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IN REPLY QUOTE: 1169/rep1

Flood Study Report
on
65 Beresford Road, Bellevue Hill
for
Mr A. Thorpe

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Ref. 1169/rep1
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1. INTRODUCTION

This office has been commissioned to prepare a flood study on the development at 65 Beresford Road, Bellevue Hill (Figure 1). The purpose of this flood study is to determine the flood impact on the property for a 100-year ARI flood based on the Rose Bay Catchment Flood Study of September 2010.

2. REFERENCES

- (i) Woollahra Council DCP 2015, Chapter E2. Stormwater and Flood Risk Management.
- (ii) Rose Bay Catchment Flood Study by WMA Water dated September 2010.
- (iii) Rose Bay Floodplain Risk Management Study and Plan by WMA Water dated January 2014.

3. WOOLLAHRA COUNCIL CONTROLS

As the development has an increase of habitable floor area of less than 40m², the development controls are not necessary to be complied with, however, we have checked for compliance with these controls to minimise risk to people and property.

The controls are:

- (i) Habitable floor areas above 100-year ARI plus 500 freeboard.
- (ii) Non-habitable floor areas above 100-year ARI plus 300 freeboard.
- (iii) Ground level parking above 20-year ARI plus 300 freeboard.

4. FLOOD ASSESSMENT

The Rose Bay Catchment Flood Study of 2020 did not list 65 Beresford Road as a property that may have a problem. The overland flow along Beresford Road is classified as a floodway. The property at 65 Beresford Road is not highlighted as flood affected.

The peak overland flow outside the site for 100-year ARI is 0.5 to 1.0 m³/sec as the majority of flow is on the other side of the road (Figure 2). Similar flows are nominated for PMF in Figure 3. The maximum depth of flow identified in Figure 4 and Figure 5 is less than 200mm for both 100 ARI and PMF floods. Beresford Road is identified as a high hazard floodway.

Using the survey information supplied by Citisurv Drawing 9364, we have prepared cross-sections to reflect the current road cross-sections and the depth of flow in front of the site. These are detailed on our drawing 1169-C3.

The current driveway has settled and is cracked (Photo 1). We have redesigned the driveway as detailed on Sections 1 and 2 to ensure no floodwater enters the site.

As the depth of flow is less than 200mm under the PMF, these sections demonstrate that the site will not be affected by flooding and is protected by brick fencing (Photo 2).

5. IMPACT ON ADJOINING PROPERTIES

It is clear that Beresford Road is a floodway and as the development is making no changes to the floodway, adjoining properties will be unaffected by the development.

If you require further information, please do not hesitate to contact us.

ALAN.L.WRIGHT & ASSOCIATES



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PHOTO 1 – CRACKED DRIVEWAY



PHOTO 2 – BRICK FENCING



FIGURE 1 – GOOGLE MAP OF 65 BERESFORD RD, BELLEVUE HILL

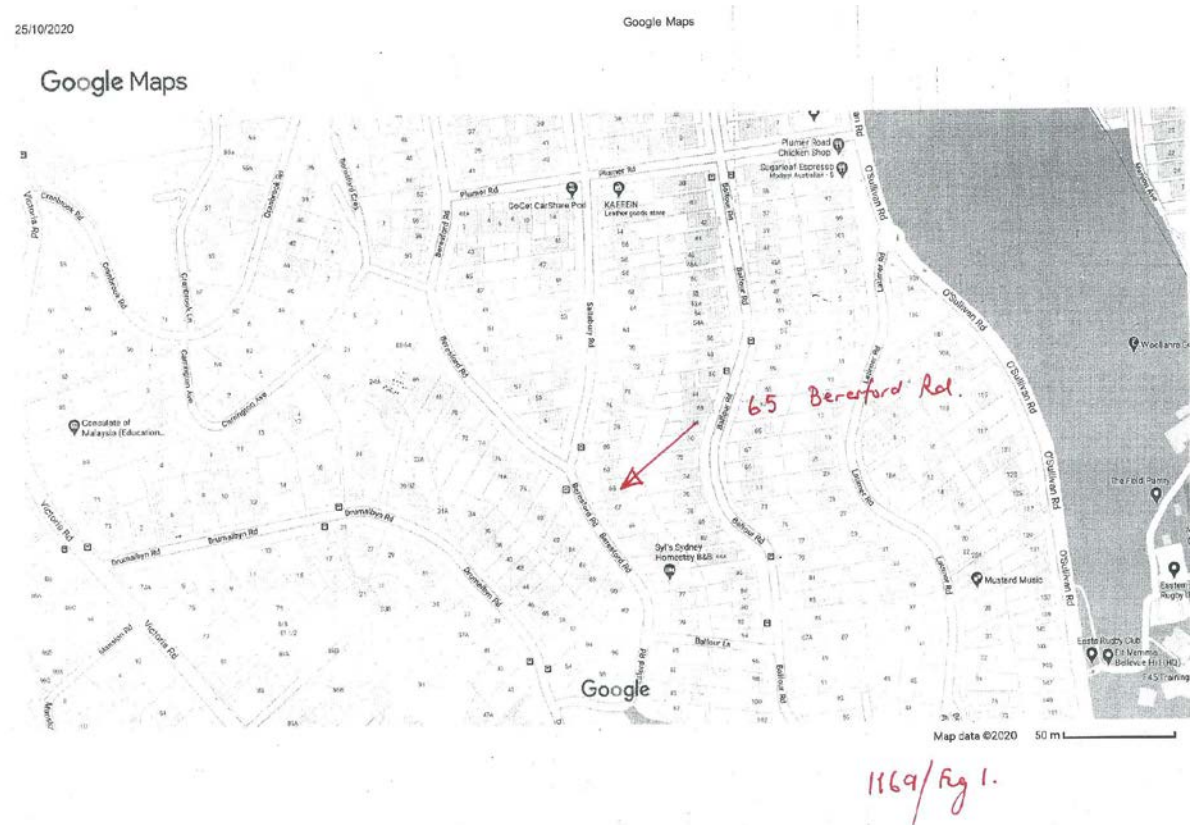


FIGURE 2 – PEAK OVERLAND FLOWS FOR 100-YEAR ARI

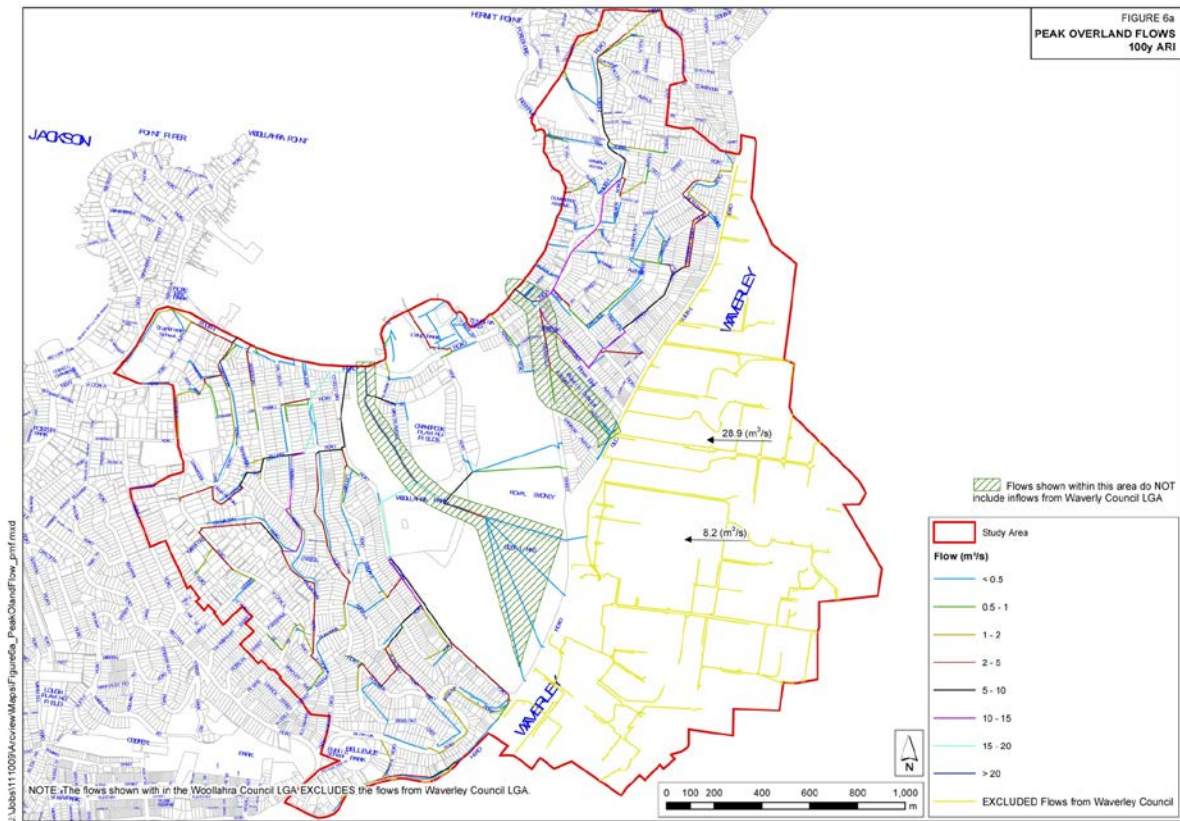


FIGURE 3 – PEAK OVERLAND FLOWS PMF

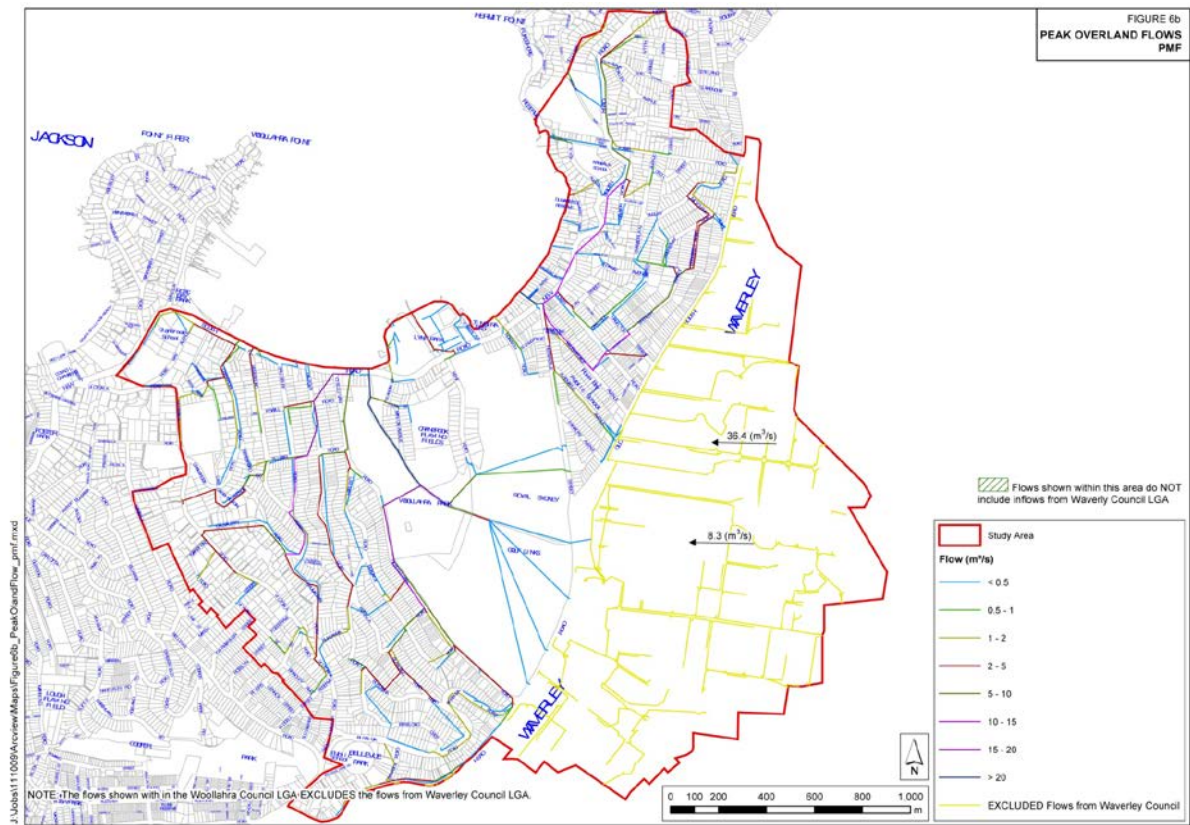
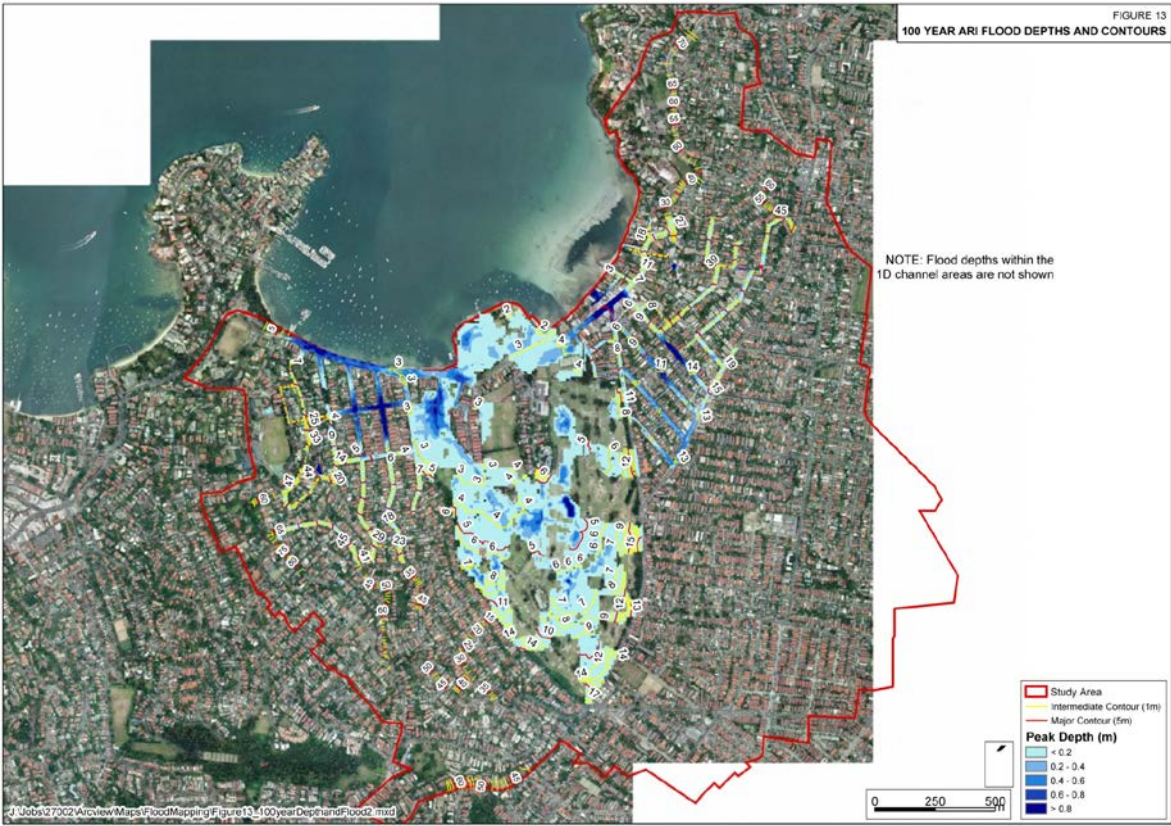
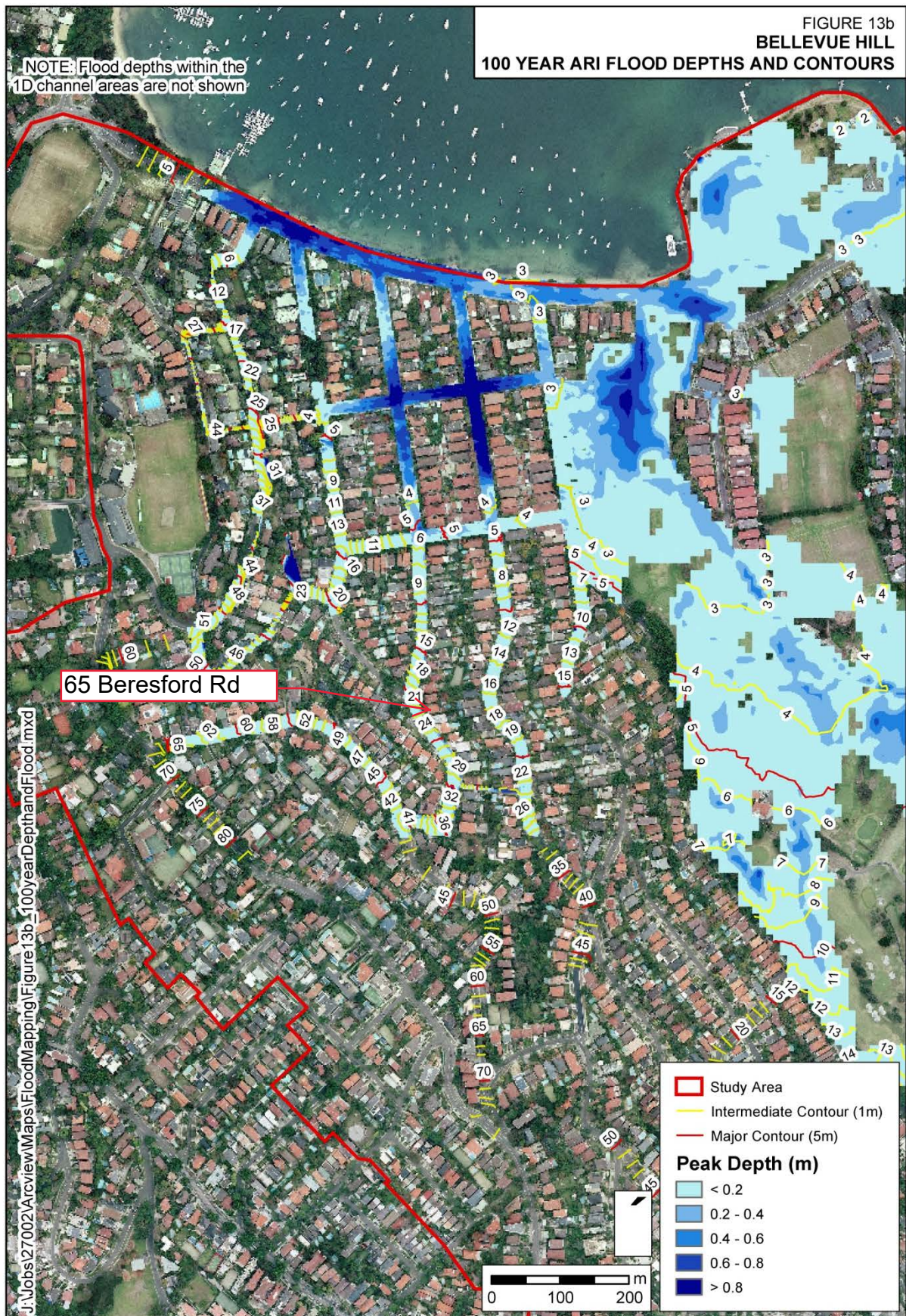


FIGURE 4 – 100-YEAR ARI FLOOD DEPTHS AND CONTOURS





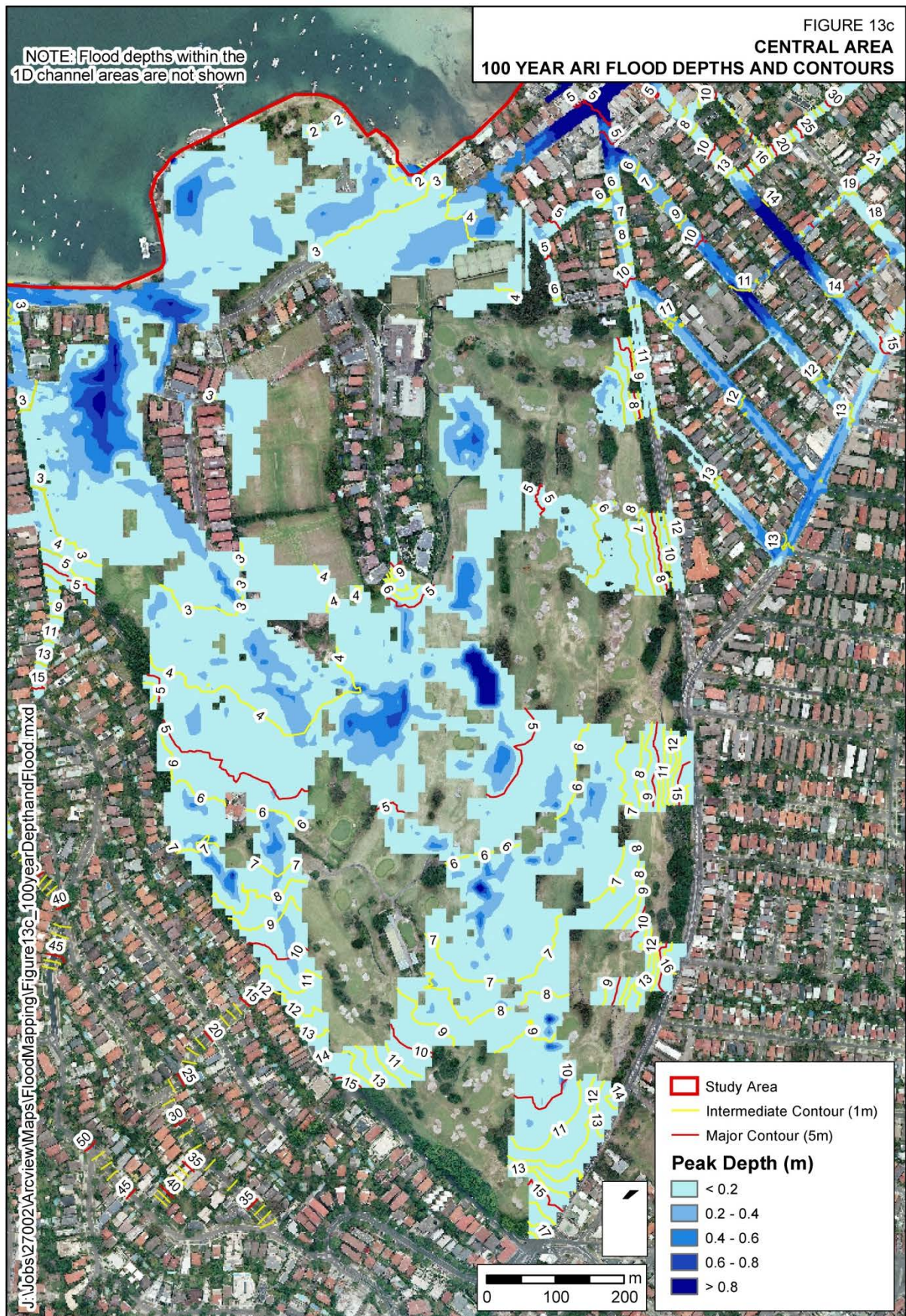




FIGURE 5 – PMF FLOOD DEPTHS AND CONTOURS

