

Our Ref: DJL: L.N1267.002.doc

06 July 2010

General Manager
Shoalhaven City Council
PO Box 42
NOWRA 2541

Attention: Mr Wayne Brighton

Dear Wayne,

RE: NORTH NOWRA / BOMADERRY LINK ROAD FLOOD ADVICE

Background

This letter report provides flooding advice requested by Shoalhaven City Council (Council) in relation to the proposed North Nowra / Bomaderry Link Road options for the crossing of Bomaderry Creek. Specifically, Council has requested details of design flood inundation extents for the 1% AEP event to assist in concept design development of the required bridge crossings. The information presented utilises results from the Bomaderry Creek Flood Study undertaken by BMT WBM on behalf of Council.

The primary objective of the Bomaderry Creek Flood Study (BMT WBM, 2010) was to define the flood behaviour of the Bomaderry Creek catchment through the establishment of detailed numerical models. The study has produced information on flood extents, levels, flows and velocities for a range of design flood event magnitudes under existing catchment and floodplain conditions.

North Nowra / Bomaderry Link Road Options

Council provided BMT WBM with three route options for the proposed North Nowra / Bomaderry Link Road, referred to as a northern, central and southern route. The alignment of the three route options in the vicinity of Bomaderry Creek is shown in Figure 1. Each of the options traverses Bomaderry Creek in the general locality of the Bomaderry Gorge.

Shown for reference in Figure 1 is the simulated peak design 1% AEP flood inundation extent and flood depth from the Bomaderry Creek Flood Study. For the central and southern route option crossing locations, the design flood extents are confined within the relatively deep and narrow gorge.

The northern route option lies closer to the entrance to the Bomaderry Gorge which forms a significant hydraulic control. Figure 2 shows the simulated 1% AEP flood extent at the northern route option crossing of Bomaderry Creek in further detail.

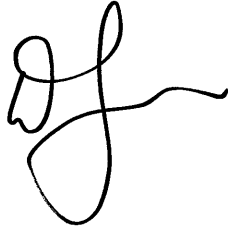
The proposed route alignment lies to the south of the existing West Cambewarra Road corridor. It is from approximately this point that the floodplain narrows rapidly into Bomaderry Gorge. At the proposed crossing location, the floodplain has narrowed considerably as indicated by the flood inundation extent shown in Figure 2.

The design 1% AEP flood level at the proposed northern route option bridge crossing is approximately 31.3m AHD.

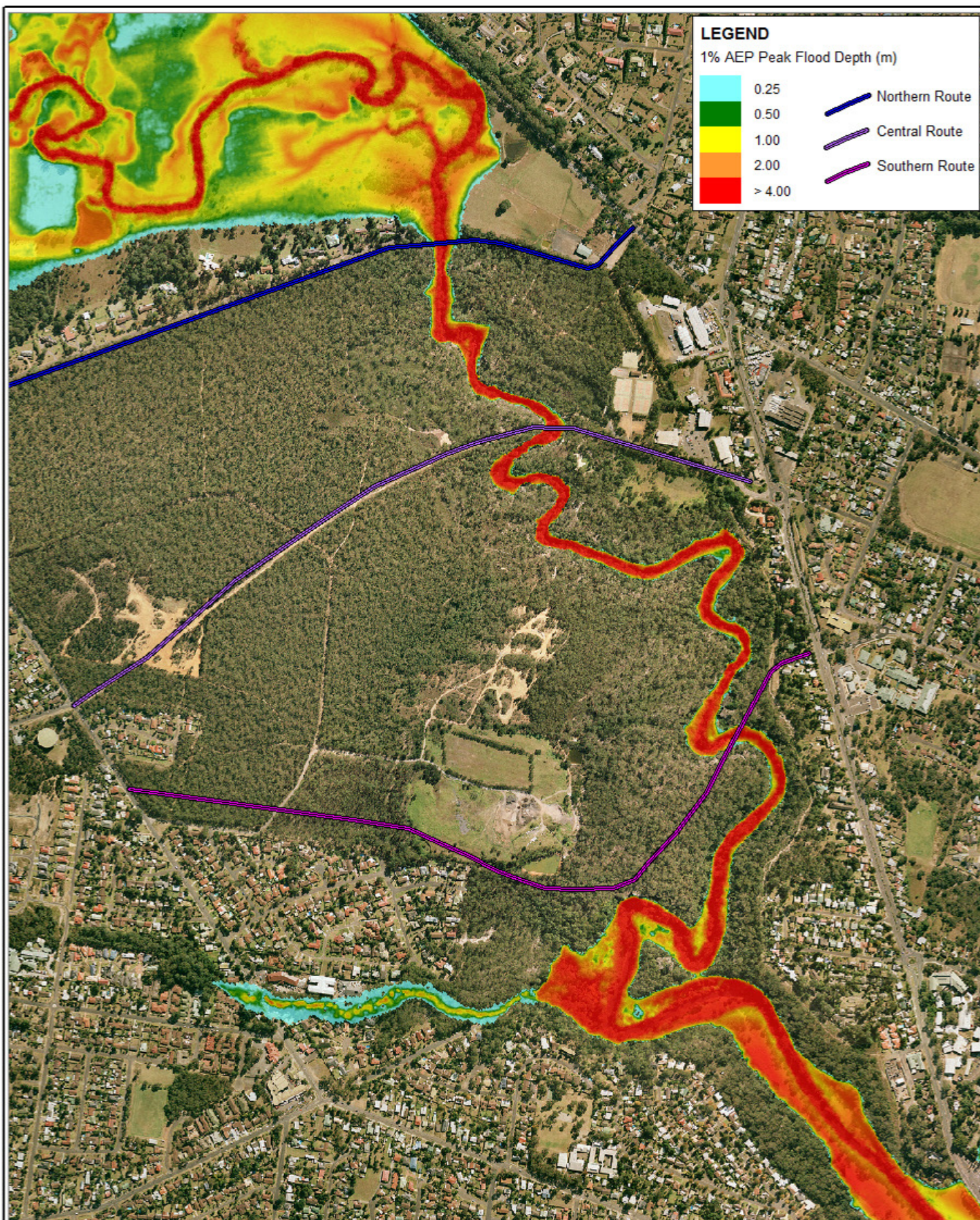
Should any further information be required in relation to flooding associated with the proposed route options or any clarification of the above information required, please contact the undersigned.

Yours Faithfully

BMT WBM Pty Ltd

A handwritten signature in black ink, consisting of a stylized 'D' followed by a horizontal line and a loop.

Darren Lyons
Associate



Title:

North Nowra / Bomaderry Link Road Options

Figure:

1

Rev:

A

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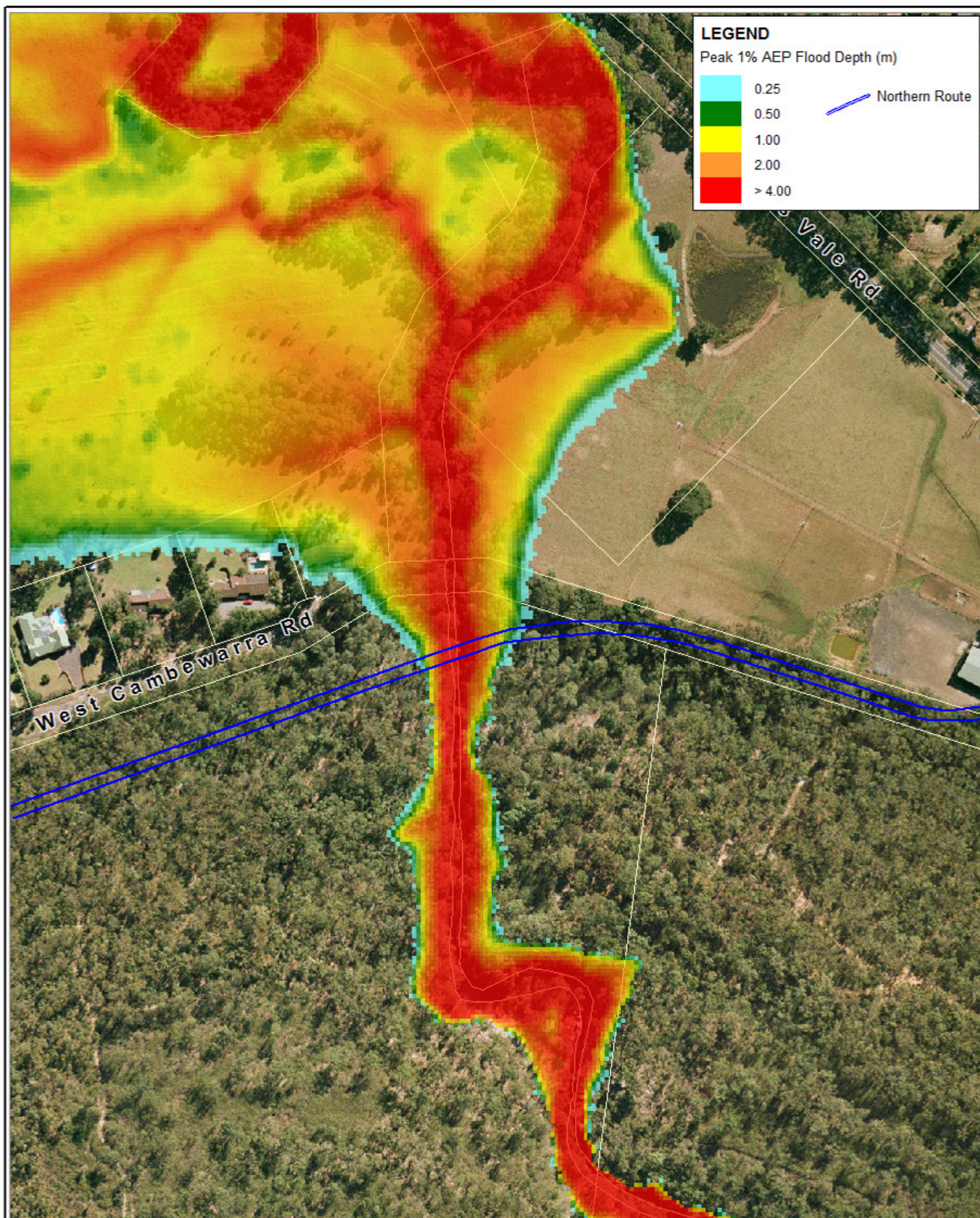
Approx. Scale



BMT WBM

www.wbmpl.com.au

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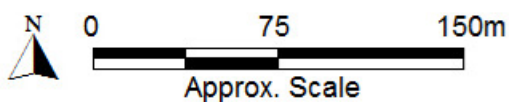


Title:
**1% AEP Peak Flood Inundation
Bomaderry Creek Crossing (Northern Option)**

Figure:
2

Rev:
A

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