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Our Ref: 17-000226
Your Ref: Preliminary Flood Impact Assessment – 118 Talavera Road, Macquarie Park
Contact: Troy Eyles

28 April 2017

Meriton Group
Level 11, Meriton Tower
528 Kent Street
Sydney NSW 2000

Attention: Tom Hutchison

Dear Tom

Preliminary Flood Impact Assessment – 118 Talavera Road, Macquarie Park

1 INTRODUCTION

This Preliminary Flood Impact Assessment has been prepared to support the planning proposal for a proposed multi-building residential development at 118 Talavera Road, Macquarie Park. This report is to accompany the application for the development on the site being prepared by SJB Architects on behalf of Meriton Group Pty Ltd (Meriton). This letter is a supplementary report outlining flooding issues on the site and includes descriptions of:

- The proposed development.
- Existing flooding issues and information.
- The hydrologic and hydraulic modelling undertaken to determine existing and post-development runoff on the site.
- Impacts of flooding issues on the proposed development.

2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The site is bounded by the M2 motorway and Talavera Road as shown in Figure 1. It does not include the current Fujitsu building.

The current site includes commercial buildings and car spaces. An overland flow path follows the drive way and discharges into culverts which cross the M2 motorway.

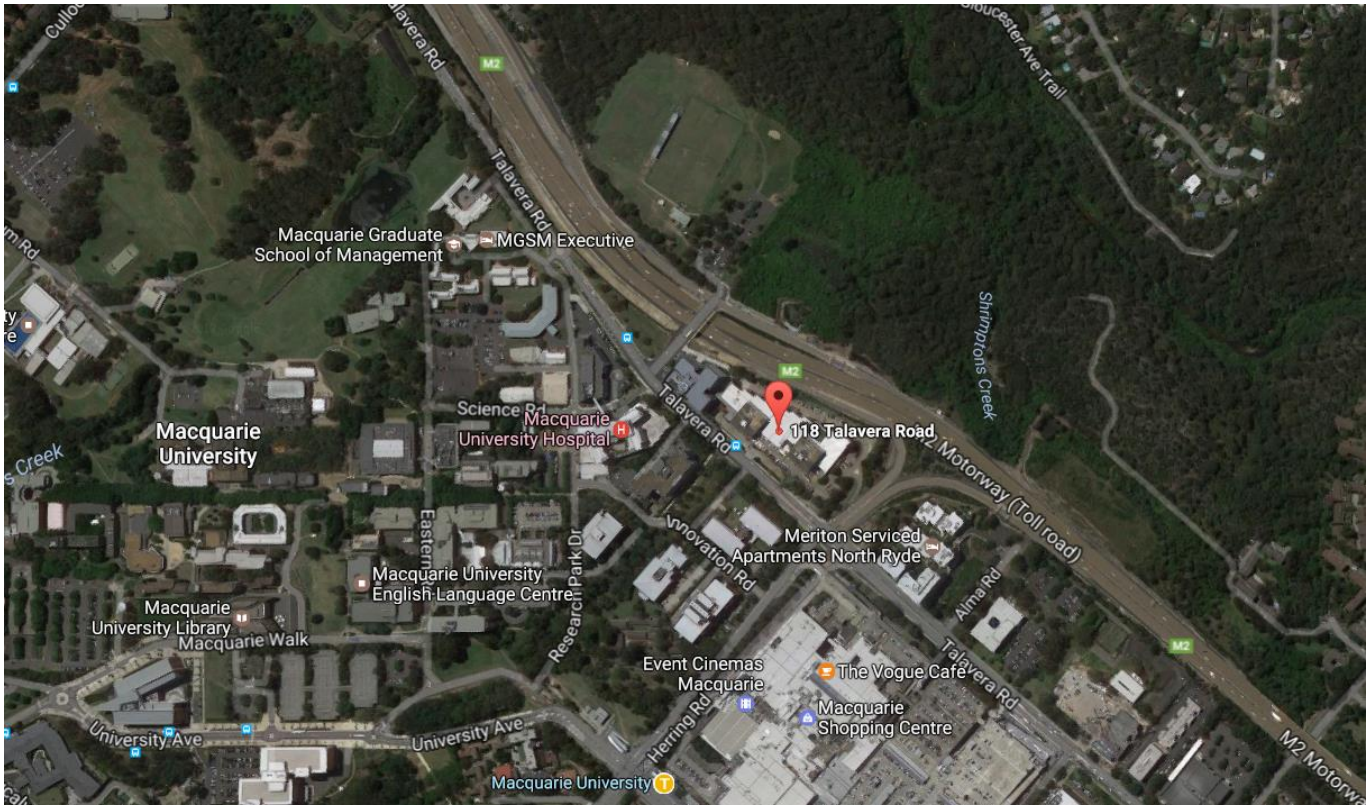

Figure 1: Site locality

The proposed development is shown in Figure 2.

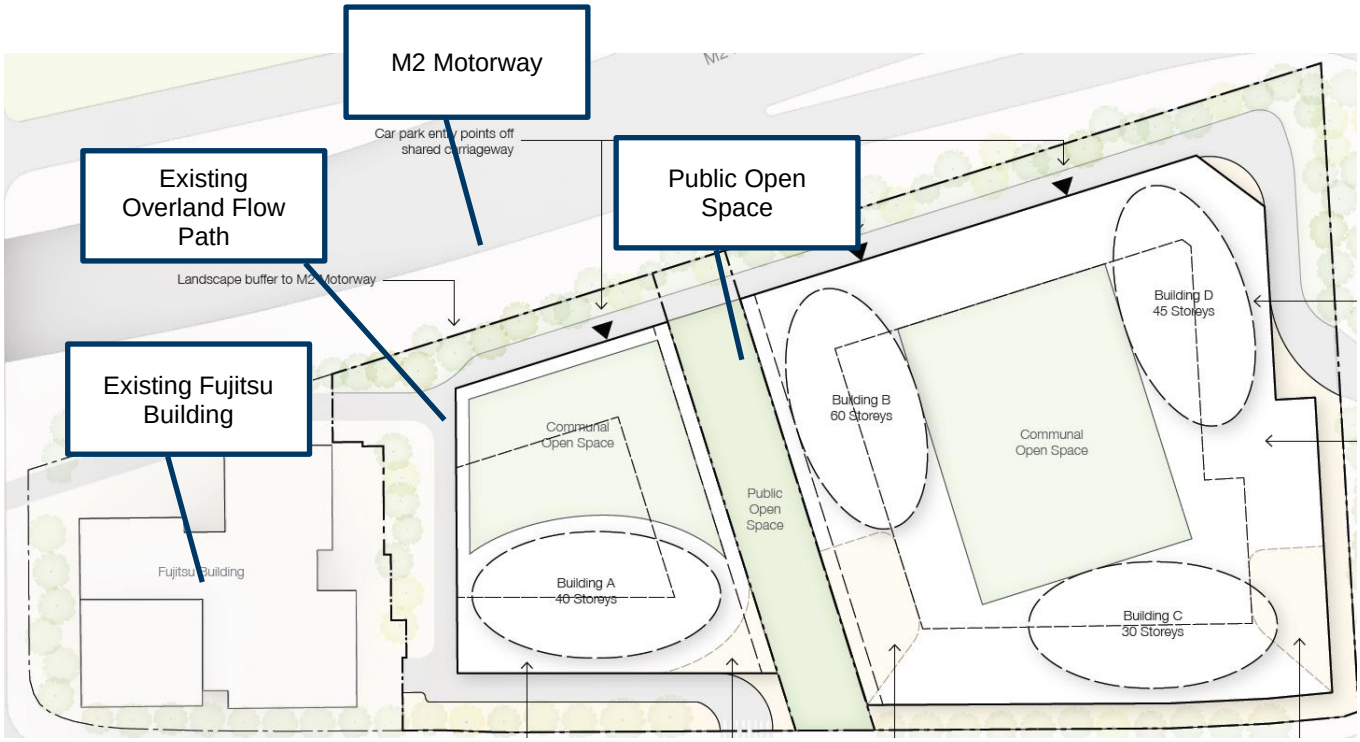

Figure 2: Proposed development (SJB Architects, 2017)

3 EXISTING FLOODING ISSUES

The *Macquarie Park Floodplain Risk Management Study & Plan* (Bewsher, 2010) identifies flood issues in the Macquarie Park catchment. Council has provided preliminary flood information derived from the Study (2010) which indicate that the site is flood affected. Flood studies have shown that a peak 1% annual exceedance probability (AEP) flow of approximately 32.5 m^3/s passes the site. Approximately 8.5 m^3/s of this is pipe flow and 24 m^3/s is overland flow. The overland flow is picked up in culverts which allow flow to pass under the M2 motorway.

A flood risk map identifying areas of low, medium and high flood risks are shown in Figure 3.

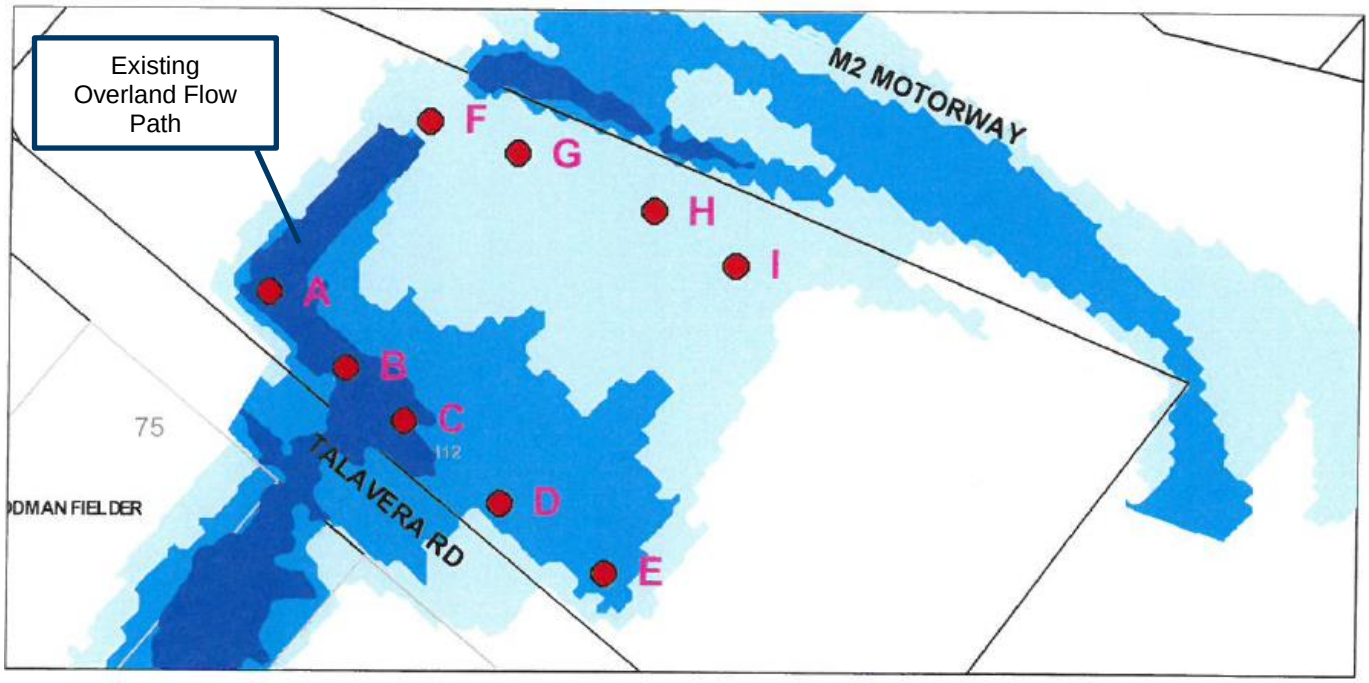

Figure 3: Flood risks Map (City of Ryde, 2017)

The existing overland flow path is expected to be preserved in the proposed development as shown in Figure 2. The public open space is be flood free for the 1% storm event.

4 IMPACTS OF FLOODING ISSUES ON PROPOSED DEVELOPMENT

The *City of Ryde Development Control Plan 2014* (City of Ryde, 2015) outlines floor levels with freeboard requirements to flood levels. The requirements are based on flood risk level and if the floors are habitable. Table 1 nominates the floor levels for locations shown in Figure 3.

Table 1: Minimum floor levels

Location	Flood risk level	Minimum habitable floor level (mAHD)	Minimum non-habitable floor level (mAHD)
A	High	45.62	45.42
B	High	45.64	45.44
C	High	45.81	45.61
D	Medium	45.90	45.70
E	Medium	45.90	45.70
F	Low	300mm above kerb	150mm above kerb
G	Low	300mm above kerb	150mm above kerb
H	Low	300mm above kerb	150mm above kerb
I	Low	300mm above kerb	150mm above kerb

5 POTENTIAL FLOOD IMPROVEMENT WORKS

The existing 15m wide overland flowpath would convey the 1% AEP overland flow of 24 m^3/s with 360mm depth.

Existing drainage infrastructure conveys approximately 8.5 m^3/s within a concrete pipe. Duplication of this infrastructure underneath the public open space may reduce the 1% AEP overland flow of 24 m^3/s to 15.5 m^3/s which could reduce the flood risk and required finished floor levels. The 360mm flow depth would reduce to 270mm.

6 CONCLUSION

This Flood Impact Statement has been prepared to support the planning proposal for a proposed multi-building residential development at 118 Talavera Road, Macquarie Park. This report outlines flooding issues on the site and includes descriptions of:

- The site and the existing flooding issues review of the existing available flood study information
- The proposed development for the site
- The hydrologic and hydraulic modelling undertaken to determine flood levels on the site
- Preliminary flood planning levels for the initial building design and site layout
- Potential flood alleviation works.

The flood issues affecting the site are manageable to support the development

Yours faithfully
Calibre Consulting

Troy Eyles
Senior Engineer – Water & Environment