

**ASSISTANT GENERAL MANAGER ENGINEERING SERVICES REPORT****ITEM 11.2 SF2459 240419 LANES BRIDGE BOWRAVILLE - PROGRESS REPORT NO7**

**AUTHOR/ENQUIRIES:** Paul Gallagher, Assistant General Manager - Engineering Services; Matthew Leibrandt, Manager Infrastructure Services; Clint Fitzsummons, Manager Assets

**SUMMARY:**

This report provides Council with the seventh progress report on the replacement of Lane's bridge.

The anticipated date to have traffic over the new bridge has now been extended to mid-late May 2019, following the late arrival of specialised deck joints and the recent wet weather which has hindered the pouring of the deck and wing wall. The various street furniture, line marking and site rehabilitation and beautification works will be completed by 30 June.

The demolition of the existing bridge will now be delayed until October following a small colony of Southern Myotis micro-bats returning to roost in a section of the bridge. The delay in the demolition will also impact on the river bed reinstatement and rock revetment required under the approvals for construction and will result in a revote of \$300,000.

The expenditure of the bridge construction remains on track within the approved \$2.7million budget having expended \$2,087,811.00 at 16 April 2019 (inclusive of both financial years).

**RECOMMENDATION:**

- 1 That Council receive and note the seventh progress report on the replacement of Lanes Bridge as at 16 April 2019.
- 2 That Council carry forward to the 2019/2020 Budget \$300,000 on WO 3085 for Lanes Bridge for the demolition of the old timber bridge, river bed reinstatement and rock revetment.

**OPTIONS:**

Receive the report.

**DISCUSSION:*****Current expenditure:***

The budget allocation for the bridge project is \$2.7million. At the time of preparing this report the current expenditure at 16 April 2019 inclusive of both financial years is \$2,087,811.00 encompasses the expenditure of the tenders and direct costs as follows:

<b>Project Budget</b>	<b>Expenditure</b>	<b>Project Expenditure to date (inclusive of two financial years)</b>	<b>Remaining Budget</b>
\$2,700,000.00	\$162,171.00 expenditure within the 2017/18 financial year \$1,925,641.00 expenditure within the 2018/19 financial year \$914,063.00 expenditure for fixed	\$2,087,811.00	\$612,189.00

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	<p>contract tender costs (includes crane hire, piling and supply of precast concrete elements).</p> <p>\$1,173,749.00 - direct costs (includes wages, on-costs and external consultants, bridge design and contribution and compensation of \$45k towards the raising of 8 High Street) Installation of culverts and road works.</p>		
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- Notable costs which have already been accounted for include the tenders for the bridge works, precast culverts, bridge guardrails, steel tie down brackets and consulting fees and installation of culverts.
- Notable costs which have not yet been accounted for include Bowraville road approach, installation costs of guardrails, bridge lighting, pedestrian fencing, river bed reinstatement and rock revetment and the demolition of the old timber bridge.
- Notable costs which are in progress include the road works and materials to the bridge approaches.

**Environmental considerations:**

Micro Bats

The demolition of the existing bridge will now be significantly delayed by the discovery of a small colony of micro-bats roosting in the old bridge, which are believed to be Southern Myotis.

Council undertook its due diligence in the pre-design phase and commissioned an ecological report by Ecosure Pty Ltd to support the Review of Environmental Factors (REF) as part of the planning process. Ecosure reported that there were no bats found in their document 'Ecological Assessment Lanes Bridge Bowraville – Final Report' (September 2018), and determined that it was unlikely that the bridge would have any effect on any endangered or threatened species.

Whilst the report concluded that there were no bats present at the Lanes Bridge site, discussions with locals and the structures crew seemed to indicate that there was a high likelihood of bats in the area. In order to avoid any unexpected disruptions to the construction process, Council staff immediately engaged a bat survey from Future Ecology, who determined that there was indeed some bat activity in the area. Recordings of the bat calls were analysed and it was determined that there was a presence of two threatened species, namely, the Southern Myotis and Little Bentwing-Bats.

The recommendation from the ecologist was that bat boxes be installed on the new bridge and in the surrounding area to rehouse displaced bats once the existing bridge is demolished. However the existing bridge must now remain in place until at least October until the bat breeding season is completed.

It is anticipated that this would not pose a problem, as the existing bridge was set to remain until the end of the construction process, when traffic will be allowed on the new bridge, and only two small portions of the bridge would be removed at the location for the new piles. At this time there were no maternal roosts in the locations where the new piles were to be placed and the presence of micro bats in the bridge has not hindered the construction of the new bridge.

A routine ecological inspection by Future Ecology Pty Ltd, has identified approximately 60 micro-bats are now roosting in a section of the existing timber bridge. In accordance with the ecologist's recommendation, the Council bridge crews were immediately notified and an exclusion zone was put in place to minimise disturbance.

Council's Engineering Designer has contacted an ecologist specialising in micro-bats, and the NSW Office of Environment and Heritage, and will be meeting with them on site to determine how to proceed with the

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demolition of the existing bridge. Depending on the outcome of this meeting and the corresponding applications to manage the bats, the installation of nesting boxes and a suitable method of closing out the roosts being implemented, it is likely that the existing bridge will not be fully demolished until the October 2019.

***Progress report on the Construction of Lanes Bridge:***

Since the last report, construction on the new bridge has been delayed slightly by the recent wet weather and the late arrival of specialised deck joints which were delivered a month later than indicated on the quote. This has deferred the pouring of the last deck and approach slab by three weeks, and traffic is now expected to be allowed on the new bridge around mid to late May. Various street furniture, line marking and site rehabilitation and beautification works will be completed by the 30 June prior to the end of the financial year.

At the time of preparing this report:

- The bridge structure itself has been constructed;
- all three deck spans have now been poured, and the final approach slab is now prepared ready for pouring. Both blade walls are completed. The works crews will shortly begin installing guardrails and other street furniture;
- the culvert base slab has been poured and precast elements placed. The wing walls and curtain walls for the culvert will be formed once the southern approach slab has been completed; and
- the roadworks for the embankment for the northern approach to the bridge has been constructed and is now under traffic. Council's roads crews will commence constructing the southern embankment once the final deck and wing walls have been poured.

***Communication and Media Release:***

The following media releases have been issued:

- 24 May 2018 - Nambucca Shire Council has resolved to replace Lanes Bridge at Bowraville with an all concrete structure at an estimated cost of \$2.7million.
- 24 September 2018 - Construction of Lanes Bridge, Bowraville is about to commence.
- 19 November 2018 – Planned significant traffic delays
- 7 December 2018 – Amended timetable for traffic delays

Progress reports:

- Progress Report No1 placed on Council's website.
- Progress Report No2 placed on Council's website
- Progress Report No3 placed on Council's website
- Progress Report No4 placed on Council's website
- Progress Report No5 placed on Council's website
- Progress Report No6 placed on Council's website

All road closures alerts have been publicised on MyRoadInfo and the existing road closure notice to emergency and transport services. The above information can also be found on Council's website and MyRoadInfo.

**CONSULTATION:**

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General Manager  
Engineer Designer  
Surveyor  
Manager Infrastructure Services  
Structure's Coordinator  
Roads Coordinator

**SUSTAINABILITY ASSESSMENT:****Environment**

There are significant environmental implications associated with the construction of the new bridge. These have been investigated and mitigation measures included within the project plan.

**Social**

There are significant social implications associated with the construction of a new bridge, should the road be closed, and residents and industry be required to be diverted for a period of up to 7 months through construction. Tallowood Steiner School have advised of the implications to their staff and students as follows:

*Tallowood Steiner School  
Staff members total: 10  
Students total: 40*

- 1 *6 staff members (both permanent and casuals) affected by this:  
Extra 32 minutes travel (without any traffic) one way = Extra 1h and 4 minutes per day  
Extra 29.1 kilometres one way = Extra 58.2 kilometres per day*
- 2 *26 students out of 40 affected:*
  - a *Students that travel to school mostly by private car: 7 students between the ages of 5 and 7 will have between 40 minutes to 1h 4 minutes extra travel per day.*
  - b *Bus from North Arm Road: 12 students between the ages of 5 and 12 extra 1h 4 minutes travel per day.*
  - c *Busses from Missabotti: currently students travel from Missabotti to Bowraville, then take bus to Tallowood Steiner School. At the end of day, they take the bus to Bowraville, then change bus to Missabotti busses: 7 students between the age of 6 and 12 will have an extra 2h 8 minutes extra travel per day.*

**Economic**

There are significant economic implications associated with construction of the new bridge should the road be closed and residents and industry be required to be diverted for a period of up to 7 months through construction. The bridge option chosen mitigates full closure and traffic diversion.

The closing of the whole road pavement has already been met with significant community angst following the story that was prematurely aired on NBN News without seeking any formal advice from the Council and the Engineering Department

Post construction, the bridge will increase economic outlook with less closures and increased productivity.

**Risk**

There are significant risk implications associated with construction of the new bridge. These have been investigated and mitigation measures included within the project plan. During the course of construction there is the potential of significant flooding of the area during large storm events. The option being recommended reduces the risk in that there is no side track, the bridge deck will be higher than the existing deck level and a single lane of traffic under traffic lights is maintained.

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**FINANCIAL IMPLICATIONS:****Direct and indirect impact on current and future budgets**

The cost of the bridge is generally covered from grants. Council will now use \$1m from unexpended loans funds in lieu of taking T-Corp loan to match the federal grant.

**Source of fund and any variance to working funds**

Council has signed a funding agreement for \$1M for the Federal funding (matched by Council through loan funds) and most recently signed the funding agreement for \$500,000 provided from the State Government under the 'Bridge Timber Replacement' program.

The road is classified as a Regional Road and funding can be provided from within the Block Grant.

**Service level changes and resourcing/staff implications**

There is a proposed improved service level associated with the raising of the bridge deck by 1.75m, which increases the flood immunity for the community. At present all work has been undertaken in house and tenders let for works outside the scope of Council's bridge team.

**ATTACHMENTS:**

There are no attachments for this report.