



TIMBER INDUSTRY ROAD EVALUATION STUDY 2023-2027

Executive Summary



TIMBER TOWNS VICTORIA
A Local Government Association



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Timber Towns Victoria (TTV) is an incorporated local government association representing the interests of municipal councils in relation to forestry on both public and private land. The Association's primary function is to provide a forum for local government to address the management of forest and forest industries and their impact on local communities.

TTV is proud to present the information enclosed within this executive summary to be utilised by local government, state government agencies, industry and other stakeholders to assist in future research efforts.

Previous TIRES project reports are available at: www.timbertownsvictoria.org.au

Report author: This TIRES report was prepared by Greenwood Strategy Solutions Pty Ltd, a leading Australian forest industry advisory company, in collaboration with Esk Mapping & GIS and 2XF Consulting. The report is based on information provided by TTV, from a range of publicly available sources and material, and from consultation with and data provided by forest owners, local government authorities and Victorian state government departments. www.greenwoodstrategy.com.au



Graphic design and layout: Think Productions www.thinkproductions.com.au



Minister's Foreword

Victoria's roads are a key economic enabler and a pillar of the state's eminence as a commodity exporter.

How quickly and efficiently we can move our exports to port underpins Victoria's competitiveness in global markets.

This is particularly the case for a commodity like timber, which is the state's largest export by volume.

The nature of forestry products means the timber industry puts unique demands on our roads.

These demands will only grow as volumes expand from 14.7 million tonnes for the 2016-20 period to 34 million tonnes for 2023-27, an expansion forecast to generate an extra 18,000 jobs.

As well as growing, the industry is evolving.

As we move away from native-forest harvesting toward greater investment in plantation timber, the role played by the road network will be critical.

It's for this reason that the Victorian Government has helped fund the Timber Industry Roads Evaluation Study.

By quantifying the economic contribution of the forest and wood products sectors regionally and state-wide, forecasting future road use

and estimating the investment needs, the study presents a more empirical basis on which to prioritise local road funding.

The Victorian Government is supporting the timber industry by encouraging the use of more efficient road freight combinations that can move greater volumes of freight with fewer trips.

Victoria has expanded its pre-approved and gazetted network to encourage road freight operators to invest in new road transport equipment that is safer and more efficient.

I want to commend Timber Towns Victoria for its work in the production of this study.

It's another great example of collaboration between state and local governments.

It will help deliver better outcomes for the safe and efficient transportation of timber products in coming years, ultimately supporting jobs and the state's economy.

I look forward to working with local government and the forestry sector to ensure industry growth and infrastructure management are co-ordinated to ensure safe and secure access for all road users.

The Hon Melissa Horne MP

Minister for Roads and Road Safety
Minister for Ports and Freight



President's Message

It is my pleasure to present the TIRES Report 2023-2027 which continues the long-term cooperation between regional municipalities, the forest industry, the Victorian State Government as well as several key stakeholders, to identify and assess critical road infrastructure, construction, and maintenance requirements, and establish funding priorities to ensure our rural and regional road network is fit for purpose and meet the needs of all road users.

Victoria's forest and wood products sector is a significant contributor to the State economy and is critical to the economic wellbeing of several key local government areas. It provides jobs across Victoria – not just in construction, but a range of sectors.

The forest industry in Victoria continues to experience considerable change. The State Government's Victorian Forestry Plan foreshadows the end of native forest harvesting in 2030. It is also supporting the establishment of 14,000

hectares of new plantations in Gippsland. The Commonwealth Government's Forest policy framework seeks to encourage the establishment of a billion new trees in key regions and the private sector is responding, with one investor looking to establish up to 20,000 hectares of new plantations in central and south-west Victoria.

The commitment to economic expansion in key forestry regions is welcomed and Timber Towns Victoria looks forward to continuing to work constructively with the forestry sector to ensure that industry growth and infrastructure management are properly coordinated to ensure safe and secure access for all road users. The TIRES report 2023-2027 provides an evidence-based framework to prioritise infrastructure investment and I encourage you to review the document.

Cr. Karen Stephens

Glenelg Shire Council

President, Timber Towns Victoria

Timber Industry Road Evaluation Study

The Victorian timber industry is a substantial contributor to the State economy and in some key regions is very significant. The sector operates broadly across regional Victoria, from the South Australian border to East Gippsland and north to the Murray River. With up to 9 million m³ of logs harvested and transported annually, the forest and wood products sector is a major user of Victoria's road infrastructure.

Since the mid-1990s, the Timber Industry Road Evaluation Study (TIRES) has been undertaken to assess the local road infrastructure required for the efficient operation of Victoria's forest and wood products sector, with a focus on the local roads which are used to transport timber from harvested forests to higher capacity State and Commonwealth road infrastructure and to key processing and export destinations. These local roads are typically the responsibility of local government and are also important for other road users, including school buses, tourists and other primary producers. Local government plays an essential role in representing and linking the interests of communities, industry and various levels of government to ensure adequate infrastructure quality and access.

There are clear benefits to the whole community in developing an appropriate road network for the

forest industries – safety for all road users, regional job security, and improved access for other primary industries. The task of transporting logs is large in terms of the annual tonnage hauled. Therefore, planning for upgrades of roads used by the forest industries also influences strategic planning for broader regional freight infrastructure. It can also justify other areas of road development and provide further regional benefits. Additionally, the sector routinely uses roads in more remote areas and often in more difficult terrain. As a result of these factors, the forest industries in Victoria have a continuing need for a special category of road funding.

This 2023-27 TIRES project has identified priorities for future infrastructure projects based on the total impact of road use by the timber industry in four TIRES regions (South West Victoria, Central Victoria, Gippsland and Mallee). It uses publicly available data, inputs from forest owners and local government authorities to:

1. Quantify the economic contribution of the forest and wood products sectors regionally and at a State level.
2. Quantify forecast road use by the industry (transport quantity and road length by year).
3. Identify priority road maintenance and upgrade projects in each of the TIRES regions.
4. Estimate the costs to local government authorities to undertake these priority projects.



About the TIRES project

Purpose of the TIRES program

The TIRES process began in 1995–96 and has undergone regular updates since then. It brings together industry and government stakeholders to describe and quantify regional infrastructure priorities and to list projected works and costs for road infrastructure maintenance and upgrades over the coming five-year period. It is a complex and important project which requires a sophisticated and multi-disciplinary approach to ensure an outcome which can inform and support State and local government decision makers, and the forest and wood products industry, to identify and implement improved road infrastructure solutions across regional Victoria.

The current TIRES project

Project scope

The 2023-27 TIRES project aims to provide a documented assessment of the projected road infrastructure requirements to serve timber industry needs in each of the four TIRES regions – South West Victoria, Central Victoria Gippsland, and the Mallee – for the next five years. The study

also provides planning priorities for road network upgrades for this period.

Twelve Victorian municipalities are included in the scope for this report, across the four identified regions. While the scope is limited to the 12 municipalities, assessment of log transport from adjacent regions is important, particularly for those municipalities which are home to timber processing or export facilities. This also includes logs transported from the South Australian side of the Green Triangle.

Road upgrade priorities

The TIRES process has an established methodology for calculating road maintenance and upgrade priorities, the Timber Index (*Ti*).

Ti is calculated using the following formula:

$$Ti = (\text{Total 5 year volume}/100,000) * (\text{No. years used}/5) * (\text{No. months available}/12) * (\text{Industry priority}) * (\text{Weight restriction}) * (\text{Vehicle type}) * (\text{Alternate route})$$





Ti formula data possible data values

5 year volume	Years used	Months available	Industry priority	Weight restriction	Vehicle type	Alternate route
Total volume carted over road during the assessment period.	Number of years road used during assessment period.	Months available for haulage in any specific year.	High = 3	Closed = 3	B-double = 1	Not available = 2
			Medium = 2	Bypass = 2	Single = 0.5	Available = 1
			Low = 1	None = 1		

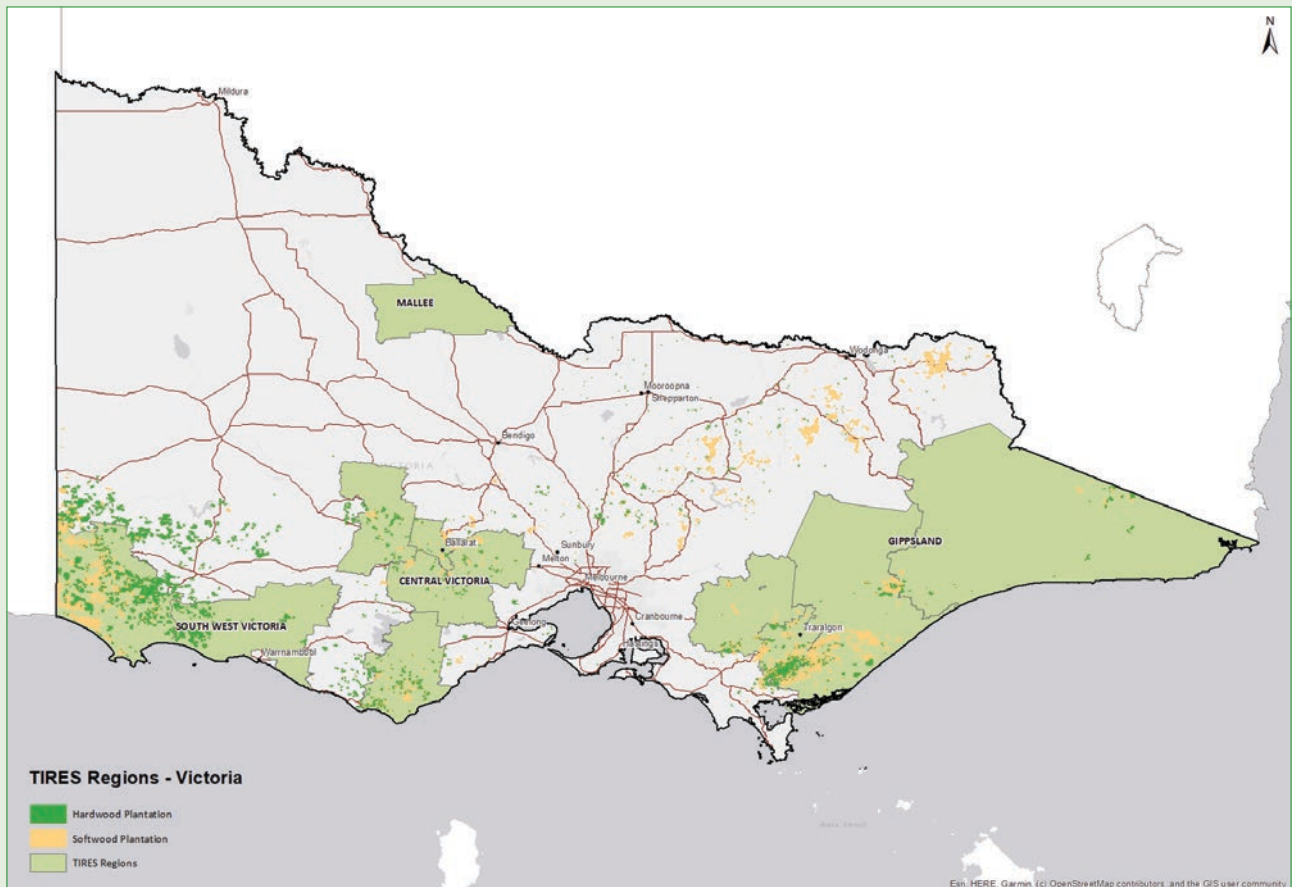
Ti values were calculated for each road identified in the analysis as requiring maintenance or upgrade. The *Ti* values can be used to compare projects within each TIRES region. However, caution should be taken if attempting to use the *Ti* values to rank projects between regions, as the methodology does not recognise inter-regional differences in conditions and operating environment.

Regional summary

This 2023–27 TIRES project has identified priorities for future infrastructure projects based on the total impact of road use by the timber industry in four TIRES regions (South West Victoria, Central Victoria, Gippsland and Mallee). It uses publicly available data, and inputs from forest owners and local government authorities to:

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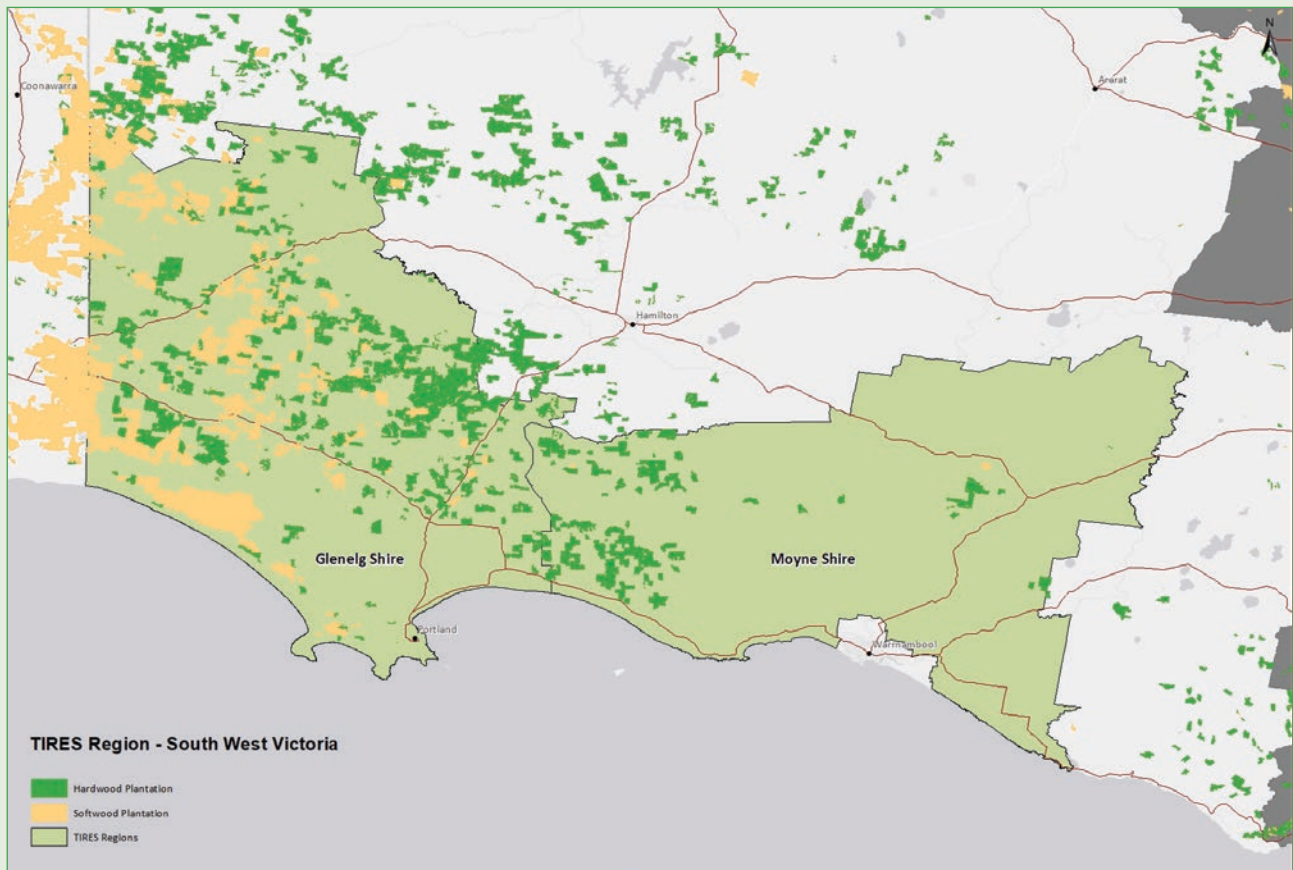
South West Victoria	<ul style="list-style-type: none"> • Glenelg • Moyne
Central Victoria	<ul style="list-style-type: none"> • City of Ballarat • Colac Otway • Golden Plains • Moorabool • Pyrenees
Gippsland	<ul style="list-style-type: none"> • Baw Baw • East Gippsland • Latrobe City • Wellington
Mallee	<ul style="list-style-type: none"> • Gannawarra



South West Victoria

South West Victoria makes up one half of the Green Triangle Region – a diverse economy with a number of sectors including timber, woodchip, mineral sands, dairy, meat processing, and electricity and gas production. Timber harvest and transport levels have increased significantly in the region since 2010, as the hardwood plantation estate has matured and the Port of Portland is now the largest woodchip export facility in the world.

The wood transport dynamics in the region are now well understood but the very large freight task on concentrated routes means that an additional \$1.5 million for timber haulage network renewal has also been identified as a high priority. More than 20 million tonnes of wood will be transported across a road network of 1,395 km during the forecast period.



 Total employment (people) 1,614	 Total woodflow (tonnes) 20,243,000	 Total road cost (\$) 33,066,123
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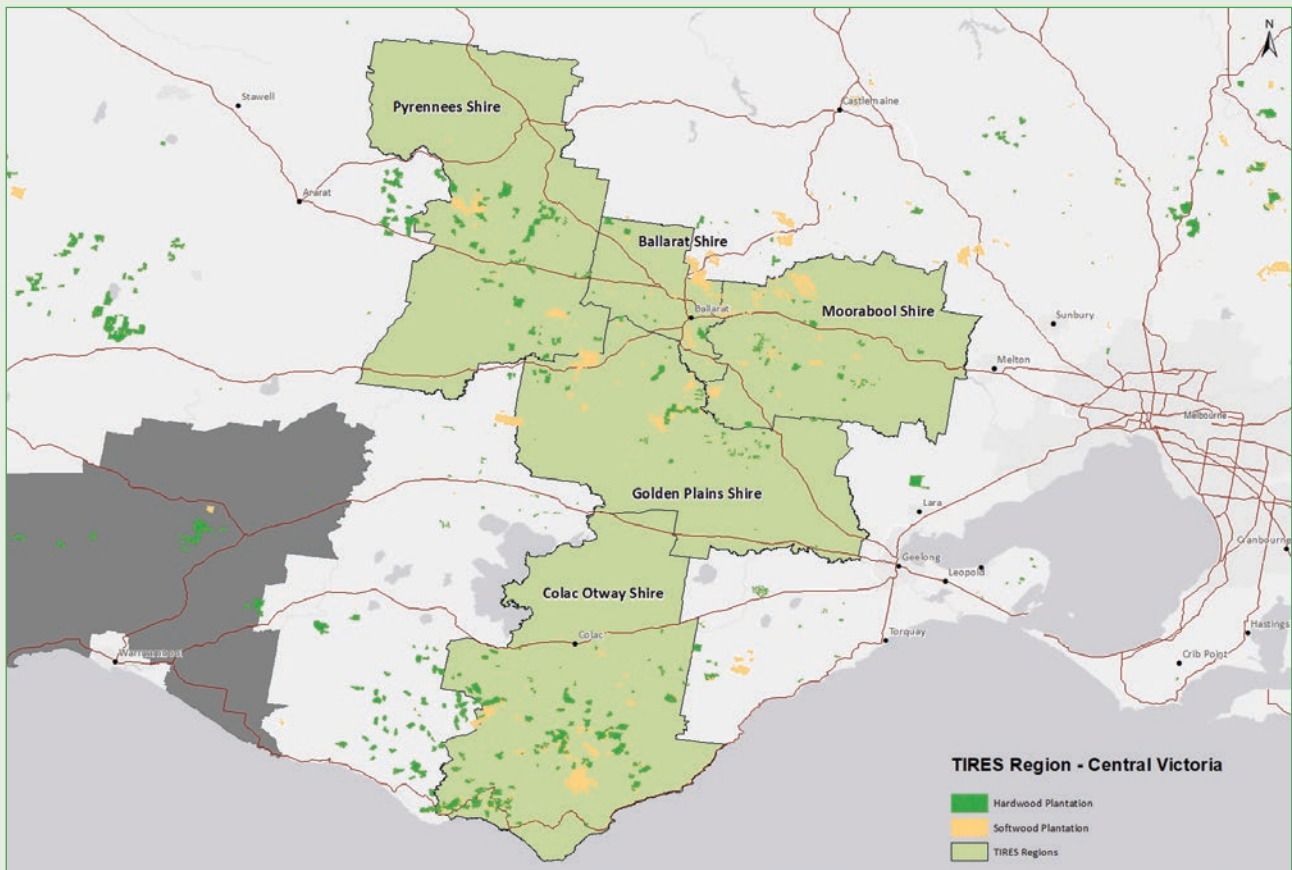
Highest priority road projects

Road name	Municipality	Road project	Estimated cost
Mumbannar - Wanwin Road	Glenelg	Rehab three sites over 3.5km	\$4,000,000
Cashmore Road	Glenelg	Upgrade Henty Hwy-P-N Rd	\$2,000,000
Portland Road	Moyne	Upgrade of School Road/Woolsthorpe-Heywood Road/Portland Road intersection	\$140,000
Wilson's Road	Glenelg	Rehab two sites over 2km	\$2,000,000
Codrington - Bessiebelle Road	Moyne	Widen 1.66km of Codrington-Bessiebelle Road between Mt Misery Road and School Road to 9.2m formation width. Includes upgrade of Mt Misery Road/Manly's Road/Codrington-Bessiebelle Road intersection.	\$1,170,000

Central Victoria

Although a significant proportion of the Central Victoria region is forested, only a small proportion is actively managed for wood production. Timber production is primarily from hardwood and softwood plantations, which comprise 44,200 ha

concentrated around the Otway Ranges in the south and around Ballarat in the centre of the region. About 3.3 million tonnes will be transported across a road network of 3,600 km during the forecast period.



Total employment (people) 262	Total woodflow (tonnes) 3,292,000	Total road cost (\$) 40,664,046
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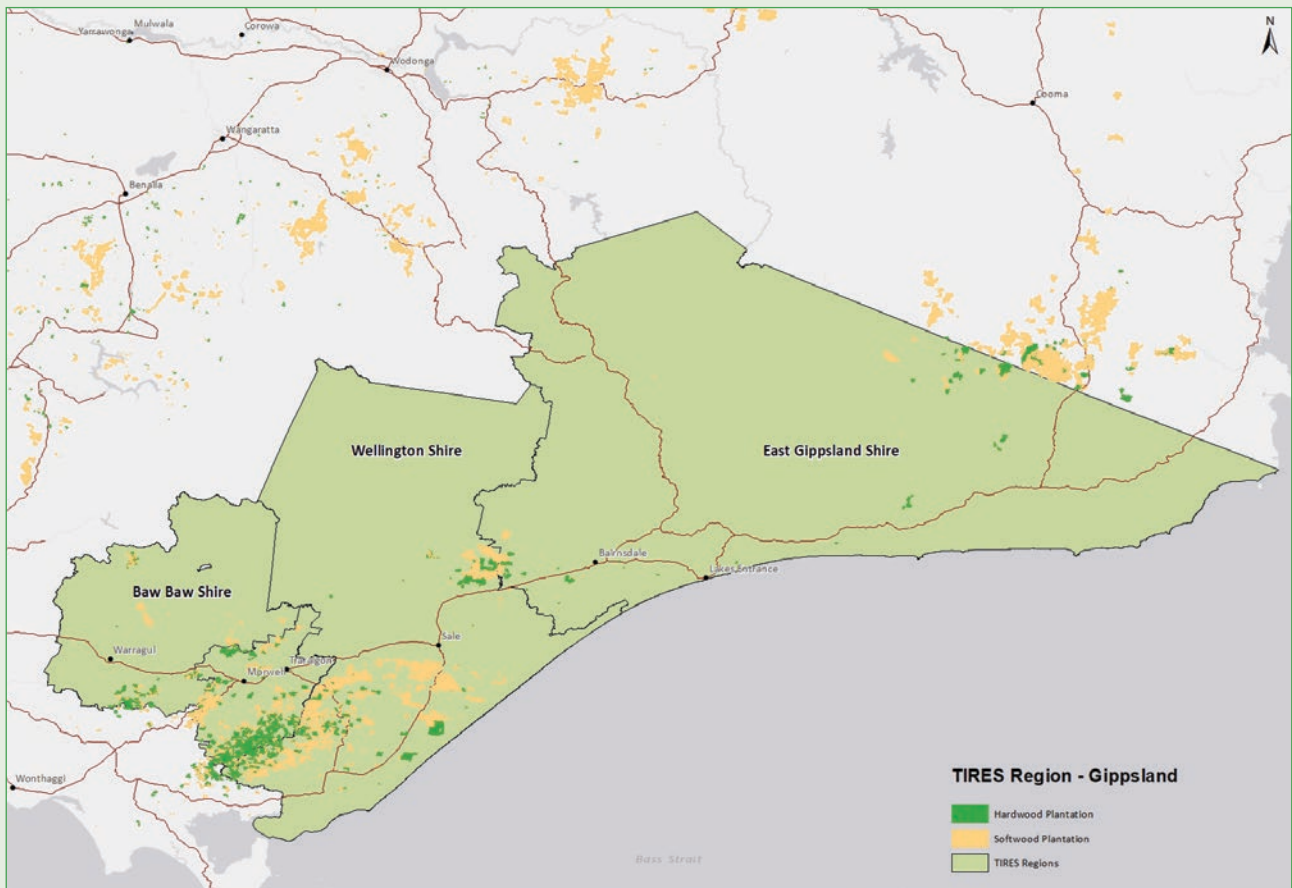
Highest priority road projects

Road name	Municipality	Road project	Estimated cost
Binns Road	Colac Otway	Resheet -50mm	\$59,594
Lismore - Pittong Road	Golden Plains	pothole repairs and major patching as required; reseal >14years; Rokewood-Skipton Road (CH9370) to north section at CH11075	\$20,000
Willowvale Road	Golden Plains	pothole repairs and major patching as required; reseal >14years; Lismore-Scarsdale Road to Brindleys Road; Brindleys Road to Lismore-Pittong Road; Lismore-Scarsdale Road to Brindleys Road	\$40,000
Sand Road	Moorabool	Reconstruction	\$1,744,800
Main Lead Road	Pyrenees	Safety and pavement improvements	\$800,000

Gippsland

Gippsland is a major forest and wood products region. Production forestry is the largest land-use by area in Gippsland, occupying about 27% of the region (ABARES, 2022) and is dominated by management of public native forests and privately owned plantations (softwood and hardwood). The ownership and management of Gippsland’s production forest estate is dominated by two

major growers – Hancock Victoria Plantations (HVP) (plantations) and VicForests (native forests), with timber processing also dominated by OPAL Australian Paper, at Maryvale. About 11 million tonnes of wood will be transported across a road network of about 3,650 km during the forecast period.



 Total employment (people) 917	 Total woodflow (tonnes) 10,913,000	 Total road cost (\$) 57,529,071
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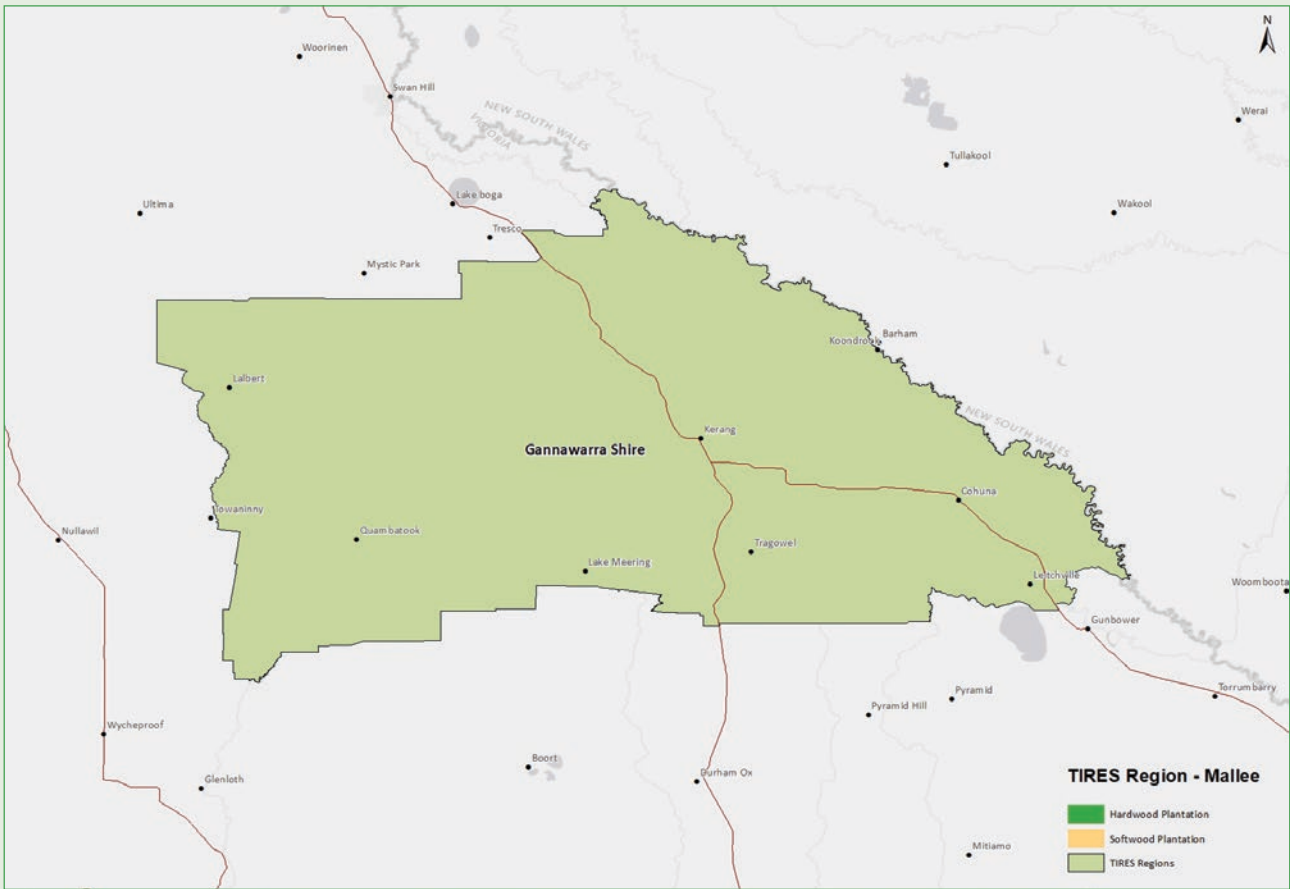
Highest priority road projects

Road name	Municipality	Road project	Estimated cost
Grand Ridge Road	Wellington	Widening, sealing, blackspot upgrades, general road maintenance	\$752,996
Whitelaws Track	Latrobe	Resheet	\$97,500
Budgeree Road	Latrobe	Resheet	\$90,000
Gormandale - Stradbroke Road	Wellington	Widening, sealing, blackspot upgrades, general road maintenance	\$508,641
Yarram - Morwell Road	Wellington	Widening, sealing, blackspot upgrades, general road maintenance	\$960,579

Mallee

The region is underpinned by a strong agricultural and food manufacturing base. Timber harvesting and processing of the region’s native red gum (*Eucalyptus camaldulensis*) forest resource

represents a small but historically and culturally important aspect of the region’s economy. About 72,000 tonnes will be transported across a road network of 116 km during the forecast period.



Total employment (people) **8**

Total woodflow (tonnes) **72,000**

Total road cost (\$) **17,500**

Highest priority road projects

Road name	Municipality	Road project	Estimated cost
Arbuthnot Street	Gannawarra	Maintenance	\$5,000
Koondrook - Murrabit Road	Gannawarra	Maintenance	\$5,000
Brays Lane	Gannawarra	Maintenance	\$2,000
Bridge Street	Gannawarra	Maintenance	\$1,000
Cassidy Lane	Gannawarra	Maintenance	\$2,500

State overview

The Victorian forest and wood products sector is significant, with wood flows across the TIRES regions expected to exceed 34 million tonnes between 2023 and 2027. The sector is also a major user of Victoria's road infrastructure.

The entire forest and wood products supply chain relies heavily on good road infrastructure to transport harvested timber and products to point of sale as efficiently as possible. Considerable work has been undertaken in the past to identify road infrastructure priorities for the industry in Victoria. This report is both timely and important in quantifying the likely industry activity for the next five years, how industry changes will influence the road infrastructure and usage arrangements and what that means for regional road infrastructure.

The forest and wood products sector provides some 50,000 jobs across the supply chain. Total economic output, in the form of sales and service income, is \$8.6 billion dollars annually, making it a significant contributor to the State's economy.

The 2023-27 TIRES project identified a total of 167 local roads for infrastructure maintenance and upgrade which will carry an estimated 34 million tonnes of log products over the next five years, across the four TIRES regions. The estimated value of road maintenance and upgrade works is \$128.6 million across 167 roads, at an average cost of \$3.72/tonne.



The importance of local government and industry collaboration

Importance of local road networks

Local government authorities play an important role in managing and maintaining safe, quality local road networks. In Victoria, they manage 87% of the State's road network. Management of local road networks is an issue of great significance to rural and regional communities and to local government. The provision of increased certainty, and adequacy of funding, is important for facilitating improved capability of regional councils to manage their assets efficiently and effectively.

Following the Covid-19 pandemic, many rural and regional municipalities have experienced increased migration from capital cities. This will inevitably result in additional pressure on local infrastructure over the coming decade. A further compounding factor is the reported diminishment of road quality across large areas of rural and regional Victoria, due to increased traffic and an extended period of above average rainfall.

Timber industry road use and the importance of infrastructure funding

Projected state-wide wood flow has increased materially in recent years, from an estimated 14.7 million tonnes for the 2016-20 TIRES forecast period to 34 million tonnes for 2023-27 forecast period. This represents about 6.9 million tonnes each year. The forest and wood products sector depends heavily on local road infrastructure through the entire supply chain, from site preparation and establishment of plantations through to transport of manufactured wood products.

There is ongoing pressure to increase the proportion of high productivity freight vehicles (HPFVs) which will ultimately reduce the amount of traffic on roads and make the freight task more economically efficient. However, the highly variable nature of the local road network means that not all haulage routes are suitable for all vehicle types, with factors such as pavement width and strength, road alignment, vertical profile and other safety considerations all limiting factors when determining road suitability for proposed vehicle configurations.

It is also imperative, regardless of proposed vehicle configurations, that local road infrastructure used by the timber industry is maintained to ensure continuity of timber haulage and safety for all road users. The cost to local government authorities of maintaining and upgrading the local road network to service new and existing plantation areas is considered to be a major impediment to an expanded and internationally competitive timber industry in Victoria. The estimated cost of \$129 million over the next five years for municipalities to maintain the transport link between forest harvesting sites and the State's arterial road network is very large. However, these road maintenance and upgrade projects also benefit other regional industries and road users.

There are considerable broader social and economic benefits to be realised if municipalities receive State and Federal infrastructure funding to support these projects, including providing local government authorities with the possibility of directing funds to other vital community projects and supporting rural communities to encourage greater tourism with the completion of local projects which improve road quality for all users.



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