



Consulting Engineers
ABN 91 621 842 466

REF:250244-SWL4

Date: 10/02/2026

Project: 19-25 Balfour St, Lindfield NSW

Client: Balfour Group Pty Ltd

RE: Flood Risk Commentary – Proposed Residential Development Site

As requested by our client, this report provides an assessment of flood risk associated with the proposed residential development.

The assessment is based on the following information:

- Site and surrounding natural topography (refer to Figure 2);
- Registered survey plan; and
- Flood information available from Ku-ring-gai Council (refer to Figure 1)

Based on advice from the Conservation Programs, Heritage and Regulation (CPHR) Group of the NSW Department of Climate Change, Energy, the Environment and Water (Reference No. SSD-82709458), the subject site is located within the Lane Cove Southern Catchments. As detailed flood modelling is not currently available for this area, a DRAINS hydrological and hydraulic model was developed to assess potential flood behaviour during the 1% AEP event.

A catchment analysis was undertaken to understand flow paths and potential flood impacts in the vicinity of the site. The extent of the assessed catchment is shown in Figure 3 and is based on information obtained from the BYDA database, Mecone Mosaic platform, and Six Maps. Upstream catchments (shaded yellow in Figure 3) are intercepted by Council's pit and pipe drainage network and conveyed via Wallace Parade, and therefore do not contribute flows toward the subject site.

Runoff generated from the intersection of Pacific Highway and Highfield Road during the 1% AEP event (shown in red hatch in Figure 3) is expected to travel along Balfour Street before being intercepted by Council's drainage system, passing the frontage of the subject site. This flow path was therefore included in the modelling to assess potential flood impacts.

The DRAINS model comprises seven primary catchments, including the Balfour Street catchment, which incorporates multiple sub-catchments draining into Council's drainage network, as well as surrounding residential and commercial catchments that ultimately discharge into the same system. A 50% blockage factor was applied to pit inlet capacities in the model to conservatively assess flood behaviour during the 1% AEP storm event. Model outputs indicate that the critical location with the potential to influence conditions at the subject site is Pit 10, where surcharge and overland overflow may occur during the 1% AEP event. Flood depths at this location were therefore assessed to determine whether overflow could affect the site.



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The model predicts a maximum overland flow depth of 0.165 m at Pit 10. For a conservative assessment, this same depth has been adopted at the kerb inlet adjacent to the subject site. This confirms that overland flows remain contained within the road reserve and do not encroach onto the subject site during the 1% AEP event (refer Figure 4 for the DRAINS model and results).

It is noted that Council drainage network data, including pit depths and reduced levels, are approximate and based on available information from Dial Before You Dig, Ku-ring-gai Council mapping, and Mecone Mosaic elevation data.

Based on this assessment, the subject site is not affected by flooding during the 1% AEP event. Accordingly, no flood planning controls are applicable to the proposed development.

Flood Risk Assessment Summary

This report assesses flood risk for the proposed residential development using site survey data, Council flood information, and hydrological modelling. A DRAINS model was developed to simulate the 1% AEP event, including 50% pit blockage assumptions, and assess overland flow behaviour along Balfour Street. The modelling confirms that peak overland flows remain within the road reserve and do not impact the subject site. Accordingly, the site is not affected by flooding during the 1% AEP event, and no flood planning controls apply to the proposed development.

Should you require any further clarification, please do not hesitate to contact us.

Yours truly,

Smart Structures Australia

Per:

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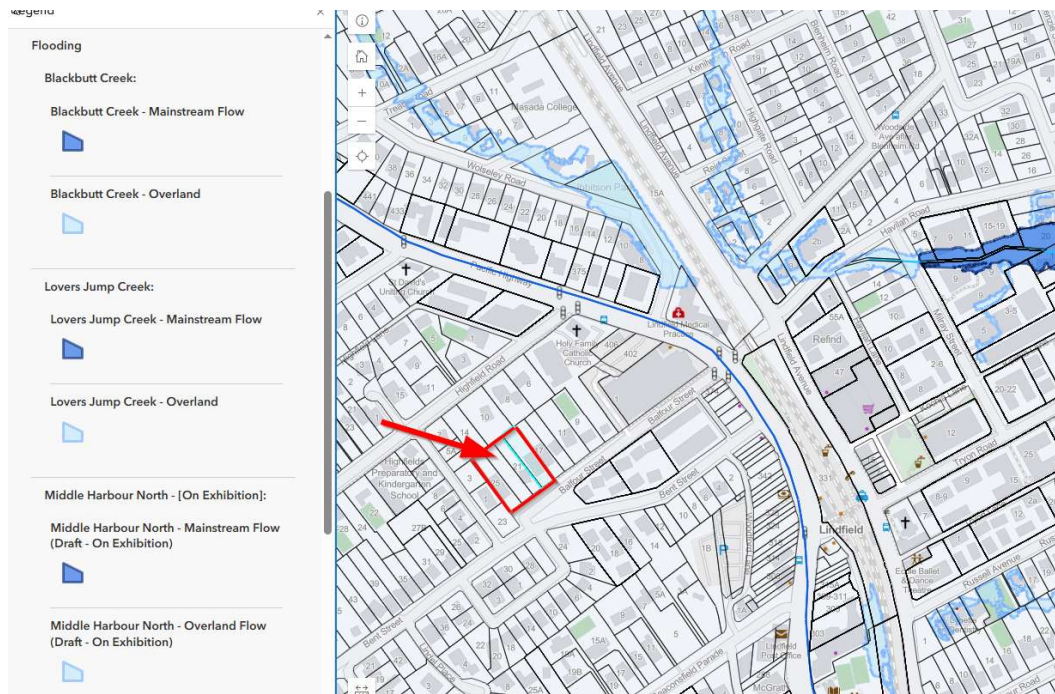


Figure 1: Flood map extracted from Council's online Maps - Extract dated June 2026

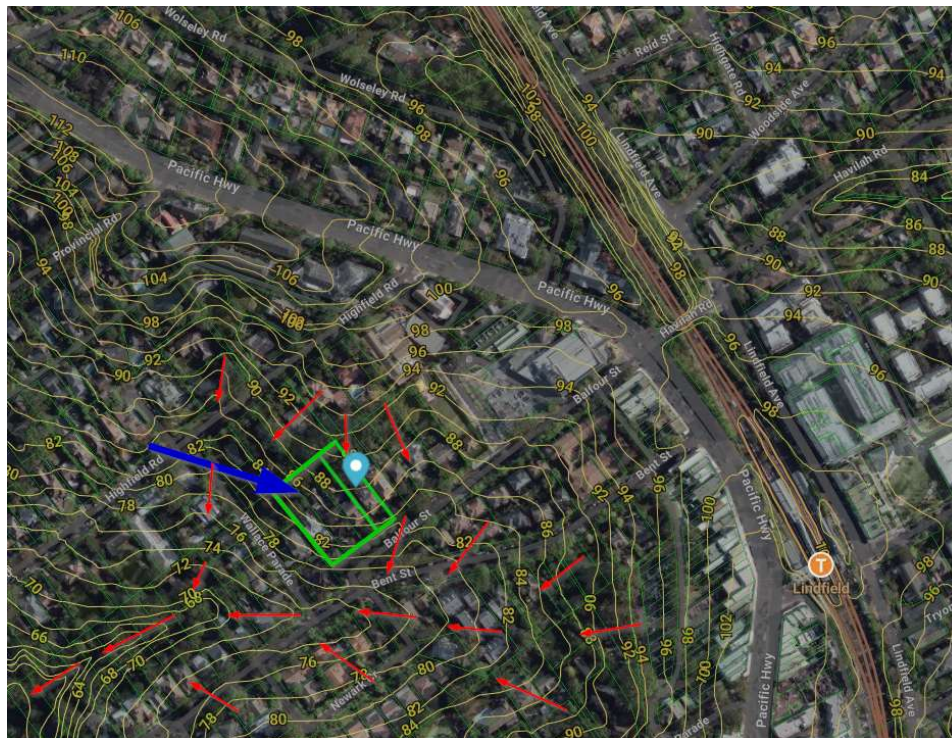


Figure 2: Topography map of subject site and surrounding areas



Figure 3: Catchment Extent for 1% AEP Flood Assessment

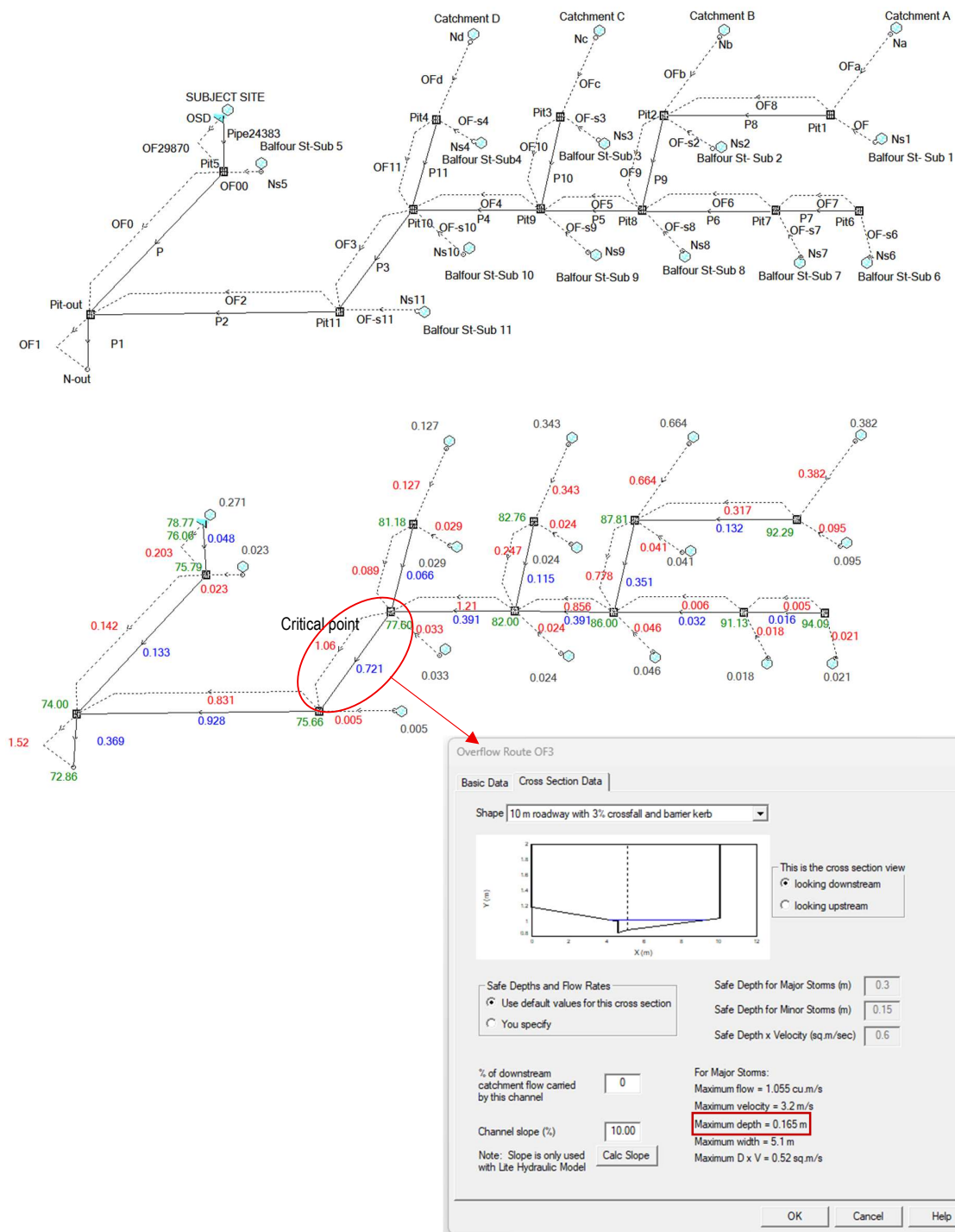


Figure 4: DRAINS model and the 1% AEP results