



FLOOD RISK MANAGEMENT PLAN

4 July 2025

Revision: A

71 Wimbledon Avenue
North Narrabeen
NSW 2101

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We acknowledge the Guringai, Darkinjung, Darug, Dharawal, Gundungurra, Wanaruah and Wiradjuri people of the land of the Garigal and Ngurra, upon those ancestral lands we work & live. We acknowledge the Traditional Custodians as the first place makers on this land. We pay our respects to Elders past and present, acknowledging them as the Traditional Custodians of knowledge of these lands, waterways and Country.



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1.0 INTRODUCTION

71 Wimbledon Avenue, North Narrabeen is identified by Northern Beaches Council as being flood affected for the 1 in 100 year storm event and Probable Maximum Flood (PMF) events. This document details the measures to be taken to ensure that the risks to both the site buildings and occupants are managed and minimised in accordance with Council's Development Control Plan requirements.

It is the intention of the author that copies of this plan are kept on site by The Owner where it can be produced for action in case of a significant storm event.

It is also intended that the emergency response signage be fixed to a wall in a clearly visible location. The Owner will ultimately be responsible for the implementation of this plan. The Owner will also be responsible for ensuring tasks are undertaken (or the delegation of those tasks) for major flood events.

The technical data referred to in this Section is drawn from the Narrabeen Lagoon Flood Study 2013, BMT WBM, Ingleside Elanora and Warriewood Overland Flow Flood Study 2019, WMAwater.

2.0 SITE DESCRIPTION

The site is located in the suburb of North Narrabeen and the eastern boundary faces Wimbledon Avenue. A site locality map is included in Appendix A.

The site covers 632m² in area which is generally flat with minor fall from the (front) eastern to the (rear) western boundary. The site currently contains an existing brick two-storey dwelling with an existing garage and metal shed.

2.1 PROPOSED WORKS

The proposed works could be summarised as:

- Demolition of existing dwelling;
- Proposed new dwelling;
- Proposed driveway; and
- Proposed swimming pool.

Architectural plans for the proposed works are attached in Appendix B.

3.0 FLOOD EVENTS

The site is identified as being flood affected for the 1 in 100 year and Probable Maximum Precipitation (PMP) storm events and maps illustrating subsequent flood hazard extents for the site are contained within Appendix C.

3.1 FORECASTS AND WARNINGS

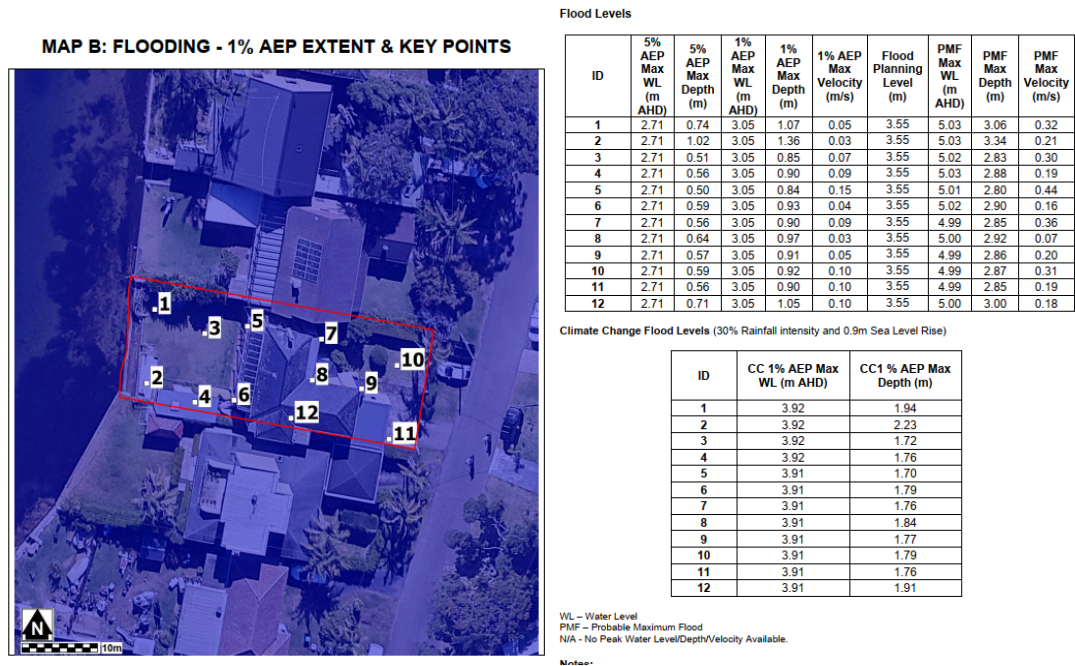
There are usually no specific warnings issued by the Bureau of Meteorology for North Narrabeen and as such the monitoring of general warnings for the Sydney metropolitan area with respect to severe weather warnings will be critical in the process of managing risks to the site.

The Bureau of Meteorology website (www.bom.gov.au) has rainfall forecast maps and also any warnings for predicted severe weather events.

The Owner and other relevant occupants should have their mobile phone numbers added to the SES contact list for the issue of SMS alerts for severe weather warnings.

3.2 FLOOD DATA FOR THE SITE

The site is categorised by the 2013 Narrabeen Lagoon Flood Study as well as the 2019 Ingleside, Elanora and Warriewood Overland Flow Study as being affected by the 1 in 100 year storm event and Probable Maximum Flood (PMF) events. A summary of Council flood information for the site is as follows:



- Flood Risk Precinct: **High**
- Flood Life Hazard Classification: **H6**
- 1% Flood Hydraulic Category: **Flood Storage**
- 1 in 100 year Maximum Flood Level: **3.05m A.H.D.**
- 1 in 100 year Maximum Depth from natural ground level: **0.85m**
- 1 in 100 year Maximum Flood Planning Level (FPL): **3.55m A.H.D.**
- Probable Maximum Flood level (PMF): **5.03m A.H.D.**

Note that the complete Council issued flood data for the site is contained within Appendix C.

3.3 FLOOD BEHAVIOUR

The site sits within the Narrabeen Lagoon catchment. The Narrabeen Lagoon Flood Study has determined that the site is at risk of significant inundation during major flood events.

The study has determined that during major storm events, the water level in Narrabeen Lagoon rises to such a level that the subject site is inundated with floodwaters of low velocity which rise and fall over durations of typically longer than 6 hours.

As the lagoon is situated to the west of the site, flooding could be expected to initially inundate the rear portion of the site.

The site would be designated as flood storage and subsequently, the management of the flood risks is required to ensure the ongoing protection of life and property.

4.0 EMERGENCY RESPONSE

This Flood Risk Management Plan recognises that protection of life is of primary importance, followed by a secondary philosophy of attempting to minimise damage to the proposed dwellings on the site.

The emergency response to a potential flood event will be initiated upon the occurrence of a certain 'trigger' threshold, upon which the emergency response plan will be actioned.

4.1 THE EMERGENCY TRIGGER

It is critical to the success of this plan that during extremely heavy and intense rainfall events The Owner are able to closely monitor the drainage conditions at the site frontage in Wimbledon Avenue.

The initial trigger for commencement of the emergency response plan follows the observation of stormwater beginning to inundate the rear section of the property following extremely heavy and intense rainfall events.

Upon the visual or media confirmation of this trigger event, the emergency responses described in Section 5 are to be enacted.

4.2 TIME NEEDED TO RESPOND

It is considered that a total period of 5 minutes would be required for The Owner to turn off the relevant mains and services and ensure that all persons within the premises have been notified and are located to the nominated emergency assembly point.

4.3 THE EMERGENCY ASSEMBLY POINT

The emergency response to a flood event is to 'shelter-in-place' on the first floor of the proposed dwelling, or to follow directions of the emergency services.

5.0 OWNER RESPONSIBILITIES

The following section describes the on-going responsibilities of The Owner with respect to flood risk management.

5.1 BEFORE THE FLOOD

TRIGGER FOR ACTION: ALWAYS

- The Owner will ultimately be responsible for the implementation of this plan. The Owner will be responsible for ensuring tasks are undertaken or delegating those tasks;
- Through a systematic induction process, all occupants are to be made aware of the possibility of flooding and the procedures to be followed if a flood were to occur;
- A copy of this plan is to be provided to all occupants, together with a single page notice (Appendix D) and an Actions Checklist (Appendix E);
- The Owner should continue to develop detailed procedures to support the actions required by this plan. Procedures will include clear responsibilities in the event of a flood, and back up resources should key persons not be present;

- The emergency response sign is to be permanently affixed to a wall in a highly visible external location.
- Check the facilities within the shelter-in-place area for use in a flood emergency, should occupants need to take shelter there. As a minimum these facilities comprise drinking water, toilets, blankets, powered battery radio and emergency lighting.

5.2 WHEN A FLOOD IS LIKELY

TRIGGER FOR ACTION: When the forecasts predict severe weather or significant amounts of rainfall (land is saturated) are observed.

- The Owner will monitor weather forecasts and warnings; and
- The Owner to enact the emergency response plan
- The Owner should prepare for the emergency evacuation.

5.3 DURING A FLOOD

TRIGGER FOR ACTION: When flood waters are observed inundating the street frontage of the site at Darius Avenue.

The phases of the emergency response shall be:

- The Owner is to request all occupants to evacuate via the emergency evacuation route.
- Follow direction of emergency services including State Emergency Services (SES).
- All occupants should have evacuated by the time the flood water starts to significantly inundate the site.
- The Owner is to sweep the premises following emergency response to ensure that all occupants have evacuated the facility.
- The Owner is to turn off all power and water and other relevant services.

- The Owner is to evacuate via the emergency evacuation route to the emergency assembly area.
- Emergency services to be notified by The Owner of the situation at the site (Appendix F).
- Emergency services may issue general evacuation orders. Their directions are to be followed even with the provision of a shelter-in-place facility.

5.4 AFTER A FLOOD

TRIGGER FOR ACTION: When emergency services give the all clear to return.

- No occupants should be allowed to leave the site while flooding is occurring or has recently occurred;
- Occupants can enter the site only after the all clear has been given by emergency services or Council;
- Where necessary, the site is to be checked by professionals before any re-use of the site;
- Where possible the Owner are to organise the safe removal of any flood debris from the site;
- The Owner is to arrange an inspection of the sub-floor area under the building and remove any flood debris if required;
- A de-brief is to be held between the occupants and The Owner and may involve emergency services and/or council staff. The flood event and response procedures, including the use of this plan, are to be reviewed; and
- Changes may be made to the plan and the requirements for future emergency evacuations should be reviewed and identify any improvements which may be necessary.

6.0 FLOOD COMPLIANCE

It is proposed to develop the site such that the objectives of Council's Flood Risk Management Policy are met.

6.1 SPECIFIC CONTROLS

Section B3.11 of the Pittwater 21 DCP controls are to be applied to the proposed development:

High Flood Risk Matrix – Residential Category

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

Flood Effects Caused By Development

A1 – Development shall not be approved unless it can be demonstrated in a Flood Risk Management Report that it has been designed and can be constructed so that in all events up to the 1% AEP event:

There are no adverse impacts on flood levels or velocities caused by alterations to the flood conveyance; and

There are no adverse impacts on surrounding properties; and

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.

Outcome – The provisions of this Flood Risk Management Report demonstrate that the flood risks have been adequately addressed in accordance with the provisions of the Flood Prone Land Design Standard.

A2 – Development shall not be approved unless it can be demonstrated in a Flood Risk 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.

Outcome – Complies as there is no net loss in storage. The proposed dwelling is situated above the 1% A.E.P and therefore the demolition of the existing Built-Upon Area has led to a net gain in flood storage on this site. A flood storage calculation plan has been provided in Appendix H.

Building Components and Structural Soundness

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).

Outcome – All new building elements shall be constructed from flood compatible materials. A table of equivalent flood compatible materials is contained within Appendix G.

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 of the refuge is to be up to the Probable Maximum Flood level. Structural certification shall be provided confirming the above.

Outcome – All new structural elements are to be designed, constructed and/or modified to ensure structural integrity for immersion and impact of velocity and debris up to the Probable Maximum Flood Level of 5.03m A.H.D.

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 must have residual current devices installed that turn off all electricity supply to the property when flood waters are detected.

Outcome – All new electrical equipment, wiring, fuel lines and any other service pipes and connections are to be waterproofed to the Flood Planning Level of 3.55m A.H.D.

All existing electrical equipment and power points located below the Flood Planning Level will have residual current devices installed that turn off all electricity supply to the property when flood waters are detected.

Floor Levels

C1 – New floor levels within the development shall be at or above the Flood Planning Level.

Outcome – All new floor levels within the development have a minimum floor level set at the flood planning level of 3.55m A.H.D.

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:

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

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

No solid areas of the perimeter of the underfloor area would be permitted in a floodway

Outcome – There are no significant works proposed below the 1% AEP event that will impede the flow of flood waters. The proposed dwelling is to have an open style foundation do not to impede flood waters.

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:

It is an extension to an existing room; and

The Flood Planning Level is incompatible with the floor levels of existing room; and

Out of the 30sqm, not more than 10 sqm 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 flood-proofed 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.

Outcome -Not applicable as no alterations and additions are being made to the existing dwelling.

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:

It is not located within a floodway; and

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

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

the ground floor is flood-proofed

Outcome - Not applicable as no alterations and additions are being made to the existing dwelling.

Car Parking

D1 - Open carpark areas and carports shall not be located within a floodway.

Outcome – Not applicable.

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.

Outcome – Not applicable.

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.

Outcome – Not applicable.

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

Outcome – Not applicable.

D5 - Enclosed Garages must be located at or above the 1% AEP level

Outcome – Complies as the proposed enclosed garage is located above the 1% AEP level at 3.24m A.H.D.

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 car park

Outcome – Not applicable as no basement carparks are proposed. Note that the proposed garage level is situated above 1% AEP.

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 (six 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.

Outcome – The emergency response as detailed in this report is to ‘shelter-in-place’ within the proposed first floor during significant flood events, or otherwise off-site as directed by Emergency Services.

The proposed development complies with a) to c). The Owner of the site should provide items as per d) to provide for a shelter-in-place scenario in potential extreme storm events.

Please note that only a small portion of the property falls within the H6 Flood Hazard category. However, this area is outside the portion of the property proposed for redevelopment.

Fencing

F1 - Fencing, (including pool fencing, boundary fencing, balcony balustrades and accessway balustrades) shall be designed so as not to impede the flow of flood waters and not to increase flood affectation on surrounding land. At least 50% of the fence must be of an open design from the natural ground level up to the 1% AEP flood level. Less than 50% of the perimeter fence would be permitted to be solid. Openings should be a minimum of 75 mm x 75mm.

Outcome – As noted on architectural details, 50% of fence will be open design from the natural ground up to the 1% AEP flood level.

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.

Outcome – The Owners are to ensure storage of toxic or potentially polluting goods, materials or other products, which may be hazardous or pollute floodwaters, will not be permitted below the Flood Planning Level of 3.55m A.H.D.

Pools

H1 - Pools located within the 1% AEP flood extent are to be in-ground, with coping flush with natural ground level. Where it is not possible to have pool coping flush with natural ground level, it must be demonstrated that the development will result in no net loss of flood storage and no impact on flood conveyance on or from the site.

All electrical equipment associated with the pool (including pool pumps) is to be waterproofed and/or located at or above the Flood Planning Level.

All chemicals associated with the pool are to be stored at or above the Flood Planning Level.

Outcome – Complies as there has been no net loss of flood storage (See Appendix H). Furthermore, there has been no impact on flood conveyance as pool is not situated within a floodway.

7.0 SUMMARY

This report is a plan for the site for major flood events to be incorporated by The Owner into the on-going management protocols for the site to manage the flood risks.

The report contains procedural information to ensure the safety of occupants during flood events and also to ensure the satisfactory performance of any new building elements.

The recommendations and strategies within this report ensure compliance with Pittwater 21 Development Control Plan, Section B General Controls, Part B3.11 'Flood Prone Land'.

Should you have any questions or queries please do not hesitate to contact the undersigned.

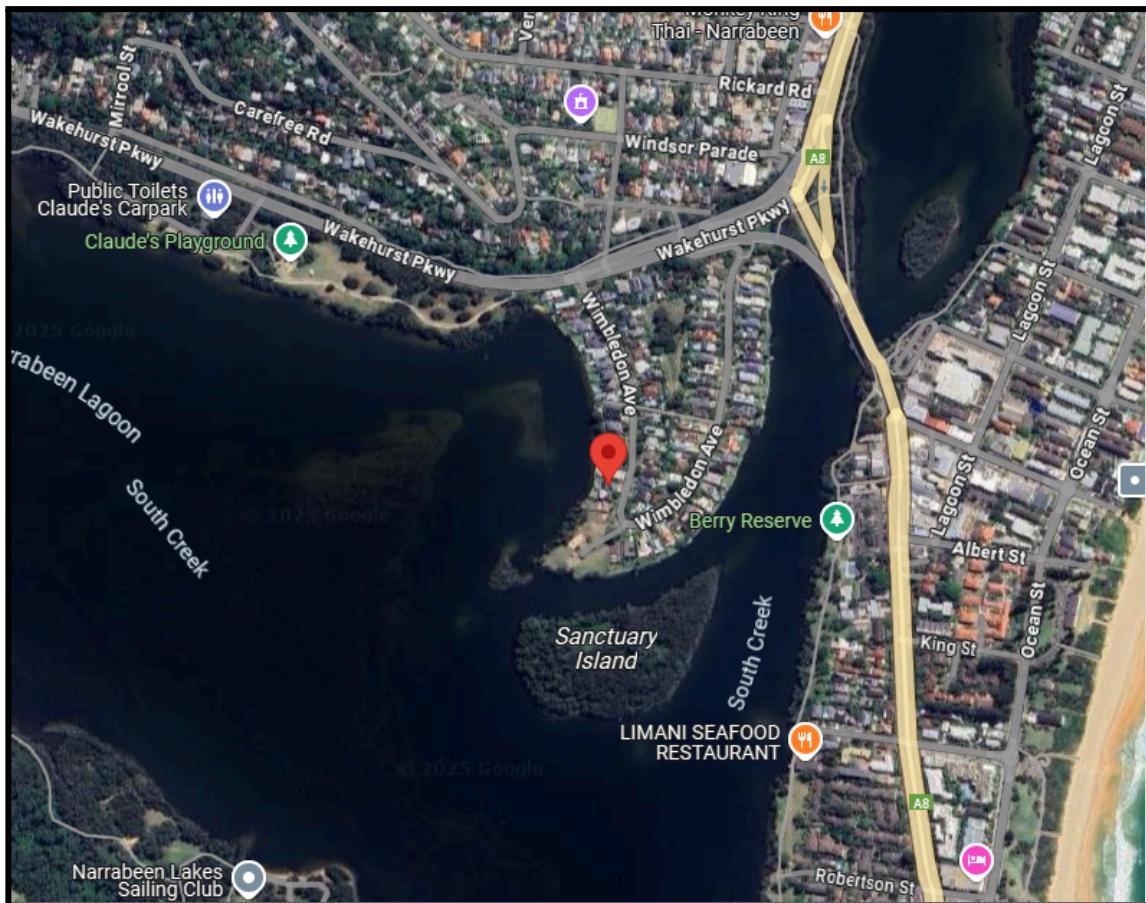
TAYLOR CONSULTING



D M SCHAEFER - Director
B.E. Civil (Hons) M.I.E. Aust. N.E.R.

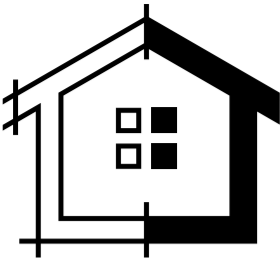


Appendix A



Locality Map - 71 Wimbledon Avenue, North Narrabeen

Appendix B



ACTION PLANS

m: 0426 957 518
e: operations@actionplans.com.au
w: www.actionplans.com.au

PLANS PUBLISHED
16 May 2025

DEVELOPMENT APPLICATION

These plans are for Council Approval only.

NO.	DRAWING NAME
DA00	COVER
DA01	NOTATION
DA02	SAFETY NOTES
DA03	SITE ANALYSIS
DA04	SITE / ROOF / SEDIMENT EROSION / WASTE MANAGEMENT / STORMWATER CONCEPT PLAN
DA05	EXISTING GROUND FLOOR PLAN
DA06	PROPOSED GROUND FLOOR PLAN
DA07	PROPOSED FIRST FLOOR PLAN
DA08	NORTH + EAST ELEVATION
DA09	SOUTH + WEST ELEVATION
DA10	LONG + CROSS SECTION
DA11	LONG + DRIVEWAY LONG + CROSS SECTION
DA12	LONG + CROSS SECTION
DA13	POOL SECTIONS
DA14	AREA CALCULATIONS
DA15	WINTER SOLSTICE 9 AM
DA16	WINTER SOLSTICE 12 PM
DA17	WINTER SOLSTICE 3 PM
DA18	SAMPLE BOARD
DA19	BASIX COMMITMENTS

PLANS TO BE READ IN CONJUNCTION WITH THE FLOOD RISK ASSESSMENT

ITEM DETAILS	DEVELOPMENT APPLICATION		
ADDRESS	71 Wimbledon Ave NORTH NARRABEEN NSW 2101		
LOT & DP/SP	LOT 18 DP 17768		
COUNCIL	NORTHERN BEACHES COUNCIL (PITTWATER)		
SITE AREA	613.4m²		
FRONTAGE	15.85m		
CONTROLS	PERMISSIBLE / REQUIRED	EXISTING	PROPOSED
	m / m² / %	m / m² / %	m / m² / %
LEP			
LAND ZONING	C4 – ENVIRONMENTAL LIVING	C4	C4
MINIMUM LOT SIZE	600m²	613.4m²	UNCHANGED
FLOOR SPACE RATIO	NOT IDENTIFIED	N/A	N/A
MAXIMUM BUILDING HEIGHT	8m ABOVE FPL	7.315m	7.791m
HAZARDS			
FLOOD RISK PLANNING (HIGH/MED/LOW)	MEDIUM/HIGH RISK	N/A	N/A
DCP			
SIDE BOUNDARY ENVELOPE	3.5m	N/A	N/A
SIDE BOUNDARY SETBACKS	N: 2.5m	N: 1.29m	N: 2.55m
	S: 1m	S: 0.69m	S: 1.25m
FRONT BOUNDARY SETBACK	6.5m	10.49m	5.071m
REAR BOUNDARY SETBACK	6.5m	-	11.397m
LANDSCAPE OPEN SPACE	60% (368.04m²)	43% (267.34m²)	50% (308.40m²)
IMPERVIOUS AREA	Max. 6% (36.804m²)	-	4% (26.86m²)
TOTAL LANDSCAPE		43% (267.34m²)	54% (332.64m²)
PRIVATE OPEN SPACE	80m²	80m²	80m²

71 Wimbledon Ave NORTH NARRABEEN NSW 2101



NCC 2022 & AS COMPLIANCES SPECIFICATIONS

- Structure - Part H1 & Section 2 of NCC
- Structural Provisions - PART H1D2 & PART 2.2 of NCC
- Site Preparation - Part H1D3 & Section 3 of NCC
- Earthworks - Part 3.2 of NCC
- Drainage - Part 3.3 of NCC
- Termite Risk Management - Part 3.4 of NCC
- Footings & Slabs - Part H1D4 & Section 4 of NCC
- Footings, Slabs & Associated Elements - Part 4.2 of NCC
- Masonry - Part H1D5 & Section 5 of NCC
- Masonry Veneer - Part 5.2 of NCC
- Cavity Masonry - Part 5.3 of NCC
- Unreinforced Single Leaf Masonry - Part 5.4 of NCC
- Isolated Piers - Part 5.5 of NCC
- Masonry Components & Accessories - Part 5.6 of NCC
- Waetherproofing of Masonry - Part 5.7 of NCC
- Framing - Part H1D6 & Section 6 of NCC
- Sub Floor Ventilation - Part 6.2 of NCC
- Structural Steel Members - Part 6.3 of NCC
- Roof & Wall Cladding - Part H1D7 & Section 7 of NCC
- Sheet Roofing - Part 7.2 of NCC
- Roof Tiles & Shingles - Part 7.3 of NCC
- Gutters & Downpipes - Part 7.4 of NCC
- Timber & Composite Wall Cladding - Part 7.5 of NCC
- Glazing - Part H1D8 & Section 8 of NCC
- Windows & External Glazed Doors - Part 8.2 of NCC
- Glass - Part 8.3 of NCC
- Glazing Human Impact - Part 8.4 of NCC
- Damp & Weatherproofing - Part H2 of NCC
- Fire Safety - Part H3 & Section 9 of NCC
- Fire Separation of External Walls - Part 9.2 of NCC
- Fire Protection of Separating Walls & Floors - Part 9.3 of NCC
- Fire Protection of Garage Top Dwellings - Part 9.4 of NCC
- Smoke Alarms & Evacuation Lighting - Part 9.5 of NCC
- Health & Amenity - Part H4 & Section 10 of NCC
- Wet Area Waterproofing - Part 10.2 of NCC
- Room Heights - Part 10.3 of NCC
- Facilities - Part 10.4 of NCC
- Light - Part 10.5 of NCC
- Ventilation - Part 10.6 of NCC
- Sound Insulation - Part 10.7 of NCC
- Condensation Management - Part 10.8 of NCC
- Safe Movement & Access - Part H5 & Section 11 of NCC
- Stairway & Ramp Construction - Part 11.2 of NCC
- Barriers & Handrails - Part 11.3 of NCC
- Ancillary Provisions - Part H7 & Section 12 of NCC
- Construction in Alpine Areas - Part 12.2 of NCC
- Attachment of Framed Decks & Balconies to External Walls of Buildings Using a Waling Plate - Part 12.3 of NCC
- Heating Appliances, Fireplaces, Chimneys & Flues - Part 12.4 of NCC
- Swimming Pools - Part H7P1 & NSW H7D2 of NCC
- Construction in Bushfire Prone Areas - Part NSW H7D4 of NCC
- Energy Efficiency - Part H6 & Section 13 of NCC
- Building Fabric - Part 13.2 of NCC
- External Glazing - Part 13.3 of NCC
- Building Sealing - Part 13.4 of NCC
- Ceiling Fans - Part 13.5 of NCC
- Whole of Home Energy Usage - Part 13.6 of NCC
- Services - Part 13.7 of NCC
- Pool Fencing & other provisions - Regulations, & AS 1926
- Demolition Works to comply with AS 2601-2001 The Demolition of Structures.
- Waterproofing of Wet Areas to comply with AS 3740:2021
- All plumbing & drainage work to comply with AS 3500:2021
- All plasterboard work to comply with AS 2588:2018
- All structural steel work to comply with AS 4100:2020 & AS 1554.1:2014
- All concrete work to comply with AS 3600:2018
- All roof sheeting work to comply with AS 1562.1:2018
- All skylights to comply with AS 4285:2019
- All ceramic tiling to comply with AS 3958.1-2007 & 3958.2-1992
- All glazing assemblies to comply with AS 2047-2014 & AS 1288:2021
- All timber retaining walls to comply with AS 1720, AS 1170
- All retaining walls to comply with AS 3700:2018 & AS 3600:2018
- All construction in bushfire-prone areas to comply with AS 3959:2018

IMPORTANT NOTATION FOR BUILDERS

- All dimensions are to be confirmed on-site by the builder/subcontractor, any incongruencies must be reported to the Designer in writing before the commencement of any work.
- No Survey has been made on the boundaries. All bearings, distances, and areas have been taken from the contour survey plan. A Survey must be carried out to confirm the exact boundary locations.
- No construction work shall commence until a site survey confirming the site boundaries has been completed. The contractor is to ensure that the approved boundary setbacks are confirmed and used, the boundary setbacks take precedence over all other dimensions. The Survey work must be performed by a registered Surveyor.
- In the event of encountering any discrepancies on these drawings, specification, or subsequent instructions issued, the Builder/Subcontractor shall contact the designer in writing before proceeding further with any work.
- The builder/subcontractor is responsible to ensure that all materials installed on-site are fit for purpose and comply with the NCC and relevant Australian Standards. The builder is to obtain written confirmation of material selection by the Client prior to ordering.
- All construction, control joints, and expansion joints in the walls, floors, and other locations shall be in strict accordance with the structural engineering details. No joints or breaks other than specified are allowed without written permission from the Engineer.
- Measurements for the fabrication of secondary components such as windows, doors, internal frames, structural steel components, and the like, are not to be taken from these documents. Measurements must be taken on-site to suit the work as constructed.
- All structural components shall be in strict accordance with details and specifications as prepared by a suitably qualified structural engineer.
- All existing structures need to be examined for structural adequacy, and it is the Contractor's responsibility to ensure that a certificate of structural adequacy is available prior to the start of any work.

SPECIFICATION

- "Approval" - obtained by either an 'Accredited Certifying Authority' or 'Local Council'.
- The Owner will directly pay all fees associated with the following: - Building approval from council or accredited certifier, any footpath and kerb deposits with the local council, insurance fees to Building Services Corporation, Long Service Leave levy fees and approval fees by water and sewerage authority. All other fees are to be paid by the builder. The amount of any local authority deposits which are forfeited due to damage or other causes, will be deducted from payments due to the builder.
- The Builder is to provide at his/her own expense adequate Public Risk Insurance and arrange indemnification under the Workers Compensation Act. Works insurance to be as stated in the contract conditions.
- All tenderers are to visit the site to satisfy themselves as to the nature and extent of the Works, facilities available and difficulties entailed in the works as Variations will not be allowed due to work arising owing to neglect of this clause.
- These drawings shall be read in conjunction with all structural and other consultant's drawings and specifications and with any such written instructions as may be issued during the course of the contract.
- Set out dimensions shown on this drawing shall be verified by the builder on site before commencement of any work. Dimensions shall not be obtained by scaling the drawings, use figured dimensions. All dimensions are in millimetres.
- The Builder is to ensure all construction, levels and other items comply with the conditions of the Building Approval.
- Any detailing additional to that which is supplied shall be resolved between the Owner and the Builder, to the Owner's approval. Except for any structural details or design, which is to be supplied by the Engineer.
- All work to be carried out in a tradesman like manner and in accordance with the standards, codes and regulations of Standards Australia, the National Construction Code and any statutory authority having jurisdiction over the works.
- All structural work is to be in accordance with the structural details prepared by a suitably qualified structural engineer, including but not limited to all piers, footings, concrete slabs, retaining walls, steelworks, formwork, underpinning, additional structural loads, timber framing, wind bracing and associated connections. Builder to obtain prior to finalising the tender, unless previously obtained by owners.
- All brickwork is to be selected by the Owner, and is to comply with AS 1640.
- All masonry is to comply with AS 3700.
- Provide all metalwork and flashings necessary to satisfactorily complete the works.
- All timber construction to be in accordance with AS 1684 - Residential timber-framed construction. Level and grade where necessary under timber floors to provide a minimum clearance of 300mm under bearers or 400mm under joists. Adequate precautions shall be taken to ensure that the surface and/or seepage water does not collect or remain under floor area.
- Sustainable timbers, and not rainforest or old growth timber will be used. Recycled timber or second hand timbers are to be sourced and used in preference to plantation timbers, if available and suitable.
- All glazing installation is to comply with AS 1288, AS 2047 and in accordance with manufacturers recommendations.
- All wall and ceiling linings in wet areas to be plasterboard and villaboard, or equal. A breathable wall wrap is to be provided to all external walls. Timber cladding is to be battened out from timber frame to provide an 'air' gap to prevent condensation. Workmanship is to comply with the relevant Australian Standards or installed in accordance with manufacturer's specifications. All bathrooms and wet areas to be waterproofed with a flexible membrane to manufacturer's specifications and to AS 3740, Part H4D2 and Section 10; Part 10.2 of the 2022 NCC.
- All Architraves and skirtings to the profile as selected by owner, and painted or stain finish as selected.
- All plumbing and drainage work to be installed and completed by a licensed tradesman and in accordance with the statutory body having authority over the works. Connect all waste to Sydney Water sewer line.
- Connect all stormwater to existing system or street drainage system in accordance with AS 3500, Part H2D2 and Section 3; Part 3.3 of the 2022 NCC.
- Smoke detector alarms are to be installed in accordance with AS 3786, Part H3D6 and Section 9; Part 9.5 of the 2022 NCC.
- If a member which provides structural support to the works is subject to termite attack, management measures are to comply with AS 3660 and Section 3; Part 3.4 of the 2022 NCC. Termite management system to be installed to manufacturer's specifications.
- Stairs and Balustrades to comply with Part H5D2, H5D3 and Section 11; Part 11.2 and 11.3 of the 2022 NCC. Provide a handrail along the full length of the flight and a slip resistant finish to the edge of the nosings to comply with 3.9.1 and 3.9.2 of the NCC. No horizontal elements to facilitate climbing between 150mm and 760mm where floor to level below is more than 4m.
- Electrical works to be in accordance with SAA wiring rules and be done by a licenced tradesperson. Obtain electrical layout prior to proceeding. All electrical power (GPO's) and light outlets to be determined by the Owner.
- Painting: All paints or other coatings shall be of the best quality materials & of approved manufacture. All priming materials shall be of an approved brand acceptable to the manufacturer of the finishing coats to be used. External joinery intended to be painted shall be primed on all faces at the place of assembly. Where new work or alteration work adjoins existing painted surfaces allow for repainting existing surfaces to provide uniform appearance.
- ZERO-VOC or LOW-VOC paints and primers only are to be used.
- Any work indicated on the plans but not specified and any item not shown on the plans which is obviously necessary as part of proper construction and/or finish, is to be considered as shown and specified and is to be undertaken as part of the contract.Variations will not be permitted without prior written approval by the owners.
- The Builder shall provide sediment and silttration control measures as required by Council, and maintain them throughout the duration of the works.
- A legible copy of the plans bearing approval stamps, must be maintained on the job site at all times. Hours of construction shall be restricted to the times as required by the building approval.
- The Builder is to arrange for all inspections required by the relevant authorities and/or lending institutions, to their requirements.

- The Builder is to obtain approval for interruptions to existing services and minimise the duration and number of interruptions. Any interruptions to existing services and equipment is to be undertaken by appropriately qualified tradespersons.
- The Builder shall restore, reinstate or replace any damage to existing structures or landscaping caused by the construction works or workmen.
- Provide protection to existing trees to remain, or as required by the Approval Conditions.

GENERAL NOTATION

- Approved means by the 'relevant local authority' or council?
- All work and materials to comply with the current Australian standards at the time of commencement, where applicable.
- The builder is to comply with all ordinances, local authority regulations and the requirements of all services supply authorities having jurisdiction over the works.
- All new downpipes are to be connected to the existing stormwater system.
- All timber sizes and concrete details to be confirmed by the builder prior to commencement of any work.
- All gutters, downpipes to be colorbond.
- All wall and ceiling linings to be plasterboard or cement render as selected, and villa board in wet areas. To comply with relevant Australian standards, and installed in accordance with manufacturers specification.

NCC 2022 & AS COMPLIANCES SPECIFICATIONS

- Structure - Part H1 & Section 2 of NCC
- Structural Provisions - PART H1D2 & PART 2.2 of NCC

- Site Preparation - Part H1D3 & Section 3 of NCC
- Earthworks - Part 3.2 of NCC
- Drainage - Part 3.3 of NCC
- Termite Risk Management - Part 3.4 of NCC

- Footings & Slabs - Part H1D4 & Section 4 of NCC
- Footings, Slabs & Associated Elements - Part 4.2 of NCC

- Masonry - Part H1D5 & Section 5 of NCC
- Masonry Veneer - Part 5.2 of NCC
- Cavity Masonry - Part 5.3 of NCC
- Unreinforced Single Leaf Masonry - Part 5.4 of NCC
- Isolated Piers - Part 5.5 of NCC
- Masonry Components & Accessories - Part 5.6 of NCC
- Waetherproofing of Masonry - Part 5.7 of NCC

- Framing - Part H1D6 & Section 6 of NCC
- Sub Floor Ventilation - Part 6.2 of NCC
- Structural Steel Members - Part 6.3 of NCC

- Roof & Wall Cladding - Part H1D7 & Section 7 of NCC
- Sheet Roofing - Part 7.2 of NCC
- Roof Tiles & Shingles - Part 7.3 of NCC
- Gutters & Downpipes - Part 7.4 of NCC
- Timber & Composite Wall Cladding - Part 7.5 of NCC

- Glazing - Part H1D8 & Section 8 of NCC
- Windows & External Glazed Doors - Part 8.2 of NCC
- Glass - Part 8.3 of NCC
- Glazing Human Impact - Part 8.4 of NCC

- Damp & Weatherproofing - Part H2 of NCC

- Fire Safety - Part H3 & Section 9 of NCC
- Fire Separation of External Walls - Part 9.2 of NCC
- Fire Protection of Separating Walls & Floors - Part 9.3 of NCC
- Fire Protection of Garage Top Dwellings - Part 9.4 of NCC
- Smoke Alarms & Evacuation Lighting - Part 9.5 of NCC

- Health & Amenity - Part H4 & Section 10 of NCC
- Wet Area Waterproofing - Part 10.2 of NCC
- Room Heights - Part 10.3 of NCC
- Facilities - Part 10.4 of NCC
- Light - Part 10.5 of NCC
- Ventilation - Part 10.6 of NCC
- Sound Insulation - Part 10.7 of NCC
- Condensation Management - Part 10.8 of NCC

- Safe Movement & Access - Part H5 & Section 11 of NCC
- Stairway & Ramp Construction - Part 11.2 of NCC
- Barriers & Handrails - Part 11.3 of NCC

- Ancillary Provisions - Part H7 & Section 12 of NCC
- Construction in Alpine Areas - Part 12.2 of NCC
- Attachment of Framed Decks & Balconies to External Walls of Buildings Using a Waling Plate - Part 12.3 of NCC
- Heating Appliances, Fireplaces, Chimneys & Flues - Part 12.4 of NCC

- Swimming Pools - Part H7P1 & NSW H7D2 of NCC

- Construction in Bushfire Prone Areas - Part NSW H7D4 of NCC

- Energy Efficiency - Part H6 & Section 13 of NCC
- Building Fabric - Part 13.2 of NCC
- External Glazing - Part 13.3 of NCC
- Building Sealing - Part 13.4 of NCC
- Ceiling Fans - Part 13.5 of NCC
- Whole of Home Energy Usage - Part 13.6 of NCC
- Services - Part 13.7 of NCC

- Pool Fencing & other provisions - Regulations, & AS 1926
- Demolition Works to comply with AS 2601-2001 The Demolition of Structures.
- Waterproofing of Wet Areas to comply with AS 3740:2021
- All plumbing & drainage work to comply with AS 3500:2021
- All plasterboard work to comply with AS 2588:2018
- All structural steel work to comply with AS 4100:2020 & AS 1554.1:2014
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- All roof sheeting work to comply with AS 1562.1:2018
- All skylights to comply with AS 4285:2019
- All ceramic tiling to comply with AS 3958.1-2007 & 3958.2-1992
- All glazing assemblies to comply with AS 2047-2014 & AS 1288:2021
- All timber retaining walls to comply with AS 1720, AS 1170
- All retaining walls to comply with AS 3700:2018 & AS 3600:2018
- All construction in bushfire-prone areas to comply with AS 3959:2018

THIS SET OF DRAWING SHOULD BE READ & KEPT IN ITS ENTIRETY. NO INDIVIDUAL PAGE SHOULD BE SEPARATED FROM THE REST OF THE SET. EACH NOTATION LISTED ON THIS PAGE APPLY TO ALL PAGES OF THIS SET.

SAFTEY NOTES

THESE NOTES MUST BE READ AND UNDERSTOOD BY ALL INVOLVED IN THE PROJECT. THIS INCLUDES (but is not excluded to): OWNER, BUILDER, SUB-CONTRACTORS, CONSULTANTS, RENOVATORS, OPERATORS, MAINTENORS, DEMOLISHERS.

1. FALLS, SLIPS, TRIPS

a) WORKING AT HEIGHTS

DURING CONSTRUCTION

Wherever possible, components for this building should be prefabricated off-site or at ground level to minimise the risk of workers falling more than two metres. However, construction of this building will require workers to be working at heights where a fall in excess of two metres is possible and injury is likely to result from such a fall. The builder should provide a suitable barrier wherever a person is required to work in a situation where falling more than two metres is a possibility.

DURING OPERATION OR MAINTENANCE

For houses or other low-rise buildings where scaffolding is appropriate: Cleaning and maintenance of windows, walls, roof or other components of this building will require persons to be situated where a fall from a height in excess of two metres is possible. Where this type of activity is required, scaffolding, ladders or trestles should be used in accordance with relevant codes of practice, regulations or legislation. For buildings where scaffold, ladders, trestles are not appropriate: Cleaning and maintenance of windows, walls, roof or other components of this building will require persons to be situated where a fall from a height in excess of two metres is possible. Where this type of activity is required, scaffolding, fall barriers or Personal Protective Equipment (PPE) should be used in accordance with relevant codes of practice, regulations or legislation.

b) SLIPPERY OR UNEVEN SURFACES

FLOOR FINISHES Specified

If finishes have been specified by designer, these have been selected to minimise the risk of floors and paved areas becoming slippery when wet or when walked on with wet shoes/ feet. Any changes to the specified finish should be made in consultation with the designer or, if this is not practical, surfaces with an equivalent or better slip resistance should be chosen.

FLOOR FINISHES By Owner

If designer has not been involved in the selection of surface finishes. the owner is responsible for the selection of surface finishes in the pedestrian trafficable areas of this building. Surfaces should be selected in accordance with AS HB 197:1999 and AS/ NZ 4586:2004.

STEPS, LOOSE OBJECTS AND UNEVEN SURFACES

Due to design restrictions for this building, steps and/ or ramps are included in the building which may be a hazard to workers carrying objects or otherwise occupied. Steps should be clearly marked with both visual and tactile warning during construction, maintenance, demolition and at all times when the building operates as a workplace. Building owners and occupiers should monitor the pedestrian access ways and in particular access to areas where maintenance is routinely carried out to ensure that surfaces have not moved or cracked so that they become uneven and present a trip hazard. Spills, loose material, stray objects or any other matter that may cause a slip or trip hazard should be cleaned or removed from access ways. Contractors should be required to maintain a tidy work site during construction, maintenance or demolition to reduce the risk of trips and falls in the workplace. Materials for construction or maintenance should be stored in designated areas away from access ways and work areas.

2. FALLING OBJECTS

LOOSE MATERIALS OR SMALL OBJECTS

Construction, maintenance or demolition work on or around this building is likely to involve persons working above ground level or above floor levels. Where this occurs one or more of the following measures should be taken to avoid objects falling from the area where the work is being carried out onto persons below.

1. Prevent or restrict access to areas below where the work is being carried out.
2. Provide toeboards to scaffolding or work platforms.
3. Provide protective structure below the work area.
4. Ensure that all persons below the work area have Personal Protective Equipment (PPE).

BUILDING COMPONENTS

During construction, renovation or demolition of this building, parts of the structure including fabricated steelwork, heavy panels and many other components will remain standing prior to or after supporting parts are in place. Contractors should ensure that temporary bracing or other required support is in place at all times when collapse which may injure persons in the area is a possibility. Mechanical lifting of materials and components during construction, maintenance or demolition presents a risk of falling objects. Contractors should ensure that appropriate lifting devices are used, that loads are properly secured and that access to areas below the load is prevented or restricted.

3. TRAFFIC MANAGEMENT

For building on a major road, narrow road or steeply sloping road: Parking of vehicles or loading/ unloading of vehicles on this roadway may cause a traffic hazard. During construction, maintenance or demolition of this building designated parking for workers and loading areas should be provided. Trained traffic management personnel should be responsible for the supervision of these areas. For building where on-site loading/ unloading is restricted: Construction of this building will require loading and unloading of materials on the roadway. Deliveries should be well planned to avoid congestion of loading areas and trained traffic management personnel should be used to supervise loading/ unloading areas. For all buildings: Busy construction and demolition sites present a risk of collision where deliveries and other traffic are moving within the site. A traffic management plan supervised by trained traffic management personnel should be adopted for the work site.

4. SERVICES

GENERAL

Rupture of services during excavation or other activity creates a variety of risks including release of hazardous material. Existing services are located on or around this site. Where known, these are identified on the plans but the excel location and extent of services may vary from that indicated. Services should be located using an appropriate service (such as Dial Before You Dig), appropriate excavation practice should be used and, where necessary, specialist contractors should be used. Locations with underground power: Underground power lines MAY be located in or around this site. All underground power lines must be disconnected or carefully located and adequate warning signs used prior to any construction, maintenance or demolition commencing. Locations with overhead power lines: Overhead power lines MAY be near or on this site. These pose a risk of electrocution if struck or approached by lifting devices or other plant and persons working above ground level. Where there is a danger of this occurring, power lines should be, where practical, disconnected or relocated. Where this is not practical adequate warning in the form of bright coloured tape or signage should be used or a protective barrier provided.

5. MANUAL TASKS

Components within this design with a mass in excess of 25kg should be lifted by two or more workers or by mechanical lifting device. Where this is not practical, suppliers or fabricators should be required to limit the component mass. All material packaging, building and maintenance components should clearly show the total mass of packages and where practical all items should be stored on site in a way which minimises bending before lifting. Advice should be provided on safe lifting methods in all areas where lifting may occur. Construction, maintenance and demolition of this building will require the use of portable tools and equipment. These should be fully maintained in accordance with manufacturer's specifications and not used where faulty or (in the case of electrical equipment) not carrying a current electrical safety tag. All safety guards or devices should be regularly checked and Personal Protective Equipment should be used in accordance with manufacturer's specification.

6. HAZARDOUS SUBSTANCES

ASBESTOS

For alterations to a building constructed prior to 1990:

If this existing building was constructed prior to:

1990 - it therefore may contain asbestos

1986 - it therefore is likely to contain asbestos

either in cladding material or in fire retardant insulation material. In either case, the builder should check and, if necessary, take appropriate action before demolishing, culling, sanding, drilling or otherwise disturbing the existing structure.

POWDERED MATERIALS

Many materials used in the construction of this building can cause harm if inhaled in powdered form. Persons working on or in the building during construction, operational maintenance or demolition should ensure good ventilation and wear Personal Protective Equipment including protection against inhalation while using powdered material or when sanding, drilling, cutting or otherwise disturbing or creating powdered material.

TREATED TIMBER

The design of this building may include provision for the inclusion of treated timber within the structure. Dust or fumes from this material can be harmful. Persons working on or in the building during construction, operational maintenance or demolition should ensure good ventilation and wear Personal Protective Equipment including protection against inhalation of harmful material when sanding, drilling, cutting or using treated timber in any way that may cause harmful material to be released. Do not burn treated timber.

VOLATILE ORGANIC COMPOUNDS

Many types of glue, solvents, spray packs, paints, varnishes and some cleaning materials and disinfectants have dangerous emissions. Areas where these are used should be kept well ventilated while the material is being used and for a period after installation. Personal Protective Equipment may also be required. The manufacturer's recommendations for use must be carefully considered at all times.

SYNTHETIC MINERAL FIBRE

Fibreglass, rockwool, ceramic and other material used for thermal or sound insulation may contain synthetic mineral fibre which may be harmful if inhaled or if it comes in contact with the skin, eyes or other sensitive parts or the body. Personal Protective Equipment including protection against inhalation of harmful material should be used when installing, removing or working near bulk insulation material.

TIMBER FLOORS

This building may contain timber floors which have an applied finish. Areas where finishes are applied should be kept well ventilated during sanding and application and for a period after installation. Personal Protective Equipment may also be required. The manufacturer's recommendations for use must be carefully considered at all times.

7. CONFINED SPACES

EXCAVATION

Construction of this building and some maintenance on the building will require excavation and installation of items within excavations. Where practical, installation should be carried out using methods which do not require workers to enter the excavation. Where this is not practical, adequate support for the excavated area should be provided to prevent collapse. Warning signs and barriers to prevent accidental or unauthorised access to all excavations should be provided.

ENCLOSED SPACES

For buildings with enclosed spaces where maintenance or other access may be required: Enclosed spaces within this building may present a risk to persons entering for construction, maintenance or any other purpose. The design documentation calls for warning signs and barriers to unauthorised access. These should be maintained throughout the life of the building. Where workers are required to enter enclosed spaces, air testing equipment and Personal Protective Equipment should be provided.

SMALL SPACES

For buildings with small spaces where maintenance or other access may be required: Some small spaces within this building will require access by construction or maintenance workers. The design documentation calls for warning signs and barriers to unauthorised access. These should be maintained throughout the life of the building. Where workers are required to enter small spaces they should be scheduled so that access is for short periods. Manual lifting and other manual activity should be restricted in small spaces.

8. PUBLIC ACCESS

Public access to construction and demolition sites and to areas under maintenance causes risk to workers and public. Warning signs and secure barriers to unauthorised access should be provided. Where electrical installations, excavations, plant or loose materials are present they should be secured when not fully supervised.

9. OPERATIONAL USE OF BUILDING RESIDENTIAL BUILDINGS

This building has been designed as a residential building. If it, at a later date, it is used or intended to be used as a workplace, the provisions of the Work Health and Safety Act 2011 or subsequent replacement Act should be applied to the new use.

NON-RESIDENTIAL BUILDINGS

For non-residential buildings where the end-use has not been identified: This building has been designed to requirements of the classification identified on the drawings. The specific, use of the building is not known at the time of the design and a further assessment of the workplace health and safety issues should be undertaken at the time of fit-out for the end-user. For non-residential buildings where the end-use is known: This building has been designed for the specific use as identified on the drawings. Where a change of use occurs at a later date a further assessment of the workplace health and safety issues should be undertaken.

10. OTHER HIGH RISK ACTIVITY

All electrical work should be carried out in accordance with Code of Practice: Managing Electrical Risks at the Workplace, AS/ NZ 3012 and all licensing requirements. All work using Plant should be carried out in accordance with Code of Practice: Managing Risks of Plant at the Workplace. All work should be carried out in accordance with Code of Practice: Managing Noise and Preventing Hearing Loss at Work. Due to the history of serious incidents it is recommended that particular care be exercised when undertaking work involving steel construction and concrete placement. All the above applies.



ACTION PLANS

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w: www.actionplans.com.au

REV.	DATE	COMMENTS	DRWN	NOTES
	16.05.2025	DA - SUBMISSION	DLR	This drawing is the copyright of Action Plans and not be altered, reproduced or transmitted in any form or by any means in part or in whole with the written permission of Action Plans. Do not scale measure from drawings. Figured dimensions are to be used only. The Builder/Contractor/owner is to ensure that the approved boundary setbacks and approved levels are confirmed and set out by a registered Surveyor prior to construction, the boundary setbacks take precedence over all other dimensions. The Builder/Contractor shall check and verify ALL dimensions on site prior to commencement of any work, creation of shop drawings, or fabrication of components. All errors and omissions are to be verified by the Builder/Contractor/client and referred to the designer prior to the commencement of works.

LEGEND

	EXISTING
	DEMOLISHED
	PROPOSED

	EXISTING RL
	PROPOSED RL

CLIENT
Jonathan & Virginia
Younger

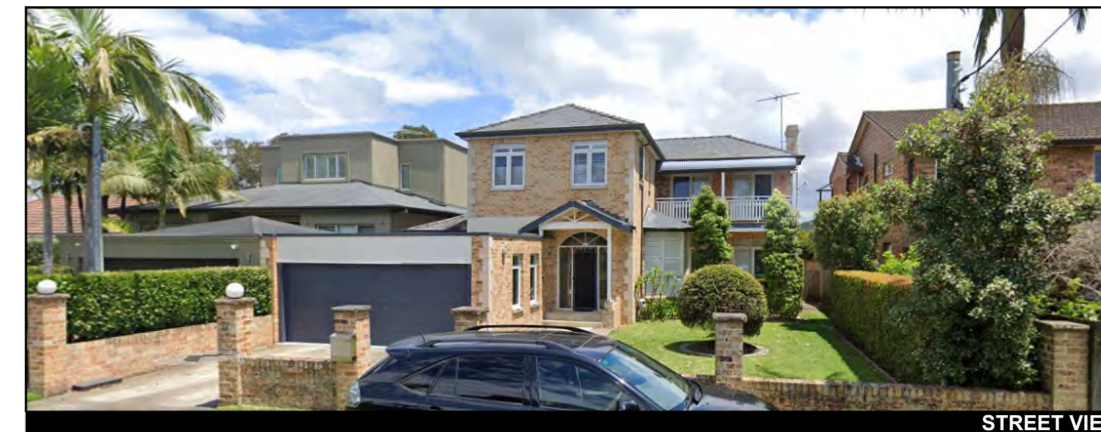
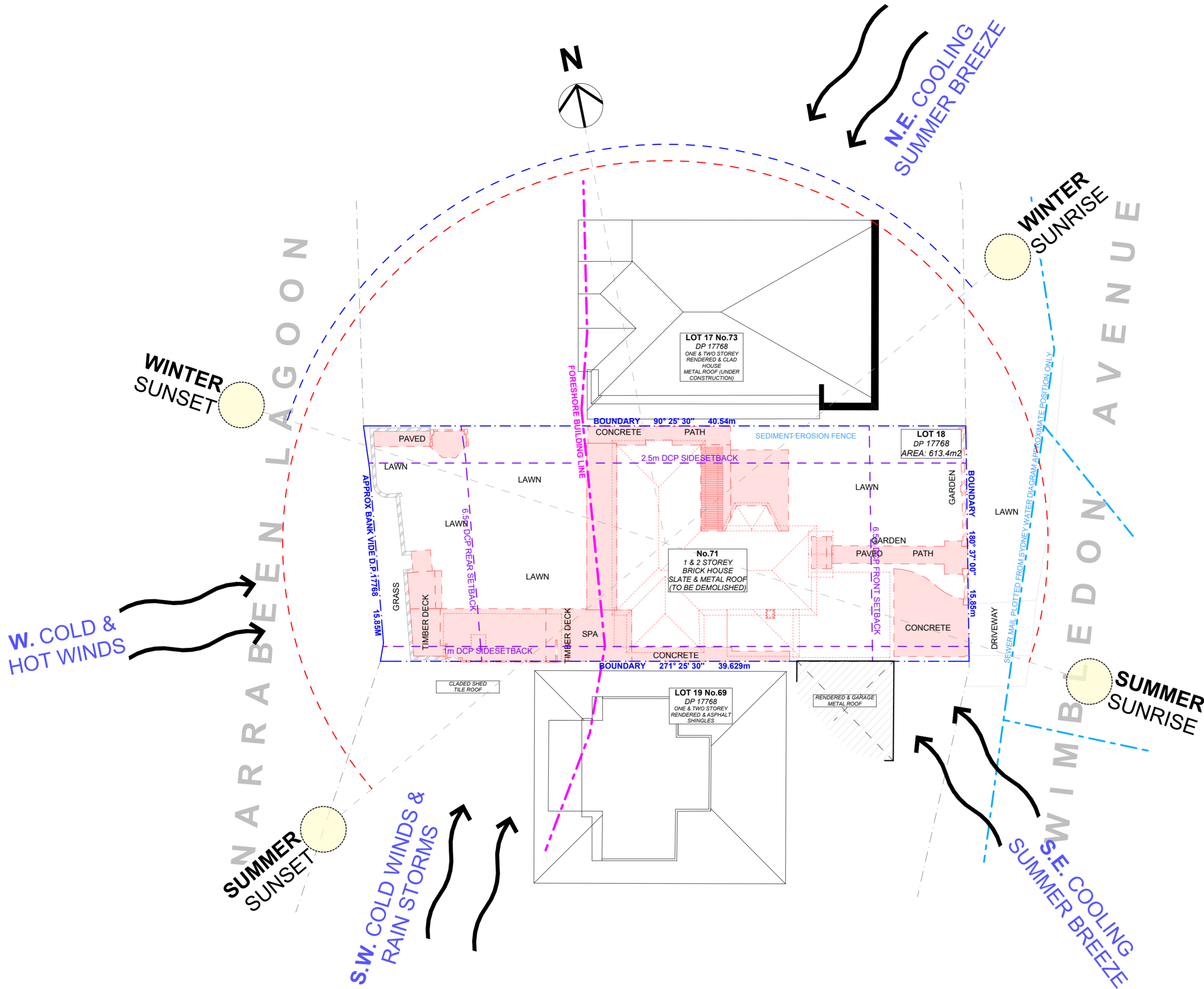
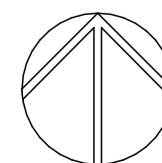
PROJECT ADDRESS
71 Wimbledon Ave
NORTH NARRABEEN
NSW 2101

DRAWING NO.
DA03

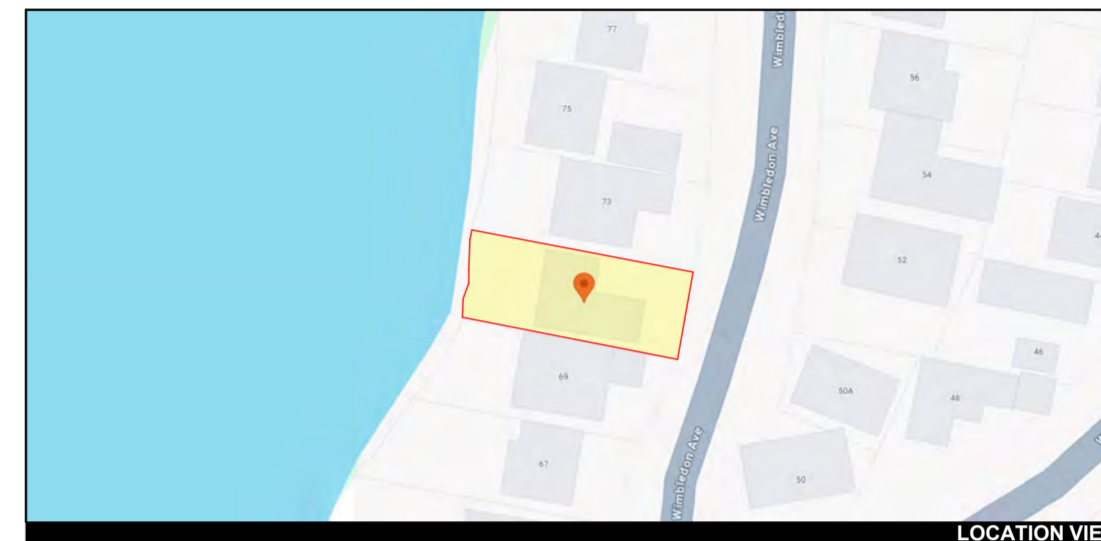
DATE
Friday, 16 May 2025

DRAWING NAME
SITE ANALYSIS

SCALE
1:200 @A2



STREET VIEW

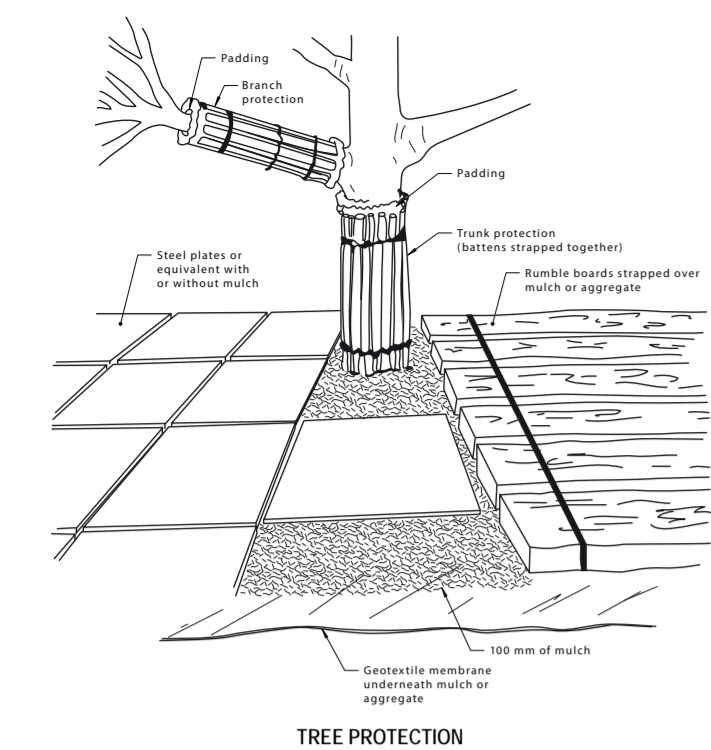


LOCATION VIEW

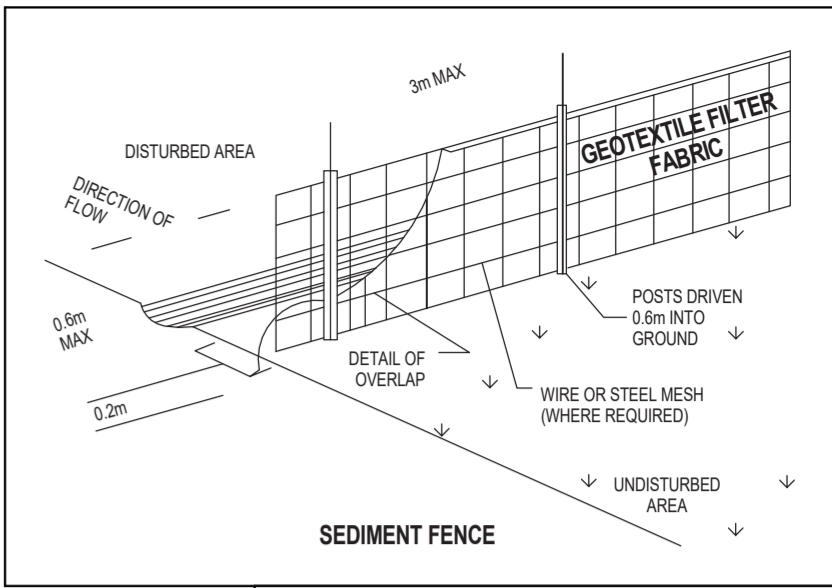
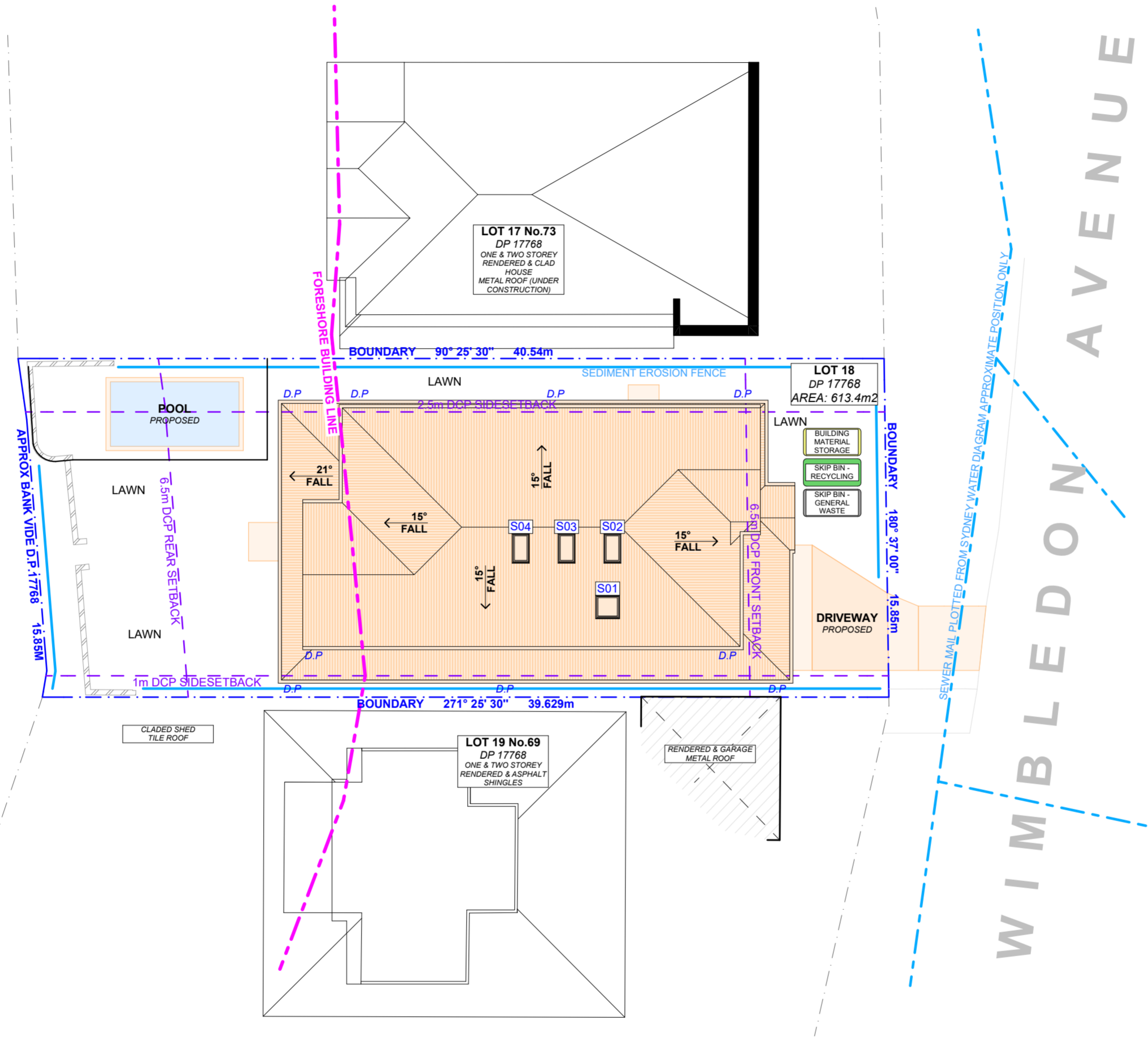


AERIAL MAP

NOTE: ALL DEMOLISHED ELEMENTS TO ENG. SPECIFICATIONS AND AS. 2601 - 2001



NARRABEEN LAGOON



NOTES REGARDING BOUNDARY
THE INFORMATION SHOWN ON THIS PLAN IS FOR DESIGN PURPOSES ONLY. THE POSITION OF BOUNDARY LINES HAVE BEEN ESTABLISHED BY A SURVEY TO MEET THE IDENTIFICATION REQUIREMENTS FOR COUNCIL AND NOT FOR REGISTRATION WITH THE LAND REGISTRATION SERVICES NSW NOR MAY THIS PLAN BE USED FOR ANY OTHER PURPOSE. SUBSEQUENT REGISTERED OR OTHER SURVEYS MAY AFFECT THE DEFINED BOUNDARY POSITIONS IN THIS AREA. ANY DIFFERENCES OF THIS NATURE ARE BEYOND THE PURPOSES OF THIS PLAN. THIS PLAN IS FOR THE ABOVE STATED PURPOSES ONLY. RESTRICTIONS ON THE TITLE HAVE NOT BEEN INVESTIGATED. IF FURTHER DEVELOPMENT IS CONTEMPLATED OR CONSTRUCTION INTENDED THEN IT IS IMPORTANT THAT A SURVEY SET OUT IS CARRIED OUT.

DUST CONTROL :
TO REDUCE DUST GENERATED BY WIND ACTION, THE REMOVAL OF THE TOP SOIL IS TO BE MINIMISED. TO PREVENT DUST GENERATION, WATERING DOWN OF THE SITE, ESPECIALLY DURING THE MOVEMENT OF MACHINERY IS REQUIRED. WHERE EXCAVATING INTO ROCK, KEEP THE SURFACE MOIST TO MINIMISE DUST. CONSTRUCT A GRAVEL ENTRY/EXIT POINT USING BLUE METAL AND RESTRICT ALL VEHICLE MOVEMENTS WITHIN THE SITE TO A MINIMUM. ENSURE WIND BREAKS, SUCH AS EXISTING FENCES ARE MAINTAINED DURING THE CONSTRUCTION PHASE UNTIL NEW LANDSCAPING IS PROVIDED OR REINSTATED. PREVENT DUST BY COVERING STOCKPILES

SEDIMENT NOTE :
1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY THE SITE MANAGER.
2. MINIMISE DISTURBED AREAS, REMOVE EXCESS SOIL FROM EXCAVATED AREA AS SOON AS POSSIBLE.
3. ALL MATERIAL STOCKPILE TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS, OR WITHIN SEDIMENT FENCE AREA.
4. DRAINAGE TO BE CONNECTED TO STORMWATER AS SOON AS POSSIBLE. IF STORED ON SITE, IT MUST BE FILTERED BEFORE RELEASING INTO STORMWATER SYSTEM OR WATERWAYS.
5. ROADS AND FOOTPATHS TO BE SWEEPED DAILY.

STOCKPILES :
ALL STOCKPILES ARE TO BE KEPT ON-SITE WHERE POSSIBLE. ANY MATERIALS PLACED ON THE FOOTPATHS OR NATURE STRIPS REQUIRE COUNCIL'S PERMISSION.
ALL STOCKPILES ARE TO BE PLACED AWAY FROM THE DRAINAGE LINES AND STREET GUTTERS. IT IS BEST TO LOCATE THESE ON THE HIGHEST PART OF THE SITE IF POSSIBLE. PLACE WATERPROOF COVERING OVER STOCKPILES.
IF REQUIRED PROVIDE DIVERSION DRAIN & BANK AROUND STOCKPILES.

GUTTER PROTECTION :
PROVIDE PROTECTION TO DOWNHILL GRATE IN GUTTER BY MEANS OF SAND BAGS OR BLUE METAL WRAPPED IN GEOTEXTILE FABRIC. WHEN SOIL OR SAND BUILDS UP AROUND THIS SEDIMENT BARRIER, THE MATERIAL SHOULD BE RELOCATED BACK TO THE SITE FOR DISPOSAL.

NOTE: ALL PROPOSED STORMWATER TO CONNECT WITH EXISTING

NOTE: SITE BOUNDARY IS TO BE IDENTIFIED BY A REGISTERED SURVEYOR AND CLEARLY MARKED ON SITE PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION WORKS.



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LEGEND
EXISTING
DEMOLISHED
PROPOSED

EXISTING RL
PROPOSED RL

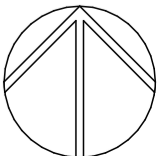
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DRAWING NO.
DA04

DATE
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DRAWING NAME
SITE / ROOF / SEDIMENT
EROSION / WASTE
MANAGEMENT / STORMWATER
CONCEPT PLAN
SCALE
1:200 @A2





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EXISTING
DEMOLISHED
PROPOSED

EXISTING RL
PROPOSED RL

CLIENT
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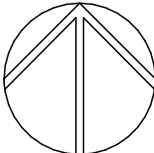
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DRAWING NO.
DA05

DATE
Friday, 16 May 2025

DRAWING NAME
EXISTING GROUND FLOOR
PLAN

SCALE
1:100 @A2



1

EXISTING GROUND FLOOR PLAN - DEMOLITION

1:100

NOTE: ALL DEMOLISHED ELEMENTS TO ENG. SPECIFICATIONS & AS 2601 - 2001

NARRABEEN LAGOON

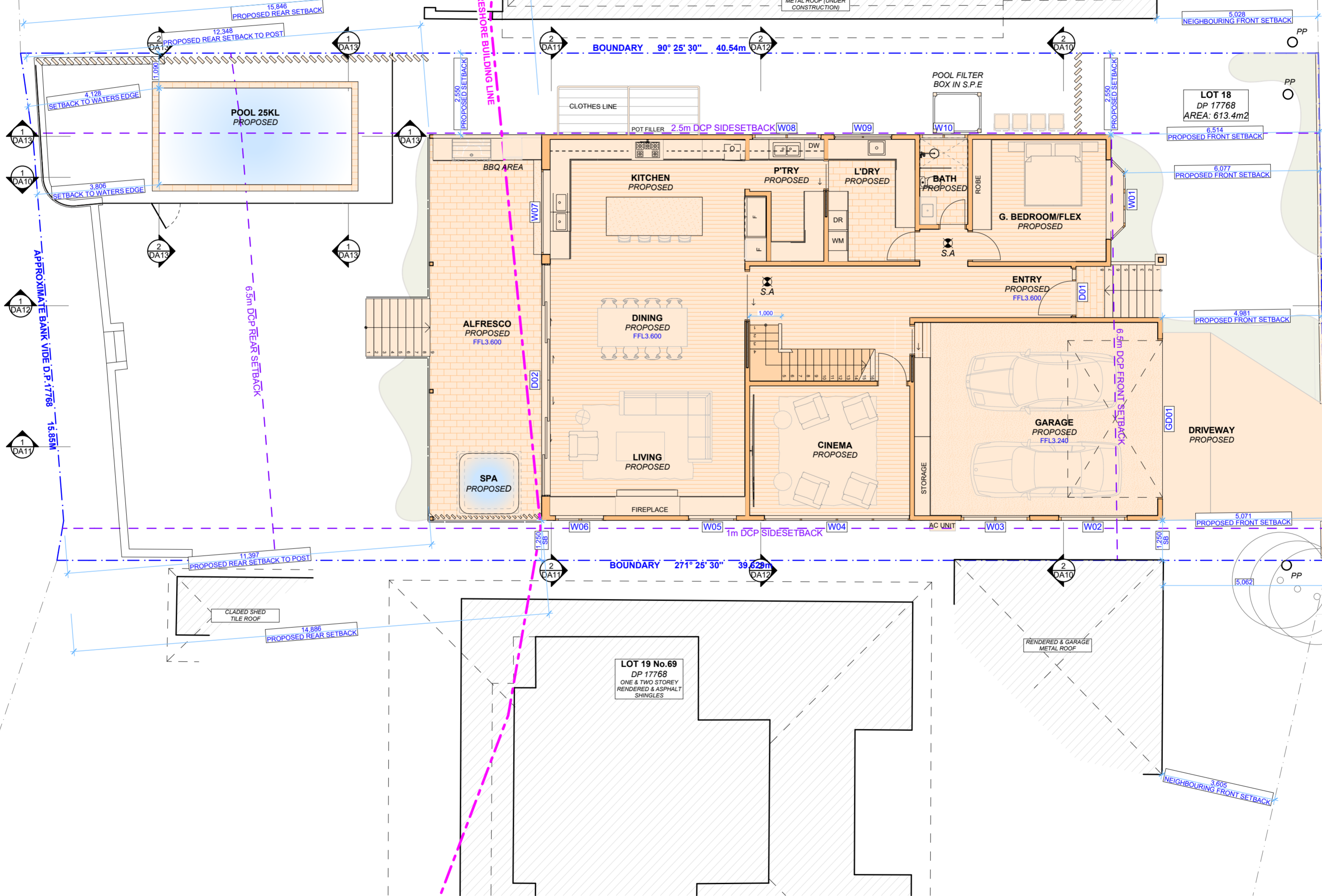
WIMBLEDON AVENUE

LOT 7335
DP 1164008

LOT 17 No.73
DP 17768
ONE & TWO STOREY
RENDERED & CLAD
HOUSE
METAL ROOF (UNDER
CONSTRUCTION)

LOT 18
DP 17768
AREA: 613.4m²

LOT 19 No.69
DP 17768
ONE & TWO STOREY
RENDERED & ASPHALT
SHINGLES



PROPOSED GROUND FLOOR PLAN

1:100

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LEGEND

- EXISTING
- DEMOLISHED
- PROPOSED

EXISTING RL
PROPOSED RL

CLIENT
Jonathan & Virginia
Younger

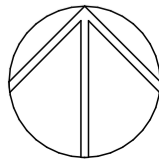
PROJECT ADDRESS
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NORTH NARRABEEN
NSW 2101

DRAWING NO.
DA06

DATE
Friday, 16 May 2025

DRAWING NAME
PROPOSED GROUND FLOOR
PLAN

SCALE
1:100 @A2



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NARRABEEN LAGOON

WIMBLEDON AVENUE

LOT 7335
DP 1164008

LOT 17 No.73
DP 17768
ONE & TWO STOREY
RENDERED & CLAD
HOUSE
METAL ROOF (UNDER
CONSTRUCTION)

LOT 18
DP 17768
AREA: 613.4m²

LOT 19 No.69
DP 17768
ONE & TWO STOREY
RENDERED & ASPHALT
SHINGLES

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LEGEND

EXISTING
DEMOLISHED
PROPOSED

EXISTING RL
PROPOSED RL

CLIENT
Jonathan & Virginia
Younger

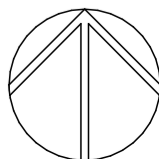
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DATE
Friday, 16 May 2025

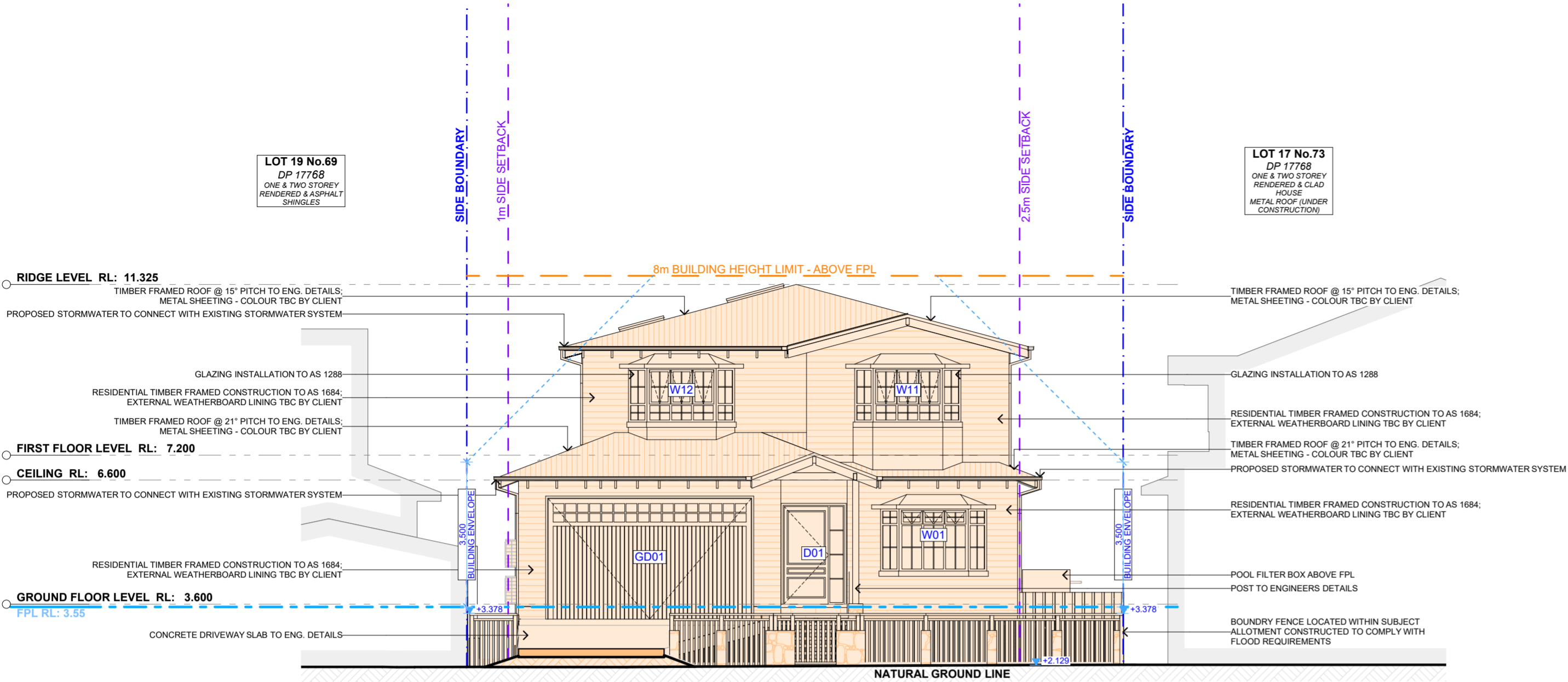
DRAWING NAME
PROPOSED FIRST FLOOR
PLAN

SCALE
1:100 @A2

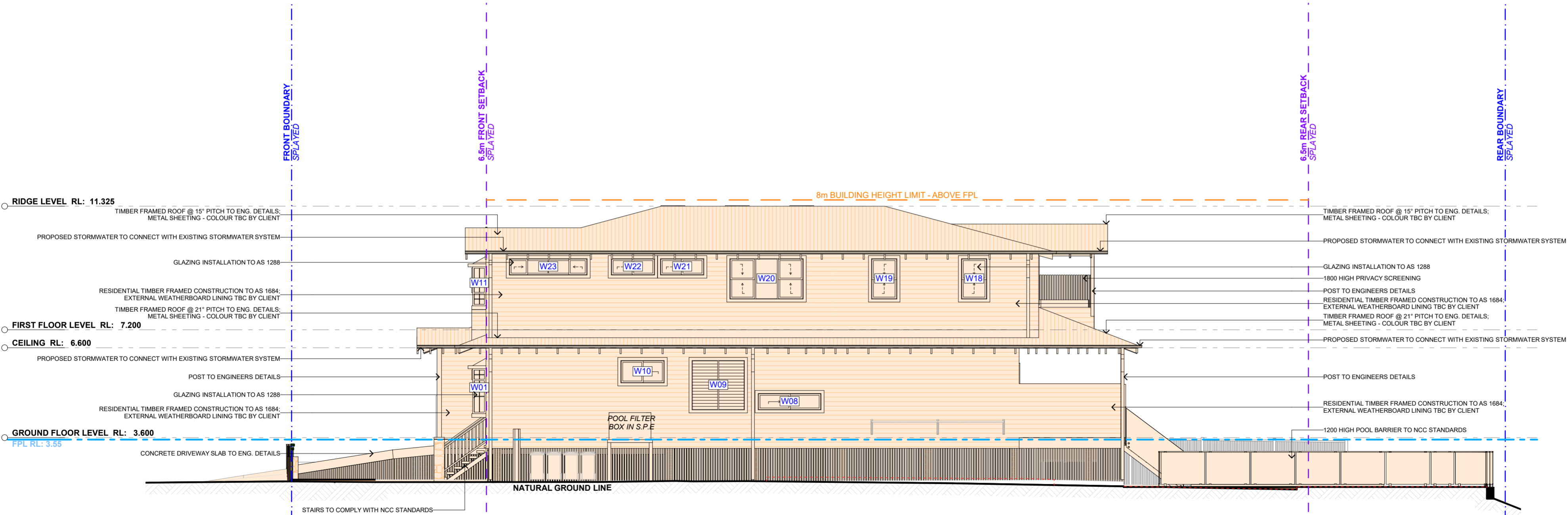


PROPOSED FIRST FLOOR PLAN

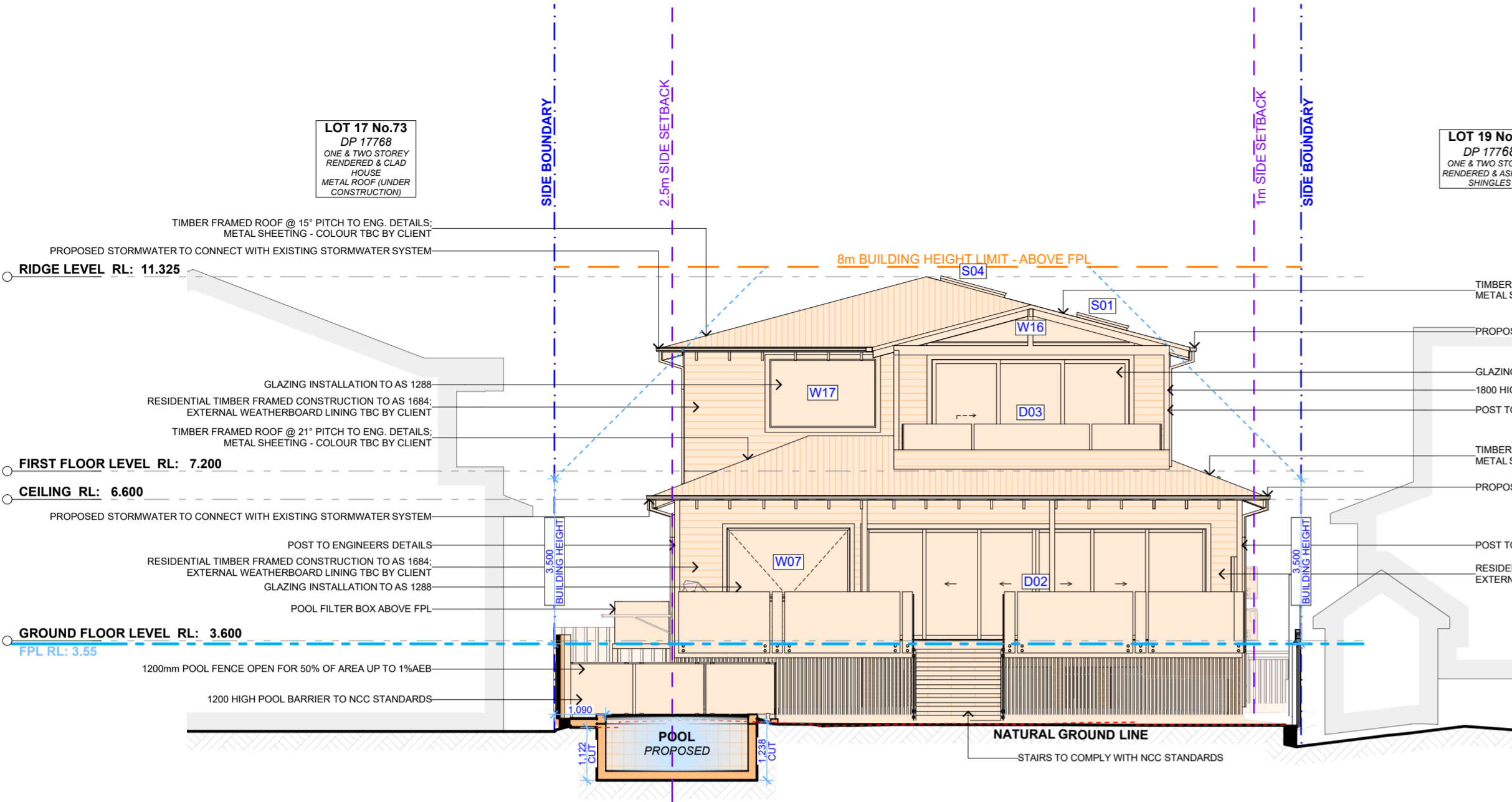
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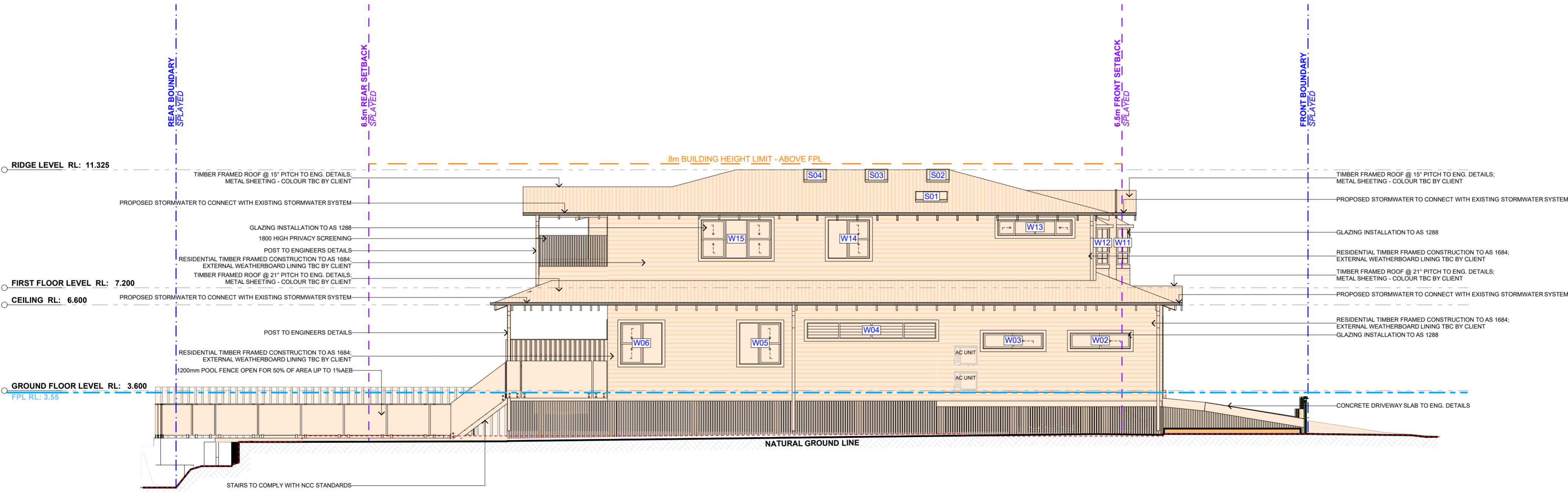
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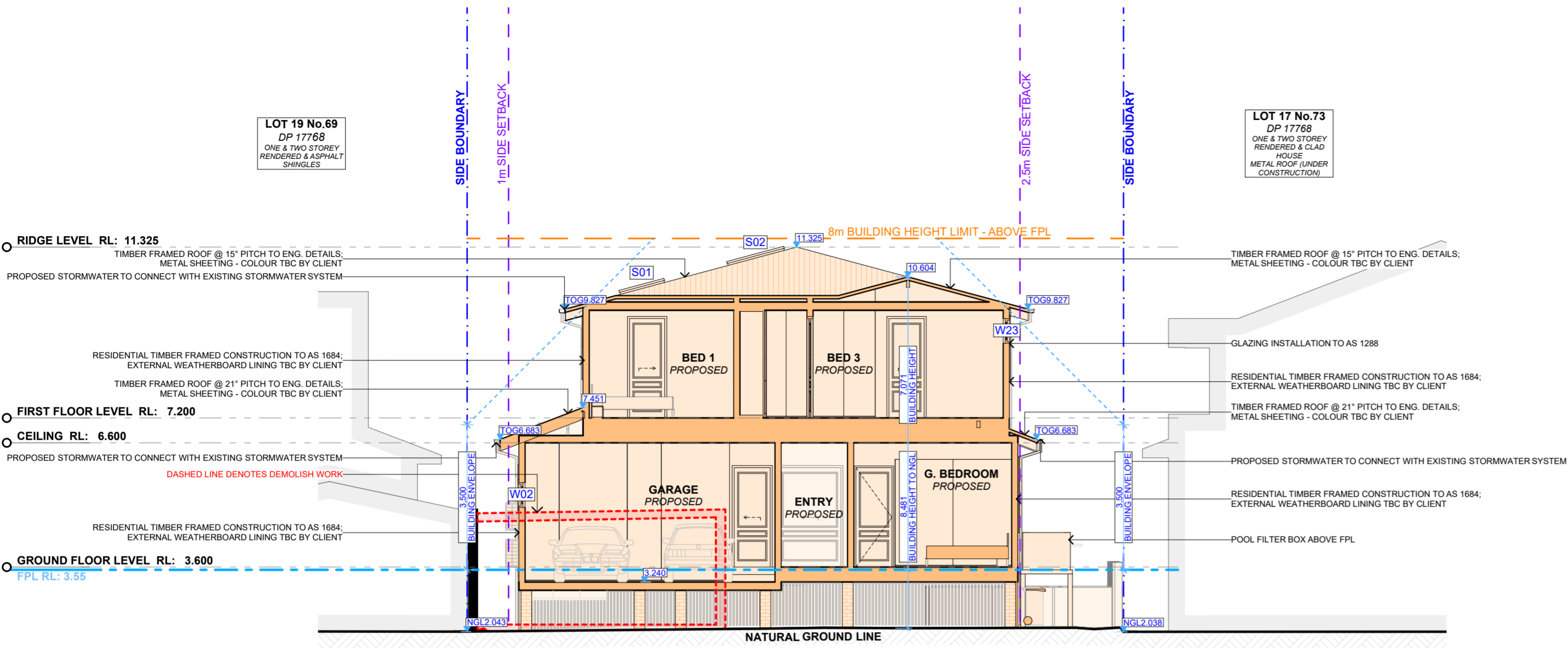
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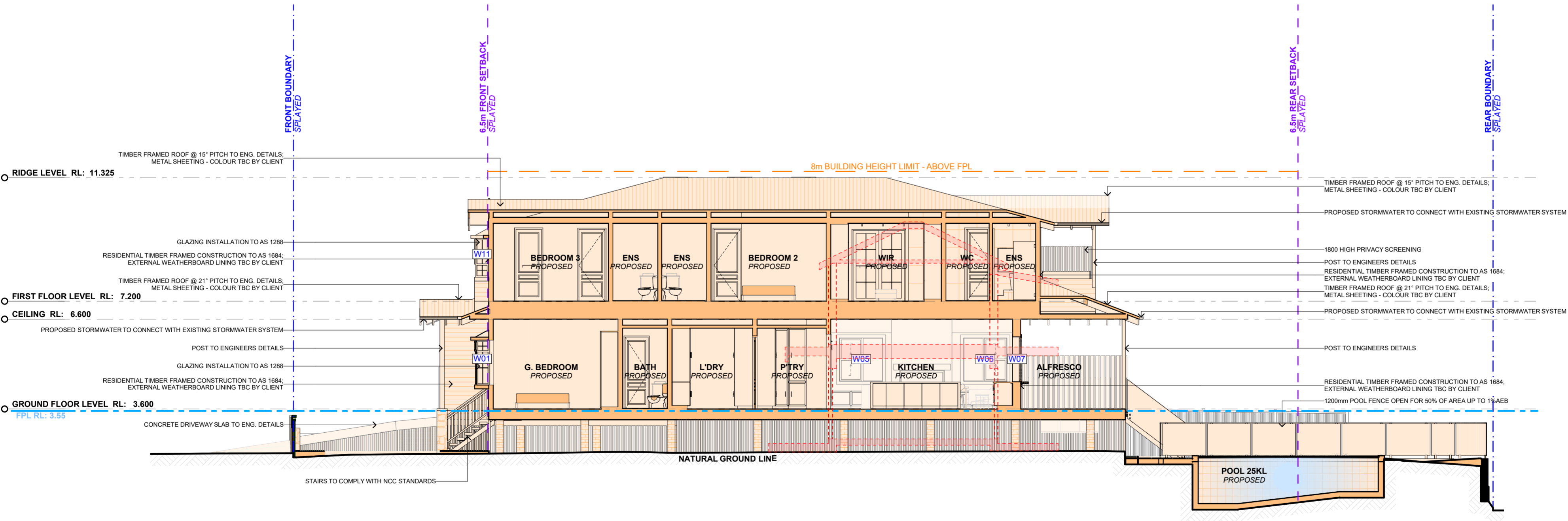
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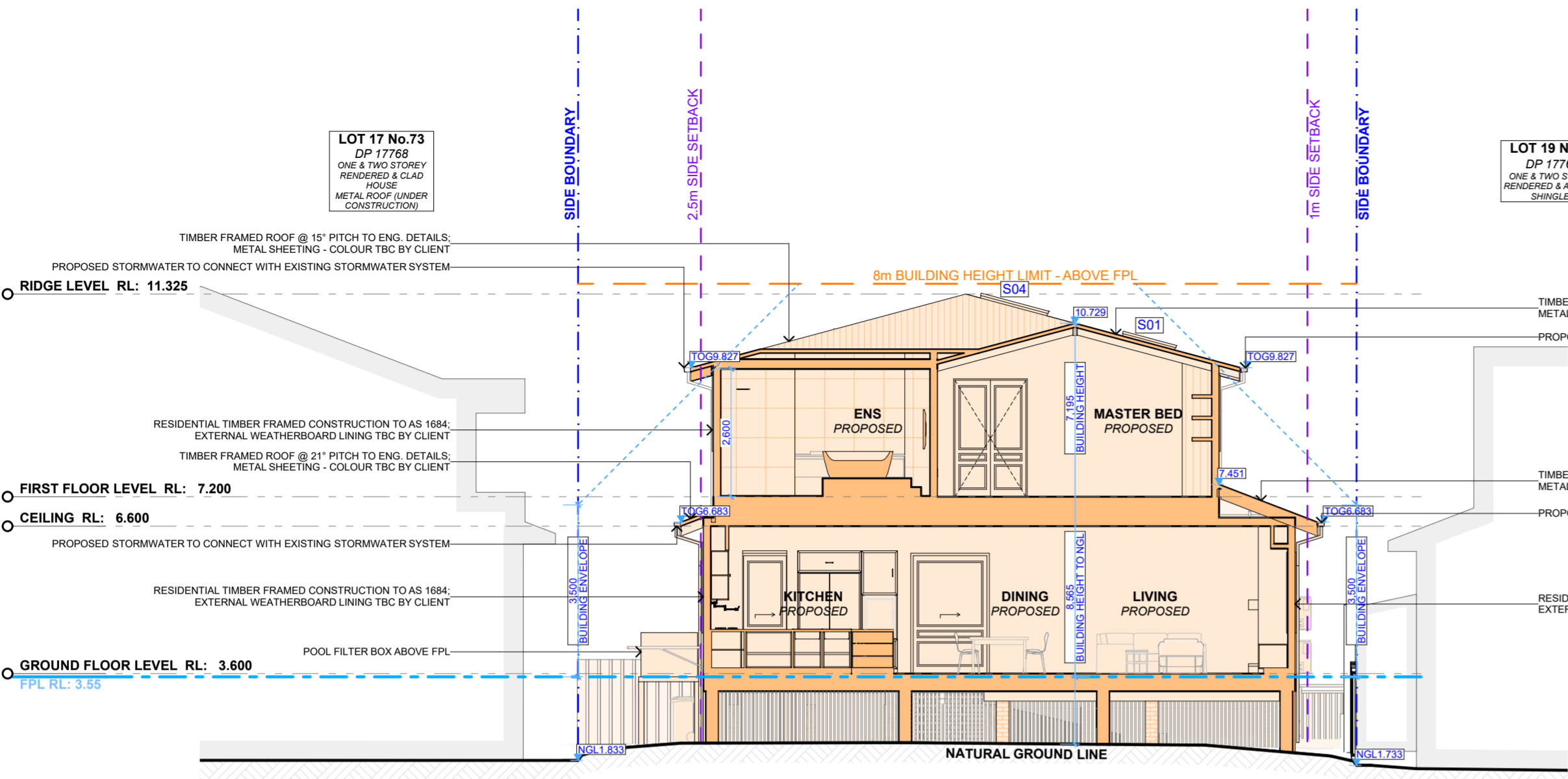
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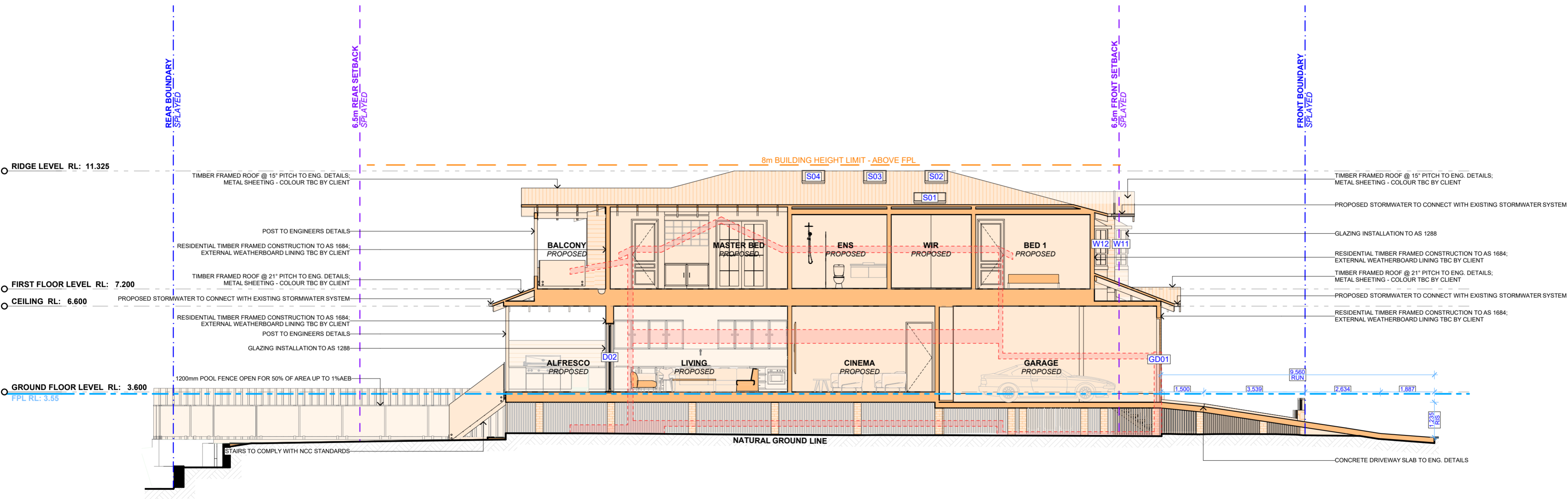
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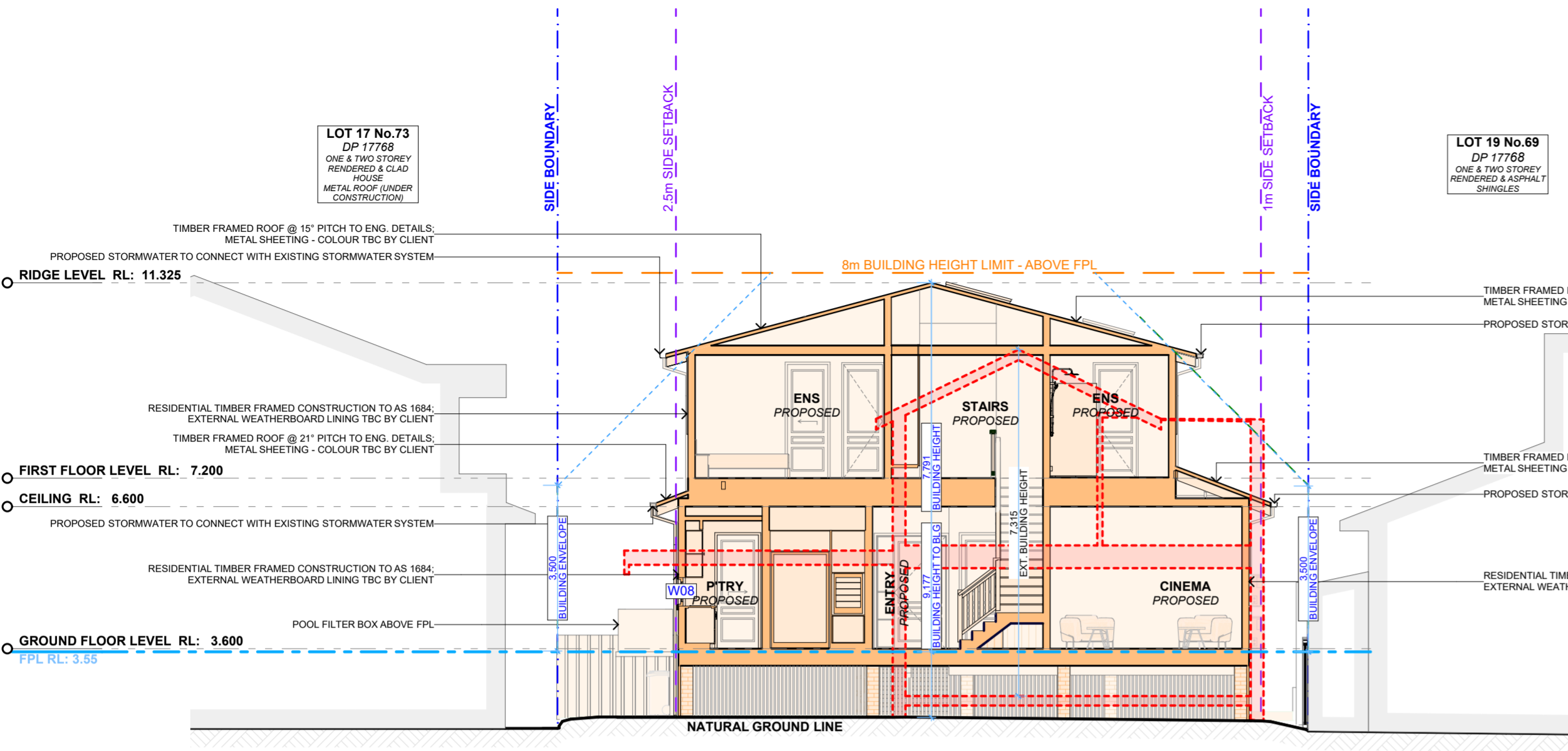
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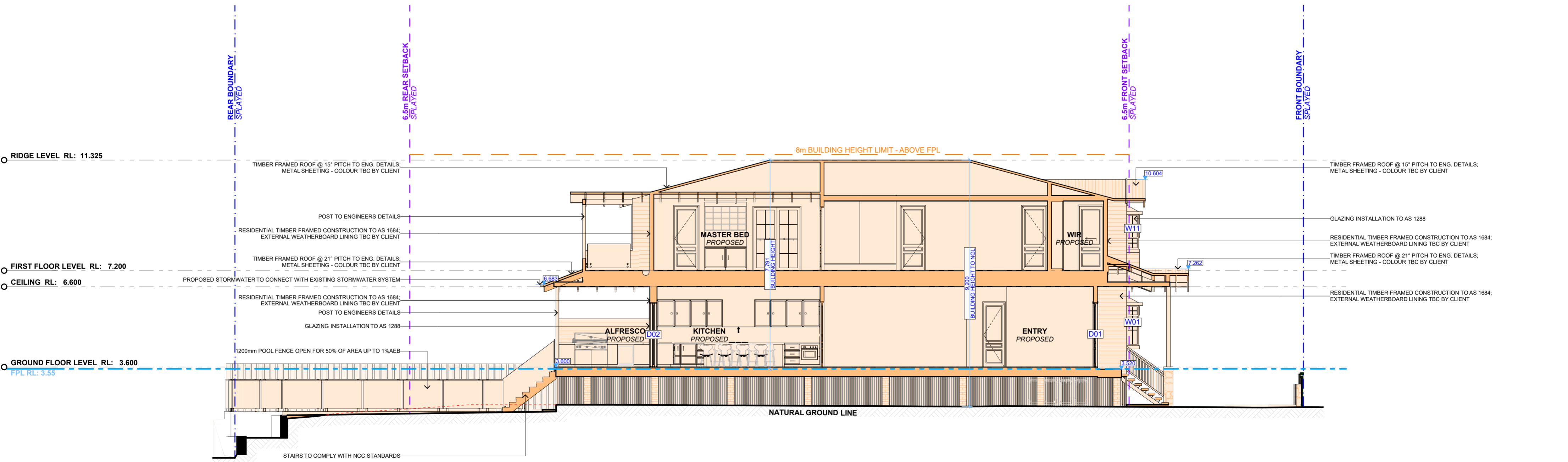
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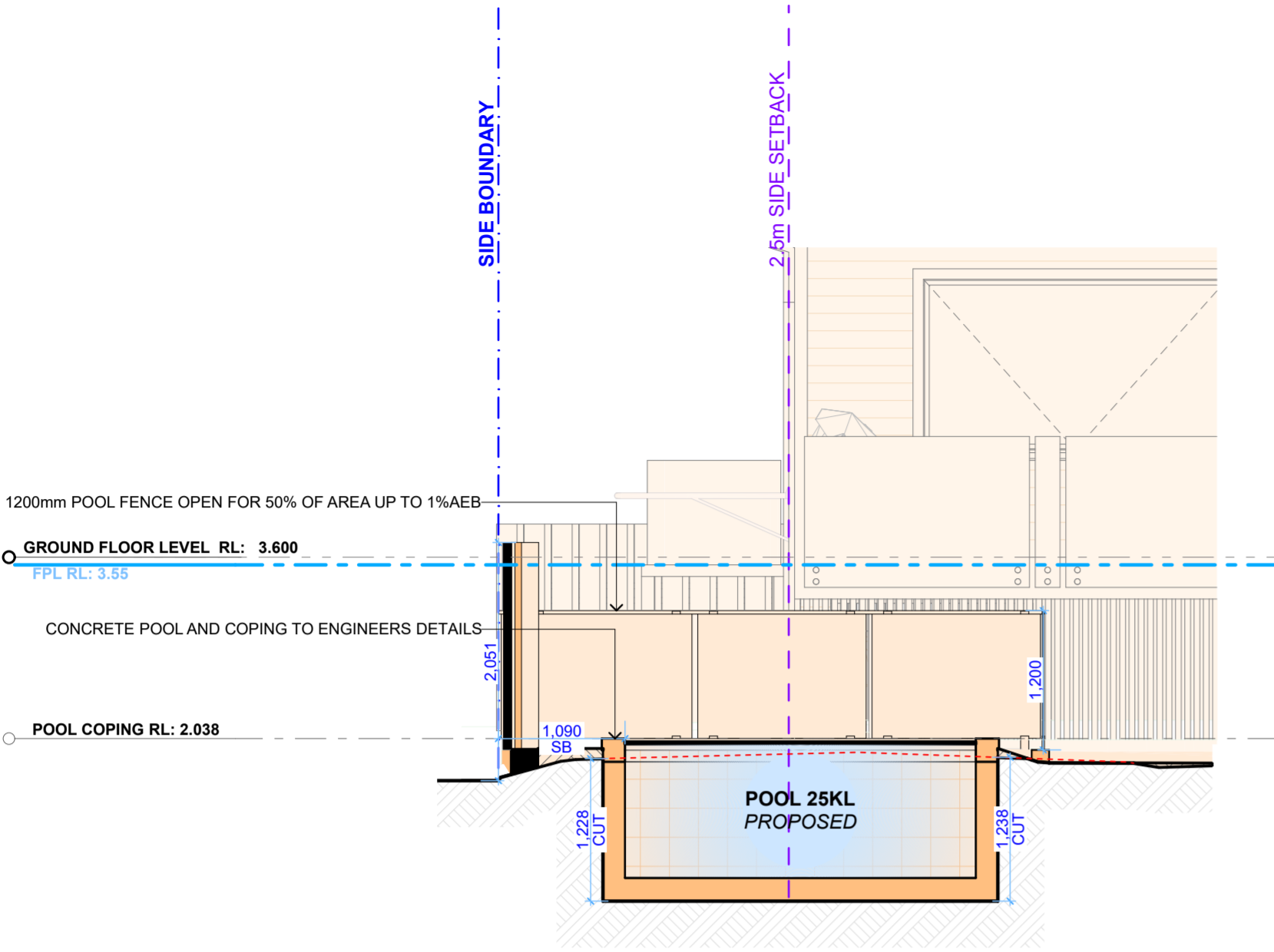
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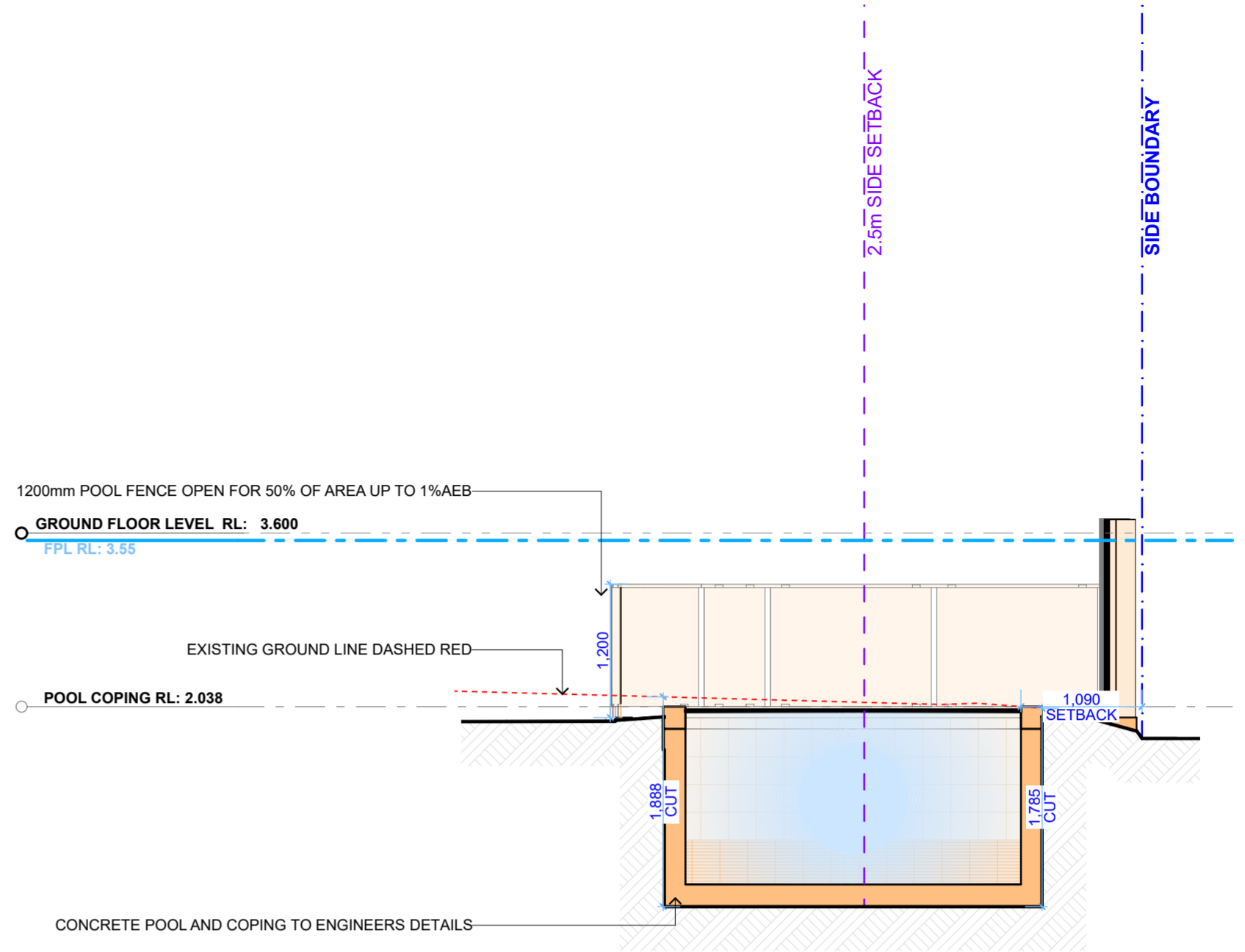
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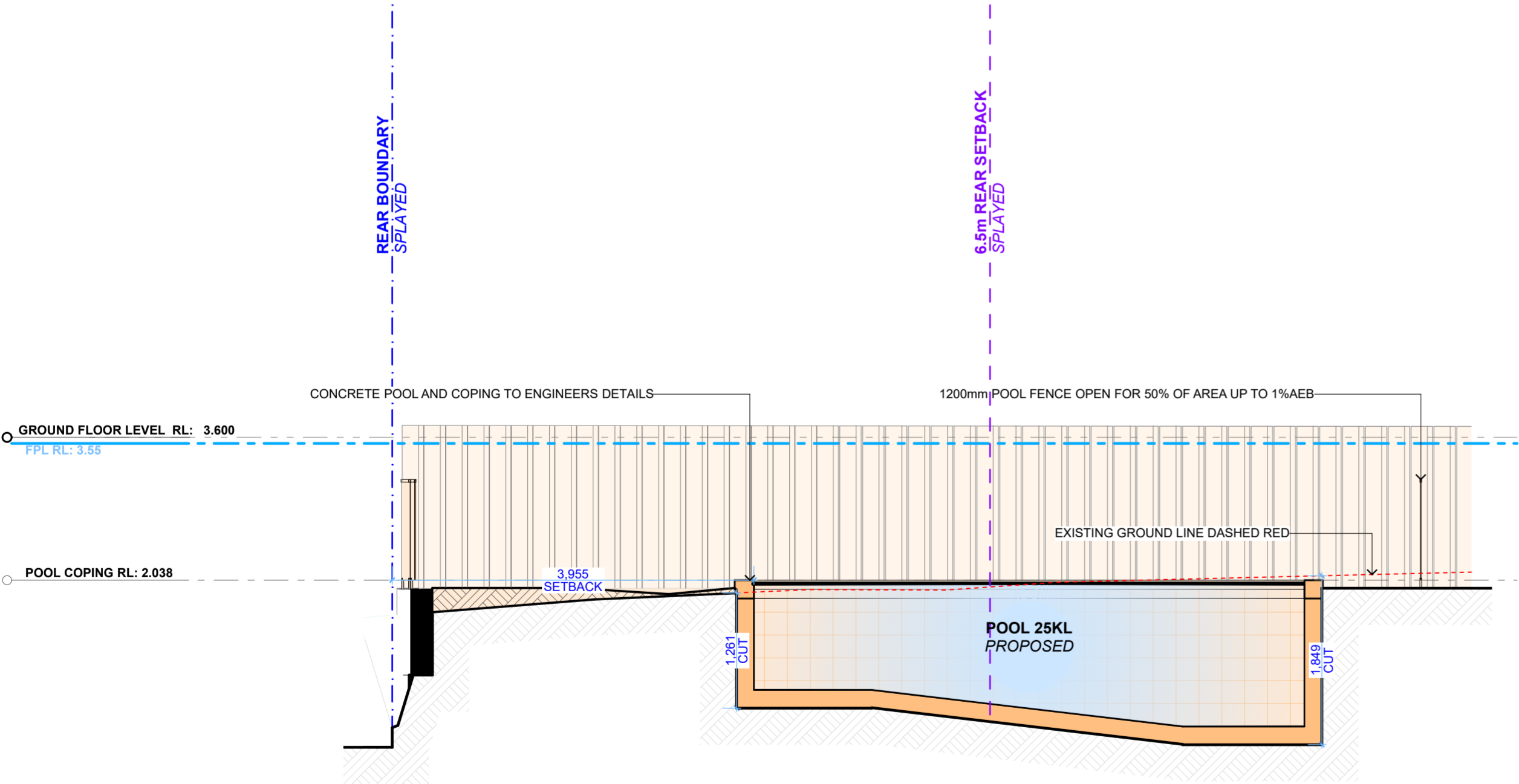
1 LONG SECTION CC 1:100



2 POOL CROSS SECTION 1:50



1 POOL CROSS SECTION 1:50



1 POOL LONG SECTION 1:50



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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

EXIST. RL
↓
[PROP. RL]

CLIENT
Jonathan & Virginia Younger

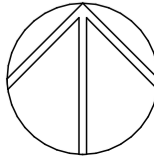
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NARRABEEN NSW 2101

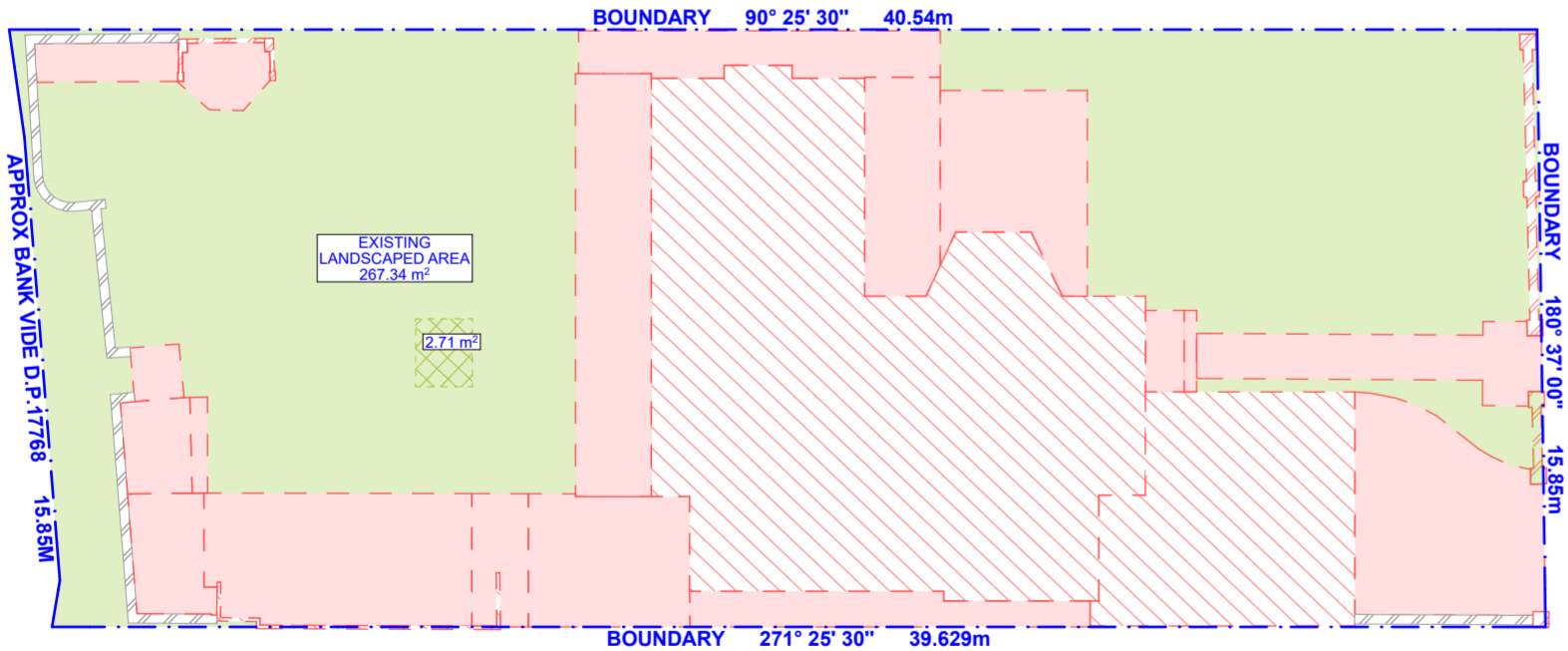
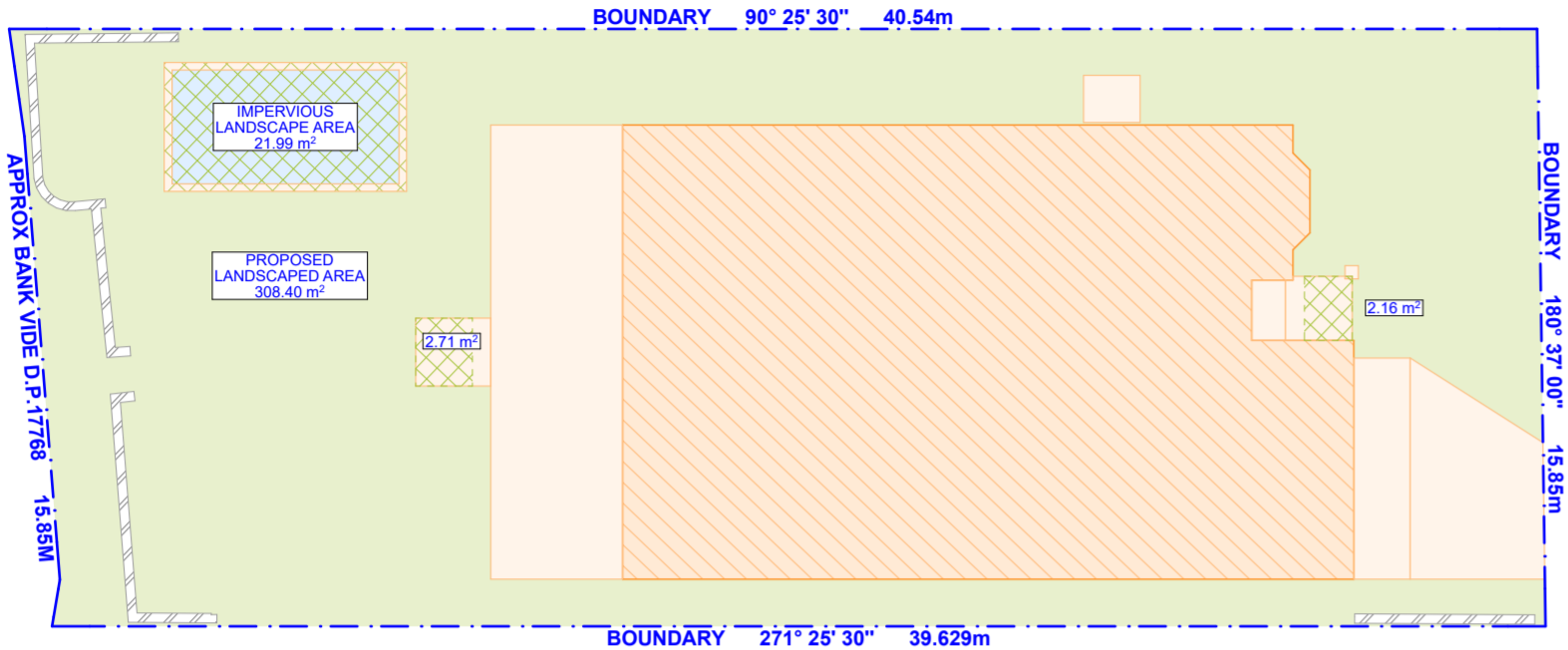
DRAWING NO.
DA13

DATE
Friday, 16 May 2025

DRAWING NAME
POOL SECTIONS

SCALE
1:50 @A2





CONTROL TABLE

SITE AREA 613.4m²

LANDSCAPED AREA

CONTROL

EXISTING

PROPOSED

60% (368.04m²)

43% (267.34m²)

50% (308.40m²)

LANDSCAPED AREA

6% (36.804m²)

-

4% (26.86m²)

6% IMPERVIOUS LANDSCAPE VARIATION

LANDSCAPED AREA

60% (368.04m²)

43% (267.34m²)

54% (332.64m²)

TOTAL

PRIVATE OPEN SPACE AREA

80m²

80m²

80m²



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			DLR	

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LEGEND

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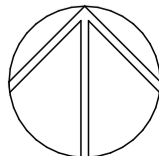
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DRAWING NO.
DA14

DATE
Friday, 16 May 2025

DRAWING NAME
AREA CALCULATIONS

SCALE
1:200 @A2





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LEGEND

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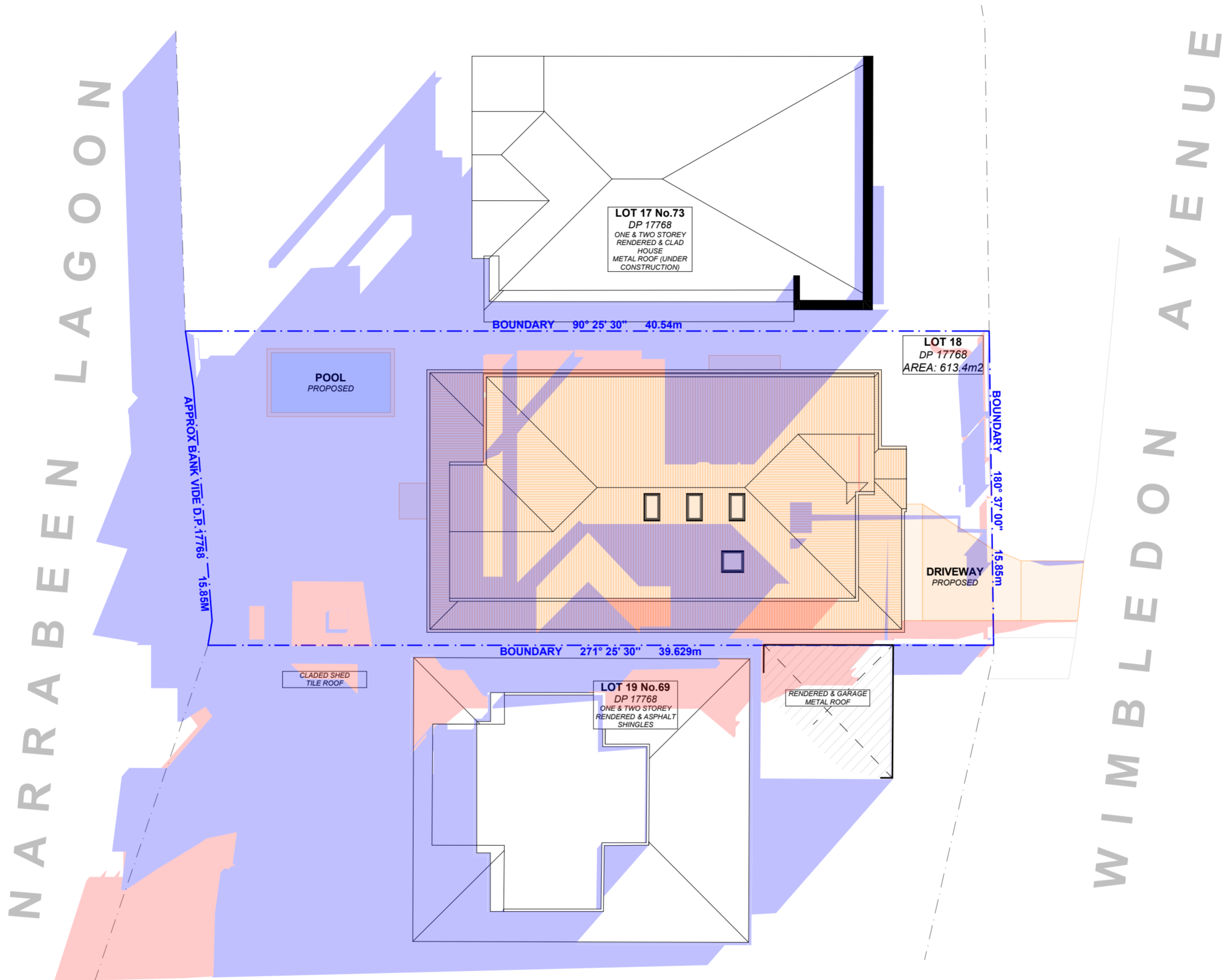
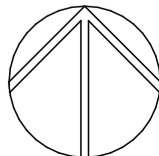
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DRAWING NO.
DA15

DATE
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DRAWING NAME
WINTER SOLSTICE 9 AM

SCALE
1:200 @A2





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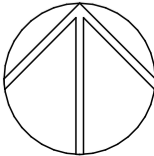
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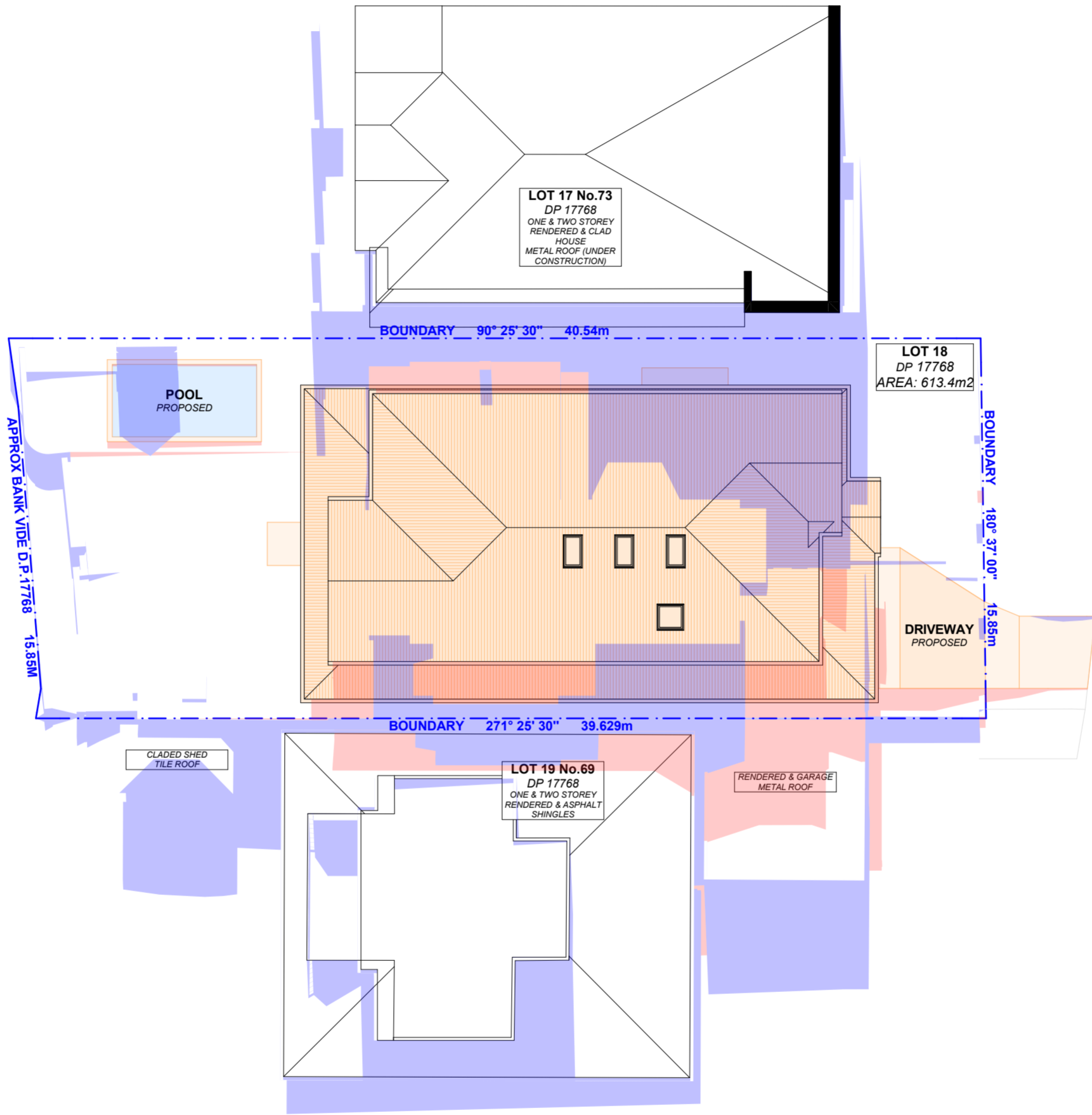
DATE
Friday, 16 May 2025

DRAWING NAME
WINTER SOLSTICE 12 PM

SCALE
1:200 @A2



NARRABEEN LAGOON



WIMBLEDON AVENUE



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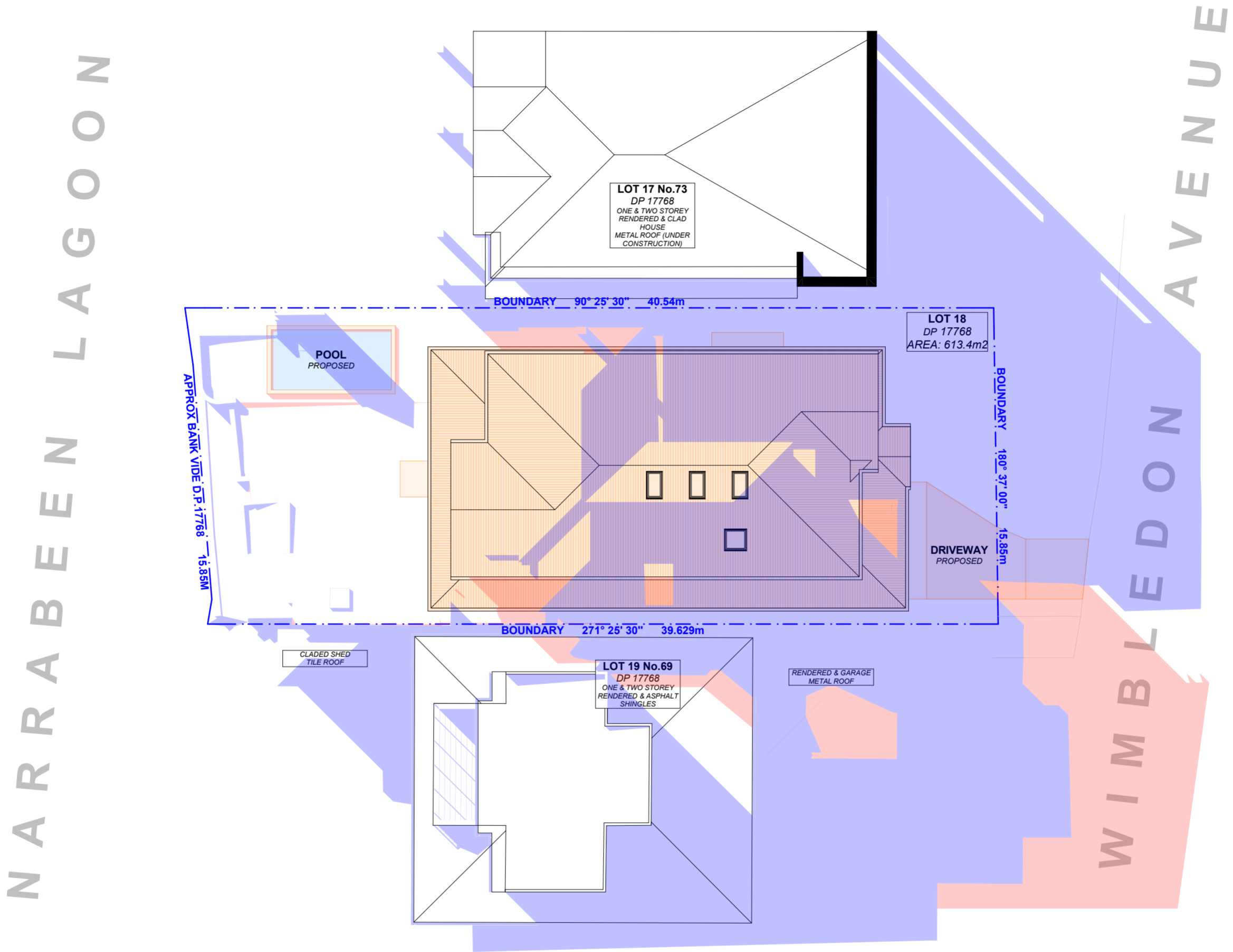
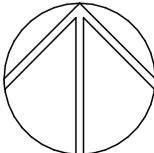
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DRAWING NO.
DA17

DATE
Friday, 16 May 2025

DRAWING NAME
WINTER SOLSTICE 3 PM

SCALE
1:200 @A2

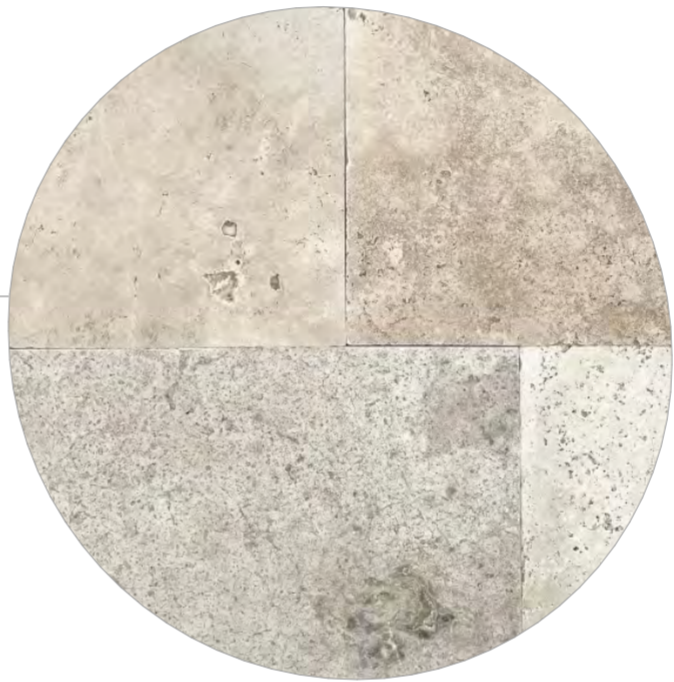




EXTERNAL WEATHERBOARD CLADDING
- COLOUR TO BE CONFIRMED BY
CLIENT AT CONSTRUCTION



EXTERNAL GARAGE DOOR AND WINDOWS WITH
TIMBER HATCH DETAILING - COLOUR TO BE
CONFIRMED BY CLIENT AT CONSTRUCTION



EXTERNAL TILED PAVING - COLOUR TO
BE CONFIRMED BY CLIENT AT
CONSTRUCTION



EXTERNAL STONEWORK CLADDING -
STONE FINISH TO BE CONFIRMED BY
CLIENT AT CONSTRUCTION



METAL COLORBOND ROOF SHEETING -
COLOUR TO BE CONFIRMED BY CLIENT
AT CONSTRUCTION



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LEGEND

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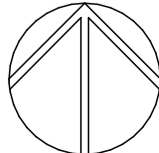
PROJECT ADDRESS
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NSW 2101

DRAWING NO.
DA18

DATE
Friday, 16 May 2025

DRAWING NAME
SAMPLE BOARD

SCALE
1:1.59, 1:1.81, 1:1.12,
1:1.71, 1:1.05, 1:1.20,
1:0.60 @A2



Appendix C

COMPREHENSIVE FLOOD INFORMATION REPORT

Property: 71 Wimbledon Avenue NORTH NARRABEEN NSW 2101

Lot DP: Lot 18 DP 17768

Issue Date: 05/06/2025

Flood Study Reference: Narrabeen Lagoon Flood Study 2013, BMT WBM, Ingleside, Elanora and Warriewood Overland Flow Flood Study 2019, WMAwater

Flood Information¹:

Map A - Flood Risk Precincts

Maximum Flood Planning Level (FPL) ^{2, 3, 4}: 3.55 m AHD

Map B - 1% AEP Flood & Key Points

1% AEP Maximum Water Level ^{2, 3}: 3.05 m AHD

1% AEP Maximum Depth from natural ground level³: 2.22 m

1% AEP Maximum Velocity: 0.20 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: 5.03 m AHD

PMF Maximum Depth from natural ground level: 4.21 m

PMF Maximum Velocity: 0.62 m/s

Map E - Flooding with Climate Change

1% AEP Maximum Water Level with Climate change ³: 3.92 m AHD

1% AEP Maximum Depth with Climate Change³: 3.09 m

Map F - Flood Life Hazard Category in PMF

H5

Map G - Indicative Ground Surface Spot Heights

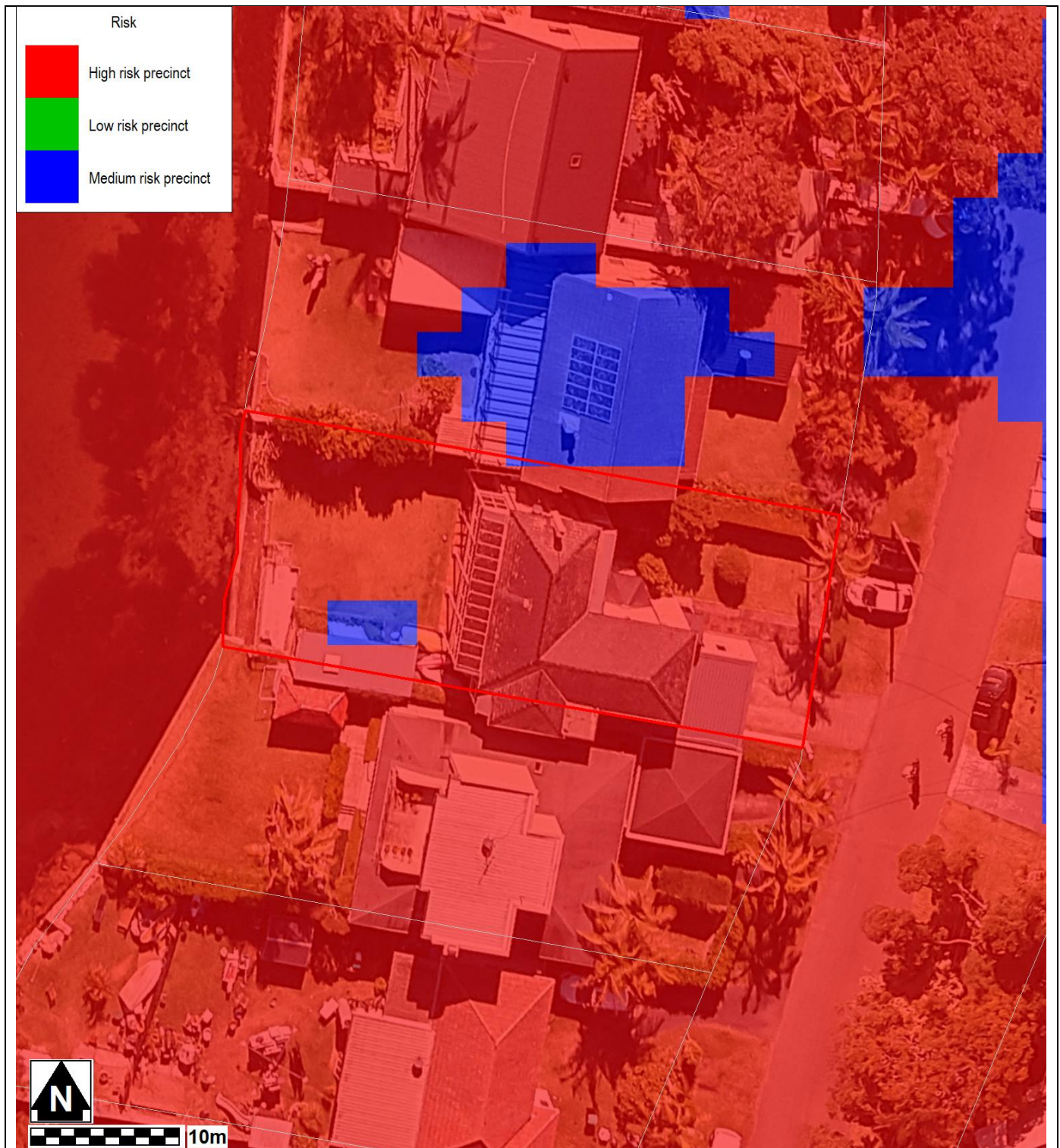
- (1) The provided flood information does not account for any local overland flow issues nor private stormwater drainage systems.
- (2) Overland flow/mainstream water levels may vary across a sloping site, resulting in variable minimum floor/ flood planning levels across the site. The maximum Flood Planning 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

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.

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: Narrabeen Lagoon Flood Study 2013, BMT WBM, Ingleside, Elanora and Warriewood Overland Flow Flood Study 2019, WMAwater) and aerial photography (Source: NearMap 2014) are indicative only.

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: Narrabeen Lagoon Flood Study 2013, BMT WBM, Ingleside, Elanora and Warriewood Overland Flow Flood Study 2019, WMAwater) and aerial photography (Source Near Map 2014) are indicative only.

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	2.71	0.74	3.05	1.07	0.05	3.55	5.03	3.06	0.32
2	2.71	1.02	3.05	1.36	0.03	3.55	5.03	3.34	0.21
3	2.71	0.51	3.05	0.85	0.07	3.55	5.02	2.83	0.30
4	2.71	0.56	3.05	0.90	0.09	3.55	5.03	2.88	0.19
5	2.71	0.50	3.05	0.84	0.15	3.55	5.01	2.80	0.44
6	2.71	0.59	3.05	0.93	0.04	3.55	5.02	2.90	0.16
7	2.71	0.56	3.05	0.90	0.09	3.55	4.99	2.85	0.36
8	2.71	0.64	3.05	0.97	0.03	3.55	5.00	2.92	0.07
9	2.71	0.57	3.05	0.91	0.05	3.55	4.99	2.86	0.20
10	2.71	0.59	3.05	0.92	0.10	3.55	4.99	2.87	0.31
11	2.71	0.56	3.05	0.90	0.10	3.55	4.99	2.85	0.19
12	2.71	0.71	3.05	1.05	0.10	3.55	5.00	3.00	0.18

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	3.92	1.94
2	3.92	2.23
3	3.92	1.72
4	3.92	1.76
5	3.91	1.70
6	3.91	1.79
7	3.91	1.76
8	3.91	1.84
9	3.91	1.77
10	3.91	1.79
11	3.91	1.76
12	3.91	1.91

WL – Water Level

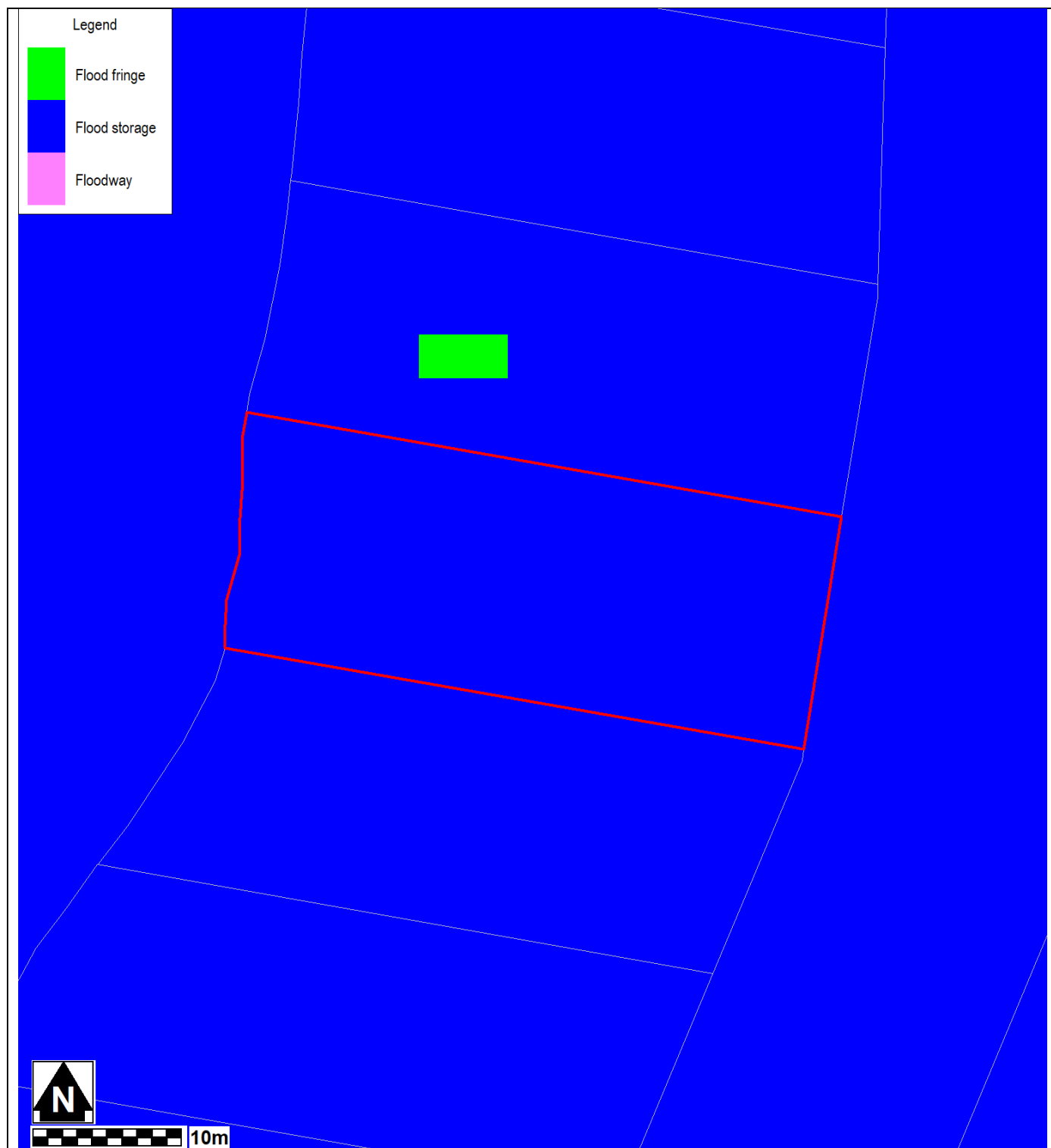
PMF – Probable Maximum Flood

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 0.3m²/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: Narrabeen Lagoon Flood Study 2013, BMT WBM, Ingleside, Elanora and Warriewood Overland Flow Flood Study 2019, WMAwater) and aerial photography (Source: NearMap 2014) are indicative only

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: Narrabeen Lagoon Flood Study 2013, BMT WBM, Ingleside, Elanora and Warriewood Overland Flow Flood Study 2019, WMAwater) and aerial photography (Source: NearMap 2014) are indicative only

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: Narrabeen Lagoon Flood Study 2013, BMT WBM, Ingleside, Elanora and Warriewood Overland Flow Flood Study 2019, WMAwater) and aerial photography (Source: NearMap 2014) are indicative only

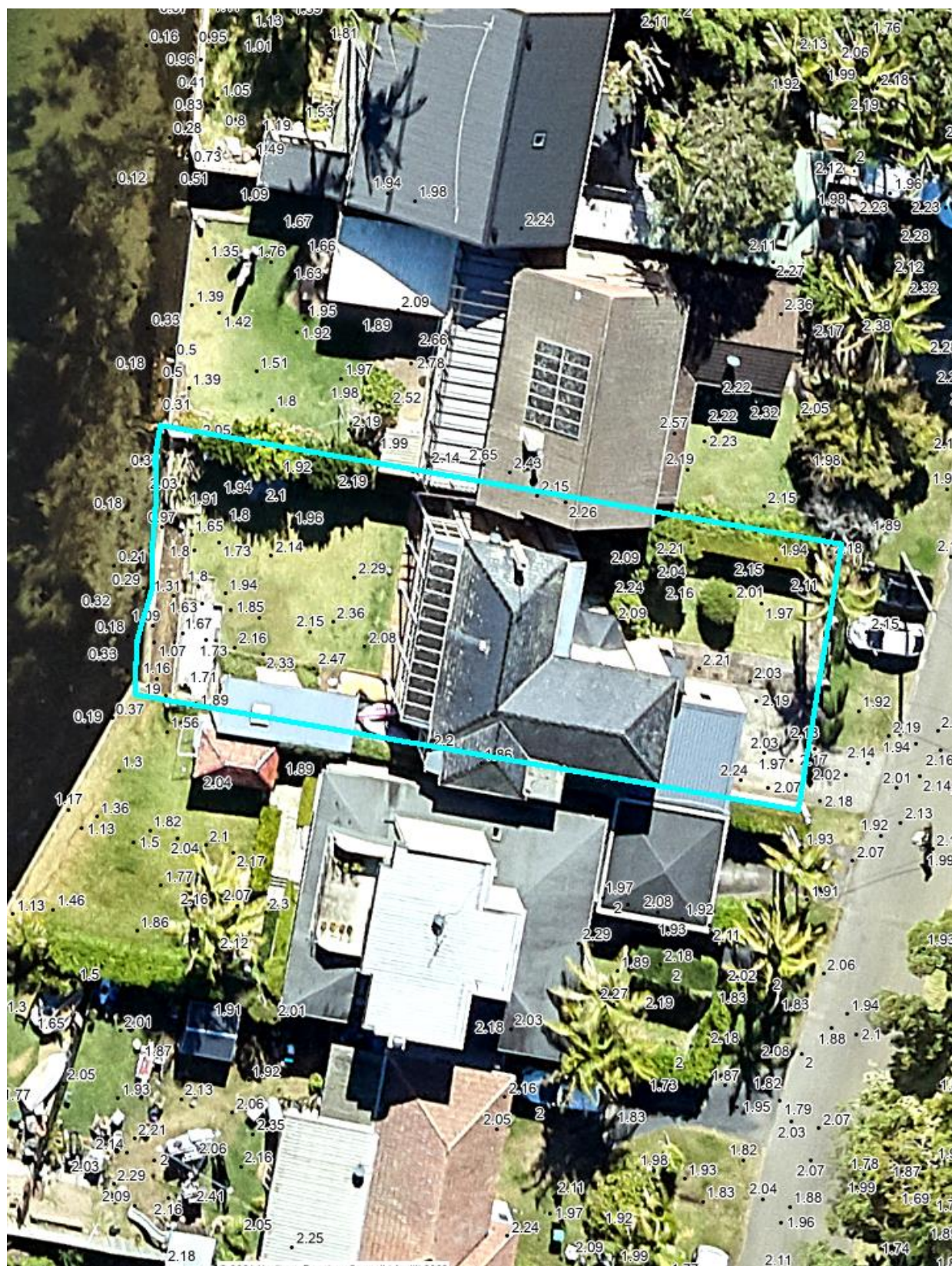
MAP F: FLOOD LIFE HAZARD CATEGORY IN PMF



Notes:

- Cadastre Lines (Source: NSW Government Land and Property Information), flood levels/extents (Source: Narrabeen Lagoon Flood Study 2013, BMT WBM, Ingleside, Elanora and Warriewood Overland Flow Flood Study 2019, WMAwater) and aerial photography (Source Near Map 2014) are indicative only.

MAP G: INDICATIVE GROUND SURFACE SPOT HEIGHTS



Notes:

- The surface spot heights shown on this map were derived from Airborne Laser Survey and are indicative only.
- Accuracy is generally within $\pm 0.2\text{m}$ vertically and $\pm 0.15\text{m}$ horizontally, and Northern Beaches Council does not warrant that the data does not contain errors.
- If accuracy is required, then survey should be undertaken by a registered surveyor.

Preparation of a Flood Management Report

Introduction

These guidelines are intended to provide advice to applicants on how to determine what rules apply on flood prone land, and how to prepare a Flood Management Report. The purpose of a Flood Management Report is to demonstrate how a proposed development will comply with flood related planning requirements.

Planning Requirements for Flood Prone Land

Development must comply with the requirements for developing flood prone land set out in the relevant Local Environment Plan (LEP) and Development Control Plan (DCP). There are separate LEPs and DCPs for each of the former Local Government Areas (LGAs), although preparation of a LGA-wide LEP and DCP is currently under way.

The clauses specific to flooding in the LEPs and DCPs are as follows:

LEP Clauses	DCP Clauses
Manly LEP (2013) – 5.21 Flood Planning Manly LEP (2013) – 5.22 Special Flood Considerations	Manly DCP (2013) – 5.4.3 Flood Prone Land
Warringah LEP (2011) – 5.21 Flood Planning Warringah LEP (2011) – 5.22 Special Flood Considerations Warringah LEP (2000) – 47 Flood Affected Land *	Warringah DCP (2011) – E11 Flood Prone Land
Pittwater LEP (2014) – 5.21 Flood Planning Pittwater LEP (2014) – 5.22 Special Flood Considerations	Pittwater 21 DCP (2014) – B3.11 Flood Prone Land Pittwater 21 DCP (2014) – B3.12 Climate Change

* The Warringah LEP (2000) is relevant only for the “deferred lands” which affects only a very small number of properties, mostly in the Oxford Falls area.

Development on flood prone land must also comply with Council's Water Management for Development Policy, and if it is in the Warriewood Release Area, with the Warriewood Valley Water Management Specification and Clause C6.1 of the Pittwater 21 DCP (2014). Guidelines for Flood Emergency Response Planning are available for addressing emergency response requirements in the DCP. These documents can be found on Council's website on the [Flooding page](#).

Note that if the property is affected by estuarine flooding or other coastal issues, these need to be addressed separately under the relevant DCP clauses.

When is a Flood Management Report required?

A Flood Management Report must be submitted with any Development Application on flood prone land (with exceptions noted below), for Council to consider the potential flood impacts and applicable controls. For Residential or Commercial development, it is required for development on land identified within the Medium or High Flood Risk Precinct. For Vulnerable or Critical development, it is required if it is within any Flood Risk Precinct.

There are some circumstances where a formal Flood Management Report undertaken by a professional engineer may not be required. However the relevant parts of the DCP and LEP would still need to be addressed, so as to demonstrate compliance. Examples where this may apply include:

- If all proposed works are located outside the relevant Flood Risk Precinct extent
- First floor addition only, where the existing ground floor level is above the FPL
- Internal works only, where habitable floor areas below the FPL are not being increased

Note that development on flood prone land will still be assessed for compliance with the relevant DCP and LEP, and may still be subject to flood related development controls.

What is the purpose of a Flood Management Report?

The purpose of a Flood Management Report is to demonstrate how a proposed development will comply with flood planning requirements, particularly the development controls outlined in the relevant LEP and DCP clauses. The report must detail the design, measures and controls needed to achieve compliance, following the steps outlined below.

A Flood Management Report should reflect the size, type and location of the development, proportionate to the scope of the works proposed, and considering its relationship to surrounding development. The report should also assess the flood risk to life and property.

Preparation of a Flood Management Report

The technical requirements for a Flood Management Report include (where relevant):

1. Description of development

- Outline of the proposed development, with plans if necessary for clarity
- Use of the building, hours of operation, proposed traffic usage or movement
- Type of use, eg vulnerable, critical, residential, business, industrial, subdivision, etc

2. Flood analysis

- 1% AEP flood level
- Flood Planning Level (FPL)
- Probable Maximum Flood (PMF) level
- Flood Risk Precinct, ie High, Medium or Low
- Flood Life Hazard Category
- Mapping of relevant extents
- Flood characteristics for the site, eg depth, velocity, hazard and hydraulic category, and the relevance to the proposed development

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. 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.

3. Assessment of impacts

- Summary of compliance for each category of the DCP, as per the table below.

	Compliance		
	N/A	Yes	No
A) Flood effects caused by Development			
B) Building Components & Structural Soundness			
C) Floor Levels			
D) Car parking			
E) Emergency Response			
F) Fencing			
G) Storage of Goods			
H) Pools			

- Demonstration of how the development complies with any relevant flood planning requirements

from the DCP, LEP, Water Management for Development Policy, and if it is in the Warriewood Valley Urban Land Release Area, with the Warriewood Valley Water Management Specification (2001)

- For any non-compliance, a justification for why the development should still be considered.
- Calculations of available flood storage if compensatory flood storage is proposed
- Plan of the proposed development site showing the predicted 1% AEP and PMF flood extents, as well as any high hazard or floodway affectation
- Development recommendations and construction methodologies
- Qualifications of author - Council requires that the Flood Management Report be prepared by a suitably qualified Engineer with experience in flood design / management who has, or is eligible for, membership to the Institution of Engineers Australia
- Any flood advice provided by Council
- Any other details which may be relevant

Further information and guidelines for development are available on Council's website at:

<https://www.northernbeaches.nsw.gov.au/planning-and-development/building-and-renovations/development-applications/guidelines-development-flood-prone-land>

Council's Flood Team may be contacted on 1300 434 434 or at floodplain@northernbeaches.nsw.gov.au .

Appendix D

EMERGENCY FLOOD RESPONSE PROCEDURE

Flood waters can rise very rapidly on this site

Once a warning is received for a possible flood or floodwaters, start to inundate the rear portion of the site:

1. All residents should be at the designated assembly point by the time the flood waters are observed to have inundated the rear portion of the site.
2. The Owner must turn off all power, water and other relevant services.
3. Nominated occupants to sweep the premises to ensure that all occupants have sought refuge at the emergency assembly point.
4. Emergency services are to be notified by The Owner of the situation at the site.

THIS SITE CAN FLOOD
NEVER DRIVE, WALK OR RIDE THROUGH FLOODWATERS

When emergency services give the all-clear to leave:

The site will only be opened for Occupants to leave once floodwaters have subsided and the emergency services have given the all-clear.

Appendix E

Flood Checklists

BEFORE A FLOOD

Trigger for action: Always

Action	Status
• All Occupants to be made aware of site flooding potential	
• Develop detailed emergency procedures, responsibilities and resources	
• Provide all Occupants with an emergency response plan and advise of their responsibilities and delegations	
• Maintain an emergency contacts list	
• Update emergency response procedures annually	

WHEN A FLOOD IS LIKELY

Trigger for action: When the forecasts predict severe weather or significant amounts of rainfall are observed:

Action	Status
• Monitor the severe weather forecasts and predictions	
• The Facilities Operator to monitor conditions at the rear of the site	
• The Facilities Operator to notify Occupants to proceed to the emergency response area	
• The Facilities Operator to shut off nominated services	

DURING A FLOOD

Trigger for action: When water are observed inundating the rear of the site:

Action	Status
● Emergency response to be undertaken in an orderly fashion	
● The phases of the emergency response shall be:	
□ The Facilities Operator to request all occupants to proceed to the emergency assembly point.	
□ All occupants should be at the assembly point by the time the flood waters overtopping the flood barrier.	
□ The Facilities Operator to sweep premises for remaining persons	
□ The Facilities Operator to retreat to the emergency assembly area.	
● Emergency services to be notified by The Facilities Operator of the situation at site.	

Appendix F

Emergency Contacts

Organisation	Role	Contact
Emergency Services	Fire/ambulance/police	000
Northern Beaches Council	Disaster Coordination Centre	1300 434 434
State Emergency Service	SES Local Controller	132 500
Northern Beaches Hospital		02 9105 5000

Appendix G

Flood Compatible Materials and Building Components for New Works

BUILDING COMPONENT	FLOOD COMPATIBLE MATERIAL	BUILDING COMPONENT	FLOOD COMPATIBLE MATERIAL
Flooring and Sub-floor Structure	<ul style="list-style-type: none"> ▪ concrete slab-on-ground monolith construction ▪ Suspended reinforced concrete slab 	Doors	<ul style="list-style-type: none"> ▪ solid panel with waterproof adhesives ▪ flush door with marine ply filled with closed cell foam ▪ painted metal construction ▪ aluminium or galvanised steel frame
Floor Covering	<ul style="list-style-type: none"> ▪ clay tiles ▪ concrete, precast or in-situ ▪ concrete tiles ▪ epoxy, form-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 	Wall and Ceiling Linings	<ul style="list-style-type: none"> ▪ 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

	<p>chemical-set adhesive</p> <ul style="list-style-type: none"> ▪ ceramic tiles, fixed with mortar or chemical-set adhesive ▪ asphalt tiles, fixed with water resistant adhesive ▪ linoleum 		<ul style="list-style-type: none"> ▪ plastic sheeting or wall with waterproof adhesive
Wall Structure	<ul style="list-style-type: none"> ▪ solid brickwork, blockwork, reinforced, concrete or mass concrete 	Insulation Windows	<ul style="list-style-type: none"> ▪ 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)	<ul style="list-style-type: none"> ▪ reinforced concrete construction ▪ galvanised metal construction 	Nails, Bolts, Hinges and Fittings	<ul style="list-style-type: none"> ▪ brass, nylon or stainless steel ▪ removable pin hinges ▪ hot dipped galvanised steel wire, nails or similar.

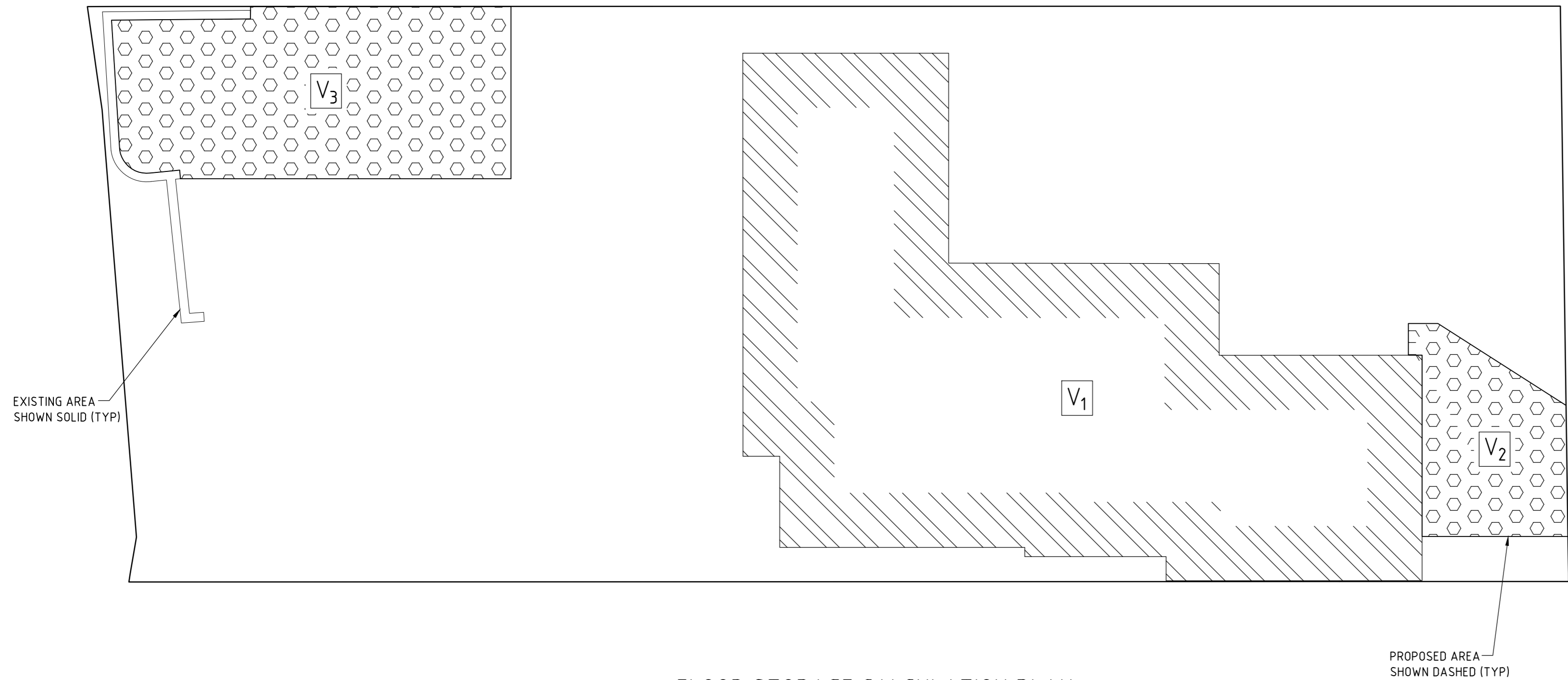
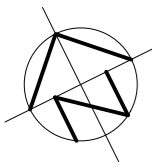
<p>Electrical and Mechanical Equipment</p> <p>For buildings constructed on land to which this Plan applies, the electrical and mechanical materials, equipment and Installation should conform to the following requirements.</p>	<p>Heating and Air Conditioning Systems</p> <p>Heating and air conditioning systems should be installed in areas and spaces of the building above the relevant flood level to the maximum extent possible. When this is not feasible, every precaution should be taken to minimise the damage caused by submersion according to the following guidelines.</p>
<p>Main power supply</p> <p>Subject to the relevant authority's approval, the incoming main commercial power service equipment, including all metering equipment, shall be located above the relevant flood level. This means that the building shall be easily disconnected from the main power supply.</p>	<p>Fuel</p> <p>Heating systems using gas or oil as fuel should have a manually operated valve located in the fuel supply line to enable fuel cut-off.</p>
<p>Wiring</p> <p>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 fibre.</p>	<p>Installation</p> <p>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</p>

<p>Components. Earth core linkage systems (or safety switches) are to be installed. Only submersible-type splices should be used below the relevant flood level. All conducts located below the relevant designated flood level should be so installed that they will be self draining if subjected to flooding.</p>	<p>fuel supply line. All storage tanks should be vented to the FPL.</p>
<p>Equipment All equipment installed below or partially below the relevant flood level should be capable of disconnection by a single plug and socket assembly.</p>	<p>Ducting All ductwork located below the relevant flood level should be provided with openings 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.</p>

<p>Reconnection</p> <p>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.</p>	<p>Ancillary Structures (steps, pergolas, etc.)</p> <p>Suitable water-tolerant materials should be used, such as reinforced concrete, masonry, sealed hardwood, and corrosive-resistant metals. Copper Chrome Arsenate (CCA) treated timber is not a suitable material.</p>
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Note: Flood-compatible materials will be used up to the Flood Planning Level.

Appendix H



FLOOD STORAGE CALCULATION PLAN
SCALE 1:100

PROPOSED DEVELOPMENT FLOOD STORAGE CALCULATIONS

FLOOD STORAGE GAIN
 $V_1 = 168.34 \text{ m}^2 \times 0.85\text{m} = 143.09\text{m}^3$

TOTAL FLOOD STORAGE GAIN = 143.09m^3

FLOOD STORAGE LOSS
 $V_2 = \frac{1}{2} \times 25.6\text{m}^2 \times 0.85\text{m} = 10.88\text{m}^3$
 $V_3 = 50.98\text{m}^2 \times 0.33\text{m} = 16.82\text{m}^3$

TOTAL FLOOD STORAGE LOSS = 27.7m^3

NET FLOOD STORAGE VOLUME CHANGE
 $143.09\text{m}^3 - 27.7\text{m}^3 = 115.39\text{m}^3$ GAIN

NET FLOOD STORAGE GAIN = 115.39m^3




FLOOD STORAGE VOLUME GAIN



FLOOD STORAGE VOLUME LOSS

ISSUE DATE	REVISION

TITLE FLOOD STORAGE VOLUME CALCULATION PLAN 71 WIMBLEDON AVENUE, NORTH NARRABEEN			
DRAWN TDR	DATE 26 JUNE 2025	CHECKED 	SCALE © A2 1:100
ENGINEER R B		:BE Civil (Hons) MIE Aust:	



DRAWING NO
FLOOD-1