

21 August 2007

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Department of Environment and Climate Change
8-20 Edwardes Street
Deniliquin, NSW 2710

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Dear Peter,

Kooyong park Moama – Rural Levee Realignment

As discussed recently we have undertaken a hydraulic investigation of the proposed levee realignment at “Kooyong Park”. Kooyong Park is located just east of the Moama township and is a rectangular parcel of land bounded by Moama Street to the west, Holmes Street to the south and Edward Street to the east as shown in Figure 1. The relevant licensed levee (ref. 50CW805647) is shown in Figure 2.

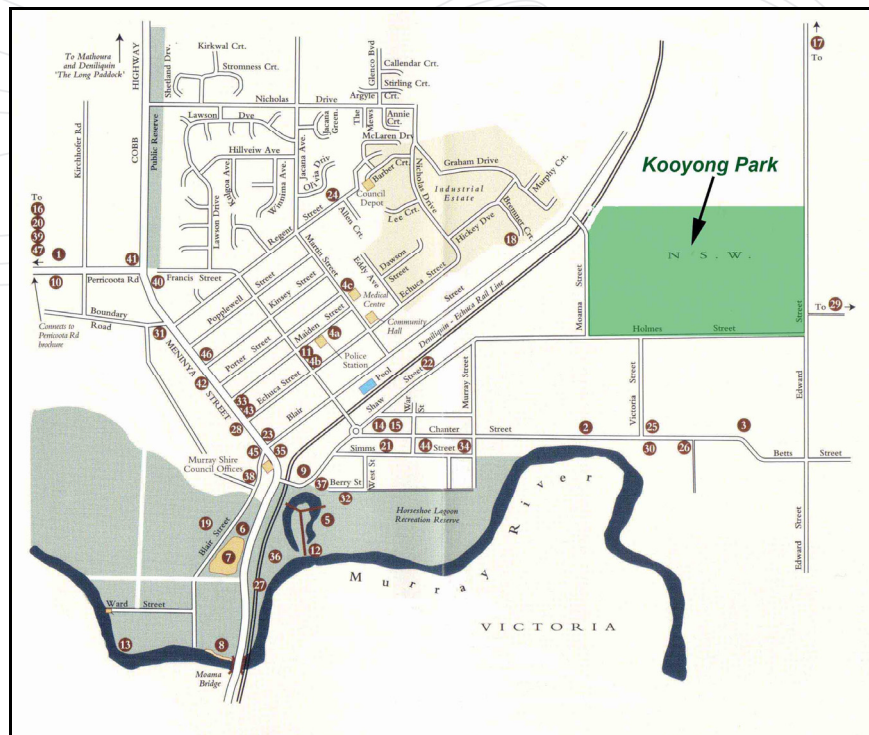


Figure 1 Site locality



Figure 2 – Levee Realignment

This review has been based on:

- A site inspection
- Review of the Moama Floodplain Management Study (SKM, 2001)
- Discussions with DECC and Murray Shire

The subject site is within the River Murray floodplain and is subject to flooding in extreme events with overland flow expected to move south along Old Deniliquin Road past the eastern boundary of the site. According to the Moama Floodplain Management Study, the site is on relatively high ground with about half the area above the 95 m contour (the recommended design flood level for Moama is 95.63 m which corresponds to a 200 year ARI flood peak according to the report)

Mapping from the Moama Floodplain Management Study shows that the site is free of floodway or flood storage classification for a 100 year ARI. For the 200 year ARI flood event there is no floodway overlay, however there is a high hazard flood storage overlay for the site. The classification of the area within the levee is no different to the area that is proposed to be included within the realigned levee, as shown in Figure 3.

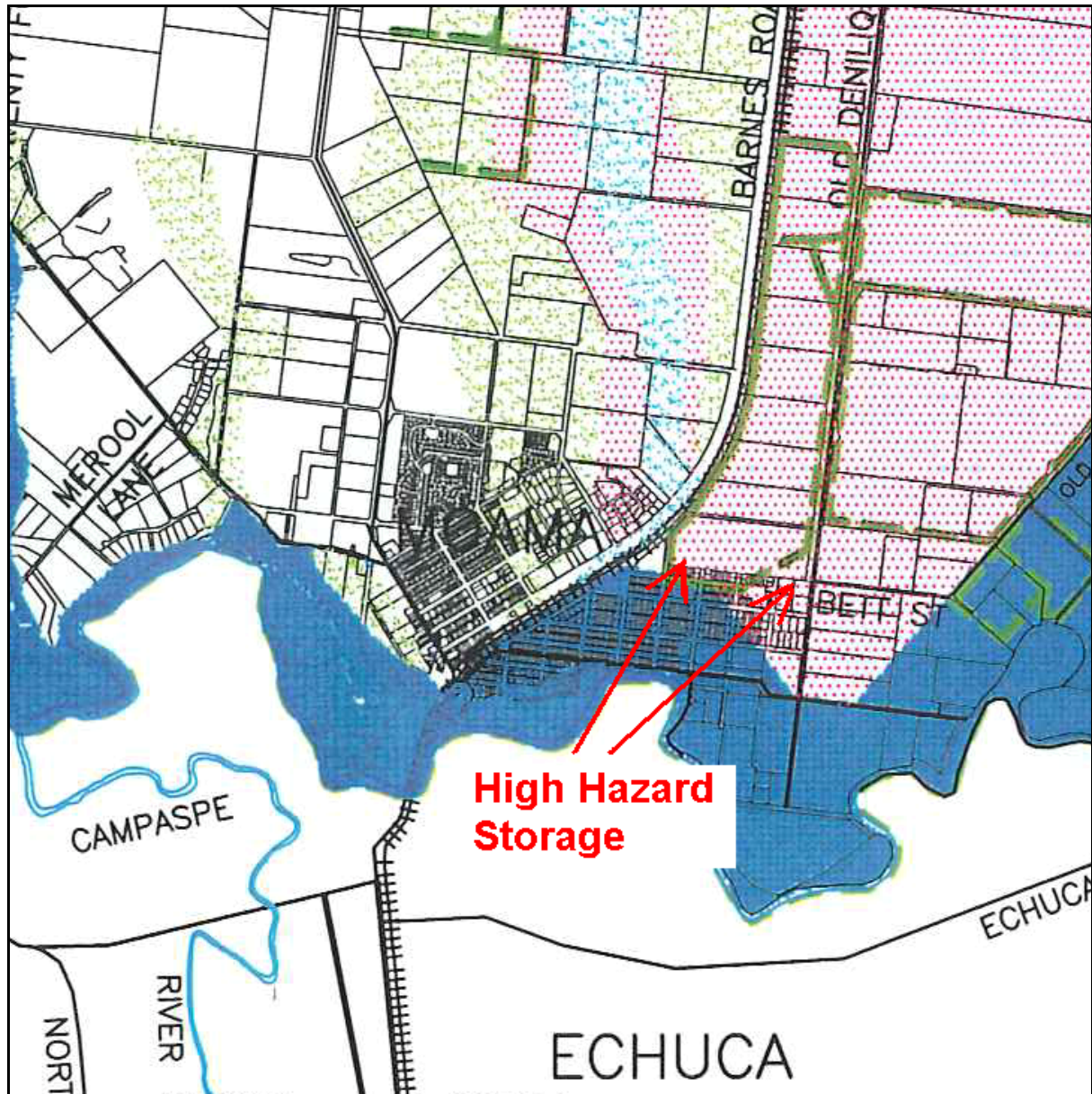


Figure 3 – Storage Overlay

The levee formation on site was observed to be an earth embankment associated with an irrigation supply channel. The levee bank is approximately 0.5 to 1 m high and cuts diagonally across the south-east corner of the site. The location of the present levee appears to have coincided with the placement of the irrigation channel rather than any floodplain conveyance requirement.

It is important to note that the numerical modelling techniques used for the Moama Floodplain Management Study are quite coarse and not sufficient to accurately define floodway and floodplain storage behaviour by current standards. As such the floodway and storage classifications are relatively broad and do not specifically take account of local conditions. Further refinement of the predicted flood conditions at and around the site could

be obtained through more detailed hydraulic modelling than has previously been undertaken. Much of the data for this analysis is readily available, however this would still require a significant investigation.

Based on the available data it is considered that the proposed levee realignment will have:

- No significant impact on floodplain conveyance and hence flow distribution
- No resulting change in floodplain storage
- No significant impact on floodplain levels or velocities

Please contact me if you have any queries relating to this information.

Yours sincerely

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