



KEMPSEY
Shire Council

DIRECTOR SHIRE SERVICE'S REPORT

13 September 2005

DSS6 TIMBER BRIDGES – BRIGGS CREEK
FILE: * MGR

SUMMARY:

Reporting on the cost of work required to repair the failed timber bridge over Briggs Creek.



Briggs Creek is located on Five Day Creek Road, Five Day in the north west of the Shire and is approximately 91 km from Kempsey. The existing bridge is a single span log bridge of approximately 19.0 metres in length with a running surface comprising of natural gravel. There are nine girders approximately 19.0 m by 600mm diameter placed side by side with gravel placed over them. A number of these girders have either snapped or split longitudinally making the bridge unserviceable.

There have been numerous requests for Council to repair the bridge to enable logging trucks to service properties further along Five Day Creek Road. Five Day Creek Road is a dedicated public road but this section of road is not regularly maintained by Council.

Council staff have been negotiating with Mr Percy White, the adjoining landowner, for quite some time to try and establish a causeway crossing down stream of the existing bridge. Mr White has refused permission to allow traffic over his property until road closures at a different location on Five Day Creek Road are finalised. The legal documents to finalise these road closures are still awaiting Mr & Mrs White's signature.

There are a number of options to repair the existing bridge. Due to the structural unsoundness of the existing bridge, the existing girders could not be used again. Estimates of the costs of two alternatives to replace the bridge have been completed.

Option 1 - Rebuild the existing bridge

To rebuild the existing bridge would require the demolition of the existing structure and the construction of new sills and girders in the current location.

Council has received an offer of the supply of all timber required to replace the bridge at no cost from Lymarn Holdings Pty Ltd. This company is one of a number that intend to harvest timber from property further along Five Day Creek Road and as such want the bridge replaced as soon as possible.

Due to the remoteness of the site, a high proportion of the cost would be used to establish the site with plant and equipment. It is estimated that it would take three weeks to complete the construction at a cost of \$85,000. This cost does not include the timber cost. The expected life of a timber bridge is approximately 50 years.

Option 2 – Installation of Hel-core Pipes

As an alternative to rebuilding the bridge, the placement of Hel-core (corrugated steel) pipes has been investigated. The placement of Hel-core pipes has the benefits of a shorter construction time, a reduction in the plant and equipment needed for installation and can be installed in an alternate location to maintain current access.

Based on available information of the creek system and a rainfall recurrence interval of 1 in 2 years, four 1650 mm diameter pipes would be required with the allowance for higher storm events crossing the road as a causeway.

The estimate for this option allows for the preparation of the base, installation and back filling of the pipes, construction of sand bag headwalls and placement of a gravel pavement. It is estimated that it would take two weeks to complete the pipe installation at a cost of \$55,000. The estimated life of such a structure is approximately 50 to 100 years.

The bridge is not listed on Council's bridge register as being maintained by Council.

Council has not allocated any funds in the current budget to carry out repairs to this bridge.

It is recommended that if Council wishes to carry out repairs to the bridge then Option 2 – Installation of Hel-core Pipes should be approved with funding sourced from Working Funds.

REPORT IMPLICATIONS:

- ***Environmental***

The implication of the recommendation would be the reinstatement of a permanent, safe and economically viable

crossing of an intermittently running stream with little disruption to the immediate area.

- ***Social Implications***

The implication of the recommendation would be to enable the provision of employment for people involved in the harvesting of timber in the Shire and to provide permanent and safe access.

- ***Economic (Financial)***

No allocation has been made in this financial year for this project. The implication of the recommendation would be the reduction of Working Funds by \$ 55,000.

- ***Policy or Statutory***

Nil

- ***Directors Review***

Council is asked to support the recommendation.

RECOMMENDATION:

That the repairs to the bridge over Briggs Creek on Five Day Creek Road be completed using Option 2 – Installation of Hel-core Pipes with funding of \$55,000 sourced from Working Funds.

.....

**K J Finnie
DIRECTOR SHIRE SERVICES**