



# Community Meeting Update - 20 June 2024

Wolgan Valley Reconstruction Project , 20 June 2024



**WASSABI GROUP**

# 1. Project Overview

## 2. Project Progress

1. Key accomplishments this month
2. Key Procurements
3. Key Deliverables Summary
4. Program Update
5. Cost Summary

## 3. Post Funding Program

This update was drafted on 20 June 2024





# Project Progress

Wolgan Valley Reconstruction Project

# Key Engagements



Project Management Services: Wassabi Group awarded and providing ongoing PM Services



Risk Specialist: ZenoE Consultancy awarded and have issued final Risk Register and Report.



"Do Nothing" narrative: AP Sheere Consulting awarded and issued final report



Cost Estimate Peer Reviewer: WT Partnership awarded and peer reviewing cost estimate. Concurrence Report issued today



Constructability & Scheduling Services: Has been awarded to CJC Management. Final report issued



Planning Approval Pathway Specialist: BD Infrastructure awarded to provide preliminary advice and final report issued.

# Key Procurements

Do Nothing - Business Case Summary	AP Sheere Consulting
Risk Specialist	ZenoE
Risk Specialist	ZenoE
Cost: Peer Review/Concurrence	WT Partnership
Planning Approval Pathway Specialist	BD Infrastructure
Planning Approval Process Next Steps	BD Infrastructure
Constructability & Scheduling Services	CJC Management
Project Management Services	Wassabi Group

# Funding Application – F306 Deliverables

## Status

Extract: NSW Natural Disaster Essential Public Asset Restoration Guidelines

No.	Key Funding Application Documents	Status
1	Letter from council - Form 306	In Progress
2	Pre-disaster function documentation	Complete
3	Pre-disaster condition evidence	Complete
4	Asset damage evidence	Complete
5	Estimated reconstruction costs based on asset's pre-disaster function	Final Issued and Concurrence Report being issued today
6	Design Documentation	Final to be issued on Friday 21 June
7	Risk Report inc Risk Register	Final Risk Register & Report issued
8	Constructability & Scheduling	Final Issued
9	Delivery Strategy Report	Final Issued
10	Planning Approval Discussion Paper	Final Issued
11	"Do Nothing" base case narrative	Final Issued

### Funding application - F306

- Letter from council
- Form 306
- Pre-disaster function documentation (*Section 4.2*)
- Pre-disaster condition evidence (*section 4.3.2*)
- Asset damage evidence (*Section 4.3.3*)
- Estimated reconstruction costs based on asset's pre-disaster function

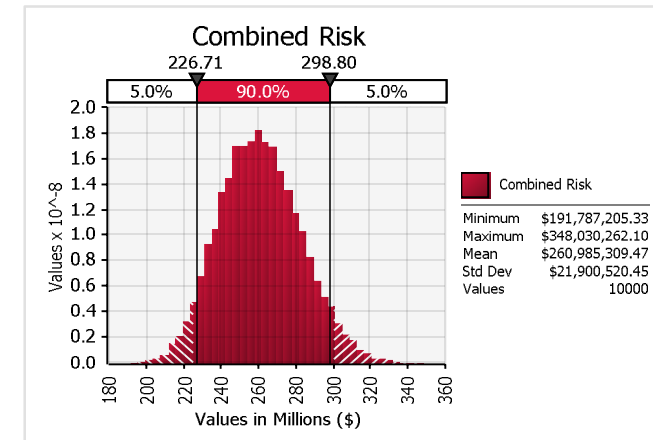
(*Section 4.9*) and (*Appendix G*)

# Key Risks

- Three project risk assessment workshops have been held
- To assist with the DAG application the favoured design has been reviewed, at a high level, for scope, constructability and environmental impact purposes.

Several major assumptions have had to be made to support the DAG application:

- The Donkey steps will need to be upgraded to facilitate construction and left in situ with ongoing council maintenance.
- The existing road will be left in its current state with only enhancements to access barriers to prevent/stop traffic accessing.
- An EIS will be required.
- No major problems with securing property
- No permanent detention basins required.
- Two arrestor beds are required.
- Bridge 2 will be a Bebo precast concrete arch.



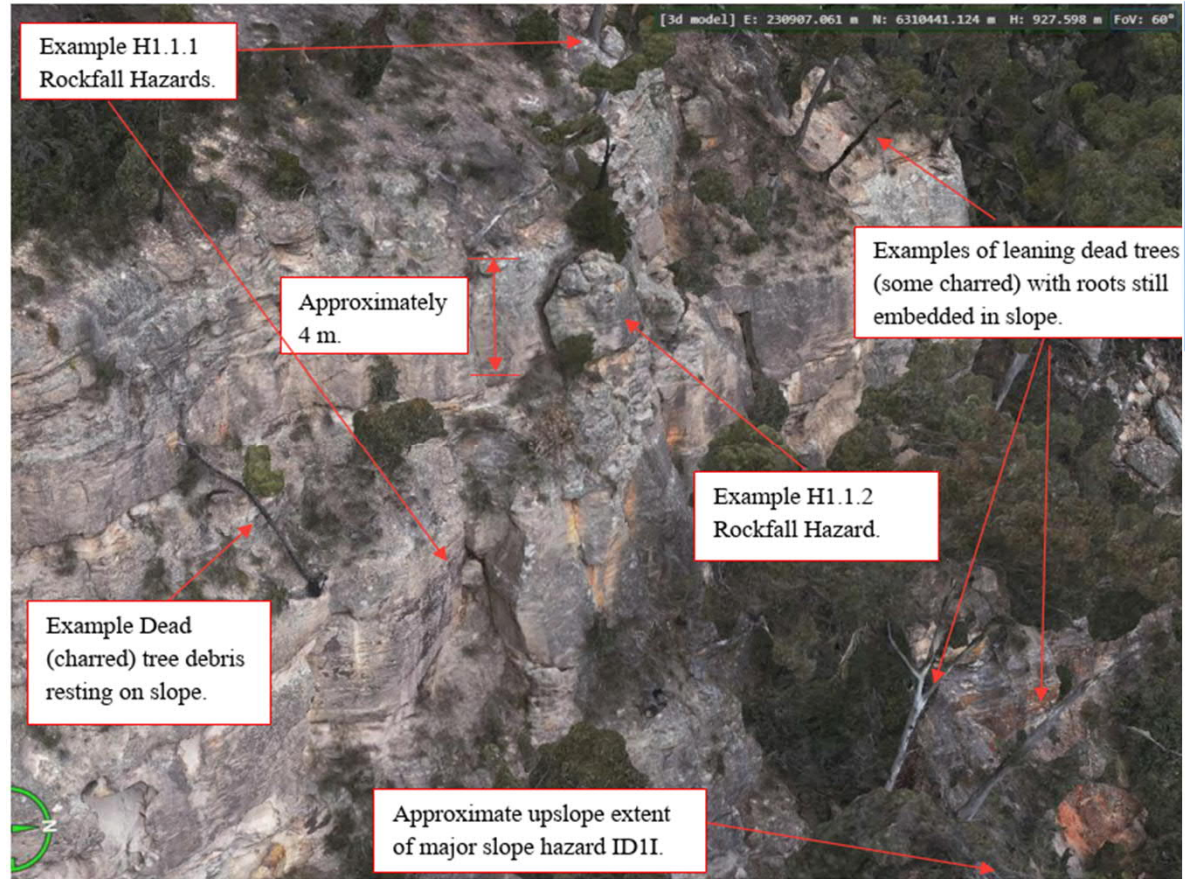
A probabilistic risk assessment was undertaken for this cost estimate that comprised a series of contingent and inherent risks that were used to evaluate the risk associated with the project. This was completed by applying various distribution methods. By utilising the @RISK software, a simulated cost was derived with the 50th and 90th percentiles and this was used to reflect the P50 and P90 estimates.

# Strategic Design Status

## Restoring Existing Wolgan Rd

### Key Works Required to make it safe

1. Mitigate rock hazard risk
2. Top-down upslope access bench construction
3. Major upslope hazard remediation
4. Intermediate upsloperemediation1
5. Top-down down slope bench construction
6. Major down slope hazard remediation
7. Intermediate downslope hazard remediation
8. In road remediation
9. Road reinstatement and temporary access restoration



Restoring Wolgan Rd Cost: \$1bn+

# Strategic Design Status

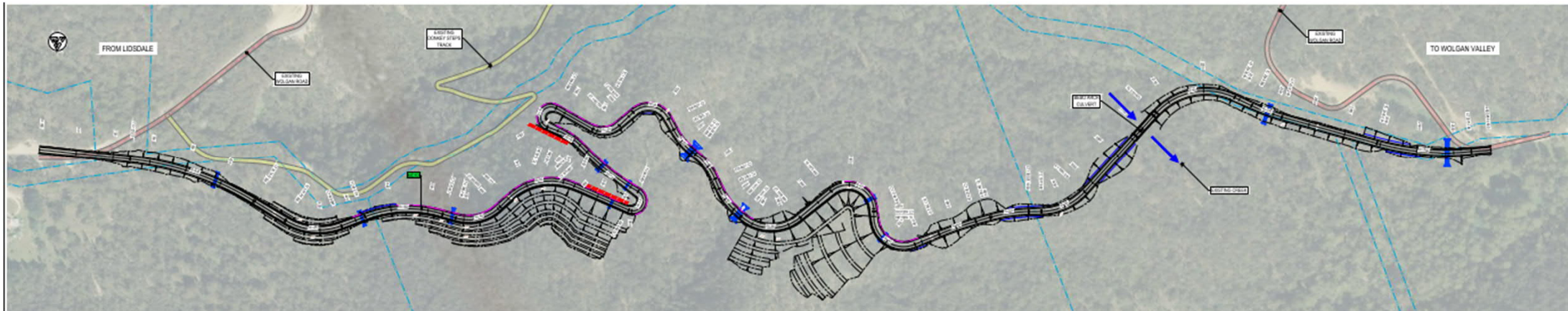
- MCA workshop held on 2 May
- Option 1 and Option 3 are largely comparable on a weighted scorecard.
- LCC have commented on the legacy cost of any option that includes a large bridge such as Options 2, 3 and 5, given the depreciation allowances council would need to account for to cover its eventual replacement.
- Option 1 would offer the lowest capital and ongoing cost to reinstate the function of the closed section of Wolgan Road.

MCA Criteria

#	Criteria	Description	Sub-criteria
1	Transport Outcomes	Assesses transport outcomes of each option.	<ul style="list-style-type: none"> <li>• Travel times.</li> <li>• User benefits</li> </ul>
2	Risk	Assesses key risks and issues for each of the options not already covered in other criteria	<ul style="list-style-type: none"> <li>• Key risks and issues</li> </ul>
3	Deliverability	Assess ease of construction	<ul style="list-style-type: none"> <li>• Scope and constructability.</li> <li>• Transport network impacts during construction</li> <li>• Delivery complexity.</li> </ul>
4	Enviro & Cultural Heritage	Assesses Enviro & Cultural Heritage outcomes of each option	<ul style="list-style-type: none"> <li>• Environmental and planning.</li> <li>• Cultural heritage</li> <li>• Property impacts.</li> <li>• Visual Impacts</li> </ul>
5	Affordability	Compares potential costs, revenue and funding avenues for each option.	<ul style="list-style-type: none"> <li>• Capital expenditure.</li> <li>• Property acquisition cost.</li> <li>• Operating and maintenance cost.</li> <li>• Geotechnical - ongoing slope risks</li> </ul>
6	Stakeholder and Community Support	Assesses stakeholder support for the Project.	<ul style="list-style-type: none"> <li>• Stakeholder support.</li> </ul>

Table 4.9 Consolidated assessment criteria

Option	Transport outcomes	Risk	Deliverability	Environment & Cultural Heritage	Affordability	Stakeholder support	Total score (Compared to Option 1)
<b>Weighting</b>	15%	15%	10%	15%	35%	10%	
Alignment Option 1	0						0
Alignment Option 2	0	0	-1	+1	-1	+1	-0.20
Alignment Option 3	0	0	+1	+2	-1	0	+0.05
Alignment Option 5	+1	0	-2	+1	-2	+1	-0.50



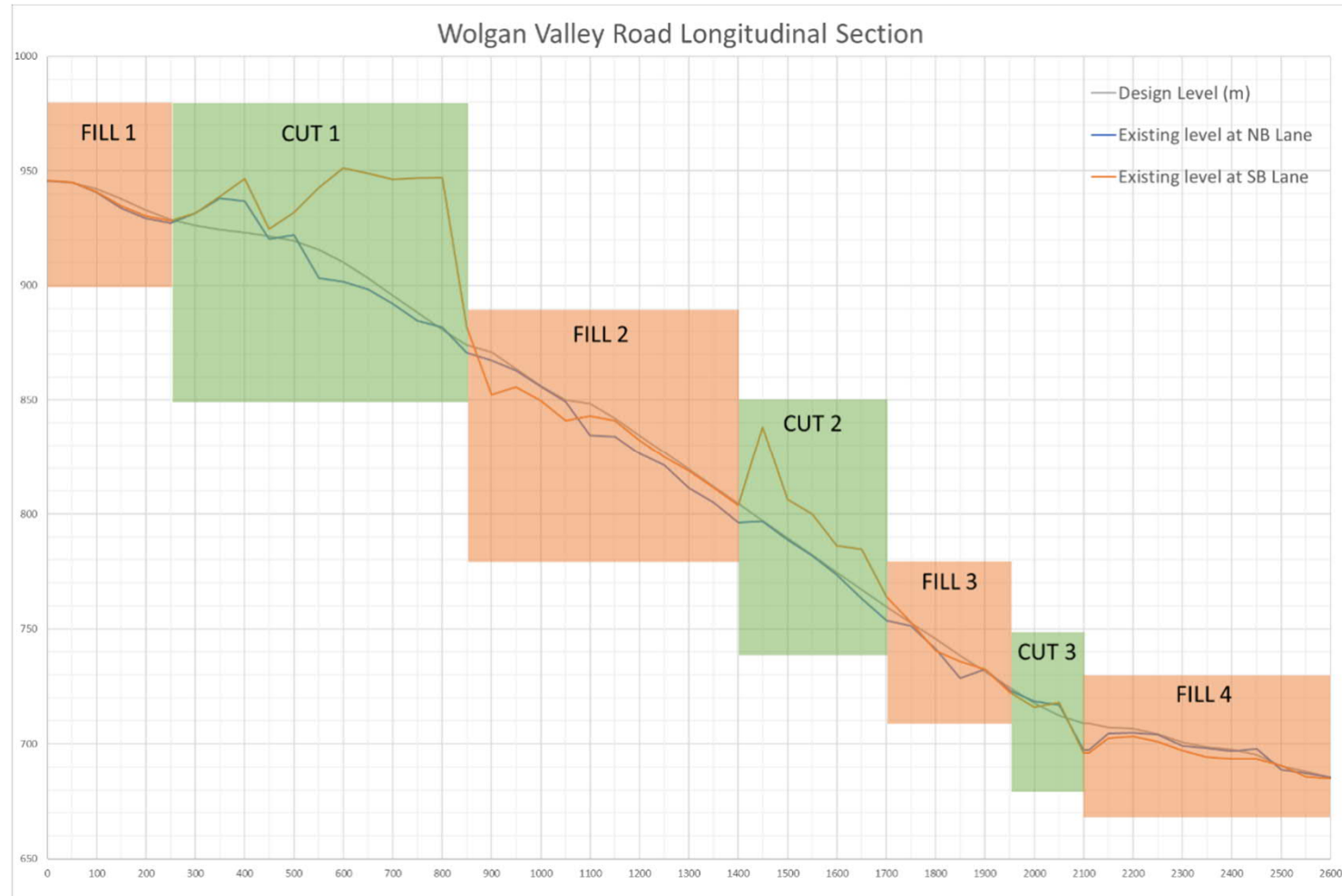
Multi Criteria Analysis (MCA) Preferred Option 1 Design



# Constructability & Scheduling Status

## Key Findings

- Sequential Nature of Construction
- Cut Quantities Will Increase, currently approx. – 280,000 cubic metres
- Additional Width of Cutting:  
An additional width of cutting is required in the large, single sided cuttings within Cut 1 and Cut 2 to allow a safe 'bench' width during the excavation sequence.
- Narrow Construction Footprint
- Large Quantity of Topsoil, Mulch and Cut Material to be Disposed Offsite
- Insufficient Stockpile Area on Site
- The BEBO ARCH at CH2100 is Difficult to Construct
- Extended Construction Period:  
143 weeks construction period excluding wet weather and contingency

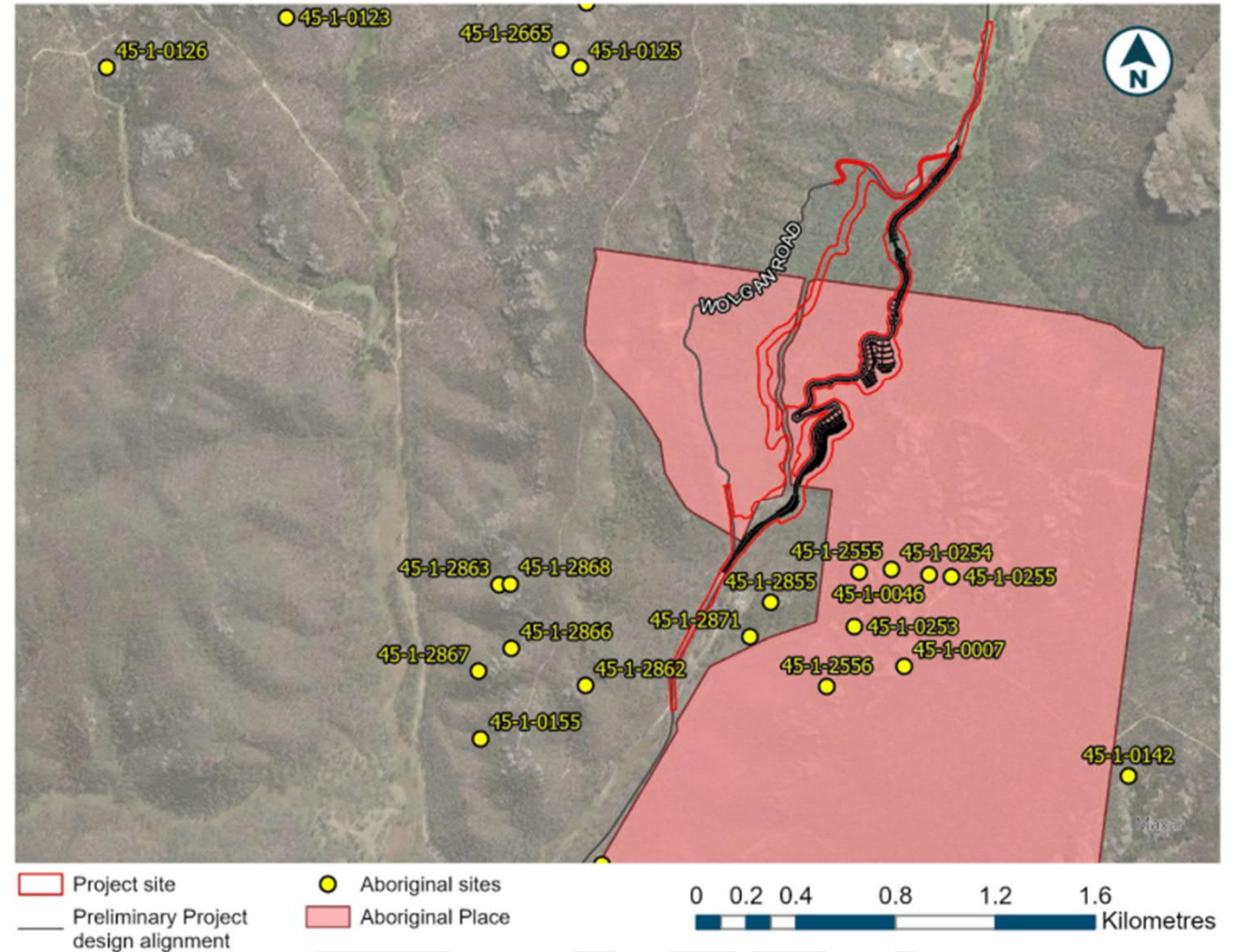


# Planning Approval Discussion Paper

The objective of this planning approvals discussion paper is to identify Commonwealth and State legislation that may be relevant to the Project and to inform Council of their options in relation to planning approval pathways.

## Key Issues:

- EIS vs REF
- Extent of impact to the Blackfellows Hand Aboriginal Place
- Biodiversity impacts
- Impacts to landscape character of the Wolgan Valley
- Impact on Gardens of Stone State Conservation Area
- Impact on Crown land
- Property lease and acquisition



# “Do Nothing” Narrative

Provide a narrative around a ‘do nothing’ base case as part of Lithgow City Council’s funding application

Considered the following:

- Limited access and strict operational protocols.
- Safety issues with existing access
- Ongoing annual costs
- Increased transport costs for all track users
- Complete loss of tourism and business closures in the valley.
- Mental health impacts on the community
- Safety issues relating to ongoing illegal access of the Wolgan Road
- Potential legal implications if the Base Case continues.
- Potential property insurance and value issues
- Base case conclusion

Some extracts from the community survey are provided here and illustrate the angst felt by many of the residents.

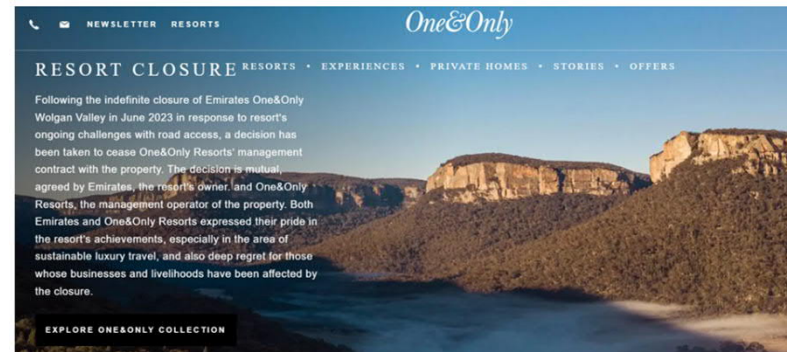
## *How has the road closure affected your mental health?*

*“At first, I thought I could handle it, but now as the solution appears to move further away, we are going downhill mentally...quite quickly. It is getting to the point where I just breakdown.”*

*“Hasn’t helped (uncertainty and unknowns: ability to attend school and work, and other sporting / social activities (including swim lessons); loss of job earnings; our future residency in valley; loss in property value; insurance implications; duration of this access predicament).”*

*“My freedom is at stake. I can’t afford a new car or even fathom driving a 4wd goat track in to work every day. You are putting my sanity in jeopardy and my children’s freedom or liberties to live these school holidays they are isolated and not allowed to go anywhere.”*

*“After the fires, COVID and now unable to reliably or regularly access our home, or gain business income, my mental health has suffered significantly. I am stressed, anxious and emotional, feeling lost and not able to perform my day job to my usual standard. I have sought medical assistance and take medication to treat anxiety and depression.”*



# Delivery Strategy

Workshop held & Report Issued

## Contracting Strategy Assessment

Using the following criteria of Poor (1) to Excellent (4), Workshop attendees ranked the effectiveness of each of the four delivery options against each of the seven Assessment Criteria.

Effectiveness	Indicators	
Not effective	1	Poor
Low effectiveness	2	Adequate
Effective	3	Good
Highly effective	4	Excellent

The final rankings based on the assessment criteria were summed, with the highest score as shown in the following table being Detailed Design and Construct (DD&C)

Importance (From Step 3)	Assessment Criteria	Options			
		Construct Only	Detailed Design & Construct	Managing Contractor	Alliance
2nd	Scope	4	10	7	15
3rd	Time	6	17	8	10
1st	Cost	5	19	4	5
	Stakeholders, Community & Environment				
	Stakeholder Management				
	Operational Risk				
	Design Functionality				
Ranking based on Assessment Criteria		15	46	19	30
Relative order of importance		4th	1st	3rd	2nd

- The Delivery Strategy workshop was held on 21st May 2024 with stakeholders from Lithgow City Council, Transport NSW and the project Consultants to discuss and develop the proposed Delivery Strategy for the Project.
- The recommended Delivery Strategy of Detailed Design & Construct received support from participants and is aligned with priorities that were collectively endorsed during the Workshop that informed its development.
- Delivery Strategy Report was issued in late May and currently being reviewed.

# Cost Estimate Status

- P90 Total Outturn Costs estimates: \$326m
- Independently reviewed and concurred
- Including
  - Preferred Option 1: Construction costs inc Client Costs, Prelims, Margins & Overheads (approx. \$181m)
  - Risk Allowances – P90 estimate (approx. \$109m)
  - Escalation (approx. \$36m)
- Risk: A probabilistic risk assessment was undertaken for this cost estimate that comprised a series of contingent and inherent risks to reflect the P50 and P90 estimates.

Description	P90
Base Cost	\$180,587,982
Contingency \$	\$109,184,083
<b>Contingency %</b>	<b>60%</b>
Guideline Ranges	35% to 70%

## Scope of the project

Project name:	Wolgan Valley Reconstruction Project - Preferred Option (Option 1)
Key features of the project:	2.6km of new two lane access road through a greenfield environment
Length of the project:	2.6km of new two lane access road
Project type (greenfield vs brownfield):	Greenfield
New structures required:	<ul style="list-style-type: none"> <li>• 21 meter span bebo arch structure</li> <li>• 5 retaining walls totalling a face area of 7,622m<sup>2</sup></li> <li>• 1,309 meters of 450mm diameter longitudinal drainage</li> <li>• 12 cross drainage structures varying from 1 cell 450mm diameter up to 3 cell 750mm diameter</li> </ul>
Existing structures that need to be modified:	nil
Demolition:	Minor demolition works to tie in locations
Contaminated materials:	Estimate includes allowances for acid sulphate rock and coal
Environmental issues:	BAU
Aboriginal impacts:	LCC to confirm whether the Aboriginal Due Diligence assessment report was prepared
Archaeological impacts:	No specialist non-Aboriginal heritage/ archaeological assessment conducted
Utility adjustment:	Nil adjustments, protection only
Construction issues:	Limited construction access, significant retaining structures and steep cut faces
Noise treatment and noise walls:	Estimate includes allowances to noise treat two nearby dwellings
Property acquisition:	<b>\$3.9M</b> , however LCC to engage a specific property valuation consultant
Environmental offset:	<b>\$6.0M</b> (provided by LCC)
Intelligent transport system:	nil

The scope of the project includes:

- Construction of 2.6 kilometres of a two-lane Greenfield Road
- Construction of 5 retaining walls
- Construction of a 21 meter span bebo arch structure

# Cost Estimate Evolution

- Increase to previous \$184m:
  - Introduced scope: Upgrade of donkey steps, treatment existing Wolgan Rd, Repairs to local roads, large L shaped gravity wall above retaining structures.
  - Increased earthworks: 120% more excavation, significant slope stabilisation, contaminated materials.
  - Pavement: Changed to a conforming design.
  - Swapped T-girder Bridge for Bebo Arch: Saving due to design change, noting discussions around constructability may reverse decision.
  - Other: Traffic control reduction (previously % based)
  - Client Cost and design: Previously % based and considered low previously.
  - Risk: Function of increased base cost, noting still under development.
  - Escalation: Not considered during options analysis.



BEBO BRIDGE FOR NORTH DEVON LINK ROAD

# Key accomplishments in May 2024



Site Visit 14 May 2024: with CJC Management, Wassabi Group and WSP

## Governance, Site Visits & Workshops

Project Control Group: Ongoing PCG and fortnightly meetings held with TfNSW and Reconstruction Authority

Constructability Site Visit: was held on 14 May and included a detailed site assessment of how the project would be constructed

Multi-Criteria Assessment Workshop: Held 2 May 2024 and outcomes agreed

Design Development: Design Report has been issued in draft including a comprehensive restoration case.

Delivery Strategy: Workshop held on 21<sup>st</sup> May and draft report issued

Risk Workshop No.2 and 3: Held on 8<sup>th</sup> & 13<sup>th</sup> May with an online collaborative workshop.

Governance: Ongoing weekly design and PM meetings

Wolgan Rd - Restoration Assessment Report: Development of the report to detail why restoration is not an option.

Draft Deliverables: Currently reviewing draft deliverables that will make up the funding application at the end of June.

# Post Funding Program

Wolgan Valley Reconstruction Project

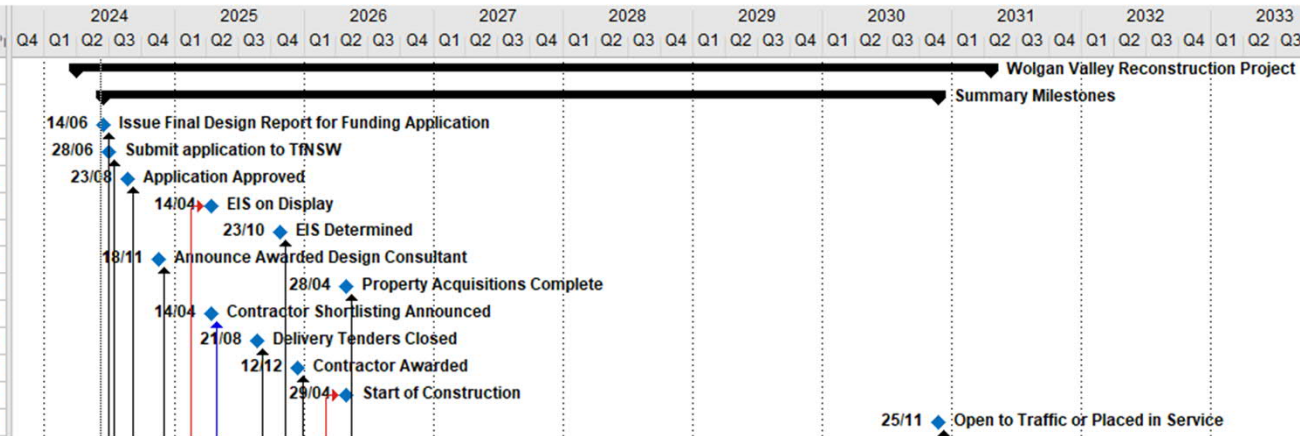




# Post Funding Program

## Preliminary and requires key inputs

Task Name	Duration	Start	Finish
Wolgan Valley Reconstruction Project	353.6 wks	Mon 1/04/24	Mon 21/04/31
Summary Milestones	321.8 wks	Fri 14/06/24	Mon 25/11/30
Issue Final Design Report for Funding Application	0 wks	Fri 14/06/24	Fri 14/06/24
Submit application to TfNSW	0 wks	Fri 28/06/24	Fri 28/06/24
Application Approved	0 wks	Fri 23/08/24	Fri 23/08/24
EIS on Display	0 wks	Mon 14/04/25	Mon 14/04/25
EIS Determined	0 wks	Thu 23/10/25	Thu 23/10/25
Announce Awarded Design Consultant	0 wks	Mon 18/11/24	Mon 18/11/24
Property Acquisitions Complete	0 wks	Tue 28/04/26	Tue 28/04/26
Contractor Shortlisting Announced	0 wks	Mon 14/04/25	Mon 14/04/25
Delivery Tenders Closed	0 wks	Thu 21/08/25	Thu 21/08/25
Contractor Awarded	0 wks	Fri 12/12/25	Fri 12/12/25
Start of Construction	0 wks	Wed 29/04/26	Wed 29/04/26
Open to Traffic or Placed in Service	0 wks	Mon 25/11/30	Mon 25/11/30



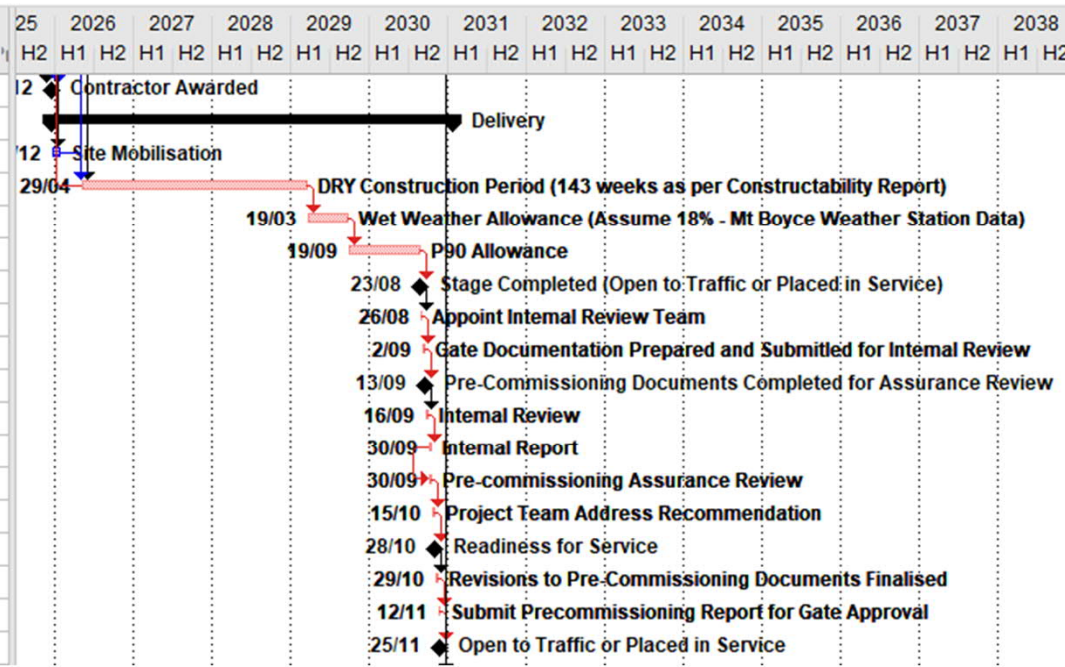
- Construction Period – 143 weeks DRY
- Wet Weather – 26 weeks (Assume 18% - Mt Boyce Weather Station Data)
- P90 Risks: 376 days (52 weeks) added currently
- Assumes 2 month funding application assessment

- EIS: Assumes the Planning Approval Pathway to be a EIS. A REF would save a significant amount of time to the Planning Approval process
- Activities such as Detailed Design and Planning Approvals Consultant procurement could alleviate the program.

# Post Funding Program

Preliminary and requires key inputs

Task Name	Duration	Start	Finish
<b>Contractor Awarded</b>	0 wks	Fri 12/12/25	Fri 12/12/25
<b>Delivery</b>	<b>254.8 wks</b>	<b>Mon 15/12/25</b>	<b>Mon 20/01/31</b>
Site Mobilisation	4 wks	Mon 15/12/25	Fri 23/01/26
<b>DRY Construction Period (143 weeks as per Constructability Report)</b>	143 wks	Wed 29/04/26	Fri 16/03/29
Wet Weather Allowance (Assume 18% - Mt Boyce Weather Station Data)	26 wks	Mon 19/03/29	Tue 18/09/29
P90 Allowance	12 mons	Wed 19/09/29	Fri 23/08/30
Stage Completed (Open to Traffic or Placed in Service)	0 wks	Fri 23/08/30	Fri 23/08/30
Appoint Internal Review Team	1 wk	Mon 26/08/30	Fri 30/08/30
Gate Documentation Prepared and Submitted for Internal Review	2 wks	Mon 2/09/30	Fri 13/09/30
Pre-Commissioning Documents Completed for Assurance Review	0 wks	Fri 13/09/30	Fri 13/09/30
Internal Review	2 wks	Mon 16/09/30	Fri 27/09/30
Internal Report	2 wks	Mon 30/09/30	Mon 14/10/30
Pre-commissioning Assurance Review	2 wks	Mon 30/09/30	Mon 14/10/30
Project Team Address Recommendation	2 wks	Tue 15/10/30	Mon 28/10/30
Readiness for Service	0 wks	Mon 28/10/30	Mon 28/10/30
Revisions to Pre-Commissioning Documents Finalised	2 wks	Tue 29/10/30	Mon 11/11/30
Submit Precommissioning Report for Gate Approval	2 wks	Tue 12/11/30	Mon 25/11/30
<b>Open to Traffic or Placed in Service</b>	<b>0 wks</b>	<b>Mon 25/11/30</b>	<b>Mon 25/11/30</b>





# Any Questions

Christopher Wassef



[christopher.wassef@lithgow.nsw.gov.au](mailto:christopher.wassef@lithgow.nsw.gov.au)



Senior Project Manager





# Project Background

Wolgan Valley Reconstruction Project

# Project Background

The Wolgan Road has been closed since November 2022, due to damage caused by a landslide and rockfall onto the road in several sections.

Lithgow Council (Council) is undertaking work to identify an appropriate permanent road solution.

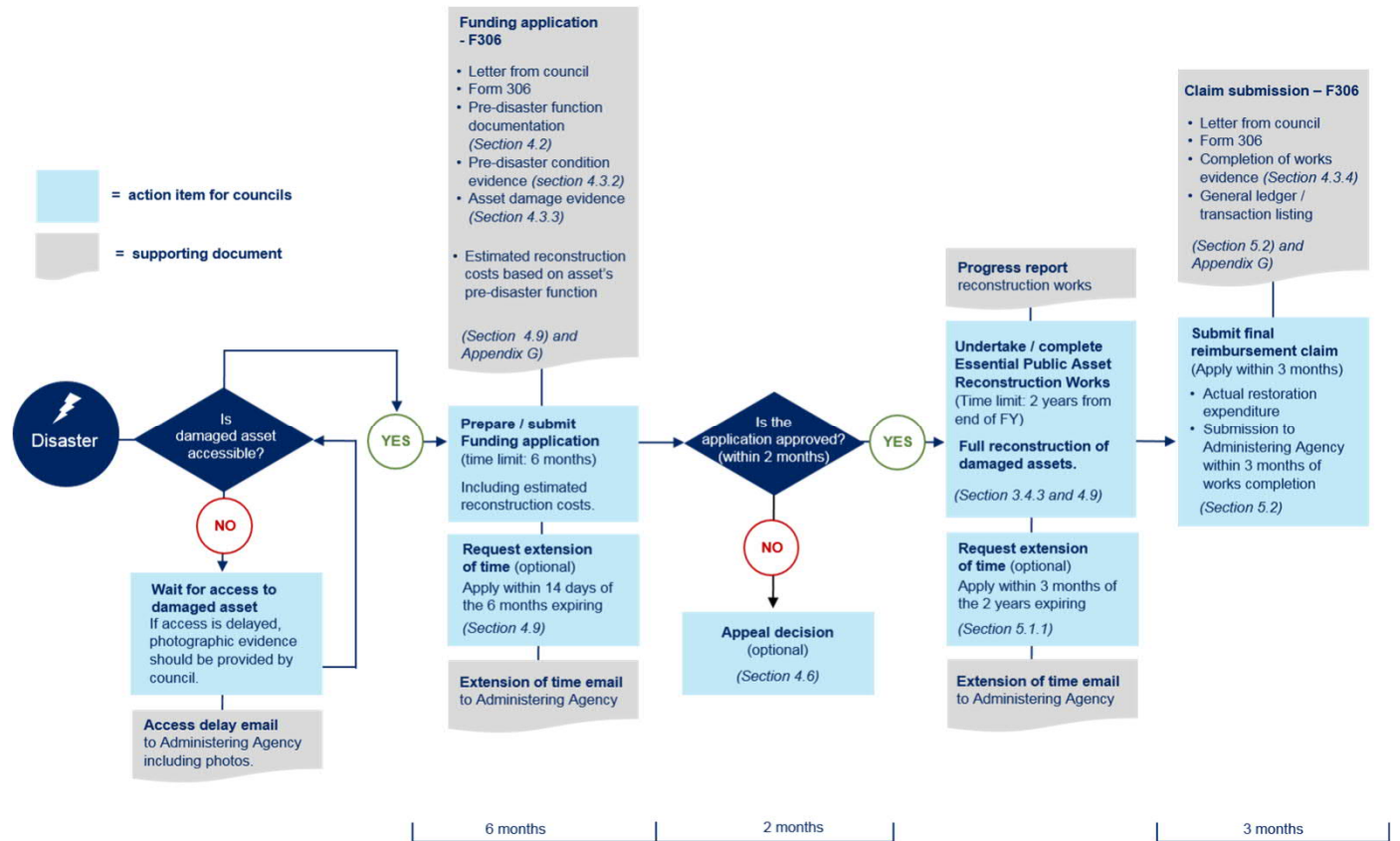
The structural failure of the Wolgan Road has been deemed a disaster and is therefore eligible for funding under the Disaster Recovery Funding Arrangements, funded by the Australian Government's National Emergency Management Agency,



Figure 5: Looking south at Hazard 2B, photograph taken 10<sup>th</sup> October 2022

# Funding Application

- Lithgow City Council is seeking external funds to replace the now condemned Wolgan Rd within Wolgan Valley.
- Under the [NSW Disaster Assistance Guidelines](#) (DAG), the NSW Government provides financial assistance to councils to restore essential public assets that are damaged as a direct result of an eligible disaster.
- This assistance is partially supported by the Australian Government under the Disaster Recovery Funding Arrangements (DRFA).



Flowchart – Essential Public Asset Reconstruction Works