TRANSPORT NFRASTRUCTURE BARRIERS AND OPPORTUNITIES

Roads, Bridges, Larger Transport Vehicle Capacity Proposal





GIPPSLAND FORESTRY HUB

Promoting the Forestry Industry



Australian Government

Department of Agriculture, Fisheries and Forestry

Acknowledgement of Country

The Gippsland Forestry Hub and Jack Barnes Forestry Services acknowledge the Traditional Custodians of Country and recognise their continuing connection to the land, water, air and sky, culture and community. We pay our respects to Elders past, present and emerging.

We acknowledge that the Gippsland Forestry Hub operates on traditional lands, including those of the Gunaikurnai, Bunurong, Wurundjeri, and Taungurung nations as well as other Traditional Owner Groups in Victoria who are not formally recognised.

Disclaimer

The Gippsland Forestry Hub engaged Jack Barnes Forestry Services (JBFS) to prepare this report. The information provided in this report is correct as at 01 July 2025.

The report has been prepared by JBFS in good faith and under the terms of the engagement outlined by the Gippsland Forestry Hub (see Project Brief). It is based on information gained from consultation with external stakeholders, publicly available information sources and materials, data provided by the Gippsland Forestry Hub and other agencies, and the experience of the project team. Where possible, the original source of data has been referenced in this report.

The information upon which this report is based and draws its conclusions, contains assumptions around existing circumstances, market conditions and federal and state government policies. If these circumstances and assumptions change, the conclusions and recommendations detailed in the report may require review.

This report is provided solely for the use of the Gippsland Forestry Hub. The contents of the report are selective, and the report does not purport to be conclusive. Nothing in this report constitutes legal, financial, investment, accounting or tax advice.

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Meet The Project Team

Jack Barnes

Jack Barnes is a professional forester with over 25 years' experience working in Australia and the UK. Jack has significant experience working in Victoria across both the hardwood and softwood plantation industries as well as with farm forestry and native logging sectors. From 2012 to 2021 Jack was the Customer and Haulage Manager for HVP Plantations in the Gippsland region. Following this, he spent three years as Operations Manager with Gippsland based forestry contracting company MJM Excavations, Harvesting and Haulage, before establishing his own forestry consulting business in 2024. These roles have given Jack a strong grounding in the region and have allowed him to develop a deep understanding of the barriers faced by the transport sector within the forestry and timber industry in Gippsland.

Jack is well networked across the end user supply chain and has firsthand experience of the challenges faced by Gippsland forest growers and contractors when it comes to marketing and transporting products from forest operations. Jack has an aptitude for strategic thinking and problem solving and is skilled in finding innovative ways to undertake tasks, improve procedures and evaluate success.

Alan Pincott

Alan Pincott has many years of experience in a variety of roles in the heavy transport industry and is a qualified heavy vehicle mechanic. Alan has been a VicRoads heavy vehicle driving instructor and licence tester and has 18 years' experience as an on road Regulatory & Compliance Officer in country Victoria, with extensive experience in crash investigation. Alan has a passion for road safety and stakeholder engagement and education.

Alan has run his own training and consultancy company "Australian Trucking Safety Services and Solutions" (ATSSS) since 2016, specialising in heavy vehicle safety and compliance. In that time, he has also worked closely with VicRoads and the National Heavy vehicle Regulator (NHVR) on programs to improve the road network, access and safety for heavy vehicles.

Alan has been instrumental in other successful road safety campaigns and strategies, including the establishment of the Safe Freight Networks and Truckies Light UP for Safety, NTI Spilt Milk and the Heavy Vehicle Rollover Awareness Program (HVRAP). He is a very experienced presenter and facilitator and understands that the key to success is industry engagement.

Peter Harbridge

Peter Harbridge is the OHS and Compliance Manager with Gibsons Ground Spread, based in Gippsland. He has a background as an on-road Regulatory & Compliance Officer in Regional Victoria, working with Vic-Roads until 2014.

Peter commenced his own business "Transport Productivity with Compliance" (TPC) in 2017 to assist transport operators who were struggling with heavy vehicle access and has developed a reputation within the transport industry as the "go to" person for support with NHVR permit access issues and successful Performance Based Standards (PBS) approvals for new configurations. Peter is well connected with road managers and regulators in Local Government Areas (LGAs) and at state and national levels. Peter brings a wealth of expertise, managing access issues from across Australia that can be applied to the Gippsland region.



Jack Barnes



Alan Pincott



Peter Harbridge

Executive Summary

Rural and regional industry rely heavily on transport networks to deliver their product to market. The forestry and timber industry in Gippsland is a prime example of this. The importance of a robust, reliable and innovative transport network for the forestry and timber industry was highlighted in the Gippsland Forestry Hub <u>30-year Strategy Implementation Plan</u> and the Gippsland Forestry Hub report on Innovation and Infrastructure. In addition to these sources, the <u>Gippsland Freight Infrastructure Master Plan 2023-2028</u>, reiterates the reliance of the region's economies on a well- functioning efficient and reliable transport network.

In order to continue to grow and compete with national and global producers of forest products, it is essential that the Gippsland region capitalises on all opportunities for efficiency improvement. This includes transport systems and networks. Historically sawlogs and other forest products have been moved relatively short distances (up to 100km) to processing facilities. More recently however, the distances from harvesting site to processing facilities and markets have been increasing, with some forest products now travelling over 400km.

There are several factors behind these changes. For example, there has been a significant reduction in the number of processing facilities operating within the Gippsland region. Some facilities have closed due to resource shortages caused by bushfires, while others have closed or changed their fibre supply requirements in response to the cessation of native timber harvesting within Victorian state forests. As a consequence, some forest products generated within the region no longer have a local market.

Access to the local markets that do remain has become more challenging. In response to concerns around fibre supply, many of the larger forest growers and processers have entered into large-scale, long-term contracts that meet the annual supply requirements of the processor completely. This makes market access for smaller and independent growers, who access the timber market less frequently, almost impossible.

Processing facilities have invested heavily in technology and innovative recovery techniques. This has led to sites consuming a greater volume of timber, thereby increasing catchment areas and transport distances. As forest products now often need to travel further to access markets it is essential that transport efficiencies are captured wherever possible. This report has explored the opportunities and barriers to these efficiencies by:

Increase Output per Unit of Input

OR

Decrease the Input per Unit of Output

The report has found that there are several opportunities to improve transport efficiency across the Gippsland region and makes the following 8 key recommendations.

- Advancing Access for RAV at HML and for HPFV in the Latrobe City Council LGA
- Advancing HML Access For HPFV Routes
- · Increasing the Frequency of Bridge Assessments and Greater Access to Assessment Results for Industry
- Improving Consistency in NHVR Permit Application Processing Across Local Road Management Authorities
- Establishing an Engagement Framework for Transport Operators and Forest Growers to Collaborate with Road Managers on Access Issues
- · Cost of Tolls for Travel Through Melbourne Toll Charge Relief
- · Increasing Understanding of the Wider Benefits of HPFV Solutions

^{*}These recommendations are further detailed from page 20.

Introduction

Historically it has often been stated that, when transporting forestry and timber produce or products there is an easy formula: "to move 100tonnes 100km use a truck, to move 1000 tonnes over 1000km use a train and to move several thousand tonnes over several thousand km, use a ship". This philosophy still holds reasonably true.

But while there are many ways of transporting forest products to end users, including road, rail and sea, in almost all cases a truck is required in the first instance, to move the harvested products to a processing plant or a secondary loading facility. Road transport is also regularly required to deliver forest products to their final processing facility or to the point of sale. There are exceptions to this transport model - however, within a Gippsland forestry and timber context, they are few and far between.

Bearing these realities and philosophies in mind, this project has primarily reviewed the road transportation of forest products from the Gippsland region. Rail and sea transport were discussed to some degree during stakeholder engagement. In particular, a greater utilisation of the national rail network was highlighted as a potential solution to some of the challenges the forestry and timber industry faces at present. However, access to and use of the rail network brings some of its own unique barriers. These are discussed as part of this report. Rail and sea freight options are likely to have a limited immediate impact on the transportation of forestry and timber products in Gippsland and will require additional specialist research before more detailed recommendations can be made.

Several major events have impacted the Gippsland forestry and timber industry in recent times. Major bush fires in 2009, 2015, 2019 and 2020 have significantly reduced the volumes of timber available for harvest over the past decade. This reduction in log availability has resulted in a loss of access to markets for some forest growers, and a complete closure of other markets for all growers, such as the Carter Holt Harvey sawmill at Mowell. More recently, the cessation of native timber harvesting activities in Victorian state-owned forests has drastically changed the market dynamics within the region, closing further processing facilities and causing others to significantly alter their fibre requirements. This decline in local processing capability means that for many forest growers in Gippsland, the only available markets are now out of region and, in some instances, out of the state.

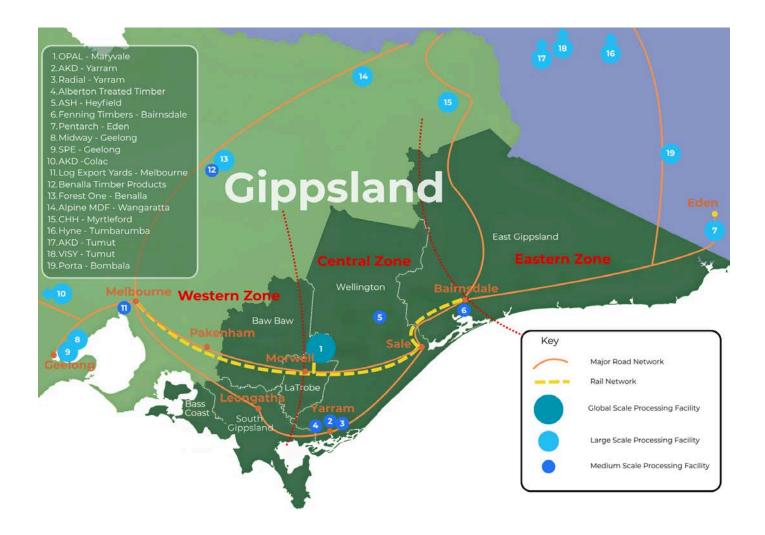
Transporting forest products further for processing has had a major impact on cost efficiency, significantly reducing the value of produce generated by Gippsland forests. In many cases, transport has now passed harvesting as the largest component of cost when converting a growing forest into saleable products.



Map of Key Regional Infrastructure Routes and Destinations

The map below indicates:

- · The region zoning used for the Current State Analysis
- · Major destinations for forest products generated within Gippsland
- Major arterial transport routes across, through and leading out of the region



Project Brief

Description

This report will identify the barriers in transport infrastructure for roads, bridges, and larger transport vehicle capacity. The report will inform the Government about the forestry and timber industry's significant dependence on efficient transportation infrastructure for the seamless movement of produce and products. It will also include a cost-benefit analysis that examines the financial, time, resource, and environmental implications of the proposed improvements. Further research and analysis may be required to delve deeper into specific issues and potential solutions that arise from this report.

Road Infrastructure Barriers

- Inadequate road network: investigate the challenges posed by limited road connectivity, especially in the Gippsland region
- Poor road condition: explore the impact of deteriorated roads on transportation efficiency, vehicle maintenance costs, and safety
- Traffic congestion: explain how congestion affects travel time, fuel consumption, and environmental sustainability

Bridge Infrastructure Barriers

- Insufficient bridge capacity: address the limitations of bridges in accommodating larger and heavier vehicles, and the restrictions they place on transportation
- Aging and deteriorating bridges: investigate the risks associated with ageing infrastructure, including reduced load-bearing capacity and closure for repairs
- · Limited bridge accessibility: highlight the challenges faced when bridges hinder transportation flow

Larger Transport Vehicle Capacity Barriers

- Legal restrictions: identify regulations and policies that limit the size and weight of vehicles, impacting forestry and timber produce and products transportation
- Infrastructure limitations: address the challenges faced in accommodating larger vehicles, such as limited bridge height and turning radius of existing road architecture
- Safety concerns: explore the potential risks associated with larger vehicles, including manoeuvrability, braking distance, and road stability
- Summarise the key barriers faced in transport infrastructure for roads, bridges, and larger transport vehicle capacity across Gippsland
- Reinforce the importance of addressing these barriers to enhance transportation efficiency and economic growth

It is anticipated that, through analysis and engagement, a number of additional barriers may be identified.

Project Design

The project has been designed in three sections

- 1. Analysis of current state
- 2. Identification and prioritisation of actions and recommendations
- 3. Review of the costs, benefits and feasibility of the recommendations

Current State Analysis

Review of Existing NHVR Approved Networks

The project team reviewed the existing NHVR network maps across the Gippsland region for any potential barriers to transport efficiency. It also examined the primary transportation routes for produce from Gippsland's forests heading outside of the region, into high volume destination areas and processors. A SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis was also conducted. The following Heavy Vehicle (HV) classes were considered when completing this review:

- HML (Higher Mass Limits)
- B-Double Class 2
- High Productivity Freight Vehicle (HPFV) (PBS A-Double 30m Reference Vehicle 2)

As part of this review, the region was further broken down into 3 zones: Eastern, Western and Central, as illustrated in the regional map on page 7.

The analysis identified that there are some administrative restrictions within the current networks that prevent commonly used configurations (such as 23m B-Doubles) operating on certain routes, or place restrictions on these configurations (e.g. prohibiting operations at HML), making them unviable.

The review also identified other barriers that limit or prevent efficiencies, such as the constantly changing speed restrictions on the A1 Princess Highway in the western zone. These cause delays to trips that did not exist before these speed restrictions were introduced.

Load limitations placed on bridges and sections of road were also identified as a key barrier to the innovation and utilisation of HPFV vehicles at HML. The barriers with the largest impacts to future efficiency are detailed in the table below.

Western Zone Morwell to Port Melbourne, North & West of Melbourne	Central Zone Morwell to Bairnsdale	Eastern Zone Bairnsdale to NSW border
A1 / M1 Bridge Mass Limitations 6 @74.5t 1 @ 75.5t Citilink @ 77.5t 1 @ 80.5t 3 @ 81.5t 1 @ 83t 80kph speed zones between Longwarry and Pakenham.	A1 / M1 Bridge Mass Limitations	A1 / M1 Bridge Mass Limitations 10 @ 68.5t 1 @ 69.5t 2 @ 70t 1 @ 71.5t 1 @ 72.5t 1 @ 72.5t 1 @ 73.5t 1 @ 74.5t 2 @ 75.5t 2 @ 76.5t 1 @ 76.5t 1 @ 77.5t 4 @ 78t 2 @ 78.5t 1 @ 79t 1 @ 80t
Westgate Bridge 68.5t limit Bolte Bridge 68.5t limit	Access limitations within Latrobe City Council LGA in the Strzelecki Ranges >19m & >44t	Monaro Highway B23 1 @ 68.5t 1 @ 74.5t 1 @ 76.5t 1 @ 77t 1 @ 78t 1 @ 78.5t 1 @ 79t

NHVR Network Maps

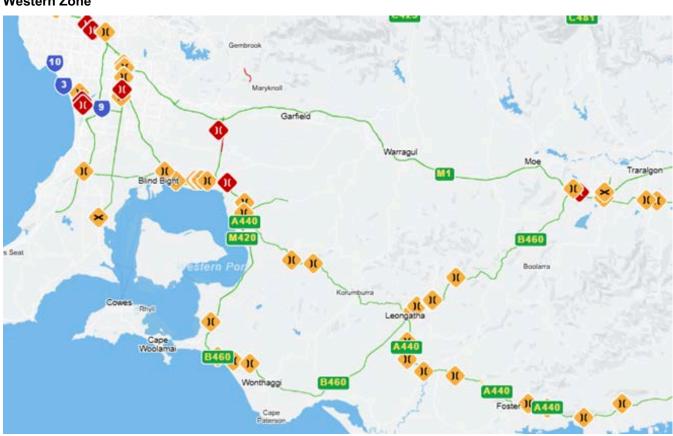
The following network maps illustrate the locations of known barriers to HPFV vehicles across the region.

The maps are taken from the NHVR website - Network for a PBS Level 3A 85.5t General Freight Network, using NHVR General Freight Reference Vehicle 2.

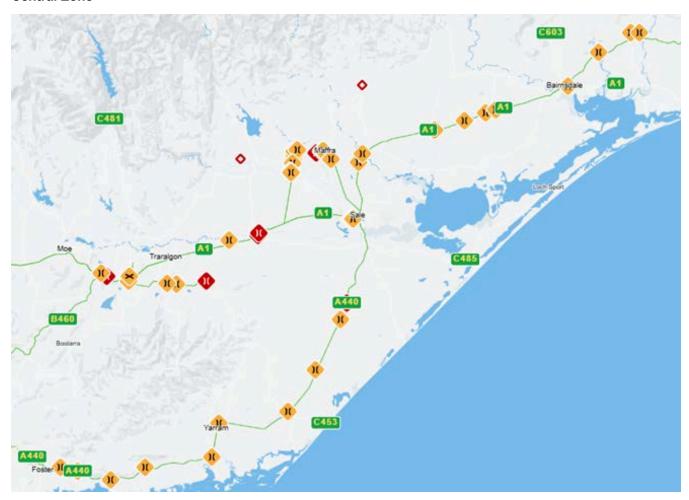
Key To Map Symbology

Symbol	Description
	Approved route for this network, in this instance freeway with two carriageways.
	Road approved with conditions, i.e. Citylink (southern link) is conditional of maximum mass of 77.5t. Includes the road number in this instance.
	Restricted route for this network.
•	Restricted route for this network.
I	Bridge approved with conditions; these have a specific maximum mass (less than 85.5t) that restricts access by this network.
•	Restricted bridge - can only be crossed by vehicles with a total mass of up to 68.5tonnes.
*	Level Crossing – vehicles exceeding 26m must obtain Over Dimension Permit (ODL) before crossing.

Western Zone



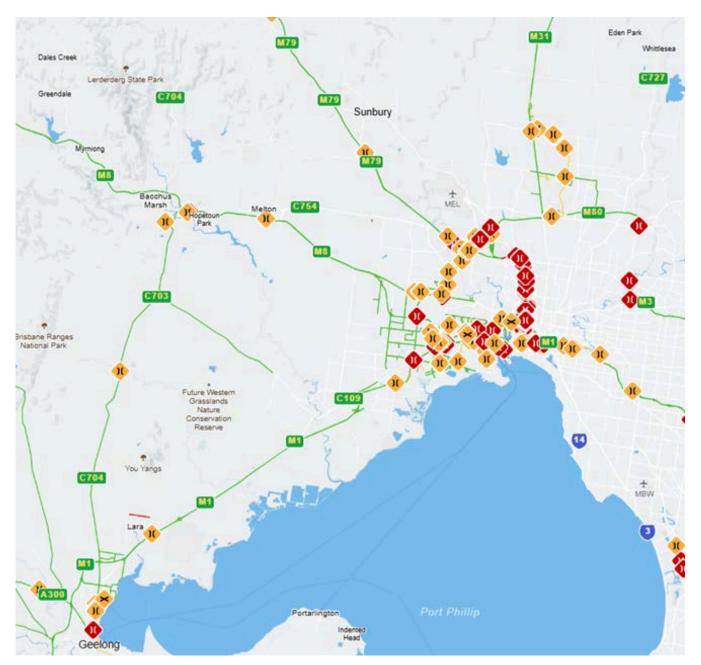
Central Zone



Eastern Zone



Metro Melbourne and Routes to the West and North of the City





SWOT Analysis of the Gippsland Region Forestry and Timber Transport Network

STRENGTHS	WEAKNESSES
 Large, diverse transport contractor base A primary national transport route throughout the entire region A large proportion of the region's roads are already suited to longer HPFV style vehicles An internationally-backed global scale processor within the region 	 Limited processing facilities within the region – lack of a major softwood sawmill Reliance on out-of-region markets for regional produce Gippsland feels landlocked at times, with the congestion of travelling through Melbourne prohibitive GVM limits on bridges inhibits/constrains their use by larger vehicles (HPFV) Lack of rail facilities for forestry and timber produce and products Inability to operate HPFV at HML
OPPORTUNITIES	THREATS
 Creation of an arterial HML HPFV route from the NSW southwestern border to the west of Melbourne and the Hume Corridor Expansion of the plantation estate to create a greater critical mass A forest product value-adding facility within region can consolidate freight for HPFV solutions Expansion of rail networks and increased utilisation of existing rail facilities for out-of-region and cross-region transportation 	 Ongoing bushfire risk that could further deplete the estate Arterial routes may be compromised if a single barrier cannot be resolved, jeopardising any potential benefits that may occur downstream of the pinch point Increasing transport time and road usage costs will make forestry and timber product transportation unviable for many landowners and operators

The findings from the Current State Analysis and SWOT revealed that all three zones across Gippsland were faced with the same or very similar barriers to the movement of heavy vehicles. As a result of these findings, the stakeholder engagement sessions and any further analysis were conducted through a lens of Gippsland as a single region.

Understanding Vehicle Types

The range of products that are generated by forest harvesting operations and downstream processing is extensive. In addition, there are, across a forest lifecycle, various other activities that can require the transportation of commodities including but not limited to:

- Short length (up to 6.5m) round logs and roundwood
- Long length round logs, (>6.5m and often longer than existing NHVR access permissions allow)
- Sawn Timber
- · Woodchips, sawdust and bark products
- · Bulk liquids such as water and fertilisers
- · Bulk aggregates such as rock, gravel, fertiliser
- · Palletised products -such as chemicals
- · Containerised products
- · Plant seedlings
- · Over-Sized and Over-Mass (OSOM) loads, such as harvesting and earthmoving equipment

Given this wide variety of load types, the aging road networks in remote and rural areas, and the innovative nature of forestry and transport contractors, there is an almost endless list of vehicle combinations that can be used for the transportation of forestry and timber produce and products.

While each of these vehicle combination types has its own advantages (depending on the nature of the job being undertaken), certain combinations are limited in their application, some are now outdated, and some have been superseded by improvements in technology and innovation.

This report will focus on the configurations listed on page 15 of this report. These are either widely used at present, or are configurations identified in the stakeholder engagement sessions as delivering significant perceived benefits to the forestry and timber industry moving forward. Configurations fall into three broad categories. General Access Vehicle (GAV), and Restricted Access Vehicles (RAV) of which there are two types - those that have NHVR gazetted approval and those that require specialist PBS approval.

1. General Access Vehicles (GAV)

Any vehicle that complies with the general mass and dimension limits can access the road network, unless signed differently. Most semitrailer configurations operating at less than 19m total length and under general mass limits (max 42.5t GVM) meet this specification.

2. Restricted Access Vehicles (RAV)

This includes Class 1, 2 or 3 vehicles operating under a permit or gazette notice, as well as vehicles operating under HML. Permits and gazette notice place restrictions on where these vehicles can travel. Access to the road network is granted via the NHVR permit system.

- Class I vehicles include agricultural vehicles and OSOM vehicles, such as floats carrying forestry
 equipment
- Class 2 vehicles include B-Doubles, Road Trains (A-Doubles) and PBS approved vehicles
- Class 3 vehicles that, together with their load, do not comply with the mass and / or dimension limits and are not a Class 1 vehicle

More details on heavy vehicle classification can be found in the NHVR fact sheet 'Classes of Heavy Vehicles'.

Commonly Used Truck Configurations in the Gippsland Forestry and Timber Industry

The illustrations and data in the table below are taken from the <u>NHVR</u> website and <u>factsheets</u>. *Axle Mass limits shown in the diagrams are for General Mass Limits (GML)*.

Configuration			Single Steer Axle	Tandem Axle group	Tri Axle Group	GVM (t)	Common Length (m)
6 Axle Semitrailer	GML		6.0	16.5	20.0	42.5	
6.0t 16.5t 20.0t		19.0	6.0	17.0	21.0	43.5	19.0
			6.0	17.0	22.5	45.5	
8 Axle -B Double - Class 2	GML		6.0	16.5	20.0	59.0	
	CML	26.0	6.0	17.0	21.0	61.0	23.0
6.0t 16.5t 20.0t 16.5t			6.0	17.0	22.5	62.5	
9 Axle B-Double – Class 2	GML		6.0	16.5	20.0	62.5	
		26.0	6.0	17.0	21.0	64.5	25.0
6.0t 16.5t 20.0t 20.0t	HML		6.0	17.0	22.5	68.0	

Examples of some of the potential PBS HPFV vehicles that may be beneficial for the forestry and timber industry in Gippsland are outlined below.

Configuration	Max length (m)	Single Steer Axle	Tandem Axle group	Tri Axle Group	Quad Axle Group	GVM (t)	
9 Axle A-Double	GML		6.0	16.5	20.0	-	72.0
	CML	36.5	6.0	17.0	21.0	-	74.0
0 00 - 00 00 - 00	HML		6.0	17.0	22.5	-	74.0
6.0t 16.5t 16.5t 16.5t 16.5t	PBS HML	30.0	6.0	16.5	22.5	-	74.5
11 Axle A-Double	GML		6.0	16.5	20.0	-	79.0
	CML	36.5	6.0	17.0	21.0	-	81.0
6.0t 16.5t 20.0t 16.5t 20.0t	HML		6.0	17.0	22.5	-	85.0
	PBS HML	30.0	6.5	17.0	22.5	-	85.5
12 Axle B-Double	GML		6.0	16.5	20.0	-	82.5
	CML	36.5	6.0	17.0	21.0	-	84.5
0 00 - 000 000 - 000	HML		6.0	17.0	22.5	-	90.5
6.0t 16.5t 20.0t 20.0t 20.0t	PBS HML	30.0	6.5	17.0	22.5	-	85.5
12 Axle B-Triple	GML		6.0	16.5	20.0	-	82.5
0 000 000 000	CML	36.5	6.0	17.0	21.0	-	84.5
i.Ot 16.5t 20.0t 20.0t 20.0t	HML		6.0	17.0	22.5	-	90.5
11 Axle B-Double (Quad)	GML		6.5	16.5	-	20.0	63.0
	CML	30.0	6.5	17.0	-	21.0	65.0
0	HML		6.5	17.0	-	27.0	77.0

Identification and Prioritisation of Actions and Recommendations

Results of Stakeholder Engagement

A list of potential stakeholders was compiled, including representatives from Gippsland transport operators, forestry contractors, forest growers, sawmillers and processors, local road managers and regulators. The following table details the stakeholders that provided input into the project:

Forest Growers

Clinton Tepper – Just Add Trees Simon Gatt – AKD Jon Lambert – Heartwood Unlimited

Road Managers & Regulators

Harvey Dinelli – **DTP**Brayden Soo – **NHVR**John Ernst – **Safe Freight Networks**Ian Mond – **DTP**

Trevor Nicklen - **DEECA**

Industry Specialists

Alan Pincott – ATSSS
Peter Harbridge – TPC
Lesia Goodwin – Gippsland
Forestry Hub
Clint Crozier – Mettler
Toledo
Greg Pullen – SEATS
(South East Australian
Transport Strategy)

Timber Processors

Brian Donchi – **Fenning Timbers**James Saliba – **OPAL**Campbell Sanderson – **AKD**Vince Hurley – **ASH**Charlie Fisher – **Pentarch Forestry**

Harvesting and Transport Contractors

Ricky Leeson – Lessons
Logging and Cartage
John O'Connor – O'Connors
Transport
Travis Healy – Latrobe
Forestry and Civil
Mark Maiden – MJM Forestry
Services
Chris Olsen – Olsen's Heavy
Haulage
Dary Hutton – ANC Forestry
Ian Reid – Austimber
Luke & Dave Blackwood –

Blackwood Haulage

Findings from Stakeholder Engagement

The initial round of stakeholder engagement generated a range of barriers and opportunities to review. These are listed below. The stakeholders were also asked to rank these findings in order of importance to their own business or organisation. The rankings were then used by the project team to prioritise and rationalise the initial findings and to determine a set of recommendations that delivered the greatest benefits to the forestry and timber industry within Gippsland.



Identification and Prioritisation of Actions and Recommendations

Identified Existing Barriers

- 1. **Permit Processing Challenges** inconsistent permit application processes across LGAs and a lack of understanding of equipment capabilities hinder efficient approvals
- 2. **Permit Duration Limitations** permits are frequently issued for only six months, despite initial expectations of up to three years
- 3. **Regulatory Inconsistencies** significant variations in NHVL standards between states creates compliance challenges
- 4. **Bridge Infrastructure Constraints** limited inspections, insufficient data, and low weight limits (68.5t) restrict the viability of HPFV
- 5. **Roadway Design & Maintenance Issues** poor vegetation management impacts visibility, while inadequate road design complicates HPFV and Class 2 vehicle operations
- 6. Access & Route Approval Barriers first and last kilometre access issues create significant challenges in securing permit and route approvals
- 7. High Toll Costs expensive tolls for transport through Melbourne increase overall freight costs
- 8. HPFV Restrictions the inability to obtain HML approval for HPFV limits operational efficiency
- 9. **Infrastructure Investment Deficiencies** inadequate funding for regional and minor roads results in deteriorating transport networks
- 10. **Receival Point Limitations** many existing forestry and timber produce and product delivery points are not equipped to handle HPFV operations
- 11. **Workforce Shortages** the forestry and timber industry face difficulties, both in retaining experienced drivers and attracting new talent
- 12. **Policy & Market Impacts** Government policies adversely affect transport infrastructure, reducing market opportunities and increasing transport distances



Identified Potential Opportunities

- 1. **Collaboration to Improve Permit Approvals** partnering with NHVR and local authorities to reduce the high permit rejection rate in the forestry and timber industry and align outcomes with broader transport sector averages
- 2. **Encouraging HPFV Uptake** increasing the number of HPFV applications to support the development and expansion of dedicated HPFV routes
- 3. **HPFV Route Development at HML** establishing key freight corridors, such as Morwell to Port Melbourne, capable of supporting HPFVs at HML, e.g. 85.5 tonnes
- 4. **Weight Limit Reviews** re-evaluating current weight restrictions to accommodate modern trailer configurations and axle groupings with broader surface footprints, enhancing road safety and efficiency
- 5. **Driver Amenities Expansion** increasing the number and availability of driver rest areas and load-checking facilities along primary freight routes to support safety and compliance
- 6. **Road Strengthening Investments** undertaking targeted road improvements and pavement upgrades to enable the wider use of HPFVs operating at HML
- 7. **Emission Reduction Initiatives** supporting decarbonisation by reducing the number of freight trips and vehicles through the adoption of higher-capacity transport solutions
- 8. **Multimodal Transport Options** leveraging rail and sea freight to ease demand on road infrastructure and offer more sustainable logistics options
- 9. **Bridge Upgrades** strengthening and upgrading bridges to support the movement of HPFVs at full HML capacity
- 10. **Innovation in Transport Systems** promoting alternative transport solutions for forestry and timber produce and products, such as self-loading trucks, to improve efficiency and reduce handling
- 11. **Traralgon Bypass Construction** reducing travel times and congestion through the development of a Traralgon bypass
- 12. **Sale Alternate Truck Route Development** enhancing regional freight efficiency by upgrading the Sale Alternate Truck Route to HPFV-capable standards
- 13. **Addressing Urban Congestion** engaging with government stakeholders to address significant freight congestion in Greater Melbourne and advocate for targeted infrastructure improvements

Aggregation of Items

Based on the feedback received, it became clear that many of the issues and opportunities raised by stakeholders could be logically grouped together for consideration and action. On occasions this involved pairing an opportunity with a barrier in order to develop a recommendation. For example, the barriers and opportunities in the table below were grouped together as they all have a key focus of obtaining HML access for HPFV.

Bridge Infrastructure Constraints
HML Restrictions
Encouraging HPFV Uptake
HPFV Route Development at HML
Road Strengthening Investments
Bridge Upgrades

Ranking of Stakeholder Identified Barriers and Opportunities

Prioritisation of Key Themes

All barriers and opportunities highlighted by stakeholders were analysed and prioritised and, from this information, key themes were established. These have been identified below:

- 1. A focus on obtaining greater access at HML for HPFV in the Latrobe City Council LGA
- 2. A focus on obtaining HML access for HPFV routes
- 3. Increased frequency of bridge inspections and a greater access to inspection results for industry
- 4. Improved consistency of permit application handling across local road management authorities
- 5. Development of an engagement mechanism for transport operators and forest growers to liaise with road managers on access issues, similar to the milk industry approach to using 9 axle PBS ADs. 6. Reduction in the cost of tolls for Gippsland timber travelling through Melbourne
- 7. Improved understanding of the wider benefits of HPFV solutions to the forestry and timber industry

Support for Existing and Proposed Projects

There are several government infrastructure projects already scheduled that were identified by the team as being critical to the success of reducing transport barriers in Gippsland. These projects are listed below and receive the support of this report:

- · Development of the Traralgon Bypass
- Development of the Sale Alternate Truck Route
- Removal of the 80kph speed restrictions on the A1/M1 from Longwarry to Pakenham

Similarly, the following government and stakeholder recommendations are also viewed as critical and again, receive the support of this report:

- · Decreasing/managing the congestion passing through Melbourne
- · Increasing the level of spending on rural roads
- Supporting the use of alternative freight systems to road transport (such as sea and rail).

^{**}Some key road safety themes were deemed to be barriers to all HV movements and therefore of significance to this project. These themes have been discussed in a separate portion of this report on Road Safety Barriers to HV Movements.



Key Issues, Recommendations and Benefit Analysis

1. Advancing Access for RAV at HML and for HPFV in the Latrobe City Council LGA

According to data supplied by NHVR (table below), which analysed over 5000 permit applications in Gippsland, the forestry and timber industry has a much higher permit rejection rate than other industries (an approximately 6% rejection rate compared to 1.5% in other industries). NHVR data suggests that the Latrobe City Council in particular has a much higher permit rejection rate than other LGAs. These permit challenges were echoed by businesses and contractors, with significant anecdotal evidence of permits not being granted for new HPFV applications, despite existing precedents. This has resulted in inconsistent access for businesses operating within the Latrobe City Council LGA.

Many of the unsuccessful permit applications related to Class 2 (B-Double configurations) operating at higher mass. These applications were, in many instances, rejected on the basis of the length of the vehicle. Being able to access forest properties with larger Class 2 configurations has many benefits for the forestry and timber industry:

- 1. A reduction in the total number of trips on the road
- 2. Reduced emissions as a result of fewer trips
- 3. Greater efficiency resulting in lower transport costs
- 4. Higher engineering standards and additional safety features on Class 2 B- Double configurations result in a safer vehicle being used to transport produce and products

NHVR Access Data Summary - Calendar Years 2022-2024:

Permit Access (2022-2024 inclusive)	No.
Access permit applications received that includes a consent request for a Gippsland Council	5689
Refused permit applications that include a consent request for a Gippsland Council	77
Permit refusal rate for Gippsland Council	1.35%
Permit applications that include a consent request for a Gippsland Council • with load description including the word "logs" or "timber"	167
Refused permit applications that include a consent request for a Gippsland Council for a logging vehicle	10
Permit refusal rate for Gippsland Council Logging vehicles	5.99%

ACTION

Reduce the NHVR permit rejection rate within Latrobe City Council LGA

RECOMMENDATION 1.1 - Engage with Latrobe City Council

Work specifically with Latrobe City Council personnel to understand the reasoning for the high level of permit rejections

RECOMMENDATION 1.2 - Training package for Latrobe City Council Permit Processors

Develop a training tool in conjunction with NHVR to assist LGA personnel in assessing permit applications that explore the wider benefits of HPFV vehicles in rural and remote regions and industries

BENEFIT ANALYSIS - Advancing Access for HPFV at HML in the Latrobe City Council LGA

To illustrate the significance of the restricted access of HPFV vehicles on roads where they have previously operated, two theoretical harvest coupes (A and B) operating in the Latrobe City Council LGA have been examined.

Coupe A:

- A 5000t Radiata pine harvest operation located near Carrajung Blackwarry in the Strzelecki Ranges
- Trucks are expected to achieve 3 loads per day into local markets such as AKD Yarram, OPAL Australian Paper or Alberton Treated Timber
- The table below indicates the difference in transport costs per tonne as a result of dropping from 23m to 19m configurations in accordance with road access regulations

Truck Type (HML)	GVM	Payload	Daily Revenue Target	Loads per day	Total No Loads	Average Rate \$/t
19m Folding Semi-trailer	45.5	29.0	\$2050	3	173	23.56
23m B-Double	62.5	42.5	\$2600	3	118	20.39
				Change	55	\$3.17

Coupe B:

- A 10,000t Eucalyptus globulus harvest operation located near Yallourn North
- Trucks are expected to achieve 2 loads per day into the Geelong woodchip markets
- The table below indicates the difference in transport cost per tonne as a result of dropping from 23m to 19m configurations in accordance with road access regulations

Truck Type (HML)	GVM	Payload	Daily Revenue Target	Loads per day	Total No Loads	Average Rate \$/t
19m Folding Semi-trailer	45.5	29.0	\$2100	2	345	36.21
23m B-Double	62.5	42.5	\$2650	2	235	31.18
				Change	110	\$5.03

Both these coupes show a potential haulage rate decrease of between 13% and 14%, equating to approximately \$16,000 for Coupe A and \$50,000 for Coupe B.

In addition to the financial benefit provided to the forestry and timber industry contractors associated with these coupes, the increase in payload also reduces the number of trucks required to transport produce and products by 31.7% (55 less trucks on the road for Coupe A and 110 less for Coupe B). This has positive implications for road maintenance, improving safety for truck drivers as well as general road users.

A reduction in trucks on the road would also have a direct link to fossil fuel emissions from the operation. There would be 3127 litres of fuel saved if 23m trucks were operating from Coupe A and 25,019 litres saved under the same scenario on Coupe B.

2. Advancing HML Access for HPFV Routes

Significant volumes of forestry and timber produce generated within Gippsland are required to travel longer distances to processing facilities and markets in southern NSW, Western Victoria (Geelong and Colac) and to the export yards located close to the Melbourne dockyards. Given the current lack of a large-scale processing market in Gippsland, increased transport distances are likely to continue for the foreseeable future. Long-distance cartage is well suited to HPFV vehicle configurations such as:

- 30m 11 Axle A-doubles
- 36m B Triples
- 30m 12 Axle A-doubles
- 30m B-Double (Quad)

• 36.5m A-Doubles

However, when compared to a standard 26m B-Double (Class 2) running at HML, these configurations do not generate a significant uplift in payload unless they too can operate at HML (see table below). This is due to the increase in tare weight created by the additional axle groups and dolly units required. It is critical that HML access is available for the HPFV units in order for these vehicles to become a viable alternative transport option for the forestry and timber industry.

	GM	IL (t)	HML (t)		Payload Gair	
HPFV Configurations	GVM	Payload	GVM	Payload	Vs GML	Vs HML
26m B-Double (9 Axle)	62.5	40.0	68.0	45.0	-	-
36m A-Double (9 Axle)	72.0	49.0	74.0	51.0	4.0	6.0
36m A-Double (11 Axle)	79.0	54.0	85.0	60.0	9.0	15.0
36m A Double (12 Axle)	82.5	56.0	90.5	64.0	11.0	19.0
30m A-Double (11 Axle)	79.5	54.0	85.0	60.0	9.0	15.0
30m A-double (12 Axle)	83.0	56.5	85.0	58.5	11.5	13.5
36m B-Triple (12 Axle)	82.5	54.5	90.5	62.5	9.5	17.5
30m B Double Quad (11 Axle)	62.5	37.0	77.0	51.0	-8.0	6.0

ACTION

Develop HPFV Routes at HML for Forest Industry Products and Produce from Gippsland

RECOMMENDATION 2.1 An HPFV Route at HML from Gippsland to Melbourne Docks

The assessment, upgrade and creation of a route from Gippsland to the Melbourne dock yards and container handling facilities that can accommodate HPFV vehicles to a minimum GVM of 85.0 and a maximum length of 30m is critical, and for a GVM of 91.0 and a maximum length of 36.5m where possible

RECOMMENDATION 2.2 An HPFV Route at HML from Gippsland to Western Victoria

The assessment, upgrade and creation of a route from Gippsland through Melbourne towards destinations in Western Victoria such as Geelong and Colac that can accommodate HPFV vehicles to a minimum GVM of 85.0 and a maximum length of 30m is critical and for a GVM of 91.0 and a maximum length of 36.5m where possible

RECOMMENDATION 2.3 An HPFV Route at HML from Gippsland to Southern NSW

The assessment, upgrade and creation of a route from Gippsland to southern NSW along both the A1 and B23 that can accommodate HPFV vehicles to a minimum GVM of 85.0 and a maximum length of 30m is critical, and for a GVM of 91.0 and a maximum length of 36.5m where possible

RECOMMENDATION 2.1 An HPFV Route at HML from Gippsland to Melbourne Docks

The assessment, upgrade and creation of a route from Gippsland to the Melbourne dock yards and container handling facilities that can accommodate HPFV vehicles to a minimum GVM of 85.0 and a maximum length of 30m is critical, and for a GVM of 91.0 and a maximum length of 36.5m where possible

BENEFIT ANALYSIS - Obtaining HML Access For HPFV Routes

CASE STUDY: Upgrade OPAL Weighbridge to Accommodate HPFV

The OPAL Australian Paper site at Maryvale currently has two weighbridges for trucks delivering timber to the site, one inbound and one outbound. These weighbridges are capable of weighing trucks up to 25 meters in length and 80 tonnes GVM. However, this could pose a challenge if HPFV access at 85.0t GVM for 30 or 35-meter A-Doubles becomes available.



Short term Solution

In the short term the weighbridge would be able to undertake a "split weigh" system, where each of the trailers is weighed independently and the dockets are later added together. This is what needs to happen at present in the rare occasion a 26m B-Double delivers to the mill that can't fit on the bridge.

This solution would require no additional investment, but would delay the weighing process slightly, probably in the region of 5-10 minutes per load. A delay of this nature is likely to cost around \$0.30 to \$0.50 per tonne for every load.

Long term Solution

The weighbridges at OPAL Maryvale site are manufactured and serviced by Mettler Toledo, as part of this project Mettler Toledo agreed to provide high level costings for the extension and upgrade of an inground weighbridge similar to the ones at Maryvale. This upgrade would allow the weighbridge to accommodate trucks up to 35m and 100t GVM. The approximate cost of supplying, installing and commissioning an upgrade of this nature is \$170,000.

Using this estimate, we can assume that both weighbridges at OPAL Maryvale could be upgraded to accommodate HPV vehicles for around \$350,000.

On a site consuming around 1,000,000 tonnes of timber each year the per tonne cost of this upgrade over 1-, 3-, 5-, and 10-year periods are detailed below.

Payback Period	Forecast Total Tonnes Delivered	Rate per Tonne
1 year	1,000,000	\$0.35
3 years	3,000,000	\$0.117
5 years	5,000,000	\$0.07
10 years	10,000,000	\$0.035

METTLER TOLEDO

^{**}JBFS wishes to thank Mettler Toledo for their assistance and participation with the project.

CASE STUDY: Delivering Hardwood Pulp-log from Gippsland to Geelong

Leeson's Logging and Cartage are a well-established timber harvesting and haulage business, with over 60 years' experience operating from Rosedale in Gippsland. For a 5-year period from 2019 to 2024, Leeson's harvested and delivered 60,000 tonnes of *Eucalyptus globulus* and *Eucalyptus nitens* hardwood pulp log per annum for Midway Limited, based in Geelong.



This harvest operation spanned a broad area of the Gippsland region, with a significant portion of the 300,000 tonnes total contract volume sourced from privately owned farm forestry and managed investment scheme plantations. All of the volume was transported by road to the Geelong processing facility using Leesons log trucks, with the majority of the volume moved on Tri-Tri B-Double units operating at HML. These units had a maximum GVM of 68.5 tonnes, with an average payload of approximately 45.5 tonnes.

The operation required six full-time trucks to complete over 1,300 trips per year to fulfill the contract. It is estimated that around 470,000 litres of fuel were consumed annually to transport this volume.

Had the route to Geelong been suited to HPFV vehicles operating at HML mass, then the option to use 11 Axle A-Doubles with a maximum GVM of 85.00t could have been explored (particularly in light of the long-term reliable nature of this contract arrangement). A HPFV vehicle of this type would have been able to achieve a payload estimate of 60.00 tonnes - that is, a 31% gain in payload. It is estimated that the operating costs for this truck configuration would increase by approximately 8% when compared to the costs of running a B-Double. The benefits of running a HPFV vehicle are significantly greater when assessed against the various metrics shown below.

Metrics per Annum	BD (26m) 68.t GVM	AD (30m) 85.0t GVM	Reduction (units)	Reduction (%)
No. of Trips	1319	1000	319	24.18%
No. Trucks Required	6	5	1	16.16%
Total Fuel consumed	471,200	382,850	88,350	18.75%
Fuel Consumed / tonne	7.85	6.38	1.47	10.7370
Road Footprint Used	34.8km	30km	4.8km	13.79%
Transport Cost Saving	\$0.00/t	\$442,773	\$7.38/t	17.75%

The use of HPFV A-Doubles at HML would have reduced congestion by effectively taking 484 trips off the road network. This is the sum of the reduced number of trucks required and the road footprint freed up by using HPFV vehicles.

Over the full term of the contract, the use of HPFV A-Double at HML would have delivered a transport cost saving of approximately \$2.2million. This saving could have served as a powerful incentive to encourage some of the private plantation owners to replant with forest products rather than converting back to pasture, as many chose to do.



3. Increasing the Frequency of Bridge Assessments and Greater Access to Assessment Results for Industry

A significant barrier highlighted during stakeholder consultation was the time consuming, expensive and often inconsistent process of bridge assessments when applying to run HPFV at HML.

At present, if an operator wants to apply to run HPFV at HML, all bridges on the route need to be assessed prior to that application being submitted. This process requires the exact dimensions of the vehicle being used by the operator to be provided to NHVR. The assessment outcome is only valid for this exact vehicle setup and, should Axle spacing change, the bridge would need to be reinspected. This is a costly step in the process and successful assessments do not mean that an application will not be declined for other reasons. This need for repeated assessments is partly due to the lack of appropriate reference vehicles available from the NHVR to help make informed, consistent decisions regarding the use of roads and bridges by the forestry and timber industry.

In addition to these challenges, the assessment outcome is only applicable to the transport operator making the application. Should a second operator apply for access for the same vehicle specification on the same route, they will still need to obtain a separate bridge assessment from the NHVR road manager. This results in a clunky, time consuming and expensive process for all parties.

ACTION

Create a mechanism to make bridge assessments more cost effective and readily available to the forestry and timber industry.

RECOMMENDATION 3.1 Engage with NHVR on Bridge Assessment Process Enhancement

Collaborate with the NHVR to refine the bridge assessment process within the broader HPFV for HML framework. Rather than serving as a prequalification requirement, bridge assessments should be the final step in the permit approval process. Provisional permit approvals could be issued, contingent upon a successful bridge assessment, to streamline approvals and improve efficiency

RECOMMENDATION 3.2 Tailor a Bridge Assessment Process within Gippsland to Suit the Forestry and Timber Industry.

Engage with state and local road managers to utilise assessment results to develop a targeted bridge upgrade program, aimed at expanding the HPFV HML network for the forestry and timber sector. A pilot project, in collaboration with the Gippsland Forestry Hub, could be undertaken to develop a more consistent and equitable process for bridge assessments in Gippsland. This project will involve the appointment of a dedicated engineer to focus on achieving the key objectives outlined below:

- Developing a set of NHVR approved HPFV reference vehicles for the forestry and timber industry
- Undertaking NHVR approved bridge assessments against these reference vehicles, to be available to the forestry and timber industry as required
- Engaging with state and local road managers to use these assessment results to develop a targeted programme of bridge upgrades, with the aim of expanding the HPFV HML network for the forestry and timber industry

BENEFIT ANALYSIS - Increased Frequency of Bridge Assessments and Greater Access to Assessment Results for Industry

An initial feasibility study, run by the Gippsland Forestry Hub in collaboration with NHVR, should be undertaken to explore the practical, financial and legal implications of allowing the proposed change to current processes.

If the proposal receives support from the NHVR, the next step would be the establishment of a fixed-term engineering position, with responsibilities as outlined in section 3.2. This role could report directly to an organisation such as Gippsland Forestry HUB or SEATS, or operate on a service contract basis, with oversight provided by an industry steering committee.



Image: Siegfried Schnepfl stock.adobe.com

A budget with KPI expectations for this role (over 2 years) is detailed below:

Cost Structure

- · Engagement of civil engineer qualified to deliver bridge assessments
- · Employment cost and administration support

Output Requirements

- Bridge assessment target (1 per week)
- · Maintenance of an inspection report register
- · Attendance at industry forums with road manager on access issues
- Liaison with road managers on Priority Bridge Upgrades Programme
- · Development of industry specific NHVR reference vehicles

- \$250,000 per annum
- \$50,000 per annum
- 48 per annum
- as needed
- 4 per annum
- as needed
- 3 per annum

Over a two-year contract term this initiative would cost \$600,000.

Based on the bridge inspection KPI alone, each assessment would cost the project \$6,250 and potentially have multiple uses across different transport operators and reference vehicles.

With stakeholders reporting that bridge assessments are costing between \$10,000 and \$20,000 and effectively being a "single use application", it is clear that this recommendation offers value to the supply chain and to road management authorities.



Image from Wikipedia.com (2025)

4. Improving Consistency in NHVR Permit Application Processing Across Local Road Management Authorities

While stakeholder feedback concluded that the handling of permit applications was generally consistent and predictable at the NHVR level, they reported that the approach for handling applications from the various LGAs within Gippsland was inconsistent and difficult to navigate, with feedback often containing information that is contradictory to existing permits. The project team liaised with the NHVR to obtain more specific data regarding permit applications for the forestry and timber industry.

Feedback from NHVR is as follows:

- The forestry and industry experience a permit rejection rate nearly four times higher than the transport industry average
- A significant portion of rejections is attributed to geometric constraints, particularly truck length
- Accurate data analysis is challenging, as many contractor applications do not specify the purpose or industry, suggesting the actual rejection rate may be even higher than reported

ACTION

Reduce the NHVR permit rejection rates for the forestry and timber Industry

RECOMMENDATION 4.1 Training Package for LGA Permit Processors

Developing a training model in partnership with NHVR to improve consistency of permit handling, including specific education on log truck capabilities by configuration, for LGA personnel handling these applications

RECOMMENDATION 4.2 Training Package for Transport Operators

Developing a training package in partnership with NHVR for industry operators to provide guidance on how to complete a permit application, with a focus on accurate and consistent data entry





BENEFIT ANALYSIS - Improving Consistency in NHVR Permit Application Processing Across Local Road Management Authorities

The development of a training model to improve the consistency and accuracy of NHVR permit applications would have benefits to both applicants and processors.

A training package will support the following goals:

- An increase in NHVR permit applicants' knowledge and confidence to complete the permit process efficiently and accurately
- A reduction in the processing time of permit applications
- A greater ability to cross-reference previous permits, ensuring more consistent outcomes across industries
 and transport operators and bringing the forestry and timber industry NHVR permit rejection rates in line
 with other transport industries
- · Generation of valuable data for NHVR analysis

A draft budget for the design and delivery of a training package across the six Gippsland LGAs, including 4 additional public sessions for transport operators, is outlined below.

Item	Units		Unit Cost	Item Cost	TOTAL COST
Develop Training Package	20	days	\$1500	\$30,000	
Deliver Training to Local LGA	6	session	\$5000	\$30,000	\$80,000
Deliver Training Workshop to Public	4	session	\$5000	\$20,000	



5. Establishing an Engagement Framework for Transport Operators and Forest Growers to Collaborate with Road Managers on Access Issues

Many stakeholders identified difficulties in accessing key road management personnel, particularly within Gippsland LGAs, as a significant barrier to transport efficiency. In addition, stakeholders reported that the restrictions local LGAs placed on transport operations through the Timber Harvest Plan process were, at times, costly and prohibitive. Given the difficulties in accessing road managers, the decision-making process for these additional restrictions and requirements remains unclear to most forestry and timber stakeholders.

Stakeholders expressed a need for increased visibility and availability of road management agencies for transport operators and landowners.

ACTION

Create opportunities for transport operators, landowners and road managers to convene at regular intervals to discuss source-to-destination challenges and to collaborate on potential solutions

RECOMMENDATION 5.1 Contact Register of Road Managers within Gippsland

Creating a contact register of road managers within the region, held and maintained by a central agency (such as Gippsland Forestry Hub or SEATS), and available to the local forestry and timber industry

RECOMMENDATION 5.2 Establishment of a Communication Network

Organising a biannual forum where local road managers are represented at a round table with contractors and landowners to discuss access and permit issues, provide updated contact register data and work collaboratively to solve roading issues



BENEFIT ANALYSIS - Establishing an Engagement Framework for Transport Operators and Forest Growers to Collaborate with Road Managers on Access Issues

The initial creation of a register of road managers would entail some administrative work and the creation of networks within the local road management authorities. There would also be costs associated with hosting the register on an accessible platform. However, once established, this register should be a relatively low-cost solution to maintain. The budget outlined below indicates an initial startup cost of approximately \$37,000, with an annual maintenance cost of approximately \$11,500.

While it is difficult to accurately estimate how often this register may be required by the forestry and timber industry, if each Timber Harvest Plan submission produced within the region required engagement with a road manager, it could well be accessed over 300 times per annum.

3yr Budget for Creation and Maintenance of Gippsland Regional Road Managers Register

Year	Item	Units		Unit Cost	Item Cost	TOTAL COST
	Initial Data Collection	20	days	\$1,400	\$28,000	
1	Online Hosting of Register	12	months	\$200	\$2,400	\$37,660
	Monthly Maintenance of Register	33	hrs	\$220	\$7,260	
	Annual Review of all Contacts	8	hrs	\$220	\$1,760	
2	Online Hosting of Register	12	months	\$200	\$2,400	\$11,420
	Monthly Maintenance of Register	33	hrs	\$220	\$7,260	
	Annual Review of all Contacts	8	hrs	\$220	\$1,760	
3	Online Hosting of Register	12	months	\$200	\$2,400	\$11,420
	Monthly Maintenance of Register	33	hrs	\$220	\$7,260	
	TOTAL 3 YEAR COST					\$60,500



6. Cost of Tolls for Travel Through Melbourne - Toll Charge Relief

Recent changes in State Government policy, particularly with regard to the logging of native state forests, has caused the Gippsland forestry and timber industry to diversify its customer base and transport products to alternative markets, travelling much greater distances as a consequence. Many of these new transport routes require transit through Melbourne. Transportation through Melbourne attracts toll fees, which compound the financial impact of these Government policies on the grower.

Current Prepaid Toll prices for a heavy commercial vehicle transiting from Gippsland through Melbourne (one way) with an E-tag (Jan 2025) are displayed in the table below:

Route	Entry Point	Exit Point	Peak (6am - 8pm)	Off Peak (8pm - 6am)	24hr Pass
Gippsland to Geelong	Citylink 15 – Toorak Rd	Citylink 9 – West Gate	30.88	20.58	92.04
Gippsland to the Hume FWY	Citylink 15 –	Citylink 1 -	35.63	23.75	92.04
Sippolaria to the Harrie I VVI	Toorak Rd Eastlink 30 –	Tullamarine			
Gippsland to M80 via Eastlink	Monash Fwy	Eastlink 20 - Eastern Fwy	20.10	NA	NA

^{**}These rates do not vary between a HML B-Double carrying 68.5t GVM (payload of approximately 45 tonnes) and a GML GAV semi-trailer truck carrying GVM 42.5t (payload of approximately 26 tonnes).

ACTION

Provide relief from toll fees for forestry and timber produce and products passing through Melbourne

RECOMMENDATION 6.1 Toll Rebate for Forestry and Timber Products Transported Through Melbourne

Forestry and timber produce and product loads originating from the Gippsland region and requiring transit through Melbourne should be eligible for a full (100%) toll rebate to support the forestry and timber industry's efficiency and competitiveness

RECOMMENDATION 6.2 Toll Rebate for Forestry and Timber Products Transported into Melbourne

Forestry and timber products or produce originating from the Gippsland region and delivered to processing facilities within Melbourne should be eligible for a toll concession equivalent to the off-peak rate, regardless of the time of day



BENEFIT ANALYSIS - Toll Charge Relief

CASE STUDY: Example Plantation

A 20-year-old 100h blue gum plantation in the Wellington LGA near Giffard, yielding 17,000t of high-quality paper making fibre, could have reasonably expected to sell its product into the OPAL facility at Maryvale.



Image from drive.com.au (2025)

Following the cessation of native logging in the Victorian state forests, OPAL announced that it would stop the production of white paper at Maryvale, due to the lack of a sustainable supply of high-quality paper making fibre.

The only viable alternative markets for this fibre are based in Eden (Pentarch Forestry) and Geelong (Midway Limited). The table below summarises the significant impact on transport costs that using these alternate markets generates.

Destination	Transport Distance KM	Tonnes per day	Truck Type & GVM	Transport cost AUD	Total Toll Fees	Total Transport Cost Increase
OPAL	85	180	BD (68.00)	\$270,000	0	0
Eden	380	45	BD (68.00)	\$1,000,000	0	\$730,000
Geelong	300	67.5	BD (68.00)	\$740,000	23,000	\$493,000

In the above example, tolls contribute 4.7% of the transport cost increases when travelling to the closest and most commercially viable alternative market in Geelong.

As a consequence of these additional expenses, landowners would experience a significant drop in return on their investment, approximately \$5000 per ha.

While the cost of tolls may appear to be a relatively small component of the increased transport cost, at 4.7%, it still amounts to \$23,000 or \$1.35 per tonne - a cost that is the direct result of the loss of access to the local market.

If all 300,000 tonnes of product generated from Gippsland forests that no longer has a market within the region (Gippsland Forestry Hub Report - Gippsland's Sustainable Forestry Future), has to transit into or through Melbourne on B-Doubles, it is estimated that the cost to the Gippsland forestry and timber industry would be around \$335,000 each year.



7. Increasing Understanding of the Wider Benefits of HPFV Solutions

Aside from the aim of moving more freight per load, there are many other benefits that can be obtained by using HPFV vehicles instead of GAV. The Australian Trucking Association (ATA) produced a set of <u>Truck Impact Charts (TIC)</u> to illustrate this.

The chart below illustrates the variance or saving obtained by using several HPFV combinations instead of a base line GAV. In this case, the baseline GAV is a 19m semitrailer of the type used by many log haulage companies, where only general access is permitted.

Metric	GAV Semi Trailer		B-Double		A-Double		
	value	%	value	%	value	%	
GVM (Tonnes GML)	43.0	100%	63.0	147%	79.5	185%	
Maximum Length (m)	19.0	100%	26.0	137%	36.5	192%	
Payload (Tonnes)	24.0	100%	38.8	162%	48.7	203%	
Trips per 1000t of Payload moved	42	100%	26	62%	21	50%	
ESA's* per 1000t of Payload moved	304	100%	224	74%	225	74%	
Fuel required per 1000 km lead	100%		82%		72%		
Driver Requirement	100%		62%		50	50%	

*ESA - Equivalent Standard Axles is a measure of road damage caused

Compared to a GAV semitrailer, a B-Double transporting the same 1,000 tonnes of freight imposes approximately 74% of the road impact, consumes around 82% of the fuel, and requires only 62% of the journeys.

Similarly, an A-Double, in comparison to a GAV semitrailer, results in approximately 74% of the road impact, uses 72% of the fuel, and completes the task in just 50% of the journeys.

These figures highlight the efficiency of HPFVs in reducing fuel consumption, directly lowering carbon emissions. Additionally, HPFVs contribute to minimised road wear, fewer interactions with other road users, and a decreased demand for drivers to complete the same freight volume.

Safety Impacts of HPFV Vehicles

There have been several studies in recent years that demonstrate that PBS and HPFV have reduced safety incidents and are generally safer vehicles than GAV. The Review of Major Crash Rates for Australian Higher Productivity Vehicles: 2015 – 2019 produced for NHVR in 2021, indicates that PBS and HPFV vehicles show a 60% improvement in safety over conventional vehicles. The chart below, taken from this report, summarises this data as incidents per 100 million km of freight transported on PBS vehicles.

Major Accident Crash Rate Difference Between PBS and Conventional Vehicles

YEAR	2013	2016	2019	Average
PBS vehicle	101.9	56.1	61.7	73
Conventional Vehicle	142.8	20.9	100.1	108
PBS Benefit	28.6%	30.7%	38.4%	32.6%

The following table highlighted in the <u>ATA</u> TIC and originally produced by Austroads in their report FS1805 'Quantifications of the Benefits Resulting from the Use of HPFV', makes a compelling case for the safety benefits of HPFVs.

Accident type Rate per 100 k		Minor	Moderate	Serious	Major	Total accidents	Total serious & major accidents
Conventional	Articulated (69%)	21	22	16	13	72	29
Trucks	Rigid Truck (31%)	42	34	19	7	102	26
Conventional incident weight - total		27.5	25.7	16.9	11.1	81.3	28
HPFVs	Articulated (69%)	8	2	2	5	18	7
	Rigid Truck (31%)	20	26	4	2	53	6
Observed HP weighte		11.7	9.4	2.6	4.1	27.9	6.7
Total HPFVs incident savings (rate per 100 km)		15.8	16.3	14.3	7.1	53.5	21.4
Observed HPFVs weight incident savings (%)		57%	63%	85%	63%	66%	76%

ACTION

Promoting the wider benefits of HPFV to road managers and regulators

RECOMMENDATION 7.1 Undertake Comparative Route Assessments

Conduct comparative assessments of HPFVs on key priority routes through and out of Gippsland to high-volume destinations. These assessments will quantify the financial, operational, and environmental benefits that can be achieved through increased HPFV usage

RECOMMENDATION 7.2 Share Findings with Road Managers

Provide a platform for these comparison assessments to be shared with road managers, to assist with the justification of permit approval

BENEFIT ANALYSIS - Increasing Awareness of the Broader Benefits of HPFV Solutions

CASE STUDY: Comparison Charts

Below is a comparison table prepared for an ATSSS client seeking approval for HPFV on a challenging project. The table shows the multiple advantages of replacing a smaller truck type with a larger vehicle. All the volume from this project is heading to a single destination, 120km from the harvest coupe. The data compares an 8 Axle B-Double operating at HML to a GAV semi-trailer operating at GML. Some of the benefits are achieved as a requirement of legislation for HPFV approval, others are seen as best practice by the client (shown in blue).

300,000 tonnes		Trip - 120 kms one way, 240km return			
Road impact	8 axle 22m. B-Double. HML	6 axle semi-trailer. 19m. GML	Benefit Achieved		
Payload	42 tonnes	25 tonnes	17 tonnes per load increase		
Total trips required	7142 loaded 7142 returning Total 14,284 trips	12,000 loaded 12,000 returning Total 24,000 trips	4858 less loads 4858 less return 9716 less trips (40%)		
Total kms Travelled	1,714,080 kms	2,880,000 kms	1,165,920 kms less		
Fuel Consumption Based on ATA TIC① per 1000 tonnes			1,165,920 kms less		
ESA② per 1000 tonnes Based on ATA TIC①	224*	304	74% ESA②		
Swept Path	PBS level 1	Not assessed			
Engine Noise Levels: Engine	80 dBA; maximum. Fitted with Euro 5 engine	87 dBA permitted	Significantly quieter		
ABS Brakes	YES, plus, EBS on all trailers	Not required	Safer, faster acting, anti- lock braking		
Electronic Rollover Protection	Yes	Not required	Significantly reduced risk of truck rollover		
Front Underrun Protection	Yes	Not required	Reduced risk of truck rollover		
GPS Tracking	Yes	Not required	Speed & fatigue monitoring		
Reduced Load Height for Improved Stability Purposes	Yes - load heights will be capped at 3.8m	Permitted to 4.3m	Reduced risk of truck rollover		
Static Rollover Threshold ⑤	Minimum of 0.35g	Unlimited and often unmeasured	Reduced risk of truck rollover		
Training: Roll-over Prevention Program Certificate③	Yes- all drivers and management have completed this	Not required	Significantly reduced risk of truck rollover		
Professional Drivers	Drivers will operate under a Code of Behaviour4	Not required	Less invasive and safer than drivers not operating under a code of behaviour		
Training: Roll-over Prevention Program Certificate③	No travel on weekends, public holidays or peak holiday periods	Not required	Increase in safety through reduced interface with other road users		
In - cabin Cameras	Yes	Not required	Effective monitoring		

Analysis of the data above clearly demonstrates the wide-ranging advantages of HPFV solutions to transport challenges, particularly when considering the haulage of the entire freight tonnage of 300,000t available for/produced by this project. The key benefits have been outlined below:

Social & Road Safety Benefits

- 9716 fewer truck movements in the area, resulting in 1,165,920 fewer kms travelled
- Self-imposed curfew on weekends, public holidays and peak holiday periods
- Reduced noise and emissions by Euro 4-5 engine
- Low speed tracking (Swept Path) meets PBS level one. (Same as 19m Semi requirements)
- · Road safety benefits, with data showing that these HPFV combinations have a much lower crash rate
- Safer vehicles with ABS on prime mover and EBS with roll-over protection systems on trailers, front underrun protection (FUPs) on prime mover results in a safer/more efficient vehicle
- All drivers and management completed ATSSS/VicRoads Heavy Vehicle Roll-Over Prevention Program resulting in committed, upskilled and ultimately safer drivers.
- GPS tracking on the truck and "In- cab" safety recording cameras, both forward and driver facing, with cloud data storage for access and interrogation
- Capped load heights at 3.8m provide optimum stability and safety to the loaded combination

Economic and Environmental Benefits:

- · 35% reduction in ESA road damage
- 25% reduction in fuel usage
- 25% reductions in emissions
- · Reduced noise emissions
- ①Truck Impact Chart (TIC) Australian Trucking Association Truck Impact Chart, Third Edition 2024.
- ② Equivalent Standard Axles (ESA) Equivalent Standard Axle (ESA) is a method of standardizing various axle configurations and loads and their effects on road pavements. ESAs are assessed by calculating the ratio of a load on an axle or axle group divided by a reference load and then raising the ratio to the fourth power. In the TIC, ESAs are calculated using the sum of the ESAs for zero load (empty) plus the ESAs for 100% loaded and multiplied by the number of trips as required for the transport task. The 50 percent load factor has been used as a benchmark reference. For the ESAs of a vehicle or vehicle combination this is laden to 50 percent of its payload capacity. ESAs per trip are calculated on the basis of one way laden to gross combination mass and one-way unladen (nil payload). This is typical of a lot of operations.
- **3 ATSSS Roll-Over Prevention Program** This is a behavioural program with proven success in reducing heavy vehicle crashes. The program is fully endorsed by VicRoads and all participants receive a certificate of participations.
- **(4)** Code of Behaviour A behavioural code for professional drivers outlining social and road safety expectations to minimise impost on communities and the travelling public. This is over and above the existing haulage regulatory requirements.
- **Static rollover threshold (SRT)** The steady-state level of lateral acceleration that a vehicle can sustain during turning without rolling over, requirement is to achieve 0.35g or less.

Rail Freight

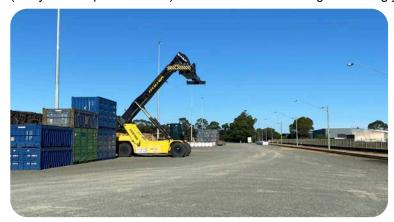
In the past, the rail freight network in Gippsland was used frequently by the forestry and timber industry for the transportation of forest products. Due to changes in technology and increasing financial and operational constraints, rail transportation has declined to only a few remaining users. Fenning Timber in Bairnsdale used the rail network to transport residual wood from their sawmill to Melbourne and Geelong until 2009, when rail freight ceased. Similarly, the rail link responsible for the transportation of forest products and building materials from Orbost to Melbourne and the docks, closed in 1987.

Australian Paper continues to use its rail siding to transport finished paper from the Maryvale production site to redistribution and manufacturing sites across Australia.

However, the development of intermodal rail transport has led to some sectors of the forestry and timber industry seeking to regain access to the rail network, in order to move products more efficiently and reduce their reliance on road transportation.

Intermodal Rail

Intermodal rail hubs are used in the transfer of freight from one form of transport to another, for example from road to rail. The use of standardised transport systems such as TEU (Twenty-Foot Equivalent Unit) and FEU (Forty-Foot Equivalent Unit) containers are becoming increasingly popular as they can be lifted on and off rail



and road freight systems with the same equipment. It is reported that over 90% of global sea freight that is non- bulk now travels in these containers. Containerised systems have been developed for the transportation of many bulk products such as aggregates, liquids and gasses, as well as palletised and boxed products. Logs have been moved in containers to international export markets for many years and could be readily packed within the region and transported direct to port.

Opportunities and Barriers to Greater Utilisation of the Rail Freight Network

There have been several recent projects supported by the Victorian Government focused on increasing access and expanding the use of the rail freight network in Gippsland. These have included:

- The redevelopment of the Fenning Intermodal Freight Terminal (FIFT)
- The upgrade of the Opal Maryvale rail terminal
- The construction of the Morwell intermodal rail hub, part of the Gippsland Logistics Precinct (GLP)

Each of the projects has encountered barriers that have significantly restricted the ability of the wider forest and timber industry to utilise these facilities to transport products. The OPAL terminal is in use by OPAL only, and the Morwell hub and the FIFT are both yet to move freight. There are no further rail projects under development within Gippsland at this time.

The ongoing development of the "Inland Rail" link for intermodal transport between Melbourne and Brisbane via regional Victoria and NSW, has triggered genuine interest from horticulture and food producers within Gippsland. Of particular interest to these sectors, is the ability for refrigerated intermodal systems. This would help to establish the critical mass that is required to become commercially operational. Connection to Inland Rail via Melbourne can significantly reduce the volume of trucks on the road between Gippsland and the city.

While there is much merit in the idea of further utilising intermodal rail, the lack of an intermodal hub on the eastern edge of Melbourne is a barrier to the effective use of this network. Intermodal cargo has to travel past the established industrial centres of Pakenham and Dandenong (which only have existing traditional rail connections) to be unloaded in Melbourne, when its destination may well be in the southeastern suburbs.

OPAL Freight Terminal at Maryvale

The Victorian Government, through the Department of Transport and Planning, provided funding to OPAL to assist with an upgrade of its rail facility at Maryvale. While this is a private rail facility owned by OPAL, third parties were granted access and use of the facility as part the funding agreement. Currently, no third party has been able to take advantage of this opportunity due to the challenges in finding a suitable product for the trains that service Maryvale.

Another issue with the Maryvale spur line is that it can only accommodate trains arriving from the west and returning to the west. There is no ability to access the mainline in an easterly direction. This limits the ability to send and receive products from the east to Maryvale and to share trains with loading facilities further east, such as the FIFT.

Morwell Intermodal Rail Hub

This facility is owned by Latrobe City Council and is under development as part of the GLP. In 2018, a grant of \$5million from the Victorian Government was used to complete Stage 1 of the intermodal rail development. However, Stages 2 and 3 (budgeted at \$11.5million and \$7.5 million respectively) have been stalled, as Latrobe City Council were unable to identify any businesses that have indicated they would use this site for rail freight. This may change as the remainder of the GLP develops.

Fenning Intermodal Freight Terminal (FIFT) - Bairnsdale



Approved Bridge Inspections Required - Two rail bridges between Morwell and Bairnsdale, the rail overpass on the A1 at Kilmany (2023) and the Avon River Bridge (2020), were recently constructed. Given that freight trains had ceased their operations to Bairnsdale in 2009, these bridges were not inspected and approved for freight trains. Until these bridges are inspected and approved for rail freight or upgraded to accommodate these vehicles, there can be no loading of freight at FIFT.

Regular High-Volume Client to Provide Critical Mass - There is a minimum requirement of around 1000t of product required for each train to be viable. At present, there are no forestry and timber parties able to supply a large enough base-load to fulfill this requirement.

The redevelopment and upgrade of this facility by Fenning Timber, in conjunction with Victorian Government, was completed in 2022. The rail network currently terminates in Bairnsdale, so this facility is suited to transporting materials to the west only. When fully operational, the FIFT is anticipated to transport 10,000 TEU per annum, on three trains per week. This would result in approximately 6000 fewer trucks on the road every year.

However, there are two key barriers to this occurring:



FIFT has identified several other industries with a significant interest in the facility and its ongoing use. These include various mineral extraction projects in the East Gippsland LGA that are currently in operation or under development. Each of these projects would be capable of providing the critical mass required to support the commencement of a commercially operational terminal. In addition, FIFT has also engaged with a number of smaller freight producers, who would be willing to commit a regular volume (at smaller quantities) to increase the train capacity. These include parties from the timber industry, hospitality services and horticulture sectors. However, until the bridges are approved for freight use, none of these negotiations can progress further.

The opportunity for FIFT to share trains with OPAL at Maryvale would also be of great benefit to all parties, both financially and operationally. However, this would require the construction of a piece of new track at Maryvale to enable trains to enter and exit the Maryvale siding from the east.

ACTION

Support FIFT to liaise with the State Government to remove barriers to the passage of rail freight between Bairnsdale and Maryvale

RECOMMENDATION R.1 Specialist Rail Network Advice

Engage a rail network expert to assist in the delivery of the identified rail recommendations

RECOMMENDATION R.2 Engagement with Track Managers on Bridge Inspections

Collaborate with the authority responsible for rail track management and construction to develop a greater understanding of bridge inspection procedures, and to identify the additional requirements (if any) for the Avon River and A1 Overpass bridges between Morwell and Bairnsdale to be approved for freight

RECOMMENDATION R.3 Engagement with Track Managers to Create Access Eastbound from Maryvale

Collaborate with the authority responsible for rail track management to determine the requirements, costs and timelines to build an eastbound access option from Maryvale onto the Gippsland mainline



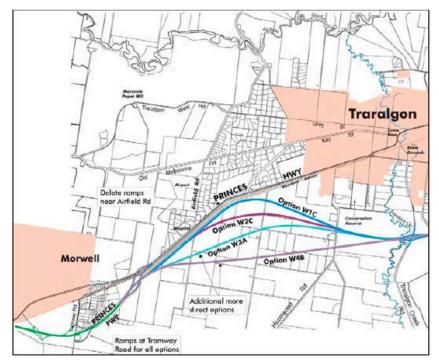


Support for Existing Projects and Initiatives

A recurring theme from the engagement process was the efficiency and cost barriers associated with delays in transportation. These delays are having a significant, negative impact on the Gippsland forestry and timber industry and this review supports any proposed plans to mitigate transport delays. The following projects were highlighted as 'urgent' by the stakeholders:

Project - Traralgon Bypass

The <u>Gippsland Freight Infrastructure Master Plan 2023-2028</u>, released by Regional Development Australia and prepared by the Committee for Gippsland, identified as its number one priority the need for a bypass around the



township of Traralgon. As the largest town within the region without a bypass, the impacts of heavy vehicle movements on Traralgon and the reciprocal delays caused to transport by the community's activities and services continue to grow each year.

SEATS also has the Traralgon Bypass Resolution as one of the key items its 2025 Priority Project Statement, and advocates for funding to be made available to drive this project forward. In March 2025. SEATS released the following statement on its webpage and across social media highlighting importance and urgency of this project.

SEATS sees Traralgon bypass as major Federal issue for next Australian Government.

SEATS has been advocating for the Princes Highway corridor through Gippsland to be improved and that funding allocations be made for planning of the Traralgon Bypass alignment.

To enable resolution of the Traralgon bypass alignment requires every effort to be made across all Australian Government and Victorian Government Agencies involved, to determine a way forward through the Latrobe Valley Mine Rehabilitation Plan. Planning for the bypass can continue once critical information about the rehabilitation of the Loy Yang Mine becomes available. Given the proximity to the Loy Yang open cut, construction of a bypass on the gazetted alignment may impact on options for rehabilitation of the Loy Yang mine.

Once the Latrobe Valley Mine Rehabilitation Plan is determined, SEATS estimates that the Victorian government will be required to allocate \$5-10m in the 2025/26 budget to determine the scope, corridor definition and cost estimates for the Traralgon bypass construction over say 6-9 financial years. SEATS will strongly support Victoria in an approach to the Australian Government for at least a 50% funding commitment towards the construction phases.

https://seats.org.au/seats-sees-traralgon-bypass-as-major-federal-issue/

Despite a significant investment of 1.4million by the state government in 2017, the project has stalled due to the Loy Yang Mine site rehabilitation plans (<u>Transport Victoria – Traralgon Bypass planning project</u>). With the mine not scheduled to close until 2035, the continued delays to the Traralgon Bypass Project add an increasing burden to the Gippsland Region transport industry that is becoming untenable.

Project - Sale Alternate Truck Route

Similarly, freight travelling through the township of Sale also experiences delays caused by congestion, traffic management systems and the general activities that occur in busy regional centres. While an alternate route around Sale does exist that has long been utilised by freight operators, this route cannot accommodate larger freight vehicles, such as B-Doubles and OSOM vehicles.

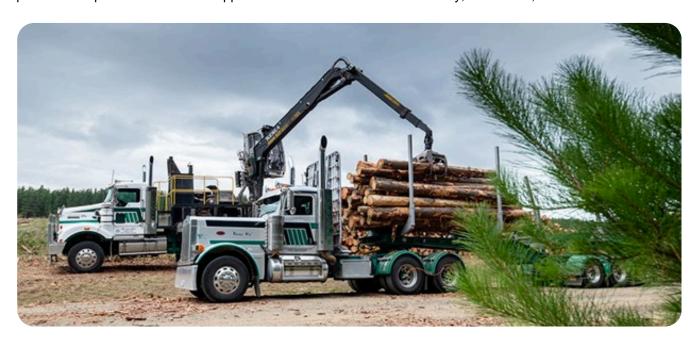
Improving access to the Sale Alternate Truck Route for all vehicles is also an item for action in the <u>SEATS 2025</u> <u>Priority Project Statement</u>.

According to Transport Victoria (<u>Projects webpage</u>), \$6.28 million has been allocated to this project from the Australian Federal Government, as part of its \$316 million commitment to upgrade the <u>Princes Highway Corridor in Victoria</u>. The Victorian state Government in the <u>2024-25 budget</u> provided \$61.9 million for upgrades of regional roads and bridges associated with the Sale Alternate Truck Route.

Transport Victoria indicates that there are several projects planned or in progress to upgrade the Sale Alternate Route. These include the replacing of a number of intersections with roundabouts to make transitioning safer for all road users and the strengthening of several bridges to accommodate heavier vehicles. Details of the specific projects are contained in the table below:

Intersection Upgrades Planned	Bridge Strengthening Works Planned
Sale-Heyfield Road / Fulham-Myrtlebank Road intersection	Thompson River Bridge. Fulham-Myrtlebank Road
Maffra-Sale Road / Myrtlebank Road Intersection	Stirling River Bridge (Lavers Creek). Fulham-Myrtlebank Road
Myrtlebank Road / Princes Highway Intersection	

This report supports all works being undertaken to improve the Sale Alternate Truck Route and highlights in particular the need to ensure that all current and future upgrades are capable of carrying HPFV at HML in both directions. This will "future proof" this transport route and facilitate a more efficient transit of forestry and timber produce and products from East Gippsland to markets in the Latrobe Valley, Melbourne, and southern NSW.



Project - Changes to Speed Restrictions on the A1/M1

80kph Zones Between Longwarry and Pakenham

In August 2021 it was announced by the state minister for Roads and Safety, Ben Carroll, that the speed limit would be reduced on two stretches of the A1 (approximately 6 kms of highway) near Tynong North. This was highlighted as a medium-term solution, and part of a broader response to safety concerns around several intersections on the A1 Princes Highway between Longwarry and Pakenham.

This medium-term solution is still in place almost 4 years later, with no publicised plans to review or provide an alternative solution to the initial safety concerns.

The tables below detail the actual lengths of carriageway that have been affected by the speed restrictions, measured from sign to sign. This totals over 16km of affected travel on a return trip from Gippsland to Melbourne. The time impact of a reduction of this magnitude is around 10 minutes per return journey.

Assuming that there are 30 trips per day made by log trucks (as calculated in the section of this report **Decreasing the Congestion Passing through Melbourne**), a total of 25 hours of productivity is lost by the forestry and timber industry in Gippsland each week, at an approximate cost of between \$5,000 and \$6,000 per week.

This small impact starts to mount up quickly. With a forecasted 300,000t heading out of region each year, (<u>The Innovation and Infrastructure report</u> and <u>Investing in Gippsland's Sustainable Forestry Future</u>) these speed restrictions are costing the forestry and timber industry in excess of \$250,000. Or, put another way, a cost of approximately \$0.80 per tonne is added to every load that passes through these speed restrictions.

East Bound

Segment Start	Segment End	Length
Tynong North Road	Gumbuya World Entrance	4.1km
Hope Street	Abeckett Road	4.6km
		8.7km

West Bound

Segment Start	Segment End	Length
Abeckett Road	Hope Street	3.6km
Gumbuya World Entrance	Tynong North Road	4.1km
		7.8km



Initiative - Decreasing the Congestion Passing through Melbourne

While estimates do vary as to how much freight will be generated by the forestry and timber industry over the next few decades, there are several known factors that can be used to build a baseline.

<u>The Innovation and Infrastructure report</u> prepared by Greenwood Strategy for the GF Hub, estimates that the baseline supply from the region's existing estate will be approximately 1.5 million tonnes per annum, following the cessation of harvest activity in the native state forests.

The <u>Investing in Gippsland's Sustainable Forestry Future</u> report prepared by PF Olsen for the Gippsland Forestry Hub supports this estimate, indicating that within the Gippsland region, there is 90,000ha of plantation forest resource, in addition to some small scale private native operations, generating approximately 1.5million tonnes of timber products per annum. At present it is estimated that approximately 1.2million tonnes of this produce is consumed within the region's local markets. The remaining 300,000 tonnes is processed outside of the region each year. This equates to around 1350 tonnes per day, or 30 B-Double loads. As much of this freight travels west, it both contributes to and experiences the impacts of traffic congestion in the City of Melbourne.

The number of trips required to transport forestry and timber products and produce can be significantly reduced every month by utilising HPFV with higher GVM under HML, resulting in higher payloads (as detailed below).

This table uses the benchmark of current Class 2 B-Double configurations moving 10,000t per month (120,000 per annum), through Melbourne for comparison purposes.

HML GVM (tonnes)	Suitable Configurations	Payload (tonnes)	No. Trips (Month)	Reduction in No. Trips Vs Class 2 (Month)	No. Trips (Year)	Reduction in No. Vs Class 2 (Year)
68.5	B-Double (9 Axle)	45.0	450	-	5400	-
74.0	A-Double (9 Axle) B-Double (11 Axle)	51.0	390	60	4680	720
85.0	A-Double (9 Axle) B-Double (11 Axle)	60.5	330	120	3960	1440
91.0	B-Triple (12 Axle) A Double 12 (Axle)	64.5	310	140	3720	1680

There is also a strong push to increase plantation estates in Gippsland. In 2022 the Victorian Government partnered with HVP **Plantations** to provide \$120millon investment to increase the pine planation estate within the region (by over 14,000ha) by 2029. HVP Plantations agreed to match the government funding, taking the investment to \$240 million. This will represent a 15% increase in the plantation area and, unless additional processing facilities are developed within the region, will generate even more volume to be transported to markets outside of Gippsland.



Initiative - Increased Investment in Rural Road Infrastructure

Concerns have been raised regarding the deteriorating condition of the public road network, particularly in regional Victoria, with a perceived reduction in funding for essential repairs and maintenance identified as a key contributing factor.

In January 2025, the Victorian Farmers Federation (VFF) released a <u>media statement</u> with data suggesting that the road toll for rural Victorian roads had increase by 156%, compared to the same time last year. The media statement also claimed that government spending on resurfacing and resealing roads has dropped by 81% in the past year.

In the 2024/25 budget, the Victorian Government announced a \$6.6billion investment in Victorian road maintenance, to be delivered over the next 10 years, including \$964 million for the F2024-25 fiscal period. Additionally, on the 27th of February 2025, the Federal Minister for Regional Development and the Victorian Minister for Local Government, Ports and Freight, Roads and Road Safety announced that \$259.5 million of joint funding would be provided to fund 16 new road safety and improvement projects across Victoria, including improvements at high-risk intersections across Gippsland.

This report acknowledges that there has been a positive shift in funding for roads maintenance in recent months and would advocate to both the federal and state governments to ensure funding for road maintenance and safety projects continues to move in this direction.



Initiative - The Use of Alternative Freight Systems to Roads Transport

<u>The SEATS 2025 Priority Project Statement</u> identifies the need for PBS compliant road access into the Port of Hastings and Port Melbourne, as well as the maintenance of rail freight access to the seaports in Victoria. As the forestry and timber industry continues to explore alternative freight systems to enhance the efficiency of timber exports, it is essential to implement the priorities identified by SEATS.



Initiative - Innovation in Forestry and Timber Transport

In some circumstances the use of HPFV is not a viable or appropriate solution to transport issues. In these instances, innovation is key in order to maximise payload and therefore efficiency. The forestry and timber industry in Gippsland has been at the forefront of such innovation, with the development of groundbreaking transport equipment and transport system designs.

CASE STUDY – Innovative Equipment Design ANC Forestry Group

In response to the black summer bushfires in 2020, sawmills in southern NSW explored the possibility purchasing sawlogs from Gippsland and replacing the fibre with woodchips for the paper and panel board sectors. In response to this, ANC Forestry Group developed a unique set of timber haulage trailers that are capable of transporting both sawlogs and woodchips, a new concept for industry.





This equipment has eliminated the need for two specialist trucks and replaced them with a single transport system running loaded almost 100% of the time, whilst reducing emissions, minimising road wear, relieving pressure on skilled driver recruitment and delivering transport cost savings.

While out of scope of this project it is recommended that further work is undertaken by the Gippsland Forestry Hub to explore the value that innovation in transport systems can deliver to the forestry and timber industry in Gippsland.



Road Safety Barriers to HV Movements

The stakeholder engagement process also identified some key issues with reference to heavy vehicle safety and driver welfare. It is the recommendation of the project team that these issues be further reviewed through a separate HV safety lens.

Deteriorating Road Surface Conditions

A number of stakeholders reported a noticeable decrease in the quality of the road surfaces in recent years and an increase in the time taken to repair minor issues. These delays often result in minor problems growing into major road quality issues. Potholes and landslips were among the most common faults reported. Issues of this nature cause delays and reduce efficiency as travel speeds have to be reduced and/or alternate routes need to be sought (sometimes for significant periods), resulting in longer journeys for trucks, increased traffic volumes on alternate routes, higher emissions and increased costs for the transport industry. Of particular concern to land managers, is the deterioration of the regional unsealed road network - historically managed by DEECA (and Vic-Forests). This ongoing deterioration is impacting the safe and timely access of forest fire prevention and emergency response vehicles.

While smaller more nimble vehicles may be able to navigate around potholes, this is not always possible when driving HV or HPFV. There is often inadequate room to enable safe avoidance due to oncoming traffic, roadside vegetation growth, the narrow lane widths on rural roads and the presence of road furniture (e.g. centre lane barriers), leaving the driver with no alternative but to drive through them. HV striking potholes has several negative impacts such as:

- · damage to the suspension and steering system of the vehicle
- · a violent impact on the driver in the cabin, which can be disorientating and dangerous
- the growing and worsening of the original road defect, creating a longer and more costly repair process

It is essential to the safe and productive use of the road network by the forestry and timber industry (and, indeed all road users), that road repairs are carried out swiftly and thoroughly. Alternate strategies such as speed reductions, diversions and temporary restrictions, while necessary in the short term, do not solve the problem - they simply move it further into the future where it becomes, in all likelihood, larger and more costly to resolve.

Management of Vegetation Within the Road Reserve

The impact of vegetation within the road reserve has been highlighted in various contexts.

Native vegetation within the road reserve can obstruct sightlines at intersections and, in some cases, impact the line of travel along the road pavement.

Additionally, urban tree planting designs often prioritise cars and light vehicles (LV), without sufficient consideration for their effects on heavy vehicles (HV). Inadequate maintenance of these plantings can force HVs to cross lanes to avoid damage or, in some cases, prevent their use of certain lanes altogether. In slow-moving urban traffic, this creates friction with other road users, as trucks appear to be "lane hopping" to navigate around overgrown vegetation. A notable example highlighted by log truck drivers is the recent tree plantings along the main street of Sale, which have been cited as a poorly planned design affecting HV movement.



Road Safety Feature Designs Impacting Heavy Vehicle Transport

The design of traffic calming structures and road safety engineering presents a number of problems for heavy vehicles, the most common of which have been outlined below:

Roundabout Design – many roundabouts within towns and on the approach to urban zones have 'S" shaped entry lanes that tighten the angle at which a vehicle approaches that roundabout. In the case of a HV, the truck is then required to travel initially left, then back right, before turning right again to access the roundabout. In multi trailer vehicles this causes the truck to straddle the white lines on the approach to the roundabout. While this driving manoeuvre is legal, it is not always well received by other road users, who often believe that they have been "cut off" or intimidated by the larger vehicle.

Victorian State Government - Department of Transport RDN 04-03.

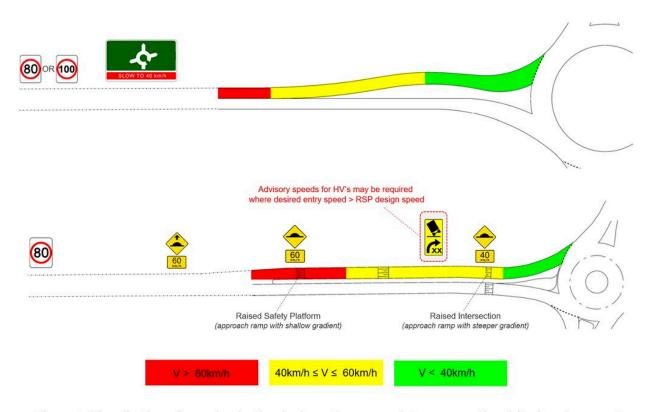


Figure 4: Visualisation of speed reduction logic on the approach to a conventional (top) and compact (bottom) roundabout (not to scale and not all signage shown)

The design of centre median barriers on stretches of roads such as the A1 Sale to Bairnsdale, can cause significant safety issues, particularly for multi-trailer units. Because the end of the barrier is shaped towards the oncoming traffic lane, trailers can catch the end of the barrier and consequently drag trucks into the centre median barriers.



Truck Driver Retention and Industry Attraction

The ability of the forest transport industry to attract and retain high quality drivers has been a well-publicised issue for over a decade. Early starts, long hours and challenging working conditions are often cited as reasons for this recruitment decline, particularly when compared to working rates and conditions for interstate and general freight haulage drivers.

Providing safer vehicles is one simple change that could be implemented to make the role more attractive. Some drivers are also motivated to drive configurations that are not commonly available, (such as A-Double type road trains in Victoria) or by undertaking unusual tasks and so being regarded as a specialist driver. Log truck driving is certainly specialised, and, if the vehicles provided included some of the largest, heaviest and newest HPFV in the state, it may act as an added attraction for high quality candidates to join the profession.



Driver Welfare

Improving driver welfare facilities has many important benefits. Well rested and refreshed drivers are more aware, more positive and generally in a better state of mind to undertake the task in hand, a task which requires focus and attention to perform safely and efficiently for multiple loads.

The more opportunities drivers have to check loads and take rest breaks, the greater the likelihood they will be safe and efficient road users. Well-designed load checkpoints that include driver facilities, easy access, and ample parking space are more likely to be utilised compared to those that are difficult to access or lack additional benefits, such as restroom facilities.

Improving access to welfare facilities at load receivals points, by strategically locating them near convenient areas such as weighbridges and ensuring they remain accessible, is highly appreciated by drivers. Many drivers frequent these facilities daily and, when provided with well-maintained services, tend to take ownership and pride in them, viewing them as essential resources for their role as valued professionals.

Summary of Recommendations

1	Advancing Access for HPFV at HML in Latrobe City Council LGA
1.1	Engage with Latrobe City Council Work specifically with Latrobe City Council personnel to understand the reasoning for the high level of permit rejections
1.2	Training package for Latrobe City Council Permit Processors Develop a training tool in conjunction with NHVR to assist LGA personnel in assessing permit applications that explore the wider benefits of HPFV vehicles in rural and remote regions and industries
2	Advancing HML Access For HPFV Routes
2.1	A HPFV route at HML from Gippsland to Melbourne Docks The assessment, upgrade and creation of a route from Gippsland to the Melbourne dock yards and container handling facilities that can accommodate HPFV vehicles to a minimum GVM of 85.0 and a maximum length of 30m is critical, and for a GVM of 91.0 and a maximum length 36.5m where possible
2.2	A HPFV route at HML from Gippsland to Western Victoria The assessment, upgrade and creation of a route from Gippsland through Melbourne towards destinations in Western Victoria such as Geelong and Colac that can accommodate HPFV vehicles to a minimum GVM of 85.0 and a maximum length of 30m is critical and for a GVM of 91.0 and a maximum length 36.5m where possible
2.3	A HPFV route at HML from Gippsland to Southern NSW The assessment, upgrade and creation of a route from Gippsland to southern NSW along both the A1 and B23 that can accommodate HPFV vehicles to a minimum GVM of 85.0 and a maximum length of 30m is critical, and for a GVM of 91.0 and a maximum length 36.5m where possible
2.4	Assess Industry Receival Points for Suitability for HPFV Ensuring that receival points at high volume sawmills and major processing facilities can accommodate HPFV vehicles of a larger size the 26m with their existing log yard equipment and infrastructure
3	Increasing the Frequency of Bridge Assessments and Greater Access to Assessment Results for Industry
3.1	Engagement with NHVR on Bridge Assessment Process Enhancement Collaborate with the NHVR to refine the bridge assessment process within the broader HPFV for HML framework. Rather than serving as a prequalification requirement, bridge assessments should be the final step in the permit approval process. Provisional permit approvals could be issued, contingent upon a successful bridge assessment, to streamline approvals and improve efficiency
3.2	Tailor a Bridge Assessment Process within Gippsland to suit the Forestry and Timber Industry Engage with state and local road managers to utilise assessment results in developing a targeted bridge upgrade program, aimed at expanding the HPFV HML network for the forestry and timber sector. A pilot project, in collaboration with the Gippsland Forestry Hub, could be undertaken to develop a more consistent and equitable process for bridge assessments in Gippsland. This project will involve the appointment of a dedicated engineer to focus on achieving the key objectives outlined below: Developing a set of NHVR approved HPFV reference vehicles for the forestry and timber industry Undertaking NHVR approved bridge assessments against these reference vehicles to be available to the forestry and timber industry as required Engaging with state and local road managers to use these assessment results to develop a targeted programme of bridge upgrades, with the aim of expanding the HPFV HML network for the forestry and timber industry

4	Improving Consistency in NHVR Permit Application Processing Across Local Road Management Authorities
4.1	Training Package for LGA Permit Processors Developing a training model in partnership with NHVR to improve consistency of permit handling across LGAs, including specific education on log truck capabilities by configuration for LGA personnel handling these applications
4.2	Training Package for Transport Operators Developing a training package model in partnership with NHVR for industry operators that provides guidance on how to complete a permit application, with a focus on accurate and consistent data entry
5	Establishing an Engagement Framework for Transport Operators and Forest Growers to Collaborate with Road Managers on Access Issues
5.1	Contact Register of Road Managers within Gippsland Creating a contact register of road managers within the region, held and maintained by a central agency (such as Gippsland Forestry Hub or SEATS), and available to the local forestry and timber industry
5.2	Establishment of a Communication Network Organising a biannual forum where local road managers are represented at a round table to discuss access and permit issues, provide updated contact register data and work collaboratively with contractors and landowners to solve roading issues
6	Cost of Tolls for Travel Through Melbourne - Toll Charge Relief
6.1	Toll Rebate for Forestry and Timber Products Transported Through Melbourne Forestry and timber produce and product loads originating from the Gippsland region and requiring transit through Melbourne should be eligible for a full (100%) toll rebate to support the forestry and timber industry efficiency and competitiveness
6.2	Toll Rebate for Forestry and Timber Products Transported into Melbourne Forestry and timber products or produce originating from the Gippsland region and delivered to processing facilities within Melbourne should be eligible for a toll concession equivalent to the off-peak rate, regardless of the time of day
7	Increasing Understanding of the Wider Benefits of HPFV Solutions
7.1	Undertake Comparative Route Assessments Conduct comparative assessments of HPFVs on key priority routes through and out of Gippsland to high-volume destinations. These assessments will quantify the financial, operational, and environmental benefits that can be achieved through increased HPFV usage
7.2	Share Findings with Road Managers Provide a platform for these comparison assessments to be shared with road managers to assist with the justification of permit approval
R1	Specialist Rail Network Advice Engage a rail network expert to assist in the delivery of the identified rail recommendations
R2	Engagement with Track Managers on Bridge Inspections Collaborate with the authority responsible for rail track management and construction to develop a greater understanding of bridge inspection procedures and to identify the additional requirements (if any), for the Avon River and A1 Overpass bridges between Morwell and Bairnsdale to be approved for freight
R3	Engagement with Track Managers to Create Access Eastbound from Maryvale Collaborate with the authority responsible for rail track management to determine the requirements, costs and timelines to build an eastbound access option from Maryvale onto the Gippsland mainline
	Innovation Study To explore the value that innovation in transport systems can deliver to the forestry and timber industry in Gippsland

Glossary

A Double: means a heavy combination not longer than 36.5m consisting of a prime mover towing two trailers in which:

- the first semitrailer is connected to the prime mover by a roll coupled connection; and
- the second trailer is a dog trailer.

A-doubles are sometimes called double road trains. NHVR

ATSSS Roll-Over Prevention Program: This is a behavioural program with proven success in reducing heavy vehicle crashes. The program is fully endorsed by VicRoads and all participants receive a certificate of participations.

Axle Mass Limits: General Mass Limits (GML) apply to all heavy vehicles. The GML states the allowable mass for all types of heavy vehicle axle groups unless the vehicle is operating under an accreditation or an exemption under the Heavy Vehicle National Law (HVNL). <a href="https://www.numer

B Double: a class 2 heavy vehicle that consists of a prime mover towing two semitrailers, with the first semitrailer being attached directly to the prime mover by a fifth wheel coupling and the second semitrailer being mounted on the rear of the first semitrailer by a fifth wheel coupling on the first semitrailer. A B-doubles must comply with prescribed mass and dimension requirements. NHVR

B Triple: a type of road train that consist of a prime mover towing three semitrailers. B-triples sometimes have dedicated networks that are different to general road train networks <u>NHVR</u>

Code of Behaviour: A behavioural code for professional drivers outlining social and road safety expectations to minimise impost on communities and the travelling public. This is over and above the existing haulage regulatory requirements.

Concessional Mass Limits (CML): allow operators accredited under the National Heavy Vehicle Accreditation Scheme (NHVAS) to utilise mass limits above the national general limits. Operators wishing to benefit from the productivity gains of CML are required to become an NHVAS member, meet the 8 Standards of Compliance in the NHVAS Mass Management Module and nominate vehicles to participate in the scheme. NHVR

Equivalent Standard Axles (ESA): Equivalent Standard Axle (ESA) is a method of standardizing various axle configurations and loads and their effects on road pavements. ESAs are assessed by calculating the ratio of a load on an axle or axle group divided by a reference load and then raising the ratio to the fourth power. In the TIC, ESAs are calculated using the sum of the ESAs for zero load (empty) plus the ESAs for 100% loaded and multiplied by the number of trips as required for the transport task. The 50 percent load factor has been used as a benchmark reference. For the ESAs of a vehicle or vehicle combination this is laden to 50 percent of its payload capacity. ESAs per trip are calculated on the basis of one way laden to gross combination mass and one-way unladen (nil payload). This is typical of a lot of operations.

General Access Vehicles (GAV): vehicles that don't require a permit or notice to access road networks; these vehicles have as-of-right access to the network unless signposted otherwise (e.g. a bridge tonnage restriction). NHVR

Higher Mass Limits (HML): Under the Heavy Vehicle National Law (HVNL), Higher Mass Limits (HML) provide a significant increase in the productivity of road freight transport heavy vehicles by allowing particular vehicles to access additional mass entitlements, subject to the following conditions:

- Operators of vehicles or combinations running at HML on triaxle groups are accredited under the Mass Management Module of the National Heavy Vehicle Accreditation Scheme (with an accreditation label fitted to the hauling unit).
- · Vehicles are fitted with certified road-friendly suspension.
- · Vehicles are travelling on an authorised route. NHVR

Glossary

HPFV: High Productivity Freight Vehicles

HV: Heavy Vehicle

Heavy Vehicle National Law (HVNL): The NHVR administers one set of laws for heavy vehicles over 4.5 tonnes gross vehicle mass. This set of laws consists of the Heavy Vehicle National Law (HVNL) and five sets of regulations. NHVR

National Heavy Vehicle Regulator (NHVR)

National Heavy Vehicle Accreditation Scheme (NHVAS):The National Heavy Vehicle Accreditation Scheme (NHVAS) is a national formal process for recognising operators who have robust safety management systems in place. It is also increasingly being used to show compliance with general duty requirements under road transport law. NHVR

PBS - Performance Based Standards Vehicles class 2 heavy vehicles. There are four levels within the PBS Scheme, and vehicles must meet safety and infrastructure standards at each level. PBS are designed to offer higher levels of safety and productivity. PBS vehicles are able to operate on road networks that have been classified as suitable for their level of performance. NHVR

Static rollover threshold (SRT): The steady-state level of lateral acceleration that a vehicle can sustain during turning without rolling over, requirement is to achieve 0.35g or less.

Truck Impact Chart (TIC): Australian Trucking Association Truck Impact Chart, Third Edition 2024



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