

East Front Road, Mannum

REVIEW OF MANAGEMENT OPTIONS FOR FOUR RIVERBANK COLLAPSE HIGH-RISK SITES

East Front Road is about 4km upstream of Mannum. It is at the edge of the flood plain on land where fill was applied in the 1970s or 1980s to raise the level of the road.

A section of the road has been closed since April 2010 due to tension cracks in three locations. In March 2011 two cavities formed in the road. Permanent gates have been installed at both ends of the road and residents have been advised of the risk and advised not to enter their properties.

The cause of riverbank collapse

Collapses of some sections of the banks of the River Murray began in February 2008 as a result of very low water levels in the lower reaches of the river in South Australia. As a result, some sites were closed or access was restricted. Inflows from the Murray-Darling Basin have restored river levels to the normal operating range. However, some sites continue to show instability.

The 2012 site review

The Department of Environment, Water and Natural Resources commissioned a review by Coffey Geotechnics of management options for four high-risk sites. It determined that sites which have already been affected by significant cracking may be particularly vulnerable to collapse.

Findings and recommendations

Monitoring has identified continued deterioration of the road, although the movements are small.

“In our opinion, in its present condition, the road close to the river is vulnerable to slope instability during periods of low river level. This could involve relatively rapid movements of a metre or more, resulting in a drop or void in the road and movement of the landslide debris towards the river.

“In our opinion the existing houses in the area are not likely to be affected by slope instability as they do not appear to be underlain by soft soils.”

Options to reduce the risk of collapse at the site include:

- Lowering the level of the road to improve stability and making minor changes to the alignment
- Permanently closing the road to the public but allowing access to existing residents of the four houses
- Setting up an early warning system to monitor for movement

Next steps

The road is under the care and control of Mid Murray Council.

The Department of Environment, Water and Natural Resources has provided the investigation report to the affected councils and will continue to work with them, and the community, to achieve the best long-term outcomes for affected sites.

For more information

visit www.sa.gov.au and search for “riverbank collapse”

The investigation report, *Review of Management Options for Four Riverbank Collapse High-risk Sites*, is available at www.waterconnect.sa.gov.au

