

SKM REPORTS INTO RIVERBANK COLLAPSE – INTRODUCTION

DWLBC has recently completed investigations into Riverbank Collapse in the Lower Murray Region. The works were commissioned to occur in three phases.

Phase 1

Phase 1 was initiated in March 2009. It involved convening of a Technical Panel Workshop (10 March 2009), to provide expert advice regarding the reason for riverbank collapse, and hence potential measures for response.

This initial advice prompted the need for further investigations.

Phase 2

Phase 2 was conducted by SKM and considered information available to date on collapse events that had been recorded and identified through monitoring. It resulted in the field inspection (21-24 September 2009) of 13 sites to assist DWLBC in understanding further the issue of riverbank collapse.

The investigation identified that the process by which riverbank collapse is occurring, is through the development of tension cracks, followed by deep rotational slips and continued bank retreat through slab failures.

Following the field investigation, DWLBC were informed by SKM that the situation of riverbank collapse in the Lower Murray is very serious, and that critical timeframes apply to the need for management actions to be implicated.

This resulted in the escalation of Riverbank Collapse to status of a State Hazard, under the direction of the State Emergency Management Committee (SEMC).

Phase 3

Phase 3 (October-December 2009), built upon the understandings gained in Phase 1 and 2, by including geotechnical investigation of seven sites nominated by DWLBC. The sites nominated included five identified in the Phase 2 results: (Sturt Reserve, Woodlane Reserve, Caloote, East Front Road and South Punyelroo), as well as 2 further infrastructure asset sites (Walker Flat waste disposal station, and Swan Reach waste disposal station).

The seven sites selected for geotechnical investigation were sites where there was a high risk of Riverbank Collapse occurring, but also where the associated consequence of collapse occurring in those areas to be considered high. This included consideration of - Injury/Loss of Life, Major Property Loss, High Traffic, High Use, and Assumed Value.

It is imperative to acknowledge that of the thirteen sites investigated in Phase 2, twelve have received classification as “critical”, with regard to their potential to result in a collapse event.

The omission of several of these sites from the Phase 3 investigation, DOES NOT imply that they are no longer considered to be high risk sites.

Recommendations made in both Phase 2 and Phase 3 are considered current and must be followed by the relevant landholders.

Peer Review

A formal peer review analysis of the work has been conducted by Golder Associates. The findings and recommendations in the peer review have been incorporated into final reports.