

24 September 2009
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HUNTINGWOOD WEST PRECINCT SUBDIVISION PMF MODELLING

1. Introduction

In response to a subdivisional requirement of Blacktown City Council, Bewsher Consulting was commissioned to model the probable maximum flood (PMF) for the precinct post-development scenario.

2. Modelling Tasks

The modelling involved the utilisation of the same flood modelling package (MIKE-11) which was previously used in 2008 to assess the 100 year and PMF pre-development scenario adjacent to and downstream of Huntingwood West (**Reference 1**). **Figure 2** from that 2008 report, which shows both the location of MIKE-11 cross sections and PMF extent, is reproduced in **Appendix A**.

The assessment of the Huntingwood West PMF post-development regime required amendments to the eastern portions of the MIKE-11 cross sections which span the Eastern Creek floodplain between the Great Western Highway and the M4 Motorway.

GHD Drawing Nos. 21-18115-DA004, DA005, DA006, DA102, DA103 and DA104 detail the subdivision layout and a digital terrain model (DTM) defining the subdivision including:

- (a) finished levels for Road 5 (which principally defines the western boundary of the precinct);
- (b) finished levels in the adjoining lots (including the lots north of Road 5); and
- (c) the levels associated with the wetlands located between Road 5 and Eastern Creek

was provided by GHD (**Reference 2**). The DTM was then used to amend the local cross section ground levels and the MIKE-11 model was re-run.

3. PMF Model Results

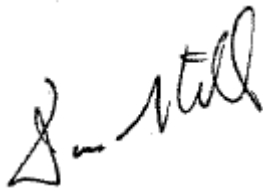
Both the base case 2008 and subdivision flood levels are listed in **Table 1** and the increases associated with the subdivisional works are regarded as minor.

It is concluded that the post-works PMF flood levels:

- (a) have no significant impact on the site, and
- (b) no significant off-site impacts.

4. References

1. Bewsher Consulting (2008) Bungarribee Precinct and Doonside Residential Precinct, Response to Blacktown City Council's 28 February 2008 Issues Listed Under "4a. Flooding". 21 April 2008. Commissioned by Landcom NSW. Bewsher Consulting Job No. J1707.
2. GHD email to Bewsher Consulting on 11 August 2009.

A handwritten signature in black ink, appearing to read 'Don Still', written in a cursive style.

Don Still
Director

TABLE 1: MIKE 11 MODELLING RESULTS**PMF FLOOD LEVELS**

	2008 Study	2009 Model (Subdivision Conditions)
MIKE-11 Cross Section ID	Flood Level (m AHD)	Flood Level (m AHD)
M4 Bridge (2620)		
EASTERN CK 2670.00	44.16	44.20
EASTERN CK 2820.00	43.80	43.84
EASTERN CK 3020.00	43.32	43.45
EASTERN CK 3170.00	42.81	42.99
EASTERN CK 3320.00	42.24	42.30
EASTERN CK 3470.00	41.93	41.96
EASTERN CK 3640.00	41.75	41.76
GWH Bridge (3690)		
EASTERN CK 3720.00	40.41	40.41
EASTERN CK 3900.00	40.00	40.00
EASTERN CK 4000.00	39.72	39.72
EASTERN CK 4190.00	39.34	39.34
EASTERN CK 4410.00	38.68	38.68
EASTERN CK 4550.00	38.23	38.23
EASTERN CK 4690.00	37.99	37.99
EASTERN CK 4930.00	37.53	37.53
EASTERN CK 5150.00	36.95	36.95
EASTERN CK 5320.00	36.72	36.72
EASTERN CK 5520.00	36.28	36.29
EASTERN CK 5640.00	36.22	36.22
EASTERN CK 5760.00	36.16	36.16
EASTERN CK 5900.00	36.10	36.10
EASTERN CK 6095.00	36.00	36.01
EASTERN CK 6290.00	35.79	35.79
Eastern Rd (6320)		

APPENDIX A

2008 PMF FLOOD MAP

