Contents

A PROJECT OVERVIEW

This section provides a snapshot of the Funding Recipient and the Project to be assessed.

Proponent Details

A1 Entity Name

Department of State Growth

GPO Box 536

HOBART TAS 7001

ABN: 36 388 980 563

A2 Primary Project Contact

s 36

s36

Position: Director Programming and Delivery

s 36

A3 Project Partners

The project partners for the Northern Roads Package are the Australian and Tasmanian Governments.

Project Details

A4 Project Name

Northern Roads Package – Stage 1 – Batman Highway – Development and Delivery

A5 Project identification (ID)

100579-18TAS-RSI

A6 Project Summary

Rationale/objectives: The Tasmanian Integrated Freight Strategy released in 2016 identified the Batman – Frankford - Birralee road corridor as a key regional freight route. It is a strategic connection between the north east and north west of Tasmania.

In April 2019 the Australian Government committed $24 million to upgrade Birralee Main Road from the Roads of Strategic Importance (ROSI) initiative. In order to maximise the benefit, and consistent with the 2016 Tasmanian Integrated Freight Strategy it is intended to extend the scope of the original Birralee Main Road commitment to include the Batman Highway and a connecting section of Frankford Road. The project is to be known as the Northern Roads Package.

Currently many heavy vehicle operators travelling between the industrial and port precinct of Bell Bay and the Bass Highway travel via Launceston, rather than the more direct route via the Batman Highway (A0278), Frankford Main Road (A1044) and Birralee Main Road (A1701). Through industry consultation, the Department of State Growth has determined this is primarily due to the safety concerns of operators travelling on these roads. The safety concerns arise from a number of factors including insufficient sealed pavement width, lack of overtaking opportunities or turn-out bays, and poor pavement quality.

The scoping phase has identified appropriate upgrades along the corridor to address these safety

concerns, including a wider sealed cross section, pavement rehabilitation/strengthening and localised curve widening as necessary to support the increased use by heavy vehicles.

Location: Batman Highway (A0278), Frankford Main Road (A1044), and Birralee Main Road (A1701). This PPR only covers the Stage 1 (Batman Highway) portion of the Northern Roads package.

Key Benefits: The major benefits expected to be delivered by the project will improve access for freight vehicles using this route, and will reduce the number of heavy vehicles travelling through the Launceston Central Business District (CBD). In addition, the works will provide safety improvements for all road users travelling on the Batman Highway, Frankford Main Road, and Birralee Main Road corridor.

As part of the project, a heavy vehicle rest area (HVRA) is to be included at the Sidmouth Hall area. This has been identified as a need by the Tasmanian Transport Association (TTA), as dedicated areas where heavy vehicle drivers can safely pull over and stop to check the vehicle or to take a break are a critical component of a safe and productive road freight network. Consultation with the TTA and local council has been undertaken in implementing the design of the HVRA.

Progress to Date: The concept design/scoping phase for the Batman Highway is approaching completion, while the concept design phase/scoping phase is yet to begin for the Frankford Main Road and Birralee Main Road portions. Funding is being sought to progress with the Development and Delivery Phases for the Batman Highway portion of the Northern Roads package.

Progress to date for the Batman Highway portion of the Northern Roads package initially involved a desktop assessment of asset condition to inform the options analysis, It has now progressed towards the completion of the concept design/scoping phase, including a detailed topographic survey for which the concept design is based on, and a flora and fauna survey. The flora and fauna survey identified no potential impacts on threatened species or habitat by the project. There was some threatened vegetation identified alongside the highway in two isolated section, however these should remain untouched by the works.

Progress to date for the Frankford Main Road and Birralee Main Road portions have predominantly involved desktop assessment of asset condition to inform options analysis, and infield investigations are planned as part of the Scoping Phase to refine and optimise the project scope. Deflectograph survey of these two roads has been completed which has given a preliminary indication of targeted areas for pavement rehabilitation, however geotechnical pavement investigations are yet to be completed, and are planned upon the commencement of the concept design/scoping phase.

The anticipated total project budget for this package is $55M at P90 contingency level.

A7 Geographic Coordinates

The project extents are defined by the following sections. This PPR only covers the Batman Highway section of the Northern Roads Package:

Road Name	Start Location		End Location	
Birralee Main Road	41°30'34" S	146°49'31" E	41°22'04" S	146°49'52.5" E
Frankford Main Road	41°17'55" S	146°57'03" E	41°22'04" S	146°49'52.5" E
Batman Highway	41°14'25" S	146°52'59" E	41°11'58" S	146°58'10" E

The project extents are also shown in Figure 1 and location information is attached in Shapefile format.

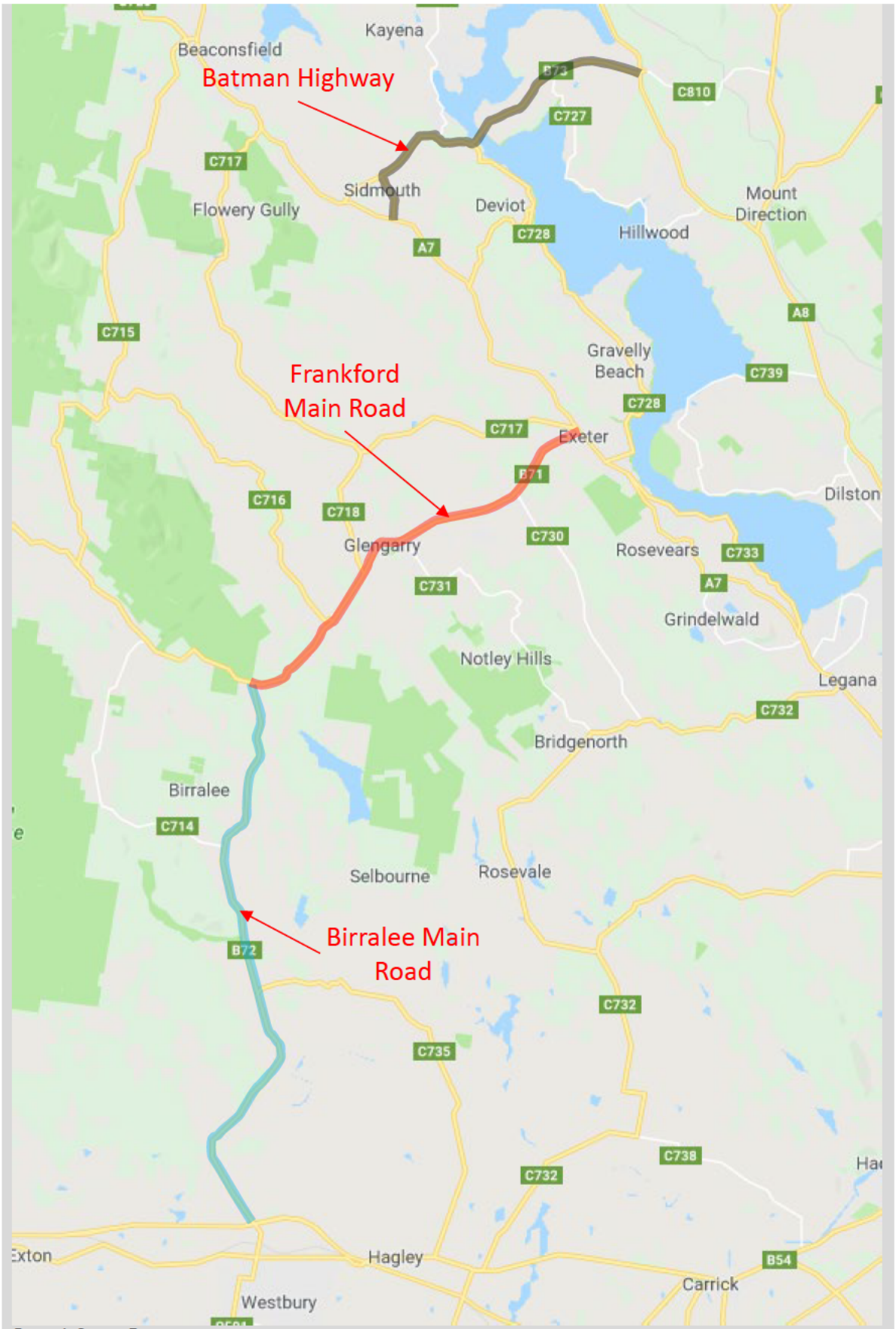


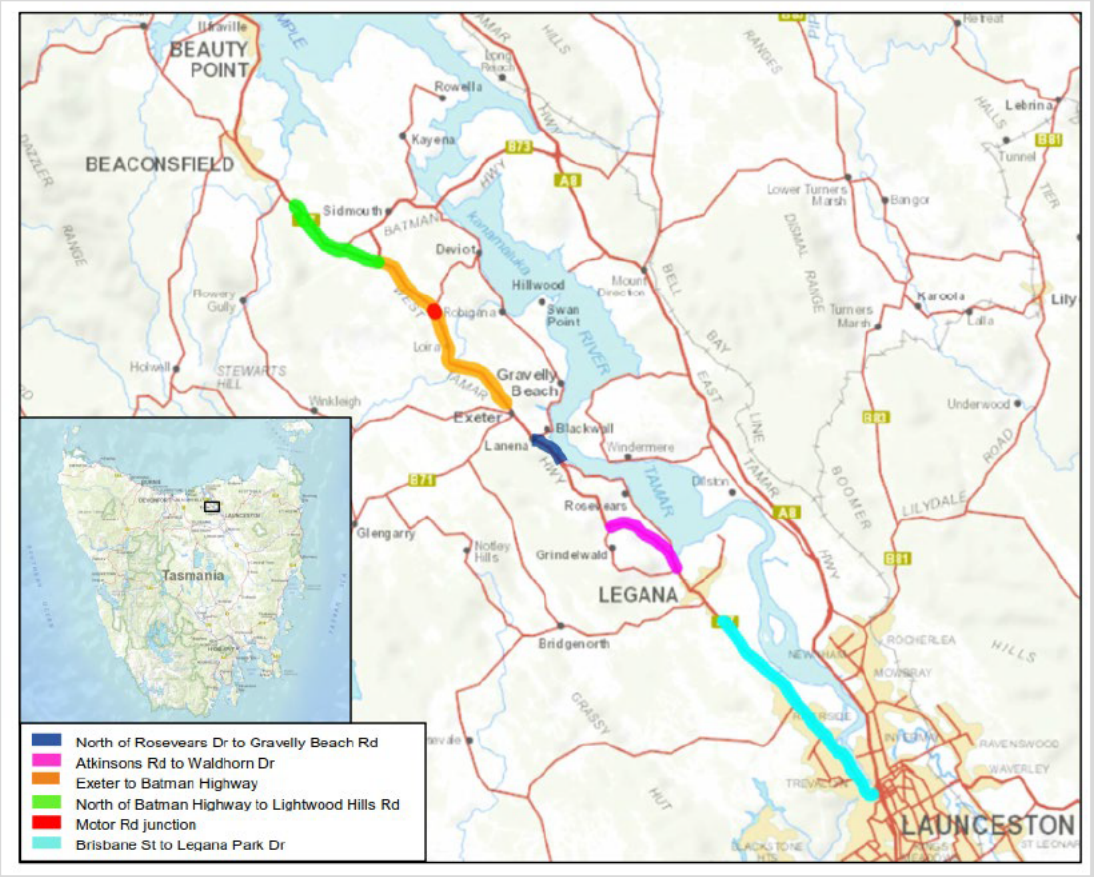
Figure 1: Project Extents

A8 Corridor and section of the National Land Transport Network (if applicable)

Birralee Main Road, Frankford Main Road and the Batman Highway are not part of the National Land Transport Network. However, the project is eligible for funding as identified in Section B4 of this PPR.

A9 Related projects

In addition to the Northern Roads Package, the Tasmanian Government has committed $12 million to transport efficiency and road safety improvement projects along the West Tamar Highway (A0252) between Riverside and Greens Beach.



B PROJECT SCOPE

This section details how the problem or opportunity was determined, why it is eligible for Australian or State Government funding and the options the Funding Recipient explored before settling on the final Scope.

B1 Problem/Opportunity Statement

Batman Highway, Frankford and Birralee Roads are part of an identified key regional freight corridor. Works proposed include road widening, pavement strengthening and localised curve improvements to enable the corridor to meet Department of State Growth requirements to cater for the increased heavy vehicle movements supporting business and industry. The project is to be known as the Northern Roads Package. This PPR is for the Stage 1 (Batman Highway) portion of the Northern Roads Package.

The roads included in the Package all have a significant percentage of heavy vehicles in their daily traffic volumes. The Batman Highway has an approximate traffic volume of 2,500 vehicles per day with 21 percent heavy vehicles. Frankford and Birralee Main Roads have traffic volumes of approximately 1,800 and 842 vehicles per day, respectively and both have in excess of 20 percent heavy vehicles daily.

The Department of State Growth obtained feedback from transport operators regarding the operational performance of the roads. Through this consultation, it is understood that due to the safety concerns of operators travelling on the Batman Highway, Frankford Main Road and Birralee Main Road, some heavy vehicle operators prefer to travel between Bell Bay and the north west along the longer route through the city of Launceston.

The lengths of identified roads for the project are 10.87km for the Batman Highway, 13.53km for Frankford Main Road, and 18.49km for Birralee Main Road. A total road length of approximately 42.89 km for the corridor.

Pavement seal width has been identified as a deficiency by heavy vehicle industry users, both in writing and verbally. The Batman Highway currently has an average of a 6.3m seal width. Frankford and Birralee Main Roads have an average seal widths of 6.75m and 6.1m. For each of the roads the current seal width are well below recommended widths given the current traffic volumes including heavy vehicle usage. This is discussed in the attached options analysis.

It is anticipated that the Northern Roads Package will encourage heavy vehicle operators to use this route, reducing the number of heavy vehicles travelling through the Launceston CBD.

This project will also result in safety improvements for all road users travelling on the Batman Highway, Frankford Main Road, and Birralee Main Road.

B2 Options Evaluation

A high-level Options Analysis Report has been completed which identifies different combinations of options for shoulder widening and pavement strengthening in order to maximise the benefit to the Northern Roads Package road corridor working to the proposed budget, including:

1. Batman Highway and Frankford Main Road shoulder widening, Birralee Main Road pavement rehab and localised curve widening
2. Shoulder widening and pavement rehab along full length of all roads
3. Batman Highway shoulder widening and pavement rehab, Frankford Main Road shoulder widening, Birralee Main Road pavement rehab
4. Batman Highway and Frankford Main Road shoulder widening and pavement rehab, Birralee Main Road pavement rehab and localised curve widening
5. As per option 4, with reduced extent on Frankford Main Road

The report also summarises and provides preliminary analysis of all existing data, which could be obtained for the road corridor. This includes industry consultation comments, traffic volumes, existing and target road widths, construction and seal history, structures in the road corridor, services, and crash history.

The options analysis process confirmed that further investigation works are required to refine and adequately inform which option will maximise the benefit to the road corridor whilst working within the proposed total project budget.

The deflectograph testing and geotechnical pavement investigations have since been completed on the Batman Highway, which as expected have identified sections for targeted pavement rehabilitation, rather than rehabilitation along the full length of road. This has been incorporated into the concept design.

Deflectograph testing has also been completed on Frankford Main Road and Birralee Main, which has provided a preliminary indication of targeted areas for pavement rehabilitation. The deflectograph testing of Birralee Main Road provided better than expected results, which means some of the funds which were previously allocated toward pavement rehabilitation can now be put toward shoulder widening on this road.

A section of Frankford Main Road has been identified where the current seal width is close to the desired seal width (based on the data provided by State Growth). This is between CH 2.82 and 8.06 on Link 5, and CH 0.00 to 0.38 on Link 21. While these widths will need to be confirmed during the concept design/scoping phase with detailed survey, State Growth have agreed to not widen this section unless pavement rehabilitation is required. This frees up scope in the budget to go towards providing a heavy vehicle rest area (HVRA) at the Sidmouth Community Hall, and provide additional funds for the widening of Birralee Main Road.

B3 Scope of Project Phase

Scoping Phase

Development Phase

To date deficiencies have been identified along with potential treatments and locations of upgrade works to resolve deficiencies have been identified. The Scoping phase for Batman Highway involved undertaking the following activities to ensure that upgrade works are targeted to maximise the benefit of expenditure along the corridor:

- Environmental and heritage investigations
- Stakeholder and community engagement
- Land use planning
- Pavement and geotechnical investigations including deflectograph testing, test pitting and laboratory testing
- Pavement design
- Engineering survey
- Concept design for road, utilities and drainage.

With each of the above items now complete for the Batman Highway, the Development phase for the Batman Highway will involve the following activities:

- Preparation of a Basis of Design Report informed by the concept design
- Updating of the Stakeholder and Community Engagement Plan (SCEP)
- Presentation of the concept design to West Tamar Council and George Town Council
- Optimisation of the road design based on consultation with public utility authorities and potholing information

- Stormwater assessment and development of a preliminary drainage design
- Preparation of design documentation for the relocation of public utilities and liaison with public utility owners
- Landowner consultation, preparation of land acquisition plans, property survey diagrams and associated documents for the Office of the Valuer General (OVG)
- Preparation of preliminary design documentation
- Road Safety Audits (preliminary & detailed design)
- Preparation of plans and text to be included on State Growth's webpage for the project
- Refinement of the road, stormwater and public utility relocation design to address feedback on the preliminary design
- Preparation of draft detailed design drawings and contract specifications
- Finalisation of the detailed design drawings and contract specifications.

Delivery Phase

The proposed program for the project aims to progress the design so that the Stage 1 package (Batman Highway) could progress to construction at the start of the Tasmanian construction season in October 2020. In parallel with construction of the Stage 1 package, the design for the Stage 2 works (Frankford Main Road and Birralee Main Road) will be finalised and then proceed to construction. The benefit of this approach is that construction can be commenced on the road with the highest freight volumes whilst the design of the remaining works is completed.

The Department intends to call tenders for Stage 1 for a construct only contract in time to begin construction in the Tasmanian construction season starting in October 2020. The construction timeframe will be October 2020 to April 2021.

B4 Eligibility under the *National Land Transport Act 2014*.

This project is eligible for approval as an Investment Project under the National Land Transport Act 2014, Part 3, Section 10:

> (a) the construction of an existing or proposed road that is in a State or Indian Ocean Territory;

C. PROJECT COSTS

This section considers project cost information and includes a summary of the data required in the Project Cost Breakdown Template. This section is to be completed in as much detail as possible based on current Project Phase.

C1 Tasmanian Project Cost Breakdown

A probabilistic cost estimation approach has been adopted to estimate the Development and Delivery Phase costs. The Development and Delivery Phase cost estimate has been prepared in accordance with Guidance Note 3A.

C2 Total Outturn Cost Breakdown

Stage 1 - Batman Highway Portion Cost Summary Table – Excluding Sunk Costs

	P50 ($m AUD)	P90 ($m AUD)
Base Cost Estimate	14.961.729	14.961.729
Contingency	2.297.171	3.950.071
Total Project Cost Estimate	17.258.900	18.911.800
Escalation	475.252	520.767
Total Outturn Cost Estimate	17.734.152	19.432.567

C3 Budget Profile

Financial Year Forecast Milestone Requirement *

P50/P90 Outturn (or Actual as appropriate)		FY20/21 ($m)	FY ($m)	FY ($m)	FY ($m)	FY ($m)	Balance of Commitment** ($m)
	Australian Government contribution	14.187322	0	0	0	0	1.358.732
	State Government contribution	3.546830	0	0	0	0	0.339683
	Other contribution (provide detail)	0	0	0	0	0	0
	Total	17.734152					

<Additional Details if applicable>

*Payment of Australian Government funding will be subject to the achievement of Project milestones determined in consultation between Commonwealth and state officials.
**To be made available on demonstrated need.

C4 State Government Budget Commitment

The Tasmanian Government has committed to providing 20% of the ROSI funding for the Northern Roads Package. The Tasmanian commitment to ROSI funding is contained within the FY19/20 Tasmanian Government Budget Papers.

D. BENEFITS

This section provides the Department with qualitative and quantitative data that will be used to highlight the benefits of the Project.

D1 Expected benefits to be delivered by the Project

The Northern Roads Package will effectively open a shorter freight route in the North of Tasmania – providing freight vehicles especially a higher efficiency route. Non freight vehicles will also benefit from the improved route.

Major Benefits include:

Freight Operational Cost Savings – shorter trips and the enabling of higher productivity vehicles such as A-Doubles

Time savings – all vehicle and occupant types

Accident reductions

Environmental benefits – reduced greenhouse gas emissions due to fuel savings

Lower maintenance costs

D2 Summary of the Benefit Cost Ratio (BCR)

The benefit cost analysis has been prepared on the basis of the entire Northern Roads Package project.

Summary Measures (P50)

		4% Discount rate	7% Discount rate
Present Value Cost		$47.7M	$46.4M
Present Value Benefits	Standard benefits	$165.6M	$112.8M
	Standard benefits with WEBS	$277.5M	$188.4M
	Standard benefits with WEBS and other benefit categories	not quantified	Not quantified
Benefit Cost Ratio	Standard benefits	3.5	2.4
	Standard benefits with WEBS	5.8	4.1
	Standard benefits with WEBS and other benefit categories	n/a	n/a

Summary Measures (P90)

		4% Discount rate	7% Discount rate
Present Value Cost		$52.9M	$51.4
Present Value Benefits	Standard benefits	$165.6M	$112.8M
	Standard benefits with WEBS	$277.5M	$188.4M
	Standard benefits with WEBS and other benefit categories	not quantified	Not quantified
Benefit Cost Ratio	Standard benefits	3.1	2.2
	Standard benefits with WEBS	5.2	3.7
	Standard benefits with WEBS and other benefit categories	n/a	n/a

D3 Benefits Indicator

Benefits indicator table

Benefit Area	Benefit indicator and units	Value
Reliability/ amenity	Public Transport reliability (standard deviation hours per annum)	n/a
	Journey time reliability (standard deviation hours per annum)	n/a
Safety	Number of avoided accidents (average annual)	4.4
	Number of avoided serious injuries (average annual)	0.3
	Number of avoided fatalities (average annual)	0
Active transport benefits	Additional kilometres of walk and cycle paths (kilometres)	n/a
	Increased walking and cycling activity (number of trips by mode and average kilometres per annum)	n/a
Commuter time savings (daily commute to work)	Minutes saved by commuters on their daily commute to work based on a sample of OD commutes along the relevant corridor (average annual)	10.2
	Average number of commuter trip (annual)	293,926
Leisure time savings	Average time savings for people on trips for leisure activities (minutes)	10.2
	Average number of leisure trips (annual)	97,975
Freight / business time savings	Average time savings for business trips, including freight (minutes)	10.2
	Average number of business and freight trips (annual)	587,852
Vehicle Operating Costs	Average change in vehicle operating costs for freight and business operators (annual)	$4.2 million
	Average change in vehicle operating costs for passengers (annual)	Not quantified
Freight and Business Productivity	Average annual value of the sum of reduced vehicle operating costs, time savings and travel time reliability for freight and business users	$5.3 million
Construction Jobs	Number of jobs supported by the Project during the construction phase of the Project (average per annum FTE)	30
Operations Jobs	Number of jobs supported by the Project during the operational phase of the Project (average per annum FTE)	N/A

D4 Benefit Net Present Value

Benefit Component		Present Value of all Benefits ($m)	Year 10 Only:	
			Year 10 Benefits in $m (10 years after construction complete)	Year 10 Benefits as a percentage of total benefits
Travel Time Savings	Passenger (existing/ new users)	**29**	**1.6**	
	Business (existing/ new users)	**43**	**2.3**	
	Freight (existing/ new users)	**19**	**1.0**	
	Total Travel Time Savings	**90**	**4.9**	**72**
Reduced Vehicle Operating Costs (resource costs)	Passenger (existing/ new users)	**Not quantified**		
	Business (existing/ new users)	**Not quantified**		
	Freight (existing/ new users)	**66**	**1.4**	
	Total Reduced Operating Costs	**66**	**1.4**	**21**
Accident Reduction	Passenger (existing/ new users)	**1.7**	**0.1**	
	Business (existing/ new users)	**1.5**	**0.09**	
	Freight (existing/ new users)	**1.1**	**0.06**	
	Total Accident Reduction		**0.24**	**4**
Environmental Benefits	Reduced Greenhouse Emissions	**4.8**		
	Reduced Local Pollution	**Not quantified**		
	Reduced Noise	**Not quantified**		
	Other (i.e. Biodiversity)	**Not quantified**		
	Total Environmental Benefits	**4.8**	**0.3**	**4**
Reduced Maintenance Costs	Routine (Annual)	**0.6**	**0.04**	
	Periodic			
	Rehabilitation			
	Total Reduced Maintenance Costs		**0.04**	**1**
Other standard benefits (reliability, crowding, tolls/fare box)		**Not quantified**		
TOTAL STANDARD BENEFITS*		**165.6**	**6.8**	
Wider Economic Benefits	Agglomeration Benefits			
	Other Wider Economic Benefits	**111.9**		

	Total Wider Economic Benefits	**111.9**		
Other Benefits (i.e. City shaping)	*(add category as required: such as heavy vehicle productivity)*			
	(add category as required)			
	Total Other Benefits	**Not quantified**	**5.8**	

**Total Standard Benefits should equal sum of total benefits.*

D5 Traffic Use Assumptions

		First year after Project completion	10 years following Project completion	30 years following Project completion
Users of existing infrastructure in Base Case	Passenger (trips)	463,696	507,137	618,804
	Business (trips)	355,017	388,277	473,772
	Freight and business (trips)	181,131	198,101	241,720
User of new/ upgraded infrastructure in Project Case	Passenger (trips)	533,250	637,284	946,970
	Business (trips)	408,270	487,920	725,024
	Freight and business (trips)	217,358	259,762	385,993
Users diverted from the rest of the highway network	Passenger (trips)	69,554	130,146	328,166
	Business (trips)	53,253	99,643	251,252
	Freight and business (trips)	36,226	61,662	144,273
Users diverted from other transport modes (where possible).	Passenger (trips)	n/a		
	Business (trips)	n/a		
	Freight and business (trips)	n/a		
Generated trips	Passenger (trips)	n/a		
	Business (trips)	n/a		
	Freight and business (trips)	n/a		
<Additional Details if applicable>				

		First year after Project completion	10 years following Project completion	30 years following Project completion
Users of existing infrastructure in Base Case	Passenger (VKT)	15,649,740	17,115,890	20,884,639
	Business (VKT)	13,693,523	14,976,404	18,274,059
	Freight and business (VKT)	9,781,088	10,697,431	13,052,899
User of new/ upgraded infrastructure in Project Case	Passenger (VKT)	17,997,201	21,508,321	31,960,234
	Business (VKT)	15,747,551	18,819,781	27,965,205
	Freight and business (VKT)	9,976,709	11,923,091	17,717,086
Users diverted from the rest of the highway network	Passenger (VKT)	2,347,461	4,392,431	11,075,595
	Business (VKT)	2,054,028	3,843,377	9,691,146
	Freight and business (VKT)	195,622	1,225,660	4,664,187

Users diverted from other transport modes (where possible).	Passenger (VKT)	n/a		
	Business (VKT)	n/a		
	Freight and business (VKT)	n/a		
Generated trips	Passenger (VKT)	n/a		
	Business (VKT)	n/a		
	Freight and business (VKT)	n/a		

E. FINANCING AND PROCUREMENT

This section is to provide the Department with a narrative as to why a particular financing and/or procurement method was chosen and details on how that procurement method will be managed.

E1 Alternate funding or financing opportunities

Alternative funding and/or financing opportunities were not considered appropriate for this project.

E2 Private Sector Funding or Financing

N/A

E3 Procurement Method

The preferred procurement method is separate design only and construct only contracts. The design contract has been awarded using the Department's standard consultant panel. The construct only contract is to use the Department's standard public tender and evaluation process, open to tenderers who meet the National prequalification requirements.

E4 Tender Exemption

A tender exemption is not being sought.

E5 Project Timeline

Activity	Timeline
Stage 1 Package (Batman Highway)	
Batman Highway – East	
Design Development	July to August 2020
Request for Tender	August to October 2020
Construction	October 2020 to April 2021
Batman Highway – West	
Design Development	July to December 2020
Land Acquisition	October 2020
Request for Tender	July to September 2021
Construction	October 2021 to April 2021
Stage 2 Package (Frankford Main Road and Birralee Main Road)	
Concept Design	August to December 2020
Design Development	December 2020 to November 2021
Land Acquisition	November 2021 to November 2022
Request for Tender	June to August 2022
Construction	September 2022 to March 2023
< Project Timeline details if applicable>	

F. RISK AND SUSTAINABILITY

This section outlines major risks associated with the Project, where the responsibility for managing these risks lies, and how sustainability can be built into the Project to increase its overall benefit.

F1 Risk Identification and Mitigation

A project risk register has been produced. This is attached as supporting information to the PPR. A risk workshop was conducted on 16 August 2019 to inform this risk register.

The risk register has since been updated to incorporate new risks identified during the scoping phase of the project for Stage 1 – Batman Highway. Table F-1 outlines the impacts and proposed mitigation strategies for some of the key risks identified to enable successful delivery of the project.

Table F-1: Major Project Risks and Proposed Mitigation Strategies

Risk Event	Potential Impact of Risk	Risk Mitigation Strategy
The project outputs cannot be delivered within the allocated project budget	Scope of project required to be reduced, minimising the benefits of the project. Alternatively, additional funding sources would need to be explored.	Project scope prepared through the Planning and Scoping Phase required for the PPR includes the preparation of project cost estimates in accordance with Department of State Growth procedures and the PCB template. High level estimates to be completed at Concept/Preliminary Design completion. Preparation of P50 & P90 estimates at Detailed Design completion.
Investigation of the existing pavement identifies significant areas of underperforming pavement.	Requires diversion of funds for road widening to pavement strengthening.	Deflectograph testing early during development phase. This identified regions of acceptable pavement which do not require rehabilitation works. Identify and cost additional remediation of existing pavement.
Local council requests for additional project scope through the consultation process	Increases project scope, cost and delivery schedule.	Undertake early discussions with councils to understand their future planning and specific requests, especially around Exeter.
Significant property acquisition is required to achieve desired pavement widths.	Additional cost in land acquisition.	Investigate road corridor widths and property

	Landowner grievances.	boundaries early in the Development Phase. Utilise design methods which minimise the impact of potential property acquisition.
TasNetworks utility relocation cost is greater than anticipated	Increased construction cost.	Conduct early engagement meetings and discussions with TasNetworks to ensure no miscommunication, and all possible options for relocation are explored.
Lead time to manufacture new cable for TasNetworks service relocation delays road widening works in the vicinity where relocation is required.	Construction delayed.	Engage TasNetworks as early as possible in the process to minimise this risk by planning the relocation early.
COVID-19 impacts and restrictions	Construction delayed due to the impacts of restrictions e.g. supply of materials	Identify as early as possible in the project what the impact of restrictions may be, and plan as best as possible based on the information available. Be agile in planning as impacts and restrictions change over the course of the project.

F2 Project Dis-benefits

Possible negative externalities associated with the project could include the need to remove threatened species to accommodate road widening and the potentially aggrieved landowners affected by land acquisition. Environmental investigations along with topographic survey collection and road design modelling have been completed for Stage 1 during the Scoping Phase to confirm the extent of any impacts, and are planned for Stage 2.

F3 Sustainability

Following the completion of the project, the increased efficiency for freight vehicles will lead to a more sustainable outcome for road users, including fewer heavy vehicles travelling through the Launceston CBD.

Additionally, the safety improvements for the Batman Highway, Frankford Main Road and Birralee Main Road will provide community benefits in the form of lower impacts on the community and as a consequence reduced resource demand to treat injured persons and repair damaged vehicles and infrastructure.

G. STAKEHOLDER ENGAGEMENT

This section outlines the steps the Funding Recipient will take to ensure that the public and other relevant stakeholders are engaged and actively managed throughout the Project.

G1 Stakeholder Consultation

Stakeholder engagement has been facilitated during the Scoping and Development Phases. A Stakeholder Community and Engagement Plan has been developed which identifies the key project stakeholders, their interest and influence on the project and proposed engagement activities.

Stakeholder engagement will be undertaken in consultation with local government, local landowners, and affected transport operators in the region of the road corridor to ensure all relevant considerations are included in the design process.

The key project stakeholders identified include:

- Property owners and occupiers
- Department of Primary Industries, Parks, Water and Environment
- George Town and West Tamar Councils
- Public Utilities
    - TasNetworks
    - Telstra
    - TasWater
    - Tasmanian Gas Pipeline
- National Heavy Vehicle Regulator
- Tasmanian Transport Association
- Public transport operators

G2 Stakeholder Consultation Plan

Date	Type of Consultation (stakeholders invited i.e. industry, community)	Issues raised	Management plan
June 2020	Briefing for Councils	N/A	N/A
September 2020	Update for Councils	N/A	N/A
September 2020	Individual meetings with adjacent landowners	N/A	N/A
October 2020	Community information sessions	N/A	N/A

G3 Public Recognition Signage Plan

Project signage in accordance with the Guidelines will be erected on both approaches to the project works on the Batman Highway.

H. COMPLIANCE

This section provides the DITCRD assurance that the Funding Recipient understands their responsibilities with regard to both State and Commonwealth legislation and regulation and has taken steps to actively comply.

H1 Commonwealth or State legislation triggered by the Project.

Commonwealth and State legislation triggered by the project has been investigated during the Scoping Phase for Stage 1. A flora and fauna survey has been completed along the Batman Highway to assess whether there will be any impacts on threatened species or habitat. This identified no potential impacts on threatened species or habitat by the project. There was some threatened vegetation identified alongside the highway in two isolated section, however these should remain untouched by the works.

Desktop investigations indicate that Aboriginal and historic heritage legislation are unlikely to be triggered by the project.

H2 Does the Building Code 2016 apply to this Project?

Yes – The project will involve Requests for Tender (RFTs), and the Department of State Growth's RFT specifications for Commonwealth funded projects requires compliance with the Building Code of 2016 in Section 3.

H3 Does the Australian Government Building and Construction WHS Accreditation Scheme apply to this Project?

Yes - Compliance with the Australian Government Building and Construction WHS Accreditation Scheme applies to the Northern Roads Package. Section 36 of the Department of State Growth's RFT specifications for projects with Commonwealth funding requires compliance with the WHS Accreditation Scheme. Furthermore, details of accreditation status are required as part of submitted tenders.

H4 Indigenous Participation Plan

An Indigenous Participation Plan will be prepared during the Development Phase.

H5 Local Industry Participation Plan

Yes - Tenderers for the construction works will be required to submit a Local Industry Participation Plan.

H6 Infrastructure Australia Business Case

N/A.

H7 Disability Discrimination Act, 2010

N/A

H8 Positive Provision Policy for Cycling Infrastructure (PPP)

N/A

I. SIGN OFF

s36 [redacted]

s 36 [redacted]

Date: 30 September 2020

Director Programming and Delivery

J. ATTACHMENTS

This section is where information that was used to help complete the PPR will be attached as Appendices.

J1 Supporting Information

The following supporting information is attached to support the PPR:

- *P50/P90 Cost Estimation Spreadsheet and Output*
- *Completed Project Cost Breakdown (PCB) spreadsheet*
- *Indigenous Participation Plan*
- *Project Location Information*

Record 9

Gazetted High Productivity Vehicle Network Strategy

Tasmania
Explore the possibilities

State Growth has recently reviewed Tasmania's High Productivity Vehicle Network in line with a recently developed set of guidelines for road geometry for High Productivity Vehicle routes. The results of this review are presente d in the *Review of the Gazetted High Productivity Vehicle Network* report. This Strategy accompanies the network review, and outlines how the Tasmanian Government will manage the Gazetted HPV Network (as described in *Schedule 1* of the *Vehicle Operations Notice 2010*).

1. Role of High Productivity Vehicles in moving freight across Tasmania

The High Productivity Vehicle network is an important part of Tasmania's transport system. A transport system that facilitates efficient freight movement is vital for Tasmania, as business and industry is reliant on efficient road and rail li nkages to ports to access larger interstate and international markets.

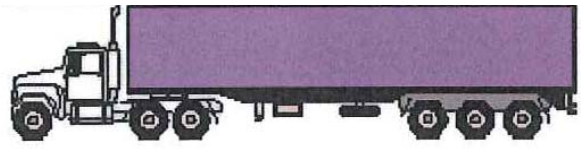
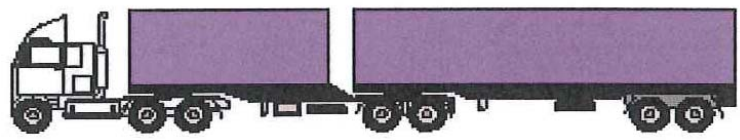
Due to the Tasmania's physical separation from external markets via Bass Strait, Tasmania's exporters and importers alike must use multiple transport modes. This makes the time and cost of freight movement critical to their ability to compete in an increasingly competitive global marketplace. Since their introduction to Tasmania in 1993, the use of High Productivity Vehicles has contributed greatly to reducing freight costs for Tasmanian businesses, by enabling the movement of larger quantities of freight per vehicle which in turn has reduced factors such as fuel consumption, driver demand, road impact, vehicle emissions and truck trips.

What are High Productivity Vehicles?

Heavy vehicles that use Tasmania's road network come in a wide range of vehicle types and trailer combinations. There is a general lack of understanding of the differences between various truck types and how they are managed by the Tasmanian Government.

Some truck and trailer combinations are allowed "general access" to Tasmania's entire road network, provided that they meet regulated mass or dimension limits. However, even general access vehicles cannot be used on roads that have prescribed load limits. General access vehicles generally have a single trailer, but some general access vehicles have two trailers. The maximum vehicle combinations for general access vehicles are outlined in Figure 1.

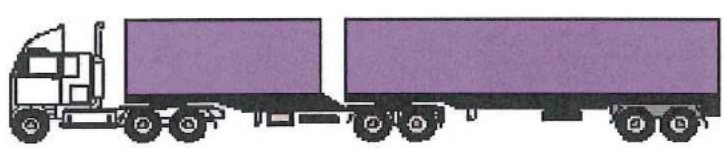
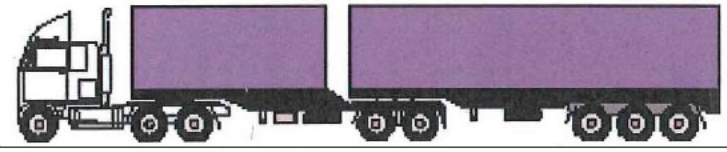
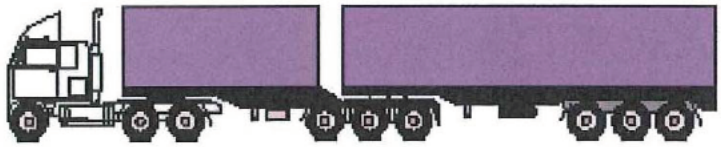
Figure 1 - General Access Vehicle combinations

	*6-axle combination* Length 19m, Width 2.5m, Height 4.3m and Mass 42.5t
	*7-axle combination* Length 21m, Width 2.5m, Height 4.3m and Mass 50.0t

In general terms, a *High Productivity Vehicle* is a vehicle or combination operating under a conditional exemption that exceeds the regulatory mass and dimension limits. For the purpose of

this document, High Productivity Vehicles are vehicles that because of their configuration (i.e. length, number of axles and mass) are restricted to accessing the High Productivity Vehicle Network. The maximum vehicle combinations for High Productivity Vehicles are outlined in Figure 2. This strategy, and the review of the Gazetted HPV Network, deals only with High Productivity Vehicles.

Figure 2 - High Productivity Vehicle combinations

	*7-axle combination* Length 21m up to 26m, Width 2.5m, Height 4.3m and Mass up to 57.5t
	*8-axle combination* Length up to 26m, Width 2.5m, Height 4.3m and Mass up to 63t
	*9-axle combination* Length up to 26m, Width 2.5m, Height 4.3m and Mass up to 68.5t

What do High Productivity Vehicles move?

To better understand the freight task across Tasmania, State Growth undertook the Tasmanian Freight Survey in 2008-09, interviewing over 100 companies across Tasmania, including freight movements to and from businesses; the frequency of trips; and the types of vehicles used.

According to the results of the Freight Survey, trucks carry the majority of the state's freight task by tonnage (92%) and in terms of tonne kilometres travelled[1] (87.5%). Heavier trucks, including six axle semi trailers and High Productivity Vehicles, carry a large proportion of the statewide task, carrying 63% of the total task by tonnage, and 73% in terms of tonne kilometres travelled.

High Productivity Vehicles carry 28% of the State's freight task by tonnage, and about 34% of the statewide task in terms of tonne kilometres travelled.

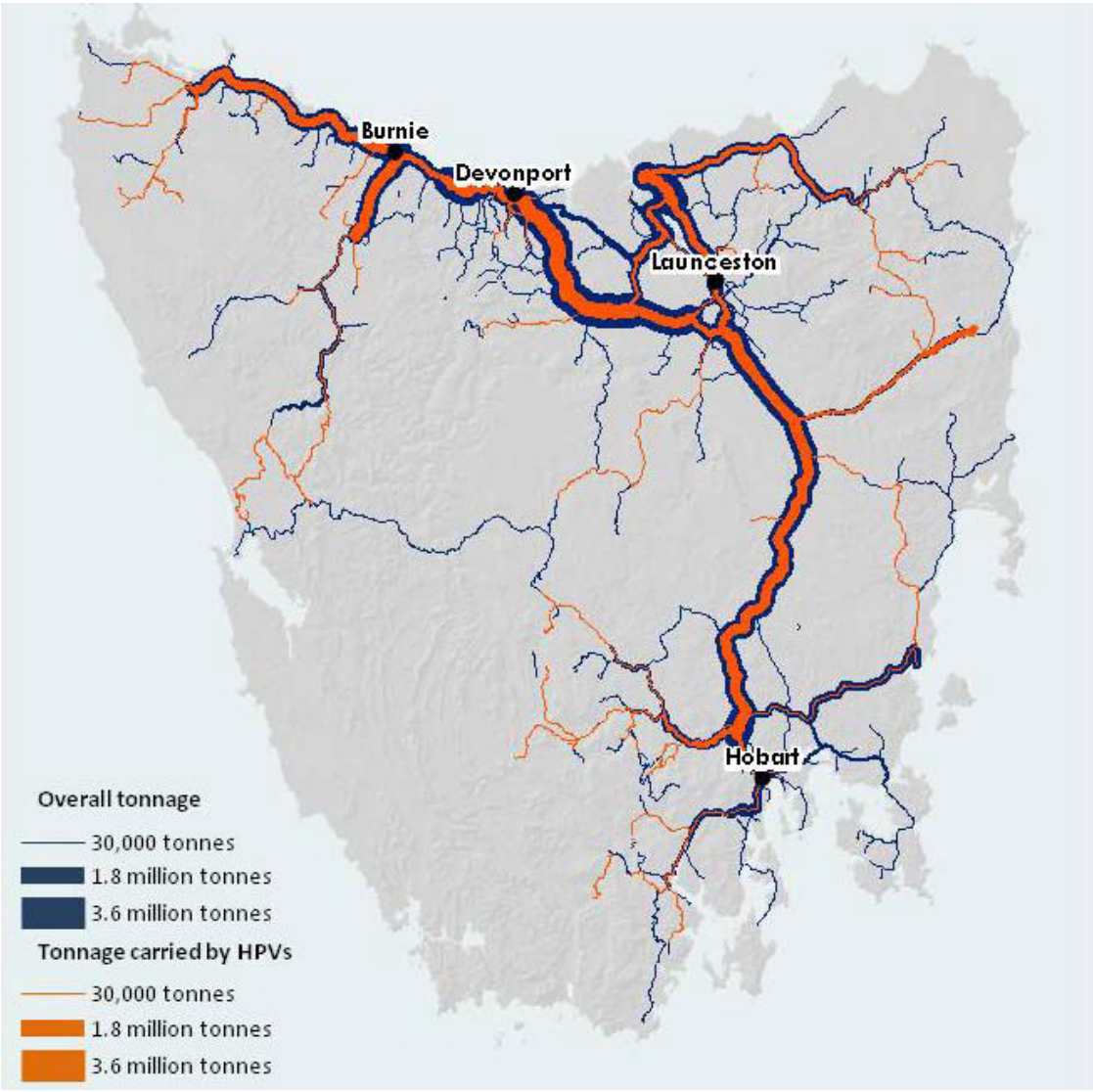
Table 1 – Freight Volumes moved by transport mode (from Tasmanian Freight Survey)

Vehicle class	Total tonnage	% total task (by tonnage)	Total tonne kilometres travelled	% total task (by tonne kms)
Rigid axle trucks	3,285,000	11.8%	135 million	5.4%
Other truck and trailer combinations	4,796,000	17.3%	223 million	9.0%
Six-axle articulated truck and trailer	9,584,000	34.5%	977 million	39.1%
High Productivity Vehicles	*7,865,000*	*28.3%*	*847 million*	*34.0%*
Rail	*2,260,000*	*8.1%*	*308 million*	*12.5%*
Total freight task	*27,798,000*		*2,490 million*	

[1] Tonne kilometres are a commonly used measure for freight transport, and one tonne kilometre represents the transport of one tonne of freight over one kilometre.

Figure 3 shows the proportion of the statewide freight task (blue line), that is carried by high productivity vehicles (orange line). Most of the State's HPV freight task moves along Tasmania's major roads, with half of the HPV freight task across Tasmania moved via the Bass and Midland Highway. Other key HPV routes include the Bridport Main Road, East Tamar Highway, Ridgley Highway, Esk Main Road, Lyell Highway, Tasman Highway and the Brooker Highway. These roads that carry the highest number and tonnages via High Productivity Vehicles, generally meet the Tasmanian guidelines for High Productivity Vehicles (Figure 4).

Figure 3 - Tonnages carried by High Productivity Vehicles compared to the overall freight task (*from Tasmanian Freight Survey*)



The forestry industry is a major user of High Productivity Vehicles, including movement of logs, woodchips and wood products, comprising 40% of the tonnage of the freight task moved by HPVs. Agriculture is also a major user of HPVs across the State, along with movement of mining ores between the west coast and Burnie Port and movement of consumer goods between ports and major urban centres.

In terms of the routes reviewed in the *Review of the Gazetted High Productivity Vehicle Network* report, 67% of the tonne kilometres travelled by High Productivity Vehicles across Tasmania moved on routes that comply with the Tasmanian Guidelines. Routes that were marginally below the Tasmanian guidelines carried 21% of the HPV task, by tonne kilometres, with about 12% of the HPV task moving on routes that do not meet the Tasmanian guidelines. As such, the majority of Tasmania's freight task moved by High Productivity Vehicles is on roads which either meet the Tasmanian guidelines for High Productivity Vehicles, or are marginally below these guidelines.

Past experience with using High Productivity Vehicles

High Productivity Vehicles have been operating on specified segments of Tasmania's road network since 1993, and the experience with using these vehicles has been that they have operated safely over this entire period, and have assisted in reducing freight costs and efficiency across a number of industries.

Reduced exposure to heavy vehicles on High Productivity Vehicle routes

Due to fact that High Productivity Vehicles carry more freight per trip, on routes where they are permitted, there are fewer heavy vehicles on the road. As such, the use of HPVs reduce exposure to the risk of crashes involving heavy vehicles.

Accidents involving HPVs are uncommon

On a per kilometre basis across Tasmania's HPV network, regardless of the standard of the route section, accidents involving High Productivity Vehicles are infrequent.

A recent analysis of heavy vehicle accidents across Tasmania, found that while collisions between heavy vehicles and passenger vehicles are more likely to result in fatalities, multiple vehicle crashes involving heavy vehicles are eight times more likely to be caused by the other road user (than the heavy vehicle driver). Similarly, heavy vehicles are half as likely to be involved in a loss of control crash, compared to other vehicles.

2. Planning and providing the HPV Network

Planning Tasmania's future freight system

Continual changes in production and industry within Tasmania, along with the changing economics of transport modes, mean that the Tasmanian Government must continually look at the way that the transport system is delivered, to ensure that it delivers efficient, cost-effective freight movement for freight demanders. While increasing productivity of heavy vehicles delivers efficiencies for freight demanders, Government needs to balance these outcomes with safety, to ensure that high productivity vehicles do not compromise the safety of the transport system for all users.

To balance the economic and social benefits provided by freight movement, with its social and environmental impacts, it is important that the Tasmanian Government plans for the state's future freight system.

The Tasmanian Government puts considerable effort into planning and providing a transport system that balances these objectives. Over the last five years, this work has included development of the

Tasmanian Infrastructure Strategy, regional integrated transport plans for Tasmania's three regions and developing a strong evidence-based planning capability (e.g. Tasmanian Freight Survey).

State Growth has also developed the *Tasmanian Road Safety Strategy 2007-2016* to provide a strategic direction for reducing fatalities and serious injuries on Tasmania's roads. This Strategy outlines four key Strategic Directions to improve safety of the transport system:

- Safer Travel Speeds
- Best Practice Infrastructure
- Increased Safety for Young Road Users
- Enhanced Vehicle Safety

State Growth is also developing the Tasmanian Freight Strategy to provide a clear direction for Tasmania's future freight system. It will provide an integrated strategy across Tasmania's roads, rail networks and ports, including outlining Tasmania's key freight network and future investment in infrastructure upgrades.

Investment in Tasmania's future freight system

The Tasmanian Government has made considerable investment in infrastructure projects across Tasmania's High Productivity Vehicle network, such as the Brighton Bypass, East Tamar Highway upgrades and Bass Highway upgrades. Additionally, Government has made significant investment in other elements of the freight system, including the Brighton Transport Hub and improvements to the State's rail network.

The Tasmanian Government is also making a series of investments in the HPV Network across the State. In the north-east, the Tasmanian and Australian Governments are investing over $40 million in the North East Freight Roads package. This includes:

- Tasman Highway: Derby – Gladstone Main Road
    - Widening and curve improvement
- Gladstone Main Road: Tasman Highway – Herrick
    - Widening and curve improvement
- Bridport Main Road: Scottsdale – Bridport turn-off
    - Widening and curve improvement
- Prossers Forest Road and Camden Road
    - Widening, junction upgrades and drainage improvements
- Mathinna/Evercreech area
    - Replacement of 5 bridges and strengthening of 1 bridge

On the west coast, the Tasmanian Government is investing over $20 million in the Murchison Highway on road improvements. This includes $15 million between the Cradle Mountain Development Road and Anthony Main Road for widening, passing bays and curve improvements.

The Tasmanian Road Safety Strategy – Infrastructure Program is funding the installation of road treatments specifically targeted at improving safety across Tasmania's road network. This includes

infrastructure to reduce or prevent head-on crashes, such as audible centreline markings, wire rope safety fencing along painted medians and dual carriageways.

The Tasmanian Government has also funded a number of road upgrades on the High Productivity Vehicle network through the Community Roads program, including:

- Upgrade of the Mersey Main Road – Bass Highway intersection
- Provision of overtaking lanes on the Huon Highway
- Improvements of the road access to Bell Bay port
- Road widening and pavement rehabilitation on the West Tamar Highway
- Upgrade of the Bass Highway – Stanley junction
- Upgrade of parts of the Ridgley Main Road
- Shoulder sealing along the Esk Main Road
- Sealing of the Lake Secondary Road between Breona and Brandum Creek
- Construction of new access to the Westbury Industrial Park

Improving vehicle and driver safety

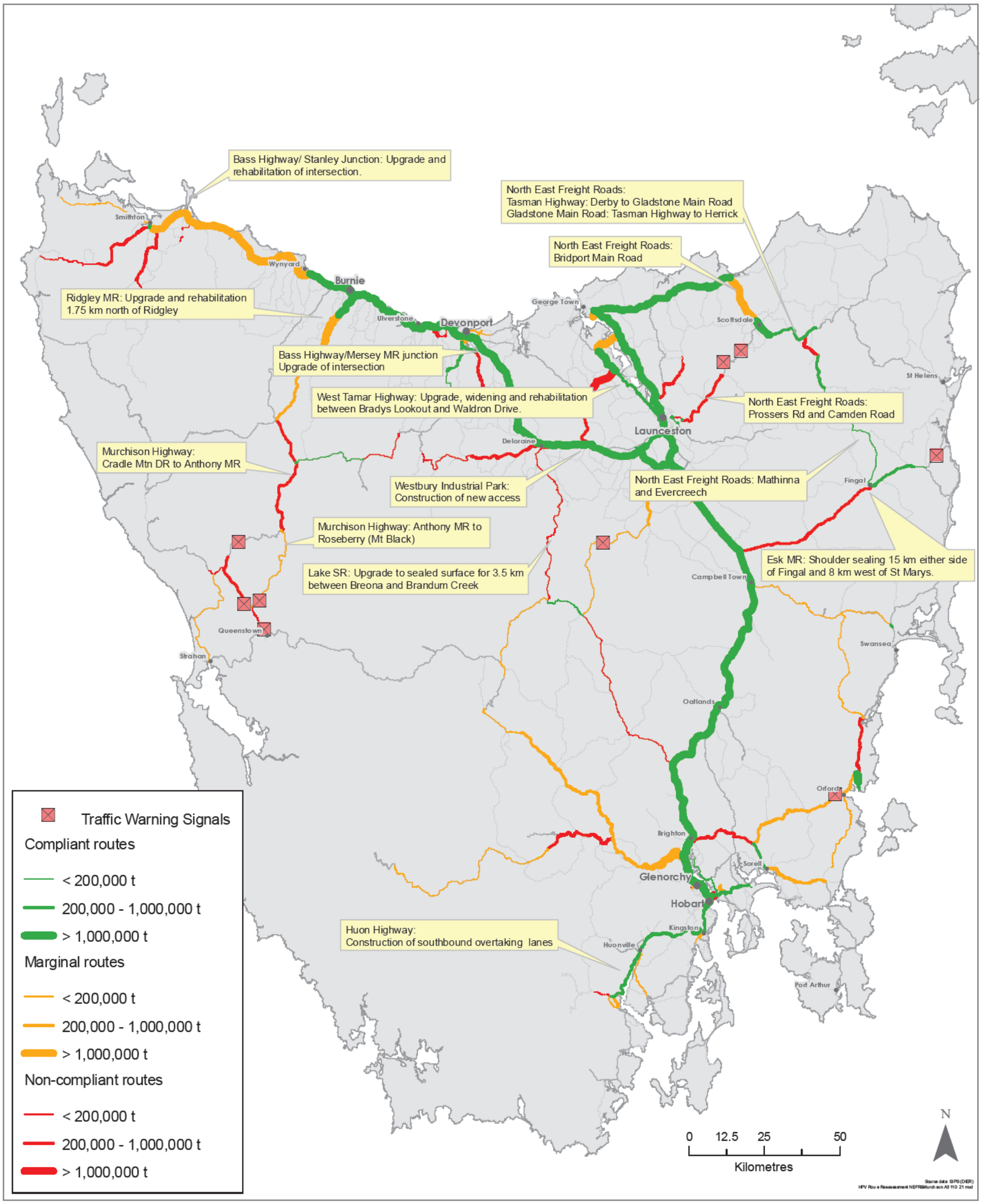
The Tasmanian Government has put considerable effort into improving the safety of heavy vehicles and driver safety. The Heavy Truck Safety Advisory Council (HeTSAC) has continued its role of developing and progressing initiatives to improve heavy vehicle road safety and reduced crashes involving heavy vehicles. This includes the development of a comprehensive Heavy Vehicle Safety Code that brings together 'best practice' information on safe systems and practices for adoption by heavy vehicle drivers and operators.

A recent example of education actions aimed at improving heavy vehicle safety were the heavy vehicle rollover prevention seminars for industry conducted towards the end of 2010. HeTSAC is now working with the transport industry and purchasers of transport services on strategies that will lead to this training being delivered to heavy vehicle drivers.

The Tasmanian Government also employs a number of Transport Inspectors across the State, who have a key role in undertaking road heavy vehicle compliance and enforcement duties. Their role also includes working with Tasmania Police and Workplace Standards Tasmania Inspectors.

Tasmania is also committed to the National Performance Based Standards Scheme, which offers the potential for heavy vehicle operators to achieve higher productivity and safety through innovative vehicle design.

Current and programmed road upgrades on the Gazetted HPV Road Network



3. Route specific mitigation measures

The Tasmanian Gazetted High Productivity Vehicle (HPV) Review has assessed the current HPV network against guidelines developed for Tasmanian roads. The Review has found that:

- 77 route sections do not meet the Tasmanian guidelines:
  - 28 State Road route sections
  - 15 Local Road and "Last Mile[2]" route sections in the North West;
  - 15 Local Road and "Last Mile" route sections in the North East;
  - 19 Local Road and "Last Mile" route sections in the South.
- 35 route sections are marginally below the Tasmanian guidelines:
  - 9 State Road route sections;
  - 9 Local Road and "Last Mile" route sections in the North West;
  - 10 Local Road and "Last Mile" route sections in the North East;
  - 7 Local Road and "Last Mile" route sections in the South.

In general, these deficiencies relate to lane and shoulder widths, vertical and horizontal alignments, traffic mix and volumes.

The attached table (Appendix 1) provides a summary of information for each route section, including:

- Length (km);
- Status
- Strategic importance;
- A description of some of the issues on each route;
- Freight tonnage – total and HPV; and
- Speed limit.

Analysis of the crash data indicates that the crash rates involving High Productivity Vehicles are very low, regardless of the standard of the route section. As such, there is a low need for risk mitigation measures, and warning signs along individual routes is an appropriate mitigation measure in most cases. The Tasmanian Government will continue to monitor utilisation of the High Productivity Vehicle network and crash statistics, and implement other risk mitigation measures where appropriate.

The mitigation measures to be applied for each route is discussed in the attached tables (Appendix 1). The factors considered when deciding to apply mitigation were:

- The length of the route section.
- The prevailing speed limit on the route section.
- The number of HPV movements per day on the route section.

[2] Last mile routes are road sections between dispersed, low volumes freight locations and major links in the freight network connecting to key freight destinations.

Routes where further mitigation measures are not being applied are:

- Route sections where mitigation measures have already been applied (e.g. signage)
- Route sections less than 5km long, with speed limits of 70 km/h or less, are deemed not to require further mitigation.
- Route sections with fewer than 10 HPV movements per day.

On route sections with fewer than 10 HPV movements per day (that do not meet the Tasmanian Guidelines), State Growth will review whether these should remain part of the Gazetted HPV Network. This review will be undertaken in consultation with road owners and industry, as part of the ongoing process of reviewing the suitability of the Gazetted HPV Network for moving Tasmania's overall freight task. Measures to be considered on these routes include seasonal signage, restrictions on timing of usage and removal from the Gazetted HPV network.

Although there are individual exceptions, mitigation measures will generally be applied on route sections more than 5km long, with 10 or more HPV movements per day and with speed limits greater than 70 km/h. These routes will have Large Truck Warning (W5-120) signs installed at 5km spacings along their entire length.

The approximate cost for installation of signs along these routes is $400,000, which includes:

- $60,000 (50 signs) on Local Road and "Last Mile" route sections that do not meet the Tasmanian guidelines;
- $175,200 (146 signs) on State Road route sections that do not meet the Tasmanian guidelines;
- $156,000 (130 signs) on State Road route sections marginally below the Tasmanian guidelines.

Prioritisation of route sections for treatment has not yet been undertaken.

Further mitigation measures are currently being considered by the Tasmanian Government, including:

- Intelligent Access[3], which has been introduced in the major eastern States, and implications for its introduction within Tasmania is being considered by DIER,
- Communication between vulnerable road users and HPVs (e.g. school buses),
- Lower speed limits for HPVs along specific routes,
- Curfews on HPV use along specific routes,
- Upgrade of key HPV routes to meet the Tasmanian guidelines, and
- Ongoing review *Schedule 1* of the *Vehicle Operations Notice 2010* to ensure that all gazetted routes are suitable for moving Tasmania's overall freight task.

[3] Intelligent Access is a program for monitoring vehicle compliance with specific access conditions, via global positioning systems (GPS), in-vehicle sensors and transmitters which transmit vehicle performance and location data.

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (STATE ROADS)

Route	Road Owner(s)	Description	Speed Limit km/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Murchison Highway - Zeehan Highway to Melba Flats	DIER	Access to Melba Flats rail siding.	100	4.60	Does not meet the guidelines	**W5-120 signs at each end of segment ($2,400)**	High	Deficiencies in lane and shoulder width	906	14	210,000	110,000
Anthony Main Road	DIER	Used to link the southern areas of the West Coast to the north		38.50	Does not meet the guidelines - low risk, include	**1) Interactive Truck Warning Signs.**	High	Few overtaking opportunities Some deficient road and shoulder widths w-beam safety barrier too close to travel lane		15	120,000	70,000
Zeehan Highway – Murchison Highway to Henty Main Road	DIER	Currently HPVs are operating under permit to transport pine logs from Henty & Macquarie Heads plantations to Scottsdale via the Anthony Main Road	60 80 100	7.00	Does not meet the guidelines	**1) Interactive Truck Warning Signs.**	High	Deficiencies in lane and shoulder width	846	9	160,000	70,000
Fingerpost Main Road	DIER	Forms part of a couplet with Tea Tree Secondary Road to provide access to the East Coast from areas west and south of Hobart. The route is the only approved access for log transport to the Triabunna Woodchip Mill.	100	7.40	Does not meet the guidelines	**W5-120 signs at 5km spacings ($2,400)**	High	Deficiencies in lane and shoulder widths w-beam safety barrier too close to travel lane	1142	29	770,000	230,000
Railton Main Road	DIER	Links Railton to Devonport, via Mersey Main Road and provides access for a cement works, agriculture and forestry	100	12.90	Does not meet the guidelines	**W5-120 signs at 5km spacings ($4,800)**	High	Well below expected geometric dimensions	1859	26	470,000	200,000
Tea Tree Secondary Road	DIER	Forms part of a couplet with Fingerpost Main Road to provide access to the East Coast from areas west and south of Hobart. The route is the only approved access for log transport to the Triabunna Woodchip Mill.	40 60 70 100	15.76	Does not meet the guidelines	**W5-120 signs at 5km spacings ($7,200)**	High	Deficiencies in lane and shoulder widths	1911	29	660,000	230,000

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (STATE ROADS)

Route	Road Owner(s)	Description	Speed Limit km/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Frankford Main Road – Birralee Main Road to Batman Highway	DIER	Links the Bell Bay to the Bass Highway via Birralee Main Road, Batman Highway, West Tamar Highway, and East Tamar Highway	60 80 100	15.90	Does not meet the guidelines	**W5-120 signs at 5km spacings ($7,200)**	High	Deficiencies in lane and shoulder widths	1664	67	1,620,000	540,000
Zeehan Highway – Lyell Highway to Murchison Highway	DIER	Used as part of the route to transport concentrates to from Mt Lyell Copper Mines to Melba Flats rail siding	100	28.30	Does not meet the guidelines	**1) Interactive truck warning signs.**	High	Deficiencies in lane and shoulder width w-beam safety barrier too close to travel lane	607	23	200,000	180,000
Murchison Highway - Anthony Main Road (north) to Ridgley Main Road	DIER	The major route for transport of products to and from the West Coast and part of the gazetted network	50 80 100	45.20	Does not meet the guidelines	**W5-120 signs at 5km spacings ($21,600)**	High	Deficiencies in lane and shoulder width w-beam safety barrier too close to travel lane	955	18	530,000	140,000
Esk Main Road - Midland Highway to Fingal	DIER	Links the Midland Highway to the Tasman Highway via Fingal and provides access for forestry, mining and agriculture	50 80 100	53.00	Does not meet the guidelines	**W5-120 signs at 5km spacings ($26,400)**	High	Deficiencies in lane widths	1226	53	610,000	420,000
Lyell Highway - Queenstown to Zeehan Highway	DIER	Used for the transport of concentrates from Mt Lyell Copper Mines to Melba Flats rail siding	60 100	3.00	marginally below the guidelines	**1) Interactive truck warning signs.**	High	Tortuous horizontal alignment Deficiencies in lane and shoulder widths	1145	14	210,000	110,000
Batman Highway	DIER	Links the Bell Bay to the Bass Highway via Birralee Main Road, Frankford Main Road, West Tamar Highway, and East Tamar Highway	80 100 (70 for vehicles over 20t from western shore of the Batman Bridge to East Tamar Highway)	11.20	marginally below the guidelines	**W5-120 signs at 5km spacings ($4,800)**	High	Slight deficiencies in lane and shoulder widths	2401	61	1,690,000	490,000

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (STATE ROADS)

Route	Road Owner(s)	Description	Speed Limit km/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Birralee Main Road	DIER	Links the Bell Bay to the Bass Highway via Frankford Main Road, West Tamar Highway, Batman Highway and East Tamar Highway	80 100	18.50	marginally below the guidelines	**W5-120 signs at 5km spacings ($9,600)**	High	Slight deficiencies in lane and shoulder widths	652	61	940,000	480,000
Marlborough Secondary Road	DIER	Connects the Lyell Highway with Lake Secondary Road at Miena. Provides the only egress from the Central Highlands between Ouse and Queenstown	80 100	31.40	marginally below the guidelines	**W5-120 signs at 5km spacings ($14,400)**	High	Poor seal condition Some deficiencies in lane and shoulder widths Some alignment issues, with poor sight lines Non-compliant delineation	221	6	110,000	50,000
Ridgley Main Road – including Burnie Truck Route	DIER	Connects the Murchison Highway and Waratah Main Road to Burnie.	40 (school zone) 60 80 100	54.20	marginally below the guidelines	**W5-120 signs at 5km spacings ($26,400)**	High	Deficiencies in lane and shoulder width w-beam safety barrier too close to travel lane	1623	135	2,010,000	1,080,000
Bass Highway - Burnie to Smithton	DIER	Provides access for large amounts of freight transport to and from the far NW Coast, including general freight, forestry products, and agricultural products	60 70 80 100	78.50	marginally below the guidelines	**W5-120 signs at 5km spacings ($38,400)**	High	Deficiencies in shoulder width	2393	105	1,550,000	840,000
Poatina Main Road (including William Street, Longford)	DIER	Provides access to the Central Highlands and the only existing HPV route for forestry transport from catchments west of Ouse onto the gazetted network, via Marlborough Secondary Road and Lake Secondary Road	40 (school zone) 60 80 100	76.30	marginally below the guidelines	**1) Interactive truck warning signs.**	High - no alternative route	Few overtaking opportunities Slightly deficient road widths w-beam safety barrier too close to travel lanealignment issues at Mt Blackwood	340	6	110,000	50,000

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (STATE ROADS)

Route	Road Owner(s)	Description	Speed Limit km/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Bridport Main Road Scottsdale-Bridport	DIER	Only existing HPV route west of Scottsdale	60 80 100	28.70	marginally below the guidelines	**W5-120 signs at 5km spacings ($14,400)**	High	Few overtaking opportunities w-beam safety barrier too close to travel lane	1650	75	1,390,000	600,000
Forth Main Road	DIER	Provides access for agricultural product transport between the Forth river valley and the Bass Highway.	50 60 100	10.50	Does not meet the guidelines		Low	Deficiencies in lane and shoulder widths Some severe alignments Non-compliant delineation	2740	2	230,000	10,000
Cethana Tourist Road	DIER	Links Sheffield Main Road with Cradle Mountain Tourist Road	70 100	11.20	Does not meet the guidelines		Low	Well below expected geometric dimensions	448		20,000	-
Sheffield Main Road - Sheffield to Olivers Tourist Road/Cethana Tourist Road	DIER	Links Spreyton to Olivers Tourist Road/Cethana Tourist Road and provides access to agricultural and forestry production	40 (school zone) 50 60 80 100	17.60	Does not meet the guidelines		Low	Well below expected geometric dimensions	777	1	100,000	Less than 10,000
Olivers Tourist Road – Sheffield Main Road to Mole Creek Main Road	DIER	Links Mole Creek and Sheffield, provides access to forestry coupes, and is a scenic drive for tourists	100	20.00	Does not meet the guidelines		Low	Well below expected geometric dimensions	259	3	50,000	20,000
Cradle Mountain Tourist Road	DIER	Links Cethana Tourist Road to Cradle Mountain Developmental Road	70 100	31.20	Does not meet the guidelines		Low	Well below expected geometric dimensions	629		30,000	-
Mole Creek Main Road	DIER	Links Olivers Tourist Road to Deloraine and provides access to agricultural and forestry production	40 (school zone) 60 80 100	44.20	Does not meet the guidelines	**W5-120 signs at 5km spacings ($21,600)**	Low	Well below expected geometric dimensions	683	10	270,000	80,000
Lyell Highway - Victoria Valley Road to Marlborough Secondary Road	DIER	Connects forest coupes in the Waddamana area to the HPV network	100	2.00	marginally below the guidelines	**less than or equal to 5 klm distance**	Low	Deficiencies in lane and shoulder widths	395	3	80,000	30,000

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (STATE ROADS)

Route	Road Owner(s)	Description	Speed Limit km/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Gordon River Main Road - West from Styx Road junction	DIER	Provides access to large forestry reserves.	80 100	40.00	marginally below the guidelines		Low	Does not geometric criteria	135	3	30,000	30,000
Sheffield Main Road - Sheffield to Melrose Road	DIER	Links Spreyton to Olivers Tourist Road/Cethana Tourist Road and provides access to agricultural and forestry production	70 100	14.30	Does not meet the guidelines		Medium	Well below expected geometric dimensions	1716	5	190,000	40,000
Gordon River Main Road - Lyell Highway to Westerway	DIER	Provides access to large forestry reserves.	40 50 60 80 100	22.50	Does not meet the guidelines	**W5-120 signs at 5km spacings ($9,600)**	Medium	Deficiencies in lane and shoulder widths Some tight curves No overtaking opportunities	1315	31	350,000	240,000
Bass Highway - Smithton to Marrawah	DIER	Provides access to primary production areas	60 80 100	35.60	Does not meet the guidelines	**W5-120 signs at 5km spacings ($16,800)**	Medium	Below expected geometric dimensions	615	19	240,000	150,000
Tasman Highway - Abels Hill Road to St Leonards Road	DIER	Major access to and from the East Coast. Made up of several discrete sections that are part of the gazetted HPV network.	40 (school zone) 60 80 100	4.10	marginally below the guidelines	**less than or equal to 5 klm distance**	Medium	Deficiencies in lane and shoulder widths, some poorer alignments	3842			
Arthur Highway – Sorell to Copping	DIER	Provides a link, via Kellevie Road to the Gunns owned Wielangta Road. Due to structural issues, Sorell Council has refused access via their asset and the route is incomplete.	50 60 70 80 100	21.25	marginally below the guidelines		Medium	Slight deficiencies in lane and shoulder widths	3881	1	370,000	10,000
Tasman Highway - Camden Hill Road to Abels Hill Road	DIER	Major access to and from the East Coast. Made up of several discrete sections that are part of the gazetted HPV network.	70 100	24.60	marginally below the guidelines		Medium	Deficiencies in lane and shoulder widths, some poorer alignments	1377			

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (STATE ROADS)

Route	Road Owner(s)	Description	Speed Limit km/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Lake Leake Main Road	DIER	Links the Midland Highway at Campbell Town to the Tasman Highway north of Swansea and provides access for forestry and agriculture	60 100	60.90	marginally below the guidelines		Medium	Deficiencies in shoulder widths	756	5	150,000	40,000
Lyell Highway - Granton to Tarraleah - West of Ouse	DIER	Connects the entire Derwent Valley to the Midland Highway. Used for transport of forestry, agricultural, mining & service industry products	100	86.00	Does not meet the guidelines	**W5-120 signs at 5km spacings between New Norfolk and Taraleah ($40 800)**		Fails to maintain minimum geometric requirements	458	15	250,000	120,000

GREEN

The mitigating factor here is that all routes are identified as being **less than 5 klm's long and <70km/h speed limit**

RED

Shows the original classification of the route as not meeting the guidelines

ORANGE

Shows the original classification of the route as being marginally below the guideline

BLUE

Shows where **HPV volumes are less than 10 per day**

Gazetted High Productivity Network review

Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - NORTH AND NORTH EAST)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	Traffic Mix	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Brisbane Street (West Tamar to Wellington)	Launceston	Urban arterial 1.0km	60	1.00	marginally below the guidelines	**less than or equal to 5 klm distance**	Critical	Lane width deficiencies			240,000	10,000
Wellington St (Midland to Charles)	Launceston 1 2km	Urban arterial	60	1.20	marginally below the guidelines	**less than or equal to 5 klm distance**	Critical	Connects Midland and East Tamar Hwys through Launceston CBD, deficiencies could be addressed with changes to parking.				
Evandale Rd (Midland to 418 Evandale Rd)	Evandale	Rural industrial/residential/airport 4 2km	80	4.20	marginally below the guidelines	**less than or equal to 5 klm distance**	High	Sthn section marginal, low volume on this section should remain			460,000	110,000
Lilydale Rd	Lilydale	Urban residential and undevloped rural 20.5km		20.50	marginally below the guidelines	**W5-120 signs at 5km spacing ($9,600)**	High	Variable lane widths make segment marginal, important connection for forest industry	570 (7.9% HV)	Residential access	380,000	90,000
Derby St (Conway to McKenzie)	Launceston	Urban residential 100m	50	0.10	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	10t load limit indicates no use allowed	<300	Residential access		
Ten Mile Track (Tasman to No 21)	Tonganah 200m	Rural industrial	50	0.20	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Services transport depot and refuelling station, short with very low volumes	1400 (13% HV)	Airport access / local freight / tourist / rural access		
Conway St (Invermay Rd to Derby St)	Launceston	Urban residential 250m	50	0.25	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	10t load limit indicates no use allowed	200-300	Residential access		
Lowes St (Midland to Main Rd)	Tunbridge	Rural residential 250m	60	0.25	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low		500	Farm access / HV access to 2 vegetable processing facilities		
Richard St	Breadalbane 470m	Urban industrial	50	0.47	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Deficiencies in lane widths. Services industrial estate, should remain.	<200	Industrial access		
Ravenswood Rd (St Leonards Rd to No 120)	St Leonards 600m	Urban residential 60km/h	60	0.60	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Services single manufacturer, low use	<200	Residential and Industrial access		

Gazetted High Productivity Network review

Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - NORTH AND NORTH EAST)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	Traffic Mix	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Main Rd (Lowes Rd to Ballochmyle Rd)	Tunbridge	Rural residential 1.2km	50	1.20	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low		750-1000	Rural access / industral (dairy processing) / farm traffic / school buses / low touris traffic		
Johnston Rd (Penquite to St Leonards)	St Leonards	Urban residential connector 2.4km	60	2.40	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	deficiencies in lane widths			370,000	30,000
Woolmers Lane (Midland to Impact Depot)	Evandale 5.6km	Rural undeveloped	100	5.60	Does not meet the guidelines	**W5-120 signs at 5km spacings ($2,400)**	Low	Services single fertiliser distributor, check if needs met by 21m vehs.				
Listers Lane (to Candish Auto electric)	Scottsdale	Urban residential	60		Does not meet the guidelines		Low	Business that requird this access shut a min of 5 yrs ago, remove	500-750	Residential access / freight depot access / school access & frontage (school zone)	100,000	Less than 10,000
Cairns St	Longford	Urban dead-end, industrial 200m	50	0.20	marginally below the guidelines	**less than or equal to 5 klm distance**	Low	Services industrial estate				
Oaks Rd (Bass to 289)	Carrick	Rural undeveloped 650m	100	0.65	marginally below the guidelines	**less than or equal to 5 klm distance**	Low	Services transport depot				
Perth Mill Rd (Evandale Main Rd to Gunns Sawmill)	Perth	Rural undeveloped 1.4km	80	1.40	marginally below the guidelines	**less than or equal to 5 klm distance**	Low	Provides access for Gunns Sawmill with load limit west of this facility.	2000	Urban collector / regional access / school buses / school pedestrian & cycle use		
Railway St	Deloraine 100m	Urban residential	50		marginally below the guidelines		Low		<200	Rural access / forestry / low tourist traffic		
Remount Rd	Mowbray 800m	Urban industrial	60	0.80	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Deficiencies in lane widths. Services industrial estate, should remain.	1450 (13.5% HV)	Rural access / school buses		

Gazetted High Productivity Network review

Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - NORTH AND NORTH EAST)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	Traffic Mix	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Quarantine Rd	ings Meadows 1.4k	Urban residential connector	50	1.40	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Deficiencies in lane width	500	Industrial / School buses / school pick up & drop off / local community facility access (sport grounds & tip)		
Brown Street	Fingal	Urban residential/undeveloped 1.5km	50	1.50	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Short length connecting Mathinna Rd to Esk Main Rd, should remain			160,000	120,000
New River Rd (Main Rd to Mathinna Plains Rd)	Ringarooma	Rural undeveloped 1.5km	100	1.50	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	deficiencies in seal and shoulder widths	3000-4000	Commercial & resdential access / school buses / pedestrians & cyclists / high tourist traffic / school zone (crossing guard)		
Mathinna Plains Rd C 423 (New River Rd to Eton Rd)	Ringarooma	Rural undeveloped 32.3km	100	32.30	Does not meet the guidelines	**W5-120 signs at 5km spacing ($16,800)**	Medium	Provides connection for large forest catchement. Pavement widths are inadequate over two sections, nthn 3.5km and the sthn 12km, use almost entirely forest industry				
Gleadow St (Goderich to Montague)	Launceston	Urban industrial/minor residential 500m	50	0.50	marginally below the guidelines	**less than or equal to 5 klm distance**	Medium	Services industrial area				
Murphy St	Launceston	Urban industrial 1.2km	50	1.20	marginally below the guidelines	**less than or equal to 5 klm distance**	Medium	Services entirely industrial area				
George Town Rd (Foch to East Tamar)	Launceston	See Invermay Rd 700m	60	0.70		**less than or equal to 5 klm distance**					30,000	-
Cressy Main Rd	Cressy	See Poatina Main Rd									340,000	60,000
George St	Scottsdale	See Bridport Main Rd									1,140,000	500,000

Gazetted High Productivity Network review

Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - NORTH AND NORTH EAST)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	Daily traffic (annual average)	Traffic Mix	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 -B-double / HPV Annual Tonnage
Legerwood Rd C 423	Legerwood	See Ringarooma Rd									80,000	10,000
Marlborough St	Longford	See Poatina Main Rd									350,000	60,000
Stieglitz St	Fingal	See Esk Main Rd										
Talbot St	Fingal	See Esk Main Rd										
Tasman Hwy (St Leonards Rd to Camden Hill Rd)	Targa	See Tasman Hwy										
William St (Listers Lane to Lot 4)	Scottsdale	No longer required, see Listers Lane										

GREEN

The mitigating factor here is that all routes are identified as being **less than 5 klm's long and <70km/h speed limit**

RED

Shows the original classification of the route as not meeting the guidelines

ORANGE

Shows the original classification of the route as being marginally below the guideline

BLUE

Shows where **HPV volumes are less than 10 per day**

Gazetted High Productivity Network review

Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - NORTH WEST)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Status	Proposed Mitigation Strategy	Strategic importance	Issues	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 - B-double / HPV Annual Tonnage
Brickport Road (200m from Bass)	Cooee	Urban residential 200m	60	0.20	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Unsure of terminating point, bottling plant or industrial estate off side road?	60,000	10,000
Waverley Rd (Westella Dr to Merinda)	Ulverstone	Rural resdential 200m	80	0.20	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Provides access to quarry, are 26m vehs required, or can business be done with 21m HML's?	290,000	
Marion St	Ulverstone	Urban residential 400m	50	0.40	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low			
Wilkinson St (Bass to Inglis)	Wynyard	Urban residential 600m	60	0.60	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	One of several access roads used from Bass Hwy to Wynyard	160,000	70,000
Pages Rd (950m from Calder Rd)	Wynyard	Rural residential 950m	100	0.95	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Provides access for single operator	50,000	
Pardoe Dev Rd	Devonport Airport	Rural undeveloped 1.4km	100	1.40	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Need?	20,000	20,000
Mill Rd (Pardoe Dev Rd to Moorland Beach Rd)	Wesley Vale	Rural undeveloped 2.1km	100	2.10	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Deficiencies in seal width		
Lillico Rd (Bass to Forth Rd)	Lillico	Rural undeveloped 3.5km	100	3.50	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Very much below criteria, remove from Gazette	160,000	70,000
Montague Road (Woolnorth Road)	Circular Head Council	Provides access for dairy produce in the region west and north of Smithton		26.80	marginally below the guidelines	**W5-120 signs at 5km spacings ($12,000)**	Medium	Slight deficiencies in lane and shoulder widths	180,000	140,000

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - NORTH WEST)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Status	Proposed Mitigation Strategy	Strategic importance	Issues	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 - B-double / HPV Annual Tonnage
Redmarsh Rd	Woolnorth	Rural undeveloped 4.0km	100	4.00	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Services dairy (s), flat terrain with good fwd sight, reduces number of HV's needed, remain in Gazette		
Swan Bay Rd	Woolnorth	Rural undeveloped 4.6km	100	4.60	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Services dairy (s), flat terrain with good fwd sight, reduces number of HV's needed, remain in Gazette		
Sealers Springs Rd	Woolnorth	Rural undeveloped 5.0km	100	5.00	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Services dairy (s), flat terrain with good fwd sight, reduces number of HV's needed, remain in Gazette		
Trowutta Rd (Trowutta to Grooms Cross Rd)	Trowutta	Rural residential/plantation forest 5.0km	100	5.00	Does not meet the guidelines	**W5-120 signs at each end of segment ($2,400)**	Low	Forestry access only	430,000	280,000
Jetty St	Ulverstone	Urban residential/industrial 340m	50	0.34	marginally below the guidelines	**less than or equal to 5 klm distance**	Low	Meets criteria following initial 150m of total 340m		
Caroline St (no 16 to Brooke)	East Devonport	Urban residential/commercial 400m	50	0.40	marginally below the guidelines	**less than or equal to 5 klm distance**	Low	Doesn't connect to network		
Leith Rd (Forth Rd to Harvest Moon)	Forth	Rural undeveloped 1.0km	100	1.00	marginally below the guidelines	**less than or equal to 5 klm distance**	Low	access by Harvest Moon farm only, low volume	80,000	
Calder Road	Wynyard	Rural residential 80km/h 4.0km	80	4.00	marginally below the guidelines	**less than or equal to 5 klm distance**	Low	Need?	150,000	
Mengha Road	Circular Head	Connects to the Bass Highway to provide access into large forest coupes	40 (school zone) 60 100	10.30	Does not meet the guidelines			Deficiencies in lane and shoulder widths, poor alignments	10,000	Less than 10,000

Gazetted High Productivity Network review

Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - NORTH WEST)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Status	Proposed Mitigation Strategy	Strategic importance	Issues	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 - B-double / HPV Annual Tonnage
Davis St (Nelson St to Montagu Rd)	Smithton	Urban commercial 350m	60	0.35	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Provides connection to Montague Rd	200,000	150,000
Irishtown Road	Circular Head Council	Major route into and out of large forest coupes south of Smithton. Provides connection into South Arthur Forest Drive and Roger River Road.	60 100	14.20	Does not meet the guidelines	**W5-120 signs at 5km spacings ($7,200)**		Deficiencies in lane and shoulder widths, poor alignments	470,000	290,000
Roger River Road	Circular Head Council Forestry	6.6km 32.8km Connects to Irishtown Road to provide access to large forest coupes south of Smithton	100	39.40	Does not meet the guidelines	**W5-120 signs at 5km spacings (Forestry Rd?) ($19,200)**		Road alignments are sub-standard, poor alignments	270,000	180,000
Dysons Lane	East Ulverstone	Urban industrial 140m	50	0.14	marginally below the guidelines	**less than or equal to 5 klm distance**	Medium	widths compromised by parallel parking, connects to industrial estate and should remain in Gazette		
Bay Drive (Left in - Right out)	Quoiba	Urban industrial 600m	50	0.60	marginally below the guidelines	**less than or equal to 5 klm distance**	Medium			
River Rd	Burnie	Urban industrial 950m	50	0.95	marginally below the guidelines	**less than or equal to 5 klm distance**	Medium	Services industrial estate	190,000	50,000

Gazetted High Productivity Network review

Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - NORTH WEST)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Status	Proposed Mitigation Strategy	Strategic importance	Issues	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 - B-double / HPV Annual Tonnage
Tarleton St (Brooke to Bridge Rd)	East Devonport	Urban residential 2.2km	60	2.20	marginally below the guidelines	**less than or equal to 5 klm distance**	Medium	Is this still required given upgrade of Esplanade and removal of most HPV traffic.	290,000	70,000
Oonah Rd (Hodgetts to McCullocks)	Yolla	Rural undeveloped 11km+	100	11.00	marginally below the guidelines		Medium	important link for forest industry, low volumes, remina in Gazette	40,000	Less than 10,000
Westport Rd (Formby Rd to Port of Dev)	Devonport	Road works precluded assessment	60	0.20		**less than or equal to 5 klm distance**			210,000	110,000
Maskells Rd (left in - left out)	Ulverstone		50	0.50		**less than or equal to 5 klm distance**				
Bollard Drive	Burnie	See Port Rd							840,000	410,000
Formby Rd (Bass to Westport)	Devonport	Unable to assess due to road works							1,150,000	350,000
Grooms Cross Rd	Smithton	See Irishtown Rd							410,000	280,000
Kimberleys Rd	Ulverstone	See Waverley Rd							290,000	-
Merinda Dr	Ulverstone	See Waverley Rd								
Penghana Rd (Lyell to Driffield)	Queenstown	See Lyell Hwy								

GREEN

The mitigating factor here is that all routes are identified as being **less than 5 klm's long and <70km/h speed limit**

RED

Shows the original classification of the route as not meeting the guidelines

ORANGE

Shows the original classification of the route as being marginally below the guideline

BLUE

Shows where **HPV volumes are less than 10 per day**

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - SOUTH)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 - B-double / HPV Annual Tonnage
Davey St (Brooker to Sthn Outlet)	Hobart	Urban arterial 2.1km	60	2.10	marginally below the guidelines	**less than or equal to 5 klm distance**	Critical	Provides connection through Hobart CBD	46	1,150,000	370,000
Elwick Rd (Brooker to KGV)	Glenorchy	Urban arterial 700m	60	0.70	Does not meet the guidelines	**less than or equal to 5 klm distance**	High	Provides access from Brooker Hwy to Glenorchy (west) industrial areas.		150,000	-
Arve Road	Geevston	Connector for Forestry, tourist route	60	4	Does not meet the guidelines	**W5-120 signs @ 1.5km and 4.0km ($2,400)**	Very High	Provides access to large forestry harvesting area, Southwood and toruist sites	10		
Andrew Street	Brighton	Connection to East Coast 1.5km	60	1.50	Does not meet the guidelines	**less than or equal to 5 klm distance**	High	Deficiencies in lane and shoulder widths	29	720,000	230,000
Crooked Billet Dr	Bridgewater	Urban industrial connector 350m	50	0.35	marginally below the guidelines	**less than or equal to 5 klm distance**	High	within Brighton Industrial estate	6	80,000	40,000
Cambridge Road (Acton to Colebrook M Rd)	Cambridge	Connection to major industrial site 1.2km	70	1.20	Variable, Tasman Hwy to Lamb Pl adequate, Lamb Pl to Colebrook Rd Does not meet the guidelines	**less than or equal to 5 klm distance**	High	rationalise and reduce to section between Tasman Hwy and Lamb Pl	1	30,000	Less than 10,000
Pear Ave	Derwent Park	Urban industrial 170m	50	0.17	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low		1	-	-
Hale St	Derwent Park	Urban dead-end industrial 180m	50	0.18	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	180m dead-end to industrial site	4	30,000	-
Gormanston Rd (Derwent Park to Pear)	Glenorchy	Urban residential/commercial/industrial 300m	50	0.30	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Provides access to a few sites, inclusive of concrete batcher and storage	28	220,000	-

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - SOUTH)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 - B-double / HPV Annual Tonnage
Maxfields Rd (Huon to No 29)	Franklin	Rural residential 300m	100	0.30	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Provides access to single manufacturer, low volume			
Jackson St	Glenorchy	Urban rsidential/industrial 550m	50	0.55	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Industrial area located west of residential, GCC tip off Jackson, high %age HV's		50,000	-
Ballochmyle Road	Tunbridge	Connection to large rural property 1.6km	100(?)	1.60	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Deficiencies in pavement width			
Hermons Rd	Geeveston	Rural 60km/h short residential section entry to large forest catchment 2.3km	60	2.30	Does not meet the guidelines	**less than or equal to 5 klm distance**	Low	Construction of a 2km> section of road would preclude the need for this segment	6	130,000	50,000
Hurst St	Bridgewater	Urban 110m	50	0.11	marginally below the guidelines	**less than or equal to 5 klm distance**	Low	Assumed no parallel parking		Less than 10,000	-
Cascade Rd (MacQuarie to Brewery)	Hobart	Urban residential 2.2km	50	2.20	Variable, with lane widths changing along length, marginally below the guidelines	**less than or equal to 5 klm distance**	Low	High volume of HV's accessing HCC tip indicate no issue		130,000	-
Campbell St	Hobart	Urban arterial road, split into 2 sections; Burnett to Brisbane 650m and Brisbane to Davey 800m	60	1.45	Burnett to Brisbane marginally below the guidelines, Brisbane to Davey does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	check use and if required rationalise and reduce to section between Burnett and Brisbane		50,000	10,000

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - SOUTH)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 - B-double / HPV Annual Tonnage
Farley St (Howard to 11 Farley)	Glenorchy	Urban industrial connector 180m	50	0.18	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Provides access to wholly industrial area			
Sunderland St (Derwent Park Rd to Lampton Av)	Derwent Park	Urban industrial/commercial 460m	60	0.46	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Provides connection between Lampton Ave and Derwent Park Rd		20,000	
Browns Road (Sthn Outlet to Pioneer Quarry)	Kingston	Urban connection oto industrial area 600m	60	0.60	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Deficiencies in pavement width, alignments		80,000	
Howard Rd	Glenorchy	Urban industrial 700m	60	0.70	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Deficiencies in wdith		20,000	10,000
Cove Hill Rd (East Derwent to Cowle)	Bridgewater	Urban commercial/industrial connector 1.0km	60	1.00	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Deficiencies in pavement and shoulder width		10,000	Less than 10,000
Lampton Ave	Derwent Park	Urban industrial/residential 1.0km	60	1.00	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Deficiencies in seal width		250,000	100,000
Chapel St (Main to Jackson)	Glenorchy	Urban residential, with industrial at end of segment 1.5km	60	1.50	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Deficiencies in lane widths		100,000	-
Bresnehans Road (Tasman to M Rd)	Little Swanport	Connects large forestry catchment to East Coast 4.0km	100	4.00	Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	Deficiencies in pavement width, alignments and delineation		70,000	70,000
Mornington Rd (Left in -Left out)	Mornington	Urban industrial 900m	60	0.90	marginally below the guidelines	**less than or equal to 5 klm distance**	Medium	Provides access to large industrial estate and CCC tip		60,000	10,000
Cadburys Road	Claremont	Urban residential 1.1km	50	1.10	marginally below the guidelines	**less than or equal to 5 klm distance**	Medium	Provides occassional access to major manufacturer		160,000	80,000

Gazetted High Productivity Network review
Appendix 1 - Route characteristics and proposed mitigation measures (Local Government Roads - SOUTH)

Route	Location (Town)	Description	Speed Limit kp/h	Length (km)	Original Status	Proposed Mitigation Strategy	Strategic importance	Issues	HPV/Day	TFS 2009 - Heavy Freight Total Annual Tonnage	TFS 2009 - B-double / HPV Annual Tonnage
Flag Staff Gully Rd (Tasman to Quarry)	Warrane	Urban connector to residential and quarry 3.6km	80-60	3.60	Variable, 2.6km adequate, 1km Does not meet the guidelines	**less than or equal to 5 klm distance**	Medium	As access is for quarry need to ascertain use of 26m veh (most quarry product requires HML not HPV)		430,000	-
Esplanade (Huon Hwy to Channel Hwy)	Huonville	See Channel Hwy									

GREEN

The mitigating factor here is that all routes are identified as being **less than 5 klm's long and <70km/h speed limit**

RED

Shows the original classification of the route as not meeting the guidelines

ORANGE

Shows the original classification of the route as being marginally below the guideline

BLUE

Shows where **HPV volumes are less than 10 per day**

Record 10

Review of Gazetted High Productivity Vehicle Route Network

Department *of* Infrastructure, Energy *and* Resources

Tasmania
Explore the possibilities

Table of Contents

Executive Summary

High Productivity Vehicles (HPVs) were introduced into Tasmania to improve productivity in the transport sector and they have operated on Tasmanian roads since trials in 1993.

The current Tasmanian Gazetted HPV Route Network covers a large percentage of the State-owned road network and extensive lengths of local roads. A number of sections are short connecting routes allowing access to depots and freight generators.

Significant sections of the current network were assessed using criteria relevant to shorter HPVs. Increases in vehicle lengths and weights since these original route assessments, as well as the desire to introduce Performance Based Standards for vehicles, has led to the development of new Tasmanian guidelines and this review of the current Gazetted HPV Route Network.

Due to the differences in Tasmanian topography compared to the Mainland States, new Tasmanian geometric criteria, used in this review, were developed. These new criteria are based on the National Performance Based Standards (PBS), modified to suit Tasmanian conditions. The Tasmanian guidelines have been reviewed and endorsed by the Australian Road Research Bureau (ARRB). The criteria used are based on:

- National guidelines for Performance Based Standards (PBS), adjusted to better fit Tasmanian conditions;
- Forestry Tasmania road construction manuals;
- Department of Infrastructure, Energy and Resources (DIER) road construction specifications; and
- Other Australian jurisdictional requirements.

As part of the review the Gazetted HPV Route Network has been reassessed and it has been determined that:

- 32% meets the Tasmanian guidelines;
- 35% is marginally below the Tasmanian guidelines; and
- 33% does not meet the Tasmanian guidelines.

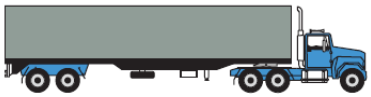
Any reduction to the HPV network will result in an increase in the numbers of General Access (GA) heavy vehicles on Tasmanian roads, as more trips would be required to move the same freight load. This would have negative impacts on safety, economic efficiency, and amenity.

A 2010 DIER report '*A Review of Casualty Crashes involving Heavy Vehicles in Tasmania*' (available on DIER's website at: http://www.transport.tas.gov.au/safety) found that heavy vehicles are half as likely to be involved in a loss-of-control crash compared to other vehicles, and are eight times less likely to be the at-fault driver in a multiple-vehicle crash. This data suggests that, overall, heavy vehicles operate safely on Tasmanian roads.

1. Background

1.1 The Vehicles

The majority of the Tasmanian heavy vehicle fleet is made up of vehicles that are a maximum 19 metres long and 42.5 tonnes Gross Vehicle Mass (GVM). These vehicles are classed as General Access (GA) vehicles.



A High Productivity Vehicle (HPV) is a vehicle combination, such as a B-Double, with a larger capacity and which conditionally operates on a restricted route network. A significant proportion of freight in Tasmania is transported in this type of vehicle.

High Productivity Vehicles (HPVs) were introduced to improve productivity within the transport sector and they have operated on Tasmanian roads since trials in 1993.

The trial vehicles were 23m long and had a maximum of 52 t GVM. Advances in technology resulted in vehicle sizes increasing to maximums of 26m and 67t GVM. Power-to-weight ratios were also instituted to ensure travel speeds were maintained.

An additional vehicle configuration was also added to Tasmania's permitted vehicle list: a 21m combination with a 50t GVM. This vehicle configuration was considered to perform, on-road, like a GA 19m semi-trailer and as such was granted the same status (i.e. general access up to 21m and 50t GVM).

HPVs deliver significant gains in productivity and safety: the former due to increased ladings; and the latter due to improved safety features and decreased vehicle trips. The efficiencies gained have resulted in large numbers of these vehicles operating in primary production sectors in Tasmania (forestry and stock movement), on roads that are of a lower standard than the primary freight routes.

The introduction of HPVs has resulted in a lower total number of heavy vehicle trips, due to increased vehicle efficiency.

1.2 The Gazetted HPV Route Network

The majority of Tasmania's road network is available for use by GA vehicles. Some roads have also been assessed and gazetted for use by longer / heavier vehicles:

- HPV routes that allow 26m vehicles to operate with GVMs of 62t; and
- Higher Mass Limits (HML) routes that allow an additional 5t lading to compliant vehicles (vehicles with road friendly suspension). The additional lading applies to any compliant vehicle on routes that have been assessed as being structurally capable of sustaining the additional mass per axle group. HML compliant vehicles can thus range in length from 19m to 26m.

Currently the Gazetted HPV Route Network covers a large percentage of the State-owned road network and significant lengths of local roads. The Network also includes short sections of local roads that grant access to depots, factories and primary produce locations.

The operational nature of gazetted roads varies due to factors such as traffic volumes, traffic mixes, road purpose and available alternate routes.

1.3 National Reforms

National reforms have been designed to help the road freight industry to better cope with an ever increasing task. It is expected that road freight will continue to increase significantly over the next ten years or so. The intent of National Reforms such as Performance Based Standards (PBS) is to allow innovation that will provide efficiencies while improving safety and reducing road damage. Coupled with PBS are reforms such as: Compliance and Enforcement, Fatigue Management (aimed at reducing all forms of non-compliance including overlading and exceeding operating hours); and the Intelligent Access Project (a tool to monitor compliance and ensure operating conditions are not breached).

As part of these reforms it is expected that jurisdictions will allow innovative vehicles, compliant with PBS, to operate on routes that are currently being used by authorised vehicles that operate in the same way. For example, a PBS-compliant vehicle that operates within the safety, geometric and pavement lading parameters of a 19m semi-trailer will be considered as a GA vehicle and allowed to operate accordingly. This will provide transport operators some certainty that investment into innovative vehicles will provide efficiencies regardless of which jurisdiction they operate in, and remove inconsistencies from cross-border locations.

2. Route Assessment

2.1 Assessment Criteria

Increases in heavy vehicle sizes and weights led to a review of Tasmania's geometric route assessment criteria to better reflect the on-road performance and road space requirements of HPVs.

National guidelines were developed based on the standard of roads through the mainland States. Due to the historical development of the Tasmanian road network and Tasmania's unique topography, these standards are considered inappropriate to apply to Tasmanian roads. Consequently, applicable guidelines were developed for Tasmanian roads, peer reviewed and accepted by ARRB.

These Tasmanian guidelines balance access and efficiency needs with safety needs and have been effective in allowing the continued safe operation of HPVs in Tasmania. Without HPVs, there would be a substantial increase in heavy vehicle numbers by some 30%. This would increase the exposure of other road users to heavy vehicles and result in higher levels of road damage.

Information was sourced from ARRB, National Transport Council, PBS and other Australian jurisdictions. This data was then used, in combination with DIER standards and specifications for road construction, to determine minimum suitable road geometries for the operation of 26m vehicles. Gravel road criteria were developed using Forestry Tasmania's road construction standards.

Of prime consideration in the selection of minimum geometries was the nature of the Tasmanian road network and the constraints imposed by topography, asset age, traffic volumes and traffic mixes. The resulting criteria, set below the requirements of the National guidelines and those of other Australian jurisdictions, were forwarded to ARRB for review, and were found to be adequate to ensure the safe operation of HPVs on Tasmanian roads.

2.2 Assessment Methodology

Routes are assessed using the *HPV Route Assessment Guidelines – Geometric and Road Performance Checklist* endorsed by ARRB. Factors included for consideration fall into the basic categories of:

- Road geometry (lane and shoulder widths, vertical and horizontal alignments, forward sightlines, overtaking opportunities, road surface, etc);
- Safety (traffic volumes, the presence of schools or urban centres, crash history, delineation, rail crossings, etc);
- Traffic mix (non-local traffic, school buses, pedestrians/cyclists, industrial traffic, existing heavy vehicle use, etc); and
- Amenity (types of roadside development, noise, tourist attractions, etc).

Additionally factors such as connections to the existing network, parallel or alternate routes, task duration, and trip frequency are also taken into account.

All assessments are undertaken in the same manner with all relevant criteria assessed. Most assessments are undertaken by officers from DIER, in consultation with the road owner, although those road owners with the relevant expertise may undertake the assessment themselves. The assessment of bridges and other structures is separate from the geometric assessment and is undertaken by specialised officers from DIER or the road owner. The decision to approve or deny a

route for HPV/HML use rests with the road owner, a reviewable decision under the *Vehicle and Traffic (Review of Decisions) Regulations 2000*.

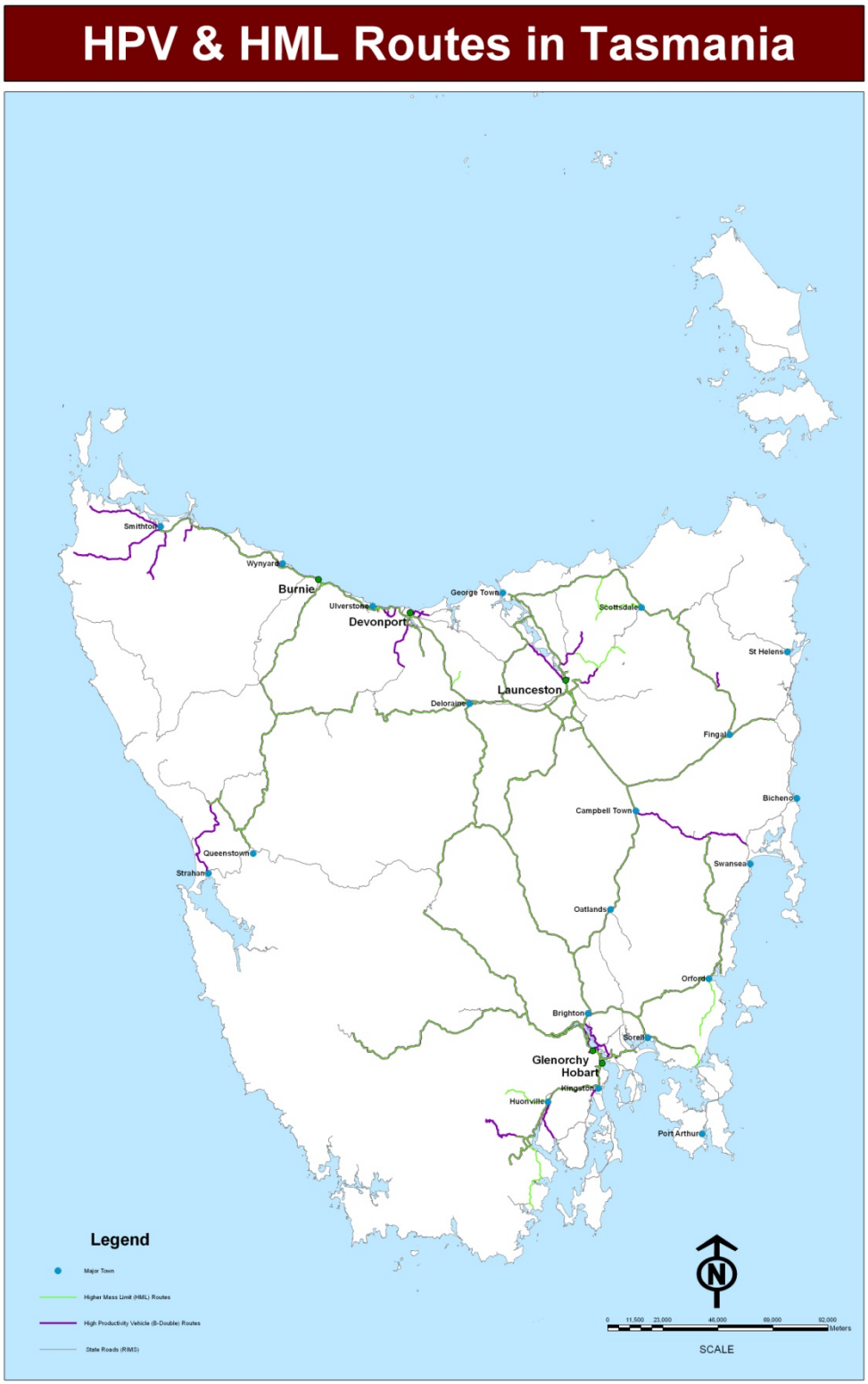
Criteria such as lane and shoulder widths and curve widening are measured on a regular basis along the route with particular note taken of changes in widths greater than 100mm. Delineation (road markings, guideposts and warning signs) are checked against Australian Standard AS 1742.2 *Manual of uniform traffic control devices: traffic control devices for general use* and any deficiencies noted. Vertical and horizontal alignments are noted; these issues can be related to lane observance, grades that affect travel speeds, and overtaking opportunities. Traffic volumes and mixes are considered and crash histories checked. Social amenity is also considered, including roadside development, the presence of schools, hospitals and other high traffic generating developments.

2.3 Route Re-Assessment

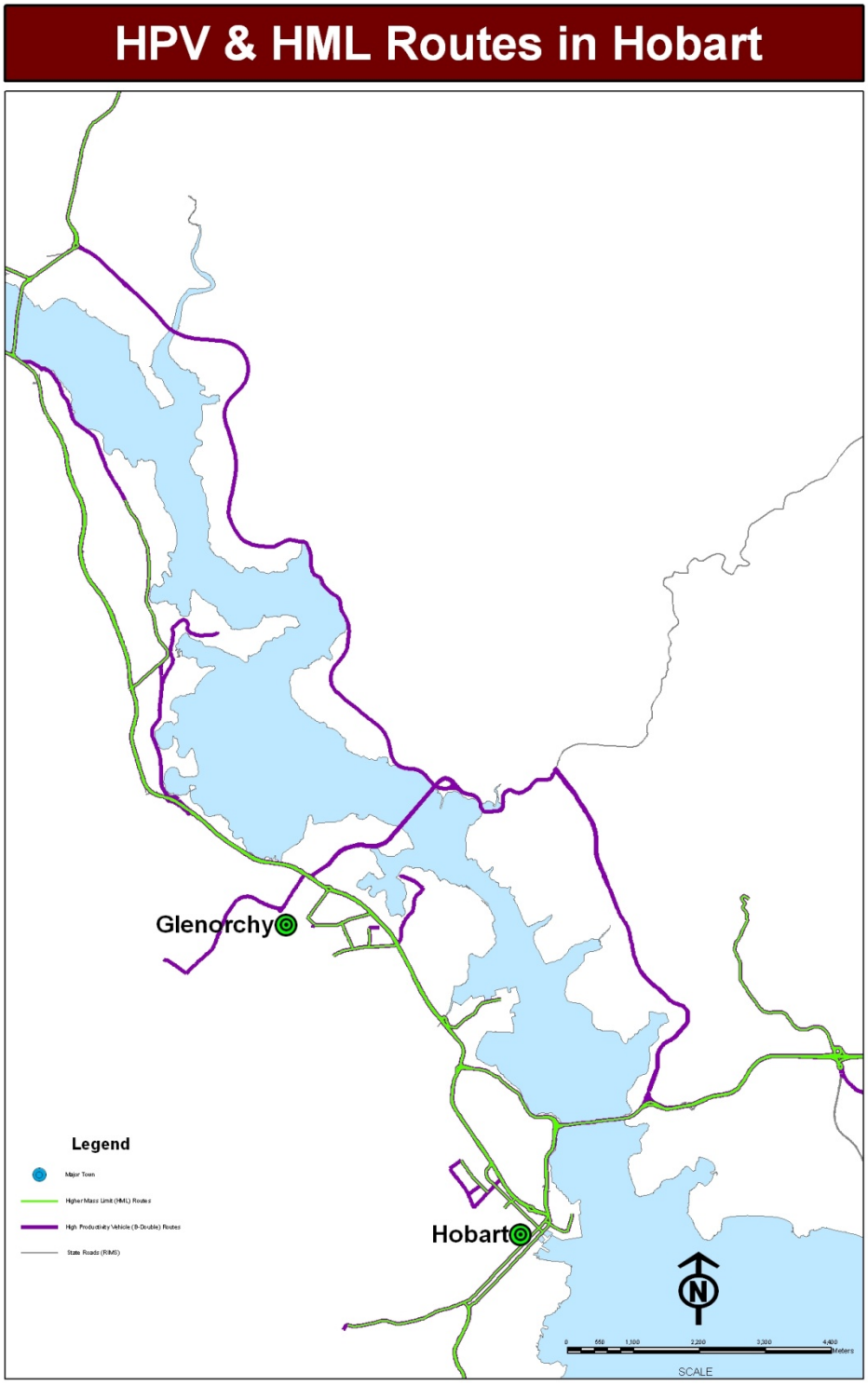
The Gazetted HPV Route Network has been re-assessed. This re-assessment found that 32% meets the Tasmanian guidelines, 35% is marginally below the Tasmanian guidelines, and 33% does not meet the Tasmanian guidelines.

APPENDIX A – Route Maps

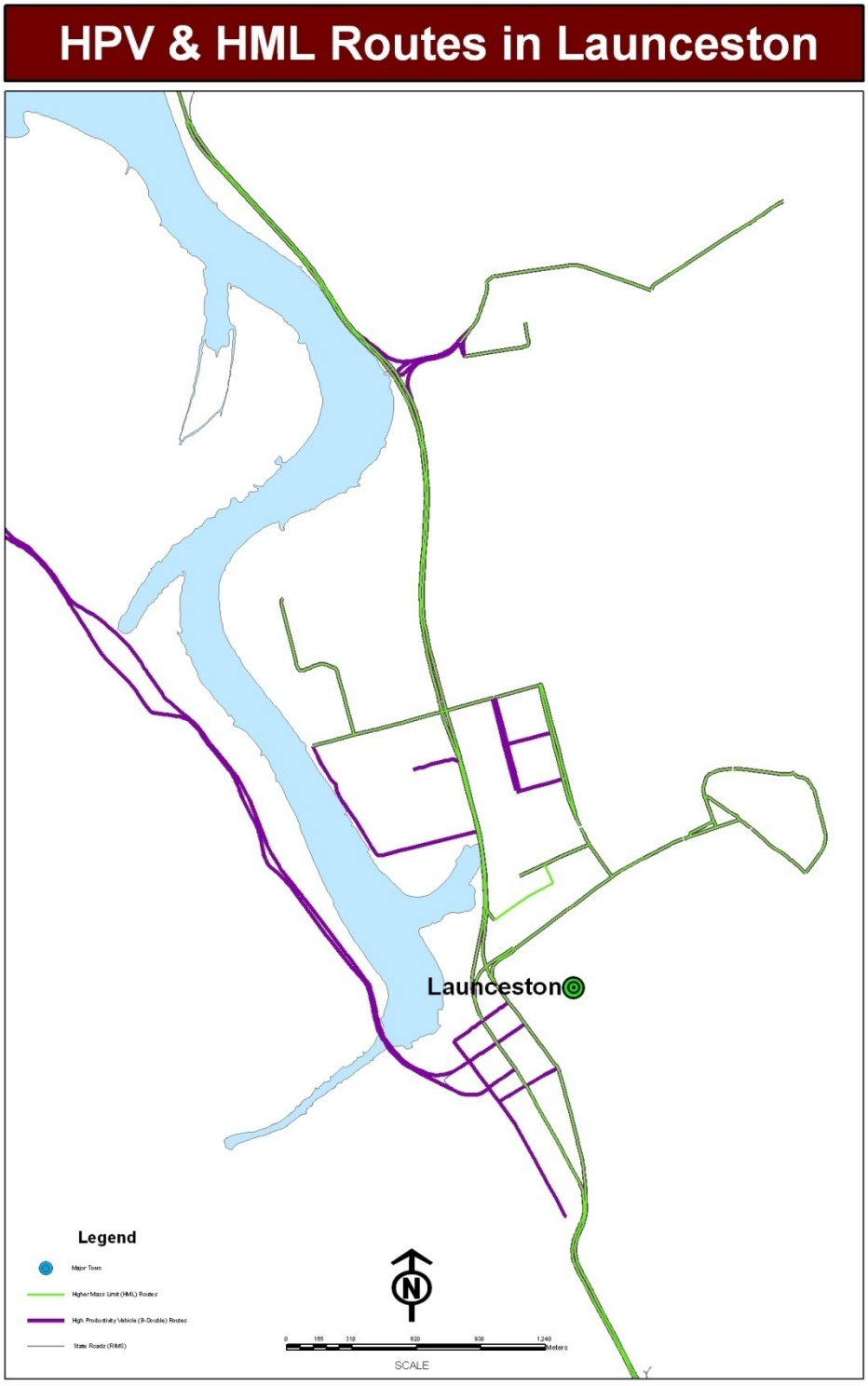
HPV & HML Routes, Tasmania



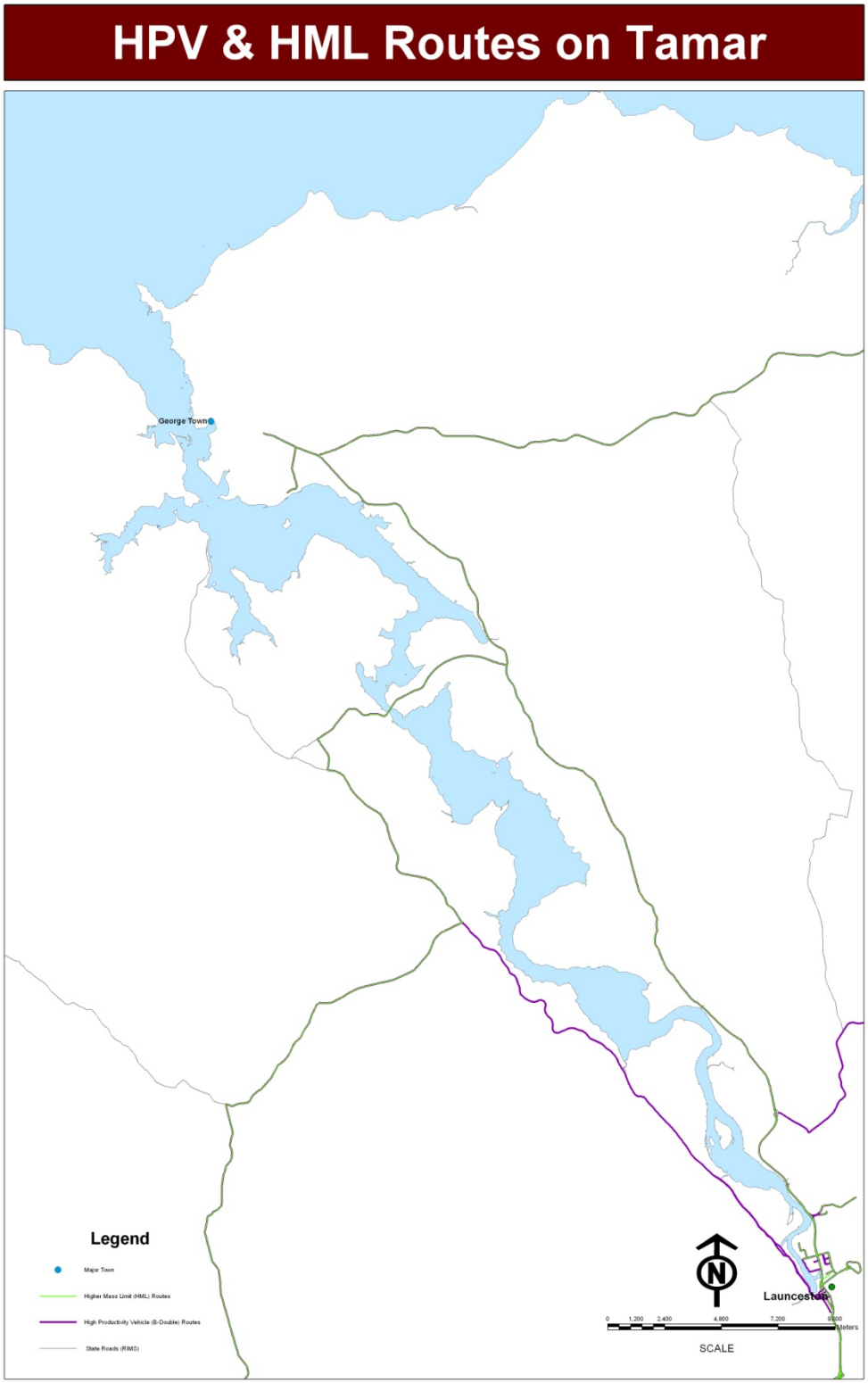
HPV & HML Routes, Hobart



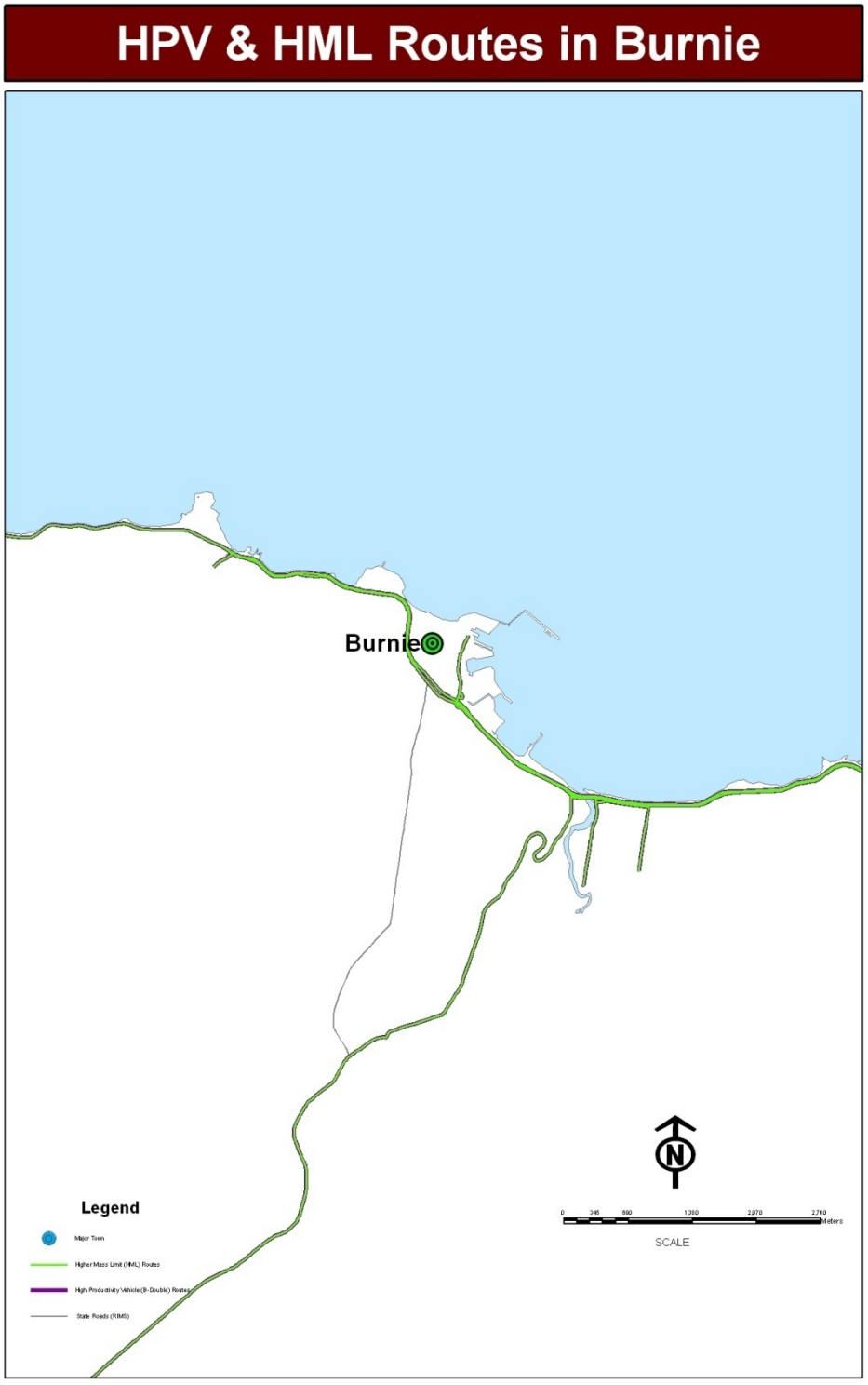
HPV & HML Routes, Launceston



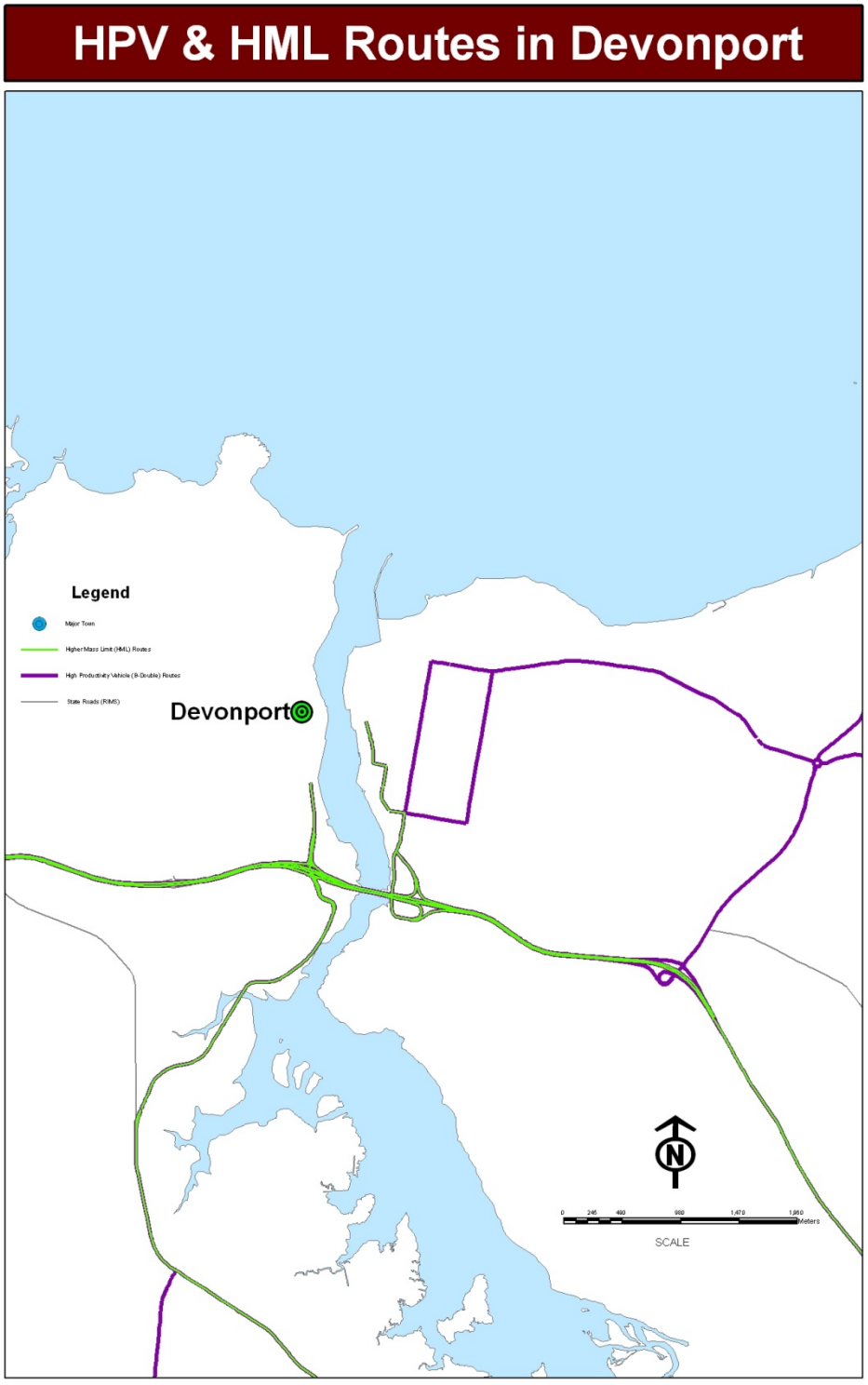
HPV & HML Routes, Tamar



HPV & HML Routes, Burnie



HPV & HML Routes, Devonport



APPENDIX B – DIER Specifications and Cross-Sections

ROAD DESIGN CROSS SECTION SELECTION						
ROAD CATEGORY	**TYPE**	>5,000	2500-5000	1000-2500	<1,000	<300
1	Trunk	A1	A1	A1	B1	
2	Freight	A1	B1	C1	C1	
3	Access	C1	D1	D1	D2	
4	Feeder	D1	D1	D2	E1	
5	Other		D2	E1	E1	
5	Unsealed				F1	F2

ROAD DESIGN CROSS SECTIONS					
ROAD			BRIDGE		
SECTION REFERENCE	Traffic Lane Width	Road Shoulders	Long Bridge Shoulder.	Short Bridge Shoulder.	Max Length for Short Bridge
A1	3.5m	2.0m	1.0m	2.0m	75m
B1	3.5m	1.5m	1.0m	1.5m	30m
C1	3.5m	1.0m	1.0m	1.0m	N/A
D1	3.0m	1.0m	1.0m	1.0m	N/A
D2	3.0m	0.5m	0.5m	0.5m	N/A
E1	2.75m	0.5m	0.5m	0.5m	N/A
Interchange Ramps	4.0m	1.0m Left 0.5m Right	1.0m Left 0.5m Right	1.0m Left 0.5m Right	N/A
Unsealed					
F1	3.25m	0.5m	0m	0m	9m	Single Lane
F2	3.25m	0m	0m	0m	N/A	Single Lane

APPENDIX C – Route Assessment Guidelines and Checklist

HPV Route Assessment Guidelines

Geometric and Road Performance Checklist

Applicant:	
Application No.:	
Route:	
Origin:	
Destination:	
Assessment Outcome:	
Name of Assessor/s:	

NB: Structural, environmental and strategic issues are considered separately and do not form part of this assessment.

Notes for Assessors:

- HPV route assessment must be undertaken by persons suitably qualified and / or experienced in traffic management and traffic engineering applications.
- This form is to be used as a guide only and not a substitute for experienced engineering judgement.
- Australian Standards, Austroads Guides and relevant DIER requirements should be referenced when considering the application of regulatory, warning or delineation devices.
- This is a living document and may be revised if new information becomes available.
- Generally short sub-standard sections do not of themselves preclude a route, however specific conditions may result in this outcome.
- Assessment may be based on road engineering factors only or may be based mainly on road engineering factors and there may be a need for signage warning of HPV activity.

Item for examination	Y/N	Number	Reference/Background	Assessor's Comments
General topics				
Does the route use part of the local road network?			Route map to be attached to report, which must show start/end points	
Is the route acceptable to road owner?				
Has the route a direct connection to an existing HPV route? Is route parallel to existing?			Parallel routes are not acceptable	
What is the number of HPV trips proposed per day?			From permit application	
Productivity improvement (i.e. what number of trips for 19 or 21 metre vehicles if HPV not approved?)			From tonnage estimate	
Is the application for a defined period?			Refer Attachment 4 Note 1	
Is there existing use by 19m or 21m heavy vehicles?			Refer Attachment 4 Note 2	
Is the route primarily within a general rural speed zone?				

Item for examination	Y/N	Number	Reference/Background	Assessor's Comments
Length of route				
Are there any vertical clearances less than 4.5m?			If yes route is precluded, unless alterations are undertaken to structure at applicants cost.	
Is the general route topography: • Open / undulating				
• Hilly / winding				
• Extreme				
Does destination site have HPV-capable off-road turning, loading and parking facilities?				
Is route crash history of concern? If yes, please comment			Refer Attachment 4 Note 3	
Traffic volumes				
AADT				

Traffic composition				
What is the traffic composition?			Refer Attachment 2	
Is this a common route for cyclists? Are facilities provided for them?				
Rail Level Crossings				
Passive?				
Active?				
Are stopping sight distances adequate?			Refer Attachment 3 Table 6	
Are the warning times and stacking distances adequate?			Refer Attachment 3 Table 7	

Road alignment and cross section				
Predominant road surface: • Sealed				
• Unsealed			Refer Attachment 4 Note 4	
Are traffic lane/carriageway widths adequate for the traffic volume and mix?			Refer Attachment 1 Table 1	
Are shoulders sealed?				
Are shoulders wide enough?			Refer Attachment 1 Table 1	
Are shoulders trafficable for all vehicles?				
Are horizontal curve formations widened?			Refer Attachment 1 Table 2	
Are tight low speed turn swept paths acceptable?			Refer Attachment 1 Table 2	
Are ample overtaking opportunities available for length of route? Are overtaking opportunities of sufficient length to overtake HPVs?			Refer Attachment 3 Table 5	