Barrenjoey Consulting Engineers pty ltd
Stormwater Structural Civil
abn 13124694917 acn 124694917

G. Wright
36 Albert Rd
Avalon
NSW 2107

21st Nov 2019

PROPOSED ALTERATIONS & ADDITIONS
36 ALBERT RD AVALON
Job No 190705

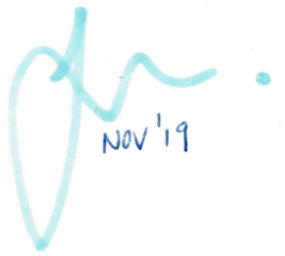
Barrenjoey Consulting Engineers pty ltd have reviewed the proposed alterations and additions at the above site address (see attached floor plan) in respect to the predicted floods events (see attached Council Flood Information).

The works are of a similar extent and nature to DA2018/0611, this DA being reviewed (in reference to flood effects) and approved in principle by Council (see attached Natural Environment Referral Response – Flood).

It is our opinion the current DA proposal should be assessed and approved in a similar manner to the earlier and that the proposed development can be constructed in accordance with the intention of Councils Pittwater 21 DCP Section B3.11 Flood Prone Land.

Should further information regarding this matter be required please contact our office as outlined below.

Regards
BARRENJOEY CONSULTING ENGINEERS pty ltd



Per
Lucas Molloy (Director)
BE CPEng NER

PO Box 672 Avalon NSW 2107
M: 0418 620 330 E: lucasbce@bigpond.com

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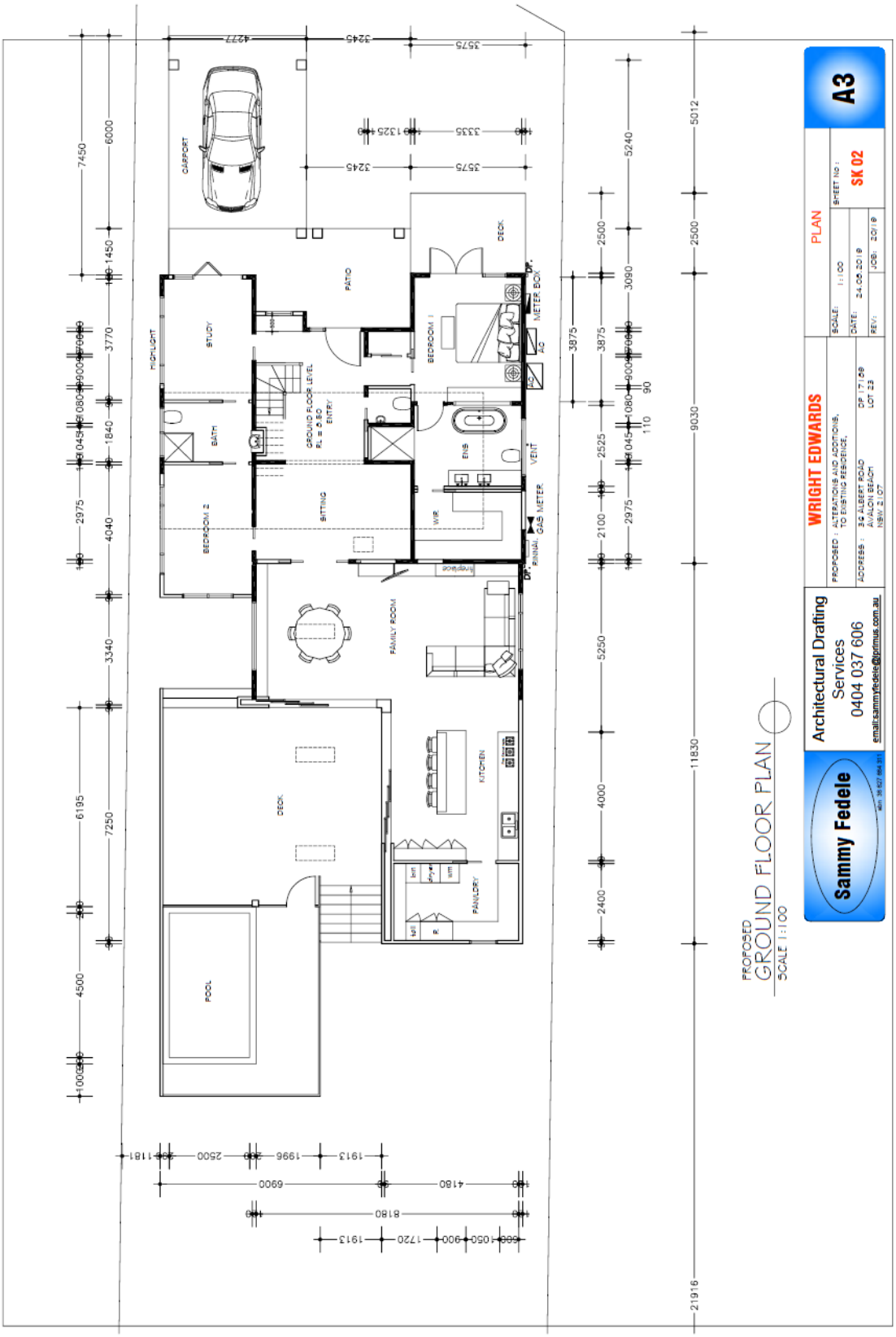

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northern beaches council

FLOOD INFORMATION REQUEST - BASIC

Property: 36 Albert Rd, Avalon Beach
Lot DP: 23//17189
Issue Date: 16/08/2019
Flood Study Reference: Avalon to Palm Beach Floodplain Risk Management Study and Plan 2017, Manly Hydraulics Laboratory

Flood Information for lot:

Flood Life Hazard Category – See Map A

1% AEP – See Flood Map B

1% AEP Maximum Water Level[3]: 9.14 mAHD

1% AEP Maximum Peak Depth from natural ground level[3]: 0.30 m

1% AEP Maximum Velocity: 0.95 m/s

1% AEP Hydraulic Categorisation: Flood fringe **See Flood Map E**

Flood Planning Area – See Flood Map C

Flood Planning Level (FPL) [1, 2, 3 & 4]: 9.64 m AHD

Probable Maximum Flood (PMF) – See Flood Map D

PMF Maximum Water Level[2]: 9.25 m AHD

PMF Maximum Depth from natural ground level: 0.46 m

PMF Maximum Velocity: 1.64 m/s

Flood Risk Precinct – See Map F

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northern beaches council

Natural Environment Referral Response - Flood

Application Number:	DA2018/0611

To:	Julie Edwards
Land to be developed (Address):	Lot 23 DP 17189 , 36 Albert Road AVALON BEACH NSW 2107

Reasons for referral

This application seeks consent for the following:

- All Development Applications on land below the 1 in100 year flood level;
- All Development Applications located on land below the Probable Maximum Flood levels.

And as such, Council's Natural Environment Unit officers are required to consider the likely impacts on drainage regimes.

Officer comments

The proposed development generally complies with the flood requirements of the DCP and LEP.
A Flood Management Report should have been submitted with this application, as most of the property is affected by 1% AEP flooding up to a depth of about 0.2m. However, in this case it has been possible to assess the application without it. The storage area indicated on the plans is permitted, but the applicant should be made aware that this area is predicted to be flood affected in a 1% AEP event.

Referral Body Recommendation

Recommended for approval, subject to conditions

Recommended Natural Environment Conditions:

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE

Flooding
In order to protect property and occupants from flood risk the following is required:

Building Components and Structural Soundness – C1

All new development shall be designed and constructed as flood compatible buildings in accordance with Reducing Vulnerability of Buildings to Flood Damage: Guidance on Building in Flood Prone Areas, Hawkesbury-Nepean Floodplain Management Steering Committee (2006).

Building Components and Structural Soundness – C2

All new development must be designed and constructed to ensure structural integrity up to the Flood Planning Level, which is generally 0.5m above natural ground level, taking into account the forces of floodwater, wave action, flowing water with debris, buoyancy and immersion. Structural certification shall be provided confirming the above.

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Building Components and Structural Soundness – C3

All new electrical equipment, power points, wiring, fuel lines, sewerage systems or any other service pipes and connections must be waterproofed and/or located above the Flood Planning Level, ie at least 0.5m above natural ground level. All existing electrical equipment and power points located below the Flood Planning Level must have residual current devices installed to cut electricity supply during flood events.

Storage of Goods – D1

Hazardous or potentially polluting materials shall not be stored below the Flood Planning Level, ie not below 0.5m above natural ground level, unless adequately protected from floodwaters in accordance with industry standards.

Car parking – G6

The car ports is to be designed to allow flood waters to pass through and is to have a minimum of 50% open area below the 1% flood level, ie up to a level of 0.2m above natural ground level.

Details demonstrating compliance are to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: To reduce the impact of flooding and flood liability on owners and occupiers of flood-prone property and reduce public and private losses in accordance with Council and NSW Government policy.

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