SWAN HILL
Rural City Council

AGENDA

SCHEDULED MEETING OF COUNCIL

Tuesday, 21 March 2023

To be held Swan Hill Town Hall
53-57 McCallum St, Swan Hill
Commencing at 2pm

COUNCIL:

Cr LT McPhee – Mayor

Cr B Moar
Cr A Young
Cr C Jeffery
Cr S King
Cr N McKay
Cr J Kelly

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SECTION A – PROCEDURAL MATTERS

- **Welcome**
- **Acknowledgement of Country**
- **Prayer**
- **Apologies/Leaves of Absence**
- **Directors/Officers Present**
- **Confirmation of Minutes**

  1) Scheduled Meeting Of Council held on 21 February 2023

- **Disclosures of Conflict of Interest**
- **Joint Letters and Reading of Petitions**
- **Public Question Time**
- **Open Forum**

SECTION B – REPORTS

B.23.12 FREIGHT ROAD NETWORK MAPPING AND INFRASTRUCTURE INVESTMENT STUDY

Responsible Officer: Engineering and Strategic Projects Manager
File Number: S32-01-18
Attachments:
1 ⇩Freight Road Network Mapping and Infrastructure Investment Report 2022 (FRNMAIR)
2 ⇩Investment Prospectus

Declarations of Interest:
Peter Ross - as the responsible officer, I declare that I have no disclosable interests in this matter.

Summary

The Department of Transport have jointly funded a study looking at deficiencies in the freight network and documenting opportunities for investment to improve the freight network in Swan Hill and Gannawarra Shires.

Discussion

In June 2022, Consultants RMCG completed a study for Swan Hill Rural City Council and the Gannawarra Shire supported by the Department of Transport. The study provides a clearer picture of the current issues and demand for greater road access for High Productivity Freight Vehicles (HPFVs). It provides useful insights and a ready to use tool to assist infrastructure managers when prioritising road investment decisions and highlights the scale and growth of the freight task from two high-volume exporting Council areas.

As reported on the VicRoads website;
“In Victoria, a High Productivity Freight Vehicle (HPFV) is a heavy vehicle combination that exceeds 26 metres and/or has a Gross Combination Mass (GCM) of more than 68.5 tonnes. A HPFV also includes a Quad-axle semi-trailer operating at up to 50.5 tonnes. Being larger allows more freight to be transported with less vehicles, reducing transportation costs and improving productivity.”
https://www.vicroads.vic.gov.au/-/media/files/documents/business-and-industry/heavy-vehicle-maps/hpfv-access-conditions--consolidated-including-pbs-level-2b.ashx?la=en&hash=51CD6F3103EAF4C0DEC3B58DFA70A3ED

The report also provides insights from freight operators, produces and processors on the growing demand for greater efficiency to stay competitive in moving produce emphasising the importance of upgrading local roads to meet modern HPFV capacity.

The plan proposes an investment in road upgrades to service the freight sector of $37.7M over the next 30 years across the two municipalities. This investment will return:

1. **Improved margins for commodity producers (agriculture, mining) and bulk handlers:** a combined $8.2M per annum in financial saving through improved movement efficiencies.

2. **Reduced fuel use:** 2.7M litres less fuel used.

3. **Reduced environmental impact:** 7,193 less CO_2-e tonnes of carbon emissions and a $380,000 reduction in environmental impact (including reduced air pollution).
4. **Reduced number of vehicle trips on Council roads, state highways and around our ports:** 7,968 fewer truck movements and 6.3 million kilometers in reduced travel.

5. **Accelerated investment in newer trucks by local and regional bulk transport operators with higher safety standards**: An estimated $70.5M investment is expected to be bought forward to purchase 98 new vehicles to replace older, less efficient B-Doubles.

6. **New higher paid jobs, the ability to maintain capacity to deliver freight services needed within the SHRCC and GSC areas:** The creation of 127 A-Double driver positions as skilled drivers of HPFV vehicles, is a welcome addition to the career path of Victorian transport operators. Although 42 fewer drivers would be employed overall because of the reduced number of larger truck movements, low availability of qualified drivers is currently a significant problem for transport operators interviewed, and a key element of the push for greater use of HPFVs.

The report is accompanied by an investment plan, which profiles the region and summarises the growing need and a business case for increasing local road access for HPFVs to deliver the wide range of regionally produced goods to port, directly to users and to rail services. The investment plan provides a prioritisation methodology for considering investment in local road improvements to cater for HPFVs. The final study report provides a prioritised list of road projects for each municipality. This list can be found at page 36 of the report.

The report highlights that there is a "last kilometre" freight task for a large majority of produce grown in the study area (Swan Hill and Gannawarra municipalities) as only farms with direct access to the main arterials or highways or other approved roads can use HPFVs.

Next steps
This study will be used by Council in developing business cases for road improvement projects. Council will then work with industry bodies, including the freight industry seeking funding to tackle these "last kilometre" road improvement projects. Council will also use this work when lobbying for improved road funding to support our agricultural and freight sectors.

Consultation

The Freight Road Network Mapping and Infrastructure Investment Report was developed after consultation with producers, processors, and port and freight operators.

Financial Implications

Co-investment from Council will assist in attracting funding for these projects. Various funding opportunities are available from time to time.

Social Implications

Not applicable.

Economic Implications

An investment in improved road freight will provide significant savings and efficiencies to the agricultural and freight sectors.

Environmental Implications

1. **Reduced fuel use:** 2.7 million litres less fuel used.

2. **Reduced environmental impact:** 7,193 less CO_2-e tonnes of carbon emissions and a $380,000 reduction in environmental impact (including reduced air pollution).

Risk Management Implications

Not applicable.

Council Plan Strategy Addressed

Prosperity - Infrastructure that enables prosperity.

Options
Council may choose to adopt or amend the recommendation.

Recommendations

That Council:

1. **Endorse the Freight Road Network Mapping and Infrastructure Investment Study report dated June 2022.**
2. **Use this report and the accompanying investment prospectus to advocated for improved road funding, and to opportunistically approach funding bodies to support the agricultural and freight sectors in this municipality and;**
3. **Write to the Victorian Minister for Transport providing the Minister with a copy of this report and expressing Council's appreciation for the funding that made this work possible.**

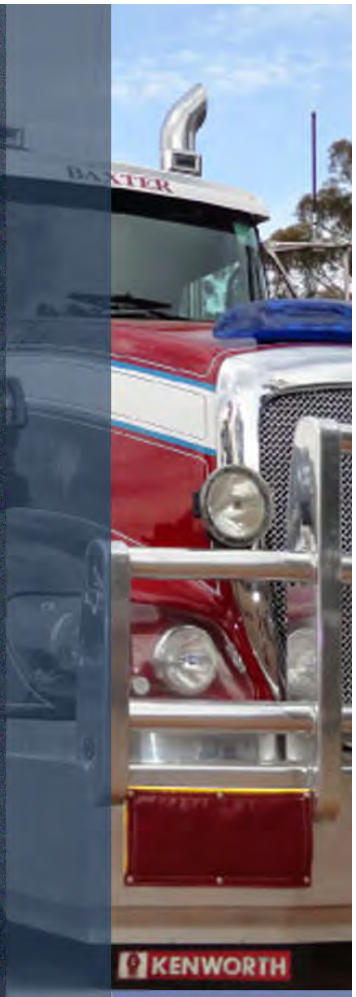
RMCG

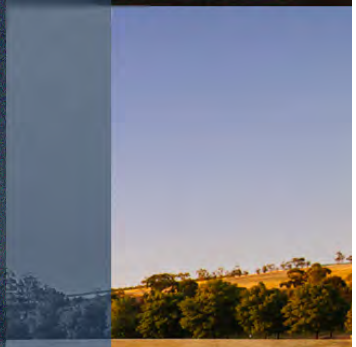
JUNE 2022

Freight road network mapping and infrastructure investment

Final Study Report

Swan Hill Rural City Council and Gannawarra Shire Council





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Victoria — Tasmania — ACT — NSW

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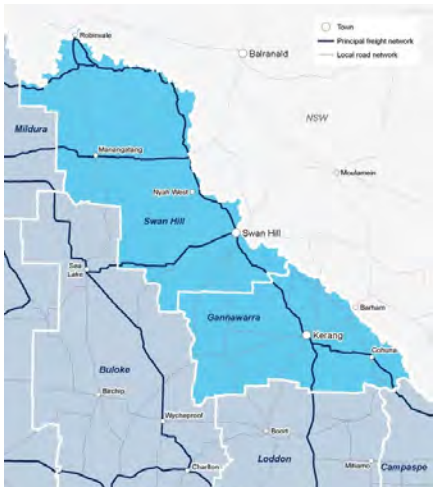
Executive Summary

Road freight is a key driver of the Victorian state-wide economy, and accounts for the movement of more than 80% of Victoria's freight.[1] To take advantage of the improvements in road transport technologies and increasing vehicle capacity, Councils want to upgrade their road network to provide access to the most efficient and cost-effective transport options for its primary producers and processors by enabling increased access for High Productivity Freight Vehicles (or HPFV).



THE PROJECT

Swan Hill Rural City Council (RCC) and Gannawarra Shire Council (SC) supported by the Department of Transport (DoT), engaged RMCG to develop an investment decision method to assist prioritisation of upgrades to the local road network outside of the Victorian Principal Freight Network (or PFN), specifically to accommodate better access for HPFV.

This report provides a clearer understanding for councils and other stakeholders, on the current issues and demand for greater road access for HPFV's. It provides useful insights and ready-to-use tools to assist infrastructure managers when prioritising road investment decisions and highlights the scale and growth of the freight task from two high volume exporting council areas. The report also provides insights from freight operators and producers and processors on their growing demand for greater efficiency to stay competitive in moving produce, emphasising the importance of upgrading local roads to meet modern HPFV capacity.

An accompanying investment plan profiles the region and summarises the growing role of, and business case for, increasing local road access for HPFVs to deliver the wide range of regionally produced goods to port, directly to users and to rail services.

The outputs of the project are:

- Study report: provides the findings of the research phase of the project investigating a logical and practical approach to setting priorities for investing in the council-managed road network to enhance their capacity to accommodate HPFVs. This includes an Excel based tool. The benefits from greater adoption of higher mass vehicles, particularly bulk road transports in A-Double configurations, have been identified and quantified.
- Investment plan: outlines a case for investment that will provide benefits to primary producers, local industries and regional Victoria. The plan provides an evidence base for future funding proposals based on a solid economic analysis.

[1] 2021 Facts and Benefits of the Road Network, VicRoads (accessed June 2022)

ROAD UPGRADE PRIORITISATION TOOLS

Councils want to upgrade key local routes linking the main production areas with freight and food manufacturing precincts in their region. The project has reviewed data sources and developed tools for the purpose of assisting councils to identify and prioritise road upgrade projects that will allow greater HPFV access and deliver the most benefits to the region. The data sets reviewed were:

- Freight movements modelling from CSIRO (TranSIT model)
- Actual HPFV movements from Telematics Analytics Portal (TAP)
- National Heavy Vehicle Regulator (NHVR) Permit Portal data on applications for HPFV access to unapproved roads
- Traffic counts (AADT using traffic count classifiers).

An easy to use prioritisation tool, supported through an Excel interface, has been developed that can validate a hierarchy of potential projects ranked highest to lowest, using a multi-criteria approach. This tool can be used in conjunction with an economic modelling approach to support a business case for future funding proposals.

BUSINESS CASE FINDINGS

The primary producers, processors and road freight operators in the region are key drivers of the state's exports and regional economy and between them, produce $1.6 billion or 9%[2] of Victoria's primary production by (farm gate) value. The region's primary industries are dominated by cereal and legume crops, livestock and meat, horticultural production, dairy farming and some mining. The vast majority of this production is exported from the region, mostly utilising the state's road network.

In 2019 The Victorian Freight Plan[3] recognised that the *regional* Victorian freight task exceeded 40 million tonnes and is growing at 1.5% per annum. A 2016 report [4], prepared by the Rail Futures institute, stated that 13 million tonnes p.a of the state's regional freight task (i.e. less than 30% by weight) was being carried by rail with the year on year total of the state's tonnage being carried by rail steadily falling over the past two decades. For high value commodities grown in the SHRCC and GSC areas, such as milk and horticultural produce (including almonds, citrus, table grapes and olives) almost the entire task is now conducted using road transport. Only the proportion of the grains industry dedicated to moving grain from the large, centralised grain receival sites to Melbourne or Geelong ports still utilise rail as a 'freight partner of choice'. Even in that case road transport provides significant augmentation[5] in the movement of cereal grains and other broad acre crops to port.

To assist primary production and the road freight industry, the Victorian Government have opened more than 3,000 km of the state's arterial road network to HPFVs including in 2021, the Murray Valley and Loddon Valley Highways[6], which are the key arterial roads bisecting and servicing two of the state's most productive Local Government Areas.

This report demonstrates, that by delivering upgrades and reclassification of 10 logically prioritised council road upgrade initiatives in each of Swan Hill RCC and Gannawarra SC, at a combined cost of $37 million to enable improved HPFV access, the estimated benefits delivered to the Victorian economy range from $4 million to 13 million p.a., depending on the pace of adoption of HPFV and the freight growth scenario.

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2 ABS regional data projected to 2020-21

3 2019 Victorian Freight Plan, Transport for Victoria

4 2016 Getting freight back on track in Victoria, Rail Futures Institute

5 Kel Baxter, principal of Kel Baxter Transport indicated a significant proportion of the business for large bulk grain transport companies working in Northern Victoria related to providing road transport services to meet demands for deliveries to port in 2020/21 were from receival sites situated on Victorian Rail lines, typically serviced by trains

6 DoT Press release, 17 June 2021.

By connecting a larger number of producers dependent on local road connections to key arterials, significant and qualifiable productivity benefits to local producers and transport operators accrue. The initiative will also drive significant state-wide and national social, economic and environmental benefits through reduced truck movements, lower emissions per tonne carried, reduced urban traffic (near port) congestion and improved road safety outcomes.

Just over 40% of fruit and nuts and 17% of broadacre grains, hay and silage (farm gate value) are produced in the study area and these upgrade projects will enable improved access to more primary producers to Victorian ports and Melbourne metro distribution centres. This investment will also enable producers to better connect and take advantage of freight services offered by HPFVs crossing the NSW/Victorian border onto the extensive NSW and SA (HPFV approved) road networks for cost effective distribution to customers throughout SE Australia.

The overall finding is that the benefits outweigh the estimated costs of the proposed upgrades for the 30-year estimated economic life of the investments, with resultant benefit-cost ratios ranging from 1.39 to 6.33 depending on the package of upgrades and scenario chosen (dependent on assumptions on adoption rates of HPFVs and forecasts in freight demand).

If the proposed package of road upgrades is implemented and impacted roads reclassified, a medium-level shift (50%) of freight from B-Doubles to HPFVs is estimated to deliver the following annual benefits to the Victorian economy, producers, processors and the transport industry servicing the study area:

1. ***Improved margins for commodity producers (agriculture, mining) and bulk handlers****:* a combined $8.2M per annum in financial saving through improved movement efficiencies.

2. ***Reduced fuel use****:* 2.7M litres less fuel used.

3. ***Reduced environmental impact****:* 7,193 less $CO_{2\text{-}e}$ tonnes of carbon emissions and a $380,000 reduction in environmental impact (including reduced air pollution).

4. ***Reduced number of vehicle trips on Council roads, state highways and around our ports****:* 7,968 fewer truck movements and 6.3M km in reduced travel.

5. ***Accelerated investment in newer trucks by local and regional bulk transport operators with higher safety standards****:* An estimated $70.5M investment is expected to be bought forward to purchase 98 new vehicles to replace older, less efficient B-Doubles.

6. ***New higher paid jobs, the ability to maintain capacity to deliver freight services needed within the SHRCC and GSC areas:*** The creation of 127 A-Double driver positions as skilled drivers of HPFV vehicles, is a welcome addition to the career path of Victorian transport operators. Although 42 fewer drivers would be employed overall because of the reduced number of larger truck movements, low availability of qualified drivers is currently a significant problem for transport operators interviewed, and a key element of the push for greater use of HPFVs.

The above benefit figures are based on 2022 freight volumes for the two regions. These volumes are expected to grow by 1.5-2.7% per annum over the next 30 years, resulting in proportional increases in the benefits. For example, the annual financial saving through improved movement efficiencies would reach $13.0m-17.5m by 2052, while the total annual economic benefits (incorporating environmental benefits) would reach $13.6m-18.3m.

KEY TERMS AND ABBREVIATIONS USED IN THIS REPORT

High Productivity Freight Vehicles or **HPFV's**: are defined in Victoria as a heavy vehicle combination that exceeds 26 metres and/ or has a GCM greater than 68.5 tonnes. HPFV also include semi-trailers fitted with a quad-axle group.

A HPFV is defined as a Class 2 vehicle under the National Heavy Vehicle Law. Access is conditional on assessments of proposed routes including road geometry and the vehicle's impact on bridge structures.

Appendix 1 to this report includes a chart outlining diagrammatically the various HPFV configurations utilised throughout Australia.

The economic and wider benefits resulting from an orderly and timely migration by freight operators from B-Double vehicle configurations to A-Double configurations have been estimated. These configurations were cited by most industry participants interviewed as the most immediately needed vehicle combination upgrade that would enable more efficient freight movements.

The choice of developing an operating and economic cost-comparison between the currently dominant largest freight vehicle configuration (the B-Double) and the most commonly sought HPFV (the A-Double) was made to calculate the benefits for a migration towards more HPFVs servicing the SHRCC and GSC areas, as more local roads are approved for HPFVs.

B-triples and AB-triples are also configurations that will be utilised more extensively by the industry in Victoria, and throughout the study area in future as road networks expand. It is likely in some circumstances freight operators will choose other HPFV combinations (rather than simply migrating to A-Doubles), to meet their specific needs including ease of loading and unloading.

The Victorian Department of Transport advised that B-triples will soon be able to operate at a gross mass of 91t and AB-triples at 113.5t. on approved networks. The road network maps supporting this approval will be published in late 2022, or early 2023. The benefits of current operators migrating to these configurations because, of an even higher total and freight mass possible per vehicle (than the A-Double), will further enhance the financial and economic case for improved network access.

Performance Based Standards (or PBS): HPFVs operate under the Performance-Based Standards (PBS) scheme administered by the (Australian Commonwealth) National Heavy Vehicle Regulator.

PBS-approved vehicles are tested against 16 stringent national safety standards and four infrastructure standards to ensure they fit the existing road network and are safe.

The Principal Freight Network (or PFN) is referred to throughout this report, and is an important framework coordinated by the Victorian Department of Transport which identifies and protects Victoria's key road and rail freight routes and places.

It includes freight corridors and places of national, state and regional significance that support high-capacity and efficient freight movements around Victoria.

1 Introduction

1.1 THIS PROJECT

Swan Hill Rural City Council (RCC) and Gannawarra Shire Council (SC) supported by the Department of Transport (DoT), engaged RMCG to develop an investment decision method to assist prioritisation of upgrades to the local road network outside of the Victorian Principal Freight Network (or PFN), specifically to accommodate better access for HPFV.

The project brief was: *To provide an investment plan for roads, bridges, culverts and key intersections upgrades within the shires of Swan Hill and Gannawarra. The Plan will be based on current and projected growth in High Productivity Freight Vehicles (HPFVs) use on local road networks accessing farms and mining interests in the region. This Plan will include A-double vehicles and future-proofing for larger and more efficient freight vehicles and connections to railheads where appropriate*[7].

The methodology adopted by RMCG in preparing this report was to:

1. Work in close collaboration with Councils and key representatives of DoT to understand the current situation and observed trends in demand by HPFV for greater road access
2. Seek advice and input from a wide range of stakeholders including local processors, producers, port operators and freight companies
3. Review the most current and relevant data sources on freight movements and primary production that could support a business case for investment
4. Provide a current, easily read and forward-looking report for councils to present the case for further investment in their local road networks to support HPFV access, and
5. Develop a prioritisation tool for use by councils to support decisions on short listing local road projects for investment.

This report provides a clearer understanding for councils and other stakeholders, on the current issues and demand for greater road access for HPFV's. It provides useful insights and ready-to-use tools to assist infrastructure managers when prioritising road investment decisions and highlights the scale and growth of the freight task from two high volume exporting council areas. The report also provides insights from freight operators and producers and processors on their growing demand for greater economy in moving produce, emphasising the importance of upgrading local roads to meet modern HPFV capacity.

This includes prioritising the required investment in the extensive network of council owned and maintained roads, bridges, culverts and key intersection upgrades within the two shires, including a number of bridges and culverts owned by Victoria's largest state-owned water corporation, Goulburn Murray Water (GMW).

An accompanying investment plan profiles the region and summarises the growing role of and business case for increasing local road access for HPFVs to deliver the wide range of regionally produced goods to port, directly to users and to rail services. Primary producers, regional processors, transport operators and governments are seeking to improve the safety and the economics of freight movements, which are critical to the competitiveness of regional Australia.

[7] Request for Quotations for Freight Road Network mapping & Infrastructure Investment Prospectus (Swan Hill RCC, June 2021)

A 2019 Deloitte study for Agrifutures[8] included case studies highlighting that total logistics costs for some primary producers were as high as 48.5% of farm gate costs (although typically lower, quoted at ~ 28.5% for Australia grain growers in the same report). The more widespread use of HPFV's provides an opportunity to reduce this cost, particularly for grain growers in the Swan Hill RCC and Gannawarra SC areas seeking efficient access to customers, particularly including distribution points in large SE Australian urban centres, and export ports in Melbourne and Geelong.

The continuing evolution and use of large capacity vehicles, particularly A-Doubles, provides opportunities for primary producers to increases competitiveness, but introduces a range of challenges for infrastructure owners, particularly road owners. The local freight task is also needing to respond to land use change and accommodate the freight needs of growing industries in the region including the emergence of renewables and mining.

This study report provides the findings of the research phase of the project investigating a logical and practical approach to setting priorities for investing in the council-managed road network to enhance their capacity to accommodate HPFVs. The benefits from greater adoption of higher mass vehicles, particularly bulk road transports in A-Double configurations, have been identified and quantified.

The second output of the project is a plan outlining a case for investment that will provide benefits to primary producers, local industries and regional Victoria. The plan provides an evidence base for future funding proposals based on a solid economic analysis.

ACKNOWLEDGEMENT OF COUNTRY

We acknowledge the *Barapa Barapa, Yorta Yorta and Wamba Wamba people* as the Traditional Owners of the Country on which this project was conducted. We recognise their continuing connection to land, waters and culture and pay our respects to their Elders past, present and emerging. Moreover, we express gratitude for the knowledge and insight that Traditional Owner and other Aboriginal and Torres Strait Islander people contribute to our shared work.

8 Agrifutures Australia: The Impact of Freight Costs on Australian Farms Publication No. 19-005 PRJ-011380 Deloitte 2019

1.2 BACKGROUND

The study area has a wide range of primarily agricultural land uses and industries, and is supported by an extensive road transport network, as shown in Figure 1-1.

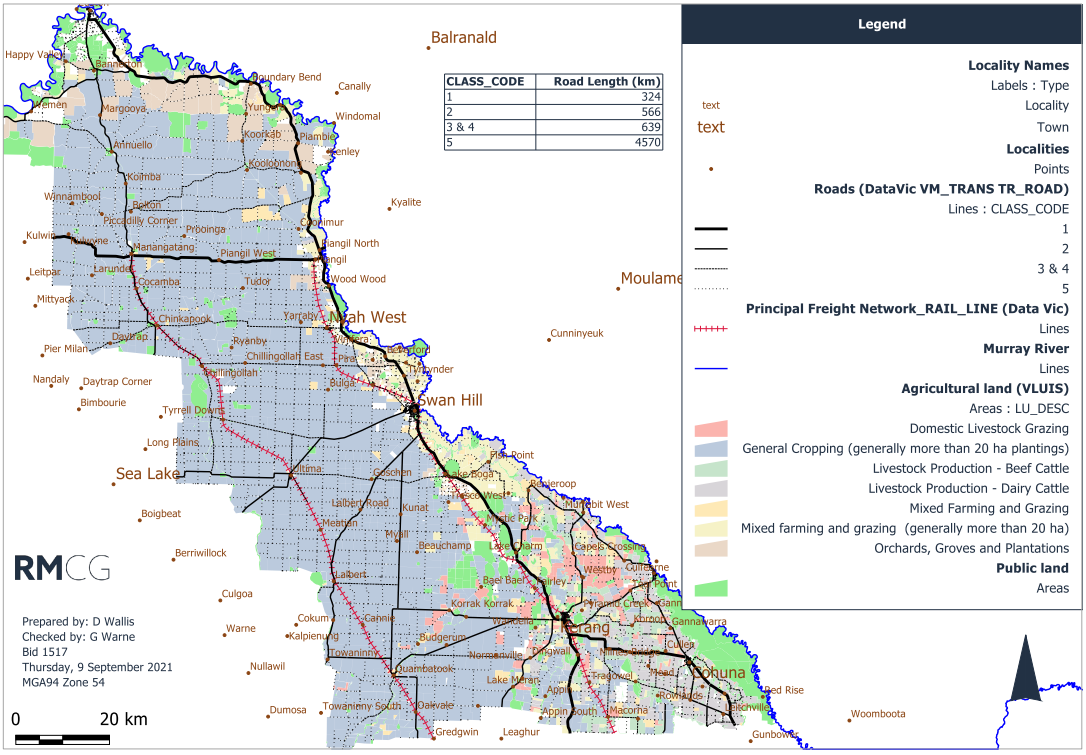

Figure 1-1: Agricultural land uses and road classes within Swan Hill Rural City and Gannawarra Shire Council LGAs

The traditional supply chain is changing. Transport of agricultural produce is now more customised and regionalised. Traditionally it was focussed on export of grain crops to ports utilising shared local grain receival facilities and state-based rail services, with the movement of other produce (meat products, livestock, irrigated fruit and dairy products) by road transport to distribution and secondary processing centres, mainly in Melbourne.

Within the two shires several freight dependent industries are growing that will require councils to evaluate the needs of existing and new freight customers and the suitability of the extensive council owned, maintained and managed road network(s) as freight demands grow and change.

A number of large intensive animal industries (particularly beef, chicken and pork) with high grain input needs, have established within Northern Victoria, Southern NSW and South-Eastern SA creating new markets and freight demands for delivering cereal crops grown within the two council areas, and the need to transport these crops at the most cost-competitive rates possible. The last extended drought highlighted the role of A-Double configuration vehicles, as trailers were parked at the council boundaries (in NSW, at Barham, Euston, and Murray Downs) waiting to be rejoined to prime movers after feed hay was sourced within northern Victoria. This trade, which included constant vehicle uncoupling and recoupling was required to cost effectively service high drought demand for hay in Northern NSW and Southern Qld.

Other examples of recent growth in production volumes, and emergence of freight demand within the council areas include:

- Growth in almond production and processing (e.g. Olam Australia P/L at Robinvale, and Select Harvests P/L at Happy Valley, near Robinvale, SA and Griffith, NSW)
- Increased prominence of pulse crops as part of traditional broadacre grain growing and the need to transport these products (lentils, peas, chickpeas) to receivals at grading and containerised facilities including within the two council areas, and at Mildura, Horsham and Donald
- Development and continuing expansion and growth of the Pentarch hay processing facility (Ultima)
- Tomato production by Kilter at Winlaton, near Lake Boga, now reaching 80,000 tonnes p.a. for cost and time-sensitive delivery to Kagome's processing plant in Echuca
- A proposed sand mining operation currently in the development approval phase (near Lalbert in both councils) that could require more than 300,000 tonnes of primary processed material to be transported to SA or Portland Victoria
- Movement of gypsum from recognised sources near Lake Charm, Chinkapook and near Balranald (NSW) using the local road network and onto cereal and irrigation farms throughout the two council areas (and beyond)
- Centralisation of fresh milk freight and dairy processor logistics away from local sites (including in the Gannawarra SC) and other local sites, to redistribution and processing facilities at Rochester, Strathmerton, Shepparton and Tatura Vic, increasing the value of and need for high capacity tankers to move chilled fresh milk from larger and larger dairy farms to processors.

Figure 1-2 shows a wider view of the region mapping the principal freight network (PFN).

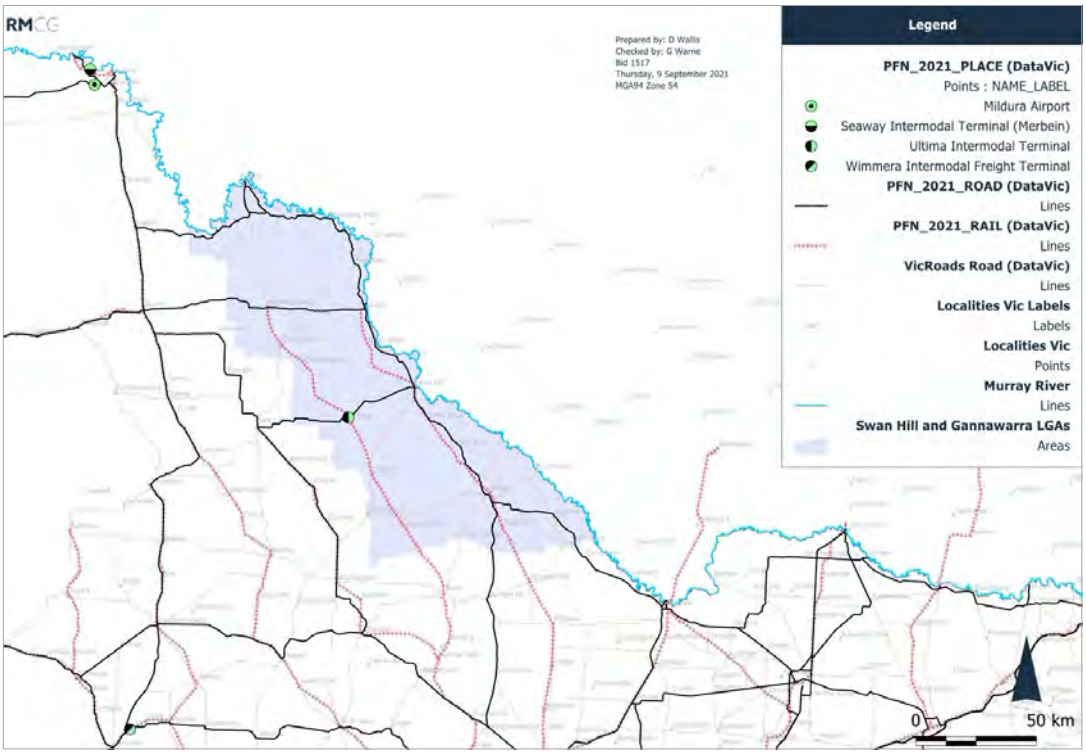

Figure 1-2: Principal freight network and VicRoads managed roads

1.3 APPROACH

Engagement

An engagement plan was developed by RMCG, following consultation with the DoT and council team members. This set out a schedule and interview guides to support effective engagement with all relevant stakeholders in the project.

The interviews followed an introduction from DoT and were conducted in an open and transparent manner to ensure that a wide range of views and opinions were canvassed. Data, insights and observations regarding the local road network, and its limitations to support HPFV traffic, heavy vehicle types utilised, commodity movements in and out of the study area and National heavy Vehicle Regulator (NHVR) permits processes, were gathered during interviews.

Freight operators and customers were also asked for their feedback on the future potential for utilising HPFV vehicles, the impacts that increased HPFV access would have on their vehicle fleet operated and / or used, and cost and efficiency implications for their businesses. Additional data sources were also identified.

The primary stakeholders with an interest in the project, included:

- A number of larger HPFV owners and operators (noting that many significant processors and producers also operate transport businesses)
- Freight company users – primary producers, processors and miners
- Swan Hill Rural City Council staff – economic development and engineering
- Gannawarra Shire Council staff – economic development and engineering
- Department of Transport staff – including Senior Transport Planner, Loddon Mallee region, Policy and Strategy – Freight Victoria A/team leader
- Other interested and impacted parties – Goulburn Murray Water (GMW), State government transport policy and transport strategy specialists.

The engagement occurred over October 2021 to January 2022. This involved interviews and meetings with:

- 10 Producers, processors and mine/quarry operators
- 7 Heavy vehicle/freight operators
- 13 Other stakeholders (Council staff, Port of Melbourne, GMW, logistics professionals).

Despite some interview scheduling being adversely impacted by harvest operations, and Covid-driven illness and interruption, response levels where high with only two targeted interviews missed.

Data analysis

Our approach to understanding the extensive non-PFN road network included an analysis of all available data and information including the Telematics Analytics Portal (TAP); NHVR Permit Portal, Council GIS data, CSIRO reporting and modelling (TranSIT), DoT spatial and other data, Victorian Government spatial and other data sets.

ABS Agricultural Census and Survey trend data was used to develop an up-to-date regional profile on production and employment and make realistic projections on growth in key commodities in the region.

In addition, RMCG have utilised a current financial model used by a large bulk transport operator to calculate per km, per trip and per annum rates for loaded and return trips for A-Doubles and B-Doubles from the SHRCC and Gannawarra Council areas, noting that the current push for increasing utilisation of HPFV's in northern Victoria is primarily for the replacement of the now widely utilised B-Doubles with A-Double configurations.

RMCG has reviewed and synthesised all available data, engaged comprehensively with key stakeholders and developed an economic model that will be used as the evidence base for the development of a sensible road investment hierarchy for priority road upgrade upgrades in Swan Hill RCC and Gannawarra SC.

2 The region

2.1 OVERVIEW

Swan Hill RCC covers an area of 6,115 square kilometres and in June 2018, had a population of 20,759. It includes the townships of Swan Hill, Lake Boga, Manangatang, Nyah, Nyah West, Piangil, Robinvale, Ultima and Woorinen South.

Gannawarra SC covers a smaller area of 3,735 square kilometres and in June 2018 had a population of 10,547. It includes the townships of Cohuna, Kerang, Koondrook, Leitchville and Quambatook. An intensive irrigation area, part of the Goulburn Murray irrigation District (GMID) extends along the Murray River servicing more than 100,000Ha, and its channel supply network crosses many local roads, from Leitchville to Woorinen.

In terms of transport, the council areas are served by two broad gauge rail services (Melbourne to Swan Hill and Melbourne to Ultima) and a number of main arterials or highways which run into and through the region: Mallee Highway, Murray Valley Highway and the Loddon Valley Highway (previous Figure 1-2).

Notably this study is about increasing the opportunities for access for HPFV's onto council maintained roads i.e. this study focusses on the program of works needed to prioritise the upgrade of the network of local roads to enable increased access and utilisation of HPFV's throughout the two council areas. Some features of the region include:

- Significant areas of primary production and processing with a high dependence on a modern road network to supply key inputs, to move produce grown from farm to processors and to deliver bulk and processed commodities to customers, particularly to export customers utilising the Port of Melbourne and the nearby port in Geelong (GeelongPort).
- Its proximity to the irrigated Sunraysia region and broader Victorian Mallee dryland cereal cropping regions, as well as the NSW and SA border regions, is central to significant interstate, inter-capital (Sydney-Adelaide) and intra-state movement of primary produce and other freight.
- It is a major supplier of cereal grains from the extensive cropping areas, milk supplied from irrigated dairy farms in the northern GMID along the Murray River and fruit from intensive horticultural production near Swan Hill and Robinvale. Emerging industries are developing which build on these mainstay industries. The emerging and expanding crops and industries in the two council areas now include export hay production, almond growing and processing, abattoirs and meat packing for export, olive production and farming a wide range of dryland pulse crops.
- Traditional quarrying and gypsum extraction operations continue to expand and recent developments to expand sand mining operations (i.e. for mineral sands and rare earths) into a large development that will operate within both council areas will provide a need to further develop road networks and connections to the rail network that are fit for purpose.

Although the research and consultation for the study has targeted opportunities for greater HPFV use within the council areas, local road upgrades will enable better, safer and lower cost freight movements across wide areas of connected SE Australia and bring significant benefits to producers and processors beyond the two council areas.

A snapshot or regional profile of primary industries production is illustrated in Figures 2-1 and Figure 2-2.

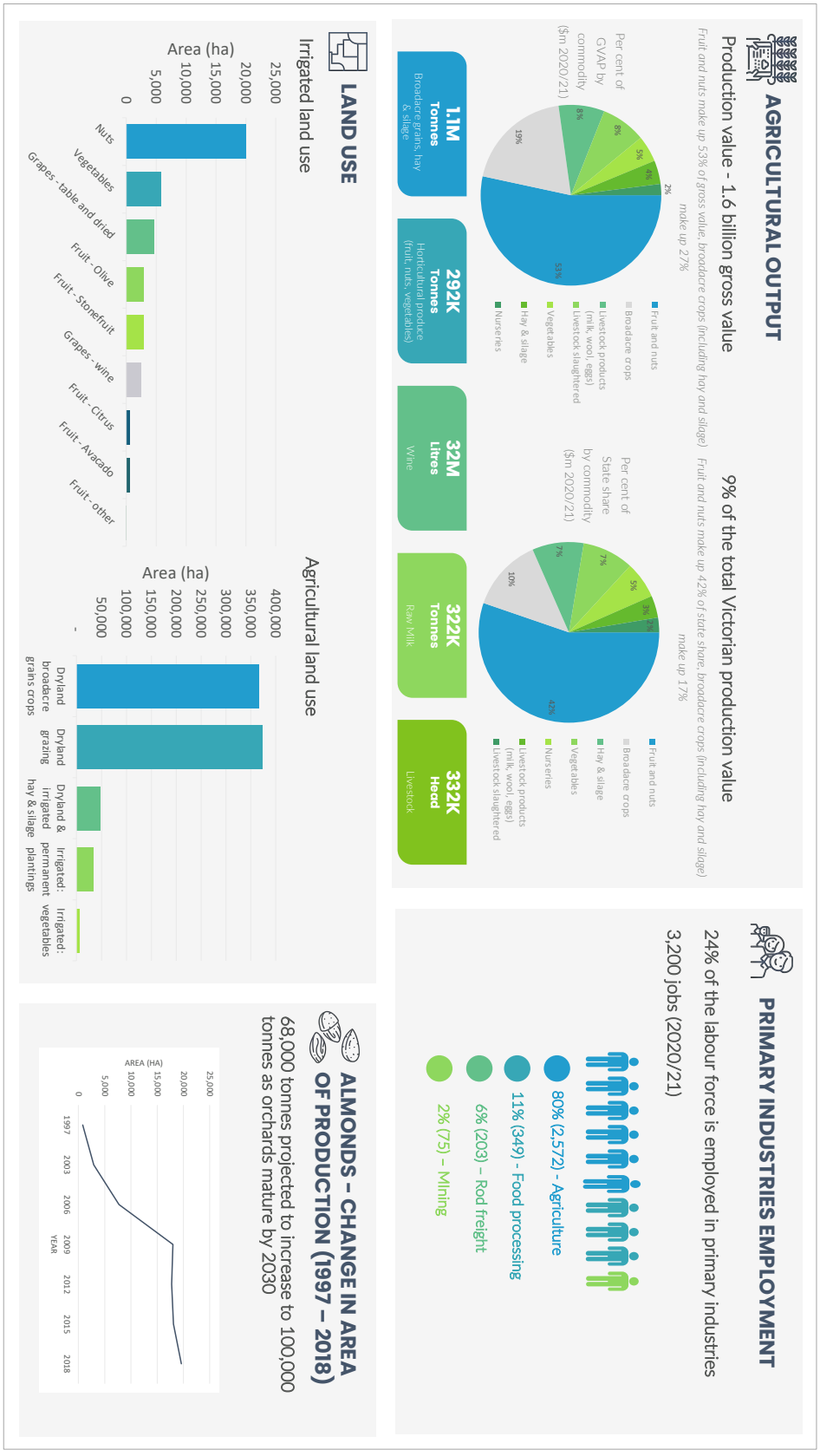

Figure 2-1: Regional profile of study area

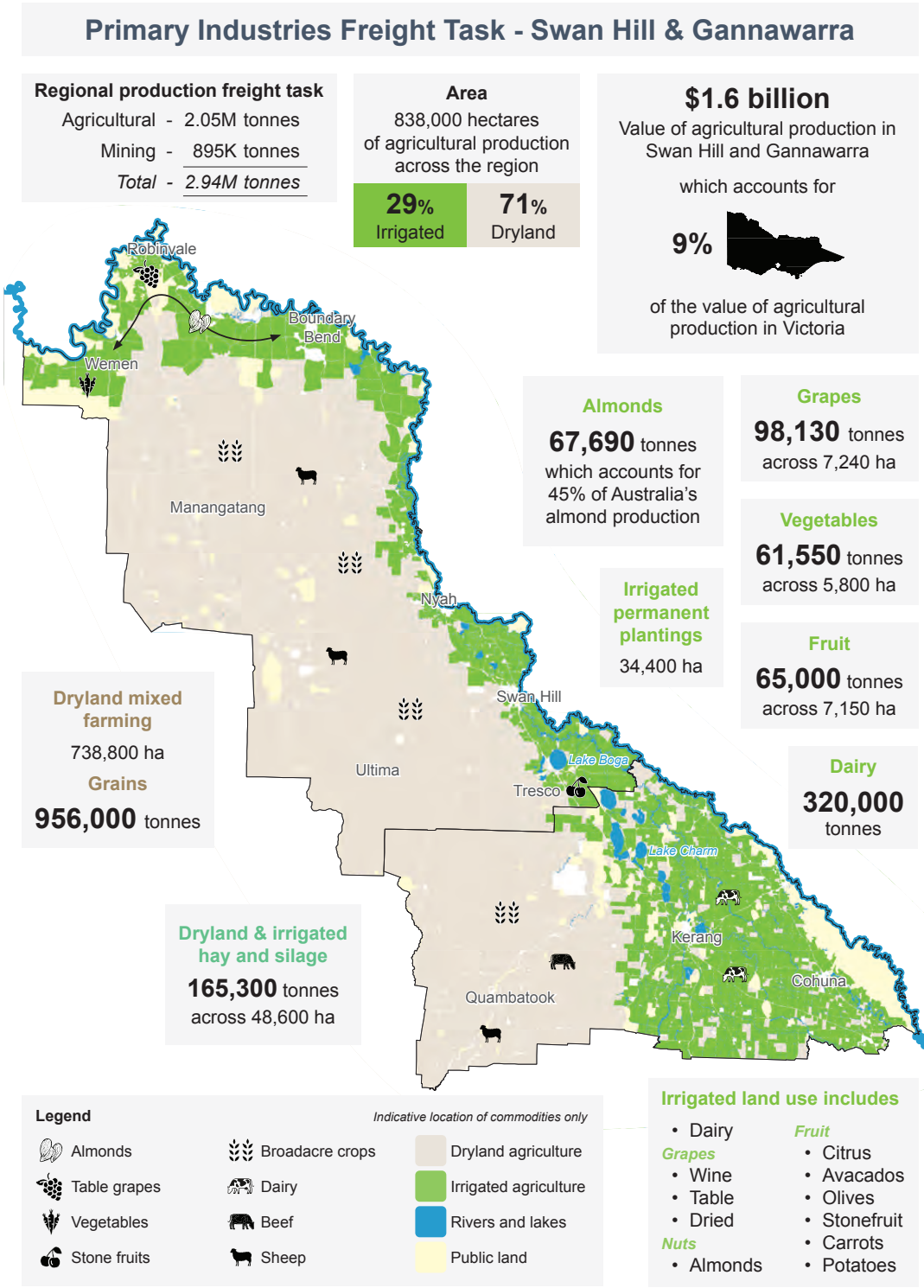

Figure 2-2: Land use map and infographic [Draft note: can use for Investment Plan

2.2 PRIMARY INDUSTRY PROFILE

The dominant primary industries in the study area are agriculture (broadacre cropping, mixed farms and dairy), horticulture (almonds, wine grapes, table grapes, stone fruits) and quarrying (gypsum and road materials).

Swan Hill and Gannawarra shires represent a powerhouse of agricultural production with ABS data confirming a combined gross value of production (GVAP) of $1.6 billion in 2019-20 comprising 9% of Victoria's agricultural output. Although extensive large-scale broadacre agriculture dominates agricultural land use (by area) the horticulture industry provides a significant and growing contribution of $960 million (60 per cent of gross value).

Swan Hill and Gannawarra shires produce more than 30% of Victoria's fruit and nut production (tonnes) and almost 20% of the state's wine output. The expanding horticulture sector provides a genuine opportunity for increased employment and value adding of produce in the region. Strong and efficient links into state and national supply chains is becoming more important. Large corporate farms want to be 'nimble' in relation to geographic location, and ready and able to expand in places where the geographic advantages (lot sizes, facility location, water supply, sunshine hours, temperature), resource availability (e.g. lowest cost access to freight services), stable workforce availability and institutional advantages (access to public infrastructure, ease of planning and cost-of-compliance) are highest.

Production of broadacre crops, hay and silage, and livestock experienced significant growth over the last 5 years. The shires produce just over 10% of the state's broadacre crop production. Although hay tonnages are relatively low compared with grains there are increased opportunities for export from the region. For further detail on the outputs of agricultural production, refer to Table 2-1 below.

Almonds in the study area represent a significant proportion of all Australian nut production by tonnage (45%). Approximately 68,000 of 151,000 tonnes of almonds produced nationally in 2019 were produced within the Victorian and NSW Murray Region, between Swan Hill and the SA border[9]. Almost 70% of Australia's almond orchards are in the NSW, Victorian and SA Murray Valley and the majority of these are located between Swan Hill and Robinvale. Almond production in the study area is projected to increase to 100,000 tonnes by 2030 as the orchards mature. In addition, significant imports of almonds from the NSW Murray, Murrumbidgee Valley and SA Riverland are processed at the two large processing plants near Robinvale. Swan Hill RCC is the largest centre in Australia for growing, processing, and transporting almonds to market in Australia; and the operations centre for the two largest grower-processors (Olam and Select harvests). Almonds are initially processed locally, before transport (by road) to Melbourne and Sydney for packaging and distribution.

Table 2-1: Summary of agricultural output, tonnes 2019-20

AGRICULTURAL OUTPUT	JURISDICTION			SHARE
	Swan Hill	Gannawarra	Study area	State share %
Broadacre crops (tonnes)	734,256	*222,158*	956,413	11%
Fruit and nuts (tonnes)	224,369	6,470	230,839	30%
Hay and silage (tonnes)	55,941	109,393	165,334	4%
Vegetables (tonnes)	61,272	271	61,543	9%
Livestock produced (no.)*	144,609	187,826	332,436	1%
Milk (tonnes raw milk)	16,192	306,211	322,403	4%
Wine (million litres)	29	3	32	24%

Notes: 2019-2020 LGA figures were derived using the 2015-2016 Agricultural Census data, adjusted for growth in the North-West region during 2016-2020. Sources: ABS (2016), *Agricultural Commodities, Australia–2015-16*; ABS (2020), *Agricultural Commodities, Australia–2019-20*; Wine Australia (2021), *Australian Wine: Production, Sales and Inventory 2019–20*; Wine Australia (2017),

[9] Guide to Australian Almonds Almond Board of Australia 2018

Australian Wine: Production, Sales and Inventory 2015-16; Agriculture Victoria (2021), *Dairy Farm Monitor Project - Victoria Annual Report 2019-20*; Agriculture Victoria (2017), *Dairy Farm Monitor Project - Victoria Annual Report 2015-16. Although dairy industry production is typically stated as milk solids, raw milk tonnages have been cited.*

A summary of the GVAP of agricultural output (farm gate value) by shire and its state share is provided in Table 2-2 below. The region produces 42% of the gross value of fruit and nuts and 17% of grains and hay value in Victoria.

Table 2-2: Summary of gross value of agricultural output ($m), 2019-20

AGRICULTURAL OUTPUT	JURISDICTION			SHARE	
	Swan Hill	**Gannawarra**	**Study area**	**% GVAP**	**State share %**
Broadacre crops	242.6	67.8	310.4	19%	10%
Hay	19	48.4	67.4	4%	7%
Fruit and nuts	846	6.6	852.5	53%	42%
Nurseries	32	0.19	32.0	2%	5%
Vegetables	74.8	0.80	75.6	5%	7%
Livestock slaughtered	26.2	102.2	128.4	8%	2%
Livestock products	13.9	117.3	131.1	8%	3%
Total agriculture	**1,254.3**	**343.2**	**1,597.5**	**100%**	**9%**

Notes: 2019-2020 LGA figures were derived using the 2015-2016 Agricultural Census data, adjusted for growth in the North-West region during 2016-2020. Sources: ABS (2018), *Value of Agricultural Commodities Produced, Australia–2015-16*; ABS (2021), *Value of Agricultural Commodities Produced, Australia, 2019-20*; Wine Australia (2021), *Australian Wine: Production, Sales and Inventory 2019–20*; Wine Australia (2017), *Australian Wine: Production, Sales and Inventory 2015-16.*

Quarrying

A number of stone quarries operate locally supplying mainly road making materials for use within and in adjoining LGAs. Gypsum is also mined (Chinkapook and Kerang Lakes) and its use is increasing on both broadacre farms and in irrigated agriculture as farmers seek to improve soil health and production (Table 2-3).

Table 2-3: Quarrying output 2020-21

MINING OUTPUT & GROSS VALUE	JURISDICTION		
	Swan Hill	**Gannawarra**	**Study area**
Mining gross value $	5.63	0.98	6.61
Mining output tonnes 2020-21			
Gypsum	406,941	96,060	503,001
Sedimentary		276,866	276,866
Limestone	110,606		110,606
Sand & gravel	4,922		4,922
Total	**522,469**	**372,926**	**895,395**

Employment

Primary industries are a significant source of direct jobs in the two LGAs, employing 3,200 people or 24% of the workforce. The majority of jobs are in agriculture and a further 620 jobs are provided by the food processing, mining and road freight sectors (Table 2-4).

Table 2-4: Primary industries employment, 2020-21

EMPLOYMENT SECTOR	SWAN HILL	GANNAWARRA	STUDY AREA
Agriculture	1,513	1,060	2,572
Food processing	226	123	349
Mining	32	43	75
Road freight	132	72	203
Total	1,903	1,297	3,200
Total employment (labour force)	9,126	4,275	13,401
Proportion of total labour force	**21%**	**30%**	**24%**

Notes: Sources - LGA and SAF for 2016 - Census of Population and Housing, 2016, TableBuilder

SA4 for 2020 - Employment by Industry Time Series, August 2021 (ABS Labour Force Survey, four quarter average)

Agriculture accounts for 19% of total employment comprising 17% of total employment in Swan Hill and in Gannawarra, this figure increases to 23%. The bulk of the jobs are in the fruit and nut industry, livestock and grain farming, and dairy. For further detail, refer to Table 2-5 below.

Table 2-5: Agricultural employment, 2020-21

AGRICULTURAL SECTOR	JURISDICTION		
	Swan Hill	**Gannawarra**	**Study area**
Fruit and tree nut growing	784	19	803
Sheep, beef cattle and grain farming	393	344	737
Dairy cattle farming	34	499	533
Other livestock farming	4	64	68
Other agriculture	297	134	430
Total agriculture	**1,513**	**1,060**	**2,572**
Growth since 2016	6.8%	6.8%	6.8%
Share of LGA's total employment	16.6%	23.2%	19%

Notes: 2019-2020 LGA figures were derived using the 2015-2016 Census data, adjusted for growth in the North-West region during 2016-2020. Sources: ABS Table Builder (2016), *Census of Population and Housing, 2016*; ABS (2021), *Labour Force Survey, SA4 - Employment by Industry Time Series, August 2021*.

2.3 TRENDS IN PRIMARY INDUSTRIES FREIGHT TASK

Regional Agriculture continues to evolve with agricultural logistics and agricultural processing becoming more focussed on improved efficiency. Emerging industries, a changing of focus and examples of new agriculture related businesses in the study area includes:

- Pentarch Agricultural: (Ultima) cereal hay processing and containerisation for dairy and beef cattle feed, utilising road and rail freight to transport containerised outputs to customers throughout SE Australia and to port for international export

- Andrew Peace wines: there are several local wine grape crushers servicing the 2,200 ha of cabernet sauvignon and chardonnay wine grapes, although additional tonnages of wine grapes utilise road transport for crushing at wineries outside the Swan Hill region(Mildura, Rutherglen, Barossa Valley SA , and Griffith NSW)
- Swan Hill RCC is second largest LGA (besides Mildura) for fruit and vegetable growing, processing and packing and is expected to retain this position (dominated by table grapes, almonds and carrots)
- Select Harvests: nut growing, nut processing and packaging of nuts grown within the Swan Hill shire (near Wemen, Robinvale and Boundary Bend) and from other Victorian, SA and Murrumbidgee orchards located throughout the southern Murray Darling Basin; new orchard establishment has stabilised but large areas are yet to reach their full production potential
- Woodward Meats Australia: abattoirs (dominated by Woodward Meats Australia P/L located near Swan Hill city) is one of Australia's largest meat wholesalers and operates a large fleet of livestock transports bringing in cattle from throughout a large area of SA, NSW, Qld and Victoria, and refrigerated vehicles transporting meat to markets in Brisbane, Sydney and Melbourne
- Pentagon Feeds (Cohuna): is one of a significant number of feed mills utilising local grain and hay delivered by road and distributing feed in pellet or processed form thus supporting production in local and nearby dairy and livestock industries
- Emerald Grain: is one of a number of grains receival sites in, and very near, the borders of the two council areas (notably at Piangil/Woorinen, Ultima, Robinvale, Manangatang and Quambatook). Grain receivals are universally supplied by road and deliver to customers using a combination of road and rail. Despite substantial utilisation of rail services the proportion of grain delivered from these receival sites to port, and to customers throughout SE Australia by road, is increasing. HPFV's play an important role in delivering this grain to port and direct to customers.

The largest tonnage of any commodity in the two council areas is broadacre grains mostly wheat, barley, canola and pulse crops (956 thousand tonnes in 2019-20). Harvested tonnage (Nov-Dec annually) is highly variable due to rainfall dependency and is distributed between deliveries to local grain receival centres, delivery to Port of Melbourne/Port of Geelong, delivery to SE Australian consumers (flour mills, feed mills, feed lots etc) and storage on-farm for post-harvest delivery to export and Australian end-users.

Hay production has increasing importance, and as a relatively low value (per tonne) crop, will benefit from any shift to HPFV and savings in transport costs. This industry has developed in the last 10 years as a result of improvements in: hay baling technology (large, high density square bales suited to compact stacking and efficient transporting), mechanised hay handling equipment (large capacity forklifts), and increased utilisation of HPFVs improving the economies of hay movement over long distances. The emergence of export industries based on premium quality hay has enabled the conversion of compressed hay into a valued and high density premium livestock feed-pellet. Increased demand for hay has been driven by repeated drought-periods throughout SE Australia (commencing in 2002 and most recently in 2017-19).

Dairy, particularly in Gannawarra, is a significant contributor to the regional freight task (39% of gross agriculture production; an average of 1,560 tonnes raw milk per farm from an average of 280 milked cows delivered evenly over 12 months per year). Milk is typically transported to Rochester in bulk refrigerated tankers then forwarded for processing, usually to Tatura, Strathmerton or Shepparton (outside the study area). Many of these farms are located on council roads which often incorporate ageing and load-limited bridge and culvert irrigation infrastructure, owned by GMW. These structures which sometimes are the load limiting factor for a local road, are a critical part of the irrigation supply and drainage infrastructure.

Already refrigerated milk transport operators have developed complex models for optimising the use of high capacity tankers for on-farm pick-ups, and even seek approval for part filled HPFV's to use load limited roads earlier in the daily pick-up roster, and finish with the last milk pick-ups from farms with direct access on to HPFV roads, usually highways.

Advice from Gannawarra SC indicated that there is a current proposal for a large sand mine near Lalbert that will extend across both LGAs and will have at least some dependence on the local road network. The current project proposal is to excavate and process 10 million tonnes per annum and extract and export 300,000 tonnes from the region for post processing. The partially refined sand will be forwarded for processing in southern Victoria or South Australia. HPFVs will form a critical role in the movement of the sand by road to either a rail intermodal site for forwarding, or for the entire freight task, directly to the refinery.

2.3.1 GRAINS FREIGHT TASK

The grains freight task is the largest in the study area and while grain production levels fluctuate with seasonal conditions the freight task has changed considerably over the past decade. This has been impacted by the following factors:

- **More grain stored on farm**: A large increase in the volume of grain stored on farm within the two council areas because of rapid daily harvesting rates, the high cost of rail freight and associated grain handling, and the desire of farmers to engage more actively in transporting and marketing their own grain to customers or to port for export. Industry experts estimate that the amount of grain stored safely (good quality steel silos) in NSW, Qld and Victoria has doubled[10]. Nationally, it is estimated over 40% of grain grown can now be stored on-farm[11], a doubling of capacity in the last 10 years.
  The storage capacity on a Victorian grain growing property is likely to be significantly higher than the national average especially when the use of the increasingly popular 'grain bags'[12] are included
- **Rising cost of handling at receival points**: Apart from the harvest convenience and an increased capacity to market grain independently, on farm storage is becoming more financially attractive to farmers. Using the schedules of fees available online[13] the combined receival, out loading, storage (months) and freight of a tonne of grain stored at a representative receival site at Piangil in the Swan Hill RCC area, transported to the port of Melbourne (350km) in the 2021/22 harvest costed a grower approximately $28 for the handling and storage, and a further $37.50 for the 380km freight. These costs have increased the demand for efficient movement of grain directly from cost-effective farm storage to port, or from farm storage to domestic customer in a single cost-effective movement.

In addition, many farmers would prefer, if possible, to utilise efficient transport to send grain directly from the 'paddock to the port' or 'paddock to customer' as the crop is harvested (or from on-farm storage facilities) thus reducing double handling associated with short haul deliveries to more local grain receival sites ensuring rapid payment.

- **Increased domestic consumption**: As population and demand for grain fed livestock increases more than 40% of Australian grain is now used as the key input into SE Australian chicken meat production, feed for other livestock industries, and local flour milling, rather than exported in bulk (Figure 2-3 shows a steady increase in domestic demand for grains in Victoria)[14]. Most of these livestock industry customers do not have rail access to their feed mills and receive 100% of their grain needs by road. Australian Grain Innovation's outlook for 2030 forecasts that Australia's domestic market will consume over half of the increase in grain production leading up to 2030 as demand for domestic (livestock) feed grain as well as grain for food and beverages market opportunities increase[15]
- **Changes in grain exports from Victoria, particularly bulk exports**: The trend away from bulk export shipments out of Victoria was disrupted when a record 5 million tonnes of grain were exported in bulk in 2020-21 following an exceptional harvest bringing an exportable surplus (Figure 2-3). This meant that bulk grain shipments made up almost half of all grain usage (increasing from only 14% of Victoria's grain usage

[10] AEGIC 2018 Australia's Grain Supply Chains: Costs risks and opportunities, report prepared by the Australian Export Grains Innovation Centre
[11] Stored Grain Information Hub, supported by GRDC
[12] GRDC estimate 9% of Australia's harvest is stored utilising grain bags
[13] Grain Trade Australia Location Differentials, Victoria 2021
Kondinin Group 2021
[14] Australia Grain and Feed Annual April 2019, prepared by USDA Foreign Agricultural Service
[15] AEGIC Australia's Grain Outlook 2030, report prepared by the Australian Export Grains Innovation Centre

the previous year). In 2019-20 the annual export tonnage was only 0.6M tonnes 60% less that an average of 1.4M tonnes over the previous six years.[16]

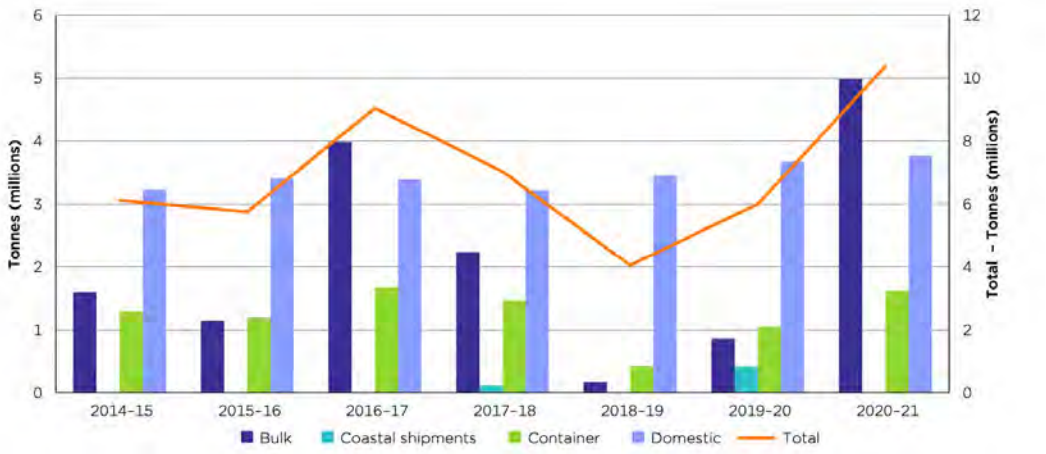

Figure 2-3: Victoria's grain usage, 2014-15 to 2020-21[17]

- **A large and growing containerised grain market:** Victoria has one of Australia's largest and most stable containerised export markets after containerised grain emerged as a grain export option during the early 2000s. In the 2020-21 shipping year, 1.6 million tonnes were exported via containers (increasing from a high of 1.1 million tonnes in 2019-20)[18]. Apart from the small number of in-port packers most packing in Victoria is completed in regional locations (including at a number of sites within and adjacent to the Swan Hill RCC and Gannawarra SC areas), with bulk grain and 'up country' containerised grain moving to port by both rail and road.
- **A commercial imperative to stay competitive**: Victorian operators need to match the performance and cost efficiency of interstate grain growers, particularly within NSW, Qld and SA where growers are able to access larger and more rapid movement of grain utilising an ever-expanding fleet of HPFV's able to economically access most roads from farm storage sites in their home state networks.

2.3.2 RAIL

Grain movement in the study area was traditionally conducted utilising Victoria's Government supported rail and bulk-receival network with multiple small receival sites at 10-20km spacings along rail lines. Since the 1990s most local receival sites have been closed, and larger receivals equipped by large specialist organisations (GrainCorp / Emerald Viterra), with modern and safe grain handling, grain testing, grain segregation, and grain loading facilities now dominate shared grain handling. GrainCorp remains the largest port terminal service provider (PTSP) in Victoria, however, it experienced its lowest share of throughput to date (56%) in 2020–21. Emerald accounted for 24% of Victoria's throughput[19].

Although nearly always located on rail lines all grain arrives by road transport from the farm, and these organisations utilise significant volumes of road freight for exports from sites, particularly to supply grain to interstate customers, to SE Australian feed, malt and flour mills, and directly to the large regional livestock feed-lot customers.

[16] ACCC 2021, Bulk Grain Ports Monitoring Report 2020-21, report prepared by the Australian Competition and Consumer Commission
[17] ACCC 2021, Bulk Grain Ports Monitoring Report 2020-21, report prepared by the Australian Competition and Consumer Commission
[18] ACCC 2021, Bulk Grain Ports Monitoring Report 2020-21, report prepared by the Australian Competition and Consumer Commission
[19] ACCC 2021, Bulk Grain Ports Monitoring Report 2020-21, report prepared by the Australian Competition and Consumer Commission

The Murray Darling Basin rail initiative was designed to standardise rail lines throughout northern Victoria, including the Piangil (Swan Hill) and Robinvale (Ultima) lines which provide freight and passenger rail services to the Gannawarra and Swan Hill RCC council areas. However, the failure to complete the project leaves the two key rail lines in the region with broad gauge lines (Figure 1-2, chapter 1), increasing the dependence on a dedicated and ageing fleet of diesel locomotives and rolling stock, and creating the risk of separation from the mainstream SE Australian grain delivery network.[20] Although it remains the policy of governments to maintain and to encourage transport of bulk goods to port by rail, the uncertainty created by the failure to complete these modernisation and integration works requires increased local investment in more road-based solutions, including road upgrades to allow access for HPFV's.

3 Prioritising road upgrades: evidence base

3.1 FREIGHT CHALLENGES AND INSIGHTS

3.1.1 OVERVIEW

Discussions were held with approximately 20 industry stakeholders in-person, by video link or over the telephone with the aim of providing a local and current focus when outlining the current challenges and opportunities that drive current freight services.

The list of industry stakeholders was compiled by RMCG after reviewing input and suggestions from DoT and council staff. The aim was to engage in brief structured interviews with representative and active local participants in the industries of processing, mining, quarrying, primary production and freight. Most potential interviewees agreed to a structured interview where their views on a wide variety of freight related issues were heard, including:

- Outlining their own annual freight task
- Key commodities grown, stored, processed or carried
- Dominant destinations for freight
- Trends observed in freight movement
- Utilisation of the locally accessible broad gauge rail network
- Experiences related to permit applications for travel by HPFV's on minor or linking roads, and
- Views and suggestions related to current and future access to highways and main roads from the local roads network (i.e. nominating roads or sections of roads or intersections most in need of upgrade from the perspective of the operator/producer).

The trend towards more HPFV use was found to be central to current business planning for almost all stakeholders interviewed. The key issues driving this push were the financial savings per tonne/km of freight carried and for the freight companies, the growing problems associated with finding and retaining quality truck drivers, necessitating the need for larger capacity vehicles which require less drivers per tonne carried.

Councils, freight operators, producers, processors and customers all agreed the use of HPFV's is increasing, and that increasing access was important for all involved in production and freight operations to maintain safe and cost-competitive services for their customers. Almost all industry interviewees indicated their own plans to increase the utilisation of HPFV's (particularly A-Doubles or road trains) as soon as the road network expanded and that extending, upgrading and maintaining the network of local roads capable of carrying the growing national and local fleet of HPHVs is important for the future of the region. Nearly all respondents confirmed that the growth in the network had been significant and encouraged councils and state road agencies to continue to expand the network of roads that can accommodate HPHV's.

Interviewees were either freight operators or producers/processors with a large freight task. They had a strong understanding of the issues with restricting access of HPFV's to the local road network. Some individual businesses were large operators, one with more than 110 registered road freight vehicles/trailers.

Several acknowledged a significant and very welcome improvement in access for HPFV's during the last 10 years throughout the Swan Hill RCC as a result of road improvements, and reclassification by the council and other road authorities and were optimistic that access for HPFVs will continue to be expanded.

All operators (with exception of those engaged almost exclusively in the local quarry industry) were running some HPFV's to move a proportion of freight into, from and through the study area and were seeking to increase the proportion of freight moved utilising larger capacity vehicles.

3.1.2 GROWTH PROJECTIONS AND FREIGHT NEEDS

All freight operators expected business growth and anticipated both growing freight volumes and a continuing shortage of skilled drivers. They all highlighted the importance of using more HPFVs to facilitate and enable this growth.

Freight operators indicated that greater HPHV road access to local roads would lead to an increase in the number of larger vehicles, particularly their fleet converting from B-Doubles to more A-Double configurations. The single 'semi' (i.e. one large 12m approx. trailer) would remain important for farmer operators of a single bulk transport, and for tasks where site access was an issue e.g. on-farm dairy feed delivery, access to some inner city malt-houses.

For almost all producers and processors the freight task had grown in recent years. In the case of winegrowers and horticulturists the growth has been significant as plantings mature and crop management improvements are realised. In a number of cases production increases in the last 5 years have been in the order of 50% in terms of tonnes grown p.a.

All interviewees (other than quarrying) indicated that they would support and want to see an increase in the freight task conducted using A-Doubles. During the interview period (late 2021 and early 2022) fuel prices were rising rapidly, and transport driver availability was reported as falling, so many transport operators conveyed a very real sense of urgency for change. The operating cost and labour efficiencies were deemed substantial and growing.

If more roads became accessible, transport operators estimated that up to 60% (or greater) of the total freight task could be moved using HPFVs. This would represent a similar migration to the move from single semi-trailer to B-Double between the introduction of B-Doubles into Victoria and throughout SE Australia in the early 1990's.

It was difficult to determine from the interviews just where the benefits and financial savings achieved of converting to more HPFVs to transport rural produce would be distributed. A simple analysis, supported by some interviewees, would indicate that during periods when rural freight was in demand (i.e. particularly during good seasons with a large SE Australian cereal crop), the benefits of more efficient freight movement will accrue to transport operators, and in lower production years, when demand for transport is lower and supply is plentiful, growers and producers will enjoy the savings.

FREIGHT ORIGIN AND DESTINATION

Several producers and most processors reported having existing HPFV access to the main highway directly from their farm or business, but several mentioned local roads that they would prefer to use to get their product to port or to customers i.e. it was typically a 'last kilometre' issue. When prompted, all participants named at least one local road that impeded their access to highways or the PFN.

The refrigerated tanker transport operators and processors servicing the regional dairy farming community provided a broad geographic perspective regarding the local road network regularly picking up milk from hundreds of dairy businesses dotted throughout the GMID i.e. irrigated areas at the southern end of SHRCC and to the east of the Gannawarra Shire Council area, to transport milk to central bulk milk distribution hubs, and processing plants outside the council areas (in Rochester, Cobram, Strathmerton, Shepparton) and beyond.

Many interviewees wanted to highlight their extensive concerns regarding the condition of some sections of State highways, bridge limits on highways and a range of Port of Melbourne access issues rather than focus on this initiative (i.e. local road access issues).

Interviewees identified a wide range of freight carried on local roads throughout the region including grains, fertiliser, stone/quarry products (both local and from southern Victoria), gypsum (local and interstate), salt, stockfeed, milk, livestock, refrigerated meat products, general freight, fruit and vegetables. All interviewees, except Kelvin Baxter Transport P/L based in Berrigan NSW and McColls refrigerated milk tanker operators (Rochester), had operations based within the two shire areas. As major contractors to national grain handlers, Baxter's operate a fleet of more than 38 bulk grain vehicles generating significant through traffic into NSW from the two council areas and nearby wheat growing areas in Northern Victoria and Southern NSW. McColls and other milk tanker operators collect raw milk from dairy farms throughout Victoria, and within the study area, carrying a large proportion of milk produced on irrigated dairy farms to processing and distribution facilities.

The most common destination of freight cited was the Port of Melbourne with other receival/processing destinations near the port (i.e. northern/western Melbourne warehousing and distribution facilities) also a key destination for many freight operators. In terms of origination of inbound freight, fertiliser from Port of Geelong was the most commonly cited import into the region.

Operators also spoke of interstate linkages and the importance of being able to use HPFVs with common dimensions and axle load limits, to link and simplify compliance for their freight task to multiple interstate destinations (NSW, SA and Qld).

RAIL FREIGHT COMPETITION AND USE

Most participants believe the *proportion* of freight grown and produced locally that is carried by road will continue to grow and had observed a reduction in rail services available (particularly in the north of the region) and felt that the commitments by both state and federal governments to improve rail freight services were uncertain.

However, two interviewees had a different view and outlined the importance and the value of the rail and intermodal facility at Ultima which enables the efficient and timely transport of both hay and wine to port in containers, via rail.

Discussions with Port of Melbourne[21] indicated there was ongoing investment in an urban *spoke and hub* model with shuttle trains bringing containers and other freight into the Port from inter-modal terminals on the outskirts of Melbourne (Beveridge, Truganina) delivered to the intermodal ports by both road and rail. Investment has been in the order of $61M from the Australian Government (Department of Infrastructure, Transport and Regional Development, 2 Dec 2021) to further develop these options. The Victorian Government Freight Plan is also planning for intermodal terminals in the regions (e.g. Shepparton, Warrnambool and Mildura corridors). Commitments of $3.1 billion were made by the Federal Government in March and April 2022 to funding the further development of intermodal sites in outer urban areas of Melbourne linked by rail-shuttle services to the Port.

The Port of Melbourne indicated the Port Rail Shuttle network investment is expected to result in 30% of Melbourne's containers to be delivered to the Port of Melbourne by rail by 2050. They recognised the need to address community concerns related to increased road transport movements near to the port as well as the need to remove pinch points which were limiting the routes available to HPFV's servicing the Port.

[21] And recent announcements by the Commonwealth Government

3.1.3 HPFV ACCESS LIMITATIONS ON ROAD NETWORK

Road access limitations on HPFV use are substantial in the study area.

Parts of Victoria's road freight network are currently capable and approved for use by HPFVs i.e. no access permit required. There are gazetted networks of roads for a wide range of HPFV configurations, particularly in Swan Hill RCC and less so in Gannawarra SC. The gazetted roads (collectors, sub-arterial, arterials) in the study area for a particular PBS vehicle class are shown in Figure 3-1.

Feedback during consultation indicated that the ability of agricultural industry freight operators to utilise higher mass vehicles is constrained by mass constraints on specific points of the network. While there are considerable mass constraints concentrated along the main arterial routes into Melbourne there are also constraints on accessing key regional routes. For example Kerang-Koondrook Rd is restricted to 68.5 tonnes due to the Koondrook bridge over the Murray River (Figure 3-1 red shaded road).

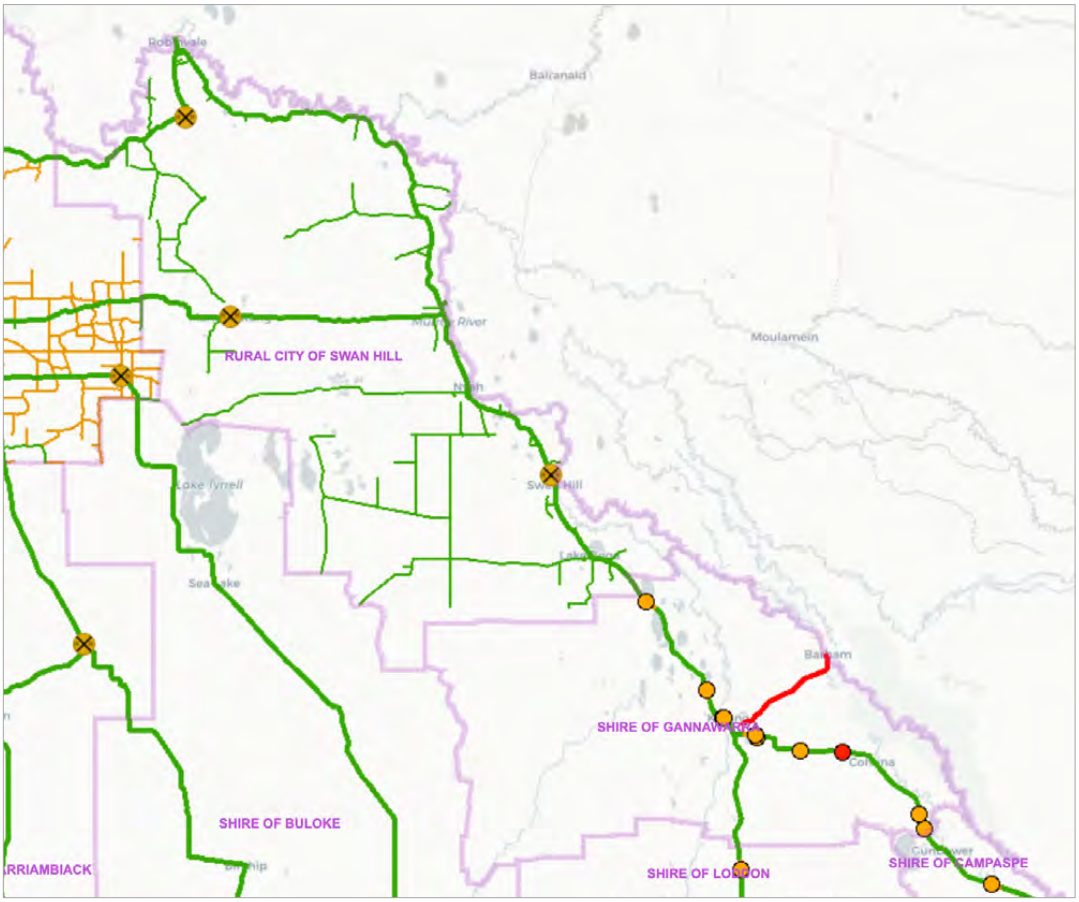

Figure 3-1: Extract from Victoria's heavy vehicle map network

Source: https://www.vicroads.vic.gov.au/business-and-industry/heavy-vehicle-industry/heavy-vehicle-map-networks-in-victoria/cl2-pbs-hpfv (PBS_Level_3A Mass - General Freight Network for Reference Vehicle 1)

Freight and transport operators pointed to the wide variation in council's acceptance of HPFVs, for example, the Mildura Rural City Council (and more recently, the Buloke Shire Council) had opened access to HPFVs across the large majority of its road network (Figure 3-1 - orange shaded roads) several years ago.

More recently Swan Hill RCC approved access by HPFV on 28 collector roads and 63 other local access roads during 2021 (Figure 3-1 – green shaded roads). Only the Murray Valley and Loddon Valley Highways are approved for HPFV access in Gannawarra SC.

Due to the disparity in HPFV access between state and local jurisdictions, interviewees felt that they were being impacted in several ways.

Operators indicated competitors were moving products (wine grapes, livestock feed, vegetables, fruit, nuts) directly from farm to customers/port utilising HPFV vehicles from interstate and within nearby LGAs. Also, producers and processors imported raw materials (fruit for packing, raw vegetables for processing, livestock etc) from interstate, nearby and distant LGA's (e.g. Griffith/St George/ SA Riverland/Mildura) where HPHV vehicle access to farms was more widely available, and then exported a significant proportion of processed meat, fruit, nuts, cereals and other goods interstate (Sydney/Brisbane/Adelaide).

More universal access for HPFV's along more local roads, which connect 'the last kilometre' to a greater number of farm businesses and key processors would make the inward and outward-bound freight tasks significantly more efficient and competitive.

Several interviewees quoted specific access "pinch points" e.g. safe entry onto highways due to an intersection with poor delineation or lack of a merging lane onto highway and all were able to cite specific local road sections that should be a high priority for upgrade to allow HPFV access. The interviewees priority roads for upgrade are summarised in Table 3-1.

Table 3-1: Local roads with demand for HPFV access - identified during consultation

ROAD	COMMENT
Swan Hill RCC	
Boundary Bend-Kooloonong Rd	Kooloonong: part sealed
Robinvale - Hattah Road	Wemen
Swan Hill - Waitchie Road	(to) Swan Hill
Swan Hill - Ultima Road	Section with non-approved access
Sea Lake - Robinvale Road	(near) Robinvale; intersection where Swan Hill Rd enters 3 km south
Collins Road	Wemen, onto Hattah - Robinvale Road
Fish Pt Rd	(Turns Davies Rd)
Knight Rd	Bannerton
Murraydale Rd	Tyntynder
Winnambool Road	Manangatang
Piangil-Connomere Road	Piangil
Pental Island Road	Swan Hill
Kentish Lane	Piangil
Murray Dale Road	(from Highway) Tyntynder; includes constrained bend
Winnambool Road	Annuello
Reserve Road	Piangil (onto Highway)
River Road	Swan Hill North (onto Highway)
Gannawarra SC	
Kerang - Leitchville Road	Avoiding townships; short cut to Murray Valley Highway
Mystic Park - Goshen Road	(to) Quambatook and back to Murray valley Highway
Cumnock Road	(to) Mystic Park; only part of road is sealed (to quarry)
Murrabit - Benjeroop Road	Murrabit
Benjeroop - Lake Charm Road	Benjeroop

3.1.4 NHVR PERMITS AND COUNCIL APPROVALS

Views and other feedback on the use of the National Heavy Vehicle Regulator (NHVR) Portal to apply for and track applications for HVFV access permits were mixed with some complementary comments provided.

Permit assessment generally took 7 to 10 days however this could extend to months in some cases. Applications seeking access to local roads were referred to councils and there were perceived inconsistencies in the application processes between LGAs (e.g. requirement for a full analysis versus a brief assessment).

Some made regular and frequent permit applications and others were more reticent and were waiting for more universal pre-approval to more roads before further investing in HPFVs. Notably, however, only a small number felt the process to be so arduous that they didn't engage with it at all.

All interviewees had been refused permits on some roads (operators, processors, producers) and several expected that operators did not apply for permits to obtain (last kilometre) local road access.

Gazetting of roads for pre-approval for HVFV access was reported as painfully slow. Notable however, many local roads in the Swan Hill RCC were gazetted for HPFV access in September 2021. Data provided by Swan Hill RCC on permit applications is summarised in the following Section 3.2.

Operators reported that transparency on permit application decisions (approvals and rejections) would be of benefit, for example, a publicly accessible data base (applicants deidentified) would be useful.

To demonstrate the importance of access to more local roads operators indicated a willingness to adhere to quite severe speed restrictions on minor roads if it enabled increased access to more roads currently ineligible for permits and resulting in resolving the 'last kilometre' safety or bridge capacity issues that currently limit the use of HPHV's for many freight tasks within the two LGA's.

3.1.5 OTHER AUTHORITIES LIMITING HPFV ACCESS

During the study it was found that authorities other than road authorities or Councils also have a role in enabling increasing access for HPFV's throughout the study area.

Goulburn Murray Water (GMW): is Australia's largest water corporation and is a statutory Victorian government Water Corporation. GMW operates to maintain infrastructure and to provide irrigation water supply and drainage services within the Goulburn Murray Irrigation District (GMID). GMW supplies irrigation water and drainage services through a network of open canals and other infrastructure to more than 600,000Ha of farmland throughout northern Victoria, including parts of the Gannawarra and Swan Hill RCC council areas. Many of these structures have load limits which limit the use of HPFV's

The GMW canal and drainage system network structures, typically smaller bridges and culverts on council roads, are often narrow structures more than 60 years old and act as a key limiting factor for enabling HPHV access. Although the structures are owned and maintained by GMW, the organisation is a state water authority which prioritises water delivery and is not a road authority[22] with budget or capacity to respond rapidly to increasing vehicle sizes and growing freight needs from a smaller cohort of larger dairy farms, with larger weekly milk outputs that must be collected.

This issue was cited by a number of interviewees, particularly milk companies, and the bulk liquid transport operators collecting milk from approximately 250[23] dairy farms throughout the region. A small proportion of these farms currently have direct access to highways and main roads enabling HPFVs to collect fresh milk.

[22] i.e. as designated by VicRoads.

[23] Current Gannawarra Council dairy industry data indicates 60,000 cows within the GSC with an av herd size of 260 cows per business.

Rail Level Crossing (ARTC): have specific approvals requirements for HPFV's. The minor road network in the council areas is crossed at several sites by the two rail lines servicing the region. The Victorian Government Agency VicTrack owns all rail lines in Victoria and leases them to various freight and passenger rail operators.

Recently, the Australian Rail Track Corporation (ARTC), a large rail track operator/maintainer, has been criticised by the National Road Transport Association (NatRoads)[24] for its requirements in relation to HPHV's crossing a number of rail level crossings, notably the rail level crossings on minor roads. Based on the submission by NatRoads to the ACCC this issue appears likely impact approvals sought (permits) and access for HPFV's seeking access to all local roads which cross ARTC rail lines. It is not clear if these requirements will be mandated for the Swan Hill and Ultima Lines, the two rail lines servicing the study area.

Specifically, the NatRoads submission to the ACCC claimed:

" *….. the heavy vehicle access regime is a mess, with the permit system in place reactive and focused solely on the short term. An element of the process that is clunky and time consuming for road freight operators is obtaining separate and distinct approval from rail operators to cross their tracks. This is a separate required task and not one within the jurisdiction of the National Heavy Vehicle Regulator (NHVR)."*

Swan Hill RCC and Gannawarra SC road and rail maps highlights the significant number of crossings that would be impacted should access for HPFV's to the local road network be extended and the sort of access and inspection provisions required by ARTC applied by the rail track owners and operators of the Swan Hill and Ultima rail services.

3.1.6 STATEWIDE AND INTERSTATE ISSUES

The Council areas border NSW and have a high volume of freight moving over the Murray River crossings at Barham, Murrabit, Swan Hill, Tooleybuc and Robinvale. This freight includes both through traffic (particularly Adelaide SA to Sydney NSW) and the crossings enable opportunities for local producers to efficiently access a wide range of regional and urban interstate customers. Recent upgrades and proposed upgrades to the Murray bridge crossings at Barham[25], Swan Hill[26] and Robinvale[27] have and will provide more HPFV access and better connect the region to all of SE Australia. To enable full utilisation of these improved crossings, a number of local roads in both SHRCC and GSC will also need to be improved and reclassified to fully benefit from the improved linkages to SE Australian markets that these bridge Improvements enable. Access to SA destinations utilising HPFVs on approved HPFV linking highways through Ouyen (Mallee Highway) and Mildura (Murray Valley Highway) is also important for bulk grains and for many producers in the horticultural sector.

3.1.7 HPFV ACCESS AND COST EFFICIENCY

All truck operators agreed that there was at least a 10% saving (in the order of $4/tonne[28]) on the cost of grain movements from shifting from B-Double to A-Doubles and most believed the savings would be higher, especially due to labour shortages so they can move more product with less drivers. Access to suitable experienced drivers was repeatedly raised as a burning issue for operators.

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[24] National Roads Transport Association (NatRoads) submission to the ACCC in relation to ARTC 6 October 2021.

[25] In December 2021Transport NSW announced B-Doubles operating at Higher Mass Limits (HML) and Performance Based Standards Level Two vehicles operating at Tier One HML can cross the Barham Koondrook Bridge spanning the Murray River following a $31.5 million facelift, resulting in an upgraded mass limit

[26] A $60m Federal Govt contribution was committed to this proposed re-alignment on 17/05/2021. Commonwealth Dept of infrastructure Transport, Regional Development and Communications web page-accessed May 2022.

[27] The new Robinvale bridge was completed in 2007, a number of bridge-approach works have been subsequently completed.

[28] Noting this is consistent with a comparative financial model analysing the total annual operating and ownership costs and $ per tonne/Km costs of a B Double v and A Double transport operating from the Council area(s) prepared by a local trucking company

Dairy industry processors and tanker operators want to increase utilisation of HPFV and operators have adopted sophisticated optimisation modelling to enable decisions on use of the most efficient vehicles possible. Changing production levels and pick up locations and the additional constraint of GMW structures make it difficult to utilise their fleet to its highest capacity.

A worsening shortage of skilled truck drivers and fuel price increases in recent months (Feb-May2022) have combined to increase the cost of all forms of freight. At the same time, however, the value of some agricultural commodities grown and processed locally have also increased significantly. Table 3-2 outlines estimates of the typical cost of freight-to-market (or processing point) for a range of commodities grown in the study area.

Table 3-2: Relative freight cost by commodity

COMMODITY GROWN	EST. $/TONNE AT DESTINATION	EST. FREIGHT COST ($/TONNE)	% FREIGHT COST
Wheat	$390	$48	12%
Oaten hay (export)	$210	$25	12%
Milk	$560	$30	5%
Wine grapes	$1,200	$50	4%
Almond (whole ex orchard)	$3,500	$25	1%
Almond processed	$7,000	$61	1%

Notes: Commodity price (ex -farm gate and processed) estimates April 2022

The figures demonstrate the high cost of freight for some commodities compared to others and the importance of any measures that can reduce the cost of the task relative to other production costs for these sectors, for example, grains and milk compared with almonds.

3.1.8 'USER PAYS' FOR LOCAL ROAD UPGRADES TO ACCOMMODATE HPFV ACCESS

During the project consultation transport operators, producers and processors were asked about their views on 'user pays' to fund upgrades to minor roads that had proportionally high utilisation (and potential benefit) by a single user. Transport operators emphasised the high level of tax on fuel use currently applied to their industry and their firm view that this revenue should be expended on maintaining and upgrading a modern road network.

Some producers and processors indicated a willingness to contribute to specific minor road infrastructure, notably safe access and exit from their property or business onto public roads, and to contribute to improvements to short lengths of public roads to facilitate easier and safer HPFV access, but not to extensive expenditure on the council road network.

3.2 ROAD FREIGHT MOVEMENTS

3.2.1 REVIEW OF DATA SOURCES

The data analysis builds on discussions with council road managers and primary production and freight industry representatives (a broad range of producers, processors, and freight operators) to understand their current road infrastructure issues.

The purpose of this review was to assess the usability of each data source for Councils and develop a method or tool that councils could use to prioritise where to invest in road upgrade projects. Apart from ABS production data and local industry knowledge, four main data sources were examined that could inform road freight movements and be used to guide decision making on prioritising roads for upgrade.

These were:

- Freight movements modelling from CSIRO (TraNSIT model)
- Actual HPFV movements from Telematics Analytics Portal (TAP)
- National Heavy Vehicle Regulator (NHVR) Permit Portal data on applications for HPFV access to unapproved roads
- Traffic counts (AADT using traffic count classifiers).

The range of data sources made available to the study each provided useful insights on agricultural commodity freight movements on the road network, however, they were also found to have limitations, likely inaccuracies and inconsistencies.

Freight movements modelling (Transit CSIRO model)

In development since 2013, CSIRO's Transport Network Strategic Investment Tool (TraNSIT) is a computer-based model of freight transport movements (and associated costs) across Australia. Rather than relying on annual average daily traffic volumes (which do not provide information on the type of cargo being carried and are only calculated for major roads), TraNSIT uses industry data at enterprise level by looking at all movements between enterprises, including major and minor roads and last kilometre. The tool currently accommodates over 150 commodities, covering agriculture, fuels, forestry, mining, manufacturing and general freight, and covers commodity transport from farm through to processing, domestic markets and export ports. The TraNSIT tool was used to generate data on volumes of freight transported through the two LGAs (sorted by commodity and roads used).

Outputs of the CSIRO Transit model are shown in Figure 3-2 as a hierarchy of roads according to the annual total tonnage carried. According to the TraNSIT website, the data for each commodity is based on "the most recent representative year" within the 2015-2020 period.[29]

In summary:

- > 500,000 tonnes/year: Main arterials or State highways, Murray Valley Highway, Loddon Valley Highway and Mallee Highway, carried the highest annual tonnage
- 200,000 - 500,000 tonnes/year: Woorinen Rd, Dumosa - Quambatook Rd, Kerang Koondrook Rd
- 100,000 - 200,000 tonnes/year: Robinvale-Sea Lake Rd, Woorinen-Vinifera Rd, Boort-Quambatook Rd, Cohuna-Koondrook Rd, Donald-Swan Hill Rd.

CSIRO TraNSIT data was also used to compile a list of the top 14 agricultural commodities (by volume) transported through the study area annually. Grains, milk, wine grapes, potatoes and livestock make up a substantial share of goods transported through both LGAs. Table 3-3 includes commodities produced in, brought into and transiting through the LGAs; consequently, the volumes for some agricultural commodities are much greater than those documented in section 2.2 (which covers produce grown in the LGAs).

[29] https://benchmark.transit.csiro.au/docs/faq_transit_model_bm.pdf

Table 3-3: Highest volume freighted commodities transported within Swan Hill and Gannawarra[30]

	SWAN HILL RCC			GANNAWARRA SC		
	Commodity	**Tonnes[31]**	**Trailer loads**	**Commodity**	**Tonnes**	**Trailer loads**
1	Wheat	877,561	35,102	Wheat	545,445	21,818
2	Barley	370,259	14,810	Other grains	457,929	18,317
3	Other grains	298,446	11,938	Barley	392,011	15,680
4	Wine grapes	154,731	7,737	Milk (raw)	110,430	4,417
5	Potatoes	149,405	7,115	Cattle	102,920	5,146
6	Cattle	118,960	5,948	Canola	32,349	1,294
7	Sheep	78,570	5,238	Potatoes	31,504	1,500
8	Bottled wine	74,792	3,740	Bottled wine	24,428	1,221
9	Grapes	59,433	3,962	Almonds	22,737	1,263
10	Carrots	55,174	2,508	Milk	22,628	1,078
11	Goats	52,560	3,504	Grapes	22,556	1,504
12	Almonds	51,426	2,857	Pigs	16,716	1,393
13	Onions	42,818	2,141	Tomatoes	14,545	970
14	Olives	36,800	2,044	Olives	12,838	713
	Total	**2,420,935**	**108,644**		**1,809,036**	**76,315**

A comparison of broadacre crops volumes from ABS collected and TraNSIT data is shown in Table 3-4.

Table 3-4: Volumes broadacre crops (tonnes) grown versus freight volumes moved

JURISDICTION	AGRICULTURAL CENSUS (ABS)	TRANSIT MODEL	% GROWN IN LGA
Swan Hill RCC	734,256	1,546,266	47%
Gannawarra SC	222,158	1,395,384	16%
Total grains (tonnes)	956,414	2,941,650	33%

Source: ABS 2020, Transit model 2014 to 2019

There is likely to be a “last kilometre” freight task for a large majority of produce grown in the study area as only farms with direct access to the main roads, highways or approved roads can rely on utilising HPFVs. The study is aiming to derive the benefit of upgrading local roads - benefits to local and statewide economy.

Usability: The CSIRO TraNSIT modelling tool was found to be not user friendly and has restricted access to registered users only. The data was also found to be dated (ranging from 2014 to 2020) and outputs on tonnages transported by road were found to be very much underestimated for some roads, especially roads located off the main freight network. This was verified by interviews with freight operators and producers using these roads. Extracting data sets for analysis for the purposes of this study was time consuming and it was concluded that it would be difficult for Councils to routinely use the tool to provide guidance on setting priorities for investment in upgrades, particularly in regard to the minor road network where the tonnage inputs in the model were found to not reflect the actual freight movements.

[30] Latest available year, 2014 - 2019, depending on commodity

[31] Payload (tonnes) oved per year for each commodity net of any container, pallets or packaging

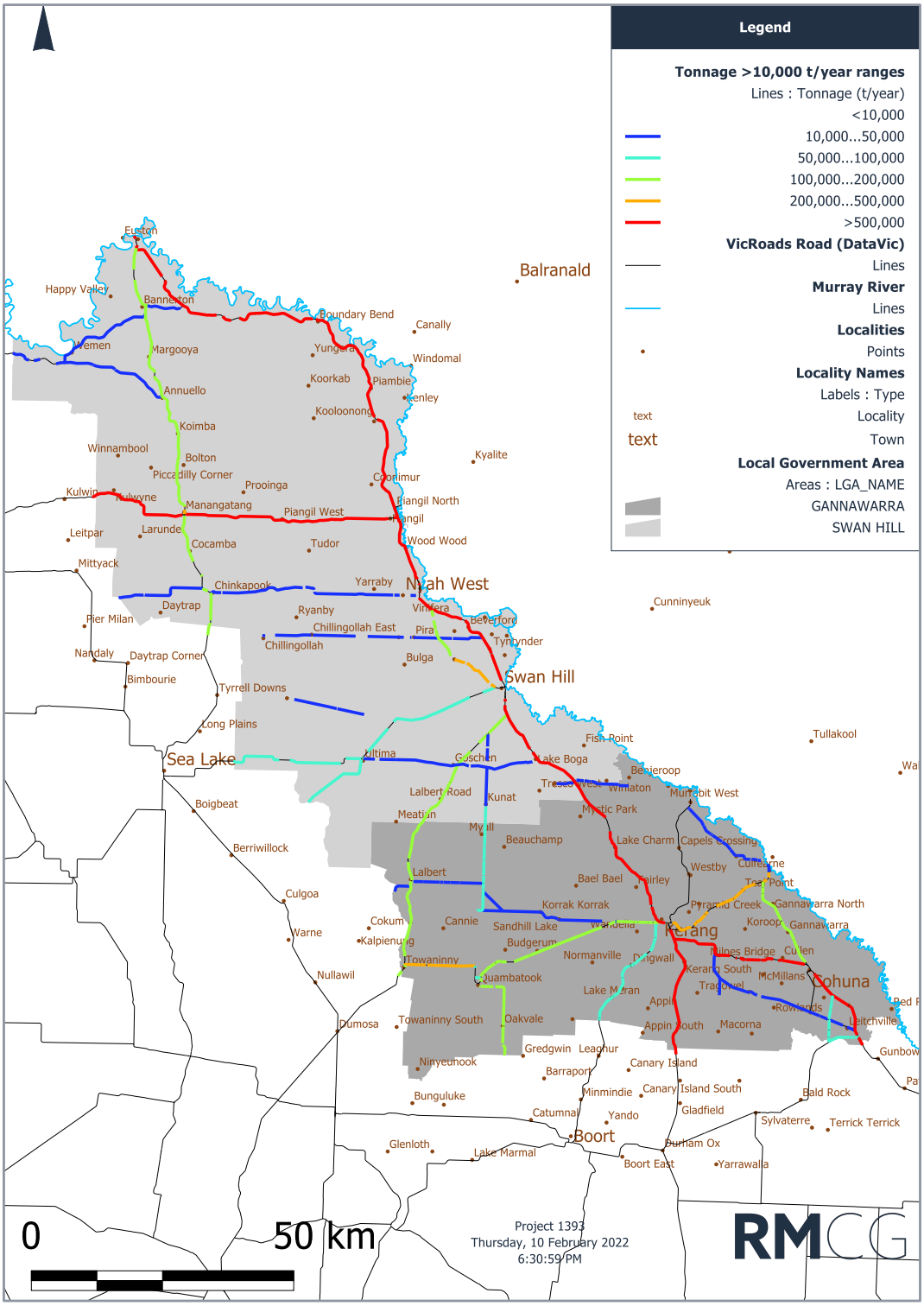

Figure 3-2: Road freight tonnage in Swan Hill RCC and Gannawarra SC [Source: CSIRO TranSIT modelling tool]

Telematics data on actual HPFV movements

Transport Certification Australia's (TCA) Telematics Analytics Platform (TAP) is a secure portal for authorised users. TAP provides a national platform for the use of digital technologies and data to a range of users.

RMCG became an authorised user for the purposes of this study.

TAP data collection and processing

Data on journeys is received from telematics devices placed in monitored vehicles. The records are matched to each road segment, as defined in the network map used to visualise data. The data is 'cleaned' removing any 'double counting' of journeys and records.

The vehicles being monitored usually require specific permission to access the road network, usually by permit or Notice through the relevant authority. The analysis for this study was confined to a subset of the vehicles (category *HPFV only*) operating in the Swan Hill RCC and Gannawarra SC areas.

Synthesis of the more than 30,000 records on numbers of HPFV journeys and vehicles (during 2021) covering each road in the study area produced a heat map showing the relative use levels on each road section (Figure 3-3).

Data characteristics included:

- **Journey counts** – This shows the number of traversals across a road segment by all monitored vehicles
- **Unique Vehicles** – Number of unique vehicle IDs from all selected vehicle categories that have used the nominated road segment
- **Speed** – Estimated average speed relies on changes in vehicle position records over a 30-second period to derive vehicle speed
- **Filters** – Used to drill down to find specific data including vehicle selector and road hierarchy classification.

As expected, the highest use routes by HPFVs were the main arterials, Murray Valley Highway and Loddon Valley Highway. The next highest use roads were the Mallee Highway and parts of the Robinvale-Sea Lake and Hattah-Robinvale Roads in Swan Hill RCC, and the Kerang-Leitchville, Leitchville, Cohuna-Koondrook and Kerang-Macorna Roads in the Gannawarra SC.

Other high use roads were Sea Lake-Swan Hill and Donald-Swan Hill Roads (Swan Hill RCC) and the Koondrook-Murrabit Road (Gannawarra SC).

Usability: Of note was that the Manager of Strategic Development at TAP advised that they were intending to roll out a program to increase accessibility to the portal by providing training and authorised access to more users. It was reported that local councils were a target audience and have recently been offered access to the portal. It was, however, concluded that in its current form, councils would find it difficult to routinely use the portal to extract data that could inform priority setting for investment in upgrades. It is likely that over time, as the usability of the portal is enhanced, this tool has great potential for use by councils, depending on their in-house expertise in synthesising outputs from very large data sets.

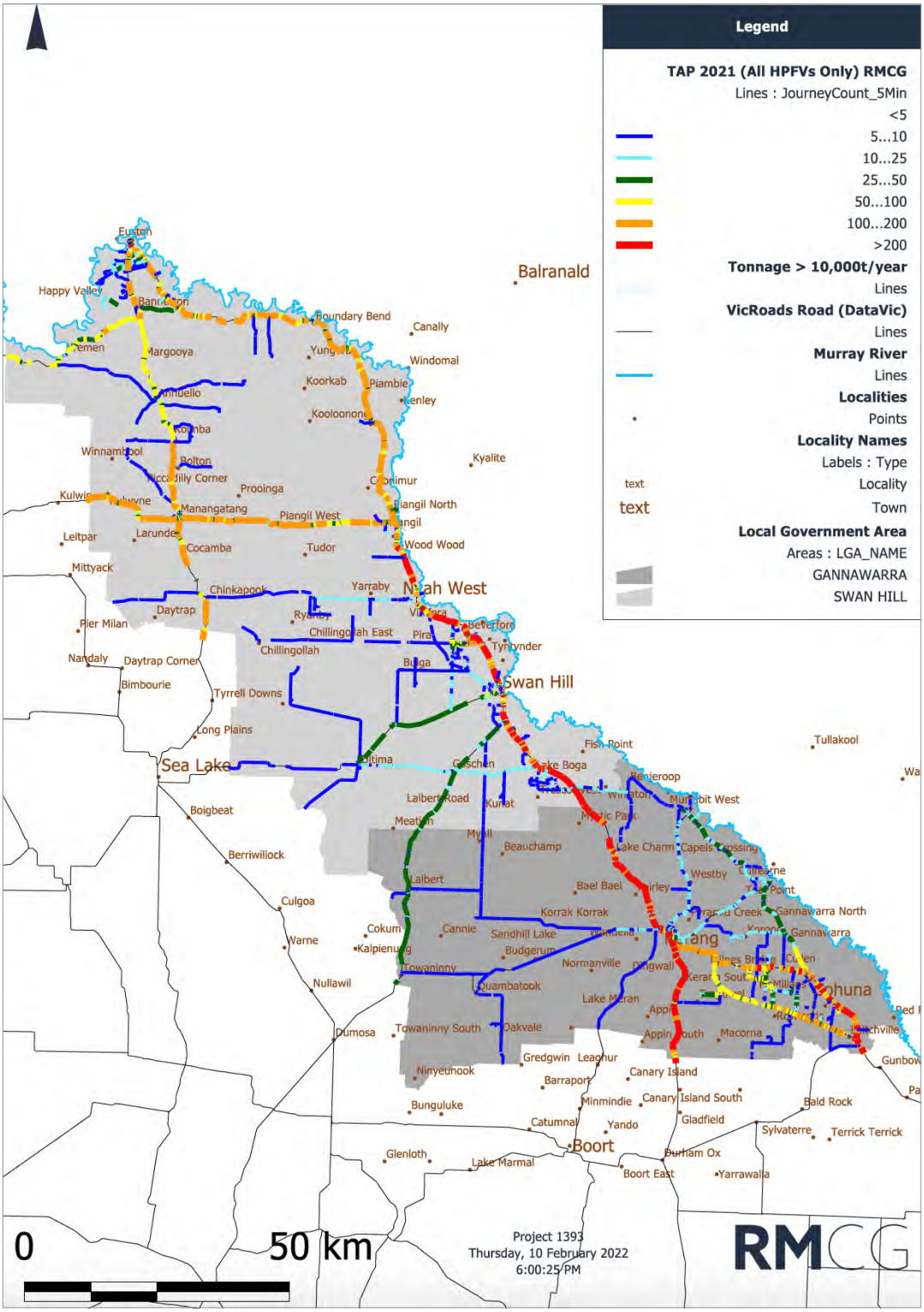

Figure 3-3: TAP portal outputs (2021) on HPFV journeys in Swan Hill RCC and Gannawarra SC

National Heavy Vehicle Regulator (NHVR) permits data

Permits are necessary where a freight route is not part of the HPFV network. The National Heavy Vehicle Regulator (NHVR) portal is a digital platform accessible by Councils and the heavy vehicle (operator) industry that provides a range of regulatory services including the application and review of permits for HPFV access to unapproved roads.

A review of the data outputs from the NHVR portal on permit applications for the study area showed that there was no consistent data by road name or location nor facility to differentiate between road hierarchy (i.e. council versus state managed) which limited its usability to inform prioritising local roads for upgrade based on permits demand. Detailed information was, however, provided by Swan Hill RCC[32] on numbers of permit applications, refusals and approvals by road name. A summary of the permit applications received over the past six years is provided in Table 3-5. Application numbers rose steeply after 2016 up until 2020 then steadied over the past two years.

Table 3-5: Swan Hill RCC NHVR permit applications for HPFV

YEAR	PERMIT APPLICATIONS	APPROVAL	REFUSAL	PART APPROVAL
2014	18	83%	17%	0%
2015	19	79%	21%	0%
2016	19	89%	11%	0%
2017	51	82%	14%	4%
2018	159	70%	4%	25%
2019	138	80%	11%	9%
2020	328	84%	12%	4%
2021	320	85%	12%	3%
All	**1052**			

Note: Permit applications include all PBS (e.g. Class 2 A-Double) and Road Trains (e.g. A-Double and B-Triple road trains).

Figure 3-4 illustrates the trend in permit applications (either single or multiple roads) to Swan Hill RCC for approval for HPFV access and the share of application approvals versus refusals. Noting that a small proportion of applicants (from 2017) were granted approval for some roads and not others.

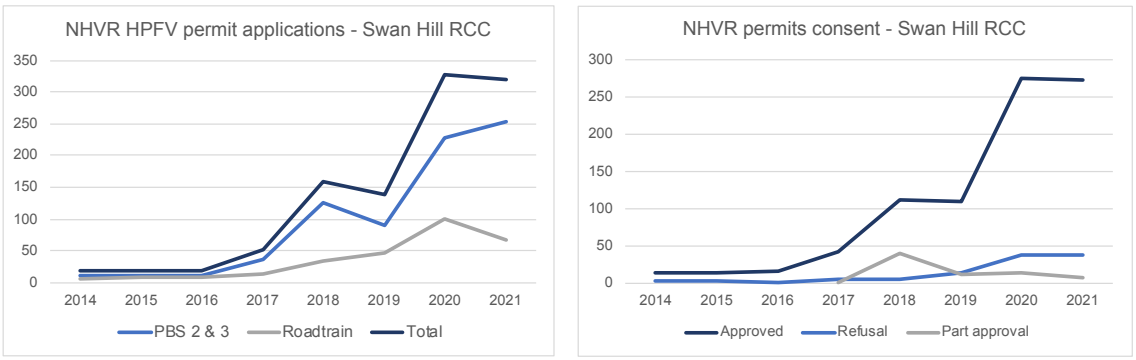

Figure 3-4: NHVR permit applications and consent: Swan Hill RCC 2014 - 2021

[32] Provided by Gaye Cutajar from Engineering, Swan Hill RCC

Council roads with the highest demand for HPFV access (applications received and collated 2014-2021) are shown in Table 3-6. The roads are spread throughout the council area with wide ranging land uses of intensive horticulture, dairy and within Swan Hill township.

Table 3-6: Swan Hill RCC roads with highest demand for HPFV access permits

	COUNCIL ROAD	LOCATION	NO.
> 100 permit applications			
1	Winlaton Rd	Fish Point	185
2	Jessie Dunstone Rd	Swan Hill	181
3	Creamery Rd	Tyntynder South	153
4	Murraydale Rd	Tyntynder	132
5	Oswin Rd	Beverford	130
6	Aerodrome Extension Rd	Swan Hill - south of township	130
7	Tyntynder Central Rd	Tyntynder	116
8	Maher Rd	Pira/Bulga	109
9	Davies Rd	Fish Pt (turns to Winlaton Rd)	106
10	Karinie St	Swan Hill	105
50 - 100 applications			
11	Collins Rd	Wemen	95
12	Burton Rd	Beverford	77
13	North South Rd	Beverford	69
14	Fish Pt Rd	Fish Pt (turns into Davies Rd)	67
15	Ultima North Rd	Ultima	66
16	Woodgate Rd	Murraydale	66
17	Saleyard Rd	Swan Hill	64
18	Knight Rd	Bannerton	62
19	Annuello Wemen Rd	Wemen	60
20	Bethune Lane	Lake Boga	60
21	Runciman Rd	Tyntynder South	51

Usability: The data outputs from the NHVR portal showed that there was no consistent data by road name or location nor was there capacity to extract records that could differentiate between road hierarchy (i.e. council versus state managed) which limited its serviceability to inform prioritising local roads for upgrade, based on demand for permits.

Traffic volume counts (AADT)

When councils are planning improvements to their road network they want to understand the current use patterns of roads. Traffic volume information is a principal indicator of how the network is used. The Average Annual Daily Traffic (AADT) estimate represents the total volume of traffic (i.e. the sum of traffic travelling in both directions on a two-way road) passing a roadside observation point over a period of time, then aggregated to the period of a full year, divided by the number of days in the year.

Usability: Traffic volume counts are a valuable and reliable source of data and evidence on road use by vehicle type that can be readily collected and analysed by councils.

3.3 PRIORITY FREIGHT ROUTES FOR UPGRADE

3.3.1 TOOL FOR COMPARING INVESTMENTS IN ROAD UPGRADES

The project findings have investigated and developed tools that can assist councils to identify and prioritise a preliminary list of road upgrade projects to allow greater HPFV access. The aim of the investment is to resolve identified constraints in the local road network and facilitate movement of regionally produced commodities onto the PFN.

An easy to use prioritisation tool, supported through an Excel interface, has been developed that can develop a hierarchy of potential projects ranked highest to lowest. A multi-criteria approach was used choosing four criteria (with thresholds) and scored out of 5, as outlined in Table 3-7. Scores were calculated for each criterion based on findings from the data analysis described in the previous Chapter 3.2. The criteria have not been weighted, however, if deemed appropriate, the scoring could be easily adjusted accordingly [refer to accompanying Excel spreadsheet].

Table 3-7: Criteria for prioritisation of road upgrades for HPFV access

#	CRITERIA	THRESHOLDS	SCORE/5	DEFINITION
1	Freight tonnage estimate/year (regionally generated) Based on: Heavy vehicle traffic Class 4 and above multiplied by est. percentage locally generated freight	Tonnes/year: <50,000 50 - 100,000 100 - 200,000 200 - 300,000 300 - 500,000	 1 2 3 4 5	A calculation of tonnes freight carried per year on each road based on AADT heavy vehicles multiplied by per cent local/regionally generated. Notes: AADT based on traffic volume data by road collected by councils. Percentage locally/regionally generated heavy vehicle traffic based on ABS statistics on production levels, local knowledge and consulting operators and customers.
2	NHVR permit demand	Rating: Low Moderate Moderate - High High	 1 3 4 5	An assessment of the past demand for NHVR permits on each road.
3	Connectivity to approved network (PFN) and processors	Rating: Low Moderate High	 1 3 5	An assessment of the linkage potential (to the PFN & processors) of the upgrade project based on mapping, local knowledge and consulting operators and customers.
4	Current road user priority	Rating: Low Moderate High	 1 3 5	An assessment of the road user priority based on local knowledge and consulting operators, customers and councils.

3.3.2 PRIORITY ROAD UPGRADES

Swan Hill RCC and Gannawarra SC provided a list of potential road upgrade projects that could contribute to connecting HPFVs onto the PFN. These projects were then short listed and evaluated using the prioritisation tool. The results for 10 road upgrade projects in Swan Hill RCC and Gannawarra SC that would improve HPFV access to the PFN are summarised in Tables 3-8 and 3-9.

Table 3-8: Summary – ranking for 10 potential road upgrade projects in Swan Hill RCC

#	ROAD NAME	SCORE	$ COST UPGRADE	RATIONALE
1	Collins Road	95%	$855,000	Intensive horticulture (or hort.) to PFN
2	Knight Rd	80%	$85,000	Intensive hort. to PFN
3	Boundary Bend-Kooloonong Rd	75%	$4,230,000	Intensive hort. to PFN
4	Tresco West Road	75%	$450,000	Intensive hort. to PFN
5	Mosstank - Wemen Road	70%	$1,570,000	Intensive hort. to PFN
6	Winlaton Road	65%	$562,500	Milk tankers, tomatoes/cotton
7	Quambatook Road	60%	$6,200,000	Grains to receival points
8	Coghill Road	60%	$1,800,000	Intensive hort. to PFN
9	Woorinen - Goschen Road	60%	$4,500,000	Access Ultima intermodal
10	Bael Bael Road	45%	$450,000	Intensive hort. linking to PFN
	Average for 10 projects	**69%**	**$20,702,500**	

Table 3-9: Summary – ranking for 10 potential road upgrade projects in Gannawarra SC

#	ROAD NAME	SCORE	$ COST OF UPGRADE	RATIONALE
1	Cohuna Island road	87%	$662,400	Dairy link to PFN
2	Lake Charm East road	80%	$432,000	Grains/hay link to PFN
3	Kow Swamp road	80%	$1,134,000	Dairy link to PFN
4	Flood Lane	67%	$864,000	Hay (lucerne) link to PFN
5	Lalbert Kerang road	60%	$6,768,000	Grains link to PFN (east & west)
6	Kangaroo Lake road	60%	$1,872,000	Hort (wine grape) link to PFN
7	Murphy's Lake road	60%	$864,000	Dairy link to PFN
8	Koondrook Murrabit road	60%	$1,260,000	Dairy link to PFN
9	Nichol road	53%	$806,400	Dairy link to Kerang-Koondrook Rd
10	Bennett road	33%	$2,304,000	Grains/future sand mine
	Average for 10 projects	**64%**	**#16,966,800**	

The location of short listed road upgrade projects is shown in Figure 3-5 (Swan Hill RCC) and Figure 3-6 (Gannawarra SC).

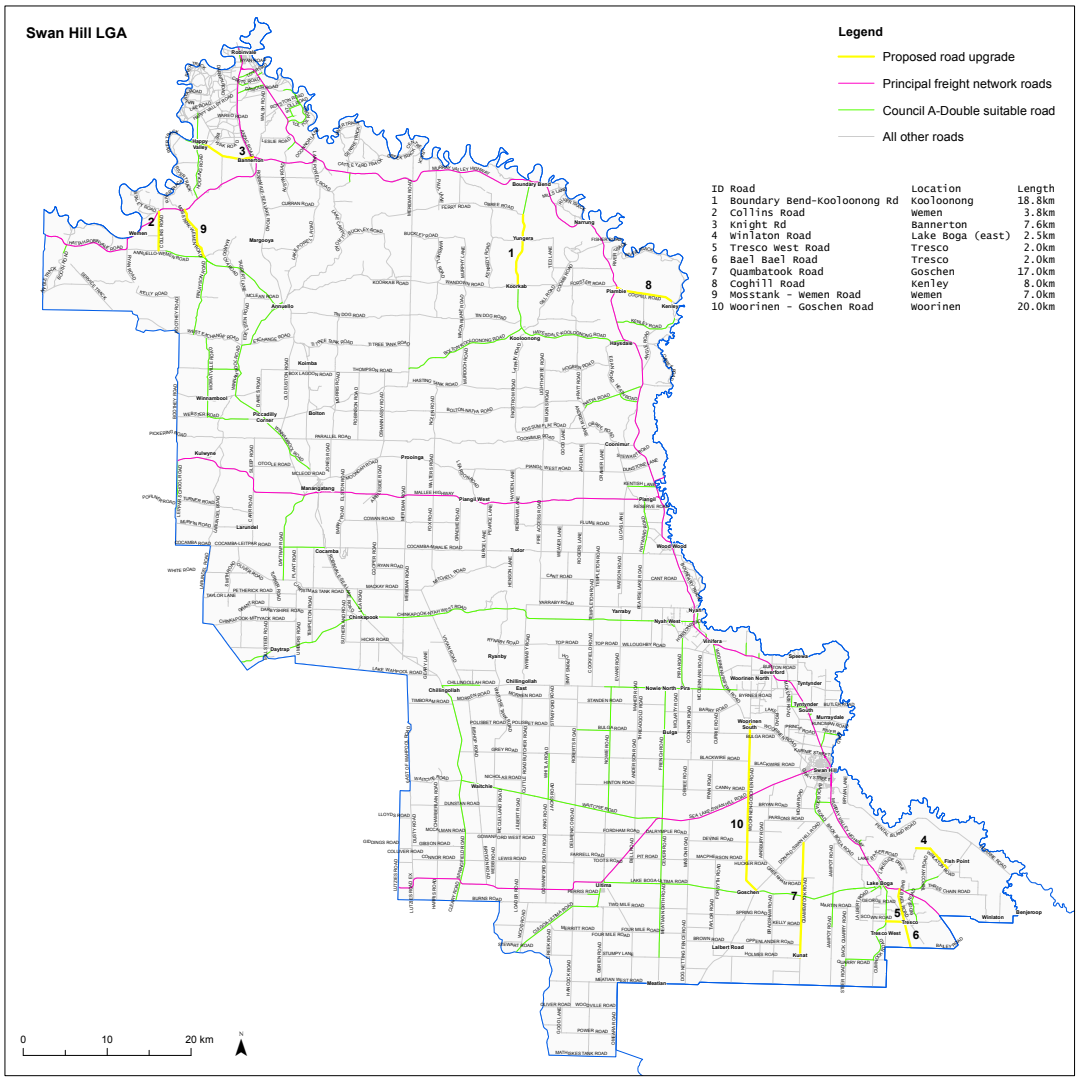

Figure 3-5: Swan Hill RCC proposed upgrade projects

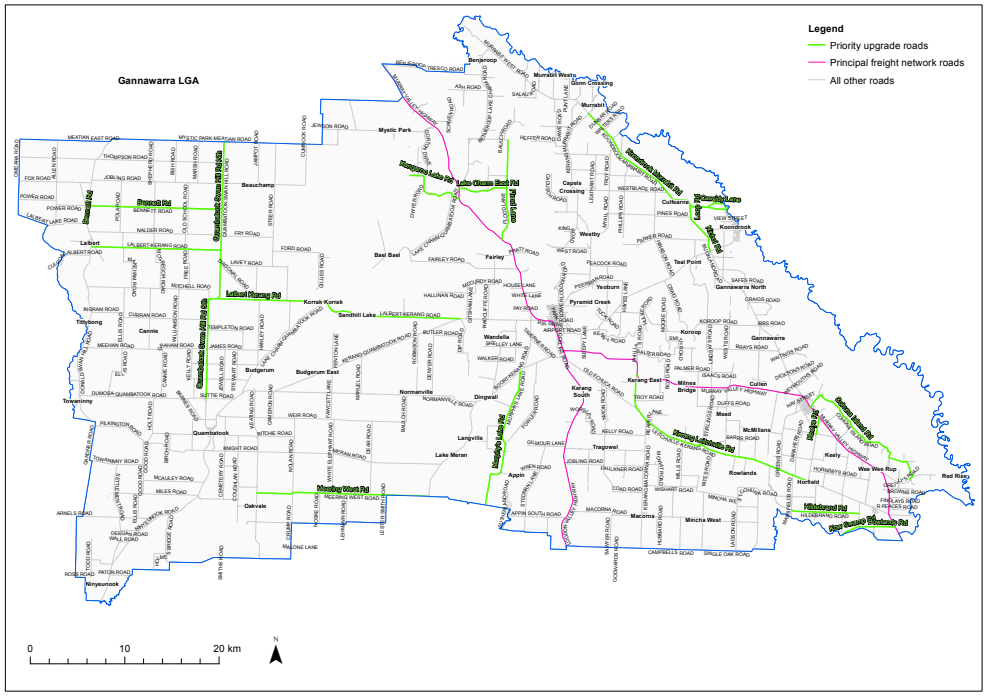

Figure 3-6: Gannawarra SC proposed upgrade projects

3.3.3 IRRIGATION INFRASTRUCTURE STRUCTURES UPGRADES

Goulburn Murray Water (GMW) is a Victorian state government water authority and supplies irrigation water and drainage services to a significant area within both local government areas. Proportionally, the Gannawarra SC has a greater area of irrigation, which delivers irrigation water from the Murray River to more than 200 irrigated dairy farms, many fodder producers and other users, primarily through a gravity driven, earthen canal system. The channel supply system was constructed in the early 20th C and many road structures associated with the channel system's extensive supply network are not suited to HPFVs.

As farm sizes and dairy herds grow, individual pick-ups by dairy companies can involve more than 40,000 litres of milk per visit (i.e. a 41.20 t load, excluding milk-tank and prime mover).

Although GMW bridge and culvert infrastructure on most highways and main roads has been replaced in recent decades, improving access for HPFV's to enable efficiencies in regular milk transfers for the entire route from individual dairy-farm pick up points to processors requires a number of minor roads and GMW managed road crossings (bridges and culverts) within the council areas to be improved.

Ideally, small bridges and box culverts would be replaced with well-installed pipe-crossings which enable level crossings (i.e. without rails, signage or other bridge furniture), that have low maintenance requirements, and are able to support HPHV loads.

As GMW is not a road authority, funding models to enable systematic, integrated and timely renewal of older road crossings over GMW supply and drainage channels that will enable access for HPFV's are not straight-forward. GMW's key driver when assessing asset refurbishment and replacement is sensibly the timely and safe delivery of water to its customers, not optimal road transport outcomes.

The locations of the structures that may require upgrade to accommodate HPFVs are shown in Figure 3-7.

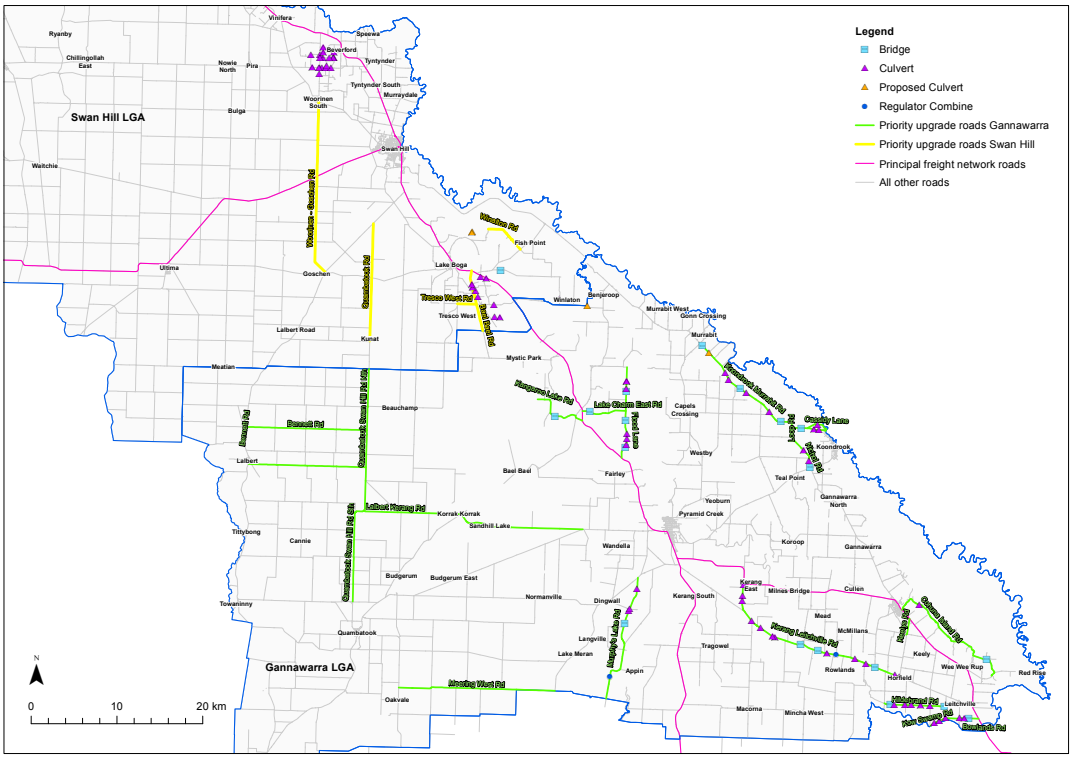

Figure 3-7: GMW structures located on roads identified for upgrade

The culverts and bridges located on selected roads in the study area are outlined in Table 3-10. This includes a high level cost estimate of an upgrade to allow access to HPFVs; assuming all structures required upgrade.

Table 3-10: Gannawarra SC - GMW culverts and bridges on priority upgrade roads

#	ROAD NAME	NO. CULVERTS	NO. BRIDGES	EST. COST UPGRADE
1	Cohuna Island road	1	1	$280,000
2	Lake Charm East road	2	1	$370,000
3	Kow Swamp road	3	3	$840,000
4	Flood Lane	3	2	$650,000
5	Lalbert Kerang road	0	0	-
6	Kangaroo Lake road	0	0	-
7	Murphy's Lake road	2	1	$370,000
8	Koondrook Murrabit road	4	2	$740,000
9	Nichol road	2	1	$370,000
10	Bennett road	0	0	-
	Total	**17**	**11**	**$3,620,000**

Source: Murray Irrigation Limited, nominal replacement cost - 0-10,000ML/day capacity structures, May 2022.

3.4 BUSINESS CASE EVIDENCE

3.4.1 SUMMARY

This chapter describes the methodology and findings from an economic model developed for the proposed road upgrades in Swan Hill RCC and Gannawarra SC. The objective of the model is to forecast and compare the likely economic costs and benefits of the upgrades. A sensitivity analysis of the model results is also presented.

The overall finding is that the proposed road upgrades will bring substantial economic and environmental benefits, valued at $2.1m-$6.8m per annum for Swan Hill and $2.2m-$6.9m per annum for Gannawarra. These benefits outweigh the estimated costs of the upgrades for the 30-year estimated economic life of the investments, with resultant benefit-cost ratios ranging from 1.39 to 6.33 depending on the shire and scenario chosen (dependent on assumptions on adoption rates of HPFVs and forecasts in freight demand).

3.4.2 METHODOLOGY AND ASSUMPTIONS

General parameters

The model covers a 30-year period (2023-2052), based on the estimated economic life of the upgraded infrastructure. The road upgrades are presumed to take place in 2023. All prices are expressed in 2022 constant terms. A discount rate of 7% per annum is used for flows of future costs and benefits, based on the long-term opportunity cost of capital as estimated by Infrastructure Australia[33].

Costs of upgrades

Quantified costs consist of the estimated costs of upgrades on 10 selected roads in each jurisdiction. The types of upgrades required and associated costs ($20.7m for Swan Hill and $17.0m for Gannawarra) were provided by the respective councils. The operation and maintenance costs of targeted roads are expected to be similar in with and without-upgrade scenarios based on advice from the Swan Hill Rural City Council[34] and are hence excluded from the analysis.

Benefits of upgrades

Quantified benefits of road upgrades stem from the expected change in the vehicle mix of trucks using the roads to transport goods to their next destination[35]. Specifically, the expected substitutions away from B-Double trucks towards HPFVs (e.g. A-Double configured trucks) would reduce fixed and variable costs of operating the truck fleet, as fewer trips will be required to transport the same volume of goods. The analysis presumed that the type and volume of goods carried will remain the same as in the baseline, i.e. the upgrades will not result in greater uptake of road freight at the expense of rail, nor will they lead to changes to primary industries production (agriculture and mining).

In addition to these financial benefits, the analysis includes quantifying and valuing avoided air pollution costs and CO2 emissions associated with reduced distances travelled. Estimated changes in the number of vehicles and drivers required are also calculated.

The model investigates 9 alternative scenarios for estimating benefits of upgrades. These incorporate:

1. Three scenarios of varying degrees of take-up of A-Double vehicles after the road upgrade (25%, 50% or 80% of total freight); and

[33] Victorian Department of Treasury and Finance. 2013. Economic Evaluation for Business Cases - Technical guidelines. URL: https://www.dtf.vic.gov.au/sites/default/files/2018-03/Economic%20Evaluation%20-%20Technical%20Guide.doc.

[34] Laura O'Dwyer, Enterprise Assets Manager, 21/03/22 (personal communication).

[35] The model used Port of Melbourne as the next destination because it was cited by interviewed parties as the most common destination of freight.

2. Three scenarios (low, medium and high) for growth in freight volume over the next 30 years, based on 2019 national-level forecasts developed by the Department of Infrastructure, Transport, Cities and Regional Development[36]. The annual rates of growth range from 1.7% to 2.7%.

Key inputs to calculating the travel cost in the with-investment and without-investment scenarios were obtained as follows:

- The average trip length was based on a distance of a return trip to Melbourne Port from the two shires (850 km for Swan Hill and 750 km for Gannawarra)
- The annual freight per road (in tonnes) for the 10 roads in each shire was calculated using the method outlined in Table 3-7, Section 3.3 (using heavy vehicle traffic count data provided by the councils, estimates of regionally generated production and local council and operator/producer feedback)
- Fuel cost ($1.89/litre of diesel) was sourced from Global Petrol Prices website[37]
- Financial cost of operating B-Double trucks ($/km) was sourced from a Victorian trucking industry operator serving the two shires[38]
- Financial cost of operating semi-trailers ($/km) was estimated at 80% of B-Double trucks; this estimate is considered conservative because the age of Victoria's semi-trailer fleet is apparently higher than that of the B-Double fleet
- Financial cost of operating A-Double trucks ($/km) was estimated to be higher than B-Doubles. Wage costs were 3% higher and other variable and fixed costs were 30% higher based on figures from the Australian Transport Assessment and Planning (ATAP) Guidelines[39]
- Environmental costs of operating semi-trailers, B-Double and A-Double trucks ($/km, including air pollution cost, climate change cost and well-to-tank emission cost) were sourced from ATAP Guidelines
- The estimate of CO2e emission per litre of diesel fuel (2.7 kg) was sourced from a 2019 National Transport Commission study, while the value of avoided CO2e emissions ($60 per tonne of CO2e) were sourced from the ATAP guidelines[40]
- The current truck fleet mix (based on tonne-kilometres travelled) was estimated at 80% doubles and 20% semi-trailers, based on expert opinion
- For each scenario, fleet sizes for each vehicle type (A-Double, B-Double and semi-trailer) were calculated based on i) the required number of trips by each fleet per annum, and ii) the number of trips that can be undertaken by a single vehicle per annum (250, based on 50 working weeks and 5 trips per week) iii) the estimates average trip-lengths
- Number of drivers for each fleet was calculated based on i) distance travelled by each fleet per annum, ii) average travel speed (70 km/h), and iii) annual driver workload (2,200 hours)
- The shift to HPFVs from existing B-Double fleet was estimated to be rapid. The assumptions used were based on responses from interviewees i.e. 25% in year 2, 50% in year 3, 75% in year 4 and 100% in year 5 onwards
- Estimates on changes in pavement wear and potential damage, linked to equivalent standard axle (ESA) loads requires specialist engineering and scientific knowledge, so this impact has not been included in the analysis[41].

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[36] Department of Infrastructure, Transport, Cities and Regional Development. 2019. *Australian aggregate freight forecasts – 2019 update*. Research Report 152. URL: https://www.bitre.gov.au/publications/2019/australian_aggregate_freight_forecasts_2019.

[37] https://www.globalpetrolprices.com/Australia/Victoria/diesel_prices/, accessed on 15 March 2022

[38] Industry-provided rather than Australian Transport Assessment and Planning (ATAP)-provided operating costs of B-Double trucks were used because the ATAP methodology applies nationwide and hence does not account for specifics of travel between the two shires and Melbourne Port. Consequently, the industry-provided cost figures are likely to be more accurate.

[39] Department of Infrastructure, Transport, Regional Development and Communications. 2016. *Australian Transport Assessment and Planning Guidelines: PV2 - Road Parameter Values*. URL: https://www.atap.gov.au/sites/default/files/pv2_road_parameter_values.pdf.

[40] Department of Infrastructure, Transport, Regional Development and Communications. 2021. *Australian Transport Assessment and Planning Guidelines: PV5 - Environmental parameter values.* URL: https://www.atap.gov.au/sites/default/files/documents/pv5-multi-modal-update.pdf.

[41] For further information, refer to ATA's Truck Impact Chart, ATA's website here, includes information on the ESA (pavement wear) for several common vehicle configurations.

3.4.3 RESULTS

Tables 3-11 and Table 3-12 present the estimated 2022 freight tonnage carried on the selected roads and the estimated costs of road upgrades. Combined, the upgrades will cost just under $37 million.

Table 3-11: Annual freight (est.) and costs upgrade for selected roads in Swan Hill (2022)

	ROAD NAME	ANNUAL FRIEGHT (T)	UPGRADE COST ($)	UPGRADE LENGTH (KM)[42]
1	Knight Rd	21,900	$85,000	7.2
2	Coghill Rd	51,075	$1,800,000	6.8
3	Winlaton Rd	54,203	$562,500	13.3
4	Bael Bael Rd	59,130	$450,000	3.1
5	Quambatook Rd	72,270	$6,200,000	13.7
6	Mosstank-Wemen Rd	131,400	$1,570,000	6.9
7	Woorinen-Goschen Rd	167,535	$4,500,000	20.4
8	Collins Rd	201,480	$855,000	4.6
9	Boundary Bend-Kooloonong Rd	202,028	$4,230,000	18.6
10	Tresco West Rd	328,500	$450,000	4.3
	Total	**1,289,520**	**20,702,500**	**99**

Table 3-12: Annual freight and costs upgrade for selected roads in Gannawarra (2022)

	ROAD NAME	ANNUAL FRIEGHT (T)	UPGRADE COST ($)	UPGRADE LENGTH (KM)
1	Kangaroo Lake road	16,977	$1,872,000	23.0
2	Bennett road	21,762	$2,304,000	6.0
3	Flood Lane	67,539	$864,000	4.0
4	Nichol road	82,096	$806,400	2.3
5	Koondrook Murrabit road	131,843	$1,260,000	2.3
6	Murphy's Lake road	141,842	$864,000	23.5
7	Lalbert Kerang road	165,750	$6,768,000	3.6
8	Kow Swamp road	273,123	$1,134,000	1.6
9	Lake Charm East road	276,028	$432,000	1.5
10	Cohuna Island road	323,482	$662,400	3.0
	Total	**1,500,443**	**$16,966,800**	**70.8**

[42] The Upgrade length (Km) and associated upgrade costing, and the freight task calculated reflects the specific road section of the named road (and the calculated catchment for farm and other production serviced by that road section) and any associated bridge or other infrastructure required on that section nominated by council. The specific road sections appear on maps 3.5 and 3.6.

Changes in annual freight travel costs due to road upgrades on selected roads, for the current (baseline) truck fleet and for the three freight task scenarios (using 2022 freight volumes) are summarised in Tables 3-14 and 3-15. The figures suggest that if the road upgrades facilitated a change in the vehicle mix "overnight", the resultant annual financial savings would range from $2.0m to $6.5m for Swan Hill and from $2.1m to $6.7m for Gannawarra (depending on the final vehicle mix). If the value of avoided CO2 emissions and other air pollutants is included (i.e. economic rather than financial benefits), the cost savings range increases to $2.1m-$6.8m for Swan Hill and $2.2m-$7.0m for Gannawarra. The overall size of the fleet and number of drivers required also decrease with an increased take-up of A-Doubles.

Table 3-13: Changes in annual freight costs due to road upgrade in Swan Hill (2022 freight volumes)

SCENARIO	BASELINE	SCENARIO 1		SCENARIO 2		SCENARIO 3	
Freight task	Semi-trailer 20%, B-Double 80%	Semi-trailer 20%, B-Double 55%, A-Double 25%		Semi-trailer 20%, B-Double 30%, A-Double 50%		Semi-trailer 20%, A-Double 80%	
Data type	Stock	Stock	Change from baseline	Stock	Change from baseline	Stock	Change from baseline
No. of trips	33,040	31,199	-1,841	29,357	-3,683	27,148	-5,893
Distance travelled (km)	28,084,283	26,519,076	-1,565,207	24,953,869	-3,130,414	23,075,621	-5,008,662
Fuel use (lt)	16,088,429	15,431,178	-657,251	14,773,927	-1,314,503	13,985,225	-2,103,204
CO2e emissions (t)	43,439	41,664	-1,775	39,890	-3,549	37,760	-5,679
Fuel cost ($)	24,189,959	23,169,290	-1,020,669	22,148,622	-2,041,337	20,923,819	-3,266,140
Variable cost, including fuel ($)	43,833,931	41,952,349	-1,881,582	40,070,766	-3,763,165	37,812,867	-6,021,064
Fixed cost ($)	30,527,794	30,383,822	-143,973	30,239,849	-287,946	30,067,081	-460,713
Environmental cost ($)	3,554,538	3,460,491	-94,048	3,366,443	-188,095	3,253,586	-300,953
Fleet size	132	125	-7	117	-15	109	-24
Number of drivers	182	172	-10	162	-20	150	-33
Total financial cost ($)	**74,361,725**	**72,336,170**	**-2,025,555**	**70,310,615**	**-4,051,111**	**67,879,948**	**-6,481,777**
Total economic cost ($)	**77,916,264**	**75,796,661**	**-2,119,603**	**73,677,058**	**-4,239,206**	**71,133,534**	**-6,782,730**

Source: RMCG Excel modelling outputs

Table 3-14: Changes in annual freight costs due to road upgrade in Gannawarra (2022 freight volumes)

SCENARIO	BASELINE	SCENARIO 1		SCENARIO 2		SCENARIO 3	
Freight task	Semi-trailer 20%, B-Double 80%)	Semi-trailer 20%, B-Double 55%, A-Double 25%		Semi-trailer 20%, B-Double 30%, A-Double 50%		Semi-trailer 20%, A-Double 80%	
Data type	Stock	Stock	Change from baseline	Stock	Change from baseline	Stock	Change from baseline
No. of trips	38,445	36,302	-2,143	34,159	-4,285	31,588	-6,856
Distance travelled (km)	28,833,486	27,226,524	-1,606,962	25,619,562	-3,213,924	23,691,208	-5,142,278
Fuel use (lt)	16,517,619	15,842,834	-674,785	15,168,050	-1,349,570	14,358,308	-2,159,311
CO2e emissions (t)	44,598	42,776	-1,822	40,954	-3,644	38,767	-5,830
Fuel cost ($)	24,835,273	23,787,376	-1,047,897	22,739,479	-2,095,794	21,482,003	-3,353,270
Variable cost, including fuel ($)	45,003,286	43,071,509	-1,931,777	41,139,731	-3,863,554	38,821,599	-6,181,687
Fixed cost ($)	31,342,182	31,194,369	-147,814	31,046,555	-295,627	30,869,179	-473,004
Environmental cost ($)	3,649,362	3,552,806	-96,557	3,456,249	-193,113	3,340,381	-308,981
Fleet size	154	145	-9	137	-17	126	-27
Number of drivers	187	177	-10	166	-21	154	-33
Total financial cost ($)	**76,345,468**	**74,265,877**	**-2,079,591**	**72,186,286**	**-4,159,182**	**69,690,777**	**-6,654,691**
Total economic cost ($)	**79,994,831**	**77,818,683**	**-2,176,148**	**75,642,536**	**-4,352,295**	**73,031,159**	**-6,963,672**

Source: RMCG Excel modelling outputs

Figure 3-7 and Tables 3-16 and 3-17 display key economic indicators – net present value (NPV), economic internal rate of return (EIRR) and a benefit-cost ratio (BCR) – for investments in road upgrades over a 30-year period. Nine future scenarios for Swan Hill RCC and Gannawarra SC, respectively. The results show that the business case for the proposed upgrades is strong i.e. the projects are economically viable, with BCRs ranging from 1.39 to 6.33.

The benefits are modelled for three annual freight tonnage growth scenarios:

- Low - 1.7% per year
- Medium - 2.2% per year
- High - 2.7% per year

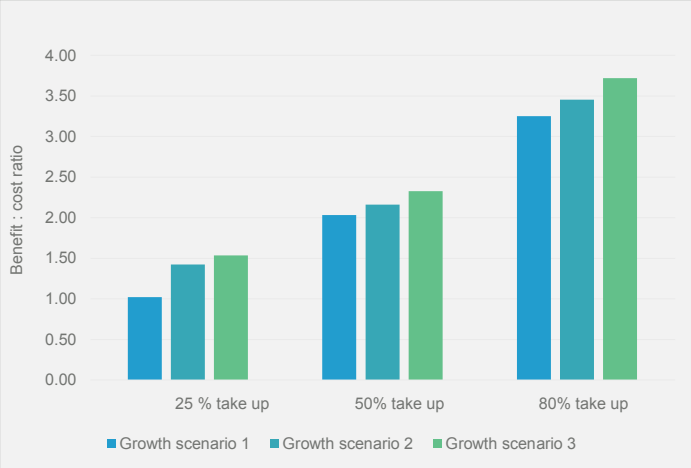


Figure 3-8: Benefit:Cost ratio of selected investment in SHRCC & GSC local roads for varying freight growth scenarios (30yr BCR 2022-2052)

Table 3-15: Economic indicators for road upgrades using nine 30-year 'vehicle mix – freight growth scenarios', Swan Hill

	VEHICLE MIX SCENARIO 1			VEHICLE MIX SCENARIO 3			VEHICLE MIX SCENARIO 3		
	Semi-trailer 20%, B-Double 55%, A-Double 25%			Semi-trailer 20%, B-Double 30%, A-Double 50%			Semi-trailer 20%, A-Double 80%		
Growth scenario	NPV ($m)	EIRR	BCR	NPV ($m)	EIRR	BCR	NPV ($m)	EIRR	BCR
1 (1.7%)	7.5	10%	1.39	34.3	19%	2.77	66.5	27%	4.44
2 (2.2%)	9.2	11%	1.47	37.7	19%	2.95	71.9	28%	4.72
3 (2.7%)	11.4	11%	1.59	42.1	20%	3.18	78.9	28%	5.08

Source: RMCG Excel modelling outputs

Table 3-16: Economic indicators for road upgrades using nine 30-year 'vehicle mix – freight growth scenarios', Gannawarra

	VEHICLE MIX SCENARIO 1			VEHICLE MIX SCENARIO 3			VEHICLE MIX SCENARIO 3		
	Semi-trailer 20%, B-Double 55%, A-Double 25%			Semi-trailer 20%, B-Double 30%, A-Double 50%			Semi-trailer 20%, A-Double 80%		
Growth scenario	NPV ($m)	EIRR	BCR	NPV ($m)	EIRR	BCR	NPV ($m)	EIRR	BCR
1 (1.7%)	11.5	12%	1.73	38.9	22%	3.46	71.8	32%	5.53
2 (2.2%)	13.2	13%	1.84	42.4	23%	3.67	77.3	32%	5.87
3 (2.7%)	15.5	14%	1.98	46.8	23%	3.95	84.5	33%	6.33

Source: RMCG Excel modelling outputs

3.4.4 SENSITIVITY ANALYSIS

A sensitivity analysis was conducted for the most conservative scenario (vehicle mix scenario 1, freight growth scenario 1) for Swan Hill. The aim was to identify how changes in key parameters influence the economic viability of the proposed upgrades. Results are presented in Table 3-18 and indicate that the economic performance of the project is objectively robust.

Table 3-17: Sensitivity analysis for 'vehicle mix scenario 1, freight growth scenario 1', Swan Hill

SCENARIO	NPV	EIRR	BCR
Base case	$7,335,146	10%	1.38
Cost of road upgrades increased by 25%	$2,498,113	8%	1.10
Total annual freight in targeted roads decreased by 25%	$664,326	7%	1.03

SENSITIVITY INDICATORS & SWITCHING VALUES					
		Base case	Indicator	Absolute^	% change
Cost of road upgrades ($)	100%	20,702,500	2.64%	28,551,106	37.91%
Total annual freight in targeted roads in 2022 (t)	100%	1,289,520	-3.64%	935,035	-27.49%
Average length of a return trip (km)	100%	850	-3.64%	616	-27.53%
Variable cost of operating an A-Double ($/km)	100%	1.80	14.83%	1.92	6.82%
Final proportion of A-Doubles in the fleet (%)	100%	50.0%	-3.64%	18.1%	-63.80%
Annual growth in freight volume, 2031-2052	100%	1.5%	-0.34%	-4.8%	-420.00%

* The ratio of the percentage change in the NPV to the percentage change in the variable tested
^ A switching value for each key variable is its value at which the NPV becomes 0
Source: RMCG Excel modelling outputs

Specifically, for the investment to become economically unviable:

- The cost of upgrades would have to increase by 38% (to $28.6 million); or
- The annual freight in the targeted roads would have to have been overestimated by 27% or more (to 935,035 t); or
- The length of an average return trip would have to have been overestimated by 28% or more (to 616 km); or
- The final proportion of A-Double truck moving freight would have to be 18% or less.

The economic viability of the upgrades is most sensitive to changes in cost of operating A-Double trucks, with variable cost increases of 14.8% or higher (from $1.8/km to $1.92/km) deeming the investment unviable. The project's performance is not overly sensitive to growth in freight levels, which would have to decrease by 4.8% per annum from year 2031 onwards to bring the NPV to 0. Given that the proposed upgrades for Gannawarra SC are modestly economically more attractive than those for Swan Hill for the above-mentioned scenario (BCR of 1.73 compared to 1.39), an equivalent sensitivity analysis for Gannawarra was deemed unnecessary

3.4.5 UNQUANTIFIED BENEFITS

Two additional benefits were excluded from the analysis due to data and resource constraints:

- **Road safety**: noting that a shift towards A-Doubles as a result of the proposed upgrades is likely to result in increased road safety and reduction in accidents, reflecting the higher performance in national safety statistics of HPFV's on Australia's roads relative to smaller trucks[43]
- **Truck drivers**: noting that an increase in the number of drivers of A-Doubles will increase the skill and career-path opportunities for this large cohort of the Victorian workforce. Incidentally, a reduction in the total number of drivers needed can also be considered a benefit given the current shortage of truck drivers in the region (as widely reported during consultations).

3.4.6 ECONOMIC ANALYSIS USING ATAP COST PARAMETERS

Economic analysis was also conducted using Australian Transport and Assessment and Planning (ATAP) cost parameters for operating semi-trailers, A-Double and B-Double trucks. The ATAP Guidelines use a marginally different methodology for calculating vehicle operating cost and time cost of truck travel (including incorporation of freight time costs)[44]. The results are presented in Tables 3-18 and 3-19 and indicate that the proposed upgrades are economically viable if the eventual uptake of A-Doubles is at least 50% of the total fleet for both shires. However, the ATAP methodology applies nationwide and hence does not account for specifics of travel between the two jurisdictions and Melbourne Port; consequently, the industry-provided travel cost figures used are likely to be a better reflection of truck travel costs in the study area.

Table 3-18: Key economic indicators using ATAP travel cost parameters, Swan Hill

	VEHICLE MIX SCENARIO 1			VEHICLE MIX SCENARIO 3			VEHICLE MIX SCENARIO 3		
	Semi-trailer 20%, B-Double 55%, A-Double 25%			**Semi-trailer 20%, B-Double 30%, A-Double 50%**			**Semi-trailer 20%, A-Double 80%**		
Growth scenario	NPV ($m)	EIRR	BCR	NPV ($m)	EIRR	BCR	NPV ($m)	EIRR	BCR
1 (1.7%)	-6.9	4%	0.64	5.6	9%	1.29	20.5	14%	2.06
2 (2.2%)	-6.1	4%	0.68	7.1	10%	1.37	23.0	15%	2.19
3 (2.7%)	-5.1	5%	0.74	9.1	10%	1.47	26.2	16%	2.36

Source: RMCG Excel modelling outputs

[43] Austroads 2014, Quantifying the benefits of high productivity vehicles. Publication No. AP-R465-14

[44] The ATAP Guidelines provide travel cost figures for 2013; these were updated to 2022 using Australia's producer prices indexes (https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/producer-price-indexes-australia/latest-release).

Table 3-19: Key economic indicators using ATAP travel cost parameters, Gannawarra

	VEHICLE MIX SCENARIO 1			VEHICLE MIX SCENARIO 3			VEHICLE MIX SCENARIO 3		
	Semi-trailer 20%, B-Double 55%, A-Double 25%			**Semi-trailer 20%, B-Double 30%, A-Double 50%**			**Semi-trailer 20%, A-Double 80%**		
Growth scenario	NPV ($m)	EIRR	BCR	NPV ($m)	EIRR	BCR	NPV ($m)	EIRR	BCR
1 (1.7%)	-3.1	5%	0.81	9.7	12%	1.61	25.0	17%	2.58
2 (2.2%)	-2.3	6%	0.86	11.3	12%	1.71	27.6	18%	2.74
3 (2.7%)	-1.2	6%	0.92	13.4	13%	1.84	31.0	19%	2.95

Source: RMCG Excel modelling outputs

3.4.7 TESTING MODEL AND PRIORITISATION TOOL

The project has reviewed data sources and developed tools for the purpose of assisting councils to identify and prioritise a preliminary list of road upgrade projects to allow greater HPFV access.

It is useful to test the economic model against the hierarchy of potential projects ranked highest to lowest according to the prioritisation tool (using a multi-criteria approach), as outlined in the earlier Chapter 3, Tables 3-8 and 3-8, Section 3.3. The results of the economic modelling approach align relatively well with the rankings from the prioritisation tool.

The economic model outputs for the highest and lowest ranked road project in each jurisdiction are shown in Table 3-20 and 3-21 (over page).

Table 3-20: Swan Hill RCC projects

Roads with highest and lowest MCA scores [see Chapter 3, Table 3-8)

	VEHICLE MIX SCENARIO 1 - FREIGHT GROWTH SCENARIO 2			VEHICLE MIX SCENARIO 2 - FREIGHT GROWTH SCENARIO 2		
	NPV ($m)	**EIRR**	**BCR**	**NPV ($m)**	**EIRR**	**BCR**
Collins Rd	3.6	31%	5.54	8.1	51%	11.09
Bael Bael Rd	0.9	20%	3.09	2.2	34%	6.18

Roads with highest and lowest tonnage per $ spent on upgrades [see Chapter 3, Table 3-8)

	VEHICLE MIX SCENARIO 1 - FREIGHT GROWTH SCENARIO 2			VEHICLE MIX SCENARIO 2 - FREIGHT GROWTH SCENARIO 2		
	NPV ($m)	**EIRR**	**BCR**	**NPV ($m)**	**EIRR**	**BCR**
Tresco West Rd	6.8	70%	17.17	14.0	115%	34.34
Quambatook Rd	-4.2	-2%	0.27	-2.6	3%	0.55

Source: RMCG Excel modelling outputs

Table 3-21: Gannawarra SC projects

Roads with highest and lowest MCA scores [see Chapter 3, Table 3-9)

	VEHICLE MIX SCENARIO 1 - FREIGHT GROWTH SCENARIO 2			VEHICLE MIX SCENARIO 2 - FREIGHT GROWTH SCENARIO 2		
	NPV ($m)	**EIRR**	**BCR**	**NPV ($m)**	**EIRR**	**BCR**
Collins Rd	5.7	48%	10.14	11.9	79%	20.27
Bael Bael Rd	-1.7	-3%	0.20	-1.3	0%	0.39

Roads with highest and lowest tonnage per $ spent on upgrades [see Chapter 3, Table 3-9)

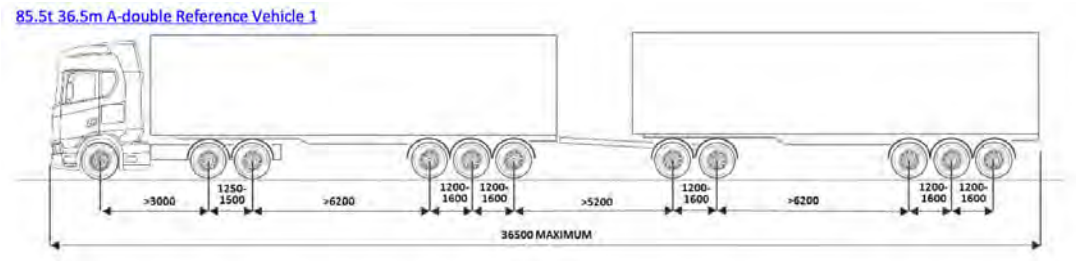
Table 3-22: Gannawarra SC projects

	VEHICLE MIX SCENARIO 1 - FREIGHT GROWTH SCENARIO 2			VEHICLE MIX SCENARIO 2 - FREIGHT GROWTH SCENARIO 2		
	NPV ($m)	**EIRR**	**BCR**	**NPV ($m)**	**EIRR**	**BCR**
Collins Rd	5.0	59%	13.26	10.3	96%	26.52
Bael Bael Rd	-1.4	-4%	0.19	-1.1	0%	0.38

Source: RMCG Excel modelling outputs

Appendix 1: HPFV information

EXAMPLE HPFV COMBINATION



PBS REQUIREMENTS FOR HPFV

#	REFERENCE DESIGN	PBS LEVEL REQUIREMENT
1	85.5t 36.5m A-Double	PBS Level 3
2	77.5t quad-quad B-Double	PBS Level 3
3	73.0t quad-tri B-Double	PBS Level 3
4	85.5t 30.0m A-Double (Bulk Commodity and Volumetric)	PBS Level 2
5	68.5t 30.0m A-Double (cubic)	PBS Level 2
6	68.5t 30.0m B-Double (cubic)	PBS Level 2
7	50.5t quad semi-trailer	NA
8	74.5t A-Double tanker	PBS Level 2

Source: Victoria's High Productivity Freight Vehicle network Information Sheet, May 2021, Heavy Vehicles Group, DoT.

Photo: Kel Baxter Transport, Berrigan NSW

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1.0	Draft	01/06/22	J. McRobert G. Warne N. Beresnev D. Wallis	J. McRobert	B. Gravenor	J. McRobert	DoT Swan Hill RCC Gannawarra SC
2.0	Final	30/06/22	J. McRobert G. Warne N. Beresnev	J. McRobert	J. Longford	G. Warne	DoT Swan Hill RCC Gannawarra SC

INVESTMENT PROSPECTUS

Local roads

Swan Hill-Gannawarra investment

for a competitive future

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INVESTMENT PROSPECTUS

SUMMARY

The study area covers an area of almost 10,000 km2 along the River Murray in Northern Victoria contained within the Swan Hill Rural City Council and Shire of Gannawarra.

The freight network supports Australia's largest nut production region and delivers 9% of the total value of Victoria's agricultural output comprising dairy, grains, livestock and diverse horticultural produce.

This primary production had a combined gross value of $1.6 billion in 2019-20.

The proposal is to invest in strategically important local road upgrade projects that will enable improved HPFV access to more primary producers and processors to Victorian ports and Melbourne metro distribution centres. The improved HPFV access will also enable more efficient deliveries to and from customers and suppliers throughout SE Australia.

Victorian operators need to match the performance and cost efficiency of their competitors. Interstate growers are able to utilise a growing fleet of HPFV's that can efficiently access more local roads that connect with intra-state and inter-state networks.

For many grain growers, dairy farmers and horticultural producers, upgrades enabling HPFV access to 'the last kilometre' between the on-farm silo complex, milk vat or fruit packing shed, linking to the principal freight network will provide large and lasting benefits to businesses and Victoria's economy.

Expected investment returns and benefits (secondary heading)

Over the next 30 years, a $37.7 million investment in 145km local road upgrades in Swan Hill RCC and Gannawarra SC is expected to deliver the following economy-wide benefits:

- An economic net present value (NPV) of $79.7 million
- An economic benefit-cost ratio (BCR) of 3.26.

This estimate is based on a 50% migration of freight to HPFVs (i.e. to A Doubles, from the current largest vehicles universally utilised, B Doubles) and a growth in the freight task in the target areas serviced by the upgraded local roads of 2% p.a

Annual benefits to the Victorian economy include: Improved margins for producers, transport operators and bulk handlers ($8.2M p.a), reduced fuel use (2.7M litres) and CO2 emissions (7,190t), reduced heavy vehicle trips (almost 8,000 p.a.) and reduced distance travelled (6.3M km).

RISKS OF UNDER INVESTMENT

With fuel prices rising rapidly and a shortage of suitably qualified transport drivers, regional freight operators conveyed a sense of urgency for change, that will increase the competitiveness of the inward and outward-bound freight tasks.

The risks of inaction are a loss of competitiveness and unrealised employment. growth opportunities.

BACKGROUND

The Investment Prospectus outlines a case for a $37 million investment into local road upgrades.

This investment will lead to improved access for high productivity freight vehicles (HPFV) in the Swan Hill RCC and Gannawarra SC local government areas that will increase the competitiveness of freight movements.

The freight network supports Australia's largest nut production region which is a powerhouse primary producer for Victoria, delivering 9% of the value of Victoria's agricultural output comprising dairy, grains, livestock and diverse horticultural produce.

This production had a combined gross value (GVAP) of $1.6 billion in 2019-20.

Improved HPFV access is a priority for primary production and freight stakeholders. The demand for better access was a key driver for this study reinforced by direct industry consultation during 2021.

The Investment Prospectus highlights the:

- Economic contribution of primary production
- Changing nature of the primary production freight task
- Freight operators, producers and processors awareness of the value of improved freight competitiveness and HPFV access
- Positive economic benefits to the region and State from investing in local road upgrades
- Key findings from research undertaken to support the business case for investment.

There is a compelling case for investment into road upgrades to accommodate HPFV in the Swan Hill-Gannawarra region.

The Project Control Group comprised members of State and Local Government and this prospectus is supported by a detailed Study Report: Freight road network mapping and infrastructure investment (RMCG 2022).

PROJECT STUDY AREA

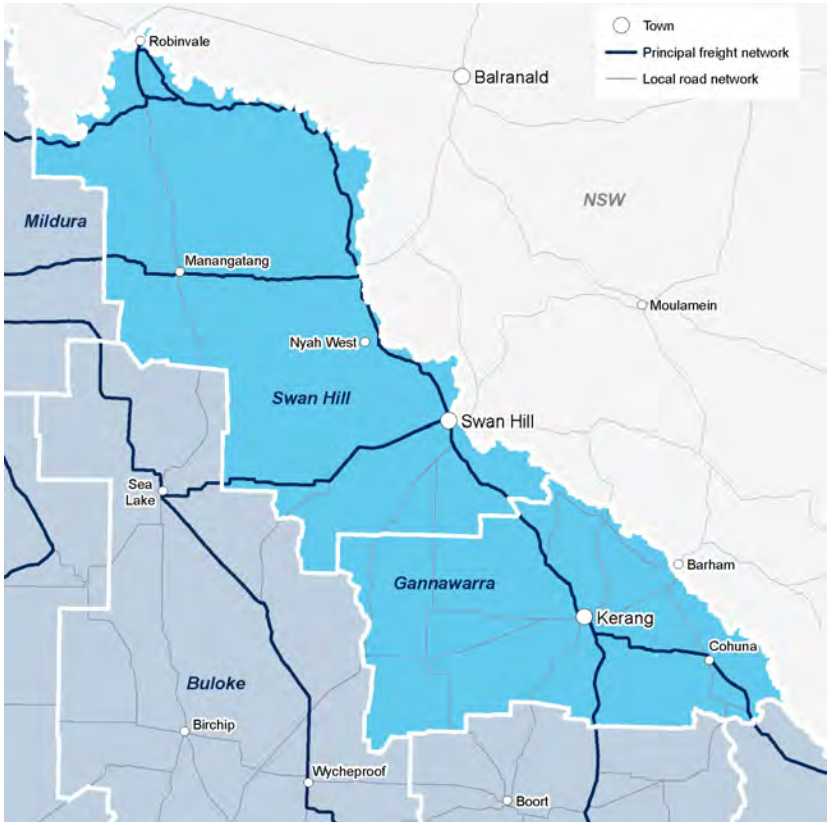
The study area covers an area of 9,850 km2 along the River Murray in Northern Victoria contained within the Swan Hill Rural City Council and Shire of Gannawarra.

Principal freight network PFN

Council areas are served by:

- Two broad gauge rail services (Melbourne to Swan Hill and Melbourne to Ultima)
- Three main arterials or highways which run into and through the region: Mallee Highway, Murray Valley Highway and the Loddon Valley Highway.

	Swan Hill RCC	Gannawarra SC
Area	6,115 square kilometres	3,735 square kilometres
Population	21,403 (2021 ABS)	10,683 (2021 ABS)
Townships	Swan Hill, Lake Boga, Manangatang, Nyah, Nyah West, Wemen, Piangil, Robinvale and Ultima	Cohuna, Kerang, Koondrook, Leitchville and Quambatook
Primary industries	Almonds, olives, table grapes, wine grapes, vegetables, fruit orchards, grains, mixed farming	Dairy, fruit orchards, vegetables, livestock, grains, mixed farming



An intensive irrigation area, part of the Goulburn Murray irrigation District (GMID), extends along the Murray River servicing more than 100,000Ha, and its channel supply network crosses many local roads from Leitchville to Woorinen.

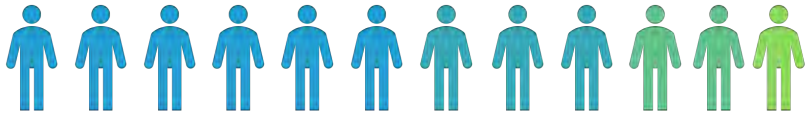
Dominant primary industries are:

- Agriculture (broadacre cropping, mixed farms and dairy) $637 million or 40% regional gross value
- Horticulture (almonds, wine grapes, table grapes, stone fruits) $960 million or 60% gross value
- Quarrying (gypsum and road materials) $7 million or less than 1% gross value (but expanding).

SIGNIFICANCE OF PRIMARY INDUSTRIES

PRIMARY INDUSTRIES EMPLOYMENT

24% of labour force employed in primary industries and related industries



3,200 jobs 2020/21

- **80% (2,572) - Agriculture**
- **11% (349) - Food processing**
- **6% (203) – Road freight**
- **2% (75) – Mining**

ECONOMIC CONTRIBUTION

Farm gate value of agriculture $1.6 billion which accounts for 9% of Victoria's agricultural production.

Regional primary producers, processors and road freight operators are key drivers of the state's exports and regional economy. Primary industries related employment is highly significant to this region.

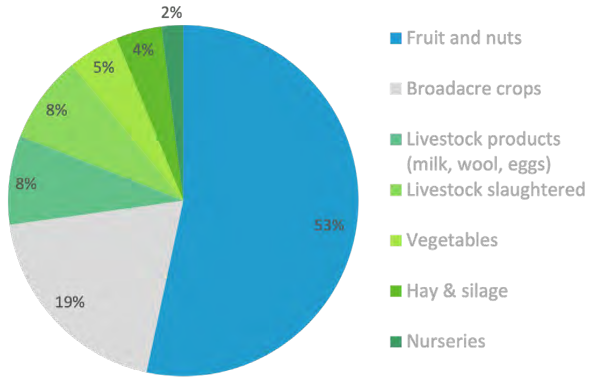
- Agriculture is the largest employment sector:
  - 2,572 direct jobs (19% total employment)
- Agriculture generates: $394 million value add:
  - Swan Hill $239 million
  - Gannawarra $155 million

AGRICULTURAL OUTPUT

Production value - $1.6 billion gross value

*Fruit and nuts make up 53% of gross value in **study area**, broadacre crops (including hay and silage) make up 27%*

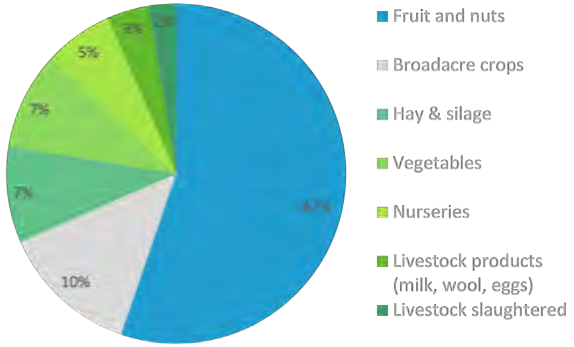
Percent of GVAP by commodity ($m 2020/21)



9% of the total Victorian production value

*Fruit and nuts make up 42% of **state share**, broadacre crops (including hay and silage) make up 17%*

Percent of State share by commodity ($m 2020/21)



1.1M Tonnes	292K Tonnes	32M Litres	322K Tonnes	332K Head
Broadacre grains, hay & silage	Horticultural produce (fruit, nuts, vegetables)	Wine	Raw Milk	Livestock

Regional agricultural production is dominated by cereal and legume crops, livestock and meat, irrigated horticultural production and dairy farming.

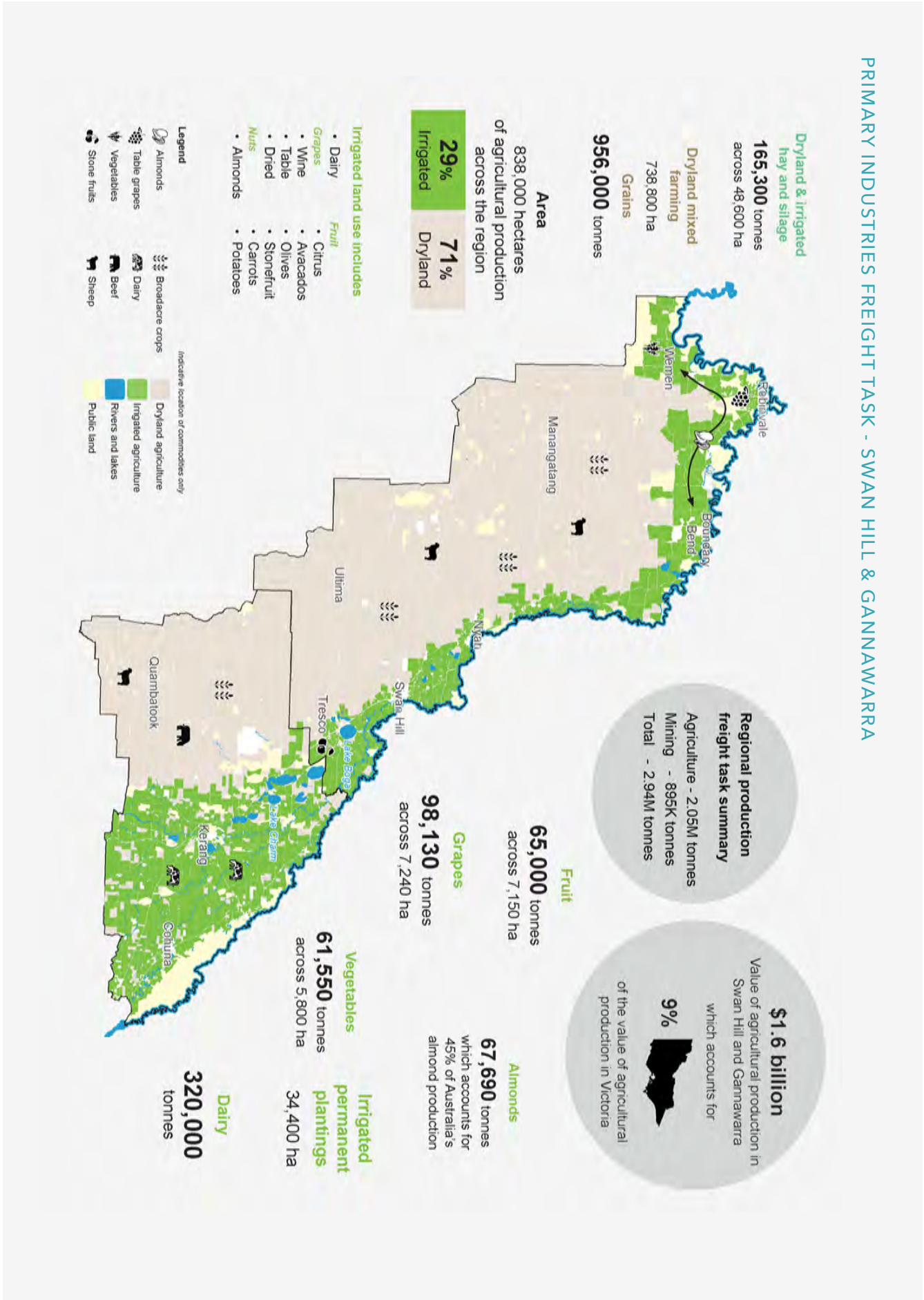
The study area is the largest almond production area in Australia comprising:

- 70% of Victoria's production and 30% of Australia's almond exports

The area also produces:

- 30% of Victoria's fruit and nut production (tonnage)
- 15% of Victoria's broadacre crops, hay and silage production (tonnage).

Significant mining and quarrying operations are conducted in the region, with at least one large new sand mining initiative planned. The vast majority of this production is exported from the region, mostly utilising the state's road network.


PRIMARY INDUSTRIES FREIGHT TASK - SWAN HILL & GANNAWARRA
Dryland & irrigated hay and silage
165,300 tonnes across 48,600 ha
Dryland mixed farming
738,800 ha
Grains
956,000 tonnes
Area
838,000 hectares of agricultural production across the region
29% Irrigated
71% Dryland
Irrigated land use includes
• Dairy
Grapes
• Wine
• Table
• Dried
Nuts
• Almonds
Fruit
• Citrus
• Avocados
• Olives
• Stonefruit
• Carrots
• Potatoes
Legend
Almonds
Table grapes
Vegetables
Stone fruits
Broadacre crops
Dairy
Beef
Sheep
Indicative location of commodities only
Dryland agriculture
Irrigated agriculture
Rivers and lakes
Public land
Regional production freight task summary
Agriculture - 2.05M tonnes
Mining - 895K tonnes
Total - 2.94M tonnes
$1.6 billion
Value of agricultural production in Swan Hill and Gannawarra
which accounts for
9%
of the value of agricultural production in Victoria
Fruit
65,000 tonnes
across 7,150 ha
Grapes
98,130 tonnes
across 7,240 ha
Almonds
67,690 tonnes
which accounts for 45% of Australia's almond production
Vegetables
61,550 tonnes
across 5,800 ha
Irrigated permanent plantings
34,400 ha
Dairy
320,000 tonnes
Wemen
Robinvale
Boundary Bend
Manangatang
Ultima
Nyah
Swan Hill
Tresco
Lake Boga
Lake Charm
Kerang
Quambatook
Cohuna

THE OPPORTUNITY

PRIMARY INDUSTRIES FREIGHT TASK

Regional primary production freight task - 3 million tonnes per annum.

More than 70% (or 2.1m tonnes) is exported from the region on the road network.

For high value perishable commodities such as milk and horticultural produce (including almonds, citrus, table grapes and olives) almost the entire task is now conducted using road transport. A large containerised hay business in Ultima, a wine business in Piangil and the proportion of the grains industry that moves grain from the centralised grain receival sites to ports, utilise rail as a freight partner of choice.

The proposal is to invest in strategically important local road upgrade projects that will enable improved access to more primary producers and processors to Victorian ports and Melbourne metro distribution centres. The improved access will also enable more efficient deliveries to and from customers and suppliers throughout SE Australia.

For many grain growers, dairy farmers and horticultural producers, upgrades enabling HPFV access to 'the last kilometre' between the on-farm silo complex, milk vat or fruit packing shed, linking to the PFN will provide large and lasting benefits to businesses and Victoria's economy.

HIGH PRODUCTIVITY FREIGHT VEHICLES

Or **HPFV** are a heavy vehicle combination that exceeds 26 metres and / or has a gross combination mass (GCM) greater than 68.5 tonnes. HPFV also include semi-trailers fitted with a quad-axle group.

A migration from the now common B-Double configuration, used extensively in the bulk grain road transport industry, to HPFV most commonly as an A-Double configuration, is already well underway but the limited capacity and condition of some local roads, including the capacity of some road bridges and culverts, must be improved before more access can be enabled.

HIGH PRODUCTIVITY FREIGHT VEHICLES

TYPICAL CONFIGURATIONS

(Maximum length / Vehicle configuration / Gross Combination Mass)

26m B-Double 68.5t

30m A-Double 85.5t

36.5m A-Double 85.5t

36.5m AB-Triple 113.5t

36.5m B-Triple 91t (2022 approved)

CHANGING SUPPLY CHAIN AND MARKETS

Both the pickup point and the destination of the grains freight task has changed over the past decade.

For producers, transport of bulk grains is now more customised and regionalised with a lesser focus on deliveries to the port of Melbourne and Geelong. In almost every primary production sector, the volume of inputs (and inbound freight requirement) is growing in line with production increases.

The one million tonnes p.a. regional grains freight task is the largest freight task for the two council areas and varies substantially with rainfall-driven yields. During high yield 'bumper crop' years, more grain is sold into the international bulk export market through Victoria's ports. In average years grain moves in a lot of different directions to a range of domestic customers. Substantive supply chain changes for grain growers have included:

- Large increases in the volume of grain stored on farm
- Growing domestic consumption from dairy and livestock producers, flour millers and feed millers located throughout SE Australia
- A large and growing containerised grain market.

The rising costs of grain handling and storage associated with traditional service providers has led to practice change (away from rail) driven by the long term imperative to meet client's needs and to remain competitive locally and internationally.

Victorian operators also need to match the performance and cost efficiency of interstate grain growers where these growers are able to utilise a growing fleet of HPFV's that can efficiently access more local roads that connect with intra-state and inter-state networks.

INDUSTRY CONSULTATION

The desire for more HPFV use was found to be central to current business planning for freight operators, local producers, processors and councils.

Discussions with transport companies operating in the region late in 2021 indicated that they would invest in HPFV as road access is expanded.

If more roads became accessible, and the linkages to the approved network increased, transport operators estimated that up to 60% (or greater) of the total freight task could be moved using HPFV (by A-Doubles or similar configurations).

All operators anticipated business growth and growing freight volumes.

At the time fuel prices were rising rapidly, and there was a shortage of suitably qualified transport drivers so many operators conveyed a sense of urgency for change.

Industry participants acknowledged that there had been some increased access for HPFV to the local road network but more was needed. Works enabling access for HPFV's along more local roads, which connect the 'last kilometre' to a greater number of farm businesses and key local processors would make the inward and outward-bound freight tasks significantly more efficient and competitive.

Both Council areas border NSW and have a high volume of freight moving over Murray River crossings at Barham, Murrabit, Swan Hill, Tooleybuc and Robinvale. Transport operators spoke of key interstate linkages and the importance of being able to use HPFVs with common dimensions and axle load limits, to link and simplify compliance for their freight task to multiple interstate destinations (NSW, SA and Qld).

CASE FOR INVESTMENT

PACKAGE OF ROAD UPGRADES

The study developed an investment decision method to assist prioritisation of upgrades to the local road network outside of the PFN, specifically to accommodate better access for HPFV.

The usability of a range of road freight and traffic data sources[1] available to Councils was reviewed to develop a tool that councils can use to prioritise where to invest in road upgrade projects [details provided in accompanying study report].

There is a "last kilometre" freight task for a large majority of produce grown in the study area as only farms with direct access to the main arterials, highways or other approved roads can use HPFV.

Using the prioritisation tool a short list of 20 priority local road sections for upgrade, to enable HPFV access, was generated. Typically, these road upgrade projects provided critical linkages for large individual producers or connected high production areas directly onto the approved road and highway network. In some cases, the improved access would facilitate freight movements sourced from outside the study area through the study and to end destinations in SE Australia.

The costs of each of the proposed works were provided by councils and typically included improvements to both pavement and wearing course layers, widening and improved delineation to allow safe HPFV access. GMW bridge and culvert assets, potentially requiring upgrade to accommodate HPFV, were also identified on priority roads. Costs were estimated based on contemporary replacement prices.

Features	Swan Hill RCC	Gannawarra SC
Investment $	$20.7 million	$17 million
Road upgrade length (km)	87 km	58 km
Average cost $/km	$237,000	$292,000
Additional investment (potential need for upgrade) GMW irrigation infrastructure structures $		17 culverts;11 bridges $3.6 million; $62,000/km

The study quantified financial benefits of upgrading local roads to producers and transport companies. The benefits stem from expected substitutions away from B-Double trucks towards HPFVs, and consequent reduced costs of operating the truck fleet (as fewer trips will be required to transport the same volume of goods). The financial benefits delivered through greater HPFV access and use will be spread between transport operators and producers. Typically, in years of lower production, freight charges will fall and producers will benefit from more efficient services; in times of high demand for transport, trucking companies tend to realise the bulk of the financial savings.

The study also quantified the economic benefits of upgrades to the local and state-wide economy. The economic benefits incorporated the financial benefits and the reduced environmental costs of operating the truck fleet (including air pollution cost, climate change cost and well-to-tank emission cost).

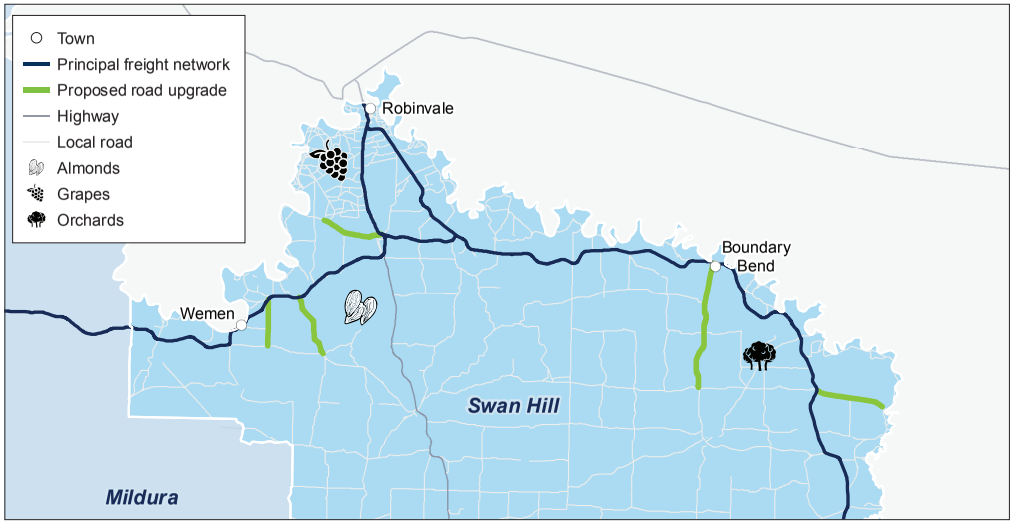
[1] Freight movements modelling from CSIRO (TranSIT model),Actual HPFV movements from Telematics Analytics Portal (TAP), National Heavy Vehicle Regulator (NHVR) Permit Portal data on applications for HPFV access to unapproved roads,Traffic counts (AADT using traffic count classifiers).

SWAN HILL RCC

Example upgrade projects

These Swan Hill roads have high volumes of heavy vehicle traffic due to the large and growing horticultural industry in the area:

- Intensively irrigated vegetables, nuts, olives, citrus and table grapes
- Some immature orchards or new plantings which are maturing, meaning that traffic volumes are likely to grow.

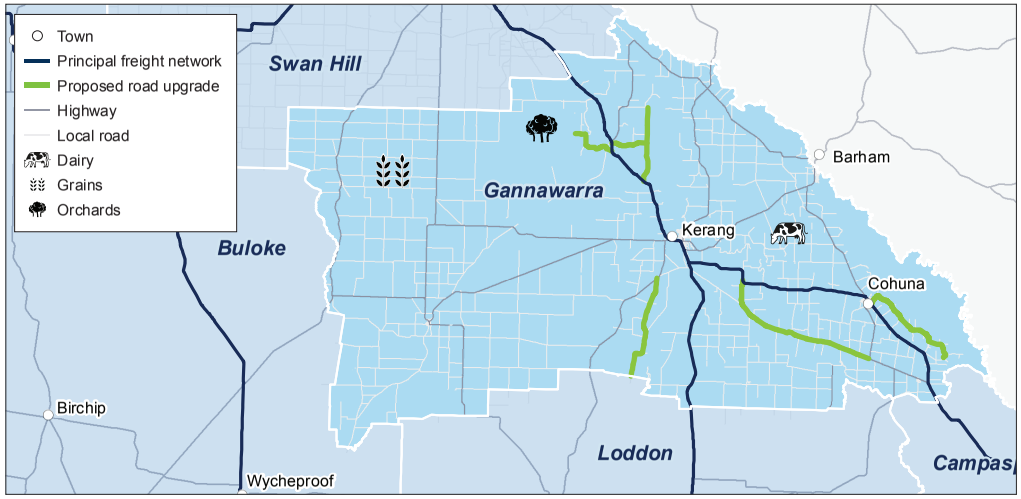


GANNAWARRA SC

Example upgrade projects

These Gannawarra roads have high volumes of heavy vehicle traffic due to intensive agricultural industries in the area including:

- Connecting dairy farms located on minor roads for regular large-volume milk pick-ups and forwarding of raw milk to the two or three large dairy processors located to the east of the study area
- Movement of stone fruits, citrus and field vegetables to packers and Melbourne markets; and the movement of seasonal processing tomato tonnages from large individual growers dependent on high-capacity local roads linking to the Murray Valley Highway to enable efficient transport to the single tomato processing plant in Echuca.

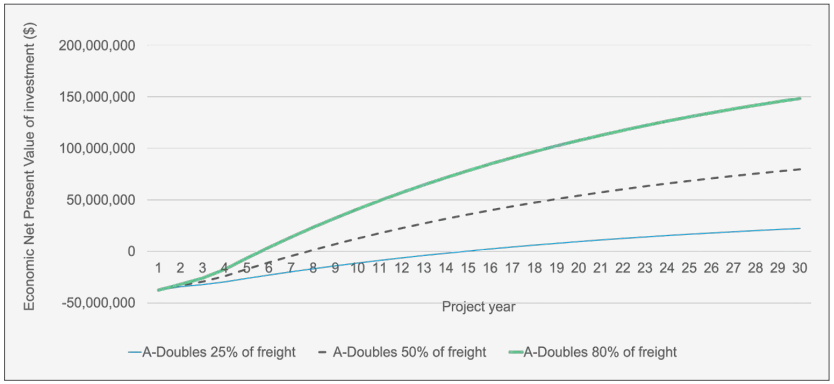


EXPECTED INVESTMENT RETURNS

Over the next 30 years, a $37.7 million investment in local road upgrades in Swan Hill and Gannawarra is expected to deliver the following economy-wide benefits:

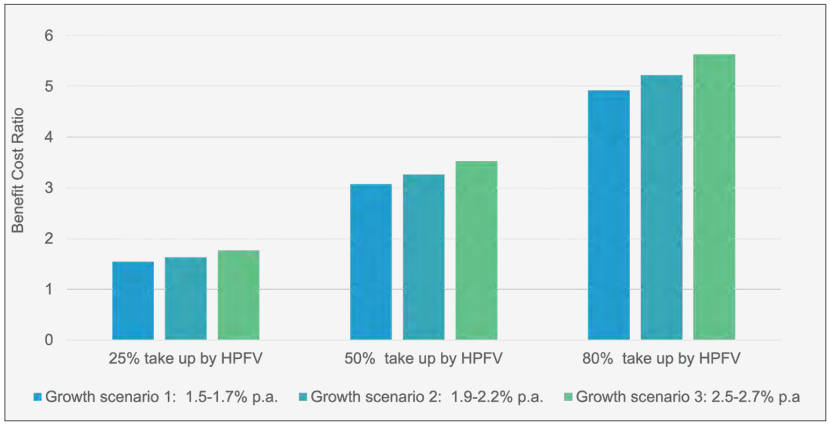
- An economic net present value (NPV) of $79.7 million
- An economic benefit-cost ratio (BCR) of 3.26
- An economic internal rate of return (EIRR) of 21%

This estimate is based on a 50% migration of freight to HPFVs (i.e. to A Doubles, from the current largest vehicles universally utilised, B Doubles) and a growth in the freight task in the target areas serviced by the upgraded local roads of 1.9-2.2% p.a. NPV projections for different HPVF take-up rates are illustrated in the chart below.



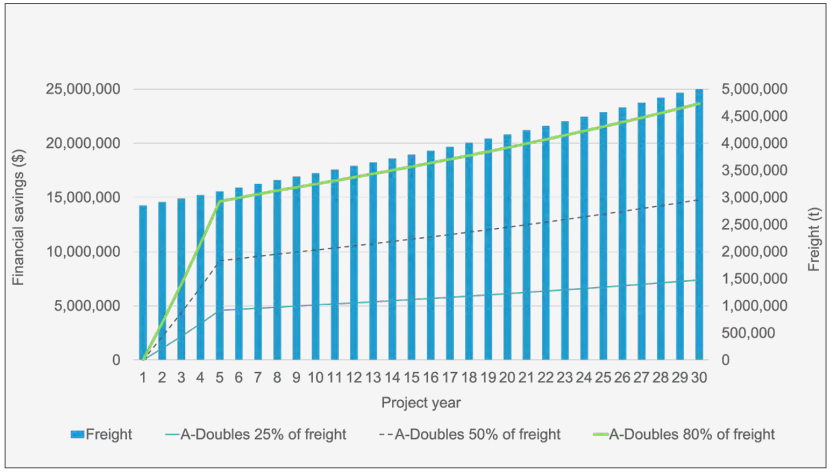
Economic modelling confirms a strong business case for the proposed upgrades.

The investment projects are economically viable, with economic BCRs ranging from 1.5 to 5.6, depending on the HPVF take-up rates and freight growth projections (see chart below). These results provide a compelling case for investing in local road upgrades in both council areas.



INDUSTRY COMPETITIVENESS

Modelled annual financial savings to producers and transport companies from the investments are in the order of $4.6 million to $15 million by 2027 (project year 5), depending on the level of adoption of HPFVs and freight volume growth. By 2052 (project year 30), these savings are expected to grow to $6.5 - $30.0 million. These savings are substantial, given that the current cost of freight in the two LGAs is around $150.7 million.



KEY MODEL ASSUMPTIONS

Key inputs to calculating the travel cost in the with-investment and without-investment scenarios are detailed in the accompanying Study Report.

Some general assumptions and data sources were:

- The average trip length was based on a distance of a return trip to Melbourne Port from the two shires (850 km for Swan Hill and 750 km for Gannawarra).
- Operation and maintenance costs of roads are expected to be similar with and without-upgrade based on advice from the Swan Hill RCC.
- Detailed truck ownership and operating cost models for B Double and HPFV (A-Double) were based on financial data provided by a local grain-freight company and key parameters in the Australian Transport Assessment and Planning (ATAP) guidelines.
- Freight task, or commercial loads carried on these roads were established utilising a range of sources including council road heavy vehicle traffic counts, ABS agricultural production data, tonnage grown/throughput information from local producers and processors, and CSIRO Transit model inputs.
- Financial and economic returns were based on both ATAP and industry figures and included quantifying and valuing avoided air pollution costs and CO2 emissions associated with reduced truck movements/trip numbers (i.e. larger vehicles make less trips).

REGIONAL AND STATEWIDE BENEFITS

If the proposed package of road upgrades is implemented and impacted roads reclassified, a medium-level shift (50%) of freight from B-Doubles to HPFVs is estimated to deliver the following annual benefits to the Victorian economy, producers, processors and the transport industry servicing the study area:

1. **Improved margins for commodity producers (agriculture, mining), transport operators and bulk handlers:** a combined $8.2M per annum in financial saving through improved movement efficiencies.
2. **Reduced fuel use:** 2.7M litres less fuel used.
3. **Reduced environmental impact:** 7,193 less CO2-e tonnes of carbon emissions and a $380,000 reduction in environmental impact (including reduced air pollution).
4. **Reduced number of vehicle trips on Council roads, state highways and around our ports:** 7,968 fewer truck movements and 6.3M km in reduced travel.
5. **Accelerated investment in newer trucks by local and regional bulk transport operators with higher safety standards:** An estimated $70.5M investment is expected to be bought forward to purchase 98 new vehicles to replace older, less efficient B-Doubles.
6. **New higher paid jobs, the ability to maintain capacity to deliver freight services needed within the SHRCC and GSC areas:** The creation of 127 A-Double driver positions as skilled drivers of HPFV vehicles is a welcome addition to the career path of Victorian transport operators. Although 42 fewer drivers would be employed overall because of the reduced number of larger truck movements, low availability of qualified drivers is currently a significant problem for transport operators interviewed, and a key element of the push for greater use of HPFVs.

A additional benefit was excluded from the quantitative analysis:

- **Road safety:** increased road safety and reduction in traffic accidents
  - reflecting the higher performance in national safety statistics of HPFV on Australia's roads relative to smaller trucks.

RISKS OF UNDER INVESTMENT

Loss of competitiveness

- The proximity of the study area heightens the need to be able to service Victorian producers and processors using HPFV to send freight to expanding Victorian, NSW and SA markets.
- Without investment in local road transport infrastructure, the supply chains in growing food production and processing, and mining sectors, will be impacted. Opportunities to attract investment by industries seeking to establish enterprises in regions with a freight advantage could be lost.

Employment growth not realised

- In order to position new industries in the region and realise employment growth, they will need to be able to competitively move freight from producers to intermodal sites and direct to customers.
- Sand mining is a growing industry and employer throughout northern Victoria and southern NSW.
    - Movement of semi processed ore to ports, rail heads or to tertiary processing sites is a significant cost. HPFV access will be critical to capitalise on new mining opportunities in the area.


SWAN HILL
Rural City Council


GANNAWARRA
Shire Council

B.23.13 COMMUNITY ENGAGEMENT - ART GALLERY EXTENSION AND RENOVATION AND VISITOR AND CULTURAL HUB AT THE PIONEER SETTLEMENT

Responsible Officer: Director Development and Planning
File Number: S01-03-09
Attachments: Nil

Declarations of Interest:
Heather Green - as the responsible officer, I declare that I have no disclosable interests in this matter.

Summary

Council on 20 September 2022 resolved to proceed with the development of two projects being –

- an extension to and renovation of the Art Gallery and
- a new Visitor and Cultural Hub at the Pioneer Settlement

Council was granted a variation to the funding agreement to split the project into two building projects and allow more time to complete each building.

Council has completed the first stage of engagement with the community for both projects and has commenced the second stage.

Community input is important to the success of both projects and will continue in the coming months.

Discussion

Council is soon to commence concept development for the Swan Hill Art Gallery redevelopment and the Swan Hill Tourism and Cultural Hub.

The proposed single-storey tourism and cultural hub will be a new purpose-built entry for Pioneer Settlement, Visitor Information Centre and Aboriginal Cultural space and will compliment possible development on Pental Island supporting Aboriginal cultural and tourism opportunities. It should be noted that all development at Pioneer Settlement is subject to Heritage Victoria approval.

The proposed redevelopment of the Art Gallery includes extra floor space to improve display areas, modernise and increase storage and improve the exterior of the building.

Consultation

Community Engagement

Stage 1 –

A total of six focus group sessions were held in February and submissions sought via Councils Let's Talk page. The attached feedback was received from the community regarding expanded and renovated Art Gallery and the new Swan Hill Tourism and Cultural hub. (attachments 1 and 2)

Focus group sessions – three focus group sessions were held in February for each building project. These sessions were well attended and provided an interactive opportunity for idea sharing and discussion. A total of 33 people attended the tourism and cultural hub forums and 22 people attended the Art Gallery forums

Let's talk – Online feedback was open for both projects from Tuesday, 3 January until Tuesday, 28 February. Thirty submissions were received in relation to the Tourism and Cultural Hub and fifteen received in relation to the Art Gallery

Information sharing sessions were held with local First Nations community, over the last three months, in conjunction with Councils Aboriginal Development Officer. Input from this community will be directly shared with the architect.

Primary school aged children participating in Council's (OOSH) service were given the opportunity to share their ideas for the two new buildings and their ideas have been captured.

Stage 2-

To ensure that all ideas and comments were recorded, residents and community members can provide additional feedback on these outcomes' reports.

The ability to make further comments or suggestion is currently open online via the Let's Talk platform until Friday, 31 March.

Drop In sessions –will be held on the 23 March at the Art Gallery and will enable participants to provide additional comments and talk to Councillors and key staff about ideas or concerns. At these sessions the Mayor will clarify some issues raised during the Focus groups sessions.

Swan Hill Regional Art Gallery redevelopment

- Thursday, 23 March from 9.30am to 10.30am at the Swan Hill Regional Art Gallery

- Thursday, 23 March from 5pm to 6pm at the Swan Hill Regional Art Gallery

Swan Hill Tourism and Cultural hub

- Thursday, 23 March from 11am to 12pm at the Swan Hill Regional Art Gallery

- Thursday, 23 March from 6.30pm to 7.30pm at the Swan Hill Regional Art Gallery

Stage 3 –
The community will be involved at a third stage when the architects for both projects are more advanced and are incorporating community input into the design.
This will include discrete sectors including – Aboriginal Community, Friends of the Pioneer Settlement, Art Gallery Advisory Group and all user groups. Details will be provided in the future.

The two architectural firms are in the process of being appointed and will be announced shortly.

Financial Implications

The cost of consultation to date is part of the budget for both projects and equates to about $12,000 plus officer time.

Social Implications

Broad community input into key projects is essential to the success of the projects.

Economic Implications

The development of two key tourism and cultural projects is part of the maturation of the city of Swan Hill and essential in attracting visitors and new residents.

Environmental Implications

Both cultural heritage and environmental sensitivities will be examined and managed

Risk Management Implications

The timelines to complete both projects is very tight and will need to be carefully managed to meet grant conditions.

Council Plan Strategy Addressed

Prosperity - A thriving diverse economy.

Options

1. That Council note the update on the community engagement program associated with development of the Art Gallery and the Tourism and Cultural Hub.
2. That Council not note the update on the development of the Art Gallery and the Tourism and Cultural Hub.

Recommendations

That Council:

1. Note the update on the community engagement associated with the development of the Art Gallery and the Tourism and Cultural Hub

2. Encourage the community to continue to get involved in the development of the Art Gallery and the Tourism and Cultural Hub.

B.23.14 SWAN HILL INTEGRATED TRANSPORT AND LAND USE STRATEGY 2050

Responsible Officer: Director Development and Planning
File Number: S22-24-01
Attachments: 1 ⇩Wagga Wagga Transport Plan

Declarations of Interest:
Heather Green - as the responsible officer, I declare that I have no disclosable interests in this matter.

Summary

This report seeks to inform and obtain direction from Council on the proposed Swan Hill Integrated Transport and Land Use Strategy 2050.

Discussion

Currently, Council does not have an Integrated Transport and Land Use Strategy for Swan Hill. In the absence of such a document, there is the potential for transport investment and associated infrastructure development to be reactionary rather than planned in a strategic and coordinated manner.

Ultimately an Integrated Transport and Land Use Strategy would deliver greater efficiencies in the development and management of the transport network now and into the future, and to enable land use planning to occur in a more coordinated approach.

This strategy will also help to inform a number of key activities planned for Swan Hill including;

- the Murray River bridge into New South Wales
- pedestrian Connectivity between the CBD and the riverfront precinct
- activation of the former Goulburn Murray Water number 9 channel for pedestrian and bike travel connecting south west development precinct and associated key development (new school); and
- freight movements throughout the city.

Developed in collaboration with Department of Transport and Planning (DoTP), the strategy will proactively respond to anticipated changes in land use, population and travel demand across the regional city. It supports shared accountability for the initiatives identified.

Furthermore, the strategy seeks to promote walking, cycling and public transport as an alternative to the private vehicle for more people, more often. This will be achieved through delivering a safer, more efficient and accessible transport network that better supports the continued growth and economic wellbeing of Swan Hill's communities, businesses, and industries.

The project scope will deliver a strategy that examines and includes the following key topics;

1. National, regional and local context
    - Economic and demographic outlook for at least the next 25 years
    - Translate what this means for the transport system; and
    - Identify likely trends in transport over the time period

2. The transport network
    - Document and quantify the current transport network, key issues and gaps
    - Document what the transport network needs to look like; and
    - Opportunities for modal targets

3. Prioritising the future transport network
    - Identifying the road, rail, walk, cycle, freight, general traffic, tourist etc. preferred routes. (eg pedestrian bridge riverside park from CBD, Active Trails)
    - Identifying gaps in the network, and what this means for social and economic outcomes

4. Prioritisation methodology and implementation plan
    - Short-Term, Medium-Term and Life of Plan' Initiatives
    - Prioritised list of activities
    - Key stakeholders
    - Possible sources of funding

Expected Outcomes
Whilst the benefits of an Integrated Transport and Land Use Strategy are significantly broad in scope, there are however a number of key objectives that the Strategy will deliver, namely;

- Adopting targets for increasing journeys made using active transport & public transport and identifying the infrastructure/service/cultural and other changes needed to achieve those targets
- Ensuring road infrastructure is fit for purpose and provides for a better return on investment
- Allowing future development to be located strategically to maximise the benefits from the use of High Productivity Freight Vehicles (HPFV)
- Create a safer mix of traffic types by developing a road network that focusses on Freight, Commuter and Tourist routes where possible.
- Less infrastructure damage through the use of HPFV's
- Social benefits such as less noise, congestion and pollution through more coordinated land use planning and regulation.

- Identification of funding opportunities for road infrastructure development by better coordination and prioritisation of local, state and commonwealth priorities.
- Better alignment and coordination with National and State Strategies regarding Road and other transport Infrastructure improvements within the region

A working example of the proposed Swan Hill Integrated Transport and Land Use Strategy is the Wagga Wagga Transport Plan (see attached).

Alternative option to the Integrated Transport and Land Use Strategy, Council can undertake an Integrated Transport Strategy that would focus active transport movements only.

Implementation
The Strategy will be coordinated through a dedicated a Project Control Group, consisting of members from Council's Planning, Engineering and Economic Development Unit, as well as representatives from DoTP.

Consultation

A key focus for this strategy will be to engage and consult with the key stakeholders, businesses, industry sectors and community.

Financial Implications

Under the Integrated Transport & Land Use Strategy option, Council's finanical contribution would be capped at $100,000, sourced from:

- 10 Year Major Project Plan - Pedestrian & Cycling Strategy 2023-24: $40,000
- Council's 2022/23 Surplus Budget: $60,000

DoTP will provide a financial committement of $50,000 for the project, under the Flexible Local Transport Solution Program.

Under the Integrated Transport Strategy option, Council's finanical contribution would be capped at $50,000, sourced from:

- 10 Year Major Project Plan - Pedestrian & Cycling Strategy 2023-24: $40,000
- Council's 2022/23 Surpus Budget: $10,000

Social Implications

Implementing key initiatives within the strategy will empower community pride and social inclusion.

Economic Implications

The implementation of the strategic earmarked intiatives will drive real long term economic benefits for the region including supporting business growth, attract new investment, liveability opportunities.

Environmental Implications

Reducing vehicle movements and encouraging active transport.

Risk Management Implications

Nil

Council Plan Strategy Addressed

Liveability - A modern municipality: Vibrant, connected and resilient.

- 1.1.1 Attractive Urban Areas
- 1.1.3 Excellent Transport Link
- 1.3.1 Encourage active & healthy Lifestyle
- 1.2.2 Accessible open spaces
- 2.3.2 Assets for our current & future needs

Options

1. Endorse the development of the Swan Hill Integrated Transport and Land Use Strategy 2050.
2. Endorse the development of the Swan Hill Integrated Transport Strategy 2050.
3. Do not endorse the development of the Swan Hill Integrated Transport/Land Use Strategy.

Recommendation

That Council:
1. Endorse the development of the Swan Hill Integrated Transport and Land Use Strategy 2050 as a joint project with the Department of Transport and Planning.
2. Approve the use of $60,000 from the anticipated 2022/23 surplus as partial funding for the development of the Swan Hill Integrated Transport and Land Use Strategy 2050.

Transport
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NSW
GOVERNMENT

Wagga Wagga Transport Plan

transport.nsw.gov.au

Connection to Country

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our Aboriginal peoples followed for tens of thousands of years. Wagga Wagga is located within Wiradjuri country. Wiradjuri country extends from the Central West to the Western Slopes and the Plains of NSW and includes Dubbo, Condobolin, Orange, Bathurst, Albury, Griffith and Narrandera. Wiradjuri people have a strong continued connection to their Country, maintaining their language, customs, stories, and song and dance.

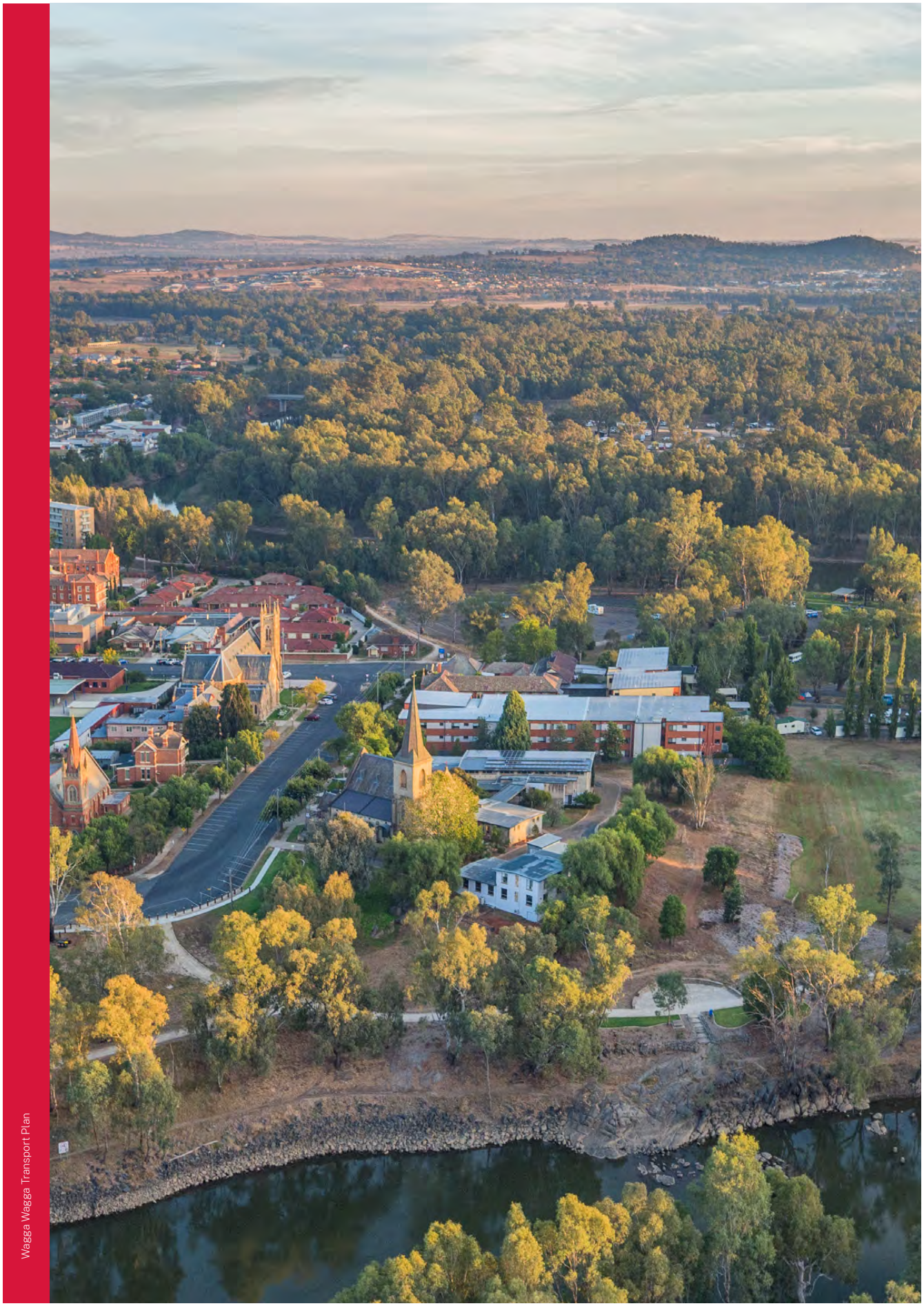
The name Wagga Wagga evolved from Wagan, which means 'a place where crows congregate' or 'a place of dance and celebration' in Wiradjuri language. The Murrumbidgee River has held a strong sense of place and connection to the Wiradjuri mob for generations. The river is an important feature in the Wiradjuri nation's landscape and its people's stories. It also forms part of a major migration route for Aboriginal people coming from the north. Wagga Wagga was home to small family groups and was a common meeting place for major gatherings where disputes were settled, laws were made, and new totems (budyan) were chosen.

Today, Wagga Wagga remains the traditional home for many Wiradjuri people, as well as people from other Aboriginal countries. In the 2016 census, about 3,500 (5 per cent) of the 63,900 residents counted in Wagga Wagga said they were of Aboriginal or Torres Strait Islander background. Of these, 96 per cent were Aboriginal. Between the 2011 and 2016 census, an additional 800 people identified as Aboriginal. About 38 per cent of the Aboriginal population in Wagga Wagga is under 14 years of age, in comparison to the NSW average of 34 per cent. The average age of Aboriginal and Torres Strait Islander residents in Wagga Wagga is 20 years, compared to the NSW average of 38 years.

The NSW Government and Wagga Wagga City Council are committed to ensuring Wiradjuri heritage is reflected in planning, management, and development. The Transport for NSW Reconciliation Action Plan 2019-2021 acknowledges and pays respect to the role of Aboriginal and Torres Strait Islander people as custodians of the lands where we work. It also demonstrates our commitment to working towards reconciliation both within Transport and in communities across NSW. Transport for NSW supports Wagga Wagga City Council's Reconciliation Action Plan which envisages Wagga Wagga to be a "thriving, innovative, connected and inclusive community".

Aboriginal and Torres Strait Islander Peoples should be aware that this document may contain images of people who have passed away.

Credit:
Wagga Wagga
City Council



Contents

◀ City of Wagga Wagga and Murrumbidgee River Credit: Destination NSW

▲ Cover image: Baylis Street, Wagga Wagga

Executive Summary

The Wagga Wagga Transport Plan ("the Plan") is the first place-based transport plan developed by Transport for NSW for a regional city in NSW. As a supporting plan of Future Transport, the Plan provides a blueprint for transforming the way people and goods will travel within, to and through Wagga Wagga over the next 20 years.

Developed in collaboration with Wagga Wagga City Council ("Council") and relevant State Agencies, the Plan presents the strategic framework for how Transport for NSW and Council will work to proactively respond to anticipated changes in land use, population, and travel demand across the regional city, and supports shared accountability for the initiatives identified.

The car is the dominant method of travel in Wagga Wagga, accounting for just over 77 per cent of all commuter trips. As the city grows and the population changes, attractive alternatives to private vehicle transport will become increasingly important, particularly for those customers without access to a car. The Plan articulates a clear transport vision for Wagga Wagga that will deliver a more

▲ Credit: Wagga Wagga City Council

sustainable, multi-modal and safe transport network for the regional city, as well as improved travel choices for more people, more often regardless of their age, ability and income.

To achieve the 2041 transport vision for Wagga Wagga, the Plan has identified 35 initiatives – of which 21 will be delivered, planned for, or investigated within the next five years – under the following three broad themes:

Connected – a transport network that facilitates seamless, multi-modal connectivity between where people live, work and play.

Safe – a transport network that delivers a safer future for the people of Wagga Wagga.

Productive – a transport network that supports the efficient, safe and sustainable movement of people and goods within Wagga Wagga and can swiftly pivot to take advantage of beneficial emerging technologies.

We believe that a Plan that focuses on securing a transport network for Wagga Wagga that is connected, safe and productive will also enable a regional city that is sustainable, vibrant and liveable for its citizens and visitors.

01 Introduction

1.1 What does this Plan do?

The Wagga Wagga Transport Plan ("the Plan") is the first place-based transport plan developed by Transport for NSW for a regional city in NSW. As a supporting plan of Future Transport, the Plan provides a blueprint for transforming the way people and goods will travel within, to and through Wagga Wagga over the next 20 years.

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Furthermore, the Plan also seeks to make walking, cycling and public transport an attractive alternative to the private vehicle for more people, more often. This will be achieved through delivering a safer, more efficient and accessible transport network that better supports the continued growth and economic wellbeing of Wagga Wagga's communities, businesses, and industries.

1.2 Stakeholder engagement

Development of this Plan has been informed through formal engagement and workshops with key stakeholders, as well as feedback provided during the public exhibition of the Draft Wagga Wagga Transport Plan (the "Draft Plan") from 23 April 2021 to 28 May 2021.

During the exhibition period, Transport for NSW received 122 submissions on the Draft Plan. Common themes raised in the feedback received included:

- traffic congestion through Wagga Wagga, particularly for north-south movements;
- the need for improved bus services across the city;
- greater investment in walking and cycling initiatives; and
- the need for improved place outcomes for Wagga Wagga.

Feedback provided on the Draft Plan has helped reshape the narrative in the Final Plan.

◀ Aerial photo of Wagga Wagga

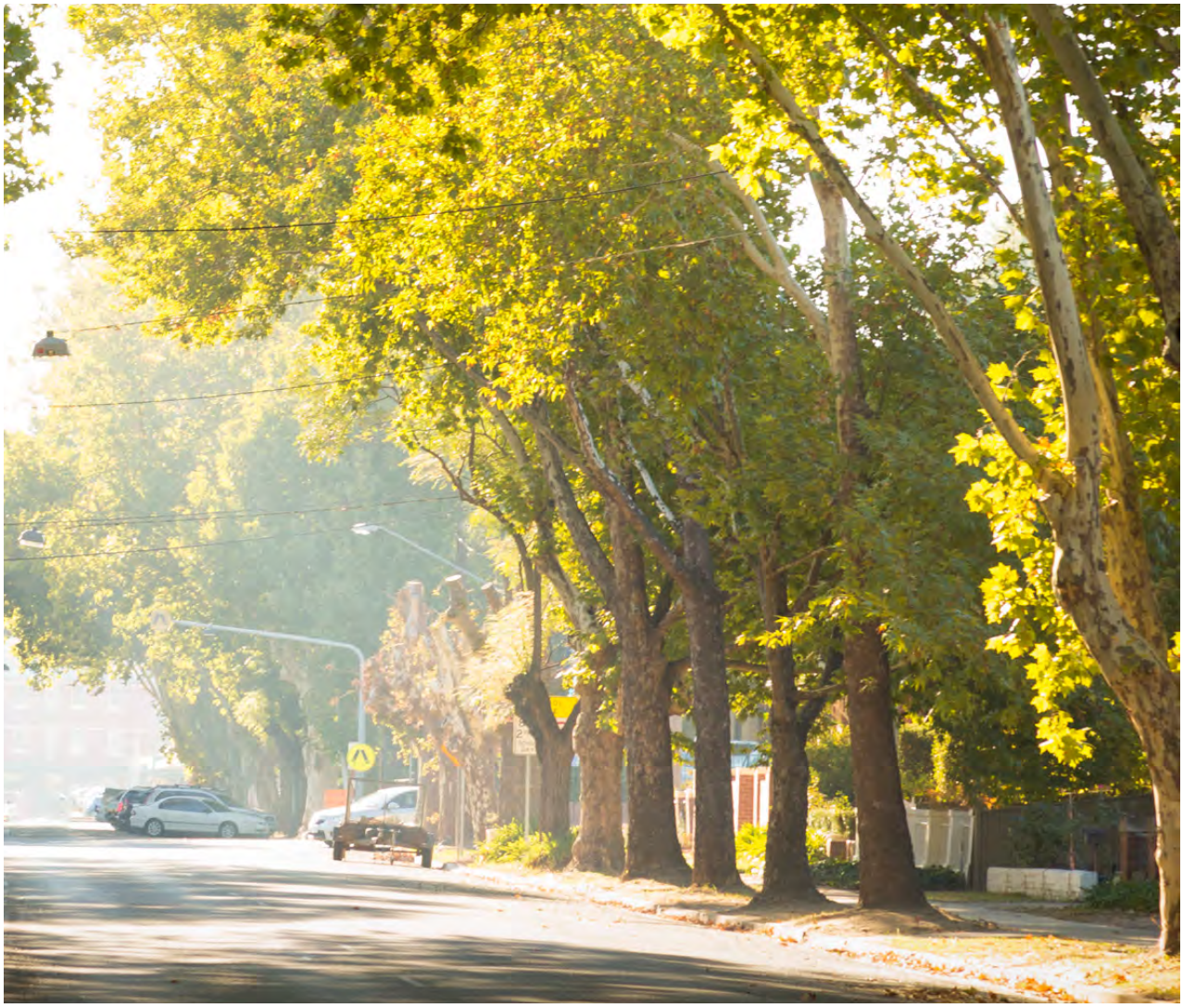
1.3 Implementing the Plan

Establishing a transport vision for Wagga Wagga and identifying key initiatives to deliver the vision is just the first step in the planning process.

Shared accountability will be integral to successfully meeting the transport needs of our customers. This will require establishment of a collaborative governance structure between Transport for NSW and Council to collectively oversee implementation of the Plan, as well as the formulation of cooperative partnerships for those initiatives that require leadership and input from key stakeholders like State Agencies, industry and community representatives to successfully fulfil the investigation.

Agency responsibility and indicative timing for each initiative is presented in Chapter 4 to clearly articulate to our customers who is responsible for their investigation and delivery.

This Plan will be a “living” document to be continually updated as the area changes, technology evolves, legislation adjusts, and new opportunities emerge. Transport for NSW and Council will provide status updates on our allocated deliverables every 12 months and undertake a refresh of the Transport Plan every five years.



1.4 Funding and delivery

Transport for NSW is committed to ensuring the transport system is financially sustainable, as well as meets the varying needs of our customers.

This Plan comprises a total of 35 initiatives. While some initiatives are already in the delivery or planning phases, new initiatives will require further investigation to determine feasibility, plus ensure new initiatives that are progressed for funding are aligned with the transport vision for Wagga Wagga and delivers value for money for the people of NSW.

Transport for NSW and Council will work collaboratively to identify opportunities to fund the initiatives outlined in the Plan, including possible federal and private sector financing. This includes ensuring that private development and industry operations align with our shared vision.

▲ Wagga Wagga Beach Credit: Jack of Hearts Photography

02 The Transport Challenge

2.1 Why is this Plan needed?

Wagga Wagga is experiencing significant change and growth. As the regional capital of the Riverina-Murray region, Wagga Wagga's scale, diversity, liveability, and natural assets attract investment, create employment and welcome new residents. Future planning will need to cater for a growing economy and population in a climate where technology and the environment are changing rapidly.

This Plan articulates how Transport for NSW, in collaboration with Wagga Wagga City Council, will respond to the following key trends that will reshape the transport needs of the regional city over the next 20 years.

2.2 A growing population

Wagga Wagga is the traditional home of the Wiradjuri people and the largest inland city in New South Wales with around 63,906 residents. It is also the largest retail, commercial, administrative, and population centre within the Riverina-Murray region, servicing the needs of surrounding settlements in a catchment of over 185,000 people.

By 2041, NSW Government population projections predict the Wagga Wagga Local Government Area will increase to about 73,267 people[1].

From a demographic perspective, the population of Wagga Wagga, like most of Regional NSW, is also aging. The average age of the region's population is expected to increase over the next 20 years, with the proportion of people over 60 years of age projected to rise from 20 per cent in 2016, to 27 per cent in 2041. During this same period, the proportion of residents aged under 30 years of age, and between 30 and 60 years of age is projected to decline.

In combination, the anticipated population growth, along with the changing demographics of the region's population, will necessitate a bespoke transport response that will satisfy the needs of our customers both now and into the future.

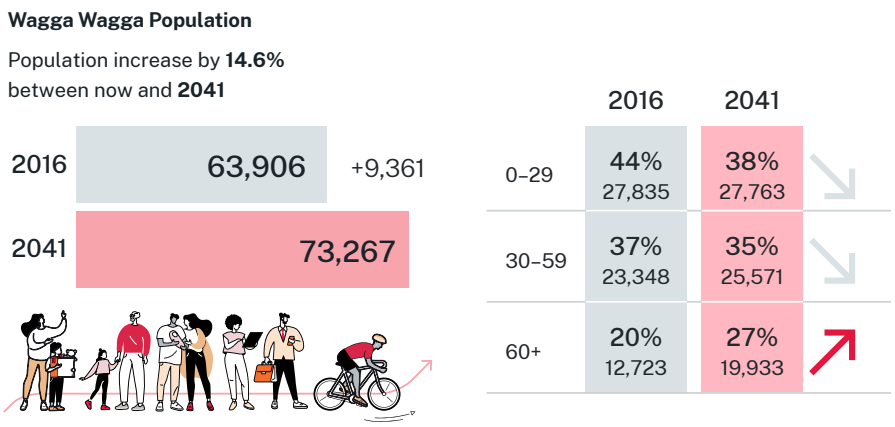


Figure 1: Population projections for Wagga Wagga 2016 – 2041

1 planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections

2.3 A hub for the region

Wagga Wagga is at the heart of the Riverina-Murray region. The regional city serves a catchment extending to the Victorian border to the south, past Narrandera to the west, Temora and Cootamundra to the north, and Gundagai, Tumut and Tumbarumba to the east. It also has strong links with the regional cities of Albury-Wodonga and Griffith, and the Global Gateway of Canberra.

Transport plays a vital role in connecting the strategic centres, towns and villages within Wagga Wagga's catchment with the goods, services and opportunities provided by the regional city.

Identifying opportunities to improve multi-modal connectivity across the catchment will not only deliver greater modal choice for more people, more often, it will also ensure improved access to the jobs, education, health, recreational and cultural facilities that Wagga Wagga has to offer.

▲ Civic Centre precinct of Wagga Wagga Credit: Chloe Smith Photography

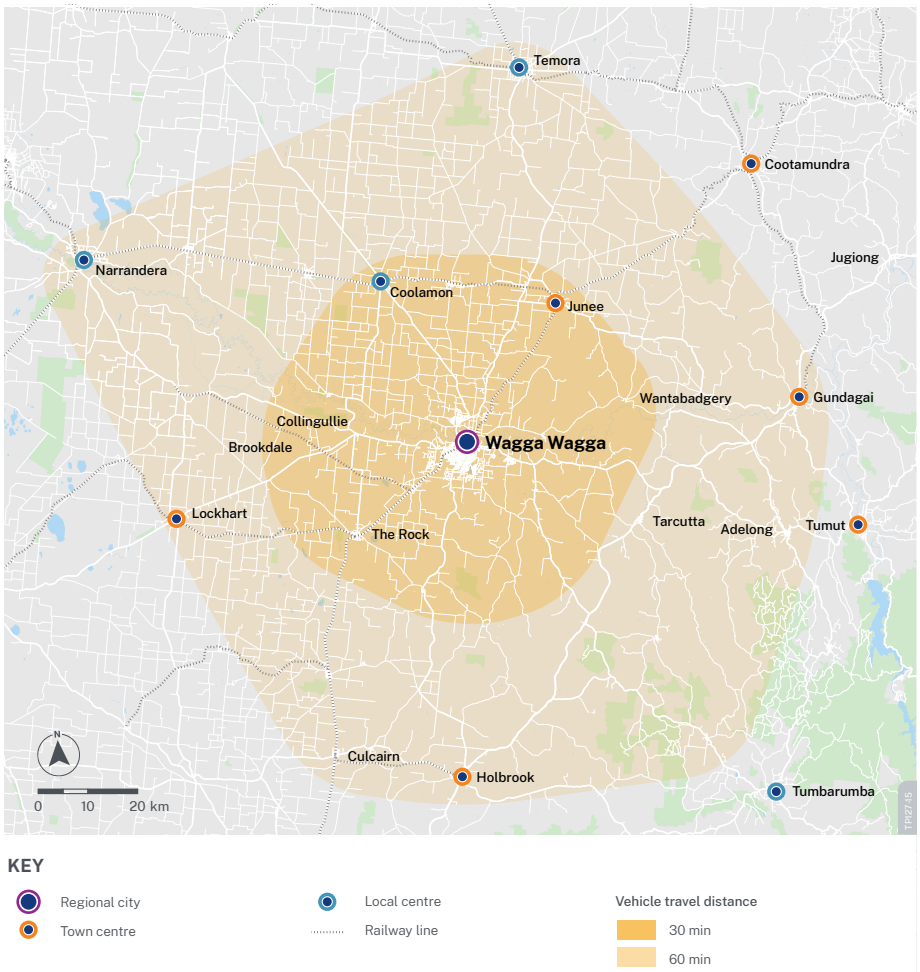


Figure 2: Wagga Wagga's Catchment of Influence

2.4 Changing land uses

With the anticipated growth in population over the next 20 years, precincts across the regional city will also evolve to accommodate the needs of a larger Wagga Wagga. New residential precincts will expand both north and south of the city centre, and infill development will see change across established suburbs.

Closer to the city centre, the CBD will continue to evolve into a vibrant, pedestrian-friendly heart while the Health and Knowledge Precinct around Wagga Wagga's two major hospitals, will transition into a central activity hub for current and new health services in both Wagga Wagga and for the wider Riverina.

To support these two precincts, Edward Street will also need to pivot to be more multi-modal, deliver equal priority for east-west and north-south trips, and enable greater activation for land uses fronting the corridor.

Finally, the 4,424 hectare Wagga Wagga Special Activation Precinct to the north of the regional city – delivering between 3,400 and 6,050 jobs by 2040[2] – will establish Wagga Wagga as the key intermodal freight hub for the Riverina-Murray region, delivering seamless integration between road and rail freight movements and wider economic benefits for the growing population.

Activation of these precincts over the next 20 years will influence travel demand across the regional city. This will necessitate close collaboration between Transport for NSW, Council, State Agencies and industry to ensure anticipated land use changes are proactively complemented with modal choice, considers both services and infrastructure solutions, and positions the customer at the centre of everything we do.

2 Wagga Wagga Special Activation Precinct Master Plan, DPIE 2021

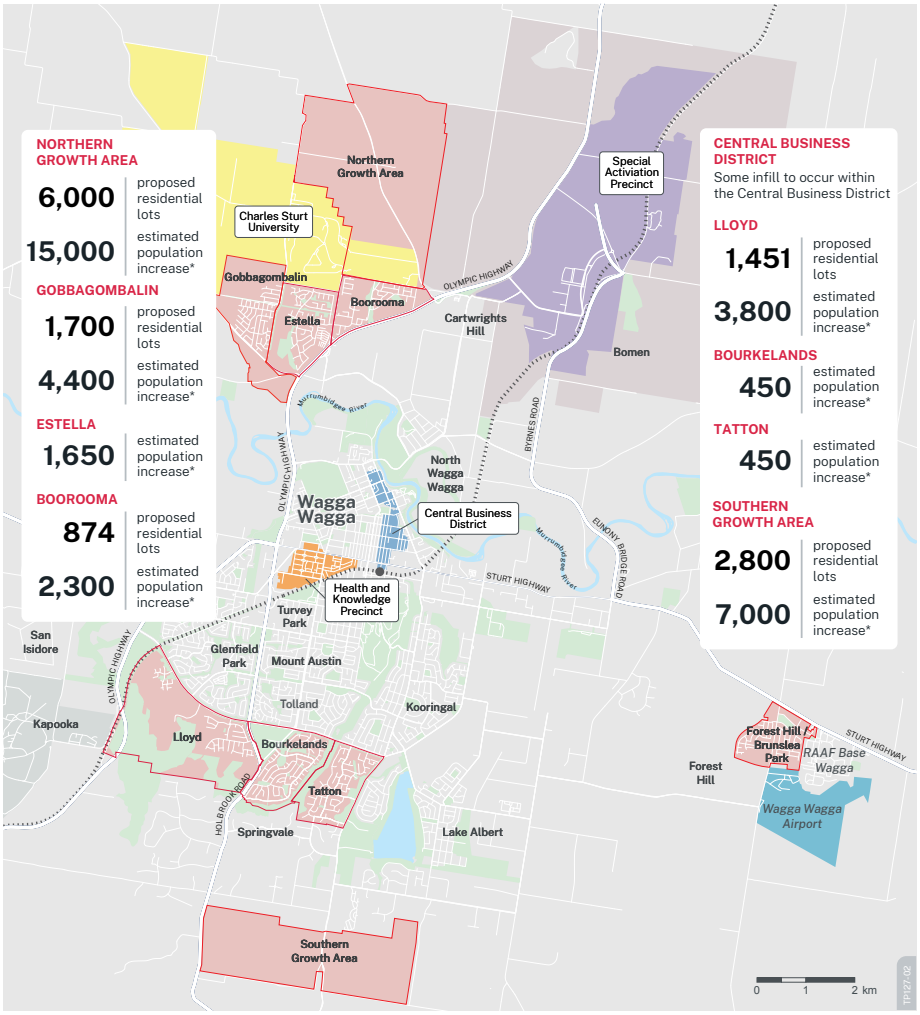


Figure 3: Anticipated Land Use Changes for Wagga Wagga

2.5 An expanding freight task

At the crossroads of the Olympic and Sturt Highways, and with rail connectivity via the Special Activation Precinct, Wagga Wagga is a key regional transport and freight hub that facilitates regional and inter-regional connections by road, rail and air. The convergence of these major freight corridors gives Wagga Wagga a competitive advantage to leverage both now and into the future.

The Main Southern Rail Line passes through Wagga Wagga and provides rail freight connections to Sydney, Melbourne and the Port of Port Kembla. Furthermore, the completion of the Inland Rail Project – a 1,700km freight rail line that will connect Melbourne and Brisbane via regional Victoria, New South Wales and Queensland – in 2027 will provide industry with more efficient rail access to domestic and international trade gateways like Melbourne and Brisbane.

Located within the Wagga Wagga Special Activation Precinct, the under-construction Riverina Intermodal Freight and Logistics (RiFL) Hub will also facilitate the seamless transition of freight between road and rail (and vice versa) to the north of Wagga Wagga, enabling direct connectivity enabling direct connectivity to both the Main Southern Rail Line and the Inland Rail corridor once complete.

Ongoing investment in freight-specific infrastructure – like the Riverina Intermodal Freight and Logistics (RiFL) Hub at Bomen and Inland Rail – across the regional city will see the freight task within Wagga Wagga expand over the next 20 years.

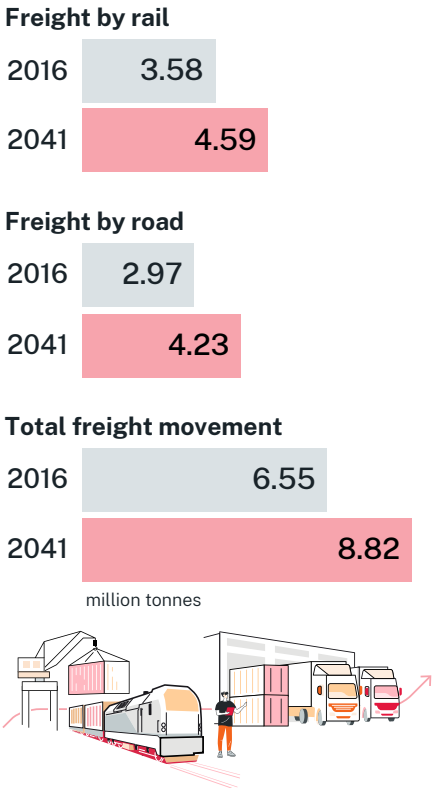


Figure 4: Volume of inbound and outbound freight movements by mode for Wagga Wagga at an SA3 level.

Freight forecast data prepared by Transport for NSW anticipates growth in Wagga Wagga-specific road and rail freight movements up to 2041, with the total freight movements across the regional city estimated to increase from 6.55 million tonnes in 2016 to 8.82 million tonnes in 2041.

The forecasted expansion of the freight task in Wagga Wagga will necessitate a bespoke transport response that seeks to maximise investment in freight-specific infrastructure, as well as delivers complementary benefits to industry and the wider community.

2.6 Facilitating a low emissions future

In March 2020, the NSW Government released the Net Zero Plan Stage 1: 2020-2030. The Plan is the foundation for NSW's goal to reach net zero emissions by 2050 and halve emissions by 2030, compared to 2005 levels.

Transport for NSW supports these goals and acknowledges that the transport sector – the second largest contributor to NSW greenhouse gas emissions in 2017[3] – will need to play a significant role in transitioning towards a low emissions future.

For Wagga Wagga, the transition will require Transport for NSW and Council collectively working together to not only deliver the infrastructure necessary to support greater uptake of low emissions technology, but also actively promote the behavioural change needed to secure a more sustainable, healthy and vibrant regional city into the future.

Electric vehicle charging

3 Page 11, Net Zero Plan Stage 1: 2020-2030, DPIE

2.7 Why not business as usual?

The car is the dominant method of travel in Wagga Wagga, accounting for just over 77 per cent of all commuter trips.[4] As the city grows and the population changes, attractive alternatives to private vehicle transport will become increasingly important, particularly for those customers without access to a car.

Almost six per cent of households across the Local Government Area do not own a private vehicle[5]. Greater modal choice across the city and its surrounding catchment will improve access to essential services like employment, education and health and address transport disadvantage. With Wagga Wagga experiencing an ageing population, multi-modal travel options will also help to support older people to age in place.

This Plan provides the blueprint for a more sustainable, multi-modal and safe transport network for Wagga Wagga, which proactively responds to anticipated changes in land use, population and travel demand, to deliver improved travel choices for more people, more often regardless of their age, ability and income.

4 Australian Bureau of Statistics, Census of Population and Housing 2016
5 Australian Bureau of Statistics, Census of Population and Housing 2016

▲ Baylis Street, Wagga Wagga

A “vision and validate” approach will be adopted to actively transition towards this future network. The approach recognises that continuing to accept current travel behaviours, in particular the high levels of private car use, is ultimately unsustainable and unlikely to achieve Wagga Wagga’s transport vision. The approach assumes that existing travel behaviours and trends can and will change over time and, therefore, should not dictate future need.

Based on this approach, the Plan outlines infrastructure, services, technology and policy mechanisms required to achieve the vision of an agile transport network that, not only supports future population and travel demand growth, but also a changing climate and land use patterns.

▲ Aerial of Wagga Wagga Special Activation Precinct, Bomen

03 The Transport Opportunity

3.1 A shared transport vision for Wagga Wagga

By 2041, Wagga Wagga will be a different city from the one we see today. Regionally significant transport initiatives like Inland Rail and the Wagga Wagga Special Activation Precinct will be operational, considerably improving connectivity both within and beyond the catchment, as well as delivering significant freight efficiencies. The inner city will have a higher population density at its core in line with Council's Local Strategic Planning Statement, and the Health and Knowledge Precinct will be an active and vibrant hub adjacent to the city centre.

With the aid of Inland Rail and associated improvements to intermodal facilities located within the Wagga Wagga Special Activation Precinct, commodities will flow seamlessly to and from Wagga Wagga. Supporting road and rail networks will be enhanced to accommodate more efficient vehicle combinations, embrace technology-driven solutions, and address first mile/last mile limitations through collaborative partnerships between all levels of Government and industry representatives.

Improved and adaptive transport options will support a vibrant and accessible city in which to live, work, play and visit. This will result in an increase in trips made by walking, cycling and public transport leading to successful places and healthy communities. Transport will be integrated with land use and balance the movement of people with the value of place.

The suburbs of Wagga Wagga will be places that provide an urban lifestyle where people regularly choose to walk and cycle to shops, services, schools or work, whereas the rural villages and towns surrounding the regional city will be supported by improved multi-modal transport services making them attractive and liveable for residents while preserving and enhancing their local character.

Through a continued focus on improving road safety outcomes, Wagga Wagga will be safer with Fatal and Serious Injury (FSI) crashes trending down in-line with the NSW-wide 'Towards Zero' goal of zero fatalities and serious injuries on our roads by 2056. Aligning speed limits and traffic calming measures with surrounding land uses will also create a safer environment for all.

On-demand transport, point-to-point services and the evolving micro-mobility transport sector will complement traditional, timetabled public transport services to provide customers with increased travel choices at times of their choosing. These initiatives will assist in providing more people with realistic alternatives to the private vehicle for more trips, more often regardless of age, ability or income. Furthermore, a higher proportion of the population living in the surrounding towns and villages will be able to access more day return services to and from the regional city, greatly improving modal choice.

Innovation and advances in technology will continue to deliver improved safety outcomes, greater network resilience and freight efficiencies. The wider distribution of 'real-time' information to support informed decision-making and the proposed rollout of digital ticketing options will see improved customer outcomes by enabling new and more personalised mobility solutions.

Finally, with the roll-out of zero emissions buses across NSW, public transport services will be cleaner and more accessible, and the take up of electric vehicles will be supported by a comprehensive, local fast charging network underpinning the electric evolution of the vehicle fleet. Advances in hydrogen fuel cell technology will also address range anxiety for long haul transport.

3.1.1 Achieving the shared transport vision

Achieving the shared transport vision for Wagga Wagga will necessitate an open and collaborative partnership between Transport for NSW and Council, a commitment to shared accountability and underpinned by a robust governance structure.

Furthermore, the shared vision will not only require the implementation of identified initiatives, but also the application of guiding principles, support of state-wide and city-specific targets, and a conscious ability to align with supporting and complementary transport and land use-focused strategic plans and strategies for Wagga Wagga.

Further detail on how the shared transport vision will be achieved is outlined in the following sections.

3.1.2 Vision Themes

Initiatives to support the shared transport vision for Wagga Wagga have been identified under the following three broad themes.

> **Connected** – a transport network that facilitates seamless, multi-modal connectivity between where people live, work and play.
>
> **Safe** – a transport network that delivers a safer future for the people of Wagga Wagga.
>
> **Productive** – a transport network that supports the efficient, safe and sustainable movement of people and goods to, from and within Wagga Wagga and can swiftly pivot to take advantage of beneficial emerging technologies.

We believe that a Plan that focuses on securing a transport network for Wagga Wagga that is connected, safe and productive will also enable a regional city that is sustainable, vibrant and liveable for its citizens and visitors.

While some initiatives are already in the delivery or planning phases, new initiatives will require further investigation to determine feasibility, as well as ensure what is progressed for funding is aligned with the shared transport vision and delivers value for money for the people of Wagga Wagga.

3.1.3 Guiding Principles

Implementation of the identified initiatives will need to be actively cognisant of, and align with, the following guiding transport planning principles.

NSW Movement and Place Framework

The NSW Movement and Place Framework (the 'Framework') is a multi-disciplinary, place-based approach to the planning, design, delivery and operation of transport networks. It recognises and seeks to optimise the network of public spaces formed by roads and streets and the spaces they adjoin and impact.

The Framework considers the whole street including footpaths, from property line to property line and takes into account the needs of customers both moving through, and spending time, in a place.

Our roads and streets are key public spaces for our communities – places where people spend time and socialise – enabling activities that add vitality to neighbourhoods. Aligning movement and place in the design of roads and streets can give users of all ages and abilities better, safer and healthier travel options while creating appealing places where people want to live.

The objective is to achieve roads and streets that:

- contribute to the network of public space within a location, where people can live healthy, productive lives, meet each other, interact, and go about their daily activities; and
- are enhanced by transport and have the appropriate space allocation to move people and goods safely and efficiently, and connect places together.

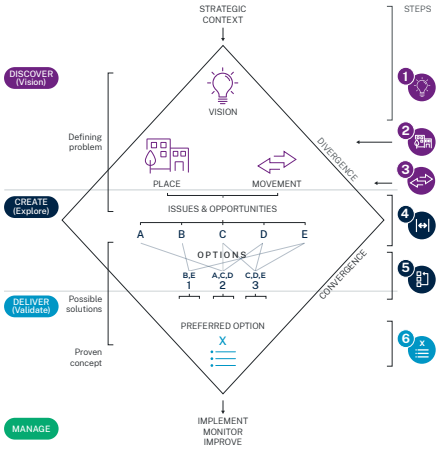


Figure 5: The Movement and Place Approach

Successful application of the Framework will ensure the streets and roads of Wagga Wagga effectively balance the movement of people and goods, with the amenity and quality of places, as well as support a vibrant and accessible city in which to live, work, play and visit.

Road User Space Allocation

While the Framework seeks to balance the movement of people and goods with the amenity and quality of places, Transport for NSW's Road User Space Allocation Policy, and the supporting Road User Space Allocation Procedure, outlines objectives, principles and processes to safely and equitably allocate road space to different priority user groups.

As shown in Figure 6, the approach considers all road users through a modal hierarchy lens, with the needs of people spending time in a place to be considered first, followed by pedestrians, cyclists, public transport, freight, and point-to-point services. The needs of private vehicles are considered last.

By implementing the Road User Space Allocation Policy, and supporting Procedure, Transport for NSW and Council will ensure that the allocation of road user space:

- is a deliberate exercise that considers the place, function and movement requirements of roads;
- achieves the strategic intent and outcomes as set out in state-wide, and regional strategies and plans;
- considers the limited amount of space available to accommodate competing user needs; and
- can be adjusted to respond to specific circumstances.

Successful application of the Road User Space Allocation Policy, and supporting Procedure, will ensure the streets and roads of Wagga Wagga consider the needs of all road users collectively, prioritises the needs of the most vulnerable customers first, and helps ensure the transport network positively reflects the aspirations of each place.

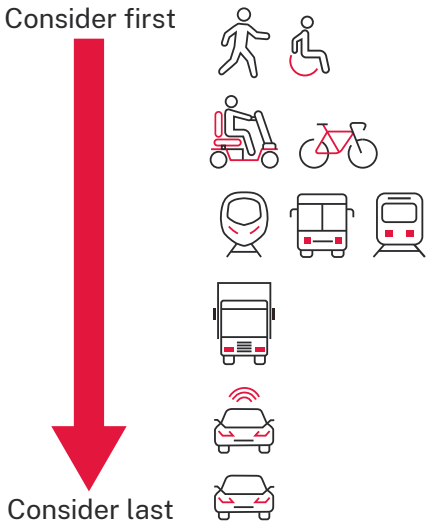


Figure 6: Order of modal priority when allocating road space by user

Safe System Approach

The Safe System approach is a key initiative in achieving the NSW Government's "Towards Zero" goal of zero fatal and serious injuries on our roads by 2056. The approach recognises that people do make mistakes and aims to ensure that when a crash occurs, the energy levels transmitted to a person are below what would cause a fatal or serious injury.

The approach is underpinned by the following principles:

- people are fallible and make mistakes;
- roads, roadsides and vehicles need to be designed to minimise the likelihood of a crash occurring or reduce the force if a crash does happen; and
- road safety is a shared responsibility.

Application of the Safe System approach will be a key tool in delivering a safer transport network for the people of Wagga Wagga.

Influence of COVID-19

The COVID-19 pandemic has seen major changes in our way of life. What was once thought impossible has, over the space of several months, become not only possible but in many ways the 'new normal'. The rapid expansion of working from home opportunities, as well as increased reliance on telehealth services and online shopping, have combined to reduce the need to travel during the pandemic. The rise of localism, a greater appreciation of open space and the need for more walkable and cycle-friendly neighbourhoods have also increased in importance.

Moving beyond the COVID-19 pandemic, future transport planning for Wagga Wagga will need to be cognisant of these changes to travel behaviour to ensure new initiatives are consistent with evolving wants and needs, rather than pre-pandemic thinking and approaches.

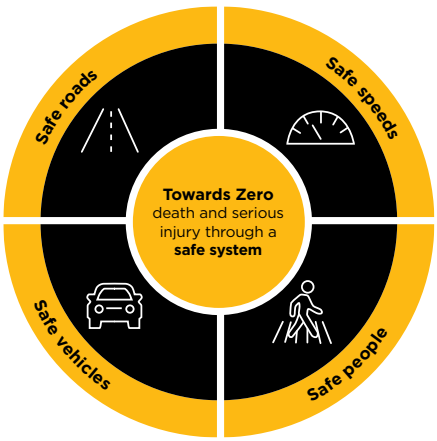


Figure 7: Components of the Safe System approach

3.1.4 Applicable Targets

State-wide 'Towards Zero' Goal

Through Future Transport, Transport for NSW is committed to help NSW achieve the ambitious 'Towards Zero' goal of zero fatalities and serious injuries on our roads by 2056. This is particularly relevant for Regional NSW with the fatality rate on country roads four times the comparative metropolitan rate, and more than 70 per cent of people who die on country roads are local.

As a supporting plan of Future Transport, the Wagga Wagga Transport Plan will both support, and contribute to, the state-wide 'Towards Zero' goal.

State-wide 'Net Zero' Goal

In March 2020, the NSW Government released the Net Zero Plan Stage 1: 2020-2030. The Plan is the foundation for NSW's goal to reach net zero emissions by 2050 and halve emissions by 2030, compared to 2005 levels.

The Wagga Wagga Transport Plan will both support, and contribute to, these state-wide emissions reduction goals. This will be achieved by identifying the infrastructure necessary to support greater uptake of low emissions technology, but also actively promote the behavioural change needed to secure a more sustainable, healthy and vibrant regional city into the future.

City-specific Mode Share Target

Data compiled from the 2016 Census showed that private vehicle transport was the dominant mode of choice for journey-to-work trips in Wagga Wagga at just over 77 per cent, followed by active transport (walking and cycling combined) at just over five per cent and public transport at 0.5 per cent.

By 2041, we want to see almost one in every five (18 per cent) trips made by walking, cycling or public transport in Wagga Wagga (see Figure 8). This step change in travel behaviour will require collaborative coordination between Transport for NSW and Council, as well as key NSW Government Agencies like DPE, NSW Health and the NSW Department of Education, industry partners and local community representatives. Furthermore, it will need to be underpinned by a comprehensive suite of infrastructure and service improvements, and complementary education campaigns.

Public transport mode share	1% to 5%
Walking mode share	5% to 8%
Cycling mode share	1% to 5%

Figure 8: 2041 City-specific Mode Share Target for Wagga Wagga

3.1.5 Complementary Plans and Strategies

The Plan has been developed as a transport-focused response to the land use aspirations presented in Council's Wagga Wagga Local Strategic Planning Statement (LSPS) and the Wagga Wagga Health and Knowledge Precinct Master Plan, as well as the NSW Government's Wagga Wagga Special Activation Precinct Master Plan.

The Plan also seeks to build on the transport vision established in Council's Wagga Wagga Integrated Transport Strategy and Implementation Plan 2040, and the Wagga Wagga Urban Highway Study developed by the former Roads and Maritime Services (RMS).

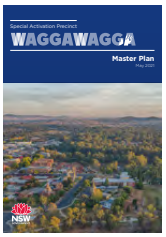
Wagga Wagga Local Strategic Planning Statement

The Wagga Wagga Local Strategic Planning Statement details Council's plan to set the direction for Wagga Wagga's growth to 2040. The 20-year plan envisages Wagga Wagga being the southern capital of New South Wales and a city that is globally connected, culturally rich and vibrant, and economically diverse with high levels of liveability.

Wagga Wagga Health and Knowledge Precinct Master Plan

The Wagga Wagga Health and Knowledge Precinct Master Plan outlines the 25 to 30 year vision for the precinct immediately surrounding Wagga Wagga's two major hospitals – the Wagga Wagga Base Hospital (public) and the Calvary Riverina Hospital (private) – to develop a central activity hub to enhance current and new health services in both Wagga Wagga and the wider Riverina, as well as support local employment in this key sector.

Wagga Wagga Special Activation Precinct Master Plan



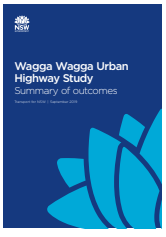
The Wagga Wagga Special Activation Precinct Master Plan articulates the vision and principles for the 4,424 hectare site, and identifies the key initiatives and provisions required to ensure that the vision is achieved.

A supporting Draft Delivery Plan for the Special Activation Precinct is currently being developed by the Regional Growth NSW Development Corporation (RGDC). This Plan will also need to cognisant of the Draft Delivery Plan once publicly released for comment, particularly for initiatives in the vicinity of the Special Activation Precinct.

Wagga Wagga Integrated Transport Strategy and Implementation Plan 2040

Released in 2017, the Wagga Wagga Integrated Transport Strategy and Implementation Plan 2040 details Council's blueprint for transport in Wagga Wagga. The Strategy seeks to maximise opportunities to increase public transport and walking and cycling use, as well as improve local traffic access and connectivity for both residents and visitors.

Wagga Wagga Urban Highway Study



Developed by the former Roads and Maritime Services between 2015 and 2017, the Wagga Wagga Urban Highway Study was commissioned to analyse the safety and efficiency of the Sturt and Olympic Highways as they pass through the Wagga Wagga city centre. The Study also assessed the efficiency of the Gobbagombalin Bridge, and the need for a heavy vehicle bypass of the regional city.

A summary of the Wagga Wagga Urban Highway Study and its findings is provided in Appendix A.

3.2 Connected

Our shared transport vision seeks to provide a transport network that facilitates seamless, multi-modal connectivity between where people live, work and play, and regardless of age, ability and income. This supports a city that is active, safe, healthy and vibrant, as well as enhances the city's position at the heart of the Riverina.

This Plan identifies opportunities for people to connect at two different scales – for trips within Wagga Wagga and for trips beyond Wagga Wagga.

3.2.1 Improving connections within Wagga Wagga

Increase attractiveness of walking and cycling

Currently, 72 per cent of trips to work in Wagga Wagga are less than five kilometres in length. This means there is a great opportunity to shift more trips, more often to walking and cycling. Shifting a portion of these shorter trips from private vehicle to walking and cycling could mean 13,000 fewer vehicle trips by 2041 and will help limit the need for additional road capacity and parking on the city's streets into the future.

Integrating more walking and cycling into our journeys has been shown to deliver significant physical health benefits and more recently, there has been an increased focus on the mental health benefits that getting out and about on foot or by bike can provide as well. By taking more trips on foot or by bike, people have the opportunity to actively engage with their local community, strengthening social cohesion and community resilience.

Finally, given trips made on foot or by bicycle are in essence, emissions free, encouraging more people in Wagga Wagga to walk and cycle over the next 20 years will play a key role in meeting the NSW Government's goal to reach net zero emissions by 2050.

The Wagga Wagga Active Travel Plan Project, an initiative co-funded by the NSW Government and Council, will deliver 56 kilometres of new cycleway and shared paths across the regional city once completed. The project will link residential areas with key destinations across Wagga Wagga including the Central Business District, Health and Knowledge Precinct, Wagga Wagga Airport, educational institutions, and recreational facilities.

▲ Lake Albert Walking Track, Wagga Wagga Credit: Wagga Wagga City Council

As part of the Project, Council is also investigating the feasibility of a shared pedestrian and cycle link across the Murrumbidgee River between Narrung and Gardiner Streets, linking into Boorooma Street.

Although the Active Travel Plan Project has seen a significant increase in the number of people walking and cycling across the regional city, more work will be required to meet the city-specific mode share targets for walking and cycling by 2041. Furthermore, with the popularity of micro-mobility devices (like electric bikes, electric scooters, mobility scooters, etc.) anticipated to increase during the timeframe of the Plan, the active transport network for Wagga Wagga will also need to be responsive to these evolving mobility trends.

From a pedestrian perspective, creating an environment that encourages more trips on foot – safe crossing locations, connected footpath networks, low vehicle speeds and volumes, good street lighting, increased tree canopy, etc. – on key pedestrian links across the regional city needs to form the basis for the next tranche of initiatives for investigation.

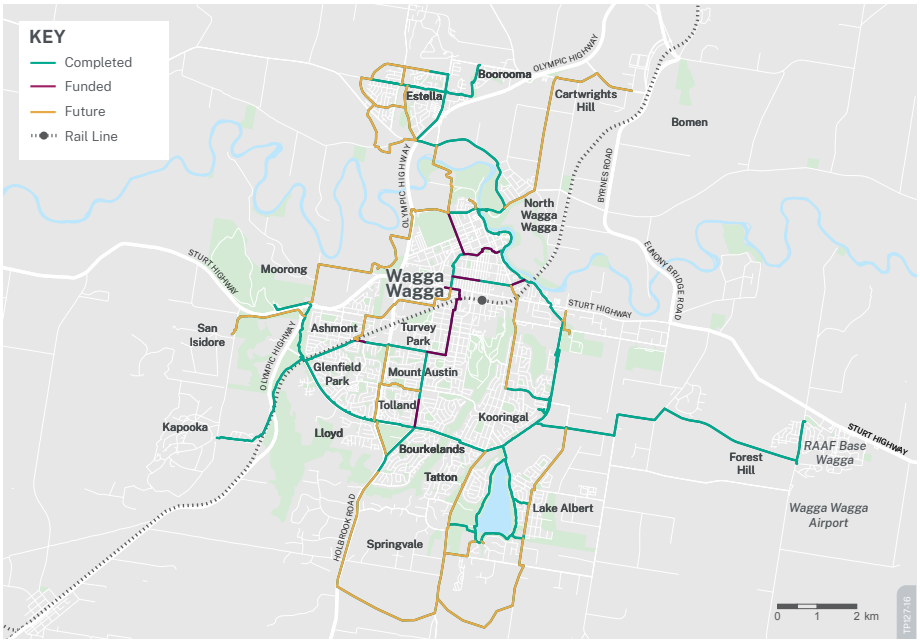


Figure 9: Active Transport Network for Wagga Wagga

At the Health and Knowledge Precinct, Transport for NSW will address a key barrier to pedestrian and cyclist connectivity, safely crossing Edward Street (Sturt Highway), by delivering new traffic signals at the Edward and Murray Streets intersection. The project will deliver an additional signal-controlled crossing of Edward Street, as well as integrate with the Central Link Cycleway – part of the Wagga Wagga Active Travel Plan Project – which will connect the Health and Knowledge Precinct with the completed Eastern Levee Link via Murray, Beckwith and Travers Streets.

The Wagga Wagga Integrated Transport Strategy also details a number of initiatives that seek to encourage more people, more often to consider walking. These include:

- Review and update the Pedestrian Access and Mobility Plan (PAMP) for Wagga Wagga
- Improve the crossability of major roads and roundabouts, with a key focus on the Tarcutta Street, Kooringal Road, Lake Albert Road, Red Hill Road, Bourke Street/ Docker Street and Glenfield Road/Pearson Street Corridors;
- Improve permeability and connectivity to and within activity centres and neighbourhoods; and
- Prioritise pedestrian movements over other transport modes in high pedestrian activity areas.

Transport for NSW strongly supports these initiatives and will work with Council to address these issues collectively. In the short-term, we will focus on updating the Wagga Wagga PAMP, improving the crossability of major roads and roundabouts across the regional city, and prioritising pedestrian movements in areas of high pedestrian activity and/or areas with a concentration of vulnerable users like schools, medical facilities, parks and playing fields.

From a cycling perspective, identifying the next tranche of initiatives post-completion of the Active Travel Plan Project will be key to continuing the bicycle revolution across Wagga Wagga. As Wagga Wagga expands further through the Special Activation Precinct and new residential growth precincts, the active transport network will also need to expand north and south to connect new residents, employees and visitors with the essential services offered in the CBD and Health and Knowledge Precinct.

The Wagga Wagga Integrated Transport Strategy also acknowledges the need to expand the active transport network north. The Strategy highlights the need to investigate a dedicated cycle route to Bomen to connect the regional city with the Special Activation Precinct and implementing a cycle link to the north of the city to service the northern growth area and Charles Sturt University.

Transport for NSW strongly supports these initiatives and will support Council with these investigations. We also see benefit in working with Council to investigate a further cycle link to the south of the regional city to connect with new southern growth areas south of Springvale. With new developments proposed across the regional city, better connections between the local network to key destinations like schools, shops, medical facilities and open space will be vital in providing improved access for all users.

Council, in conjunction with NSW Health and UNSW, is currently reviewing the impact the Active Travel Plan Project has had on walking and cycling in Wagga Wagga to date. Transport for NSW supports the review and will work with Council to identify additional areas for improvement and expansion, address remaining barriers to a greater uptake of cycling across the regional city, and collectively plan for new cycle-focused initiatives.

Finally, as new residential precincts expand across the regional city, Transport for NSW and Council will use the opportunity to work with representatives from DPE and industry over the life of the Plan to ensure they are designed to support walking and cycle-friendly neighbourhoods, as well as provide safe and efficient connections to the existing active transport network.

Initiative #	Initiative	Timeframe	Responsibility
C1	Complete delivery of the Wagga Wagga Active Travel Plan Project	Short (0-5 yrs)	Council Transport for NSW
C2	Upgrade the intersection of Edward and Murray Streets with traffic signals and controlled pedestrian crossings on all approaches	Short (0-5 yrs)	Transport for NSW Council
C3	Review and update the Pedestrian Access and Mobility Plan (PAMP) for Wagga Wagga	Short (0-5 yrs)	Council Transport for NSW
C4	Investigate the improved pedestrian crossability of major roads and roundabouts on key corridors including Tarcutta Street, Kooringal Road, Lake Albert Road, Red Hill Road, Bourke Street/ Docker Street and Glenfield Road/Pearson Street	Short (0-5 yrs)	Council Transport for NSW
C5	Undertake a review of the Active Travel Plan Project to identify additional areas for improvement and expansion, address remaining barriers to a greater uptake of cycling across the regional city, and collectively plan for new micro-mobility initiatives	Short (0-5 yrs)	Council NSW Health Transport for NSW
C6	Investigate a dedicated cycle route to Bomen to connect the regional city by bicycle with the Wagga Wagga Special Activation Precinct	Medium (5-10 yrs)	Council RGDC Transport for NSW
C7	Implement a cycle link to the north of the regional city to service the northern growth area and Charles Sturt University	Short (0-5 yrs)	Council Transport for NSW
C8	Investigate a cycle link to the south of the regional city to service the southern growth area	Short (0-5 yrs)	Council Transport for NSW
C9	Ensure new residential precincts are designed to support walking and cycle-friendly neighbourhoods, as well as provide safe and efficient connections to the existing active transport network	Life of Plan	Council Transport for NSW

A prioritised bus network

Through the 16 Regional Cities Bus Services Improvement Program ("16 Cities Program"), Transport for NSW has delivered an additional 240 bus services per week for Wagga Wagga, with all routes running later into the evening on Thursdays, Fridays and Saturdays, as well as offering Sunday services for the first time across the city for all routes between 8am and 6pm. Figure 10 highlights the current bus service network for Wagga Wagga following the changes introduced through the 16 Cities Program.

To complement the increase in timetabled services, Transport for NSW is also trialling the Bomen bookable bus service between the CBD and the Bomen Business Park. The service has been introduced to operate around shift times to provide greater travel flexibility for people working at the Wagga Wagga Special Activation Precinct. On-demand transport options will continue to service a growing number of customers in Wagga Wagga over the short-term, and our aim is to further integrate them into the overall transport mix going forward.

As Wagga Wagga continues to grow, there will be a need to keep investing in the bus network for Wagga Wagga if the city-specific public transport mode share target presented in Section 3.1.4 is to be achieved.

From a service planning perspective, continuing to evolve the Wagga Wagga bus network to support faster journey times, consistent service frequencies across weekday and weekend periods, service patterns that enable easy interchange between modes, and operating services that are accessible to all customers will be fundamental in making bus services more attractive for more people, more often over the life of the Plan.

In the short-term, Transport for NSW, with the support of Council, will:

- review the service changes delivered through the 16 Regional Cities Bus Services Improvement Program and continually enhance the bus network to proactively respond to changes in customer need, population, land use and technology;
- review the trial of the Bomen bookable bus service between the CBD and the Bomen Business Park; and
- work with community – particularly customers not yet using the Wagga Wagga bus services – to understand the barriers to greater uptake of bus travel across the regional city. This data will help inform future service planning for Wagga Wagga to make the services more accessible to more people, more often.

In the medium to longer term, consideration of bus priority measures on key routes will ensure bus services operate reliably and quickly and continue to meet customer needs.

Plan the bus network based on the following service principles:

- Attractive journey times
- Consistent frequencies
- Direct journeys
- Consistency across weekday and weekend services.
- Services that contribute to vibrant places
- Service patterns enable easy interchange between modes
- Flexible on demand services for areas which are less accessible to timetabled services
- Services are accessible to all customers.

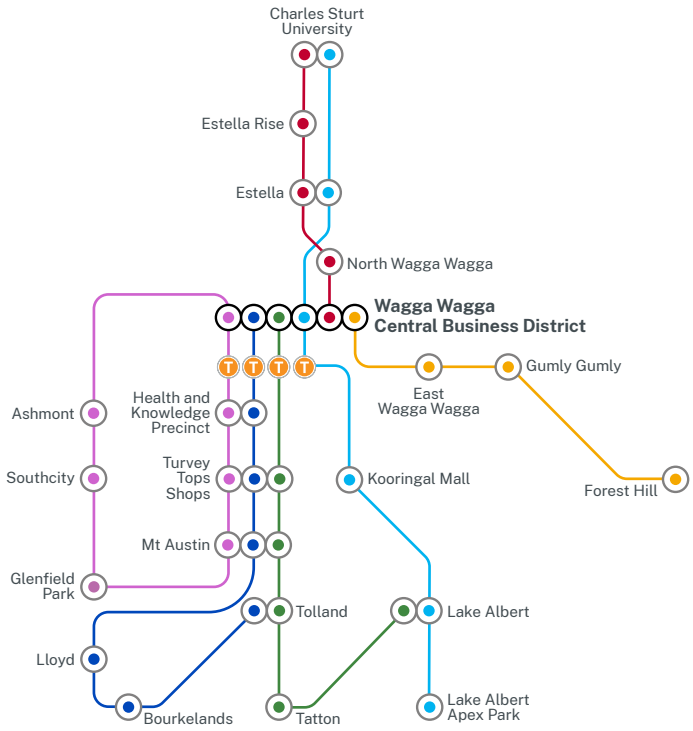


Figure 10: Current bus network map of Wagga Wagga

Initiative #	Initiative	Timeframe	Responsibility
C10	Review the service changes delivered through the 16 Regional Cities Bus Services Improvement Program and continually enhance the bus network to proactively respond to changes in customer need, population, land use and technology	Short (0-5 yrs)	Transport for NSW
C11	Review outcome of the Bomen bookable bus service trial between the CBD and the Bomen Business Park	Short (0-5 yrs)	Transport for NSW
C12	Work with community to understand the barriers to greater uptake of bus travel in Wagga Wagga	Short (0-5 yrs)	Transport for NSW Council
C13	Investigate the need for bus priority measures on key routes to ensure services continue to operate reliably and quickly	Medium to Long (5-20 yrs)	Transport for NSW Council

Improving local connections for a growing city

During peak periods, the Olympic Highway Corridor between the new residential precincts of Boorooma, Estella and Gobbagombalin, and Edward Street (Sturt Highway) experiences congestion and a loss in travel time reliability. Furthermore, the current conflict between east-west through traffic along the Edward Street (Sturt Highway) Corridor and more locally-based, and increasingly multi-modal, north-south trips provides a particularly complex issue for the regional city.

Transport for NSW is currently planning to upgrade the intersections of the Olympic Highway with both Old Narrandera Road and Travers Street. This project will considerably improve safety at these two key intersections, as well as enhance accessibility to the expanding northern growth area.

Despite the proposed intersection upgrades, there will be an ongoing need for Transport for NSW and Council to proactively work together to manage future travel demand and improve modal choice across the regional city – particularly with the anticipated increase in Wagga Wagga's population, combined with increasing demand associated with the Special Activation Precinct and the impending densification around the Health and Knowledge Precinct.

The Draft Wagga Wagga Transport Plan identified the need to investigate transport and freight connectivity improvements for North Wagga Wagga. This investigation would include consideration of a duplicated Gobbagombalin Bridge, and a potential new northern link road – a new road link that if supported, would connect the Olympic Highway near the intersection with Old Narranderra Road and Oura Road, North Wagga Wagga.

Since the exhibition of the Draft Plan, Transport for NSW and Council have been working collaboratively to expand the scope of the investigation to also consider the following initiatives:

- Achieving an effective balance between movement and place along the Edward Street Corridor, particularly in the vicinity of the Health and Knowledge Precinct;
- Managing future demand along the Olympic Highway Corridor between the Special Activation Precinct and Edward Street;
- Upgrading the intersection of Edward and Pearson Street;
- Upgrading the intersection of the Olympic Highway, Coolamon Road and Horseshoe Road; and
- An additional crossing of the Murrumbidgee River.

Transport for NSW supports the expanded scope and sees value in addressing the network issues holistically rather than individually given the issues are generally inter-related. The investigation must consider both service and infrastructure solutions, be multi-modal in its approach, and provide clarity on when preferred solutions will need to be delivered.

▲ Sturt Highway and Eunony Bridge Road roundabout Credit: Wagga Wagga City Council

Initiative #	Initiative	Timeframe	Responsibility
C14	Collectively investigate the impact of land use change and changing travel demand along the Edward Street (Sturt Highway) Corridor, as well as connections to North Wagga Wagga, the northern growth areas and the Wagga Wagga Special Activation Precinct. The investigation must include consideration of the following initiatives, and consider both service and infrastructure solutions, be multi-modal in its approach, and provide clarity on when preferred solutions will need to be delivered: • a duplicated Gobbagombalin Bridge; • a potential new northern link road; • achieving an effective balance between movement and place along the Edward Street Corridor; • managing future demand along the Olympic Highway Corridor between the Special Activation Precinct and Edward Street; • upgrading the intersection of Edward and Pearson Street; • upgrading the intersection of the Olympic Highway, Coolamon Road and Horseshoe Road; and • an additional crossing of the Murrumbidgee River.	Short (0-5 yrs)	Transport for NSW Council

3.2.2 Improving connections beyond Wagga Wagga

The Regional Connected Network

Transport for NSW will utilise the Regional Connected Network approach to deliver an integrated public transport network for all Regional NSW. The approach seeks to better meet the everyday travel needs of regional communities through connecting people with, and between, a network of regional cities and centres.

Under the approach, public transport services will be designed to allow for same day return travel, and at times which meet the needs of regional communities to facilitate access to essential services and employment.

Figure 11: Public transport service planning for Wagga Wagga under the Regional Connected Network approach

▲ NSW TrainLink customer assistance

As shown in Figure 11, the Regional Connected Network for Wagga Wagga considers the connections between Wagga Wagga and its neighbouring regional cities and centres (like between Wagga Wagga and Albury-Wodonga, and between Canberra and Wagga Wagga), as well as the connection between Wagga Wagga and its neighbouring regional towns and villages (like between Narrandera and Wagga Wagga, and between Tumut and Wagga Wagga).

Under existing service patterns, NSW TrainLink offers day return coach services between Wagga Wagga and Canberra five times a week (Monday and Friday: Wagga Wagga – Gundagai – Canberra; Tuesday, Thursday and Saturday: Wagga Wagga – Junee – Cootamundra – Canberra) and is trialling a day return coach service between Tumut and Wagga Wagga every Wednesday.

Pivoting public transport service planning to adopt the Regional Connected Network approach for trips between Wagga Wagga and its neighbouring regional cities and centres, towns and villages would deliver the following customer outcomes:

Service Approach	Service Type	Application Cities, Centres and Towns
Connecting Wagga Wagga to Neighbouring Cities and Centres	Day-return services from Wagga Wagga or single night journeys from Wagga Wagga	Albury-Wodonga, Canberra, Melbourne, Sydney
Connecting Neighbouring Cities and Centres to Wagga Wagga	Day-return services to Wagga Wagga	Albury-Wodonga, Cowra, Griffith
Connecting Neighbouring Towns and Villages to Wagga Wagga	Day-return services to Wagga Wagga	Coolamon, Cootamundra, Gundagai, Junee, Lockhart, Narrandera, Temora, The Rock, Tumbarumba, Tumut, Urana, Uranquinty

Using the Regional Connected Network approach as the framework to inform future service patterns for public transport services between Wagga Wagga and its neighbouring regional cities and centres, towns and villages will considerably improve modal connectivity for customers travelling to and from the regional city. The approach would also contribute to achieving the city-specific public transport mode share target presented in Section 3.1.4.

In the short-term, Transport for NSW will focus on improving the timing of services between Wagga Wagga and its neighbouring towns and villages to make public transport a viable option for people travelling to Wagga Wagga for work, study, access essential services or play.

While in the medium-term, the focus will shift to improving day return frequencies between Wagga Wagga and its neighbouring regional cities and centres – Albury-Wodonga, Canberra, Cowra, Griffith. Services to Albury-Wodonga will investigate opportunities to better integrate service patterns to align with V-Line services to Melbourne, thereby delivering improved interchange capabilities with existing rail and coach services into Melbourne.

Initiative #	Initiative	Timeframe	Responsibility
C15	Investigate improved service patterns between Wagga Wagga and its neighbouring towns and villages – Coolamon, Cootamundra, Gundagai, Junee, Lockhart, Narrandera, Temora, The Rock, Tumbarumba, Tumut, Urana, Uranquinty – to make public transport a viable option for people travelling to Wagga Wagga for work, study, access essential services or play	Short (0-5 yrs)	Transport for NSW
C16	Investigate improved day return service frequencies between Wagga Wagga and its neighbouring regional cities and centres – Albury-Wodonga, Canberra, Cowra, Griffith	Medium (5-10 yrs)	Transport for NSW

The importance of aviation connectivity

After private vehicle transport, flying was the second most popular way people travelled to and from Wagga Wagga before the COVID-19 pandemic. Post the COVID-19 pandemic, aviation is expected to regain in popularity, particularly for trips between Wagga Wagga and Sydney, and Wagga Wagga and Melbourne.

As we transition out of COVID-19 related travel restrictions, the NSW Government will work with Council to support a return to, and continued growth of, regional aviation. In the medium-term, Transport for NSW will also investigate opportunities to better align timetabled, and potentially on-demand, public transport services, as well as point-to-point connections, with scheduled flight arrivals and departures at Wagga Wagga Airport.

Initiative #	Initiative	Timeframe	Responsibility
C17	Investigate opportunities to better align timetabled, and potentially on-demand, public transport services, as well as point-to-point connections, with scheduled flights at Wagga Wagga Airport	Medium (5-10 yrs)	Transport for NSW Council

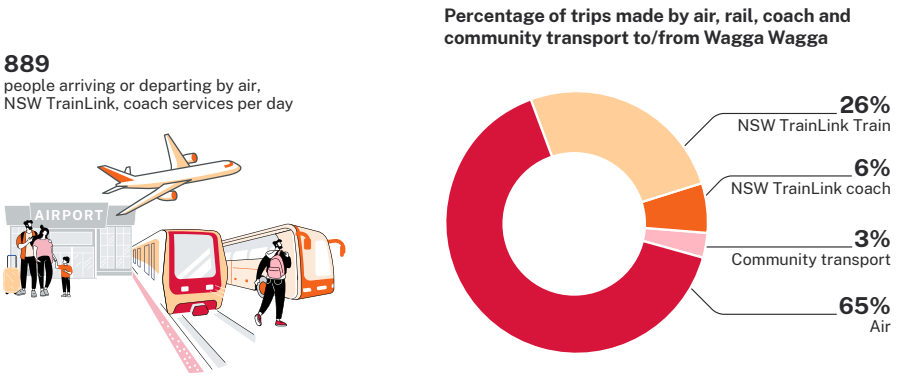


Figure 12: Percentage of trips made by air, rail, coach and community transport to and from Wagga Wagga

3.3 Safe

A safe city for all is a key objective of the Wagga Wagga Transport Plan. The Plan is committed to delivering a safe transport network for Wagga Wagga that accommodates the needs of all road users, is proactive in its approach to road safety, and supports places that are both vibrant and accessible to all.

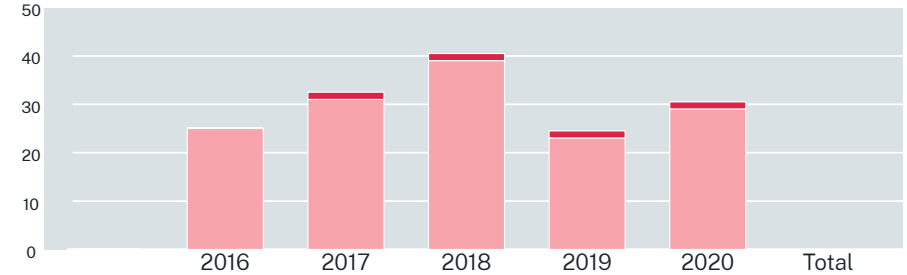
3.3.1 Identify causes and locations of safety concern

While Transport for NSW will continue to take a proactive approach to road safety where possible, there will still be an ongoing need to resolve crash clusters and priority sites within the regional city.

Between 2016 and 2020, the Wagga Wagga transport network – defined as all roads within a 10-kilometre radius from the intersection of Baylis and Edward Streets for this analysis – recorded a total of four fatal crashes and 147 serious injury crashes, resulting in four fatalities and 169 serious injuries (see Figure 13).

The crash analysis also revealed the proportion of fatal and serious injury crashes in Wagga Wagga that occurred at intersections was higher than other comparable urban areas across Regional NSW over the same time period (see Figure 14), and most fatal and serious injury intersection crashes occurred during daylight hours (7am to 7pm). Fatal and serious injury crashes recorded at non-intersections however were spread more evenly across all hours of the day.

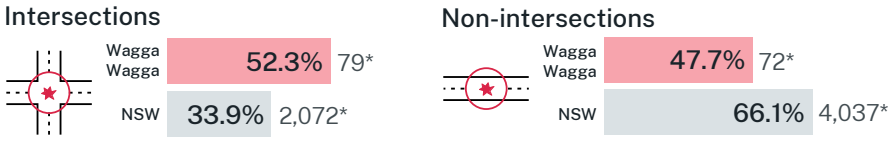
Fatal and Serious Injury Crashes recorded in Wagga Wagga between 2016 – 2020



	2016	2017	2018	2019	2020	Total
Fatal Crashes	0	1	1	1	1	4
Serious Injury Crashes	25	31	39	23	29	147
Total	**25**	**32**	**40**	**24**	**30**	**151**

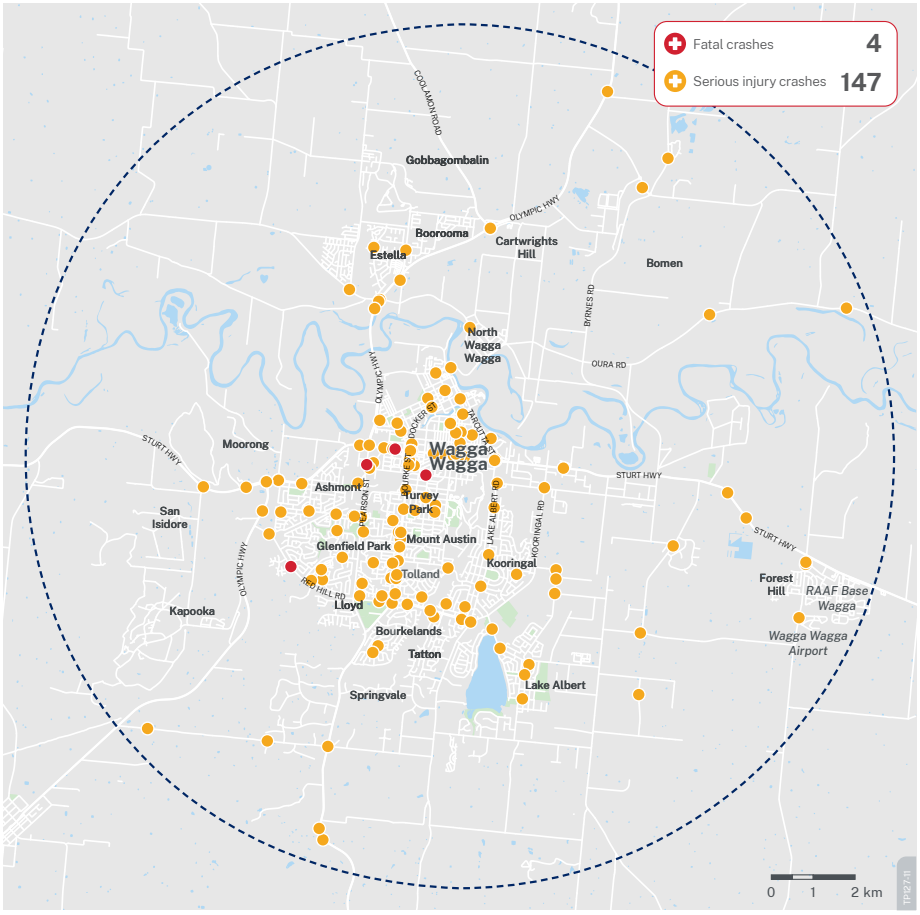
Source: Transport for NSW, 2020

Figure 13: Total Fatal and Serious Injury Crashes recorded in Wagga Wagga (2016-2020)



Intersection locations include crashes up to 10 metres from an intersection
*number of total crashes

Figure 14: Analysis of crash location between those recorded in Wagga Wagga and comparable urban areas across Regional NSW



KEY

- Fatal Crashes
- Serious Injury Crashes

Figure 15: Location of Fatal and Serious Injury Crashes recorded in Wagga Wagga between 2016 and 2020

The locations of the fatal and serious injury crashes recorded between 2016 and 2020 is presented in the map Figure 15. The map shows that the highest concentration of these fatal and serious injury crashes occurred on:

- Edward Street (Sturt Highway) between Pearson Street and Lake Albert Road – this corridor recorded 14 serious injury crashes between 2016 and 2020, of which 10 occurred at intersections; and
- Bourke Street / Docker Street – this corridor recorded 12 serious injury crashes between 2016 and 2020, of which nine occurred at intersections.

To improve safety on these corridors, Transport for NSW is currently investigating safety improvements for the Edward Street Corridor and is keen to work with Council in the short-term to undertake a safety review of the Bourke Street / Docker Street Corridor.

Feedback provided during the public exhibition of the Draft Plan highlighted safety concerns at the intersections of Pearson Street and Dobney Avenue (double roundabout), and Edward Street and Pearson Street.

While the analysis of fatal and serious injury crashes recorded between 2016 and 2020 did not identify either location as a crash cluster, Council, in conjunction with the Australian and NSW Governments, is undertaking a $5.6 million project to rehabilitate, reseal and improve Dobney Avenue and Pearson Street between the Sturt Highway and the double roundabouts.

Furthermore, as part of Initiative C14, Transport for NSW will investigate the upgrading of the Edward and Pearson Street intersection. Transport for NSW also sees benefit in supporting Council to undertake a safety review of the Glenfield Road / Pearson Street Corridor to complement the rehabilitation works underway at Dobney Avenue and Pearson Street.

Of the fatal and serious injury crashes recorded between 2016 and 2020, speeding (14 per cent), alcohol (nine per cent), and fatigue (eight per cent) were contributing factors.

While the proportion of speeding and fatigue-related crashes in Wagga Wagga is trending below the NSW average, the prevalence of alcohol in Wagga Wagga crashes exceeded the current NSW average rate of seven per cent. In the short-term, Transport for NSW will work with Council, NSW Police, industry and community representatives to identify options – educational programs, extended hours for public transport services, point-to-point service improvements, etc. – to reduce drink driving across the regional city.

Initiative #	Initiative	Timeframe	Responsibility
S1	Investigate and implement safety initiatives for the Edward Street Corridor	Short (0-5 yrs)	Transport for NSW Council
S2	Undertake a safety review of the Bourke Street / Docker Street and Glenfield Road / Pearson Street Corridors	Short (0-5 yrs)	Council Transport for NSW
S3	Rehabilitate, reseal and improve Dobney Avenue and Pearson Street between Edward Street (Sturt Highway) and the double roundabouts	Short (0-5 yrs)	Council Transport for NSW
S4	Identify options – like educational programs, extended hours for public transport services, point-to-point service improvements – to reduce drink driving across the regional city	Short (0-5 yrs)	Transport for NSW Council NSW Police

▲ Example of a wide Wagga Wagga intersection with limited formal pedestrian crossing facilities

3.3.2 Create a safer environment for walking and cycling

Part of the Safe System approach involves making built environments safer for pedestrians and cyclists by implementing a range of measures such as slower speeds, improved lighting, safer pedestrian crossing facilities, and dedicating more physical space to walking and cycling.

Speed limits are set so vehicles are able to safely respond to potential risks in the road environment. Additionally, speed limits need to be cognisant of place, considering both activities and land use beyond the pavement. Generally, where there are more people walking and cycling, lower speed limits are used to reduce the risk of crashes and people being seriously injured.

To support this position, analysis undertaken by Transport for NSW identified a 33 per cent reduction in crashes causing serious injuries and deaths in 40km/h high pedestrian activity areas across NSW between 2005 and 2015.

To ensure speed zones improve safety outcomes for all customers, Transport for NSW will actively work with Council over the life of the Plan to determine the appropriateness of existing posted speed limits across the regional city. Where it is established that the speed zone is not appropriate for the local environment, speed limits will be adjusted accordingly.

Wide streets also fail to discourage drivers to decrease their speed. Streets should be designed to be intuitive and slow vehicles down to a safe speed. This can be achieved by reducing the travel lane widths and repurposing that space to increase footpath width, plant decorative trees and gardens, or install on-street parking and cycle lanes.

Although pedestrian priority infrastructure is more prevalent within the Wagga Wagga CBD, many locations across the regional city do not currently include the infrastructure necessary (like marked pedestrian crossings and pedestrian refuges) to deliver a safe crossing environment for pedestrians. Safe crossing points are a key consideration in the attractiveness and legibility of the pedestrian network, particularly for more vulnerable pedestrians.

As noted in Section 3.2.1, Transport for NSW will actively work with Council to improve the pedestrian crossability of major roads and roundabouts on key corridors across the regional city (Initiative C4). In the short-term, the focus will be on the Tarcutta Street, Kooringal Road, Lake Albert Road, Red Hill Road, Bourke Street/Docker Street and Glenfield Road/Pearson Street corridors.

As part of the Inland Rail Project, the Australian Rail Track Corporation (ARTC) is assessing the Edmondson Street Bridge to identify works to support the future passage of double-stacked container trains through Wagga Wagga. Transport for NSW and Council will need to work collaboratively with ARTC to ensure the project delivers a safe outcome for pedestrians and successfully integrates into the existing footpath network, and the impact to established travel patterns during construction is effectively managed.

We will also work collaboratively over the life of the Plan to prioritise pedestrian movements in areas of high pedestrian activity and/or areas with a concentration of vulnerable users like schools, medical facilities, parks and playing fields.

Finally, Transport for NSW will work with Council, the NSW Department of Education, and independent schools to address barriers to walking and cycling to schools across the regional city. NSW children are not walking or cycling as much as they did in previous decades. Today on average, only one in every four school children walk or cycle to school, with the majority now being driven. Creating a safer environment for school children to walk or cycle to school not only contributes to improved self-confidence and physical development outcomes, it also benefits the wider community too as they will also be able to utilise the improved active transport connections.

In combination, initiatives that create a safer environment for walking and cycling across Wagga Wagga will be integral to achieving the city-specific active transport mode share target presented in Section 3.1.4.

Initiative #	Initiative	Timeframe	Responsibility
S5	Ensure posted speed limits across the regional city safely respond to potential risks in the road environment, are cognisant of place, and consider both activities and land use beyond the pavement	Life of Plan	Transport for NSW Council
S6	Prioritise pedestrian movements in areas of high pedestrian activity and/or areas with a concentration of vulnerable users like schools, medical facilities, parks and playing fields	Life of Plan	Council Transport for NSW
S7	Work with the NSW Department of Education and independent schools to address barriers to walking and cycling to school across the regional city	Short (0-5 yrs)	Council Transport for NSW Dept of Education Independent Schools

Credit: Wagga Wagga City Council

3.4 Productive

Wagga Wagga is an important origin and destination for freight given its strategic location at the junction of two state highways, location on the rail network and its strategic proximity to Sydney, Melbourne, Canberra and Adelaide.

Our shared transport vision seeks to deliver a transport network for Wagga Wagga that supports the efficient, safe and sustainable movement of people and goods to, from and within the regional city, as well as benefits from emerging technologies.

We also want a network that can leverage off the significant economic investment in freight-related initiatives like the Wagga Wagga Special Activation Precinct and Inland Rail, and maximises opportunities for "moving more with less" by road and rail.

3.4.1 Infrastructure that supports "moving more with less"

Opening up more of the NSW road network to facilitate greater access for Performance Based Standard (PBS) vehicle combinations will provide industry with the certainty required to invest in these modern, safer, and more efficient heavy vehicles.

Under existing conditions, the Olympic and Sturt Highways are approved under notice for PBS Level 2B vehicle combinations.

PBS Level 3A vehicle combinations are approved under notice along the Sturt Highway, west of the Pearson Street intersection, and on the Olympic Highway, north of the Pearson Street intersection. Furthermore, new roads within the Special Activation Precinct are also proposed to accommodate PBS Level 3A vehicle combinations[6].

Access via Eunony Bridge Road, Byrnes Road and Merino Road is currently limited to PBS Level 2A vehicle combinations.

For Wagga Wagga, achieving consistency in the classification for heavy vehicle road access for key routes to and from the Special Activation Precinct will be integral to the future success of the intermodal hub.

In the short-term, Transport for NSW will work with Council to investigate opportunities to open up Eunony Bridge Road, Byrnes Road (between Eunony Bridge Road and the Special Activation Precinct) and Merino Road to both PBS Level 2B and PBS Level 3A vehicle combinations.

In the medium-term, Transport for NSW will investigate opportunities to expand the network for PBS Level 3A vehicle combinations east along the Sturt Highway to intersection with the Hume Highway.

Initiative #	Initiative	Timeframe	Responsibility
P1	Investigate opportunities to open up Eunony Bridge Road, Byrnes Road (between Eunony Bridge Road and the Special Activation Precinct) and Merino Road to both PBS Level 2B and PBS Level 3A vehicle combinations	Short (0-5 yrs)	Council Transport for NSW
P2	Investigate opportunities to expand the network for PBS Level 3A vehicle combinations east along the Sturt Highway to the Hume Highway	Medium (5-10 yrs)	Transport for NSW Council

6 Wagga Wagga Special Activation Precinct: Assessment of Refined Use – Traffic and Transport Plan, WSP, July 2020

▲ Bourke Street level crossing, Wagga Wagga

3.4.2 Heavy vehicle rest areas and decoupling sites

Wagga Wagga's strategic freight location provides a convenient layover to manage fatigue and access services. The recently completed truck stop on the corner of the Sturt Highway and Tasman Road in East Wagga Wagga has provided a much-needed rest and refuel area for trucks outside the urban core of Wagga Wagga. The Special Activation Precinct also includes considerations for further heavy vehicle decoupling and rest areas within the Special Activation Precinct.

Transport for NSW sees value in working with Council and industry representatives to strategically plan for additional heavy vehicle rest areas and decoupling sites across the regional city. Working directly with Council and industry representatives, the strategic investigation will undertake a deep dive into the issues and opportunities for heavy vehicle rest stop and decoupling site provision in a Wagga Wagga context, as well as help plan for the larger vehicle combinations, like PBS Level 2B and PBS Level 3A, being considered for freight-focused NSW roads.

This investigation would ensure that the needs of drivers and industry are met collectively, as well as future-proof any new facility to accommodate the larger vehicle combinations that underpin "moving more with less".

Initiative #	Initiative	Timeframe	Responsibility
P3	Work with Council and industry representatives to strategically plan for additional heavy vehicle rest areas and decoupling sites across Wagga Wagga	Short (0-5 yrs)	Transport for NSW Council Industry

3.4.3 Rail level crossings

Wagga Wagga currently has two 'at-grade' rail level crossings – one on Docker Street, just south of the intersection with Chaston Street, and the other on Fernleigh Road, just east of the intersection with Bulolo Street. Both rail level crossings are currently controlled by flashing lights and boom gates.

With the Inland Rail Project anticipated to increase rail freight volumes through Wagga Wagga, further investigation will be required to understand the impact this volume increase may have on vehicle wait times at the Docker Street and Fernleigh Road level crossings. Transport for NSW and Council will need to work collaboratively with the ARTC to investigate this issue further.

Initiative #	Initiative	Timeframe	Responsibility
P4	Investigate the impact of future rail freight movements on vehicle wait times at the Docker Street and Fernleigh Road level crossings	Short (0-5 yrs)	ARTC Council Transport for NSW

3.4.4 Address first and last mile barriers and land use conflicts

First and last mile access for freight on the local road network is vital to support the continued economic viability of communities and businesses within Wagga Wagga. Freight access must be considered early when planning precincts and neighbourhoods to deliver solutions that achieve an appropriate balance between the movement and delivery of goods, with the need to support vibrant and successful places.

The provision of 'fit-for-purpose' loading facilities – both on-street and off-street – at key destinations is also crucial in enabling the seamless transportation of goods from vehicle to property. Network access and servicing constraints are often barriers that inhibit freight productivity and can impact the sustained success of regional cities, towns and villages.

Recognising the need for specialist information and resources to better plan for last mile deliveries and servicing in urban environments, Transport for NSW has prepared the Freight and Servicing Last Mile Toolkit to assist urban planners, developers and government to give greater consideration to freight and servicing demands for new buildings and precincts in urban environments.

Using the Last Mile Toolkit as a guiding framework for urban freight considerations, over the life of the Plan, Transport for NSW and Council will work collaboratively with DPE and industry to:

- ensure existing barriers to first and last mile deliveries on the local road network are addressed collectively to maximise freight connectivity across the regional city;
- Ensure that future planning and development provides strategically located, 'fit-for-purpose' loading facilities across Wagga Wagga to support the seamless transportation of goods from vehicle to property and
- ensure key road and rail freight corridors across Wagga Wagga are protected from incompatible land uses.

Initiative #	Initiative	Timeframe	Responsibility
P5	Collectively address existing barriers to first and last mile deliveries on the local road network	Life of Plan	Council Industry Transport for NSW
P6	Ensure that future planning and development provides strategically located, 'fit-for-purpose' loading facilities across Wagga Wagga to support the seamless transportation of goods from vehicle to property	Life of Plan	Council Industry Transport for NSW
P7	Ensure key road and rail freight corridors are protected from incompatible land uses	Life of Plan	Council DPE Transport for NSW

3.4.5 Realising the opportunities of Inland Rail

The Inland Rail Project will create opportunities to build on the way the regional rail network operates. Through the Special Activation Precinct, Wagga Wagga will become a central hub for the region with more direct rail connections to Melbourne, as well as new connections north through the heart of Regional NSW and onwards to Brisbane.

The Inland Rail Project utilises the existing rail corridor through Wagga Wagga with enhancements and modifications to provide sufficient height and width to support the safe running of double-stacked freight trains. This supports "moving more with less" as it allows twice as many containers to be transported, maximising the efficiency of the rail line and also increasing the opportunities for road freight to be transferred to rail.

To maximise investment in Inland Rail, and key supporting infrastructure like the Riverina Intermodal Freight and Logistics (RiFL) Hub, Transport for NSW will actively work with Council and industry over the life of the Plan to support additional opportunities that will enable the seamless transition of freight between road and rail (and vice versa) within the Special Activation Precinct.

▼ Sydney to Melbourne Railway Viaduct, Wagga Wagga

Initiative #	Initiative	Timeframe	Responsibility
P8	Support additional opportunities that enable the seamless transition of freight between road and rail (and vice versa) within the Wagga Wagga Special Activation Precinct	Life of Plan	Council Transport for NSW

3.4.6 Feasibility of a Southern Bypass

The Wagga Wagga Local Strategic Planning Statement (LSPS) considers the option of a future bypass corridor to the south of the regional city. The indicative corridor would enable through traffic on the Sturt Highway to bypass the city.

While the findings of the Wagga Wagga Urban Highway Study did not support a bypass of the regional city at this time, the Study did acknowledge the need for Transport for NSW and Council to continue to work together to plan for an alternative heavy vehicle route so that if or when volumes increase, appropriate measures can be deployed.

Moving forward, Transport for NSW sees value in working with Council to assess the feasibility of a southern bypass of Wagga Wagga in the short-term.

Initiative #	Initiative	Timeframe	Responsibility
P9	Assess the feasibility of a southern bypass of Wagga Wagga	Short (0-5 yrs)	Council Transport for NSW

3.4.7 Facilitate the fleet transition to emissions-free technology

Electric vehicles are forecast to reach upfront price parity with traditional combustion engine vehicles in Australia from 2024[7]. Combined with the NSW Government's aspirational target for hydrogen to make up 10 per cent of the total gas network by 2030, there is the need and the opportunity for a transition towards a future where both electric and hydrogen fuel cell vehicles become the norm rather than the exception.

The transition to a cleaner, greener transport future will require leadership and collaboration between NSW Government Agencies, Council and industry to deliver the required infrastructure and services that will enable, and encourage, the change to occur.

As shown in Figure 16, under existing conditions there is currently five electric vehicle charging stations in Wagga Wagga – four public stations and one fast charger managed by the NRMA.

7 NSW Government 2020, Net Zero Plan Stage 1: 2020-2030, p. 17

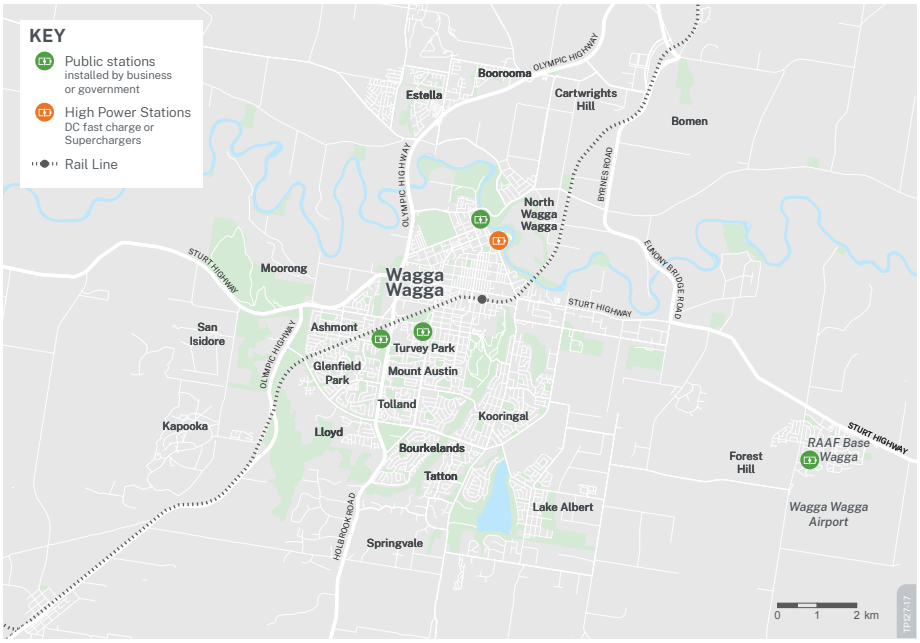


Figure 16: Electric vehicle charging stations

While electric vehicle charging infrastructure will be considered for inclusion within the Wagga Wagga Special Activation Precinct, Transport for NSW and Council will need to work collaboratively with industry over the life of the Plan to identify additional charging station locations across the regional city to proactively support the approaching fleet transition to low emissions technology. The provision of on-site electric vehicle charging infrastructure should also be considered as part of future development proposals across the regional city.

Like electric vehicles, hydrogen fuel cell vehicles are also emissions free, converting compressed hydrogen into electricity to power an electric motor. They offer the advantages of longer operating ranges, lighter weight and rapid refuelling capability, which may suit long distance freight operations.

While refuelling opportunities for hydrogen fuel cell vehicles do not yet exist in Wagga Wagga, Transport for NSW and Council will need to be agile to this evolving technology, particularly for freight-specific hubs like the Special Activation Precinct where the need for hydrogen refuelling capabilities is likely to be greatest.

Initiative #	Initiative	Timeframe	Responsibility
P10	Investigate opportunities for additional electric vehicle charging station locations across Wagga Wagga	Life of Plan	Council Industry Transport for NSW
P11	Consider the inclusion of on-site electric vehicle charging infrastructure for future development proposals	Life of Plan	Council DPE Transport for NSW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04 Initiatives

This Plan has identified 35 initiatives that in combination, will help propel the transport services and infrastructure for Wagga Wagga towards the 2041 vision. To provide greater clarity as the Plan transitions into the implementation phase, the 35 initiatives have been split by project phase – in delivery, in planning, for investigation; by time period – short, medium, life of plan; and by responsibility – lead, support.

Initiatives identified for completion in the short-term are the highest priority items. These initiatives will either be delivered, planned for, or investigated within the next five years. Initiatives identified for completion in the medium-term will be investigated within the next 5 to 10 years while initiatives with a 'Life of Plan' timeframe represent a commitment for Transport for NSW, Council and key stakeholders to work collaboratively as opportunities arise over the next 20 years to accommodate the initiative.

While some initiatives are already in the delivery or planning phases, new initiatives will require further investigation to determine feasibility, as well as ensure what is progressed for funding is aligned with the transport vision for Wagga Wagga and delivers value for money for the people of NSW.

Transport for NSW and Council will provide status updates on our allocated initiatives every 12 months and undertake a refresh of the Transport Plan every five years. The refresh will consider progress on the initiatives listed in this Plan, as well as identify potential new initiatives that may be necessary to respond to future customer needs, emerging technologies, changing land uses, or new service and/or infrastructure commitments proposed for Wagga Wagga over the next five years. The refresh will also provide an opportunity to review progress on transitioning the regional city towards the 2041 transport vision.

4.1 Short-Term Initiatives

The Plan has identified a total of 21 short-term initiatives that will be delivered, planned for, or investigated within the next five years. In terms of responsibility for the short-term initiatives, Transport for NSW will be the lead for nine initiatives, Council will be the lead for 11 initiatives and the Australian Rail Track Corporation will be the lead for one initiative.

			Responsibility	
Initiative #	Initiative	Project Phase	Lead	Support
C1	Complete delivery of the Wagga Wagga Active Travel Plan Project	In Delivery	Council	Transport for NSW
C2	Upgrade the intersection of Edward and Murray Streets with traffic signals and controlled pedestrian crossings on all approaches	In Planning	Transport for NSW	Council
C3	Review and update the Pedestrian Access and Mobility Plan (PAMP) for Wagga Wagga	In Delivery	Council	Transport for NSW

			Responsibility	
Initiative #	Initiative	Project Phase	Lead	Support
C4	Investigate the improved pedestrian crossability of major roads and roundabouts on key corridors including Tarcutta Street, Kooringal Road, Lake Albert Road, Red Hill Road, Bourke Street/Docker Street and Glenfield Road/Pearson Street	In Delivery	Council	Transport for NSW
C5	Undertake a review of the Active Travel Plan Project to identify additional areas for improvement and expansion, address remaining barriers to a greater uptake of cycling across the regional city, and collectively plan for new cycle-focused initiatives	In Planning	Council	NSW Health Transport for NSW
C7	Implement a cycle link to the north of the regional city to service the northern growth area and Charles Sturt University	For Investigation	Council	Transport for NSW
C8	Investigate a cycle link to the south of the regional city to service the southern growth area	In Planning	Council	Transport for NSW
C10	Review the service changes delivered through the 16 Regional Cities Bus Services Improvement Program and continually enhance the bus network to proactively respond to changes in customer need, population, land use and technology	For Investigation	Transport for NSW	
C11	Review outcome of the Bomen bookable bus service trial between the CBD and the Bomen Business Park	For Investigation	Transport for NSW	
C12	Work with community to understand the barriers to greater uptake of bus travel in Wagga Wagga	For Investigation	Transport for NSW	Council
C14	Collectively investigate the impact of land use change and changing travel demand along the Edward Street (Sturt Highway) Corridor, as well as connections to North Wagga Wagga, the northern growth areas and the Wagga Wagga Special Activation Precinct – the investigation must include consideration of a future duplication of Gobbagombalin Bridge	For Investigation	Transport for NSW	Council

			Responsibility	
Initiative #	Initiative	Project Phase	Lead	Support
C15	Investigate improved service patterns between Wagga Wagga and its neighbouring towns and villages – Coolamon, Cootamundra, Gundagai, Junee, Lockhart, Narrandera, Temora, The Rock, Tumbarumba, Tumut, Urana, Uranquinty – to make public transport a viable option for people travelling to Wagga Wagga for work, study, access essential services or play	For Investigation	Transport for NSW	
S1	Investigate and implement safety initiatives for the Edward Street Corridor	For Investigation	Transport for NSW	Council
S2	Undertake a safety review of the Bourke Street / Docker Street and Glenfield Road / Pearson Street Corridors	For Investigation	Council	Transport for NSW
S3	Rehabilitate, reseal and improve Dobney Avenue and Pearson Street between Edward Street (Sturt Highway) and the double roundabouts	In Delivery	Council	Transport for NSW
S4	Identify options – like educational programs, extended hours for public transport services, point-to-point service improvements – to reduce drink driving across the regional city	For Investigation	Transport for NSW	Council NSW Police
S7	Work with the NSW Department of Education and independent schools to address barriers to walking and cycling to school across the regional city	In Planning	Council	Transport for NSW Dept of Education Independent Schools
P1	Investigate opportunities to open up Eunony Bridge Road, Byrnes Road (between Eunony Bridge Road and the Special Activation Precinct) and Merino Road to both PBS Level 2B and PBS Level 3A vehicle combinations	For Investigation	Council	Transport for NSW
P3	Work with Council and industry representatives to strategically plan for additional heavy vehicle rest areas and decoupling sites across Wagga Wagga	For Investigation	Transport for NSW	Council Industry
P4	Investigate the impact of future rail freight movements on vehicle wait times at the Docker Street and Fernleigh Road level crossings	For Investigation	ARTC	Council Transport for NSW
P9	Assess the feasibility of a southern bypass of Wagga Wagga	For Investigation	Council	Transport for NSW

4.2 Medium-Term Initiatives

The Plan has identified a total of five medium-term initiatives that will be investigated within the next 5 to 10 years. In terms of responsibility for the medium-term initiatives, Transport for NSW will be the lead for four initiatives, and Council will be the lead for one initiative.

			Responsibility	
Initiative #	Initiative	Project Phase	Lead	Support
C6	Investigate a dedicated cycle route to Bomen to connect the regional city by bicycle with the Wagga Wagga Special Activation Precinct	For Investigation	Council	RGDC Transport for NSW
C13	Investigate the need for bus priority measures on key routes to ensure services continue to operate reliably and quickly	For Investigation	Transport for NSW	Council
C16	Investigate improved day return service frequencies between Wagga Wagga and its neighbouring regional cities and centres – Albury-Wodonga, Canberra, Cowra, Griffith	For Investigation	Transport for NSW	
C17	Investigate opportunities to better align timetabled, and potentially on-demand, public transport services, as well as point-to-point connections, with scheduled flights at Wagga Wagga Airport	For Investigation	Transport for NSW	Council
P2	Investigate opportunities to expand the network for PBS Level 3A vehicle combinations east along the Sturt Highway to the Hume Highway	For Investigation	Transport for NSW	Council

4.3 'Life of Plan' Initiatives

The Plan has identified a total of nine 'Life of Plan' initiatives that will be investigated as opportunities arise over the next 20 years. In terms of responsibility for the 'Life of Plan' initiatives, Transport for NSW will be the lead for one initiative, and Council will be the lead for eight initiatives.

		Responsibility	
Initiative #	Initiative	Lead	Support
C9	Ensure new residential precincts are designed to support walking and cycle-friendly neighbourhoods, as well as provide safe and efficient connections to the existing active transport network	Council	Transport for NSW
S5	Ensure posted speed limits across the regional city safely respond to potential risks in the road environment, are cognisant of place, and consider both activities and land use beyond the pavement	Transport for NSW	Council
S6	Prioritise pedestrian movements in areas of high pedestrian activity and/or areas with a concentration of vulnerable users like schools, medical facilities, parks and playing fields	Council	Transport for NSW
P5	Collectively address existing barriers to first and last mile deliveries on the local road network	Council	Industry Transport for NSW
P6	Ensure that future planning and development provides strategically located, 'fit-for-purpose' loading facilities across Wagga Wagga to support the seamless transportation of goods from vehicle to property	Council	Industry Transport for NSW
P7	Ensure key road and rail freight corridors are protected from incompatible land uses	Council	DPE Transport for NSW
P8	Support additional opportunities that enable the seamless transition of freight between road and rail (and vice versa) within the Wagga Wagga Special Activation Precinct	Council	Transport for NSW
P10	Investigate opportunities for additional electric vehicle charging station locations across Wagga Wagga	Council	Industry Transport for NSW
P11	Consider the inclusion of on-site electric vehicle charging infrastructure for future development proposals	Council	DPE Transport for NSW

Appendix A: Wagga Wagga Urban Highway Study – Summary of Outcomes

NSW GOVERNMENT

Wagga Wagga Urban Highway Study

Summary of outcomes

Transport for NSW | September 2019

Contents

1. Introduction

Community concerns have been raised in recent years around traffic volumes, safety and heavy vehicle use of the two major inland highways within Wagga Wagga – the Sturt and Olympic highways. The Wagga Wagga Urban Highway Study ("the study") was carried out by Transport for NSW between 2015 and 2017 to investigate these concerns. Evidence from a range of sources was gathered to provide a clear picture of how the highways currently perform in Wagga Wagga and identify existing and potential future issues for detailed investigation.

Road safety, travel efficiency, freight accessibility, cyclist and pedestrian facilities, and intersection performance were analysed as part of the study. The feasibility of a heavy vehicle bypass of Wagga Wagga and the efficiency of the Gobbagombalin Bridge were also assessed.

Since the study's completion in 2017, the NSW Government has released *Future Transport 2056*, its 40-year vision to guide the delivery of transport services and infrastructure. Future Transport committed to greater engagement with stakeholders and the need to consider broader impacts of all transport modes on places.

The Future Transport *Regional NSW Services and Infrastructure Plan* included an initiative to develop "Place Plans" or integrated transport and land use plans for key regional cities, with Wagga Wagga chosen to pilot the new approach. The Wagga Wagga Place Plan is being developed in partnership with Wagga Wagga City Council, a range of stakeholders from across the Transport cluster, other state agencies and the broader community. The plan will use the Movement and Place Framework (as identified in Future Transport) to manage the road network in a way that supports safe, efficient and reliable journeys for people and freight while enhancing the amenity of places.

A broad range of stakeholders, including local community, businesses, freight sector and tourists, will have the ability to contribute to:

- creating places for people to spend time
- improving local and regional transport links
- planning, design and management of movement corridors with a whole-of-government multi-modal road and corridor planning approach considering 'last mile' connectivity and freight access for industry.

Key inputs to the plan will be the Wagga Wagga Urban Highway Study, along with Council's Integrated Transport Strategy. The findings and recommendations of each will be further explored in the Place Plan. A draft of the Wagga Wagga Place Plan is expected to be released for community comment later this year.

The Wagga Wagga Urban Highway Study includes key findings and recommendations on road safety challenges, traffic delays at key intersections, opportunities to improve traffic flow across and along the State highways especially during peak times, the need for a possible alternative freight route bypassing the main city centre, and improved heavy vehicle servicing, uncoupling and rest facilities in Wagga Wagga.

A number of these recommendations have been actioned, including:

- traffic signal phasing adjustments at key intersections on the Sturt Highway to improve traffic flow and pedestrian safety
- investigation work to develop options to improve traffic flow and road user safety at the Sturt Highway and Murray Street intersection
- planning work to improve traffic efficiency and road safety at the Travers Street and Old Narrandera Road intersections on the Olympic Highway
- planning for the widening of Marshalls Creek Bridge on the Sturt Highway.

As the authority responsible for managing the State road network, Transport works in partnership with local councils to ensure the broader road network is managed and planned effectively.

In 2017, Council published the *Wagga Wagga Integrated Transport Strategy and Implementation Plan 2040*. This document identifies numerous opportunities for Transport for NSW to work closely with Council to deliver some of the above key findings.

The Urban Highway Study's findings do not support duplicating the Gobbagombalin Bridge in the short to medium term. However, improvements at the intersections either side of the bridge will reduce delays and help provide a safe and reliable journey into Wagga Wagga from the north. Transport will work with Council to explore its proposal to reopen Gardiner Street in North Wagga Wagga. This collaborative effort may result in improved use of the existing road network and would encourage use of Wiradjuri Bridge as an alternate route to the central business district for the northern growth area of the city.

Similarly, the Urban Highway Study's findings show the number of heavy vehicles travelling through Wagga Wagga each day without stopping is not high enough at present to support the implementation of a heavy vehicle bypass. The study shows a majority of heavy vehicles enter the city to engage in some business, contributing to the local economy. Transport will continue to work with Council to plan for an alternative heavy vehicle route so that if or when the volumes increase and impact the level of service of the State road network, appropriate measures can be carried out.

Transport will also work with Council to establish options for better heavy vehicle servicing facilities in the city, both within the Bomen industrial area close to the Olympic Highway, and several other locations on the Sturt and Olympic highways. Transport will work with Council and developers to ensure access to and from any proposed site along the State road network is safe, does not impact the efficiency of the road network and is appropriate for the vehicle types using the facility. Transport will also ensure any rest areas outside the urban area complement facilities provided in town.

Transport will continue to work with Council to strategically plan for the future and engage with our community and key stakeholders to ensure the State road network meets the city's needs as it continues to grow.

2. Purpose of the study

The Wagga Wagga Urban Highway Study was carried out between 2015 and 2017 to analyse the safety and efficiency of the Sturt and Olympic highways as they pass through the Wagga Wagga city centre.

The study area is shown in Figure 1 below and includes:

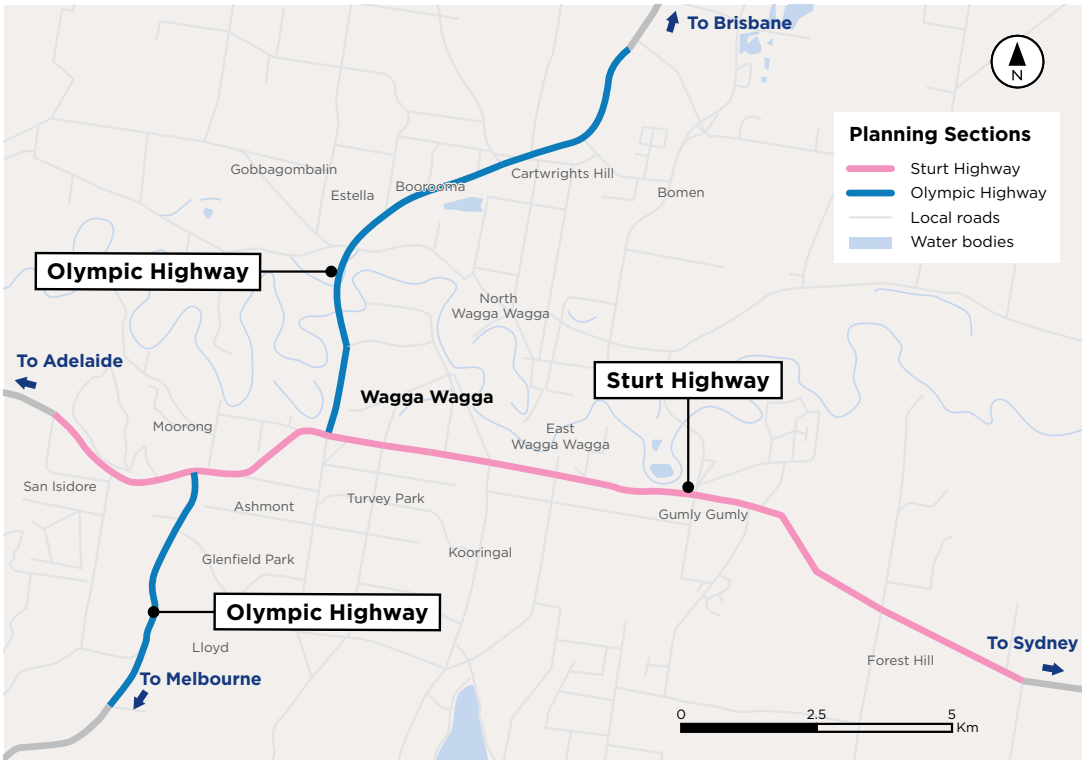
- Sturt Highway from O'Hehirs Road to Cummins Drive
- Olympic Highway from Dunns Road to Trahairs Road.

As the manager of the State road network, part of Transport's role is to monitor and regularly assess the way the network is used by our customers and local communities. This helps future planning by understanding the network's performance, identifying current and future challenges and determining what we can do to ensure the network continues to serve the community's transport needs.

This study does not determine funding for projects. The study will be used to develop future planning priorities and investment opportunities, and help Transport work collaboratively with Council to ensure both the State and local road networks operate as efficiently as possible.

Following its completion in 2017, the work of the Wagga Wagga Urban Highway Study has been absorbed into a more in-depth analysis of the Wagga Wagga road network through the Wagga Wagga Place Plan. This plan is in development and being led by Transport for NSW.

Figure 1. Wagga Wagga Urban Highway Study area



3. Study objectives

The objectives of the Wagga Wagga Urban Highway Study were to analyse and identify:

- road safety challenges
- traffic delays at key locations, including:
  - Marshalls Creek Bridge
  - Gobbagombalin Bridge, including Travers Street and Old Narrandera Road intersections
- opportunities to improve traffic flow across and along the State highways especially during peak times
- need and viability of a possible alternative freight route bypassing the main city centre
- improved heavy vehicle servicing, uncoupling and rest facilities in Wagga Wagga.

The analysis to achieve these objectives and the outcomes of that analysis are covered in Section 5. This details the work that Transport has been doing since the study's completion in 2017 and absorption into Transport for NSW's larger Wagga Wagga Place Plan.

4. Wagga Wagga Integrated Transport Strategy 2040

In 2017, Council published the Wagga Wagga Integrated Transport Strategy and Implementation Plan, a comprehensive transport blueprint for the city to 2040.

The Integrated Transport Strategy and Implementation Plan and Wagga Wagga Urban Highway Study both identify that Wagga Wagga's population is growing and expected to reach around 80,000 people by 2036, an increase of around 20,000 people from the 2016 census data.

The Strategy and Implementation Plan focuses on six key areas to help plan for this population increase and maintain the community's expected levels of service for transport: integrated land use, parking, freight and logistics, road network, active travel and public transport.

Figure 2. Wagga Wagga Integrated Transport Strategy 2040

4. Wagga Wagga Integrated Transport Strategy 2040 continued

Council has taken an integrated approach in the strategy to address the topics raised during the consultation process and includes actions on:

- improving cycling infrastructure, corridors and networks
- prioritising people over motor vehicles in the core of the city
- investigating innovative public transport initiatives
- carrying out measures to increase the likelihood of the NSW Government duplicating the Gobbagombalin Bridge
- supporting development in the northern growth area through appropriate structure planning
- improving parking in the central business district and health precinct, and providing better pedestrian access
- preserving a corridor within Council strategies for a southern heavy vehicle bypass
- prioritising Bomen as an intermodal hub connected to the Inland Rail Network
- working with Transport to improve the Olympic Highway and Old Narrandera Road intersection.

There are clear opportunities for Transport to continue to work with Council to help achieve the shared vision for Wagga Wagga's transport services and broader road network, to meet the needs of the local community, businesses and industries, now and into the future.

These include improvements to the Olympic Highway intersections with Old Narrandera Road and Travers Street, as well as:

- improving cyclist and pedestrian facilities across the Sturt Highway
- making better use of the existing road network, particularly the route to Wiradjuri Bridge, to help manage access across the Murrumbidgee River
- widening Marshalls Creek Bridge on the Sturt Highway
- improving key intersections along the Sturt Highway to better manage traffic flow and reduce congestion, by improving operation of traffic signals
- investigating options to improve heavy vehicle services within the city, complemented by rest areas outside the urban area.

While Transport and council have differing views on the timing for a heavy vehicle bypass of the city and duplication of Gobbagombalin Bridge, Transport will continue to work collaboratively with Council to help achieve its planning goals for the local road network wherever possible and optimise the use of existing infrastructure. Transport will also engage with Council on the requirements to effectively manage and optimise the State road network and plan for its future needs.

5. Study assessments and outcomes

5.1 Stakeholder engagement

Wagga Wagga City Council, Committee 4 Wagga and freight industry groups were consulted as part of the development of the Wagga Wagga Urban Highway Study. Further consultation has been carried out as initiatives progressed, including consultation with the community on potential improvements to the Olympic Highway intersections with Travers Street and Old Narrandera Road in June 2019. Transport will continue to work closely with Council and stakeholders on the key findings and recommendations of the Urban Highway Study to ensure the best possible outcomes for the Wagga Wagga community in the current and future management of the Sturt and Olympic highways, and the broader road network.

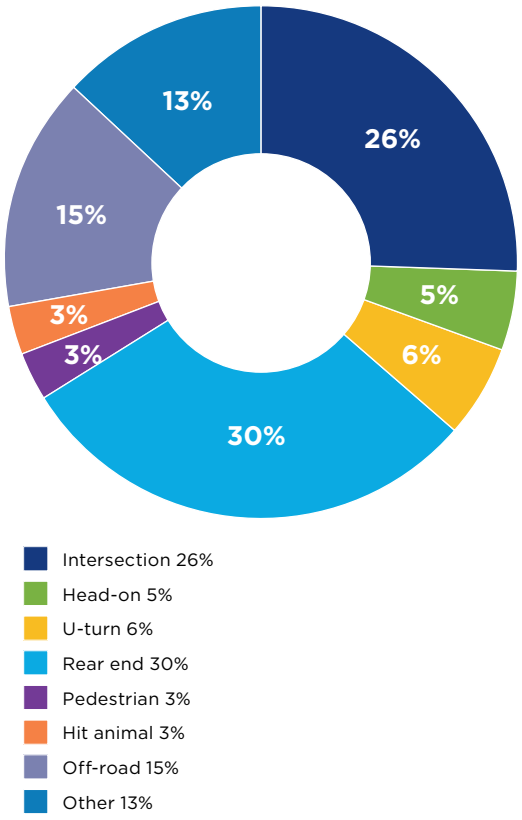
5.2 Road safety

Crash data was analysed for the Sturt Highway and Olympic Highway within the study area to identify key road safety issues, trends and hot-spots. The original crash data from 2010 to 2014 has been updated to 2013 to 2017 data for this summary. Between 2013 and 2017, there was a total of 105 casualty crashes including 36 serious injury crashes (no fatal crashes were recorded in this period). This is a reduction from the 2010 to 2014 period when four fatal crashes were recorded within the study area.

The majority of crashes happened in the built-up area of Wagga Wagga, particularly around the Wagga Wagga Base Hospital and industrial areas at east and west Wagga Wagga and Bomen.

Rear end crashes were the most common type, followed by intersection crashes. Many of these crashes related to accessing properties and side streets, particularly on the Sturt Highway between Best Street and Pearson Street.

Figure 3. Crash types on the Sturt and Olympic highways in the Wagga Wagga urban area (2013–2017)



5. Study assessments and outcomes continued

Following this assessment, Transport started investigating potential safety improvements at a number of sites including at the intersection of the Sturt Highway and Murray Street.

A traffic movement study was conducted to determine how motorists, cyclists and pedestrians used the area. This work involved setting up a static camera at the intersection to record vehicle and pedestrian movements over a three-week period. The footage revealed poor driver behaviour and difficulty making right turns from all directions at the intersection.

A community survey was carried out from September to October 2018 to better understand concerns at the intersection. The major concerns noted were road safety and poor sight distance for motorists. However the community also expressed concern that intersection changes could potentially create new problems including:

- restricting access for residents, businesses, emergency vehicles, heavy vehicles and at the hospital
- reducing parking
- increasing congestion
- moving the problem to another local street.

Transport is now investigating possible safety and efficiency solutions at the intersection and across the road network around the hospital. This includes consulting with the hospital redevelopment to inform decision-making. Once a potential solution has been developed, Transport will consult with Council and the community to seek feedback before starting the work. This collaborative effort aims to find a solution that not only enhances the State road network in Wagga Wagga, but also improves the broader road network for the whole community.

5.3 Traffic

5.3.1 Traffic volumes

The study reported traffic flows on the Sturt Highway ranged from around 18,000 vehicles a day in the east, to just under 14,000 west of Docker Street. Traffic volumes were at their highest between 8 and 9am and between 4 and 6pm. On the Olympic Highway, 2018 counts showed the volume of traffic on the Gobbagombalin Bridge reached around 20,000 vehicles per day with similar morning and afternoon peak periods to the Sturt Highway.

5.3.2 Traffic efficiency

Traffic volumes in the Wagga Wagga urban area are four to five times the volumes on the highways outside of the city, indicating that most of the traffic in Wagga Wagga is generated by local residents and businesses.

The study assessed the existing and future performance of intersections and found a number experience delays around peak times, which impacts traffic flows across and along the highways in the city centre.

These include intersections along the Sturt Highway, such as at Lake Albert Road and Tarcutta Street, Best Street and Docker Street, and along the Olympic Highway at Travers Street and Old Narrandera Road. The study recommended investigating infrastructure improvements and altering the timing of traffic signals to reduce delays and better manage traffic flows.

Since the study's completion, Transport has reprogrammed four traffic signals along the Sturt Highway at Lake Albert Road, Baylis Street, Edmondson and Best Street, and Docker Street with the intention to improve traffic efficiency during peak periods.

Figure 4. Mobility scooter crossing the Sturt Highway near Emblen Street

5.3.3 Origin-Destination survey

An Origin-Destination (O-D) survey was carried out as part of the study to measure how much of the traffic (both light and heavy vehicles) entering Wagga Wagga via the Sturt and Olympic highways was through traffic, and how much had Wagga Wagga as a destination. This survey was carried out by recording number plates and times at entry/exit points to the city and comparing them to determine the time taken to travel through the area.

Key findings of the O-D survey included:

- less than 10 per cent of traffic analysed was through traffic (traffic that travels through Wagga Wagga without a break in the journey of one hour or more). More than 90 per cent of trips had their origin or destination in Wagga Wagga, or spent a significant amount of time (more than an hour) in the urban area before continuing their journey
- traffic volumes on both highways in the urban area are four to five times higher than those outside of the city, indicating that most of the traffic in Wagga Wagga comes from the city itself
- the number of heavy vehicles inside the urban area is up to double those outside the city. This indicates that many of the heavy vehicles operating within the city are servicing the businesses and industrial areas of Wagga Wagga, and not simply travelling through.

The O-D survey findings are consistent with the outcomes of consultation with the heavy vehicle industry which identified most heavy vehicle drivers carry out business in Wagga Wagga. This can be a simple rest stop, driver changeover, delivery and/or pickup of goods, or to transport goods from one location to another within the urban area. Figure 5 shows the location of the industrial areas of Wagga Wagga, clearly showing a strong presence along the Sturt Highway.

5. Study assessments and outcomes continued

Both the Wagga Wagga Urban Highway Study and the Wagga Wagga Integrated Transport Strategy identify the need for improving heavy vehicle facilities in and around Wagga Wagga to accommodate the number of heavy vehicles that stop inside the city, with the Integrated Transport Strategy proposing the development of a significant freight interchange facility.

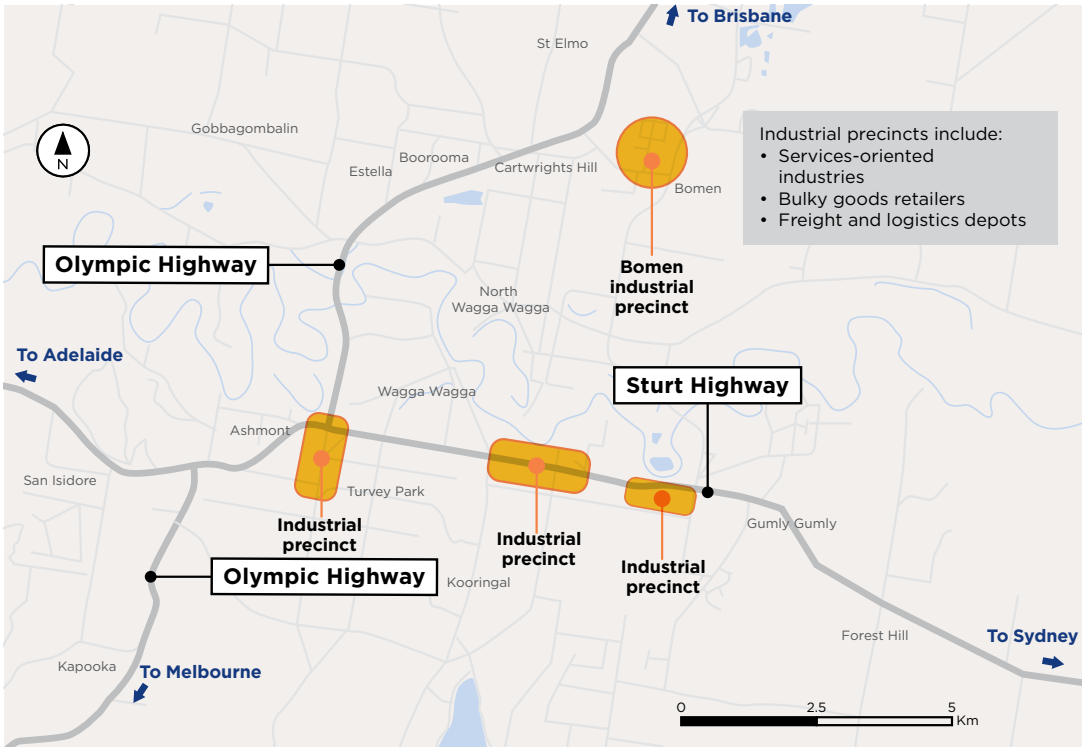
Transport will continue to work closely with Council and developers to investigate suitable locations for a facility of this kind, as well as other facilities, such as rest areas along both highways. Transport will also work with Council to ensure access to and from any proposed sites is safe and does not impact the road network's efficiency.

5.4 Active transport

The Urban Highway Study and Integrated Transport Strategy both identified the need for improved active transport facilities in Wagga Wagga to encourage cycling and walking as transport modes in the city.

The existing Wagga Wagga bicycle network offers off-road bicycle tracks providing limited connections to destinations and some on-road bicycle lanes. Feedback provided during the development of the Wagga Wagga Integrated Transport Strategy suggested the community sees the Sturt Highway as a barrier to safe and efficient cycling and pedestrian movements.

Figure 5. Heavy vehicle freight destinations in Wagga Wagga



The Wagga Wagga Urban Highway Study also found the Sturt Highway has a lack of appropriate pedestrian and cyclist facilities. Although the crash statistics for the study period only show two crashes involving pedestrians, maintaining safety for these vulnerable road users will continue to be a challenge. There are significant opportunities to work with Council to improve the city's cycling and walking networks to provide people with a healthy and viable transport alternative.

An $11.7 million active travel package was also announced by the NSW Government in early 2018 to improve cyclist and pedestrian infrastructure throughout the city. The funding will enable Council to develop and implement 45 kilometres of cycling paths across the city by 2020 as an attractive and safe mode of travel for a wide range of trip types and users in Wagga Wagga.

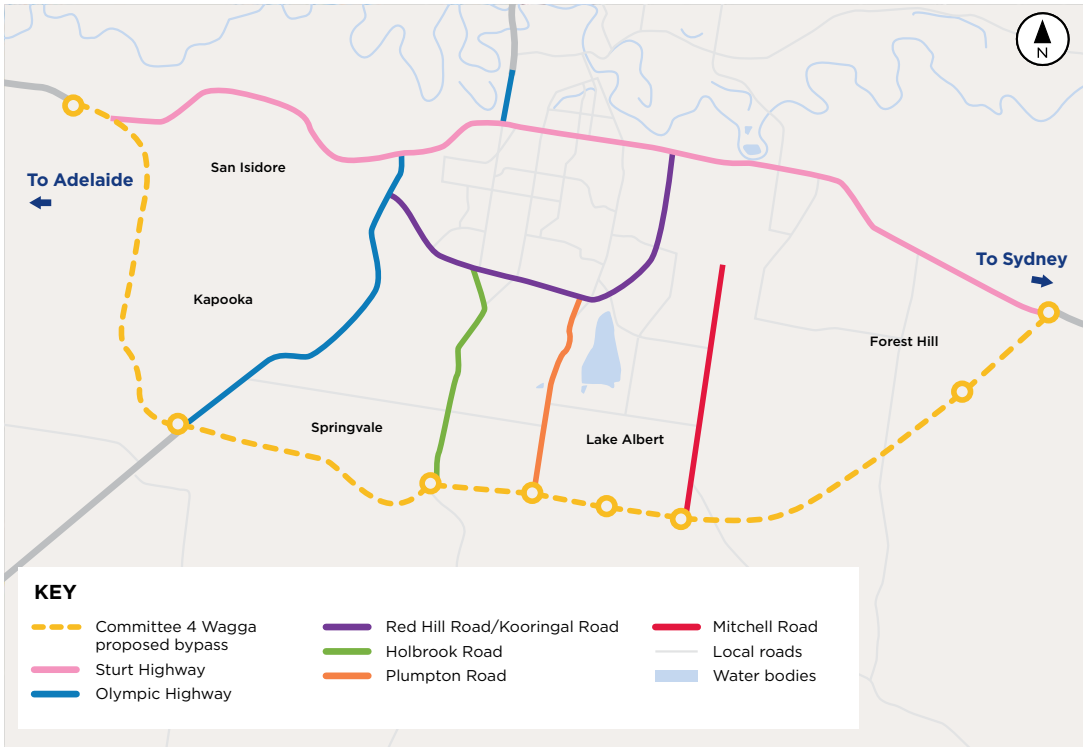
5.5 Heavy vehicle alternate route

Following the work completed by Council and Committee 4 Wagga, and calls from the community, one of the study's key objectives was to assess the feasibility of a heavy vehicle alternate route, or bypass, and its ability to reduce heavy vehicle trips along the Sturt Highway through the city.

The assessment used the existing Sturt Highway through the city as the base case and the east-west bypass route proposed by Committee 4 Wagga (C4W) as the comparison route.

It should be noted that use of the route proposed by C4W as part of the assessment is not an endorsement of this route or any other proposed route by the NSW Government. It is simply an indicative point of comparison for assessment purposes.

Figure 6. Heavy vehicle alternate route as proposed by Committee 4 Wagga



5. Study assessments and outcomes continued

The proposed route starts east of Forest Hill, crosses a number of intersections and re-joins the Sturt Highway near Churches Plain Road.

The bypass assessment considered the estimated number of heavy and light vehicles (based on O-D survey results) that would use the bypass as well as the calculated time to travel along the bypass compared to the existing highway route. The assessment also assumed a 100 km/h speed limit, and considered impacts of intersection types along the route and the route length.

Based on the assessment, the study concluded the number of vehicles that would use the alternative route would be low and does not support development at the moment. The majority of heavy vehicles currently entering the city have Wagga Wagga as a destination for either business or rest purposes, and this is expected to continue into the future as Wagga Wagga is growing steadily.

A review of several corridors across the state with similar light and heavy vehicle volumes, including the Great Western Highway through Bathurst, the Oxley Highway through Tamworth and the Kings Highway through Queanbeyan, indicates a reasonably consistent level of infrastructure provision to Wagga Wagga, including two lanes in each direction and either traffic signals or roundabouts at key intersections.

Transport acknowledges the alternative route is clearly identified in the Integrated Transport Strategy and will continue to work with Council to preserve a corridor as part of Council's Local Environmental Plan. This will provide an opportunity for future improvements if the level of service on the Sturt Highway drops and/or heavy vehicle numbers increase above the predicted volumes as Transport can respond with a comprehensive plan for the entire Wagga Wagga road network developed in collaboration with Council.

Figure 7. Gobbagombalin Bridge approach from the northern growth area of the city during a busy morning peak period

5.6 Gobbagombalin Bridge, Old Narrandera Road and Travers Street

Gobbagombalin Bridge provides an essential crossing of the Murrumbidgee River, linking the high growth areas of Booroma, Estella and Gobbagombalin in the north of the city to the central business district. While Council has identified the need for duplicating Gobbagombalin Bridge in the Integrated Transport Strategy, the Urban Highway Study indicated that with appropriate traffic management, the capacity of the bridge is sufficient in the short to medium term.

The study identified the Olympic Highway intersections on either side of Gobbagombalin Bridge at Old Narrandera Road and Travers Street as having safety and efficiency issues that can benefit from local and State road network solutions. Congestion at both these intersections is predicted to increase in the near future, especially during peak periods, due to residential growth to the north of the city.

These intersections were also identified in the Wagga Wagga Integrated Transport Strategy, with Council outlining the need to collaborate with Transport to find appropriate congestion solutions. Transport will continue to work with Council to investigate solutions to ease congestion at these intersections. In particular, Transport will investigate the option of opening up Gardiner Street to provide another crossing point of the Olympic Highway to access the local road network.

This proposal outlined by Council in the Integrated Transport Strategy projected that congestion may be eased at the Old Narrandera Road intersection, as well as improve traffic flows on Gobbagombalin Bridge, by providing alternative access to the Wagga Wagga central business district via the Wiradjuri Bridge crossing.

The Urban Highway Study acknowledged Wiradjuri Bridge is underused in the Wagga Wagga road network. Easier access to this crossing via the opening of Gardiner Street may provide an immediate, viable, low-cost alternative for commuters and service vehicles in the northern growth areas of the city.

Transport will collaborate with Council to investigate this option as a possibility for better managing safety and efficiency issues at both the Old Narrandera Road and Travers Street intersections, while making best use of the existing road network and prolonging the capacity of Gobbagombalin Bridge.

In August 2018, the Premier and the then-Minister for Roads, Maritime and Freight announced a $30 million investment in the Wagga Wagga electorate to fund two projects to improve traffic flow:

- road and intersection upgrades on the Olympic Highway either side of the Gobbagombalin Bridge to ease congestion and improve safety
- widening the Sturt Highway to four lanes over Marshalls Creek in Wagga Wagga (discussed in Section 5.6 below).

Transport is investigating road and intersection upgrades at the Olympic Highway intersections with Old Narrandera Road and Travers Street to:

- improve safety, access and traffic efficiency at each intersection, with a knock-on effect of improved traffic flow across Gobbagombalin Bridge
- improve travel time and reduce delays on this section of Olympic Highway
- reduce the frequency and severity of crashes on this section of Olympic Highway.

While duplication of Gobbagombalin Bridge is not being considered as part of this work, the proposed intersection upgrades will improve safety, access and traffic efficiency for this increasingly busy area.

5. Study assessments and outcomes continued

In June 2019, Transport called for community feedback on a proposal to improve the Olympic Highway intersections at Old Narrandera Road and Travers Street. Around 390 comments were received, which are now being reviewed and collated into a community consultation report. It is anticipated the document will be publicly available in late 2019, with concept designs expected to be finalised later this year.

A significant number of comments focussed on intersection concerns, general traffic efficiency and road safety matters. A small number of comments referred to the reopening of Gardiner Street, in line with Council's proposal in the Integrated Transport Study and demonstrating the need to investigate this option with Council.

Transport will continue to work with Council and the community in finalising the preferred road safety and traffic efficiency solutions at the Travers Street and Old Narrandera Road intersections.

5.7 Marshalls Creek Bridge

Both the Urban Highway Study and Integrated Transport Strategy identified the two-lane Marshalls Creek Bridge on the Sturt Highway as a congestion pain point. The community has also raised concerns about the bridge.

Following the NSW Premier and the then-Minister for Roads, Maritime and Freight's announcement of a $30 million investment in the Wagga Wagga electorate in August 2018, Transport has started investigations to widen the Sturt Highway from two to four lanes over Marshalls Creek.

Geotechnical and survey work has been completed, and work on concept designs is continuing. Transport has also started consulting with Council and key stakeholders around Marshalls Creek, and will engage with the broader community as design work progresses.

Construction is expected to start in 2021 and take up to 18 months to complete.

Figure 8. Planning work has started on widening the Sturt Highway at Marshalls Creek Bridge

6. Next steps

The Wagga Wagga Urban Highway Study has contributed to a range of positive outcomes for the Wagga Wagga community in the form of:

- $30 million funding package from the NSW Government to improve traffic flow on the Sturt Highway by widening Marshalls Creek Bridge and on the Olympic Highway by carrying out road and intersection improvements either side of Gobbagombalin Bridge
- traffic light phasing reprogramming to improve traffic flow and pedestrian safety at key intersections
- $11.7 million active transport package from the NSW Government for improved cycling and pedestrian facilities
- investigation work at the Murray Street intersection on the Sturt Highway to improve driver behaviour and increase safety.

The Urban Highway Study also aligns with the Wagga Wagga Integrated Transport Survey and Implementation Plan 2040 on the above road safety and efficiency outcomes and provides numerous opportunities for Transport to continue to work in partnership with Council. Two such opportunities are the reopening of Gardiner Street to provide easier access for the northern growth area to the local road network and a secondary access route to the Wagga Wagga central business district via Wiradjuri Bridge, as well as improving heavy vehicle rest and service facilities.

Transport will continue to monitor the performance of both State highways within the Wagga Wagga urban area to ensure their efficient operation and management now and into the future. Collaboration with Council is key to addressing current road network issues efficiently and effectively, planning appropriately for the future and to increase the knowledge base, expertise and creativity required to develop innovative solutions for the future of the broader Wagga Wagga road network. The Transport Cluster will also work collaboratively with Council and other stakeholders in finalising the Wagga Wagga Place Plan this year. The issues raised in this summary report will be included as part of the Place Plan to guide integrated transport and land use planning for Wagga Wagga for the next 20 years.

Figure 9. Traffic signals along the Sturt Highway at Lake Albert Road have been reprogrammed to improve traffic efficiency

Wagga Wagga Transport Plan

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DISCLAIMER

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NSW GOVERNMENT

B.23.15 APPOINTMENT OF COUNCIL DELEGATES TO OUTSIDE ORGANISATIONS

Responsible Officer: Chief Executive Officer
File Number: S16-20-01
Attachments: Nil.

Declarations of Interest:
Scott Barber - as the responsible officer, I declare that I have no disclosable interests in this matter.

Summary

The purpose of the report is to consider the appointment of Councillors to outside organisations and community groups.

Discussion

Council makes appointments to various external organisations and community groups. This assists Council in working closely with its community and taking part in a wide range of activities associated with the development of the Municipality.

Council at its Scheduled Meeting on 20 December 2022 appointed Councillors to organisations where an asterisk (*) was marked in some organisations to denote that this position may change once Council had results of the Victorian State Election.

Council has brought this report back to enable Cr Kelly to be involved community groups and in the decision of the delegations to organisations.

Consultation

Councillor Assembly held on 6 December 2022 and Councillor Assembly held on the 24 February 2023.

Financial Implications

Travel and accommodation costs incurred by Councillors will be reimbursed. These costs are included in the annual budget.

Social, Economic and Environmental Implications

Appointments to external organisations will assist Council in achieving its economic, social and environmental objectives.

Risk Management Implications

Nil.

Council Plan Strategy Addressed

Leadership - Bold leadership, strong partnerships and effective advocacy.

Options

Some appointments are mandatory (e.g. Audit and Risk Committee) while others are optional.

Recommendation

That Council:

1. **Appoint Councillors to external organisations as shown in the table below.**
2. **Note the position of the Audit and Risk Committee is from 1 January 2023 until 31 December 2023.**

COUNCIL DELEGATES

	Organisation	Councillor / Officer December 2021/22	Councillor / Officer December 2022/23
1	**Audit and Risk Committee**	Cr McPhee Cr King	Cr King Cr Moar (This position is for the period of January 2023 to December 2023)
2	**CEO Employment and remuneration Committee**	Mayor Benham Cr McPhee Cr Young	Mayor McPhee Cr Moar Cr Young
3	**Swan Hill Regional Livestock Exchange**	Cr Moar Svetla Petkova	Cr Moar Director of Infrastructure
4	**Swan Hill Leisure Centre Committee of Management**	Cr King Cr Jeffery (sub delegate)	Cr King Cr Jeffery (sub delegate)
5	**Swan Hill Regional Art Gallery Advisory Committee**	Cr Young Cr McKay (sub delegate)	Cr Young Cr McKay (sub delegate)
6	**Central Murray Regional Transport Forum**	Mayor	Mayor
7	**Municipal Association of Victoria**	Cr McPhee Cr Benham (Sub delegate)	Cr McPhee Cr McKay (sub delegate)

	Organisation	Councillor / Officer December 2021/22	Councillor / Officer December 2022/23
8	**Murray River Group of Councils**	Mayor CEO	Mayor CEO
9	**Swan Hill Inc.**	Cr McKay Cr Young (Sub delegate)	Cr McKay Cr Young (sub delegate)
10	**Swan Hill Motorplex**	Cr King	Cr King
11	**Agribusiness Advisory Committee**	Cr Moar	Cr Moar Cr Young (sub delegate)
12	**Event Support Fund**	Mayor and Cr McKay	Mayor and Cr Moar
13	**Joint Bridge Committee between Murray River Council and Swan Hill Rural City Council**	Cr McPhee and Cr Moar	Cr McPhee and Cr Moar
14	**Community Development Fund**	Mayor and Cr McKay	Mayor and Cr Moar
15	**Indoor Sports Stadium Advocacy Committee**	Cr Jeffery	Cr Jeffery
16	**Central Victorian Greenhouse Alliance**	Cr Moar	Cr Moar
17	**Swan Hill Rec Reserve Advisory Committee**	Cr King	Cr King

	Committee	Councillor 2021/22	Councillor 2022/23
18	**Robinvale Aboriginal Elders Committee**	Mayor Benham	Mayor McPhee
19	**Robinvale Euston Business Association**	Cr King	Cr King
20	**Lake Boga Inc**	Cr Young	Cr Young
21	**Manangatang Improvement Group**	Mayor Benham Cr Young	Cr Kelly
22	**Nyah Action Group**	Cr McKay	Cr Young
23	**Ultima Progress Association**	Cr Young	Cr Kelly
24	**Woorinen Progress Association**	Cr McPhee	Cr Jeffery
25	**Piangil Community Group**	Cr McPhee	Cr McPhee
26	**Boundary Bend Progress Association**	Mayor Benham	Cr McKay
27	**Wemen Progress Association**	Mayor Benham	Cr Kelly
28	**Rail Freight Alliance**	Cr King	Cr King
29	**Central Murray Regional Transport Forum**	Mayor Benham	Mayor
30	**Rural Councils Victoria**	Mayor Benham Cr Jeffery Cr Moar	Cr McKay Cr Kelly
31	**Local Aboriginal Network Robinvale**	Mayor Benham	Cr McPhee Cr McKay (sub delegate)
32	**Local Aboriginal Network Swan Hill**	Mayor Benham Cr McKay (sub delegate)	Cr King Cr McKay (sub delegate)
33	**Grampians Wimmera Mallee Water Advisory Committee**	Cr Moar	Cr Moar
34	**Swan Hill Residents and Ratepayers Association**	Cr Jeffery Cr McPhee (sub delegate)	Cr McPhee Cr McKay (sub delegate)

B.23.16 AUSTRALIAN LOCAL GOVERNMENT ASSOCIATION (ALGA) CONFERENCE

Responsible Officer: Chief Executive Officer
File Number: S16-04-05
Attachments: Nil.

Declarations of Interest:
Scott Barber - as the responsible officer, I declare that I have no disclosable interests in this matter.

Summary

This report proposes that Council be represented at the ALGA Conference in Canberra (13-16 June 2023) by the Mayor, Les McPhee (or delegate), the Deputy Mayor, Cr Stuart King (or delegate) and the Chief Executive Officer, Scott Barber.

Discussion

The annual ALGA Conference in Canberra is the only opportunity that Local Government has to bring all Mayors, CEO's and key decision makers together at the national one event.

At previous events Swan Hill Rural City Council has taken the opportunity to meet with Federal Ministers, Shadow Ministers, senior bureaucrats and other Councils to communicate the major projects and issues that are affecting the people of the municipality. Joint advocacy meetings with the Murray River Group of Councils have been extremely effective on topics such as the Basin Plan.

It is recommended that Council send Mayor, Les McPhee (or delegate), the Deputy Mayor, Cr Stuart King (or delegate) and the Chief Executive Officer, Scott Barber as its delegation to ensure that maximum benefit can be gained from the 3 days.

This delegation composition has been effective for Swan Hill Rural City Council at previous conferences.

Council may choose to approve a larger or smaller delegation to attend.

Financial Implications

Accommodation and travel costs associated with attending this conference. Travel is usually undertaken within a Council vehicle.

Social Implications

Not applicable.

Economic Implications

Not applicable.

Environmental Implications

Not applicable.

Risk Management Implications

Not applicable.

Council Plan Strategy Addressed

Leadership - Bold leadership, strong partnerships and effective advocacy.

Options

Council can choose to change the number of representatives attending the conference.

Recommendations

That Council:

1. **Authorise the travel of the Mayor, Cr Les McPhee (or delegate), the Deputy Mayor, Cr Stuart King (or delegate) and the Chief Executive Officer, Scott Barber. Council will support the cost of the selected Councillors and CEO.**

2. **Endorse attendance of additional Councillors who wish to attend, at their own cost.**

3. **Authorise the Councillor McPhee to exercise the voting rights of the Swan Hill Rural City Council at the 2023 National General Assembly.**

4. **Request all participants to submit reports to Council upon return from the conference.**

SECTION C – DECISIONS WHICH NEED ACTION/RATIFICATION

C.23.3 SIGN & SEAL REPORT

Responsible Officer: Chief Executive Officer

Attachments: Nil.

Declarations of Interest:
Scott Barber - as the responsible officer, I declare that I have no disclosable interests in this matter.

Summary

The following documents and agreements have been signed and sealed by the Councillors and the Chief Executive Officer on the respective dates. Those actions require the ratification of the Council.

Discussion

During the course of any month Council is required to sign and seal a range of documents arising from decisions made on a previous occasion(s). Examples include sale of land, entering into funding arrangements for Council programs etc.

As the decision to enter into these agreements has already been made, these documents are signed and sealed when received, with Council ratifying the signing and sealing at the next Council meeting.

The following documents were signed and sealed since the last Council meeting:

No.	Document Type	Document Description	Date signed/ sealed
1132	Transfer and variation of Lease Spoons Riverside	Between Swan Hill Rural City Council and Monash Drive Pty Ltd	28/02/23
1133	Deed of Renewal for Robinvale Network House	Between Swan Hill Rural City Council and Robinvale Network House Inc.	07/03/23

Note: A Section 173 Agreement is a typically a contract between the Council and a landowner that places use or development restrictions on the land.

They are intended to ensure compliance with conditions contained in permits granted by the Council and are often used in subdivision matters. These agreements refer to Section 173 of the Planning and Environment Act 1987.

Conclusion

Council authorise the signing and sealing of the above documents.

Recommendation

That Council notes the actions of signing and sealing the documents under delegation as scheduled.

C.23.4 COUNCILLOR ASSEMBLIES - RECORD OF ATTENDANCE AND AGENDA ITEMS

Responsible Officer: Chief Executive Officer
File Number: S15-05-06
Attachments: 1 ⇩Councillor Attendance and Agenda items

Declarations of Interest:
Scott Barber - as the responsible officer, I declare that I have no disclosable interests in this matter.

Summary

The following report provides attendance details of Councillor Assemblies on a monthly basis.

Discussion

Whilst Minutes have not been recorded, Agenda items and those in attendance are reported and presented to Council.

An assembly of Councillors is defined as a meeting that is planned or scheduled at which at least half of the Council and one Officer are in attendance, and where the matters being considered that are intended or likely to be the subject of a Council decision.

No formal decisions can be made at an assembly but rather direction can be given that is likely to lead to a formal decision of Council.

Details of the most recent assemblies of Council are attached.

Consultation

Not applicable.

Financial Implications

Not applicable.

Social Implications

Not applicable.

Economic Implications

Not applicable.

Environmental Implications

Not applicable.

Risk Management Implications

Not applicable.

Council Plan Strategy Addressed

Leadership - Bold leadership, strong partnerships and effective advocacy.

Options

Council Assemblies are reported to ensure good governance and transparency.

Recommendation

That Council note the contents of the report.

COUNCILLOR ASSEMBLIES ATTENDANCE AND AGENDA
28 February 2023 at 1.00pm, Swan Hill Town Hall – Council Chambers

AGENDA ITEMS
- Daft Budget Presentation

ADDITIONAL ITEMS DISCUSSED
- Nil

ATTENDANCE
Councillors
- Cr Nicole McKay
- Cr Bill Moar
- Cr Stuart King
- Cr Ann Young
- Cr Les McPhee
- Cr Chris Jeffery
- Cr Jacquie Kelly

Apologies
- Nil

Leave of Absence
- Nil

OFFICERS
- Scott Barber, Chief Executive Officer
- Bruce Myers, Director Community and Cultural Services
- John McLinden, Acting Director Infrastructure
- Heather Green, Director Development and Planning
- Bhan Pratap, Director Corporate Services
- Ash Free, Finance Officer
- Kerry Thompson, Financial Accountant
-

Other
- Nil

CONFLICT OF INTEREST
Nil

COUNCILLOR ASSEMBLIES ATTENDANCE AND AGENDA
7 March 2023 at 1.00pm, Swan Hill Town Hall – Council Chambers

AGENDA ITEMS
- Budget Discussion
- Planning Application 34 Everingham Street, Swan Hill
- Swan Hill Integrated Transport and Land Use Strategy 2050
- Herbert Street update
- Australian Local Government Association (ALGA) conference
- Freight Road Network Mapping and infrastructure Investment Study
- Robinvale Hotel up-date
- Sustainable Fruit Fly Management in the Murray Valley beyond 2025

ADDITIONAL ITEMS DISCUSSED

- Lake Boga Lease up-date
- Councillor savings

ATTENDANCE
Councillors
- Cr Nicole McKay
- Cr Bill Moar
- Cr Stuart King
- Cr Ann Young
- Cr Les McPhee
- Cr Chris Jeffery
- Cr Jacquie Kelly

Apologies

- Cr Ann Young
- Cr Chris Jeffery

Leave of Absence
- Nil

OFFICERS
- Scott Barber, Chief Executive Officer
- Bruce Myers, Director Community and Cultural Services
- John McLinden, Acting Director Infrastructure
- Heather Green, Director Development and Planning
- Bhan Pratap, Director Corporate Services
- Ash Free, Finance Officer
- Tamara Broadsmith, Planning Team Leader
- Dennis Hovenden, Acting Economic & Development Manager
- Nathan Keighran, Economic Development Coordinator
- Nick Mudge, Environment and Sustainability Officer

Other
- Josh Bray, McKnight and Bray consultant
- Dan O'Bryan, Owner of 34 Everingham Street, Swan Hill

CONFLICT OF INTEREST
Nil

SECTION D – NOTICES OF MOTION

SECTION E – FORESHADOWED ITEMS

SECTION F – URGENT ITEMS NOT INCLUDED IN AGENDA

SECTION G – TO CONSIDER & ORDER ON COUNCILLOR REPORTS

SECTION H – IN CAMERA ITEMS