

Impacts of rainfall events Lockyer focal area: flood report II

Introduction

This report documents impacts of the flood event in the focal area 10 January 2011. It is an addit to *Impacts of rainfall events Lockyer focal area: 6 January 2011* (flood report I) which documents flood damage 27 December 2010.

Impacts

This rainfall event compounded damages which occurred following events December 2010. Most erosion occurred in the main channel, Fig 1 & 2. Banks collapsed along hundreds of metres with scour behind established trees and where vegetation was growing within the channel immediately upstream, Fig 1.



Figure 1: Blackfellow Creek facing south and remains of Mt Sylvia Rd. Instream vegetation immediately upstream diverted flow into bank causing scouring.



Figure 2: Extensive landslips occurred; common sites were of similar geology that had been historically cleared and frequently burnt; sites included where grasscover was well established.

Three of ten works sites assessed after this event were significantly damaged, Figures 3-5. It is also likely that further damage has occurred to a pipeline trench and other rock chutes (refer flood report I) and that bank revegetation has washed away. All works held up despite damage and evidence suggests that works successfully controlled some sediment into the waterway, Fig 5b.

Access is 4WD only (or helicopter or horse!). Contact is limited to a few landholders who are acting as relays. Repairs to works are limited by access and availability of plant operators, and are generally not a priority for landholders at this point in time. Repairs to works are likely to cost in excess of \$40 000. Landholders are being encouraged to apply for QRAA funding. Some landholders have also identified areas for new erosion control works.

The following has been observed to lessen the likelihood of bank collapse:

- battering back vertical banks and reestablishing bank vegetation,
- dedicated wide (10m+ each bank), thickly vegetated riparian zones along full reaches, and
- managing growth of vegetation in the main channel.

21 January 2011

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Sites of works



3. 18.01.11-
New creek meander into paddock, right; destroyed fencing, gates, troughs, pipe; fencing erected for groundcover management December



4a. 12.01.2011-
moderate rock movement will require excavator repair but chute essentially intact

2010



4b. 5.07.10-
main channel with rock chute in the background; reference point circled



4c. 12.01.11-
Chute survived despite bank scouring; further erosion controlled



5a. 09.07.10-
during construction of lower of series of two rock chutes; reference point circled



5b. 19.01.11-
lower rock chute buried in sediment; some rocks appear to be washed away, right, but essentially intact; note

increase in channel width and sheer scour opposite bank



5c. 27.09.10-
upper chute beside road culvert soon after construction



5d. 19.01.11-
chute appears intact and controlled erosion; associated drain controlled sediment into

waterway