growth Plan Volume 1 October 2006" as an incorporated document.</p> <p>VicRoads further reinforced the alignment of Section 4C through the strategic planning in Amendment C138. The alignment utilises the location for the western portion of the East-West Link Road shown within the Armstrong Creek Urban Growth Plan.</p>	4.12.2008
Amendment C170	Applied the Urban Growth Zone to all land zoned Farming Zone located within the Urban Growth Boundary nominated in the Armstrong Creek Urban Growth Plan Framework Plan.	4.12.2008
Amendment C117 (Breakwater Road)	<p>Introduced a Public Acquisition Overlay (PAO3) over land required for the proposed road and bridge works. Deleted areas of PAO3 not required.</p> <p>Amended the boundary of the Heritage Overlay (HO1756).</p> <p>Amended the boundary of the Environmental Significance Overlay-Schedule 2 (ESO2).</p> <p>Amended the schedule to the Floodway Overlay (FO) to exempt VicRoads from permit requirements.</p> <p>Amended the schedule to the Land Subject to Inundation Overlay (LSIO) to exempt VicRoads from permit requirements.</p> <p>Amended the schedule to Clause 52.17 (Native Vegetation) to exempt VicRoads from permit requirements.</p>	Not gazetted. Replaced by C210
Amendment C210 (Breakwater Road) Ministerial Amendment s20(4)	Applies the PAO3 to a number of properties on Tucker Street and Fellmongers Road, Breakwater.	10.12.2009
Amendment C212	Reduced the area of DPO8 for Section 4C to an area covering the approved alignment along the Geelong – Warrnambool Rail	18.2.2010

Process	Details	Date Gazetted
Ministerial Amendment s20(4)	line.	
Amendment C206	<p>Provided for the future development of the Armstrong Creek East Precinct by introducing a new Schedule to the Urban Growth Zone and a Precinct Structure Plan and Native Vegetation Precinct Plan.</p> <p>Also applied an updated FO to the area and amended schedules to the Mixed Use Zone, Business 1 Zone and Public Park and Recreation Zone, and updates the incorporated Armstrong Creek Urban Growth Plan - Framework Plan as they relate to Armstrong Creek East Precinct. Both this and the following amendment helped to confirm and define the East – West Link Road.</p>	3.6.2010
Amendment C207	<p>Updated the Municipal Strategic Statement to include reference to the North East Industrial Precinct, Precinct Structure Plan, May 2010 (NEIP).</p> <p>Rezoned land within the NEIP from part Industrial 1 Zone, part Public Use Zone 1, and part Farming Zone to Urban Growth Zone 1 (UGZ1).</p> <p>Removed the Development Plan Overlay (DPO3) applying to this land.</p> <p>Applied Schedule 1 to the Development Contributions Plan Overlay (DCPO1) to the NEIP.</p> <p>Amended the Land Subject to Inundation Overlay (LSIO) in the NEIP.</p> <p>Amended the Schedule to Clause 52.01 and 61.03.</p> <p>Amended the Schedule to Clause 52.16 to include the Armstrong Creek North East Industrial Precinct Native Vegetation Precinct Plan, May 2010.</p> <p>Amended the Schedule to Clause 81.01 to incorporate the Armstrong Creek North East Industrial Precinct, Precinct Structure Plan, May 2010, Armstrong Creek North East Industrial Precinct Development Contributions Plan, May 2010 and Armstrong Creek North East Industrial Precinct Native Vegetation Precinct Plan, May 2010, and the Armstrong Creek North East Industrial Precinct Growling Grass Frog Conservation Management Plan, May 2010.</p>	3.6.2010
Amendment C232 Ministerial Amendment s20(4)	<p>Removed DPO8 from the Section 4C alignment.</p> <p>Introduced PAO3 to the Section 4C alignment along the Geelong – Warrnambool rail line.</p> <p>Introduced PAO9 for the Armstrong Creek Railway Station.</p>	8.10.2010

Process	Details	Date Gazetted
	<p>Inserts an incorporated document titled Geelong Ring Road Section 4C Incorporated Document, June 2010 in the Schedule to Clause 52.03 and the Schedule to Clause 81.01.</p> <p>VicRoads and Department of Transport undertook informal consultation with the affected landowners and the Grovedale and Waurm Ponds Community prior to requesting the s20 (4) amendment.</p>	

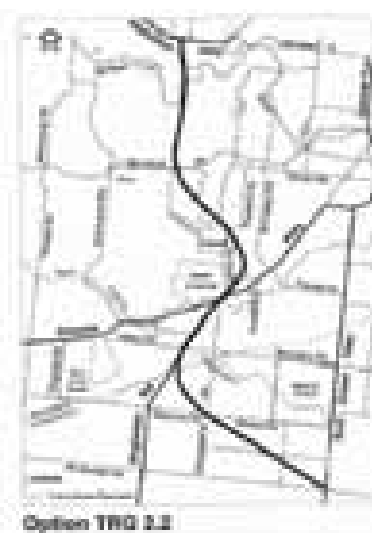
Table 2: Chronology of planning processes

3.2 History of development of alignment

The *Geelong Ring Road Strategic Study* 2002 considered both eastern and western alignments for a ring road around Geelong. The study recommended a western bypass but also acknowledged the need for a southern link from the end of a western bypass to the Bellarine Peninsula in the longer term and to the Surf Coast Highway in the shorter term.

Further planning of Section 3 of the Geelong Bypass by an interdepartmental Technical Reference Group (TRG) for the Environment Effects Statement (EES) between 2003 and 2005 considered various possible southern bypass alignment options including Boundary Road, Whites Road and Mount Duneed Road.

The four options that were identified for consideration are as shown below:



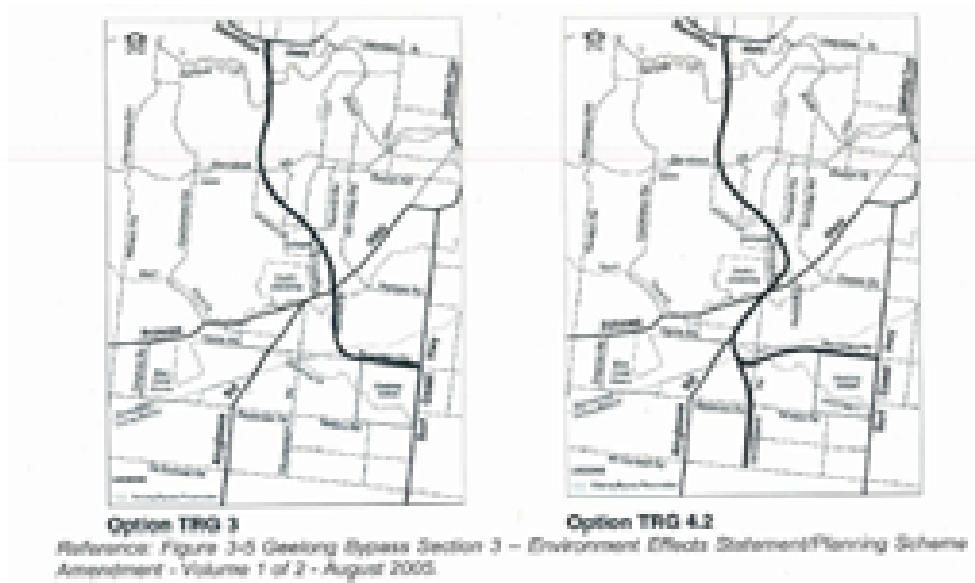
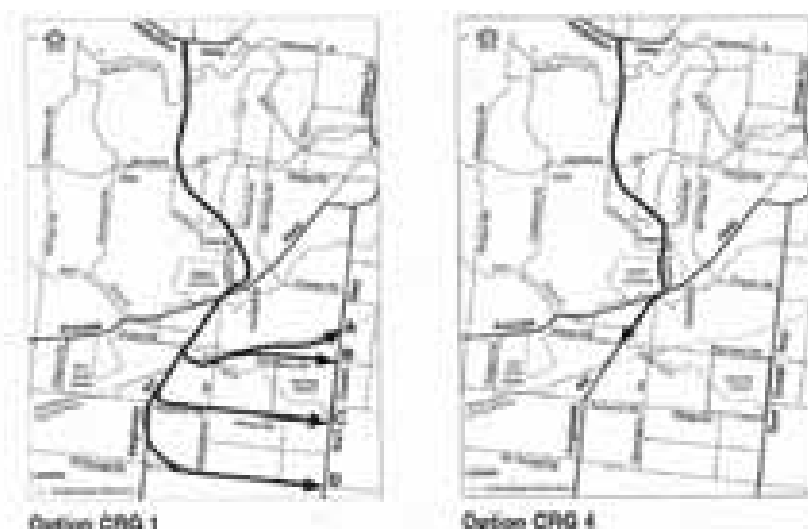
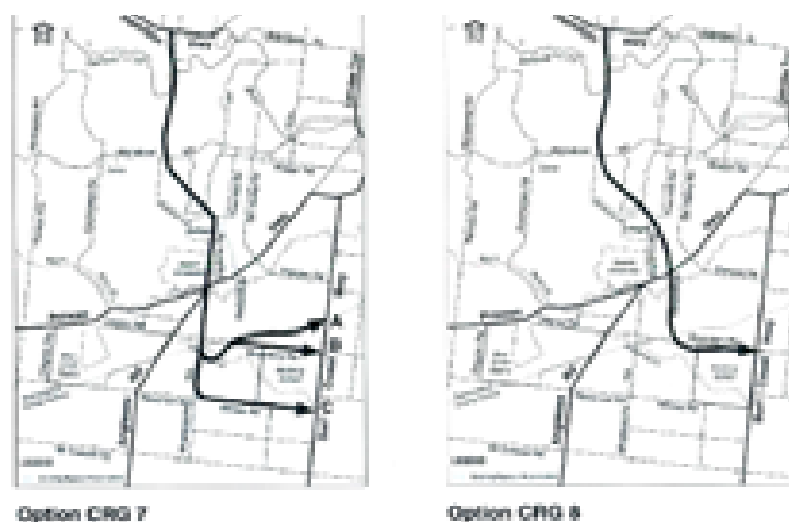


Figure 1: Technical Reference Group options

Further options were developed by a Community Reference Group (CRG) that included additional alignment options along the Geelong-Warrnambool rail line, Boundary Road, Whites Road and Mount Duneed Road. The options shown in Figure 2 below also seem to indicate that the CRG considered options that had multiple east-west access to the Surf Coast Highway (see CRG options 1 and 7), although this multiple access option does not seem to have been pursued beyond these CRG options.

Details of the alignments considered through these processes were included in the documentation presented to the EES/Amendment C113, C114 and C115 Panel in 2005.





Reference: Figure 3-6 Geelong Bypass Section 3 - Environment Effects Statement/Planning Scheme Amendment - Volume 1 of 2 - August 2005.

Figure 2: Community Reference Group options

The evolution of the TRG and CRG options was discussed in the EES at Chapter 3 - Option Development and Community Consultation. Chapter 18 of the EES discusses constraints on the alignment of an East-West link road and establishes a 'common corridor' within these constraints.

The constraints defining the East-West Link corridor (Section 18.3.2 in the EES) were as follows:

- The northern boundary is constrained by the existing rail line and existing residential development to the north of the rail line;
- The need to avoid the cost (\$10 million) of relocating a Powercor substation on Ghazepore Road between Hams Road and the rail line;
- The desirability of avoiding the Boral limestone quarry west of Ghazepore Road;
- 'The Geelong Airfield has been adopted as a constraint that assists in identifying the southern boundary of a corridor for the Surf Coast Highway link'; and
- The imperative of maintaining sufficient distance between the road alignment and the rail line at Surf Coast Highway to preserve the option of a future grade separation.

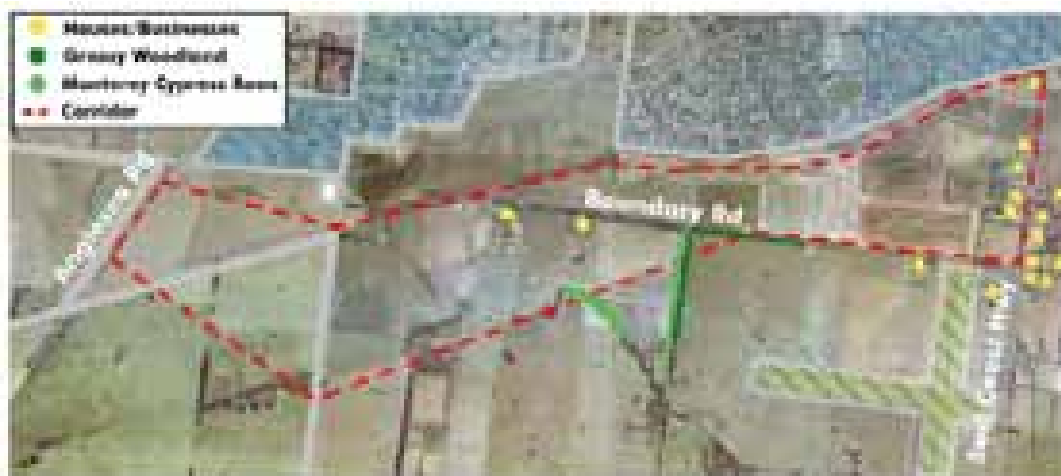


Figure 3: The 'common corridor' (Figure 18.6 from the EES)

The rationale for including the airfield as a constraint was that it was anticipated that the Surf Coast Highway link would precede the closure of the airfield, and in fact it was unclear at the time whether the airfield would continue to operate or not at the time of the EES.

The EES refers mainly to the role of the East-West link to provide a connection between Anglesea Road and Surf Coast Highway, although the future link to the Bellarine Peninsula is also foreshadowed. At the time the proposed alignment was supported by both Greater Geelong and Surf Coast Councils. Surf Coast Shire has subsequently stated a preference for a route at, or south of, Mount Duneed Road.

The EES (Section 18.3.3) made the following concluding comments in relation to the establishment of a common corridor for the East-West link:

It is considered that the determination of an alignment within the corridor to the precision required to incorporate a Public Acquisition Overlay in the Greater Geelong Planning Scheme would be more appropriately undertaken in conjunction with Council's planning for the Armstrong Creek/Mount Duneed growth area, rather than in this EES/PSA as this would enable the following issues affecting both the link and the proposed urban development to be addressed in a manner that provides for the best overall outcome:

- *The sustainability of roadside vegetation along Boundary Road in an urban environment and the limitations it may impose on urban development;*
- *The future of the Geelong Airfield which, if it was to remain operational in the medium to long term, could impose constraints on both urban development and the alignment of a link to Surf Coast Highway due to the proximity of the north-south runway to*

Boundary Road and Air Safety standards governing the existence of obstructions along runway approaches.

Nevertheless, the opportunity to provide a link to the Surf Coast Highway within the previously described corridor needs to be protected to some extent. Accordingly, the Planning Scheme Amendments prepared to enact the outcome of this EES will also seek to obtain strategic recognition of the link via an insertion in the City of Greater Geelong's Municipal Strategic Statement.

The EES / C113 Panel noted that there were two broad options for the route to the Surf Coast Highway: 'close to the Warrnambool-Geelong Railway as proposed, or further south (generally along Mount Duneed Road)'.

The Panel considered that: 'the link to the south might provide a better connection to Ocean Grove, ...but has little to recommend it as the main need would appear to be a link to the eastern side of Geelong proper onwards to the Portarlington Road.'

The Panel concluded that:

The link route shown in the EES is suitable as a route corridor and there does not appear to be any superior or even feasible alternative.

The approach ultimately recommended by the EES/C113 Panel was to preserve a range of alignment options by setting aside a wide corridor through DPO8. In determining the extent of the corridor the Panel had regard to the constraints identified by VicRoads in the EES.



Figure 4: The area defined in DPO8

Amendment C138 (Armstrong Creek Urban Growth Plan) which was approved in December 2008 further reinforced the alignment of Section 4C through the corridor identified in the EES. The alignment was shown on the *Armstrong Creek Urban Growth Plan – Framework Plan* as a dashed line called the proposed East-West Link Road (arterial) (See Appendix C).

The alignment shown follows a very similar alignment to the existing version with the main differences being that less detail was shown in the Framework Plan and the western end of the road was shown connecting with a realigned Anglesea Road.

As part of strategic planning for Amendment C138 the future of the airfield was clarified; flora and fauna studies carried out (resulting in an extension of the Vegetation Protection Overlay); and the access road network for the Armstrong Creek Urban Growth Area was set out. This work in effect 'ticked off' on the further work proposed in Section 18.3.3 of the EES.

The alignment was further refined in February 2010 through Amendment C212 – which reduced the area of DPO8 and, importantly, released land immediately to the north of Boundary Road from the overlay, effectively eliminating Boundary Road as a Section 4C alignment option from that point.



Figure 5: The portion of DPO8 excised through Amendment C212

The Explanatory Report for C212 states that one of the main reasons for implementing the amendment was to reduce hardship on landowners affected by the broad DPO8. The Advisory Committee assumes that Amendment C212 was informed by the work done on the Armstrong Creek Framework Plan but it is not clear to the Advisory Committee to what extent

any consequences of the alignment being pushed closer to existing houses in South Grovedale was considered at that time.

Amendment C232 (approved October 2010) introduced a more tightly defined corridor through PAO (Schedule 3) based on the work done as part of Amendment C138.



Figure 6: The Section 4C alignment defined in PAO3

Prior to the exhibition of Amendment C232 VicRoads commissioned a range of specialist investigations including traffic modelling; road safety; flood impact; traffic noise; air quality; cultural heritage; social impact; net gain and ecological; land use and landscape; and landscape and visual assessments. These reports assisted in determining the alignment ultimately included in PAO3 through Amendment C232. The width of the reservation identified in PAO3 is between 80 and 100 metres.

The Section 4C alignment is contained in an Urban Growth Zone (UGZ) and more specific planning control for Section 4C is included in the planning scheme in clause 52.03 – Specific Sites and Exclusions – which in turn refers to the *Geelong Ring Road Section 4C Incorporated Document* June 2010. The Incorporated Document essentially enables the use and development of the land defined by PAO3 as a road and removes the requirement for a permit to construct the road.

4. Previous community consultation

Under the outcomes required in the Terms of Reference at Clause 38, the Advisory Committee is required to do:

- *An assessment of the community consultation undertaken when determining the alignment of Section 4C of the Geelong Ring Road.*

There have been many planning and environmental assessment processes relevant to the alignment of the Geelong Ring Road Section 4C. These are listed in the chronology in Section 3.1. The various alternative alignments that have been considered over time are summarised in Section 3.2.

In this Chapter the community consultation processes for the major amendments and the Geelong Bypass Environment Effects Statement (EES) critical to the Section 4C alignment determination are discussed.

4.1 Geelong Bypass EES and amendment C113

4.1.1 What was proposed?

The Geelong Bypass was considered through the joint exhibition of Amendment C113¹ to the Greater Geelong Planning Scheme and an Environment Effects Statement. The Bypass had three main elements:

- A series of options for the Bypass alignment between the Hamilton Highway and the Princes Highway at Waurin Ponds;
- Options for connections from the Bypass to the Princes Highway west of Geelong; and
- Options to connect the Bypass eastwards to Surf Coast Highway.

The range of alternative options and proposals in the EES and amendment are shown in Section 3.2.

VicRoads was the proponent for the EES and the Planning Authority for the planning scheme amendment.

¹ Amendment C113 to the Greater Geelong Planning Scheme was exhibited jointly with Amendment C114 and C115 and the EES. The three amendment numbers related to different alternative alignments for Section 3 of the Geelong Ring Road. Following adoption of Amendment C113 the other amendments (alignments) were abandoned and are not considered further here. It is important to note that the Section 4C corridor was common to all the amendments.

4.1.2 Consultation process

The EES and planning scheme amendments were exhibited by VicRoads between 8 August and 16 September 2005 and 232 submissions were received.

At the Advisory Committee Hearing (Document 10), VicRoads advised that the following measures were taken in relation to public information and exhibition:

Public Awareness Campaign – July – Sept, 2005

- *Zone of interest was published in the Geelong Independent in August 2005 (Advisory Committee Note: see Figure 7 below);*
- *Articles were published in all local media including radio and print;*
- *Letterbox drop to residents and businesses between Pioneer Road and Mt Duneed Road, Surfcoast Highway to Draytons Road;*
- *Mailed and emailed to 1,000 interested parties on VicRoads distribution list;*
- *Zone of Interest included in information bulletins sent to thousands of stakeholders;*
- *Published on the VicRoads website;*
- *Available at VicRoads offices, COG offices, Belmont Library and DPCD;*
- *Information days (promoted in local media) – 13 August 2005;*
- *.....*

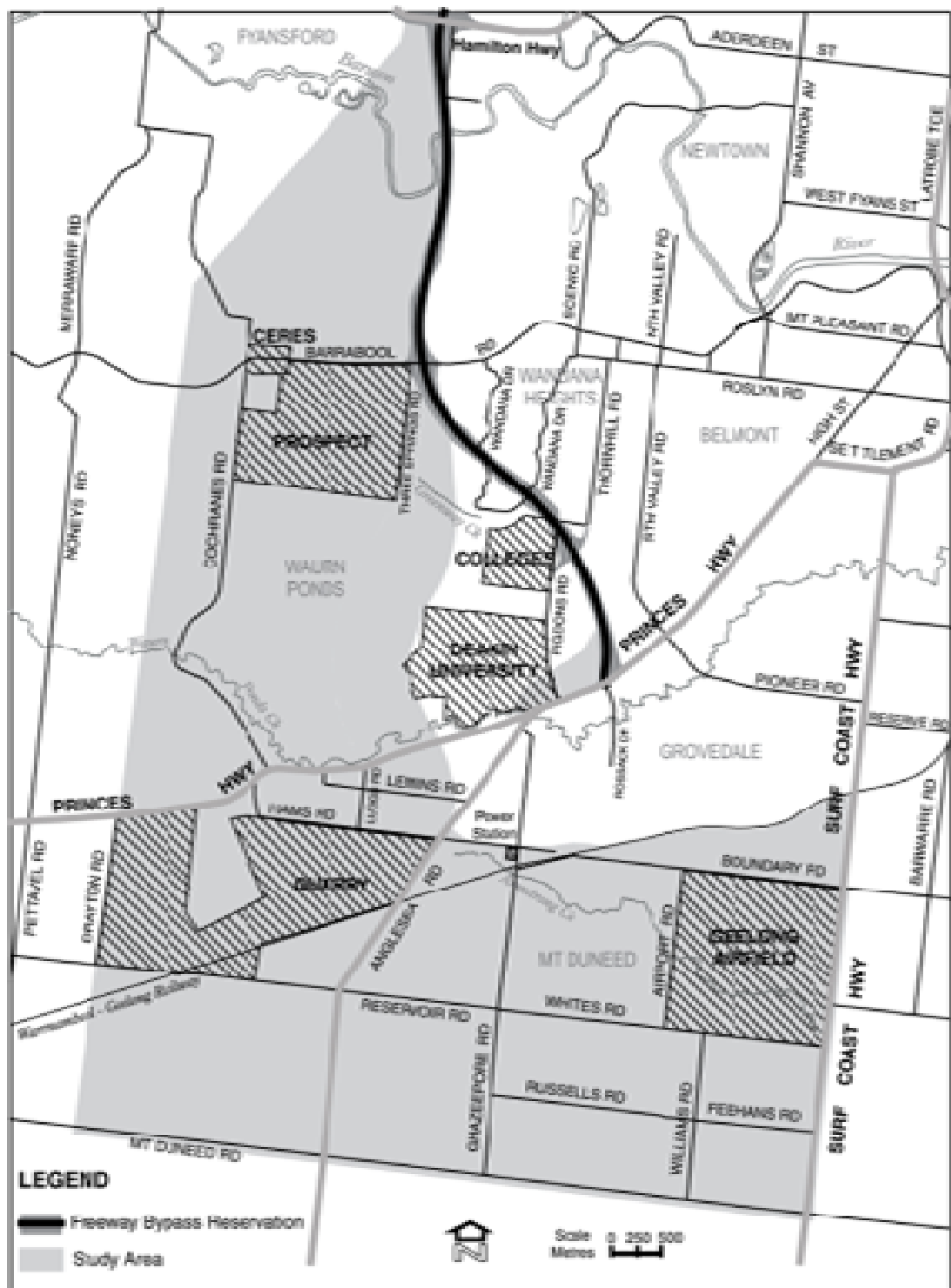


Figure 7: Area of Interest²

VicRoads also attached a copy of a press article discussing the Bypass (although not specifically mentioning Section 4C) from 19 August 2005, and a copy of the print advertisement for the EES and amendment. They submitted that this ran for eight weeks in *The Age* and *The Geelong Advertiser*.

² From VicRoads submission to Advisory Committee

The advertisement included the following:

....The EES also investigates opportunities for the future development of a road link between the Geelong Bypass at Waurin Ponds, the Princes Highway West and the Surf Coast Highway.

and the exhibited Explanatory report for amendment C113 included:

Other land more generally affected by the proposed amendment includes:

-
- *an area shown as a corridor as an opportunity for a possible link between the Princes Highway and the Surf Coast Highway on figure 1 of proposed clause 21.26; and*
- ...

Figure 1 from exhibited Clause 21.26 of the MSS is shown below as Figure 8.

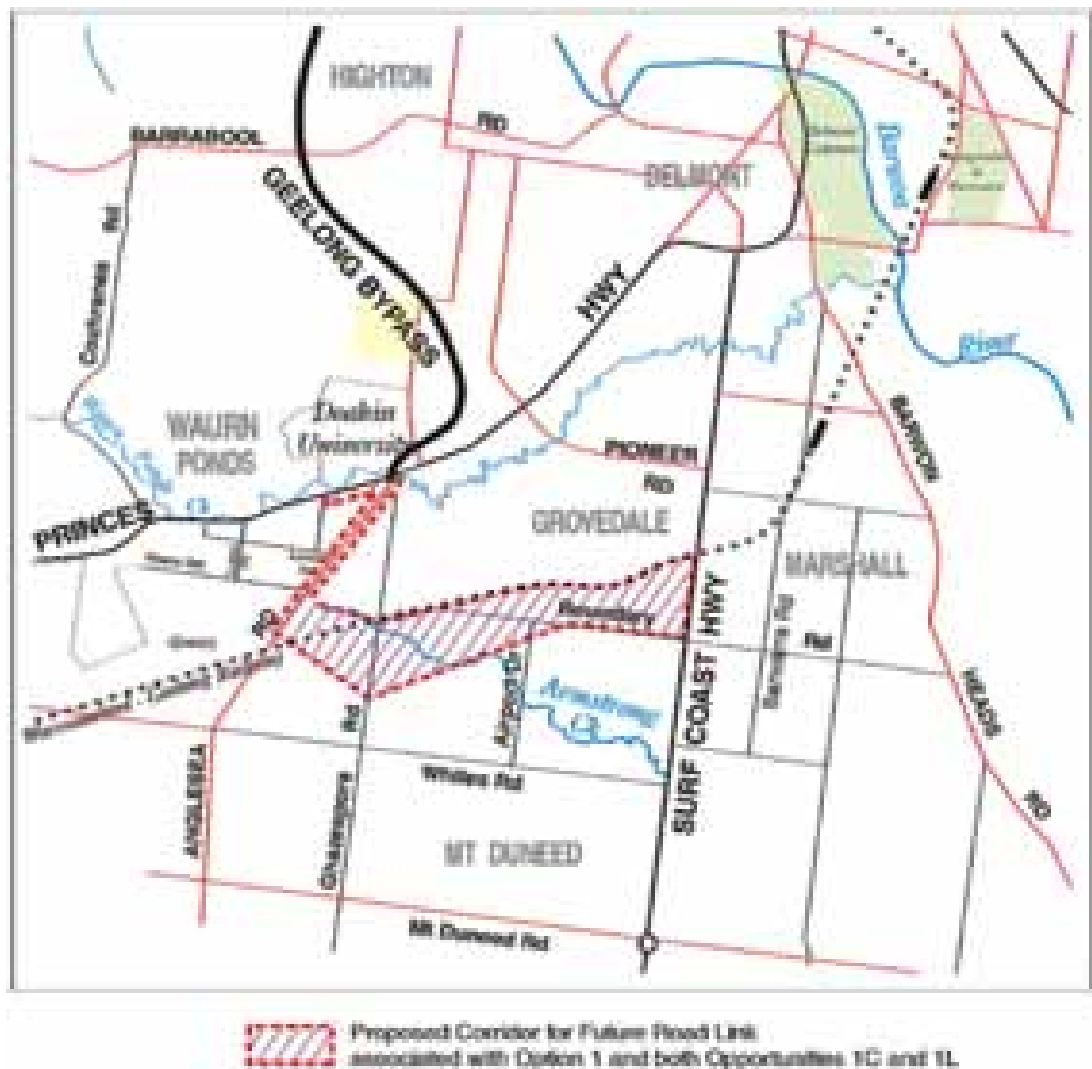


Figure 8: Proposed Corridor for Future Road Link³

³ from C113 exhibited clause 21.26

VicRoads also provided a series of information bulletins on the Bypass project that were in circulation in 2003-2004 in the lead up to the formal EES process.

A Panel was appointed in late 2005 under both the *Environment Effects Act 1978* (EES) and *Planning and Environment Act 1987* (amendment) to consider the submissions. The Panel held hearings in November 2005 and a 'workshop' in December 2005 before submitting its report in February 2006.

The Panel addressed submissions throughout its report but provided an overview in Chapter 4. The Advisory Committee notes that VicRoads was criticised by some submitters for the consultation process for the EES and Amendment C113 but received support from others (see Section 4.1.3 of the Panel report).

However it appears to the Advisory Committee that the most striking element of the submissions (as reflected in the Panel report), is how little attention the corridor from the Bypass to the Surf Coast Highway received. In the table in Section 4.3.1 of the Panel report, which discusses the supporting and opposing points for Option 1 (which included the corridor to Surf Coast Highway), the only mention appears to be a point was raised both for and against the effectiveness of an east-west link as proposed.

The Panel commented at Section 4.3.3 ('The Link'):

Submissions in relation to the link to Surf Coast Highway focussed on issues of 'planning blight' – the adverse effects that would flow from the uncertain future of land covered by the link notation.

The EES/Amendment C113 panel report included the following figure as Figure 8. The figure shows the panel's preferred alignment for Section 3 and how it relates to what became Sections 4A, 4B and 4C. The Advisory Committee notes the line drawn along a Boundary Road alignment.



Figure 9: Option 1C extended with link to Surf Coast Highway⁴

This issue is discussed further below in Section 4.1.4.

4.1.3 Introduction of the Development Plan Overlay

The EES/C113 Panel's recommendation 4.1 stated in relation to the Bypass – Surf Coast Highway link that:

The link route shown in the EES is suitable as a route corridor and there does not appear to be any superior or even feasible alternative.

Their recommendation 4.2 stated that:

The appropriate planning scheme provisions for the link should include:

- *Notation in the MSS (this is proposed);*
- *The application of a Development Plan Overlay; and*
- *The inclusion of VicRoads as a formal referral authority.*

The rationale for applying a DPO as well as the reference in the MSS was that in summary:

- The corridor would be clearer as it would be on the planning scheme maps as well as in policy;

⁴ Figure 8 from EES/C113 Panel Report

- It would provide a statutory mechanism (the Development Plan) to approve the precise alignment without need for a further amendment; and
- It would provide a statutory input for VicRoads into planning permit applications along the corridor.

A recommended draft DPO schedule was provided with the Panel report. This suggested approach was supported by the Minister for Planning at the time (Rob Hulls) and the Planning Authority. The DPO (DPO8) was applied as part of the finalisation of Amendment C113 as well as the changes to the MSS at clause 21.26.

The DPO8 as implemented through Amendment C113 is shown in Figure 4.

Amendment C113 was gazetted on 26 October 2006.

4.1.4 Submissions to the Advisory Committee

No submitters directly took issue with the consultation process for the Geelong Bypass EES and Amendment C113. Some had been aware of, and participated in, the consultation program for the Bypass.

For example, Ms Kumnick (submission 47) stated in relation to the EES that:

It was a very public process, we heard of the EES and the Technical Reference Groups. We attended meetings about the Option for Section 3.

It is apparent from the Advisory Committee's work that the understanding of the implications of the Geelong Bypass for Section 4C may have been limited in the community prior to the Amendment C232 process and the active involvement of Ms Kumnick and other residents.

Ms Kumnick went on from the comment above to state:

We then realised 4C maybe was coming close to our house so we put flyers in our neighbours mailboxes, but the location of 4C was unclear so people were doubtful of our fears. Anyway, the general word was that it was going on Mt Duneed Road or Boundary Road.

This later point was raised by a number of submitters to the Advisory Committee; that is, it was assumed that Section 4C was always going to go along Boundary Road or further south, but not further north.

The basis for this assumption is not entirely clear to the Advisory Committee but Figure 8 from the EES/Amendment C113 Panel Report (shown as Figure 9 in this report) may have contributed.

4.1.5 Discussion

The Advisory Committee considers that the key test for the adequacy of the consultation process is whether VicRoads met the relevant statutory obligations in terms of content and extent. Part of this test is whether the material exhibited adequately communicated the intent of the Amendment.

The *Environment Effects Act 1978* does not specify the procedures for public exhibition, however the *Ministerial Guidelines for Assessment of Environmental Effects* (at page 23) do provide guidelines for advertising, a 20-30 business day exhibition period and the availability of documentation.

Section 19 of the *Planning and Environment Act 1987* provides the requirements for notice for planning scheme amendments. Section 19(1)(b) states notice must be given:

to the owners (except persons entitled to be registered under the Transfer of Land Act 1958 as proprietor of an estate in fee simple) and occupiers of land that it believes may be materially affected by the amendment; and

Additionally, Section 19(1A) of the *Planning and Environment Act 1987* states:

Subject to subsection (1C), the planning authority is not required to give notice of an amendment under subsection (1)(b) if it considers the number of owners and occupiers affected makes it impractical to notify them all individually about the amendment.

These matters are discussed more in the context of Amendment C138 in Section 4.2 below.

It seems clear to the Advisory Committee that the consultation process for the EES and Amendment C113 was comprehensive and more than adequately satisfied any statutory obligation. The variety and length of the public communication outside the statutory requirements, the use of a community reference group and the fulfilling of statutory obligations through the formal exhibition and Panel process leads the Advisory Committee to conclude that the process met, and indeed exceeded, what was required.

The remaining question for the Advisory Committee's relates to the content of the exhibited EES and Amendment C113 and whether it clearly identified and articulated the likelihood of a transport corridor from the Bypass east to Surf Coast Highway.

Having viewed the text and plans in the EES and exhibited Amendment documents, the Advisory Committee considers that there was adequate

information to identify such a corridor. The corridor was identified as follows:

- Figure 1 in the exhibited clause 21.26 (shown in Figure 8 above);
- The various plans from the Technical Reference Group and Community Reference Group in the EES (shown in Section 3.2 of this report); and
- The 'Common Corridor' shown in Figure 18.6 of the EES (in Figure 3 of this report).

The Advisory Committee notes there are factors that potentially confused the issue, but the Advisory Committee has seen no evidence that this was intentional on the part of any agency involved. These factors include:

- Figure 8 in the EES/Amendment C113 Panel report showing a route alignment along Boundary Road,
- The sheer amount of material in the EES and Amendment documentation; and
- The undoubted focus through consultation and the Panel process on controversial issues associated with the alignment of section 3 of the Bypass (i.e. north of Princes Highway).

In relation to the application of the DPO through Amendment C113, the Advisory Committee notes that the DPO itself was not exhibited. This could give rise to concern that a planning control (as opposed to a policy statement in the MSS) has been introduced over that land without an apparent opportunity for objection or comment by affected parties.

The Advisory Committee notes, however, that the *outcomes* the DPO was put in place to achieve were clearly articulated in the C113 amendment documentation and the area of the DPO was clearly identified in the exhibited clause 21.26. In addition, the Advisory Committee notes that this specific issue does not appear to have been raised by any party to this process or any other forum brought to the Advisory Committee's attention.

4.1.6 Conclusion on consultation for the Geelong Bypass

The Advisory Committee concludes that the community consultation for the EES and Amendment C113 to the Greater Geelong Planning Scheme was comprehensive and satisfied the legislative requirements for notice.

Whilst there were elements of the consultation that could have been made clearer in relation to the link between the Bypass and Surf Coast Highway, the Advisory Committee is satisfied that there was sufficient information available in the EES and amendment documentation for interested parties to gain an appreciation of the likely corridor, if not route alignment.

The Advisory Committee finds that:

- 1. The community consultation for the Geelong Bypass and Amendment C113 to the Greater Geelong Planning Scheme was acceptable in terms of statutory requirements and adequate information to inform interested parties of the corridor for the East - West Link Road.**

4.2 Amendment C138 – Armstrong Creek Urban Growth Area

4.2.1 What was proposed?

Amendment C138 to the Greater Geelong Planning Scheme was the amendment that introduced into the planning scheme the framework plan for the large urban and residential growth area that became the Armstrong Creek Urban Growth Area. Specifically the key elements in the Amendment were:

- Updating MSS clause 21.08 - Urban Growth;
- Introducing a new MSS clause 21.40 - Armstrong Creek Urban Growth Area - which introduced the Urban Growth Plan;
- Applying or amending overlays to recognise natural values and constraints (Environmental Significance Overlay, Vegetation Protection Overlay and Special Building Overlay);
- Amended clause 52.01 to establish public open space requirements; and
- To amend clause 81.01 to incorporate the *Armstrong Creek Urban Growth Plan Volume 1 2006*.

The City of Greater Geelong was the Planning Authority for the Amendment. The Armstrong Creek Urban Growth Plan is shown in Figure 10.⁵ A larger landscape version is provided in Appendix C.

⁵ The Armstrong Creek Urban Growth Area clause and this plan are now at clause 21-11 of the planning scheme following approval of a new MSS in 2010.

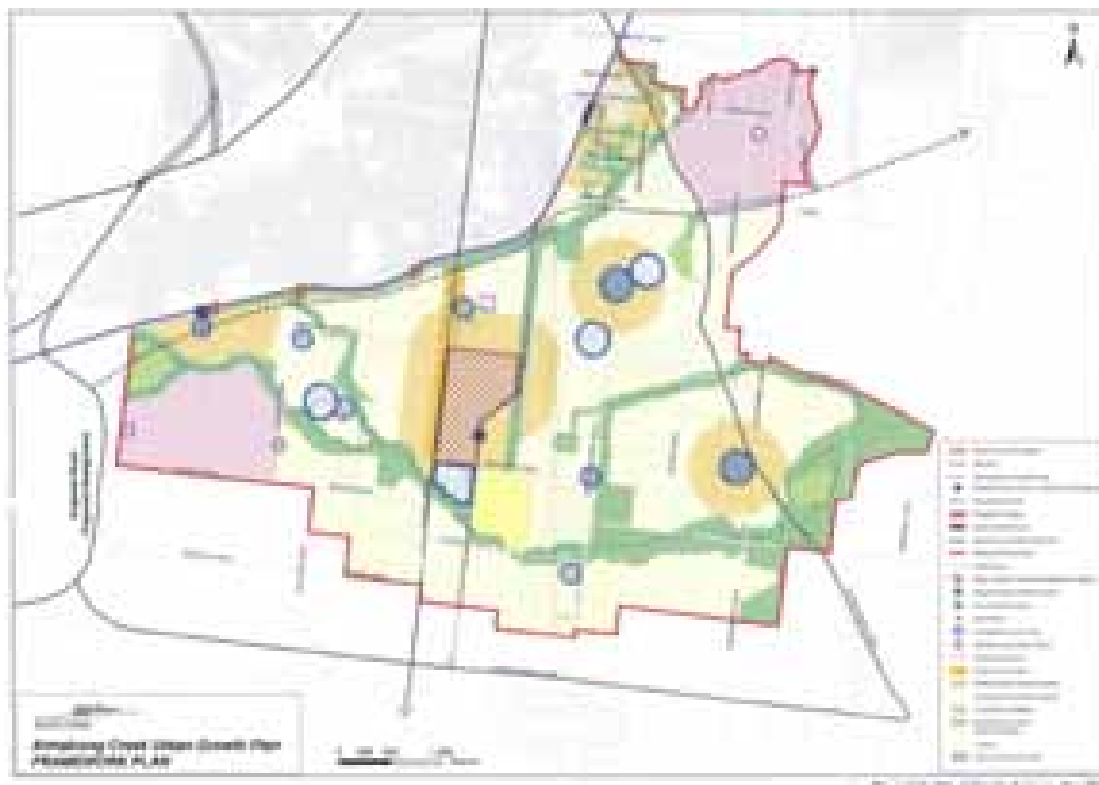


Figure 10: Armstrong Creek Urban Growth Plan

Importantly for the work of this Advisory Committee, the Urban Growth Plan shows an East - West Link Road running from Anglesea Road in the west to Surf Coast Highway and then crossing the Barwon Heads Road and Barwon River in the east.

Whilst the road is shown as a nominal link, in Section 4C between Anglesea Road and Surf Coast Highway, it clearly follows the Geelong – Warrnambool Rail Line rather than, for example, Boundary Road.

The Amendment explanatory report included in ‘Land Affected by the Amendment’:

.... A new road link from the proposed Geelong Bypass is planned to provide an east - west link from Anglesea Road to Surf Coast Highway and ultimately across the Barwon River to the Bellarine Highway and Portarlington Roads.

In the exhibited document for incorporation (*Armstrong Creek Urban Growth Plan Volume 1*) at clause 4.8.3 sub clause 8.12 at page 122:

A new link road (the ‘east-west link road’) should be provided linking Anglesea Road (the Geelong Bypass) with the Bellarine Highway, broadly on the alignment shown in Figure 4.8.1.

Figure 4.8.1 of that document was a 'Movement Network' plan which showed the East – West Link Road running along the Geelong – Warrnambool rail line as in the main Urban Growth Plan.

4.2.2 Consultation process

The City of Greater Geelong outlined the background to the Amendment and the notice given during formal exhibition. In summary this involved:

- One notice in the Geelong Advertiser on 2 December 2006;
- A letter to affected landowners including landowners immediately across the railway line to the north and along Rossack Drive (see Figure 11);
- Workshops with agencies, community groups, stakeholders and landowners in Armstrong Creek; and
- Meeting with many individual submitters on request.

A copy of the letter and package sent to those notified was included at Appendix 12 of the DPCD submission to the Hearing. This was:

- A covering letter;
- A copy of the notice for Amendment;
- A copy of the Amendment explanatory report; and
- A copy of Project Newsletter No 3 prepared by David Lock and Associates which included a copy of the Armstrong Creek Urban Growth Plan, albeit at a small size.



Figure 11: Properties near Section 4C provided direct notice for Amendment C138

In addition to the statutory exhibition process for Amendment C138, Council outlined an extensive community consultation program that was employed in the lead up to the formal exhibition process (explained at Section 17.1 of their submission).

During the formal exhibition of the Amendment, Council also undertook other non-statutory communication such as a press release which led to a front cover story (and Page 4) in the Geelong Advertiser on 29 November 2006. This story made reference to the East – West Link Road without referring to its nominal alignment along the rail line.

Council provided a folio of press articles and advertising around the Amendment in their submission to the Hearing at Appendix 7.

Formal exhibition of the Amendment occurred between 30 November 2006 and 9 February 2007. Council received 119 submissions which were referred to a Panel. The submission topics as presented to the Advisory Committee were:

- *The category and location of the East West Link Road*
- *The location of the Sub-Regional Centre*
- *The location of neighbourhood centres*
- *The extent of Open Space and the Provision of Biodiversity Corridors*
- *The location of the Southern Urban Growth Boundary*
- *The Greenways Concept is an inefficient use of land*
- *The Development Contributions Plan (DCP) is not fully developed*
- *Employment Lands do not need a designated location*

Council also noted there was considerable support for the Amendment.

The C138 Panel heard submissions for 17 days between 13 November and 18 December 2007 in Geelong and Melbourne. The Panel report generally supported the strategic direction of the Amendment whilst recommending a number of specific changes.

At this stage the East-West Link, shown as the dotted line along and south of the rail line, was apparently still not clearly settled. The Panel, in commenting on a neighbourhood activity centre stated:

The submission by the Dennis Family Corporation in relation to the north-east Neighbourhood Activity Centre was that it should be relocated approximately 300 metres south to the intersection of Boundary Road

and Horseshoe Bend Road, particularly if Boundary Road was to be retained as the major east-west link.

Further on, in specifically addressing the East-West Link, the Panel stated:

The east-west link from the Geelong Ring Road to the Surf Coast Highway, and indeed ultimately to the Bellarine Highway, is proposed to run south of and roughly parallel to the Warrnambool – Geelong Railway. This route is in keeping with VicRoads' investigation area and seems to the Panel to be sensible approach for making a connection from the Ring Road to the Surf Coast Highway

Having considered the Panel's recommendations and revised the Urban Growth Plan, Council adopted the Amendment in May 2008. The Amendment was gazetted on 4 December 2008.

4.2.3 Submissions to the Advisory Committee

Many submissions were critical of the consultation for Amendment C138 and its suggested limitations in terms of informing people north of the rail line of the implications of the Armstrong Creek Urban Growth Plan for Section 4C.

For example Mrs Gladwell (Submission no 2) was critical of the process on several fronts, including why it was not recognised that few or no submissions from Grovedale, Waurm Ponds or Marshall might point to a weakness in consultation when so many were received from Mount Duneed.

Ms Kumnick (Submission no 13) suggested that the construction of Section 4C was 'hidden' in the Armstrong Creek Amendment C138 documents.

Mr Creighton (Submission no 23) suggested that the process was 'pulling the wool' over the eyes of Grovedale, Marshall and Waurm Ponds residents by residents in Mount Duneed further south by seeming to be fully aware of the Section 4C alignment along the rail line.

The City of Greater Geelong outlined in detail the consultation that was undertaken (as described in 4.2.2 above) and rejected any suggestion there had been improper or 'secret' dealings between Council and Armstrong Creek developers and landowners.

Mr Bettess for Council outlined in some detail the extensive consultation process for the design of the Armstrong Creek Urban Growth Area, including those steps which occurred on a restricted basis due to discussion of commercially sensitive issues.

He also noted that the consultation program and approach itself was available on Council's website for anyone to see so the process was transparent.

In the Advisory Committee Hearing, Council conceded in hindsight that the formal exhibition consultation could have been more extensive and some of the materials related to the East-West Link Road more clearly articulated. They did not however consider that this amounted to a substantial failure in the consultation.

They stated:

... the Council concedes that given the fact that we are here today reviewing these matters in retrospect more extensive statutory notification program with direct mail to a further group of residents in the South Grovedale and Waurm Ponds area would have been appropriate and that the matters that are being addressed today would have been addressed earlier and the angst which is in the community as a result of the retrospective nature of these proceedings could have in part been lessened.

4.2.4 Discussion

As with the Geelong Bypass (EES and Amendment C113) the Advisory Committee considers that the key test for the community consultation is whether Councils statutory obligations were met. The two main areas criticised in submissions were as follows:

- The extent of notice provided north of the railway line in Grovedale; and
- The clarity of communication of intent of the Amendment in the notice in relation to the East – West Link Road (Section 4C).

Extent of Notice

In relation to the notice requirement of Section 19(1)(b) of the *Planning and Environment Act 1987*, Mr Bettess for Council addressed the issue of whether persons who were 'materially affected' were given appropriate notice. He drew the Advisory Committee's attention to a Victorian Supreme Court Case⁶ on the issue.

⁶ *Danjeet Nominees Pty Ltd v Sonny John Ellul* [1995] VSC 84; [1995] VSC 84

In this case Beach J stated:⁷

...To be affected by a proposal the land in question must be directly affected by it, not merely incidentally affected by it. A proposal approving the construction of a shopping centre, school or sporting complex 200 metres from the land would not be a proposal affecting the land within the meaning of the sub-s. even though such a proposal may have the effect of either increasing or decreasing the value of the land.

On this basis direct notice adjacent to the railway was only given to the properties along Riatta Avenue, Bickford Road, Springhurst Crescent and some on Euroka Court.⁸ Notice was also given to properties fronting Rossack Drive on the basis that it was considered it may at some point extend south into Armstrong Creek.

The case related to the *Sale of Land Act* 1962 but Council argued that the principle is equally applicable here. As it relates to the effect of an action on property, the Advisory Committee generally accepts that proposition.

It is however perhaps a different situation to some extent in that the effects of the road (noise, visual, air quality for example) may 'affect' properties at some distance even if the road is not actually being built through them or immediately adjacent to them, especially having regard to the rule of statutory interpretation that legislation should be interpreted having regard to its purpose so far as the literal interpretation of the words permit. Thus under the *Sale of Land Act* 1962 a property could not be regarded as being affected by unacceptable overlooking, but it could be affected under the *Planning and Environment Act* 1987.

Whether this relates to a *material* affect in this case is another question. As it was, Council decided that only those immediately abutting properties as described above and shown in Figure 11 would receive direct notice. It can be argued that, looking back, direct notice further into Grovedale might have been a more conservative approach. However, where that line should be drawn then becomes debatable in itself.

The Advisory Committee considers, on balance, that Council's approach to notification was reasonable and within the statutory obligations set out within the *Planning and Environment Act* 1987, although a more extensive targeted campaign within Grovedale would have been desirable.

⁷ At paragraph 11.

⁸ The Advisory Committee notes that the approach taken was consistent with that east of Surf Coast Highway.

The Advisory Committee also notes that under Section 39(7) of the *Planning and Environment Act 1987*, even if a defect in procedure relating to notice could be proved, the Amendment is not invalidated due to its approval.

Adequacy of Notice Material

The second issue is the adequacy of the notice material itself. Numerous submitters as discussed in the preceding section submitted that the material that was available did not clearly articulate the presence, or alignment, of the East – West Link Road.

As noted in Section 4.2.2 above, Council sent a package of material to assist recipients with an understanding of the Amendment.

In relation to the presence of the alignment, the Advisory Committee is satisfied that the existence of a notional East – West Link Road through Armstrong Creek was articulated in text, even if the actual alignment was not. Some examples of that articulation are provided in Section 4.2.1 above.

Even so, this could have been clearer still. For example the relevant section of the explanatory report could have read (Advisory Committee suggestion underlined):

.... A new road link from the proposed Geelong Bypass is planned to provide an east - west link from Anglesea Road to Surf Coast Highway immediately adjacent to the Geelong - Warrnambool Rail Line and ultimately across the Barwon River to the Bellarine Highway and Portarlington Roads.

In relation to the exhibited Urban Growth Plan, the East – West Link Road is shown but is somewhat lost on what is (understandably) a very busy plan, particularly when viewed as a small reproduction.

In relation to this issue Council drew on a VCAT case⁹ in which Morris J noted that:

I would regard the notice as including a brief description of the effect of the amendment. The notice tells the reader what the amendment is about and which land is affected by the amendment. The purpose of such a notice is not to explain the amendment: this is to be done by the explanatory statement. Rather the purpose of the notice is to alert a person to the existence of the proposed amendment so that the person can choose whether or not to take the next step to participate in the planning

⁹ *Freeman v Knox City Council* [2007] VCAT 414 at para 15

process. The next step in this regard is to examine the explanatory report and the amendment.

Morris J went on to state in relation to content of the explanatory report in Freeman that:¹⁰

A documented headed "Explanatory Report" which does not explain an amendment would not be an explanatory report which would satisfy the requirements of the Act. But what degree of detail is required to satisfy the requirement that the document "explain" the amendment? This is a difficult question, not least because long documents do not always explain as well as short documents. Indeed, many long documents often contain padding or obfuscation that actually mitigates against a sound explanation.

They noted that *Freeman* concludes at paragraph 20 that the explanatory report is to be read *in conjunction* with the Amendment or that at least they be available at the same time. It is then incumbent on the potentially affected person to seek out the further information and detail in the complete Amendment documentation.

On this issue the Advisory Committee considers that in summary there was adequate information contained within the notice material and exhibited Amendment to identify the presence and location of the proposed East – West Road Link.

However this information was not as clear as it could have been. An example of how the text could have been improved is shown above. Similarly in Newsletter 3 the presence and alignment of the East – West Link Road along the rail line could have been better highlighted.

As submitters noted, and Morris J commented on in *Freeman*, often the clarity of the message is lost in planning jargon and lengthy documentation and, as with many Amendments that is an accusation that could conceivably be levelled in this case.

However, the Advisory Committee has not seen any evidence that this was a deliberate attempt to conceal the issue within Amendment C138. Rather, it appears the alignment of Section 4C was regarded as a relatively minor issue in a very large strategic planning exercise for the planning and development of a new major urban area to house 50-60,000 people.

¹⁰ *Freeman v Knox City Council* [2007] VCAT 414 at para 19

4.2.5 Conclusions on consultation for Amendment C138

The Advisory Committee concludes that the statutory requirements for notice were met for Amendment C138. There were elements of the consultation that could, in hindsight, have been undertaken more effectively and Council acknowledged this in the Hearing.

These elements include possibly more extensive notice north of the rail line and clearer articulation in the Amendment C138 documentation of the implications of the Urban Growth Plan for the final alignment of Section 4C.

However, the Advisory Committee concludes that the process undertaken including both formal exhibition consultation and non statutory consultation (including widespread media coverage) resulted in a process that was sufficiently well known to alert residents in the area of the possibilities of Armstrong Creek development and seek further information on specific aspects if they so desired.

The Advisory Committee finds that:

2. **The community consultation for Amendment C138 to the Greater Geelong Planning Scheme was acceptable in terms of statutory requirements.**
3. **Whilst some elements of the Amendment C138 consultation could have been undertaken more comprehensively, including broader formal notice and clearer articulation of the East - West Link Road alignment, these are not in themselves substantive to the point that they amount to any significant failure of process.**

4.3 Amendment C212

4.3.1 What was proposed?

Following Amendment C138, Amendment C212 reduced the area of DPO8 on the east – west corridor for Section 4C to a narrow band along the rail line (see Figure 5 for area excised).

This was done on the basis that the strategic planning for Armstrong Creek in Amendment C138 had settled the final alignment of the east – west link between Anglesea Road and Surf Coast Highway as well as more broadly in the Urban Growth Area.

4.3.2 Consultation Process

The then Minister for Planning exempted the Amendment from notice requirements under Section 20(4) of the *Planning and Environment Act 1987* and it was not exhibited.

DPCD noted in their submissions:

Detailed design work by VicRoads had progressed sufficiently at the time to enable the alignment of Section 4C to be defined and the area of the DPO8 could then be reduced through Amendment C212 to the Greater Geelong Planning Scheme..... The amendment was also necessary to address financial hardship concerns experienced by the land owner of 80 Boundary Road.

4.3.3 Submissions to the Advisory Committee

Many submissions criticised the consultation processes around Section 4C over time and these are discussed in other sections in this chapter. No submissions directly addressed Amendment C212.

4.3.4 Discussion

The Advisory Committee notes that this amendment is quite significant in the series of amendments that relate to Section 4C. This is because it is the first amendment that removes the opportunity for a Boundary Road alignment through the use of a statutory tool and finalises the alignment close to the rail line.

The strategic planning for Armstrong Creek in Amendment C138 showed a clear nominal alignment along the rail line, but it was Amendment C212, by removing more southerly options closer to Boundary Road that arguably fixed this course in a statutory sense.

As will be discussed in the next section, by the time a Public Acquisition Overlay (PAO3) was applied by Amendment C232, the alignment in the eyes of Government agencies was firmly settled.

It seems to the Advisory Committee that this amendment is more significant than Amendment C232 in finalising the alignment and thus arguably should have been subject to public exhibition and the normal process for an amendment. However, VicRoads, as the Planning Authority, on the basis of the extensive strategic planning completed through Amendment C138 that showed the alignment along the rail line, considered, and recommended to the Minister for Planning, that a Section 20(4) amendment was appropriate.

The Advisory Committee has seen no evidence that the decision to pursue Amendment C212 was an attempt to conceal the planning for Section 4C. On the contrary, it appears to be an attempt to resolve hardship issues of directly affected landowners (i.e. those owning property along the proposed route) in a context where VicRoads considered that the alignment had been adequately aired through Amendment C138.

4.3.5 Conclusions on consultation for Amendment C212

The Advisory Committee concludes that it would have been preferable for Amendment C212 to have been a normally exhibited Amendment as it could have potentially aired the concerns ultimately expressed through Amendment C232 at an earlier stage. This may possibly have allowed for minor Section 4C alignment variations within the strategic planning undertaken for Armstrong Creek through Amendment C138.

However, the Advisory Committee also concludes that the Amendment process that was pursued was reasonable within the context of the strategic planning that had been completed for Amendment C138.

4.4 Amendment C232

4.4.1 What was proposed?

Amendment C232 introduced the PAO3 for the Section 4C link as well as introducing PAO9 for the Armstrong Creek Railway Station. The PAO3 (shown in Figure 6) was within the DPO8 from Amendment C113.

Between Ghazeepore Road and the Surf Coast Highway, PAO3 approximately coincided with the remnant of DPO8 after Amendment C212. Amendment C232 removed the remaining DPO8 in this area.

The Amendment also inserted '*Geelong Ring Road – Section 4C Incorporated Document, June 2010*' in the Schedule to clause 52.03 and Schedule to clause 81.01.

4.4.2 Consultation Process

VicRoads as Planning Authority ran a non-statutory consultation process for Amendment C232. In the Advisory Committee Hearing they listed the main components (in summary) as:

- Public display from 30 June 2010 until 18 August 2010;
- Information days on 7 and 31 July 2010;
- Distribution of C232 information via:

- Letterbox drop to properties within Armstrong Creek and north of the rail line¹¹;
- VicRoads website;
- Letters to property owners subject to acquisition;
- E-mail to distribution list;
- Newspaper advertising on 15 occasions across three local newspapers.

The Amendment C232 documentation exhibited was extensive and included:

- A summary report of the Amendment;
- A broad range of specialist technical reports on noise, traffic modelling, road safety, flood modelling, landscape and visual assessment, ecology, cultural heritage, land use impact, social impact and air quality.

The public consultation attracted 295 written submissions, and the Advisory Committee has viewed these through the course of its work. DPCD in its submission to the Advisory Committee identified the key issues in these submissions (in summary) as:

- A preference for alternative alignments further south along Boundary Road, Whites Road or Mount Duneed Road;
- Traffic noise and air quality impacts on South Grovedale and Waurn Ponds;
- Property devaluation;
- Lack of consultation;
- Safety at the rail line/Surf Coast Highway Intersection;
- Preference for freeway rather than arterial road; and
- Don't close Ghazeepore Road at the rail line.

A number of submissions also addressed the location and operation of the proposed Armstrong Creek Railway Station.

Following consideration of submissions, VicRoads requested that the Minister for Planning approve the Amendment under Section 20(4) of the *Planning and Environment Act 1987* without the requirement for formal statutory exhibition.

The then Minister for Planning, in agreeing to waive notice requirements, gave his reasons as follows:

I am satisfied that:

¹¹ Map shown on page 10 of document 10 from VicRoads in the Advisory Committee Hearing.

Compliance with any of the requirements of sections 17, 18 and 19 of the Act and the regulations is not warranted because:

- *Previous formal and informal consultation with the affected land owner's stakeholders and the local community means that the views of the affected parties are known.*

The interests of Victoria or any part of Victoria make such an exemption appropriate because:

- *Section 4C of the Geelong Ring Road provides clear benefits to the community by providing a new arterial road connection between the southern end of the Geelong Ring Road at Anglesea Road and the Surf Coast Highway at Grovedale, servicing commuter, freight and tourism needs in the Geelong southern suburbs and Victoria's south-west and coastal regions. Section 4C will also assist in achieving the Government's objectives for the Armstrong Creek urban growth area by providing for safe and efficient traffic movements to and from the growth area for a future population of 55,000 people.*

The Amendment was gazetted on 8 October 2010.

4.4.3 Submissions to the Advisory Committee

A number of submissions to the Advisory Committee were critical of the consultation process for Amendment C232. These were not so concerned at the notification given or advertising process, but rather they were concerned that this seemed to be the first comprehensive opportunity to comment on the alignment of Section 4C, but the alignment by this time had been fixed.

Thus many of the submitters wanted to comment (and indeed submitted to Amendment 232) that Section 4C should be further south as well as providing comments on detailed design issues and impact mitigation.

4.4.4 Discussion

The Advisory Committee has considered the material exhibited for Amendment C232 and the submissions received on it and notes that the parties viewed the exhibited material from very different perspectives.

VicRoads appear to be approaching the Amendment as fine tuning of a settled alignment and applying the PAO for a road nearly ready to be built. Many submitters however appear to give the impression that this is the first time they are aware of the detail of the alignment and that there is considerable opportunity to substantially alter the route itself.

In terms of the exhibitions process itself, the depth and breadth of consultation that was undertaken by VicRoads for Amendment C232 seems extensive. The Advisory Committee is of the view that if such a process had been undertaken earlier, either following Amendment C113 or during Amendment C138, that the issues related to Section 4C may have been aired and resolved sooner. That is not to suggest that a different outcome would have resulted in terms of alignment, but rather that submitters from north of the rail line might have been satisfied that they had been accorded a better opportunity for input.

Of particular note is the area of notice that VicRoads used for Amendment C232 compared to the area used by the City of Greater Geelong for Amendment C138 north of the rail line. VicRoads provided direct notice to properties north almost to Heyers Road (in the east of Section 4C) and around Ghazeepore Road and north of Hams Road (in the west of Section 4C). This, coupled with the extensive advertising and clear definition of the alignment of 4C, arguably for the first time, led to a resultant significant number of submissions.

The decision by the then Minister for Planning to waive notice formal requirements via agreeing to a Section 20(4) Amendment in the face of many objections also requires comment. Whilst not inherently unreasonable, the Advisory Committee considers that the airing of submitters' concerns through reference to a Panel might have allayed some of the concerns of submitters about the alignment and the process.

Again, this may not have resulted in a different alignment, but it would have provided the opportunity for the submissions to be considered independently outside of the Planning Authority (VicRoads) itself and for the submitters to be heard in a public forum.

As it is, it leaves the community with the suspicion that the submissions to Amendment C232 were given little weight in considering whether or not the Amendment should be adopted.

4.4.5 Conclusions on consultation for Amendment C232

The Advisory Committee concludes that the community consultation for Amendment C232 was thorough and extensive in scope but that reference of submissions to an independent Panel would have been a preferable approach to allow consideration of submissions outside the Planning Authority.

The Advisory Committee notes that the extent of notice and advertising for Amendment C232 was admirable, and well beyond that normally required in a statutory exhibition process for an Amendment.

The Advisory Committee finds that:

- 4. The community consultation for Amendment C232 to the Greater Geelong Planning Scheme was detailed in content and extensive in scope, but would have been a superior process if the Amendment had been formally exhibited and contested submissions heard by an external body to the Planning Authority.**

4.5 Overall discussion on consultation

The Advisory Committee has provided detailed comments on individual consultation processes for the EES and amendments that have led to the current approved alignment of Section 4C of the Geelong Ring Road.

There has been extensive consultation at different times and with different focuses as the preceding sections have shown. If there has been an overall weakness in the consultation processes, it appears to the Advisory Committee that there has not been a direct and clear community consultation focus on the detailed alignment of Section 4C, at least not until Amendment C232.

Up until that point, the alignment of Section 4C was considered in various public planning processes, and particularly the EES/Amendment C113 and Amendment C138, but as one issue among many, causing it to be somewhat 'lost' in the bigger picture countenanced in those processes.

Thus, whilst in those earlier planning processes there was information on the alignment of Section 4C and its corridor, it had to be sought out by those interested in the issue rather than being the obvious subject of the amendments.

Some of the submissions to the Advisory Committee process have suggested that Government agencies have provided '*vague, misleading, conflicting and inconsistent information*' and alleged serious impropriety on the part of participants in the process of planning for Armstrong Creek and Section 4C.

The Advisory Committee was presented with no evidence of such behaviour in the Hearings. In the Advisory Committee Hearing the agencies and other parties present, when subject to frequent and onerous requests for more information, appeared unfailingly obliging in helping the Advisory Committee investigate the issues in the Terms of Reference.

It is also worth noting that a number of submissions to the Advisory Committee were supportive of the consultation undertaken through the Armstrong Creek development process. These submissions came from landowners and development companies but also from regional development agencies and some individuals.

4.6 Overall conclusions

The Advisory Committee concludes that overall there has been extensive community consultation at different times that has led to the approved alignment of Section 4C of the Geelong Ring Road.

This consultation has at times not been as targeted as it could be and this was acknowledged in the Advisory Committee Hearing at different times by both VicRoads and the City of Greater Geelong.

If the strategic planning for Section 4C had been undertaken differently and with more of a focus on specifically determining an alignment rather than achieving it through the Armstrong Creek Amendment, it is likely that a superior consultation outcome could have been achieved earlier in the process.

However the fact remains that the alignment corridor was available during the EES/Amendment C113 process, and the nominal alignment within the corridor was available from Amendment C138 onwards. The information was available if an interested person was to seek it out.

The Advisory Committee notes that the two amendments that subsequently implemented the alignment, i.e. amendments C212 and C232, were not independently reviewed via formal notice, submissions and a Panel. The Advisory Committee agrees that the concerns raised by submitters to the Amendment C232 informal consultation process may have had a better and more transparent airing if they had been subject to an independent review through a Panel.

The Advisory Committee finds that:

5. **A considerable degree of community consultation for the Geelong Ring Road Section 4C alignment has been undertaken over a number of years and through a number of different processes. The public availability of information on the corridor or alignment has been acceptable in each of the processes.**
6. **Elements of the community consultation for the Geelong Ring Road Section 4C could have been undertaken earlier and more effectively,**

but the Advisory Committee does not consider that the deficiencies are such that they amount to a significant failure of the process.

5. Assessment of Section 4C and alignment options

Chapter 5 responds to the required outcomes in the terms of reference to provide recommendations on:

- *the relative merits and impacts (economic, environmental and social) of the approved alignment of Section 4C of the Geelong Ring Road compared with any other alignments previously considered by VicRoads, the City of Greater Geelong, or any other relevant government strategic planning investigation, having regard to the function of the road to provide an east-west arterial road connection and Barwon River crossing to service the southern suburbs of Geelong and Armstrong Creek, as well as the Bellarine Peninsula.*

The approach adopted by the Advisory Committee is to: firstly, review the design of the approved alignment and issues that were raised in relation to the approved alignment; and secondly, provide a comparison of the approved alignment against other options put forward in the Advisory Committee process. The Chapter concludes with a discussion of each of the main issues, and the conclusions, findings and recommendations of the Advisory Committee in relation to each.

5.1 Approved Section 4C alignment

5.1.1 Description of approved Section 4C alignment



Figure 12: Current Section 4C approved alignment¹²

Ultimate proposal

The currently approved alignment prepared by Aecom for VicRoads is shown at a larger scale in Appendix D to this report. It shows:

- The longer term cross section comprising a four lane two-way divided medium speed (80 km/hr) urban arterial road (not freeway standard), with bike lanes and potential for additional on-road bus lanes;
- A western connection to the roundabout being constructed as part of Section 4B north of the rail line;
- No provision for Anglesea Road re-alignment;
- Indicative layout for future Armstrong Creek railway station;
- Indicative connections to Armstrong Creek collector roads and Boundary Road;
- Provision for longer term grade separation with the rail line at Surf Coast Highway; and

¹² Source: VicRoads submission Revision E

- Possible longer term connection to the east, ultimately to Bellarine Peninsula (via future Barwon River Bridge).

VicRoads submitted that in the longer term, the duplicated Section 4C would be grade separated at the Surf Coast Highway. This would likely occur in conjunction with grade separation of the Surf Coast Highway rail crossing just to the north of Section 4C. The PAO3 allows sufficient road reserve width for future duplication and a full grade separated interchange at Surf Coast Highway.

Short to medium term - proposed form

VicRoads and Council submitted that Section 4C would be built initially on the southern carriageway alignment as a two lane two way arterial road with a total of six at grade intersections. It is proposed to construct the southern carriageway for the first stage to maximise the distance of the road from existing houses. VicRoads advised that this decision was taken in direct response to issues raised by submitters in response to the exhibition of Amendment C232.

The intersections proposed are:

- Roundabout at the western end connecting to Section 4B of Geelong Ring Road and Princes Highway;
- Intersections at Ghazeepore Road; the entrance to the Armstrong Creek Railway Station; Boundary Road connection; and one other collector road. VicRoads indicated that each of these intersections would be signalised and that the signals would be linked (Although it was not clear to the Advisory Committee this would be the case from the opening or that signals would be installed as required.);
- Signalised intersection with Surf Coast Highway. Initially this will be a T intersection but with the intention of an extension to the east in the medium term.

Initial traffic volumes are expected to be in the order of 5,000 to 7,000 vehicles per day (vpd).

VicRoads advised that \$76.9 million in funding had been allocated to complete the design, land acquisition and construction of Section 4C from 2011 to 2014.

Earlier plans had suggested that Ghazeepore Road may be truncated at the rail line but VicRoads have confirmed that, while closure of the rail crossing may be considered in the future to improve safety, it is not currently proposed. VicRoads also acknowledged that local north-south access would need to be carefully considered in future consideration of Ghazeepore Road.

5.1.2 Context - Other planned road network projects

VicRoads advised the following expected timing of currently planned road projects:

- Geelong Ring Road Section 4A – late 2011 completion;
- Breakwater Road realignment – late 2012 completion;
- Geelong Ring Road Section 4B – 2013 completion;
- Geelong Ring Road Section 4C - 2014 completion;
- Princes Highway duplication Waurn Ponds to Winchelsea – 2014;
- Princes Highway duplication Winchelsea to Colac – Government commitment to project; and
- Pioneer Road – Government commitment to widen section from Princes Highway to shopping centre.

Planning is continuing for the East-West link road between Surf Coast Highway and the Barwon River. VicRoads and Council advised that the precinct structure plans would set aside the road reservation and that it is expected that developers would fund initial construction of a two lane two way road.

VicRoads and Council also advised that initial route planning was being progressed to determine an alignment across the Barwon River and further east, ultimately to join with the Bellarine Highway. This work is in the very preliminary stages.

5.1.3 Design and safety issues for approved alignment



Figure 13: Proposed initial stage cross-section near Bickford Road¹³

A number of submitters including: Ray Gladwell (Submission no 1); Lee Gladwell (Submission no 2); D & D Trifilo (Submission no 19); Anne Fuller (Submission no 27); and Kent Fuller (Submission no 28) raised concerns regarding the safety of the Surf Coast Highway level crossing due to the

¹³ Source: VicRoads submission

close proximity of the Section 4C intersection and concerns that vehicles would queue across the level crossing.

The proposed intersection is approximately 170m south of the level crossing and includes two right turn lanes for traffic turning from the Surf Coast Highway west on to Section 4C.

VicRoads have carried out a safety audit and SIDRA traffic analysis of the proposed intersection layout. VicRoads submitted that the design of the intersection, combined with linking of the traffic signal sequence to the level crossing will ensure a safe design.

The internal Road Safety Audit Report provided by VicRoads also concluded that, in the longer term, once the Section 4C alignment is continued to the east and the Surf Coast Highway intersection becomes a cross intersection, a third lane would be required to ensure that southbound through traffic does not queue across the rail crossing. VicRoads also submitted that at that time, given expected increases in traffic and train numbers, grade separation of the rail crossing is likely to be warranted.



Figure 14: Proposed intersection layout Section 4C / Surf Coast Highway¹⁴

The Advisory Committee's conclusions and findings in relation to this issue are included at Section 5.4.3 of this report.

¹⁴ Source: VicRoads submission

VicRoads design response to noise and other amenity issues is discussed in Chapter 6.

5.1.4 Accessibility issues for approved alignment

The Advisory Committee received a number of submissions regarding pedestrian access across the railway line and Section 4C road corridor.

The *Armstrong Creek Urban Growth Plan – Framework Plan (May 2010)* shows three pedestrian bridges over the railway line. The *Armstrong Creek West Draft Masterplan (December 2010)*¹⁵ shows four pedestrian bridges over the railway line and five signalised intersections along the Section 4C alignment.

The City of Greater Geelong stated a strong desire for the early construction of pedestrian overpasses:

*In addition to these amelioration treatments (noise treatments), the City of Greater Geelong also submits that there needs to be a commitment as early as possible to pedestrian overpasses as detailed in the Armstrong Creek Urban Growth Plan Framework Plan for the Armstrong Creek Urban Growth Area to ensure that there is appropriate connectivity between the existing and urban areas of southern Geelong and the new Armstrong Creek development*¹⁶

It is highlighted that the Framework Plan does not include pedestrian bridges over the 4C alignment, but rather just the railway line. Noting this the Advisory Committee requested VicRoads to explain its intentions, if any, regarding grade separated pedestrian facilities over the Section 4C alignment, acknowledging that it is not responsible for the provision of pedestrian crossings of rail lines.

VicRoads responded as follows:

Due to the high cost of a grade separated pedestrian facility, a detailed benefit/cost assessment is required in order to provide best use of resources by comparing it with alternative lower cost pedestrian treatments. The VicRoads Traffic Engineering Manual Volume 1, Chapter 4, provides guidelines... ..conditions to justify installation include peak-hour volume of traffic using the road, peak-hour volume of pedestrians crossing the road and proportion of pedestrians under 12 years of age and over 60 years of age.

¹⁵ Source: Mesh submission

¹⁶ CoGG Submission Vol 1 Page 73 of 74

It is expected that traffic and pedestrian volumes for Geelong Ring Road 4C would not meet the conditions for a grade separated pedestrian facility in accordance with Traffic Engineering Manual Volume 1, Chapter 4, until the Armstrong Creek Urban Growth Area is substantially developed. When warrants are met, VicRoads will consider the installation of a grade separated pedestrian facility at this location (Adjacent to the proposed Armstrong Creek Railway Station)

In other words, VicRoads does not envisage any grade separated pedestrian bridges being built in the early stages. VicRoads also provided a copy of a *Concept Bicycle Strategy* which shows connections across Section 4C at Ghazepore Road, Surf Coast Highway and at the Armstrong Creek Railway Station.

The written submission by Mesh Liveable Urban Communities on behalf of Armstrong Creek West Landowners Consortium (Submission no 36) notes that the Urban Growth Plan and draft Masterplan contain numerous pedestrian bridges across the railway reserve and a number of signalised intersections along the Section 4C alignment but questions when and how these will be delivered.

The Mesh submission concludes that in order to reduce the divisive impact of the road and to improve the interface to the future rail station the following actions should be encouraged:

- *Requiring delivery of two (one in the interim and one in the ultimate or when the rail station is delivered whichever is sooner) of the pedestrian bridges over the rail corridor as part of the road works to promote pedestrian access into the West Precinct; and*
- *Requiring delivery of two of the signalized intersection to promote pedestrian access into the precinct two (one in the interim and one in the ultimate or when the rail station is delivered whichever is sooner).*

Other submitters including Mr and Mrs Pearce (Submission no 6), existing residents of Grovedale, were opposed to pedestrian overpasses on the basis that they were unsightly and difficult to negotiate for the elderly and disabled. At grade crossings were preferred. A number of submitters raised concerns about the barrier effect that a wide corridor would have in separating the communities.

The Advisory Committee's conclusions and findings in relation to this issue are included at Section 5.4.4 of this report.

5.1.5 Traffic projections

VicRoads commissioned traffic modelling for various scenarios and these are contained in *Geelong Ring Road Sections 4B and 4C – Veitch Lister Consulting (VLC) report dated October 2009*. A copy of this report was placed on exhibition with the Amendment C232 documents and has also been made available to the Advisory Committee. Extracts of the road network traffic projections were presented by VicRoads to the Advisory Committee and a copy of the following relevant scenarios are attached in Appendix E to this report:

- Interim Scenario – 4A and 4B complete (around 2013);
- Ultimate (around 2040) with East-West Link completed to Bellarine Peninsula and Section 4C;
- With Section 4C only (no East-West link) (around 2040); and
- No Section 4C or East-West link (around 2040).

The following points were clarified by the Advisory Committee in relation to the traffic modelling:

- The modelling takes into account expected development and population growth on the Bellarine Peninsula;
- The modelling includes provision for public transport travel;
- Scenarios are based on average daily weekday volumes; and
- Scenarios do not show peak holiday or weekend traffic flows.

The following further observations are made from the traffic modelling information provided by VicRoads at the Hearing and from the Advisory Committee's own analysis of the modelling:

- Local roads to the north of the rail line including Rossack Drive - Heyers Road will continue to experience moderately high traffic volumes for a local collector until after Sections 4A and 4B are completed. This would be expected to reduce in the ultimate scenario with Section 4C completed;
- Future traffic volumes on Breakwater Road (on its new alignment currently being constructed) become problematic by 2040 if no new link across the Barwon River is provided. The projected volume of 27,000 vpd is well above the normal capacity of a two lane two way road (up to 20,000 vpd) and Breakwater Road - Fellmongers Road would require duplication (including a further bridge) to carry such traffic;
- With an additional southern bridge over the Barwon River as part of an East-West Link Road connecting to the Bellarine Peninsula, Breakwater Road traffic drops back to 18,000 vpd (in 2040) and the East-West Link carries 24,000 vpd at the bridge;

- Section 4C traffic volumes (in 2040) are projected to be between 13,000 and 15,000 vpd with no East-West Link Road and between 16,000 and 17,000 vpd with the Link Road. In both scenarios Section 4C could likely continue as a two lane two way road until this time. It is noted that modelling does not include analysis of weekend or holiday traffic and volumes may exceed capacity at peak times at some locations;
- The traffic modelling does not include any upgrade of Mount Duneed Road or the addition of any southern connection between Anglesea Road and the Surf Coast Highway. The impact of the inclusion of an upgraded link between Anglesea Road and the Surf Coast Highway (either via an upgraded Mount Duneed Road or a new, more southern alignment) would be to reduce traffic volumes on Section 4C and enable it to continue as a two lane two way road for a longer period before requiring duplication;
- Mount Duneed Road traffic volumes are projected to range between 5,800 and 8,100 vpd. VicRoads acknowledged these volumes, particularly on weekends and holidays, are likely to further increase. It was noted that Mount Duneed Road in its current form is not suited to carrying a significant increase in traffic;
- VicRoads also acknowledged that the Mount Duneed Road volumes may be under-estimated on the basis that the Section 4C-Surf Coast Highway route would contain up to 11 sets of traffic lights in the future and Torquay and Bellarine Peninsula bound drivers are likely to take the alternative Anglesea Road-Mount Duneed Road route;
- Barwon Heads Road east of Mount Duneed Road is projected to carry 11,000 vpd without the East-West Link Road and a new Barwon River bridge and this reduces to 9,800 vpd with the East-West Link and new bridge. Both Scenarios are well within the normal operating capacity of a two lane two way road;
- Peak weekend and holiday volumes may, however, be more of an issue for Barwon Heads Road traffic, particularly if Mount Duneed Road is upgraded and therefore becomes a more attractive option to access the Bellarine Peninsula. The amenity impact on Barwon Heads township and the Barwon River bridge would need to be closely examined if Mount Duneed Road were to be upgraded.

5.2 The Role of Section 4C

VicRoads and Council submitted that Section 4C is intended to fulfil three roles in the road network: local; sub-regional; and regional. This section sets out each of these three intended roles.

5.2.1 Local collector

VicRoads submitted that Section 4C would fill the following local collector road roles:

- Access to future railway station; and
- Connectivity for local road users, including pedestrians and cyclists.

5.2.2 Sub regional connection

VicRoads submitted that Section 4C would fill the following sub-regional roles:

- Access for Greater Geelong, Surf Coast and Great Ocean Road residents; and
- An east-west arterial road for Armstrong Creek Urban Growth Area and surrounds.

5.2.3 Regional connection

Council submitted that part of the 'big picture' in relation to arterial road planning is to provide a complete Ring Road connection to the North East Industrial Precinct (NEIP) and across the Barwon River to the Bellarine Peninsula.

VicRoads submitted that Section 4C would fill the following regional roles:

- Consistent with providing long-term solutions for growth in south western Victoria;
- Transport connection for road users from Melbourne and regional Victoria to coastal areas and south western Victoria;
- Strategic link to tourist destinations;
- Longer term southern link around Geelong and additional crossing of the Barwon River; and
- Benefits for freight and business users.

5.3 Alignment issues and options

The various alternative alignment options that have been proposed and considered over time are described in Section 3 and discussed in Section 5.4 below. There are number of other relevant road issues requiring further comment and these are discussed below.

5.3.1 Context - other road improvements impacting on Section 4C

East-West Link

A future eastern extension of Section 4C beyond Surf Coast Highway to the Bellarine Peninsula across a new Barwon River bridge is seen by VicRoads as *'a long term proposal aligned more with the need to service land use changes and to support local and regional trips'*. Plans for the North East Industrial Precinct (NEIP) of the Armstrong Creek Urban Growth Area include land set aside by the developer between Barwon Heads Road and the Barwon River for a future East-West Link to the Bellarine Peninsula. It is expected that development of the Horseshoe Bend and Marshall precincts will see a similar reservation of land for the East-West Link between Surf Coast Highway and Barwon Heads Road.

DPCD advised that careful consideration was given to an East-West Link as part of the consultation on the Armstrong Creek Urban Growth Plan, which located an indicative alignment for the East-West Link and Barwon River crossing.

The timing for construction of any new bridge will depend on the extent of future development of the Bellarine Peninsula and the level of attractiveness of the area as a tourist destination. The need for a new bridge will also be determined by the capacity of existing east west routes (Breakwater Road and Barwon Heads Road) to cater for increased traffic to the Bellarine Peninsula. As noted in Section 5.2.5, Breakwater Road is expected to exceed the capacity of a two lane two way road by 2040 in the absence of a further river crossing.

VicRoads and Council advised that preliminary work was currently being done on an alignment for an East-West Link road east of the Barwon River to the Geelong - Portarlington Road.

Breakwater Road

Work is currently proceeding on the realignment of Breakwater Road to provide a new overpass over the rail line and Barwon River. The new connection will intersect with Fellmongers Road and Tucker Street at a new signalised intersection. The new link is expected to be completed in 2012.

The new link will overcome existing flooding problems and provide a more direct link across the Barwon River and to the Bellarine Peninsula. Capacity of the route will, however, be limited by the two lane two way cross section of the new road and of Fellmongers Road.

Mount Duneed Road

VicRoads acknowledges that Mount Duneed Road is currently carrying significant traffic volumes, particularly on weekends and holidays. VicRoads submitted that Mount Duneed Road plays an important role in the regional arterial road network and an agreement with Council is in place to declare it as an arterial road.

VicRoads recently undertook \$8 million of improvements including widening, shoulder sealing, improved drainage and the construction of a new roundabout at Anglesea Road.

VicRoads recognises that increases in traffic will occur on this road in future and further improvements may be necessary.

Anglesea Road

Anglesea Road is a major arterial road connecting to the Surf Coast and Great Ocean Road. Traffic volumes have increased with the recent opening of the Geelong Ring Road Section 3. Further increases in traffic could be expected with the opening of Sections 4A and 4B, ultimately requiring duplication of Anglesea Road.

The Armstrong Creek Urban Growth Area Framework Plan shows a realignment of Anglesea Road to the east, south of the railway line (see Figure 10). The Advisory Committee was advised that the intention of this realignment is primarily to enable significant limestone deposits to be extracted on the land owned by Boral south of the rail line and to the west of Ghazeepore Road.

VicRoads and Council advised that if this was to proceed, the currently preferred alignment for Anglesea Road would be: via the Section 4C alignment across a new bridge over the rail line to Ghazeepore Road; then following the Ghazeepore Road alignment (or an alignment approximately 100m west of Ghazeepore Road) south to link back to the existing Anglesea Road/Mount Duneed Road roundabout.

If this alignment was to be adopted the Anglesea Road bridge across the rail line that is currently under construction as part of Section 4B would no longer be needed for an arterial road use. It may, however, have a local road use and possibly a role in providing direct access to the Boral quarry.

VicRoads advised that options for the realignment were being discussed between VicRoads, Council and Boral. There is currently no VicRoads or government commitment to a proposal, funding or timing for construction.

5.3.2 Options proposed by South Grovedale Action Group

The South Grovedale Action Group provided five alternative routes to the Section 4C alignment in their submission to the Advisory Committee. The alignment options are shown in Appendix F and are broadly described as follows:

- Option 1 – Proposed Section 4C alignment to Boundary Road then following Boundary Road to Barwon Heads Road;
- Option 2 – As for Option 1 but connection to Anglesea Road at Whites Road rather than following Section 4C alignment;
- Option 3 – Whites Road – Burvilles Road;
- Option 4 – Whites Road – Stewarts Road; and
- Option 5 – Mount Duneed Road.

The Action Group submitted that each of these options provided advantages over the proposed Section 4C alignment, mainly on the bases that:

- The options impacted less on existing residential areas; and
- More southern options provided a more direct and central access to the Armstrong Creek Growth Area.

5.3.3 Submissions regarding alignment options

A number of submitters to the Advisory Committee, as well as to the Amendment C232 process, submitted that the Section 4C alignment would be better located elsewhere (Boundary Road, Whites Road or Mount Duneed Road). A common theme from submitters was that the main link between Anglesea Road and Surf Coast Highway should be along Mount Duneed Road, although there was some sympathy for the impacts that this may have on properties adjoining Mount Duneed Road.

VicRoads responded that if Section 4C was constructed along Boundary Road it would create a wedge of land between Boundary Road and the rail line that would create a barrier between the existing suburbs of South Grovedale and Waurin Ponds and the new development in Armstrong Creek. VicRoads prefers the single transport corridor along the existing Section 4C alignment on the basis that it minimises the barrier effect. The South Grovedale Action Group and other submitters opposed this view, submitting that such a wide corridor would be a more effective barrier than two narrower corridors.

VicRoads further argued that a Section 4C alignment along Whites Road or Mount Duneed Road would not adequately service traffic movements from the Armstrong Creek Urban Growth Area.

As set out in Section 5.3.2 above, the South Grovedale Action Group submitted five alternatives to the approved Section 4C alignment. The Action Group submitted that these options required detailed consideration including a cost benefit analysis. The advantages put forward by the Action Group varied from option to option but a key benefit submitted in each case was that all alignments were well separated from the existing residential areas of Grovedale.

VicRoads provided the Advisory Committee with a comparative assessment of Section 4C against each of the Action Group options and the option of a high speed southern link as proposed by Surf Coast Shire Council. A copy of the report provided is attached as Appendix G. VicRoads' assessed options against the three overarching project objectives (performance of local, sub-regional and regional roles) and against the 10 broader project objectives included in the Amendment C232 Summary Report:

1. Cost effective extension of Geelong Ring Road to Surf Coast Highway (Compatible with a future connection to the Bellarine Peninsula);
2. Reduce crash rates, travel times and operator costs for road users;
3. Connectivity for all users to areas on either side of the new road;
4. Minimise adverse community and social impacts;
5. Minimise aboriginal and post- settlement cultural heritage impact;
6. Protect/enhance landscape, open space and recreational values;
7. Limit air, water and noise pollution to acceptable levels;
8. Minimise impacts on flora and fauna;
9. Minimise significant surface water quality, flood risks and groundwater impacts; and
10. Comply with local planning schemes and local, state and commonwealth legislation.

A detailed spreadsheet was provided to the Advisory Committee outlining VicRoads' assessment. A copy of the assessment spreadsheet has not been included as the Advisory Committee believes that the report (Appendix G) adequately summarises the assessment.

In summary VicRoads assessed that the alternative options did not perform as well as the approved Section 4C alignment for a number of reasons that applied to varying degrees to all alternatives including:

- Does not provide as well for connections to Armstrong Creek Urban Growth Area;
- More costly than Section 4C due to overall length and more difficult bridging of Barwon River; and
- Greater environmental impact on grassy woodlands, Barwon River floodplain or wetlands.

In the assessment VicRoads acknowledged that some options better met some of the project objectives. Most alternatives, but in particular the high speed southern link option and the Mount Duneed Road option, provided a better connection to the Surf Coast Highway and Torquay.

VicRoads concluded that only two alignments met, to some degree, all the project objectives: the approved Section 4C alignment; and the Option 1 (Boundary Road) alignment. Of these, VicRoads argued that the approved Section 4C: met the objectives to a much greater degree; is more compatible with the Armstrong Creek Urban Growth Area planning; has less impact on significant native vegetation on Boundary Road; and has less impact on recently installed public utility assets.

VicRoads submitted that any investigation of other alignments for Section 4C would require a significant amount of new work, requiring at least two years to complete, and would cost in the order of \$2-3 million.

In their closing submission VicRoads stated:

Without the provision for Section 4C and its future extension to the Bellarine Peninsula, VicRoads believes other roads in Geelong and its surrounds will be significantly impacted by increased traffic volumes and place significant pressure on our existing road network. Under this scenario, VicRoads would need to consider other measures to increase the capacity of the arterial road network to cope with future traffic demands.

Greater Geelong Council supported the VicRoads assessment and added that the current approved alignment lines up best with the preferred Barwon River crossing point. Council submitted:

The location for the river crossing in the vicinity of the Reserve Road alignment is logical as it provides for the most narrow point of the river floodplain, and therefore avoids significant wetlands and environmentally significant areas and provides for a route to connect to the existing arterial road network, the Bellarine Highway and Geelong Portarlington Road.

The South Grovedale Action Group challenged this, stating that the extension of the current proposed Section 4C east of Barwon Heads Road to

Bellarine Highway would have limited use for communities in the northern Bellarine area. Instead they supported a free flowing more southern link with fewer intersections, better access to coastal areas and the lower Bellarine Peninsula and avoidance of most urban areas.

The Mount Duneed Progress Association (Submission no 32) submitted that Section 4C should be retained in the currently approved alignment and should be 'free flowing' with limited intersections to reduce the likelihood that alternative roads with minimal intersections would be used instead. They considered that if Section 4C was relocated away from the northern corridor, its purpose would not be met as a link to the Bellarine Highway. They also commented that Mount Duneed Road has many undulations making visibility challenging and dangerous, and has rural uses such as horse riding and livestock crossing that would be threatened by any future upgrade of Mount Duneed Road.

The Ocean Grove Community Association (Submission no 40) also raised concerns about the potential traffic impact on Barwon Heads Road and the townships of Ocean Grove and Barwon Heads if a direct connection between the Geelong Bypass and the Bellarine Peninsula was not built. They supported the approved alignment as part of such a connection.

Surf Coast Shire Council (Submission no 42) submitted that the Surf Coast Highway link must provide a seamless high speed transition from Anglesea Road to the Surf Coast Highway. They considered that Section 4C in its current form is not an efficient link to Torquay and the Great Ocean Road. They suggested that detailed work to identify appropriate routes and design for a southern link to the Surf Coast Highway should commence immediately. Surf Coast Shire Council provided the Advisory Committee with a copy of a report prepared by Veitch Lister Consulting that made a comparison of distance and travel times between the approved Section 4C route and a high speed southern link. The report concluded that a southern high speed link would be 1km shorter and five minutes faster than the Section 4C – Surf Coast Highway route for the trip from the end of Geelong Ring Road Section 3 to Torquay (based on a fully developed Armstrong Creek Urban Growth area). This is mainly due to the slowing impact of lower speed limits and around 10 additional sets of traffic lights expected in the longer term.

In response to submissions, Greater Geelong Council acknowledged that *'there will come a time where the desire line for traffic to access the Surf Coast Highway and Surf Coast generally will be via routes beyond the urbanised Armstrong Creek Growth Corridor.'* Council added that this situation had been recognised in the Armstrong Creek Framework Plan which shows an arterial

connection to Surf Coast Highway via a realigned Anglesea Road and Mount Duneed Road.

Greater Geelong Council submitted in relation to Mount Duneed Road:

There will clearly be a need for further treatment to Mt Duneed Road to provide for an arterial link given the terrain of Mt Duneed generally and in particular the intersection treatment with the Surfcoast Highway. These are obviously matters which will be addressed when the realignment of Anglesea Road has been resolved as part of the overall network planning associated with the later stages of the Geelong Ring Road project delivery.

VicRoads likewise acknowledged that Mount Duneed Road would require upgrade to cater for expected increased traffic volumes in the future.

In response to the Surf Coast Shire Council submission in favour of a High Speed Southern Link (south of Mount Duneed Road), Greater Geelong Council submitted:

It is the City of Greater Geelong's submission that the dual purpose served by the Mt Duneed Road alignment is to provide for connectivity through to lower Duneed and ultimately to Barwon Heads and the Bellarine Peninsular, as well as providing the high speed link to the Surfcoast Highway means that this route is far superior to the route which the Surf Coast Shire submission refers to.

In saying this the City obviously acknowledges the necessity for significant augmentation/grade separation at the Surfcoast Highway/Mt Duneed Road intersection, however submits that the geometry of this intersection is such that it could readily support the grade separation required in a manner which would deliver the best possible traffic network for the entirety of the region, rather than as articulated in the Surf Coast Shire submission which would be singularly focused on delivery of an additional access to the Surfcoast Highway.

The Advisory Committee heard that Barwon Water (Submission no 17) has recently completed two major pieces of water supply infrastructure to serve the Armstrong Creek Urban Growth Area. Barwon Water submitted that any relocation of the Section 4C alignment to, or north of, the Boundary Road alignment would result in significant infrastructure relocation costs of between \$500,000 and \$6.6 million, depending on the extent of assets affected.

Armstrong Creek developers, including the Horseshoe Bend Landowners Group (Submission no 35), Mesh (Submission no 36), Keystone Business Park

(Submission no 16), Newland Developers (Submission no 37) and Armstrong Creek Pty Ltd (Submission no 18) submitted to the Advisory Committee that they had committed considerable effort and funds into design activities based on the current alignment of Section 4C. Clearly developers would be affected to a differing extent depending on what, if any, changes were proposed to the Section 4C alignment.

Mr Underwood, on behalf of the Carter Group (Submission no 38), sought speedy resolution to the possible re-alignment of Anglesea Road in order to provide certainty for prospective developers, particularly in the Western Employment Precinct of the Armstrong Creek Urban Growth Area. The Carter Group supports the realignment of Anglesea Road and requests early direction on how Anglesea Road and Ghazeepore Road will provide access to the Western Employment Precinct.

The Department of Sustainability and Environment (DSE) (Submission no 39) advised that they supported the approved Section 4C alignment. Their issues are discussed further in Section 6.3.

5.4 Discussion and conclusions on alignment issues

The Advisory Committee has, as required by the terms of reference, conducted an assessment of the relative merits of the approved Section 4C alignment compared with other previously considered alignments and other alignment options presented to it. The Advisory Committee has reached conclusions and made findings and recommendations as set out below.

5.4.1 Earlier alignments

Discussion

Much of the earlier generation and analysis of options for Section 4C related to how the road would link with the various options for Section 3. Once the preferred option for Section 3 became clear, the approach recommended by the EES/C113 Panel was to preserve a range of alignment options by setting aside a wide corridor through DPO8. This conclusion was based on the constraints identified in the EES as discussed in Chapter 3.

It is noted that the Panel concluded that a 'link to the south' was not considered a feasible option '*as the main need would appear to be a link to the eastern side of Geelong proper onwards to the Portarlington Road*'. It seems clear that the Panel felt that the link needed to serve **both** roles of an Anglesea Road – Surf Coast Highway connection and a Bellarine Peninsula link.

This had the effect of eliminating further consideration of a more southerly link to the Surf Coast Highway.

The Advisory Committee notes that the EES and Panel conclusions regarding the need to protect an East-West corridor pre-dated detailed work on the Armstrong Creek Urban Growth Area. There is only passing reference in the EES to the role of the East-West Link road as a local arterial serving the Armstrong Creek Urban Growth Area.

Conclusions

The Advisory Committee regards the approach taken in the EES and C113 of identifying a wide corridor to preserve options as a sound approach.

The Advisory Committee, however, believes that the impact of development in the Armstrong Creek Urban Growth Area on route options may have been understated in determining the role or roles to be served by the route.

The Advisory Committee is of the view that there would have been benefit in a more fundamental assessment of the appropriate alignment for arterial roads to serve the three roles (local, sub-regional and regional as discussed in Section 5.2) identified for Section 4C once the Armstrong Creek Urban Growth Area plans had been more developed. The separation of these roles onto different routes seems to have been considered by the CRG (see Options CRG1 and CRG7 in Figure 2 above), however it appears that any subsequent assessment of options has been done on the basis that the road must fulfil all three roles rather than looking at the best option or options to fulfil the roles separately.

Had the latter approach been taken the conclusion may well have been to retain the option of keeping the through traffic bound for Torquay and the Great Ocean Road out of the Armstrong Creek area with a bypass to the south.

The Advisory Committee finds that:

- 7. The early development of route options was generally soundly based on the information available at the time. With the benefit of hindsight, it may have been preferable to do a more fundamental review of the role/s and alignment options as part of the work on the Armstrong Creek Urban Growth Area Framework Plan. The Advisory Committee finds that, had this been done, multiple route options may have been preferred rather than one option to fulfil multiple roles.**

5.4.2 Refinement of the route corridor

Discussion

The Section 4C alignment became progressively more defined within the approved DPO8 corridor through Armstrong Creek Urban Growth Area planning (Amendment C138); then the DPO8 being narrowed via Amendment C212; and then the PAO3 applied through Amendment C232.

Boundary Road west of Surf Coast Highway has vegetation protection controls through VPO1.¹⁷ These controls, in addition to the broader strategic planning for Armstrong Creek and consideration of the best alignment for road linkages further east, resulted in the Section 4C alignment being moved north away from Boundary Road and to its current alignment south of the rail line and closer to the existing houses in South Grovedale.

The move away from a Boundary Road alignment was supported by DSE on the basis that it avoided and minimised the loss of native vegetation.

Council, along with prospective developers, other government agencies and infrastructure providers, began preparing more detailed plans for the Armstrong Creek precincts based on the Framework Plan. For reasons discussed in Chapter 4, few concerns were raised by Waurn Ponds and South Grovedale residents about the impact of the alignment that was proposed in the Framework Plan. As a result there was a more limited examination of the amenity impacts on the existing residential areas in the Amendment C138 process than might otherwise have been the case.

As part of Amendment C232, detailed investigations were carried out into the potential environmental effects; noise impacts; social and economic effects of the Section 4C alignment, but by this time the alignment had been reduced down to one option and no other alignment alternatives were on the table. Submissions raised in relation to Amendment C232 seem to the Advisory Committee to have been regarded by VicRoads as submissions on how Section 4C should be designed to minimise amenity impacts rather than any discussion about whether it should proceed on that alignment.

Conclusions

Accepting the identified corridor as defined in DPO8 as the starting point, the subsequent work to further refine the road corridor was, in the view of the Advisory Committee, justified and appropriate in order to provide

¹⁷ Introduced prior to Armstrong Creek Urban Growth Area planning.

certainty for future development and reduce the impact on owners of land within the broader DPO8 area.

The decision to move the Section 4C alignment away from Boundary Road and closer to existing houses in Grovedale was soundly based.

The Section 4C alignment was in a sense 'locked in' by the Framework Plan (via Amendment C138) and subsequent steps (C212 and C232) were seen (at least by VicRoads) as merely implementing the Plan by further refining the route corridor.

The Advisory Committee finds that:

- 8. The further refinement of the Section 4C corridor implemented through Amendments C212 and C232 was appropriate and soundly based.**

5.4.3 Safety of Surf Coast Highway intersection

Discussion and conclusion

The Advisory Committee accepts the work done by VicRoads on assessing the safety of the at-grade Section 4C / Surf Coast Highway intersection with regard to its proximity to the Surf Coast Highway rail level crossing. No evidence was presented that this work was flawed or inappropriately prepared.

The Advisory Committee accepts the advice that appropriate design measures and signal coordination can be put in place to ensure appropriate safety standards are met.

The Advisory Committee finds that:

- 9. The advice of VicRoads that appropriate design measures can be put in place to ensure a safe intersection layout for the Surf Coast Highway intersection with Section 4C appears sound and was not challenged with evidence in the Hearing.**

5.4.4 Pedestrian and Bicycle Access

Discussion and conclusions

The Advisory Committee is not convinced that the issue of pedestrian and bicycle connectivity to Armstrong Creek and Grovedale across the rail line/Section 4C corridor has been adequately addressed. Clearly there are differing views between VicRoads, Council, developers and residents on

how access should be addressed and, in particular, what infrastructure should be built in the early stages. The Advisory Committee was not presented with sufficient information to reach a conclusion on these issues and recommends that the Council do further work, in conjunction with VicRoads, Department of Transport, developers and existing residents to define and resolve these issues. This work should provide a pedestrian and bicycle access plan for the area that addresses: access points; appropriate forms of access (at-grade or grade separated); and timing of works. This work may be able to be done in conjunction with the Armstrong Creek West Precinct Structure Plan provided that care is taken to consider broader access issues into adjoining precincts and the existing residential area in Grovedale.

As stated in Section 5.1.1, the Advisory Committee is not clear on whether it is intended to signalise all of the intersections on Section 4C from the initial opening of the road. This needs to be determined considering not only likely traffic volumes, but also the need for safe pedestrian access that would be provided by traffic signals.

The Advisory Committee is concerned about the possible barrier effect of such a wide corridor and this potential barrier makes resolution of access issues across the corridor all the more important.

The Advisory Committee recommends that:

- 1. Greater Geelong City Council prepare a pedestrian and bicycle access plan for access along and across the rail line and Section 4C corridor. The access plan should provide clear direction for location, form, timing and funding responsibility of traffic signals, pedestrian overpasses, bicycle and pedestrian infrastructure and should be developed in consultation with VicRoads, the Department of Transport, Armstrong Creek West developers and existing residents.**

5.4.5 Alignment alternatives

Discussion

The Advisory Committee has closely examined the VicRoads assessment of the options presented by the South Grovedale Action Group and the Surf Coast Council. The basis of the assessment is summarised in Section 5.3.3.

The Action Group have provided five options that are physically feasible and these options provide a useful basis to compare the merits of the approved alignment and assess whether any of the options may still offer a viable alternative to the approved alignment. The 'high speed southern connection' as preferred by Surf Coast Council has also been assessed.

The Advisory Committee agrees with the South Grovedale Action Group that the assessment carried out by VicRoads is somewhat subjective and some elements are contestable, but accepts that overall it represents a reasonable and appropriate assessment against the three broad and 10 specific objectives identified.

VicRoads argue that none of the options presented are significantly or fundamentally better than the approved alignment when assessed against the objectives presented. VicRoads concluded that other options do not service the Armstrong Creek Urban Growth Area, and in particular the Armstrong Creek station precinct, as well as the current approved alignment, and that other options appear to have a greater potential impact on flora and fauna. The VicRoads assessment was supported by Greater Geelong Council.

If the project were to be assessed on the basis of overall achievement against all objectives it would be reasonable to conclude that the approved alignment is the best option. Such a conclusion, however, requires an acceptance that the project must meet all objectives and that there is only to be one project rather than considering the best combination of arterial road options to meet the separate objectives.

The scenario that presents as possibly a better overall solution is the construction of both Section 4C as a limited arterial and early construction of a high standard southern link between Anglesea Road and the Surf Coast Highway, either as an upgraded Mount Duneed Road or a high speed link further to the south.

The Advisory Committee considers that this dual project option may have a number of advantages:

- Approved Section 4C alignment best meets the roles of local arterial connection to Armstrong Creek and future connection to Bellarine Peninsula;
- A southern alignment provides a significantly better connection between Anglesea Road and Surf Coast Highway to Torquay and the Great Ocean Road;
- Reduced traffic volumes on Section 4C would significantly delay or eliminate the need to duplicate Section 4C in the future and have less impact on existing residential areas in South Grovedale; and
- Reduced traffic on Surf Coast Highway between Section 4C and Mount Duneed Road with subsequent reduced impact on the future Activity Centre.

The dual project option is not without its drawbacks:

- Any upgrade of Mount Duneed Road will have impacts on the adjoining residents as articulated in the submission by the Mount Duneed Progress Association;
- A more attractive route from the Geelong Bypass via Anglesea Road and Mount Duneed Road would likely increase traffic on Barwon Heads Road and ultimately through Barwon Heads; and
- The overall cost of bringing forward a southern link in addition to Section 4C would be greater in the short-term (although this could be offset by reduced travel times for Torquay bound traffic and deferral of Section 4C duplication costs).

Greater Geelong and Surf Coast Councils and VicRoads appear to all at least notionally support the construction of a southern high speed link between Anglesea Road and Surf Coast Highway, albeit in different preferred forms:

- Greater Geelong City Council supports completion of a high speed link to Surf Coast Highway via a realigned Anglesea Road and upgraded Mount Duneed Road 'as early as possible';
- Surf Coast Shire Council supports a high speed link on a southern alignment (south of Mount Duneed Road) and proposes that work to identify appropriate routes and design should commence immediately; and
- VicRoads supports the role of Mount Duneed Road as an arterial of increasing importance that will likely require future upgrade to cater for increased traffic.

Conclusions

The Advisory Committee agrees that the VicRoads assessment is somewhat subjective and some elements are contestable, but accepts that overall it represents a reasonable and appropriate assessment against the stated objectives.

The Advisory Committee accepts the argument by VicRoads that none of the options presented are significantly or fundamentally better than the approved alignment when assessed against the objectives presented. The Advisory Committee agrees that other options do not service the Armstrong Creek Urban Growth Area, and in particular the Armstrong Creek station precinct, as well as the current approved alignment. The Advisory Committee also agrees that other options assessed appear to have a greater potential impact on flora and fauna, and in some cases sensitive wetland areas.

The Advisory Committee concludes that the approved Section 4C alignment presents a good option in terms of fulfilling the 2 roles of: a local arterial road for access to Armstrong Creek; and a future link to the Bellarine Peninsula.

The Advisory Committee is however not convinced that the role of a connection to the Surf Coast Highway and Torquay is best served by the approved alignment for Section 4C. The Advisory Committee accepts the arguments put forward by Surf Coast Shire Council and a number of other submitters that a Section 4C – Surf Coast Highway route to Torquay would be longer (in terms of both distance and time) and therefore less attractive, particularly once Armstrong Creek Urban Growth Area is fully developed and the route includes up to 11 sets of traffic lights.

The Advisory Committee concludes that there is merit in the option of a dual project approach, involving the construction of Section 4C as well as construction of a high standard southern link between Anglesea Road and the Surf Coast Highway, either as an upgraded Mount Duneed Road or a high speed link further to the south. In any further investigation of these options the impacts on Mount Duneed Road and Barwon Head Road traffic will need careful consideration.

The Advisory Committee acknowledges the amenity concerns expressed by the South Grovedale residents in relation to the proposed long term duplicated arterial configuration of Section 4C. Many submitters appeared to object on the understanding that it would be a freeway standard road and this is not proposed. Amenity issues are discussed in detail in Chapter 6.

The Advisory Committee believes that retention of Section 4C as a two lane two way road for a long period will go some way to addressing the concerns expressed. By constructing a separate southern link early (certainly before Section 4C traffic volumes increase to a high level), the two lane cross section can be retained for the foreseeable future. On the basis of the traffic projections provided (and acknowledging that some remodelling would be required to confirm this) Section 4C is unlikely to require duplication before 2040 under this scenario, even with an East-West Link across the Barwon River to the Bellarine Peninsula. On this basis, significant short to medium term amenity and urban design improvements to the unused portion of the Section 4C road reserve are warranted and these are discussed further in Section 6.2.

It is apparent from the traffic projections discussed in 5.1.5 that an additional Barwon River crossing is likely to be needed at some stage in the future. The Advisory Committee agrees that the Section 4C and East-West link Road will provide a suitable route for this connection. Bearing these points in mind the

Advisory Committee concludes that options should be kept open for this link.

The Advisory Committee finds that:

10. **The construction of a two lane two way arterial road on the approved Section 4C alignment to fulfil the role of an arterial collector road for the Armstrong Creek Urban Growth Area is supported.**
11. **The retention of the entire existing PAO3 area as a road reserve to preserve the option of longer term duplication of the Section 4C and link to the Bellarine Peninsula is necessary and appropriate. Given the likely impact of future duplication on the existing residents of South Grovedale to the north, and future residents of Armstrong Creek to the south, any future proposal to duplicate the road should be the subject of a community consultation process to ensure that the proper design of the road and any remedial measures are in line with the standards of that time.**
12. **The intended role of an arterial link between Anglesea Road and Surf Coast Highway is best catered for by a separate route that bypasses the Armstrong Creek Urban Growth area i.e. on or south of Mount Duneed Road.**

The Advisory Committee recommends that:

2. **VicRoads commence work as soon as possible on investigating a suitable route for a southern link between Anglesea Road and Surf Coast Highway in parallel to work on Section 4C. The investigation should consider: the impact on properties and communities adjoining Mount Duneed Road; and the potential traffic impact on Barwon Heads Road and the townships of Ocean Grove and Barwon Heads, in reaching a recommendation on a preferred route.**

5.4.6 A Boundary Road option

Discussion and conclusion

The Advisory Committee does not agree that a Boundary Road alignment for Section 4C would have created a dislocated wedge in the Armstrong Creek Urban Growth Area. The Advisory Committee agrees with the submission of the South Grovedale Action Group that the size of the wedge created between Boundary Road and the rail line would have been a significant development area in its own right and so the Advisory Committee does not

see this as a valid reason, in its own right to have eliminated the Boundary Road alignment as an option.

The Advisory Committee does, however, note the submission of DSE and the issues that would be faced in terms of significant impact on native vegetation if a Boundary Road alignment had been adopted. The potential high cost of relocating recently constructed water infrastructure is a further valid reason to now not consider Boundary Road as an alignment option.

5.4.7 Development process

Discussion and conclusion

The Advisory Committee does not accept that the fact that developers have spent time and money on further planning work based on the approved alignment should, on its own, eliminate the possibility of adopting other alignment options if there is a compelling case for a change. Such a change is a normal cost risk associated with carrying out development planning in its early stages.

The Advisory Committee is, however, concerned that a change in alignment would cause delays to planning of the Urban Growth Area and the consequent delays that would be caused to releasing developable land to the market. Armstrong Creek, as one of Victoria's largest growth areas, forms an important part of meeting the demand for new housing and industrial land.

5.4.8 Anglesea Road

Discussion and conclusion

With regard to the realignment of Anglesea Road, the Advisory Committee encourages, as a matter of priority, resolution of discussions between VicRoads, Council and Boral. A decision on realignment is required urgently in order to avoid any further unnecessary expenditure on road and bridge works and enable the finalisation of planning for: the western end of the alignment of Section 4C; Ghazeepore Road; and access to Armstrong Creek, particularly the Western Employment Precinct.

Recommendation

The Advisory Committee recommends that:

- 3. VicRoads and Greater Geelong City Council expedite discussions with Boral in order to make a prompt decision on the future alignment of Anglesea Road.**

6. Remedial measures for Section 4C

This Chapter responds to the Advisory Committee's term of reference to provide recommendations on:

Any additional remedial measures that could be incorporated into the design and development of Section 4C alignment to address environmental and amenity impacts on existing and future residents.

The following issues are addressed:

- Noise;
- Landscaping;
- Flora and Fauna; and
- Air Quality.

The Advisory Committee notes that VicRoads commissioned a Social Impact Assessment report from SKM for Section 4C through Amendment C232. The Advisory Committee assumes that the mitigation recommendations of that Study will also be followed in advancing the final design and development of Section 4C (see Appendix H).

6.1 Noise

6.1.1 Measures identified in background reports

Marshall Day Acoustics Pty Ltd (MDA) was commissioned by VicRoads to assess road traffic noise levels associated Geelong Ring Road Section 4C. The final version of their report is dated 15 June 2010.

The report includes modelling of eight scenarios. All scenarios modelled utilised the same daily traffic volume estimate. The estimate used was the 'Most Likely Ultimate Scenario (including Geelong Ring Road Section 4A, 4B, 4C & Bellarine Peninsula Link)', prepared by Veitch Lister Consulting (Oct 2009) which forecasts between 16,000 – 17,000 two-way vehicles per day (vpd). Each scenario also modelled the exhibited C232 Section 4C route alignment and typical ultimate cross section.

The variables modelled included: type of road surface (7mm spray seal or dense graded asphalt); traffic noise objectives to be attained at existing or approved residences (nil, 63dBA, or existing + 12 dBA); traffic noise objectives at future Armstrong Creek residences (none or 63dBA); and with or without noise barriers. In relation to this last variable the Advisory Committee notes that the report states:

VicRoads is proposing to construct a 2m high berm on the north side of Section 4C, as shown in Figure 2. For the scenarios with no noise barriers, this berm has not been included in the model.

The report states that based on VicRoads' Noise Reduction Policy the noise level objectives for the Section 4C alignment are as shown in Table 3.

Existing $L_{A10(18h)}$	Noise level objective	Comment
Less than 50dBA	Existing $L_{A10(18h)} + 12\text{dBA}$	If not practicable, noise level objective is 63dBA
50-63dBA	63dBA	
Above 63dBA	No increase	If not practicable, an increase of up to 2dBA can be tolerated

Table 3: Noise objectives

The results of the modelling included the following key findings:

- No additional noise barrier treatments are required to meet a 63dBA noise level objective where the existing noise level has been determined to be in the range of 50-63 dBA.
- In order to comply with the 'existing + 12dBA' noise level objective at existing or approved residences, if a 7mm spray seal is used in construction, a section of noise barrier 2m high is likely to be required on top of the proposed 2m high berm, giving a total height of 4m. Figure 15 highlights the location (on the northern boundary) where the 2m wall on top of the berm will be required under this scenario.
- If dense graded asphalt is used, the length of roadway required to include a 2m high wall on top to the 2m high berm reduces (Refer Figure 16).

In identifying the wall height and location under these scenarios, the June 2010 report notes that additional background noise measurement will be required to determine exact locations for noise mitigation:

As the estimates are based on only three measurements, the barrier designs based on them should be considered to be for planning purposes only. If the 'existing + 12dBA' option is implemented, further noise measurements will be required to provide more detail.

In relation to remedial measures required on the south side of the Section 4C alignment, the June 2010 report notes that VicRoads will not be responsible for noise mitigation and this responsibility will rest with the developers of Armstrong Creek. Having noted this, the June 2010 report modelled likely remedial measures on the southern boundary to achieve the 63dBA objective to inform decisions regarding landscaping. The modelling assumed

residential locations as depicted on the Armstrong Creek Urban Growth Plan - Framework Plan as shown at Clause 21.11-4 in the Greater Geelong Planning Scheme.

The mitigation measures identified that 3m barrier walls on top of a 2m berm will likely be required along the southern boundary in most locations if a 7mm spray seal is utilised in construction (Refer Figure 17). The report notes that future developers 'may opt for other solutions' and that further modelling will be required once further structure planning is completed.



Figure 15: Northern wall location and height (on top of 2m berm – '7mm spray seal')¹⁸

¹⁸ Extract from Plot 4, Marshall Day Acoustics, June 2010



Figure 16: Northern wall location (on top of 2m berm – ‘dense graded asphalt’)¹⁹

¹⁹ Extract from Plot 8, Marshall Day Acoustics, June 2010



Figure 17: Indicative southern wall heights (on top of 2m berm - '7mm spray seal')²⁰

²⁰ Extract from Plot 4, Marshall Day Acoustics, June 2010

The modelling undertaken for the southern boundary highlights that if dense graded asphalt is utilised in construction instead of the 7mm spray seal, the wall locations remain the same however they are reduced in height to 2m.

6.1.2 Submissions

VicRoads

VicRoads written submission to the Advisory Committee dated 7 April 2011 reiterated the findings outlined in the 15 June 2010 Marshall Day Acoustics report (as summarised by the Advisory Committee in Section 6.1.1). The submission confirmed that the VicRoads Traffic Noise Reduction Policy will be applied to the project. Further, the submission states:

*Final design and provision of noise attenuation measures will be in accordance with the policy in order to achieve the objective noise levels – typically 63 dBA L10 18 hr. The policy **also provides for consideration to be given** to limiting the increase in noise level to 12 dBA, where existing noise levels are less than 50 dBA (Advisory Committee emphasis).*

The submission also noted that in order to comply with a noise increase of no more than 12dBA for properties that currently have noise levels less than 50 dBA, a 2m high barrier on top of the 2m high earth berm (or a 4m high barrier) would be required for both spray seal and dense graded asphalt road surfaces. Having noted this, VicRoads then suggests that such mitigation measures are not required here and state:

In this particular location, provision of an earth berm, with planting as proposed in the project's Landscape Planning Concept Plan is considered by VicRoads to be preferable to a timber or masonry fence on aesthetic grounds and also to minimise or avoid sound reverberations from trains back towards existing residences.

During the VicRoads presentation to the Advisory Committee on Day 1 of the Hearing, Mr Miles stated that the following mitigation works would be undertaken:

- The alignment would be constructed initially on the southern carriageway;
- A two metre earth mound with planting along the entire northern boundary; and
- Traffic noise monitoring will be undertaken.

Mr Miles also reiterated that the VicRoads Traffic Noise Reduction Policy provides for consideration of limiting traffic noise increases by 12 dBA where

existing levels are less than 50 dBA. In stating this, Mr Miles confirmed that the readings at Bickford Road residences were between 40-50 dBA.

The Advisory Committee requested that VicRoads provide supplementary information on the amelioration measures that it intends to implement as part of constructing Section 4C. This information was sought to clarify exactly what mitigation measures VicRoads will provide (and had funding to implement) as opposed to what it may consider providing. The response to this request was handed to the Advisory Committee at the close of proceedings on Day 3 (Document 77). The only definitive mitigation measure confirmed was a 2m high earth mound along the northern boundary of Section 4C. The advice noted that the construction of the earth mound will limit traffic noise levels at houses north of the railway line to 63 dBA or less for any type of road surface material (spray seal, dense graded asphalt or open graded asphalt). Further, the supplementary advice stated:

*VicRoads will **give consideration to** limiting the traffic noise increase to 12 dBA at the above houses, which currently experience a noise level of less than 50 dBA ('existing plus 12 dBA policy'). To achieve this, the noise impact assessment of Section 4C has determined:*

- *With a sprayed seal road surfacing, a 2 metre high noise barrier would be required (920 m long) on top of the earth mound (4 m high total) adjacent to Bickford Road*
- *With a dense graded asphalt road surfacing, a 2 metre high noise barrier would be required (370 m long) on top of the earth mound (4 m high total) immediately adjacent to Bickford Road*

The advice also states that the use of dense graded asphalt road surfacing instead of spray seal surfacing would incur an additional expenditure of approximately \$750,000. The advice also noted that the use of open graded asphalt in lieu of dense graded asphalt will result in a further reduction in traffic noise levels of up to 3 dBA initially but the benefit reduces somewhat over time as the open graded asphalt voids fill with grit. The cost of each type of asphalt is approximately the same.

VicRoads supplementary submission (Doc 77) also dismissed the provision of individual 'Architectural Acoustic Treatments' to residences to reduce traffic noise for this project. The advice states that as the houses to the north of the railway line are closely spaced, a noise barrier is preferred to individual treatments such as double glazing (which are only provided in exceptional circumstances where houses are widely spaced).

The closing submission of VicRoads under the heading 'Amelioration Measures for Section 4C – Noise' reiterated that VicRoads is committed to

providing a landscaped 2m high earth mound on the northern boundary. Other remedial measures will *be considered* following further modelling. The extract reads:

To meet the Policy's 63 dBA objective, current modelling suggests that a two metre earth mound with planting along the entire northern boundary will be required. Following future modelling to assess the existing plus 12 dBA criteria, other measures will also be considered by VicRoads including noise walls.²¹

City of Greater Geelong

In relation to mitigation measures to address noise impacts, the City of Greater Geelong's written submission to the Advisory Committee Hearing dated 10 May 2011 '*strongly recommends*' that in addition to the 2m high earth mound along the northern boundary of the Section 4C alignment, a 2m high noise wall be constructed for the '*entire length of the Bickford Road interface*' and that an open graded asphalt treatment be used. Council considers these measures are required to '*ensure that the amelioration of any impacts from the road are undertaken in such a manner to ensure that there is absolutely minimal impact on existing urban areas of Waurin Ponds and south Grovedale.*'

Council's written submission included the following conclusion:

The City submits that there needs to be explicit direction from this Advisory Committee in relation to amelioration associated with the road and this should not be left open to a further design detail at a later date. As has been stated in the City's submission proper the City supports additional measures including earth mounding, 2 meter high noise wall on top of the earth mound for the entire length of Bickford road, landscaping to minimise the visual impact of this noise wall, and open graded asphalt to reduce the decibel reading from road noise associate with traffic on 4C.

Individual submitters

The Advisory Committee accepts the submission of VicRoads that of the 295 submissions that were lodged in response to Amendment C232, 228 submissions stated that they were concerned and or opposed to the alignment due to likely traffic noise impacts on people living in South Grovedale and Waurin Ponds (to the north of the railway line), particularly in the vicinity of Bickford Road and Riatta Avenue. The significant majority of these submissions called for the abandonment or relocation of the road.

²¹ Hearing Document No 81, page 2, VicRoads Closing Submission

The written submission of Ms Kumnick to this Advisory Committee dated 11 April 2011 (Submission 47) while not specifically addressing preferred mitigation measures, did make the following observations in discussing the exhibition process associated with C232:

It concerned us that the noise wall (shown in the Geelong Ring Road Stage 4C Landscape Planning Concept) only went partially along Bickford Rd. The Project Officer told us at the exhibition that this wall would be extended to the Surf Coast Highway, another Project Officer recently told us that the noise wall was this only long (sic) because regulations don't require walls past a certain distance. We do not feel confident.

Following the presentation of her submission, the Advisory Committee sought the view of Ms Kumnick regarding the noise attenuation measures she preferred if the Section 4C alignment was to be constructed in its currently approved location. Ms Kumnick replied that although she doesn't want to entertain the need for noise attenuation (as she wants the road relocated), if the alignment stayed where it is:

...a 4 metre barrier from one end to the other would be required.

Ms Kumnick also observed that *'we have been advised that there is no money for a wall.'*

The Advisory Committee also notes that Ms Gillam (Submission 71) expressed concern regarding the Section 4C alignment's impact on the 13 hearing impaired children that attend the Grovedale West Primary School which is the only deaf teaching facility in the Barwon South Western Region. Ms Gillam stated that the students use frequency modulators / or interpreters in the class room and extra background noise inside or outside the school buildings would be highly problematic for these children. Ms Gillam also submitted that *'teachers were extremely concerned about noise impact from Section 4C in the playground'* stating that *'with heavy industrial traffic including trucks anticipated from the Western Industrial Precinct travelling along Section 4C, these hearing-impaired children will struggle to hear playground peers or staff – effectively socially isolating them – an extreme form of disadvantage for anyone.'*

Ms Gillam's submission did not include any recommendations on remedial measures. Rather she urged that *'another more sustainable / socially justifiable route should be implemented.'*

The 11 April 2011 submission on behalf of the South Grovedale Action Group (Submission 43) and presentation by Dr Alford at the Hearing also ultimately seeks the relocation of the road. No specific advice or recommendations were contained in the submissions on behalf of the Group

relating to noise mitigation measures. In relation to noise impacts of the Section 4C alignment, Dr Alford expressed concern that the modelling undertaken by VicRoads consultant and the cited VicRoads policy relates to *'a freeway-acceptable standard of 63 decibel noise levels.'* It was submitted that this standard represents a very high threshold which is out of kilter with reasonable community standards noting that Grovedale and some areas of Waurm Ponds include very quiet residential areas. The submission also expressed concern that VicRoads stated during Day 1 of the Hearing that there was *'no allocated budget for noise wall construction (just funding for earth mounds).'* The submission also indicated that *'Research studies show that 45 dBA or lower harms health, sleep, children. Noise levels of 55dBA+ are a serious source of noise pollution in workplaces.'*

6.1.3 Discussion

The potential noise impact on existing residents associated with the construction of Section 4C in its current alignment is one of the key concerns raised by submitters resident in Grovedale and Waurm Ponds.

The City of Greater Geelong in its submission to the Advisory Committee reiterated that it maintains its support for the current alignment. Council also was particularly strong in advocacy for noise mitigation measures to be implemented to achieve *'absolutely minimal impact on existing urban areas of Waurm Ponds and South Grovedale.'* The City of Greater Geelong urged the Advisory Committee to provide explicit direction in relation to amelioration measures and that such measures *'should not be left open to further design detail.'* Specifically the City of Greater Geelong recommended that remedial noise treatments include:

- Construction of a 2m high earth mound along the northern boundary of the Section 4C alignment (as agreed by VicRoads);
- Construction of a 2m high noise wall on top of the earth berm for the entire length of the Bickford Road interface; and
- Utilise an open graded asphalt treatment as the road surface.

While acknowledging that it broadly accepts the underlying intent of these recommendations, the Advisory Committee considers that there is insufficient information available at this time to endorse such specific outcomes. The Advisory Committee has formed this view on the basis that the Marshall Day Acoustics report clearly states:

As the estimates are based on only three measurements, the barrier designs based on them should be considered to be for planning purposes only. If the 'existing + 12dBA' option is implemented, further noise measurements will be required to provide more detail.

The Advisory Committee accepts the need for further work. It is not prepared to accept at this time that Council's recommendations (to construct a 2m high wall for the entire length of the Bickford Road interface on top of a 2m high earth berm and the use of an open graded asphalt) will achieve the objective of limiting external noise level increase to 12dBA where the noise level adjacent to Category A or Category B buildings north of the Section 4C alignment is currently less than 50dBA L₁₀(18hr).

Clearly, as recommended by MDA in their June 2010 report, further modelling is required prior to detailed design so that the objectives in the VicRoads Noise Policy can be met. This work should be done as a matter of priority.

Having noted this, the Advisory Committee is firmly of the view that necessary funding should be made available as part of Stage 1 construction of the project to ensure achievement of the policy objectives, particularly the 'existing + 12 dBA policy outcome' for applicable areas where current noise level is less than 50 dBA.

To be clear, the Advisory Committee recommends that a commitment be made to implement mitigation to achieve the policy objective including the 'existing + 12 dBA' outcome in the VicRoads Noise Policy as opposed to 'giving it further consideration'. In this regard the additional modelling undertaken needs to be of a standard to enable comprehensive assessment, design and costing of measures.

Having stated that additional modelling work is required to identify detailed mitigation measures, the Advisory Committee accepts (regardless of the outcomes of the additional modelling) that Stage 1 construction of the Section 4C alignment should:

- Include VicRoads' core noise attenuation design treatment of the landscaped 2m earth berm along the entire northern boundary of the alignment; and
- That Stage 1 construction should occur on the southern carriageway of the proposed Section 4C.

The Advisory Committee also considers it important to ensure that a noise monitoring program is developed and implemented.

6.1.4 Conclusion

The Advisory Committee concludes that the following mitigation measures, actions or initiatives should be incorporated into the design and development of the Section 4C alignment in order to minimise potential noise impacts on current and future residents:

- Construct Stage 1 road works (two lane two way urban arterial road) on the southern carriageway of the Section 4C alignment (as proposed by VicRoads);
- Construct and appropriately landscape²² a 2m earth berm along the entire northern boundary of the Section 4C alignment as part of Stage 1 construction works;
- Undertake detailed noise modelling as a matter of priority in order to identify locations and detailed mitigation measures required to limit external noise level increase to 12dBA where the noise level adjacent to Category A or Category B buildings north of the Section 4C alignment is currently less than 50dBA L₁₀(18hr). Such modelling should be based on identifying mitigation measures associated with traffic volume projections that reflect the most likely 'Ultimate Scenario' (including Geelong Ring Road Section 4A, 4B, 4C & Bellarine Peninsula Link);
- Implement in full the mitigation recommendations arising from the additional noise modelling required to respond to the ultimate design / traffic flow projections as part of Stage 1 construction works;
- Design and implement an on-going traffic noise monitoring program to be implemented post the opening of Section 4C, Stage 1 to identify effectiveness of 'existing + 12 dBA' mitigation measures (and augment as required);
- Review and update noise modelling and implement additional remedial works as required to achieve the traffic noise policy objectives in force at that time prior to undertaking any future duplication or upgrade works.

These findings are reflected in the Advisory Committee's recommendations at Section 6.5.

²² Issues and recommendations relating to associated landscape and architectural treatments for the earth berm and sound wall are discussed in Section 6.2.

6.2 Landscaping

6.2.1 Measures identified in background reports

Land Design Partnership Pty Ltd prepared a Landscape and Visual Impact Assessment of the Geelong Ring Road Section 4C as part of the Amendment C232 process. The assessment included a landscape analysis, an assessment of the landscape's capacity to accommodate the alignment and recommended mitigation measures to address identified visual impacts. The identified impacts and recommended mitigation measures are highlighted in text boxes on the two Landscape Planning Concept diagrams that were prepared (refer extract below). The Advisory Committee notes that the extract reproduced below includes reference to the 'noise mitigation 2m high wall above 2m high mound' between chainage 22760 and 22680 consistent with Marshall Day Acoustics Plot 4 recommendations (7mm spray seal).

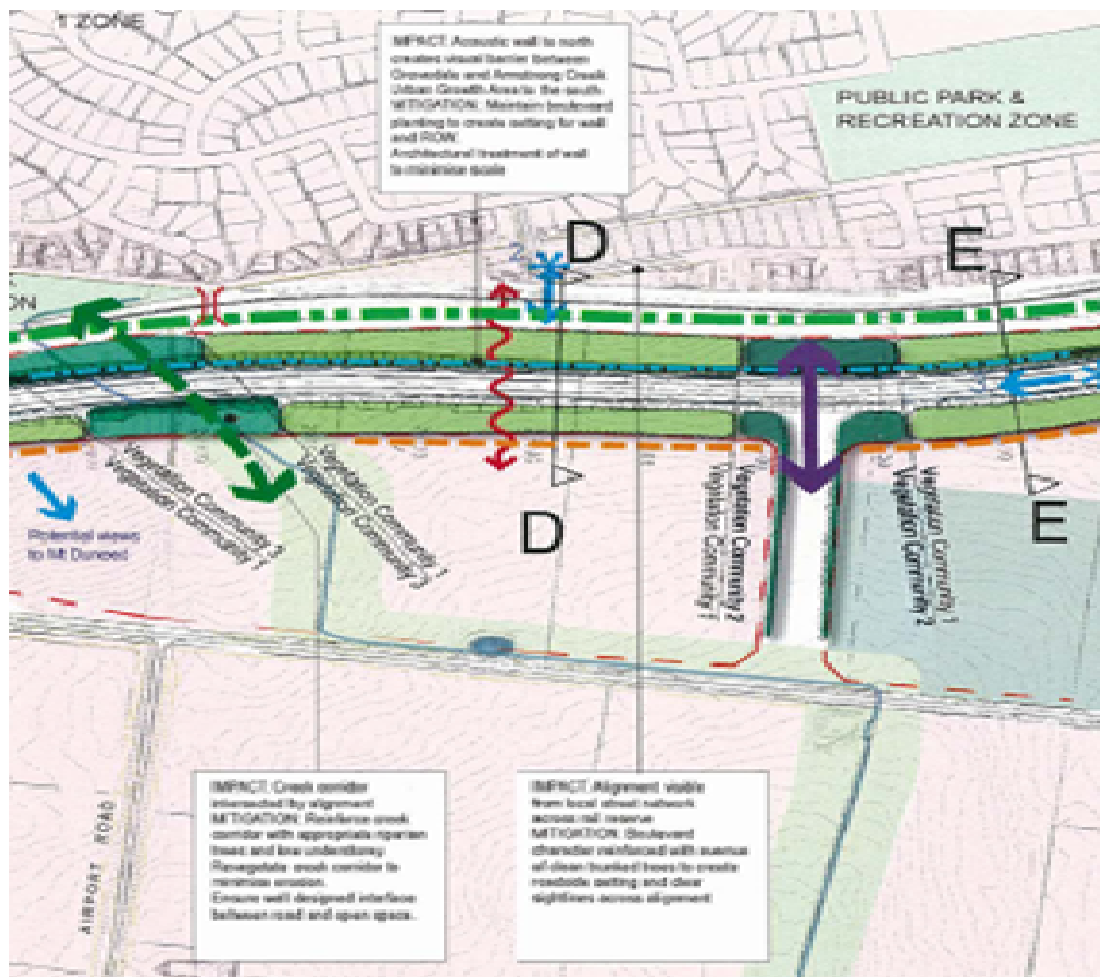


Figure 18: Extract from Landscape Planning Concept²³

²³ Land Design Partnership, 2 June 2010

The key impact locations and proposed landscape mitigation measures identified in the Landscape Planning Concepts (as presented in the text boxes) are now listed. It is noted that the impact locations are discussed in order from the far west of the alignment (near the intersection with Anglesea Road) to the eastern boundary (proximate to the Surf Coast Highway).

Impact Location: Section 4C overpass of railway line

Proposed Mitigation:

- Maintain boulevard planting with understorey layer on approach embankments to and from the overpass of the railway line in the west of the alignment. Also treat screen wall to the north and south and ensure overpass form is well designed to minimise impact on potential residential area.

Impact Location: Right of Way / Intersection with Ghazepore Road (In close proximity to Cultural Heritage Site and Native Vegetation stand)

Proposed Mitigation:

- Maintain boulevard character of ROW with mixed indigenous tree theme to complement existing native vegetation.

Impact Location: Alignment bisects urban growth area

Proposed Mitigation:

- Create boulevard character with avenues of clean trunked trees. Maintain clear sightlines between north and south.

Impact Location: Creek corridor intersected by alignment

Proposed Mitigation:

- Reinforce creek corridor with appropriate riparian trees and low understorey. Revegetate creek corridor to minimise erosion. Ensure well designed interface between road and open space link.

Impact Location: Broad ROW disconnects station hub from the Growth Area to the south. Elevated road profile impedes visual connectivity.

Proposed Mitigation:

- Car park planting to adopt similar vegetated theme to ROW. Investigate optimum width and elevation of ROW.

Impact Location: Existing roadside vegetation removed for alignment (along Boundary Road).

Proposed Mitigation:

- Reinforce existing road corridor native vegetation with mixed indigenous planting to ROW. Maintain visual connection with use of clear trunk trees and low understorey.

Impact Location: Alignment disconnects Grovedale from growth area.

Proposed Mitigation:

- Boulevard character reinforced with avenue of clean trunked trees to create roadside setting and clear sightlines across alignment. 'Consider' architectural treatments incorporated into built form for noise attenuation of adjacent arterial appropriate development.

Impact Location: Creek corridor intersected by alignment

Proposed Mitigation:

- Reinforce creek corridor with appropriate riparian trees and low understorey. Revegetate creek corridor to minimise erosion. Ensure well designed interface between road and open space link.

Impact Location: Acoustic wall to north creates visual barrier between Grovedale and Armstrong Creek Urban Growth Area to the south.

Proposed Mitigation:

- Maintain boulevard planting to create setting for wall and ROW. Architectural treatment of wall to minimise scale.

Impact Location: Alignment visible from local street network across the rail reserve (Bickford Road)

Proposed Mitigation:

- Boulevard character reinforced with avenue of clean trunked trees to create roadside setting and clear sightlines across alignment.

Impact Location: Alignment disconnects Grovedale from growth area.

Proposed Mitigation:

- Boulevard character reinforced with avenue of clean trunked trees to create roadside setting and clear sightlines across alignment. 'Consider' architectural treatments incorporated into built form for noise attenuation of adjacent arterial appropriate development.

Impact Location: **Alignment encroaches into detention area.**

Proposed Mitigation:

- Reconfigure detention basins to maintain function. Reinforce wetland environment with appropriate riparian trees and low understorey.

6.2.2 Submissions

VicRoads

In relation to landscaping and visual amenity initiatives to mitigate impacts of the alignment VicRoads advised in its supplementary submission (Doc 77) that the Landscape Planning Concept plan (2 June 2010) will be reviewed in consultation with the City of Greater Geelong and the developer of the Armstrong Creek West Precinct. They stated the review would seek an outcome to:

... integrate the Section 4C roadway and landscaping measures with land use planning proposals and visions for the precinct.

The supplementary advice also stated that:

Discussions with neighbouring residents on the north side of the railway will be carried out by VicRoads prior to finalizing the details of the landscaping plan for the project.

City of Greater Geelong

The City of Greater Geelong's submission to the Advisory Committee Hearing dated 10 May 2011 notes (at page 58) that the Section 4C alignment is predominantly located in a slight valley immediately south of the railway reservation. The submission notes that this location will enable construction in a manner which will minimise substantial visual intrusion both on the north side of the railway reservation and in the broader growth area to the immediate south. The submission by the City of Greater Geelong does not identify any additional landscaping mitigation measures than those presented in the exhibition of C232.

Individual submitters

The written submission by Mesh Liveable Urban Communities on behalf of Armstrong Creek West Landowners Consortium (Submission no 36, Document no 46) recommends a reassessment of the proposed cross section details within the context of an 'urban design review'. The objective of such a review would be to 'ensure the delivery of an 'urban' condition with large scale plantings and kerb treatments etc that progressively promotes visitation and use.'

The submission states that such a review is required given that the duplication of Section 4C will not be undertaken in the foreseeable future. Accordingly they considered it important that a revised landscape concept that introduces large scale planting early will be required to minimise the Section 4C road corridor being a low level (vegetation) freeway reservation separated from rather than integrated with land uses and abutting communities. It was also submitted that such a review has the potential to ameliorate the potential divisive impact of the road and improve the interface with the future rail station.

6.2.3 The Advisory Discussion

Committee considers significant and enduring benefits can be attained for existing and future residents on both sides of the proposed Section 4C alignment if an integrated urban design and landscape theme is formulated and implemented. The Advisory Committee considers that the present iteration of the *Landscape Planning Concept* does not adequately respond to the raft of challenges and opportunities associated with integrating the Section 4C alignment into the existing and future urban landscape. For instance the merits of the proposed mitigation measure that advocates the use of '*clean trunked trees to create roadside setting and clear sightlines across alignment*' is questioned by the Advisory Committee in the context that this recommendation could be at odds with an opportunity to achieve visual and possibly even acoustic benefits associated with dense planting. Having noted this, the Advisory Committee also highlights that little time was spent during the Hearing evaluating the landscape planning proposal.

Having considered the submissions before it, and reviewed the content of the existing Landscape Planning Concept, the Advisory Committee accepts the submissions of both VicRoads and Mesh that advocate for a review of the landscape plan prior to its finalisation. The study would benefit from having involvement / input with a broad range of stakeholders including relevant service authorities, residents and landowners.

6.2.4 Conclusion

The Advisory Committee concludes that the following action should be incorporated into the design and development of the Section 4C alignment in order to improve the environment and amenity of current and future residents:

- Commission as a matter of priority an integrated urban design and landscape study for a broad area extending from the existing South Grovedale community to the northern sections of the Armstrong Creek West precinct.

This finding is reflected in the Advisory Committee's recommendations in Section 6.5.

6.3 Flora and fauna

6.3.1 Measures identified in background reports

AECOM prepared a '*Detailed Net Gain and Ecological Assessment – Geelong Ring Road Section 4C*' in March 2010. The report found that the project area has little pre-European vegetation remaining and has been heavily modified for agricultural, pastoral and industrial use. No threatened flora species were recorded. While noting that 0.01 Habitat of Grassy Woodland and three small trees will likely need to be removed to facilitate construction of the Section 4C alignment, the report highlighted that '*..VicRoads have amended the 4C alignment and that this now avoids the better quality Hectares vegetation along Boundary and Ghazeepore Roads identified previously in AECOM (2010).*'

The report also concluded that the fauna values of the remnant vegetation in the Section 4C project area are considered to be generally low, with very few reptiles and a relatively small number of bird species recorded.

In relation to remedial measures, the report recommends the following actions to further avoid or reduce the ecological impacts of the Section 4C alignment:

- *Where possible, avoid removal or damage to remnant native vegetation, particularly the more intact stands along roadsides.*
- *Where clear of native vegetation is required and permitted, it will need to be off-set (through revegetation and protection / improvement of existing native vegetation).*
- *An estimated 0.01 Habitat Hectares of Grassy Woodland will need to be offset (preferably within the Otway Plain Bioregion under the DSE's like-for-like policy) if removal of Habitat Zones 1 – 5 is required for the project.*
- *The loss of the three Small Trees at Site 3 will require an offset incorporating the recruitment of 140 similar trees (e.g. Swamp Gums or locally indigenous eucalypts).*
- *Prepare a Construction Environment Management Plan (CEMP) prior to the development, incorporating issues such as weed control, the protection of remnant vegetation and off-setting losses of native vegetation.*

6.3.2 Submissions

VicRoads

It is understood that VicRoads accepts the mitigation measures articulated in the *Detailed Net Gain and Ecological Assessment – Geelong Ring Road Section 4C* (March 2010) report as reflected in the Amendment C232 Summary Report by AECOM, 18 June 2010.

Department of Sustainability and Environment

The Department of Sustainability and Environment's (DSE) submission to the Advisory Committee dated 11 April 2011 (which also incorporates the views of Parks Victoria) notes that DSE were engaged in the consideration of the published alignment of Section 4C in the context of Amendment C138, Amendment C207 and Amendment C232. The submission also notes that DSE supported Amendment C232 and in doing so confirmed that the route selection was compliant with State environmental requirements including the *Flora and Fauna Guarantee Act 1988*, the *Wildlife Act 1975* and native vegetation policy through *Victoria's Vegetation Management – A Framework for Action* (NRE 2002) (NVF).

The conclusion of DSE's submission clearly articulates their views regarding a preference for the retention of the approved location of the Section 4C alignment.

The current alignment in C232 for Geelong Ring Road 4C is consistent with the requirements for 'Victoria's native Vegetation Management – A Framework for Action' by avoiding and minimising the loss of native vegetation.

DSE has concerns over the strategic impact to the East West Connector Road alignment over the Barwon River, Ramsar Wetlands and Bellarine Yellow Gums if Stage 4C was moved further south from its current C232 alignment.

DSE supports the current alignment and would expect that environmental sustainability and environmental requirements are satisfactorily dealt with if any amendment to the road alignment occurs.

Individual submissions

The verbal presentation and submission by Dr Alford to the Advisory Committee, on behalf of the South Grovedale Action Group (Hearing Document 75), advanced the proposition that the interests, health, and amenity of 10,000 – 20,000 people were being weighed against (or competing with) vegetation protection considerations along Boundary Road. The

sentiment expressed was that the decision making framework relating to the location of the Section 4C alignment was disproportionately and inappropriately skewed in favour of native vegetation protection. This view was shared by a number of resident submitters.

6.3.3 Discussion

The Advisory Committee accepts DSE's submission that it considers the approved Section 4C alignment is consistent with the State's policy framework and legislative requirements for native vegetation and fauna protection.

The Advisory Committee does not accept submissions, either explicit or inferred, that native vegetation protection or other natural environment considerations took precedence in the decision making framework over the health or wellbeing of existing residents.

6.3.4 Conclusion

The Advisory Committee concludes that the following flora and fauna mitigation measures proposed in the Aecom report should be incorporated into the design and development of the Section 4C alignment in order to minimise environmental and amenity impacts on current and future residents:

- Where possible, avoid removal or damage to remnant native vegetation, particularly the more intact stands along roadsides;
- Where native vegetation clearing is required and permitted, it will need to be off-set (through revegetation and protection / improvement of existing native vegetation);
- An estimated 0.01 Habitat Hectares of Grassy Woodland will need to be offset (preferably within the Otway Plain Bioregion under the DSE's like-for-like policy) if removal of Habitat Zones 1 – 5 is required for the project;
- The loss of the three Small Trees at Site 3 will require an offset incorporating the recruitment of 140 similar trees (e.g. Swamp Gums or locally indigenous eucalypts); and
- Prepare a Construction Environment Management Plan (CEMP) prior to development, incorporating issues such as weed control, the protection of remnant vegetation and off-setting losses of native vegetation.

These findings are reflected in the Advisory Committee's recommendations presented in Section 6.5.

6.4 Air quality

6.4.1 Measures identified in background reports

A screening assessment for air quality impacts of Section 4C of the Geelong Ring Road was undertaken by VicRoads in 2010. The purpose of the assessment was to model vehicle emissions and their potential impacts on the surrounding air quality along the proposed route.

Three sites were nominated and assessed in accordance with VicRoads Environmental Guidelines *Assessing the Air Quality Impacts of Road Developments – Screening Tool* 2005 to determine if a further detailed assessment was required.

The results of the assessment are documented in *An Air Quality Screening Assessment Report* April 2010. The assessment concluded:

The estimated road emission levels and peak concentration of all contaminants, for the ultimate year scenario of Section 4C, are significantly below the intervention levels; therefore, no further air quality assessment is recommended.

6.4.2 Submissions

VicRoads

VicRoads presentation to the Advisory Committee noted that its modelling of estimated vehicle emissions and contaminant calculations highlighted that they were below the intervention levels contained in the *EPA – Victorian State Environment Protection Policy – Air Quality management*. Accordingly VicRoads have concluded that it is unlikely there will be health problems. The submission also states:

No reported health concerns have been reported on the Surf Coast Highway through Grovedale which has higher traffic volumes.

VicRoads reaffirmed that it does not propose any air quality amelioration measures as part of construction of the Section 4C project.

Individual submissions

The Advisory Committee acknowledges that of the 295 submissions received in response to the exhibition of Amendment C232 it has been advised that 218 stated that they were concerned regarding air quality impacts on people living in South Grovedale and Waurin Ponds (to the north of the railway line), particularly in vicinity of Bickford Road / Riatta Avenue.

A number of submissions to this Advisory Committee also raised air emission concerns. Having noted this, the Advisory Committee highlights that no submission before it recommends remedial measures to minimise potential air quality impacts associated with the construction of Section 4C on its currently approved alignment. All submissions that raise the issue of air quality do so in the context that that alignment is flawed and should be relocated.

A number of submitters (for example Mr Schutz) drew the Advisory Committee's attention to a recently published overseas paper on the air quality impacts from roads. The Advisory Committee notes these submissions but considers that until such new scientific findings, if proved, are incorporated into State policy they can not be given any particular weight.

6.4.3 Discussion

The Advisory Committee was not presented with any evidence that the approved Section 4C alignment will result in unacceptable air quality impacts on existing residents or proposed communities in the Armstrong Creek Growth Area. The Advisory Committee accepts VicRoads submission that further air emission modelling is not required for the foreseeable future. The Advisory Committee also notes that air emission impacts on residents to the north of the alignment will be marginally lower in the initial stages of development given that the Stage 1 construction has been relocated to the southern carriage way and that traffic movements will likely be lower than anticipated for reasons discussed in section 5.1.5.

6.4.4 Conclusion

No additional remedial measures are recommended by the Advisory Committee in relation to air quality impacts.

6.5 Remedial measure recommendations

For the reasons discussed in sections 6.1 – 6.4, the Advisory Committee recommends:

- 4. Incorporate the following remedial measures, actions and initiatives into the design and development of the Section 4C alignment to address environmental and amenity impacts on existing and future residents:**

Noise Attenuation

- Construct Stage 1 road works (two lane two way urban arterial road) on the southern carriageway of the Section 4C alignment (as proposed by VicRoads);
- Construct and appropriately landscape a 2m earth berm along the entire northern boundary of the Section 4C alignment as part of Stage 1 construction works;
- Undertake detailed noise modelling as a matter of priority in order to identify locations and detailed mitigation measures required to limit external noise level increase to 12dBA where the noise level adjacent to Category A or Category B buildings north of the Section 4C alignment is currently less than 50dBA L₁₀(18hr). Such modelling should be based on identifying mitigation measures associated with traffic volume projections that reflect the most likely 'Ultimate Scenario' (including Geelong Ring Road Section 4A, 4B, 4C & Bellarine Peninsula Link);
- Implement in full the mitigation recommendations arising from the additional noise modelling required to respond to the ultimate design / traffic flow projections as part of Stage 1 construction works;
- Design and implement an on-going traffic noise monitoring program to be implemented post the opening of Section 4C, Stage 1 to identify effectiveness of 'existing + 12 dBA' mitigation measures (and augment as required);
- Review and update noise modelling and implement additional remedial works as required to achieve the traffic noise policy objectives in force at that time prior to undertaking any future duplication or upgrade works.

Landscape Treatment

- Commission as a matter of priority an integrated urban design and landscape study for a broad area extending from the existing South Grovedale community to the northern sections of the Armstrong Creek West precinct.

Flora and Fauna

- Where possible, avoid removal or damage to remnant native vegetation, particularly the more intact stands along roadsides;
- Where native vegetation clearing is required and permitted, it will need to be off-set in accordance with *Victoria's Vegetation*

Management – A Framework for Action (through revegetation and protection / improvement of existing native vegetation);

- An estimated 0.01 Habitat Hectares of Grassy Woodland will need to be offset (preferably within the Otway Plain Bioregion under the DSE's like-for-like policy) if removal of Habitat Zones 1 – 5 is required for the project;
- The loss of the three Small Trees at Site 3 will require an offset incorporating the recruitment of 140 similar trees (e.g. Swamp Gums or locally indigenous eucalypts); and
- Prepare a Construction Environment Management Plan (CEMP) prior to development, incorporating issues such as weed control, the protection of remnant vegetation and off-setting losses of native vegetation.

7. Summary of Findings and Recommendations

7.1 Findings

The Advisory Committee finds that:

Consultation

1. The community consultation for the Geelong Bypass and Amendment C113 to the Greater Geelong Planning Scheme was acceptable in terms of statutory requirements and adequate information to inform interested parties of the corridor for the East - West Link Road.
2. The community consultation for Amendment C138 to the Greater Geelong Planning Scheme was acceptable in terms of statutory requirements.
3. Whilst some elements of the Amendment C138 consultation could have been undertaken more comprehensively, including broader formal notice and clearer articulation of the East - West Link Road alignment, these are not in themselves substantive to the point that they amount to any significant failure of process.
4. The community consultation for Amendment C232 to the Greater Geelong Planning Scheme was detailed in content and extensive in scope, but would have been a superior process if the Amendment had been formally exhibited and contested submissions heard by an external body to the Planning Authority.
5. A considerable degree of community consultation for the Geelong Ring Road Section 4C alignment has been undertaken over a number of years and through a number of different processes. The public availability of information on the corridor or alignment has been acceptable in each of the processes.
6. Elements of the community consultation for the Geelong Ring Road Section 4C could have been undertaken earlier and more effectively, but the Advisory Committee does not consider that the deficiencies are such that they amount to a significant failure of the process.

Alignment

7. The early development of route options by VicRoads was generally soundly based on the information available at the time. With the benefit of hindsight, it may have been preferable to do a more fundamental review of the role/s and alignment options as part of the

work on the Armstrong Creek Urban Growth Area Framework Plan. The Advisory Committee finds that, had this been done, multiple route options may have been preferred rather than one option to fulfil multiple roles.

8. The further refinement of the Section 4C corridor implemented through Amendments C212 and C232 was appropriate and soundly based.
9. The advice of VicRoads that appropriate design measures can be put in place to ensure a safe intersection layout for the Surf Coast Highway intersection with Section 4C appears sound and was not challenged with evidence in the Hearing.
10. The construction of a two lane two way arterial road on the approved Section 4C alignment to fulfil the role of an arterial collector road for the Armstrong Creek Urban Growth Area is supported.
11. The retention of the entire existing PAO3 area as a road reserve to preserve the option of longer term duplication of the Section 4C and link to the Bellarine Peninsula is necessary and appropriate. Given the likely impact of future duplication on the existing residents of South Grovedale to the north, and future residents of Armstrong Creek to the south, any future proposal to duplicate the road should be the subject of a community consultation process to ensure that the proper design of the road and any remedial measures are in line with the standards of that time.
12. The intended role of an arterial link between Anglesea Road and Surf Coast Highway is best catered for by a separate route that bypasses the Armstrong Creek Urban Growth area i.e. on or south of Mount Duneed Road.

7.2 Recommendations

In finding that the approved Geelong Ring Road Section 4C alignment is acceptable and should proceed, the Advisory Committee further recommends that:

1. **Greater Geelong City Council prepare a pedestrian and bicycle access plan for access along and across the rail line and Section 4C corridor. The access plan should provide clear direction for location, form, timing and funding responsibility of traffic signals, pedestrian overpasses, bicycle and pedestrian infrastructure and should be developed in consultation with VicRoads, the Department of Transport, Armstrong Creek West developers and existing residents.**

2. VicRoads commence work as soon as possible on investigating a suitable route for a southern link between Anglesea Road and Surf Coast Highway in parallel to work on Section 4C. The investigation should consider: the impact on properties and communities adjoining Mount Duneed Road; and the potential traffic impact on Barwon Heads Road and the townships of Ocean Grove and Barwon Heads, in reaching a recommendation on a preferred route.
3. VicRoads and Greater Geelong City Council expedite discussions with Boral in order to make a prompt decision on the future alignment of Anglesea Road.
4. Incorporate the following remedial measures, actions and initiatives into the design and development of the Section 4C alignment to address environmental and amenity impacts on existing and future residents:

Noise Attenuation

- Construct Stage 1 road works (two lane two way urban arterial road) on the southern carriageway of the Section 4C alignment (as proposed by VicRoads);
- Construct and appropriately landscape a 2m earth berm along the entire northern boundary of the Section 4C alignment as part of Stage 1 construction works;
- Undertake detailed noise modelling as a matter of priority in order to identify locations and detailed mitigation measures required to limit external noise level increase to 12dBA where the noise level adjacent to Category A or Category B buildings north of the Section 4C alignment is currently less than 50dBA L₁₀(18hr). Such modelling should be based on identifying mitigation measures associated with traffic volume projections that reflect the most likely 'Ultimate Scenario' (including Geelong Ring Road Section 4A, 4B, 4C & Bellarine Peninsula Link);
- Implement in full the mitigation recommendations arising from the additional noise modelling required to respond to the ultimate design / traffic flow projections as part of Stage 1 construction works;
- Design and implement an on-going traffic noise monitoring program to be implemented post the opening of Section 4C, Stage 1 to identify effectiveness of 'existing + 12 dBA' mitigation measures (and augment as required);
- Review and update noise modelling and implement additional remedial works as required to achieve the traffic noise policy

objectives in force at that time prior to undertaking any future duplication or upgrade works.

Landscape Treatment

- **Commission as a matter of priority an integrated urban design and landscape study for a broad area extending from the existing South Grovedale community to the northern sections of the Armstrong Creek West precinct.**

Flora and Fauna

- **Where possible, avoid removal or damage to remnant native vegetation, particularly the more intact stands along roadsides;**
- **Where native vegetation clearing is required and permitted, it will need to be off-set in accordance with Victoria's Vegetation Management – A Framework for Action (through revegetation and protection / improvement of existing native vegetation);**
- **An estimated 0.01 Habitat Hectares of Grassy Woodland will need to be offset (preferably within the Otway Plain Bioregion under the DSE's like-for-like policy) if removal of Habitat Zones 1 – 5 is required for the project;**
- **The loss of the three Small Trees at Site 3 will require an offset incorporating the recruitment of 140 similar trees (e.g. Swamp Gums or locally indigenous eucalypts); and**
- **Prepare a Construction Environment Management Plan (CEMP) prior to development, incorporating issues such as weed control, the protection of remnant vegetation and off-setting losses of native vegetation.**

Appendix A Terms of Reference

Note: Attachments to the Terms of Reference are not included due to their size.



TERMS OF REFERENCE

ADVISORY COMMITTEE

Advisory Committee appointed pursuant to Part 7, Section 151 of the *Planning and Environment Act 1987* to report on the alignment of the Geelong Ring Road Section 4C

○

Name

1. The Advisory Committee is to be known as the 'Geelong Ring Road Section 4C Advisory Committee'.
2. The Advisory Committee is to have members with the following skills:
 - land use planning
 - transport planning
 - traffic engineering
 - development economics and compensation.

Purpose

3. The purpose of the Advisory Committee is to advise the Minister on the planning consultation and approval arrangements for Section 4C of the Geelong Ring Road and the relative merits and impacts of the approved alignment of Section 4C of the Geelong Ring Road with any other known alignment.

Background

4. The Geelong Ring Road (Princes Freeway) (Sections 1-3) opened as far as the Princes Highway at Waurn Ponds in June 2009, providing a 23km freeway link between Corio and Waurn Ponds, along Geelong's western outskirts. In March 2009, work commenced to extend the Ring Road for 2.5km, providing a direct connection with Anglesea Road via an overpass of the Princes Highway at Waurn Ponds (Section 4A). Construction has also commenced on Section 4B which will provide a 5km westerly link from Anglesea Road near Hams Road to the Princes Highway near Draytons Road. It will run through land currently occupied by the Blue Circle quarry (Boral), and is expected to be completed in 2013 (**Attachment 1** provides a location plan for the different road sections).

5. The land use planning which provided the strategic direction for the location of Section 3 of the Geelong Ring Road occurred in 2006. Amendment C113 came into effect on 10 October 2006. Amendment C113, C114, and C115 had been jointly exhibited in order to identify a number of options for the alignment of Section 3 the Ring Road.
6. Amendment C113 introduced the Public Acquisition Overlay (PAO3) for Section 3 of the Geelong Ring Road which has since been constructed, and Amendments C114 and C115 were abandoned.
7. The report of the panel that assessed the Environment Effects Statement for Section 3 of the Geelong Ring Road recommended that strategic recognition should be provided for the future link of the Geelong Ring Road to the Surf Coast Highway (Section 4C) and Section 4B, the connection to the Princes Highway to the west. The then Minister for Planning approved the application of a Development Plan Overlay (DPO8) as a planning mechanism to note the future development of Sections 4B and 4C. DPO8 was approved as part of Amendment C113 as an interim measure to protect a broadly defined corridor (in which to locate a finalised road alignment) from encroachment by other land uses. For Section 4C, DPO8 covered an area west of Anglesea Road and generally south of Warrnambool – Geelong – Melbourne railway line (**Attachment 2**).
8. Since 2006, the Surf Coast Shire has expressed their desire for a separate high speed road to link Torquay and the Great Ocean Road from the Geelong Ring Road. The strategic planning to resolve this issue continues through discussions between the Surf Coast Shire, VicRoads, and the City of Greater Geelong.
9. The Armstrong Creek Urban Growth Area (ACUGA) is located on the southern edge of Geelong and is the primary growth corridor for future development in the Greater Geelong municipality. The Armstrong Creek Urban Growth Plan – Framework Plan (ACUGP) was developed over the course of 2005-7, subject to a public exhibition process and independent panel review in 2007, and was gazetted on 4 December 2008 as part of Amendment C138. It provides the overall strategic planning framework for future development in the growth area, and incorporated the strategic direction established through C113 for the Geelong Ring Road.
10. VicRoads and the City of Greater Geelong recognised the need for a further east – west arterial road connection and Barwon River crossing in addition to the Breakwater Road river crossing to service population growth within the Armstrong Creek Urban Growth Area, and connect the Ring Road to the Bellarine Peninsula.
11. The DPO8 provided a location for part of that road alignment, and a more precise alignment and east – west arterial road link was developed as part of the ACUGP in consultation with VicRoads. The ACUGP indicated the arterial

road as a dashed line called the East-West Link Road (**Attachment 3**). The East-West Link Road is proposed to run along the railway line from Ghazeeopore Road to Surf Coast Highway as a parallel transport corridor with the railway line, and form part of a broader road that traverses the entire growth area connecting the Ring Road in to the Bellarine Peninsula.

12. The western section of the East – West Link Road (to Surf Coast Highway) is contained within the area of the DPO8. The eastern portion of the East-West link road beyond Section 4C recognised within the ACUGP provides for a further Barwon River crossing and signals the future arterial road connection to the Bellarine Peninsula.
13. The major control points that guided strategic planning for the East – West Link Road included:
 - (i) Access to the Geelong Ring Road (Anglesea Road)
 - (ii) Good access to the future Armstrong Creek West Railway Station
 - (iii) The avoidance of creating a second barrier to north south pedestrian movement by locating the road close to the existing railway corridor, thereby consolidating the transport corridors into one and minimising potential adverse impacts
 - (iv) Allowing for a viable crossing of the Barwon River. The Barwon River has a pinch point just south of the 220Kv transmission lines that cross the river, which provides an appropriate crossing point.
14. VicRoads utilised the strategic planning developed as part of Amendment C138 to finalise the alignment of Section 4C of the Geelong Ring Road. The alignment utilises the location of the western portion of the East – West Link Road shown within the ACUGP. The road reservation is located south of and is for the most part contiguous with the existing Warrnambool – Geelong – Melbourne railway line. The width of the reservation is 80 – 100 metres and is identified through a Public Acquisition Overlay (PAO).
15. Amendment C232 to the Greater Geelong Planning Scheme implemented the PAO for Section 4C of the Geelong Ring Road as well as the PAO required for the future Armstrong Creek West railway station and southern carpark (**Attachment 4**). The future railway station is planned to provide a key regional park-and-ride facility and assist in the provision of train services which run more frequently between Geelong and Melbourne.
16. Amendment C232 was approved on 8 October 2010 by the then Minister for Planning at the request of VicRoads under Section 20(4) of the *Planning and Environment Act 1987*. This occurred after VicRoads and the Department of Transport undertook informal consultation with the affected landowners and the Grovedale and Waurin Ponds Community.
17. In February 2010 (prior to approving Amendment C232), the then Minister for Planning approved Amendment C212. Detailed design work had progressed sufficiently at the time to enable the alignment of the road to be defined and the area of the DPO8 to be reduced through C212.

18. VicRoads has recently acquired the property at 80 Boundary Road (**Attachment 5**). This acquisition was made to address the financial hardship concerns experienced by the land owner as a result of the DPO8 control over the land.
19. VicRoads have commenced a preliminary desktop analysis to investigate a future connection of the East – West Link Road to Portarlington Road (Bellarine Peninsula Connection).

Armstrong Creek Urban Growth Area background

20. The Armstrong Creek urban growth area is the largest contiguous growth area in Victoria, consisting of 2,500 hectares of developable land. The Armstrong Creek growth area is seen as Victoria's sixth major growth area alongside the designated metropolitan growth areas within the municipalities of Wyndham, Hume, Casey-Cardinia, Melton and Whittlesea. The Geelong region is regional Victoria's fastest growing area.
21. The Armstrong Creek growth area will:
 - (i) Provide housing for between 55,000 to 65,000 people
 - (ii) Be subdivided into approximately 22,000 lots
 - (iii) Provide approximately 22,000 ongoing jobs with a focus on high technology job and developing synergies with Deakin University
 - (iv) Be developed in accordance with sustainable development principles to achieve liveable community outcomes with a focus on energy efficient housing, walkability, public transport provision and sustainable water use
 - (v) Have physical and social infrastructure provided at an early stage, with an aim of building communities rather than just releasing land for development
 - (vi) Provide a boost to local employment during the construction phase
 - (vii) Assist in addressing housing affordability and choice issues currently experienced in the region
 - (viii) Assist in addressing the shortage of residential land in the municipality by ensuring Geelong has 15 years of residential land supply.
22. The ACUGP was adopted by the City of Greater Geelong Council (CoGG) on 13 May 2008. It provides principles and guidance for the development of seven precincts which make up the urban growth area (**Attachment 6**). These precincts will be master-planned on a precinct by precinct basis via the precinct structure plan process.
23. The Armstrong Creek East Precinct (ACEP) and Armstrong Creek North East Industrial Precincts (NEIP) have approved precinct structure plans, and both have commenced the subdivision process (**Attachment 7**). The NEIP contains the road reservation for part of the eastern section of the East – West Link road which traverses the precinct's southern boundary, and provides the location of

the future Barwon River bridge crossing. The ACEP is located in the south of the growth area, and is not impacted on by the current East – West link road alignment.

24. CoGG have issued a permit for 72 lots within the NEIP and agreements are being established with tenants and developers of the first stage of the business park. This first stage fronts a portion of the road reservation for the East-West Link Road that has been set aside within the NEIP.
25. CoGG have issued a permit for the first stage of subdivision within ACEP for 484 lots and civil construction has commenced. CoGG are currently assessing two new permit applications for further stages of subdivision that total more than 1800 lots in addition to the initial 484 within the first stage of subdivision.
26. The Armstrong Creek West precinct contains the approved alignment of Section 4C of the Geelong Ring Road. Precinct structure planning has commenced for the Armstrong Creek West precinct and it is anticipated that the proposed planning scheme amendment documentation will be ready for exhibition by May 2011.

Method

27. The Advisory Committee may apply to vary these Terms of Reference in any way it sees fit prior to submission of its report.
28. The Department of Planning and Community Development will carry out public notification with respect of the review of Section 4C of the Geelong Ring Road as follows:
 - (i) Notice in the following local papers:
 - i Geelong Advertiser
 - ii Geelong Independent
 - (ii) Letters to all landowners and occupiers located within the area shown on Map 1 (**Attachment 8**)
 - (iii) Notice to:
 - i. City of Greater Geelong
 - ii. VicRoads
 - iii. Department of Transport
 - iv. Department of Transport
 - v. Department of Sustainability and Environment
 - vi. Corangamite Catchment Management Authority
 - vii. Aboriginal Affairs Victoria
 - viii. Country Fire Authority
 - ix. Surf Coast Shire
 - x. Barwon Water
 - xi. PowerCor

- xii. South Grovedale Community Action Group
 - xiii. Mount Duneed Ring Road Action Group
 - xiv. Landowners within Armstrong Creek Growth Area
 - xv. Developer consortiums within the Armstrong Creek Growth Area
29. The Advisory Committee must consider all relevant submissions.
 30. The Advisory Committee may inform itself in any way it sees fit but must not consider the location and extent of the Public Acquisition Overlay for the proposed Armstrong Creek railway station located south of Waurn Ponds.
 31. The Advisory Committee is expected to carry out a public hearing in Geelong.
 32. The Advisory Committee may conduct workshops or forums to explore particular issues or other matters. Any workshops or forums will be a public process.
 33. The Advisory Committee may meet and invite others to meet with them when there is a quorum of at least two of the Committee members.
 34. The Advisory Committee may limit the time of parties appearing before it to 30 minutes.
 35. The Advisory Committee may prohibit or regulate cross-examination.

Submissions are public documents

36. The Advisory Committee must retain a library of any written submissions or other supporting documentation provided to it directly until a decision has been made on its report or five years has passed from the time of its appointment.
37. Any written submissions or other supporting documentation provided to the Advisory Committee must be available for public inspection until the submission of its report, unless the Advisory Committee specifically directs that the material is to remain 'in camera'.

Outcomes

38. The Advisory Committee must produce a written report for the Minister for Planning providing:
 - A summary of the statutory planning process undertaken and the strategic context of the alignment of Section 4C of the Geelong Ring Road, including Amendments C113, C114, C115, C116, C117, C138, C170, C210, C212, C206, C207, and C232 to the Greater Geelong Planning Scheme.
 - An assessment of the community consultation undertaken when determining the alignment of Section 4C of the Geelong Ring Road.
 - Recommendations on:
 - (i) the relative merits and impacts (economic, environmental and social) of the approved alignment of Section 4C of the Geelong Ring Road

compared with any other alignments previously considered by Vic Roads, the City of Greater Geelong, or any other relevant government strategic planning investigation, having regard to the function of the road to provide an east-west arterial road connection and Barwon River crossing to service the southern suburbs of Geelong and Armstrong Creek, as well as the Bellarine Peninsula.

(ii) Any additional remedial measures that could be incorporated into the design and development of Section 4C alignment to address environmental and amenity impacts on existing and future residents.

- An assessment of submissions to the Advisory Committee.
- Any assessment of any other relevant matters raised in the course of the Advisory Committee hearing.
- A list of persons who made submissions considered by the Advisory Committee.
- A list of persons consulted or heard.

Timing

39. The Advisory Committee is required to complete its hearings no later than two months from the date of its appointment.
40. The Advisory Committee is required to submit its report in writing as soon as practicable but no later than four weeks from the completion of hearings.

Fee

41. The fee for the Advisory Committee will be set at the current rate for a Panel appointed under Part 8 of the Planning and Environment Act 1987.
42. The costs of the Advisory Committee will be met by the Department of Planning and Community Development.

Project Manger

43. Day to day liaison for this matter will be through Mark Gregory, Acting Planning Coordinator, Barwon South West Region of the Department of Planning and Community Development on ph. 5226 4007 or by email at mark.gregory@dpcd.vic.gov.au.


MATTHEW GUY MLC
Minister for Planning

Date: 22 FEB 2011

Appendix B List of submitters to the Advisory Committee

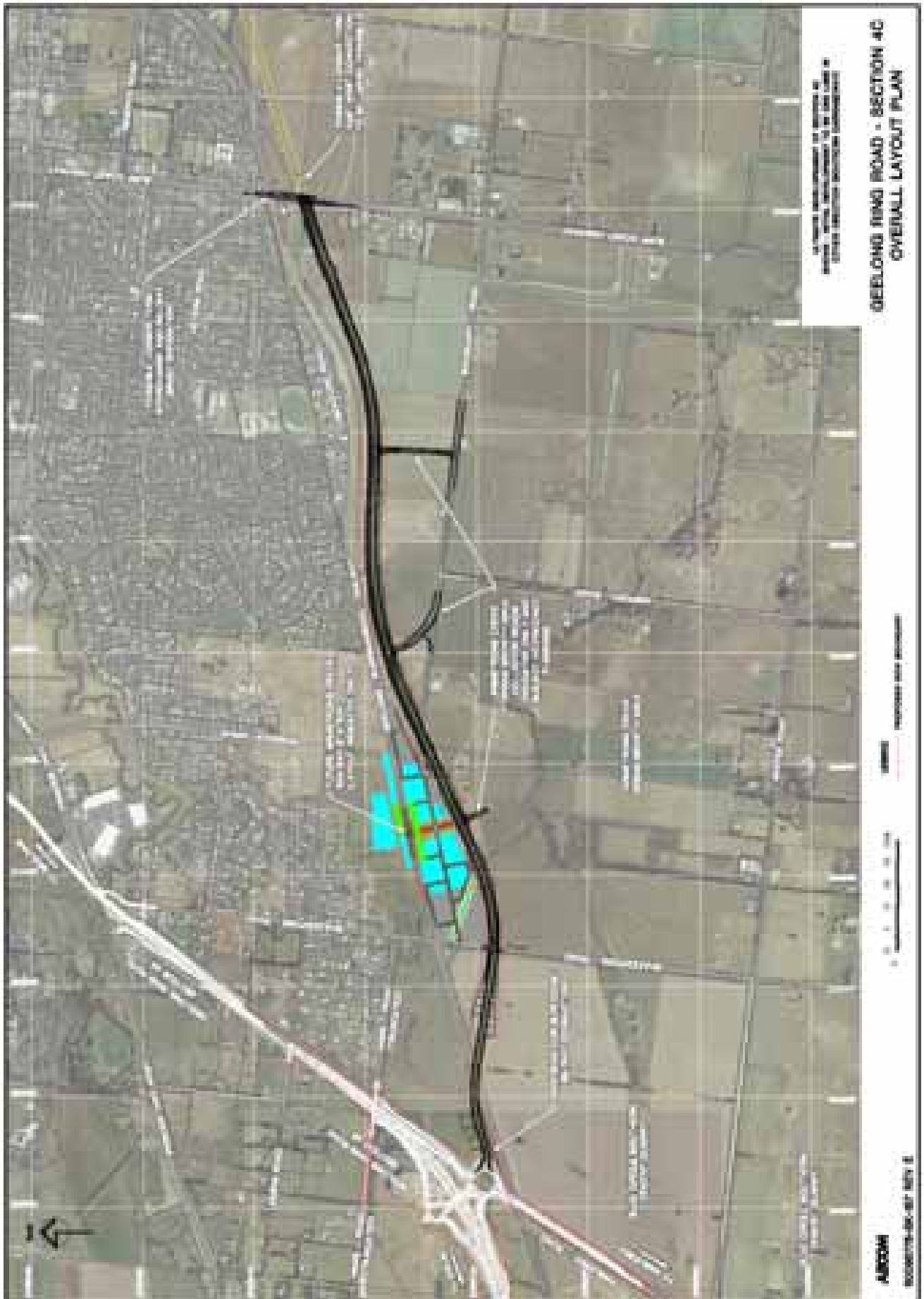
Submission Number			Surname	Title	Representing
1	Mr	Ray	Gladwell		
2	Mrs	Lee	Gladwell		
3		Jurge	Schutz		
4	Ms	Cathy	Kumnick		
5		Karen & Danny	Ortiz		
6		Dot & Ken	Pearce		
7	Mr	Stephen	Lauder		
8		Terry	O'Brian		
9	Mr	Bill	Collins		
10	Mr	David	Sinclair		
11	Mr	Harry	Roberts & Family		
12	Mr	John	Collins		
13		Peter, Belinda & Gareth	Wilkin		
14	Ms	Astra	Kirsanovs		
15	Mr	Rod	Cottrill	Team Leader Program Development	VicRoads
16	Mr	Trent	Keirnan	Director	Keystone Business Park
17	Mr	Justin	Hamling	Acting Development Services Coordinator	Barwon Water
18	Mr	Michael	Price	Director	Armstrong Creek Pty Ltd
19	Dr	Ignatius	Calderone	Calderone and Assoc Pty Ltd	D & D Trifilo
20	Ms	Gwen	Clarke		
21	Mr	Bill	Clarke		
22	Ms	Colleen	Creighton		
23	Mr	Ross	Creighton		
24	Ms	Debra	Creighton		
25	Mrs	Barbara	Dawson		
26	Mr	Dorrien	Dawson		
27	Ms	Anne	Fuller		
28	Mr	Kent	Fuller		
29	Mr	Chris	George		
30		Carol & Donald	Grimmer		

Submission Number			Surname	Title	Representing
31	Mr	Jim	Haigh		
32	Mr	John	Threlfall		Mount Duneed Progress Association
33	Mr	Horst	Pfeifer		
34	Mr	Paul	Westcott	Convenor	PTUA Geelong Branch
35	Mr	Cameron	Gray	Planning Manager, St Quentin Consulting Pty Ltd	Horseshoe Bend Landowners Group
36	Mr	Chris	de Silva	Mesh	Armstrong Creek West Consortium
37	Mr	Mark	Whinfield	Newland Developers P/L	Armstrong Creek Development Corporation
38	Mr	Geoff	Underwood	Spade Consultants Pty Ltd	The Carter Group
39	Mr	Geoff	Brooks	Manager Statutory Planning Services	Department of Sustainability and Environment
40	Mr	Michael	Harbour	Committee Member	Ocean Grove Community Association Inc
41	Ms	Jacinta	Proud		
42	Mr	Sunil	Bhalla	Director Infrastructure	Surf Coast Shire
43	Ms	Margarita	Kumnick	Chair	South Grovedale Action Group
44	Mr	Peter	Bettess	General Manager Economic Development Planning & Tourism	City of Greater Geelong
45	Mr	Peter	Bright		
46	Ms	Lesley	Hansen		
47	Ms	Margarita	Kumnick		
48	Mr	Andrew	Kumnick		
49	Mr	Paul	Kumnick		
50	Mr	John	Rollo		
51	Ms	Sally	Harle	Project Manager - Planning and Development	Boral Property Group
52		G & A	Draper		
53	Mr	Steve	Davies		
54	Ms	Cynthia	Rossack		
55	Mr	Phill	Cranny		
56	Mr	Mark	Gregory	Acting Planning Coordinator	Department of Planning and Community Development
57	Mr	Andrew	Stafford		Australian Property Partnership Pty Ltd

Submission Number			Surname	Title	Representing
58	Mr	Ian	Beswicke	Operations Officer - District 7	CFA
59	Ms	Elaine	Carbines	Chief Executive Officer	G21 - Geelong Region Alliance
60	Mr	Peter	Dorling	Executive Director	Committee for Geelong
61	Mr	Andrew	Herington		
62	Mr	Anthony & Ms Amanda	Collins		
63	Mr	Noel	Clough		
64	Ms	Pauline	Coales		
65	Ms	Maravene K	Black		
66			See sub no 62		
67	Ms	Elaine	Cranny		
68			See sub no 23		
69	Mr	Frank & Mrs Gabriella	Crulci		
70			See sub no 53		
71	Ms	Nerida	Gillam		
72	Mr	Walter & Mrs Helen	Hetherington		
73	Ms	Susan	Hopgood		
74		Kyrialli	James		
75	Mr	Bryan	Knowles		
76	Mr	Pieter & Ms Denise	Kulk		
77	Ms	Verna L	Lovell		
78	Mr	Lyndall	Mourney		
79		E W M	Patchett		
80	Ms	Susan M	Perron		
81	Mr	Dean	Smith		
82	Mr	Alan & Ms Joan	Talbot		
83	Mr	Andrew	Patterson		
84	Ms	Helen	Schutz		
85	Ms	Margaret	Voysey		
86	Ms	Geraldine	Webber		
87	Ms	Simone	Wilkinson	Regional Water Act Statutory Functions Coordinator	Corangamite Catchment Management Authority

Appendix C Armstrong Creek Urban Growth Plan – Framework Plan – May 2010

Appendix D Current Section 4C alignment Plan



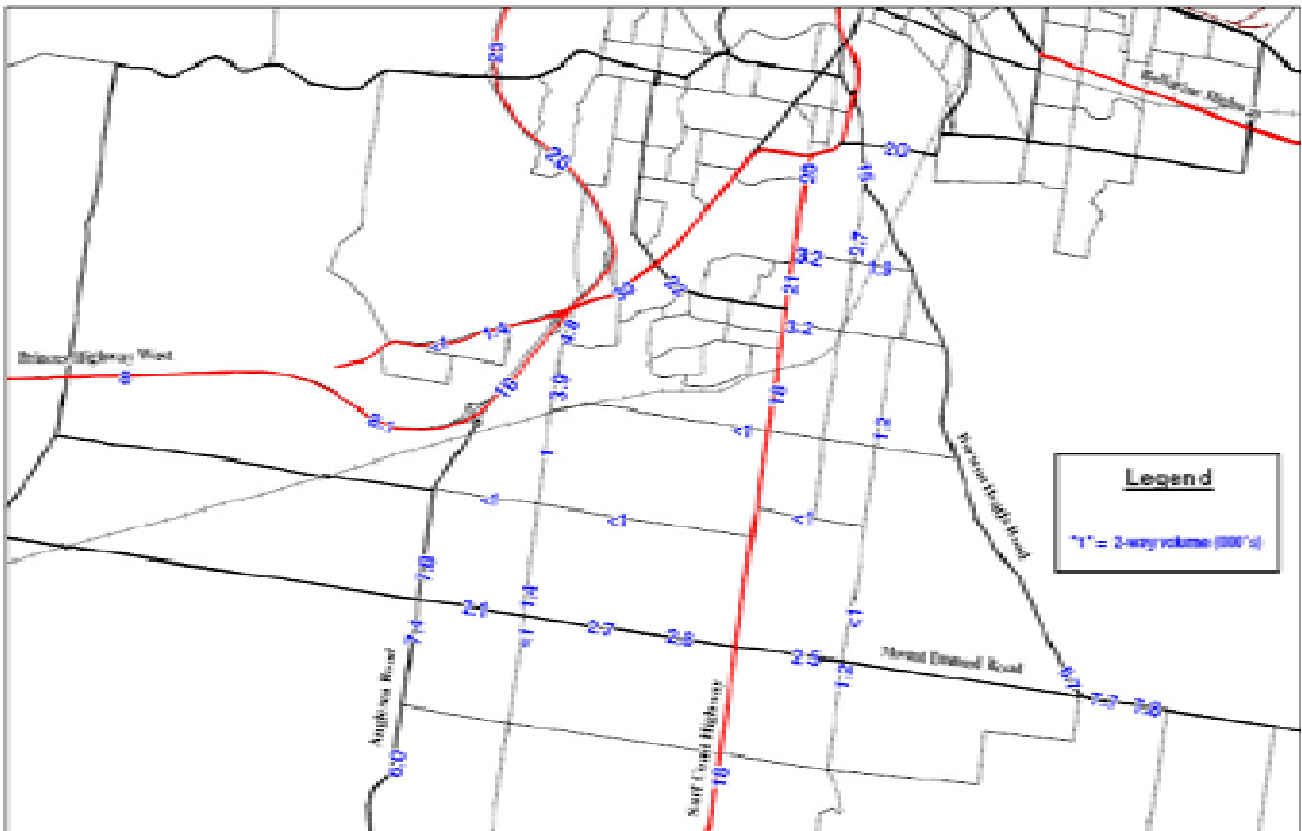
GEE LONG RING ROAD SECTION 4C
ADVISORY COMMITTEE REPORT: 9 JUNE 2011

Appendix E VicRoads Traffic Projections

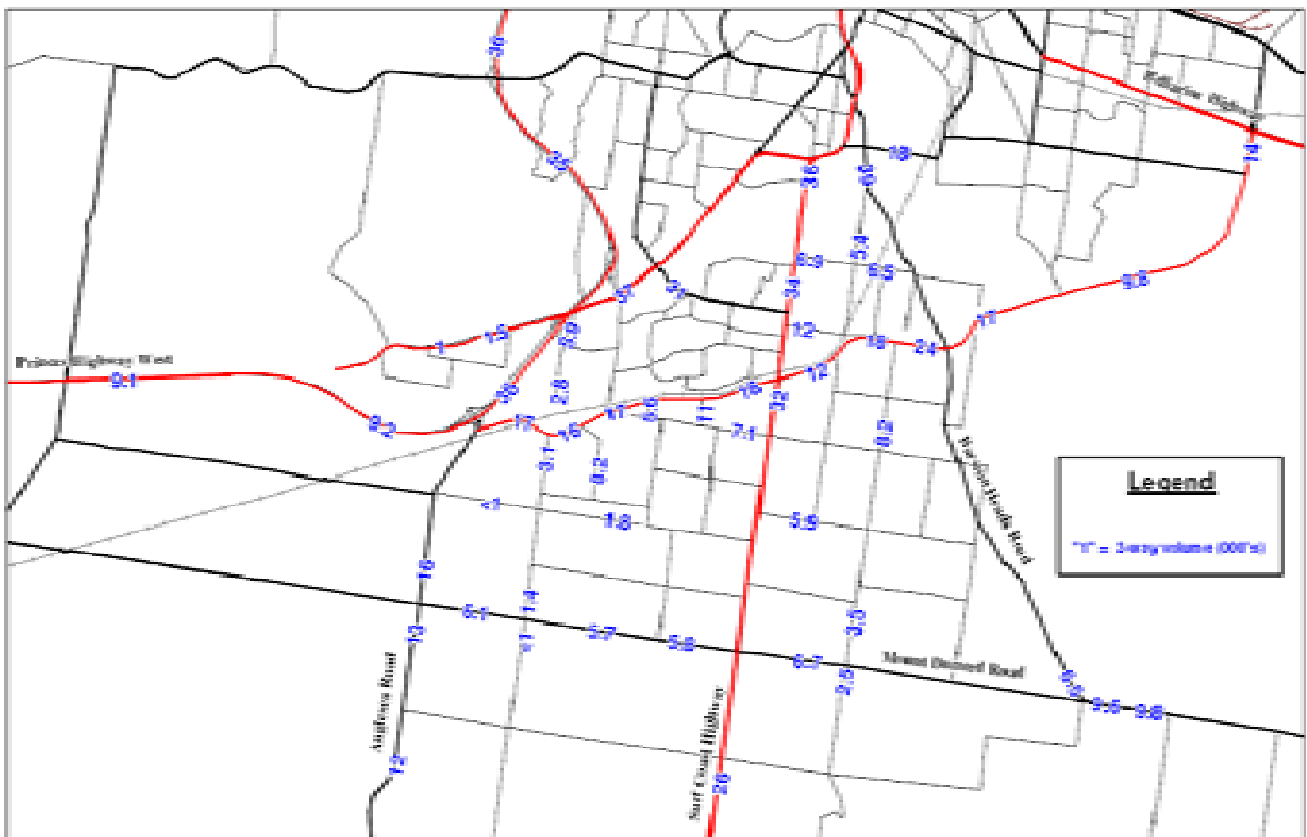
All traffic volumes are shown as average daily weekday two way volumes in '000 vehicles per day.

Source: VicRoads submission

(Original Source: Veitch Lister Consulting 2009)



Projected Traffic Volumes – Interim Scenario – 4A and 4B complete (around 2013)



Projected Traffic Volumes – Ultimate (around 2040) with East-West Link and Section 4C

Appendix F Alignment Options proposed by South Grovedale Action Group

Revised version tabled at the Hearing by VicRoads - showing corrections to more accurately reflect plan provided by South Grovedale Action Group

Appendix G VicRoads Assessment of Alignment Options

GEELONG RING ROAD SECTION 4C

REPORT ON THE COMPARATIVE ASSESSMENT OF THE MERITS AND IMPACTS OF THE APPROVED SECTION 4C ALIGNMENT WITH OTHER ALTERNATIVE ALIGNMENTS

INTRODUCTION

The Geelong Ring Road Section 4C Advisory Committee requested VicRoads to provide a comparative assessment of the merits and impacts of the approved Section 4C alignment with other alternative alignments.

ALTERNATIVE ROUTE OPTIONS

The plan attached shows the:

- Section 4C alignment approved as part of Amendment C232,
- five alternative routes included in the submission from Dr Katrina Alford on behalf of the South Grovedale Community Action Group, and
- High Speed Link Road included in the submission from Surf Coast Shire

COMPARATIVE ANALYSIS TABLE

A comparative analysis table is attached. It outlines VicRoads assessment of the merits and impacts of the approved Section 4C alignment with the other alternative alignments included in submissions to the Advisory Committee. Input to the assessment was obtained by VicRoads from the City of Greater Geelong, the Department of Sustainability and Environment and the Department of Planning and Community Development.

Each alignment has been assessed against the three overarching and ten broader project objectives included in Section 1.3 of the Amendment C232 Summary Report.

DISCUSSION ON THE COMPARATIVE ASSESSMENT

General

The South Grovedale Community Action Group's submission outlined alternative alignments which all turn sharply to the left and utilise Barwon Heads Road, then merging with the east west Bellarine link shown on the Armstrong Creek Framework Plan. VicRoads considers that these alignments do not meet current standards at the eastern end. Accordingly each option has been assessed on the basis of an acceptable geometric alignment east of Barwon Heads Road (ie broken lines shown on plan).

Each route has been assessed from Anglesea Road to the Barwon River as it was considered that this was necessary in order to assess each alignment against the second overarching objective.

High Speed Link

The High Speed Link would provide an excellent connection from the southern end of the Geelong Ring Road to Torquay and beyond. This alternative, however, has not been included in the assessment because it does not meet the strategic intent of connecting to the Bellarine Peninsula in the longer term (second overarching objective) and does not service the Armstrong Creek Urban Growth Area (third overarching objective).

This project would have to compete for funding against other competing projects on a statewide basis. VicRoads considers that this project has a lower priority compared to other competing projects within Victoria.

Approved Section 4C Alignment

The Section 4C alignment, approved as part of Amendment C232, has been assessed as having the following merits:

- Good cost-effective and safe connection to the Surf Coast and Great Ocean Road destinations,
- Meets the strategic intent for a longer term connection to the Bellarine Peninsula,
- Is integrated with the Armstrong Creek Urban Growth Area, the draft West Precinct Structure Plan and the future Armstrong Creek railway station, and
- The alignment crosses the Barwon River at the optimal location in terms of the minimising the environmental impact on the floodplain and the Ramsar wetlands.

The impacts of the Section 4C alignment have been assessed as:

- The alignment is within 130 metres of houses on the north side of railway line near Bickford Road, and
- Visual impact from raised overpass over the railway line at the western end.

South Grovedale Community Action Group Five Alternative Alignments

Option 1 (Boundary Road)

The Option 1 (Boundary Road) alignment has been assessed as having the following merits:

- Good safe connection to the Surf Coast and Great Ocean Road destinations,
- Meets the strategic intent for a longer term connection to Bellarine Peninsula,
- Unlikely to affect any cultural heritage sites, and
- Alignment is removed from existing houses north of the railway line.

The impacts of the Option 1 (Boundary Road) alignment have been assessed as:

- Not integrated with the Armstrong Creek Urban Growth Area and leaves lower value land between alignment and railway (Additional \$10 - \$15 million land compensation costs),
- More costly due to overall length and future bridging of Barwon River
- Areas of endangered grassy woodland affected, environmental impact on the Barwon River floodplain and Ramsar wetlands and Narana Aboriginal Cultural Centre on Surfcoast Highway affected,
- Close to the Armstrong Creek Urban Growth Area Major Activity Centre, and
- Impacts on recently installed assets by Barwon Water.

Option 2 (Diagonal connection to Boundary Road-then Option 1)

The Option 2 (Boundary Road) alignment has been assessed as having the following merits:

- Provides a reasonable connection to the Surf Coast and Great Ocean Road destinations,
- Partially meets the strategic intent for a longer term connection to the Bellarine Peninsula,
- Alignment is removed from existing houses north of the railway line.

The impacts of the Option 2 (Boundary Road) alignment have been assessed as:

- Not integrated with the Armstrong Creek Urban Growth Area, significantly affects the Western Industrial Precinct and leaves lower value land between the alignment and railway line (Additional \$10 - \$15 million land compensation costs),
- More costly due to overall length, future bridging of Barwon River and compensation costs due to sterilising valuable limestone in future quarry,
- Areas of endangered grassy woodland affected, environmental impact on the Barwon River floodplain and Ramsar wetlands and Narana Aboriginal Cultural Centre on Surfcoast Highway affected,
- Close to the Armstrong Creek Urban Growth Area Major Activity Centre,
- Impacts on recently installed assets by Barwon Water, and
- Does not provide as good a connection to the future Armstrong Creek railway station.

Option 3 (Whites/Burvilles Road extension)

The Option 3 (Whites/Burvilles Road Extension) alignment has been assessed as having the following merits:

- Good connection to the Surf Coast and Great Ocean Road destinations, and
- Alignment is removed from existing houses north of the railway line.

The impacts of the Option 3 (Whites/Burvilles Road Extension) alignment have been assessed as:

- Poorly integrated with the Armstrong Creek Urban Growth Area, significantly affects the approved East Precinct Structure Plan,
- Does not meet the strategic intent for a longer term connection to Bellarine Peninsula,
- More costly due to overall length, future bridging of Barwon River and compensation costs due to sterilising valuable limestone in future quarry,
- Significant impacts on endangered native vegetation, environmental impact on the Barwon River floodplain and Ramsar wetlands, and
- Does not provide a good connection to the future Armstrong Creek railway station.

Option 4 (Whites/Southern East West Connection)

The Option 4 (Whites/Southern East West Connection) alignment has been assessed as having the following merits:

- A very good connection to the Surf Coast and Great Ocean Road destinations, and
- Alignment is removed from existing houses north of the railway line.

The impacts of the Option 4 (Whites/Southern East West Connection) alignment have been assessed as:

- Poorly integrated with the Armstrong Creek Urban Growth Area, significantly affects the approved East Precinct Structure Plan, including allotments already sold,
- Does not meet the strategic intent for a longer term connection to Bellarine Peninsula,
- Considerably more costly due to overall length, future bridging of Barwon River and compensation costs due to sterilising valuable limestone in future quarry,
- Significant impacts on endangered native vegetation, open space and recreational values and has an extreme environmental impact on the Barwon River floodplain and Ramsar wetlands,
- Does not provide a good connection to the future Armstrong Creek railway station.

Option 5 (Mount/Lower Duneed Road)

The Option 5 (Mount/Lower Duneed Road) alignment has been assessed as having the following merits:

- A very good connection to the Surf Coast and Great Ocean Road destinations, and
- Minimises impacts on the overall community, north and south of the railway.

The impacts of the Option 5 (Mount/Lower Duneed Road) alignment have been assessed as:

- Poorly integrated with the Armstrong Creek Urban Growth Area, significantly affects the approved East Precinct Structure Plan,
- Does not meet the strategic intent for a longer term connection to Bellarine Peninsula,
- Considerably more costly due to greater overall length, future bridging of Barwon River and compensation costs due to sterilising valuable limestone in future quarry,
- Significant impacts on endangered native vegetation and has environmental impact on the Barwon River floodplain and Ramsar wetlands, and
- Does not provide a good connection to the future Armstrong Creek railway station.

Summary

The comparative assessment by VicRoads has concluded that there are only two alignments that meet, to some degree, the three overarching objectives and the broader project objectives. These are the approved Section 4C alignment and the Option 1 (Boundary Road) alignment.

VicRoads considers that the approved Section 4C alignment:

- Meets the three overarching objectives and the broader project objectives to a much greater degree than does the Option 1 (Boundary Road) alignment, and
- Is consistent and compatible with the Armstrong Creek Urban Growth Area, completed and current precinct structure planning activities and recently installed public utility assets servicing the growth area.

Appendix H Commitments from SKM report

SKM was engaged by VicRoads to undertake a Social Impact Assessment (SIA) of Section 4C. Their March 2010 SIA report recommended the following mitigation measures *to reduce negative social impacts* arising from Geelong Ring Road Section 4C:

- *Consideration should be given to sound mitigation measures on key parts of Section 4C to protect residential areas from vehicle noise.*
- *Landscaping to improve visual aesthetics of new roadways, embankments and structures*
- *Consultation with Council and local residents about desired landscape measures*
- *Minimise the extent of land acquisition as much as possible*
- *Where close to 50% of a property is being acquired, VicRoads should consider offering to buy the entire parcel enabling the occupier to move to a new area if they wish to do so*
- *Considering early purchase of properties where this would assist owners to resettle and reduce their uncertainties about the future.*
- *Maintaining access to properties during construction will lessen the impact on people's lives and livelihoods.*
- *Active communication with landholders as soon as final plans and firm deadlines are known.*
- *Configure traffic light sequence to improve travel times along Section 4C to benefit through traffic.*
- *Signage/road design which encourages usage of Section 4C over less desirable routes and local roads, e.g. working with council to discourage usage of the Rossack Drive / Heyers Road route.*
- *Provision of good pedestrian and cyclist road crossings that line up with pedestrian bridges proposed as part of the Armstrong Creek Urban Growth Area Framework Plan. This will be important for minimising the new road's contribution to the existing 'barrier effect' created by the railway line.*
- *Working with the Department of Transport to ensure good pedestrian and bicycle access to and through the new railway station in association with Section 4C and roads coming from the Armstrong Creek Growth Area.*

- *Close co-operation with the ACUGA developers to ensure good integration between Section 4C and the abutting new residential area to the south.*
- *Construction of a shared pedestrian / cycle path in conjunction with Section 4C linking into other existing paths and improving access to relevant destinations e.g. Deakin University.*

SKM also completed a SIA for the proposed Armstrong Creek Railway Station which *'forms an addendum to the SIA for the Geelong Ring Road Section 4C'*. The following additional mitigation measures were identified:

- *Development of the pedestrian bridge across the rail line early in the process so benefits can be realised for pedestrian and cycle linkages.*
- *As the bridge is likely to be used by cyclists, the design of the bridge should be 'cycle friendly' (i.e. not tight turns etc)*
- *Pedestrian connectivity into and within the station precinct will be important. The provision of good connections with existing paths will facilitate this connectivity. The signalised intersection along Geelong Ring Road Section 4C will assist north-south bicycle and pedestrian trips.*
- *Walking and cycling paths should also run through the station precinct connecting to the station platforms and pedestrian bridge. This could take the form of off-road shared paths or on-road bicycle lanes within the station precinct.*
- *Provision of adequate bike parking allowing people to combine cycling with public transport use.*
- *Connectivity with other forms of public transport will also be important. Scheduling of buses, particularly to Deakin University should be synchronised with train services.*
- *The sooner that land acquisition intention can be finalised and communicated to the landholders the sooner they will be able to make plans for their future.*
- *Traffic planning and management will need to be considered for local streets in southern Wauru Ponds to mitigate potential impacts from the increased traffic associated with the new station.*
- *Consideration should be given to reducing the noise impacts of passing trains on adjacent residential properties. This potential mitigation could target the materials and design of the residential properties.*

- *Consideration should also be given to the potential for creating a 'town centre' public open space attractive for passive recreation and socialising.*