PREPARED FOR:

Justice Brewery

JCO CONSULTANTS

PROPOSED BREWERY & TAP ROOM

Unit 5, 380 Pittwater Road, North Manly NSW

Flood Management Report

PREPARED BY

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1. INTRODUCTION

JCO Consultants has been engaged to prepare a Flood Management Report for the Proposed Brewery & Tap Room in the existing commercial premise at Unit 5, 380 Pittwater Road, North Manly in accordance with the requirements of Northern Beaches Council.

The following documents have been referred in this report:

1. *Site Survey Plan prepared by 'CMS Surveyors Pty Ltd' dated 12th Feb 2025*
2. *Architectural Plans prepared by 'Kira Robson Architect'*
3. *Councils Flood Information Report – Comprehensive dated 10th Mar 2025*
4. *Warringah LEP (2011) – 5.21 Flood Planning*
5. *Warringah LEP (2011) – 5.22 Special Flood Considerations*
6. *Warringah DCP (2011) – E11 Flood Prone Land*
7. *NSW Government Flood risk Management Manual – The Management of Flood Liable Land (2023)*
8. *Australian Rainfall and Runoff (AR&R 2019).*

2. DESCRIPTIONS OF THE DEVELOPMENT

The proposed development consists of change of use to a brewery & tap room including internal refurbish within an existing commercial premise, and minor alteration to the external landscape area to provide addition seats. The proposed development does not involve alteration or addition to the existing building structure.

Table 2-1 – Existing and Proposed Floor Levels

Area	Existing Floor Level (RL m AHD)	Flood Planning Level (RL m AHD)	Design Floor Level (RL m AHD)
Unit 5 Internal Area	2.58	3.69	2.58
Proposed Mezzanine Level	-	3.69	3.95

The site plan of the proposed development is presented as below:

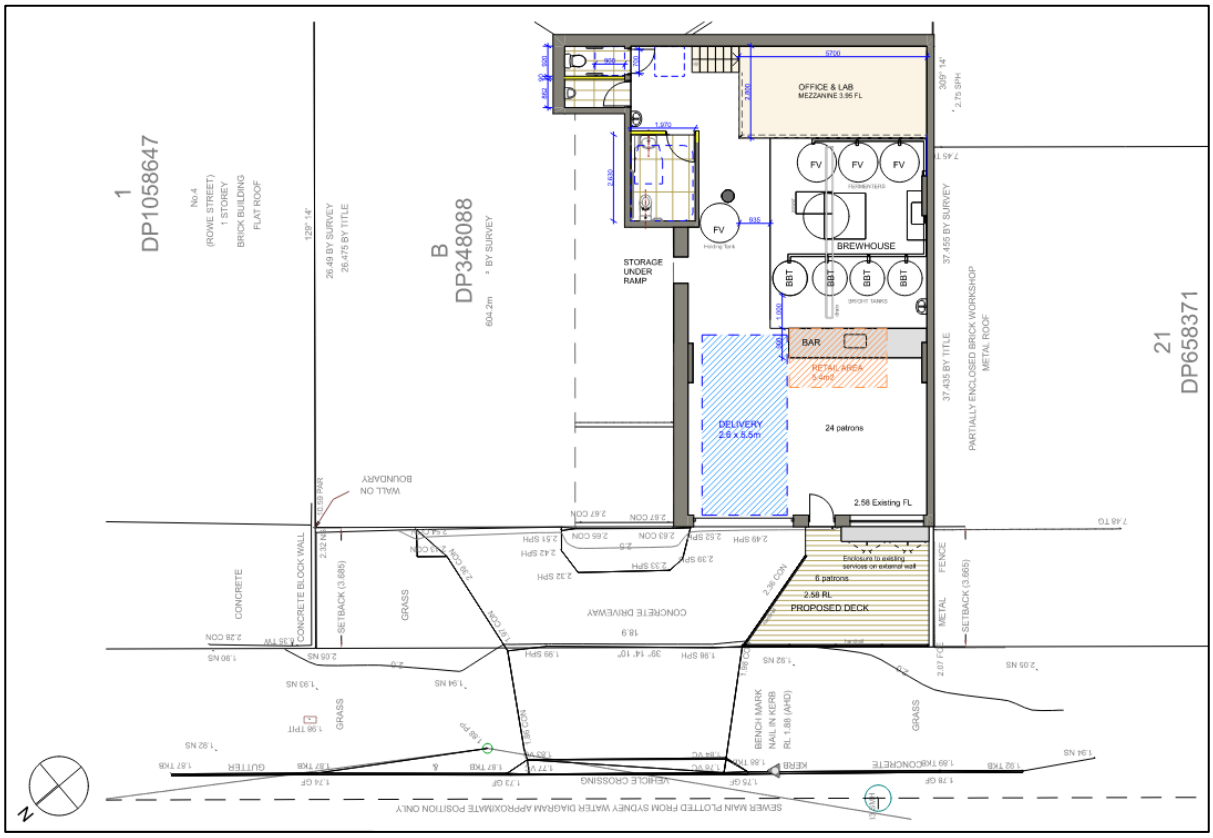

Figure 2-1 – Site Plan

3. FLOOD ANALYSIS

Flood information as provided by Council are summarised below at point 4 & 5 (location of proposed development). See Appendix C for full report.

- 1% AEP Flood Level: 3.19m AHD
- Flood Planning Level (FPL): 3.69m AHD
- Probable Maximum Flood (PMF) Level: 5.66m AHD
- Flood Risk Precinct: Medium – High Risk
- Flood Life Hazard Category in PMF: H5
- 1% AEP Flood Hydraulic Category: Flood Storage
- 1% AEP Maximum Depth from natural ground level (Max): 1.01m
- 1% AEP Maximum Velocity: 0.15m/s

- PMF Maximum Water Level (Max): 5.66m AHD
- PMF Maximum Depth from natural ground level (Max): 3.51m
- PMF Maximum Velocity: 0.29m/s

- Climate Change 1% AEP Flood Level: 3.44m AHD
- Climate Change 1% AEP Maximum Depth from natural ground level (Max): 1.29m

MAP B: FLOODING - 1% AEP EXTENT & KEY POINTS

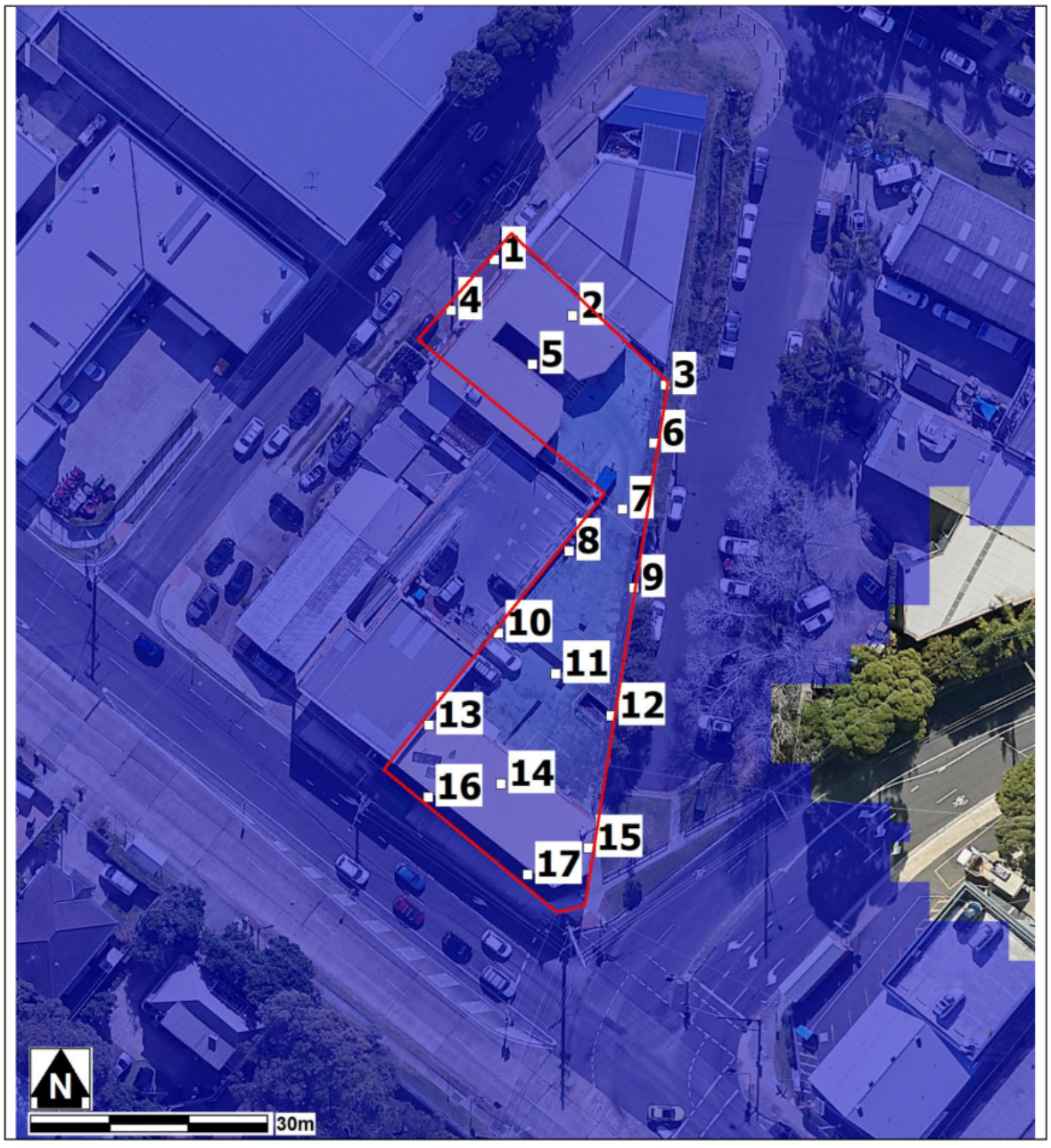

Figure 3-1 – Flood Levels Key Points

Flood Levels

ID	5% AEP Max WL (m AHD)	5% AEP Max Depth (m)	1% AEP Max WL (m AHD)	1% AEP Max Depth (m)	1% AEP Max Velocity (m/s)	Flood Planning Level (m)	PMF Max WL (m AHD)	PMF Max Depth (m)	PMF Max Velocity (m/s)
1	2.74	0.61	3.19	1.03	0.21	3.69	5.66	3.53	0.39
2	2.74	0.62	3.19	1.04	0.07	3.69	5.66	3.55	0.14
3	2.74	0.75	3.19	1.17	0.21	3.69	5.66	3.68	0.40
4	2.74	0.52	3.19	0.95	0.15	3.69	5.66	3.45	0.29
5	2.74	0.58	3.19	1.01	0.07	3.69	5.66	3.51	0.15
6	2.74	0.82	3.19	1.25	0.23	3.69	5.66	3.75	0.65
7	2.73	0.78	3.19	1.21	0.21	3.69	5.66	3.71	0.40
8	2.73	0.65	3.19	1.08	0.07	3.69	5.66	3.58	0.14
9	2.73	0.86	3.18	1.29	0.33	3.68	5.66	3.79	0.63
10	2.73	0.55	3.19	0.97	0.08	3.69	5.66	3.48	0.16
11	2.73	0.64	3.18	1.07	0.09	3.68	5.66	3.57	0.19
12	2.73	0.71	3.19	1.14	0.18	3.69	5.66	3.64	0.38
13	2.73	0.36	3.18	0.79	0.09	3.68	5.66	3.29	0.26
14	2.73	0.54	3.18	0.97	0.14	3.68	5.66	3.47	0.28
15	2.73	0.62	3.18	1.05	0.84	3.68	5.66	3.55	0.95
16	2.73	0.45	3.19	0.88	0.46	3.69	5.66	3.38	0.60
17	2.73	0.53	3.18	0.97	0.18	3.68	5.66	3.47	0.99

Climate Change Flood Levels (30% Rainfall intensity and 0.9m Sea Level Rise)

ID	CC 1% AEP Max WL (m AHD)	CC1 % AEP Max Depth (m)
1	3.44	1.31
2	3.44	1.32
3	3.44	1.45
4	3.44	1.22
5	3.44	1.29
6	3.44	1.53
7	3.44	1.48
8	3.44	1.36
9	3.44	1.57
10	3.44	1.25
11	3.44	1.35
12	3.44	1.42
13	3.44	1.07
14	3.44	1.24
15	3.43	1.33
16	3.44	1.16
17	3.43	1.24

Figure 3-2 – Flood Levels

4. ASSESSMENT OF IMPACTS

We have adopted the High Flood Risk Precinct Planning matrix in Warringah DCP (2011) E11 Flood Prone Land for this part of the assessment. See Appendix B.

Table 4-1 - Land Use: Business & Industrial Use

Business & Industrial		
Business or office premises	Retail premises	Medical centre
Registered club	Entertainment or recreation facility	Community facility
Function centre	Public administration building	Storage premises
Eco-tourist facilities	Camping ground	Patient transport facilities
Place of public worship	Home business	Mortuary or crematorium
Veterinary hospital	Animal boarding establishment	Charter and tourism boating facility
Warehouse or distribution centre	Sex services premises	Service station
Advertising structure or Signage	Car park	Water recreation structure
General industry	Depot	Transport facility
Vehicle repair facility	Boat building and repair facility	Port, wharf or marina
Waste disposal facility	Waste water disposal system	Water supply system
Industrial training facility	Additions/alterations to business/industrial buildings	Occupation/change of use of an existing premises

Table 4-2 - Summary of Compliance

			Compliance		
			Not Applicable	Yes	No
A	Flood effects caused by Development	A1		X	
		A2		X	
B	Building Components & Structural	B1		X	
		B2		X	
		B3		X	
C	Floor Levels	C1			X (refer table below for details)
		C3		X	
		C4	X		
		C6	X		
		C7	X		
D	Car Parking	D1	X		
		D2	X		
		D3	X		
		D4	X		
		D5	X		
		D6	X		
E	Flood Emergency Response	E1		X	
F	Fencing	F1	X		
G	Storage of Goods	G1		X	
H	Pools	H1	X		

Table 4-3 – Flood Matrix Justifications

A Flood effects caused by Development	
A1	The subject site is located within the 1% AEP flood extent. The proposed development is limited to change of use of existing premise with internal refurbish works and proposed deck in the front setback area. The existing building structure or footprint will not be altered and the future deck will be a subfloor open structure. Therefore, it can be concluded that the development will have no adverse impact to neighbouring properties and to the existing flood conditions (flood storage, velocity & flood level).
A2	The existing building footprint (acting as a blockage to the flood conveyance) will not be altered under this proposed development. Flood Storage will remain the same as per existing conditions. There will be no net loss of flood storage.
B Building Components & Structural	
B1	It is recommended that any new internal structures, fixtures and fittings within the existing premise below the flood planning level (RL 3.69m AHD) are to be constructed with flood compatible materials in accordance with "Reducing Vulnerability of Buildings to Flood Damage: Guidance on Building in Flood Prone Areas", Hawkesbury-Nepean Floodplain Management Steering Committee (2006). Some flood compatible materials are given in Appendix A.
B2	The proposed development does not involve construction of new building or alteration of existing building structure. However, it is recommended that a qualified structural engineer shall be engaged to inspect and certify that the existing building's structural integrity is adequate to withstand flood forces up to the flood planning level (RL 3.69m AHD), taking into account the forces of floodwater, wave action, flowing water with debris, buoyancy and immersion.
B3	It is recommended that 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 (RL 3.69m AHD). All existing electrical equipment and power points located below the Flood Planning Level within the subject Unit 5 must have residual current devices installed that turn off all electricity supply to the property when flood waters are detected.
C Floor Levels	
C1	The existing finished floor level is RL2.58m AHD. It is below the Flood Planning Level (RL3.69m AHD) provided by Council. Given that the proposed development involves mainly internal works, it is proposed to retain the existing finished floor level of RL2.58m AHD for accessibility to external area and to Girard Street. The proposed office & lab area located at the rear of the unit is elevated with a finished floor level of RL3.95m AHD, being above the Flood Planning Level (RL3.69m AHD).
C3	The existing building footprint (acting as a blockage to the flood conveyance) will not be altered under this proposed development. The proposed development will not result in additional blockages to impede the floodway or flood conveyance on the site. It will not result in increase of net loss of flood storage in all events up to the 1% AEP event.

C4	Not applicable.
C6	Not applicable.
C7	Not applicable.
D Car Parking	
D1	No new car parking is proposed. This section is not applicable.
D2	Not applicable
D3	Not applicable
D4	Not applicable
D5	Not applicable
D6	Not applicable
E Flood Emergency Response	
E1	The proposed development is limited to change of use to brewery & tap room with internal refurbishments. Refer Section 5 for further details regarding flood emergency response.
F Fencing	
F1	No applicable as no new fencing is proposed.
G Storage of Goods	
G1	Hazardous or potentially polluting materials are to be stored above the Flood Planning Level of 3.69m AHD. Goods, materials or other products which may be highly susceptible to water damage to be located/stored above the Flood Planning Level of 3.69m AHD.
H Pools	
H1	No applicable as no new pool is proposed.

5. FLOOD WARNING

5.1. Warning of Impeding Flood

The Bureau of Meteorology provides flood advice, flood forecasting and warnings relevant to the local area which are conveyed to emergency service agencies.

The Bureau of Meteorology will advise on severe weather or thunderstorm warnings for the local area to the SES Local Controller. In addition to this, information will also be made available through media outlets to disseminate evaluation warnings.

5.2 Severe Weather Warnings

The Bureau of Meteorology issues Severe Weather Warnings whenever severe weather is occurring in an area or is expected to develop or move into an area. The warnings describe the area under threat and the expected hazards. Warnings are issued with varying lead-times, depending on the weather situation, and range from just an hour or two up to about 24 hours.

Severe Weather Warnings are issued for:

- Sustained winds of gale force (63 km/h) or more
- Wind gusts of 90 km/h or more
- Very heavy rain that may lead to flash flooding
- Abnormally high tides (or storm tides) expected to exceed highest astronomical tide
- Unusually large surf waves expected to cause dangerous conditions on the coast
- Widespread blizzards in Alpine areas

5.3 Flood Watch

A Flood Watch is issued by the Bureau of Meteorology if flood producing rain is expected to happen in the near future and flooding is expected to be above Minor level.

5.4 Preliminary Flood Warnings

These warnings usually predict which class of flooding (minor, moderate or major) will occur rather than providing quantitative forecasts. They are the first in a series of warnings and will typically be followed by more detailed flood warnings. These products are disseminated directly to media outlets by the BoM and are published on the BoM website.

5.5 Flood Warnings

These normally predict flood heights (in metres and centimetres at a gauge) which will be reached at a location at a specified time in the future. After the issuing of a Preliminary Flood Warning, Flood Warnings are renewed at frequent intervals until the relevant stream drops to below the minor flood level. The local SES is responsible for covering operations for all levels of flooding within the council area and caters for both SES control of operations and where appropriate, the handover to the Local Emergency Controller (LECON).

Local Emergency Operations Controller (LECON)

- Mentor flood response operations
- Coordinate support to the SES local Controller if requested to do so

- As required by the SES Local Controller, evacuate persons at threat of inundation
- Control emergency operations
- Issue the 'all clear' when Emergency operations have been completed

NSW Police Service

- Assist with the distribution of evacuation warnings
- Assist with the conduct of evacuations
- Conduct road control operations in conjunction with Transport for NSW (TfNSW)
- Ensure all evacuees are registered
- Secure evacuated area

NSW Fire Brigades

- Assist with the distribution of evacuation warnings
- Assist with the conduct of evacuations
- Conduct clean-up operations, including the hosing down of flood affected premises

6. FLOOD EMERGENCY RESPONSE PLAN

6.1 Preparedness

In preparation for any flood event the following items should be addressed:

- Education and training to staff on flood awareness and plan implementation is intrinsic to its successful operation. All staff are to be familiarised with this document.
- A staff will be designated as the Site Flood Coordinator and is entrusted with the responsibility of monitoring flood activities and dissemination of evacuation warning as and when required.
- The Site Flood Coordinator should attend the flood events and seminar held by the community in the local area to meet the local SES members and learn about flood safety. The event dates area found on the following website, https://www.ses.nsw.gov.au/disaster-tabs-header/flood/. This person allocated the responsibility is to return and provide a presentation to the rest of the staff members after each session.
- The FloodSafe Guide for the local area is required to be distributed to every staff member electronically. The FloodSafe Guide is a customised brochure addressing flooding in the local context.
- All new staff are to be introduced to this plan as part of their induction and made aware of the protocols to be employed during a flood event.
- Conduct regular flood evacuation drills to make sure evacuation time is cut to 20 mins maximum.
- All medical supplies should be located above the PMF flood level where possible.
  The flood management plan should be reviewed every 5 years, particularly considering the potential effects of climate change, such as sea level rise and increased rainfall intensities.

6.2 Alert

The occupants and staff shall be vigilant at all times of severe thunderstorms, weather warning and continual rain, and are encouraged to check with warning from BoM, local radio, television, or the SES Local Controller. If advance warning of potential flooding is given, the Site Flood Coordinator and staff should consider directing all occupants to flood free area well in advance if safe to do so, to mitigate risk to customers, staff, and others.

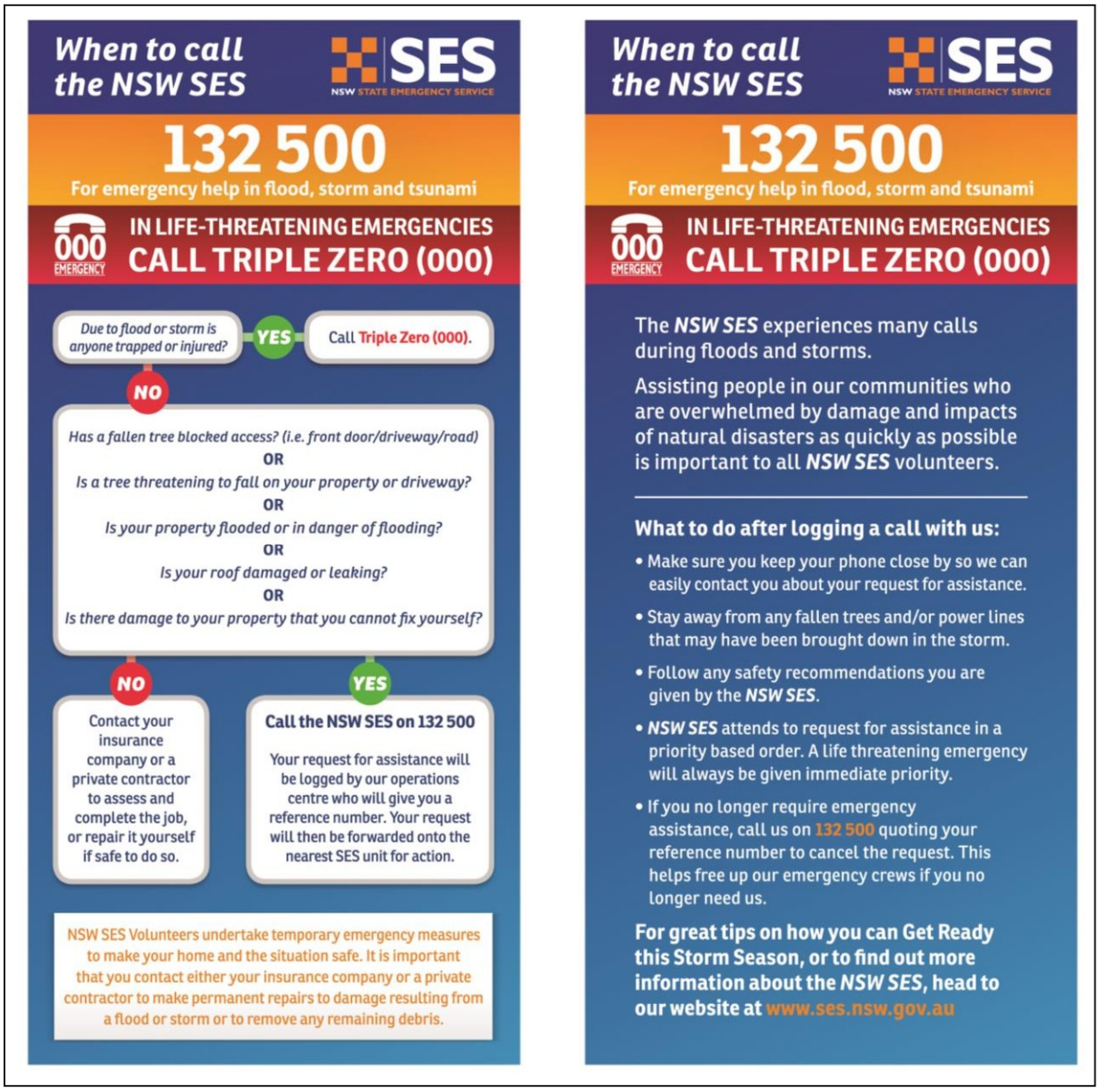

Figure 6.2: NSW SES 'When to call' diagram

In the event that an alert is raised by any of the channels outlined previously in this report, the Site Flood Coordinator is to communicate the alert to all other staff members and initiate the Flood Emergency Response Plan.

6.3 Emergency Contacts

The list below should be updated regularly.

Parties to Contact	Phone Number
Site Flood Coordinator	……/……/…… (Nominate and date by site administration)
SES	132 500 (Emergency Help)
Bureau of Meteorology NSW Flood Warning Centre	1300 659 218 9296 1555 http://www.bom.gov.au/nsw/warnings/
Local Fire Brigade	000 (Emergency)
Police	000 (Emergency)
Bayside Council	1300 434 434
Sydney Water (Water and Sewer)	132 090
Endeavour Energy	131 033
TfNSW Traffic Enquiry	1300 555 727

6.4 Evacuation

Evacuation is the temporary movement (relocation) of people from a dangerous or potentially dangerous place to a safe location, and their eventual return. It is an initiative-taking emergency management strategy that uses distance to separate people from danger created by a hazard.

In this case evacuation will be conducted as per the Onsite Evacuation Route on Figure 6.4. In the event flooding occurs without prior warning, occupants should seek refuge and Shelter-In-Place in Upper Carpark Level via the carpark ramp adjacent to the entry.

If offsite evacuation is required, access for leaving the site is via Girard Street which is located at the frontage of the subject site. **Flood Plain Management Guidelines** suggest that persons evacuating a flood affected area should be moving away from the flood affected area. The maximum PMF Flood Level at the site location according to Councils Flood Information Report is RL5.66m AHD.

The most appropriate evacuation route is:

1. **Exit the property and walk towards the site frontage on Girard Street;**
2. **Once at site frontage, turn right and head north until reach the intersection of Girard Street and Waine Street;**
3. **Walk across Waine Street and head north on Rowe Street until reach the intersection of Rowe Street and Palomar Parade;**
4. **The intersection of Rowe Street and Palomar Parade has been identified as an area located outside of the PMF flood extents *(Refer to Figure 5-1).***

The <u>Off-site Evacuation Route</u> has been represented on Figure 6.4.

Occupants should await further instructions from SES and/or Emergency Services in the event of a flood evacuation order being issued.

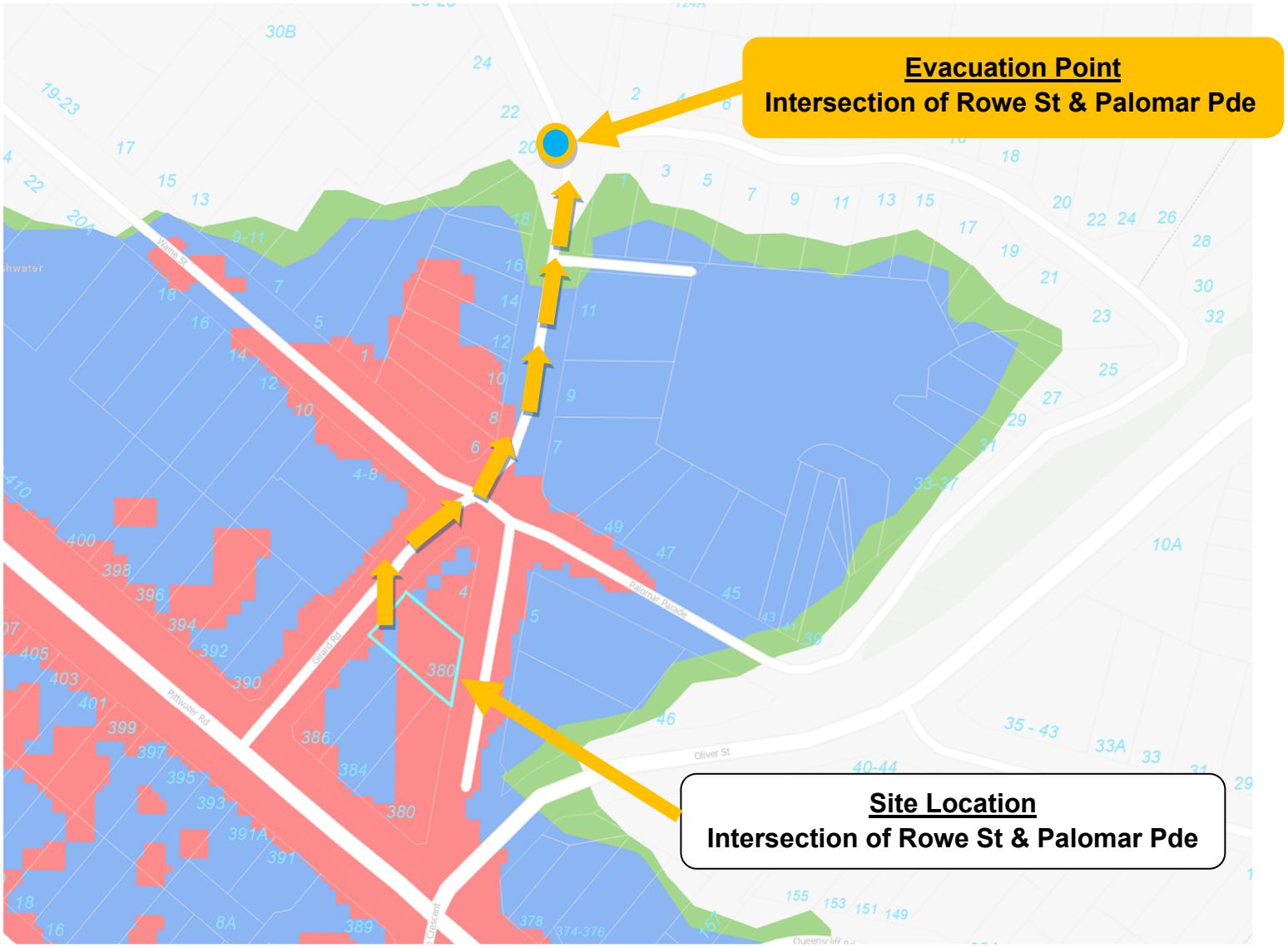

Figure 6.4 – Proposed Evacuation Route

6.5 Actions, Responsibilities and Procedures

Evacuation actions, responsibilities and procedures are outlined below:

Action	When	Who
Monitor local radio and TV for flood warning	During heavy rain and prior to predicted heavy rain	Site Flood Coordinator
Monitor BOM and SES website	During heavy rain and prior to predicted heavy rain	Site Flood Coordinator
Review Site Evacuation Plan	Monthly	Site Flood Coordinator
Evacuation Drills	Bi-Annually	Site Flood Coordinator
Evacuation of occupants	Following a flash flood warning from BoM, in liaison with SES	Site Flood Coordinator

6.5.1 Steps to Follow During the 1% AEP Event

- In an emergency always phone emergency services on 000.
- If flood water rising higher than expected and/or rapidly approaching ground floor level phone emergency services on 000.
- Obtain information from BoM, SES, radio stations and local observations to ensure occurrence of event.
- Warn other occupants on site, immediately start to vacate low level areas move towards mezzanine spaces.
- Designate an individual (if available) to activate back-up power supply if required.
- Turn off unnecessary electrical, gas and water on site.
- Site Flood Coordinator to contact SES to advise on site occupancy or vacancy. If occupied advise on intended Shelter-In-Place plan for site and consult with SES on any further actions.

6.5.2 Recovery

Recovering from a disaster will be easier if you are prepared. To help people recover, the NSW SES, NSWRFS and Fire & Rescue NSW have Recovery Kits available on their websites and in hard copy.

Disaster Recovery Centers may be established following disasters. These can provide a range of welfare services including financial assistance, personal support, organizing temporary accommodation and providing information and referrals.

6.6 After the Flood Event

After the flood event, the Site Flood Coordinator is required to check with the relevant authority that it is safe to re - enter into the flooded area. Staff or customers should not re-enter the flooded area unless advised by emergency services authorities to do so. Flooded areas pose health risks to individuals and the following procedures should be followed entering the facility:

- Have electrics and gas fixtures been checked by qualified personnel prior to use
- Beware of snakes and spiders
- Beware of health risks from wading through muddy water
- Do not use food or drinks which have been in contact with floodwater
- Boil all water until supplies are declared safe to drink
- Report damaged utility lines to appropriate authorities
- Plan which items and areas should be cleaned first
- Use disinfectant for cleaning
- Wear shoes and gloves in any area which has been flooded.

7. NEIGHBOURING DEVELOPMENT APPROVALS

Unit 1 of No. 380 Pittwater Road (same building as the proposed development) has been granted development approval for a change of use to a winery and brewery (DA2020/0118). That tenancy has a floor area of 266 m^2, which is approximately double the size of the current proposal, and was approved for 60 patrons—twice the number proposed for Unit 5. The nature of Unit 1 development is similar to the current application, demonstrating that a comparable use has already been supported by Council in this location.

Future owners and/or tenants occupying the subject unit may refer to past development approvals in the vicinity of the site when developing in-house business Flood Emergency Plans.

8. CONCLUSION & RECOMMENDATIONS

The proposed development comprises of change of use to a brewery & tap room and refurbish within an existing commercial premise. It is not proposed to alter the existing building structure, nor to create additional permanent structures which may impede existing flood conveyance or reduce existing flood storage.

To meet Councils DCP and LEP, the following mitigation measures must be considered as part of the development:

- ***The proposed finished floor level to be RL2.58m AHD (matching the existing finished floor level);***
- ***The proposed office & lab area finished floor level to be RL3.95m AHD (being above Flood Planning Level 3.69m AHD);***
- ***The outdoor decking area structure to be subfloor open and void;***
- ***All new internal structures, fixtures and fittings within the existing premise below the flood planning level (RL 3.69m AHD) are to be constructed with flood compatible materials;***
- ***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 (RL 3.69m AHD). All existing electrical equipment and power points located below the Flood Planning Level within the subject unit 5 must have residual current devices installed that turn off all electricity supply to the property when flood waters are detected;***
- ***A suitably qualified structural engineer is to certify that the structures up to RL3.69m AHD can withstand the forces of floodwater, debris and buoyancy forces;***
- ***A laminated copy of the Flood Emergency Plan should be permanently displayed on the wall near the entrance door, alongside instructions for operating any shut-off valves if applicable. The plan should be introduced to all new employees and the implementation protocols should be rehearsed on a regular basis.***

In our opinion the proposed change of use development will not adversely affect the existing flood regime as long as the recommendations of this report are carried out.

APPENDIX A

Building Component Flood Compatible Material

BUILDING COMPONENT	FLOOD COMPATIBLE MATERIAL	BUILDING COMPONENT	FLOOD COMPATIBLE MATERIAL
Flooring and Sub-floor Structure	• Concrete slab-on-ground monolith construction • Suspension reinforced concrete slab • Steel Piers/Columns	**Doors**	• Solid panel with water proof adhesives • Flush door with marine ply filled with closed cell foam • Painted metal construction • Aluminium or galvanised steel frame
Floor Covering	• Clay tiles • Concrete precast or in situ • Concrete tiles • Epoxy, formed-in-place • Mastic flooring, formed-in-place • Rubber sheets or tiles with chemical-set adhesives • Silicone floors formed-in-place • Vinyl sheets or tiles with chemical-set adhesive • Ceramic tiles, fixed with mortar or chemical –set adhesive • Asphalt tiles, fixed with water resistant adhesive	**Wall and Ceiling Linings**	• Fibro-cement board • Brick, face or glazed • Clay tile glazed in waterproof mortar • Concrete • Concrete block • Steel with waterproof applications • Stone, Natural solid or veneer, waterproof grout • Glass blocks • Glass • Plastic sheeting or wall with waterproof adhesive
Wall Structure	• Solid brickwork, blockwork, reinforced, concrete or mass concrete	**Insulation Windows**	• Foam (closed cell types) • Aluminium frame with stainless steel rollers or similar corrosion and water resistant material
Roofing Structure (for Situations Where the Relevant Flood Level is Above the Ceiling)	• Reinforced concrete construction • Galvanised metal construction	**Nails, Bolts, Hinges and Fittings**	• Brass, nylon or stainless steel • Removable pin hinges • Hot dipped galvanised steel wire, nails or similar

Electrical and Mechanical Equipment	**Heating and Air Conditioning Systems**
For dwelling constructed on land to which this Plan applies, the electrical and mechanical materials, equipment and installation should conform to the following requirements.	Heating and air conditioning systems should, to the maximum extent possible, be installed in areas and spaces of the house above the relevant flood level. When this is not feasible every precaution should be taken to minimise the damage caused by submersion according to the following guidelines.

Main Power Supply – Subject to the approval of the relevant authority the incoming main commercial power service equipment, including all metering equipment, shall be located above the relevant flood level. Means shall be available to easily disconnect the dwelling from the main power supply.	**Fuel –** Heating systems using gas or oil as a fuel should have a manually operated valve located in the fuel supply line to enable fuel cut-off.
Wiring – All wiring, power outlets, switches, etc., should, to the maximum extent possible, be located above the relevant flood level. All electrical wiring installed below the relevant flood level should be suitable for continuous submergence in water and should contain no fibrous components. Earth core linkage systems (or safety switches) are to be installed. Only submersible-type splices should be used below relevant flood level. All conduits located below the relevant designated flood level should be so installed that they will be self-draining if subjected to flooding.	**Installation –** The heating equipment and fuel storage tanks should be mounted on and securely anchored to a foundation pad of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. All storage tanks should be vented to an elevation of 600 millimetres above the relevant flood level.
Equipment – All equipment installed below or partially below the relevant flood level should be capable of disconnection by a single plug and socket assembly.	**Ducting –** All ductwork located below the relevant flood level should be provided with opening for drainage and cleaning. Self draining may be achieved by constructing the ductwork on a suitable grade. Where ductwork must pass through a water-tight wall or floor below the relevant flood level, the ductwork should be protected by a closure assembly operated from above relevant flood level.
Reconnection – Should any electrical device and/or part of the wiring be flooded it should be thoroughly cleaned or replaced and checked by an approved electrical contractor before reconnection.	**Ancillary Structures (Steps, pergolas, etc.) –** Suitable water tolerant materials should be used such as masonry sealed hardwood and corrosive resistant metals. Copper Chrome Arsenate (CCA) treated timber is not a suitable material.

Note: A document for reducing vulnerability of buildings to flood damage, "Guidance on Building in Flood Prone Areas" is a comprehensive document that anyone building or renovating a property in a flood affected area should consult. The link below will take you directly to the document.

https://www.ses.nsw.gov.au/media/2247/building_guidelines.pdf

APPENDIX B

Warringah DCP 2011 – E11 Flood Prone Land: Flood Planning Matrix

		High Flood Risk Precinct				
		Vulnerable & Critical Use	Residential Use	Business & Industrial Use	Recreational & Environmental Use	Subdivision & Civil Works
A	Flood effects caused by Development	A1 A2	A1 A2	A1 A2	A1 A2	A1 A2
B	Building Components & Structural	B1 B2 B3	B1 B2 B3	B1 B2 B3	B1 B2 B3	
C	Floor Levels	C2 C3	C1 C3 C4 C6	C1 C3 C4 C6 C7	C3	C5
D	Car Parking	D1 D2 D3 D4 D7	D1 D2 D3 D4 D5 D6	D1 D2 D3 D4 D5 D6	D1 D2 D3 D4 D5 D6	D1
E	Emergency Response	E1 E2	E1	E1	E1	E3
F	Fencing	F1	F1	F1	F1	F1
G	Storage of Goods	G1	G1	G1	G1	
H	Pools	H1	H1	H1	H1	H1

A. FLOOD EFFECTS CAUSED BY DEVELOPMENT

A1	Development shall not be approved unless it can be demonstrated in a Flood Management Report that it has been designed and can be constructed so that in all events up to the 1% AEP event: (a) There are no adverse impacts on flood levels or velocities caused by alterations to the flood conveyance; and (b) There are no adverse impacts on surrounding properties; and (c) It is sited to minimise exposure to flood hazard. Major developments and developments likely to have a significant impact on the PMF flood regime will need to demonstrate that there are no adverse impacts in the Probable Maximum Flood.
A2	Development shall not be approved unless it can be demonstrated in a Flood Management Report that in all events up to the 1% AEP event there is no net loss of flood storage. Consideration may be given for exempting the volume of standard piers from flood storage calculations. If Compensatory Works are proposed to balance the loss of flood storage from the development, the Flood Management Report shall include detailed calculations to demonstrate how this is achieved.

B. BUILDING COMPONENTS AND STRUCTURAL SOUNDNES

B1	All buildings shall be designed and constructed with flood compatible materials in accordance with "Reducing Vulnerability of Buildings to Flood Damage: Guidance on Building in Flood Prone Areas", Hawkesbury-Nepean Floodplain Management Steering Committee (2006).
B2	All new development must be designed and constructed to ensure structural integrity up to the Flood Planning Level, taking into account the forces of floodwater, wave action, flowing water with debris, buoyancy and immersion. Where shelter-in-place refuge is required, the structural integrity for the refuge is to be up to the Probable Maximum Flood level. Structural certification shall be provided confirming the above.
B3	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. All existing electrical equipment and power points located below the Flood Planning Level within the subject structure must have residual current devices installed that turn off all electricity supply to the property when flood waters are detected.

C. FLOOR LEVELS

C1	New floor levels within the development shall be at or above the Flood Planning Level.
C2	All floor levels within the development shall be at or above the Probable Maximum Flood level or Flood Planning Level, whichever is higher.
C3	All new development must be designed and constructed so as not to impede the floodway or flood conveyance on the site, as well as ensuring no net loss of flood storage in all events up to the 1% AEP event. For suspended pier/pile footings: (a) The underfloor area of the dwelling below the 1% AEP flood level is to be designed and constructed to allow clear passage of floodwaters, taking into account the potential for small openings to block; and (b) At least 50% of the perimeter of the underfloor area is of an open design from the natural ground level up to the 1% AEP flood level; and (c) No solid areas of the perimeter of the underfloor area would be permitted in a floodway
C4	A one-off addition or alteration below the Flood Planning Level of less than 30 square metres (in total, including walls) may be considered only where: (a) it is an extension to an existing room; and (b) the Flood Planning Level is incompatible with the floor levels of the existing room; and (c) out of the 30 square metres, not more than 10 square metres is below the 1% AEP flood level. This control will not be permitted if this provision has previously been utilised since the making of this Plan. The structure must be floodproofed to the Flood Planning Level, and the Flood Management Report must demonstrate that there is no net loss of flood storage in all events up to the 1% AEP event.
C5	The applicant must demonstrate that future development following a subdivision proposal can be undertaken in accordance with this Development Control Plan.
C6	Consideration may be given to the retention of an existing floor level below the Flood Planning Level when undertaking a first floor addition provided that: (a) it is not located within a floodway; and (b) the original foundations are sufficient to support the proposed final structure above them. The Flood Management Report must include photos and the structural certification required as per Control B2 must consider whether the existing foundations are adequate or should be replaced; and (c) none of the structural supports/framing of existing external walls of are to be removed unless the building is to be extended in that location; and (d) the ground floor is floodproofed.
C7	Consideration may be given to a floor level below the Flood Planning Level within the first 5 metres from the street front in an existing business zone provided it can be demonstrated that: (a) The minimum floor level is no lower than the adjacent footpath level, and (b) The maximum internal distance from the front of the building is 5 metres, which can only apply to one side of an individual premises, and (c) The maximum area for the floor area to be below the Flood Planning Level for an individual premises is 30 square metres, and (d) There is direct internal access between areas above and below the Flood Planning Level for each individual premises

D. CAR PARKING

D1	Open carpark areas and carports shall not be located within a floodway.
D2	The lowest floor level of open carparks and carports shall be constructed no lower than the natural ground levels, unless it can be shown that the carpark or carport is free draining with a grade greater than 1% and that flood depths are not increased.
D3	Carports must be of open design, with at least 2 sides completely open such that flow is not obstructed up to the 1% AEP flood level. Otherwise it will be considered to be enclosed. When undertaking a like-for-like replacement and the existing garage/carport is located on the street boundary and ramping is infeasible, consideration may be given for dry floodproofing up to the 1% AEP flood level.
D4	Where there is more than 300mm depth of flooding in a car park or carport during a 1% AEP flood event, vehicle barriers or restraints are to be provided to prevent floating vehicles leaving the site. Protection must be provided for all events up to the 1% AEP flood event
D5	Enclosed Garages must be located at or above the 1% AEP level
D6	All enclosed car parks (including basement carparks) must be protected from inundation up to the Flood Planning Level. All access, ventilation, driveway crests and any other potential water entry points to any enclosed car parking shall be above the Flood Planning Level. Where a driveway is required to be raised it must be demonstrated that there is no net loss to available flood storage in any event up to the 1% AEP flood event and no impact on flood conveyance through the site. Council will not accept any options that rely on electrical, mechanical or manual exclusion of the floodwaters from entering the enclosed carpark
D7	All enclosed car parks must be protected from inundation up to the Probable Maximum Flood level or Flood Planning Level whichever is higher. For example, basement carpark driveways must be provided with a crest at or above the relevant Probable Maximum Flood level or Flood Planning Level whichever is higher. All access, ventilation and any other potential water entry points to any enclosed car parking shall be at or above the relevant Probable Maximum Flood level or Flood Planning Level whichever is higher.

E. EMERGENCY RESPONSE

E1	If the property is affected by a Flood Life Hazard Category of H3 or higher, then Control E1 applies and a Flood Emergency Assessment must be included in the Flood Management Report. If the property is affected by a Flood Life Hazard Category of H6, then development is not permitted unless it can be demonstrated to the satisfaction of the consent authority that the risk level on the property is or can be reduced to a level below H6 or its equivalent. If the property is flood affected but the Flood Life Hazard Category has not been mapped by Council, then calculations for its determination must be shown in the Flood Management Report, in accordance with the "Technical Flood Risk Management Guideline: Flood Hazard", Australian Institute for Disaster Resilience (2012). Where flood-free evacuation above the Probable Maximum Flood level is not possible, new development must provide a shelter-in-place refuge where: a) The floor level is at or above the Probable Maximum Flood level; and b) The floor space provides at least 2m² per person where the flood duration is long (6 or more hours) in the Probable Maximum Flood event, or 1m² per person for less than 6 hours; c) It is intrinsically accessible to all people on the site, plainly evident, and self-directing, with sufficient capacity of access routes for all occupants without reliance on an elevator; and d) It must contain as a minimum: sufficient clean water for all occupants; portable radio with spare batteries; torch with spare batteries; and a first aid kit Class 10 classified buildings and structures (as defined in the Building Codes of Australia) are excluded from this control. In the case of change of use or internal alterations to an existing building, a variation to this control may be considered if justified appropriately by a suitably qualified professional. Note that in the event of a flood, occupants would be required to evacuate if ordered by Emergency Services personnel regardless of the availability of a shelter-in-place refuge.
E2	If a shelter-in-place refuge is required, it must contain as a minimum: sufficient clean water for all occupants; portable radio with spare batteries; torch with spare batteries; a first aid kit; emergency power; and a practical means of medical evacuation.
E3	It must be demonstrated that evacuation or a shelter-in-place refuge in accordance with the requirements of this DCP will be available for any potential development arising from a Torrens title subdivision.

G. STORAGE OF GOODS

G1	Hazardous or potentially polluting materials shall not be stored below the Flood Planning Level unless adequately protected from floodwaters in accordance with industry standards.

APPENDIX C

Councils Flood Information Report

northern beaches council

COMPREHENSIVE FLOOD INFORMATION REPORT

Property: "380 Pittwater Road NORTH MANLY NSW 2100"
Lot DP: "Lot 23 DP 5342
Lot B DP 348088"
Issue Date: 10/03/2025
Flood Study Reference: Manly Lagoon Flood Study 2013, BMT WBM

Flood Information[1]:

Map A - Flood Risk Precincts
Maximum Flood Planning Level (FPL) [2, 3, 4]: 3.69 m AHD

Map B - 1% AEP Flood & Key Points
1% AEP Maximum Water Level [2, 3]: 3.19 m AHD
1% AEP Maximum Depth from natural ground level[3]: 1.30 m
1% AEP Maximum Velocity: 0.93 m/s

Map C - 1% AEP Hydraulic Categorisation
1% AEP Hydraulic Categorisation: Flood Storage

Map D - Probable Maximum Flood
PMF Maximum Water Level (PMF) [4]: 5.66 m AHD
PMF Maximum Depth from natural ground level: 3.81 m
PMF Maximum Velocity: 1.39 m/s

Map E - Flooding with Climate Change
1% AEP Maximum Water Level with Climate change [3]: 3.44 m AHD
1% AEP Maximum Depth with Climate Change[3]: 1.58 m

Map F - Flood Life Hazard Category in PMF
H5

Map G - Indicative Ground Surface Spot Heights

(1) The provided flood information does not account for any local overland flow issues nor private stormwater drainage systems.
(2) Overland flow/mainstream water levels may vary across a sloping site, resulting in variable minimum floor/ flood planning levels across the site. The maximum Flood Planning Level may be in a different location to the maximum 1% AEP flood level.
(3) Intensification of development in the former Pittwater LGA requires the consideration of climate change impacts which may result in higher minimum floor levels.
(4) Vulnerable/critical developments require higher minimum floor levels using the higher of the PMF or FPL

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Notes

General

- All levels are based on Australian Height Datum (AHD) unless otherwise noted.
- This is currently the best available information on flooding; it may be subject to change in the future.
- Council recommends that you obtain a detailed survey of the above property and surrounds to AHD by a registered surveyor to determine any features that may influence the predicted extent or frequency of flooding. It is recommended you compare the flood level to the ground and floor levels to determine the level of risk the property may experience should flooding occur.
- Development approval is dependent on a range of issues, including compliance with all relevant provisions of Northern Beaches Council's Local Environmental Plans and Development Control Plans.
- Please note that the information contained within this letter is general advice only as a detail survey of the property as well as other information is not available. Council recommends that you engage a suitably experienced consultant to provide site specific flooding advice prior to making any decisions relating to the purchase or development of this property.
- The Flood Studies on which Council's flood information is based are available on Council's online Flood Study Reports webpage.
- If the FPL is higher than the PMF level, then the FPL should still be used as the FPL, as it includes freeboard which the PMF does not.
- If the property is affected by an Estuarine Planning Level (EPL) which is higher than the FPL, then the EPL should be used as the FPL.
- Areas affected by an EPL in the former Pittwater LGA are mapped on Council's online Estuarine Hazard Map. Note that areas in the former Manly LGA affected by an EPL have been identified and will be soon added to this map.
- Council's drainage infrastructure is mapped on Council's Stormwater Map. Note that locations are indicative only and may not be exactly as shown.

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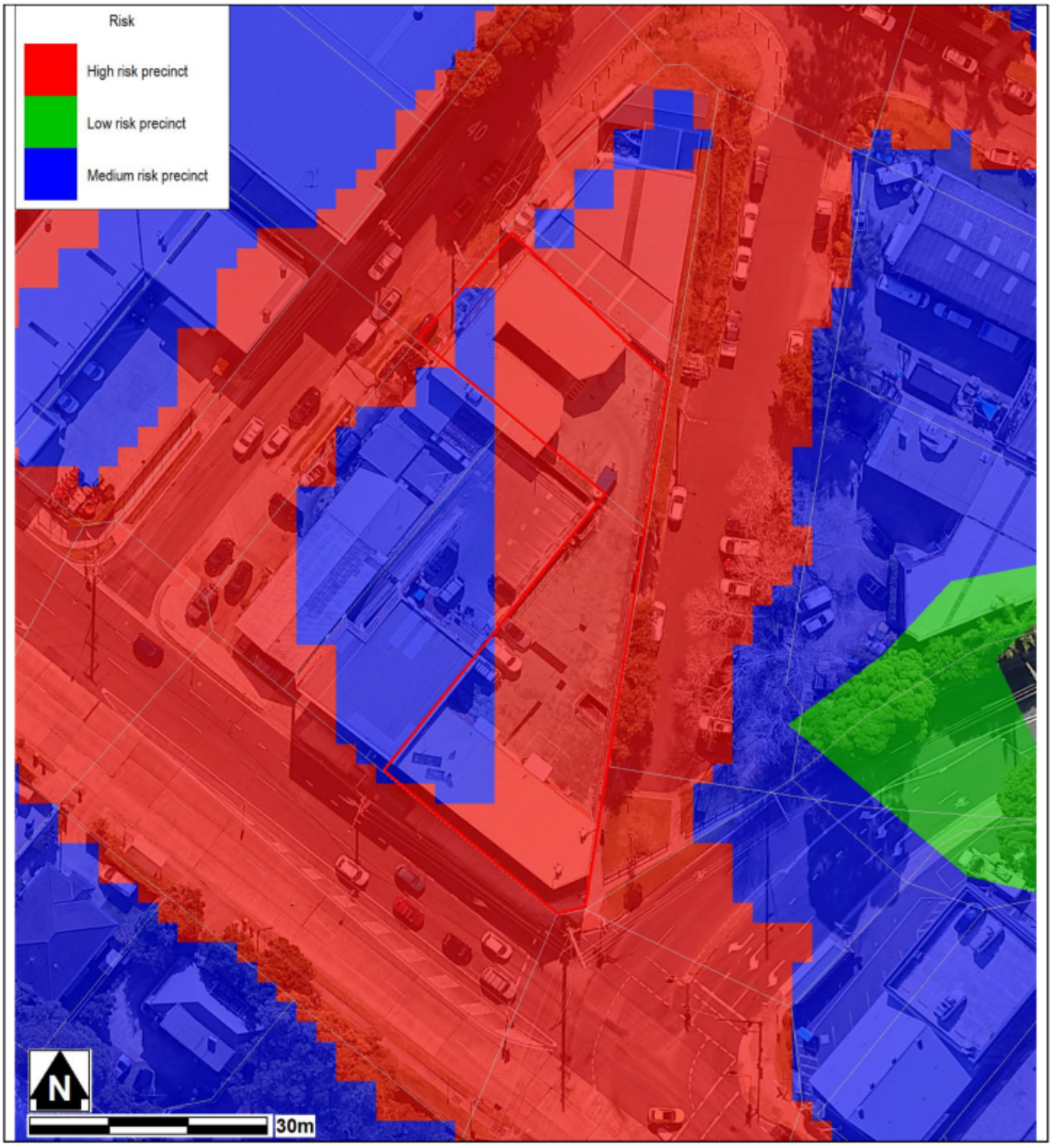
MAP A: FLOOD RISK PRECINCTS



Notes:

- **Low Flood Risk precinct** means all flood prone land not identified within the High or Medium flood risk precincts.
- **Medium Flood Risk precinct** means all flood prone land that is (a) within the 1% AEP Flood Planning Area; and (b) is not within the high flood risk precinct.
- **High Flood Risk precinct** means all flood prone land (a) within the 1% AEP Flood Planning Area; and (b) is either subject to a high hydraulic hazard, within the floodway or subject to significant evacuation difficulties (H5 or H6 Life Hazard Classification).
- The **Flood Planning Area** extent is equivalent to the Medium Flood Risk Precinct extent and includes the High Flood Risk Precinct within it. The mapped extent represents the 1% annual Exceedance Probability (AEP) flood event + freeboard.
- None of these mapped extents include climate change.
- Cadastre Lines (Source: NSW Government Land and Property Information), flood levels/extents (Source: Manly Lagoon Flood Study 2013, BMT WBM) and aerial photography (Source: NearMap 2014) are indicative only.

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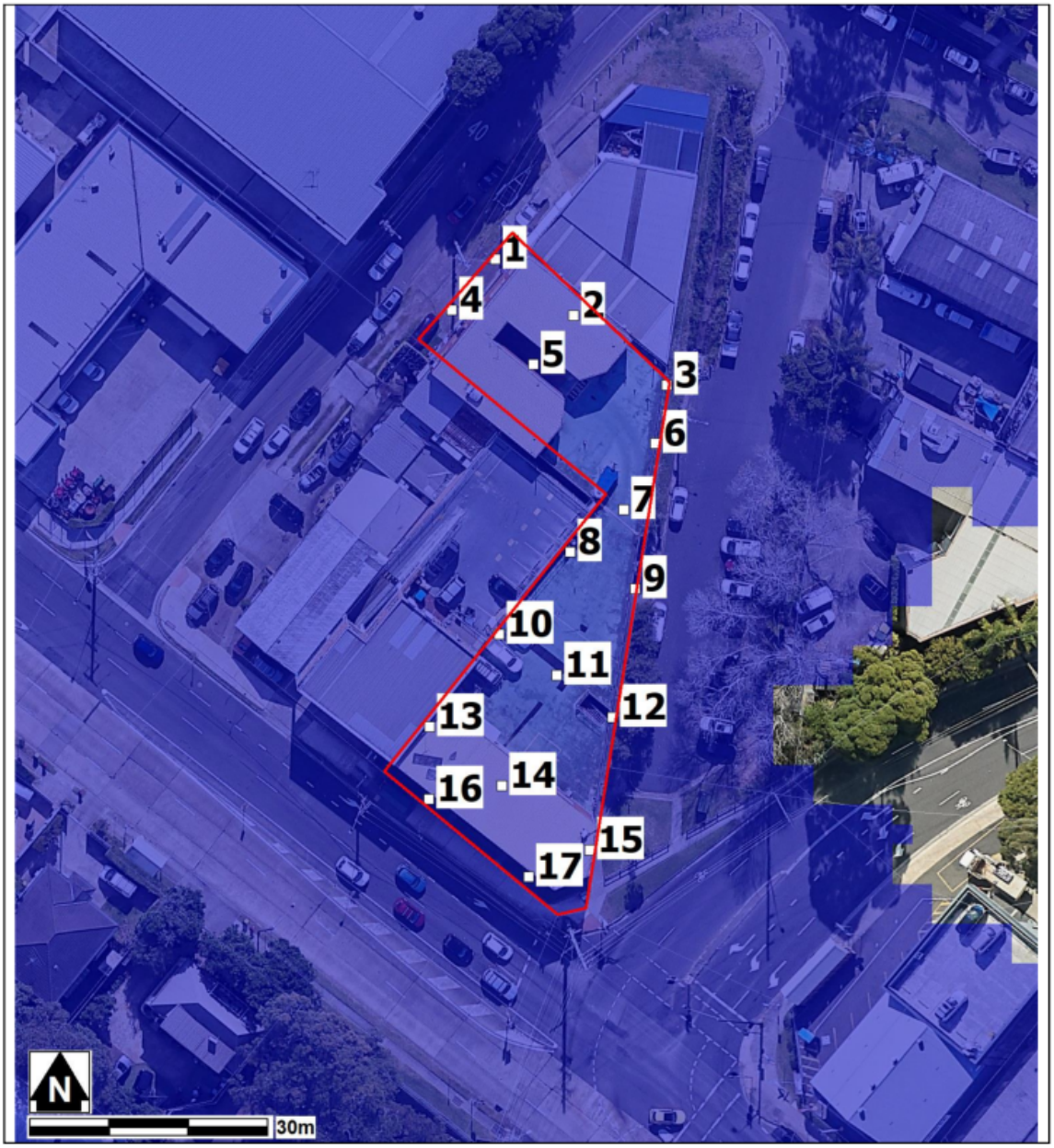
MAP B: FLOODING - 1% AEP EXTENT & KEY POINTS



Notes:

- Extent represents the 1% Annual Exceedance Probability (AEP) flood event.
- Flood events exceeding the 1% AEP can occur on this site.
- Extent does not include climate change.
- Cadastre Lines (Source: NSW Government Land and Property Information), flood levels/extents (Source: Manly Lagoon Flood Study 2013, BMT WBM) and aerial photography (Source Near Map 2014) are indicative only.

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Flood Levels

ID	5% AEP Max WL (m AHD)	5% AEP Max Depth (m)	1% AEP Max WL (m AHD)	1% AEP Max Depth (m)	1% AEP Max Velocity (m/s)	Flood Planning Level (m)	PMF Max WL (m AHD)	PMF Max Depth (m)	PMF Max Velocity (m/s)
1	2.74	0.61	3.19	1.03	0.21	3.69	5.66	3.53	0.39
2	2.74	0.62	3.19	1.04	0.07	3.69	5.66	3.55	0.14
3	2.74	0.75	3.19	1.17	0.21	3.69	5.66	3.68	0.40
4	2.74	0.52	3.19	0.95	0.15	3.69	5.66	3.45	0.29
5	2.74	0.58	3.19	1.01	0.07	3.69	5.66	3.51	0.15
6	2.74	0.82	3.19	1.25	0.23	3.69	5.66	3.75	0.65
7	2.73	0.78	3.19	1.21	0.21	3.69	5.66	3.71	0.40
8	2.73	0.65	3.19	1.08	0.07	3.69	5.66	3.58	0.14
9	2.73	0.86	3.18	1.29	0.33	3.68	5.66	3.79	0.63
10	2.73	0.55	3.19	0.97	0.08	3.69	5.66	3.48	0.16
11	2.73	0.64	3.18	1.07	0.09	3.68	5.66	3.57	0.19
12	2.73	0.71	3.19	1.14	0.18	3.69	5.66	3.64	0.38
13	2.73	0.36	3.18	0.79	0.09	3.68	5.66	3.29	0.26
14	2.73	0.54	3.18	0.97	0.14	3.68	5.66	3.47	0.28
15	2.73	0.62	3.18	1.05	0.84	3.68	5.66	3.55	0.95
16	2.73	0.45	3.19	0.88	0.46	3.69	5.66	3.38	0.60
17	2.73	0.53	3.18	0.97	0.18	3.68	5.66	3.47	0.99

Climate Change Flood Levels (30% Rainfall intensity and 0.9m Sea Level Rise)

ID	CC 1% AEP Max WL (m AHD)	CC1 % AEP Max Depth (m)
1	3.44	1.31
2	3.44	1.32
3	3.44	1.45
4	3.44	1.22
5	3.44	1.29
6	3.44	1.53
7	3.44	1.48
8	3.44	1.36
9	3.44	1.57
10	3.44	1.25
11	3.44	1.35
12	3.44	1.42
13	3.44	1.07
14	3.44	1.24
15	3.43	1.33
16	3.44	1.16
17	3.43	1.24

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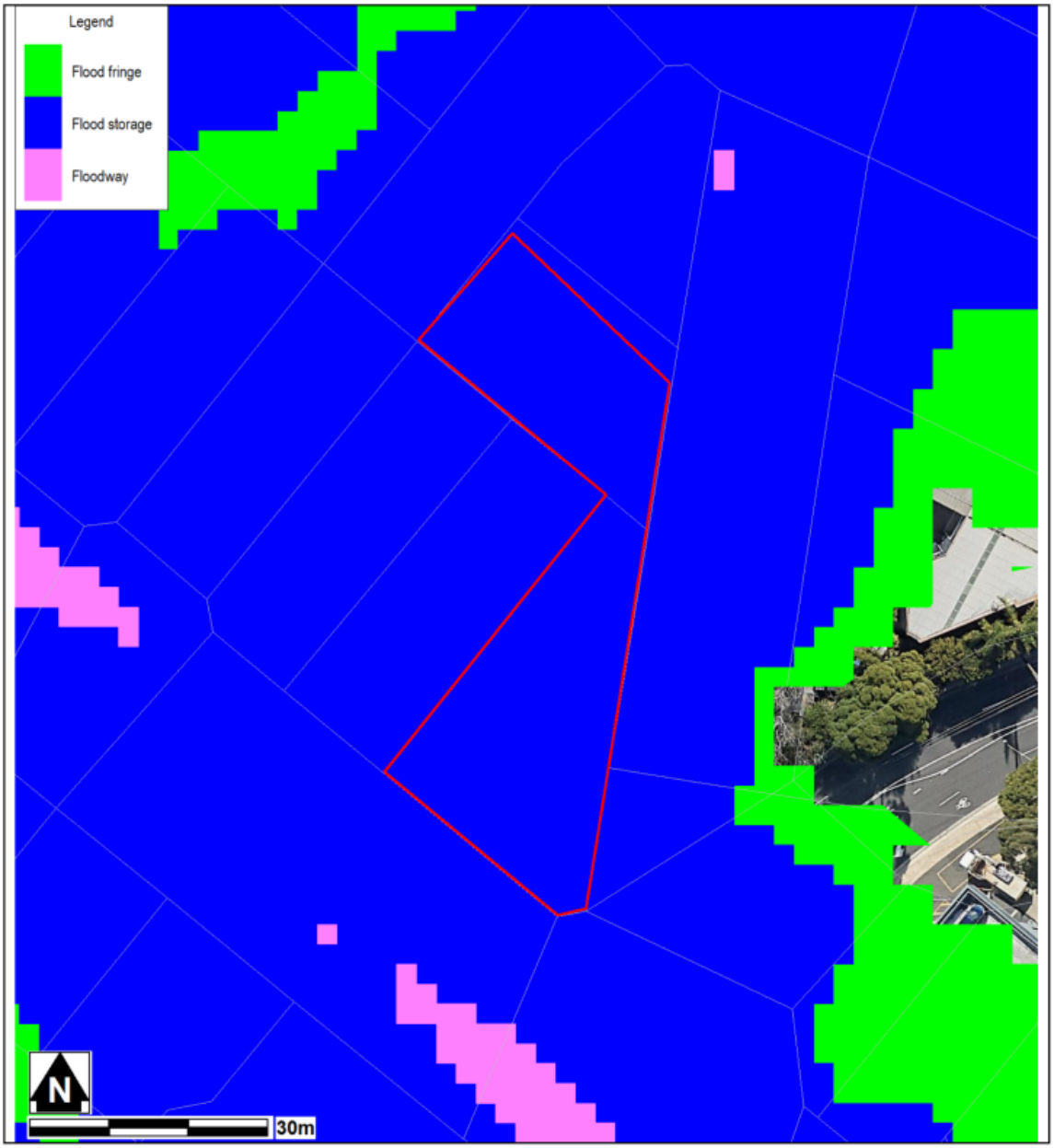
WL – Water Level
PMF – Probable Maximum Flood
N/A - No Peak Water Level/Depth/Velocity Available.

Notes:

- The flood planning levels above are calculated by adding a 0.5m freeboard to the 1% AEP water level. However, if the depth of flow is less than 0.3m and a Velocity X Depth product is less than 0.3m^2/s, a freeboard of 0.3m may be able to be justified for development.

MAP C: 1% AEP FLOOD HYDRAULIC CATEGORY EXTENT MAP



Notes:

- Extent represents the 1% Annual Exceedance Probability (AEP) flood event
- Extent does not include climate change
- Cadastre Lines (Source: NSW Government Land and Property Information), flood levels/extents (Source: Manly Lagoon Flood Study 2013, BMT WBM) and aerial photography (Source: NearMap 2014) are indicative only

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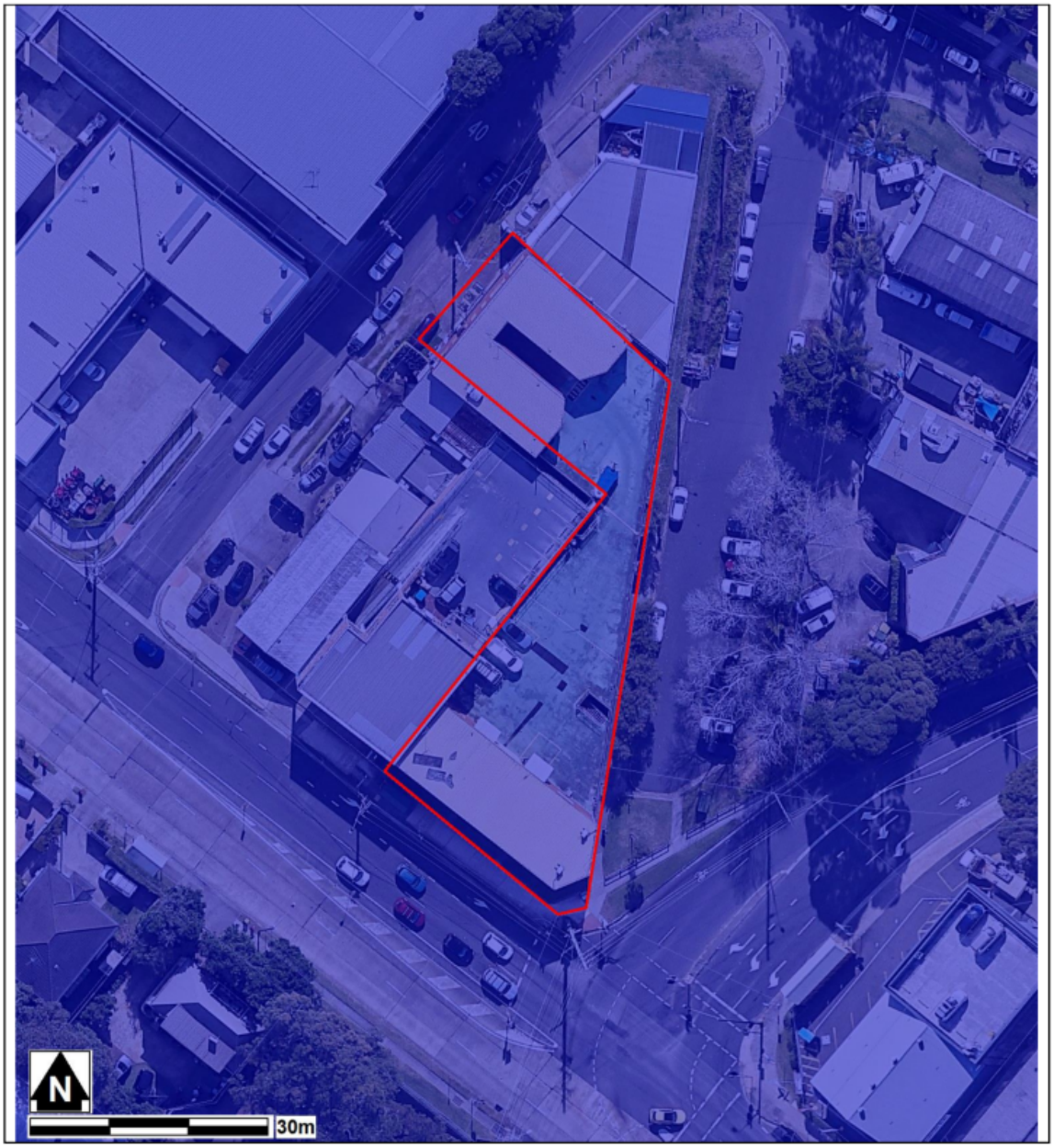
MAP D: PMF EXTENT MAP



Notes:

- Extent represents the Probable Maximum Flood (PMF) flood event
- Extent does not include climate change
- Cadastre Lines (Source: NSW Government Land and Property Information), flood levels/extents (Source: Manly Lagoon Flood Study 2013, BMT WBM) and aerial photography (Source: NearMap 2014) are indicative only

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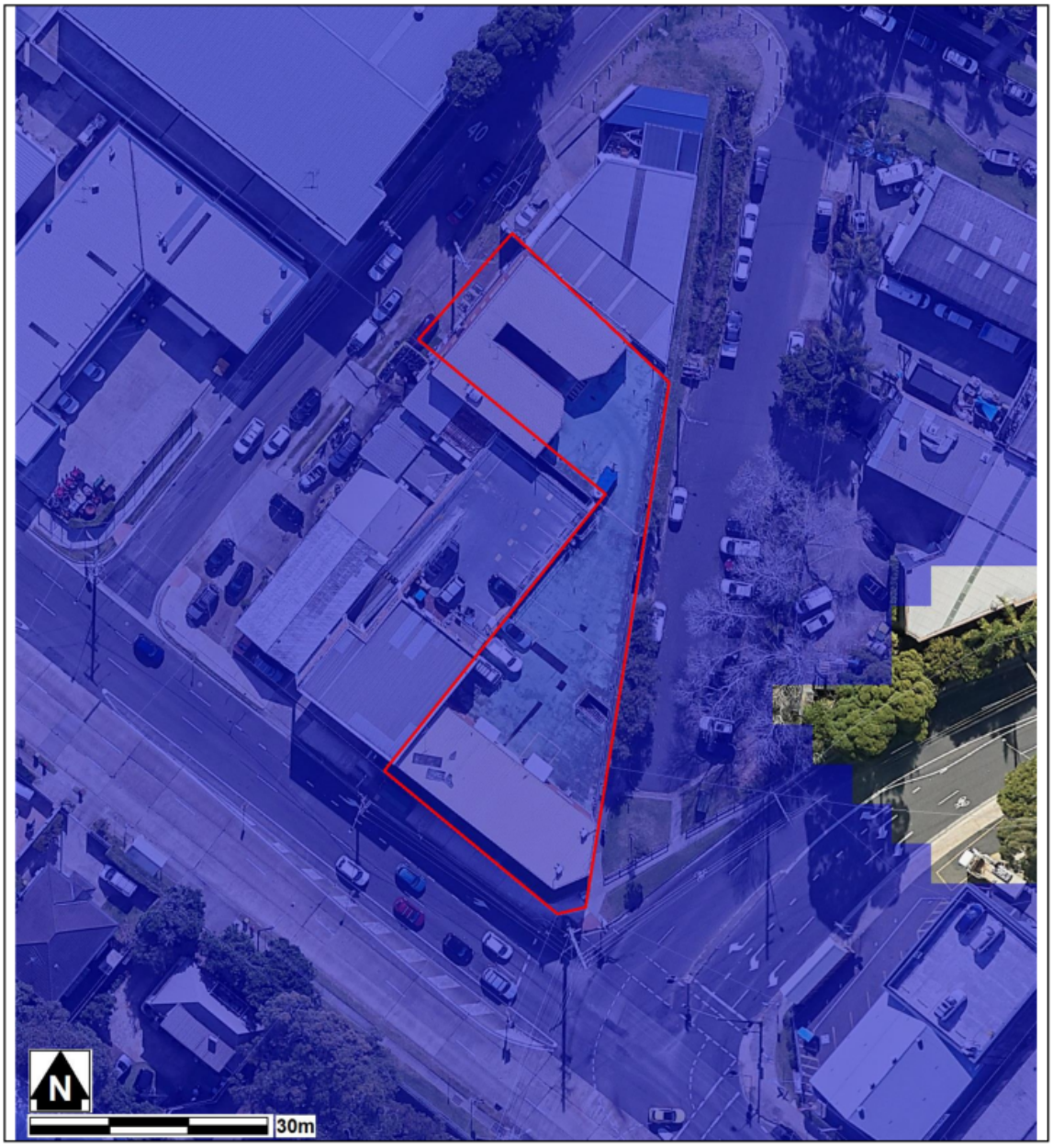
MAP E: FLOODING – 1% AEP EXTENT PLUS CLIMATE CHANGE

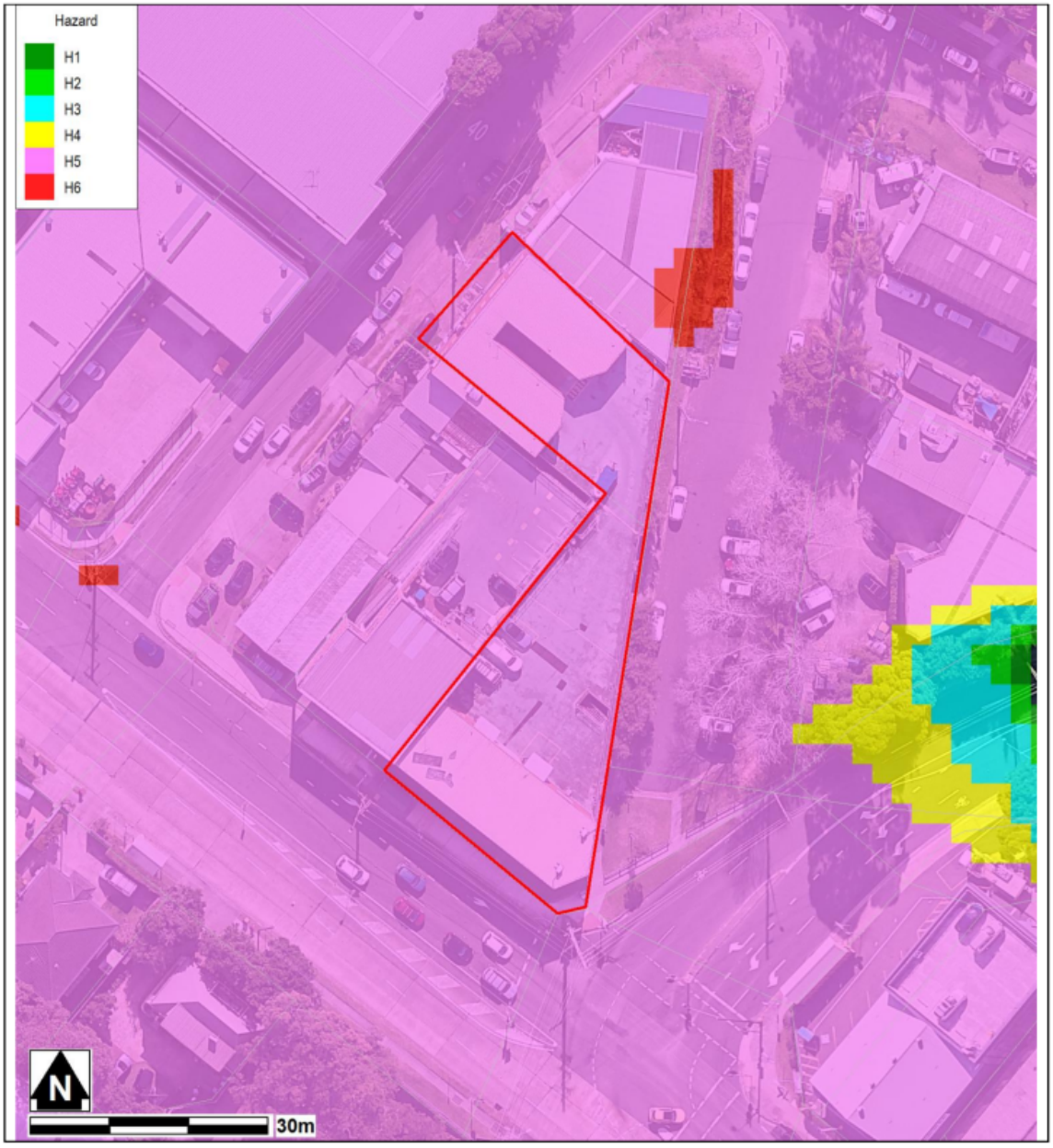


Notes:

- Extent represents the 1% annual Exceedance Probability (AEP) flood event including 30% rainfall intensity and 0.9m Sea Level Rise climate change scenario
- Flood events exceeding the 1% AEP can occur on this site.
- Cadastre Lines (Source: NSW Government Land and Property Information), flood levels/extents (Source: Manly Lagoon Flood Study 2013, BMT WBM) and aerial photography (Source: NearMap 2014) are indicative only

Issue Date: 10/03/2025

MAP F: FLOOD LIFE HAZARD CATEGORY IN PMF



Notes:

- Cadastre Lines (Source: NSW Government Land and Property Information), flood levels/extents (Source: Manly Lagoon Flood Study 2013, BMT WBM) and aerial photography (Source Near Map 2014) are indicative only.

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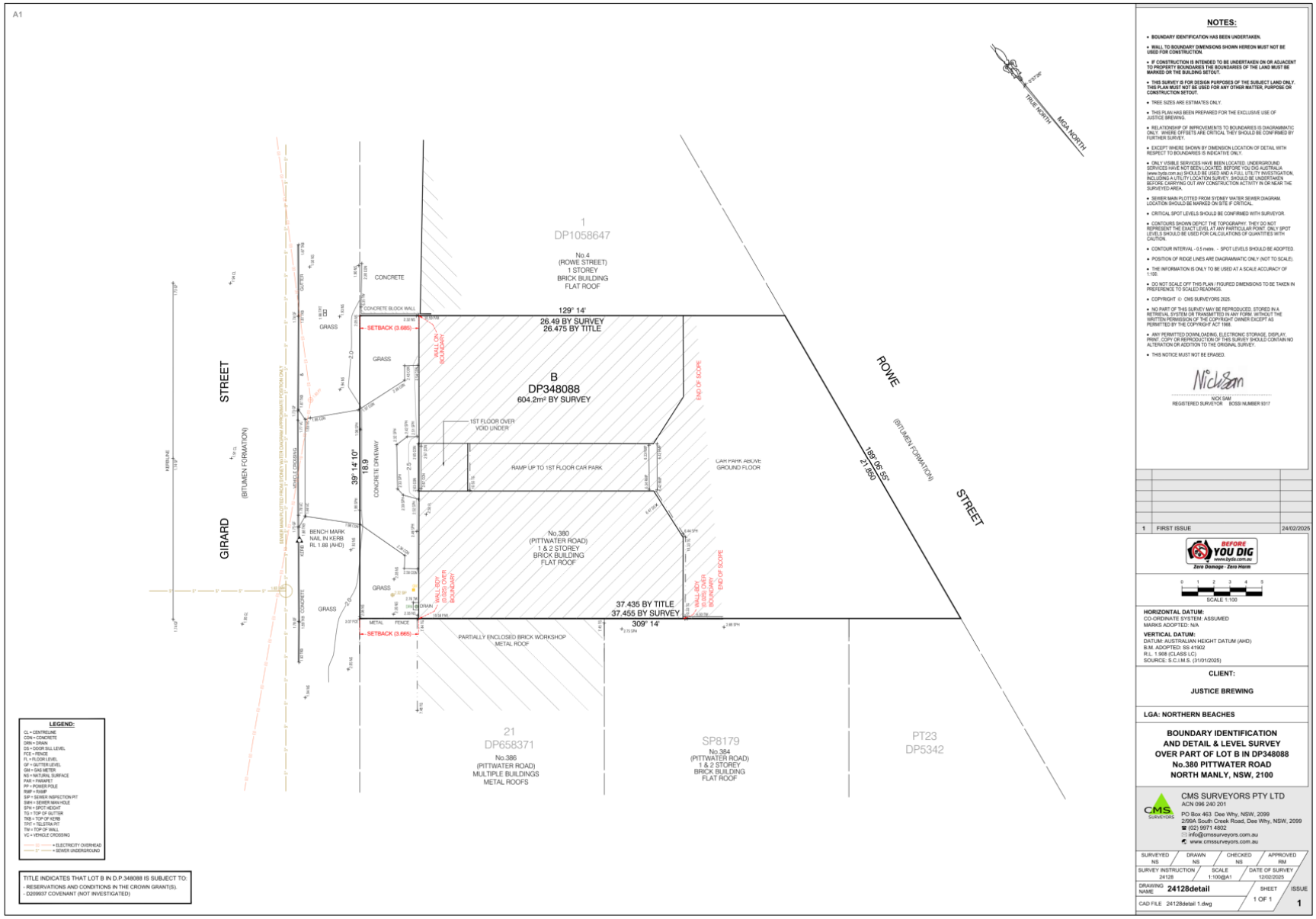
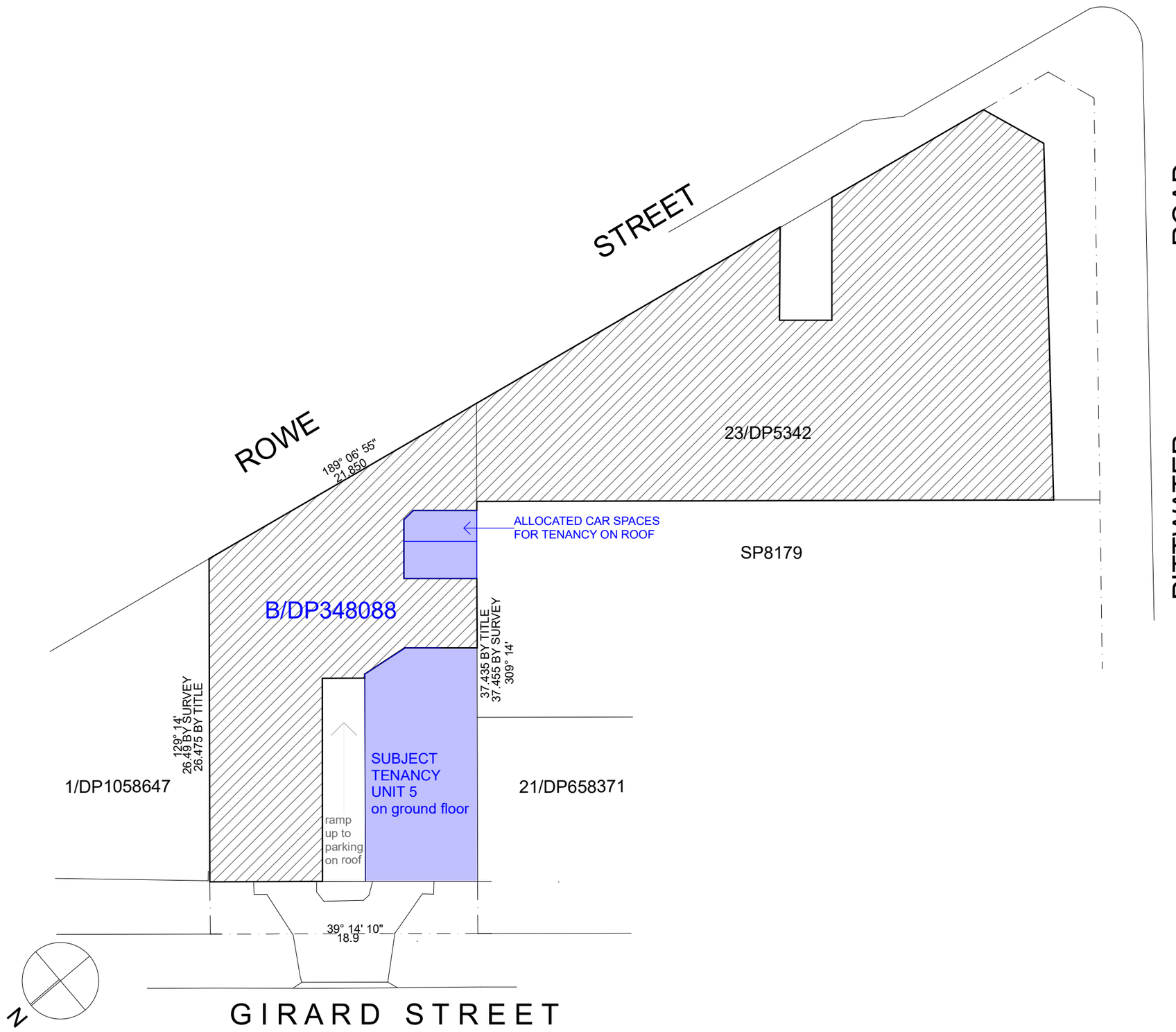
APPENDIX D

Survey plan & Architectural Plans





GIRARD STREET ELEVATION

ROOF TOP PARKING

RAMP ACCESS TO ROOF TOP PARKING

KIRA ROBSON **architect**
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Rev	Date	Issue
nil	12 June 25	ISSUED FOR DEVELOPMENT APPLICATION

BREWERY & TAP ROOM
Unit 5, 380 Pittwater Road
North Manly NSW

DRAWING TITLE
SITE PLAN

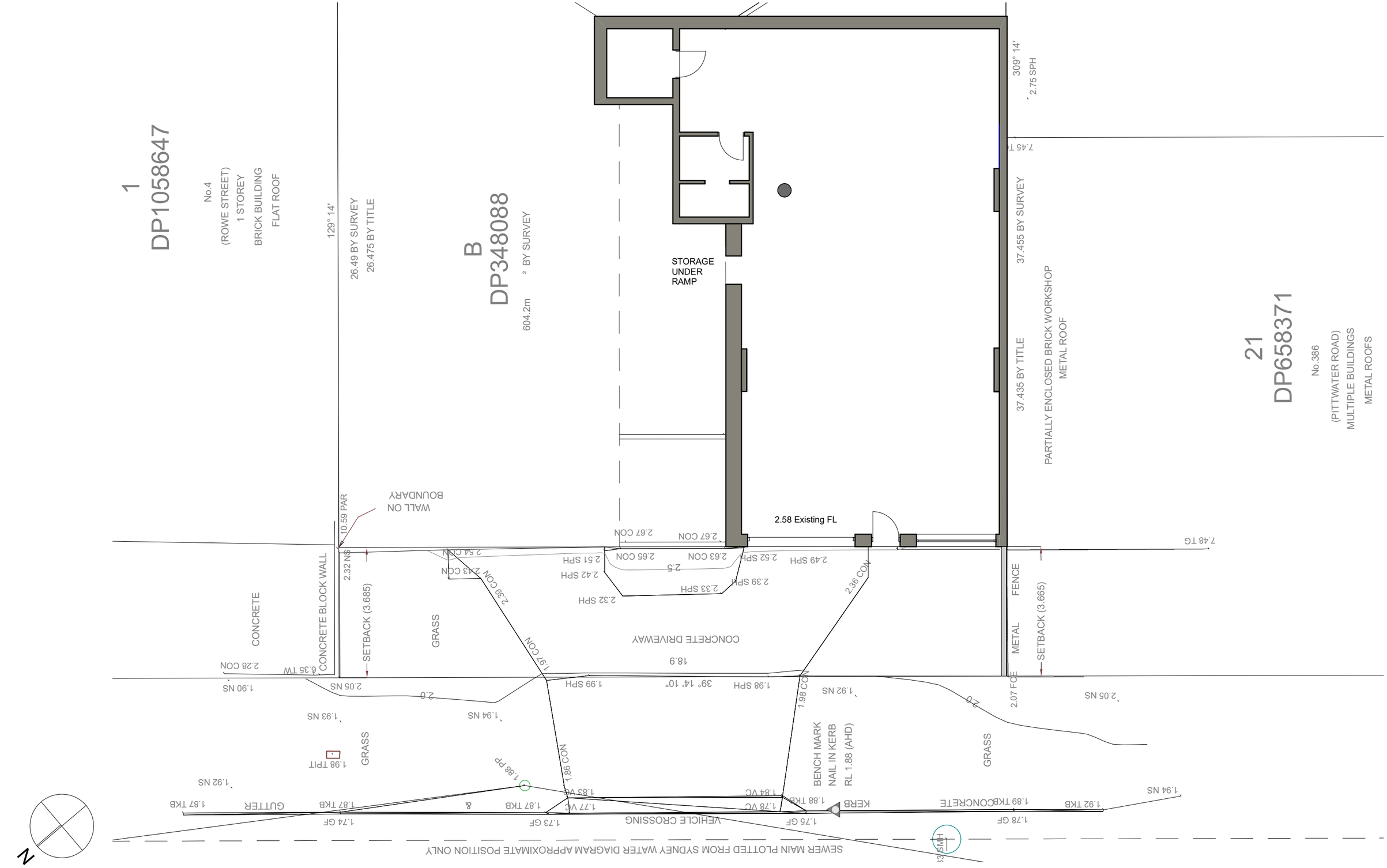
CLIENT
JUSTICE BREWERY

DRAWING SCALE
Not to scale

DATE
June 2025

DRAWING NO.
DA00

ISSUE
-



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Rev	Date	Issue

BREWERY & TAP ROOM
Unit 5, 380 Pittwater Road
North Manly NSW

DRAWING TITLE
EXISTING FLOOR PLAN

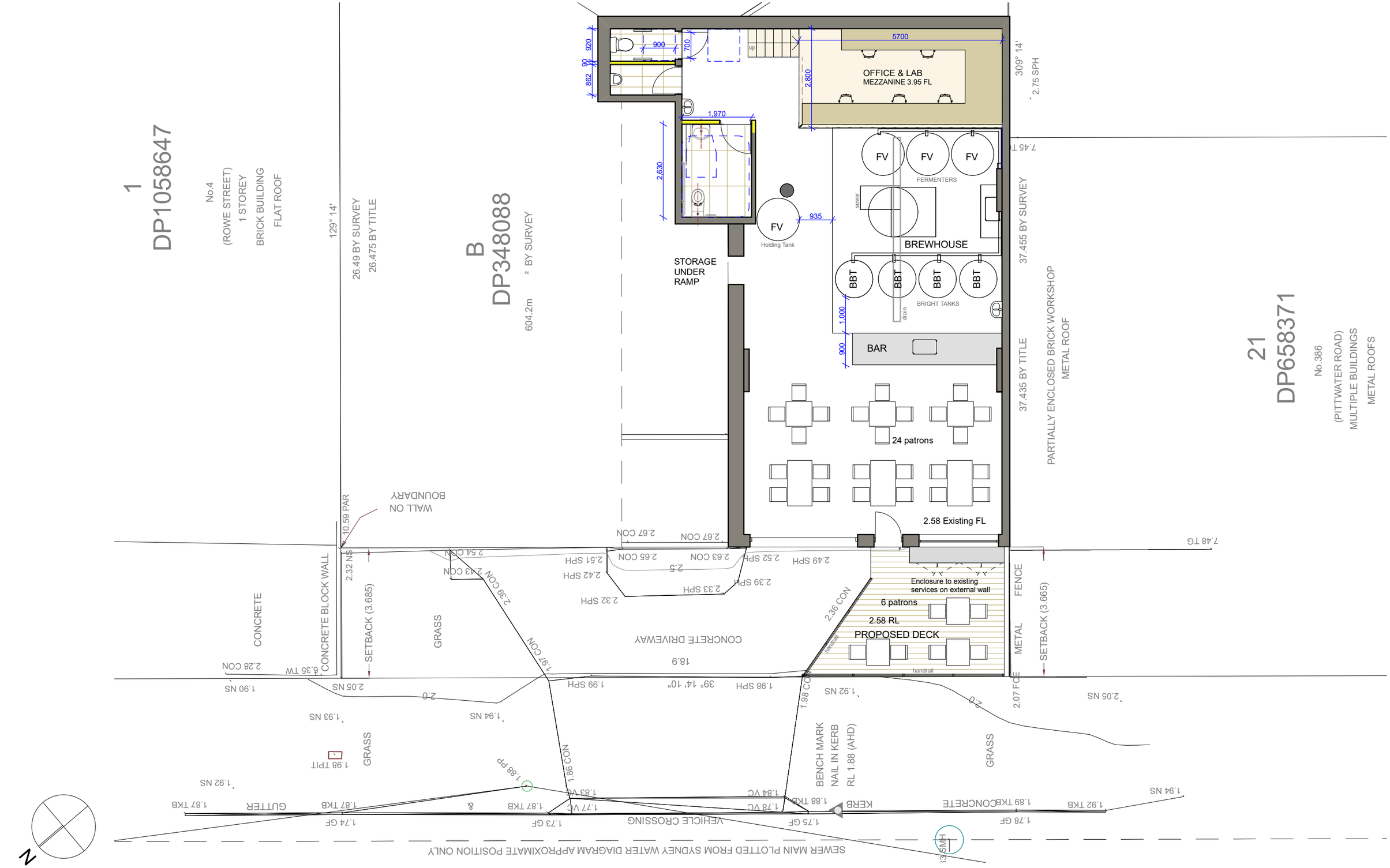
CLIENT
JUSTICE BREWERY

DRAWING SCALE
1:100 @A3

DATE
May 2025

DRAWING NO.
E01

ISSUE
-



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Rev	Date	Issue
nil	12 June 25	ISSUED FOR DEVELOPMENT APPLICATION

BREWERY & TAP ROOM
Unit 5, 380 Pittwater Road
North Manly NSW

DRAWING TITLE
FLOOR PLAN

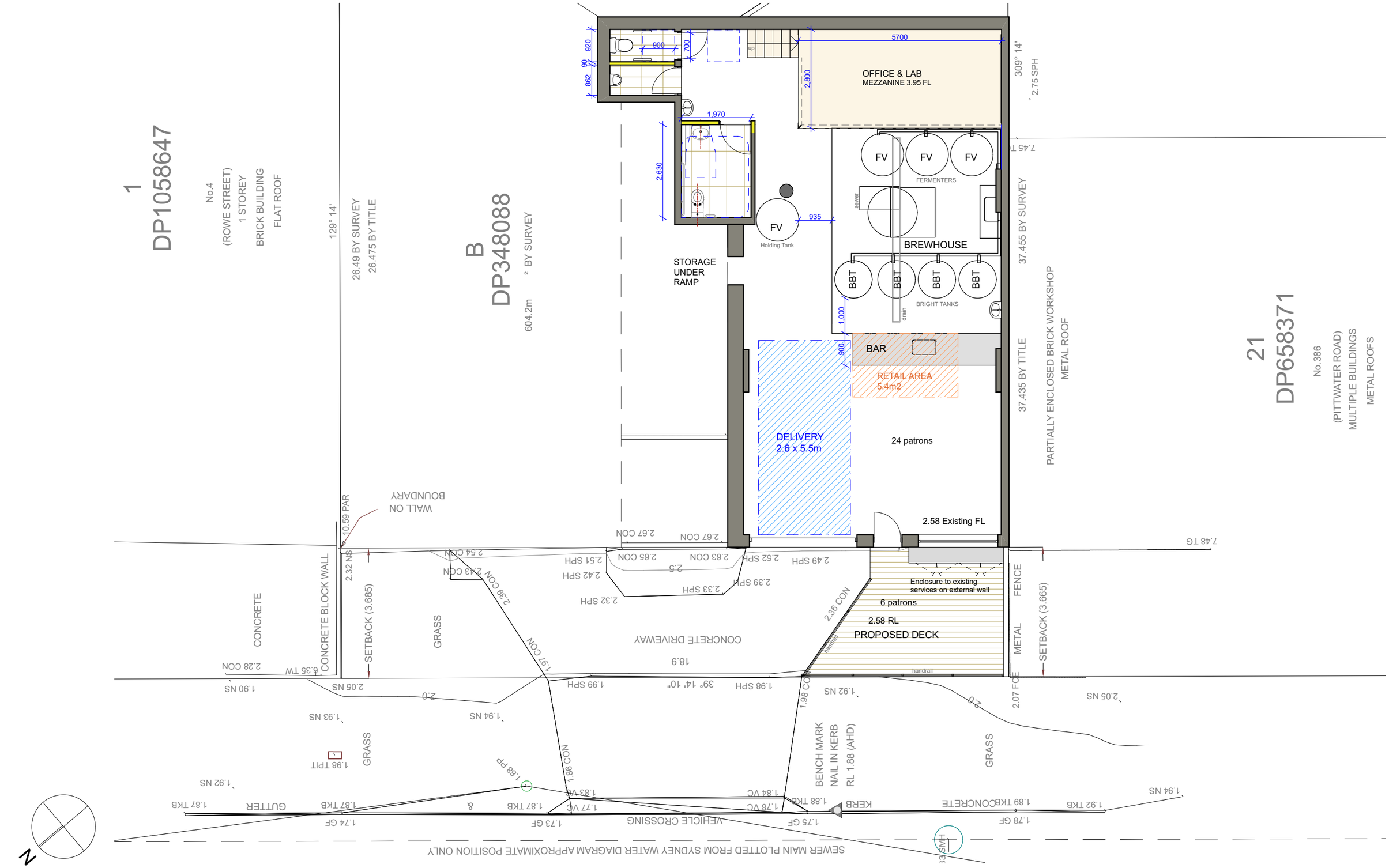
CLIENT
JUSTICE BREWERY

DRAWING SCALE
1:100 @A3

DATE
June 2025

DRAWING NO.
DA01

ISSUE
-



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Rev	Date	Issue
nil	12 June 25	ISSUED FOR DEVELOPMENT APPLICATION

BREWERY & TAP ROOM
Unit 5, 380 Pittwater Road
North Manly NSW

DRAWING TITLE
AREAS

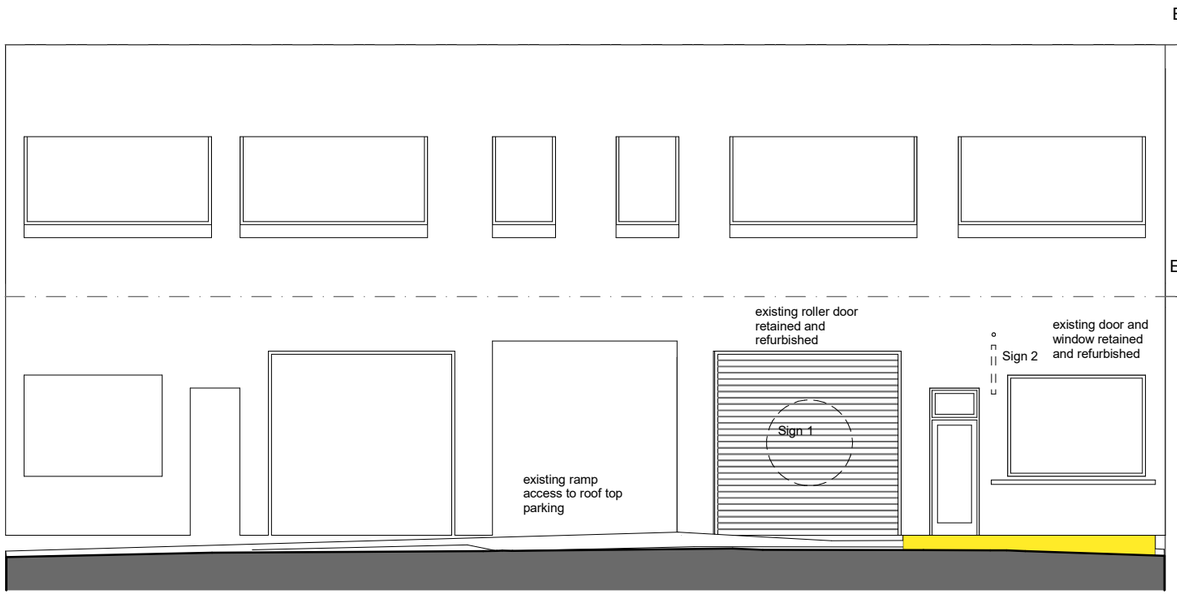
CLIENT
JUSTICE BREWERY

DRAWING SCALE
1:100 @A3

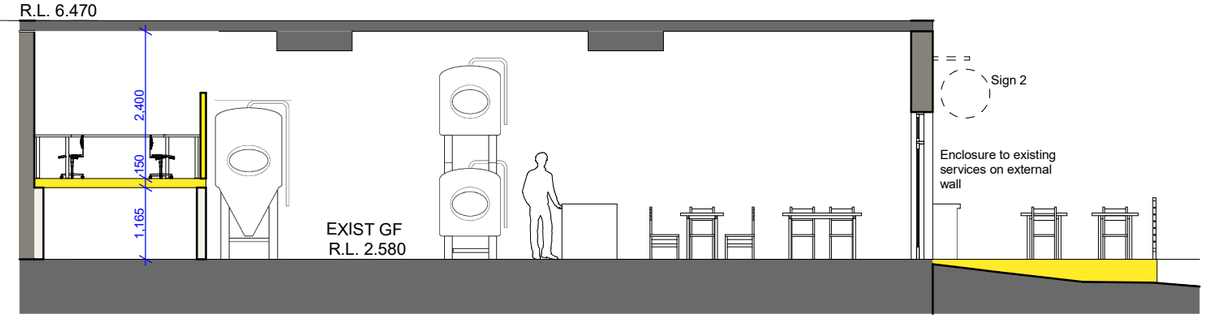
DATE
June 2025

DRAWING NO.
DA02

ISSUE
-



STREET ELEVATION - Scale 1:100



SECTION - Scale 1:100

SIGNAGE - not to scale

Illuminated Sign #2
Not to scale

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Rev	Date	Issue
nil	12 June 25	ISSUED FOR DEVELOPMENT APPLICATION

BREWERY & TAP ROOM
Unit 5, 380 Pittwater Road
North Manly NSW

DRAWING TITLE
ELEV, SECT & SIGNAGE

CLIENT
JUSTICE BREWERY

DRAWING SCALE
1:100 @A3

DATE
June 2025

DRAWING NO.
DA03

ISSUE
-