

## 10.4 Southern Highlands Innovation Park - Infrastructure Planning and Delivery

**Report Author:** Manager Strategic Land Use Planning  
**Authoriser:** Interim Deputy General Manager

### PURPOSE

The purpose of this report is to provide Council and the broader community with a detailed overview of the Southern Highlands Innovation Park (formerly known as the Moss Vale Enterprise Corridor), the Moss Vale Bypass and the Berrima Road Deviation project; and to outline a process for improved strategic infrastructure planning and delivery for the Shire.

### RECOMMENDATION

- 1. THAT** Council note the update report on the Southern Highlands Innovation Park, the Moss Vale Bypass and the Berrima Road Deviation project.
- 2. THAT** Council develop a priority infrastructure program that aligns with the strategic priorities of Council and the community.
- 3. THAT** Council progress the detailed design of priority infrastructure works inclusive of the Moss Vale Bypass to ensure key projects are 'investment ready'.
- 4. THAT** Council proactively work with State and Federal Governments to plan, fund and deliver key enabling infrastructure and essential services to meet the needs of our growing communities.
- 5. THAT** Council continues to develop and implement best practice Project Management Frameworks to ensure that lessons learnt are captured and identified opportunities for improvement are implemented continually.

### REPORT

#### **BACKGROUND**

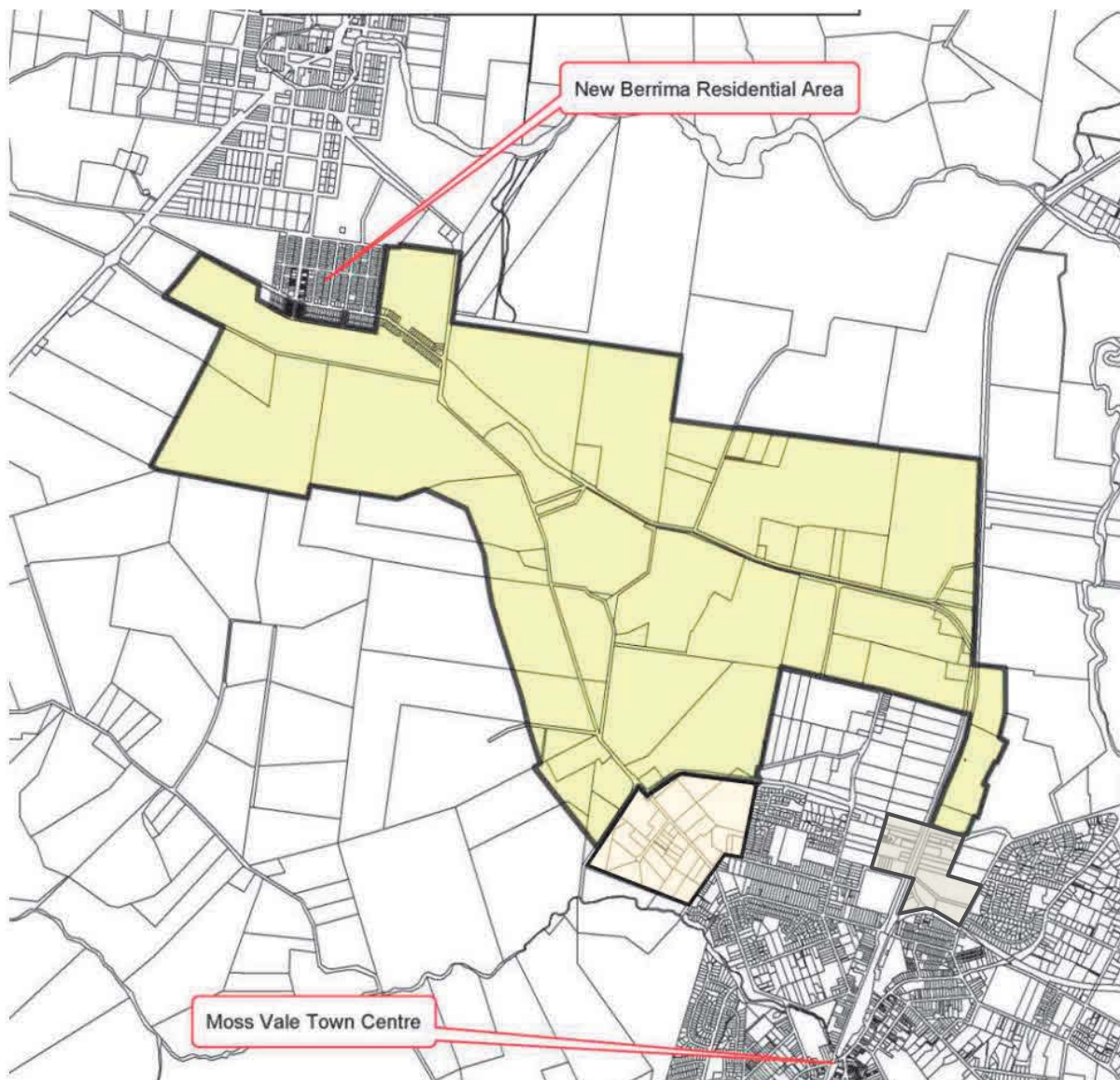
At the Council Meeting of 11 August, 2021 it was resolved that:

- 1. A further detailed report be presented to Council to provide the community with surety in relation to these matters*
- 2. This report to include history and mapping proposed routes to highlight connectivity, time lines and detailed impact on Argyle Street, especially for heavy vehicles using the Illawarra Highway*
- 3. Transport for NSW be contacted to ascertain the scope of its Moss Vale Movement and Place study to determine if it includes a strategic assessment of the Illawarra Highway and if Council staff can assist them in this work.*

This report responds to item 1 above by providing a detailed report in relation to the Southern Highlands Innovation Park, the Moss Vale Bypass and the Berrima Road

Deviation projects. Further, this report includes an overview of the history and forward plans for the projects in response to item 2 above.

The *Southern Highlands Innovation Park* (SHIP) is a regionally significant employment precinct comprising some 1,023 hectares of industrial zoned land between Moss Vale and New Berrima (see **Figure 1**). The precinct is strategically located within close proximity to Sydney, Canberra, Wollongong and the new Western Sydney Airport and Aerotropolis, and provides a unique opportunity to attract sustainable and innovative industries and become a major employer and economic driver for the Shire and the broader region.



**Figure 1 – Southern Highlands Innovation Park**

The SHIP (formerly known as the *Moss Vale Enterprise Corridor*) was initially identified by Council as a major employment precinct in 2008 with the adoption of the *Moss Vale Enterprise Corridor Development Control Plan* (DCP) in August of that year. At that time, the precinct was intended to be developed as a sustainable employment area for the region emphasising light and general industrial development, accommodating business park commercial development and larger scale freight storage and distribution operations associated with existing rail infrastructure and a possible intermodal freight terminal.



The precinct was formally rezoned to a mix of industrial zones as part of the adoption of *Wingecarribee Local Environmental Plan 2010* (WLEP), and despite being identified as a local and regionally significant employment zone since 2008, the precinct has remained largely undeveloped.

In 2013, Council adopted the *Section 94 Developer Contributions Plan for The Moss Vale Enterprise Corridor 2013 to 2050* which identified the major transport infrastructure needs to support the development of the precinct. This includes the Moss Vale Bypass Stages 1, 2 and 3, and the Berrima Road Deviation (known in the Section 94 Plan as the Berrima Road Blue Circle Railway Overpass) as well as other key transport infrastructure needs.

In 2020, Council adopted both the Wingecarribee Local Strategic Planning Statement and Southern Highlands Destination Strategy, which recognise and re-emphasises the importance of the precinct as a regionally significant employment precinct. The adopted strategies commit Council to working with State and Federal Government to secure funding for key enabling infrastructure to unlock the development potential of the SHIP.

Work has recently commenced on a Master Plan and Infrastructure Servicing Strategy for the SHIP, which will provide a vision and strategic direction for the precinct and certainty to both industry and Government in the provision of key enabling infrastructure to unlock the development potential of the regionally significant employment precinct.

This report provides a detailed overview of the SHIP, the Moss Vale Bypass and Berrima Road Deviation project, and outlines a process for improved strategic infrastructure planning and delivery for Moss Vale and the Shire as a whole.

## **REPORT**

### **Southern Highlands Innovation Park Master Plan**

As outlined above, despite being identified as a major employment precinct since 2008, the SHIP has remained largely undeveloped, with the exception of a number of key industries within the precinct.

Council has recently commenced work on a Master Plan and Infrastructure Servicing Strategy for the SHIP, which will provide a vision and strategic direction for the Precinct and certainty to both industry and Government in the provision of key enabling infrastructure to unlock the development potential of the SHIP.

The Master Plan will be completed in Stages, with Stage 1 being a 'reframe' of the vision and strategic direction for the Precinct. The SHIP has the potential to leverage off new and emerging employment centres (such as the new Western Sydney International Airport and the Aerotropolis) and off new and emerging transport corridors (such as the M9 Outer Sydney Orbital and a refocus on rail freight logistics) to provide a complementary employment base of regional significance.

The first stage of the master planning process will include a high level land use and competitor analysis and feasibility model, to ensure that the Master Plan capitalises on the Shire's competitive and comparative advantages to recognise the potential of the precinct.

The following stage(s) will include a detailed Master Plan, Servicing Strategy and viability analysis, as well as detailed funding, governance and delivery strategies to provide certainty to both industry and Government in the delivery of key enabling infrastructure to unlock this regionally significant employment precinct.

The Master Plan and Servicing Strategy will be developed in consultation with industry, Government and community stakeholders throughout all stages of the process.

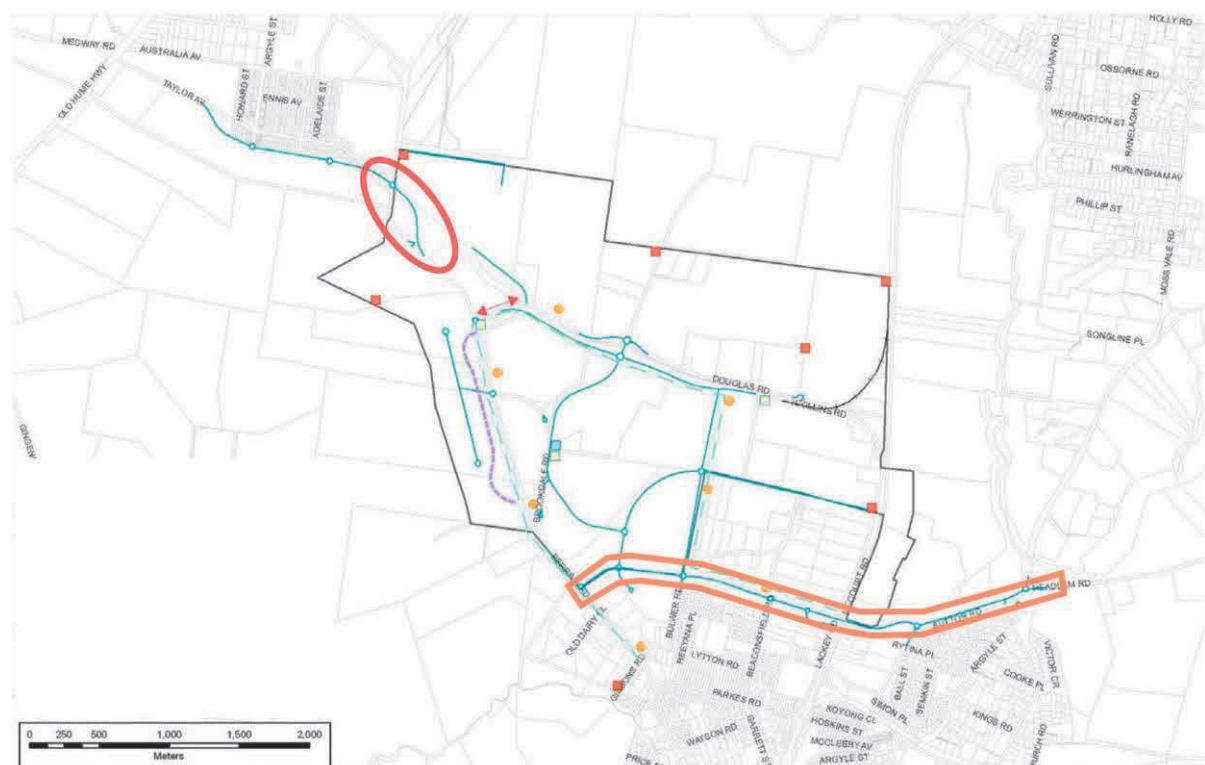
### **Southern Highlands Innovation Park Transport Infrastructure Plan**

In 2013, Council adopted the Moss Vale Enterprise Corridor Section 94 Contributions Plan which includes an overall transport infrastructure plan for the precinct. The Plan identifies the transport infrastructure upgrades that are required to support development within the precinct including significant road works, land acquisition, new bridges and rail crossings and the proposed Moss Vale Bypass as shown in **Figure 2** below.

The Transport Infrastructure Plan aims to provide efficient access to and from the precinct for heavy vehicles, to support new development while reducing the impacts on existing communities and transport networks. The Moss Vale Bypass stages 1, 2 and 3 (shown in orange in **Figure 2**) and the Berrima Road Deviation (shown in red) are critical enabling infrastructure projects to unlock the development potential of the precinct and to reduce the impacts of new development on the surrounding transport network.

The Berrima Road Deviation project removes the level crossing of the private rail siding on Berrima Road, which currently acts as a significant barrier to traffic flow between the SHIP and the Hume Highway. In the longer term a proposed New Berrima Bypass will link with the Berrima Road Deviation to significantly improve access to and from the Highway.

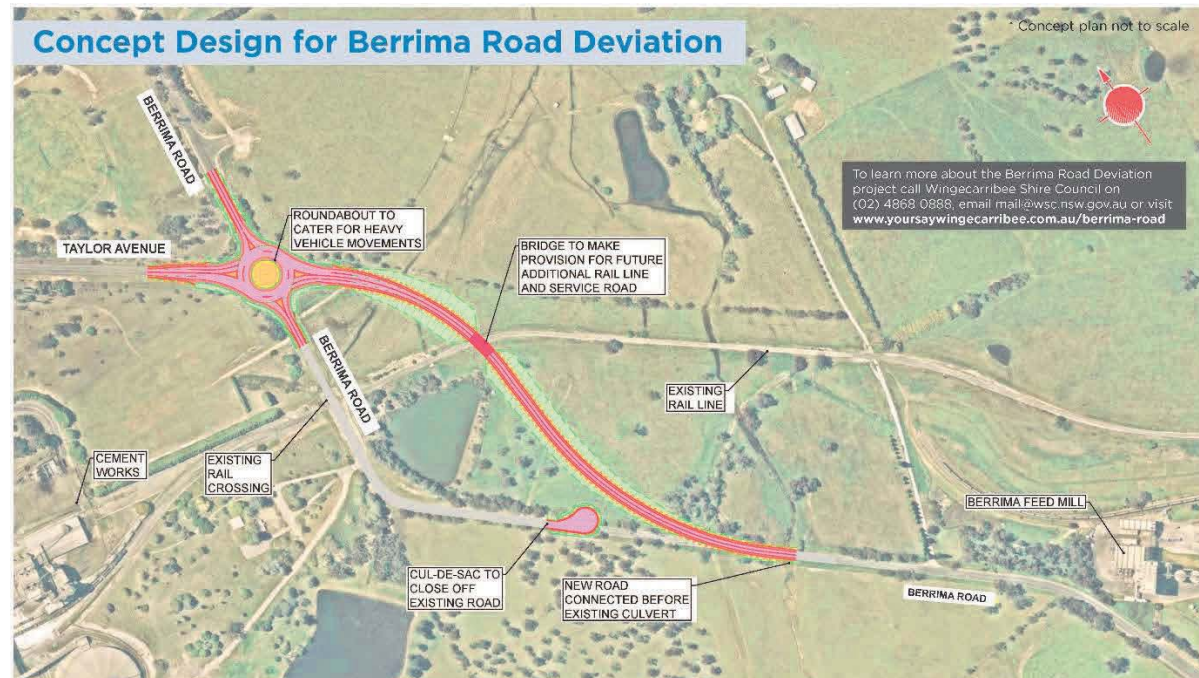
The Moss Vale Bypass, planned to be delivered in three (3) stages, will provide an alternate route (or Bypass) to Argyle Street in the Moss Vale town centre and will provide heavy vehicle access to and from the precinct for vehicles heading east along the Illawarra Highway towards Robertson and north along Moss Vale Road towards Bowral.



**Figure 2 – Transport Plan (Berrima Road Deviation shown red, Moss Vale Bypass shown orange)**

### Berrima Road Deviation

The Berrima Road Deviation project (alternatively known as the Berrima Rail Overpass) provides a new road link at New Berrima, a grade separated rail crossing and associated earthworks and embankments as shown in **Figure 3** below.



**Figure 3 – Berrima Road Deviation Concept Design**

The project will remove the level crossing of the private rail siding on Berrima Road, which currently acts as a significant barrier to traffic flow between the SHIP and the Hume Highway. The existing intersection at Berrima Road and Taylor Avenue will be upgraded to improve the efficiency of the intersection, and in the longer term, a proposed New Berrima Bypass will link with the Berrima Road Deviation to significantly improve access to and from the Highway.

The Berrima Road Deviation project was awarded grant funding under the National Stronger Regions Fund in 2014, however, after a number of significant setbacks, Council was unable to deliver the project and the grant funding was ultimately returned. A detailed report on the project shortfalls was presented to Council in 2019 with the details outlined below.

### Project History

In November 2014, Council submitted a grant application under the National Stronger Regions Fund to the Federal Department of Infrastructure and Regional Development. The grant application was based on a total estimated project cost of \$9.205M in 2014 with Council contributing 50% of the estimated project cost, being \$4.603M.

The grant application was ultimately successful, and Council entered into a Funding Agreement in May 2016. Under the funding agreement Council was required to commence construction within 12 months of signing the agreement.

The initial project estimate used for the grant application was based on a cost estimate developed by Quantity Surveyors Altus Page Kirkland in 2010 of approximately \$7.87M. The 2010 cost estimate was subsequently indexed by approximately 4.00% per annum to provide the \$9.2M figure in 2014 dollars, which was used in the National Stronger Regions Fund grant application.

It is important to note that the 2010 cost estimates, that were ultimately used in the grant application, were based on concept level designs only, and were indexed through to 2014 rather than updating the estimate to reflect current costs.

## **Project Design**

Following the successful grant application, Council engaged Opus International to provide detailed design services for the project in August 2016.

The detailed design was intended to be completed by the end of 2016, however, significant delays were encountered with the delivery of the project design. Council were provided with a variety of reasons for the delays, but ultimately it became apparent that the delays were due to staffing instability resulting from a takeover of Opus International by WSP.

By early 2018, WSP had completed the takeover of Opus International, however by that time the entire project design team had left the organisation. WSP staff reviewed the Opus International design and identified a number of significant deficiencies in the proposed design. WSP then undertook a full and comprehensive redesign of the project to ensure compliance with the relevant standards. This work was undertaken at no additional cost to Council but resulted in further delays in the provision of the full detailed design for the project.

While the project design was undertaken by an external consultant, Council has an obligation to appropriately manage contractors to ensure they deliver projects in accordance with an agreed scope of works and timeframe. The errors made in managing the design of the Berrima Road Deviation have served as a lesson for future projects and Council has made significant improvements to its project management framework to ensure that projects, both design and construction, are better managed in the future.

## **Bulk Earthworks**

Following significant delays in the detailed design process, Council instructed the WSP design team to develop a bulk earthworks design package to allow Council to commence earthworks on the project within the timeframes outlined in the grant Funding Agreement.

A bulk earthworks contract was competitively tendered and awarded to Stefanutti Constructions Pty Ltd with works commencing in October 2017.

The bulk earthworks plan included a northern and southern embankment (either side of the rail crossing), that were to be developed over private land under a licence agreement and transferred to Council as part of a land swap following the completion of the project.

The northern road embankment area is significantly impacted by high voltage power lines, and electrical services relocation works are required to be carried out before construction can commence on this section of the road embankment. Therefore, work initially commenced on the southern embankment to avoid the existing electrical services across the northern part of the site.

Construction of the southern embankment has been completed and the contractor disestablished the site until work is able to commence on the northern embankment.

As part of the bulk earthworks project, Council has utilised stockpiled material that was stored at sites on Berrima Road and in Braemar. The project has allowed Council to reuse approximately 65,000m<sup>3</sup> of material which provided a significant cost saving on the project.

Similarly, Council intends to utilise an estimated 3,000m<sup>3</sup> of spoil material from the Kirkham Road South project as part of the northern embankment construction, which will provide further cost savings on the project.

## **Electrical Relocations**

The initial concept designs for the Berrima Road Deviation project, on which the grant application was based, did not consider Endeavor Energy's requirements associated with the relocation of the high voltage electrical services, which provide a critical link to the adjoining Cement Works.

As part of the detailed design process, Council worked with an electrical designer to develop plans for the relocation of the high voltage power lines on the northern portion of the site.

The electrical design process, including negotiations with Endeavor Energy, has been complicated and protracted, leading to significant delays and a substantial increase in the cost estimate for the electrical services relocation work from \$160K in 2010 to some \$1.259M in 2019.

The extensive delays in the detailed design process, as well as obtaining approvals for the electrical relocation, ultimately resulted in Council not being able to meet the project timeframes agreed to under the Funding Agreement. The delays have also significantly affected the project costs with escalation costs for civil infrastructure works estimated at 6.5% to 8.0% per annum.

## **Project Budget**

The successful grant application under the National Stronger Regions Fund was based on a total estimated project cost of \$9.205M in 2014 with 50% of the project cost to be funded by Council. As outlined above, the grant application was based on a 2010 cost estimate, with costs escalated to 2014 values.

In March 2016, Council further engaged engineering design company Parsons Brinkerhoff to prepare a cost estimate for a concept design of the project (excluding the electrical relocation) which was calculated to be \$7.75M with a target accuracy of +/- 25%.

Throughout the detailed design work undertaken by Opus International, Council was not made aware of any substantial concerns regarding the available budget for the project of \$9.2M. However, in August 2018, Council received a draft cost estimate from WSP based on the completed project tender design which outlined potential and significant increases in the project cost estimate.

The designers were requested to undertake a review of the estimate based on the level of funding available (\$9.2M) and to re-consider the contingency amount of 22% which was considered high for a completed design. The consultants were also requested to investigate options to further reduce the project estimate by changing the roundabout at Taylor Avenue to a T-intersection to reduce the scale of pavement works for the project.

In December of 2018, Council received revised cost estimates from WSP which highlighted significant increases to the project cost estimate. The revised estimates, including property costs, project management, contingencies and the already expended \$2.18M were as follows:

- Roundabout option - \$15.15M
- T-intersection option - \$14.37M

The revised project estimates resulted in a funding shortfall of \$5.95M for the roundabout option, and \$5.17M for the T-intersection option.

Two significant factors contributed to the project cost increases, including the additional requirements for the relocation of the high voltage electricity services across the site and the result of cost escalation over time.

The significant funding shortfall and the failure to meet the timeframes outlined in Funding Agreement ultimately resulted in Council not proceeding with the project and returning the grant funding.

### **Project Development Framework Shortcomings**

There appear to be a number of factors that led to Council not proceeding with the Berrima Road Deviation project and returning the grant funding, however, the key issue centres around Council committing to grant funding and deadlines prior to completing the detailed design of the project, and identifying and addressing risks to inform the project scope and cost estimate. This ultimately resulted in significant time and cost blow outs. These factors are set out below:

- Differences between the concept design and detailed design
- Significant time taken to obtain service authority approvals
- Additional time resulted in price rises for key project aspects
- Additional property acquisitions due to detailed design
- Additional service authority costs based on detailed design
- The grant conditions were based on a fixed cost and time for construction

To address the shortcomings of the Berrima Road Deviation Project, Council has made significant changes to its project delivery model, improving its project management framework, and progressing the design of priority infrastructure projects throughout the Shire.

Council is committed to improving its infrastructure planning and delivery processes, and the current Project Delivery team are already applying the lessons learned from this project to the Moss Vale Bypass and the future progression of the Berrima Road Deviation, which will lead to significantly improved infrastructure outcomes for the community.

### **Moss Vale Bypass**

The Moss Vale Bypass is proposed to be advanced in three (3) stages, and will provide an alternate route (or Bypass) to Argyle Street in the Moss Vale town centre as shown in **Figure 4**.

Stage 1 will be constructed between Suttor Road and Beaconsfield Road and includes a new bridge crossing of the main southern railway and connection to Lackey Road.

Stage 2 will bypass Suttor Road connecting the over-bridge to Moss Vale Road, with Suttor Road reverting back to a local access road.

Stage 3 of the bypass will connect Stage 1 to Berrima Road as shown in **Figure 4**.

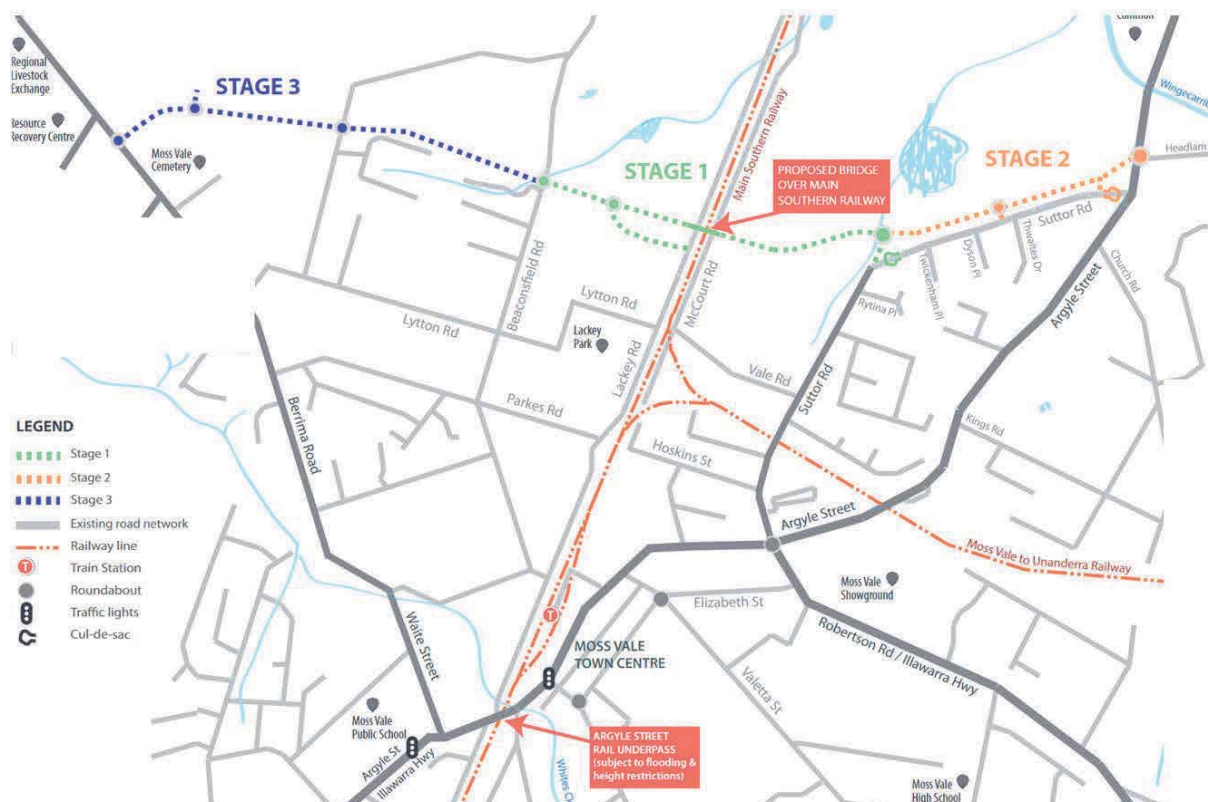


Figure 4 – Moss Vale Bypass

The existing transport network in Moss Vale is significantly congested and the Moss Vale Bypass is considered a critical piece of enabling infrastructure to unlock the development potential of the SHIP and free up congestion on Argyle Street.

The project provides significant benefits to the local transport network including, but not limited to:

- Supporting heavy vehicle movements between Moss Vale Road, the Illawarra Highway (via Suttor Road) and the Hume Highway
- Distributing traffic across the network, particularly away from the congested sections of Argyle Street and freeing up capacity on Argyle Street
- Providing a crossing of the main southern railway that is not height restricted or subject to flooding
- Providing a shared path along the route of the Moss Vale Bypass which will connect Berrima Road to the Bong Bong Cycle track and the interconnecting streets

Council, with the support of both State Members, Wendy Tuckerman MP and Nathaniel Smith MP, have secured \$2.4m from the NSW Government to develop the design and business case for the Moss Vale Bypass.

This design process will ensure that the scope of Stage 1 is fully understood, risks are mitigated and that informed cost estimates are prepared. Council will then be in a strong position to seek funding opportunities for this project, confident that the project is deliverable and “investment ready”.

While the Moss Vale Bypass is a critical piece of infrastructure for the Moss Vale transport network, it is not expected to solve all the traffic problems in Moss Vale and surrounds.



Council will need to continue to partner with Transport for NSW to plan and deliver solutions for the Moss Vale town centre.

As part of the Moss Vale Bypass Design – Stage 1, Council will be reviewing the suitability of interconnecting roads for the expected traffic volumes. This will inform Council planning to ensure that, where appropriate, road upgrades or load restrictions can be enacted during the project development.

It should also be noted that Council is working closely with Transport for NSW to develop the Moss Vale Movement and Place study which will consider all modes of transport in and around the Moss Vale town centre. In this regard, Council is actively pursuing the opportunity to explore a potential southern bypass of Moss Vale as a long-term infrastructure project.

### **Strategic Infrastructure Planning and Delivery**

The Berrima Road Deviation project is only one example of the shortcomings in Council's strategic and infrastructure planning processes over an extended period of time.

A failure to take a strategic approach to plan for population growth and essential infrastructure has resulted in significant limitations in our ageing infrastructure networks, which will continue to impact on new development and our existing communities.

All three (3) of our major Sewerage Treatment Plants are operating at or above capacity, our major employment precinct is severely limited by infrastructure availability, trunk stormwater drainage is insufficient in our towns and villages, and a number of Council infrastructure projects, such as the Station Street upgrade, have significantly exceeded the project cost estimates.

There is a clear need to refocus the organisation to develop and deliver clearer strategic priorities for the Shire, and to improve our strategic infrastructure planning and delivery processes.

The recently adopted Wingecarribee Local Strategic Planning Statement and Local Housing Strategy provide an important framework for the future of the Shire, and will ensure that Council, Government and service providers can make informed decisions about the infrastructure and services needed to meet the needs of our growing communities.

The proposed restructure of Council and the establishment of a Strategic Outcomes Department that reports directly to the General Manager will allow Council to refocus on the strategic priorities of the organisation and the community.

It is recommended that Council also develop a priority infrastructure program that aligns with the strategic priorities, and where possible, progress the detailed design of priority infrastructure works to ensure key projects are 'investment ready'.

Further, it is recommended that Council proactively work with State and Federal Governments to plan, fund and deliver key enabling infrastructure and essential services to meet the needs of our growing communities.

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## **COMMUNICATION AND CONSULTATION**

### **Community Engagement**

The development of strategic priorities and a priority infrastructure program will be directly informed by consultation with Government, industry and the community.



Council will continue to engage the community during the preparation of the SHIP Master Plan and the development of the Moss Vale Bypass and Berrima Road Deviation Projects.

There are resources available on the [www.yoursaywingecarribee.com.au](http://www.yoursaywingecarribee.com.au) website. The community is encouraged to review this information and get in touch with Council either through the “ask a question” function or via Council’s Contact Centre.

### **Internal Communication and Consultation**

A priority infrastructure program will need to consider all the infrastructure that is required to support our growing communities and will be developed through a ‘whole of Council’ approach to ensure the program is robust and deliverable.

The Moss Vale Bypass and Berrima Road Deviation projects have been developed over a number of years with input from Council’s Assets, Project Delivery, Infrastructure Services, Strategic Planning, Property and Finance teams as well as the Executive team.

The delivery of these projects will require the ongoing support and input of all Council staff.

### **External Communication and Consultation**

Council has worked closely with the NSW Government including Local Members, Wendy Tuckerman MP and Nathaniel Smith MP and contacts at Transport for NSW and Department of Regional NSW to fund and develop these projects.

## **SUSTAINABILITY ASSESSMENT**

- **Environment**

The environmental issues in relation to this report are assessed in accordance with the Environmental Planning and Assessment Act 1979 and other relevant legislation.

- **Social**

These projects are important in their role of supporting employment creation, management of traffic and improved amenity for the community. Council’s management of significant capital projects impacts the community’s confidence in Councils ability to provide community services.

- **Broader Economic Implications**

The development of an ‘investment ready’ Priority Infrastructure Program will significantly increase Council’s ability to deliver key enabling infrastructure projects, to unlock development potential and support our growing communities.

These projects will support wider economic development particularly in the Southern Highlands Innovation Park, but also by providing better connections between the Illawarra, Southern Highlands Towns and Villages and the Hume Highway. Improving the way Council manages these projects will support this economic growth and community confidence in the region.

- **Culture**

There are no cultural issues in relation to this report.



- **Governance**

The restructure of Council and the establishment of a Strategic Outcomes Department that reports directly to the General Manager will allow Council to refocus on the strategic priorities of the organisation and the community.

Similarly, an improved Project Management Framework will continue to ensure that projects are managed appropriately and allow Council to deliver infrastructure in an efficient and effective manner.

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## **COUNCIL BUDGET IMPLICATIONS**

The development of an 'Investment Ready' priority infrastructure program will have significant impact on Council's budget. In the short to medium term, Council will need to allocate resources to progress priority infrastructure projects through the detailed design process.

In the longer term, improved infrastructure planning and delivery processes will allow Council to make informed investment decisions in relation to the provision of infrastructure and ensure that infrastructure is delivered in an efficient manner into the future.

Council has obtained \$2.4M funding from the State Government to develop designs and inform the budget position for future grants related to construction funding. Via support from the State Members, the State Government has committed to supporting the Moss Vale Bypass.

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## **RELATED COUNCIL POLICY**

Not applicable in the context of this report.

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## **CONCLUSION**

As outlined in the body of this report, there were a number of significant shortcomings in Council's handling of the Berrima Road Deviation Project.

Similarly, a failure to take a strategic approach to planning for population growth and essential infrastructure has resulted in significant limitations in our ageing infrastructure networks, which will continue to impact on new development and our existing communities throughout the Shire.

There is a clear need to refocus the organisation to develop and deliver clearer strategic priorities for the Shire, and to improve our strategic infrastructure planning and delivery processes.

The restructure of Council and the establishment of a Strategic Outcomes Department that reports directly to the General Manager will allow Council to refocus on the strategic priorities of the organisation and the community.

It is recommended that Council also develop a priority infrastructure program that aligns with the strategic priorities, and where possible, progress the detailed design of priority infrastructure works to ensure key projects are 'investment ready'.

This report provides Council and the community the strategic approach toward addressing traffic concerns in Moss Vale and the much-needed infrastructure to support the Southern Highlands Innovation Park.

## AGENDA FOR THE ORDINARY MEETING OF COUNCIL

Wednesday 08 September 2021

### REPORT GENERAL MANAGER



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### ATTACHMENTS

1. Berrima Road Deviation - Project Update(Item 12.2 of Ordinary Council Meeting 10, April 2019)
2. Moss Vale Bypass Concept Design with Stages
3. Berrima Rad Overpass Concept Design



## AGENDA FOR THE ORDINARY MEETING OF COUNCIL

Wednesday 10 April 2019

REPORT DEPUTY GENERAL MANAGER OPERATIONS, FINANCE  
AND RISK**12.2 Berrima Road Deviation - Project Update**

Reference: 7810/28  
Report Author: Manager Project Delivery  
Authoriser: Deputy General Manager Operations, Finance and Risk  
Link to Community  
Strategic Plan: Work in partnership to ensure a safe road network

**PURPOSE**

The purpose of this report is to provide Council with an update on the project delivery and funding challenges with respect to the Berrima Road Deviation project.

**RECOMMENDATION**

1. **THAT** Council note the contents of this report.
2. **THAT** Council undertake the necessary works to make the project "shovel ready" for future grant applications. This will include finalising the relocation of existing services, property acquisitions and topsoil and seed the constructed road embankment with an estimated total cost \$4.4M for the revised project scope.
3. **THAT** Council advise the Department of Infrastructure, Regional Development and Cities that due to a significant number of issues Council will not be able to complete the approved works by the 31 March 2020 deadline and will therefore have to let the funding agreement lapse.

**REPORT****BACKGROUND**

The required upgrade of the Berrima Rail crossing has been considered for some years as part of the Moss Vale Enterprise Corridor with Council applying for a series of grants from State and Federal Government from 2008 to 2011, all of which were unsuccessful.

The project is intended to divert Berrima Road away from the existing level crossing near Boral Cement Works to a bridge over the train line further east. The existing T-junction intersection at Berrima Road and Taylor Avenue will be replaced with a B-triple truck capacity roundabout and approximately 600m of new road constructed to remove a sharp bend.

In November 2014 Council submitted an application under the National Stronger Regions Fund to the Federal Department of Infrastructure and Regional Development. The application stated a total estimate project cost of \$9.205M in 2015 dollars with Council contributing \$4.603M.

**AGENDA FOR THE ORDINARY MEETING OF COUNCIL**

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**REPORT DEPUTY GENERAL MANAGER OPERATIONS, FINANCE  
AND RISK**

The application was successful with Council entering into a Funding Agreement in May 2016. Under the funding agreement Council was required to commence construction within 12 months of signing the agreement.

**REPORT**

The initial project estimate used for the grant application was based on an estimate developed by Quantity Surveyors, Altus Page Kirkland, for works associated with the development of the Moss Vale Enterprise Corridor. The works were estimated in 2010 at approximately \$7.87M.

This Altus Page Kirkland (2010) figure was subsequently escalated at approximately 4.00% per annum to provide the \$9.2M figure in 2014 dollars, which was then used in the 2014 National Stronger Regions Fund grant application.

**Project Design**

Council engaged Opus International to provide detailed design services for the project in August 2016. The detailed design was intended to be completed by the end of 2016. It is important to note that it is not uncommon for detailed design for large scale infrastructure projects to commence only once project funding has been secured.

Ongoing delays were encountered with the delivery of the project design. Council were provided with a variety of reasons for the delays, but ultimately it became apparent that the resulting delays were due to staffing instability as a result of a takeover of Opus International. Ultimately, WSP took over Opus in early 2018, but in the meantime, the entire project design team had left the organisation.

WSP staff reviewed the Opus International design and identified a number of significant deficiencies in the proposed design. WSP then undertook a full and comprehensive redesign of the project to ensure compliance with the various standards. This work was undertaken at no additional cost to Council but resulted in a further delay in the provision of the full detailed design for the project.

**Bulk Earthworks**

Once Council officers became aware that the detailed design would not be completed in time to meet the funding deed construction commencement timing, WSP design team were then instructed to develop a bulk earthworks package which would allow work to commence on the project within the timeline required under the grant provisions.

The bulk earthworks contract was competitively tendered and awarded to Stefanutti Constructions Pty Ltd with works commencing in October 2017. Work commenced on the southern road embankment to avoid the northern end of the site which is constrained by existing high voltage electrical services across the site.

The construction of the southern embankment has been completed and the contractor has disestablished the site until it is possible to start work on the northern embankment.

As part of the bulk earthworks project, Council has utilised stockpiled material that was stored at sites on Berrima Road and in Braemar. The project has allowed Council to reuse

**AGENDA FOR THE ORDINARY MEETING OF COUNCIL**

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**REPORT DEPUTY GENERAL MANAGER OPERATIONS, FINANCE  
AND RISK**

approximately 65,000m<sup>3</sup> of material as well as rehabilitating the two spoil sites for potential future uses.

It is estimated that the potential cost of disposal of this volume of material @ \$100/tonne (Council's Resource Recovery Centre disposal fees are currently \$414.60/tonne plus transport for inert waste), represents a potential saving to Council of \$11.7M.

Further, to import and place this volume of quarried material for the road embankments is estimated as \$108/m<sup>3</sup>, whereas the material from the spoil sites has been tested, transported and placed for \$49/m<sup>3</sup>. This represents a potential saving of \$3.8M to the project.

In addition, Council intends to utilise an estimated 3,000m<sup>3</sup> of spoil material from the Kirkham Road South project as part of the northern embankment construction, which represents a further potential saving of \$1.25M, based on a tendered disposal cost of \$1.34M.

**Electrical Relocations**

Council has been working closely with a suitably qualified electrical designer to develop plans for the relocation of the high voltage power lines on the northern end of the site.

The development of the designs has been protracted; involving negotiations with Endeavour Energy to determine the scope of works. The energy supply services are critical links to the Cement Works so have been carefully considered by Endeavour Energy.

Incorporating the requirements of Endeavour Energy into the design of the high voltage electrical service relocations has resulted in a significant increase to the cost estimate for the works. The original 2010 estimate for the electrical relocation work was only \$160k to simply relocate the power lines underground, but the latest estimate is \$1.259M including a 30% contingency.

The ongoing delays related to obtaining approvals for the electrical relocations has ultimately resulted in Council not being able to meet the project timeframes under the National Stronger Regions Fund funding agreement. The extensive delays have also significantly affected the project costs with escalation costs for civil infrastructure works estimated at 6.5% to 8.0% per annum.

Once Council obtains the required design approvals, it will then be necessary to tender the relocation works, the contractor must then negotiate an approval for the required power outage from Endeavour Energy before the works can be carried out. The electrical relocation works must be carried out before it is possible to commence the construction of the northern road embankment.

Subject to confirmation by Endeavour Energy, the work to undertake the connections for the relocation works may be limited to the two week shutdown period, which usually occurs around the Christmas/New Year period, to minimise impacts on the Cement Works. This will, in turn, further delay the opportunity for Council to commence the bulk earthworks for the northern embankment, and in turn, further delaying the completion of the project.

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**REPORT DEPUTY GENERAL MANAGER OPERATIONS, FINANCE  
AND RISK****Project Budget**

The original project budget was prepared by Quantity Surveyors Altus Page Kirkland. The project estimate was developed in relation to works associated with the Moss Vale Enterprise Corridor development and was estimated at approximately \$7.87M. This figure was used in an unsuccessful application to the Federal Government National Stronger Regions Fund in 2011.

This figure was escalated to \$9.2M for the funding application under the National Stronger Regions Fund submitted by Council in November 2014.

Council further engaged engineering design company Parsons Brinkerhoff to prepare an estimate for a concept design of the project in March 2016. This estimate was calculated to be \$7.75M, but excluded the electrical relocations and had a target accuracy of +/- 25%.

Throughout the detailed design work undertaken by Opus International, Council was not made aware of any substantial concerns regarding the available budget for the project; which was estimated at \$9.2M in the original engagement for the design development.

In August 2018, Council became aware of a potential (and substantial) increase in the project estimates. WSP, who had since taken over the design of the project provided Council with a draft estimate based on the completed project tender design. The estimate was prepared by a third party, Macdonald International Engineers, who are approved by RMS to develop estimates for RMS projects.

The designers were requested to undertake a review of the estimate based on the level of funding available to deliver the project (\$9.2M) and to also re-consider the contingency amount which was considered high for a completed design at 22%. The consultants were also requested to investigate options to also further reduce the project estimate by changing the roundabout to a T-intersection to reduce the scale of pavement works for the project.

Council received revised estimates from WSP on 7 December 2018.

The revised estimates for the remaining works were as follows (including 19% contingency):

- \$12.27M for the roundabout; or
- \$11.49M for a T-intersection;

In addition, there are additional costs including:

- Property Costs (estimated) - \$280,000
- Outstanding design fees - \$84,000;
- Fee contingencies - \$35,000;
- Project Management - \$300,000;

Therefore, the total estimate to complete the outstanding works for the project is:

- \$12.97M for the roundabout; or
- \$12.19M for the T-intersection;

Given the revised estimate provided by WSP, if Council were to deliver the project based on the original scope (roundabout option), noting that expenditure to date is \$2.18m, the funding shortfall for the project is estimated as \$5.95M, with a total project cost of \$15.15m.

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Two significant factors have contributed to project cost increases; firstly the project scope for the relocation of the high voltage electricity services across the site has significantly been altered. It is apparent that the original estimates were simply based on a rate to put the services underground at an estimated cost of \$160,000 in 2010. But following development of the detailed design for the works in 2017, in consultation with Endeavour Energy, these works are currently estimated at \$1.26M (including 30% contingency), with a reinstatement of overhead high voltage power lines required.

The majority of the remaining additional cost is largely attributable to cost escalation over the ensuing period since the funding application was submitted. Based on a construction cost escalation factor of 6%, a \$9.205M project costing from 2014 would require cost escalation increases to \$13.06M or an additional \$3.85M for the project to be delivered during 2020.

**Project Way Forward**

Due to ongoing delays in obtaining the necessary design approvals for the relocation of the high voltage power lines, Council is unable to complete the project works to satisfy the timeframes of the funding agreement with the grant programme required to close at the end of June 2020, requiring final works and claims for funding to be submitted by the end of March 2020.

It is therefore recommended that the works on the site are reduced to enable the project to be in a position to be "shovel ready" for any future grant funding opportunity.

It is recommended the Council undertake the following works:

- Negotiate with the relevant property owner in relation to the proposed land swap;
- Complete the property acquisition from the relevant adjacent property owner;
- Complete the service relocations for electrical, Telstra, and Jemena;
- Topsoil and seed the southern embankment to protect it for the future;
- Pay remaining consultants fees;

Based on current estimates these works could be completed for approximately \$2.2M. Current expenditure for the project to date is approximately \$2.2M which would bring the total cost to \$4.4M.

This would leave Council with a "shovel ready" project with land acquisitions complete and external impediments removed to leaving a grassed mound until the future completion of the project can be undertaken and a simpler and shovel ready project to deliver for future grant funding when available.

**Managing Future Funding Applications for Infrastructure Projects**

The development of this project has highlighted the difficulties for Council to deliver grant funded projects when only high level planning has been used as the basis of a funding application. Significant work has recently been undertaken by Council officers to develop a risk assessment framework in relation to project scoping and budget development for all future projects.

In reality the ability to satisfactorily undertake adequate scoping and budget development for large infrastructure projects, such as Berrima Road, represents a significant cost to Council,



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as it can really only be achieved by undertaking full detailed design in consultation with the various external agencies that may impact the project.

For example, the proposed Moss Vale Bypass will involve collaboration and negotiation with a number of external agencies including;

- Australian Rail Track Corporation;
- APA Group (Gas pipeline);
- Telstra;
- Jemena;
- Endeavour Energy;

In the case of the Berrima Road Deviation project, the design development costs have been in the vicinity of \$500,000. This represents a significant cost to Council for a project that, if a grant application had not been successful, may have remain unfunded for a number of years before a funding opportunity became available.

This will remain challenging for Council, however where the level of risk (financial and operational) is considered too high, Council officers will advise Council of this risk and any mitigating strategies which could be employed to reduce risk (and the associated cost).

Moving forward, Council officers will identify any additional budget funding required for large scale infrastructure projects to ensure that cost escalation is considered as part of the annual budget process. While this will be challenging, it is one of the key contributing factors to the current budget situation for this project.

Council has also made approaches to State Government agencies about the possibility of obtaining funding for design development for significant projects, but this is generally not supported. The Safe & Secure Water Program does provide funding for project designs and Council currently has applications in place for the design of the upgrades of the Moss Vale and Bowral Sewage Treatment Plants.

### IMPACT ON COUNCIL'S FIT FOR THE FUTURE IMPROVEMENT PLAN

This report does not require a decision of Council which would have an impact on its Improvement Plan.

Any decision to proceed with the project without the funding secured under the National Stronger Regions Fund would require Council to review its options under its adopted Long Term Financial Plan.

### COMMUNICATION AND CONSULTATION

#### Community Engagement

Council has issued a number community engagement updates in relation to the project via the YourSayWingecarribee website and community updates.

#### Internal Communication and Consultation

Executive

Project Delivery

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Assets

Infrastructure Services

Chief Financial Officer

**External Communication and Consultation**

Discussions have been held with:

- The Federal Government funding body;
- Design consultant;
- High voltage electrical design consultant;
- Endeavour Energy
- Boral and Austral (adjoining property owners);

**SUSTAINABILITY ASSESSMENT****• Environment**

There are no environmental issues in relation to this report.

**• Social**

There are no social issues in relation to this report.

**• Broader Economic Implications**

Delays in delivering this project may partly-contribute to the lack of activity within the Moss Vale Enterprise Corridor, however there are other more significant factors which are also contributing to this.

**• Culture**

There are no cultural issues in relation to this report.

**• Governance**

This report outlines the conditions and timeframes of the Funding Agreement which must be adhered to in delivering this project.

**COUNCIL BUDGET IMPLICATIONS**

Council has allocated \$4.6M from internal cash reserves to provide matched funding for this project.

Based on current estimates, the additional work required to complete the necessary land acquisitions, utility relocations and site finalisation could be completed for approximately \$2.2M. Current expenditure for the project to date is approximately \$2.2M which would bring the total cost to \$4.4M.



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**RELATED COUNCIL POLICY**

Nil

**OPTIONS**

The options available to Council are:

**Option 1**

Abandon the project in its current state and provide the minimal work required to topsoil and seed the constructed road embankment. Estimated total cost \$2.25M.

**Option 2**

Undertake works to make the project "shovel ready" for future grant applications. This will include finalising the relocation of existing services, property acquisitions and topsoil and seed the constructed road embankment. Estimated total cost \$4.4M.

**Option 3**

Continue to develop the project to completion at the risk of losing the Federal Government funding for the project. Estimated total (potential) cost \$15.2M.

Option 2 is the recommended option to this report.

**CONCLUSION**

It is acknowledged that the outcome in relation to this project is not what Council was expecting and whilst there are good and valid reasons for the delays in relation to external approvals, property matters etc. which have been outlined in the report, project scoping and the grant application completed and submitted in 2014 for the project have been found wanting.

The forward commitment to Council is that the organisation has been on a continuous improvement path for project scoping within the organisation, particularly over the past 2 years. There has been and continues to be much greater collaboration between the Assets team (who have project scoping and budget development responsibility) and the various Project delivery areas of Council (infrastructure Services – day labour projects), Water and Sewer Operations and Project Delivery Team (outsourced contracted works).

Project scoping now involves a multiple level sign off with much more robust risk assessment processes that identify and plan for environmental, heritage, planning, regulatory, external agency approval and most importantly the impact of time delays on project costs. Where ever practical council staff will be presenting a capital works programme with a two stage approach, investigation and detailed design in year 1 with a detailed project costing developed, with project delivery in year two or a future year with appropriate cost escalation factors built in. A similar approach is preferred for significant grant applications; however government policy does not currently favour this approach with very few opportunities to receive funding to get projects "shovel ready" prior to a grant application being made.

It is proposed therefore that a different approach is used when future grant opportunities present themselves, particularly with large infrastructure projects in excess of \$1M dollars

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where very limited investigation or design work has been undertaken to inform project estimates.

Experience has shown that even after using professional quantity surveyors project costings are being underestimated, particularly when projects are not "shovel ready", therefore in future significant contingencies (40% to 50%) will be included where a project is not "shovel ready" if a grant application is to proceed. The impact of external agency requirements for projects will not be possible to accurately assess without detailed designs and appropriate approvals.

This approach whilst more robust may be challenged by funding agencies and will require a considered and defensible response, and may result in a lower success rate for grant projects that are not shovel ready where a smaller contingency is achievable. It is also highlighted that the use of Benefit Cost ratios (BCR) is now a major determining factor in assessment of applications by funding authorities and the inclusion of larger contingencies which detrimentally impact the BCR of projects being considered for funding.

In summary, the following strategies are being utilised going forward to ensure consistent delivery of well scoped, adequately funded fit for purpose projects delivered on time, within budget and to agreed quality:

- (a) Significant improvements around identifying project "risk factors" and ensuring that project scope and budget adequately mitigate those risk factors
- (b) A collaborative project scoping and sign off process involving the assets team and the relevant project delivery team.
- (c) A preference for a two (2) staged approach to significant capital works projects with an investigation and design project to bring projects to a shovel ready status – year (1), followed by a project delivery phase in year (2).

**ATTACHMENTS**

There are no attachments to this report.

