

Bega Valley Cuttagee Bridge Project

Evaluation of economic impacts

March 2021

prepared by **.id**

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Executive summary

Background

The *Tathra-Bermagui Road (MR272)* main road runs through the North-East coastal area of Bega Valley Shire LGA, an important agricultural region that generated around \$37 million, or 31.5% of the total agricultural value in 2020. The road provides an important transport link between Bermagui and towns further south to Tathra. Furthermore, the road enables the region with important supply chain links to the freight and logistics sector and agricultural processing areas in the LGA.

However, the agricultural industry is hampered by the limited freight access through the Cuttagee bridge along the road. The bridge is also an essential link for Bega Valley residents and businesses, and part of an important alternative route when the Princes Highway is occasionally closed due to natural disasters and traffic accidents. This significantly reduces the competitiveness of agricultural production, transport, processing and exports.

Bega Valley Shire Council has identified a need to renew the Cuttagee bridge with the objective of increasing agricultural productivity and competitiveness by providing an efficient freight movement through *Tathra-Bermagui Road (MR272)*. This will also increase road network resilience to natural disasters and provide safe and reliable road access for local businesses and the community.

The project

The project scope involves replacing the existing timber bridge with a concrete structure to provide two-lanes and a shared pathway.

Evaluation of economic impacts

This report presents the results of the Economic Evaluation of the proposed project. Two methods of analysis were undertaken:

- Economic analysis of project needs: Demonstrates how the project is strategically aligned with the local economic needs. The analysis also shows the impact of COVID-19 on the Bega Valley economy.

- Economic Impact Analysis (EIA): Based on the LGA Economic Impact Model (developed by NIEIR), we assessed the effect of the project on the national and Local Government Area (LGA) economy.

The impacts of COVID-19 on the local economy

The recent COVID-19 pandemic has had a significant impact on the Bega Valley economy, with the estimated GRP fall of 12% in June Quarter 2020 from the March Quarter 2020 GRP. This fall is higher than the 7% fall experienced in the regional NSW as a whole. The recovery in GRP is likely to be slow, with Bega Valley's June Quarter 2022 GRP is estimated to be still 5% below the March Quarter 2020 GRP.

The pandemic also had a significant impact on Bega Valley's local jobs and residents. The number of local jobs decreased by 7% in June Quarter 2020 compared to March Quarter 2020, worse than the 5% decrease experienced in the regional NSW as a whole. Similar to the GRP, the recovery in local jobs are expected to be slow. The number of local jobs in June Quarter 2022 is estimated to be 3% below the March Quarter 2020 level.

Finally, the residents on unemployment benefits (JobSeeker and Youth allowance) increased to 12% in June 2020 compared to 7.2% in March 2020. By January 2021, 9.9% of the residents were on unemployment benefits, slightly higher than the regional NSW average of 9.7%.

Economic impact assessment

The construction phase of the project is estimated to support 84 FTE jobs in Bega Valley LGA and generate \$10.2 million to Gross Regional Product (GRP). The phase has the potential to provide 8.7 FTE jobs for youth (16 to 24 years old) and 1.5 FTE jobs for the Aboriginal and Torres-Strait Islander population within the Bega Valley Shire LGA.

The project is also expected to benefit agricultural production as a result of lower transport costs and improved competitiveness. Based on the analysis in this report, it is estimated that the project would increase Agriculture, Forestry and Fishing industry production by \$0.35 million per year. This represents around 0.1% of total Agriculture, Forestry and Fishing industry output in Bega Valley Shire LGA and is considered conservative.

An increase in Agriculture, Forestry and Fishing industry production by \$0.35 million is estimated to create 2.4 FTE jobs and generate \$0.25 million to Gross Regional Product (GRP) per year. The increased industry production has the potential to provide 0.19 FTE jobs for youth (16 to 24 years old) and 0.05 FTE jobs for the Aboriginal and Torres-Strait Islander population within the Bega Valley Shire LGA per year.

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1. Introduction

.id has been engaged by Bega Valley Shire Council to undertake an evaluation of the economic impacts for the proposed renewal of the Cuttagee Bridge project (“The project”).

The North-East area of Bega Valley Shire LGA is an economically important agricultural region which is home to 113 agricultural businesses and employs almost a third of the LGA’s Agriculture, Forestry and Fishing industry. The area generates \$37 million in economic value (3.1% of total Value-added) in 2019/20. This area also has an important supply chain links to the freight and logistics sector and agricultural processing areas in the LGA.

The *Tathra-Bermagui Road (MR272)* main road runs through the North-East coastal area of Bega Valley Shire LGA. The road provides an important transport link between Bermagui and towns further south to Tathra. Furthermore, the road enables the region with important supply chain links to the freight and logistics sector and agricultural processing areas in the LGA.

However, the agricultural industry is hampered by the limited freight access through the Cuttagee bridge along the road. The bridge is also an essential link for Bega Valley residents and businesses and an important alternative route when the Princes Highway is occasionally closed due to natural disasters and traffic accidents. The existing bridge is in poor condition, with numerous structural issues identified by the Council. This significantly reduces the competitiveness of agricultural production, transport, processing and exports.

The Bega Valley Shire council has identified a need to renew the Cuttagee bridge with the objective of increasing agricultural productivity by providing an efficient freight movement through *Tathra-Bermagui Road (MR272)*. This will also increase road network resilience to natural disasters and provide safe and reliable road access for local businesses and the local community.

In this document, we report on the analysis we have undertaken to assess the economic impacts of the project. This assessment has been undertaken in line with State and Federal Government guidelines.

This report has been prepared in the following sections:

- **Project context:** This section summarises the proposed project and includes projects costs.
- **Project need:** This section provides an economic analysis of how the project strategically aligns with the needs of the Bega Valley LGA economy. An analysis of the impacts on the local economy as a result of the COVID-19 is also presented.
- **Economic impact assessment:** This section reports on the outputs from the economic impact model that is specifically tailored to the LGA economy, using local input-output tables from NIEIR. Outputs include employment and Value-added impacts for the construction and operational phase of the project.

2. Project context

2.1 Project description

Bega Valley Shire Council has identified a need to renew an existing bridge, the Cuttagee bridge (“The Bridge”), over Cuttagee inlet. The bridge is located seven kilometres south of Bermagui along the Tathra-Bermagui Road (MR272), a sealed Main Road providing an alternative route to the Princes highway between Tilba and Bega. The bridge is an essential link for Bega Valley residents and part of a regionally important alternative route when the Princes Highway is occasionally closed due to incidents such as flood, fire, landslip, storm damage or traffic accident.

Currently, the bridge is a single lane, 10-span timber bridge (see Figure 2.1). The bridge closely resembles the original 1935 form of construction, consisting of six timber spans and 4 steel spans supporting timber decking, kerbs and handrails throughout. The bridge is currently load limited to 22.5t due to generally poor condition and excessive deflection in girders. The existing bridge is in generally poor condition. Some of the main structural issues identified by the Council are:

- Excessive deflection in the timber spans (max.48mm) primarily due to undersized girders.
- Poor condition of the timber and steel substructure due to rot in timber piles and corrosion of unpainted, temporary steel piles.
- Termite damage on girders.
- Susceptible to failure in a severe storm event due to poor detailing of the deck holding-down arrangements.
- Cracking through and spalling at the top of concrete piers.
- Significant loss of section to steel girder bracing.

Figure 2.1 – Cuttagee Bridge – P1 deck from north

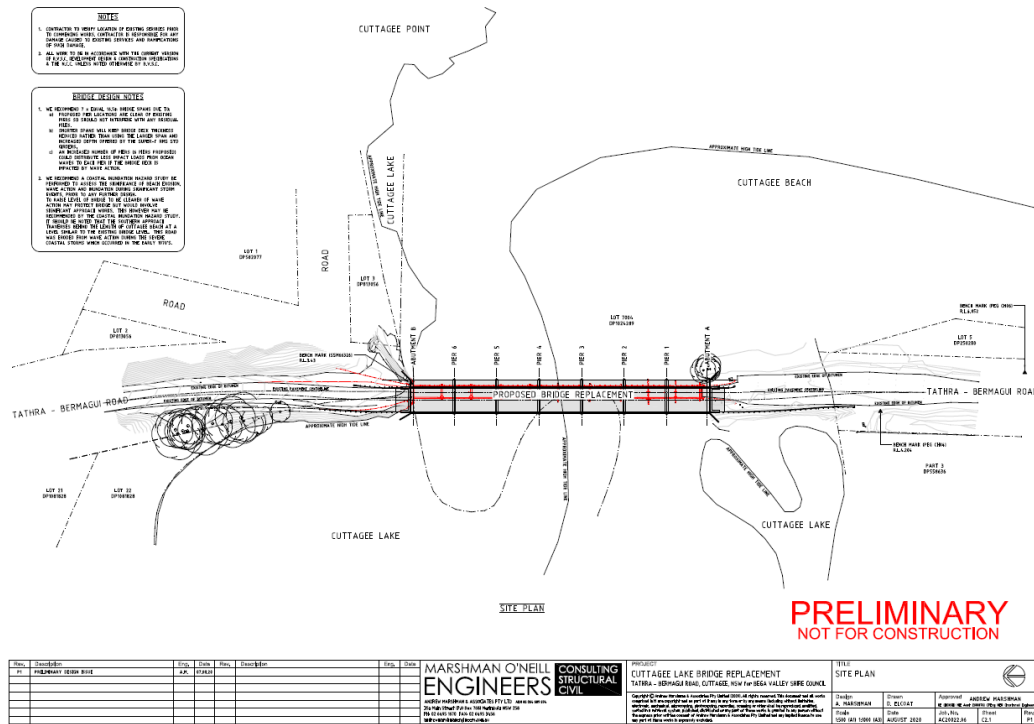


Source: Bega Valley Shire Council, 2020, Cuttagee Bridge Renewal Funding Document

The project proposes to replace the existing timber bridge with a concrete structure to provide two-lanes plus a shared pathway.¹ Survey, ground investigation and preliminary design have been undertaken (see Figure 2.2).

¹ While the bridge is listed in the Bega Valley Local Environment Plan 2013, Schedule 5 - Environmental Heritage, the bridge is not listed on the State Register for heritage.

Figure 2.2 – Cuttagee Bridge Preliminary Plan



Source: Marshman O'Neill Engineers via Bega Valley Shire Council, 2020, Cuttagee Bridge Renewal Funding Document

2.2 Project cost

The project construction costs included in this evaluation have been provided by the Council. Total construction costs were estimated to be \$15 million.

3. Project need

3.1 Economic need

This section outlines why the project is needed in terms of supporting the local economy.

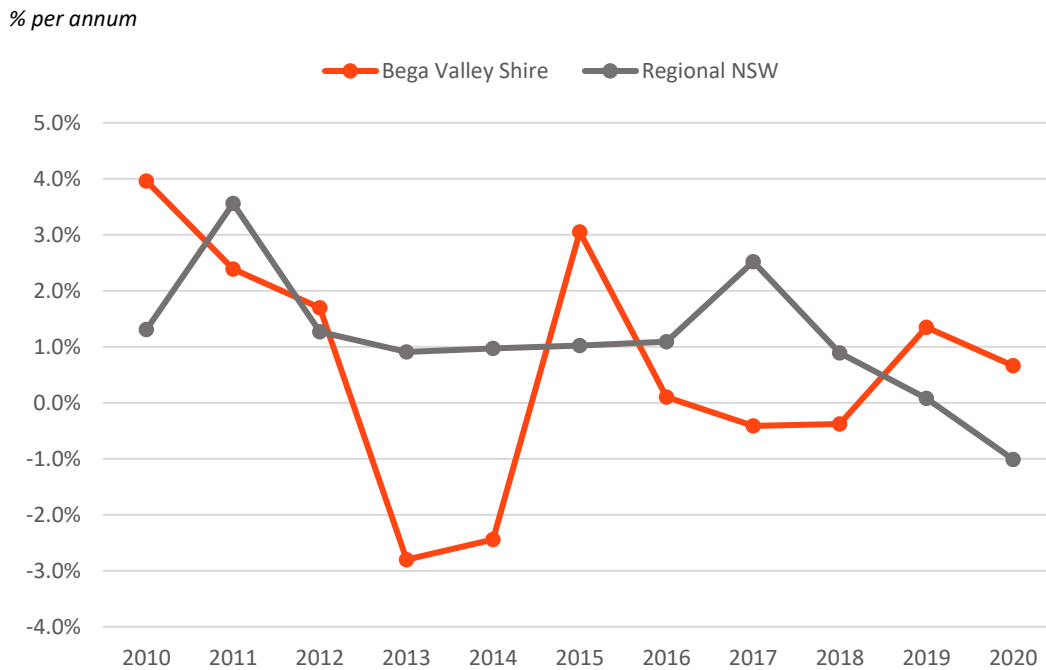
3.1.1 Economic overview

Bega Valley Shire is located at the south-eastern extremity of coastal New South Wales about 350 kilometres south of Sydney, 430 kilometres north-east of Melbourne, and 170 kilometres south-east of Canberra.

The local economy supported 14,013 jobs and generated \$1.57 Billion in Gross Regional Product in 2019/20. This represents the 34th largest LGA by economic activity in regional NSW. The area is home to almost 34,500 residents and is known for its coastal lifestyle, picturesque national parks and large dairy industry.

The growth in the local economy averaged 0.3% p.a. over the last decade, significantly lower than the average regional NSW growth of 1.1% p.a. over the same period. The spike in growth in 2015 was due to the construction of the South East Regional hospital project, while the spike in 2019 was due to the Princes Highway upgrade.

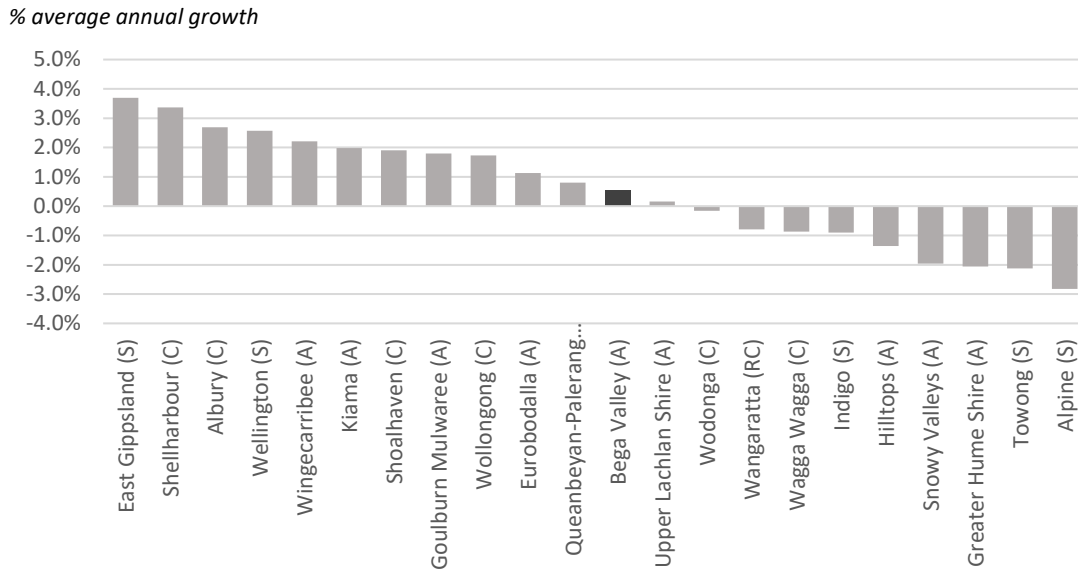
Figure 3.1 - Recent growth in GRP - Bega Valley Shire



Source: (NIEIR 2021)

Bega Valley Shire GRP growth over the period from 2017 to 2020 (0.5% per annum) was in line with the average annual GRP growth rate of surround Regional LGAs during the same period of 0.5% per annum.

Figure 3.2 - GRP growth - regional LGA benchmarks, 2017 to 2020

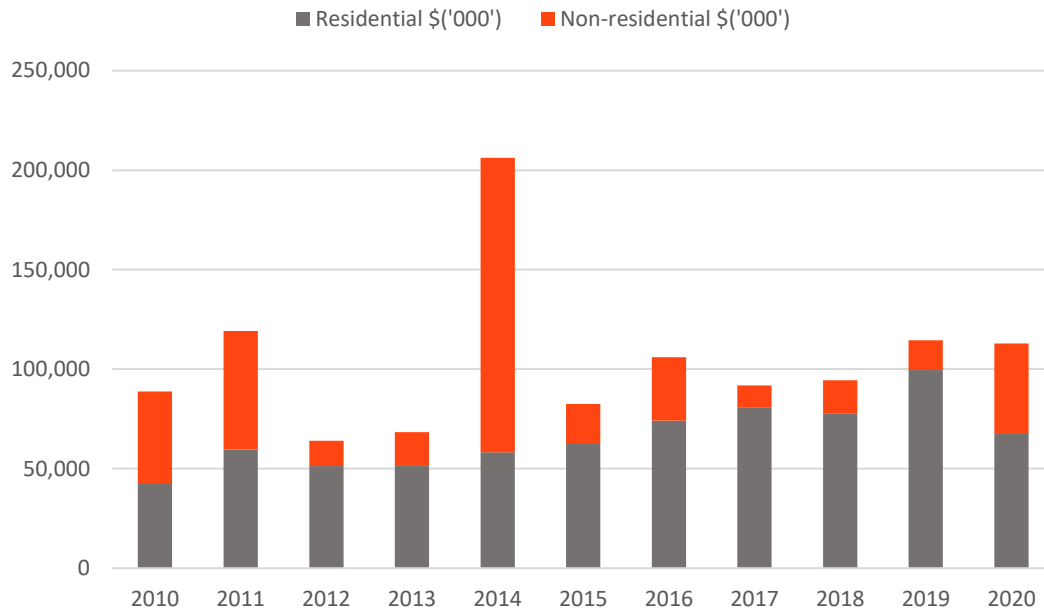


Source: (NIEIR 2021)

Commercial investment in the region has been relatively low as reflected by weak building approvals outside of residential developments. The average value of non-residential building approvals over the last three financial years (\$25M) has been below the decade long average (\$38M). In this recent period, the total value of residential building approvals (\$245M) has outweighed total non-residential building approvals (\$76M).

Figure 3.3 - Building approvals - Bega Valley Shire

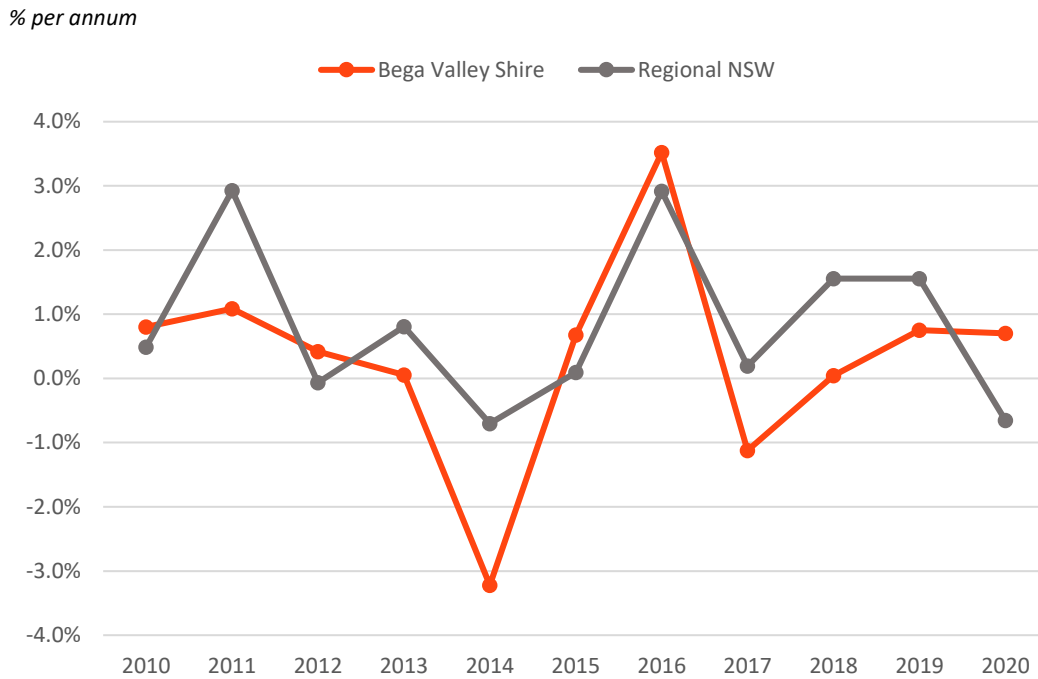
Annual value approved



Source: (ABS, Cat: 8731.0 - Building Approvals, Australia 2021)

Local jobs growth has been higher than GRP growth but is still weak. From 2011 to 2020, Bega Valley Shire local jobs grew at 0.3% per annum, below the Regional NSW average (0.9% per annum). In the last three years, Bega Valley Shire local jobs growth has been higher compared to the period from 2011 to 2020. From 2017 to 2020, local jobs have increased by 0.5% per annum, lower than the regional NSW average of 0.8% p.a. over the same period.

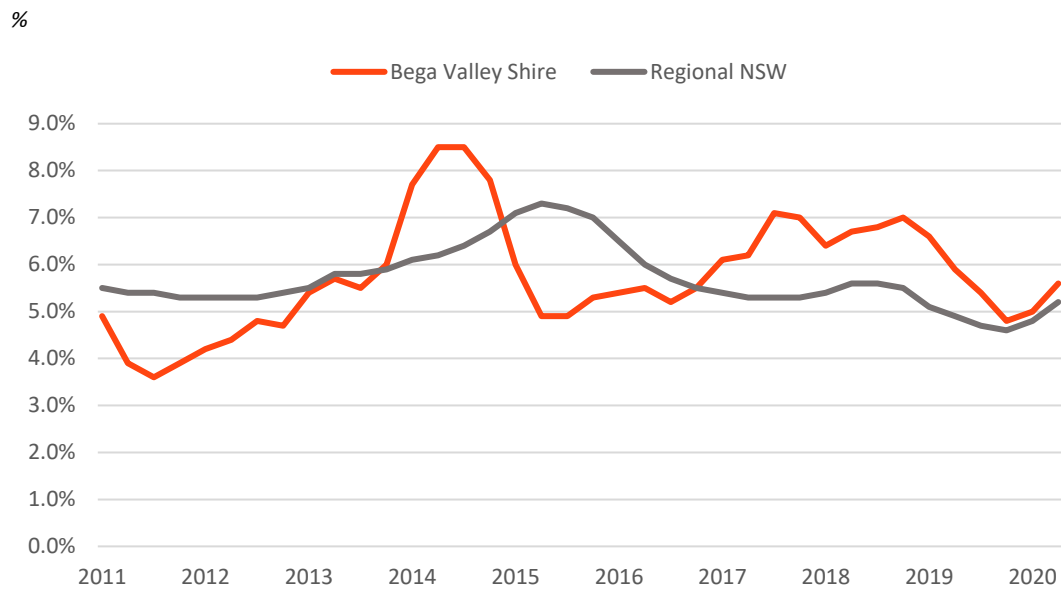
Figure 3.4 - Recent growth in Jobs - Bega Valley Shire



Source: (NIEIR 2021)

Low jobs growth, except for during the hospital construction phase and the Princes Highway upgrade phase, has led to poor employment outcomes. Over the last eight years to June-2020, the unemployment rate in Bega Valley Shire averaged at 6.1%, above the Regional NSW average (5.9%). Despite the improvement in the unemployment rate over the last five quarters before the COVID-19 outbreak, the unemployment rate remained slightly higher than the Regional NSW average.

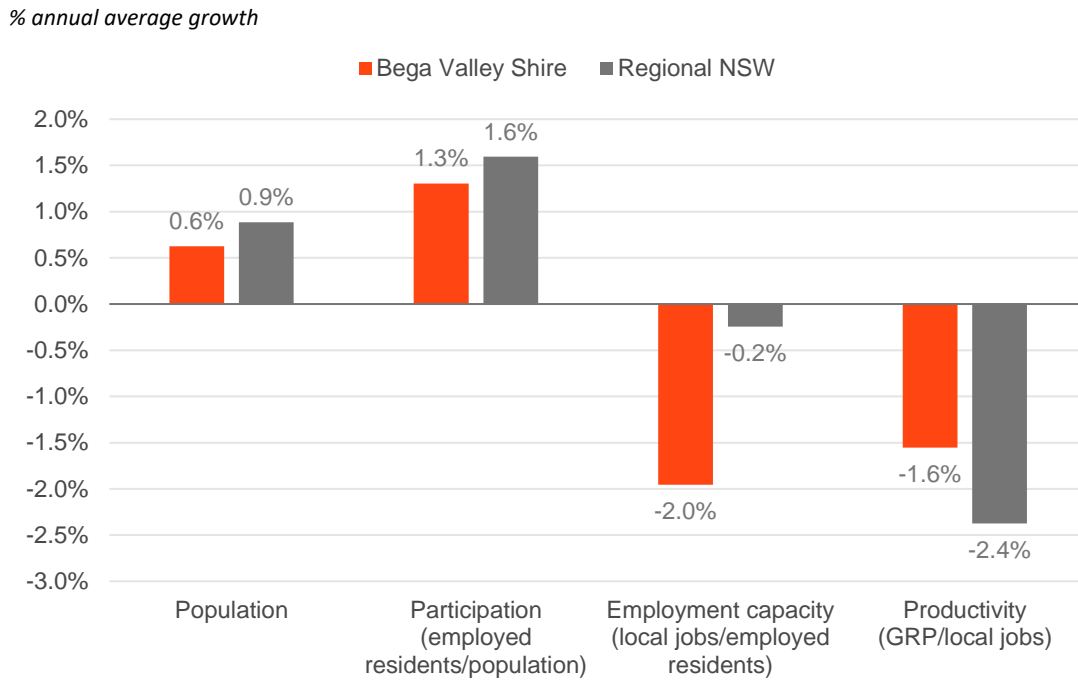
Figure 3.5 - Unemployment rate - Bega Valley Shire



Source: (ABS Labour force survey 2020) (Department of Employment SALM 2020)

The main contributor to growth in the three years to 2019 was an increase in participation rates, followed by population growth. However, these rates were still below the regional NSW average. Employment capacity, local jobs vs employed residents, detracted from growth. This means in spite of more residents getting employment, they were leaving the LGA for work as jobs growth was not keeping up. Productivity was also negative for the period.

Figure 3.6 - Components of growth - Bega Valley Shire, three years to 2019



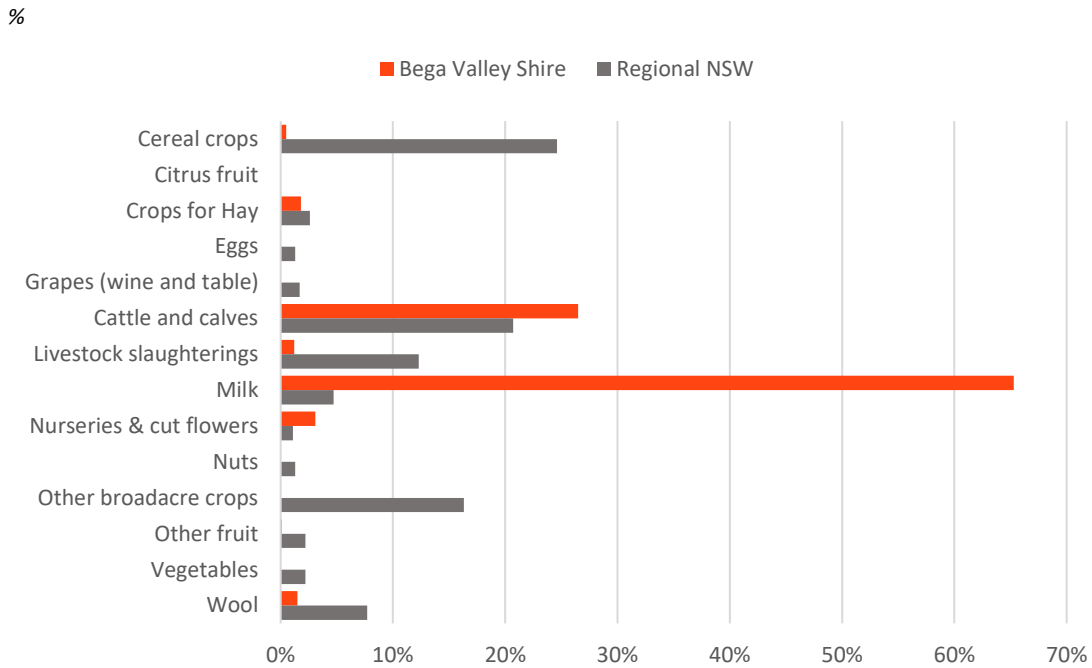
Key message

The recent economic performance of Bega Valley Shire has been relatively poor compared to the rest of regional NSW. Without investment in renewing the bridge that helps increase in construction jobs and support a resilient freight transport network to Bega Valley’s strategic Agricultural sectors, conditions are unlikely to improve.

3.1.2 Importance of the Tathra-Bermagui road to Bega Valley

Bega Valley has a strong agriculture industry, with a specialisation in dairy production and beef cattle farming. The two commodities, respectively, accounts for 65.3% and 26.5% of the LGA’s total agricultural output in value terms in 2015/16.

Figure 3.7 – Value of agricultural production 2015/16 - Bega Valley Shire



Source: ABS, Value of Agricultural Commodities Produced, Australia, 2015-16. Cat. No. 7503.0

In 2019/20, Bega Valley Shire LGA’s Agriculture, Forestry and Fishing industry generated \$117 million in Value-added and directly employed 1,506 workers, comprising 10.7% of the total LGA employment (compared to 6.4% in the regional NSW as a whole). Moreover, the Agricultural sector has a strong supply-chain impact on the Food Product Manufacturing industry. In 2019/20, Bega Valley Shire LGA’s Food Product Manufacturing industry generated \$96.3 million in Value-added and directly employed 832 workers, comprising 5.9% of the total LGA employment, higher than 2.2% in the regional NSW as a whole. Bega Valley Shire LGA’s comparative advantage in Agriculture, Forestry and Fishing and Food Product Manufacturing sector is clearly illustrated in the chart below, with an LQ of 1.69 and 2.68, respectively.

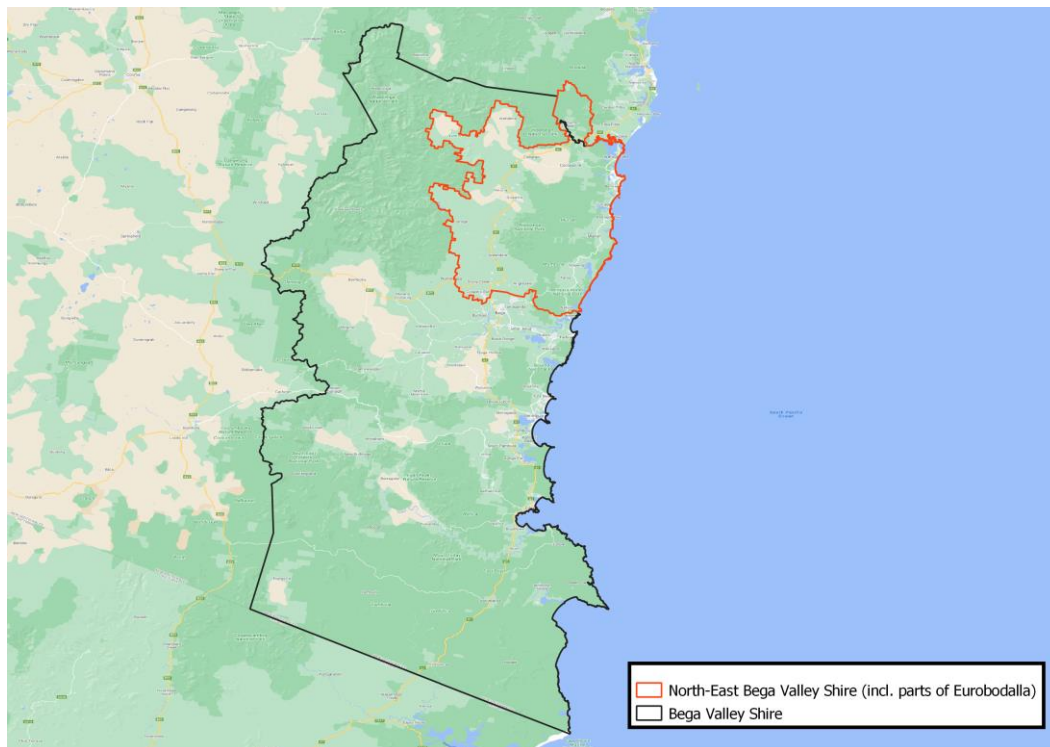
Figure 3.8 – Comparative Advantage 2019/20 - Bega Valley

Location Quotient

	Jobs	Value Added
Food Product Manufacturing	2.68	4.01
Agriculture, Forestry and Fishing	1.69	1.76
Accommodation and Food Services	1.42	1.92
Manufacturing*	1.24	1.63
Information Media and Telecommunications	1.19	1.26
Arts and Recreation Services	1.18	1.81
Retail Trade	1.09	1.36
Other Services	0.97	1.15
Rental, Hiring and Real Estate Services	0.94	1.11
Administrative and Support Services	0.92	1.07
Health Care and Social Assistance	0.91	1.13
Professional, Scientific and Technical Services	0.91	0.87
Construction	0.89	1.10
Electricity, Gas, Water and Waste Services	0.87	0.88
Wholesale Trade	0.86	0.84
Transport, Postal and Warehousing	0.84	0.94
Education and Training	0.81	0.98
Public Administration and Safety	0.77	0.80
Financial and Insurance Services	0.65	0.94

Source: NIEIR (2021) | * Includes Food Product Manufacturing

Renewal of the bridge is expected to have a direct impact on the productivity of Agriculture, Forestry and Fishing industry businesses in the North-East area of Bega Valley Shire LGA. The area is an important agricultural region, where the Agriculture, Forestry and Fishing industry in the area generated \$110 million in Output, \$37 million Value-added and directly employed 474 workers in 2019/20, comprising 31.5% of the LGA’s Agriculture, Forestry and Fishing industry.

Figure 3.9 – North-East Bega Valley

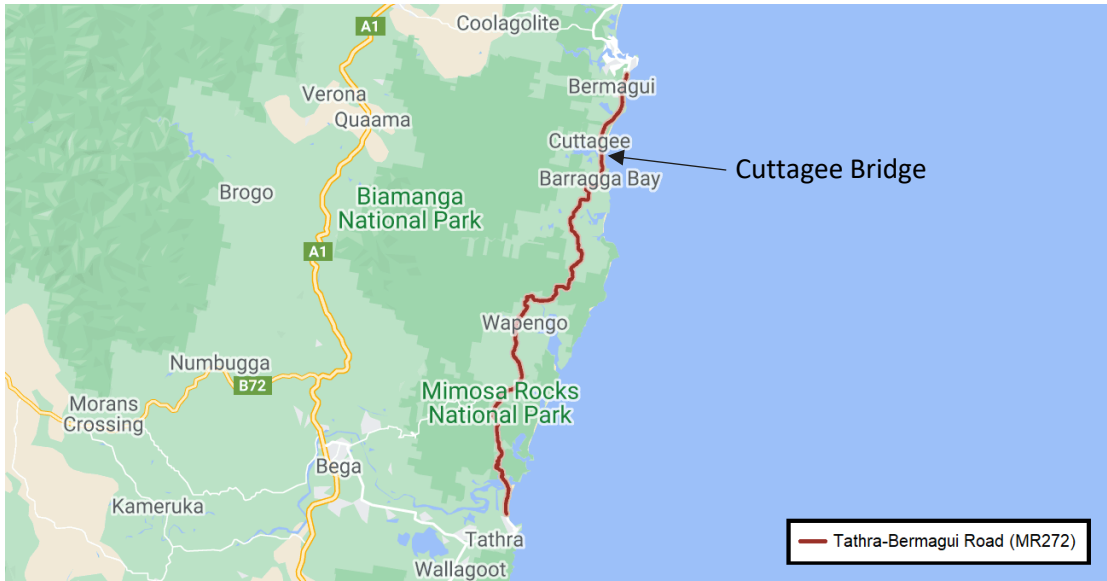
Source: ABS (2021)

The Agriculture, Forestry and Fishing industry in the area has a strong supply chain relationship with the Food Manufacturing industry, mostly located south of the area in Bega, Merimbula and Eden. The three towns comprise over 96% of the LGA's Food Product Manufacturing industry jobs and economic value.

Moreover, Bega is a regional centre in Bega Valley Shire, providing retail, hospitality, professional and health services to the surrounding regional areas. Bega also serves as an important local agriculture business hub. The agriculture support service businesses situated within Bega provide essential services to the dairy, beef and cattle farming businesses in the North-East area of Bega Valley.

The main road connecting the North-East area of Bega Valley to southern parts of the LGA is Tathra-Bermagui road (MR272). The road is a 41.6 km long main road that runs through the North-East coastal area of Bega Valley Shire LGA. The road provides an important transport link between Bermagui and towns further south to Tathra and serves as an arterial road network for the businesses around the road. Subsequently, the road enables a vital supply chain link between the Agriculture, Forestry and Fishing industry in the North-East area and the agricultural freight, logistics and processing sectors in Bega, Merimbula and Eden.

Figure 3.10 - Tathra-Bermagui Road (MR272)



Source: Google Map (2021)

The following towns, villages and localities are located on Tathra-Bermagui Road (MR272) main road:

Bermagui	Barragga Bay
Murrah	Wapengo
Tanja	Nelson
Mogareeka	Tathra

The road is also an essential link for Bega Valley residents and an important alternative route when the Princes Highway is occasionally closed due to incidents such as flood, fire, landslip, storm damage or traffic accident. Moreover, the closure of the road will have a significant impact on the agricultural businesses in the North-East of Bega Valley and its supply-chain industries connected through the road. This significantly reduces the competitiveness of agricultural output transport, processing and exports.

Key message

Agricultural sector is a crucial economic sector for Bega Valley. Moreover, Tathra-Bermagui Road (MR272) connects the agricultural businesses in the North-East area of Bega Valley with the supply-chain industries in the rest of Bega Valley. The proposed bridge renewal project provides the opportunity to increase the transport resilience to natural disasters and increase productivity in Bega Valley’s strategically important Agricultural sector.

3.1.3 The impact of COVID-19 on the economy

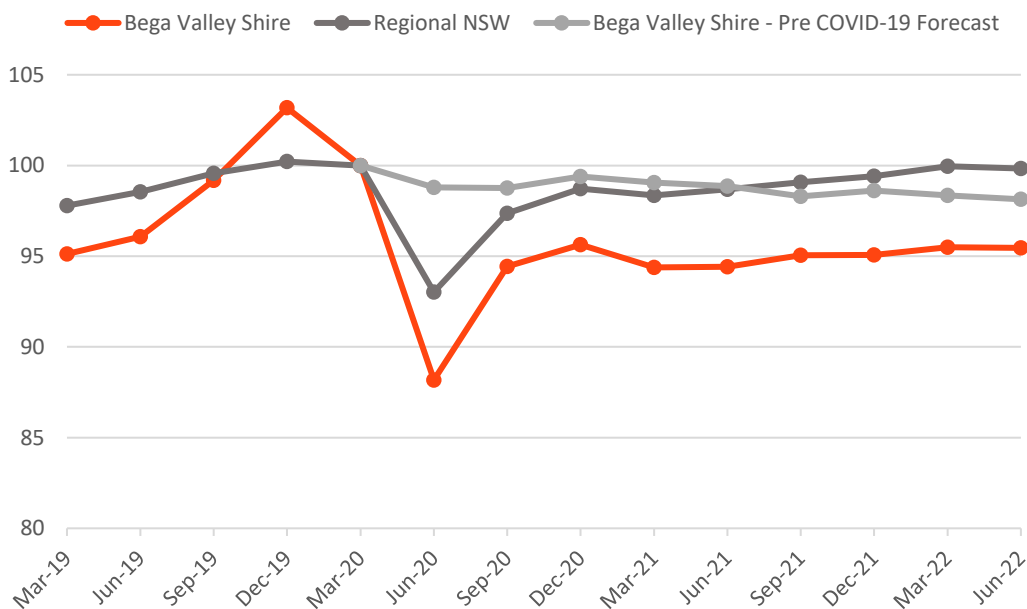
The outbreak of COVID-19 had a significant impact on the Bega Valley economy. Immediately following the outbreak, GRP is estimated to contract by 12% (index points) in June Quarter 2020 compared to March Quarter 2020. This contraction was significantly higher than the estimated regional NSW average of 7% contraction during the same period.

According to the economic forecast by the National Institute of Economic and Industry Research (NIEIR), the recovery in Bega Valley’s GRP is likely to be gradual, with GRP in June Quarter 2022 still 5% below the March 2020 Quarter level. The recovery is forecasted to take longer than the regional NSW, where the regional NSW GRP recover back to pre COVID-19 level by March Quarter 2022.

Overall, the cumulative impact of COVID-19 is estimated at \$157 million between 2019 and 2022, compared to the pre COVID-19 forecast. This represents a -4.5% impact on the economy over the three year period.

Figure 3.11 – Estimated impact of COVID-19 on GRP – Bega Valley Shire

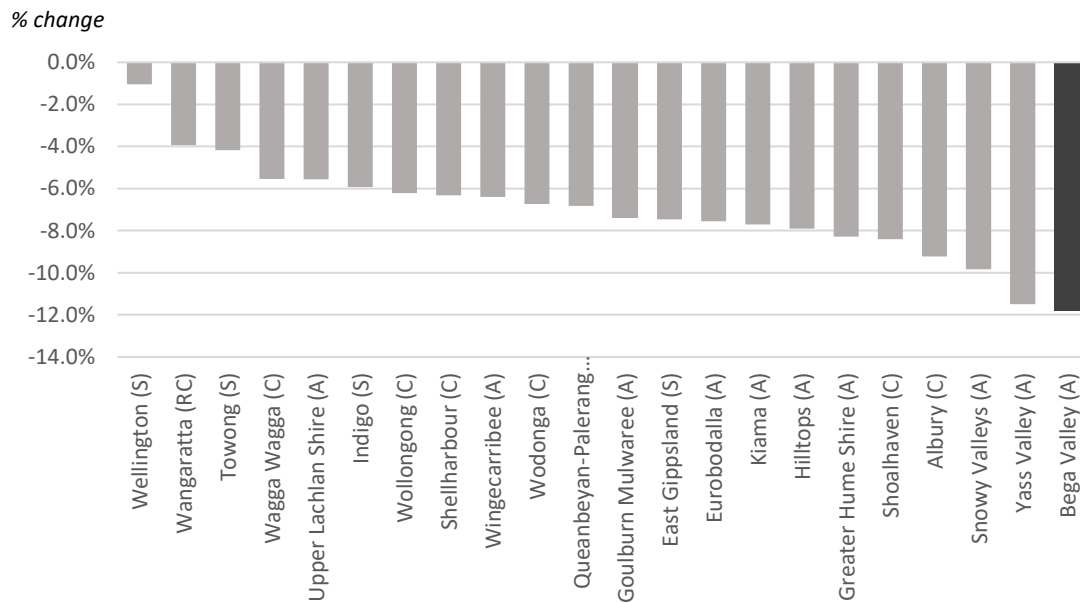
Forecast, Index, 100 = March Quarter 2020



Source: NIEIR (2020)

Compared to surrounding regional LGAs, Bega Valley is estimated to be the worst impacted in terms of the percentage change in GRP over the period from March Quarter 2020 to June Quarter 2020 (-11.8%). The average GRP change of surround Regional LGAs during the same period was -6.9%.

Figure 3.12 - GRP change - regional LGA benchmarks, March Quarter 2020 to June Quarter 2020



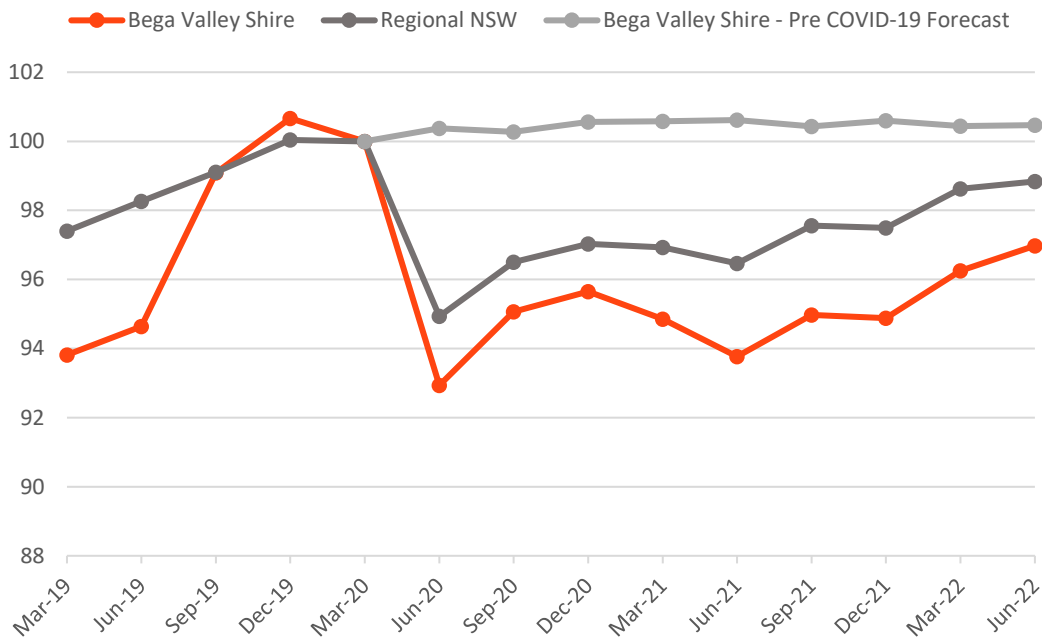
Source: NIEIR (2020)

Similar to the impact on GRP, the impact on local jobs is large and the recovery is likely to be slow. In June Quarter 2020, local jobs are estimated to be 7% (index points) lower than the previous Quarter. The estimated decrease in local jobs is higher than the 5% decrease in the regional NSW on average.

According to the NIEIR forecast, the local jobs in June Quarter 2022 is estimated to be 3% below the March 2020 Quarter level. In comparison, local jobs in the regional NSW is estimated to recover almost back to pre COVID-19 level by June Quarter 2022 (1% below the March Quarter 2020 level). The post COVID-19 local jobs in Bega Valley is estimated to be 520 jobs less, or 3.5% lower, than the pre COVID-19 forecast.

Figure 3.13 – Estimated impact of COVID-19 on Local Jobs– Bega Valley Shire

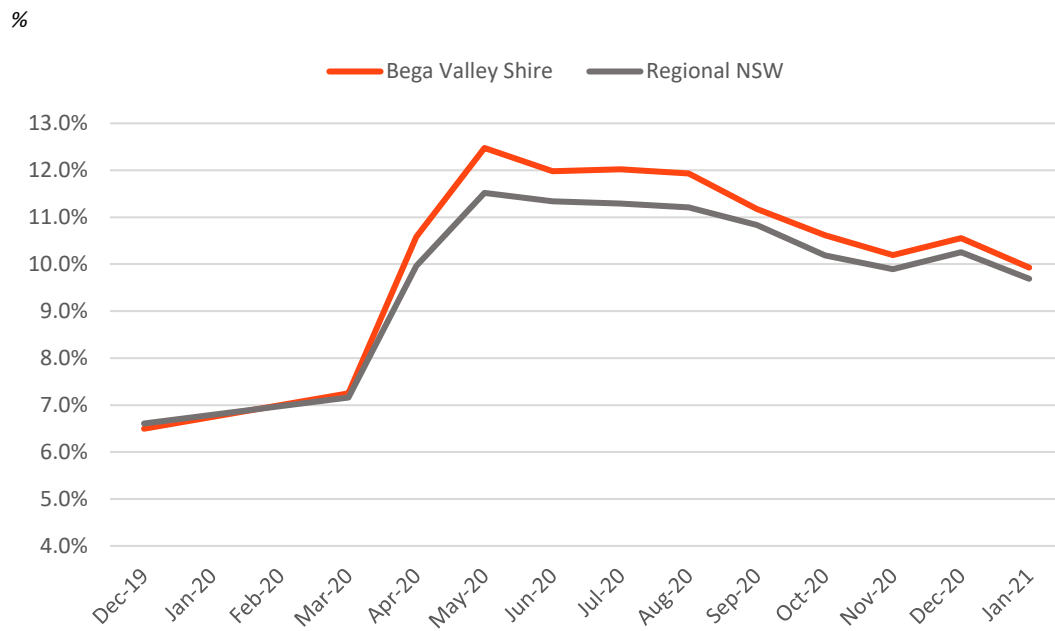
Forecast, Index, 100 = March Quarter 2020



Source: NIEIR (2020)

COVID-19 had a large impact on unemployment in Bega Valley. The residents receiving unemployment benefits (JobSeeker and Youth allowance) was 12% in June 2020, an increase of 4.8% points compared to March 2020 (7.2%). This increase was higher than that experienced by the regional NSW as a whole (see figure 3.14). By January 2021, 9.9% of the residents were on unemployment benefits, slightly higher than the regional NSW average of 9.7%.

Figure 3.14 – Residents on unemployment benefits - Bega Valley Shire



Source: Department of Social Services - JobSeeker and Youth Allowance recipients (2021)

Key message

COVID-19 has had a major impact on Bega Valley economy, greater than other regions in the regional NSW. Moreover, the impact is likely to last long, where GRP and Local jobs in June Quarter 2022 is estimated to remain lower than the March Quarter 2020 level. The recovery of Bega Valley’s economy post COVID-19 is likely to take a long time without the investment in renewing the bridge that helps increase construction jobs and provide a flow on benefits to the wider economy.

4. Economic impact assessment

4.1 Economic impact methodology

The economic impact of the project was assessed using a Regional Input-Output model. The construction and operational phases were modelled separately. The economic impacts are calculated using an input-output model which is derived from the local economy model developed by National Economics (NIEIR).

An input-output matrix describes how the different industries in an economy interrelate and how supply chains operate in the local area. The economic modelling reproduces the National Accounts data for local areas. Data sources in the model include:

- Census Journey to Work data
- ABS Labour Force Survey
- Centrelink employment estimates
- ABS building approvals – commercial floorspace estimates.
- Australian Taxation Office worker income data
- Microsimulation of household expenditure

The modelling produces a factor, which shows the flow-on effects of economic productivity in an industry sector, to other sectors and the total economy.

The impacts, both direct and indirect, reported in this assessment are:

- Gross regional product - Gross Regional Product (GRP) is a measure of size or net wealth generated by the local economy. The majority of the GRP comprises wages and profits generated.
- Employment – The number of employment is one of the most fundamental economic indicators of the size of the local economy. The employment includes both full-time and part-time jobs and the value varies across areas.

4.2 Assumptions

The project will generate both construction and ongoing employment and Value-added impacts for the Bega Valley Shire economy.

4.2.1 Construction phase

The estimated capital expenditure has been used to identify the construction phase impacts of the project. The project is anticipated to cost \$15 million. This is based on information provided by the Bega Valley Shire Council.

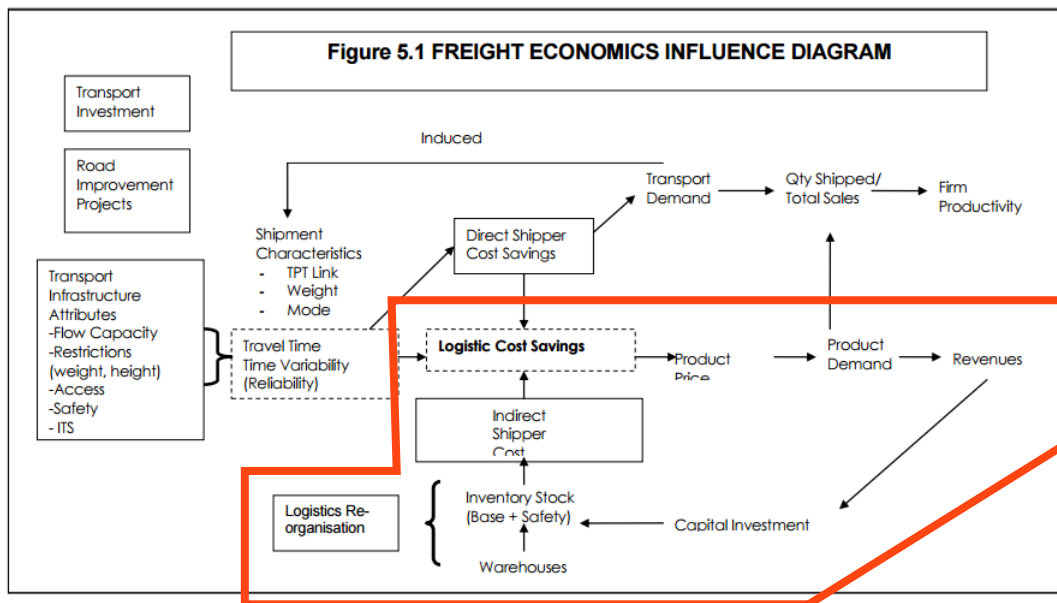
4.2.2 Operational phase

Research from AgriFutures² highlights the benefits to agricultural production as a result of rural road upgrades. These benefits are typically not included in traditional Economic Impact Assessments. Agricultural productivity benefits include:

- Avoided reductions in product value due to quality reduction or damage
- Avoided stress on animals
- Access to price premia by satisfying tight delivery schedules to markets or transport hubs
- Productivity and cost improvements due to the timely delivery of inputs

The diagram below illustrates the link between cost savings and productivity benefits.

Figure 4.1 – Freight economics influence diagram



Source: AgriFutures (2017)

² Research Activities on Rural Roads, AgriFutures (2017)

To estimate the productivity benefit arising from the renewal of the bridge, we have assumed 50%³ of the \$0.70million⁴ freight cost savings in the Agriculture, Forestry and Fishing industry are diverted to an increase in production. This results in a direct impact on the industry of \$0.35 million, around 0.1% of total Agriculture, Forestry and Fishing output in Bega Valley Shire LGA and is considered conservative.

4.3 Results

4.3.1 Construction phase

Using the NIEIR Impact Assessment Module to assess an economic impact gives an idea of the likely flow-on effects. Construction in the Bega Valley Shire LGA is an important industry, worth \$133.2 million Value-added, or 11.2% of the local economy in 2019/20 (in terms of Value-added). Construction tends to fluctuate significantly with the commencement or completion of new projects.

The investment of \$15 million of Heavy and Civil Engineering Construction activity into the LGA would add \$5.3 million in direct impact in Value-added and 40 FTE jobs associated directly with the construction.

In addition, another 27 FTE jobs (\$3.2 million in Value-added) would come from associated industries (suppliers and users), with approximately almost 17 FTE jobs in consumption impact (more money flowing through the economy from increased spending by additionally employed workers).

The total impact on the local economy would be 84 FTE jobs and \$10.2 million in Value-add from the construction phase of the project.

The impact model also includes assumptions around input-output relationships between regions and therefore there are additional impacts to the broader Australian economy as a result of supply chain relationships. These impacts would be an additional \$4.1m in Value-added and 27 extra FTE jobs outside the region.

³ Remaining 50% is assumed to be retained as a profit

⁴ Based on Cuttagee Bridge BCA, Bega Valley Shire council (2021)

Table 4.1 - Economic impacts of the construction phase of the projects

Construction Phase	Output (\$m)	Value-added (\$m)	Local jobs (FTEs)
Direct Impacts	15.0	5.3	40
Industrial impacts	8.1	3.2	27
Consumption impacts	4.0	1.7	17
Total local Economy Impacts	27.1	10.2	84
Outside Bega Valley Impacts	9.1	4.1	27
Total Australian Economy Impacts	36.1	14.3	111

Source: .id based on National Institute of Economic and Industry Research (NIEIR) economic impact model for Bega Valley Shire

LGA

Impacts for specific groups

Based on existing employment characteristics, a proportion of these will be undertaken by youth, culturally diverse and indigenous persons. The impacts from the construction phase are estimated to generate 8.7 FTE jobs for youth (16 to 24 years old) and 1.5 FTE jobs for the indigenous (Aboriginal and Torres-Strait Islander) population within Bega Valley Shire.

4.3.2 Operational phase

The direct productivity improvement of \$0.35 million annual output to the Agriculture, Forestry and Fishing industry of Bega Valley Shire LGA would add \$0.15 million in direct Value-added impacts and 1.5 FTE jobs associated directly with the project. In addition, another 0.4 FTE jobs (\$0.05 million in Value-added) would come from associated industries (suppliers and users), with around 0.5 FTE jobs (\$0.05 million in Value-added) in consumption impact (more money flowing through the economy from increased spending by additionally employed workers).

The total impact on the local economy would be 2.4 FTE jobs and \$0.25 million in Value-add per year from the operational phase of the project.

The impact model also includes assumptions around input-output relationships between regions and therefore there are additional impacts to the broader Australian economy as a result of supply chain relationships. These impacts would be an additional \$0.13 million in Value-added and 0.9 extra FTE jobs outside the region.

Table 4.2 - Economic impacts of the operational phase of the projects

Operational Phase	Output (\$m)	Value-added (\$m)	Local jobs (FTEs)
Direct Impacts	0.35	0.15	1.5
Industrial impacts	0.12	0.05	0.4
Consumption impacts	0.11	0.05	0.5
Total local Economy Impacts	0.57	0.25	2.4
Outside Bega Valley Impacts	0.27	0.13	0.9
Total Australian Economy Impacts	0.84	0.37	3.2

Source: .id based on National Institute of Economic and Industry Research (NIEIR) economic impact model for Bega Valley Shire

LGA

Impacts for specific groups

Based on existing employment characteristics, the increase in agricultural output has the potential to provide extra 0.19 FTE jobs for youth (16 to 24 years old) and 0.05 FTE jobs for the Aboriginal and Torres-Strait Islander population within the Bega Valley Shire LGA.