Environment Effects Act 1978
Planning and Environment Act 1987

PRINCES HIGHWAY DUPLICATION
TRARALGON EAST TO KILMANY
EES INQUIRY PANEL AND
ADVISORY COMMITTEE

........................................
Kathryn Mitchell, Chair

........................................
Des Grogan, Member

........................................
Chris Harty, Member

15 June 2012
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EXECUTIVE SUMMARY</td>
<td>1</td>
</tr>
<tr>
<td>2. INTRODUCTION</td>
<td>4</td>
</tr>
<tr>
<td>2.1 THE INQUIRY</td>
<td>4</td>
</tr>
<tr>
<td>2.2 TERMS OF REFERENCE AND PROJECT OBJECTIVES</td>
<td>5</td>
</tr>
<tr>
<td>2.3 SUBMISSIONS AND HEARINGS</td>
<td>7</td>
</tr>
<tr>
<td>2.4 SITE INSPECTIONS</td>
<td>9</td>
</tr>
<tr>
<td>3. THE PROPOSAL</td>
<td>10</td>
</tr>
<tr>
<td>3.1 SUBJECT SITE AND SURROUNDS</td>
<td>10</td>
</tr>
<tr>
<td>3.2 WHAT IS PROPOSED?</td>
<td>11</td>
</tr>
<tr>
<td>3.3 WHAT APPROVALS ARE REQUIRED?</td>
<td>14</td>
</tr>
<tr>
<td>3.4 VARIATIONS AND OPTIONS</td>
<td>16</td>
</tr>
<tr>
<td>4. LEGISLATIVE AND POLICY FRAMEWORK</td>
<td>21</td>
</tr>
<tr>
<td>4.1 COMMONWEALTH LEGISLATION</td>
<td>21</td>
</tr>
<tr>
<td>4.2 STATE LEGISLATION</td>
<td>21</td>
</tr>
<tr>
<td>4.3 STATE POLICY</td>
<td>22</td>
</tr>
<tr>
<td>4.4 LOCAL POLICY</td>
<td>25</td>
</tr>
<tr>
<td>4.5 RELEVANT STRATEGIC DOCUMENTS</td>
<td>32</td>
</tr>
<tr>
<td>5. ISSUES ANALYSIS OF PROJECT</td>
<td>37</td>
</tr>
<tr>
<td>5.1 OVERVIEW</td>
<td>37</td>
</tr>
<tr>
<td>5.2 KEY ISSUES</td>
<td>38</td>
</tr>
<tr>
<td>6. ROAD ALIGNMENT, LAYOUT AND DESIGN</td>
<td>40</td>
</tr>
<tr>
<td>6.1 DESCRIPTION</td>
<td>40</td>
</tr>
<tr>
<td>6.2 KEY ISSUES</td>
<td>48</td>
</tr>
<tr>
<td>6.3 EVIDENCE AND SUBMISSIONS</td>
<td>49</td>
</tr>
<tr>
<td>6.4 DISCUSSION</td>
<td>54</td>
</tr>
<tr>
<td>6.5 FINDINGS AND RECOMMENDATIONS</td>
<td>64</td>
</tr>
<tr>
<td>7. BIODIVERSITY AND HABITAT</td>
<td>67</td>
</tr>
<tr>
<td>7.1 DESCRIPTION</td>
<td>67</td>
</tr>
<tr>
<td>7.2 KEY ISSUES</td>
<td>74</td>
</tr>
<tr>
<td>7.3 SUBMISSIONS AND EVIDENCE</td>
<td>75</td>
</tr>
<tr>
<td>7.4 DISCUSSION</td>
<td>76</td>
</tr>
</tbody>
</table>

7.5 Findings ........................................................................................................... 85

8. Noise and Vibration .................................................................................. 86
   8.1 Description .......................................................................................... 86
   8.2 Key Issues ......................................................................................... 87
   8.3 Evidence and Submissions ................................................................. 87
   8.4 Discussion .......................................................................................... 90
   8.5 Findings and Recommendations ....................................................... 91

9. Social and Economic Impacts ............................................................... 92
   9.1 Description .......................................................................................... 92
   9.2 Key Issues ......................................................................................... 93
   9.3 Submissions and Evidence ................................................................. 94
   9.4 Discussion .......................................................................................... 97
   9.5 Findings and Recommendations ....................................................... 98

10. Heritage ..................................................................................................... 100
    10.1 Description ....................................................................................... 100
    10.2 Key Issues ....................................................................................... 101
    10.3 Evidence and Submissions ............................................................... 101
    10.4 Discussion ....................................................................................... 103
    10.5 Findings and Recommendations ....................................................... 103

11. Relocation of Gippsland Water Assets .................................................... 104
    11.1 Description ....................................................................................... 104
    11.2 Key Issues ....................................................................................... 104
    11.3 Evidence and Submissions ............................................................... 105
    11.4 Discussion ....................................................................................... 107
    11.5 Findings and Recommendations ....................................................... 107

12. Other Matters ............................................................................................. 109
    12.1 Description ....................................................................................... 109
    12.2 Key Issues ....................................................................................... 111
    12.3 Evidence and Submissions ............................................................... 111
    12.4 Discussion ....................................................................................... 112
    12.5 Findings and Recommendations ....................................................... 115

    13.1 Description ....................................................................................... 116
    13.2 Key Issues ....................................................................................... 117
    13.3 Discussion ....................................................................................... 117
13.4 FINDINGS AND RECOMMENDATIONS ................................................................. 119

14. PLANNING SCHEME AMENDMENTS .............................................................. 120
   14.1 DESCRIPTION ............................................................................................. 120
   14.2 KEY ISSUES ............................................................................................... 121
   14.3 SUBMISSIONS AND EVIDENCE ............................................................... 121
   14.4 DISCUSSION ............................................................................................... 123
   14.5 FINDINGS AND RECOMMENDATIONS ................................................... 124

15. MATTERS OF COMMONWEALTH INTEREST ........................................... 126
   15.1 DESCRIPTION ............................................................................................. 126
   15.2 KEY ISSUES ............................................................................................... 128
   15.3 SUBMISSIONS AND EVIDENCE ............................................................... 130
   15.4 DISCUSSION ............................................................................................... 131
   15.5 FINDINGS .................................................................................................. 134

16. “AT WHAT COST?” ......................................................................................... 135

17. CONCLUSIONS – RESPONSE TO TERMS OF REFERENCE .................. 138

18. INQUIRY RECOMMENDATIONS ................................................................. 141

APPENDICES:

1. TERMS OF REFERENCE
2. LIST OF SUBMITTORS
3. DOCUMENT LIST
LIST OF TABLES:

1. Location of road reserve widening
2. Existing and forecast daily Princes Highway East traffic volumes
3. Local road daily traffic volumes, 7 day average
4. Native Vegetation Losses
5. Changes in noise levels at post duplication

LIST OF FIGURES:

1. Princes Highway looking west towards Traralgon from Flynns Creek Road
2. Proposed duplication alignment
3. Princes Highway at Kilmany looking west
4. Woodland at corner of Princes Highway and Barrs Lane
5. Grassland at the corner of Princes Highway and Maffra-Rosedale Road
6. Some of the Very Large and Large Old Trees (VLOTs) and (LOTs) found within the Project area
7. Strzelecki Memorial
8. Part of Gippsland Water Assets lying parallel to the Princes Highway
**LIST OF ABBREVIATIONS:**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMPs</td>
<td>Construction Environmental Management Plans</td>
</tr>
<tr>
<td>CHMP</td>
<td>Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>CMA</td>
<td>Catchment Management Authority</td>
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<tr>
<td>CoRTN</td>
<td>Calculation of Road Traffic Noise</td>
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<tr>
<td>EES</td>
<td>Environment Effects Statement</td>
</tr>
<tr>
<td>EMP</td>
<td>Environmental Management Plan</td>
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<tr>
<td>EMS</td>
<td>Environment Management Strategy</td>
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<tr>
<td>EP Act</td>
<td><em>Environment Protection Act 1978</em></td>
</tr>
<tr>
<td>EPBC Act</td>
<td><em>Environment Protection and Biodiversity Conservation Act 1999</em></td>
</tr>
<tr>
<td>EVC</td>
<td>Ecological Vegetation Class</td>
</tr>
<tr>
<td>DPCD</td>
<td>Department of Planning and Community Development</td>
</tr>
<tr>
<td>DSE</td>
<td>Department of Sustainability and Environment</td>
</tr>
<tr>
<td>FFG</td>
<td><em>Flora and Fauna Guarantee Act 1989</em></td>
</tr>
<tr>
<td>FTE</td>
<td>Full Time Equivalent</td>
</tr>
<tr>
<td>GDEs</td>
<td>Groundwater Dependent Ecosystems</td>
</tr>
<tr>
<td>GLP</td>
<td>Gippsland Logistics Precinct</td>
</tr>
<tr>
<td>GW</td>
<td>Gippsland Water</td>
</tr>
<tr>
<td>GWF Pipeline</td>
<td>Rosedale to Traralgon Sewer Main</td>
</tr>
<tr>
<td>HabHa</td>
<td>Habitat Hectares</td>
</tr>
<tr>
<td>LOT</td>
<td>Large Old Trees</td>
</tr>
<tr>
<td>LPPF</td>
<td>Local Planning Policy Framework</td>
</tr>
</tbody>
</table>
MNES     Matters of National Environmental Significance
MOT      Medium Old Trees
NES      National Environmental Significance
P&E Act  Planning and Environment Act 1987
PEPS     Project Environment Protection Strategy
RAP      Registered Aboriginal Party
ROS      Regional Outfall Sewer
SIAR     Social Impact Assessment Report
SPPF     State Planning Policy Framework
VLOT     Very Large Old Trees
WGCMA    West Gippsland Catchment Management Authority
WMT      Wide Medium Treatments

LISTED SPECIES:

Clover Glycine     Glycine latrobeana
Drooping Sheoak    Allocasuarina verticillata
Dwarf Galaxias    Galaxiella pusilla
Eastern Great Egret Ardea modesta
Gippsland Red Gum Eucalyptus tereticornis subsp. mediana
Growling Grass Frog Litoria raniformis
Matted Flax-lily   Dianella amoena
River Swamp Wallaby-grass Amphibromus fluitans
Strzelecki Gum     Eucalyptus strzeleckii
White-bellied Sea Eagle Haliaeetus leucogaster
1. EXECUTIVE SUMMARY

(a) The Princes Highway is the primary road link between Gippsland and Melbourne, and supports key regional industries including dairying, grazing, timber, paper, coal and gas production. The Highway is a major route for tourist traffic visiting the Gippsland Lakes, the high country and south coast of New South Wales.

(b) It is proposed to fully duplicate the Princes Highway between Traralgon and Sale, and the Project under review is the section of the Princes Highway between Traralgon East and Kilmany (but excluding the section of the Princes Highway either side of Rosedale).

(c) This section of Highway is approximately 31 kilometres long and is an undivided single lane, and experiences capacity constraints particularly during peak holiday periods. It has a poor casualty crash record and a significant proportion of heavy vehicles utilise the Highway.

(d) The Project is expected to deliver significant benefits for road safety, improve efficiency during peak times and provide capacity to allow for predicted growth in traffic volumes along this route.

(e) In August 2010, VicRoads referred the Project to the (former) Minister for Planning under the Environment Effects Act 1978. On 22 October 2010 the (former) Minister for Planning decided that an Environment Effects Statement was required for the Project for the following reasons (in summary):

- The proposed alignment is likely to result in significant adverse effects on biodiversity including on native vegetation, listed flora and fauna species;
- To investigate the opportunity to avoid or minimise significant adverse effects through alignment selection, roadway design as well as mitigation and offsetting measures;
- To provide an integrated assessment of environmental effects associated with alternative alignments, including biodiversity, waterways, existing land uses and infrastructure.

(f) The Project was referred to the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities as a controlled action under the Environment Protection and Biodiversity Conservation Act 1999 and it requires assessment and approval under this Act.

(g) Planning Scheme Amendments to the Latrobe Planning Scheme (Amendment C65) and to the Wellington Planning Scheme (Amendment C76) are required as part of the approvals process.
(h) The EES was placed on public exhibition, together with draft amendments to the Latrobe and Wellington Planning Schemes between 18 January and 9 March 2012, and a total of 38 submissions were received.

(i) The Minister appointed an Inquiry Panel under section 9 of the Environment Effects Act 1978 on 28 March 2012 and an Advisory Committee under section 151 of the Planning and Environment Act 1987 on 22 March 2012 to consider the Project and its potential impacts, in accordance with Terms of Reference dated 15 March 2012. The members of the Advisory Committee and the Inquiry Panel are Kathryn Mitchell (Chair), Des Grogan and Chris Harty.

(j) The Project involves minimising the impact on biodiversity and habitat, and Environment Protection and Biodiversity Conservation Act 1999 listed species and communities, such as the Gippsland Red Gum, Grassy Woodland, Matted Flax-lily and Dwarf Galaxias. It includes balancing these impacts and expected improvements to road safety; against the impact on private landowners such as acquisition of farming land and agricultural productivity.

(k) The Inquiry generally supports the proposed duplication in most of the preferred alignment as determined by VicRoads. However, the Inquiry found that there are a number of issues to be reconciled that may result in minor variations from the preferred route.

(l) The Inquiry accepts that the impacts on biodiversity and habitat values are considered to be of Commonwealth and State significance whereas land use, social and amenity impacts are significant at a local level.

(m) Overall, the Inquiry considers that the EES has sufficiently dealt with the potential impacts on biodiversity and habitat for the Project.

(n) Although there is some loss of endangered native vegetation, the Inquiry is satisfied that the level of effect is not significant. The Inquiry notes the support from the Department of Sustainability and Environment that the EES appropriately addresses the key legislation and policy requirements including relating to impacts on native vegetation and threatened species and the determination of suitable offsets.

(o) The Inquiry is satisfied with the level of effort demonstrated in the EES to protect the environmental values associated with the Princes Highway road reserve between Traralgon and Kilmany, and considers that the mitigation measures proposed in Chapter 13 of the EES are satisfactory and should be implemented through an appropriate Environmental Management Plan.

(p) The proposed alignment will have some negative social impacts on local residents, however the Inquiry believes that these impacts are less significant than those of other
alignments tested as part of the EES process. The proposed alignment will have a negative social and economic impact in particular on two properties (the Ferguson property and the Kilgowers’ property Checker Park).

(q) The impacts on non-Aboriginal and Aboriginal cultural heritage can be mitigated and the relocation of the Strzelecki Memorial is a necessary outcome of the recommended alignment.

(r) In terms of Commonwealth issues, the Inquiry considers that the EES in Chapters 13 and 20 has sufficiently dealt with the potential impacts on Matters of National Environmental Significance for the Project. The significance of impact on listed ecological community and species from the selected Project design is considered by the Inquiry to be reasonable. The impact on the Dwarf Galaxias is considered to be minor, subject to the mitigating actions contained in the Environmental Management Framework.

(s) Although there is some loss expected of the critically endangered Gippsland Red Gum, Grassland and Associated Native Grassland, the Inquiry is satisfied that the EES has established an appropriate impact significance gauge based on 1%, and that the level of effect on the vegetation community from the Project is not significant.

(t) The key finding of the Inquiry based on the material presented in the EES, the supporting documentation and the Environmental Management Framework, is that the likely environmental impacts of the Project on State and National matters are acceptable.

(u) Overall, the Inquiry supports approval of the draft Planning Scheme Amendments to facilitate the Project, subject to further recommendations resulting in minor changes to the planning controls, and in variations to the preferred route.

(v) However, finalisation of the Public Acquisition Overlay should only occur after VicRoads has reviewed the alignment, including median widths and intersection treatments.

(w) The Inquiry raises concerns about the significant cost impost on the Project by VicRoads not being able to use the existing road reserve, and the impact this has on the extent and cost of acquisition of private land, and the cost of relocating significant Gippsland Water assets.

(x) The extent and impact of these costs should not be taken lightly. For these reasons, the key recommendations of the Inquiry require VicRoads review the proposed alignment, prior to finalisation of the Amendments and the preferred duplication route.
2. INTRODUCTION

VicRoads proposes to duplicate the Princes Highway between Traralgon East and Kilmany as part of a larger Project to duplicate the Highway between Traralgon and Sale. An Environment Effects Statement (EES) and ultimately, planning scheme amendments are required to facilitate this Project. The Project requires assessment under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and the Minister for Planning’s Assessment Report to the Commonwealth Minister will need to assess the impacts of the Project on Matters of National Environmental Significance (MNES) under the Commonwealth-Victorian Bilateral Agreement for Environmental Impact Assessment.

2.1 The Inquiry

On 22 October 2010, the former Minister for Planning determined that an EES was required for the Project under the Environment Effects Act 1978. The EES has been prepared by the Proponent in response to Scoping Requirements issued for the proposal in March 2011.

To assist in the assessment of the Project, the Minister for Planning appointed an Advisory Committee on 22 March 2012 under section 151 of the Planning and Environment Act 1987 to consider draft Amendment C65 to the Latrobe Planning Scheme and draft Amendment C76 to the Wellington Planning Scheme. Additionally, he appointed an Inquiry Panel under the provisions of section 9 of the Environment Effects Act 1978 on 28 March 2012.

The Minister for Planning provided Terms of Reference (dated 15 March 2012) to provide the framework for the Advisory Committee’s and Inquiry Panel’s work. The Terms of Reference are provided at Appendix 1.

The members of the Advisory Committee and the Inquiry Panel (the Inquiry) comprise Kathryn Mitchell (Chair), Des Grogan and Chris Harty.
2.2 Terms of Reference and Project Objectives

(i) Terms of Reference

The Minister for Planning signed the Inquiry’s Terms of Reference on 15 March 2012, noting the combined Inquiry and Advisory Committee is to be known the ‘Princes Highway Traralgon East to Kilmany Duplication Project Inquiry and Advisory Committee’.

Paragraph 3 of the Terms of Reference states that in overview, the Inquiry is to:

- Consider and report on the potentially significant effects of the Project taking into account the procedures and requirements the Minister required for the preparation of the Environment Effects Statement (EES) under section 8B(5) of the EE Act (see Attachment 1) and the controlling provisions under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (Commonwealth) as outlined in paragraph 9 ...

- Address matters relevant to the alignment and design of the Project and the draft planning scheme amendments prepared by VicRoads.

With regard to Outcomes, paragraph 19 notes that the Inquiry must produce a written report for the Minister for Planning that presents (amongst other matters):

- The Inquiry’s findings regarding the potential environmental effects (impacts of the Project and alignment alternatives ... including impacts on relevant matters of NES under the EPBC Act;

- Advice regarding the availability and effectiveness of feasible mitigation measures or procedures to prevent, minimise or compensate for environmental effects, including on relevant matters of NES, either proposed by the proponent or suggestions made in public submissions or by the relevant agencies;

- Any recommended modifications or feasible alternatives to the Project, including in relation to alignment and design, and their likely effects, including on matters of NES;

- A statement of appropriate conditions for approval of the action under Victorian and Commonwealth law, which should be applied to achieve acceptable environmental outcomes in the context of applicable legislation and policy;

- Any matters relevant to the proposed planning scheme amendments prepared by VicRoads ....

The Terms of Reference further note that submissions are public documents, submissions and supporting material must be made available for public inspection,
and the Inquiry is required to report in writing to the Minister for Planning within eight weeks of its last Hearing date.

(ii) Project Objectives

The Project objectives as defined by VicRoads in the EES are:

- Improve accessibility and road safety;
- Reduce transport cost and delay;
- Improve road network connectivity and efficiency;
- Enhance road environment and minimise impact on flora, fauna and cultural heritage sites;
- Minimise the impact on local landowners and the community.

The larger Project to duplicate the Highway between Traralgon and Sale was identified as a key priority under VicRoads’ Princes Highway East Corridor Strategy and the Federal Government’s Nation Building Program. It is being jointly funded by the Federal and State Governments.

Improved safety, access and transport efficiency underpin the Project and form key aspects of Victorian Government transport policies, and VicRoads operating charter as set out in the Transport Integration Act 2010. Specifically, the Project would assist in meeting the objectives of:

- National Transport Links – Growing Victoria’s Economic Strategy;
- Nation Building Program – 2009-2014; and
- VicRoads – Route 1, Route 620 Corridor Strategy – Princes Highway East.

The Project is expected to deliver significant benefits for road safety, improve efficiency during peak times and provide capacity to allow for predicted growth in traffic volumes along this route.

An evaluation framework was developed for the assessment options. The Project objectives defined by VicRoads and relevant legislation and policy were used to create evaluation criteria against which the alignment alternatives were assessed. Impact ratings from each option took into account the following:

- The scale and geographic extent of potential effects, or by policy/legislative compliance and implication;
- The environmental, social and/or economic significance of the potential effects;
- The ability and cost to mitigate or rectify the potential effects; and
• The level of uncertainty surrounding the potential effects, taking account of the precautionary principle.

The potential impacts of each option were considered in relation to the option of not constructing the Project. This is referred to as a ‘No Project’ scenario. An Impacts rating framework was developed which listed ‘Potential Project Benefits’, ‘Potential Project Disbenefits’ and rating them on a scale of very well to very poor. Variations and options are further discussed in Chapters 3.4 and 6 of this report.

2.3 Submissions and Hearings

The EES was placed on public exhibition, together with draft Amendments to the Latrobe and Wellington Planning Schemes between 18 January and 9 March 2012. A total of 38 submissions were received in response to the exhibition process, of which 10 were generally in support and the remainder raised issues of concern. The list of submittors is provided at Appendix 2.

All submissions were referred to and received by the Inquiry. The key issues raised in submissions related to:

• Acquisition of private land instead of using the dedicated road reserve already in place;
• Noise, pollution and amenity impacts on adjacent landowners;
• Impact on farming activities due to acquisition of farming land;
• Loss of native vegetation and fauna – for instance the Matted Flax-lily, Gippsland Red Gum, and Grassy Woodland;
• Removal of trees; and
• Reduced access to property and services.

A Directions Hearing was held on 27 March 2012. Following the Directions Hearing (and also before the public Hearings), the Inquiry undertook an unaccompanied inspection of the proposed duplication route and its surrounds.

The Inquiry then met in the offices of Latrobe Council (in Traralgon), and at Esso BHP Billiton Centre (in Sale), on 11, 12, 17 and 18 April to hear submissions in respect of the Project. Those who appeared before the Inquiry at the public Hearings included:
<table>
<thead>
<tr>
<th>Submittor</th>
<th>Represented By</th>
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<tr>
<td>Department of Planning and Community Development</td>
<td>Elissa Bell, Senior Environmental Assessment Officer</td>
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<tr>
<td>VicRoads</td>
<td>Nicola Collingwood of Counsel, instructed by Jessica Kaczmarek Rigby Cooke Lawyers, with submissions and evidence from the following:</td>
</tr>
<tr>
<td></td>
<td>- Ian Inglis, Manager Project Delivery</td>
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<td></td>
<td>- Caroline Deppeler, VicRoads Team Leader</td>
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<td></td>
<td>- Christine Wyatt, GHD (planning)</td>
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<td>- Henry Turnbull, Traffix Group (traffic and road design)</td>
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<td>- Tim Wills, GHD (biodiversity)</td>
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<td>- James McIntosh, VicRoads (acoustics)</td>
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<td></td>
<td>- Vladimir Pavasovic, GHD (acoustics)</td>
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<td></td>
<td>- Jim Shovelton, Mike Stephens and Associates (agricultural and economic assessment)</td>
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<td></td>
<td>- Richard Fanning, VicRoads Principal Adviser,</td>
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<td>Road Design and Traffic Standards</td>
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<tr>
<td>Department of Sustainability and Environment</td>
<td>John Brennan, Program Manager - Regional Planning, with:</td>
</tr>
<tr>
<td></td>
<td>- Ryan Incoll, Environment and Water Regional Manager</td>
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<td></td>
<td>- Debbie Shaw, Senior Biodiversity Officer</td>
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<tr>
<td>Gippsland Water</td>
<td>Andrew Sherman, Russell Kennedy Solicitors, with:</td>
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<td></td>
<td>- Donna Wardell, Land and Legal Officer</td>
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<td></td>
<td>- Linley Keen, Manager Commercial Services</td>
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<td>- Chris Madsen, Manager Asset Planning</td>
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<td></td>
<td>- David Peake, Senior Engineer</td>
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<td>- Brian Wallan, Manager Major Systems</td>
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<tr>
<td>Flynn Farm Landcare Group</td>
<td>Rowan Paulet, Graeme Stuckey, Bernie Ferguson and Les Rowles</td>
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<tr>
<td>Rosedale Caravan Park</td>
<td>Phil Logan</td>
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<tr>
<td>Rosedale Chamber of Commerce</td>
<td>Sparie Nassiokas</td>
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<tr>
<td>Community Submittors</td>
<td>Bernie and Patrick Ferguson</td>
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<td></td>
<td>Richard Kilgower</td>
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<td></td>
<td>Rowan and Alan Paulet Bernie</td>
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<tr>
<td></td>
<td>Nicole Dunbar for Sam, Ben and Alex Dunbar</td>
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<td></td>
<td>Graeme Stuckey</td>
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Part of Mr Shovelton’s evidence was heard ‘in camera’, due to sensitive information being provided about the economic impact the Project might have on particular property owners. There were no objections from any party about this short ‘in camera’ session.

Evidence was tabled from Annie Noble from Dr Vincent Clark and Associates in relation to cultural heritage (Aboriginal and non-Aboriginal) but after review of this evidence and the submissions made by VicRoads, the Inquiry did not need her to present this evidence in person. No submitters indicated that they wished to hear this evidence or cross examine the witness.

At the commencement of the Hearings, VicRoads summarised the key issues relating to the Project as follows:

- Minimising impact on biodiversity and habitat and EPBC Act listed species and communities such as the Gippsland Red Gum, Grassy Woodland, Matted Flax-lily and Dwarf Galaxias;
- Minimising impact on Ecological Vegetation Classes (EVCs);
- Minimising Impact on Aboriginal and non-Aboriginal cultural heritage sites, and removal of the Strzelecki Memorial;
- Minimising proposed land acquisition where possible; and
- Expected improvements to road safety.

VicRoads noted that agricultural productivity is unlikely to be significantly affected if measures such as relocation and reinstatement of infrastructure, drainage and access are implemented.

The Inquiry acknowledges the input of all parties to this process, and also those who attended the Hearings in support of many parties and submitters.

2.4 Site Inspections

The Inquiry undertook ‘roadside’ site inspections prior to the commencement of the Hearing. It then undertook a more formal accompanied inspection as part of the Hearing program on Day 3. VicRoads organised a mini bus and submitters were invited to attend. Apart from the Inquiry, and VicRoads officers and their representatives, Mr Sherman attended part of the inspection on behalf of Gippsland Water, and Mr Peter Stuckey attended for the whole of the inspection.

The Inquiry travelled from Sale to Traralgon East and back again, stopping at various parts of the proposed duplication route as necessary. The Inquiry found this inspection to be informative and instructive. Members of the Inquiry undertook further inspections after the conclusion of the Hearings.
3. THE PROPOSAL

3.1 Subject Site and Surrounds

The Princes Highway is the primary road link between Gippsland and Melbourne. The existing Highway is an undivided road with a single lane in each direction and overtaking lanes at various locations. The Project area encompasses the section of the Princes Highway between Traralgon East to east of Kilmany with the exception of the township area of Rosedale. It runs through an agricultural area used mainly for grazing, which is mostly cleared of native vegetation. It is closely aligned with the Latrobe River and adjoining floodplain. Figure 1 shows the Princes Highway looking west towards Traralgon from the Flynns Creek Road intersection, showing part of the more heavily vegetated sections of the Highway. Other sections of the Highway are less heavily vegetated.
The road reserve of the Project area can be broadly described as comprising a predominantly woodland character between Traralgon East and Rosedale, and a predominantly grassland character between Rosedale and Kilmany. The road reserve itself contains an extensive linear corridor of predominantly native vegetation and represents a remnant area of native vegetation communities that are now rare on adjoining private land.

The Highway is an important route serving the expanding regional industry. It is a major route for tourist traffic bound for the Gippsland Lakes, the high country and the south coast of New South Wales. The Princes Highway supports key regional industries including dairying, grazing, timber, paper, coal and gas production. VicRoads expects that the Project will increase road safety, reduce travel costs and assist road freight efficiency for goods and produce between Gippsland and Melbourne and export markets, and will generate significant associated economic benefits.

3.2 What is proposed?

VicRoads proposes to duplicate the Princes Highway between Traralgon East and Kilmany as part of a larger Project to duplicate the Highway between Traralgon and Sale (refer to Figure 2).

The existing Princes Highway between Traralgon East and Kilmany, excluding the section through Rosedale that is already duplicated, is approximately 31 kilometres long. The existing Highway is an undivided road, and it proposed to provide two lanes in each direction separated by a central median and associated intersection upgrades.
Figure 2: Proposed Duplication Alignment.
A construction area for the proposed duplication alignment includes the following:

- Existing Highway and new carriageway including a central median;
- Clear zone extending a minimum of nine metres from the edge of the traffic lanes;
- Construction buffers to accommodate relocated services and batter slopes in some areas;
- Relocated Regional Outfall Sewer (ROS) and Gippsland Water Factory (GWF) pipeline easement; and
- Re-alignment of Sheepwash Creek and new crossings of Flynns Creek and Blind Joes Creek.

The construction corridor required for the new carriageway is nominally 25-30 metres wide. This includes the pavement, clear zone and construction buffer areas. Where this new carriageway is constructed in adjacent freehold land, the width proposed to be acquired for the extension of the road reserve is nominally 30 metres.

Two stages of the larger Project to duplicate the Highway between Traralgon and Sale are either completed (Traralgon East) or are currently under construction (Wurruk to Sale).

An Environment Effects Statement and Planning Scheme Amendments are required to facilitate the Project. The Project requires assessment under the EPBC Act and the Minister for Planning’s Assessment Report to the Commonwealth Minister will need to assess the impacts of the Project on Matters of National Environmental Significance (MNES) under the Commonwealth-Victorian Bilateral Agreement for Environmental Impact Assessment.

For most of its length, the existing Highway would be converted to serve traffic in one direction, and a new carriageway would be constructed to serve traffic in the other direction. In some sections the new carriageway would be located within the road reserve, but for most of the length the proposed duplication alignment utilises adjacent freehold land:

- to the north between Minniedale Road (Traralgon East) and Flynn;
- to the south approaching the Flynns Creek crossing;
- to the north between Middle Creek and Blind Joes Creek;
- to the south between Nambrok Road and west of Nambrok Creek and at the Kilmany rail overpass; and
- to the south between Velore Road and Templetons Road, Kilmany.
Elsewhere both carriageways are within the existing road reserve. The crossing of Flynns Creek is the only location where both carriageways are within adjacent freehold land. At this location, a wider corridor of freehold land is proposed to be acquired in order to improve the existing curve and cross the creek at right angles. A total of 78 hectares of freehold land is proposed to be acquired for the Project, with 68 allotments and 51 landowners (including three authorities) affected by acquisition to varying extents.

The Inquiry was advised that this stretch of the Highway has a poor casualty crash record. Over the last 5 years, there have been 32 crashes in Project area, four of which has resulted in fatalities, and 17 in serious injuries.

Heavy vehicles represent a significant proportion of vehicles utilising the Highway, and this use is anticipated to grow over the coming years.

There is a single lane carriageway in each direction for most of the length of the Project area which contributes to capacity constraints, particularly during peak holiday periods when there are slower moving recreational vehicles (e.g. towing caravans and boats). The Inquiry was advised that if the Princes Highway is not duplicated, growing traffic volumes are anticipated to result in peak period traffic volumes exceeding the theoretical capacity of the Highway by 2024.

3.3 What Approvals are Required?

(i) EES and Statutory Approvals

The purpose of the Inquiry is to provide an integrated assessment of the potential effects of the proposed duplication of the Princes Highway, between Stammers Road, Traralgon East and Templeton Road, Kilmany. The report of the Inquiry will inform the Minister for Planning’s Assessment of the Project under the Environment Effects Act 1978 and will assist the Minister to make decisions about the proposed amendments to the Latrobe and Wellington Planning Schemes to facilitate the Project.

The EES has been prepared by VicRoads in response to Scoping Requirements issued for the proposal in March 2011.

In August 2010, VicRoads referred the Project to the (former) Minister for Planning under the Environment Effects Act 1978. The Project for the purposes of the referral was a larger Project area between Traralgon East and Fulham. On 22 October 2010, the (former) Minister for Planning decided that an EES was required for the Project for the following reasons:
The proposed alignment is likely to result in significant adverse effects on biodiversity, including on native vegetation, listed flora and fauna species and communities of both state and national significance;

The opportunity to avoid or minimise significant adverse effects through alignment selection, roadway design as well as mitigation and offsetting measures is uncertain and requires further investigation; and

An integrated assessment of environmental effects associated with alternative alignments, including biodiversity, waterways, existing land uses and infrastructure is needed to inform decision-making.

The EES was placed on public exhibition, together with draft Amendments to the Latrobe and Wellington Planning Schemes, from 18 January 2012 until March 2012.

(ii) Commonwealth Decision

The Project was referred to the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities, and was determined to be a controlled action under the EPBC Act. It therefore requires assessment and approval under this Act.

The accredited EES process under the Commonwealth-Victorian Bilateral Agreement for Environmental Impact Assessment applies to this Project. Consequently, the Minister for Planning’s Assessment report to the Commonwealth Minister will also need to assess the impacts of the Project on Matters of National Environmental Significance (MNES) in accordance with Schedule 1 Part B of the Agreement.

(iii) The Draft Amendments

Draft Amendment C65 to the Latrobe Planning Scheme proposes to:

- include land required for the Princes Highway Duplication and relocation of sewerage and water infrastructure in Public Acquisition Overlays;
- remove the existing Heritage Overlay (HO128) and include land required for the relocation of the Strzelecki Memorial;
- exempt the Princes Highway Duplication and associated works from requiring planning permits; and
Draft Amendment C76 to the Wellington Planning Scheme proposes to:

- include land required for the Princes Highway Duplication in a Public Acquisition Overlay;
- exempt the Princes Highway Duplication and associated works from requiring planning permits; and

(iv) Other approvals

Under Victorian law, the Project requires the following additional approvals:

- an approved Cultural Heritage Management Plan (CHMP) under the *Aboriginal Heritage Act* 2006 to manage works in areas of cultural heritage sensitivity;
- consent to remove a listed vegetation community and protected flora under the *Flora and Fauna Guarantee Act* 1988;
- consents for works on waterways under the *Water Act* 1989; and
- consent to disturb heritage sites under the *Heritage Act* 1995.

3.4 Variations and Options

The Project area is a corridor extending 100 metres north and south of the existing road reserve boundary (but widened in the vicinity of Kilmany and Flynn, see Figure 1 in Appendix B Options Assessment Report in Technical Appendices Volume 1). The Project area was the subject of specialist existing conditions assessments and the options assessment was informed by expert advice from a range of speciality disciplines (see page 7 of the Appendix B Options Assessment Report).

VicRoads initially proposed an alignment that was within the existing road reserve, requiring minimal land acquisition. The decision of the former Minister for Planning that an EES was required for the Project and the subsequent investigations into the value and prevalence of listed flora and fauna within the road reserve resulted in an extensive range of alternative options being developed for consideration.

Several of these were quickly disregarded as failing to achieve the EES evaluation objectives. The short-listed options were then subjected to a more detailed assessment, and the preferred route was then determined. This assessment is outlined in Section 5.5.5 of the EES and set out in detail in the Options Assessment Report (Appendix B in Technical Appendices 1) and the evidence of Ms Wyatt of
GHD. The assessment of alignment options was undertaken by dividing the existing Highway into seven sections.

Biodiversity and social impacts were competing issues in assessing alignment options, and selection of a preferred alignment required a balance of outcomes, with some criteria assigned greater weight in some sections. Biodiversity and habitat values were given highest priority in Sections 2, 5 and 6 where the largest areas of EPBC Act listed communities were found. The ability to avoid and minimise biodiversity and social impacts is affected by major infrastructure including the Gippsland Railway (Sections 1, 2 and 7) and the ROS (Section 2). The State Resource Overlay (Sections 1 to 4), which is intended to reserve land for future coal development, was also a consideration.

(i) Section 1 – Stammers Road to Minniedale Road

The western end of Section 1 of the Project is the duplicated Highway at Stammers Road. Section 1 extends to the intersection of Wilmot Court and Minniedale Road, which will be developed with a roundabout and is 1.8 kilometres long, representing 6% of the total length of the Project. VicRoads purchased the most north-eastern property at this intersection to enable the construction of the roundabout. The preferred option is a combination of Options 1A and 1C, and adopts the centreline of the existing road as the centreline of the duplicated road. It has a reduced median which is a minimum width of 10 metres. A narrower median is considered as acceptable for this section because future residential development in this locality may involve lower road speed limits. The native vegetation losses for the preferred option are not considered to be significant in the context of overall losses for the Project.

VicRoads preferred option for Section 1 is a combination of Options 1A and 1C.

(ii) Section 2: Minniedale Road to Flynn

Section 2 runs between Minniedale Road and the township of Flynn. It is 8.3 kilometres long and represents 27% of the total length of the Project. Wide median treatments are proposed at Kenyons Lane and Barrs Lane. Section 2 has significant biodiversity values, particularly along the south side of the road reserve which comprises a contiguous corridor of very high and high state conservation significance native vegetation, which is recognised as an EPBC Act listed community, mostly in its woodland form.

Option 2A would require the removal of several hectares of native vegetation and so it rated very poorly for biodiversity. Option 2D would require the removal of more old trees than 2E.
VicRoads preferred option for Section 2 is 2E for the following reasons:

- The impact of 2A on biodiversity and habitat values is considered to be unacceptable;
- 2G would have the most significant impact on land use and amenity;
- 2D would have a greater impact on biodiversity and habitat values than 2E given that option 3F is not preferred; and
- 2D is significantly more expensive than 2E.

(iii) **Section 3: Flynn to Wrights Lane**

Section 3 is 4.8 kilometres long and represents 15% of the total length of the Project. The alignment options for Section 3 sought to improve the alignment by removing curves and avoiding native vegetation and houses as far as practicable. The curve at the Flynns Creek crossing requires upgrading to current standards, so all options were designed to improve this. Eastbound and westbound truck stops are located to the west of Flynns Creek Road. A wide median treatment is proposed at Flynns Creek Road and Wrights Lane.

Option 3A would be located largely within the existing road reserve with some minor adjacent private land acquisition necessary on corners. No severance impacts are anticipated, unlike some other options. Option 3F proposes to cross Flynns Creek Road to the south of the township, and Flynn community members expressed the view that it would create a severance in the community. With the variation of Option 3A, losses of very high conservation significance vegetation would be avoided. The variation avoids a scar tree and maximise the distance from the house on the inside of the first bend.

VicRoads preferred option for Section 3 is a variation of 3A.

(iv) **Section 4: Wrights Lane to Rosedale**

Section 4 is 3.8 kilometres long and represents 12% of the total length of the Project. It is a short, relatively straight section of road which would terminate just east of the Blind Joes Creek crossing, and match in with the already duplicated Highway on the western fringe of Rosedale. A wide median treatment is proposed at Wrights Lane and Cricket Street. Section 4 provides an opportunity to minimise the overall disturbance of the Project by utilising the existing road reserve. The three options in this section would be similar in terms of amenity impacts on residents either side of the Highway.
Option 4A would have significantly less impact on freehold land, would maximise the distance from houses either side of the Highway, and would minimise overall costs compared to 4B and 4C.

VicRoads preferred option for Section 4 is 4A.

(v) Section 5: Rosedale to East of Nambrok Road

Section 5 is 2.7 kilometres long and represents 9% of the total length of the Project. The existing Highway has curves requiring improvement and a poor safety record, which the short-listed options are designed to improve. A wide median treatment is proposed at Nambrok Road.

Option 5D has the least impact on the EPBC listed community. The preferred option will require minimal land to be acquired and will have a lesser impact on adjacent landowners and residences, apart from one house on a small allotment east of Nambrok Road. The preferred option will impact on less Aboriginal cultural heritage sites compared to the other alignments. Other options have greater impacts to land use and amenity.

VicRoads preferred option for Section 5 is a variation of Option 5D.

(vi) Section 6: East of Nambrok Road to Settlement Road

Section 6 is 5.9 kilometres long and represents 19% of the total length of the Project. It is a relatively straight section of road bordered by large farming properties on either side. The land to the south of the Highway and closer to Kilmany has been cultivated more intensively and some areas are irrigated via a series of channels. Wide median treatments are proposed at Maffra-Rosedale Road, Settlement Road and Sale-Toongabbie Road.

VicRoads preferred option for Section 6 is a combination of 6C and 6A as follows:

- Option 6C, for the western section to avoid the grasslands with the wide median treatment at Maffra-Rosedale Road flared to the north to reduce land impacts; and
- Option 6A for the eastern section where there is little grassland in the road reserve to avoid impacts to properties, houses and a dairy.
(vii) **Section 7: Settlement Road to Templetons Road**

Section 7 is 3.9 kilometres long and represents 13% of the total length of the Project. The road reserve through Kilmany is relatively narrow and there are several houses along the frontage that are close to the existing Highway. Whilst Option 7B rated better for amenity criteria, it would introduce impacts upon one residence not currently exposed to the Highway. Option 7B has a greater impact on private land, and is significantly more expensive than 7A, mostly due to the construction costs associated with a new rail crossing.

VicRoads preferred option for Section 7 is 7A.
4. LEGISLATIVE AND POLICY FRAMEWORK

4.1 Commonwealth Legislation

In September 2010, VicRoads referred the Project to the Department of Sustainability, Environment, Water, Population and Communities. As mentioned, the Project for the purposes of the referral was a larger Project area between Traralgon East and Fulham. On 8 October 2010, the Secretary, under delegation from the Minister, determined that the Project was a controlled action and required assessment and approval under the EPBC Act.

The controlling provisions under the EPBC Act relate to listed threatened species and communities (sections 18 and 18A). Section 18 specifies that actions which have or will have or are likely to have a significant impact on listed threatened species or endangered communities are prohibited without approval. This applies to species listed as endangered, such as the Mattted Flax-lily - 18(3), listed as vulnerable such as the Dwarf Galaxia – 18(4), or listed as a critically endangered ecological community such as the Gippsland Red Gum Grassy Woodland and Associated Native Grassland – 18(5). Section 18A relates to a person being guilty of an offence if an action is taken which results in a significant impact on listed threatened species and ecological communities.

4.2 State Legislation

(i) Planning and Environment Act 1978

The Planning and Environment Act 1978 establishes a framework for planning the use, development and protection of land in Victoria in the present and long-term interest of all Victorians. The Act sets out the legislative basis to ensure that standard planning provisions (planning schemes) are prepared and approved throughout Victoria. The Act sets out procedures for preparing and amending the Victoria Planning Provisions and planning schemes, obtaining permits under schemes, settling disputes, enforcing compliance with schemes, and other administrative procedures.
(ii) **Land Acquisition and Compensation Act 1986**

The process under which freehold land can be compulsorily acquired is set out in the *Land Acquisition and Compensation Act 1986*. Under this Act, land required for a public purpose can be acquired by State Government departments and agencies. Acquisition can be undertaken either compulsorily or through negotiated acquisition of land. There are procedures (separate to this EES process) for the determination of compensation.

(iii) **Crown Land (Reserves) Act 1978, Land Act 1958**


(iv) **Native Title Act 1993**

This Act provides for the recognition and protection of native title, and associated dealings, as well as providing procedures for the permitting of future acts that may affect native title.

4.3 **State Policy**

The relevant Planning Schemes for the Project are those for the Latrobe City Council and the Shire of Wellington. The relevant State Planning Policy Framework (SPPF) clauses for both Schemes include:

Clause 11 *Settlement* includes Clause 11.05-1 *Regional Development* which seeks to promote the sustainable growth of Regional Victoria through a network of settlements.

The *Regional Victoria Settlement Framework Plan* identifies Morwell and Traralgon as Major Regional Cities, where urban growth will be directed. Nearby Sale is identified as a Regional City, and Warragul as a Regional Town. The strategies note that over time, regional cities will develop improved connections with each other.

Clause 11.05-4 *Regional Planning Strategies and Principles* notes the strategy to maintain and enhance regional Victoria’s competitive advantages by avoiding adverse impacts on the capacity of major infrastructure (including Highways), resulting from urban development in adjacent areas. It seeks to focus major investments in regional cities on major transport corridors in order to maximise the access and mobility of communities.
This same Clause notes the need to maintain and enhance environmental health and productivity of rural landscapes by managing development impacts, and by avoiding development impacts on land that contains high biodiversity values, landscape amenity, water conservation values, food production and energy production capacity, extractable resources and minerals, cultural heritage and recreation values, assets and recognised uses.

Clause 12 *Environmental and Landscape Values* states that planning should help to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity), and conserve areas with identified environmental and landscape values.

The Clause contains a number of specific strategies that seek to protect and enhance biodiversity, and significant environments and landscapes. Many of the strategies and policies contained within this Clause are addressed within the various specialist technical assessments undertaken for the EES, including those described in Chapter 10 (Soils and Geology), Chapter 11 (Groundwater), Chapter 12 (Surface Water), and Chapter 13 (Biodiversity and Habitat).

Clause 13 *Environmental Risks* states that planning should adopt a best practice environmental management and risk management approach which aims to avoid or minimise environmental degradation and hazards. Planning should identify and manage the potential for the environment and environmental changes to impact upon the economic, environmental or social well-being of society.

The Clause contains a number of strategies relating to floodplain management, soil degradation, noise abatement and air quality. These policies are addressed with the relevant technical assessments undertaken for the EES, including those described in Chapter 10 (Soils and Geology), Chapter 16 (Noise) and Chapter 15 (Air Quality).

Clause 14 *Natural Resource Management* states that planning is to assist in the conservation and wise use of natural resources including energy, water, land, stone and minerals to support both environmental quality and sustainable development. Relevant policies within the Clause include those relating to protection of agricultural land, catchment planning and management, water quality and mineral and stone resources. Clause 14.01-1 *Protection of agricultural land* has the objective “To protect productive farmland which is of strategic significance in the local or regional context”.

Clause 14.03 *Resource Exploration and Extraction* in particular notes the significance of the brown coal resource in Central Gippsland and seeks to ensure that changes in use and development of land overlying coal resources, as generally defined in Framework of the Future (Minister for Industry, Technology and Resources and
Minister for Planning and Environment, 1987) and the Land Over Coal and Buffer Area Study (Ministry for Planning and Environment, 1988), do not compromise the winning or processing of coal.

Clause 15 *Built Environment and Heritage* states that planning should ensure new land use and development appropriately responds to its landscape, value built form and cultural context, and protect places and sites with significant heritage, architectural, aesthetic, scientific and cultural value. Creating quality built environments supports the social, cultural, economic and environmental wellbeing of communities, cities and towns.

Land use and development planning must support the development and maintenance of communities with adequate and safe physical and social environments for residents, through the appropriate location of uses and development and quality of urban design.

Relevant policies relate to landmarks, views and vistas, heritage, and design for safety. These policies are addressed within the EES at Chapter 17 (Visual and Landscape) and Chapter 14 (Cultural Heritage).

Clause 16 *Housing* states that planning should provide for housing diversity, and ensure the efficient provision of supporting infrastructure. This Clause seeks to ensure that housing is integrated with infrastructure and services, and is located with good access to services and transport.

Clause 17 *Economic Development* states that planning is to provide for a strong and innovative economic, where all sectors of the economy are critical to economic prosperity. The Clause seeks to ensure that industry and tourism is located with good access for employees, freight and road transport.

Clause 18 *Transport* states that planning should ensure an integrated and sustainable transport system that provide access to social and economic opportunities, facilitates economic prosperity, contributes to environmental sustainability, coordinates reliable movements of people and goods, and is safe. The policy requires that transport routes be located to achieve the greatest overall benefit to the community with social, cultural and economic infrastructure, minimising impacts on the environment and optimising accessibility, safety, emergency access, service and amenity. It seeks to locate and design new transport routes and adjoining land uses to minimise disruption to residential communities and their amenities. Strategies include to:

- Locate transport routes to achieve the greatest overall benefit to the community and with regard to making the best use of existing social, cultural
and economic infrastructure, minimising impacts on the environment and optimising accessibility, safety, emergency access, service and amenity;

- Locate and design new transport routes and adjoining land uses to minimise disruption of residential communities and their amenity.

Clause 19 *Infrastructure* states that planning for development of social and physical infrastructure should be provided in a way that is efficient, equitable, accessible and timely. Growth and redevelopment of settlements should be planned in a manner that allows for the logical and efficient provision and maintenance of infrastructure, including the setting aside of land for the construction of future transport routes.

### 4.4 Local Policy

The relevant sections of the Local Planning Policy Framework (LPPF) of the Latrobe and Wellington Planning Schemes are summarised as follows:

#### (i) Latrobe Planning Scheme

Clause 21.03 *Natural Environment Sustainability* includes Clause 21.03-2 *Environmental Sustainability Overview*. This Clause aims to protect native flora and fauna species and their habitats, and increase the extent and quality of native vegetation and biodiversity across the municipality. The Objective *Native Vegetation and Biodiversity* has strategies that include:

- *Encourage the protection of remnant native vegetation on private land;*

- *Enhance the quality and quantity of remnant vegetation by controlling threatening processes, developing plans, providing incentives and encouraging community involvement;*

- *Enhance the condition and quantity of native vegetation;*

- *Encourage the protection of native fauna species and their habitat on private land with an emphasis on protecting threatened species;*

- *Maintain the natural asset value of Council road reserves.*

The Objective *Native Vegetation and Biodiversity* aims to "increase the extent and quality of native vegetation and biodiversity across the municipality". Strategies include:

- *Encourage the development of wildlife corridors and links across the municipality;*

- *Develop and operate a native vegetation offset bank based on parks and reserves to address offset requirements.*
Clause 21.03-5 Water Quality and Quantity Overview has the Objectives to "protect and improve water quality and river health" and to "ensure that the natural function of the floodplain to convey and store flood waters is preserved".

Clause 21.04 Built Environment Sustainability aims to ensure that the heritage of Latrobe City is protected and conserved, and ensure that the management of heritage places will reveal rather than diminish the significance of the place.

21.04-6 Infrastructure Review has the objective to "Maximise the use of existing infrastructure" with the Strategy to "promote and support the infrastructure and development of small town communities".

Clause 21.04-4 Heritage Overview has the objective "To ensure that the heritage of Latrobe City is protected and conserved". The Strzelecki Memorial (Heritage Overlay 128) is located just east of Traralgon on the southern side of the Princes Highway within the road reserve. The Barrs Lane Railway Site is on the Victorian Heritage Inventory, and this contains a scatter of historical artefacts identified on the exposed ground surface in the railway reserve where it is crossed by Barrs Lane. Two places just outside the Project area, but which are close to the Project area are the former meatworks at Staplegrove in Flynn (Heritage Overlay 8, and Victorian Heritage Register) and the Flynnstead State School No 2944 (Heritage Overlay 20).

Clause 21.05 Main Towns has the objective "To provide the flexibility for development to occur in each town to accommodate the needs of its population as well as to contribute to the municipal networked city" and the strategy to "protect the effectiveness of the transport corridors between the towns". Traralgon is identified as a main town, and includes a structure plan for future growth. Small areas of land adjacent to the western end of the Project area are highlighted as being suitable for urban growth.

Clause 21.07 Economic Sustainability includes Council’s vision which is "to facilitate a well connected, inter-active economic environment in which to do business" and "to facilitate a vibrant and dynamic economic environment". The Clause includes the following objectives and strategies:

- Provide a balanced approach to economic development taking into account economic, social and environmental values;
- Ensure that the heritage of Latrobe City is protected and conserved;
- Ensure that transport corridors are protected and maintained;
- Ensure that new development is not undertaken in such a way as to compromise the effective and efficient use of existing or future infrastructure or resources such as the airport, coal resources, timber production, and high quality agricultural land;
... Facilitate a functional, safe and efficient rural road system that supports the maintenance of the rural character as well as meeting the demands of both rural and urban residents;

Strategically plan for road and rail haulage in conjunction with the timber industry.

Latrobe Council considers it relevant to consider the emerging coal industry as a future land use. The Inquiry was advised that potential impacts on industry in the region have been considered in development of route options and selection of a proposed alignment. The Project would support the development of the Gippsland Logistics Precinct through the facilitation of improved access and road freight capacity.

(ii) Wellington Planning Scheme

Clause 21.04 Settlement aims to ensure that urban design and development provides for greater connectivity. The regional role of Sale, which is identified as an ‘Urban Township’, is reinforced. The towns of Stratford and Rosedale are located on the Princes Highway and have been identified as having developing specialist functions, such as tourism based retailing and as stopping points for Highway travellers.

Clause 21.05 Environment and Heritage describes Wellington Shire as a rural area, in which significant environmental issues exist, including water quality, protection of vegetation habitat, and impacts on neighbouring wetlands. It notes that the townships and farming communities across the Shire are heavily dependent upon the health of its catchments and rivers for town water supplies and rural irrigation. The continued health of these catchments is important to the long term sustainability and economic well being of the Shire.

The Clause states that the recognition and management of remnant native vegetation on both public and private land is important in the protection of biodiversity species. It further states that:

Wellington Shire has an extensive and diverse cultural heritage which illustrates how the landscape has been changed by Indigenous and non-Indigenous peoples. Much physical evidence is visible today including landscapes; township precincts; public buildings; residences; cemeteries; bridges; dairies; farms and the iconic cattlemen’s huts of the high country.
Environment and Heritage Objectives in this clause include:

- To achieve integrated catchment management that addresses salinity, erosion, sedimentation, water quality, biodiversity, and native vegetation retention;
- To protect biodiversity, including important natural landscapes, endangered flora and fauna species, and indigenous vegetation on public and private land;
- ...  
- To retain native vegetation on private land, Crown Land, declared water stream-side reserves and roadsides.

Biodiversity strategies include:

- Recognise and protect native flora and fauna and maintain biological diversity within the Shire;
- ...
- Encourage the retention of appropriate vegetation and fauna habitat in new development;
- Encourage revegetation programs to use indigenous species.

Heritage strategies include:

- ...
- Promote the identification, protection and conservation of all places with heritage significance;
- Promote the identification, protection and maintenance of Aboriginal cultural heritage values.

Clause 21.06 Economic Development has the objective to support the contribution that agriculture and rural industries make to the regional economy. It contains policies which support the upgrade of the Princes Highway and to maintain safe and efficient access to the region. Relevant economic development strategies include:

- To support the contribution that agriculture and rural industries make to the regional economy.
- ...
- To discourage the use or development of high quality agricultural land that would be incompatible with its sustainable agricultural use of the land.
- ...
· Encourage businesses and industries which are reliant on road and rail infrastructure to locate on, or close to, the Princes Highway and South Gippsland Highway transport corridors.

Clause 22.01 Special Water Supply and Catchment Areas Policy has the following objectives:

· To protect water and quantity catchments used for domestic and rural water supply, and to protect aquifer recharge areas;
· To manage land use or development in water catchments to ensure that they do not have off-site effects which could adversely affect water quantity;
· To encourage retention of natural vegetation and the establishment of new vegetation cover.

Clause 22.03 Heritage Policy aims to provide direction for the most appropriate manner to undertake works in heritage places. The policy encourages the conservation of places of heritage significance and discourages demolition except in certain circumstances as listed in the policy.

Section 14 of the EES provides further description of heritage assets identified in the Heritage Study. The policy notes that development proposals should have regard to the Aboriginal Affairs Victoria Aboriginal cultural resource management grid map and guidelines, and demonstrates that impacts on Aboriginal cultural heritage values have been addressed. A draft Cultural Heritage Management Plan has been prepared for the Project under the requirements of the Aboriginal Heritage Act 2006.

Clause 22.06 Coal Resources Policy seeks to ensure that the use and development of land overlying the coal resources recognises the need to conserve and utilise the coal resource in the context of overall resources, having regard to social, environmental, physical and economic considerations in order to ensure a high quality of life for residents. The policy applies to coal resources as shown on the ‘Coal Policy’ plan included in this Clause. This includes land within the Project area to the west of Rosedale, on the southern side of the Princes Highway. Proposals to develop land in this area consider whether the land is expected to be required for development of the coal resource, whether development of the coal resource may be prejudiced, and whether the proposed use or development can be located elsewhere.

Clause 22.07 Coal Buffers Policy seeks to ensure that the use, development, and management of land in coal resource areas mutually protects urban amenity and coal resource development as well as the continued social and economic productive use of land. This policy applies to the coal related Urban and Construction Buffer Areas, which includes land within the Project area to the south of the Princes
Highway, between Wrights Lane and Shaws Lane, Rosedale. The Project is not considered to conflict with this buffer policy.

(iii) Zones, Overlays and Particular Provisions

The relevant zones and overlays within the Latrobe Planning Scheme Project area include:

- Residential 1 Zone;
- Rural Living Zone Schedule 3;
- Farming Zone;
- Public Use Zone 4 – Transport;
- Road Zone Category 1 (Princes Highway);
- Environment Significance Overlay Schedule 1 – Urban Buffer;
- Heritage Overlay (HO128 – Strzelecki Memorial);
- Design and Development Overlay Schedule 1 – Major Pipeline Infrastructure;
- Design and Development Overlay Schedule 3 – Princes Freeway – Traralgon Bypass;
- Development Plan Overlay Schedule 5 – Residential Growth Areas;
- State Resource Overlay Schedule 1 – Gippsland Brown Coalfields; and
- Public Acquisition Overlay Schedule 1 - VicRoads Road acquisition.

The relevant zones and overlays within Wellington Planning Scheme Project area include:

- Township Zone;
- Industrial Zone 1;
- Farming Zone;
- Public Use Zone 1 - Service and Utility;
- Public Use Zone 4 – Transport;
- Public Use Zone 6 – Local Government;
- Public Park and Recreation Zone;
- Public Conservation and Resource Zone;
- Road Zone Category 1 (Princes Highway);
- Road Zone Category 2;
- Environmental Significance Overlay Schedule 2 – Wetlands;
- Environmental Significance Overlay Schedule 3 – Urban and Construction Buffer;
• Environmental Significance Overlay Schedule 7 – Landfill Buffer;
• Design Development Overlay Schedule 1 – Industrial Areas;
• Rural Floodway Overlay;
• Land Subject to Inundation;
• State Resource Overlay Schedule 1 – Gippsland Brown Coalfields;
• Public Acquisition Overlay – Roads Corporation – Road widening;
• Public Acquisition Overlay 6 – Wellington Shire Council – Waste Management Operations Landfilling; and
• Airport Environ Overlay Schedule 2.

Under both Planning Schemes, there are particular provisions relating to site specific exemptions (Clause 52.03) and native vegetation (Clause 52.17).

Clause 52.03 Specific Sites and Exclusions provides for the use of specific controls that achieve a particular land use and development outcome. This occurs through the use of an Incorporated Document that excludes other permit triggers in the planning scheme on the basis of the suite of controls provided for in the Incorporated Document. Under both the Latrobe and Wellington Planning Schemes this clause relates to major infrastructure projects such as Bass Link, rail and airport infrastructure works.

Clause 52.17 Native Vegetation seeks to protect native vegetation, provide habitat for plants and animals and reduce the impacts of land and water degradation. The clause has the objectives to avoid the removal of native vegetation, if the removal of native vegetation cannot be avoided, to minimise the removal through appropriate planning and design and to appropriately offset the loss of native vegetation. The clause provides for the management of native vegetation particularly near buildings to reduce the threat to life and property from bushfire. The clause requires a permit to remove, destroy or lop native vegetation, including dead native vegetation. However, there are exemptions relating to matters such as maintenance, fire protection, planted vegetation, utility installations, fences, grazing, road safety, approved extractive industry and mining.

Under the provisions of the various zones and overlays, a planning permit for the Project will be required for the following:

• Buildings and works under the Heritage Overlay 128 (Latrobe), Design and Development Overlay 3 (Latrobe), Public Acquisition Overlay 1 (Latrobe), and Land Subject to Inundation Overlay (Wellington).

• Removal, lopping or removal of native vegetation under the Public Acquisition Overlay 1 (Latrobe), Environmental Significance Overlay 2 (Wellington), and Environmental Significance Overlay 7 (Wellington).
• Destruction, lopping or removal of native vegetation under Clause 52.17 of the Wellington and Latrobe Planning Schemes.

• Application of a Public Acquisition Overlay to land required to be acquired by VicRoads for the Princes Highway duplication, and by Gippsland Water for the ROS, recycled water main and associated infrastructure.

Planning approval for the proposed works would be implemented by undertaking planning scheme amendments to both the Latrobe and Wellington Planning Schemes as follows:

• Amend the schedules to Clause 52.03 ‘Specific Sites and Exclusions’ and incorporate a document by listing the document at the schedules to Clause 81.01, to exempt the Project and associated works and vegetation removal from acquiring permits subject to certain conditions being met;

• Apply a Public Acquisition Overlay by amending relevant planning scheme maps to include land which may be acquired for the Project, and amend the schedules to Clause 45.01 to clarify the acquisition purpose; and

• Relocate Heritage Overlay 128 (Latrobe Planning Scheme only), to correspond with the relocation of the Strzelecki Memorial.

4.5 Relevant Strategic Documents

(i) Commonwealth

The Commonwealth Government has prepared a number of documents relevant to the preparation of the EES and its assessment relating to flora and fauna species and ecological communities that have been listed under the EPBC Act and which the Inquiry has considered. These are briefly outlined below.

Commonwealth Listing Advice on Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland, Threatened Species Scientific Advisory Committee, 2008

To support the Policy Statement, listing advice to the former Minister for the Environment, Heritage and the Arts from the Threatened Species Committee was prepared which describes the ecological community, the process of assessment and how the relevant listing criteria for the ecological community has been met for listing under the EPBC Act. The listing advice provides information about the pre-settlement and current extents of the ecological community and significance of loss.
Commonwealth Conservation Advice on *Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland*, Threatened Species Scientific Advisory Committee, 2008

To support the Policy Statement, conservation advice was prepared by the Threatened Species Committee which describes the ecological community, its conservation status, distribution, threats, research priorities and priority actions for conserving the ecological community. Actions include addressing habitat loss, disturbance and modification, invasive species, destruction, fire and disease.

Matters of National Environmental Significance, Significant Impact Guidelines 1.1, 2009

Supporting the consideration of the Policy Statement, listing advice and conservation advice and any species recovery plans are the Significant Impact Guidelines. They assist any person who proposes to take an action to decide whether or not they should submit a referral to the Commonwealth Government for a decision on whether assessment and approval is required under the EPBC Act. They have been used in the EES to assist in assessing the significance or otherwise of impacts from the effects of the works proposed for the Project.


National Recovery Plans have been prepared for both listed species under the EPBC Act for the Matted Flax-lily and Dwarf Galaxia. Both these Plans go into detail concerning the species, distributions, threats and conservation management actions.


This Policy Statement is a guide to assist land managers, owners and occupiers as well as environmental assessment officers and consultants to identify, assess and manage the *Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland*, which is listed as critically endangered ecological community under the EPBC Act. It is a guide that describes the ecological community, where it is found, how to manage threats, suggests conservation actions and explains what its listing means for land managers.
(ii) State and Local


Victoria’s Native Vegetation Management – A Framework for Action (The Framework) is incorporated into all planning schemes in Victoria and is used for assessing applications for native vegetation removal under Clause 52.17 or any overlay control that provides protection for native vegetation. It sets out the policy of Net Gain which is the “reversal, across the entire landscape, of the long-term decline in the extent and quality of native vegetation leading to a Net Gain”.

Net Gain is where overall gains for native vegetation and habitat are greater than overall losses, and where losses of native vegetation and habitat are reduced, minimised and more than offset by commensurate gains. Losses and gains are determined by a combined quality-quantity measure of areas of native vegetation referred to as habitat-hectare scores.


This Action Statement provides information and general discussion of the communities, their broad description and distribution, conservation status, and issues related to their management. It proposes major conservation objectives and approaches that are applicable to each community.

West Gippsland Regional Native Vegetation Plan (2003)

The West Gippsland Catchment Management Authority (CMA) prepared the Native Vegetation Plan to meet State policy requirements and to provide strategic direction to native vegetation management across the region. The plan is a component of the West Gippsland Regional Catchment Strategy and provides a framework for the coordinated strategic implementation of catchment management across the region. The Plan sets out directions and priorities for vegetation management within the region and aims to provide the strategic direction for native vegetation management in the West Gippsland CMA region.

This plan translates the policy objectives of Victoria’s Native Vegetation Management – A Framework for Action, August 2002, to the specific circumstances of the region.
West Gippsland CMA Regional Catchment Strategy (2004-2009)

The West Gippsland CMA prepared a Regional Catchment Strategy, which primarily seeks to protect four biophysical asset classes, including land, water, biodiversity and atmosphere and climate. In addition it supports three socio-economic asset classes including people and communities, infrastructure, and production.

Wellington Shire Heritage Study: Stage 1 (2005)

The Wellington Shire Heritage Study: Stage 1 involved consultation with the community and fieldwork, to identify and assess heritage places across the Shire, and is a Reference Document in the Wellington Planning Scheme. This study identifies a number of sites having heritage significance, both listed in the Planning Scheme, and sites recommended to be listed within the Planning Scheme.

Latrobe 2021 - The Vision for Latrobe Valley (2006)

Latrobe 2021 is a strategic document that outlines a series of objectives which are broken down into community outcomes objectives of sustainability, liveability, community capacity building and governance. The Latrobe Valley is identified as the hub of road networks and Highways for greater Gippsland, with recent roadwork improvements such as the Pakenham bypass, further shortening road travel times to Melbourne. The duplication of the Princes Highway would further support the hub of road networks and develop the Princes Highway capability and utilisation by industries located in and around Latrobe Valley.

Latrobe City Council Residential and Rural Residential Land Assessment (2009)

The summary report of the Latrobe City Council Residential and Rural Residential Land Assessment presents recommendations for residential and rural residential land in the Latrobe City, and specifically for Traralgon. The findings from this assessment are intended to provide input into the preparation of revised Small Town Structure Plans and future strategic work resulting from the review of the Latrobe Municipal Strategic Statement.

Land supply and current land use, access to the Highway and increased generation of traffic utilising the Highway, would need to be considered. The predicted future growth of Traralgon would not only increase the number of residents using the Princes Highway but also increase the population of Latrobe and neighbouring municipalities accessing the services.

The Project Implementation Plan – Gippsland Logistics Precinct Project notes that Latrobe City Council has had a significant long term interest and involvement in facilitating an open access intermodal freight terminal to meet the needs of the region. The development of the Gippsland Logistics Precinct (GLP) will facilitate an open access intermodal freight terminal to establish a centre for the efficient and cost effective movement of freight to and from the Gippsland region.

Latrobe City Heritage Study (2010)

The 2010 Latrobe City Heritage Study reviews previous heritage studies and provides an updated list of heritage places and precincts of local significance as well as a series of recommended actions and strategies that form the basis of a heritage strategy for Latrobe City. The Strzelecki Memorial is the only place of local significance within the Project area that is included in the Heritage Study.

Latrobe City Council Plan (2011-2014)

The Latrobe City Council Plan 2010-2014 is the planning tool which outlines the Council’s operational and strategic direction over the coming four years. The Project would facilitate investment in Latrobe and the wider region, consistent with key objectives of the Latrobe City Council Plan, through increased accessibility for residents, business and tourism.


The Economic Sustainability Strategy aims to identify actions that will consolidate Latrobe City’s position as a major regional city and service centre for the Gippsland region and drive economic growth at a pace exceeding that of other regional centres. The plan notes the upgrade of the Highway as an economic asset, particularly noting that high quality roads, freight and public transport systems, are vital to enable businesses to operate effectively and to attract new investment.
5. ISSUES ANALYSIS OF PROJECT

5.1 Overview

At the Directions Hearing, the Inquiry advised VicRoads that it had a number of issues and questions which it sought to be addressed through the Hearing process. The Inquiry advised that it had reviewed the EES material and it had prepared some initial notes on matters that it wished VicRoads to take into consideration in preparing its submissions and evidence for the Hearing. These were provided on a ‘without prejudice’ basis to assist VicRoads prepare its case based on the understanding the Inquiry had on the Project at that point in time.

The Inquiry noted that a key issue to be reconciled was the balance between minimising impacts on Commonwealth and State listed flora and fauna communities, the social and economic impacts from the proposed duplication of the Princes Highway, and the acquisition of private land. It noted that the studies appeared to reveal that the preferred route alignment option of least impact for biodiversity resulted in a greater impact for landowners.

Through their written submissions, many submittors questioned why the proposed alignment for the Highway duplication did not make use of an existing reservation, notwithstanding that the Inquiry recognised through its preliminary reading of the EES that the impact of this option on endangered remnant native vegetation communities within this bioregion was noted to be high. This seemed to be because most of the native vegetation in the local landscape is within the existing road reserve. More specifically, key matters which the Inquiry directed VicRoads to address at the Hearing related to:

- The preferred route selection and its deviation from the road reserve, and the process and weighting used to determine the balance between environmental impacts and social and economic impacts;
- The impact of the Project on Gippsland Water assets;
- The impacts on surface water, especially for realignment and crossings of creeks;
- Plans showing chainages, intersection designs, and cross sections;
- Clarification of various issues relating to biodiversity and habitat; and
- Further commentary on noise, visual and landscape matters and the Environmental Management Framework.
The Inquiry appreciates the response of VicRoads in addressing these matters and considers that the additional material it provided assisted the Inquiry and various parties at the Hearing to better understand and appreciate the authority’s overall position.

5.2 Key Issues

The Inquiry has approached the analysis of the Project using an issues-based format, with the key issues identified for resolution being:

- Road alignment, layout and design;
- Biodiversity and habitat;
- Noise and vibration;
- Social and economic impacts;
- Heritage;
- Duplication of Gippsland Water assets; and
- Other matters (soils and geology, groundwater, surface water).

It is important to note that the Inquiry has not separated out each submission and responded individually, rather it has grouped and responded to the key issues raised.

The Inquiry also addresses the implementation measures for the Project, including:

- Environment Management Framework;
- Planning Scheme Amendments; and
- Matters of Commonwealth interest.

For reasons that become obvious, the Inquiry questions the economic impact of this Project and the high costs involved in pursuing the preferred alignment.

The Inquiry finalises its report by providing its conclusions as a response to the Terms of Reference, following which it consolidates its various recommendations.

The Inquiry is conscious of issues relating to privacy, and while information was provided to it linking property owners and addresses, the Inquiry has identified the property by owner name and the property identification number, based on the information sheets provided by VicRoads.
Additionally, VicRoads provided a set of plans that identified chainages\(^1\), and these have been used extensively for identification purposes, particularly in Chapter 6.

It should be observed at the outset that neither the Inquiry nor the submitters who presented to it (either in person or through a written submission) are in any doubt that the duplication of the Princes Highway is a much needed and long overdue Project. That it should be approved – in one form or another – is not in question. The key issue to be resolved is whether the preferred alignment is the best option from a road design and layout perspective, an environmental perspective, and a social and economic perspective.

One of the difficulties faced by the Inquiry is that while it did not expect that full design of the proposed duplication should be made available as part of the EES process, as the design was only about 20% complete, this resulted in the Inquiry asking numerous questions of VicRoads, including requests for further and more detailed information. Given that a high percentage of the Highway duplication is proposed to use private property, the Inquiry considers it incumbent upon itself and its deliberations to explore as far as possible, the impact this proposal has on private landowners. This is especially so given the land acquisition that might be required – both for road and Gippsland Water purposes.

Additionally, this public process is the only opportunity that landholders will have to be engaged by an independent body. Because the draft Planning Scheme Amendments are proposed to be approved by the Minister for Planning without further public exhibition, this process represents the only opportunity for the Inquiry to review the environmental effects of the Project and the draft Planning Scheme Amendments. Hence, the Inquiry considers it important to test the road design and layout to ensure that minimisation of costs to the environment, the community and in economic terms has been and will be fully explored by VicRoads. A key driving concern of the Inquiry is, as far as possible, to reduce the cost of the Project while still achieving VicRoads objectives’ for a safe and efficient road that maintains environmental values.

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\(^1\) Mapsheets containing chainage distances were submitted in response to item 5(i) of the Inquiry’s ‘Matters on Notice to be addressed by VicRoads in submission at the Inquiry Hearings’.
6. ROAD ALIGNMENT, LAYOUT AND DESIGN

6.1 Description

The existing Princes Highway from Stammers Road, Traralgon East to Kilmany primarily consists of a two-lane, two-way road (refer to Figure 3). A section of the road through Rosedale is duplicated and there are sections of three lane cross sections which provide for passing opportunities.

Figure 3: Princes Highway at Kilmany looking west

The Project is a culmination of the assessment of a range of alignment options ranging from the ‘No Project’ scenario to utilisation of the existing road reserve, through to acquisition of private land, in some cases quite distant from the existing road reserve. Assessments of the alignment options were based on the development of ‘concept corridors’ identifying what would be expected to construct each alignment option. To assist with comparison and assessment the following assumptions were made for each ‘concept corridor’:

- Concept corridors were developed wide enough to include all construction activities – approximately 25 metres wide for a single carriageway (2 lanes) or
50 metres wide for a dual carriageway (4 lanes) with some widening at intersections;

- The standard median width for all options was a minimum of 15 metres, wider at intersections, where there are variations to the existing carriageway geometry and where it was intended that native vegetation be protected within the median;

- For options involving a new dual carriageway that do not use the existing road, it was assumed that the existing roadway would be retained as a two-way local access road (to be examined in more detail if one of these options was selected);

- For options where the existing road is utilised as one of the carriageways, a clear zone extending nine metres either side of the traffic lanes was delineated for road safety purposes, because the existing Highway does not meet current standards for clear zones. Within the clear zones it was assumed that any hazards such as power poles or trees will be removed; and

- The connections between sections were excluded as the potential combinations of options between sections could not be incorporated in any meaningful way. Potential impacts of connections were considered where relevant when selecting and assessing the preferred alignment.

The base case scenario of not proceeding with the duplication was discounted due to the projected impacts on the existing Highway into the future from increasing traffic use and the clear support from the community for Highway duplication.

With regard to other alignment options, assessment within each section of the Project area clearly identified that acquiring extensive areas of private land for alignments which diverted from the existing road reserve would have higher impacts on individual landowners and township communities compared with those alignments that generally followed the existing road reserve. This was evident from concerns expressed by the community particularly at Flynn and Kilmany about being surrounded or isolated by road alignments surrounding these settlements.

Options to fully utilise the existing road reserve were discounted because of the extent of vegetation loss and severity of impact on threatened flora species. The preferred alignment selected for the Project involved a hybrid of options which centred around the existing road reserve in a manner which utilises as much as possible the existing carriageway while seeking to satisfy native vegetation policy and avoidance or minimisation of loss and impact on listed species and ecological vegetation communities.
The Project involves construction of a dual carriageway road with a central median, upgraded intersections and U-turn facilities. In some sections of the 31 kilometre route, the duplicated cross section utilises part or the entire existing road pavement as one carriageway and in other sections new road carriageways are proposed.

For a limited section of the route, the duplicated road is contained within the existing road reservation. For the majority of the route however, the road design adopted by VicRoads and the vegetation constraints have resulted in the need to widen the existing 40 to 60 metre road reservation.

The total route has been considered by VicRoads as seven separate sections and at the request of the Inquiry, chainages have been included on the Proposed Duplication Alignment Mapbook A (response to Item 5(i) of the Inquiry’s Matters on Notice). For simplicity chainage 0 was applied to the start of the Project, just east of Stammers Road and chainage 0 was allocated to the start of the works east of Denison Road, i.e. east of Rosedale.

In most locations the road design and/or vegetation constraints have driven the road reservation widening to the north or south of the existing road reservation. Table 1 outlines where the road reservation widening occurs.

**Table 1: Location of Road Reservation Widening**

<table>
<thead>
<tr>
<th>Chainage</th>
<th>Section(s)</th>
<th>Widening</th>
<th>Local Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1700-10900</td>
<td>1, 2 and 3</td>
<td>North</td>
<td>Minniedale Road to Flynns Creek Road</td>
</tr>
<tr>
<td>11000-12900</td>
<td>3</td>
<td>South</td>
<td>Flynns Creek Road to west of Pinegrove</td>
</tr>
<tr>
<td>13600-14800</td>
<td>3 and 4</td>
<td>North</td>
<td>Pinegrove to east of Wrights Road</td>
</tr>
<tr>
<td>15800-17550</td>
<td>4</td>
<td>North</td>
<td>Smiths Lane/Blind Joes Creek</td>
</tr>
<tr>
<td>1100-1700</td>
<td>5</td>
<td>South</td>
<td>West of Nambrok Road</td>
</tr>
<tr>
<td>1600-2000</td>
<td>5 and 6</td>
<td>North</td>
<td>East and west of Nambrok Road</td>
</tr>
<tr>
<td>1850-6800</td>
<td>5 and 6</td>
<td>South</td>
<td>Nambrok Road to Nambrok Creek</td>
</tr>
<tr>
<td>8250-9000</td>
<td>6 and 7</td>
<td>North</td>
<td>Settlement Road to Swamp Road</td>
</tr>
<tr>
<td>9200-10000</td>
<td>7</td>
<td>South</td>
<td>East of Sale – Toongabbie Road</td>
</tr>
<tr>
<td>10700-12700</td>
<td>7</td>
<td>South</td>
<td>Kilmany to Templetons Road</td>
</tr>
</tbody>
</table>

In order to assist with the design of the Project, traffic volume data was collected on sections of the Highway in October 2008 and 2009. This data was compared with the

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2 VicRoads advised the Inquiry that the design of the Project is approximately 20% complete and is subject to further detailed design.
capacity of the Highway. Traffic volume data was also collected on the local road network during 2008 and 2009.

Forecasts of future traffic volumes were undertaken based upon observed historical trends and an appreciation of population and industrial growth across the region. A summary of existing and predicted traffic volumes is contained in Chapter 6.3 of this report.

In the absence of the duplication, VicRoads concluded that by 2024 peak hour traffic volumes would exceed the practical degree of saturation of the Highway.

It should be noted that the preferred road alignment has a significant impact on Gippsland Water assets, and these issues and impacts are discussed separately in Chapter 11 of this report.

Particular characteristics and relevant issues relating to each section of the route are now discussed.

In dealing with these issues, the Inquiry has focussed on this aspect from an engineering perspective, with its analysis based on first principles. That is, if the duplication was to be designed with little or no other constraints in place, what would be the best alignment?

(i) Section 1

Wilmot Court and Minniedale Road intersect the Highway to the north and south respectively. The two T intersections are offset approximately 100 metres. The Project design proposes relocation of Wilmot Court to the east to provide a four way intersection with Minniedale Road.

A roundabout is proposed at the new intersection. In order to achieve the necessary diameter for turning traffic at the roundabout and to provide adequate clearance to the existing railway level crossing on Minniedale Road, the northern portion of the roundabout encroaches upon Property No. 190, on the north east corner of Wilmot Court and the Highway, which is owned by VicRoads. Adjacent to Property No 187 the eastbound carriageway diverges north very close to the frontage boundary and pushes into high conservation significance native vegetation. A similar divergence is proposed on the westbound carriageway east of the roundabout, which also pushes into high conservation significance native vegetation.

Driveway crossovers are proposed for the properties abutting the eastbound carriageway, between Stammers Road and Wilmot Court. The roundabout at the Minniedale Road/Wilmot Court intersection will facilitate westbound movement from these properties.
(ii) Section 2

This section of duplication is approximately 9,150 metres long and for a significant distance the proposed duplication works occur on adjoining private land to the north of the existing road reservation.

The design of a U-turn facility at approximately chainage 2200, i.e. approximately 800 metres east of the proposed roundabout at Minniedale Road, dictates the width of the median as does the presence of native vegetation. Two relatively small properties, (Property Nos 193 and 194) and the Dunbar property (No 207) would be required to use this U-turn facility. The driveway serving Property No 207 is located approximately 200 metres west of the U-turn and the start of the deceleration lane taper is located within 30 metres of the driveway.

The wide median is continued east from chainage 2100 to the Kenyons Lane intersection (chainage 3500). The EES describes Kenyons Lane as “an unsealed local no-through road providing access to farming properties north of Princes Highway”. It also provides access to “a dosing station and associated infrastructure for the Regional Outfall Sewer”. The Proposed Duplication Alignment Mapbook shows a southern leg of the Kenyons Lane/Princes Highway intersection connected into a road reservation. No information was provided to ascertain whether this is a traffic route.

Kenyons Lane is estimated to carry less than 30 vehicles per day or 3 vehicles two-way in the peak hour. These vehicle movements may use Kenyons Lane by entering from the west (left turn) or east (right turn) and exit to the east (left turn) or the west (right turn).

At chainage 3400, which is just west of Kenyons Lane, the relevant cross section provided (Document No 1) by VicRoads shows that the southern edge of the proposed westbound carriageway is located approximately 40 metres north of the southern boundary of the existing road reservation. In this location, the easement for the ROS abuts the existing road reservation. The provision of a wide median and the presence of very high and high conservation significance native vegetation and the listed endangered Matted Flax-lily within the 40 metre wide southern portion of the existing road reserve has prevented the use of this part of the road reserve and consequently resulted in the need to relocate the ROS.

Between Kenyons Lane (chainage 3500) and Barrs Lane (chainage 7400) a U-turn facility is proposed at chainage 5500. The U-turn is proposed in a 15 metre wide median section of the Highway. Four driveways into farms and other properties are shown on the plans within a distance of 1,000 metres west of the U-turn, as well as a T intersection on the eastbound carriageway of the Highway at Sheepwash Creek.
Road. Three of the properties (Property Nos 215, 216 and 217) are relatively small compared with other holdings in the area.

Barrs Lane is an unsealed, 6 metre wide, two lane, two-way road at the Highway intersection. An at-grade rail crossing is located on Barrs Lane approximately 75 metres south of the Highway intersection. Traffic volumes recorded in October 2008 indicate that Barrs Lane carries a 5 day average traffic volume of 54 vehicles, with am and pm peak hour volumes of 7 and 9 vehicles. Two-way heavy vehicle traffic was recorded as 15%, which equates to 8 vehicles per day both ways. Barrs Lane is an approved over-dimensional route for B-doubles and higher mass limit trucks. No B-doubles were recorded on the survey days.

Between Barrs Lane and Flynns Creek Road (chainage 10700), the Highway cross section varies from parallel carriageways with a 15.0 metre median, to diverging carriageways and sections of 39 to 41 metres wide median.

Flynns Creek Road, which is the eastern limit of Section 2 (as defined by VicRoads), has a two lane, two-way sealed pavement. It is also an over-dimensional route and carried an average daily volume of 293 vehicles, measured over 5 days in October 2008. Heavy vehicles represented 12% of total daily traffic flow and am and pm peak hour two way volumes were 38 and 37 vehicles respectively.

(iii) Section 3

This section of the duplication extends approximately 3,500 metres with the cross section design at both the western and eastern ends being guided by the Austroads Guide for Road Design and associated VicRoads supplements (Document No 20) regarding wide median treatments. Improvement in the horizontal alignment of the road in the vicinity of Flynns Creek, to provide curve radii of approximately 1,100 metres, that is, a design speed of 110 kilometres per hour has resulted in property acquisition on both sides of the proposed alignment.

U-turn slots are proposed on the narrower median sections of road at chainages 11650 and 13050. Beyond chainage 13500 the eastbound carriageway diverges north on the approach to the Wrights Lane intersection in order to provide an Austroads wide median treatment T intersection with a 31 metre median.

Wrights Lane is a local road, with a 5.5 metre wide sealed, two way pavement at the Highway intersection. The seal extends approximately 25 metres south, beyond which it is a gravel road. An unnamed access lane provides potential access to two rural properties on the north side of the Highway opposite Wrights Lane. On average 22 vehicles per day were recorded on Wrights Lane over a 5 day period in 2008. No heavy vehicles were recorded.
Section 4

The cross section at the western end of this section of duplication is dictated by the combination of the design at the Wrights Lane intersection and the presence of patches of high conservation significance native vegetation and some very large and large old trees located between the proposed carriageways. Approximately 600 metres east of the intersection, the two carriageways converge to be contained within the existing road reservation and impacting on areas of high conservation significance native vegetation. The carriageways remain parallel for approximately one kilometre before the eastbound carriageway diverges to the north to develop a 25 metre median width approximately 850 metres west of the Smiths Lane intersection. Approximately 300 metres east of the Smiths Lane intersection the Highway intersects with Cricket Street. The Cricket Street intersection has an Austroads wide median design with a median width estimated to be a minimum of 25 metres. U-turn slots are proposed at chainages 15650 and 17650 in the narrower median cross sections.

Section 5

Between chainage 0 and chainage 1100 this section of the duplication is primarily contained within the existing road reservation. Beyond chainage 1100 there is an existing sub-standard horizontal curve in the road alignment. The proposed design improves the curve radii to a 100 kilometres per hour design speed, resulting in property acquisition to the south of the current road reservation. On the approach to the Nambrok Road intersection, from approximate chainage 1100, the carriageways diverge to facilitate the rural wide median treatment. In this location, that is, chainage 1800 the median is approximately 38 metres wide. This median width continues to chainage 2600, beyond which the northern carriageway diverges south over a distance of 300 metres to provide parallel carriageways separated by a 15 metre median.

The intersection treatment at Nambrok Road, that is, the 38 metre median together with the presence of high conservation significance native vegetation within the road reserve and on adjoining private land to the north, pushes the southern or westbound carriageway south beyond the existing road reservation.

Nambrok Road is a partially sealed, two lane, two-way road. The October 2008 surveys indicated it carried, on average over 5 days, 63 vehicles per day, 16% of which were heavy vehicles. Nambrok Road south is a local no through road.

A cross section of the Highway at chainage 1900, east of Nambrok Road, indicated that the road reservation was approximately 84 metres. This dimension included ‘clear zones’ of 9 metres on each side and ‘clearances’ of 10 metres on each side,
which incorporates part of the ‘clear zones’. The existing road reservation at this cross section was shown as approximately 60 metres.

(vi) Section 6

This section extends from chainage 1900 to chainage 8500, a distance of 6.6 kilometres. Over 4.8 kilometres of this length, the road reservation is widened to the south.

A cross section at chainage 4400 shows a proposed road reservation of approximately 99 metres, compared with an existing road reservation of 60.5 metres. At this cross section the median is 15.0 metres wide. A U-turn slot is provided within the narrow median at chainage 3800. Beyond chainage 5200 the northern carriageway diverges to provide a wide median treatment intersection at the Maffra-Rosedale Road intersection.

Maffra-Rosedale Road is a 7 metre wide sealed, two way, two lane road and is an approved over dimensional route. Five day average traffic volumes were recorded as 1135 vehicles per day, with 22% heavy vehicles.

Approximately 300 metres beyond the Maffra-Rosedale intersection, the northern carriageway diverges south onto the approximate alignment of the existing carriageway. The cross section at chainage 6300 shows a proposed road reservation of 90 metres compared with an existing reservation of 61.5 metres. A median width of 15 metres is proposed at this cross section.

Beyond chainage 6500, both carriageways diverge to the north, and from chainage 6800 to chainage 8200, the duplicated roadway occupies the existing road reservation. A U-turn slot is located at chainage 7050, within the narrow median cross section.

Approaching Settlement Road the northern carriageway diverges to provide a wide median intersection treatment.

Settlement Road is a 5.5 metre wide, two lane, two way sealed road. Five day average daily volumes of 126 vehicles per day were recorded, 25% of which were heavy vehicles.

(vii) Section 7

The wide median through the Settlement Road intersection continues through the Sale-Toongabbie Road intersection, 400 metres to the east. Beyond this intersection the carriageways converge to pass over the Gippsland railway line. Adjacent to the
Kilmany township, a service road is proposed, extending from Velore Road approximately one kilometre west. A wide median treatment is also proposed at the Velore Road intersection.

Sale-Toongabbie Road is a 7.5 metre wide sealed, two-way, two lane road. Average 5 day traffic volumes of 239 vehicles per day were recorded, with 14% heavy vehicles.

Velore Road is a 6 metre wide sealed, two-way, two lane road for a distance of approximately 80 metres from the Highway intersection. At this point Velore Road provides access to Kilmany Landfill and Recycling facility, beyond the access road Velore Road is unsealed. Average 5 day traffic volumes of 145 vehicles were recorded, 52% of which were heavy vehicles, primarily generated by the landfill site.

6.2 Key Issues

The key issues with road design and layout matters for the Project considered by the Inquiry relate to how well the following relevant EES Evaluation Objectives set out in the Scoping Requirements have been addressed:

- To provide for the duplication of the Princes Highway between Traralgon East and Kilmany to address safety and capacity issues.
- To avoid or minimize disruption and other adverse effects on infrastructure, land use (including agriculture, residential and future coal mining) and households, as well as road users during construction and/or resulting from the Highway alignment;
- To avoid or minimise noise, visual and other adverse amenity effects on local residents during the development and operation of the proposed duplicated Highway to the extent practicable.

The relevant Project objectives are to:

- Improve accessibility and road safety.
- Reduce transport delays and cost.
- Improve road network connectivity and efficiency.
- Enhance the road environment and minimise impact on flora, fauna and cultural heritage.
- Minimise the impact on local landowners and the community.

From its review of the EES, submissions and evidence, the Inquiry has identified that the key layout and road design issues with the Project are whether the design of
intersections, U-turns and median widths are excessive and can be reviewed from a road engineering design perspective to the extent of land acquisition required.

Underlying the above is the question posed by many submitters about why the existing road reserve, dedicated for such purposes for the last 50 or so years, cannot be used for duplication of the Highway, rather than having to acquire private land in order to reduce the impact upon flora and fauna values.

6.3 Evidence and Submissions

The assessment of alignment options, traffic and transport issues and design considerations were addressed under Chapters 5 – Project Alternatives, 6 – Project Description and 9 – Traffic and Transport of the EES and in the Options Assessment Report, Appendix B and Traffic and Transport Assessment Report, Appendix D prepared by GHD Pty Ltd in Technical Appendices Volume 1. Evidence was also presented to the Inquiry from Mr Turnbull from Traffix Group Pty Ltd, as well as an overview through submissions by Ms Deppeler and Mr Inglis of VicRoads.

With respect to submissions on aspects of alignment options and Project design, the Inquiry acknowledges that although there was support from the community for duplicating the Highway, there was also concern about aspects of the Project design. Concerns were expressed about selecting an alignment that would diverge from the existing Highway and surround and isolate existing communities, and the tension over private land acquisition to protect native vegetation by not duplicating the Highway within the existing road reserve.

Evaluation of alignment options was selected on safety and engineering standards. Ms Collingwood on behalf of VicRoads submitted:

- *That the road is to be built to an ‘M’ road standard, which pertains to road geometry design parameters and lane and shoulder width, incorporating a two-lane carriageway in each direction, and providing sealed road shoulders and a central median;*

- *Access is to be managed in accordance with the VicRoads Model Access Management Policies Schedule 3 (limited access – rural)(AMP3) which allows direct access from adjacent properties and includes at grade intersections; and*

- *The incorporation of intersection upgrades.*

With respect to design aspects of the preferred alignment, Ms Collingwood submitted:
The total width of the duplication options considered (and ultimately the preferred option) varies depending on the width of the median between carriageways and the intersection treatments.

The function of the road median is to separate vehicles and reduce conflict between opposing traffic flows. Relevant Austroads Guide for Road Design applicable to VicRoads as the Road Authority provide that wider medians are safer and should be adopted in rural settings. VicRoads have adopted a safety first approach to median widths and intersections, as supported by the evidence of Mr Henry Turnbull, Managing Director of Traffix Group.

The median widths proposed are a minimum of 15 metres, except for the area between Stammers and Minniedale Roads (Traralgon East) and along the frontage of the township of Kilmany which each have a 10 metre wide median. The narrower median was adopted proximate to Traralgon given the anticipated residential growth associated with the town (and likely lower speeds) and at Kilmany, due to the limited width between the railway to the north and residential properties. Wire rope barriers will be installed in these areas.

It is important to note that the development of the road design specifically considered for each stretch of the Highway whether there was the opportunity to reduce median widths and whether the extent of acquisition was reasonable, balanced against safety and other considerations, including vegetation. Additionally, this assessment included a practical element in that the alignment needed to have regard to infrastructure services such power poles/lines, water mains and the railway line.

The Traffic and Transport Assessment Report, Appendix D, contained information on existing and forecast daily traffic volumes on the Highway and existing traffic volumes on the local road network. The following table summarises the data contained the GHD report.

Table 2: Existing and Forecast Daily Princes Highway East Traffic Volumes

<table>
<thead>
<tr>
<th>Location</th>
<th>2008/09</th>
<th>%</th>
<th>2014</th>
<th>%</th>
<th>2024</th>
<th>%</th>
<th>2034</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>East of Minniedale Road</td>
<td>9376</td>
<td>19%</td>
<td>11249</td>
<td>21%</td>
<td>14400</td>
<td>23%</td>
<td>18433</td>
<td>26%</td>
</tr>
<tr>
<td>West of Flynns Creek Road</td>
<td>9721</td>
<td>19%</td>
<td>10553</td>
<td>19%</td>
<td>13509</td>
<td>21%</td>
<td>17293</td>
<td>23%</td>
</tr>
<tr>
<td>East of Denison Road</td>
<td>8577</td>
<td>19%</td>
<td>9973</td>
<td>17%</td>
<td>12767</td>
<td>19%</td>
<td>16343</td>
<td>21%</td>
</tr>
<tr>
<td>Kilmany township</td>
<td>8243</td>
<td>17%</td>
<td>8915</td>
<td>16%</td>
<td>11412</td>
<td>18%</td>
<td>14609</td>
<td>19%</td>
</tr>
</tbody>
</table>
Table 3: Local Road Daily Traffic Volumes, 7 Day Average

<table>
<thead>
<tr>
<th>Road and Intersection</th>
<th>Traffic volumes</th>
<th>% of heavy vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minniedale Road</td>
<td>583</td>
<td>10</td>
</tr>
<tr>
<td>Kenyons Lane</td>
<td>&lt;30</td>
<td>n/a</td>
</tr>
<tr>
<td>Sheepwash Creek Road</td>
<td>34</td>
<td>40</td>
</tr>
<tr>
<td>Barrs Lane</td>
<td>51</td>
<td>18</td>
</tr>
<tr>
<td>Stuckeys Lane</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>Flynns Creek Road</td>
<td>270</td>
<td>11</td>
</tr>
<tr>
<td>Wrights Lane</td>
<td>16</td>
<td>n/a</td>
</tr>
<tr>
<td>Smiths Lane</td>
<td>20</td>
<td>n/a</td>
</tr>
<tr>
<td>Cricket Street</td>
<td>245</td>
<td>12</td>
</tr>
<tr>
<td>Nambrok Road</td>
<td>61</td>
<td>8</td>
</tr>
<tr>
<td>Maffra – Rosedale Road</td>
<td>1091</td>
<td>21</td>
</tr>
<tr>
<td>Settlement Road</td>
<td>120</td>
<td>25</td>
</tr>
<tr>
<td>Sale – Toongabbie Road</td>
<td>215</td>
<td>13</td>
</tr>
<tr>
<td>Freshwaters Road (Kilmany)</td>
<td>60</td>
<td>13</td>
</tr>
<tr>
<td>Velore Road</td>
<td>125</td>
<td>55</td>
</tr>
</tbody>
</table>

The local road traffic volumes were collected in October 2008 and 2009. Traffic volume forecasts were not provided for the local road network. No traffic volume data was provided for vehicle movements into or out of farm properties.

Mr Turnbull assessed the justification for the Project based on its design objectives, comment upon the appropriateness of the alignment from a design, safety and operational perspective and provide responses to relevant submissions.

Mr Turnbull concluded that the Project is warranted as the Highway is approaching safe operating capacity and it will offer significant safety benefits. The Inquiry accepts that this is not in dispute.

Mr Turnbull summarised the intersection treatments proposed and concluded that they offer “significantly better access options than existing conditions”. Mr Turnbull indicated that the wide median treatments “will allow two stage movements of vehicles making right turn movements into and out of side streets increasing both safety and traffic flow efficiency by removing waiting vehicles from the traffic stream”.

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**Princes Highway Duplication – Traralgon East to Kilmany**  

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Page 51
Mr Turnbull also commented upon the proposed road cross sections and indicated that “the wider 15 metre median has allowed for the absence of safety barriers separating the carriageways. This has significant costs benefits”.

Mr Turnbull initially suggested in his witness statement that the road alignment could be reviewed in the vicinity of Pinegrove, “to reduce the carriageways intrusion into Pinegrove”. However during the Hearing he qualified his written evidence by indicating that due to issues with reverse curves, the opportunity to adjust road alignments may not be feasible.

Mr Turnbull indicated that the proposed roundabout at the Minniedale Road intersection “is not the most appropriate intersection treatment in a 100 Km/h speed environment”. Following discussions between Mr Turnbull and VicRoads officers, the speed limit in the vicinity of the roundabout may be reduced to 80 kilometres per hour.

Mr Turnbull was shown Document 1 tendered by VicRoads, and was asked by the Inquiry whether he considered that the intersection layout was safe. Document 1 shows the proposed Kenyons Road/Highway intersection treatment as well as concepts for realignment of Sheepwash Creek. His response was that the intersection layout was acceptable.

In response to a number of questions raised by the Inquiry, Ms Collingwood called Mr Richard Fanning of VicRoads (Principal Adviser, Road Design and Traffic Standards) to assist the Inquiry in understanding the various intersection treatments. Mr Fanning was not involved in the design of the Project, however, he has specific expertise in relation to VicRoads and Austroads standards.

Document 20 was tended in conjunction with Mr Fanning’s submission. This document included sections of Austroads ‘Guide to Road Design Part 3’.

Mr Fanning was shown swept path diagrams, (indicatively prepared by the Inquiry), showing turning paths of semi-trailer and B-double vehicles based upon 15 metre and 30 metre wide intersection medians, plus turn lanes for each direction. These diagrams indicated that a B-double vehicle could undertake a right turn manoeuvre through a 15 metre wide residual median without impacting upon vehicles in the through traffic lanes. The major difference between the tendered design (15 metre median) and the Figure V7.3 Austroads design was the width of the median opening required to undertake the turn, i.e. 13 metres for the narrower median and 9 metres for the 31 metre median. Mr Fanning was unable to advise the Inquiry whether the 13 metre median opening was acceptable.
Mr Fanning was asked by the Inquiry whether traffic volumes on the Highway and the local road should be a relevant consideration in determining the appropriate intersection configuration. He acknowledged that it was one of the factors to be considered. He was advised by the Inquiry that some of the local roads carried less than 50 vehicles per day and, in view of that, whether the proposed intersection treatments were warranted. He was unable to respond without further information being provided.

Mr Fanning was shown Document 1, the Kenyons Road/Highway intersection treatment and asked if the movement from north to south or west to south was acceptable. He responded that the layout proposed was undesirable.

Peter, Margaret and Susan Stuckey of Flynns Creek Road provided written submissions to the Inquiry (submission Nos 15 and 15A). Their property is located at the south-east corner of the Highway intersection and their interpretation of the plans is that “the duplication option shown in yellow, which moves the Highway inside our front fence, would devastate our family life as we know it”.

Sheet 6 of Mapbook A was attached to their submission. This shows Flynns Creek Road diverging north of the railway line from a single carriageway two lane road to two separate carriageways. The eastern or southbound carriageway is contained within the existing Flynns Creek Road reservation, which abuts the Stuckey property. The western or northbound carriageway traverses railway land which catered for a former railway station. In the opinion of the Inquiry, neither the Highway duplication nor the realigned Flynns Creek Road encroach upon the Stuckey property.

It is acknowledged however, that the scale of the plans, combined with the tree canopy within and adjacent to the Stuckey property makes it very difficult to determine where the existing road pavement is located in relation to the road reservation. The photographs attached to the Stuckey submission indicate that the eastern carriageway will be located closer to their house than the current road pavement. Figure 31 in the GHD, Traffic and Transport Assessment Report dated December 2011 shows a curve in Flynns Creek Road north of the railway level crossing. The Inquiry is not sure whether the Stuckey fence shown on the photographs is located on the title boundary. However, a power pole is shown in the photograph between a parked vehicle and the fence line, it is unlikely that this pole would be on private land. The annotation on the photograph indicates that the new road “lies to the right of vehicle”. This infers that the new carriageway of Flynns Creek Road will be closer to the house, although inside the road reservation.
6.4 Discussion

The Inquiry has identified the key road design issues as they relate to:

- The use of the existing road reservation and carriageway compared with the extent of public acquisition required;
- The variation in median width; and
- Intersection design and U-Turn options.

For approximately 21.4 kilometres or 70% of the alignment, the preferred design has resulted in property acquisition. For approximately 5.9 kilometres of the route, the existing carriageway is located very close to the northern boundary of the road reservation and the decision to use part or all of this pavement as the westbound carriageway has ‘pushed’ the eastbound carriageway into private property. Similarly, for approximately 3.9 kilometres of the route, the existing carriageway is located very close to the southern boundary of the road reservation. The decision to use the existing carriageway as the eastbound carriageway has ‘pushed’ the westbound carriageway south into private property.

The alignment selection has been driven by the need to balance safe road design and avoid native vegetation of very high and high conservation significance, threatened flora and fauna species and a critically endangered ecological vegetation community. The issues of duplicated carriageway alignments proposed to be located onto adjoining private land are the outcome of balancing the above mentioned elements of the Project and their interaction with each other to drive the extent of Public Acquisition Overlay along various sections of the alignment.

The selection process of the preferred alignment for the Project has considered the ‘No Project’ scenario as well as a range of options involving alignments that diverge well away from the existing Highway, run within the existing Highway reserve and run along and adjacent to the existing Highway reserve. The selection of the preferred alignment for the Project has culminated in mostly following the existing Highway reserve, the exception being the crossing over Flynns Creek, by utilising wherever possible the existing Highway carriageway and providing a duplicated carriageway that ensures the following key aspects are achieved:

- Avoids extensive disruption of adjoining private land by alignments that diverge away from the current Highway and dissect through private property.
- Avoids extensive loss of native vegetation including listed ecological vegetation communities and threatened species habitat.
- Minimises the extent of private land acquisition by identifying alignments for a duplicated carriageway that runs parallel with the existing road.
reserve boundary for most of its length, with the exception of the crossing over Flynns Creek.

From the perspective of alignment selection, the Inquiry is satisfied that the evaluation process of alignment options and selection of a preferred alignment is appropriate and have taken into consideration not only environmental impacts but also social impacts. This is supported by the attempts to limit land acquisition to sections of private property along the existing Highway and yet continue to achieve a design for a safe and efficient transport route between Traralgon and Kilmany. However, the Inquiry considers that more work is required to be undertaken by VicRoads in relation to the need for rural wide median treatments at all of the intersections selected. The current intersection designs have a significant impact upon property acquisition compared with a 15 metre wide residual median that achieves the same objectives.

The Inquiry considers that the further detailed design of the Project alignment should be guided by the objectives of minimal vegetation loss and land acquisition. An aspect where the Inquiry believes this should be considered is with regards to median widths particularly at intersections. Acknowledging the concerns raised by the Inquiry with regard to median widths, Ms Collingwood responded:

There are several intersections at which a wide median of 30 metres is proposed (Kenyons Lane, Barrs Lane, Flynns Creek Road, Wrights Lane, Cricket Street, Nambrok Road, Maffra-Rosedale Road, Settlement Road and Freshwaters or Velore Road).

The rationale behind these wide median treatments is driven by safety considerations and the current safety standards applicable to road construction throughout Victoria. The 30 metre width allows a B-double truck to prop in the median, separating conflict related decisions and eliminating the prospect of large vehicles obstructing Highway traffic. It is essential to VicRoads that the proposed median widths are applied. This is a serious matter of road safety which should not be compromised. There is no doubt that this Highway will cater to a significant increase in traffic volume over time. It already accommodates a high proportion of heavy vehicle traffic. This will increase over time – to up to 26% in some locations. There is no doubt that this road will need to cater to the community into the foreseeable future – it is a goal of Highway design to increase the longevity of the Highway to the greatest extent. If the proposed median widths are reduced the Highway will fall short of the current safety standard. The opportunity to apply design parameters for the Highway that cater for the future intensification of the Highway will be lost.

In her closing submission on behalf of VicRoads, Ms Collingwood re-iterated the above views:
VicRoads submits that it is appropriate for the Panel to adopt a safety first approach to its consideration of the Project. The starting point must comprise a review of the design specifications adopted by VicRoads in determining the proposed alignment.

VicRoads submits that it is unacceptable to compromise safety in terms of traffic engineering and road design. The key propositions that underpin the proposed duplication alignment and associated design treatments are:

- The standard wide intersection treatments are necessary to achieve a safe and efficient Highway that will serve the needs of local communities and regional industry alike; and
- The standard minimum median widths must be maintained to accommodate run-off-road type crashes.

When viewed in their proper context, these design parameters are not generous or aspirational; they represent the minimum safety requirements for the construction of high-speed rural Highways, as reflected in the nationally applied Austroads Guide for Road Design and associated VicRoads supplements. They should be applied unless there is compelling justification to the contrary. In this case, there is no sound basis to deviate from the current applicable safety standards.

The Inquiry acknowledges traffic safety is critical when designing roads and/or intersections. Bearing in mind that the Inquiry investigated swept path diagrams for B-double vehicles turning through medians of 15 metres and 30 metres width plus turning lanes, it found that the vehicle does not impede though vehicle movement in either direction. That is, the wider median is not required for a B-double vehicle to undertake a right turn or U-turn movement. Furthermore, the Inquiry believes that important factors are the desirability of reducing impacts on both the environment and on adjoining landowners who face the prospect of land acquisition to facilitate the Project. The Inquiry does not wish to, nor has it eroded safety standards. However, the Inquiry has been presented with a Project that is in its early stages of detailed design (approximately 20% complete thus far according to Ms Wyatt), and it is considered important by the Inquiry that every effort is made to minimise as much as possible the impacts from land acquisition while also seeking to avoid increasing the extent of native vegetation impacts that have been predicted in the EES. This affects the total cost of the Project, a factor that should not be taken lightly.

The Inquiry also considers other factors that must be taken into account are traffic activity and the potential for conflict when vehicles arrive at the same location at the same time. Traffic engineering theory may be used to determine likely gaps in the traffic stream and the delays experienced by the minor traffic stream.
One of the Evaluation Criteria stated in the GHD Traffic and Transport Assessment Report was to “minimize the occurrence of road user travel time delays”.

Section 9.1.2 of the GHD report refers to “travel time for Highway road) users”. Section 9.3.1 indicates that at the ‘left-in/left-out’ intersections, there would be “minor impacts on connectivity and travel times”.

Neither VicRoads nor its consultants make reference to local road traffic delays at any of the proposed intersections. Nor is there reference to calculations of queue lengths or delays on the local roads at the Highway intersections.

The Inquiry believes that it is essential to undertake this analysis, in conjunction with a cost/benefit analysis at a significant number of local road intersections to assist in determining the appropriate engineering design standard. This investigation should include the preparation of swept path diagrams using both a 15 metre wide residual median and the wider median.

The Inquiry next turns its attention to specific issues within each of the seven sections of the Project.

(i) Section 1

The relocation of Wilmot Court to the east to provide a four way intersection rather than retention of the staggered T intersections is considered by the Inquiry to be an appropriate solution. Mr Turnbull recommended a reduced speed zone of 80 kilometres per hour at the roundabout. The Inquiry agrees with this suggestion.

(ii) Section 2

The Dunbar family in their submission to the Inquiry (Submission Nos. 11, 10, 12 and 26) indicated that their farm generated one semi-trailer every two weeks, as well as tractors, other trucks and farm machinery. In the future, they may generate B-double trucks. This information was provided in response to questioning from the Inquiry (the Inquiry has already noted that neither VicRoads nor its consultants provided local traffic volume data).

The U-Turn facility at chainage 2200 (located east of Wilmot Court), with a 120 metre long indented right turn lane, is not considered to be located conveniently or safely for heavy vehicles exiting the Dunbar property wishing to travel west.

In the opinion of the Inquiry, it appears unnecessary to provide a 41 metre wide median at this location to achieve a U-turn movement, even for a B-double truck. The Inquiry considers that some reduction in the median width is possible and
VicRoads should further investigate the alignment taking into consideration property acquisition, the implications of the length of wide median section, the impact upon Gippsland Water assets and the presence of native vegetation of high conservation significance.

At Kenyons Lane, no local traffic counts were undertaken and based on information provided at the Hearing, the Inquiry estimates Kenyons Lane to carry less than 30 vehicles per day. To the north of the Highway, Kenyons Lane provides access to farming properties and Gippsland Water infrastructure. It is not clear to the Inquiry whether access is required to the road reservation to the south.

From the limited information available to the Inquiry it may be assumed that there is little, if any, vehicle movement north-south across the Highway on Kenyons Lane. The Inquiry therefore doubts the need to provide a 33 metre wide median, to accord with the Austroads standard, for less than 4 vehicles per hour, in the peak hour, turning right into or right out of Kenyons Lane. Furthermore, there is no evidence that any of these vehicles are B-doubles. A 15 metre wide residual median with an appropriate intersection design would safely achieve all of VicRoads requirements and reduce the land acquisition width by approximately 20 metres. It appears to the Inquiry that some reduction in the median width is possible, however, all of the factors previously mentioned need to be taken into consideration prior to finalising the alignment.

Between chainages 4200 and 7100 between Sheepwash Creek and west of Barrs Lane, a narrower median cross section is adopted. The Inquiry notes that within this section of the Project there is a lack of native vegetation between the proposed carriageways and VicRoads propose a 9 metre clear zone on the south side of the southern carriageway. Relocation of the southern carriageway to the south, without impacting upon the vegetation and installation of a wire rope barrier, will reduce the extent of property acquisition for a length of approximately 2.5 kilometres adjacent to the ROS. Beyond chainage 7100, that is, on the west approach to Barrs Lane the eastbound carriageway diverges to the north to develop the Austroads wide median design at the Barrs Lane T intersection. The Inquiry notes that there are no vegetation constraints in this location.

Mr Paulet (Property No 233 and Submission No 18), whose properties are on the north side of the Highway west of the Barrs Lane intersection, shares a driveway onto the Highway with the adjoining property to the east, (Property No 224), owned by the Fox family. Mr Paulet indicated that his property generated on average 10 vehicles per week and on average 3 B-doubles per year. The Inquiry therefore assumes that north-south vehicle movement between Barrs Lane and the rural properties to the north would be less than 2 vehicles per hour.
The Inquiry accepts that Barrs Lane is a designated over-dimensional (O-D) route. Four vehicle movements may be undertaken by O-D vehicles e.g. left in, left out, right in, right out. In a number of instances, O-D vehicles have escort vehicles in order to provide safe and efficient movement for all vehicles. From a road design perspective, it would be possible to reduce the median width through the provision of escort vehicles for the 3 of the 4 potential O-D vehicle movements between Barrs Lane and the Highway with a 15 metre wide residual median, rather than a 31 metre wide median.

Section 2 of the duplication is approximately 9.25 kilometres long, of which approximately 2.9 kilometres has a median width of 30 to 40 metres.

From the perspective of road design only, redesign of the U-turn facility at chainage 2200 east of Wilmot Court and adjustments to the wide median treatments at Kenyons and Barrs Lanes could reduce land acquisition for a distance of 2.6 kilometres in this section of duplication. VicRoads should investigate alternative design options in this area taking into consideration all of the design parameters previously mentioned.

(iii) Section 3

Flynns Creek Road forms a T intersection with the Highway and is a designated O-D route. At the Flynns Creek Road intersection, the existing carriageway is located approximately 6 metres north of the southern boundary of the road reservation. The reservation is approximately 62 metres wide in this location. From an engineering design aspect, there is no reason for a median any wider than 15 metres residual width in this location compared with the proposed width of 43.6 metres. A B-double vehicle could make a right turn movement from the eastbound carriageway into Flynns Creek Road without blocking eastbound traffic on the Highway. In crossing the westbound carriageway, it would be exposed to traffic on the westbound carriageway in exactly the same manner as per the wide median treatment.

A B-double or O-D vehicle making a right turn from Flynns Creek Road into the Highway would be able to store in the wide median clear of westbound traffic. If a 15 metre wide residual median was constructed, a right turning B-double would need to undertake crossing the westbound carriageway and entering the eastbound carriageway in one movement. However, it would be possible to legislate that all B-doubles or O-D vehicles exiting Flynns Creek Road onto the Highway have escort vehicles. Modification of the intersection design would reduce the width of property acquisition by up to 27 metres over a distance of 600 metres. A number of large and very large old trees are located within the current road reserve and adjoining paddocks in the vicinity of the Flynns Creek Road intersection, as well as native vegetation of high conservation significance. VicRoads should undertake a detailed
review of this section of duplication based upon the parameters previously outlined and the implications of constructing the southbound carriageway of Flynn's Creek Road closer to the Stuckey house prior to determining the most appropriate intersection alignment.

The Potts property (No. 16), known as Pinegrove, is located in this section of duplication, between chainages 13500 and 13800 on the approach to the Wrights Lane intersection. The southern carriageway opposite Pinegrove is offset between 10 and 20 metres from the southern boundary of the road reservation. It appears to the Inquiry that the design could be modified to shift the carriageway south so that it is closer to the reservation boundary without compromising safety or design standards. Across the frontage of Pinegrove, the northern carriageway deviates north on the approach to the Wrights Lane intersection. If the 15 metre wide median section was to extend across the frontage of Pinegrove parallel to the modified southern carriageway, then property acquisition within Pinegrove could be minimised or eliminated.

Wrights Lane at chainage 14200, is the eastern boundary of this section of the duplication. It forms a T intersection on the south side of the Highway. A farm access track, within a road reservation, is located on the north side of the Highway. This reserve separates the Potts (Property No 16) and Anderson (Property No 20) land. The aerial Mapbook A Map sheet 9 shows access only to the Anderson property. At the Wrights Lane intersection the proposed median width is 37 metres, this width being developed approximately 500 metres west of the intersection and tapering to a 15 metre median 500 metres east of the intersection.

No information is available regarding daily traffic movements to and from the Anderson property. However, based upon submissions made by local residents, it is likely to be less than 10 vehicles per day. Wrights Lane carries on average 22 vehicles per day, with a peak hour volume of 5 vehicles and no heavy vehicle traffic on any day.

Based upon the daily traffic volumes on Wrights Lane, from a road engineering design perspective, a 37 metre wide median in this location would appear excessive. Bearing in mind the previous comments regarding the road alignment adjacent to Pinegrove, VicRoads should review the Wrights Lane intersection design, taking into consideration the presence of high conservation significance native vegetation and very large and large old trees east and west of the intersection. This investigation must take into consideration the health of the trees.

A 15 metre wide median at the Wrights Lane intersection could enable construction to occur without or only minimal property acquisition for 500 to 700 metres either
side of Wrights Lane, subject to weighing up the parameters previously mentioned including minimising native vegetation losses.

(iv) Section 4

Between Wrights Lane (chainage 14200 and 15700), the westbound carriageway appears to follow the alignment of the existing carriageway, which is south of the centre line of the existing road reservation. From chainage 15900 east of and to Smiths Lane at chainage 16800 the eastbound carriageway follows the alignment of the existing carriageway.

Reference to the proposed cross section west of Smiths Lane indicates that a 9.2 metre widening of the road reservation is required to achieve a 10 metre clearance. The cross section also indicates a 25 metre wide median. There is no indication of what the 10 metre clearance is to or from, as there is already allowance for a 9 metre clear zone.

Beyond Smiths Lane, the 25 metre median is maintained to create a wide median treatment at the Cricket Street intersection.

In other locations over the duplication, a wide median has been developed by the carriageways diverging over a distance of 300 metres.

The Inquiry considers that it may be possible to adjust the carriageway alignments to both reduce the extent of land acquisition through the use of a 15 metre residual median width while also minimising impacts on native vegetation. If upon further analysis VicRoads concluded that the two northbound heavy vehicles in the peak hour, potentially turning right out of Cricket Street, warranted a wide median treatment, then the carriageways could diverge in the 300 metres between Smiths Lane and Cricket Street. It is considered desirable that the detailed design process review this section of Highway design to consider these matters.

(v) Section 5

This section of the duplication is 1,900 metres long and approximately 60% of it is contained within the existing road reservation. Improved horizontal curve alignments seek to remove the hazards associated with the ‘Nambrok curves’ while the introduction of a wide median treatment at Nambrok Road results in some property acquisition.

Nambrok Road extends four kilometres north of the Highway to Sale-Toongabbie Road, south of the Highway it is a local no through road. North of the Highway it
carries 63 vehicles per day, with a peak hour volume of seven, including one or two heavy vehicles.

The intersection treatment results in a 38 metre wide median. On the basis of the daily and peak hour traffic volumes and limited likelihood of north-south traffic movement across the Highway alone, the Inquiry finds it difficult to understand how this intersection treatment could be justified from an engineering perspective. However, the presence of high conservation native vegetation within the road reserve has influenced the design of this intersection treatment.

Approximately 100 metres east of Nambrok Street the cross section indicates that a road reservation of 84 metres is required, including clearances of 10 metres and clear zones of 9 metres. These requirements combined with the 38 metre median extend 700 metres into Section 6.

In the opinion of the Inquiry there appears to be no engineering justification for the 84 metre road reservation. Further investigation by VicRoads should enable reduced property acquisition, as there is clearly a ‘vegetation free zone’ between the proposed road pavement and the vegetation. Furthermore, a 9 metre clear zone and a 10 metre clearance are proposed on the south side of the southern carriageway within farming property. The introduction of a wire rope barrier in this location would significantly reduce property acquisition in this area.

(vi) Section 6

Between chainages 2500 and 2800 east of Nambrok Road, the existing carriageway diverges from a 15 metre offset off the northern boundary of the road reservation to an offset of approximately 40 metres. West of chainage 2500, the existing carriageway passes between sections of high significance grassland. Between chainages 2350 and 4000, similar grassland extends 350 to 450 metres into the adjoining paddocks. At approximately chainage 3100 a threatened species has been identified - Rough-grain Love-grass (*Eragrostis trachycarpa*) - which is not impacted by the duplication.

If the northern alignment of the eastbound carriageway was retained generally on its current alignment, to ensure retention of the Rough-grain Love grass, the existing carriageway could be retained as the western carriageway. This would minimise or eliminate property acquisition between chainages 2600 and 3800.

Maffra-Rosedale Road forms a T intersection with the Highway at approximately chainage 5550. A wide median treatment intersection is proposed and there are no vegetation constraints.
Austroads Guide to Road Design – Part 4A states that “wide median treatments (WMT) were developed for use on high speed rural divided roads to physically control the speed of crossing traffic”. It also states that “the minor road entries are designed with horizontal curvature and large islands to reduce the speed of vehicles approaching and entering the intersection”. Vehicles approaching the intersection on the minor road must give way to all approaching vehicles. It would therefore be desirable for a stop sign to be installed facing southbound traffic. Similarly a vehicle travelling west on the Highway wishing to turn right onto the minor road must give way to all oncoming traffic.

A swept path diagram for a B-double truck, through a 30 metre wide median, shows that the rear wheels of the rear trailer are offset from the prime mover and front trailer. For a 15 metre wide residual median both trailers are offset from the prime mover and a wider median opening is required, 13 metres compared with 9 metres for the 30 metre wide median. In both cases, the B-double vehicle is clear of through vehicles on both carriageways of the Highway.

In the opinion of the Inquiry, at least for a T intersection, the wide median treatments relates to the separation of turning movements on the minor road, rather than the median width on the Highway. If VicRoads was to re-visit the design, based upon a 15 metre wide residual median on the Highway, it would find that it should meet all the criteria outlined in the Austroads manual.

Settlement Road, which is the eastern boundary of Section 6, forms a T intersection with the Highway. Based upon the VicRoads traffic count data, Settlement Road carries three heavy vehicles per hour, two-way, during the peak hour. The Inquiry does not consider that based on engineering road design principles the intersection design at the Settlement Road should include a 30 metre wide median. West of Settlement Road a number of trees and high significance grasses are located in the road reservation. East of the intersection, a threatened species, Small Scurf-pea (*Cullen parvum*), appears to be on the alignment of the westbound carriageway. This species could be saved by elimination of the wide median treatments at Settlement Road and Sale-Toongabbie Road.

(vii) Section 7

Sale-Toongabbie Road, located 400 metres east of Settlement Road, forms a T intersection with the Highway. Once again there appears to be no engineering justification for the wide median.

East of Swamp Road at chainage 9300, a 92 metre wide road reservation is shown on the proposed cross section, including an 18 metre wide property acquisition on the south side.
The proposed road alignment results in a 37 metre width section of unused road reservation along the northern edge of the reserve, although it is noted that this part of the road reserve contains a rare occurrence of remnant Grassy Woodland. Careful redesign of the northern carriageway in this location could avoid this Grassy Woodland.

Approximately 300 metres east of Swamp Road, the Highway crosses the Gippsland railway line. In order to minimize construction costs, a minimal skew angle is preferred. VicRoads indicated that the alignment shown achieves this outcome, however, there is no indication of whether property compensation costs were considered as well as construction costs.

Beyond the railway crossing, the alignment is dictated by the need to retain access to the Kilmany township and Landfill, as well as matching into the Public Acquisition Overlay east of Templetons Road. Although there appears to be no engineering reason why the duplicated alignment could not be contained within the existing road reservation between chainages 11300 and 12400, it is evident that there are native vegetation constraints to the north which would prevent the eastbound carriageway being shifted further north within the existing road reserve.

6.5 Findings and Recommendations

The Inquiry supports duplication of the Princes Highway as defined by the Project. The process of alignment option evaluation is considered satisfactory and the selection of a preferred alignment for the Project is supported. However, over the 31 kilometre length of the duplication, there are a number of locations where, in the opinion of the Inquiry, VicRoads must review the alignment.

The review should take into consideration traffic safety, a cost/benefit analysis of various intersection treatments, cost of property acquisition and the competing issues of property acquisition and retention of significant native vegetation.

In some locations, the provision of a wide median intersection treatment, combined with a desire to retain relatively small areas of native vegetation results in property acquisition extending for more than one kilometre.

Based upon engineering design principles, a 15 metre wide residual median would be feasible between chainage 1700 and chainage 4200 (between Minniedale Road and east of Kenyons Lane). The U-turn slot at chainage 2200 east of Wilmot Court may be designed to accord with the standard adopted at the other eight locations on the route and in the opinion of the Inquiry, the wide median treatment intersection could be reviewed at Kenyons Lane.
Ten wide median intersection treatments are proposed for this Project. At four locations, daily traffic volumes of 30 to 70 vehicles were recorded, at two locations daily traffic volumes were 120 and 125 vehicles, at three other locations daily volumes ranged from 215 to 270 vehicles.

Two of the nine roads carrying 270 or less vehicles per day are approved over dimensional routes. In a number of instances, over dimensional vehicles are accompanied by escort vehicles, and in the opinion of the Inquiry, escort vehicles should be mandated.

The Inquiry considers that the wide median intersection treatments located at Barrs Lane, Flynn's Creek Road, Wrights Lane, Cricket Street, Nambrok Road, Maffra-Rosedale Road, Settlement Road and Sale-Toongabbie Road have some potential for review so as to reduce the area of property acquisition. In conjunction with a review of the intersection treatment at Wrights Lane there is an opportunity to review the road alignment adjacent to the Pinegrove property to avoid or minimise property acquisition.

Between chainages 4200 and 9100 (east of Sheepwash Creek to west of Flynn township), the southern carriageway generally follows the alignment of the existing single carriageway. The Inquiry is not aware of when this section of the Highway was constructed. However, the choice of this alignment, which is typically offset less than 15 metres from the existing northern boundary of the road reservation ‘sets the scene’ for all future road design over this 4.9 kilometre length of road, making the southern 25 to 60 metres of road reservation superfluous. The Inquiry recognises that is primarily as a result of the presence of very high and high conservation significance native vegetation and listed threatened species and the need to avoid impacting on these habitat values. The Inquiry therefore cannot understand why both VicRoads and Gippsland Water expected that any future duplication could occur within the existing road reservation.

The Inquiry makes the following recommendations:

1. Through the detailed design process, VicRoads review the following aspects of the Princes Highway duplication, subject to satisfying the aims of maintaining adequate and appropriate road and traffic safety, reducing the extent of land acquisition required, reducing the impacts on the Gippsland Water assets, and minimising additional losses of native vegetation:
   - Between chainages 1700 and 3400, seek to reduce the median widths to incorporate a 15 metre wide residual median where practical.
Between chainages 3400 and 9200, seek to reduce the median widths where practical.

At the intersections of Kenyons Lane, Barrs Lane, Flynns Creek Road, Wrights Lane, Cricket Street, Nambrok Road, Maffra-Rosedale Road, Settlement Road and Sale-Toongabbie Road, based upon a traffic safety and cost benefit analysis, determine whether a 15 metre wide residual median would be acceptable.

Between chainages 13400 and 14300, review the alignment of both carriageways to minimise the impact of property acquisition on the Pinegrove property.

Between chainages 1500 and 6800 east of Rosedale, determine whether the road alignment can be modified to reduce or eliminate proposed land acquisition, and to determine whether the installation of a wire rope barrier would be more cost effective than a nine metre wide clear zone and a 10 metre clearance that results in significant property acquisition.

At the alignment of the Princes Highway at the Gippsland railway crossing at Kilmany, review and compare construction costs with land acquisition costs.

The status of Barrs Lane as an over-dimensional route and if required, ensure that all over-dimensional vehicles have escorts.

The road configuration at the corner of the Princes Highway and Flynns Creek Road to ensure that it does not impinge on the Stuckey property (Property No 6).

The location and design of the U-turn facility at approximately chainage 2200 taking into consideration heavy vehicles exiting from the Dunbar property (Property No 207) onto the Princes Highway.

2. VicRoads adopt an 80 kilometre per hour design speed through the Minniedale Road roundabout, and review the alignments of the eastbound carriageway, west of the roundabout and the westbound carriageway east of the roundabout.
7. BIODIVERSITY AND HABITAT

7.1 Description

Biodiversity and habitat issues were addressed in Chapter 13 of the EES and in the Biodiversity and Habitat Assessment Report prepared by GHD Pty Ltd, Appendix H in the Technical Appendices Volume 2. The Princes Highway is located alongside and in parts within the floodplain of the Latrobe River with the proposed alignment crossing waterways including Sheepwash Creek, Flynns Creek, Blind Joes Creek and Nambrok Creek.

The biodiversity and habitat conditions along the Project area can be broadly described as comprising a predominantly woodland character between Traralgon East and Rosedale (refer to Figure 4) and a predominantly grassland character between Rosedale and Kilmany (refer to Figure 5).

Figure 4: Woodland at the corner of Princes Highway and Barrs Lane
The road reserve itself contains an extensive linear corridor of predominantly native vegetation compared with that found on adjoining private land, which is predominantly cleared farming land. There are pockets of remnant and planted vegetation and scattered trees and the riparian vegetation occurring along the Latrobe River corridor.

The entire EES Project area encompasses 1,194 hectares of which approximately 202 hectares comprises the construction area for the proposed alignment. Within the EES Project area, approximately 190 hectares of remnant native vegetation occurs, most of which is confined to the road reserve and along waterways with some native grasslands and scattered trees in adjoining freehold land.

The Project is located within the Gippsland Plain Bioregion and contains native vegetation and habitat for fauna species that includes ecological communities and species listed under both Commonwealth and State legislation. One ecological community is listed under the EPBC Act while two are listed under the State Flora and Fauna Guarantee Act 1989 (FFG Act). The ecological community listed under the

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3 An Ecological Community consists of a group of flora and fauna species that occur and interact together naturally in an area and typically can include woodlands, grasslands, shrublands, forests, wetlands etc.
EPBC Act is the critically endangered *Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana)* Grassy Woodland and Associated Native Grassland. The FFG Act listed communities are the *Forest Red Gum Grassy Woodland* (which corresponds to the woodland form of the EPBC Act listed ecological community) and the *Central Gippsland Plains Grassland* (which corresponds to the grassland form of the EPBC Act listed ecological community).

The Project study area contains the following Ecological Vegetation Classes (EVCs):

- Plains Grassy Woodland (EVC 55) is listed as endangered within the bioregion and is impacted by the Project. Both relatively intact and highly modified patches of Plains Grassy Woodland occur within the Project area. The tree canopy is dominated by Gippsland Red Gum (*Eucalyptus tereticornis* subsp. *mediana*) to 30 metres tall.

- Grassy Woodland (EVC 175) is listed as endangered within the bioregion and is impacted by the Project. This EVC generally occurs within areas of higher elevation than the floodplain and is limited to road reserves. Vegetation is characterised by an open modified cover of native grasses, with some areas comprising emergent shrubs. The majority of canopy trees have been cleared, although some small patches supporting Drooping Sheoak (*Allocasuarina verticillata*) remain. Much of the roadside contains planted native and exotic trees and shrubs, several of which are spreading into areas of Grassy Woodland.

- Swampy Riparian Woodland (EVC 83) is listed as endangered within the bioregion but was mapped in the EES as outside the construction zone for the Project.

- Swamp Scrub (EVC 53) is listed as endangered within the bioregion and is impacted by the Project. Several small patches of Swamp Scrub in poor to moderate condition occur within the construction area along tributaries and drainage lines such as Sheepwash and Blind Joes Creek. Remnant patches of Swamp Scrub typically support Swamp Paperbark (*Melaleuca ericifolia*), Tall Sedge (*Carex appressa*), Common Reed (*Phragmites australis*) and Bulrush (*Typha domingensis*). A dense cover of introduced plant species is also present within these areas.

- Aquatic Herbland (EVC 653) is listed as endangered within the bioregion but was mapped in the EES as outside of the construction zone for the Project.

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4 A Statewide descriptive system for native vegetation communities that have similar vegetative and ecological characteristics, requirements and functions.
With respect to flora species found within the Project area, one species, the Matted Flax-lily (*Dianella amoena*) is listed under the EPBC Act and FFG Act; one species, the Small Scurf-pea (*Cullen parvum*) listed under the FFG Act; and one species, the Yarra Gum (*Eucalyptus yarraensis*) is listed as rare under the 2005 DSE Advisory List of Rare and Threatened Plants in Victoria.

With respect to fauna species found within the Project area, one species, the Dwarf Galaxia (*Galaxiella pusilla*) is listed under the EPBC Act and FFG Act and was found in Flynns Creek and Blind Joes Creek. The EPBC Act and FFG Act listed Growling Grass Frog (*Litoria raniformis*) has been historically recorded within the Project area near Flynns Creek, but was not detected during targeted surveys for this Project.

Generally, the EES identifies a number of main fauna habitat types within the Project area including:

- **Large patches of remnant woodland vegetation containing hollow-bearing trees** (Plains Grassy Woodland and Grassy Woodland). This habitat type is mainly within the road reserve of the Highway, particularly west of Rosedale.

- **Smaller patches of remnant woodland vegetation containing hollow-bearing trees**. This habitat type occurs within the freehold land north and south of the Highway, and in patches within the road reserve mainly east of Rosedale.

- **Scattered trees** (individual and small clumps of isolated paddock trees, which are hollow bearing). The majority of scattered trees occur within freehold land adjacent to the Highway, with some scattered trees occurring within the road reserve.

- **Major waterways** (e.g. Sheepwash, Flynns and Blind Joes Creeks) and the associated riparian vegetation along these waterways (e.g., Swamp Scrub and Swampy Riparian Woodland EVCs), and other minor waterways.

- **Artificial waterbodies** (e.g. farm dams with some fringing/riparian vegetation). All of these waterbodies occur within freehold land adjacent to the Highway.

- **Planted native and exotic trees and vegetation**. The majority of this habitat occurs within freehold land adjacent to the Highway, and along some of the waterways. Some planted native and introduced vegetation occurs within the road reserve.

- **Modified Treeless Vegetation and Non-Native Vegetation**. The vast majority of this habitat type occurs within freehold land used predominantly for grazing, and/or cropping.

- **Five main wildlife corridors**, including three major waterways (Sheepwash, Flynns and Blind Joes Creeks), and the north and south road reserves off the Highway.
With respect to Large and Very Large Old Trees (VLOTs and LOTs\textsuperscript{5}), the EES found that the Project area contains around 267 LOTs and VLOTs (refer to Figure 6). These trees can be found either within patches of remnant vegetation or as scattered trees either in small groups or isolated individuals. Because of their size, they are very old and often provide hollows which act as important nesting and refuge for wildlife and birdlife.

\textbf{Figure 6: Some of the VLOTs and LOTs found within the Project area}

\textbf{(i) Project Impacts}

The Biodiversity and Habitat Assessment Report (Technical Appendix H), takes the view that all biodiversity and habitat values located within the construction area footprint is presumed permanently lost. However, the report considers that the construction area is conservative, and that after further detailed design, a reduction in losses is expected to be realised. The impact of the Project on native vegetation and biodiversity is identified in the EES on two levels; the native vegetation losses and associated impact on fauna habitats, which are linked to State vegetation management policy through the assessment of habitat condition and habitat hectare assessment for net gain purposes; and Commonwealth biodiversity protection for

\textsuperscript{5} A Large Old Tree (LOT) is a tree with a Diameter at Breast Height (DBH) equal to or greater than the large tree diameter specified in the relevant EVC Benchmark while a Very Large Old Tree (VLOT) is a tree with a DBH of at least 1.5 times that of the large tree DBH specified in the relevant EVC Benchmark.
listed ecological communities and flora and fauna species. With respect to native vegetation losses, the submission from the Department of Sustainability and Environment (DSE) provided a useful summary of the losses involved with the Project, and Table 4 provides an updated summary of vegetation losses.

**Table 4: Native Vegetation Losses**

<table>
<thead>
<tr>
<th>Ecological Vegetation Class</th>
<th>Hectares</th>
<th>Habitat Hectares</th>
<th>Bioregional Conservation Status</th>
<th>Conservation Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plains Grassy Woodland EVC 55</td>
<td>1.56</td>
<td>0.69</td>
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<td>Very High*</td>
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<td>Plains Grassy Woodland EVC 55</td>
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<td>4.31</td>
<td>Endangered</td>
<td>High</td>
</tr>
<tr>
<td>Swamp Scrub EVC 53</td>
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<td>0.38</td>
<td>Endangered</td>
<td>Very High</td>
</tr>
<tr>
<td>Grassy Woodland EVC 175</td>
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<td>0.04</td>
<td>Endangered</td>
<td>High</td>
</tr>
<tr>
<td>Modified Treeless Vegetation^</td>
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<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Minor Treeless Vegetation^</td>
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<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Total</td>
<td>25.18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* includes an area of existing habitat for Matted Flax-lily and removal/translocation of 4 individual plants (a listed species under the EPBC Act and the FFG Act).

^ offsets are not required for Treeless Vegetation.

Large and Very Large Old Tree losses include:

- 18 VLOTs and 12 LOTs (30 in total) from within remnant patches of vegetation, all of which are of high conservation significance, except for one tree of very high conservation significance; and
- 31 scattered trees of high conservation significance including 16 VLOTs, 11 LOTs, 3 Medium Old Trees (MOTs) and 1 small tree.

With respect to the EPBC Act listed ecological community *Gippsland Red Gum Grassy Woodland and Associated Native Grassland*, the impact includes a total of 9.03 hectares comprising:

- 0.55 hectares of the woodland form of the community; and
- 8.48 hectares of the grassland form of the community.

The extent of loss of this ecological community is predicted to be in the range of 0.97 to 1.4% based on the best and worst case scenarios according to the extent range provided in the 2008 *Commonwealth Listing Advice on Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland* prepared...
by the Threatened Species Scientific Advisory Committee for this community. Additional survey work undertaken for the EES identified a further 172 hectares of the grassland form of the ecological community mainly in the Nambrok area east of Rosedale, which would alter the percentage loss to around 0.87 to 1.1%. VicRoads has formed the view that 1% loss of the ecological community is considered to represent a significant level of impact and accordingly, has sought to identify the objective of further reducing the extent of loss to below 1% through further detailed design processes associated with the Project.

The Project would impact upon both the Central Gippsland Plains Grassland and Forest Red Gum Grassy Woodland vegetation communities that are listed under the FFG Act. The EES considers however, that these two vegetation communities generally correspond with the grassland and woodland form respectively of the EPBC Act listed Gippsland Red Gum Grassy Woodland and Associated Native Grassland ecological community. It notes that that the level of impact would be commensurate with the extent of impacts on the grassland and woodland forms of this community i.e. a low level of impact for the woodland form being the Forest Red Gum Grassy Woodland and a higher level of impact on the grassland form being the Central Gippsland Plains Grassland.

Survey work for the EES identified the presence of approximately 221 of the EPBC Act and FFG Act listed Matted Flax-lily plants, of which four would be impacted by the Project. All four plants occur within the road reserve on the southern side of the Princes Highway west and east of Minniedale Road. It is proposed to translocate these four specimens, and for the remainder of the plants identified to be avoided by the design of the Project.

Two other State protected species were detected during surveys to be within the impact zone of the Project: these are the Yarra Gum and the Small Scurf-pea. The Project would result in the loss of up to three Yarra Gums from the northern side of the Princes Highway east of Wright’s Lane, and five Small Scurf-peas from the northern side of the Princes Highway, south of the Sale-Toongabbie Road, and east of Settlement Road.

Impacts on the habitat of the EPBC Act and FFG Act listed Dwarf Galaxia are predicted in the EES associated with bridge crossing works proposed over Flynn's Bridge. The Listing Advice indicates that the extent of the ecological community has declined from approximately 120,000 hectares to around 660 to 5,600 hectares with the grassland form ranging in extent from 30 to 60 hectares and the woodland form ranging from 900 to 5,600 hectares. VicRoads response to the Inquiry’s Matters on Notice indicate that the conservative estimate of the maximum total extent is 930 hectares and the conservative estimate of the minimum total extent is 660 hectares.
Creek and Blind Joes Creek, and potentially associated with the proposed 200 metre realignment of Sheepwash Creek. The extent of loss of species is uncertain. However, the EES proposes that works occur during periods of low flow and outside known breeding seasons for the species (August-September). Also, any specimens found at Flynns Creek could be translocated prior to commencement of construction.

Impacts on the Growling Grass Frog are also uncertain because the species was not detected during survey work, despite historical records indicating the presence of the species in the Project area.

7.2 Key Issues

The key issues with biodiversity and habitat matters for the Project considered by the Inquiry relate to how well the following relevant EES Evaluation Objectives set out in the Scoping Requirements have been addressed:

- To avoid or minimise effects on species and ecological communities listed under the Flora and Fauna Guarantee Act 1988 (Vic) or the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) and to comply with requirements under Victoria’s Native Vegetation Management – A Framework for Action.
- To provide for the sustainable long-term management of retained native vegetation and habitat areas within and adjacent to the road reservation along the duplicated Highway.

Submissions have been made to the EES seeking to consider the desirability or otherwise of using the existing road reserve for the carriageway duplication as an alternative to the alignment design proposed in the Project. Submissions have suggested that in considering the existing road reserve, regard should be had to the balance required between the extent of vegetation loss and its consequences or impacts on biodiversity and habitat values, versus the extent of private land acquisition and its consequences or impacts on land use economics and social amenity.

In considering the evaluation objectives for biodiversity and habitat, the Inquiry reviews how the Project responds to the net gain policy framework established under Victoria’s Native Vegetation Management – A Framework for Action, 2002. Of particular note are the strategies under the SPPF relating to Biodiversity in Clause 12.01 and Clause 12.01-1 – Protection of habitat:

*Assist the conservation of the habitats of threatened and endangered species and communities as identified under the Flora and Fauna Guarantee Act 1988,*
including communities under-represented in conservation reserves such as native grasslands, grassy woodlands and wetlands.

and under Clause 12.01-2 – Native Vegetation Management:

Apply the three step process as set out by Victoria's Native Vegetation Management – a Framework for Action. These are:

- Step 1: As a priority, avoid adverse impacts on native vegetation, particularly through clearance.

If the removal of native vegetation can not be avoided:

- Step 2: Minimise impacts through appropriate consideration in the planning process and expert input to Project design or management; and
- Step 3: Identify appropriate offset options.

Matters to consider associated with the above issues are whether the identified extent of impacts on biodiversity and habitat are significant and whether environmental management requirements and proposed offsets to achieve net gain are appropriate.

Subsidiary issues linked to the above relate to matters raised by submittors about:

- Taking into account existing and/or future revegetation in the local area towards offsets in order to reduce the extent of private land acquisition.
- The relevance of the quality and condition of the roadside vegetation given its regrowth and weediness.
- The ability to translocate the Matted Flax-lily.

7.3 Submissions and Evidence

Evidence was presented to the Inquiry from Ms Wyatt and Dr Wills from GHD Pty Ltd. With respect to submissions on aspects of biodiversity and habitat, the Inquiry acknowledges a considerable degree of concern expressed by the local members of the community in relation to private land acquisition versus duplicating the Highway within the existing road reserve, and the requirements to protect native vegetation within the road reserve. This is perhaps best summed up by the submission from Mr and Ms Lazzaro (Submission No 1 & 1A) who felt that:

.... the frogs, lizards etc .... had priority consideration over us human beings and the land we have purchased and worked for years.

Many submittors such as Mr Paulet on behalf of the Flynn Farm Discussion and Landcare Group (Submission No 19), Mr and Ms Ferguson (Submission No 5), Ms Gilheany (Submission No 14) and Mr Stuckey (Submission No 17) expressed the
view that generally the local community overwhelmingly supported the Highway duplication. They submitted that they have been preparing in anticipation of the works occurring within the existing road reserve through revegetation works on their properties as part of Landcare activity. With the proposal to align part of the duplication within adjoining private land to avoid vegetation within the road reserve, many submitters such as the Landcare Group considered that a commitment to plant trees and establish wildlife corridor plantings would be a more appropriate offset for the loss of roadside vegetation from duplicating the Highway within the road reserve. The submitters’ view was reinforced by the knowledge that much of the vegetation found along the Highway road reserve is either not original, with much of it regrowth from past clearing or pristine with many exotic and non-indigenous tree species present.

In contrast, the submission from DSE was supportive of the Project, determining that it appropriately addresses the key legislation and policy requirements including:

- Adequately describing the native vegetation and biodiversity implications within the Project area.
- Satisfactorily calculating native vegetation losses.
- Endorsing implementation of the three step approach to avoid, minimise and offset native vegetation impacts through:
  - Consideration of native vegetation in the alignment selection processes and road design;
  - Further consideration of native vegetation during construction via a Construction Environment Management Plan (CEMP); and
  - Satisfactory arrangements in place to achieve offsets including the use of a property at Bengworden for offset protection.
- Adequately identifying the likely impacts on rare and threatened species.

7.4 Discussion

(i) Legislative and Policy Drivers

In responding to the Evaluation Objectives for biodiversity and habitat, it was submitted to the Inquiry by Ms Collingwood that the key issue with the Project is the permanent loss of threatened native vegetation and ecological communities. A key driver of the Project design was the avoidance of impact on native vegetation and ecological communities. Ms Wyatt’s evidence was that development of the Project alignment had been influenced by factors such as the need to provide connections with the existing Highway, the need to achieve design and safety standards, the
preference to optimise use of existing infrastructure and to minimise ecological, heritage and social impacts. She submitted to the Inquiry that:

*VicRoads has sought to meet the Project objectives and avoid known constraints and in some cases this has resulted in the proposed alignment being located outside the existing road reserve within private land.*

The Inquiry notes that the proposed duplication alignment was informed by extensive field surveys, landowner consultation and been guided by legislative and regulatory requirements. Ms Wyatt advised that:

*One of the key reasons for the Minister’s decision to require an EES was the occurrence of native vegetation and threatened species of State and National significance within the Project area. Section 6.2.4 of the Options Report, notes that generally, higher biodiversity and habitat impacts occur for those options which utilise the road reserve as this is where most of the native vegetation in the local landscape exists. The road reserves form important wildlife corridors, and Commonwealth and State policies specify that impacts to these values should be avoided in the first instance. As noted in the EES and Options Report, avoiding these values is often only possible if adjacent private land is utilised instead.*

As Ms Wyatt noted, the option of least impact for biodiversity is the option of most impact for landowners. The difficulty facing members of the local community directly affected by the Project is the necessity for decision making authorities to consider and adhere to legislative and regulatory requirements for protecting very high and high conservation significance native vegetation. As the submission from DSE states:

*Victoria’s Native Vegetation Management – a Framework for Action (DNRE 2002) (the Framework) is incorporated in the Victoria Planning Provisions, and specifically referred to in Clauses 11.03, 12.01 and 52.17 of the Wellington and Latrobe Planning Schemes. The Framework uses a three-step approach that requires the proponent to investigate the options to avoid clearing, evaluate options for the minimisation of clearing where avoidance cannot be achieved and to mitigate any unavoidable clearing through identifying offset measures. The Framework is binding on all Government instrumentalities and planning must ensure implementation of the three-step approach.*

The Inquiry is bound by its Terms of Reference to report back to the Minister for Planning on the significance or otherwise of environmental impacts and whether the Project has been designed and can be conditioned to achieve an acceptable environmental outcome in the context of applicable legislation and policy\(^7\). In this

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\(^7\) Point 19(iv) of the Inquiry Terms of Reference dated 15 March 2012.
regard, the advice from DSE regarding biodiversity and habitat effects is very relevant to the considerations of the Inquiry.

(ii) Significance of Native Vegetation, Road Reserve Habitat and Effects

Along the Project area, the existing native vegetation is important for biodiversity and habitat purposes. This is reflected in both Commonwealth and State environmental laws as well as in State planning policy, and is reinforced by the substantially linear nature of the vegetation cover and extent. The vegetation provides important refuge for threatened species (i.e. Matted Flax-lily). However, due to its extent with both woodland and grassland forms in a landscape that is predominantly cleared for farming pursuits, it represents a remnant of a community of plants as habitat for fauna that is now limited within the Gippsland region.

To duplicate the Highway within the existing road reserve would result in a substantially higher loss of native vegetation. The EES Technical Report on page 47 indicated that the extent of vegetation loss for duplicating the Highway within the road reserve would result in approximately 40.80 hectares compared with the Project loss of 20.66 hectares (a difference of 20.14 hectares). The loss of the EPBC Act listed ecological community component of 28.46 hectares is compared to the Project’s loss of 9.03 hectares (a difference of 19.43 hectares). Although it could be argued that the differences in vegetation loss are not considerable, the significance of the impacts on the environment would be high. This is because of the linear nature of the vegetation along the road reserve corridor.

Removal of native vegetation from within the road reserve would increase gaps between stands of vegetation and reduce the width of the vegetation, thereby increasing edge effects along the linear nature of the vegetation extent. These effects trigger the significant impact criteria for ecological communities listed as critically endangered under the EPBC Act under the Matters of National Environmental Significance Significant impact guidelines 1.1 by:

- Reducing the extent of an ecological community; and
- Fragmenting or increase fragmentation of an ecological community, for example by clearing vegetation for roads.

The Inquiry notes the acknowledgement by GHD that although the Matters of National Environmental Significance (MNES) Significant impact guidelines are intended to be used at the referral stage, it was considered that they would be useful in determining significance of impacts for a number of potential effects. The Inquiry agrees with GHD, and finds that the guidelines offer assistance when assessing impact significance on biodiversity and habitat values arising from the Project.
In considering the above, the Inquiry believes that the alternative argued by submitters may produce impacts that would be significant, and may fail to satisfy policy requirements.

Revegetation works either already undertaken by the Flynn Farm Discussion and Landcare Group and other landowners or proposed to be undertaken in order to provide an effective offset for any increased losses of native vegetation from within the Highway road reserve to accommodate duplication works, are commendable. While landowners have the ability to collect seed and establish plantings, the Inquiry is aware from its experience and expertise that it is challenging to re-create EVCs. This is an important distinction to make in providing offsets for achieving a net gain in the quantity and quality of native vegetation lost due to clearing.

Because the native vegetation found along the Highway road reserve in the Project area comprises EVCs with an endangered bioregional conservation status and a habitat/hectare quality rating that is reasonable (not necessarily pristine as noted by some submitters), the conservation significance is rated as either high or very high. In accordance with the policy *Victoria’s Native Vegetation Management – A Framework for Action*, 2002 achieving a net gain offset for high and very high conservation significance native vegetation requires the same vegetation, habitat type and ecological function that is at least 75% to 90% respectively, of that which is lost. In addition, the Inquiry notes the limitation placed on the contribution of revegetation towards offsetting native vegetation losses as outlined in the evidence of Dr Wills:

> The majority of remnant vegetation within the Highway road reserve is either classified as high or very high conservation significance. According to *Victoria’s Native Vegetation Management – A Framework for Action* (DNRE 2002), only 25% and/or 10% of offsets are permitted to be obtained via revegetation for the loss of areas of high and very high conservation significance respectively. Therefore, revegetation can only contribute to a small component of offsets. In addition, to be considered as a suitable offset, revegetation needs to meet certain criteria as outlined in *Native Vegetation: Revegetation Planting Standards – Guidelines for establishing native vegetation for net gain accounting* (DSE 2006).

The condition of the existing native vegetation within the Highway road reserve was questioned by some submitters, however evidence provided to the Inquiry by Dr Wills indicated that despite the fact that much of the vegetation now found within the road reserve is regrowth and is not in pristine condition due to the presence of exotic and non-indigenous species, the habitat/hectare scores provided in the Technical Appendix H Report by GHD equate to a high and very high conservation significance rating, which is contributed to by the presence of listed endangered and threatened species. The significance of the past history of the native vegetation becomes somewhat minor in the assessment of habitat/hectare function because the
assessment of condition is based on existing conditions. The existing conditions of
the native vegetation present within the Highway road reserve in the Project area is
identified under the EES as being a good representational example of a listed
ecological community under both Commonwealth and State legislation.

(iii) Listed Species and Waterway Habitat

It is possible to translocate the Matted Flax-lily according to the National Recovery
Plan for the species. Submitters suggested that in translocating four individual
plants, why not translocate all plants (up to 33 specimens) that would be impacted
by duplicating the Highway within the road reserve? In response to this suggestion,
the Inquiry heard from Dr Wills who advised that while the removal and
translocation of four Matted Flax-lily individuals may be regarded as insignificant,
the removal of up to 33 individual plants would be considered a significant impact.
Dr Wills advised that the occurrence of Matted Flax-lily in the Project area was
strongly correlated with the rail reserve and Princes Highway between Traralgon
and Flynn, and that the species is seldom seen on private land. The Inquiry finds
that the combination of removal/translocation of the individual plants and the
removal of native vegetation for the Highway duplication within the road reserve
would trigger, in a cumulative sense, the following significant impact criteria for
endangered species under the Matters of National Environmental Significance
Significant impact guidelines 1.1 by:

- Leading to a long-term decrease in the size of a population.
- Reducing the area of occupancy of the species.
- Fragmenting an existing population into two or more populations.
- Adversely affecting habitat critical to the survival of a species.
- Modifying, destroying, removing, isolating or decreasing the availability or
  quality of habitat to the extent that the species is likely to decline.

For the Dwarf Galaxia and Growling Grass Frog species, the Inquiry is satisfied that
the effects will be minor. Its view on this is founded on the fact that for those
waterways where the Dwarf Galaxia has been detected (Flynns and Blind Joes
Creeks), construction activity will involve bridge and not culvert works which will
involve pylons located outside of the waterway flow channel. In addition, works are
planned to coincide with low flow conditions and outside of breeding seasons.

For the Growling Grass Frog, the EES indicates that the species was not detected
during survey work and that although the species has been historically recorded in
the area, the EES environmental management measure is that pre-construction
surveys will be undertaken to ensure that the species is not present before habitat is
impacted. A species specific management plan would be prepared to compensate for habitat loss.

Impacts on waterway habitats were found to be mainly associated with bridge crossings over Flynns and Blind Joes Creeks with the exception of Sheepwash Creek where approximately 200 metres of this waterway will be realigned to enable the duplicated carriageway to cross the creek in a more perpendicular manner. The submission from Ms Gilheany expressed concern over the adverse environmental effects of the proposed realignment works and the resulting loss of habitat value. Her submission particularly highlighted recent efforts at improving habitat condition along this section of waterway.

The Inquiry notes the EES has identified mitigation actions to avoid construction works within the waterway flow channel and to plan works for periods of low flow and outside of breeding seasons for listed species such as the Dwarf Galaxia. The Inquiry has reviewed the assessment in the EES regarding the existing condition and habitat value of Sheepwash Creek, which was confirmed to some extent by the Inquiry during its inspections. The Inquiry notes the limited amount of riparian vegetation including tree coverage along the section of creek proposed to be realigned. The Inquiry considers that the extent and timing of works will not lead to significant loss of habitat value. The Inquiry considers that the works proposed for Sheepwash Creek creates the opportunity for a significant improvement of habitat value associated with the extent of rehabilitation proposed.

(iv) Offsets, Net Gain and Sustainable Native Vegetation Management

The Inquiry heard from Ms Collingwood who summarised the response to achieving an appropriate net gain outcome:

*The total Net Gain target to offset the removal of native vegetation is 8.46 Habitat Hectares (HabHa). This target comprises:*

- 0.36 HabHa of Plains Grassy Woodland of very high conservation significance, providing suitable habitat for Matted Flax-lily;
- 1.00 HabHa of Plains Grassy Woodland of very high conservation significance;
- 6.48 HabHa of Plains Grassy Woodland of high conservation significance;
- 0.05 HabHa of Grassy Woodland of high conservation significance; and
- 0.57 HabHa of Swamp Scrub of high conservation significance.

*As this includes vegetation of High and Very High conservation significance, some of which provides habitat for one listed species (Dianella amoena Matted Flax-lily), these vegetation losses would need to meet ‘like-for-like’ requirements. To offset*
the loss of 30 large old trees within patches, 124 large old trees would need to be protected. In addition, to offset the loss of 31 scattered trees, 146 trees would need to be protected.

Loss of all patches of native vegetation and scattered native trees will be offset in accordance with Victoria’s Native Vegetation Management: A Framework for Action (NRE 2002). The majority of offsets will be sourced from the VicRoads owned property in Bengworden, however, VicRoads will source the following additional offsets to fully meet the Net Gain requirements of the Project:

- 0.36 HabHa of Very High significance Plains Grassy Woodland habitat that provides suitable habitat for Matted Flax-lily (most likely from within the Princes Highway road reserve between Sheepwash Creek and Flynn); and
- 152 LOTs/VLOTs (145 are available from within the Princes Highway road reserve between Sheepwash Creek and Flynn, and an additional seven will need to be secured via BushBroker or a private offsets broker).

Commonwealth Offset Requirements

The offsets to be secured as part of the Victorian government’s Native Vegetation Framework would meet all of the offset criteria under the EPBC Act draft offsets policy. However, in addition to the Victorian government’s offset requirements, some additional ‘top-up’ offsets are required by the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC).

The maximum impact to the listed community will be 9.03 ha, including both the woodland and grassland forms. Aside from Bengworden, options for offsetting the loss of the EPBC Act-listed community include: protection of the woodland form of the community to be retained in the Princes Highway road reserve between Traralgon and Flynn, and protection of additional areas of the grassland form of the community within the road reserve between Nambrok Road and Maffra-Rosedale Road or on adjacent private properties east of Rosedale that support the listed community, where landowners have indicated interest in part of their property being used as an offset site.

The Inquiry is satisfied that the arrangements proposed in the EES for implementing offsets for the loss of native vegetation associated with the Project will achieve a net gain. The Inquiry notes that VicRoads has secured a property at Bengworden that will satisfy offset requirements under Victoria’s Native Vegetation Management – A Framework for Action, 2002. The Inquiry’s views on the achievement of net gain are reinforced by the supportive response from DSE in its submission to the EES.

Having regard to the above, the Inquiry is comfortable that the second Evaluation Objective is satisfied.Offsets to be provided such as the property at Bengworden as well as the section of existing native vegetation on the south side of the Highway.
between Sheepwash Creek and Flynn are proposed to be secured. VicRoads’ response to future management arrangements was outlined in its response to the Inquiry’s Matters on Notice in items 6(viii) and 6(ix) where the use of the road reserve as an offset is possible under a Memorandum of Understanding (MOU) between VicRoads and DSE, and in accordance with VicRoads’ Recognition of Roadside Vegetation Guidelines, 2011. The process would involve recording the net gain potential of the native vegetation area, developing an offset management plan to be approved by DSE and executing an agreement between VicRoads and DSE. In relation to future arrangements to safeguard any roadside vegetation offset, VicRoads’ response was:

As outlined in Recognition of Roadside Vegetation Guidelines (VicRoads 2011, page 11), the following text is relevant:

- If an agreed roadside offset site is impacted by maintenance works, construction activity or other development undertaken by VicRoads in a way that is inconsistent with the requirements of the relevant Landowner Agreement, VicRoads will be liable to replace the impacted offset vegetation.

- If the impacted native vegetation credit has already been allocated to satisfy the net gain requirements for a VicRoads Project, VicRoads will also be liable to offset the recognised offset site in line with the requirements of the like-for-like rules of the Framework. This means that the relevant multipliers will be applied to the impacted offsets site, not the original clearance site (a ‘double offset’).

- Where the adverse impact is caused by the activities of third parties (e.g. contractors, utility authorities), those parties will be liable to the full extent possible for any vegetation or offset replacement costs.

- As such it is important that should VicRoads staff identify potential impacts on agreed roadside offset sites, consultation will be required with VicRoads Environmental Sustainability and relevant Regional Environmental Officers to investigate options to avoid and minimise these impacts. VicRoads will also be required to notify DSE should any impact occur and discuss options to rectify the issue.

- Any such impacts should also be recorded as an environmental incident in the VicRoads Enviro Tracker System.

These mechanisms are considered by the Inquiry to put in place an appropriate and sustainable management regime for offset native vegetation established, particularly through an offset management plan. The issue of sustainable long term management of native vegetation and habitat was addressed to the Inquiry by Ms Collingwood, who described how VicRoads undertakes such responsibilities:
VicRoads manages road reserves in accordance with its 2011 roadside management strategy - Roadside Management – a balanced approach, Roadside Management Strategy 2011. This policy provides clear and consistent objectives for the management of roadside areas, based on four principles:

- Enhancement of road safety and vehicle movement;
- Protection of environmental and cultural heritage values;
- Management of fire risk; and
- Preservation of roadside amenity.

Factors considered in managing roadside vegetation include:

- The presence of local, regional, State or national significance of the flora and fauna;
- The role of the road and roadside in the local and regional integrated Fire Management Plans;
- The strategic importance of the road and volume of traffic using it; and
- The surrounding land uses and landscape.

The policy recognises the community benefits associated with roadside vegetation and provides that roadsides will be managed recognising community needs and expectations for environmental responsibility, social equity and economic efficiency. Compliance with State and Federal legislation is an important restriction on the management of roadside vegetation.

VicRoads submits that there is no basis on which to infer that VicRoads has failed to appropriately manage the road reserve because it has not kept it clear of native vegetation since its declaration. This approach is contrary to State and Federal legislative frameworks that prescribe the correct approach to the avoidance, minimisation and removal of vegetation and denies the value placed on roadside vegetation by both the local and the broader community.

The response outlined by Ms Collingwood describes a management regime that is, in the opinion of the Inquiry appropriate and adequate, particularly in terms of adhering to the legislative and policy framework that governs both road and roadside vegetation management. It is acknowledged that there are limits on vegetation removal which are made all the more relevant when considering the conservation status of the vegetation concerned. In this regard, the Inquiry concludes that the long term sustainable management arrangements proposed are appropriate and satisfactory.
7.5 Findings

Overall, the Inquiry finds that the EES in Chapter 13 has sufficiently dealt with the potential impacts on biodiversity and habitat for the Project. The Inquiry accepts the concept outlined in Ms Wyatt’s evidence that the scale of environmental effects in alignment selection meant that the impacts on biodiversity and habitat values were considered to be of a Commonwealth and State level whereas land use, social and amenity impacts were significant at a local level.

The significance of impact on biodiversity and habitat from the selected Project design is considered by the Inquiry to be reasonable. Although there is some loss of endangered native vegetation and therefore an impact, the Inquiry is satisfied that the level of effect is not unacceptable.

The Inquiry is satisfied with the level of effort demonstrated in the EES to protect the environmental values associated with the Princes Highway road reserve between Traralgon East and Kilmany and considers that the mitigation measures proposed in Chapter 13 of the EES are appropriate and should be implemented through an Environmental Management Plan.

The Inquiry notes that in addition to using the property at Bengworden for securing offsets, vegetation within the road reserve or on private land may also be used. The Inquiry supports VicRoads’ intentions. It is noted that areas of grassland vegetation of high conservation significance occurs on private land adjoining the Highway east of Rosedale, both south at Property No 219A and more generally to the north. These areas offer an opportunity for supplementing any offset requirements. Accordingly, the Inquiry finds that it would be useful for VicRoads to consider discussions with landowners in these areas to determine potential opportunities for providing vegetation offsets.

The Inquiry does not make any additional recommendations with respect to biodiversity and habitat.
8. **NOISE AND VIBRATION**

8.1 **Description**

Noise and vibration issues are covered in Chapter 16 of the EES and in the Noise and Vibration Assessment Report, Appendix L in Technical Appendices Volume 4. The Noise and Vibration Assessment Report prepared by GHD was undertaken to characterise the ambient noise environment, identify sensitive receptors in the Project area and assess the potential for road construction and operation to increase noise levels generally and at sensitive receptors.

Six residential sites within the Project area were selected as representative sites. Measurements were undertaken over a seven day period at each of the sites, in accordance with VicRoads standard procedures to establish baseline conditions and calibrate a road traffic noise model of the alignment.

The six noise monitoring locations were chosen as representative of the Project. The sites were selected on the basis of proximity to the Highway, ease of access, absence of extraneous noise from other sources and property owner co-operation.

Meteorological data from the Bureau of Meteorology’s Latrobe Valley Airport weather station was obtained and used to validate the noise measurements. Noise data collected during hours with adverse weather conditions were excluded from the data set.

Attended and unattended noise level measurements were undertaken and all data was checked for consistency. Some data was excluded from the analysis due to logger connection issues and a perceived error in measurements.

Road traffic noise predictions were undertaken using the United Kingdom Department of Transport Calculation of Road Traffic Noise (CoRTN) algorithm, for 2014 and 2024. The model provides predictions of noise levels, based upon forecast traffic volumes, due to an increase in traffic volumes and the proposed duplication alignment and road surface.

The CoRTN algorithm and noise modelling process was validated against the road traffic noise monitoring data and estimated traffic counts. The model is deemed to be verified if the average difference between the measured and calculated values of the descriptors is within + or −2 dB(A).
GHD also undertook a Risk and Impact Assessment for the Project, primarily in relation to construction noise and vibration during the evening and night time periods.

8.2 Key Issues

The key issues with noise and vibration matters for the Project considered by the Inquiry relate to how well the following relevant EES Evaluation Objective set out in the Scoping Requirements has been addressed:

- To avoid or minimize noise, visual and other adverse amenity effects on local residents during the development and operation of the proposed duplicated Highway to the extent practicable.

A specific scoping requirement for the Noise and Vibration Assessment was stated on page 16-1 of the EES as follows:

- Identify proposed design and management measures to avoid, mitigate and manage any potential noise effects on sensitive receptors during construction and subsequently, to ensure the Project will comply with applicable policy.

8.3 Evidence and Submissions

Six submissions indicated that the proposed road duplication and ancillary works such as tree removal would increase traffic noise levels at their properties. The following residents provided written submissions to the Inquiry regarding traffic noise:

- Mr Kilgower (Property No 215 and Submission No 13), indicated concerns about the proximity of the Highway to his residence and the resultant noise and air pollution.
- Mr P, Ms M and Ms S Stuckey (Property No 6 and Submission Nos 15 and 15A), were concerned about the potential loss of screening vegetation and the increase in traffic noise.
- Ms M Stuckey – as above.
- Mr C Stuckey (Property Nos 7, 8 and 19 and Submission No 17), submitted that construction of the Highway closer to his residence will increase traffic noise.
- Mr Kilgower and Ms Jennings (Property No 215 and Submission No 23), noted that the proposed roadworks will encroach 40 metres into the property and the noise level will be “very loud”.
- Mr Bishoff (Property Nos 233 and 234 and Submission No 28), was concerned that no noise monitoring was undertaken at his property which
is very close to the proposed southern carriageway. The nearest noise monitoring station is approximately 2.8 kilometres east of his residence and he has concerns regarding the extrapolated values.

Mr Kilgower followed this up by making a presentation to the Inquiry.

Prior to the evidence being provided regarding road traffic noise associated with the proposed Highway duplication, Ms Collingwood introduced Mr McIntosh of VicRoads, who produced Document No 9 *VicRoads – Traffic Noise Reduction Policy*.

The Policy states that “VicRoads is committed to taking whatever steps it can to reduce the overall level of traffic noise and to limit the effect of traffic noise on nearby residents when new or improved roads are opened to traffic”.

In spite of this commitment, VicRoads apply stringent constraints to the application of their policy, which says “Where arterial roads and freeways are built on new alignments, or where existing arterial roads or freeways are widened by two or more lanes and buildings previously protected from traffic noise are exposed by removal of buildings required for widening, the traffic noise level will be limited” to specific objectives “or the level that would have prevailed if the road improvements had not occurred, whichever is the greater”.

For residential dwellings the noise level objective will be 63 dB(A) L10 (18hr) measured between 6 am and midnight.

VicRoads also have a policy in relation to *retro fitting* acceptable treatments. The trigger for considering retro fitting is when the traffic noise levels exceed 68 dB(A) L10 (18hr).

Mr McIntosh indicated that cost was a factor when determining an appropriate solution to a traffic noise problem.

Mr Pavasovic, the author of the December 2011 GHD report, provided expert evidence to the Inquiry. Mr Pavasovic indicated that the following properties would be most impacted by changes in noise levels of greater than 5 dB(A) due to the Highway duplication.
Table 5: Changes in Noise Levels Post Duplication

<table>
<thead>
<tr>
<th>Property No</th>
<th>Chainage</th>
<th>Change in dB(A)</th>
<th>Noise level dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>16900</td>
<td>8</td>
<td>60</td>
</tr>
<tr>
<td>32</td>
<td>16400</td>
<td>8</td>
<td>57</td>
</tr>
<tr>
<td>230A</td>
<td>4000</td>
<td>7</td>
<td>69</td>
</tr>
<tr>
<td>232</td>
<td>5000</td>
<td>5</td>
<td>63</td>
</tr>
<tr>
<td>233</td>
<td>5500</td>
<td>5</td>
<td>68</td>
</tr>
<tr>
<td>433</td>
<td>11500</td>
<td>5</td>
<td>65</td>
</tr>
<tr>
<td>406</td>
<td>10100</td>
<td>5</td>
<td>61</td>
</tr>
<tr>
<td>187</td>
<td>1300</td>
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<td>5</td>
<td>69</td>
</tr>
<tr>
<td>194</td>
<td>1600</td>
<td>5</td>
<td>64</td>
</tr>
<tr>
<td>16</td>
<td>13600</td>
<td>5</td>
<td>65</td>
</tr>
</tbody>
</table>

Ten of the eleven property owners listed in Table 5 did not make a submission in relation to the proposed duplication. The only submission came from Mr Bishoff.

In response to a question from the Inquiry, Mr Pavasovic indicated that the noise assessment at Property No 187, which is located approximately 150 metres west of the proposed roundabout at Minniedale Road, did not consider the roundabout. He indicated that the roundabout would have an impact upon traffic speed and therefore the noise level may be higher than estimated by GHD at Property No 187.

The GHD research indicated that there would be an increase in noise levels between present day and 2024 of greater than 5 dB(A) at 12 properties along the route, which would be "clearly noticeable" to the normal human ear. This would be attributable to a combination of the increase in traffic volumes and the change in traffic and alignment occurring due to the Project. However, mitigation to reduce operational noise levels is not required as VicRoads Traffic Noise Reduction Policy only applies to three small sections of the proposed alignment which can be classified as new alignment. These locations are:

- At the Wilmot Crescent roundabout, chainage 1400;
- South of the existing road reserve at the crossing of Flynns Creek, chainage 12200; and
- At the Velore Road intersection, chainage 11000.

In these cases, the predicted noise levels would not exceed 63 dB(A) therefore mitigation to reduce traffic noise levels is not required.
Mr Pavasovic indicated that vegetation “is not generally considered an effective traffic noise barrier, although it does have an effect in attenuating noise at frequencies above 2 kHz. However, the psychological effect of vegetation between a noise source and an observer should not be overlooked”.

8.4 Discussion

The Inquiry notes that with respect to retro-fitting to reduce traffic noise impacts, the Noise and Vibration Assessment Report, Appendix L states that for the Project, the retro-fitting policy to reduce traffic noise does not relate to Highways built prior to 1979, which Document 9, VicRoads’ Traffic Noise Reduction Policy, neglects to mention.

Table 5 indicates that six properties will experience noise levels of 65 dB(A) or more, a further two properties will experience noise levels of 63 dB(A) or more. In spite of these noise levels, which exceed the noise levels required for some form of attenuation in the VicRoads policy, no action is proposed because of the limitations imposed on the application requirements of the Traffic Noise Reduction Policy.

Property No 10, which is located on the north side of the Highway, east of Flynns Creek (chainage 12000) experiences a 4dB(A) noise level increase to 67 dB(A) due to the increased traffic activity and proximity to the Highway. However, as the EES states on page 16-12 because “the noise attributable to the new alignment section would not be above the level that would have prevailed if the new alignment had not been built and on that basis”, VicRoads advised that the Policy does not apply. In other words, noise level increases, even if exceeding 63 dB(A), that occur due to increased traffic volumes are not VicRoads responsibility.

Although the EES Scoping Requirements state that one of the tasks is to “identify proposed design and management measures to avoid, mitigate and manage any potential noise effects” subsequent to construction, there is no mention of any mitigation measures. VicRoads Traffic Noise Reduction Policy infers that mitigation action across the Project, apart from perhaps the three small sections of new alignment will generally not be necessary.

The Inquiry acknowledges that the proposed Highway duplication will have an adverse noise impact upon 12 privately owned properties. It notes that based on its noise policy, VicRoads is not proposing to provide any assistance to ameliorate these impacts. It was put to the Inquiry by Ms Collingwood that:

The policy balances the need to give proper regard to the amenity impacts of Highway construction and other factors, such as the level of effectiveness of noise attenuation measures relative to cost. It is important to note that the policy has
received a level of recognition as an acceptable basis for planning decisions. VicRoads submits that the policy is appropriate as a key driver in relation to noise attenuation measures.

Ms Collingwood referred the Inquiry to the considerations of the Traffic Noise Reduction Policy in the 2011 Panel Report into Amendment C128 to the Ballarat Planning Scheme and C29 to the Pyrenees Planning Scheme for the Western Highway Upgrade between Ballarat and Beaufort. In that matter the Panel’s comments are noted on page 58:

The Panel role does not normally extend to ‘looking behind’ adopted government policy, and the VicRoads Noise Policy has a level of recognition as an acceptable basis for planning decisions. Nevertheless, we are conscious that the VicRoads Noise policy does not appear to have been subject to the scrutiny associated with recognition in the planning scheme.

Also, in 2002 the EPA foreshadowed the development of road traffic noise strategy which would include a new State Environment Protection Policy (SEPP) to provide the policy framework and legal standards for noise levels from roads. The Panel is not aware of whether there has been any progress on that strategy.

The Inquiry is concerned that VicRoads Traffic Noise Reduction Policy does not form part of the planning scheme policy framework or controls, and has not been the subject of a public process in terms of the considerations under a planning scheme. Application of the Policy appears unfair in terms of mitigating impacts from works that improves public infrastructure and yet also impacts on affected landowners through land acquisition processes for such works. From this perspective, the Inquiry considers that noise mitigation efforts for affected properties would assist to ensure impacts from the Project are equitably addressed.

8.5 Findings and Recommendations

The proposed Highway duplication will have an adverse noise impact upon 12 privately owned properties. The Inquiry is concerned that VicRoads is not proposing assistance to ameliorate the problem based on its Traffic Noise Reduction Policy. The Inquiry finds that this represents an inequitable situation and leaves properties that have in some instances already been affected by other Project impacts, disadvantaged.

The Inquiry recommends that:

VicRoads enter into discussions with all property owners identified in Table 5 of this report and the owner of Property No 10 to determine the most appropriate form of noise attenuation measures, and that VicRoads assist in funding appropriate noise attenuation measures.
9. SOCIAL AND ECONOMIC IMPACTS

9.1 Description

Social and economic impacts are addressed in the EES at Chapter 8: Planning and Land Use, Chapter 18: Social and Chapter 19: Economic and in the Planning and Land Use Assessment Report, as well as the relevant technical appendices.

The Planning and Land Use Assessment describes the potential impacts of the Project on planning and land use in the Project area. The EES evaluation objective relevant to this is:

To avoid or minimise disruption and other adverse effects on infrastructure, land use (including agriculture, residential and future coal mining) and households, as well as road users during construction and/or resulting from the Highway alignment.

This Assessment concluded that the Project is consistent with State and local planning policies which seek to enhance connections through the region, and provide for safe and more efficient use of road infrastructure.

Relevant to social and economic impacts, the Planning and Land Use Assessment states the following in terms of short term impacts:

- **Economic impacts** - In the short term, the Project would have positive impacts, including the potential for increased localised employment during the construction phase. This could have associated multiplier effects which may benefit the local and regional community. Construction workers would be expected to come from both within and outside the region, providing increased employment opportunities in the short term.

- **Environment, amenity and access** - Negative land use impacts in the short term include amenity access impacts on surrounding land uses during the construction period of the road including temporary road closures, increased truck movements on local roads, increased noise and dust associated with construction works and access alterations.

- **Land acquisition** - Acquisition of land to facilitate road construction would not result in any short term land use changes (other than the land required for the roadway itself), and the current land use of adjoining lots would remain consistent with the current zoning controls and policies contained within the relevant Planning Schemes.
This Assessment states that longer term impacts would include agricultural viability, farm vehicle access on Highway, land severance, coal resources, flooding, lot configuration, future land use and development.

Chapter 19 of the EES discusses economic impacts of the proposed alignment. This report examined the effects the Project would have on the productivity of agricultural land, on local and regional industries and on employment. A benefit cost ratio was calculated to quantify the direct benefits and costs of the Project. The Economic Assessment found that the Project would generate employment over the three year construction phase, which has been estimated at approximately 1000 jobs or an average of 333 Full Time Equivalent (FTE) jobs per annum. Flow on employment was estimated at approximately 2,300 FTE jobs.

The direct benefits and costs of the Project would be $103 million and $227 million respectively. These benefits include savings on vehicle operating costs, travel time, crash costs and externalities. Costs considered include capital and maintenance. The Impact Assessment estimated the following savings:

- Travel time savings of $58.56 million over a 30 year life of the Project;
- Vehicle operating cost savings of $13.10 million;
- Crash costs savings of $30.48 million over a 30 year life of the Project;
- Externality savings (a reduction in greenhouse gas emissions, noise and impact on natural landscape as a result of vehicles using the route) of $0.89 million over a 30 year life of the Project.

9.2 Key Issues

The key issues with social and economic impacts matters for the Project considered by the Inquiry relate to how well the following relevant EES Evaluation Objective set out in the Scoping Requirements has been addressed:

To avoid or minimise disruption and other adverse effects on infrastructure, land use (including agriculture, residential and future coal mining) and households ...

The key unresolved social impacts issues raised in submissions relate to the acquisition of farming land, potential loss of farming income, and loss of amenity.
9.3 Submissions and Evidence

Several submissions were received from landowners whose properties would be affected by the proposed alignment. These submissions related to concerns about the loss of amenity of their properties. Mr Paulet (Submission No 18) described the historical and sentimental connection that his family has with the land. Mr Stuckey (Submission No 17) discussed the aesthetics and tranquillity of his property with old gum trees, and concern that the Highway duplication will bring the noise closer to his home. This sentiment was similarly felt by Mr and Ms Lazzaro (Submission Nos 1 and 1A) and other submitters who were concerned that the alignment would bring the road and power poles closer to their homes. Mr Kilgower and Ms Jennings (Submission No 23) agreed, describing the impacts of a loss of garden living next to a major Highway and that the Highway will be very close to their house, furthermore stating the potential danger that would exist in relation to traffic potentially veering off the road.

Mr and Ms Derham (Submission No 30) commented on the Flynn community in particular, which is a close knit group of farming families that have built their farming business over generations and rely on the land for financial income. Flynn Farm Discussion and Landcare Group (Submission No 19) stated that over the last 20 years it has undertaken a commitment to reforestation on private property, having planted thousands of trees as a wildlife band across the land in preparation of the plantations to be lost within the existing reserve. In addition it mentioned the cultural heritage issues associated with the Project and that the Project does not take into account the farming and land use history of the local community. It further stated that agricultural productivity of the area is a lifeline to the local community.

Several other submitters were concerned about the impact of the proposed alignment on their farming property, and the potential loss of farming income. Mr and Ms Ferguson (Submission No 5) manage an irrigated dairy farm and stated that acquisition of four hectares of high ground would make the farm unworkable in times of flood in terms of holding cattle. They commented: “Taking productive farm land out of production by acquisition will be an even bigger cost to the broader community. These losses go on indefinitely”. Mr and Ms Fox (Submission No 16), owners of a 201 acre dairy farm in Flynn, explained that infrastructure for the underground irrigation pipeline to the farm will need to be uprooted at large cost.

Mr and Ms Bowman (Submission No 9) stated that the proposed alignment would interfere with their existing dam, two existing watercourse crossings and their road access/gateway, which would all be impacted and need to be replaced. Mr and Ms Warren (Submission Nos 3 and 3A) commented on the loss of high ground for cattle refuge during times of flood, however supported the selected alignment stating that they could continue farming with minimal interference.
In relation to this issue, in his expert witness statement for VicRoads, James Shovelton of Mike Stephens and Associates stated that aside from impacts on the personal financial situation of farmers: “... the proportion of farming land to be acquired for the duplication on those properties inspected (by himself) is small and unlikely to be a major contributor to the continuing viability of the farming businesses”\(^8\). In relation to the impact of loss of elevated land during floods, he stated the inability to graze low lying country will have differing effects depending upon the proportion of flood prone land to higher country and the length of flooding. According to Mr Shovelton, “unless there was a high proportion of land removed by the duplication there is unlikely to be a major impact on long term profitability”\(^9\).

Mr Shovelton concluded that while there would be an impact on the profitability of properties through the loss of land, the proportion of land lost would appear to be small in relation to the general size of properties. The loss will be considered as greater if the acquired land has higher productivity compared with the rest of the property. Mr Shovelton considered that it is unlikely that the acquisition of land for the duplication will have a significant effect on the operation and viability of any of the properties, apart from the Kilgower and Ferguson properties.

Mr Kilgower (Submission No 13), proprietor of Checker Park, explained that the alignment will encroach approximately 40 metres into his property, which is comprised of stables, day yards, paddocks, a swimming dam for horses and a training track (which would be reduced in circumference making it more difficult to train horses). In addition, he mentioned that restriction on use of the land over time will lead to depreciation of the value of the property and that infrastructure would need to be shifted. He stated that the proximity of Checker Park to the proposed alignment would result in increased noise, air pollution and would adversely affect sleeping patterns and create other health issues for both the occupants and the horses – this would include the impact of night works during the construction period. The site inspections of the Inquiry confirmed this level of impact.

In relation to the Kilgower property, Mr Shovelton believed that there was a strong case that the proposed alignment would have a detrimental impact in the long term, and that permanent arrangements would need to be made to accommodate the horses which would need to be moved from the property as the result of loss of paddocks. Regarding the suggested noise level impacts, Mr Pavasovic, stated that although there would be an increase in noise level to the Kilgower property, this increase in noise would not adversely affect sleeping patterns or create other health

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\(^8\) James Shovelton expert witness report, p3.

\(^9\) James Shovelton expert witness report, p3.
Some submitters commented on the inconvenience of additional travel to their properties that the proposed alignment would create. Mr Dunbar (Submission No 10) explained that he would be forced to travel in an easterly direction for hundreds of metres before turning to travel west into Traralgon. Ms Dunbar (Submission No 11) stated that entry to her property would have to be designated to a different area, and this would need to be considered with heavy B-double cattle transport having to be diverted from Highway onto subdivision roads, not designed to take heavy vehicles, and to have suitable all weather access through paddocks to stockyards.

However Mr and Ms Anderson (Submission No 7) supported the alignment, stating that it would not “cut the Kilmany community in half” like other options did, and the proposed option will only affect a few landowners, not the entire community.

Despite the potential impacts on the farming communities, Latrobe City Council (Submission No 27) submitted that the alignment would have economic benefits. It stated that the Morwell bypass closure had impacted negatively on tourism, and that without the duplication, travellers will seek alternative routes (although Council also recognised that this can have an economic benefit for smaller towns). Council suggested that a study should be conducted into the economic impacts of the proposed duplication not occurring. Wellington Shire Council (Submission No 37) further held the view that the alignment recognises the significant social and economic benefit associated with the Project.

In its submission, VicRoads stated that in overall terms, agricultural productivity of the affected properties is unlikely to be significantly adversely affected by the Project. However, measures would need to be put in place with regards to relocation and reinstatement of infrastructure, drainage and access, so that farming operations can continue with minimal disruption. VicRoads considered that the Project represents a net community benefit for the region and to Victoria. It is expected that the Project will enhance road infrastructure and provide safety benefits at a local and regional level. According to VicRoads, the negative impacts would be minor, short term or localised, or could be mitigated.

According to the Social Impact Assessment Report (SIAR), the Project would avoid significant community severance impacts. Increased safety and faster travel times may result in increased visitors to local towns and community facilities. The Project may also improve social connectivity at the regional level. Additional social benefits would be reduced travel time between Traralgon, Rosedale and Sale. The SIAR concluded that the social impacts of the Project are anticipated to be in the range insignificant to moderate across the whole study area.
The SIAR noted that although several locations along the alignment would experience changes to visual amenity, the proposed alignment would minimise vegetation clearance, reducing impacts to amenity values along the route. The major visual change would be the removal of existing roadside vegetation to construct the proposed duplication of the Princes Highway, which would increase the visibility of traffic. Replacement planting is proposed as part of the Highway duplication. The SIAR conceded that the Project may have a negative impact on the visual amenity of dwellings fronting the Princes Highway in Kilmany.

9.4 Discussion

The Inquiry’s consideration of social and economic effects involves weighing up the impacts on the communities most affected by the Project.

As stated in its submission, the proposed alignment was selected by VicRoads to minimise adverse impacts on landowners and residents and sites of community significance. Although it is recognised that the Project would bring the Highway closer to some residences and result in some visual and noise impacts, on the whole the overall social impact is relatively low. It is acknowledged that some properties are directly impacted by the proposed alignment, and that Kilmany was identified as having a high potential for an adverse social impact. There is a limited scope to mitigate these effects through landscaping.

The preferred alignment for the duplication is proposed to more closely follow the Highway road reserve with land acquisition, apart from the exception of a section crossing Flynns Creek, involving the area of properties that front the current Highway road reserve. The width of land acquisition varies but for the most part generally ranges from 5 to 50 metres, with greater areas affected around the revised intersections of the Highway at Sale-Toongabbie Road and Velore Road at Kilmany.

The Inquiry notes that the Planning and Land Use Management Measure for risk PLU1 relating to land acquisition seeks to “reduce the widths of road reserves, construction corridors and clear zones where possible during detailed design to minimise land acquisition.” The Inquiry believes this is very important and considers that VicRoads should review the preferred alignment for the Project to fine tune final locations to achieve this management measure. (This is consistent with other recommendations that the Inquiry has made with regard to road design and layout, and noise impacts.) In making these findings and recommendations, the Inquiry considers that alternatives to the preferred alignment should be assessed in terms of impact on native vegetation, and the reduction and possible elimination of land acquisition. These need to be costed to allow decision makers the opportunity to assess and consider the merits of any alternative alignments.
As identified in the EES, the Project is likely to have both positive and negative impacts on local residents, for instance potentially increased travel times due to restrictions on right-hand turns from adjacent properties and some roads being mitigated by improved safety.

The Inquiry accepts VicRoads submission that whilst Highway impacts exist for these properties, it is the cumulative impact of visual, noise, access and other amenity impacts together that potentially result in a perceived higher level of impact for properties owners such as the Fergusons, Foxs’ and Kilgowers.

The expert evidence presented by Mr Shovelton indicates that the greatest impact will be on the Ferguson property and the Kilgower property Checker Park, however the proposed alignment results in less overall social impact than other alignment options.

9.5 **Findings and Recommendations**

The net community benefit of the proposed alignment on a broad scale is positive. It will result in a significantly safer Highway that will reduce travel times between Traralgon and Sale.

There will be a number of consequential impacts including greater connectivity and increased employment opportunities. The Inquiry finds that the proposed alignment results in some negative social and economic impacts on local residents, however these impacts are less significant than those of the other alternative alignments investigated.

There will be some direct negative impacts on properties, particularly on the north side of the existing Highway between Traralgon and Rosedale and on the south side between Rosedale and Kilmany, and especially during construction. The Inquiry considers that to better assess the social and economic impacts and disadvantages on the community, VicRoads should review the final location of the preferred alignment in comparison with an assessment of alternative alignments that integrate impacts and costs on land acquisition and vegetation, and as noted in Chapter 8 of this report, noise impacts.

The Inquiry recognises the social and economic impacts on the Ferguson and Kilgower properties and their occupants, and acknowledges that VicRoads and the owners of these properties will need to enter into negotiations for appropriate compensation. Duplication of the Princes Highway may result in Checker Park becoming non viable as a horse training facility, and this will need to be taken into account through compensation procedures.
The Inquiry recommends:

VicRoads investigate fine tuning of alternatives to the preferred Princes Highway duplication alignment that integrates the assessment of impacts and costs on avoiding land acquisition with impacts on native vegetation for the benefit of final approvals.
10. HERITAGE

10.1 Description

Heritage matters are addressed in Chapter 14 - Cultural Heritage in the EES and in the Non-Aboriginal Cultural Heritage Assessment Report, Appendix I in the Technical Appendices Volume 2 and in the Draft Cultural Heritage Management Plan, Appendix J in the Technical Appendices Volume 3. Five historical cultural heritage places have been identified to be in close proximity to the Project area, however the Strzelecki Memorial (refer to Figure 7) just east of Traralgon is the only heritage place that would be directly impacted by the proposed alignment.

Figure 7: Strzelecki Memorial

The Memorial is covered by a Heritage Overlay (HO128) in the Latrobe Planning Scheme. It is located two kilometres east of Traralgon on the south side of the Princes Highway facing north and about one kilometre west of Minniedale Road.

A CHMP is required for the Project, and a draft CHMP is included in the EES (Appendix J) to provide an assessment of the effects of the Project on Aboriginal cultural heritage and recommended mitigation, consistent with the EES scoping requirements.
In terms of Aboriginal cultural heritage, the Gunaikurnai Land and Waters Aboriginal Corporation are the Registered Aboriginal Party (RAP) responsible for the activity area and will evaluate the CHMP pursuant to section 55 of the *Aboriginal Heritage Act* 2006. The CHMP requires archaeological salvage and documentation of 10 artefact sites of low to high significance and salvage of an artefact scatter has already been completed. The CHMP further permits damage to five sites of low significance and provides management recommendations. A total of 40 Aboriginal cultural sites were identified within the activity area including three scar trees, and 37 artefact scatters.

### 10.2 Key Issues

The key issues with regard to heritage matters for the Project considered by the Inquiry relate to how well the following relevant EES Evaluation Objective set out in the Scoping Requirements has been addressed:

- *To protect Aboriginal and non-Aboriginal cultural heritage.*

Non-Aboriginal cultural heritage issues include impact on farming communities and the proposed relocation of the Strzelecki Memorial. The Non-Aboriginal (historical) Cultural Heritage Assessment and Aboriginal Cultural Heritage Management Plan examined the effects on identified places and potential unknown places.

### 10.3 Submissions and Evidence

The main point of contention in relation to non-Aboriginal Cultural Heritage was the relocation of the Strzelecki Memorial. The Traralgon and District Historical Society Inc. (Submission No 8) stated that the Strzelecki Memorial should remain on the present site for historical reasons. It recommended that a sign draw attention to the Strzelecki Memorail and a picnic/park area surrounding the Memorial be established for visitors.

The EES stated that consultation revealed that some landowners have a family connection to their land that dates back to the 1850s. Furthermore on the issue of local heritage, Mr Potts (Submission No 20) mentioned that his Pinegrove property is one of the oldest standing properties in the district and that the pine trees along the front and western boundaries and fence post and gates should be preserved as part of its historical significance. A number of other submittors considered their properties to be of local and historical significance.

In response to this, Ms Noble, heritage consultant, prepared expert evidence in relation to Aboriginal and non-Aboriginal cultural heritage matters, although she did not give evidence at the Hearing. Her evidence stated that the Pinegrove...
property requires further investigation in terms of heritage protection. The pine trees at the front of Pinegrove are on land owned by VicRoads. The front gate and fence to this property may be impacted by the proposal, however could potentially be relocated back within the property.

Latrobe City Council (Submission No 27) submitted that if retention of the Strzelecki Memorial on the same site is not possible, it would prefer to receive details of the relocation method and for the Memorial to be disassembled in one piece. The Draft Planning Scheme Amendment requires a heritage conservation management plan (provided for with the draft Incorporated Document) to ensure that the Memorial is relocated appropriately.

VicRoads (and Mr Turnbull) noted that access to the Memorial site is poor, as it is on the side of the road and there is no provision for parking. The site inspection by the Inquiry observed that the Memorial is difficult to see and even more difficult to find a place to stop safely and observe it. A potential location has been identified approximately 150 metres to the east of the existing site, which VicRoads considered would improve access to the Memorial and would be a longer term social benefit. It conceded that a temporary loss of access to the site would take place.

VicRoads added that the potential for new historical cultural heritage to be uncovered during the construction process is low, and the Environmental Management Framework could minimise the potential for damage.

A CHMP was developed by Vincent Clark and Associates. Ms Noble’s expert report stated that the investigation was conducted in accordance with the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2007. In response Mr and Ms Ferguson’s (Submission No 5) reference to Aboriginal artefacts identified at Sheepwash Creek, Ms Noble stated that recommendations for mitigation of these sites have been discussed with the RAP Gunaikurnai Land and Waters Aboriginal Corporation. Where possible the site will be avoided and where avoidance is not possible, archaeological salvage is likely to be recommended.

The CHMP identified 40 Aboriginal cultural heritage sites, including three scar trees and 37 artefact scatters, and stated that the Project avoids 16 of the 40 sites. It is not possible to avoid all sites as the Project is linear and necessarily intersects areas of cultural heritage sensitivity such as waterways where sites have been identified. The CHMP would require archaeological salvage and documentation of 10 artefact sites of low to high significance, whilst salvage of an additional artefact scatter has already been completed. The CHMP would further permit damage to five sites not located during the assessment of very low to low significance. Management recommendations for eight places located during the Stage 3 complex assessment that would be impacted are pending, and would be confirmed following further
consultation with the relevant RAP. The EES states that site compounds are likely to be located in close proximity to the Highway, but the exact number, area and locations are currently unknown. Measures to manage the potential impact on the Aboriginal cultural heritage sites have been recommended.

10.4 Discussion

Although it will result in temporary loss of access to the site, the Inquiry accepts that relocation of the Strzelecki Memorial may improve exposure and access for the public and is a necessary outcome of the alignment.

Whilst other heritage impacts may exist for landowners who have a family connection with their land, it is noted that the preferred alignment will have less impact than other alignments, and measures will be put in place by VicRoads to minimise any impacts.

The Inquiry, while satisfied that the potential impact on Aboriginal Cultural Heritage sites will be mitigated, has not reviewed the CHMP.

10.5 Findings and Recommendations

The impacts on non-Aboriginal and Aboriginal cultural heritage are minimal and can be mitigated.

The relocation of the Strzelecki Memorial is a necessary outcome of the alignment.

The Inquiry recommends:

VicRoads consult with Latrobe City Council (and the Traralgon and District Historical Society Inc.) when it relocates the Strzelecki Memorial.
11. RELOCATION OF GIPPSLAND WATER ASSETS

11.1 Description

Identification and the need to relocate the Gippsland Water assets are outlined in Chapter 6 – Project Description in the EES. Gippsland Water has four important assets located to the north of the Princes Highway road reservation, these include:

- The Regional Outfall Sewer;
- The Rosedale to Traralgon sewer main (GWF Pipeline);
- Water reticulation infrastructure (Water Reticulation Main, WRM); and
- The Tyers-Glengarry-Rosedale Water Distribution Main (Water Distribution Main, WDM).

All of these assets are impacted by the preferred road alignment which is subject to this EES.

Gippsland Water has no present need to replace or relocate any of these assets. The ROS and the GWF Pipeline cannot be located within a road reservation, whereas the other two assets can be located within a modified road reservation.

The section of the proposed duplication that impacts upon the Gippsland Water assets extends from approximately west of Kenyons Lane to west of Flynn township (chainage 2950 to chainage 9100), a length of approximately 6.15 kilometres.

The GWF Pipeline was constructed during 2008 within the existing ROS easement, and it is understood that Gippsland Water has only recently finalised compensation claims for this work with owners and occupiers.

11.2 Key Issues

The key issues with regard to the Gippsland Water matters for the Project considered by the Inquiry relate to how well the following relevant EES Evaluation Objectives set out in the Scoping Requirements have been addressed:

- To avoid or minimise disruption and other adverse effects on infrastructure, land use ...
- Overall, to identify an alignment for the Princes Highway duplication ... that would achieve a balance of economic, environmental and social outcomes consistent with an integrated and sustainable transport system that contributes to an inclusive, prosperous and environmentally sustainable State.
The key issue is that approximately 6.15 kilometres of existing Gippsland Water assets cannot be retained in its existing location if the duplication of the Princes Highway is built on the preferred alignment as proposed by VicRoads.

Since there is no other need to replace or relocate the Gippsland Water assets, other than the proposed road duplication, Gippsland Water require that VicRoads fund all construction and compensation claims for this work. The Inquiry was advised at the Hearing that it is anticipated that the total cost of relocation of the Gippsland Water assets could be in the order of $20 million.

![Part of Gippsland Water Assets lying parallel to the Princes Highway](image)

**Figure 8:** Part of Gippsland Water Assets lying parallel to the Princes Highway

### 11.3 Evidence and Submissions

A detailed submission was presented by Mr Sherman of Russell Kennedy on behalf of Gippsland Water.

Mr Sherman indicated that elements of the Gippsland Water works caused by the Project will impact on owners and residents in various ways. These include:

- Impacts during construction;
- Impacts during a restoration phase; and
- Impacts over the long term.
Because of the need for almost continuous connection of the Gippsland Water services, the works will need to be constructed at the start of the Project.

The ROS is a 1.0 metre diameter gravity trunk sewer reinforced concrete pipe constructed in the late 1950s. Over a 6.5 kilometre section, the ROS crosses three creeks as above ground structures. In addition, there are a number of above ground ventilation and control structures. Some of these structures require protective fencing.

The need for the above ground structures and access for maintenance vehicles and equipment dictates that the ROS cannot be located within the road reservation.

The GWF pipeline was constructed during 2008 within the ROS easement and north of the ROS. The GWF pipe is 200 millimetres in diameter and approximately 1.5 metres below ground level. A number of valves are located above ground to enable ongoing maintenance.

The WRM and WDM are able to be retained within the road reservation.

Mr Sherman submitted that the level of disruption to farming properties during construction is significant. Properties likely to suffer most are Property Nos 13 and 23 (Kilgower and Jennings), Property No 18 (Paulet), Property No 5 (Ferguson), Property No 29 (G Stuckey) and Property No 17 (C Stuckey).

Mr Sherman also said that power lines cannot, except in particular circumstances, be located above or near a major asset like the ROS or GWF pipeline.

In response to a question from the Inquiry, Mr Madsen, Manager Asset Planning from Gippsland Water indicated that bends or deflections of 12.5 to 22.5 degrees could be designed into the ROS. This question followed on from an Inquiry question to VicRoads representatives regarding reverse curves in the Highway alignment. The outcome of the two questions was that Mr Sherman submitted that “there (is) no gap or separation between the future road reserve and any new (GW) easement”.

Gippsland Water noted that Public Acquisition Overlay 4 is proposed, however, it was suggested that assuming the Project proceeds on completion of the Gippsland Water works, the Overlay should be removed from the various parcels of affected land and easements created.

Once the works are completed the areas subject to the easement may be used for:

- Pasture;
- Most types of driveways; or
- Minor chattels and minor fencing.
11.4 Discussion

The Inquiry was advised by Gippsland Water that prior to construction of the GWF Pipeline in 2008, Gippsland Water was advised by VicRoads that any future duplication of the Highway would occur within the existing road reservation.

Examination of the Map books and the aerial photographs (Document No 14) provided by Gippsland Water shows that the existing road carriageway east of chainage 4200 is very close to the northern boundary of the road reservation. The Water Reticulation Main west of Sheepwash Creek Road appears to be located immediately adjacent to the road pavement.

Although it may appear that an oversight may have occurred regarding the future of the Highway duplication when Gippsland Water assets were being constructed to avoid future conflicts, it appears to the Inquiry that it was the initial expectation of VicRoads that the duplication would occur within the existing road reserve. This expectation would have prevailed until such time as it was revealed that an EES would be necessary, and that the vegetation within the road reserve was deemed to be significant. Pipeline construction in 2008 would have pre-dated listing of the critically endangered ecological vegetation community in January 2009.

If the works proceed in accordance with the VicRoads preferred alignment, a new easement will be required to be created on private land. In the majority of locations, the easement will be on open paddocks and in due course, with appropriate restoration and time, Gippsland Water believe the land will return to open paddocks.

However, in the case of the Kilgower/Jennings, Paulet and Ferguson properties, the works may result in a longer term impact.

11.5 Findings and Recommendations

The VicRoads preferred road alignment will result in the relocation of a 6.15 kilometre length of Gippsland Water infrastructure some of which was constructed in 2008. The Inquiry finds some initial significant impact on landowners from construction for relocating the ROS, primarily due to the extent of works required. However, the Inquiry considers that these effects are temporary because once works are completed and the land re-instated, previous land use will be able to resume. Gippsland Water has stated that an easement can be used for the assets rather than permanent land acquisition, and hence the long term effects from the permanent loss of land from production should not eventuate. The need for an easement compared to a Public Acquisition Overlay for Gippsland Water assets is further discussed in Chapter 14 of this report.
The Inquiry has already made recommendations encouraging VicRoads consider reviewing alignment locations during detailed design to minimise the need for land acquisition and re-iterates these with regard to relocation of Gippsland Water infrastructure.

The Inquiry recommends that:

**VicRoads further review the alignment of the duplication to minimise any adverse impact upon Gippsland Water assets.**
12. OTHER MATTERS

12.1 Description

The EES addressed Soils and Geology, Groundwater and Surface Water issues associated with the Project. These matters are discussed below with respect to impacts on their values and potential hazards and impacts.

(i) Soils and Geology

Soils and geology are covered in Chapter 10 of the EES and in the Soils and Geology Assessment Report, Appendix E in the Technical Appendices Volume 1. The soils and geology of the Project area comprises sands, clays and gravels intersected by the tributaries of the Latrobe River with fluvial gravel, sand, silts and clays associated with swampy deposits.

Risks associated with the Project include the potential for works to encounter contaminated soil mainly associated with farming activity and the Gippsland Railway line, acid sulphate soils and the potential for soil erosion mainly from cut and fill earthworks associated with road and pipeline construction.

(ii) Groundwater

Groundwater is covered in Chapter 11 of the EES and in the Groundwater Assessment Report, Appendix F in the Technical Appendices Volume 2. The Project study area is crossed by multiple groundwater aquifers ranging in depth below the ground surface of between 30 metres to 700 metres. There are 14 licensed bores within the Project study area which are used mainly for farm irrigation. The deeper bores tend to have a lower level of salinity compared to those bores that are shallower (less than 30 metres deep) and hence are of higher quality for beneficial uses.

Groundwater Dependent Ecosystems (GDEs) tend to be those associated with waterways or where the groundwater level is within 10 metres of the surface. Within the Project area they would be focused on waterways such as Sheepwash Creek, Flynns Creek, Blind Joes Creek and Nambrok Creek as well as other minor tributaries and drainage lines crossed by the existing Highway.

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10 Groundwater Dependent Ecosystems (GDEs) are ecosystems that rely on groundwater to meet all or some of their water requirements.
(iii) Surface Water

Surface Water is covered in Chapter 12 of the EES and in the Surface Water Assessment Report, Appendix G in the Technical Appendices Volume 2. The Project study area is crossed by multiple surface waterways including four major waterways; Sheepwash Creek, Flynns Creek, Blind Joes Creek and Nambrok Creek; and twelve minor waterways including four tributaries of the Latrobe River or Loy Yang Creek. These waterways form part of the Lower Latrobe River catchment, which in turn is a river system that flows into Lake Wellington forming part of the Gippsland Lakes Ramsar Wetland of international significance.

For waterways, the EES proposes that culvert crossings shall be used for all but three waterways with bridge crossings proposed for Sheepwash Creek, Flynns Creek and Blind Joes Creek. Nambrok Creek is proposed to be crossed using culverts given that its current condition is similar to an irrigation channel with little riparian habitat intact. Design for waterway crossings is proposed in the EES to follow a ‘like for like’ approach with culverts matching existing culvert crossings and bridge spans matching those waterways with existing bridge crossings.

At Sheepwash Creek it is proposed to realign the waterway for a 200 metre section to enable the crossing by the proposed northern carriageway of the duplication to be perpendicular to the Creek. Ms Collingwood tabled a concept plan for the realignment (Document No. 1) for the benefit of the Inquiry. Design details for the creek crossing have not been undertaken, however the EES notes that:

*The realignment would require the construction and reinstatement of the channel profile and vegetation. Further work would be required to develop a design for the realignment of the channel. It is likely that the WGCMA would require some offset works to compensate for disturbing and realigning the creek.*

Flood risk is a matter identified in the EES with regard to ensuring that waterway crossings do not interfere with floodwater flows and movement, and avoiding any aggravation of flood risk on surrounding property. Both the Latrobe and Wellington Planning Schemes have applied the Floodway Overlay and Land Subject to Inundation Overlay over parts of the Project study area. The EES identifies that the Project has a higher level of risk for impacting flood behaviour at the crossings associated with Sheepwash Creek, Flynns Creek and Blind Joes Creek. Because of the wide and flat nature of the floodplain at Flynns Creek, the EES recognises that additional works may be required to ensure that road and bridge construction compensates for floodwater storage.
12.2 Key Issues

The key issue with the soils and geology, groundwater and surface water for the Project considered by the Inquiry relate to how well the following relevant EES evaluation objective set out in the Scoping Requirements has been addressed:

- To protect catchment values, surface water and groundwater quality, stream flows and floodway capacity, as well as to avoid impacts on protected beneficial uses.

Looking at this objective, the key issues for the Inquiry are whether the Project construction works and operation will have a significant impact:

- On and from soils and geological qualities of the study area;
- On groundwater quality and its dependent ecosystems; and
- On the water quality and flood behaviour characteristics of waterways proposed to be crossed by the duplication.

12.3 Submissions and Evidence

There were no submissions made with respect to soils and geology. One submission expressed concern with groundwater bores and three submissions were made with respect to surface water.

Mr Bishoff (Submission No. 28) raised concern over a 100 metre deep groundwater bore which is used to supply stock water to his farm. The bore provides water via a reticulated system to tanks and a dam, and would be lost within part of the land proposed to be acquired for the duplication. The EES identified that groundwater bore locations and operational status within the construction corridor would be confirmed prior to construction, and landowners would be consulted regarding any potential impacts. If bores are to be impacted, replacement may be required subject to consent from Southern Rural Water.

With regard to surface water, the submissions from Mr Logan from the Rosedale Caravan Park (Submission No 34) and Ms Nassiokas from the Rosedale Chamber of Commerce and Industry Inc. (Submission No 38 and Document No 18) supported the duplication alignment to the north crossing Blind Joes Creek at the western end of Rosedale, from not only a safety and amenity viewpoint, but also in recognition of avoiding impact on riparian vegetation and notably a significant large gum tree within the road reserve.

In contrast, the submission from Ms Gilheany (Submission No. 14) expressed concern over the proposed works to realign Sheepwash Creek from the perspective
of disturbance to the creek banks and potential risk of erosion and sedimentation downstream. She stated that:

*The proposed works will alter flow rates and potentially adversely affect an already precious waterway particularly as it merges with Loy Yang Creek.*

She further referred to the installation of piers and other major earthworks as having residual detrimental effects on a sensitive waterway which is environmentally regenerating.

In response to the issue of erosion, the Inquiry heard evidence from Dr Wills who stated that:

*... the realignment of Sheepwash Creek will cause only short term adverse impacts downstream arising from a limited amount of sediment release during construction. This sediment will be flushed through in subsequent flood events and cause no long term alteration to the creek downstream. The realigned stream will be constructed with appropriate structural components such as bends to ensure that the new channel is stable, and that the velocity of the water does not increase to the level which would cause erosion, or reduce to the level that would cause an increase in flood frequency.*

12.4 Discussion

(i) Soils and Geology

The Inquiry notes that there were no concerns expressed from any party with respect to soils and geology. Impacts that may arise from exposure to contaminated land and acid sulfate soils have been addressed in the EES through its risk assessment, with the likelihood of sources of contamination expected to be low and, if present, localised. The EES proposes contingency actions relating to assessment (mainly consisting of soil sampling and geotechnical testing) as part of the detailed design phase for the Project and supported by actions such as compliance with relevant EPA guidelines and appropriate in-situ treatment or waste recovery/disposal measures.

Risks associated with soil erosion and impacts from cut and fill earthworks have been identified and addressed in the EES through environmental management measures. These are considered to be appropriate by the Inquiry. Preliminary estimates indicate that large quantities of fill material may need to be imported, however the EES recognises the need during detailed design of the Project for analysis to plan the sourcing and disposal of correct volumes of material, and to reduce the risk associated with unplanned sourcing or disposal of materials. Fill material would be sourced from surplus materials on site. Additional sources
include local quarries etc. under arrangement with Contractors. Soil erosion risks are proposed to be managed through compliance with VicRoads contract specification provisions for erosion and sediment control.

The Inquiry is satisfied that significant environmental impacts on soils and geology from the Project are unlikely. However minor impacts may have the potential to occur but these can be managed in accordance with relevant CEMPs and Environmental Management Measures proposed in the EES.

(ii) Groundwater

The Inquiry notes some concern expressed with respect to the loss of groundwater bores with the Project, and the potential impacts on farm and stock water supply. Impacts that may also arise from the Project relate to groundwater quality, which is primarily linked to either interception of groundwater from excavation works and dewatering processes, or spillage from materials or chemicals that pollute groundwater aquifers.

The Inquiry notes that the EES considers the level of risk to groundwater to be negligible to low.

Groundwater bores affected by the Project can be identified and assessed and replaced if necessary, after consultation of landowners. This form of response appears satisfactory to the Inquiry, however the environmental management measure to support this intent should be made clearer, to ensure that impacts on irrigated farming activity are not significantly disrupted.

Construction of the duplication will mainly be above the existing ground surface level and would require fill. Excavation is expected to be limited, with maximum depths of around three metres. Dewatering during construction is expected to be limited with associated low risks to groundwater aquifers. These measures support the negligible level of impact rating identified by the EES on groundwater supplies and quality. The requirement to relocate Gippsland Water assets, including the ROS, is expected to cause minimal impacts on groundwater based on the submission from Gippsland Water (Document No. 15) that the depth of construction for the pipeline would most likely be no more than three metres.

Given the current depth of groundwater aquifers within the Project study area at between 30 to 700 metres, the Inquiry is satisfied that significant environmental impacts on groundwater and GDEs from the Project are unlikely, and that minor impacts may have the potential to occur. These impacts can be managed in accordance with relevant CEMPs and Environmental Management Measures proposed in the EES.
(iii) Surface Water

The Inquiry has previously acknowledged that from a biodiversity and habitat viewpoint, the bridge crossings will avoid significant environmental impacts by spanning piers to avoid flow channels and timing works to occur during periods of low flows and outside of breeding seasons of listed protected species.

The EES identifies risks with waterway crossings through the removal of instream and riparian vegetation, with the exception of Flynns Creek and Blind Joes Creek where instream and some riparian vegetation would be retained. The removal of vegetation could impact on the stability of banks and increase risks of erosion. Construction activities could have the potential to impact on water quality due to erosion and sedimentation. In response to these risks, the EES identifies that impacts on water quality can be minimised by scheduling works on waterways during periods of no or low flows, and through the use of silt fences and sediment traps.

Likewise, with regard to the proposal to realign Sheepwash Creek, the Inquiry is aware that the detailed design of these works have not been finalised. Any works on waterways will require the approval from the West Gippsland Catchment Management Authority (WGCMA) through a Works on Waterways approval under the Water Act 1989. Regarding Sheepwash Creek in particular, the EES states:

Further investigations would be undertaken to develop a design concept for the realignment of the creek which would form part of the works on waterway application to the WGCMA. The design concept would include the following considerations:

- Natural channel design in terms of planform and shape.
- Stable longitudinal gradients with possible grade control structures.
- Varying bank slopes to a maximum of 1:3.
- Additional protection of bank toes at bends.
- Vegetated and protected banks with appropriate species selection.
- Creation of habitat values (e.g. placement of pools and riffles).
- Include planting of trees to provide shading and habitat benefit.

All of the above provides comfort to the Inquiry that the concerns of Ms Gilheany regarding the environmental impacts from the works will not be significant. The Inquiry confirms these can be managed through the CEMP's and Environmental Management Measures outlined in the EES.

In terms of the floodplain function of Flynns Creek and the need for works to compensate for loss of floodplain function due to construction of the road
embankment (and the wide and flat nature of the floodplain), the Inquiry notes the response from VicRoads to the Matters on Notice states that any need for compensatory works will need to be agreed upon in consultation with the WGCMA during the detailed design phase of the Project. Such works, if required, would be managed through appropriate measures included in the contractor’s Environmental Management Plan.

Generally, the Inquiry is satisfied that with regard to the selection of the types of waterway crossings with a culvert or a bridge. The key criteria to be achieved will relate to hydraulic flow set by the WGCMA. If the waterway crossing impedes the passage of water too much, then the hydraulic criteria will not be met and approval may not be forthcoming. Assuming that the hydraulic criteria are met with either construction method, then the net environmental benefit in terms of flow is considered to be negligible (particularly as there is an existing waterway crossing in place).

12.5 Findings and Recommendations

Overall, the Inquiry considers that Chapters 10, 11 and 12 of the EES have sufficiently dealt with the potential impacts on soils and geology, groundwater and surface water for the Project. The significance of impact on the values and from the hazards of these matters from the selected Project design are considered by the Inquiry to be either negligible or low, and ultimately reasonable.

The Inquiry considers that the mitigation measures proposed in Chapters 10, 11 and 12 of the EES are satisfactory. These should be implemented through an appropriate Environmental Management Plan, with the exception of risk GW13, which should be amended to provide clear action on replacement of groundwater bores impacted by the Project.

The Inquiry makes the following recommendations in relation to groundwater:

Amend Risk GW13 in the Groundwater Environmental Management Measures to read:

- Confirm bore locations (and operational status) within construction corridor and conduct landholder consultation.
- Groundwater bores impacted through loss due to construction will be replaced. Construction groundwater supplies would be from licensed bores and subject to the Southern Rural Water approvals process and/or groundwater trading rules/local management rules.
- Audit of landholders would be conducted of identified water supplies that may be impacted, e.g. dams or bores.
13. ENVIRONMENTAL MANAGEMENT FRAMEWORK

13.1 Description

An Environmental Management Framework (EMF) is included in Chapter 21 of the EES. This EMF addresses the matters specified in the EES Scoping Requirements and guides the design, construction and operational phases of the Project. The EMF guides development of an overall Project Environment Protection Strategy (PEPS), contract specification and various management plans. These deal with cultural heritage, listed species specific management plans and vegetation offsets, contractor EMS and CEMPs. An environmental risk assessment was conducted, and specialist impact assessments undertaken for the proposed duplication alignment which informed the EMF with regards to Project risks, impacts and mitigation actions.

The statutory basis of the EMF system will be via various consents and approvals required under legislation, and through the Incorporated Document proposed under the draft Planning Scheme Amendments for the Latrobe and Wellington Planning Schemes. It is proposed to amend the Planning Schemes to provide specific controls for the Project within an Incorporated Document which will have the effect of exempting the Project from the use, buildings and works, and vegetation removal permit requirements of the planning schemes, subject to certain conditions being met. Such conditions include the requirement for CEMP(s) to be prepared and implemented consistent with the EMF included under Chapter 21 of the EES, the requirement for an offset management plan to be prepared for unavoidable losses of native vegetation, and the requirement for a heritage conservation management plan for the relocation of the Strzelecki Memorial.

Under the EMF, the PEPS would be prepared by VicRoads and would be used by VicRoads to guide environmental management for the Project, and to track implementation of overall environmental commitments and approval conditions. It would contain an action plan and commitments table to deliver on all environmental management measures and objectives from the EES, and include a summary of commitments made in key management plans and approval documents such as the CHMP, Offset Management Plan and Species Specific Management Plans for EPBC Act listed species. VicRoads would prepare a contract specification which would contain all the requirements for the construction contractor, including preparation of an EMS and CEMPs for the Project, and the need to comply with all relevant management plan requirements.
With respect to construction, the successful contractor would become responsible for preparing an EMS which generally outlines objectives, environmental values, proposed mitigation treatments, monitoring and review procedures. The contractor will be responsible for preparing CEMPs which covers the matters addressed under the EES, as well as site/issue specific matters such as traffic management, groundwater management, acid sulphate soil management, landscape management, heritage conservation and community engagement.

VicRoads will be responsible for on-going management of the Project post construction/operational phases, including road maintenance. Resource and energy waste minimisation requirements will be built into the contract specification requiring the contractor to reuse as much material as possible.

Monitoring of contract performance will be the responsibility of VicRoads with monthly reporting by the contractor to VicRoads outlining performance against the EMS and CEMPs, as well as any other items specifically required by VicRoads. The contractor will be required to appoint an independent auditor for contract implementation performance and compliance, with an initial audit conducted prior to construction commencing to confirm that the EMS and CEMPs are consistent with best practice environmental guidelines including EPA guidelines, with quarterly audits during the construction phase.

### 13.2 Key Issues

The key issue with the Environmental Management Framework for the Project considered by the Inquiry relate to how well the following relevant EES evaluation objective set out in the Scoping Requirements has been addressed:

- To provide a transparent framework with clear accountabilities for managing environmental effects and hazards associated with the Project in order to achieve acceptable environmental outcomes.

Looking at this objective, the key issue for the Inquiry are whether the EMF is satisfactory and will be complied with by both VicRoads and contractors.

### 13.3 Discussion

The Inquiry considers that the general approach of an EMF followed by detailed PEPS, EMS and CEMPs tied into the conditions under the Incorporated Document within both the Latrobe and Wellington Planning Schemes is reasonable. These actions should provide a clear, strong and transparent framework for managing detailed environmental effects.
Having appropriately qualified and skilled personnel to manage construction and operation of the Project will be critical to:

- Ensure good relations with the local community, the local governments and State government agencies such as DSE during construction;
- Ensure the environmental management framework is implemented successfully; and
- Lead to improved environmental outcomes.

The range of environmental management measures and actions listed in sections 21.7.1 to 21.12.11 and Tables 21-2 to 21-12 of the EES provide a comprehensive suite of provisions that the Inquiry believes will adequately provide for the mitigation of any significant impacts that may have the potential to arise during Project construction. This view is supported by these measures specifying the nature of risk to each environmental measure, and describing the management measure with clear responsibility for compliance nominated.

The Inquiry notes the incorporation within the environmental management measures of the relevant extracts of the VicRoads standard construction contract specification that would be adopted for the Project, as well as management measures to address specific risks identified by the various assessments undertaken for the EES. It is noted that objectives have been developed with consideration to the EES Scoping Requirements, relevant environmental legislation and potential environmental impacts associated with the Project. Indicators have been developed to measure the effectiveness of proposed environmental management measures with respect to environmental objectives.

This network of cascading provisions from the VicRoads PEPS to the contractor’s EMS and various CEMP’s should provide an effective management regime for environmental management for the Project. The Inquiry is comforted by the statement in the beginning of Chapter 21 of the EES regarding the tone of wording:

*Note that where the conditional tense is used throughout the EES (e.g. the use of the word ‘would’ rather than ‘will’), this is in reference to the possibility that the Project may not be approved and may therefore not proceed. If however the Project does proceed, the environmental management measures outlined in this section will be implemented.*
13.4 Findings and Recommendations

The Inquiry is satisfied that the environmental management framework to be put in place by VicRoads is adequate and acceptable. The suggestion in the EES that upon approval of the Project, the positivity of wording is carried through to the subservient documentation under the EMF to ensure that environmental management measures are actioned is supported.

Having considered the EMF, the Inquiry considers areas that the issues raised under the EES and within this report are addressed in terms of their inclusion within the relevant CEMPs to be developed for the Project.

The Inquiry makes the following recommendations:

Ensure that the scope and intent of all the Inquiry’s recommendations are appropriately translated and incorporated into the VicRoads Project Environment Strategy (PEPS) and the contracts, the Environment Management Strategy (EMS) and the various Construction Environmental Management Plans (CEMPS).
14. PLANNING SCHEME AMENDMENTS

14.1 Description

It is proposed that Planning Scheme Amendments (Amendment C65 to the Latrobe Planning Scheme and Amendment C76 to the Wellington Planning Scheme) be prepared to facilitate the Project.

Draft Planning Scheme Amendments were included in the EES at Appendix Q of the Technical Appendices Volume 4. While exhibited with the EES, it is not a formal exhibition of an Amendment within the meaning of the Planning and Environment Act 1987.

It is proposed that as an outcome of this current process, separate Planning Scheme Amendments will be prepared for the Latrobe and Wellington Planning Schemes pursuant to Section 20(4) of the Planning and Environment Act 1987, with the Minister for Planning being the planning authority.

Under the provisions of the relevant zones and overlays, a planning permit would usually be required for the following components of the Project:

- Buildings and works under the Heritage Overlay 128 (Latrobe), Design and Development Overlay 3 (Latrobe), Public Acquisition Overlay 1 (Latrobe), and Land Subject to Inundation Overlay (Wellington).
- Removal, lopping and destruction of vegetation under the Public Acquisition Overlay 1 (Latrobe), Environmental Significance Overlay 2 (Wellington), and Environmental Significance Overlay 7 (Wellington).
- Destruction, lopping or removal of native vegetation under Clause 52.17 of the Wellington and Latrobe Planning Schemes.
- Application of a Public Acquisition Overlay to land required to be acquired by VicRoads for the Princes Highway duplication, and by Gippsland Water for the ROS, recycled water main and associated infrastructure.

Planning approval for the proposed works would be implemented by undertaking Planning Scheme Amendments to the Latrobe and Wellington Planning Schemes as follows:

- Amend the schedules to Clause 52.03 ‘Specific Sites and Exclusions’ and incorporate a document by listing the document at the schedules to Clause 81.01, to exempt the Project and associated works and vegetation removal from requiring permits subject to certain conditions being met;
• Apply a Public Acquisition Overlay by amending relevant planning scheme maps to include land which may be acquired for the Project, and amend the schedules to Clause 45.01 to clarify the acquisition purpose; and
• Relocate Heritage Overlay 128 (Latrobe Planning Scheme only), to correspond with the relocation of the Strzelecki Memorial.

The Amendments would have the effect that no further planning permits would be required for the Project. A Planning Scheme Amendment to each planning scheme for all further works and activities would:
• Provide for a single planning approval and reduce administrative work required by the Latrobe City and Wellington Shire Councils by omitting the need to consider further planning permit submissions.
• Have already been reviewed by the Minister for Planning under the EES process.
• Implement the outcomes and recommendations of the Minister’s Assessment via the proposed inclusion of an Incorporated Document in the schedule to Clause 52.03 in the respective planning schemes.

A draft of the Incorporated Document is included in the draft Planning Scheme Amendments at Appendix Q of the Technical Appendices. The draft Incorporated Plan exempts the Project from the requirement for a planning permit under any provision of the Latrobe and Wellington Planning Schemes subject to the conditions prescribed in Clause 5 of the Incorporated Document. The conditions set out at Clause 5 address the following matters:
• Preparation of a Construction Environmental Management Plan(s);
• Preparation of an Offset Management Plan; and
• Preparation of a Heritage Conservation Management Plan.

The EES process will inform and assist in the finalisation of the Incorporated Document.

14.2 Key Issues

The key issues to resolve are whether the draft Planning Scheme Amendments included in the EES are suitable to manage the Project and whether there is any need for further exhibition.

14.3 Submissions and Evidence

Submissions about the draft Planning Scheme Amendments were received from the Latrobe City Council and Gippsland Water. Wellington Shire made a short
submission supporting the Project but did not provide any commentary about the draft provisions.

Neither Council attended the Hearing, as both indicated their submissions would stand.

The only matters raised by Latrobe City Council related to the Schedule to the Public Acquisition Overlay and the Incorporated Document. With regard to the schedule, Council recommended that VicRoads be nominated as the acquiring authority (which would be consistent with how it is expressed for the Wellington schedule). With regard to the Incorporated Document, Latrobe Council requested that under the fourth dot point in Clause 4, the last sub-dot point be amended so that “… any further subdivision of land that is affected by the proposal which creates a new lot, must be consolidated with an adjoining parcel”.

In responding to the Public Acquisition Overlay issue raised by Latrobe City Council, Ms Wyatt advised that:

*The reason for this difference is that in preparing the draft amendment documentation, GHD have sought to utilise the existing schedules. This difference already exists. I would have no objection to altering the Wellington PAO schedule, as submitted by Latrobe Council, provided that Wellington Shire Council confirm that there are no other PAO1’s that would be affected by the change.*

Further, Ms Wyatt said in relation to the potential for subdivision to be permitted under the Incorporated Document, that:

*It is anticipated that no new lots would be required. Parts of existing lots would be subdivided such that land would be acquired for consolidation with the road reserve.*

In this regard, Ms Wyatt noted that this matter is covered in the Environmental Management Framework and the issue raised by Latrobe Council is consistent with the EES.

In response to questions from the Inquiry, Ms Wyatt also accepted that it would be appropriate to insert wording under Clause 5.2 of the Incorporated Document relating to the preparation of a CEMP(s), requiring any Plan(s) to be prepared to the satisfaction and approval of the Minister for Planning in consultation with DSE, Latrobe City and Wellington Shire Councils. This would provide a level of control with respect to the Plan(s) addressing all relevant matters and compliance with the EES, EMF and Minister’s Assessment.

Gippsland Water sought clarification that land set aside with respect to Schedule 4 to the Public Acquisition Overlay is not less than 20 metres in width, commencing from
the northern alignment of the adopted road reserve, and that there be no gap between Public Acquisition Overlay 1 (the road reserve) and the new easement required for the relocation of the Gippsland Water assets. Gippsland Water further noted that the name of its assets be correctly identified in Clause 4 of the Incorporated Document. In this regard, Mr Sherman provided suggested wording of Clause 4.0 by letter dated 23 April 2012.

14.4 Discussion

Ms Collingwood advised that the basis for the Minister for Planning to be the planning authority for the amendments is warranted for the following reasons:

- The planning scheme amendments will facilitate a regionally significant Project that is consistent with State strategies to improve road safety, efficiency and capacity.
- The Project has been designed on the basis of extensive community consultation, and the EES process requires that stakeholder views are known and reasonably considered.
- The Project would have already been reviewed under the EES process and the planning scheme amendments would implement the outcomes and recommendations of the Minister’s Assessment.
- Co-ordination is required to facilitate decision making by multiple agencies.

Neither the Latrobe or Wellington Councils had any issues regarding this course of action, nor did submitters. The issues raised by both Latrobe Council and Gippsland Water can be easily remedied. Both go to matters of detail and do not materially impact on the draft Amendments in any way. VicRoads seemed comfortable with those changes and the Inquiry generally endorses these.

With regards to Gippsland Water, the Inquiry notes the comment from Mr Sherman that although the use of the PAO4 as proposed “serves as a tool to achieve any Gippsland Water acquisition, the overwhelming majority of Gippsland Water’s interests will be secured by an easement only”. He mentioned that:

At some future date, assuming the Project proceeds with the GW Works completed as contemplated, the PAO4 should be removed from the various parcels of affected land.

This highlights for the Inquiry the matter of the extent of application of the Public Acquisition Overlay. Conscious of the desire to minimise to the greatest extent possible the need to acquire private land for the Project, the Inquiry would like to see VicRoads, as a first principle, avoid the need to use the Public Acquisition Overlay 4 for the Gippsland Water assets affected by the Project in lieu of the use of easements
where feasible. VicRoads, as part of the design development process, should seek to reduce the extent of land acquisition. The Inquiry considers that if these actions can be undertaken prior to finalising the amendment procedures, there would be an improved chance that impacts on landowners from land acquisition could be better managed.

Generally, the Amendments are consistent with the key strategic directions of both Councils and do not conflict with any policy objectives.

As a side note, the Inquiry considers this is to be an appropriate way to deal with the proposed planning controls as part of an EES process, as it does not overly complicate the process by having exhibition of too many components. It simplifies the process for all users, particularly local submitters.

### 14.5 Findings and Recommendations

The Inquiry considers that the approach taken in the EES to provide the information about the required Planning Scheme Amendments to facilitate the Project is fair and reasonable. It included the draft Planning Scheme Amendments in the exhibition material and this was able to be reviewed and commented on by any concerned party. The Inquiry is satisfied that both draft Amendments, the application of the relevant Public Acquisition Overlays and the Incorporated Document are well considered and provide the appropriate guidance necessary to enable the Project to be realised.

The Inquiry makes the following recommendations:

1. Prior to finalising the Planning Scheme Amendments, VicRoads undertake the following:

   Through the detailed design process for the Project, more accurately determine the extent of the Public Acquisition Overlay required.

   Reconsider applying the Public Acquisition Overlay 4 in favour of Gippsland Water’s assets in lieu of the use of easements in consultation with Gippsland Water to minimise the extent of land acquisition required for the Project.

2. Approve Amendment C65 to the Latrobe Planning Scheme and Amendment C76 to the Wellington Planning Scheme via a s20(4) process, with the Minister for Planning as Planning Authority, subject to the following modifications:
Amend the Schedule to the Public Acquisition Overlay in the Wellington Planning Scheme to rename the Acquisition Authority from ‘Roads Corporation’ to ‘VicRoads’.

Amend the second and fourth dot points of Clause 4.0 of the Incorporated Document to read as follows:
- Buildings and works associated with the relocation of the Regional Outfall Sewer, the Rosedale to Traralgon Sewerage Rising Main and water supply infrastructure affected by the Princes Highway duplication.
- Activities ancillary to any of the abovementioned matters including, but not limited to:
  - Creating and using lay down areas for construction purposes.
  - Demolishing and/or decommissioning buildings, structures, and works.
  - ...
  - Any subdivision of land that is affected by the proposal which creates a new lot, must be consolidated with an adjoining parcel.

3. Amend Clause 5.2 of the Incorporated Document to read as follows:
- Consistent with the staging of works, and prior to the commencement of construction or carrying out of any buildings or works, Construction Environmental Management Plan(s) must be prepared to the satisfaction and approval of the Minister for Planning in consultation with the Department of Sustainability and Environment, the Latrobe City Council and the Wellington Shire Council and implemented in accordance with the Environmental Management Framework included as part of the Princes Highway Duplication, Traralgon East to Kilmany Environment Effects Statement [date] and any requirements as described in the Minister for Planning’s assessment of the Environment Effects Statement.
15. MATTERS OF COMMONWEALTH INTEREST

15.1 Description

Matters of Commonwealth interest relate to the approvals required under the EPBC Act and to MNES. MNES issues were addressed under Chapter 20 of the EES and supported by Chapter 13 dealing with Biodiversity and Habitat and in the Biodiversity and Habitat Assessment Report prepared by GHD Pty Ltd in Appendix H of the Technical Appendices Volume 2. The Minister for Sustainability, Environment, Water, Population and Communities determined on 8 October 2010 that the Project is a controlled action under the EPBC Act. The controlling provisions under the Act relevant to this Project, as noted in the Terms of Reference are Sections 18 and 18A (listed threatened species and communities).

The Australian Government has accredited the Victorian EES process as the required assessment process under the EPBC Act to assess matters relevant to that Government’s decision to approve the Project under that Act. At the conclusion of the EES process, the Minister for Planning’s assessment will be provided to the Federal Minister for Sustainability, Environment, Water, Population and Communities.

As stated in the Terms of Reference 19(i) the Inquiry is tasked with providing advice to the Minister for Planning on considerations relevant to the Assessment that will inform decisions on the Project under the EPBC Act.

In preparing the EES, a number of surveys were undertaken of areas both within and outside the Project area targeting the presence and extent or otherwise of the listed ecological community Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland and other individual flora and fauna species listed under the EPBC Act including:

- Mattt Flax-lily (Dianella amoena), which was detected;
- Dwarf Galaxias (Galaxiella pusilla), which were detected;
- Strzelecki Gum (Eucalyptus strzeleckii), which was not detected;
- Clover Glycine (Glycine latrobeana), which was not detected;
- River Swamp Wallaby-grass (Amphibromus fluitans), which was not detected;
- Eastern Great Egret (Ardea modesta), which was not detected;
- White-bellied Sea Eagle (Haliaeetus leucogaster), which was not detected; and
- Growling Grass Frog (*Litoria raniformis*), this was not detected despite historical records of the presence of the species in the Project area.

(i) **Threatened Communities**

The Project area contains approximately 210 hectares of the critically endangered ecological community *Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana)* Grassy Woodland and Associated Native Grassland (both woodland and grassland forms). According to the 2010 Policy Statement 3.22 prepared by the then Commonwealth Department of the Environment, Water, Heritage and the Arts for the ecological vegetation community, it was listed as critically endangered in January 2009 because it “represents one of Victoria’s most threatened and fragmented endemic ecosystems”. The Policy states that:

> The ecological community was formerly widespread across the central Gippsland plain, but now less than five per cent of its original extent remains. Most known remnants are small – under 10 hectares – and comprise isolated fragments surrounded by a mostly cleared, agricultural landscape. Many patches of the ecological community require recovery efforts because they are so degraded due to weed and feral animal invasion, loss of native biodiversity and rural tree dieback that their capacity to maintain ecosystem function is impaired. The protection, management and recovery of remnants on public and private land is crucial to the future survival of this unique ecological community.

The alignment preferred by VicRoads will result in the removal of 0.55 hectares of the woodland form and 8.48 hectares of the grassland form, totalling 9.03 hectares of the community lost. Based on the extent of the ecological community provided in the 2008 Commonwealth Listing Advice on *Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana)* Grassy Woodland and Associated Native Grassland prepared by the Threatened Species Scientific Advisory Committee, the extent of the ecological community has declined from approximately 120,000 hectares to around 660 to 5,600 hectares, with the grassland form ranging in extent from 30 to 60 hectares and the woodland form ranging from 900 to 5,600 hectares. This represents a very severe decline of this ecological community to remnants of 0.75% to 4.6% of pre-European extent. The response from VicRoads to the Inquiry’s Matters on Notice indicate that the conservative estimate of the maximum total extent is 930 hectares, and the conservative estimate of the minimum total extent is 660 hectares.

The extent of loss of this ecological community is predicted to be in the range of 0.97 to 1.4% based on the above best and worst case scenarios of extent. Additional survey work undertaken for the EES identified an additional 172 hectares of the grassland form of the ecological community mainly in the Nambrok area east of Rosedale, which would alter the percentage loss to around 0.87 to 1.1%. VicRoads
has formed the view that 1% loss of the ecological community is considered to represent a significant level of impact and accordingly, has sought to identify the objective of further reducing the extent of loss to below 1% during the detailed design process of the Project.

(ii) Threatened Species

With respect to threatened species, approximately 211 individuals of the Matted Flax-lily were recorded within the Project area, mainly occurring on the south side of the Highway generally between Traralgon and Flynn. The preferred duplication alignment of the Project will result in the loss of four individual plants. Aligning the duplication within the road reserve would result in the loss of up to 33 plants.

For the Dwarf Galaxias, this species has been recorded both upstream and downstream of the proposed crossing over Flynns Creek, and downstream only of the proposed crossing over Blind Joes Creek. Potential habitat for the species was identified within Sheepwash Creek, although no individuals were recorded.

The presence of the Growling Grass Frog was not detected during surveys undertaken as part of preparing the EES. The EES suggests that the species may be present within well vegetated dams located near waterways, and may use waterways as movement corridors.

15.2 Key Issues

The key issues with MNES for the Project considered by the Inquiry relate to how well the following relevant EES evaluation objectives set out in the Scoping Requirements have been addressed:

- To avoid or minimise effects on species and ecological communities listed under the Flora and Fauna Guarantee Act 1988 (Vic) or the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) and to comply with requirements under Victoria’s Native Vegetation Management – A Framework for Action.

- To provide for the sustainable long-term management of retained native vegetation and habitat areas within and adjacent to the road reservation along the duplicated Highway.

In considering the evaluation objectives for MNES, the Inquiry believes it is important to consider how the Project responds to the relevant significant impact criteria under the Matters of National Environmental Significance Significant Impact Guidelines 1.1 for:
• Ecological communities listed as critically endangered under the EPBC Act and whether the Project would:
  - Reduce the extent of an ecological community; and
  - Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads.

• Species listed as endangered under the EPBC Act and whether the Project would:
  - Lead to a long-term decrease in the size of a population.
  - Reduce the area of occupancy of the species.
  - Fragment an existing population into two or more populations.
  - Adversely affect habitat critical to the survival of a species.
  - Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

• Species listed as vulnerable under the EPBC Act and whether the Project would:
  - Lead to a long-term decrease in the size of an important population of a species.
  - Reduce the area of occupancy of an important population.
  - Adversely affect habitat critical to the survival of a species.
  - Disrupt the breeding cycle of an important population.
  - Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.
  - Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species’ habitat.
  - Introduce disease that may cause the species to decline.

Matters to consider associated with the above issues are whether the identified extent of impacts on the listed ecological community and threatened species are significant or not, and whether environmental management requirements and proposed offsets are appropriate.

Subsidiary issues linked to the above relate to matters raised by submitters about:
• Taking into account existing and/or future revegetation in the local area towards offsets in order to reduce the extent of private land acquisition; and
• The ability to translocate the Matted Flax-lily.
15.3 Submissions and Evidence

MNES issues were addressed through evidence presented to the Inquiry from Dr Wills from GHD Pty Ltd. Regarding MNES, the submission from Mr Paulet representing the Flynn Farm Discussion and Landcare Group (Submission No 19) raised matters in relation to the Matted Flax-lily and the critically endangered ecological community.

Mr Paulet submitted that:

- If the existing road reserve was used for duplicating the Princes Highway, out of 211 Matted Flax-lily plants located within the road reserve up to 33 individuals would be impacted, resulting in an impact of 15% of the population; and
- The EES did not target surveys for the Matted Flax-lily within the existing revegetation sites on private land that had been undertaken by the Landcare Group.

Mr Paulet questioned that if four plants are proposed to be removed and translocated, is it possible that the remaining 33 plants impacted could also be translocated, or at least assessed with a costing analysis under the EES, which he said, was lacking.

Regarding the critically endangered ecological community, Mr Paulet submitted that if the existing road reserve was used for duplicating the Princes Highway, approximately 28.4 hectares of the ecological community would be lost representing between 3 to 4.3% of the surveyed community. He said this extent of loss may not be significant given the commitment of the Landcare Group to undertake both existing and future revegetation works that could contribute towards suitable offsetting of vegetation loss.

In response to these issues, Dr Wills gave evidence that the removal/translocation of four individuals of the Matted Flax-lily is regarded as a non-significant impact under the EPBC Act but that the removal/translocation of up to 33 specimens is likely to be regarded as a significant impact. He stated that:

*Under the Act, opportunities to avoid and minimise impacts need to be considered, which is what the Project has done. In addition, while Matted Flax-lily is a species that has been successfully translocated in the past, any removal of habitat is also likely to further impact patches of native vegetation of high and very high conservation significance, some of which are also classified as the EPBC Act-listed community, Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland.*
With respect to recording the presence of the Matted Flax-lily, it was the evidence of Dr Wills that:

*Our experience is that the occurrence of the Matted Flax-lily in the local area is strongly correlated with the rail reserve, Princes Highway road reserve, and a few other local road reserves. Furthermore, the species is seldom seen on private land.*

Dr Wills described the limitations of using revegetation in achieving suitable offsets under the State Native Vegetation Management Framework. However, the EES in Chapter 20 describes the following criteria under the Draft Policy Statement 4.1: Use of Environmental Offsets under the Environment Protection and Biodiversity Conservation Act 1999:

- Environmental offsets should be targeted to the matter protected by the EPBC Act that is being impacted.
- A flexible approach should be taken to the design and use of environmental offsets to achieve long term and certain conservation outcomes which are cost effective for proponents.
- Environmental offsets should deliver a real conservation outcome.
- Environmental offsets should be developed as a package of actions - which may include both direct and indirect offsets.
- Environmental offsets should, as a minimum, be commensurate with the magnitude of the impacts of the development and ideally deliver outcomes that are ‘like for like’.
- Environmental offsets should be located within the same general area as the development activity.
- Environmental offsets should be delivered in a timely manner and be long lasting.

### 15.4 Discussion

With regards to responding to the evaluation objectives for MNES, the Inquiry is conscious of the significant impact criteria for the listed critically endangered ecological community, endangered and vulnerable species. In addition, the Inquiry recognises that the avoidance and minimisation of impacts to the significant native vegetation and communities was a key driver in selecting the proposed duplication alignment for the Project. Equally, however, the Inquiry is aware and acknowledges that given the size and linear nature of the Project, some impacts upon native vegetation are unavoidable, and these must be balanced with impacts with respect to matters such as land use, amenity and cost.
(i) Gippsland Red Gum Grassy Woodland and Associated Native Grassland Ecological Community

With respect to how the Project design has considered the legal status of the Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland, the EES notes that:

The proposed duplication alignment was selected to avoid fragmenting large areas of the community such as the south side of the existing Highway between Minniedale Road and Flynn's Creek Road and the large areas of grassland that extend into private land between Nambrok Road and Maffra- Rosedale Road. These areas are considered to be of higher ecological value and more important for the long-term sustainable management of the ecological community.

The Inquiry considers that this selection has attempted to satisfy State net gain policy. Implementation of this policy has seen the level of impact on the listed ecological community reduced to an extent whereby around 1% of the community would be impacted by the Project. The EES recognises that a loss of greater than 1% of this community would be considered a significant impact because of the lack of specific impact guidelines for this particular ecological community. This is because of the effects of clearing for the Project would still cause an impact through a reduction of the extent of the community and an increase in its fragmentation, two of the relevant significant impact criteria listed under Key Issues above.

Given the severity of decline and loss of the ecological community since European settlement to an extent ranging from less than 5% to less than 1%, the Inquiry considers that the position of VicRoads to view a 1% level of impact on the ecological community is realistic and appropriate. A 95% to 99% extent of loss is reason for this ecological community to have critically endangered status, which heightens the importance of ensuring that further losses are minimised as much as possible. It also reinforces that offsetting losses need to include the protection of the very high and high quality vegetation remnants to avoid continued further losses of the ecological vegetation community.

The Inquiry notes that the mitigation actions proposed for the ecological community generally seek to:

- Restore and revegetate degraded remnants of the ecological community, including replanting of Gippsland Red Gum (Eucalyptus tereticornis) and key ground layer species, to ameliorate the impacts of dieback; and
- Investigate options to maintain and improve connectivity of remnants, including the protection of paddock trees.
These actions are to be supported by a series of pre-construction, construction and post-construction measures that involve further reducing vegetation loss through detailed design, supporting revegetation works through seed collection, management planning for the long term management of retained native vegetation, weed management and monitoring vegetation condition and mitigation actions.

These mitigation actions will contribute towards minimising the significance of the effects on MNES and are considered appropriate to be implemented as part of the Project EMF.

(ii) Matted Flax-Lily

The EES recognises that removal of four Matted Flax-lily plants would not lead to a long term decrease in the size of the population of the species, given this is a small portion of the 211 plants found in the Project area. The Inquiry considers that this is a reasonable conclusion. Removing and translocating four individual plants, which is noted in the National Recovery Plan as a feasible action, should not result in either a significant reduction in the presence of the species or in further fragmentation of the species in the area.

In contrast, locating duplicated carriageways within the existing Highway road reserve would cause significant impacts with respect to both a reduction in the overall range of the species and further fragmentation of the species. This would occur through the increased extent of vegetation loss from clearing within the ecological community within which the species is currently found.

(iii) Dwarf Galaxias

For the Dwarf Galaxias, the level of impacts are considered to be minor given the mobility of the fish and the design of construction works proposed through bridge and not culvert works which will involve pylons located outside of the waterway flow channel and are planned to coincide with low flow conditions and outside of breeding seasons. In particular, the Technical Appendix H - Biodiversity and Habitat Assessment Report identified that the quality of riparian habitat for the species upstream in Blind Joes Creek was relatively poor.

(iv) Growling Grass Frog

For the Growling Grass Frog, the EES indicated that the species was not detected during survey work, and that although the species has been historically recorded in the area, the EES environmental management measure identifies that pre-construction surveys will be undertaken to ensure that the species is not present
Before habitat is impacted. A species specific management plan would be prepared to compensate for habitat loss.

For the Growling Grass Frog (and the Dwarf Galaxias), the EES proposes preparing a species specific management plan which will address pre-construction, construction and post-construction actions to mitigate impacts on both species. Actions proposed include bridge crossing design with minimal footprint impact on the ground, timing of works to avoid high flow conditions and breeding seasons, management of drainage and runoff to reduce favourable conditions for competitive species such as Eastern Gambusia (Gambusia holbrooki), and revegetation and habitat restoration works and plantings.

Similar to the comments on the mitigation actions proposed for the ecological community, the Inquiry endorses the actions for mitigating the significance of the impacts on the listed flora and fauna species proposed under the EES.

15.5 Findings

Overall, the Inquiry considers that the EES in Chapters 13 and 20 has sufficiently dealt with the potential impacts on Matters of National Environmental Significance for the Project. The significance of impact on listed ecological community and species from the selected Project design is considered by the Inquiry to be reasonable. The Inquiry considers that provided the four Matted Flax-lily plants can be translocated to suitable receptor sites, it is unlikely that the Project will have a significant impact on this species. Impacts on the Dwarf Galaxias are considered to be minor, subject to the mitigating actions contained in the Environmental Management Framework being adhered to. Although there is some loss of the critically endangered Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland, the Inquiry is satisfied that the EES has established an appropriate impact significance gauge based on 1%. The level of effect on the vegetation community from the Project is not significant.

The Inquiry is satisfied with the level of effort demonstrated in the EES to protect the environmental values associated with the Princes Highway road reserve between Traralgon East and Kilmany. It considers that the mitigation measures proposed in Chapter 20 of the EES are satisfactory and should be implemented through the appropriate Environmental Management Plans.
16. “AT WHAT COST?”

As stated in Chapter 5, it is clear that the duplication of the Princes Highway is a much needed and long overdue Project. The Inquiry heard from Ms Collingwood who submitted that:

*The key benefit of the proposal is to deliver significant improvements to road safety by eliminating existing safety risks and providing for a higher road safety standard overall. The road safety benefit of the Project is expected to result in a reduction of 3.8 casualty crashes per year. The duplication will:

- Separate opposing traffic movement;
- Increase capacity and improve safety for vehicles entering and exiting the Highway;
- Provide clear zones on either side of the carriageways and separation of the carriageways to assist in reducing the severity of run-off-the-road type crashes;
- Improve road curves in areas such as the Flynn's Creek crossing and around Nambrok Road – this is expected to reduce the likelihood of run off road type crashes;
- Overall improvements to the horizontal and vertical alignment of the Highway are expected to improve sight distances, with benefits along the length of the Highway, including at direct property accesses and intersections.*

That it should be approved is not in question, but rather the key issue to be resolved is whether the preferred alignment is the best option from a road design and layout perspective, an environmental perspective, and a social and economic perspective.

VicRoads initially pursued an alignment that was within the existing road reserve, requiring minimal land acquisition. The decision of the former Minister for Planning that an EES was required for the Project and the subsequent investigations into the value and prevalence of listed flora and fauna within the road reserve resulted in an extensive range of alternative options being considered. Several of these were disregarded as failing to achieve the EES Evaluation Objectives. The short-listed options were then subjected to a detailed assessment, with the preferred route then determined.

As stated previously, the Inquiry process involves balancing impacts on Commonwealth and State listed flora and fauna communities, against the social and economic impacts from acquisition of private land. However it is apparent that the route option of least impact for biodiversity has the most impact on landowners.
Many submitters had questioned why the Highway duplication did not make use of its existing reservation. Their bewilderment was reinforced by the existence of the road reserve since before the Second World War. However, this seems to be because most of the significant native vegetation in the local landscape exists within the road reserve. The value of this vegetation is high despite evidence showing that much of it appears to be regrowth.

The Inquiry questioned the economic impact of this Project and the high costs involved in pursuing the preferred alignment. For instance, the key issue for Gippsland Water is the reconstruction of a secure and operationally appropriate form of the ROS, the Rosedale to Traralgon Sewer Main (often referred to as the ‘Gippsland Water Factory Pipeline’), water reticulation infrastructure commencing between Stammers Road and Minniedale Road (near to Traralgon), and the 250mm Tyers-Glengarry-Rosedale Water Distribution Main. Gippsland Water stated in its submission that it has no present need to relocate any of its assets, the need only arises due to the Project. The relocation, as required by the Project alignment, is anticipated to be in the (upper) order of $20 million. This is a considerable cost to place on top of the Project.

The EES states that in the absence of the Project, predicted traffic volume growth is anticipated to result in peak period traffic volumes approaching capacity by 2024 and being over capacity by 2034, with predicted impacts on flow breakdowns, travel time conditions and travel time reliability. With future predicted increases in traffic volumes it is reasonable to assume that the rate of casualty crashes would increase too. There is no doubt that duplication of the Princes Highway is required.

The Inquiry is of the view that the proposed alignment that minimises impact on biodiversity and habitat, on EVCs and EPBC Act listed species and ecological vegetation communities such as the Gippsland Red Gum Grassy Woodland and Associated Native Grassland, Matted Flax-lily and Dwarf Galaxias, has a higher cost. This high cost is created by having to identify an alignment for the duplicated road carriageways that is located to avoid these vegetation and habitat areas, and therefore pushing the alignment into adjacent private land. What this high cost demonstrates is a changing set of values that seeks to protect environmental values, especially where they are rare and threatened.

In the view of the Inquiry, this shift in values is particularly evident when vegetation communities that are critically endangered are at stake. The Gippsland Red Gum Grassy Woodland and Associated Native Grassland is an ecological vegetation community listed as critically endangered. This means that within the Gippsland Bioregion there remains little of this form of vegetation community. Consequently, the presence of remnants of a vegetation community such as this becomes highly
valuable; to the extent that it is of national importance because of the little of what is left and the desire to save it.

This Project highlights the tension between impacts on values that compete on National, State, regional and local scales. The Inquiry notes the high cost of undertaking this Project, however, it also recognises the value of the assets that are affected.

VicRoads stated that land acquisition has been minimised where possible, and the Inquiry agrees that the preferred alignment has less impact on land acquisition than other alignments. Agricultural productivity is unlikely to be significantly adversely affected if measures such as relocation and reinstatement of infrastructure, drainage and access are implemented. The Project will bring expected improvements to road safety and to the economy. Accordingly, the Inquiry supports the proposed alignment, but is concerned about the substantial costs involved in reconstructing the ROS and other water reticulation infrastructure (particularly when such assets have in their own right been subject to recent construction activity without the benefit of knowing future plans for road construction), the extent of private land acquisition, as well as VicRoads wide median treatment options which add to this cost burden, and the consequential social and economic impacts.

For these reasons, the Inquiry recommends that VicRoads review its preferred alignment option to minimise land acquisition prior to approval of the Project.
17. CONCLUSIONS – RESPONSE TO TERMS OF REFERENCE

At paragraph 19 under Outcomes, the Terms of Reference for the Inquiry note that it must produce a written report for the Minister for Planning presenting:

- the Inquiry’s findings regarding the potential environmental effects (impacts) of the Project and alignment alternatives documented in the EES, including impacts on relevant matters of NES under the EPBC Act;
- advice regarding the availability and effectiveness of feasible mitigation measures or procedures to prevent, minimise or compensate for environmental impacts, including on relevant matters of NES, either proposed by the proponent or suggestions made in public submissions or by relevant agencies;
- any recommended modifications or feasible alternatives to the Project, including in relation to alignment and design, and their likely impacts, including on matters of NES;
- a statement of appropriate conditions for approval of the action under Victorian and Commonwealth law, which should be applied to achieve acceptable environmental outcomes in the context of applicable legislation and policy;
- any matters relevant to the proposed planning scheme amendments prepared by VicRoads;
- relevant information and analysis in support of the Inquiry’s conclusions and recommendations; and
- a description of the proceedings conducted by the Inquiry and a list of those consulted and heard by the Inquiry.

In providing its overall conclusions, the Inquiry addresses each of these matters in turn.

(i) Potential environmental effects

The proposed duplication of the Princes Highway between Traralgon East and Kilmany raises a number of key environmental effects. The Project would result in the loss of approximately 20.66 hectares of native vegetation, including 9.03 hectares of the EPBC Act listed ecological community – Gippsland Red Gum Grassy Woodland and Associated Native Grassland. Four specimens of the Matted Flax-lily would need to be translocated to avoid destruction.
Other environmental effects relate to land use, social and economic impacts from land acquisition of 78 hectares from 68 allotments to facilitate the duplication. Land acquisition has been heavily influenced by the key drivers of avoiding impacting on vegetation and wide median and intersection design. Associated effects from land acquisition include loss and disruption of land use activity, farming infrastructure and economic impacts. Construction activity with the duplication also creates noise and amenity impacts.

The Inquiry considers that the evaluation process for alignment selection has appropriately considered avoiding impacts on vegetation as well as land use, social and economic impacts by identifying an alignment that mostly follows the existing Highway, apart from a section where the duplication crosses Flynns Creek. Subject to the detailed recommendations for mitigation, environmental management and further detailed Project design that have been made under the EMF, the environmental effects of the Project can be managed and the adverse impacts on environmental values within the Project area should not be significant.

(ii) Availability and effectiveness of feasible mitigation measures

The EES has established an EMF which requires a series of plans to be prepared including CEMP(s), and Offset Management Plans for achieving compliance with Victoria’s net gain policy and individual species management plans to address particular management issues for listed flora and fauna species. The Inquiry is satisfied that the environmental management system will provide an adequate and appropriate suite of mitigation measures that will avoid significant adverse effects arising from the Project.

(iii) Modifications or feasible alternatives

The Inquiry has raised issues relating to road design, and has recommended further review and assessment of median widths, intersection treatments, the use of wire rope barriers in some locations, and a U-turn design during the detailed design process. The Inquiry’s key consideration is to reduce the extent of land acquisition while maintaining safe road design standards and minimising impacts on vegetation.
(iv) **Conditions for approval**

Conditions of approval have been recommended by the Inquiry throughout its report. Generally, the Inquiry is satisfied that the Environmental Management Framework will establish an appropriate approval and management regime for the Project and should be included in approvals, where relevant.

(v) **Planning Scheme Amendments**

Draft Planning Scheme Amendments have been prepared for the Project and publicly exhibited with the EES. The Inquiry is satisfied that the structure of the Planning Scheme Amendments are appropriate and should be approved by the Minister for Planning under Section 20(4) of the *Planning and Environment Act 1987* subject to the Inquiry’s recommendations for modifying aspects of the Amendment documentation.

(vi) **Information and analysis in support of conclusions and recommendations**

The Inquiry was provided with a copy of the full EES and its technical appendices, all submissions, further technical evidence and many other documents (see Appendix 3) in response to its Directions and as part of the Hearing process. It has taken this material into account in its deliberations and considers that it has fairly assessed the EES and the submissions made in response to it.

(vii) **Description of the proceedings and consultation**

The Inquiry held a Directions Hearing on 27 March 2012, and a public Hearing over four days on 12, 13, 17 and 18 April 2012 in Traralgon and Sale. Any party who wished to be heard was provided with that opportunity, and there were no restrictions placed on the available time for any presentation, in that the time requested by submitters was allowed for in the Hearing timetable.

A total of 38 written submissions were received in response to the exhibition process (see Appendix 2) and a number of these submitters also presented at the public Hearing. All submissions and the issues raised in them were taken into account by the Inquiry.
18. INQUIRY RECOMMENDATIONS

For the reasons set out in this report, the Inquiry endorses the Environment Effects Statement and the draft Planning Scheme Amendments to allow for the duplication of the Princes Highway between Traralgon East and Kilmany, subject to the following recommendations:

1. Road Alignment, Layout and Design

1.1 Through the detailed design process, VicRoads review the following aspects of the Princes Highway duplication, subject to satisfying the aims of maintaining adequate and appropriate road and traffic safety, reducing the extent of land acquisition required, reducing the impacts on the Gippsland Water assets, and minimising additional losses of native vegetation:

- Between chainages 1700 and 3400, seek to reduce the median widths to incorporate a 15 metre wide residual median where practical.
- Between chainages 3400 and 9200, seek to reduce the median widths where practical.
- At the intersections of Kenyons Lane, Barrs Lane, Flynns Creek Road, Wrights Lane, Cricket Street, Nambrok Road, Maffra-Rosedale Road, Settlement Road and Sale-Toongabbie Road, based upon a traffic safety and cost benefit analysis, determine whether a 15 metre wide residual median would be acceptable.
- Between chainages 13400 and 14300, review the alignment of both carriageways to minimise the impact of property acquisition on the Pinegrove property.
- Between chainages 1500 and 6800 east of Rosedale, determine whether the road alignment can be modified to reduce or eliminate proposed land acquisition, and to determine whether the installation of a wire rope barrier would be more cost effective than a nine metre wide clear zone and a 10 metre clearance that results in significant property acquisition.
- At the alignment of the Princes Highway at the Gippsland railway crossing at Kilmany, review and compare construction costs with land acquisition costs.
- The status of Barrs Lane as an over-dimensional route and if required, ensure that all over-dimensional vehicles have escorts.
The road configuration at the corner of the Princes Highway and Flynns Creek Road to ensure that it does not impinge on the Stuckey property (Property No 6).

- The location and design of the U-turn facility at approximately chainage 2200 taking into consideration heavy vehicles exiting from the Dunbar property (Property No 207) onto the Princes Highway.

1.2 VicRoads adopt an 80 kilometre per hour design speed through the Minniedale Road roundabout, and review the alignments of the eastbound carriageway, west of the roundabout and the westbound carriageway east of the roundabout.

2. Noise and Vibration

2.1 VicRoads enter into discussions with all property owners identified in Table 5 of this report and the owner of Property No 10 to determine the most appropriate form of noise attenuation measures, and that VicRoads assist in funding appropriate noise attenuation measures.

3. Social and Economic Impacts

3.1 VicRoads investigate fine tuning of alternatives to the preferred Princes Highway duplication alignment that integrates the assessment of impacts and costs on avoiding land acquisition with impacts on native vegetation for the benefit of final approvals.

4. Heritage

4.1 VicRoads consult with Latrobe City Council (and the Traralgon and District Historical Society Inc.) when it relocates the Strzelecki Memorial.

5. Gippsland Water Assets

5.1 VicRoads further review the alignment of the duplication to minimise any adverse impact upon Gippsland Water assets.

6. Groundwater

6.1 Amend Risk GW13 in the Groundwater Environmental Management Measures to read:

- Confirm bore locations (and operational status) within construction corridor and conduct landholder consultation.
- Groundwater bores impacted through loss due to construction will be replaced. Construction groundwater supplies would be from
licensed bores and subject to the Southern Rural Water approvals process and/or groundwater trading rules/local management rules.

- Audit of landholders would be conducted of identified water supplies that may be impacted, e.g. dams or bores.

7. **Environmental Management Framework**

7.1 Ensure that the scope and intent of all the Inquiry’s recommendations are appropriately translated and incorporated into the VicRoads Project Environment Protection Strategy (PEPS) and the contracts, the Environment Management Strategy (EMS) and the various Construction Environmental Management Plans (CEMPS).

8. **Planning Scheme Amendments**

8.1 Prior to finalising the Planning Scheme Amendments, VicRoads undertake the following:

- Through the detailed design process for the Project, more accurately determine the extent of the Public Acquisition Overlay required.
- Reconsider applying the Public Acquisition Overlay 4 in favour of Gippsland Water’s assets in lieu of the use of easements in consultation with Gippsland Water to minimise the extent of land acquisition required for the Project.

8.2 Approve Amendment C65 to the Latrobe Planning Scheme and Amendment C76 to the Wellington Planning Scheme via a s20(4) process, with the Minister for Planning as Planning Authority, subject to the following modifications:

8.2.1 Amend the Schedule to the Public Acquisition Overlay in the Wellington Planning Scheme to rename the Acquisition Authority from ‘Roads Corporation’ to ‘VicRoads’.

8.2.2 Amend the second and fourth dot points of Clause 4.0 of the Incorporated Document to read as follows:
- Buildings and works associated with the relocation of the Regional Outfall Sewer, the Rosedale to Traralgon Sewerage Rising Main and water supply infrastructure affected by the Princes Highway duplication.
- Activities ancillary to any of the abovementioned matters including, but not limited to:
  - Creating and using lay down areas for construction purposes.
- Demolishing and/or decommissioning buildings, structures, and works.
- ...
- Any subdivision of land that is affected by the proposal which creates a new lot, must be consolidated with an adjoining parcel.

8.2.3 Amend Clause 5.2 of the Incorporated Document to read as follows:
- Consistent with the staging of works, and prior to the commencement of construction or carrying out of any buildings or works, Construction Environmental Management Plan(s) must be prepared to the satisfaction and approval of the Minister for Planning in consultation with the Department of Sustainability and Environment, the Latrobe City Council and the Wellington Shire Council and implemented in accordance with the Environmental Management Framework included as part of the Princes Highway Duplication, Traralgon East to Kilmany Environment Effects Statement [date] and any requirements as described in the Minister for Planning’s assessment of the Environment Effects Statement.

Kathryn Mitchell   Des Grogan   Chris Harty

15 June 2012
APPENDIX 1: TERMS OF REFERENCE

TERMS OF REFERENCE

Inquiry appointed under Section 9 of the Environment Effects Act 1978 and Advisory Committee appointed under Section 151 of the Planning and Environment Act 1987 to report on the proposed duplication of the Princes Highway between Traralgon East and Kilmany

Name

1. The combined Inquiry and Advisory Committee is to be known as the ‘Princes Highway Traralgon East to Kilmany Duplication Project Inquiry and Advisory Committee’ ("the Inquiry").

Purpose

2. The purpose of the Inquiry is to provide an integrated assessment of the potential effects of the proposed duplication of the Princes Highway, between Stammers Road Traralgon East and Templeton Road Kilmany ("the Project"). The report of the Inquiry will inform the Minister for Planning’s Assessment of the Project under the Environment Effects Act 1978 (the EE Act) and will also assist the Minister to make decisions about the proposed amendments to the Latrobe and Wellington planning schemes to facilitate the Project.

3. In overview, the Inquiry is to:

   i. Consider and report on the potentially significant effects of the Project taking into account the procedures and requirements the Minister required for the preparation of the Environment Effects Statement (EES) under section 8B(5) of the EE Act (see Attachment 1) and the controlling provisions under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (Commonwealth) as outlined in paragraph 9 below; and

ii. Address matters relevant to the alignment and design of the Project and the draft planning scheme amendments prepared by VicRoads.

Background

Project

4. VicRoads proposes to duplicate the Princes Highway between Traralgon East (Stammers Road) and Kilmany (Templetons Road) as part of a larger Project to duplicate this Highway between Traralgon and Sale.

5. It is likely that most of the duplication will involve construction of a second carriageway adjacent and parallel to the existing Highway, either in the road reserve or on adjacent land. In some places two new carriageways may be required. The Project will also include works to make safer provision for junctions with intersecting roads, and works to relocate...
6. The section of the Princes Highway which is already duplicated through the township of Rosedale is not included in the Project for the purposes of the EES process.

**EES decision**

7. On 22 October 2010, the former Minister for Planning determined that an EES was required for the Project under the EE Act. The EES has been prepared by the proponent in response to Scoping Requirements issued for the proposal in March 2011.

8. The EES was placed on public exhibition, together with draft amendments to the Latrobe and Wellington planning schemes, from 18 January 2012 until 9 March 2012.

**Commonwealth decision**

9. In addition, the Project was referred to the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities, and was determined to be a controlled action under the EPBC Act. It therefore requires assessment and approval under the EPBC Act. The controlling provisions under that Act relate to listed threatened species and communities (sections 18 and 18A).

10. The accredited EES process under the Commonwealth-Victorian Bilateral Agreement for Environmental Impact Assessment applies to this Project. Consequently, the Minister for Planning’s Assessment report to the Commonwealth Minister will also need to assess the impacts of the Project on matters of national environmental significance (NES) in accordance with Schedule 1 Part C of the Agreement.

**Planning approval process**

11. VicRoads has prepared draft planning scheme amendments to facilitate the Project:

   i. Draft amendment C65 to the Latrobe Planning Scheme, which would amend the planning scheme to:

      a. include land required for the Princes Highway Duplication and relocation of sewerage and water infrastructure in Public Acquisition Overlays;

      b. remove the existing Heritage Overlay (HO128) and include land required for the relocation of the Strzelecki Memorial;

      c. exempt the Princes Highway Duplication and associated works from requiring planning permits; and,

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11 The agreement came into operation on 25 June 2009 and provides for the accreditation of specified Victorian statutory processes to ensure an integrated and coordinated assessment of actions requiring Commonwealth approval.
d. include the ‘Princes Highway Duplication, Traralgon East to Kilmany, Incorporated Document, November 2011’ as an incorporated document in the Latrobe Planning Scheme.

ii. Draft amendment C76 to the Wellington Planning Scheme, which would amend the planning scheme to:

a. include land required for the Princes Highway Duplication in a Public Acquisition Overlay;

b. exempt the Princes Highway Duplication and associated works from requiring planning permits; and

c. include the ‘Princes Highway Duplication, Traralgon East to Kilmany, Incorporated Document, November 2011’ as an incorporated document in the Wellington Planning Scheme.

Other approvals

12. Under Victorian law, the Project requires the following additional approvals:

i. an approved Cultural Heritage Management Plan under the Aboriginal Heritage Act 2006 to manage works in areas of cultural heritage sensitivity;

ii. consent to remove a listed vegetation community and protected flora (four individual Matted Flax Lily plants to be translocated) under the Flora and Fauna Guarantee Act 1988;

iii. consents for works on waterway under the Water Act 1989; and

iv. consent to disturb heritage sites under the Heritage Act 1995.

Method

13. The Inquiry may inform itself in any way it sees fit, but must consider the exhibited EES and draft planning scheme amendments, any submissions received in response to these exhibited documents, the proponent’s response to submissions and other relevant information provided to, or obtained by, the Inquiry, having regard to relevant statutory provisions, policies and associated plans.

14. The Inquiry must conduct a public Hearing and may make other such enquiries as are relevant to its consideration of the potential environmental effects of the Project.

15. The Inquiry must conduct its Hearings in accordance with the following principles:

i. the Hearings will be conducted in an open, orderly and equitable manner, in accordance with the rules of natural justice, with a minimum of formality and without the necessity for legal representation;

ii. the Inquiry process will aim to be exploratory and constructive, where adversarial behaviour is minimised; and,
iii. parties without legal representation will not be disadvantaged – cross-examination will be strictly controlled and prohibited where deemed not to be relevant by the Inquiry Chair.

16. The Inquiry will meet and conduct Hearings when there is a quorum of at least two of its members present including the Inquiry Chair.

Submissions are public documents

17. The Inquiry must retain a library of any written submissions or other supporting documentation provided to it directly until five years has passed from the time of its appointment.

18. Any written submissions or other supporting documentation provided to the Inquiry must be available for public inspection until the submission of its report, unless the Inquiry specifically directs that the material is to remain ‘in camera’.

Outcomes

19. The Inquiry must produce a written report for the Minister for Planning presenting:

i. the Inquiry’s findings regarding the potential environmental effects (impacts) of the Project and alignment alternatives documented in the EES, including impacts on relevant matters of NES under the EPBC Act;

ii. advice regarding the availability and effectiveness of feasible mitigation measures or procedures to prevent, minimise or compensate for environmental impacts, including on relevant matters of NES, either proposed by the proponent or suggestions made in public submissions or by relevant agencies;

iii. any recommended modifications or feasible alternatives to the Project, including in relation to alignment and design, and their likely impacts, including on matters of NES;

iv. a statement of appropriate conditions for approval of the action under Victorian and Commonwealth law, which should be applied to achieve acceptable environmental outcomes in the context of applicable legislation and policy;

v. any matters relevant to the proposed planning scheme amendments prepared by VicRoads;

vi. relevant information and analysis in support of the Inquiry’s conclusions and recommendations; and,

vii. a description of the proceedings conducted by the Inquiry and a list of those consulted and heard by the Inquiry.

Timing

20. The Inquiry is required to report in writing to the Minister for Planning within eight weeks from its last Hearing date.
Fee

21. The members of the Inquiry will receive the same fees and allowances as a panel appointed under Division 1 of Part 8 of the Planning and Environment Act 1987.

22. The costs of the Inquiry will be met by VicRoads.

APPROVED:

MATTHEW GUY MLC
Minister for Planning

Date: 12 March 2012
APPENDIX 2: LIST OF SUBMITTORS

- Michael and Judith Lazzaro
- Margaret Collyer
- Keith and Anne Warren
- Sam Love
- Bernie and Rose Ferguson and family
- Ken Anderson
- Ross and Glenda Anderson
- Thelma Mayze, Traralgon and District Historical Society
- Colin and Judith Bowman
- Benjamin Dunbar
- Joy Dunbar
- Alex Dunbar
- Richard Kilgower
- Susan Gilheany
- Peter, Margaret and Susan Stuckey
- Heath and Nicky Fox
- Colin Thomas Stuckey
- Rowan Paulet
- Rowan Paulet, Flynn Farm Discussion and Landcare Group
- Chris Potts
- Paul and Kerry McDonough
- Lucia Lancellotti
- Troy Kilgower and Carole Jennings
- Les and Marita Rowles
- Pamela Derham
- Sam Dunbar
- Deirdre Griebsma, Latrobe City Council
- David William Bishoff
- Graeme Stuckey
- John and Alison Derham
- J Rathjen
- Wayne Gilmour and Christine Borchier (including a petition of 53 names)
- Lynton Fisher
- Phillip and Kerrie Logan, Rosedale Caravan Park
- John Brennan, Department of Sustainability and Environment
- Chris Madsen, Gippsland Water
- Paul Holton, Wellington Shire Council
- Sparie Nassiokas, Rosedale Chamber of Commerce
## APPENDIX 3: DOCUMENT LIST

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