

Station Street Menangle Flood Impact Assessment

1% AEP

Peak Flood Extent and
Water Level Contours

Existing

FIGURE 10

Legend

Study Site

0.1 m Water Level Contours

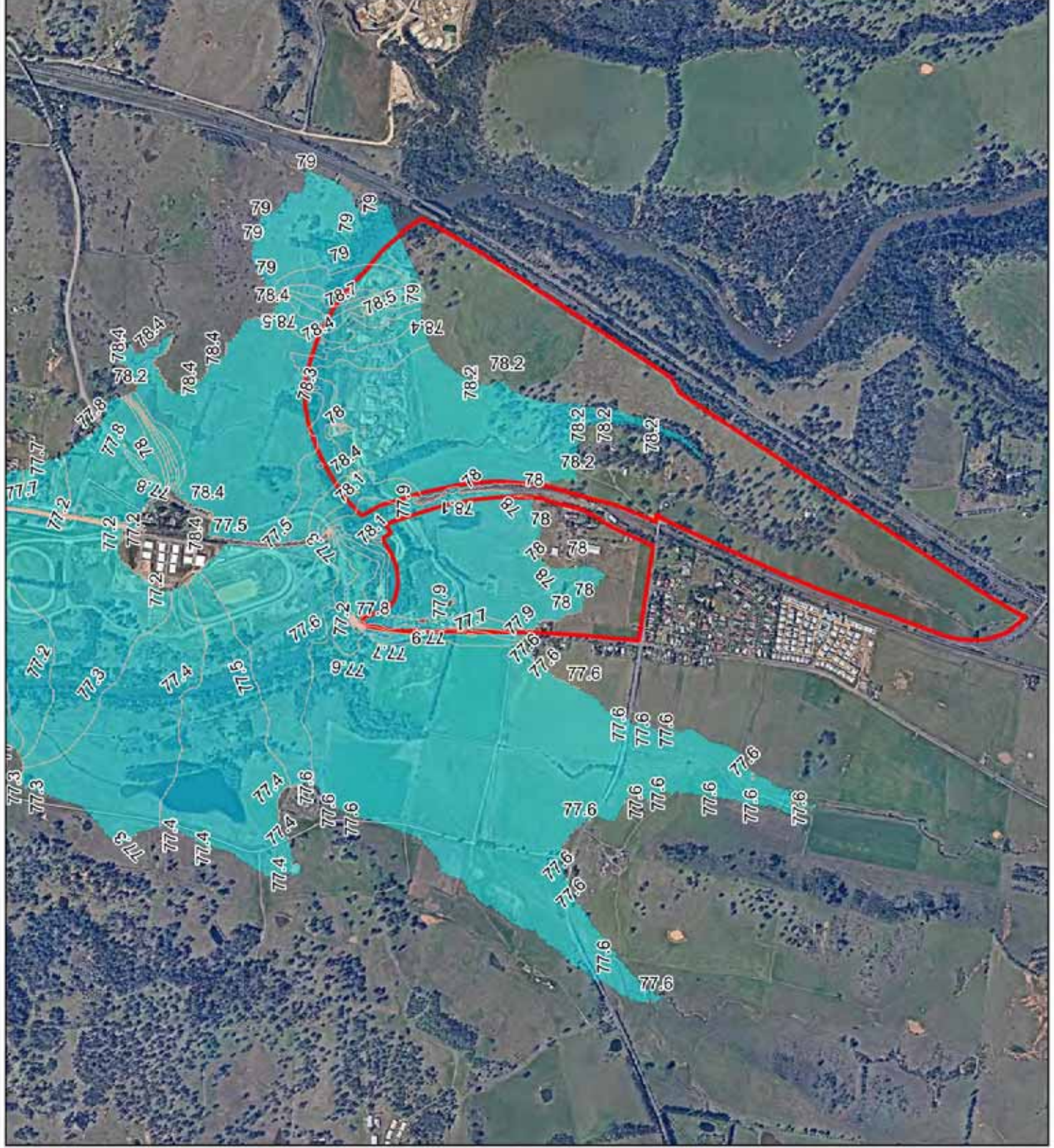
Flood Extent



1:20,000 Scale at A4



Map Produced by Cardno NSW/ACT Pty Ltd
Date: October 2016
Project: 59917040
Coordinate System: MGA Zone 56



4.2 Hydrologic Modelling

A hydrologic model of the catchment was developed by WorleyParsons (2015) as a part of Nepean River Flood study. The outputs from this model were adopted as the inflows into the hydraulic model.

The same approach and the same inflows adopted in the Nepean River Flood study were adopted in the current assessment.

4.3 Hydraulic Modelling

In order to assess the flood behaviour of the site, the existing 2D TUFLOW model of the Nepean River catchment was run to assess the flood behaviour within and downstream of the study site. It should be noted that the upstream boundary of the hydraulic model in both the 2015 Worley Parsons study and this study is located on the Nepean River just downstream of the Hume Motorway bridge crossing (refer **Figures 2 and 5**).

4.3.1 Model Topography

A rectangular grid size of 8 m x 8 m was adopted in Nepean River flood study. The same grid size was found suitable for the purpose of the current study.

Development TINs were created to represent the proposed fill platforms. The fill TIN was developed on the basis of raising the residential development layout up to the FPL namely 1% AEP flood level plus a 500mm freeboard. It was also assumed that the isolated infrastructure pad located in the north-west of the site (which has a plan area of approximately 5,000 m²) will be filled to the 1% AEP flood level. **Figure 5** shows the extents of the fill which was represented in the Proposed Conditions model.

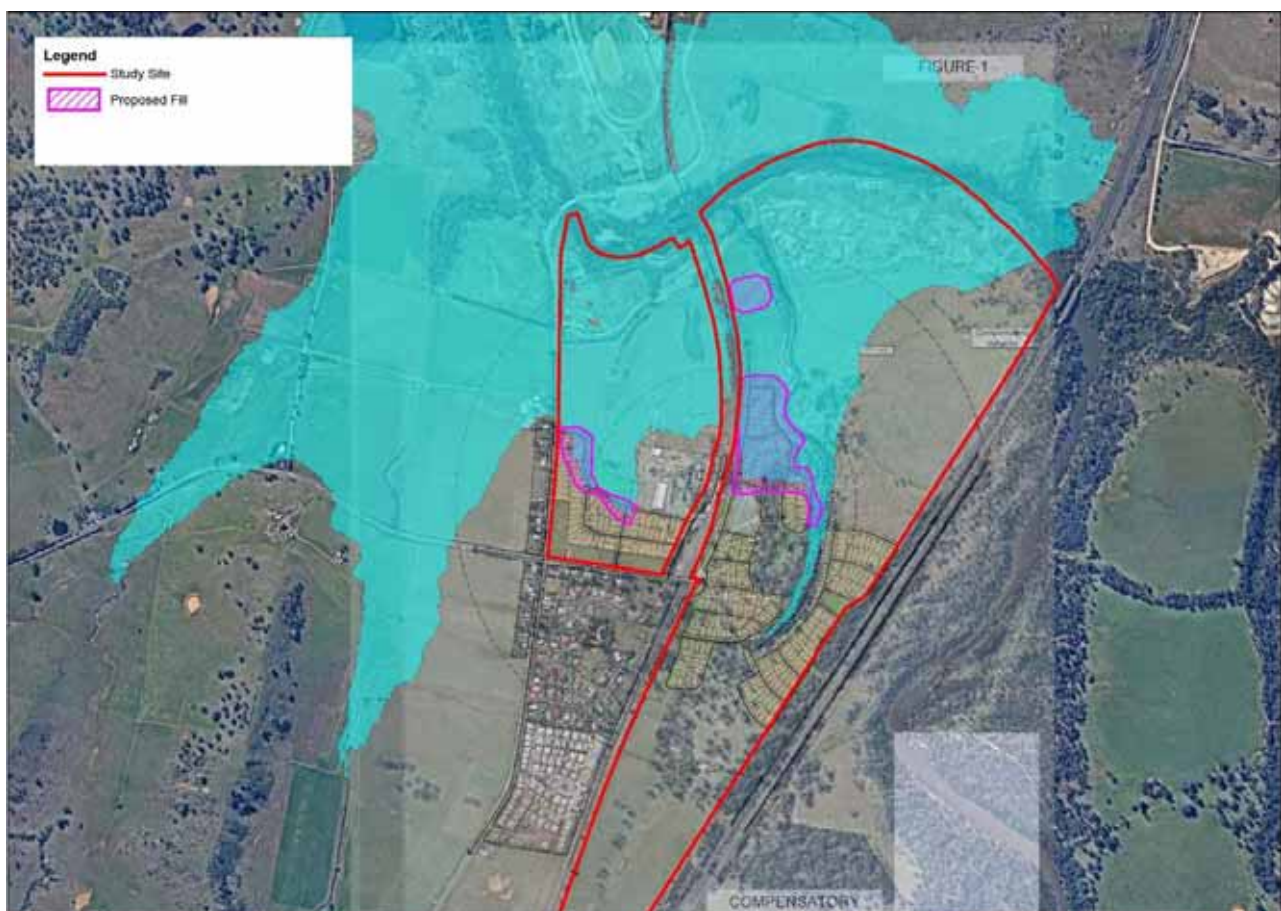


Figure 5 Extents of the Proposed Fill