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PARLIAMENT OF TASMANIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

# Brighton Bypass

*Presented to His Excellency the Governor pursuant to the provisions of the Public Works Committee Act 1914.*

MEMBERS OF THE COMMITTEE

| Legislative Council | House of Assembly |
|---|---|
| Mr *Harriss* (Chairman) | Mr *Best* |
| Mr *Hall* | Mr *Green* |
| | Mrs *Napier* |

By Authority: Government Printer, Tasmania

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# TABLE OF CONTENTS

# INTRODUCTION

To His Excellency the Honourable Peter George Underwood, Officer of the Order of Australia, Governor in and over the State of Tasmania and its Dependencies in the Commonwealth of Australia.

MAY IT PLEASE YOUR EXCELLENCY

The Committee has investigated the following proposal: -

**Brighton Bypass**

and now has the honour to present the Report to Your Excellency in accordance with the *Public Works Committee Act 1914.*

# BACKGROUND

**Existing Road Environment**
The Midland Highway is a Category 1 road within the Tasmanian State Road Hierarchy and is the principal road freight link between the north and the south of the State. It is also the route for a significant volume of commuter and local traffic. Currently, the alignment of the highway passes through the townships of Brighton and Pontville. A speed zone of 50km/h applies through Brighton and 60km/h through Pontville. The 50km/h zone through Brighton is necessary due to the presence of a shopping zone & adjacent commercial activities. The speed restrictions generate transport inefficiencies for intrastate traffic. The majority of north – south commercial and freight movements occur along the Midland Highway, and hence through Pontville and Brighton. Tea Tree Road is the major southern link from the Midland Highway to the East Coast for high productivity vehicles and hence is subject to significant traffic usage and heavy vehicle movements.

**Present Traffic Volumes**
The Department of Infrastructure Energy and Resources commissioned GHD Pty. Ltd. to prepare a report on traffic modelling for the Midland Highway between Granton and Dysart (Report for Midland Highway Traffic Modelling, Final Report, January 2008), reviewing origin – destination data; traffic volume data; crash data; turning movement counts; queue surveys; public transport information; Traffic Network data; and land use development data.

**Options investigated**
Over the last 30 years, a number of options have been investigated for the Brighton Bypass alignment. These options are discussed below.

<u>Western Bypass</u>
Earlier investigations recommended a western bypass of Brighton and Pontville. However, the steep terrain and residential development associated with a western

bypass of Brighton and Pontville (and further north to Bagdad) were identified as significant constraints.

Existing Corridor
Upgrading of the existing corridor was investigated in a number of reports. Key constraints for this option included ribbon development, requiring a high number of acquisitions of residences and businesses; a large number of accesses onto the highway, reducing safety and affecting speeds; parts of the existing corridor are flanked by native vegetation remnants; proximity to significant Aboriginal and heritage values; and high construction costs.

Pontville Bypass only
Following representations to Brighton Council by some residents and business people, the Council requested that a short western bypass of Pontville be considered. Key constraints included very high construction costs and an unsafe and uneconomical transport route.

Earlier investigations compared options somewhat subjectively, with consideration given to the proximity of various developments and natural features (including topography, land zonings and native flora and fauna)

Later reports involved a more rigorous approach for comparing options, including a 'Pareto Assessment', which involved ratings of issues pertinent to costs, engineering, traffic ratings, land use and the natural environment. This assessment generated overall ratings for each option.

A value management process, which identified how well each option achieved key functions (selection criteria) identified through a series of workshops with key stakeholders. Critical performance criteria were agreed upon and weighted so as to compare options. Desktop studies, followed up with comprehensive field studies, assisted with the weighting process. Key stakeholders were integral in each Value Management process.

**Historical Crash Rates**
The crash history on the Midland Highway at Brighton over the five year period from 2002 to 2007 shows that a total of 59 crashes occurred on this section of the highway, of which 20 involved a rear end collision, 5 involved head on collisions, 15 involved injury (5 serious and 10 minor) and 2 were fatal.

An identified problem area in Brighton is the intersection of Tea Tree Road (Andrew Street) where 14 crashes were reported, including 5 involving rear end collisions and 5 involving vehicles turning into the Midland Highway from Tea Tree Road (Andrew Street).

**Project Summary**
The Brighton Bypass is a $164 million investment in upgrading the Midland Highway to the north of Hobart, funded by the Australian Government. The funding is subject to the signing of a Memorandum of Understanding (MOU) between the State Government and Australian Government.

It will provide a bypass of the towns of Brighton and Pontville, significantly improved connections to the developing Brighton Industrial Estate and Brighton Transport Hub, residential and retail centres in Brighton and to the historic settlement of Pontville. The bypass will provide a new dual carriageway highway between the East Derwent Highway at Bridgewater and the existing Midland Highway north of Pontville.

The Midland Highway is the State's major north-south transport corridor and a key link in Tasmania's AusLink National Network. The Highway is the major transport link for people travelling between the North and South of the State, and provides a critical freight connection supporting the region's reliance on the northern ports for freight imports and exports. It will also support improved access to the East Coast, including for forestry freight vehicles accessing the Triabunna woodchip mill and port via Tea Tree Road.

This project will provide:

- A highway system to accommodate Tasmania's growing freight task, which is projected to double by 2022;
- A highway system that supports the changed direction of trade from southern Tasmania to the northern ports;
- A more consistent operating environment for freight traffic and passenger vehicles;
- Reduced freight travel times and improved transport efficiencies for freight vehicles, travelling between the Southern Region and northern destinations;
- Reduced conflict between the through traffic function of the Highway and the local access requirements of the Brighton area;
- Benefits to industrial and warehousing activities, supporting economic growth in southern Tasmania;
- Seamless connections between road/rail freight via the Brighton Transport Hub;
- Improved access to the developing Brighton Industrial Estate;
- A safer road network for all users by addressing many safety issues associated with the deficiencies of the existing highway;
- Reduced road trauma and the associated economic costs of crashes to the community;
- Significant social benefits through improved amenity in Brighton and Pontville;
- Opportunities for local contractors to bid for construction works;
- Opportunities for the public to learn more about local heritage and environmental values; and
- Opportunities to realign rail infrastructure to provide optimum service requirements.

At this stage, it is anticipated that an Early Contractor Involvement (ECI) contract will be awarded by April 2009 and that the project will be constructed between mid 2009 and mid 2012.

The Brighton Bypass Project includes the construction of approximately 9.5km of new, dual carriageway highway, three grade separated interchanges, a significant

crossing of the Jordan River, crossings of minor waterways, some realignment of the Main Line railway, several overpass and underpass structures at road and rail crossings, realignment of secondary roads, construction of service roads and ramps, significant property acquisition and other accommodation works. The project has been split into two sections with the interface approximately 1.3km north of Crooked Billet creek and 250m to the east of the existing Midland Highway. This point is north of the Crooked Billet Creek crossing and the works associated with the Brighton Interchange. The proposed horizontal and vertical alignments are effectively linear at this point.

**Forecast Traffic Volumes, Level of Service**
Modelling information was used to extract modelling results for options in the corridor. Option 1, the development of the Brighton Bypass, indicated a reduced travel time northbound in morning peak time, but did not have any significant impact on travel during the afternoon peak time. The traffic micro-simulation modelling of the project area undertaken by GHD, which provided traffic forecasts to 2017, was provided to Meyrick and Associates. Meyrick and Associates then prepared an economic analysis for DIER in March 2008 consistent with the National Guidelines for Transport System Management in Australia (ATC 2007).

**Resolution of Safety Problems**
The dual carriageway bypass project, through its Limited Access provisions and with the proposed interchanges, will address the specific traffic, safety and transport related issues between Bridgewater and Pontville. It is expected that the Bypass will result in an overall reduction of 70% in fatal crashes and 50% in injury crashes.

Grade-separated interchanges at key locations, supported by Limited Access provisions, will address the local traffic and transport related issues through Bridgewater and Pontville, particularly within the Brighton town centre.

**Level of Service during Construction**
The level of service on the Midland Highway will only be affected in those locations where the existing highway is to be upgraded or where there are interchanges to be constructed to access and egress from arterial roads. At these locations there will be a need to reduce the speed environment during the construction period and maintain the trafficable lanes on the highway to one in each direction (current configuration). The reduction in the speed environment will not adversely affect the travel times, as the section of highway to be upgraded is currently under an 80Km/h speed limitation. These factors should not alter the volume capacity of the Highway during construction.

**Relation to Other Projects**
The success of the Brighton Bypass project is not dependent on any other project, investment or development. However, the Brighton Bypass will provide support for other developments in the area.

The Brighton Bypass is part of the continued upgrade of the Midland Highway from Granton to Dysart. Dependent on this bypass is the seamless entry to and egress from the Brighton Transport Hub and the Brighton Industrial Estate. The Australian Government has provided planning funding to aid in the future delivery of the Pontville – Bagdad bypass, and the new Bridgewater Bridge.

Brighton Transport Hub

The Brighton Transport Hub project involves the construction of a modern road-rail facility and freight distribution hub at Brighton. The aim of the project is the efficient movement of goods between rail and road transport into and out of Southern Tasmania.

Bridgewater Bridge Refurbishment

The Southern Tasmanian National Transport Network Investment Program (2006-2016) proposes the ultimate replacement of the Bridgewater Bridge. However, there is a need for the existing bridge to remain in service until the new bridge is commissioned. Consequently, the refurbishment of the existing bridge is required to meet this timetable and these works are expected to extend the life of the bridge by a minimum 15 years. As part of the works, the lifting function at the bridge will be restored, a function that has been inoperable since 2006. The refurbishment works are expected to be complete by December 2010.

Midland Highway/Lyell Highway Junction

The Midland Highway/Lyell Highway junction upgrade will involve the reconstruction of the junction to provide a dual lane roundabout where the Midland Highway, Lyell Highway and Brooker Highways intersect. This project has been identified by the high crash history at the site and the delays that are currently faced at the junction during peak hours due to the poor efficiency of the junction. The reconstruction of the junction is expected to be complete by June 2009.

Bagdad Bypass

This project involves the extension of the Northern Section of the Brighton Bypass and is planned for implementation in the future. The northern extremity of the Northern Section of the Brighton Bypass and the Pontville connector have been designed with this in mind to minimise future redundant works. The Pontville-Bagdad Bypass is anticipated to be dual carriageway; 110km/h design speed and have a grade separated interchange at Dysart.

## SCOPE OF WORKS

**Proposed Southern Section**

The 3.3 kilometre section of the bypass includes interchanges at the Brighton Industrial Area and also at the southern end of the Brighton Township.

The preferred alignment deviates from the existing highway at the East Derwent Highway Roundabout over a length of about 1.1 km before rejoining the current highway alignment. The new highway follows the line of the existing through the Bridgewater Industrial Area for approximately 300 metres before deviating to the east across Crooked Billet Creek. Beyond Crooked Billet Creek, the new highway runs parallel to, and about 200 metres to the east of, the existing before crossing the railway line and joining the northern section of the bypass.

Due to the need to provide two interchanges and the requirement to follow the horizontal alignment of the existing highway through the Brighton Industrial Estate the options for the location of the new highway become very limited in terms of meeting the speed environment required. By deviating the highway for 1.1 kilometres from East Derwent Highway, the alignment will meet the required 110 km/h design speed. The Brighton Interchange will allow seamless connection to the intermodal hub.

**Proposed Northern Section**
The preferred 6.2 kilometre option is the eastern Brighton/Pontville bypass (and the eastern Bagdad extension) The Northern Section of the Brighton Bypass will provide a dual carriageway to the east of Brighton and Pontville. The southern extent is located immediately north of the Brighton Interchange. At the northern end of the project, the Brighton Bypass is planned to connect to a possible future bypass of Bagdad. This connection will occur at the location of a future proposed Pontville Interchange. A concept design has been developed for the Pontville Interchange. In the interim, a two-lane connector will join the Brighton Bypass to the existing Midland Highway, north of Pontville. The connector will meet the existing Midland Highway at a new roundabout, approximately 200m south of Shene Road. This connector is designed to maximise the use of ramps associated with the future interchange. The bypass will include a conventional diamond shaped, grade-separated interchange at Tea Tree Road. This will provide an important transport link between the Midland Highway and the East Coast.

This is a greenfields site and 70% of the highway corridor is owned by DIER. The remaining 30% of land will be vested by March 2009. This route is cost effective, with high engineering and traffic ratings, and construction can proceed significant without interference to existing highway traffic. The proposed grades are relatively flat, reducing travel times and visual impact, and the severance effect on rural properties would be less disruptive. Added to this there will be lower environmental impacts, and amenity and pedestrian safety will be improved in the townships.

**Design**

Pavement
The flexible granular road pavement design has been undertaken in accordance with Austroads Pavement Design, Design of New Flexible Pavements. A preliminary and conservative pavement design has been undertaken using an adopted CBR of 4%. It is proposed that the main carriageways and shoulders be surfaced using a two coat (14/7mm) prime and seal (as will Briggs Road, Nelson Building Road, the Brighton Golf Club access and Tea Tree Road for consistency). Bridge decks and high stress areas such as ramp terminals, on Tea Tree Road and the Pontville Roundabout, are proposed to be asphalted.

Bridge Structures
The bridges are all designed in accordance with the Australian Standard AS 5100 – Bridge Design. The bridge loading from each bridge is in accordance with the code and includes SM1600 and HLP 400 design traffic loading. The required clearance for structures over the road is 6.0m vertically and varies horizontally. The required clearance for structures over rail is 5.1m vertically and 4.4m horizontally. Fill batter slopes of 1.5:1 will be allowed adjacent to abutments.

Drainage

Transverse drainage will be designed to protect the highway for a 100-year storm event, ensuring that the carriageways have 0.5 metres freeboard. Longitudinal drainage will be designed to protect the pavement for a 20-year storm event. The median will contain a depressed and grassed drain lined with a concrete channel at the invert. Grated pits and transverse culverts will be required to carry water away from the median drain. Where the median contains a concrete safety barrier, side entry pits will be provided to drain the pavement. Subsoil drainage will also be provided in the median to prevent ingress of water into the pavement layers.

In the context of highway design, particles from car exhausts, tyres and brakes, surface oils and litter fall and collect on the road surface. Many of these particles adhere onto sediment which stormwater transports to waterways. Other contaminants dissolve as water passes over them. Water Sensitive Urban Design (WSUD) philosophies and principles will be applied wherever practical and feasible.

Intelligent Transport Systems (ITS)

DIER are currently investigating building infrastructure into the design of the bypass for power and communication for planned and future ITS equipment, CCTV and signage. The design and construction of a transport inspection area and weighbridge is currently under consideration and its suitability will be determined prior to construction of the bypass.

**Key Construction Milestones**

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|---|---|---|
| 1 | Project Bid to Australian Government (Strategic Merit Test) | Completed (May 2008) |
| 2 | Risk Identification workshop | Completed |
| 3 | Stakeholder Engagement Strategy | Completed |
| 4 | Completion of survey | Completed |
| 5 | Stakeholder engagement workshop/plan/strategy | Completed |
| 6 | Concept designs | Completed |
| 7 | Structure ECI model/conditions of contract/Crown Law approval | Completed |
| 8 | Project Bid to Australian Government (Development) | Completed |
| 9 | Open Brighton Project Office | January 2009 |
| 10 | Tender/assess/award ECI contract | January – April 2009 |
| 11 | Project Bid to Australian Government (Construction) | February - March 2009 |
| 12 | Acquisition – vesting of land | March 2009 |

| | | |
|---|---|---|
| 13 | ECI design development/pricing/D&C contract award | April - July 2009 |
| 14 | Commence design and construction | July - August 2009 |
| 15 | Complete construction | June 2012 |

**Contractual Arrangements**

Governance Arrangements
The project would be subject to the normal governance arrangements that apply to all major infrastructure works undertaken by DIER on the National Highway.

Contractual Arrangements
The Brighton Bypass Project (the Project) has been split into two sections – the Northern Section and the Southern Section – and the intention is for the design and construction aspects of these two Sections to be managed via separate contractual arrangements.

Allocation of Design Work
Design services for the majority of projects within DIER's Roads Program are currently allocated to one of two Professional Services consultants (Pitt & Sherry and GHD Pty Ltd) in accordance with the requirements of over-arching professional services contracts between DIER and each of these providers. These Professional Services contracts were competitively tendered in 2004.

As regards design services for the Project, GHD Pty Ltd is currently working on the Preliminary Design for the Northern Section, while Pitt & Sherry is progressing the Preliminary Design for the Southern Section.

Procurement of Construction Works and Project Estimates
DIER intends to procure construction works for each of the two sections of the Project using separate contracts. The estimated value of the project for the Northern Section is approximately $102M, and the estimated value of the project for the Southern Section is approximately $127M (including Brighton Transport Hub civils/non buildings). No single contractor will be permitted to win both contracts.

In terms of procurement/contracting methodology, DIER's processes require project managers to develop a procurement strategy for their specific projects which involves, at a minimum, selecting a contract type that is suitable for the required goods/works/services, and ensuring the accompanying procurement process is compliant with Treasurer's Instructions (TIs) and other Department of Treasury and Finance (DOTAF) guidelines regarding procurement and contracting, and structured in a way that will achieve best value for the Department and taxpayers.

Given the size and scale of the Brighton Bypass Project and the implications of delivery strategy selection on a project's success, DIER has undertaken a rigorous assessment process to determine exactly which procurement and contracting

strategy would deliver the best value outcomes for stakeholders. The procurement/contracting models examined by DIER were:

- Construct only – using AS 2124;
- Design and Construct – using AS 4300;
- Early Contractor Involvement (ECI); and
- Alliance Contracting.

The first two models are mandated for use by State Government Agencies, whereas the last two have not previously been used by DIER, but are being used extensively by other State Road Authorities for delivery of projects of a similar size and scope to the Project.

DIER's assessment took the form of a two-stage Suitability Analysis, which was specifically structured to determine which of the possible procurement and contracting models would be most appropriate for the Project.
The two stages were Stage 1 – Preliminary screening, and Stage 2 – Detailed assessment against three Project-specific criteria. The criteria assessed in Stage 2 were the procurement strategy supports achievement of the Department's Project objectives, the procurement strategy supports the effective management of risk, and the procurement strategy takes into account constraints in the project delivery environment.

The results of the two-stage analysis indicated the preferred procurement strategy for the Project to be an ECI-based model.
To confirm/validate its findings that ECI would be the most suitable model for delivery of the Project, DIER also undertook a final stage review of the model in the context of other State Road Authorities' perspectives of the ECI model, industry perspectives of the ECI model, and the Crown Solicitor's office perspective of ECI model.

This process did not reveal any issues of major concern that would detract from the suitability of the proposed ECI model for the Project.

<u>Overview of ECI Model</u>
ECI is an innovative hybrid style of contract that involves two discrete stages:

Stage 1 – Similar to a project alliance in that not all project details are defined, and the construction contractor, once engaged, works with the client and its designers to plan, design, document and price the project, appropriately apportioning risks as they are identified. As in a project alliance, this stage is undertaken on a full "open book" basis. The key deliverable of Stage 1 is the Stage 2 offer, comprising a risk-adjusted price for the completion of the project. The client reviews the Stage 2 offer to ensure it represents best value-for-money for the project in question.

Stage 2 – Similar to a Design and Construct contract, but subject to the client first accepting the Stage 2 offer described above. If the client accepts the Stage 2 offer, the contractor is required to complete the detailed design and construction documentation and complete the construction. If the client does not accept the offer, it can terminate the agreement and look for another party to complete the work in Stage 2 through a tender process.

While ECI contracts are a relatively recent innovation, they are now the most popular contractual delivery mechanism in the Highways Agency of the United Kingdom, which has been using this style of contracting since 2001. Locally, the ECI model is gaining acceptance across Australia as infrastructure authorities grapple with the best way to manage the procurement and delivery of major projects. Within the roads sector, it has been used in South Australia and Western Australia, and has become most popular at the Queensland Department of Main Roads, which, since November 2005, has utilised the model on approximately 10 contracts.

Value-for-money

Value-for-money has been defined in TI 1201 as "achieving the desired outcome at the best possible price". The potential for each of the possible procurement/contracting models to achieve value-for-money was closely examined as part of DIER's two-stage Suitability Analysis, with the results suggesting that an ECI-style contract would provide better value-for-money outcomes compared to the other contract models in that:

- The risk-negotiation process will enable project risks to be managed most effectively, including those risks related to the current skill shortage;
- The value engineering opportunities should result in improved constructability of design and subsequent cost savings; and
- The inclusion of good faith and relationship management provisions should result in the minimisation of disputes, with the potential for additional cost savings.

In addition, the ECI model contains a number of safeguards that will help DIER ensure that the contractor's price represents best value, including:

- The ability to assess the contractor's rates for Stage 1;
- Use of an 'open book' approach during Stage 1;
- A requirement for competitive sub-contractor pricing;
- The ability to assess productivity rates on similar projects;
- The use of independent estimators/verifiers; and
- As a result of tension in Stage 1 due to DIER's ability to terminate the contract and go to tender for completion of the work in Stage 2 if it considers the risk-adjusted price submitted by the contractor to be unacceptable.

**National Land Transport Bilateral Agreement**

The Brighton Bypass is included in a $303M election commitment by the current Australian Government, announced by Martin Ferguson, Shadow Minister for Transport, Roads and Tourism on 1 November 2007. The project will be undertaken within the requirements of the current Notes on Administration, and the proposed Memorandum of Understanding (MOU).

Needs and Strategic Objectives Identified by Corridor Studies

The Brighton Bypass (Midland Highway) will form part of the AusLink National Network. The Brighton Bypass project is part of an overall upgrade of the Midland Highway between Granton and Dysart.

Strategic Transport Objectives

The strategic objectives of the AusLink Network are to deliver projects that:

- Increase its infrastructure handling capacity and efficiency;

- Improve safety and security;
- Improve transport productivity on its nationally strategic and export-orientated freight corridors; and
- Improve the reliability of travel on interstate and interregional corridors.

These are consistent with viable, long-term economic and social outcomes, and with the obligation to current and future generations to sustain the environment. The Brighton Bypass project meets these strategic objectives by:

- Facilitating the movement of goods and people between Hobart and the northern regional ports and urban centres by providing a more consistent operating environment for freight traffic;
- Improving safety, efficiency and level of service of the Midland Highway;
- Providing a seamless connection to the new intermodal facilities for southern Tasmania;
- Providing support for the on-going development and growth of the Bridgewater industrial estate; and
- Providing sustainable social and environmental outcomes for Brighton and Pontville.

Specifically, the Brighton Bypass will support the development of a freight transport hub at Brighton and will improve the access to the Brighton Industrial Estate. The project will ensure that the Midland Highway can continue to fulfil its economic task by supporting fast, efficient and reliable freight vehicle travel. The transport efficiency gains for freight vehicles will provide benefits to industry and will support economic growth in southern Tasmania.

**Transport Problems**

The current problems for the Midland Highway between Granton and Dysart include a lack of support for the changed direction of trade from southern Tasmania to the northern ports, poor access and connectivity for industry and transport related industries, and a low level of service and inconsistent operating environment. Other problems with the existing Midland Highway from Bridgewater to Pontville include inadequate junction layouts to adjacent land developments, especially the Bridgewater industrial area, a high number of accesses and junctions, a high number of vehicle crashes, and slower speeds and travel times, with some delays through Brighton.

The Brighton Bypass is a major infrastructure upgrade supporting the changed direction of freight movement within the Southern Region toward a reliance on the northern ports for freight imports/exports. The project will result in a new high standard dual carriageway highway with a consistent operating environment, and support seamless road connections between the Brighton Industrial Estate and Brighton Transport Hub.

The Bypass will also address the low speed limit deficiencies and the safety issues associated with the numerous accesses to residential properties and businesses between Bridgewater and Pontville. The dual carriageway bypass project, through its Limited Access provisions and with the proposed interchanges, will address the specific traffic, safety and transport related issues between Bridgewater and Pontville.

Grade-separated interchanges at key locations, supported by Limited Access provisions, will address the local traffic and transport related issues through Bridgewater and Pontville, particularly within the Brighton town centre.

## ENVIRONMENTAL AND SOCIAL IMPLICATIONS

**Local Government Planning Requirements (Strategic and Statutory)**
The proposed bypass is classified as a Level 1 activity under the Tasmanian Environmental Management and Pollution Control Act 1994 (EMPCA). As such, approval is required from local councils, under the Land Use Planning and Approvals Act 1993 (LUPAA).

The proposed bypass is located within both the Brighton and Southern Midlands Municipalities. The project will therefore be split into a number of Level 1 Development Applications. The area in Brighton falls under the jurisdiction of the Brighton Planning Scheme 2000. The section in Southern Midlands Municipality is covered by the Southern Midlands Planning Scheme 1998. The bypass will be assessed in accordance with the land use planning considerations of these two planning schemes.

**Brighton Council – Brighton Planning Scheme 2000**
The bypass corridor was previously identified and is represented on the Planning Scheme maps as the Infrastructure Zone. However, following detailed investigations and design it has been established that the preferred alignment extends beyond the proclaimed corridor in some locations.
Development applications submitted to Brighton Council on Thursday 20 November 2008, include:

- The Industrial Estate to Brighton Lodge;
- Brighton Lodge to Jordan River;
- Jordan River to Tea Tree Road; and
- Tea Tree Road to Rifle Range Road.

There has been one representation on the development application submitted for the section from the Jordan River to Tea Tree Road:
Mr Hallam (231 Tea Tree Road) submitted a representation to alert the project team to his concerns regarding cars and heavy vehicles exiting the bypass on the off ramp to Tea Tree Road. His concerns included noise and light from vehicles accelerating from a standing start to turn left or right onto Tea Tree Road, particularly heavy vehicles heading east on Tea Tree Road. The project team has been in contact with Mr Hallam and he is satisfied with the level of service. The project team is currently assessing his concerns.

A further representation was submitted by Ms van Randen of Richmond, regarding the intent of DIER to upgrade Tea Tree Road, and in particular Back Tea Tree Road as a short cut for traffic to Hobart Airport. This representation was submitted outside of the timeframe permitted for representations. This information will be

forwarded to Brighton Council in order for Council to contact Ms van Randen, as Back Tea Tree Road is a Council road.

A further development application for the section from East Derwent Highway to the Industrial Estate was submitted on 27 November 2008.

**Southern Midlands Council – Southern Midlands Planning Scheme**
The proposed highway alignment falls slightly outside the existing Future Road Zone in the Southern Midlands Council Planning Scheme, encroaching on the Rural Agricultural Zone. The preferred alignment was chosen to reduce the environmental impact on the Bagdad Rivulet and to provide improved road geometry and an improved interchange layout for the future Bagdad Bypass. It also allows the existing access to the Commonwealth of Australia Rifle Range to be maintained with a subsequent reduction in environmental impact.

Under the Southern Midlands Planning Scheme a road is considered a discretionary use outside the road zone once the road has been proclaimed. In the case of this proposal the sections of the road that would extend beyond the areas zoned for future road, form part of larger titles previously acquired by DIER for the purposes of this bypass. Given the long established intention of a bypass in this location there does not appear to be any political impediment to proclaiming the road rather than rezoning the land. This approach has been discussed with officers of the Resource Planning and Development Commission and the Southern Midlands Council and has their support.

The issues to be addressed for the section of the road within the Southern Midlands Municipality are similar to those outlined for the area within the Brighton Municipality as outlined above. They will be addressed as part of a comprehensive environmental impact statement accompanying a Level 1 Development Application, to be submitted to Council. It is planned to submit the development application for the Southern Midlands section in February 2009.

**Environmental Assessment**
Assessments have been made in relation to the need for early construction works in terms of noise, dust and traffic management. Further details will be included in the Contract Management Plan (CMP). At this stage of the project, desktop research and most field surveys have been undertaken. As such, mitigation measures will be finalised and permits/approvals will be sought following the completion of field surveys in January 2009. Currently the full impacts of the proposed bypass are anticipated to be manageable, and details of the results of the field assessments will be provided to Council.

An Environmental Impact Assessment (EIA) report has been produced and includes the results of these surveys, mitigation measures, and outline any permits or further approvals that are required. The key environmental footprint issues and associated impacts to be considered are:

- Agricultural land capability;
- Flora and fauna;
- Water courses;
- Aboriginal and European heritage;

- Visual impacts;
- Noise and vibration;
- Air emissions from vehicles; and
- Community/social impacts.

The following sections outline in more detail the potential impacts of this development, including legislative requirements and potential mitigation measures.

**Agricultural Land Capability**

The Tasmanian Land Capability Classification System ranks land according to its ability to sustain a range of agricultural activities without degradation of the land resource. Class 1 land is the best land and Class 7 is the poorest. Notably, there is no prime agricultural land (i.e. Class 1, 2 or 3 land) along the 9.5 km alignment (not including the Bridgewater Bridge). The 'best' land is the 2.5 km of Class 4 land, which has good grazing potential but is marginal for cropping activities. Most of the Class 4 land occurs to the south east of the township of Brighton, with a smaller area to the north of Pontville.

Much of the proposed alignment (7 km) occurs on Class 5 land, which has good grazing potential however is unsuitable for cropping activities (unless there is available irrigation water). There is no Class 6 or 7 land along the alignment.

**Fauna**

Although degraded in many areas, the study site provides a range of fauna habitat including native grasslands and weed infestations along the watercourses (GHD 2008). The denser vegetation cover within un-grazed rail and road reserves provides potential shelter for smaller vertebrates, such as bandicoots (North Barker 2008). There are few hollow bearing trees within the study area; however those present offer some nesting and foraging habitat for native bird species (North Barker 2008).
Potential threatened fauna species occurring within the study area are outlined below.

Eastern Barred Bandicoot (Perameles gunnii)

The Eastern barred bandicoot may utilise the shelter provided by the weed infestations along watercourses such as the Bagdad Rivulet and Jordan River. These riparian zones also interface with agricultural land, and in some places native grassland, which provide foraging habitat for bandicoots. This species may also occur within well-vegetated sections of road and rail reserves. There are numerous previous observations of this species within 5km of the study area (Biodiversity Conservation Branch 2008). Although this is a nationally threatened species, it is not considered threatened under Tasmanian legislation, as it is locally common in Tasmania and therefore not considered to be at risk.

Tussock Skink (Pseudemoia pagenstecheri)

The study area provides potential good reptile habitat within the rocky outcrops, usually associated with the riparian zones, and native grasslands. It is quite possible the threatened tussock skink, which is known to have an important population in the vicinity of Rifle Range Road, would utilise parts of the study area, such as the Poa and Themeda grasslands.

Green and Gold Frog (Litoria raniformis)

Potential amphibian habitat is present in drainage lines and where the road corridor crosses the Bagdad Rivulet and the Jordan River. It is considered possible for these watercourses to support the green and gold frog (Litoria raniformis). This species is listed as Vulnerable under both the TSPA and EPBCA. Although water levels are currently very low within the study area, these watercourses may be used by the green and gold frog for dispersal between water bodies. There are no confirmed records of this species in the vicinity of the study area; however the Natural Values Atlas predicts this species to occur within 500m of the site.

**Mitigation Measures**

Potential impacts to the Eastern barred bandicoot and green and gold frog are not anticipated to be significant as a result of this development. The Eastern barred bandicoot is considered locally common in Tasmania, and impacts to the potential habitat provided within the site, are unlikely to have a significant impact on populations of this species. It is possible the green and gold frog may utilise some waterways within the study area, however the quality of these habitats is degraded. Impacts to this species are also unlikely to be significant. However measures to mitigate impacts to waterways, and hence this species, will be incorporated into a Construction EMP. It is therefore unlikely that permits/referrals under the Tasmanian TSPA or Federal EPBCA will be required for potential impacts to the Eastern barred bandicoot or green and gold frog.

The tussock skink is not listed under the EPBCA, however it is listed under the TSPA. It is not known at this stage if potential impacts to this species will be significant. As such, further work will be conducted prior to any works to determine the level of impact. The Threatened Species Unit of the Department of Primary Industry and Water (DPIW) has requested that a targeted survey for the tussock skink is undertaken in the warmer months of spring or summer. This survey has been completed, and the species was identified within the project area. The results of this survey, including mitigation measures will be incorporated into any permits required.

**Flora**

The corridor of the proposed bypass extends from the suburb of Bridgewater to north of Rifle Range Road, Pontville. The site is predominantly composed of agricultural land and areas of native grassland, some of which is of conservation significance. There are also areas of woody weed infestation (often associated with watercourses), and weedy roadside vegetation. None of the vegetation types within the bypass corridor are listed as threatened. Fourteen flora species identified during field surveys in 2008 are listed as threatened under either one or both of the Tasmanian TSPA and the Federal EPBCA, as listed below:

- Blue wallabygrass (austrodanthonia popinensis);
- Double jointed speargrass (austrostipa bigeniculata);
- Knotty speargrass (austrostipa nodosa);
- Rough speargrass (austrostipa scabra);
- Cutleaf daisy (brachyscome rigidula);
- Lemon beautyheads (calocephalus citreus);
- Curly sedge (carex tasmanica);

- Grassland flaxlily (dianella amoena);
- Blue devil (eryngium ovinum);
- Gentle rush (juncus amabilis);
- Hotrock fern (pellaea calidrupium);
- Basalt guineaflower (hibbertia basaltica);
- Woolly New-Holland daisy (vittadinia gracilis); and
- Narrowleaf New-Holland daisy (vittadinia Muelleri).

**Mitigation Measures**

Fourteen threatened flora species have been recorded during the surveys conducted in 2008. In addition, a number of other threatened species have previously been recorded within the proposed bypass corridor. It is possible these and other threatened species such as orchids, lilies and other threatened annuals could be present in the study area, but were overlooked due to the timing of the 2008 surveys. As such, a spring and also a summer survey that focus on native grasslands, roadsides, higher quality agricultural land and poor drainage areas, will be conducted to effectively search for these species.

Where feasible, these species will be avoided; however where this is not possible, measures such as translocation of individuals to suitable habitat outside of the road corridor will be considered. If implemented, this would be done in consultation with the Threatened Species Unit of the Department of Primary Industries and Water (DPIW). In addition, disturbance of any of these species will require a 'permit to take native species' from DPIW. Permit applications will be made following the completion of spring and summer surveys, to include the threatened species recorded during these surveys.

In addition to the Tasmanian listed threatened species, it is expected a referral under the Federal EPBC Act will be required for the listed Austrodanthonia popinensis, Dianella amoena and Carex tasmanica, as impacts to these species may be significant. If considered necessary, a referral will be made to the Federal Department of Environment, Water, Heritage and the Arts for determination of whether the proposed bypass is a controlled or uncontrolled action, early in 2009.

**Water Courses**

There are four main watercourses within the study area, namely the Bagdad Rivulet, Strathallan Rivulet, Jordan River and Crooked Billet Creek. Generally the condition of the waterways within the study area is somewhat degraded. A query of the Conservation of Freshwater Ecosystem Values (CFEV) database identified the Bagdad Rivulet to be of low to moderate conservation value. The CFEV database identified native fish populations to be pristine (value of 1.0) within the relevant section of the Bagdad Rivulet.

Both the Natural Values Atlas and EPBC Protected Matters Search Tool identified the potential for Australian Grayling (Prototroctes maraena) populations to occur within the study area. This species occurs widely in Tasmania and is known from the northern, eastern and southern coastal river drainages. Given the proximity of the study area to the Jordan River and its associated links with the Derwent River estuary, it cannot be confirmed whether or not this species is present with the

available information. For this reason a construction EMP will be developed in consultation with an aquatic ecologist to mitigate and minimise the impact of construction on the aquatic environment (i.e timing of works, sediment control measures). A water quality monitoring plan has been drafted.

Potential amphibian habitat is present in drainage lines and where the road corridor crosses the Bagdad Rivulet and the Jordan River. It is considered possible for these watercourses to support the green and gold frog (Litoria raniformis). The development of the construction EMP will also minimise impacts on the Bagdad Rivulet instream environment, including impacts to amphibians and macroinvertebrates.

**Mitigation Measures**
The current road design includes a number of waterway crossings, as such, measures to mitigate impacts to waterways will be outlined in the EIA and the Construction EMP, both of which will be developed in the coming months. These mitigation methods will include techniques such as sediment control, and timing of works, to reduce the likelihood of impacts to the instream environment of the watercourses. In addition, the current condition of most waterways is not considered to be of good quality.

With mitigation measures in place, impacts to the watercourses within the study area are not likely to be significant, and as such permits/referrals under the above legislation are not anticipated to be required. No further aquatic investigations are anticipated to be required at this stage. The development of the construction EMP will minimise impacts on the instream environment of waterways, including impacts to amphibians and macroinvertebrates.

**Cultural landscape Assessment – Vegetation Communities**
The proposed bypass works will involve the clearance of exotic and native vegetation, including native grasslands of conservation significance. These grasslands occur throughout the road corridor, and it is unlikely all can be avoided in the design of the road. It has been recommended that offsets are considered for the loss of these grasslands, possibly in DIER owned land adjacent to or nearby the study area.

Although these native grassland communities within the current proposed corridor are not listed as threatened under the Tasmanian Nature Conservation Act (2002) or the Federal Government EPBCA (1999), they are considered to be of high conservation significance (North 1992, North 1996). Furthermore, one area adjacent to the road corridor is entered in the Commonwealth Heritage List. This is the Pontville Small Arms Grassland Site, located off Rifle Range Road and adjacent to the Study Area. This site has been entered in the Commonwealth Heritage List for both natural and historic heritage values. The natural values relate to its native grasslands.

**Mitigation Measures**
In regard to the Pontville Small Arms Grassland Site, the bypass has been designed to avoid this site, and passes in front of this region. A small section of an existing road that passes through the site will be re-graded during the works; however impacts to the adjacent grasslands will be minimal. After consideration of the EPBC Act Policy Statement 1.2, Significant Impact Guidelines (Department of the Environment and Heritage 2006), it is considered unlikely that the Pontville Small Arms Grassland Site

will be significantly impacted by the adjacent roadworks. Measures such as fencing off of this site will be incorporated into the Construction EMP. Field surveys to map the vegetation communities present within the bypass corridor have been completed. At this stage, no further vegetation community investigations are required.

**Aboriginal Heritage**

In June 2008, AB Everett (Aboriginal Heritage Consultant) undertook an assessment of the area commencing to the north of the Crooked Billet Creek and extending north to Mangalore. Everett reviewed previous Aboriginal heritage assessments of the Study Area, considered known Aboriginal sites and undertook an on site assessment. In addition to the previously identified sites, Everett located five new sites within the Study Area, consisting of stone artefact scatters of varying size and a number of relics. Results of this survey have been submitted for inclusion on the Tasmanian Aboriginal Site Index (TASI).

A second Aboriginal heritage assessment was conducted by Steve Stanton Pty Ltd in July 2008. The study area for this assessment covered an area of land to the south of the Crooked Billet Creek, extending in a northerly and easterly direction, predominantly to the east of the existing Midland Highway. No Aboriginal heritage sites were previously recorded within this section of the study area. Stanton located a small stone artefact scatter (outside of the road corridor) consisting of at least two artefacts located on the ground surface. This site has been registered as TASI 10667.
A third Aboriginal heritage assessment was also conducted by Steve Stanton Pty Ltd in July 2008, covering an area from Crooked Billet Creek south to the Gunn Street roundabout in Bridgewater, which denotes the southern extremity of the proposed works. No Aboriginal heritage sites were recorded during this survey; however there are significant known sites to the east and west of the bypass corridor in this southern region. Stanton (2008) notes that these sites are non-renewable and have high cultural significance for today's Aboriginal community. The bypass design currently avoids impacts to these sites.

**Mitigation Measures**

Due to the concentration of Aboriginal heritage sites within the Study Area, the potential for the road construction and associated works to impact on these sites is high. Further work such as an archaeological survey will be undertaken, and the preparation of a detailed management plan identifying all visible Aboriginal sites and also the identification of land forms with Aboriginal site potential has been recommended.

In the event that impacts on Aboriginal cultural material cannot be avoided, culturally appropriate mitigation methods will be applied. Permits will also be obtained to disturb these sites, prior to undertaking works. In the event that any suspected Aboriginal cultural material is encountered during surface or sub-surface disturbances arising from physical works associated with the project, then the activity shall cease until the Manager of the Aboriginal Heritage Office (Tasmanian Department of Environment, Parks, Heritage and the Arts) is informed to enable further assessment.

Due to the number of currently known Aboriginal heritage sites within the vicinity of the Study Area, and the potential for further sites to exist, an Aboriginal archaeological assessment has been completed. Tim Stone (Archaeologist)

completed an archaeological assessment of the Northern area and CHMA completed the Southern section. The investigations included a desktop archaeological assessment and more in depth field identification of Aboriginal sites in the proposed corridor in order to recommend measures to mitigate any potential damage to cultural heritage sites and their values. It also included consultation with the Aboriginal community to ascertain their concerns about the proposed development and appropriate management alternatives. Culturally appropriate management methods will be applied, and permits will be required to disturb any sites, prior to undertaking works.

**European Heritage**

As one of the earliest areas of European settlement and development in Tasmania, the historic heritage study has identified a large concentration of heritage sites within, and in the vicinity of, the Study Area. The types of sites identified are diverse, ranging from grand and imposing residences to smaller cottages; transport related sites; archaeological sites and historic plantings.

There are no places within or adjacent to the study area currently included in the National Heritage List. One adjacent place, the Pontville Small Arms Grassland Site is included on the Commonwealth Heritage List for its natural and historic values. There is one place within the Study Area that is included in the Register of the National Estate (RNE), Brighton Lodge, at 508 Midland Highway. In addition there are two places included in the RNE that are adjacent to the Study Area. This includes the Bridgewater Bridge and Remains, and the Shene Property, which is included as two registrations (ID 016849 and 010862). A large number of places listed on State or local registers are located adjacent to the Study Area. Key heritage issues relate to:

- The Crooked Billet Creek concentration of sites related to transport infrastructure such as culverts, cuttings and retaining walls; an historic inn site; and historic plantings;
- Parkholme, 288 Midland Highway;
- Brighton Lodge;
- The 1825/1855 Old Brighton Township Sites; and
- Linear cultural landscape features such as the Old Bush Roads, Bell's Line of Road, the Apsley Railway corridor, and historic plantings, including remnants of the Pioneer Memorial Avenue.

The potential also exists for heritage places adjacent to the Study Area to be damaged during construction by vibration from machinery and earthworks. Static compaction techniques may be a way of minimising the risks of vibration damage. The structural condition of sites in the vicinity of the study area is not known at this stage. A suitably qualified engineer will assess the structural condition of heritage places to assess the potential vibration risks and identify appropriate vibration monitoring and minimisation techniques, prior to commencement of construction.

**Cultural Landscape Assessment**

Broader cultural landscape sites have also been identified within the study area, such as road and rail corridors, historic township sites, and historic plantings. Assessment of the potential cultural landscape impact of the proposed bypass has not yet been

undertaken. In evaluating the cultural landscapes of the Brighton municipality, the following must be taken into account:

- Council to take all possible means to preserve the old land parcel field boundaries where they still occur;
- In response to development pressures, the field boundaries should be mapped, photographed and described;
- Take all possible steps to preserve the former field land parcel boundaries of the township that was called 'Brighton' in the 1850s. This is an important and significant part of the district's historical landscape; and
- Council to take all possible steps to preserve the old nineteenth century roads where they occur. Bell's Line of Road is one of the oldest extant roads in Australia. All possible effort is also to be taken to preserve the old bye-way roads. Because these roads were not constructed in the same manner as Bell's, they are susceptible to destruction from ploughing and agriculture.

Consistent with the above, the retention of significant cultural landscape elements will be considered during the final design of the Brighton bypass. This may include field boundaries, historic plantings, and old roads.

**Mitigation Measures**

Although a number of sites have been identified as part of the desktop study, currently the necessity for heritage works approval is restricted to the Parkholme property. However, the Tasmanian Heritage Council also has a direct interest in a number of places that have been approved for entry in the Heritage Register, but not yet registered, and also potentially an interest in a number of other places of heritage significance which may be impacted upon. Given the number of historic sites, the potential impacts, and the emergency powers of the Tasmanian Heritage Council, consultation will occur with, and advice be sought from Heritage Tasmania, the Tasmanian Heritage Council and the Brighton and Southern Midlands Councils.

The sites identified to date vary in their levels of significance. The levels of potential impact from the proposed bypass will also vary. Site specific mitigation measures to minimise impacts on heritage values will be determined following completion of the on-ground heritage surveys, however mitigation measures may include:

- Additional recording of heritage sites;
- Archaeological excavations of archaeological sites that will be impacted upon;
- The establishment of works exclusion zones in proximity to the proposed road works;
- Minimising the potential for vibration damage to heritage places during construction; and
- Options for replanting of trees and flora that have been damaged or destroyed during works.

It should be noted that the present road design does not encroach on the EPBC Act listed Pontville Small Arms Site.

Investigations to date have occurred as a desktop study with limited fieldwork of the Study Area and surrounds to identify known historic heritage issues. This was followed by detailed field assessments, in key areas to provide mitigation measures and recommendations on processes. Further work will include additional field assessments of the study area and accurate location and recording of significant sites prior to works occurring. Those sites without accurate physical locations will be

recorded during the field assessments and adequate boundaries for the sites will be established. Consideration will be given to all prudent and feasible alternatives where a site of significance has the potential to be impacted upon. The loss of heritage sites or values will only occur when it is established there are no prudent and feasible alternatives to carrying out those works. Site specific mitigation methods will be developed where no prudent and feasible alternatives exist to impacting upon a site of significance. A suitably qualified engineer will assess the potential vibration risks to identified historic heritage sites, identify appropriate vibration monitoring techniques, or vibration minimisation methods. Particular attention will be given to the high level of potential impact on the 1825 and 1855 Old Brighton Townships. All prudent and feasible alternatives will be considered for this site. Given the likely level of impact, additional historical research and field assessment was undertaken for this site. Attention was also given to those sections of the Parkholme property; Bell's Line of Road and the Apsley Rail Line Corridor where potential impacts are likely to occur. Heritage Tasmania, the Tasmanian Heritage Council and the Brighton and Southern Midlands Councils will be consulted with, given their direct role in managing heritage registered places, and broader heritage conservation responsibilities.

**Visual Impacts**

The site of the proposed bypass is within a rural area, currently used for agricultural, residential and some industrial purposes. The landscape is variable in topographical features, with some houses and buildings constructed on ground that slopes above the proposed bypass route. It is likely the proposed bypass, including the road and associated infrastructure will have some degree of visual impact on the surrounding environment and users. The key physical features that may impact visually once the road is constructed are the road itself; bridges; cut and fill batters; interchanges; and sound attenuation barriers.

**Mitigation Measures**

The key requirements relating to visual impact of the proposed bypass are established within the Brighton Planning Scheme and the Southern Midlands Planning Scheme.
A Visual Impact assessment was conducted and was submitted with the Development Application to the Brighton Council.

**Noise Impact**

The duplication and upgrade of the southern section of the Midland Highway, south of the Brighton Interchange, is unlikely to cause noise issues. No sensitive land uses (with the exception of Parkholme) are located along this stretch of road. The Parkholme property is owned by Boral Pty Ltd and is currently being used as a private residence; it lies within the Environmental Buffer Overlay and is adjacent to an existing quarry. Under the Brighton Planning Scheme (2000) residential properties are not permitted within this Overlay. Brighton Council will be consulted to determine whether Parkholme is considered to be a sensitive use. Consideration will then be given to the needs for noise mitigation.

North of the Brighton Interchange, on the east and west sides of the existing Midland Highway (508 & 510 and 419 – 512 Midland Highway respectively) are private properties. These are considered to be sensitive land uses.

Detailed noise assessment of the impact from increased traffic loads, the duplication of the southern section of the existing Midland Highway and the development of the new road was conducted to ensure whether the new highway complies with DIER Code of Practice. Techniques for reducing traffic noise propagation (such as the use of noise mounds and walls) will be explored to minimise impacts on the properties where noise is expected to exceed DIER Code of Practice.

Where the Brighton Planning Scheme regulations of developments not exceeding noise levels of 5 dB(A) above background are not feasible, the Environmental Management and Pollution Control Act 1994 (EMPCA) requirements will be satisfied such that no environmental nuisance will occur.

## STAKEHOLDER CONSULTATION

Given the scale of the project, a strategic approach to public, community and stakeholder engagement and consultation has been developed and adopted for this study. A summary of the stakeholder consultation program for the project follows.

**Stakeholder Consultation Strategy**
A Stakeholder Consultation Strategy has been devised for the Brighton Transport Projects (BTP), which aims to provide an holistic, co-ordinated approach to consultation planning and communication and will assist in managing emerging issues, keeping stakeholders informed, maintaining positive relationships with stakeholders, and ensuring positive, proactive communication.

**Stakeholder Engagement Plan**
The engagement program aims to encourage active involvement from the community. Avenues for input into the project will be widely advertised through a range of different media such as websites, posters in local areas, newspaper advertisements, and letters to directly impacted stakeholders. The establishment of a staffed public display at the site office and exhibition centre will provide a useful source of information to community members.

The consultation program designed for this project aims to inform and engage a wide range of stakeholders, as well as the broader community. Consultation events such as informal information days and public displays aim to create an informative and inclusive environment, where all community members feel comfortable to make enquiries and express their options, concerns and ideas relating to the project.
A visualisation has been produced comprising of a fly-over of the concept design of the bypass, which is complemented by a drive through in both a northerly and southerly direction to allow stakeholders to visualise the features of the design.

Consultation Manager Service has been adopted for the management of issues for the project. Stakeholder issues and concerns will be addressed and monitored throughout the project in Consultation Manager, with the aim to assist with timely and efficient management and documentation of issues.

Selecting a suitable path for the new roadway, and engaging with the stakeholder strategy has revealed that there are significant natural landscape, historical and cultural heritage values embedded in this locality that deserve acknowledgement – be

these geological or historical, European or Indigenous in nature. An opportunity exists here to engage with the community to explore these existing characteristics and to acknowledge both past and present. Generating design ideas will require research, consultation, sensitive interpretation, and grounded landscape design processes. DIER see that given guidance and scope, local groups can engage directly with this project, generating both a sense of local ownership and place.

## SOCIAL IMPLICATIONS

**Landscape and Urban Design**
The Contractors for each section of the Highway Project are to work together through the design and documentation phase to create a consistent approach for an urban design framework to include the significant landscape, Aboriginal and European cultural histories. The framework is to include design frameworks for safety elements, lighting, screening, barriers, texture, colour, and materials, planting and built form.

**Project Context**
Complimentary to the delivery of a key piece of infrastructure, there are opportunities in the BBP to consider and respond to a broader range of issues. As the main road-based approach to our Capital City, it is understood that there is an opportunity to showcase the very best of Tasmanian design by developing a co-ordinated and considered sequence of built elements, views, and landscape materials together with the road design.

DIER propose that these project opportunities define the key criteria against which to map out a Design Framework within which to develop and assess detailed design solutions. The Design Framework will link to the Sustainability Strategy and Stakeholder Strategy to co-ordinate a sense of history, place and community, together with sustainable design practices toward a single project aim - the development of the Brighton Bypass as a 'gateway' to Hobart.

A considered and designed sequence of experiences that are textural, tonal, even dramatic in form will merge to create a gateway experience for road users approaching Hobart. As an urban design experience, this project has the potential to be of equivalent significance to the recently completed Craigieburn Bypass in Melbourne as the Northern gateway into the City of Melbourne, or the Pacific Motorway Transit Projects in Southern Queensland.

**Integrated Aesthetic Design**
As significant as our natural and cultural heritage is, any design intervention offers a key opportunity to define a new layer of context. As noted, DIER propose developing a Design Framework with which to co-ordinate the urban design elements of the project and the various stakeholder groups. The Design Framework will act as a map, identifying a series of unfolding and key moments along the new bypass roadway, be they views, bridges, mass plantings, cuttings or barriers. Each key point yields an opportunity for intensive landscape and urban design interventions, ideas proposed by DIER designers, local artists or sourced from community groups.

The Design Framework will define the guidelines for how these individual moments could be treated. On a broad level, individual or group elements may be considered for treatment - elements such as retaining walls or barriers, acoustic or visual screens, mass plantings, rock beds, bridges or signage. On a detail level, the framework will define the parameters for planting types, mulches, colour, texture, built form, lighting, anti-graffiti coatings, even perceived personal safety.

The aim of all of this design work will be to create a memorable arrival and departure visual experience for travellers using the Midlands Highway. The opportunity exists here to define a uniquely Tasmanian experience, and specifically a gateway to Hobart. It is this defined experience that will meld the historic and current context with a sustainable vision for the future.

**Sustainability**
The idea of acknowledging, interpreting and creating context can underpin a highly visible working platform on which to display sustainable practices as our best thinking toward a sustainable future. While the proposed urban design interventions are intent on visually communicating a sense of place, sustainable strategies listed as follows will underpin every design intervention. DIER Consultants are currently piecing together the Sustainability Strategy for this project, and the outcomes of that analysis will feed directly into the design process.

- Maintenance free design;
- Low embodied energy and recyclable materials;
- Sustainable Construction Management processes to minimise waste and water use; and
- Water Sensitive urban design principles including swales and stormwater retention basins with appropriate planting.

Incorporating these kinds of sustainable design Strategies into this project may result in a National model for future projects of this nature.

## ECONOMIC DEVELOPMENT BENEFITS

In addition to the specific transport benefits, which have been identified and quantified, based on the experience of rural communities along Australia's major highways which have been bypassed, a range of additional development benefits can be forecast for the proposed Bypass. Economic development and economic growth in the local area of the Brighton Bypass covers long-term increases in economic activity, which can be attributed to the Brighton Bypass investment. These benefits can be shown to be an addition to the direct transport benefits and not simply their capitalised value. The following information has been developed by GHD in conjunction with Mr Robert Noakes, a recognised Australian economist, with an extensive background in the preparation of submissions to the Australian Government.

**Increased Property Values and Council Rate Revenues**
In the area of influence of the Brighton Bypass, residential property prices vary from $250,000 to $400,000. With the re-alignment of the highway, a range of property impacts can be expected for the Brighton town centre from:

- A decrease in noise levels, particularly from heavy trucks;
- Improved road safety, with local area traffic only;
- Opportunities to redesign the urban landscape of the Brighton urban area, with increased emphasis on walking, bicycling and increased open space activities (street markets);
- Opportunities for the redevelopment of existing housing and the construction of new residences by young couples (Brighton has one of the youngest populations in southern Tasmania); and
- Strengthening of the Brighton town centre as an urban dormitory for greater Hobart.

**Increased Local Area Investment in Retailing/Local Markets**

As of December 2007, ABS data reported 462 businesses in the Brighton locality. Of these, approximately 370 were within the area of influence of the existing highway (2 kms either side). With the relocation of the highway, it is expected that a significant number of property changes will take place. They will include:

- A reduction in the number of vacant residential properties (currently 192 properties or 16.5 per cent of the total of 1,163 occupied residential dwellings);
- Increased investment in existing commercial properties, particularly shops and small industrial buildings; and
- Increased construction of new shopping facilities.

It is likely that 50 per cent of existing commercial properties (33) will be upgraded after 2010/11 when the impact of the Bypass is evident to property owners and small businesses. New commercial investment in new properties is also forecast, based on Brighton Council data.

**Induced Construction Employment**

Southern Tasmanian State and Regional Tasmanian unemployment levels historically remain higher than Australian mainland levels. During the project's construction, it is expected that Tasmanian and mainland contractors will employ approximately forty (40) unskilled personnel, sourced from the local area, to work on aspects of the project over four (4) years. Training will be provided, as the personnel will be largely unskilled and otherwise unemployed. This induced employment will result in savings in Commonwealth Government welfare payments and will allow for increased local area consumption expenditures. Over the four years of construction, annual employment benefits are estimated at $1.163 million ($1.123 million in net employment income plus $40,000 in job training).

**Increased Local Employment in Retailing/Commercial Activities**

After the construction of the Bypass, it is expected that local area employment within the urban enclave of Brighton will increase. For the local businesses, it is forecast that fifteen (15) new full-time jobs will be generated (for businesses currently employing staff and those which are sole traders). Annual increased full-time employment benefits after taxation were estimated.

## PROJECT COSTS

Section A: South East Derwent Highway to Lodge, 3.3km

| Cost Item | Amount ($) |
|---|---|
| Project Specific Works | 13,068,000 |
| Earthworks | 10,130,000 |
| Drainage | 1,505,000 |
| Pavement | 4,325,000 |
| Bitumen Surface | 970,000 |
| Traffic Facilities | 1,236,400 |
| Landscaping | 498,000 |
| Miscellaneous | 1,910,000 |
| Additional | 600,000 |
| Fees | 10,803,899 |
| Contingency and Outturn | 17,532,999 |
| **TOTAL** | **62,579,298** |

Section B: Lodge to Pontville

| Cost Item | Amount ($) |
|---|---|
| Project Specific Works | 1,110,000 |
| Structures | 24,992,200 |
| Earthworks | 10,830,658 |
| Drainage | 1,889,000 |
| Pavement | 4,440,000 |
| Bitumen Surface | 895,000 |
| Traffic Facilities | 1,325,300 |
| Landscaping | 2,878,078 |
| Miscellaneous | 1,174,000 |
| Additional | 9,133,942 |
| Fees | 14,691,906 |
| Contingency and Outturn | 28,500,287 |
| **TOTAL** | **101,860,371** |

## EVIDENCE

The Committee commenced its inquiry on Monday, 19 January last with an inspection of the site of the proposed works. The Committee then returned to Parliament House whereupon the following witnesses appeared, made the Statutory Declaration and were examined by the Committee in public:-

- Michael King, Brighton Bypass Technical Manager, Department of Infrastructure, Energy & Resources;
- Brian Daws, Project Manager, Brighton Bypass South, Department of Infrastructure, Energy & Resources;

- Andrew Fowler, Project Manager, Brighton Bypass North, Department of Infrastructure, Energy & Resources;
- Phil Cantillon, Project Director, Brighton Bypass Project, Department of Infrastructure, Energy & Resources; and
- Mr Ian Addison.

**Background**

The Project Director, Mr Cantillon, provided the Committee with the following overview of the project:-

*It is a $164 million investment and subject to the memorandum of understanding between the State and Australian governments and we are in the process of working through that the moment. The bypass is 9.5 kilometres long and is dual carriageway for its entire length, except for that connection at the Bagdad end. As we know, the Midland Highway is the major north-south transport corridor and a key link in the AusLink National Network and is a critical freight connection in that location. It also facilitates through the upgrade to the Tea Tree interchange improved access to the east coast.*

*The report outlined under section 1.6 a series of the objectives of the project. We have spent a lot of time in developing those objectives because we wanted to make sure that when we do go to contract we fully understand what we're asking for as part of that project. What we are seeking to build is a highway system that accommodates the growing freight task, which you have heard before, which is expected to double by 2022; supports the changed direction of trade from the south of Tasmania to the northern ports; provides a more consistent operating environment for passenger and freight vehicles - that is a very key feature of this project, to have a uniform and safe environment through there controlling limited access; reduces freight travel times that conversely improve transport efficiencies for freight vehicles; reduces conflict between local and border State traffic; benefits economic industrial warehousing activities in the south and particularly access to the Brighton transport hub - we are trying to provide a seamless connection with the two interchanges to the north and the south; improves access to the development of the Bridgewater industrial estate area; reduces road trauma; and provides social benefits as well as in a broader context, opportunities for local industry and the public to learn more about the local heritage and environmental aspects. Each of those has a platform on which we have addressed our contracting and project development, which I will explain as we go through.*

*In terms of the history of the project, the report documented the options that were investigated in a long-term planning sense. When we were out on site, we spoke about some of rationale, why it was chosen at the northern end to bypass certain sections. It might have been subject to heritage aspects. In a long-term planning sense, which culminated in any particular route, there was a western bypass considered, there was an upgrade of the existing corridor, plus also a shorter western bypass. That development occurred over many, many years, leading to further value engineering, workshops et cetera, that took place. The report referred to a series of other reports that were written through the period that culminated in the current corridor that we have at this point in time.*

*Just as an overview, in terms of crash history on the existing Midland Highway between 2002 and 2007 there were 59 crashes ... of which 20 involved rear-end and five involved head-on collisions. Fifteen involved injury, two were fatal and 14 crashes actually took place at the Tea Tree Road/Andrew Street intersection... We spoke in the report about our resolution of safety problems. Travel time savings with this project are not as great as what you hope to achieve. There are only a few minutes involved, I think - two-and-half minutes ... there is more in it for trucks than for the average car. But the limited access provisions are what will provide the substantive safety benefits - the uniform travel environment - and also the key connections to the industrial estate.*

*In terms of the report, the way it was framed, it was also a document that meets the needs of both the State Government and the Australian Government, so the document itself is in a form that we normally submit to them for the purpose of demonstrating things such as strategic fit for the network, so you would have seen sections in there about how this project fits into the broader context of the AusLink network.*

*...Globally, in terms of design features, it is a standard construction for us. Obviously the hub is something a little more special - a component that is being delivered as part of the southern project. The pavement is a granular-type seal. Where there are high-stress areas there will be asphalt pavement - at the top of ramps and around terminals et cetera. Bridge structures are to contemporary design standards; drainage, one-in-100-year flood protection. We are also including intelligent transport system considerations as far as the project is concerned. What that is, I am not quite sure - I am going through a process of finding out at the moment, and a lot of people are contributing to that to make sure that is a showcase for Tasmania, whether it be ensuring that CCTV is put in place, providing somehow for the future, or something associated with the hub movements et cetera.*

*In terms of key time frames, there is a section under 2.4 of the report, which showed that we had done a lot of work in nine months to get where we are. We have put a project bid up to the Australian Government which they have approved $10.5 million for at this point in time - for development planning and preliminary construction works - along the lines of what we saw on that site - and that would be the Transend-type power lines et cetera - and some earthworks. That is on an 80:20 basis at the moment but once the MOU is signed it would bounce up to 100 per cent funding at that point, so it is in the order of about $12 million. We are going through a process of writing a second bid. That is Mike's job; he is our bid writer. He wrote this one and he is writing a second bid in February, to be there by early March in time for the Australian Government Project Group's process. That bid is about accessing design and construction money associated with stage 2, which is from about July... It is essentially to get the groundwork there so that we have something tangible to work to. A lot of the field investigations have been done - heritage and environmental, surveys. Acquisitions are well under way and we expect to spend quite a bit of money this financial year on that. We hope to have all the land vested by about March...*

*In terms of the contracting, as you mentioned earlier, we tendered this on 10 January. Tenders close on 6 February and there will not be the award of a contract until we know we have approval from the parliamentary standing committee - or conversely that we have the MOU signed and 100 per cent funding, preferably both of them would be the desired situation given the*

*scale of the project. In terms of the contracting strategy, it is different. It is unique and has a lot of success across Australia at the moment. Queensland Main Roads have done 11 of these, what we call an 'early contractor involvement model'. South Australia has done one and they are going to do three; Western Australia has done a couple. They are all talking up how successful they have been in taking this particular approach. It is a relationship-type contracting; it's not alliance contracting. The difference is that you have a soft front end where you work together, collaborate, pat each other on the back and look at how well you're succeeding, but it's got a hard back end. It is a hard dollar back end, where you have to demonstrate value for money. The processes are bad if we can't do a deal through this stage 1, and there are plenty of checks and balances in there, we will just walk away and tender again on the open market. That is the intention, that's what we're telling management. There is a lot of tension created through the current procurement process to get a value-for-money outcome because that is the hardest thing to demonstrate...*

*We have a pre-tender meeting on Wednesday. Some months ago we did a pre-registration process for it, if and when it comes up. We had a list and from that list there were about 14 or 15 contractors. Obviously that list will shrink down to something a bit more workable. We're encouraging local industry participation. I don't think large contractors walk into another State with everything; they usually piggy-back off local industry participants, so we're expecting to see a number of joint ventures. If I had to call it I would like to think we'd have about seven or eight...*

*You had a section in the report about a strategic figure. I mentioned earlier on that the reason that was in there - and it's a little bit different to the way you've seen the reports before that have come through the standing committee - is that it's a specific requirement of the Australian Government. We thought it was a benefit given the size, scale and complexity of the job to be able to demonstrate this connectivity with the AusLink network so that you saw what its work objectives were and how this fitted into it. Essentially the strategic objectives for the bypass in an AusLink sense are to facilitate the movement of goods and people between Hobart and the northern ports; improving safety, efficiency and the level of service; provide a seamless connection with the intermodal facilities; provide support for ongoing development and the connection of the Bridgewater industrial estate; and ensure sustainable and social environmental outcomes.*

*In terms of how we approach the approvals process, while on the one hand was it going to be a project that was subject to a level 2 planning approval - some other projects such as Westbury-Hagley were; we had specific environment protection notices issued - in this case we're not likely to as it is all done through local planning scheme jurisdictions. I think there are five on the bypass and one on the hub, correct me if I am wrong, across two municipalities. The southern midland ones and the far northern end, the Rifle Range Road, is subject to a proclamation - just for the road alignment that we are going through at the moment.*

*The environmental assessment - a very comprehensive report. There is a whole swag of documentation ... that's been done. The way we approached it, the environmental impact assessment was done as a single document representing the entire bypass and covered key things that we mentioned in 5.3 as agricultural land capability, flora and fauna, water courses, Aboriginal and European heritage, visual impacts, noise and vibration, air emissions from*

*vehicles, and community and social impacts. There is perhaps a bit more information in there about what we tried to do, to explain the impacts of the job and the mitigation measures, and they are the sorts of things that are bound into the contract...*

*Working through the report, in section 6 there is a whole swag of stuff on stakeholder engagement. That is a new approach that we have done, a lot more elaborate and a lot more contemporary, I suppose. We are using a consultation manager tool, it is a web-based tool where anyone can sit in any office and get a phone call and log an inquiry as to what it is. We've been logging those inquiries and it's been very successful. We've got a good handle on the issues. I have a list of the inquiries we've received to get an understanding of the sorts of issues that were raised and we have a sense of that. Most importantly, it allows us to manage those issues more proactively. We have a strategic consultation framework that goes across the hub as well as the Brighton bypass, and the way we actually decouple them is that they work within a global strategy, but below that they have their own action schedules in terms of specific things they need to do, which may relate to a particular stakeholder group, that we don't need to deal with on the bypass which might be dealt with by the hub later on. A lot of active engagement, web sites et cetera.*

*In social terms, landscaping and urban design are key factors of the job. We are keen to have an impact in some form. It is a very important precinct with many notable features, as you saw out there. We are keen to have a set strategy. We have a framework we are developing at the moment. We want to do more work with the contractor over the next few months while we are in that development phase and it is key emphasis to look at what we can do, consult with the community et cetera and have something they are all very proud of at the end of the day.*

*I suppose sustainability is part of that urban design, a sustainability framework is a goal to be kicked in both of those areas. Leading up to the latter section where we spoke about project challenges on page 44, this is really about keeping our eye on the money - the $164 million and using it wisely. We think we have to the extent that we have done a lot of scope and cost alignment. That is a key feature. We look at what we want to do, what we think we need to do, how we respond to that and what that might cost. We ask what we can afford and we align to two together. This $164 million estimate is a P90 and we have a great deal of confidence in that. Probably not the level of contingencies I suppose that you saw because it is a more bread and butter job. It does not have that range of unknowns, I suppose, that we saw on the Bridgewater refurbishment job.*

*But the key things are managing cost, making sure that we have the right design solutions that prove to be as much maintenance-free as we can and are visually attractive, engaging with the local community - that is what that exhibition centre is designed for - and making sure that we run a tight ship and get through the process as quickly and as collaboratively as we can with all of those.*

*Again, section 8, there was a section on economic development with reports done by GHD in conjunction with a very notable, recognised Australian economist, Robert Noakes. Section 8 dealt with various economic drivers and areas of it, culminating in section 9 which was the benefit-cost analysis, based on either a 4 per cent discount rate or a 7 per cent, of about 1.58 or in that order.*

*...There is a lot of detail in it... If I can just say that there has been a lot of work done by the Australian Government at the moment setting up some best practice estimates and it has set about an improved approach. We have adopted that plus melding our own practices, which I think are very robust, and put the two together to put together a form that breaks it down into relevant detail and management contingency, and having some rationale for that contingency across the two jobs. Those sorts of dollars are what we look at every month.*

**Project Costs and the Tender Process**

The Committee questioned the witnesses with regard to the project costs, and the following exchange took place:-

***Mrs NAPIER*** *- The southern section is worth about $62 million -*

***Mr CANTILLON*** *- No, in section 3.2.2 of the report on page 14 the northern section is worth about $102 million.*

***Mrs NAPIER*** *- I was not including the Brighton transport hub.*

***Mr CANTILLON*** *- If you add $164 million to the hub and take out the cool store, that adds up to about $229 million.*

***Mr HALL*** *- I had that question too. There was a bit of confusion there on page 14, but that clarifies it.*

***Mr CANTILLON*** *- What that means is, the northern section is about $102 million. Andrew was out there doing a refurbishment project at the same time as we spoke about this morning and Brian will be doing the Lyell inclusive in the southern section, which is estimated at about $127 million. Mike's role, as we mentioned earlier, spans all those projects and consultation design management and key issues like that.*

***Mrs NAPIER*** *- On the breakdown that you gave us of your P&S estimates, if you do not include that Brighton transport hub, it is about $62 million.*

***Mr CANTILLON*** *- Yes, $62 million, that is right.*

***Mrs NAPIER*** *- If I can interrupt a little there. The larger the sum you offer, the more likely you are to get interstate contractors coming in because of the size of the project. I guess you work pretty hard to try to make sure that Tasmanians get a reasonable opportunity to have a piece of the action. Your document says that you will not allow the contractor for the north to also be the contractor for the south. How are you going to manage that, to make sure you get a reasonable Tasmanian component to this?*

***Mr CANTILLON*** *- Because this is a new form of contract and in Tasmania our organisation is used to doing what they call construct-only contracts or maybe design and construct, so we try different forms. This one is a little bit different and so, for the purposes of walking down that path, we get a very detailed procurement strategy. We use that as a discussion purpose for*

*Treasury and Finance and Crown Law, for that matter, to look at ultimately getting their exemption to us undertaking the works as an ECI. So that took a number of months with a very successful outcome. That looked at how we could integrate local contractors into it. On one side of the spectrum, someone will say, if you aggregate it all into one single project, you will probably get a better price. Maybe or maybe not - I am not convinced. On the other side, it is a risk management strategy too, to the extent that they are different projects. The south is about the Bridgewater industrial stage, building a hub and the connections to the hub and things like that. You have to look at the noise issue. You are on fringe urban environment. . Basically, as you pointed out, you are in a much more rural environment...*

*We still think that the money we are spending will get sufficient industry take-up and this feedback that we are getting from the local industry but also through representations at the moment, is that some good local joint ventures are being set up and I think on Wednesday when we have the pre-tender meeting we will probably see that there is quite a number of them.*

***Mrs NAPIER** - With the $32 million worth of bridges in that northern section you could almost entertain doing it in the same way as the National Highway was done on north-west coast - cut it into sections - so that you could increase the likelihood that you could get more local operators there.*

***Mr CANTILLON** - Yes, that is right. Also, I think the other observation worth reflecting on perhaps is that the roads program has grown. The total pool of money that is being spent on the roads industry at the moment is very large. Just in election commitments, I think it is over $600 million between the State and Australian government funding contributions to it with rail and other projects in there. As you move up the scale in complexity and size, the way you procure is different as well. So there is plenty of work out there. There is the Kingston bypass, there is rail. We saw Van Ek working on the Jordan River when we were out there contracting. I think there is enough there to sustain the local industry.*

*In section 3.2.4 of the report there is a key emphasis with building into this a pecuniary strategy about managing risk and about making sure we get good price outcomes because if you can't demonstrate a good price outcome, why have we done it in the first place. There's a lot of attention to it and we have our best team here, they are a very motivated group that will be here for the life of the project.*

**Community Consultation**

The Committee questioned the witnesses with regard to the community consultation, and the following exchange took place:-

***Mr BEST** - Who leads the negotiations on the land and with the private owners et cetera?*

***Mr CANTILLON** - Generally the project managers do it. They work within a template approach that we have. We have what we call a 'manager, land assets' who looks after everything that is property-related. There is a framework approach that we take, so that would generally be within that. There is a whole series of acts and legislation that we have to work within...*

***Mr GREEN*** *- ...I think that the headquarters you're going to have on site, as Brenton indicated, will make a difference... From the point of view of the new headquarters out there, would you be able to tell the committee what the interface with the public will be, how you plan on running that on a day-to-day basis, how many people are going to be out there and what you plan on doing with the building into the future?*

***Mr CANTILLON*** *- It is there for the long haul. We want a facility that we can run current and future projects out of, be an exhibition centre for it - that will be through the life of projects we are doing at the moment - Brighton, Lyell refurbishment and probably Tea Tree. It will carry on to Bagdad and the Bridgewater Bridge replacement, so conceivably it could be there for 10-15 years quite easily. It is in a good location, to the extent that when we do come to sell it, I don't think we'll lose any value on it. The personnel operating out there will be project based but it will also be our exhibition centre. I will get Mike to explain how that might operate.*

***Mr KING*** *- Initially we'll set it up as a public contact area. There will be a small staff out there initially, about three of us, I think. Then, as the tender process evolves, Brian and Andrew will come out to Brighton full time, along with a number of other staff once the extension is built out the back. The exhibition area will house information on all our projects in the area, not just the bypass. It gives us the opportunity also with works being done in Tea Tree Road, Constitution Hill - although that will be well advanced by then - and Lyell Highway junction so that everybody can call in and discuss it. We will have a similar set-up to this so that we will have the drive-through visualisation. A drive-through, driving south to north, north to south, so that we can show people short sections within the area of their concerns.*

*We have not investigated the full use of the site yet but there will be things that we can do with school communities to get them involved, whether it be just to give them a background on road construction and road design. Also with the community we have to think of the OH&S issues involved in getting people on-site and showing them through it. But it opens up, I guess, a whole new area for us to engage the public because we are sitting on a main street, we are not part of a construction site. People usually see these compounds and never know what is going on because, even as the client, we would be within that compound under the contractor's control. But this now gives us the opportunity to set up an area where the public can talk to us. We have an 1800 number currently. We have e-mail addresses and we have a web site. But it gives them a place to call and to talk to one of us about the project.*

***Mr GREEN*** *- How many people would be displaced by the existing corridor?*

***Mr CANTILLON*** *- Not that many because within the zone 1 footprint is that long.*

***Mr KING*** *- Classically, zone 1 is ours, I think, in the long term.*

***Mr DAWS*** *- The only property that we are relocating is the property where we parked in the southern section where the buses are currently located. We are currently in acquisition process and we have been speaking to the landowners there since early last year about the process and what their rights are and what they are entitled to...*

***Mrs NAPIER*** *- Are there any sticking points?*

***Mr FOWLER*** *- The only others are the ones leasing the DIER-owned properties within the footprint at the moment.*

***Mr KING*** *- In terms of consultation I think the reports that have come out, we have 45 pages of contact with stakeholders of which there are only three pages of direct contact from stakeholders to us. I would say that in general it is a very high, positive feedback on the project.*

***Mrs NAPIER*** *- So you do not have any stakeholders with whom you are having some difficulties in terms of accessing land and so on?...*

***Mr KING*** *- We have spoken to landowners who have been there for a number of years and now they are going to have a highway going through the back of their property and who have known about it but they have said, 'Every time we have been told that it is 10 years away, so we thought it was still 10 years away.' We have spoken to them and they understand and accept the things that we will do in terms of noise concerns or things like that.*

***Mr CANTILLON*** *- We know that there is a community that we are bypassing through Brighton, so one of the things we are doing at the moment is trying to settle the tourism directional signage scheme. Do it now, present it, talk to people in BP and the shop there and others as to what we are putting in and why - be proactive and try to keep on the front foot. We have all our contract managers and work supervisors sitting out there as well...*

***Mr BEST*** *- This is such a significant project in the sense of the time that you're going to be out there, the amount of money and all those sorts of things. It is impressive that you have decided that you're going to have a presence there. I have a couple of questions that may lead to some other thoughts, particularly with the consultation that will be ongoing with the community. I note 750 000 cubic metres of soil will be moved and I think you're going to reclaim most of that. I think you have said that there will be an excess of 200 000 cubic metres. I imagine there may be some opportunities there with local council as to where that fill might go that is outside the scope of the job. I know - and Bryan will probably vouch for this - that with the bypass at either Penguin or Ulverstone there were some configurations entered into with Central Coast Council and the fill was used. It is a bit different because I think they were reclaiming some low-lying land. There are probably going to be a lot of opportunities there that will create goodwill for the community and also can be of economic and social benefit.*

***Mr DAWS*** *- Regarding the numbers you quoted there, the 750 000 cubic metres and the 250 000 excess, that's just coming from the transport hub. The actual southern section of the bypass has 250 000 cubic metres of cut with 500 000 cubic metres of fill, so we are in deficit of 250 000 cubic metres. Between the southern bypass and the transport hub there will be a zero balance between the two projects.*

***Mr CANTILLON*** *- And equally, the northern end will be pretty well balanced there as well.*

***Mr FOWLER*** *- It is fairly well balanced, yes.*

***Mr DAWS*** *- That was one of the advantages of making the split between the north and south project where we did so that we could utilise the full single contract on the transport hub and the southern section of the bypass and go backwards and forwards without trying to cross contract at the same time.*

**Travel Time and Distance**

The Committee questioned the witnesses with regard to the impacts of the project on travel time and distance, and the following exchange took place:-

***Mr HALL*** *- I think Mrs Napier might have talked about the difference in transport time between once the project is completed and what now exists. Do you have a figure on that? It talks roughly about it in the submission but it doesn't give a specific time saving. Will there be a time saving?*

***Mr FOWLER*** *- There will be a time saving. Our traffic modelling has shown that the average speed would not be 110 kph. Obviously some drivers, and trucks in particular, are limited to speeds less than 110 kph. At the moment we have speed limits down to 50 kph through Brighton itself. The time saving would depend on what sort of traffic you encountered as you went through Brighton, but it would be in the order of 2-3 minutes typically. If it were a truck, for example, having to decelerate early and taking longer to accelerate, it could well have a saving in excess of three minutes, which isn't a lot. The major reason for bypassing Brighton is to improve safety, so getting those heavy vehicles and all the traffic out of Brighton itself and also providing a safer environment without vehicles turning on and off. As you go along the bypass you will be free of accesses and side roads.*

***Mr HALL*** *- How much longer in distance will it be? It will be 9.5 kilometres for the bypass - how long is the existing route?*

***Mr FOWLER*** *- I can't recall the number; I think it is around 2.5 kilometres.*

***Mr HALL*** *- You will have to alter all the distance signs between Hobart and Launceston, won't you, to take account of this?*

***Mr FOWLER*** *- I'm sure that has been considered.*

**Traffic Noise**

The Committee questioned the witnesses with regard to the traffic noise, and the following exchange took place:-

***Mr HALL*** *- With the noise mitigation - and we identified some of those European and Aboriginal heritage issues and 'Parkhome', the homestead there - could you put on record how you're going to mitigate noise and vibration? There would be some old sandstone and heritage-type buildings there.*

***Mr DAWS*** *- With the vibration, the bypass itself is more than 100 metres away from the homestead so we don't estimate there will be any vibrational impacts on the building. Particularly during construction that is something that is going to be part of the contract, to monitor, particularly when we go through and do the cut and fill operation. With the noise, that homestead is a special case; it is in an industrial zoning and is currently owned by Boral that runs the quarry behind there. It is not used as a primary residence for people. There are occasions that a caretaker stays there at the moment but when we went through and did the noise assessment it was below the limit that was deemed required for noise mitigation.*

***Mr HALL*** *- Does that quarry under the Brighton planning scheme have an attenuation zone around it at this stage?*

***Mr DAWS*** *- I think there's a -1-kilometre buffer zone around the actual quarry itself where you can't have any more residential properties.*

***Mr HALL*** *- You can't have any more, although there are properties existing. I noticed on the scale of the map that there were quite a lot of properties within a kilometre.*

***Mr DAWS*** *- Yes. A lot of the properties you see there are now just commercial. There were a couple of properties, such as 'Parkhome', 'The Lodge' and a few more further to the north that were within the 1 kilometre zone before the buffer zone was put there. They are just in that special area that Brighton Council keeps an eye on.*

***Mr HALL*** *- Regarding noise buffering, in terms of where the road goes close to the residential part of Brighton, how is that going to be accommodated?*

***Mr DAWS*** *- We ran a noise model from East Derwent Highway right the way through to Pontville. Using the DIER standard and also basing it on best practice that they use on the mainland, we have adopted 63 decibels. That is our target, with up to 65 decibels being an acceptable limit. Once we'd gone through and run the initial model using 2022 traffic volumes - that is 10 years after the highway will be completed - we identified all those homes that were above the 63 decibel noise level. We then ran through a number of options using noise mounds and noise barriers located between the highway and the properties. Where we can we are trying to adopt noise mounds to try to reduce the impact of the highway when you look out from the actual houses themselves.*

***Mr HALL*** *- Which is the most expensive to construct?*

***Mr DAWS*** *- They're about the same. Noise mounds are just an earth embankment. We are going to have a lot of earth around so they are cheap but there is a lot more earth involved. The noise walls, depending on what type you go for, are in the order of a couple of hundred dollars a square metre. Noise walls probably work out about the same, if not a tiny bit more expensive.*

***Mr FOWLER*** *- The mounds are typically slightly cheaper.*

***Mr CANTILLON*** *- Visually I think there would be a preference from some of the community if we could incorporate as many mounds as we could rather than a structure through there but that is something that we are working through.*

***Mr DAWS*** *- We went through and we identified all the properties where we had 63 decibels. We then went through and we nominated locations where we needed some type of sound device. After we went through and put in noise walls, there were only six properties which were above 63 decibels in the whole corridor so we went through and put in the noise walls. Four of those properties were between 63 and 65 decibels, so they were within our acceptable limits, and there were two properties which were over 65 and we are going to go a process of discussing with the properties owners some type of architectural treatment to the house, such as double glazing or some other treatment to try to reduce the noise impact. But overall, once we had gone through and done all the noise walls it was a lot less than what we were expecting, mainly around the Tea Tree interchange and where the rail line down near William Street crosses. They were the key areas where we ended up putting up noise walls.*

***Mrs NAPIER*** *- Because you allowed for $3.5 million for sound attenuation?*

***Mr DAWS*** *- Yes. Based on previous projects, such as Penguin and Ulverstone, we were taking a conservative estimate trying to allow for more noise walls.*

***Mrs NAPIER*** *- So that is a bit over the top, probably, in terms of what you need?*

***Mr DAWS*** *- Yes. So now that we are doing noise mounds rather than noise walls where we can, there may be some savings through there. But through the preliminary design we are going to detail the exact dimensions, heights et cetera a bit further so that we can refine the estimates.*

**Traffic Lanes**

The Committee questioned the witnesses with regard to the number of lanes proposed in the bypass project, and the following exchange took place:-

***Mr HALL*** *- One of our submissions talked about the fact of four lanes versus two lanes in parts and I think the minister has been quoted as saying that you do not need a four-lane highway unless there are more than 10 000 vehicles per day. I think on the southern part of this up to Brighton there were more than the 10 000 and then after that they were fewer, weren't there? So you can explain the rationale. I am happy to have four lanes, personally. I think that is better. It is obviously a cost issue.*

***Mr DAWS*** *- When we went through the prediction, 10 years out into the future, even up to the Tea Tree Road interchange from the East Derwent Highway, we were expecting up around the 10 000 vehicles. So we can justify the four lanes right the way up to Tea Tree on the basis that the minister is referring to. From Tea Tree onwards you can probably take this, Andrew.*

***Mr CANTILLON*** *- Part of it is because the bridge is there and it is a stitch in time to duplicate them now as opposed to later on and then what is remaining is I suppose the cost of the dual in a sense. But at some point you are going to have a transition through there as well.*

***Mr FOWLER*** *- During our cost and scope alignment process we tested that pretty thoroughly as to whether we needed to have a dual carriageway through there or whether a single carriageway would suffice. But we came across the issue of where was the ideal location to transition from four to two and with structures fairly uniformly located, there was no ideal place to narrow it down without having hard barriers that then create issues as well, so traffic merging and also hard, unforgiving barriers, and when it came down to it, there were some locations where we reasonably could transition down to two lanes if there was a definite need to but then the overall cost saving was not that great.*

***Mr CANTILLON*** *- For the complexity involved it was far better to go a tad further up the road. It was a value engineering judgment. That was the response.*

**Heritage and Environmental Issues**

The Committee questioned the witnesses with regard to heritage and environmental issues surrounding the project, and the following exchange took place:-

***Mr HALL*** *- The Aboriginal heritage issues I think you covered off pretty well. Regarding the fauna, I think there were some native grasses. Do you have to do any offsets with those at all if you plough them up or are they outside the EMPC act?*

***Mr DAWS*** *- ...I am planning to lodge our EMPC submission within the next week or so around the threatened grasses. In the next couple of weeks we will be sitting down looking at the northern and southern project as whole, trying to figure out where there are potential offsets for threatened grasses and some of the other threatened plants. There is also a threatened species permit that we have to go through as well.*

***Mr FOWLER*** *- We are proposing to do some offsetting, but under the EPBC act they can't consider offsets when they are granting an approval because you are not, in effect, legally bound to continue on and implement those offsets. The offsets are something outside of the EPBC approval.*

***Mr GREEN*** *- They'd be on the rifle range anyway, I imagine.*

***Mr FOWLER*** *- There are certainly significant populations of threatened flora species on the rifle range but elsewhere as well and just throughout the general area. We find that typically on a lot of roadsides there are threatened species. They seem to like the maintenance regime that DIER uses, just slashing once a year and keeping stock off them; they thrive in those locations...*

***Mrs NAPIER*** *- For the record, could we go through the issue associated with the proximity to the rifle range? My initial suggestion was if we took it closer to the rifle range we could straighten it up and we wouldn't have a curve or two bridges.*

***Mr FOWLER*** *- The rifle range, other than being Australian Government owned, is still in use and has been since before World War II, I believe. So it is still an active facility. It is Commonwealth heritage listed due to the flora species there, as well as European heritage due to the rifle range itself. It also has Aboriginal heritage aspects on there. Six months ago we tested the previous*

*planning work, which was to avoid the rifle range. We looked at a couple of alignments, one that encroached slightly on the rifle range and one that encroached more significantly but provided a significantly better alignment for us. When we tested those we found that there were more environmental considerations. The impact on the waterway at the Bagdad rivulet was higher if we moved into the rifle range, as well as then having to affect the way the army used their rifle range, the way they accessed it, dealing with the Commonwealth heritage listing and also EPBC requirements with getting approval to affect those threatened species. We did test that; it was something we looked at. We looked outside the square and thought, 'What if we didn't have this issue, would this be better for the project, to take a more direct route and go through the rifle range?' We found that it was more expensive and more environmentally damaging.*

***Mrs NAPIER** - So it was actually more expensive?*

***Mr FOWLER** - It was, yes.*

***Mrs NAPIER** - I was quite comfortable with your explanation out there. It seems a reasonable explanation but I thought it was a good thing to get it on the record.*

***Mr FOWLER** - What we found was that if we move the road to the east slightly on the eastern side of the Bagdad rivulet there's quite a long depression and there would have been a lot of fill, or even a longer bridge that had to be constructed to cover this long depression. That was the main issue we had.*

**Overview**

Mr Addison provided the Committee with the following submission in respect of the rail and cycle aspects of the project:-

*I want to start by acknowledging, as I did in the submission, the efforts of DIER in relation to the public outreach, publicising of the project and giving us the chance to have a very close look at it - Brian and Andrew in particular, who I spoke to at one of the public forums. Phil also got in touch with me by phone when I contacted him regarding this submission, and I certainly appreciate that...*

*Re the Brighton bypass, I want to mention a couple of things. Firstly, I am looking at it from a multimodal perspective with a bit of a focus on rail. I have also mentioned in the submission about providing for pedestrian and cycling access between two of the major parts of Brighton, being the Brighton area itself and Bridgewater - they are the two main focus areas of commercial activity in that area - and the need for the project to make active provision for that. As I mention in my submission, I sent to DIER a submission on the combined projects and in that I mentioned that as one of the issues.*

*I think it is a pity that today's hearing is not about this part of the corridor in a multimodal sense, that we aren't talking about how the rail corridor might be improved and allowed for down the track and about pedestrians and cycling along the corridor.*

*It's difficult for me to know exactly what to add to what I've said before because I don't know how individual members of the committee have interpreted the comments and suggestions that I have made. So without the benefit of that knowledge, I will mention firstly the importance of the north-south rail connection, especially the link between the Brighton hub and the Bell Bay port and its increasing importance. I think that the standard of the rail route currently is poor, especially in the south of the State. Through the Brighton area it is typical of that poor section in the south of the State. When we had a look at the simulated flyover it was interesting to compare the beautiful vertical and horizontal alignment of the bypass with the rail route. On those maps you can see where the rail route follows. You can't see the gradients on that type of map but on the 3-D simulation you could see the gradients in the track and it is really quite a circuitous route. On the map that I have presented to the committee I have dotted in where the current rail route is so it can seen a bit more clearly. But it does not compare well with what is planned for the highway. It is over a century apart, I think, in standard. Therefore, I am trying to stress the need to make provision now for a significantly improved route where you are going from a twenty-first century terminal and then out into a virtually nineteenth century rail route in providing that link to, say, Bell Bay in particular.*

*I, like everyone here, would love the journey on an improved highway as it is. I know we have people who travel that road regularly and would appreciate the benefits of a four-lane highway. I am not disputing that and how nice it would be. What I am saying is that it is a significant amount to spend and in doing so we should make allowances within that for other modes to be lifted to a high standard. People who would have looked at that and would think about the drive north or the drive south over the Midland Highway would be I think hoping that they are not going to encounter too much truck traffic especially on the mostly single-carriageway sections of the road. They may not appreciate how valuable the rail route will be in terms of keeping road freight traffic to a manageable level.*

*People in Launceston I think ought to appreciate that the route from the south through the city to Bell Bay is going to become an increasing issue for truck traffic and therefore being able to take a lot of that freight via the rail route past the city I think would be of enormous benefit. But you have to invest in the infrastructure and it has to be of a standard that is at least comparable to what we are attempting to provide for rail.*

*I realise it is a bit of a step to say that we should provide a little bit less road capacity at least in the initial to medium-term phases. Traditionally the idea has been to provide things way into the future and allow for growth et cetera. I am just challenging that concept to an extent. I know there are others who would also challenge that idea of providing capacity way above what is required in the medium term and that is something to reinforce what I have put in the submission.*

*As to the extra funding that might be needed to allocate a much-improved railway through this section, I have suggested from the roundabout at East Derwent Highway through to the area where the new highway will overpass the current rail route near Tea Tree Road which should be marked on the map. There is potential but it would cost to do that. I think it is fair to say that in terms of the road connections et cetera, we are probably sparing no expense to extending and investing in a really decent standard and it would be a pity if we could not find some money to*

*ensure that the rail route and indeed cyclists and pedestrians were not well catered for within that funding.*

*I will probably wrap up by just going to the very last page of my submission, and this is perhaps something that Mr Best and Mr Green could relate to, perhaps especially Mr Green from the Burnie area. I have mentioned there that about decade ago and, in fact, going back probably even 10 years further than that, there was quite a bit of upgrade to the highway, just east of Burnie. It was done over a couple phases, probably about 10 to 15 years apart. In doing so, the rail needed to be moved more towards the sea and provision was made to do that and it made for a better rail alignment in places, but interspersed with some sections of reasonable curves it had some really tight curves thrown in in the middle where at the time it was perhaps considered that it wasn't needed to move the rail track any further to cater for the road. What I'm saying there is had a bit more priority been given to the rail route - a much better rail route could have been put through at the time the road was being constructed, or the duplication was being done. I think now we have an opportunity - we were talking with the minister late last year about half a billion dollars being spent on the road between Dysart and Granton. When we're talking about that amount of investment I think it would be disappointing if in the short term we didn't make allowances for these other options and in the medium term actually putting them into effect. By that I am talking especially about the rail route but also the pedestrian and cycling allowances.*

**Cycle Paths**

The Committee questioned the witnesses with regard to the provision of cycle paths, and the following exchange took place:-

***Mrs NAPIER*** *- Can I get a clarifying point because we usually do have a debate about cycling and bicycles, whether we can put in a cycling lane that's safe? What is the protocol in relation to National Highway and cycling lanes?*

***Mr CANTILLON*** *- Sometimes they are a combination of widened shoulders. In this particular situation on the Brighton bypass we are exploring a combination of using the local network through the township, supplemented by shared cycleways and joining the local connector runs so that there would be a continuous stream through Bridgewater and the East Derwent Highway.*

***Mr DAWS*** *- We have a map and we can show you the routes.*

***Mr GREEN*** *- The pathway that we passed on the right coming back from Pontville, I noticed that there was a park and dam and a pathway leading off. Does that connect right through?*

***Mr FOWLER*** *- At the ford?*

***Mr GREEN*** *- Yes.*

***Mr FOWLER*** *- It doesn't go all the way through. I haven't walked that yet to see how far it goes, but I think it's just local.*

***Mr GREEN***- *I was looking on the overhead photo and it looked to go about two-thirds of the way down there for some reason. I don't know whether there is a feature down there or something or whether it is just part of a track that may be continued in the future.*

***Mr FOWLER*** - *I think it's more just a leisure facility than anything, but I haven't walked it to see how far it goes. We haven't discussed with council what their future plans are with that.*

***Mr GREEN***- *I thought it might be a good pedestrian cycleway.*

***Mr CANTILLON***- *We are hoping to hold discussions with council on this and other matters...*

***Mrs NAPIER*** - *I have a question on that same issue - the issue of cyclists and pedestrians?*

***Mr DAWS***- *At the moment, the existing highway comes around here, along this white line and continues straight through here. There is currently a bus stop on either side of the road for people to get off and on at the industrial estate. In the only risk area we will provide some type of pedestrian overpass so people can cross the road without having to try to run across the highway. We are also looking at options for having some type of bus route and, because buses will no longer be able to stop on the highway, providing bus stops through the link road through the industrial estate. So the buses come off and go around through Brighton, so we can provide a bit more connectivity through the industrial estate for pedestrians. As part of that we are looking at having a footpath down along this road through here. From the connection onto the access road to the properties on the western side of the highway here we are looking at having a combined pedestrian-cycling pathway. From here it runs right along down, crosses over the current alignment to the highway down through here and joins up with the old highway going down to Bridgewater.*

*From this point, heading north, we are looking at having a cycleway from here running along the access road and where the new highway deviates from the existing highway, have some type of cycleway from here down around, over the railway line and up through Brighton.*

*At this point through here we are looking at not having the cycleway as part of a shoulder. We want to try to maintain that separation between a cycle path and cyclists riding on the highway itself. This is still concept stage so we are still working out the details of the exact location.*

***Mr GREEN***- *There will be a link though?*

***Mr DAWS***- *There will be that link because we have identified that there are people who do come from Brighton and Crooked Billet Creek is the crunch - we somehow need to get them across Crooked Billet Creek. We thought about the option of having a cycleway around the back but that adds an extra two kilometres or so to the route and people would not use that.*

***Mrs NAPIER*** - *They are not going to do that, they will take a short cut.*

***Mr DAWS***- *No. The existing highway through here, the current bridge that we have over the railway line, just to the north of that, where we construct the new rail into the transport hub, we*

*are cutting the road through there, so we cannot physically get cyclists along the existing highway which is why we are looking at having something down along the bypass through here.*

***CHAIR** - At the top of the batter?*

***Mr DAWS** - We are not sure whether it is going to be at the top or the bottom of the batter. Those details are still being finalised at the moment. But this is the approximate location that we are looking to have some type of connection here which will link the Brighton community and the Bridgewater area*

***Mrs NAPIER** - So there will be designated tracks?*

***Mr DAWS** - There will be a designated area. So, a cycleway linked in with a pedestrian overpass through here so people can come down, cross the highway and reach the highway through this location through here. Because they are so constrained by the properties on either side of the road, there will be a concrete Jersey barrier through the centre of the highway, so there will be no option for people to get there and try to cross the road. If people want to catch a bus out to the industrial estate, there will be bus stops and a walkway for them to cross over.*

***Mrs NAPIER** - Presumably the discussions with the council continue about the rest of the distance to Pontville?*

***Mr DAWS** - Yes, particularly through the signage.*

***Mrs NAPIER** - I think it's a fair point that Mr Addison raises...*

***Mr BEST** - I think it has been noted that there will be a cycle link, from what I gather, that needs to be worked through with the council and that there is consideration about the alignment of rail, as to what is the best way of doing that.*

***Mr CANTILLON** - Probably the way I would express it is that regarding the cycle lane we have a vision there and we see strong cooperation from council. We need to have a champion there and come to some agreed arrangement about that. We think there is mileage to be had there and we advocate that. Obviously with the rail issue we have looked it and considered the issues that Mr Addison has raised. It is a work in progress really. Does this site stack up with going somewhere else? What we are hearing is probably not, in a global context, but it is a test that you have to apply in the transport sense on the project.*

**Rail Alignment**

The Committee questioned the witnesses with regard to rail alignment, and the following exchange took place:-

***Mr BEST** - Mr Addison, in relation to the railway line you're talking about the alignment, is that right? You're saying that the alignment is probably not as efficient as it could be given that the highway is an efficient alignment?*

***Mr ADDISON*** - *I'm saying that typically in southern Tasmania and in isolated places elsewhere you have curves of radii between about 100 and 250 metres. That is really tight and if we're talking about easing them out, as they have at the approaches to the new bridge at the Jordan River bridge and the rail bridge there, which is in the final phases of coming on stream, it has probably been eased out from 100 metres to perhaps between 200 and 250 metres. We're talking about easing the speed limit from 35 kph to perhaps 45 kph or maybe 50 kph. That helps but in terms of intermodal traffic where you want trains running along at a decent speed - not quite highway speed, but certainly on the mainland they would be planning to run their intermodal trains at highway speed - with curves of that type I would be hoping that you're looking for a minimum of 500-metre radii curves where you are talking about being able to maintain perhaps 70 kph or thereabouts, or perhaps even closer to about 900 metres where you might be able to run without having to slow down a freight train.*

***Mr BEST*** - *Looking at your chart, I think you have put a thick line here and this is where you are suggesting the rail, as an option, runs alongside the highway. Am I understanding it correctly?*

***Mr ADDISON*** - *Yes, that is it. I am not saying it should be built at this stage. What I am saying is we should be doing a lot now and make some investments to allow for this at a later time. On the front of that I have used a photo where you can see the location of the new bridge and I have marked in roughly the route of the new alignment across here for the new Jordan River rail bridge. I guess my concern is that they might be saying, 'We have put in a new bridge, albeit probably 30 years later than it should have been, but now we do not need to do any more. That is okay, that is a satisfactory standard'. I am saying that the bridge certainly will be of a satisfactory standard but the alignment down through there and what you have to do to get down there and back up again is the unsatisfactory part of it in the medium to long term and that is just one aspect of it.*

***Mr BEST*** - *For rail?*

***Mr ADDISON*** - *For rail. Just to add to that, I noticed since the public consultations that the road approaching now to the industrial precinct looks as though it is grade separated. So regarding the new road in through there, the new alignment of that curved road as it comes up, it seemed to be in the flyer that the simulation was that there is now grade separation here -*

***Mr DAWS*** - *Yes, that is an error in the flyer which we are in the process of having fixed. We have had discussions with the chief traffic engineer and also the Rail Management Unit. When all the trains start to go into the transport hub we are only estimating to have a couple of train movements per day at the most down through this line, heading down to the paper mill at Boyer. So we are indicating that this would be a conventional level crossing but will also have some advanced warning.*

***Mr ADDISON*** - *So it is as it stood at the time of the public display?*

***Mr DAWS*** - *Yes.*

***Mr ADDISON*** - *What I am saying is that in the longer term that crossing and the one down near the sports ground down to the left of the map, plus the curvature through there and the curvature*

*as it approaches at the top, are pretty substandard. I am saying that I really think that allowance should be made for a better alignment in the medium to long term but the allowances need to be made now, I feel.*

***Mr DAWS*** *- It is something that we are looking into. That line is for the current rail alignment which takes you out through here. It is not shown but that is where the rail is going to go into the transport hub. We are looking at potentially realigning the section of this rail through here. At the moment this section has a maximum 2.5 per cent grade for the trains and the radius of the curve through there is about 100 to 200 metres which is very tight for a train and the problem is that with the train coming up the 2.5 per cent grade, when they start to turn corners they use up to 25 per cent of the power to go around the bends. So we are looking at the option of increasing that radius of the curve through there but the Rail Management Unit at the moment is looking at a wider view of the rail network because if we increase that curve here and they say 20 seconds for a train but we do not improve the sections further up and they are a lot worse, the money that we spend here may be better spent improving the network somewhere else. There are options which we are going through at the make sure that all those considerations are taken into account. It was obvious if we built the highway through there now it would be difficult to come back.*

***Mr ADDISON*** *- That's just one of many curves like that.*

***Mrs NAPIER*** *- Are there any other sections of the road improvement that would prevent the realignment of rail, as is being suggested by Mr Addison, should the funding be available?*

***Mr CANTILLON*** *- I did some number crunching, Ian, and there is $136 million of State and Federal Government money committed for upgrades to Tasmania's rail network. That's excluding the $78 million rail rescue package. They have submitted a series of strategic project bids to the Commonwealth Government for a number of different jobs. As part of that work, there is one particular project called the main line upgrades. The key thing is to make sure that we're using the money in the right locations, where we can get the most value. It might look at face value that it is worthy to do something here perhaps but by comparison in the global scheme of things when we look at the entire network length, you are probably going to get greater value and impact on the money in spending it in other locations. We have asked that question. The work is ongoing, it is still happening at the moment, but we don't anticipate at this stage any rail impacts on the bypass project as we have identified based on the feedback that we've got on the other sites that they're investigating. You're right, in a global transport sense you do look at it between the two and we did look at it at the time but this is a bypass project as well and, as Mr Addison said, there is a further cost overlay to do rail works. It's not as if you're getting the two for the same price. It does cost you more and you can do some work here but in the global scheme of things, if you want to get best value out of the money, should it be spent here or further up the road, what we are hearing is that it is probably further up the road. Those justifications and rationales are the ones that we have to put before the Australian Government.*

***Mrs NAPIER*** *- You're saying that any of the new road sections being built don't interfere with potential realignments? Has that work been done?*

***Mr CANTILLON*** *- If we were going to do some rail works at this site in addition to the roadworks, we might change the height of the road at certain locations over certain lengths and try to optimise the earthworks footprint between the two but again that is an additional cost; it's not part of the bypass project scope. Even if we did that, is this really a site at the end of the day in the global context where people want to spend their money? What we're hearing is that there are other sites that are going to come up trumps. This could be a site but it's right down the order; it's further afield.*

***Mr ADDISON*** *- I think it's fair to say that the worst sections are on the approaches to Rhyndaston further up. As I have put in my submission, $20 million or thereabouts was allocated for improvements there and two other sites further north. I also put in my submission that of the 90 kilometres from Bridgewater to Anthill Ponds at least 60 kilometres are of this kind of very difficult standard and that in the longer term the investment should be looked at for making those improvements. If $164 million was spent on the southern rail network you would have a very good connection between Brighton and Anthill Ponds but we're comparing different things.*

***Mrs NAPIER*** *- And that's certainly listed in the material we were provided with about the Rhyndaston rail improvement.*

***Mr ADDISON*** *- Yes, but I am not saying that at this stage we should be investing big money in putting in the rail connection here, I am saying that we need to identify a much higher standard of alignment where we are talking about this AusLink thing. The Tasmanian corridor strategy is to 2030 and we should be thinking what can be provided around that time and what we do now. Just as we are saying that it is better now to take the four lanes a bit further because it will give us benefits down the track, I think it is just as valid to say we should be, where we can, perhaps doing a bit of extra earthworks and maybe allowing for a grade separation at Briggs Road where the highway goes under and allocate for a rail under there as well. Identifying a corridor and making sure your connecting roads are built to avoid that - those are the points I am trying to make, not necessarily to build these things right at the moment as part of this...*

***Mr BEST*** *- With an alignment of rail, surely that would have to be cheaper than an alignment of a four-lane highway? It's a matter of whether you have the money or not in the project, isn't it? It doesn't matter if its' cheap if you don't have the money in the project. Do you know roughly what the different in cost might be?*

***Mr FOWLER*** *- Per kilometre for rail it is in the order of $2 million, I think.*

***Mr DAWS*** *- I think, depending on the alignment, they quoted between $1 million and $2 million per kilometre, depending on whether it is straight or flat.*

***Mr CANTILLON*** *- When we did to Chasm Creek it was $2.3 million a carriageway kilometre, but that was a very complex drive and you went 4 metres out to sea. This has some large overlays and bridgeworks and stuff like that. We have not done the maths. We have looked at it from a different approach.*

***Mr BEST*** *- The deal is done and I think there was some talk about a memorandum of agreement to be signed. Are you able to negotiate any more regarding the rail or is this what the deal is and that's it?*

***Mr CANTILLON*** *- In terms of the scope itself, what we have here is $164 million and we have to submit an estimate and a bid that has 90 per cent probability that we can do it for that amount of money. Obviously if there are savings that we can realise then maybe there are opportunities, but we are too early at this stage to say there. There are other jobs in the program but they are for other rail jobs or other planning jobs, the Bridgewater Bridge refurbishment et cetera. We haven't even signed the MOU yet, so they're things that you would keep in the back of your mind.*

## DOCUMENTS TAKEN INTO EVIDENCE

The following document was taken into evidence and considered by the Committee:

- Department of Department of Infrastructure, Energy and Resources Submission – Brighton Bypass; and
- Submission from Mr Ian Addison - Brighton Bypass and Bridgewater Bridge.

## CONCLUSION AND RECOMMENDATION

The need for the proposed works was clearly established. As a part of the National Highway, the Brighton Bypass project would increase road safety, accommodate the projected increase in Tasmania's freight transport, increase employment opportunities in the Brighton area, and decrease freight travel times.

The Committee noted the importance of the cycle paths being included in the project, promoting social, health and environmental benefits. It was also emphasised that a prime consideration in the development of the cycle paths is the safety of its users.

While the Committee believed the consideration of the rail mode was important within the conceptual overlay of the project, members accepted that the Department had as much as was practicable allowed for the alignment of rail in future. The Committee also acknowledged that the rail mode was not within the scope of the current project.

Accordingly, the Committee recommends the project, in accordance with the documentation submitted, at an estimated total cost of $164,000,000.

**Parliament House**
**Hobart**
**13 March 2009**

**Hon. A. P. Harriss M.L.C.**
**Chairman**