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SUSTAINABLE WATER
STORMWATER & RUNOFF
STREAMS & WATERWAYS
CIVIL & INFRASTRUCTURE

11th April 2019

Rowan Huppert
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Dear Rowan

**RE: 20&21 Boorea Ave Lakemba – Flooding Assessment Addendum**

Introduction

This letter serves as an addendum to the Flood Impact Report (Issue C) prepared by Storm Consulting May 2017 enclosed with this letter.

Recent verbal conversations with Canterbury-Bankstown Council staff regarding this proposed development indicate that Council are seeking further assurances that neighbouring properties will not be adversely affected by flooding due to the proposed development. This addenda seeks to provide this assurance.

Council's Asset Engineer, Mr Dipen Nandodwala, confirmed in an email on 5th April 2009 that there are no overland flows expected down Boorea Ave and into the site during a 1% AEP event. Nevertheless, an overland flow path has been proposed within the site to convey any flows down to Coxs Creek that may emanate from Boorea Ave in a larger event or due to blockage.

Hydraulic Assessment

The flood levels at the site are defined by flowrate through hydraulic constraints or restrictions in the floodway cross section area combined with roughness of that restriction. The proposed development will have no impact on the incoming flowrate or channel roughness. Therefore, changes to flood levels due to the proposed development are driven by change in floodway area and, to a lesser extent, floodplain volume. The flowrate of the floodwaters during the 1% AEP are expected to be relatively high compared to floodplain storage volume which is why the focus is on waterway area.

The existing site development has sheds on the property (North-West) boundary adjacent to Coxs Creek channel and along the South-West boundary. These sheds impede flood flows and would typically be modelled at 100% impervious. It is noted that the shed wall along the North-West boundary does have small openings that will allow flood water to pass the boundary and into or out of the property. The capacity of these openings is relatively very small, are subject to blocking and are not intended to pass peak flow but rather to drain the site.

Removal of the existing sheds and construction of the proposed development will increase the floodway area of Coxs Creek in the vicinity of the site. This may result in a slight reduction in flood levels in the immediate area however the hydraulic controls or channel restrictions both upstream and downstream the site will remain the same resulting in the flood levels being relatively unchanged.

This is shown in the diagrams overleaf where Section C in Figures A1 and A2 is logically the existing hydraulic control (restriction in floodway area) defining flood levels. The flooding extents on the Canterbury-Bankstown flood map extends in a North-West direction opposite 21 Boorea Ave which is consistent with a hydraulic control located at Section C. This is shown in Figure A3.

## Figure A1: Existing Site Condition



**Figure A2: Proposed Site Condition**

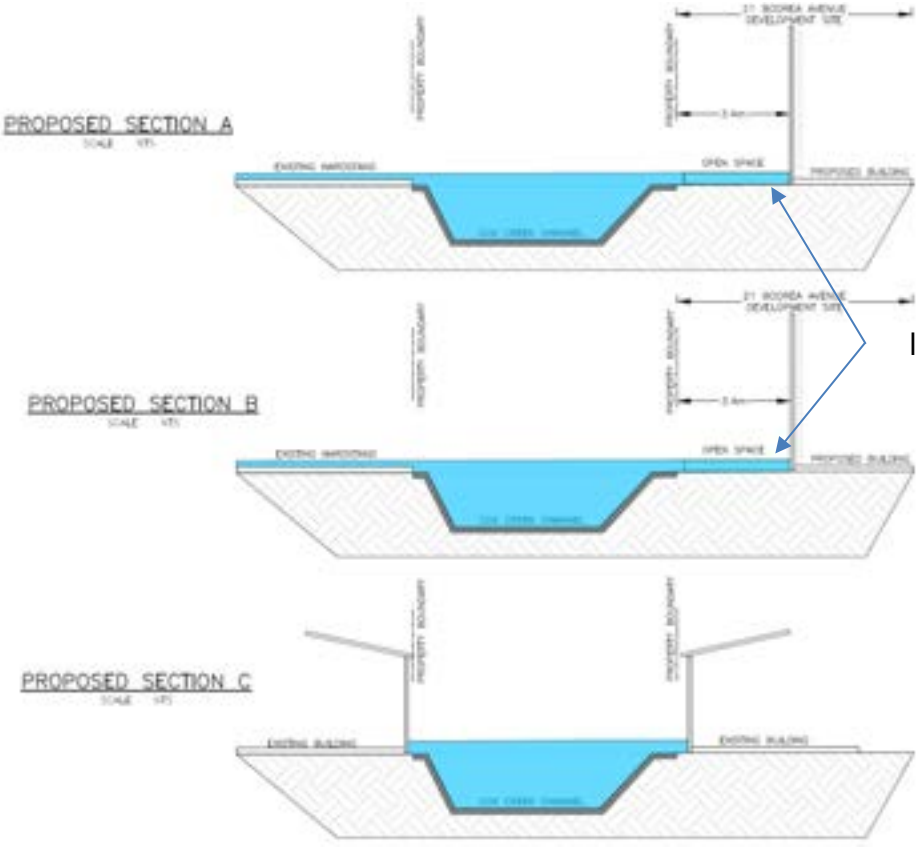
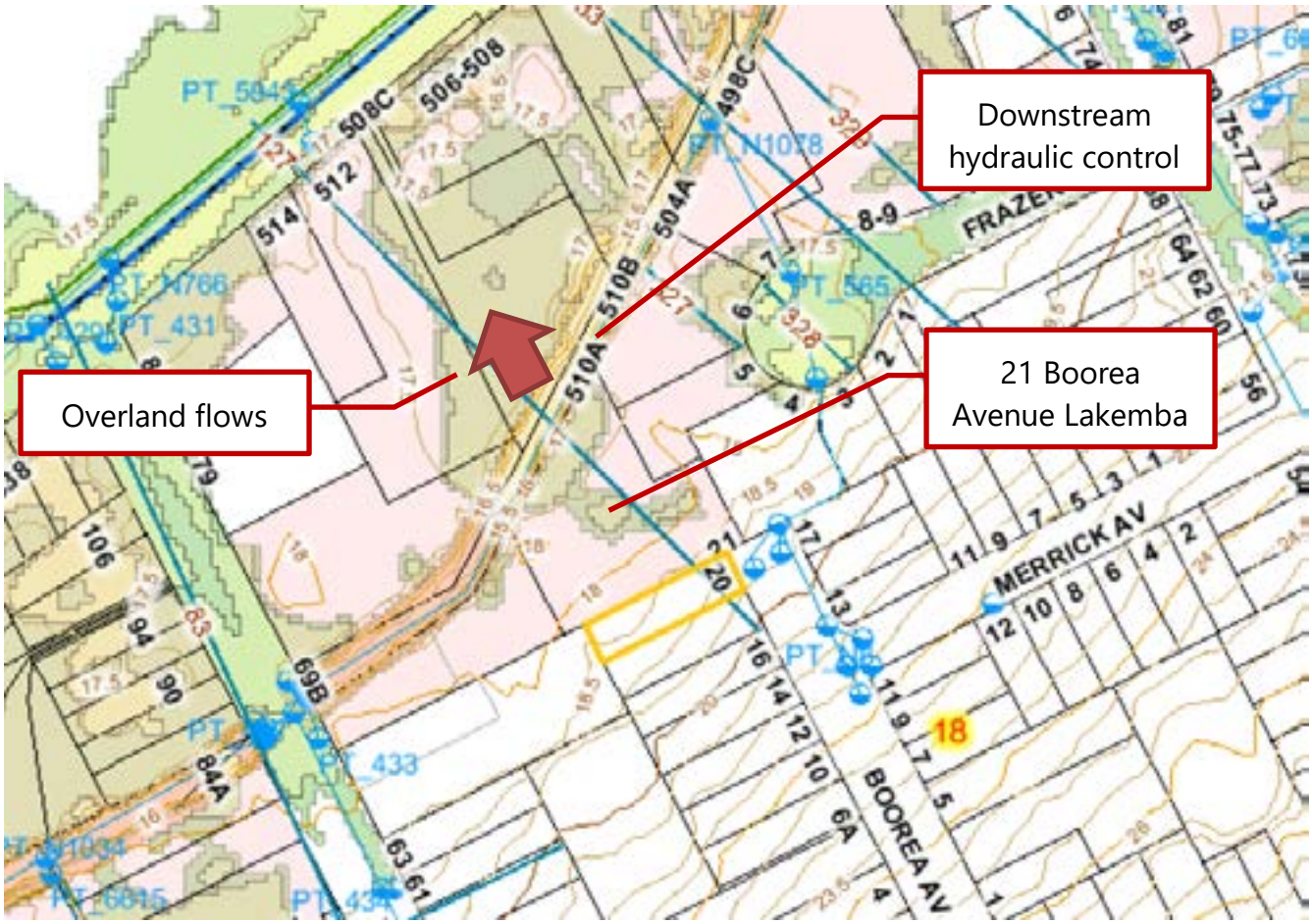


**Figure A3: Extract of Council flood map**




Conclusion

The proposed development would result in an increase in floodway area and a small reduction in localised flood levels is expected to result in the immediately area. However, flooding from Coxs Creek is generally controlled by the hydraulic restriction downstream of the development site. This restriction will not be affected by the proposed development. Therefore the proposed development will have either no impact, or a small beneficial impact, on flood levels experienced by neighbouring properties.

Yours sincerely

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