Consulting Engineers

STRUCTURAL - CIVIL - STORMWATER - REMEDIAL

... STRUCTURALLY SOUND

Flood Management Report

52 Burchmore Road, Manly Vale

Issue B

29 September 2021

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Prepared by: Kostas Oikonomou

Flood Management Report

Project no: 210629

Issue: B

Date: 29.09.2021

Client: Morten Scheibye

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Principal review: Michael Wachjo

Council: Northern Beaches Council (Warringah Area)

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Document History

Revision	Engineer	Peer Review	Principal Review	Description	Date
A	K. Oikonomou	M.Wachjo	R. Wray	Director review	16.07.2021
B	S.Ruskin	M.Wachjo	R.Wray	Amendments to Architectural Plans	29.09.2021

Contents

1. Introduction 4

1.1 Aim 4

1.2 Description of Development 5

1.3 Site Conditions 5

1.4 Flood Behaviour 5

2. Flood Analysis 6

2.1 Site Flooding Extent 6

3. Assessment of Impacts 7

3.1 Development Matrix 7

4. Recommendations 8

4.1 Flood Planning Level 8

4.2 Flood Storage 8

4.3 Building Components and Structural Soundness 9

4.4 Emergency Flood Response 9

4.5 Pool ans Pool Fencing 10

5. Conclusion 10

APPENDIX A 11

APPENDIX B 38

APPENDIX C 56

1. Introduction

At the request of Morter Scheibye, Northern Beaches Consulting Engineers have undertaken a hydrologic and hydraulic investigation at 52 Burchmore Road in Manly Vale to determine the effect of the proposed alterations and additions on the existing floodplain.

For the undertaking of this report, Northern Beaches Consulting Engineers (NBCE) has analysed the general drainage patterns of the catchment and has considered the effects of mainstream flooding as determined in the Manly Lagoon Flood Study (2013) with respect to the proposed development. This report has been prepared in accordance with:

- *Australian Rainfall and Runoff 1997*
- *Northern Beaches Council (Warringah Area)*
- *Warringah Local Environmental Plan 2011 (LEP)*
- *Warringah Development Control Plan (DCP) – Section E11*
- *NSW Government Floodplain Management Manual (2005)*
- *Council supplied flood information and advise*

1.1 Aim

This study explores the risk of mainstream flooding envisaged to occur at the subject site during the 1% AEP storm event. The development under consideration is located at 52 Burchmore Road, Manly and is situated close proximity to Burnt Bridge Creek which is predicted to experience mainstream flooding during heavy rainfall events. The anticipated flood behaviour within the contributing catchment for the 1% Annual Exceedance Probability (AEP) has been assessed in relation to the proposed alterations and additions at the subject site.

1.2 Description of Development

The proposed alterations and additions at the residential property at 52 Burchmore Road consist of alterations to the existing dwelling, a first floor extension, an addition of an inground pool at the rear including a deck and a levelled garden (refer Appendix A).

1.3 Site Conditions

The subject site at 52 Burchmore Road in Manly Vale is approximately 736m^2 and located within the Northern Beaches Council (Warringah Area) LGA. The property is located adjacent to Burnt Bridge Creek which is situated within Manly Golf Course. The subject site is relatively steep and sloping to the rear towards Burnt Bridge Creek.

Figure 1 - Site Location. Source: Six Maps (NSW)

1.4 Flood Behaviour

The flood behaviour for the subject site is predominately a flood storage area adjacent to mainstream flooding. This occurs during large storm events when the capacity of Burnt Bridge Creek is exceeded. Refer Appendix B for Council supplied flood information indicating the predicted flooding extents at the subject site.

2. Flood Analysis

2.1 Site Flooding Extent

The site flooding extent has been determine using Council's available flood information. All relevant flood information is shown below:

Predicted 1 in 100-year flood level:	3.18m AHD
Highest Flood Planning Level (FPL):	3.68m AHD
Probable Maximum Flood (PMF) level:	5.66m AHD
Flood Risk Precinct:	Medium
Mapping of relevant extents:	Refer Appendix B
Flood characteristics (subject site):	
* Maximum 1% AEP Flood Depth	0.94m above surface level
* Degree of Inundation	58%
Existing Basement Subfloor Level:	4.28m AHD
Proposed Basement Floor Level:	4.28m AHD
Existing Ground Floor Level:	10.43m AHD
Existing First Floor Level:	13.67m AHD
Proposed First Floor Level:	13.67m AHD

3. Assessment of Impacts

3.1 Development Matrix

The subject site is classified under the residential category in figure 2 below.

		Medium 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

Figure 2 - Development Matrix. Source: Northern Beaches (Warringah) Council Website Information

Table 1 - Assessment of Impacts Table

		Compliance	
	Not Applicable	Yes	No
A Flood effects caused by the development		x*	
B Drainage Infrastructure & Creek Works	x		
C Building Components & Structural		x*	
D Storage of Goods		x*	
E Flood Emergency Response		x*	
F Floor Levels		x*	
G Car Parking	x		
H Fencing		x*	
I Pools		x*	

*Note – Compliance achievable should the recommendations outline in this report be adopted

4. Recommendations

4.1 Flood Planning Level

The architectural plans prepared Action Plans show the proposed basement floor level (RL 4.83m AHD) to match the pre-exiting floor level (refer Appendix A). The proposed basement floor level is located above the FPL and outside the 1% AEP flood extent.

4.2 Flood Storage

The contributing flood blockage area for the proposed development aims to generally match the existing flood blockage area to ensure that no net increase occurs within the site. To ensure that there is no increase to the flood blockage area for the site, the rear area located within the 1% AEP flood extent must be lowered to compensate to any flood storage lose as result of the pool and levelled garden. We note that the majority of the pool, including the pool coping and levelled garden must match the average Natural Ground Level (NGL) RL 3.72m AHD. Refer Appendix C for flood blockage areas and compensating calculations. Flood blockage calculations are shown below:

Existing Flood Blockage Area:	$0m^2$
Proposed Flood Blockage Area:	$6.12m^2$
Compensating Storage Proposed:	$9.68m^2$
Net Increase in Flood Storage:	**$3.56m^2$**

Note: NBCE has considered the 1% AEP Flood Level (3.18m AHD) and survey levels to determine the 1% AEP flood extent within the property (Refer Appendix C).

4.3 Building Components and Structural Soundness

All structural elements up to the PMF must be designed and constructed to withstand hydrostatic pressures and impacts from debris due to flooding. Furthermore, the switchboard and main circuit unit must be fitted above the FPL. All new electrical equipment, power points, wiring, fuel lines, sewerage systems or any other service pipes and connections must be waterproofed up to the FPL and conduits must be laid such that they are free draining. Any hazardous or potentially polluting material must be stored above the FPL to ensure adequate protection from floodwaters. All proposed fencing is to be installed with openings to ensure adequate passage of floodwaters in accordance with Warringah Council's *Flood Prone Land Design Standard*.

4.4 Emergency Flood Response

The proposed development must provide an onsite refuge above the Probable Maximum Flood (PMF) level (5.66m AHD) which is to have appropriate access installed to enable access points from all areas within the development. As such, the development must meet the following *shelter-in-place* requirements:

- The existing ground floor level (RL 10.43m AHD) for the development is located above the PMF flood level.
- The existing ground floor area for the development, which does not include balconies or hallways, must cater for the proposed number of occupants ($2m^2$ per person)
- The designated area must ensure adequate access points are provided such that the requirements of the BCA and Council are satisfied

The shelter-in-place refuge must provide:

  - Sufficient clean water for all occupants
  - Portable radio with spare batteries
  - Torch with spare batteries
  - First aid kit

4.4 Pool and Pool Fencing

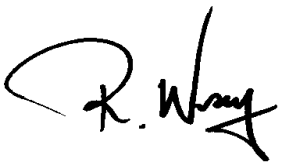
The proposed in-ground pool is located within the 1% AEP extent. The pool coping must be flush with the NGL, since the proposed location of the pool is falling away towards the rear

boundary, the average NGL (RL 3.72m AHD) must be adopted for the pool coping. The pool fence must be of an open design with minimum 50% of the fence to be open and minimum openings of 75mm x 75mm.

5. Conclusion

In accordance with accepted engineering practice, NBCE have undertaken a flood study at the above-mentioned site. No anticipated increased flooding is envisaged to occur at the subject site due to the proposed alterations and additions should the recommendations of this report be carried out. The flood information provided by Northern Beaches (Warringah) Council has been used for this assessment. The recommendations of this report should be adopted for the development to meet the requirements of *Warringah Development Control Plan (DCP) – Section E11.* Please contact the author if further clarification is required.

NORTHERN BEACHES CONSULTING ENGINEERS P/L



Rick Wray

BE(Civil) MIEAust CPEng NER RPEQ

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APPENDIX A

Proposed Development Plans & Survey Plan

ACTION PLANS

m: 0426 957 518
e: operations@actionplans.com.au
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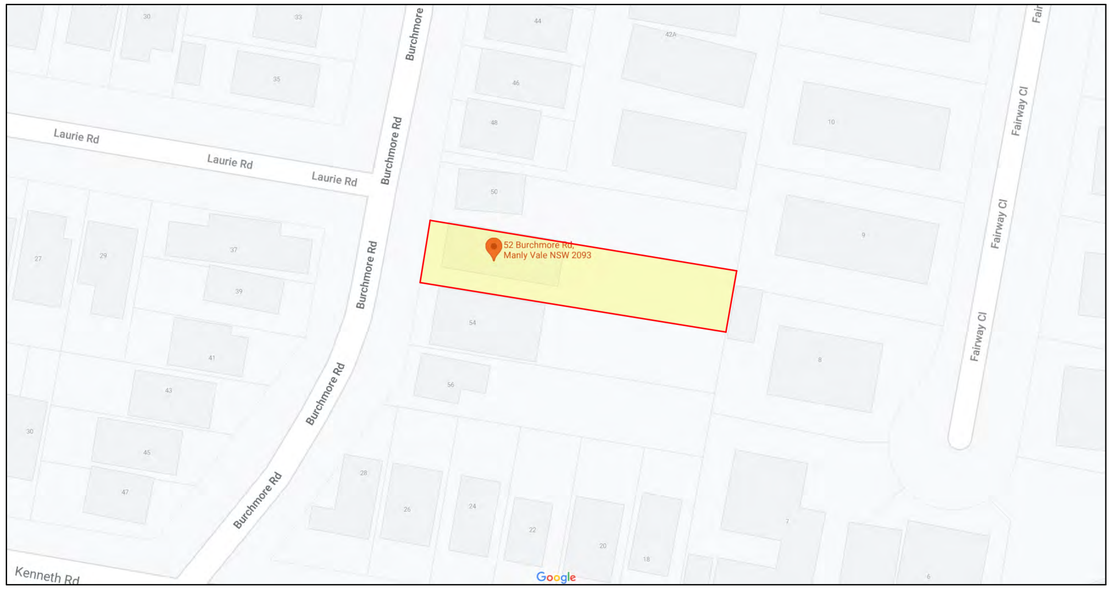
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DEVELOPMENT APPLICATION

SHEET NUMBER	SHEET NAME	DATE PUBLISHED
DA00	COVER	21/09/2021
DA01	NOTATION	21/09/2021
DA02	SAFETY NOTES	21/09/2021
DA03	SITE ANALYSIS	21/09/2021
DA04	SITE / ROOF / SEDIMENT EROSION / WASTE MANAGEMENT / STORMWATER CONCEPT PLAN	21/09/2021
DA05	EXISTING BASEMENT FLOOR PLAN	21/09/2021
DA06	EXISTING GRANNY FLAT FLOOR PLAN	21/09/2021
DA07	EXISTING GROUND FLOOR PLAN	21/09/2021
DA08	EXISTING FIRST FLOOR PLAN	21/09/2021
DA09	PROPOSED BASEMENT FLOOR PLAN	21/09/2021
DA10	PROPOSED GRANNY FLAT FLOOR PLAN	21/09/2021
DA11	PROPOSED GROUND FLOOR PLAN	21/09/2021
DA12	PROPOSED FIRST FLOOR PLAN	21/09/2021
DA13	NORTH ELEVATION	21/09/2021
DA14	EAST ELEVATION	21/09/2021
DA15	SOUTH / WEST ELEVATION	21/09/2021
DA16	PROPOSED CROSS SECTION	21/09/2021
DA17	PROPOSED LONG SECTION	21/09/2021
DA18	PROPOSED POOL PLAN & LONG SECTION	21/09/2021
DA19	AREA CALCULATIONS / SAMPLE BOARD	21/09/2021
DA20	WINTER SOLSTICE 9 AM	21/09/2021
DA21	WINTER SOLSTICE 12 PM	21/09/2021
DA22	WINTER SOLSTICE 3 PM	21/09/2021
DA23	BASIX COMMITMENTS	21/09/2021



ITEM DETAILS	DEVELOPMENT APPLICATION			
ADDRESS	**52 BURCHMORE ROAD, MANLY VALE NSW 2093**			
LOT & DP/SP	**LOT 26 DP 6238**			
COUNCIL	**NORTHERN BEACHS COUNCIL (WARRINGAH)**			
SITE AREA	735.7m²			
FRONTAGE	12.190m			
CONTROLS	**PERMISSIBLE / REQUIRED**	**EXISTING**	**PROPOSED**	**COMPLIANCE**
	m / m² / %	m / m² / %	m / m² / %	
LEP				
LAND ZONING	R2 – LOW DENSITY RESIDENTIAL	R2	UNCHANGED	**YES**
MINIMUM LOT SIZE	600m²	735.7m²	UNCHANGED	**YES**
MAXIMUM BUILDING HEIGHT	8.5m	9.223m	UNCHANGED	**YES**
DCP				
WALL HEIGHT	7.2m	7.861m	UNCHANGED	**YES**
SIDE BOUNDARY SETBACKS	0.9m	N: 0.956m S: 1.317m	N: 0m S: UNCHANGED	**NO**
FRONT BOUNDARY SETBACK	6.5m	3.675m	UNCHANGED	**NO**
REAR BOUNDARY SETBACK	6.0m	32.295m	UNCHANGED	**YES**
LANDSCAPE OPEN SPACE	40% (294.28m²)	51.60% (379.68m²)	41.1% (302.38m²)	**YES**
PRIVATE OPEN SPACE	60m²	60m²	147.03m²	**YES**

NCC & AS COMPLIANCES SPECIFICATIONS

- EARTHWORKS - PART 3.1.1 OF NCC
- EARTH RETAINING STRUCTURES - PART 3.1.2 OF NCC
- DRAINAGE - PART 3.1.3 OF NCC
- TERMITE-RISK MANAGEMENT - PART 3.1.4 OF NCC
- FOOTINGS & SLAB - PART 3.2 OF NCC INCLUDING AS 2870-2011
- MASONRY - PART 3.3 OF NCC INCLUDING AS 3700:2018
- FRAMING - PART 3.4 OF NCC
- SUB FLOOR VENTILATION - PART 3.4.1 OF NCC
- ROOF CLADDING AND WALL-CLADDING - PART 3.5 OF NCC
- GLAZING - PART 3.6 OF NCC INCLUDING AS 1288
- FIRE SAFETY - PART 3.7 OF NCC
- FIRE SEPARATION OF EXTERNAL WALLS - PART 3.7.2 OF NCC
- FIRE PROTECTION OF SEPARATING WALLS AND FLOORS- PART 3.7.3 OF NCC
- SMOKE ALARMS - PART 3.7.5 OF NCC
- WET AREAS AND EXTERNAL WATERPROOFING - PART 3.8.1 OF NCC
- ROOM HEIGHTS - PART 3.8.2 OF NCC
- FACILITIES - PART 3.8.3 OF NCC
- LIGHT - PART 3.8.4 OF NCC
- VENTILATION - PART 3.8.5 OF NCC
- SOUND INSULATION - PART 3.8.6 OF NCC
- STAIRWAY AND RAMP CONSTRUCTION - PART 3.9.1 OF NCC
- BARRIERS AND HANDRAILS - PART 3.9.2 OF NCC
- SWIMMING POOLS - PART 3.10.1 OF NCC
- CONSTRUCTION IN BUSHFIRE PRONE AREAS - PART 3.10.5 OF NCC
- FENCING & OTHER PROVISIONS - REGS & AS1926.1 2012
- DEMOLITION WORKS - AS2601-2001 THE DEMOLITION OF STRUCTURES.
- WATERPROOFING OF WET AREAS TO COMPLY WITH AS 3740-2010
- ALL PLUMBING & DRAINAGE WORK TO COMPLY WITH AS 3500:2018
- ALL PLASTERBOARD WORK TO COMPLY WITH AS 2588:2018
- ALL STRUCTURAL STEEL WORK TO COMPLY WITH AS 4100-1992 & AS 1554
- 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 & 1288
- ALL TIMBER RETAINING WALLS ARE TO COMPLY WITH AS 1720.1-2010, AS 1720.2-2006, AS 1720.4-2006, AS 1170.1-2002 & AS 1170.4-2007
- ALL RETAINING WALLS ARE TO COMPLY WITH 3700:2018 & AS 3600:2018
- ALL CONSTRUCTION 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 get written confirmation of material selection by the client prior to ordering
- All construction, control joints, and expansion joints in the wall, floors, 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 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 only figured dimensions. All dimensions are in millimetres.
- The Builder is to ensure all construction, levels and other items comply with the conditions ofthe Building Approval.
- Any detailing in addition to what 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 the Standards Association of Australia, National construction Code of Australia 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 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 - "Timber Framing Code". Level & 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 &/or seepage water does not collect or remain under floor area.
- Sustainable timbers and not rainforest or old growth timber will be use. Recycled timber or second hand timbers are to be sourced and used in preference to plantation timbers, if available and suitable.
- All glazing installed is to comply with AS 1288, 2047 and in accordance with manufacturers recommendations.
- All wall and ceiling linings to be plasterboard and villaboard or equal in wet areas. 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 specification. All bathrooms and wet areas to be waterproofed with a flexible membrane to manufacturer's specification and to AS 3740 and Part 3.8.1 of the Building Code of Australia Housing Provisions.
- 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 and part 3.1.2 Drainage of the Building Code of Australia Housing Provisions.
- Smoke detector alarms to be installed in accordance with AS3786 and the Building Code of Australia/ NCC clause 3.7.2.2.
- If a member which provides structural support to the work is subject to attack by Termites protection measures are to comply with AS3660 and be installed to manufacturer's specification.
- Stairs and Balustrades to comply with part 3.9.1 & 3.9.2 of the Building Code of Australia Housing Provisions. 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 in 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 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 at the Builder's expense.
- Variations will not be permitted without prior written approval by the owners.
- The Builder shall provide sediment and siltration 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 ofinterruptions. 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
- The owner will directly pay the fees associated with the following:
building approval from council, footpath and kerb deposits with the local council, insurance fee to building services corporation, long service leave service levy fee and approval fee 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 cause will be deducted from the 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 stated in the contract conditions.
- All work to be carried out in a tradesmen like manner and in accordance with the standards codes and regulations of the standards association of Australia, building code of Australia and any statutory authority having jurisdiction over the work.
- 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.
- All work and materials to comply with the current Australian standards at the time of commencement were applicable.
- These drawings shall be read in conjunction with all structural and other consultants 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 should not be obtained by scaling the drawings. use only 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.
- 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 plumbing and drainage work to be installed and completed by a licenced tradesman and in accordance with the statutory body having authority over the works. connect all waste to Sydney water sewer line
- All new downpipes are to be connected to the existing storm water system.
- All power and stormwater outlet locations shall be determined onsite by the owner.
- Smoke detector alarm to be installed in accordance with as3786 and the building code of Australia.
- Electrical work to be in accordance with SAA wiring rules and be done by a licenced tradesman
- Any detailing in addition to what 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 supplied by the engineer.
- All timber sizes and concrete details to be confirmed by the builder prior to commencement of any work.
- All structural work is to be in accordance with the structural details prepared by a structural engineer(i.e.) piers, footings, concrete slabs, retaining walls, steelwork, formwork, underpinning, additional structural loads, timber framing, wind bracing and associated connections. builder to obtain prior to finalising tender.
- Any work indicated on the plans but not specified, and any item not shown on the plan which is obviously necessary as a part of construction and/or finish is to be considered as shown and specified, and is to be done as part of the contract. variations will not be permitted without the written consent of the owner.
- The builder shall provide sediment and siltration control measures as required by council and maintain them through the duration of the works.
- A legible copy of the plans bearing approval stamps must be maintained on the job at all times. hours of construction will be restricted to the times as required by the building approval.
- The builder is to arrange for all inspections required by the authorities and 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 with existing services and equipment to be attended to by the appropriately skilled tradesmen.
- The builder shall restore, reinstate or replace any damage caused to existing structures or landscaping by construction work or workmen. provide protection to existing trees to remain as required by approval conditions.
- All brickwork is to be selected by owner and is to comply with as1640
- All masonry to comply with as3700
- All metalwork and flashing items necessary to satisfactory complete work shall be provided.
- All gutters, downpipes to be colorbond.
- All timber construction to be in accordance with the Australian standard 1684 “timber framing code”
- All glazing installed to comply with as1288, 2047 and in accordance with manufacturers recommendation
- All wall and ceiling linings to be plasterboard or cement render as selected and villa board in wet areas, to comply with the relevant Australian standards or installed in accordance with manufacturers specification.
- All bathrooms and wet areas to be adequately waterproofed to manufacturers speciation and as3740 and part 3.8.1 of the building code of Australia housing provisions
- Stairs and balustrades to comply with part 3.9.1 & 3.9.2 of the building code of Australia housing provision.
- Termite protection measures to comply with as 3660 and be installed to manufacturers specification.
- Any detailing additional to that supplied, shall be resolved between the owner and the builder to the owners approval. except for any structural details or design which is to be supplied by the structural engineer.

NCC & AS COMPLIANCE SPECIFICATIONS

- Earthworks - part 3.1.1 of NCC
- Earth retaining structures - part 3.1.2 of NCC
- Drainage - part 3.1.3 of NCC
- Termite-risk management - part 3.1.4 of NCC
- Footings & slab - part 3.2 of NCC including as 2870-2011
- Masonry - part 3.3 of ncc including as 3700:2018
- Framing - part 3.4 of NCC
- Sub floor ventilation - part 3.4.1 of NCC
- Roof cladding and wall-cladding - part 3.5 of NCC
- Glazing - part 3.6 of NCC including as 1288
- Fire safety - part 3.7 of NCC
- Fire separation of external walls - part 3.7.2 of NCC
- Fire protection of separating walls and floors- part 3.7.3 of NCC
- Smoke alarms - part 3.7.5 of NCC
- Wet areas and external waterproofing - part 3.8.1 of NCC
- Room heights - part 3.8.2 of NCC
- Facilities - part 3.8.3 of NCC
- Light - part 3.8.4 of NCC
- Ventilation - part 3.8.5 of NCC
- Sound insulation - part 3.8.6 of NCC
- Stairway and ramp construction - part 3.9.1 of NCC
- Barriers and handrails - part 3.9.2 of NCC
- Swimming pools - part 3.10.1 of NCC
- Construction in bushfire prone areas - part 3.10.5 of NCC
- Fencing & other provisions - regs & AS 1926.1 2012
- Demolition works - AS 2601-2001 the demolition of structures.
- Waterproofing of wet areas to comply with AS 3740-2010
- All plumbing & drainage work to comply with AS 3500:2018
- All plasterboard work to comply with AS 2588:2018
- All structural steel work to comply with AS 4100-1992 & AS 1554
- 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 & 1288
- All timber retaining walls are to comply with AS 1720.1-2010,
  AS 1720.2-2006, AS 1720.4-2006, AS 1170.1-2002 & AS 1170.4-2007
- All retaining walls are to comply with 3700:2018 & AS 3600:2018
- All construction 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 token to ovoid 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 objecls. 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 ovoid 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 ore identified on the plans but the excel location and extent of services may vary from that indicated. Services should be located using on 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 moss 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 moss 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 con 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 limber 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 lo 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 lo 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.

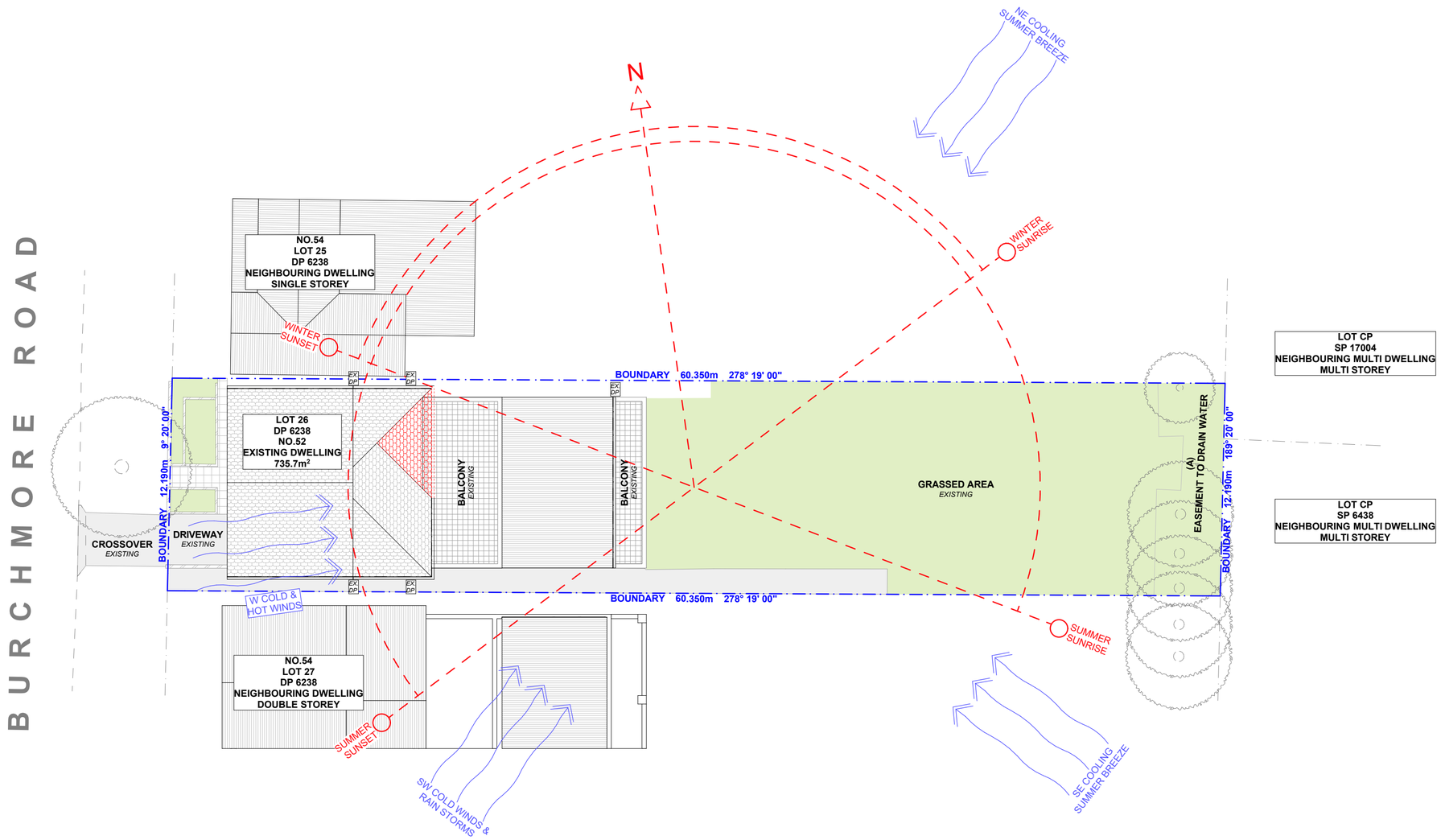
9. OPERATIONAL USE OF BUILDING RESIDENTIAL BUILDINGS

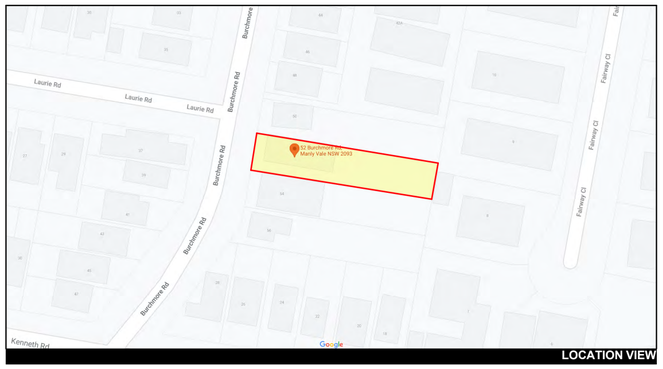
This building has been designed as a residential building. If it, at a later date, it is used or intended to be used as a workplace, the provisions of the Work Health and Safely Act 2011 or subsequent replacement Act should be applied to the new use.

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 dale 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.





1 SITE ANALYSIS PLAN - DEMOLITION 1:200

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

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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED
- LANDSCAPED AREA
- HARD SURFACE
- EXISTING TREE

CLIENT
MORTEN & KYLIE SCHEIBYE

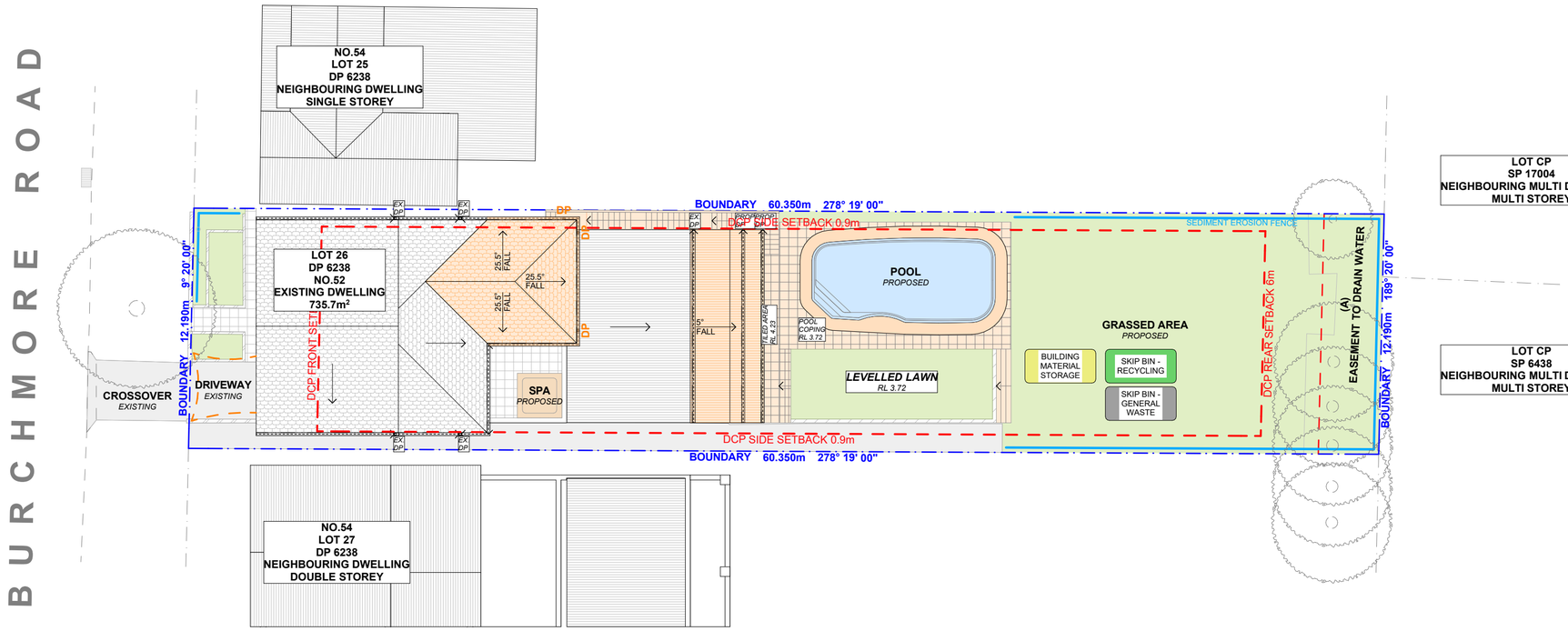
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

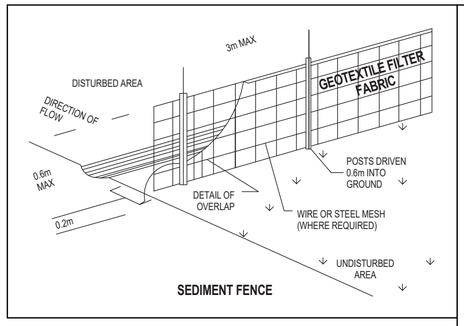
DRAWING NO.
DA03

DATE
Tuesday, 21 September 2021

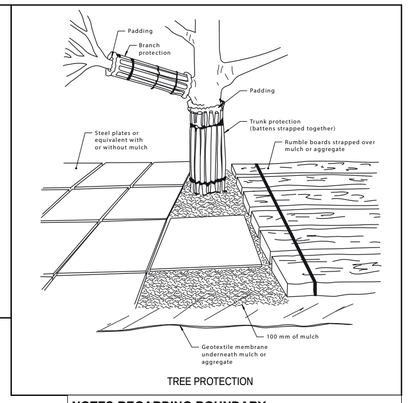
DRAWING NAME
SITE ANALYSIS

SCALE
1:200 @A2





SEDIMENT FENCE



TREE PROTECTION

LOT CP
SP 17004
NEIGHBOURING MULTI DWELLING
MULTI STOREY

LOT CP
SP 6438
NEIGHBOURING MULTI DWELLING
MULTI STOREY

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.

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.

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 SWEPT DAILY.

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

NOTE: ALL PROPOSED STORMWATER TO CONNECT WITH EXISTING

1 SITE/ SEDIMENT/ WASTE MANAGEMENT/ STORMWATER CONCEPT PLAN 1:200

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LEGEND
- EXISTING
- PROPOSED
- DEMOLISHED
- LANDSCAPED AREA
- HARD SURFACE
- EXISTING TREE
- SEDIMENT FENCE
- DP DOWN PIPE

CLIENT
MORTEN & KYLIE SCHEIBYE

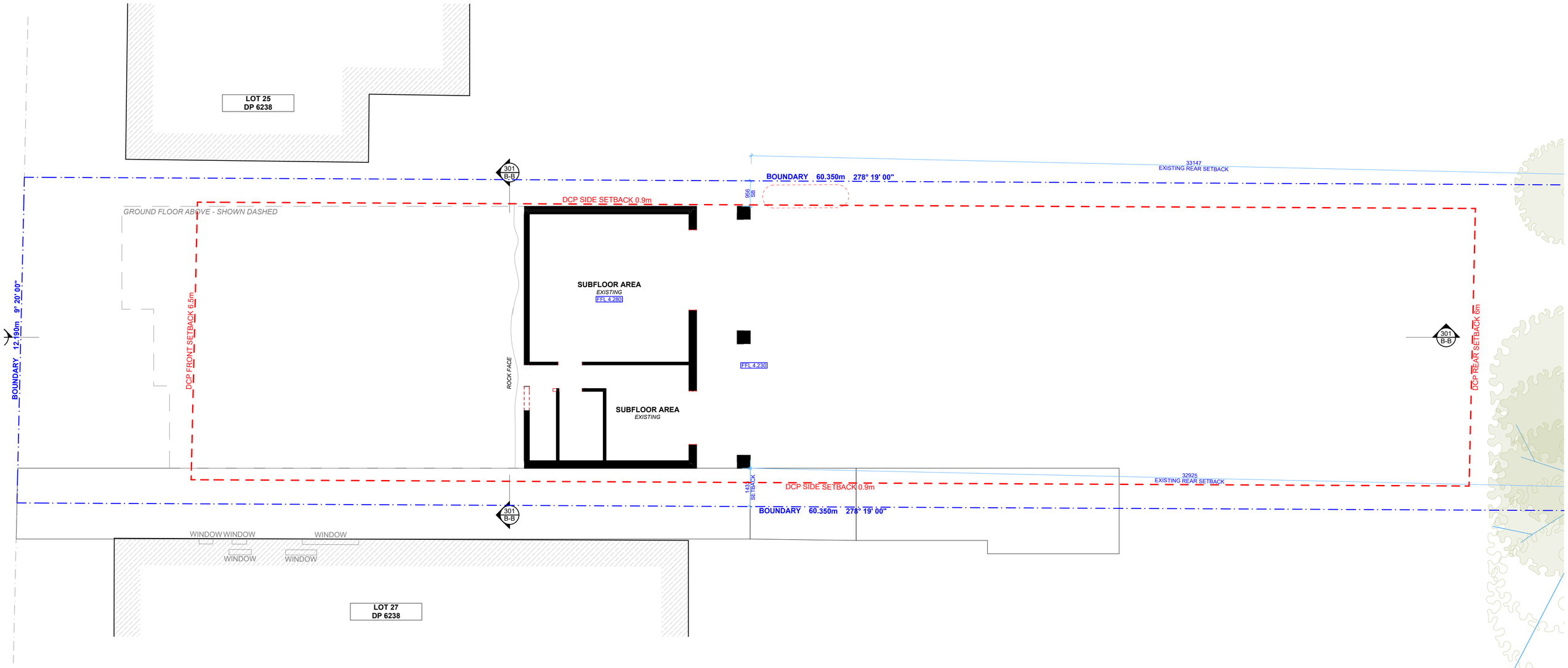
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA04

DATE
Tuesday, 21 September 2021

DRAWING NAME
SITE / ROOF / SEDIMENT EROSION / WASTE MANAGEMENT / STORMWATER CONCEPT PLAN

SCALE
1:200 @A2



1 **EXISTING BASMENT FLOOR PLAN - DEMOLITION** 1:100

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

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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

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MORTEN & KYLIE SCHEIBYE

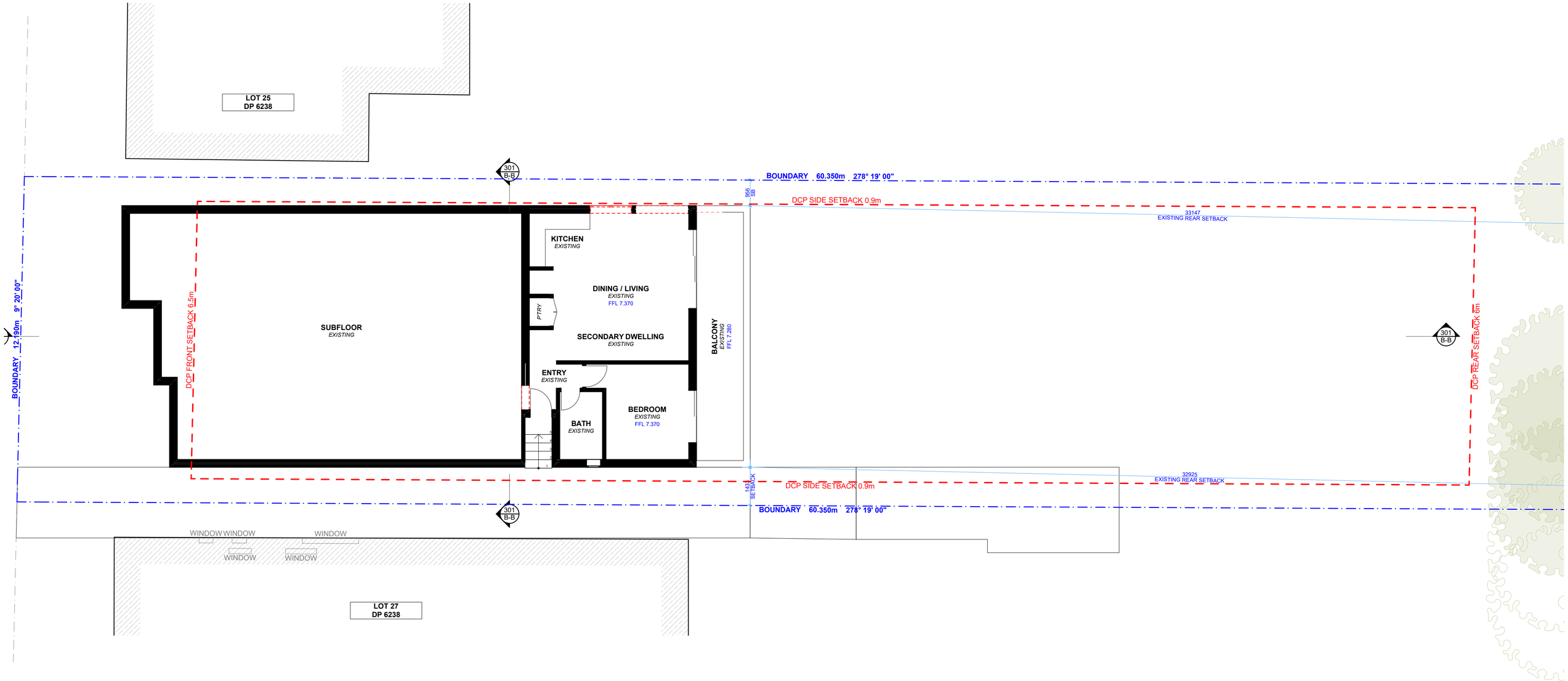
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA05

DATE
Tuesday, 21 September 2021

DRAWING NAME
EXISTING BASEMENT FLOOR PLAN

SCALE
1:100 @A2



1 EXISTING GRANNY FLAT FLOOR PLAN 1:100

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

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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

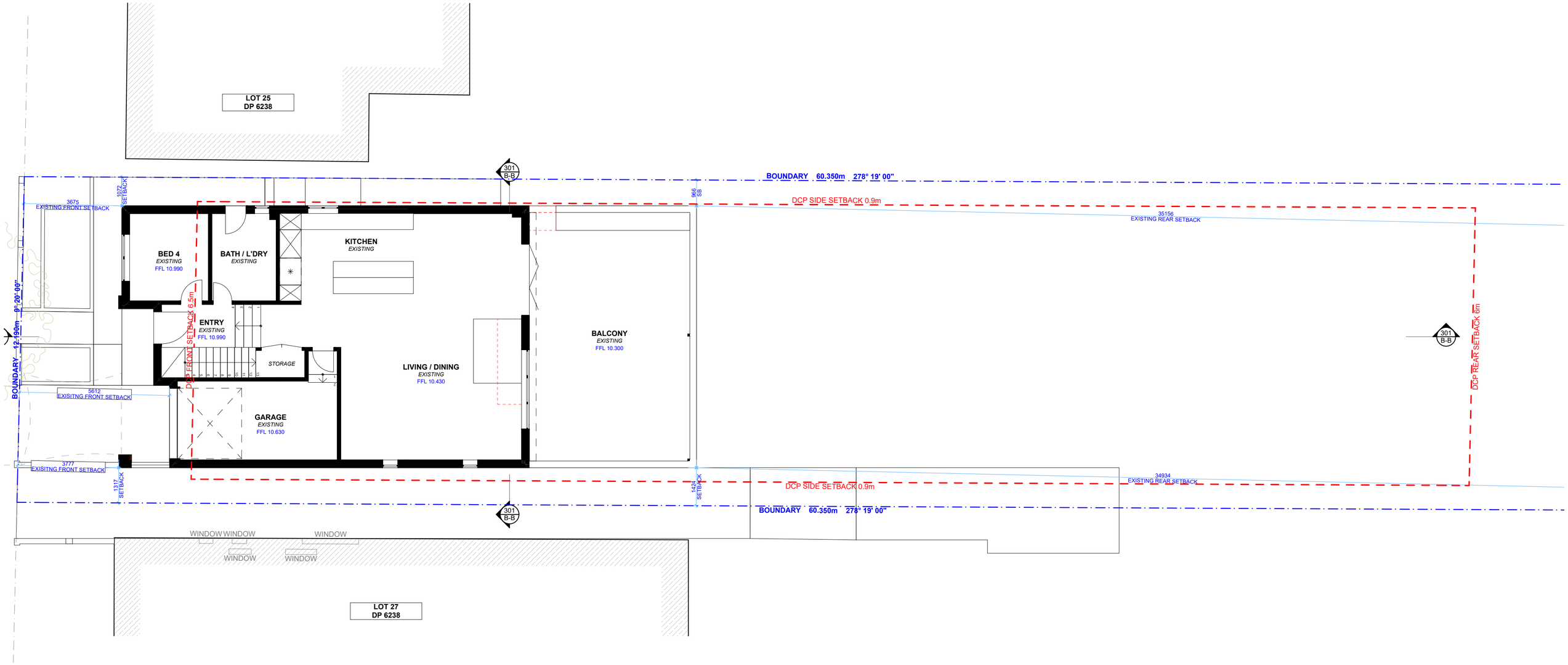
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA06

DATE
Tuesday, 21 September 2021

DRAWING NAME
EXISTING GRANNY FLAT FLOOR PLAN

SCALE
1:100 @A2



1 EXISTING GROUND FLOOR PLAN 1:100

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

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All errors and omissions are to be verified by the Builder/Contractor and referred to the designer prior to the commencement of works.

LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

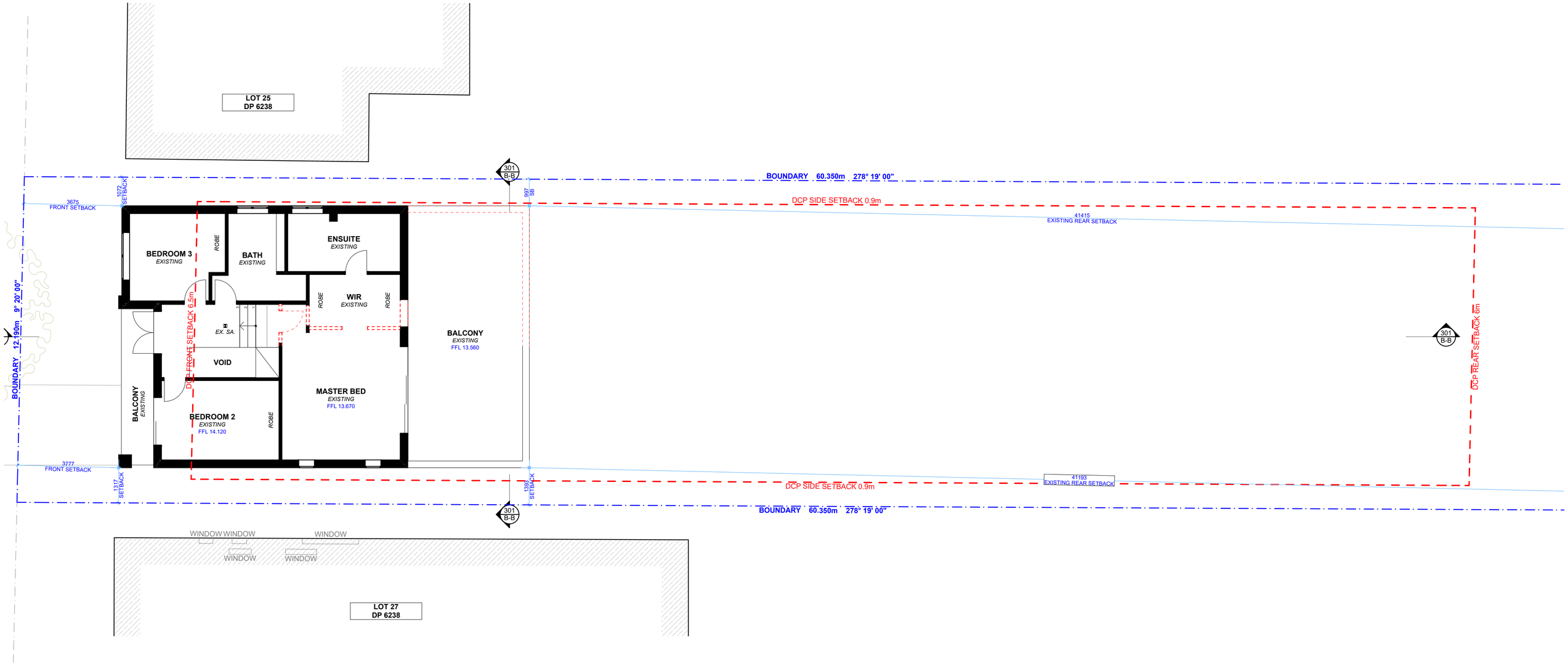
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA07

DATE
Tuesday, 21 September 2021

DRAWING NAME
EXISTING GROUND FLOOR PLAN

SCALE
1:100 @A2



1 **EXISTING FIRST FLOOR PLAN** **1:100**

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

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REV.	DATE	COMMENTS	DRWN
A	05/03/2021	INITIAL DESIGN PLAN	AL
B	21/05/2021	FIRST DESIGN AMENDMENT	AL
C	27/05/2021	SECOND DESIGN AMENDMENT	AL
D	30/06/2021	DA - PRELIMINARY ISSUE	DLR
E	14/09/2021	DA	DLR

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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

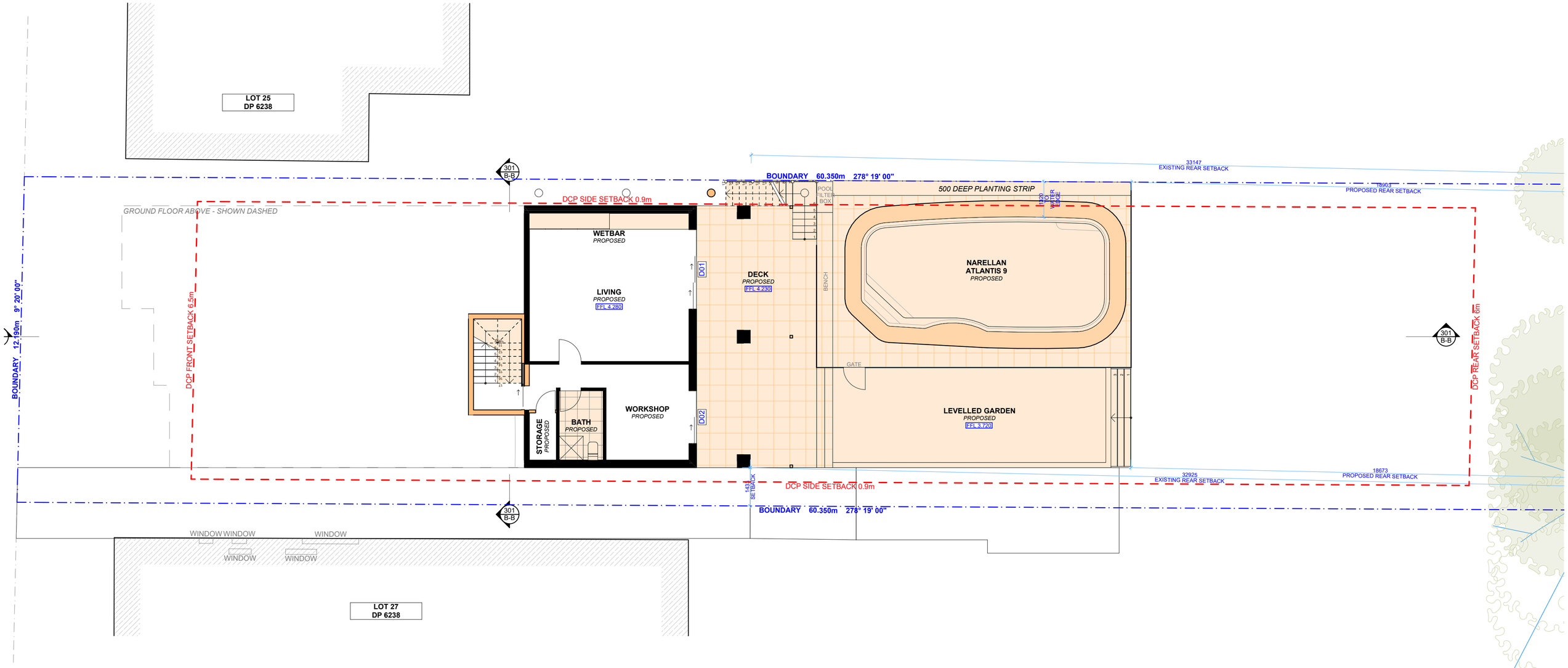
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA08

DATE
Tuesday, 21 September 2021

DRAWING NAME
EXISTING FIRST FLOOR PLAN

SCALE
1:100 @A2



1 **PROPOSED BASMENT FLOOR PLAN** 1:100

ACTION PLANS

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A	05/03/2021	INITIAL DESIGN PLAN	AL
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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

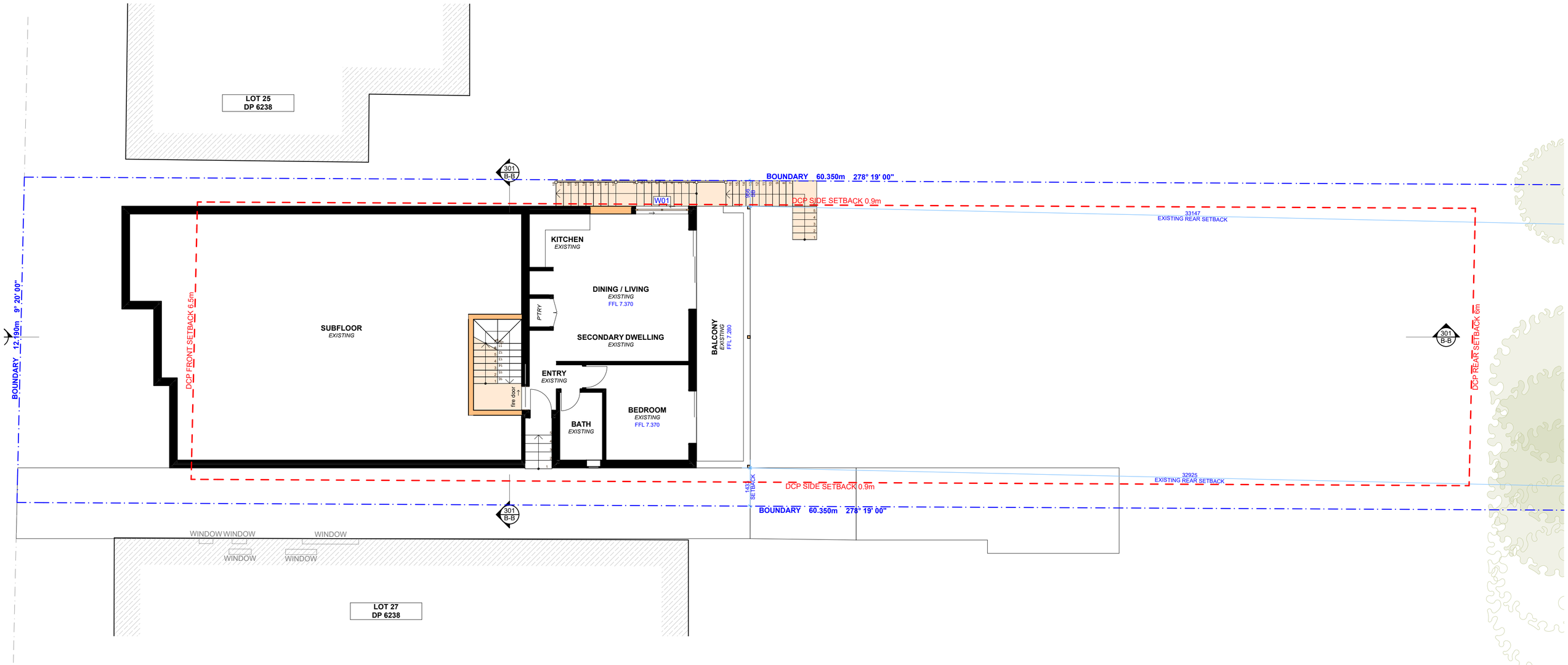
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA09

DATE
Tuesday, 21 September 2021

DRAWING NAME
PROPOSED BASEMENT FLOOR PLAN

SCALE
1:100 @A2



1 PROPOSED GRANNY FLAT FLOOR PLAN 1:100

ACTION PLANS

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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

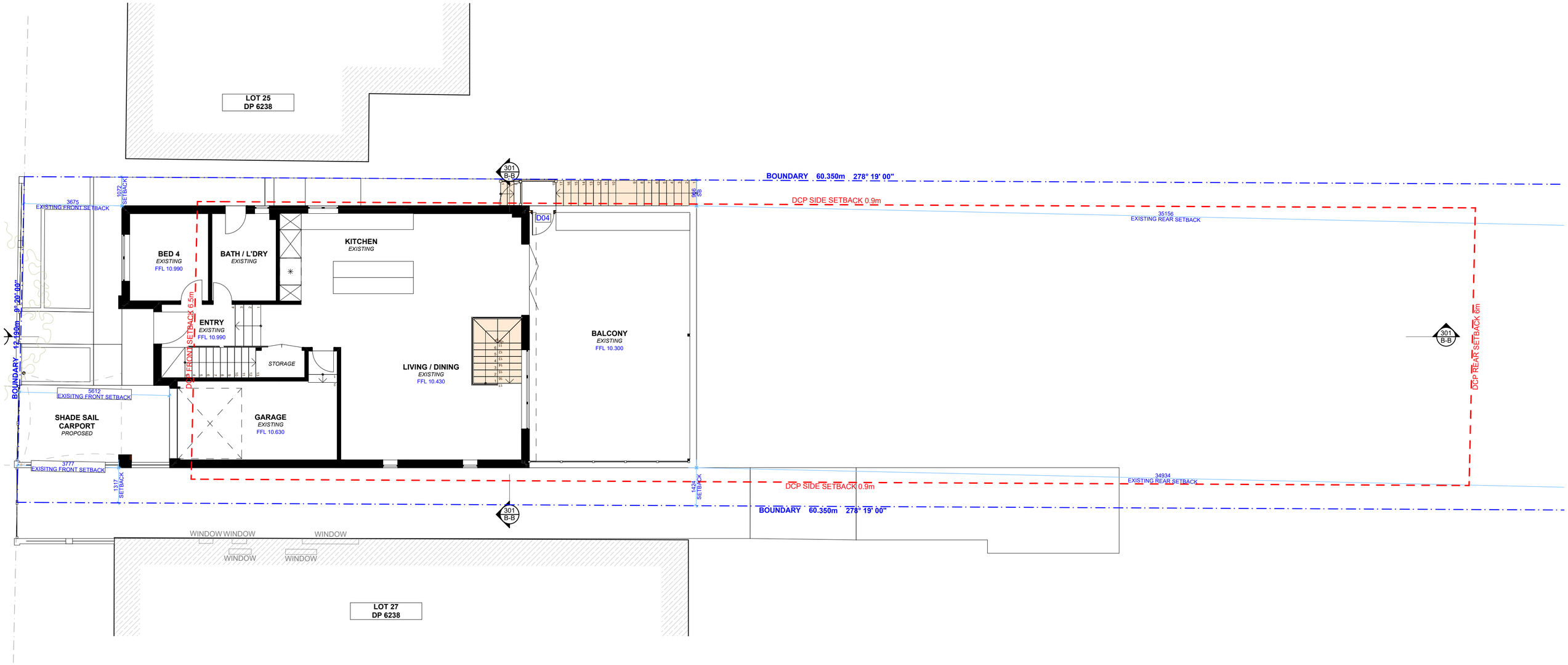
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA10

DATE
Tuesday, 21 September 2021

DRAWING NAME
PROPOSED GRANNY FLAT FLOOR PLAN

SCALE
1:100 @A2



1 PROPOSED GROUND FLOOR PLAN 1:100

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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

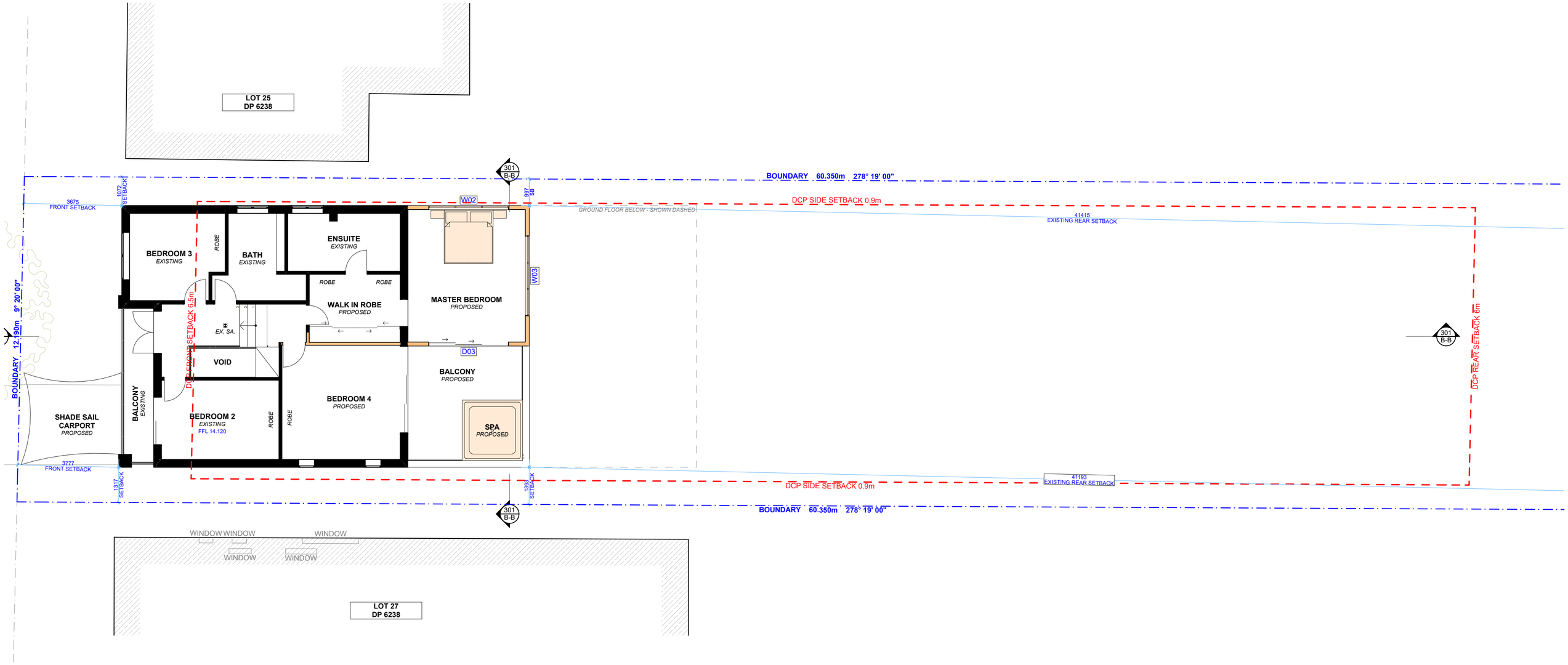
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA11

DATE
Tuesday, 21 September 2021

DRAWING NAME
PROPOSED GROUND FLOOR PLAN

SCALE
1:100 @A2



1 **PROPOSED FIRST FLOOR PLAN** 1:100

ACTION PLANS

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REV.	DATE	COMMENTS	DRWN
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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

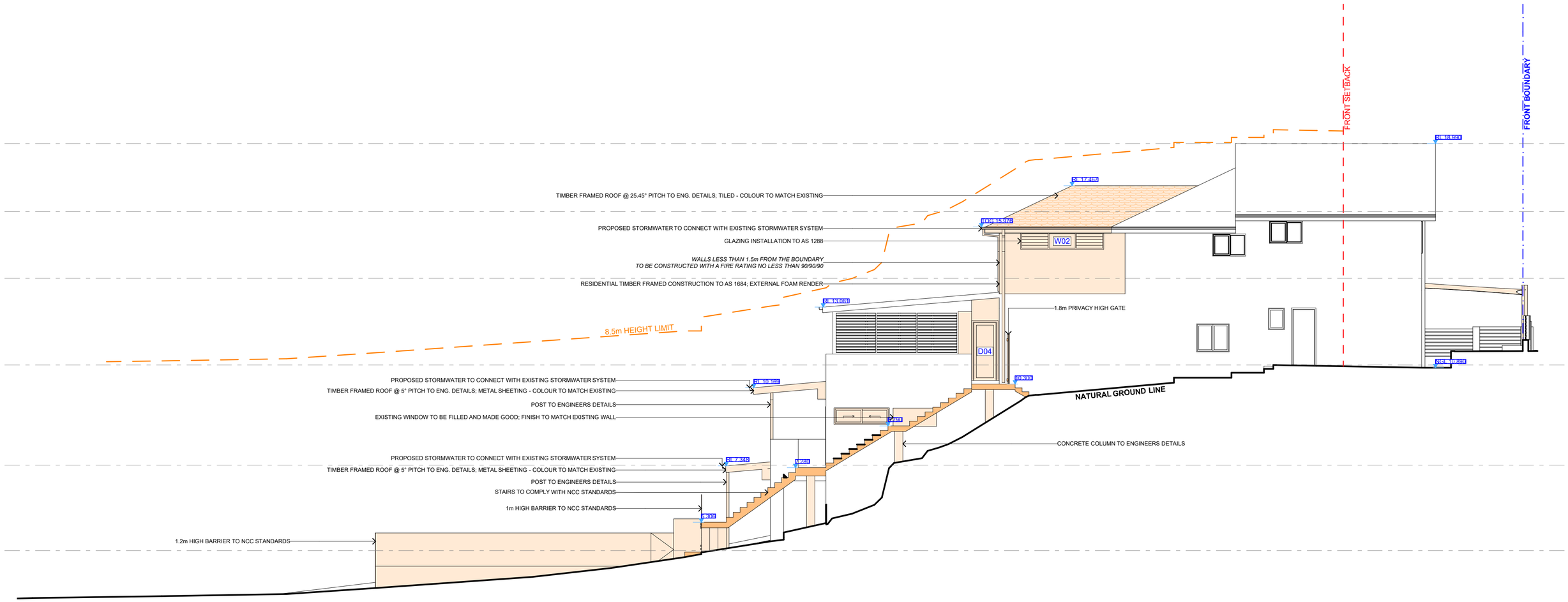
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA12

DATE
Tuesday, 21 September 2021

DRAWING NAME
PROPOSED FIRST FLOOR PLAN

SCALE
1:100 @A2



1 NORTH ELEVATION 1:100

ACTION PLANS

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REV.	DATE	COMMENTS	DRWN
A	05/03/2021	INITIAL DESIGN PLAN	AL
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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

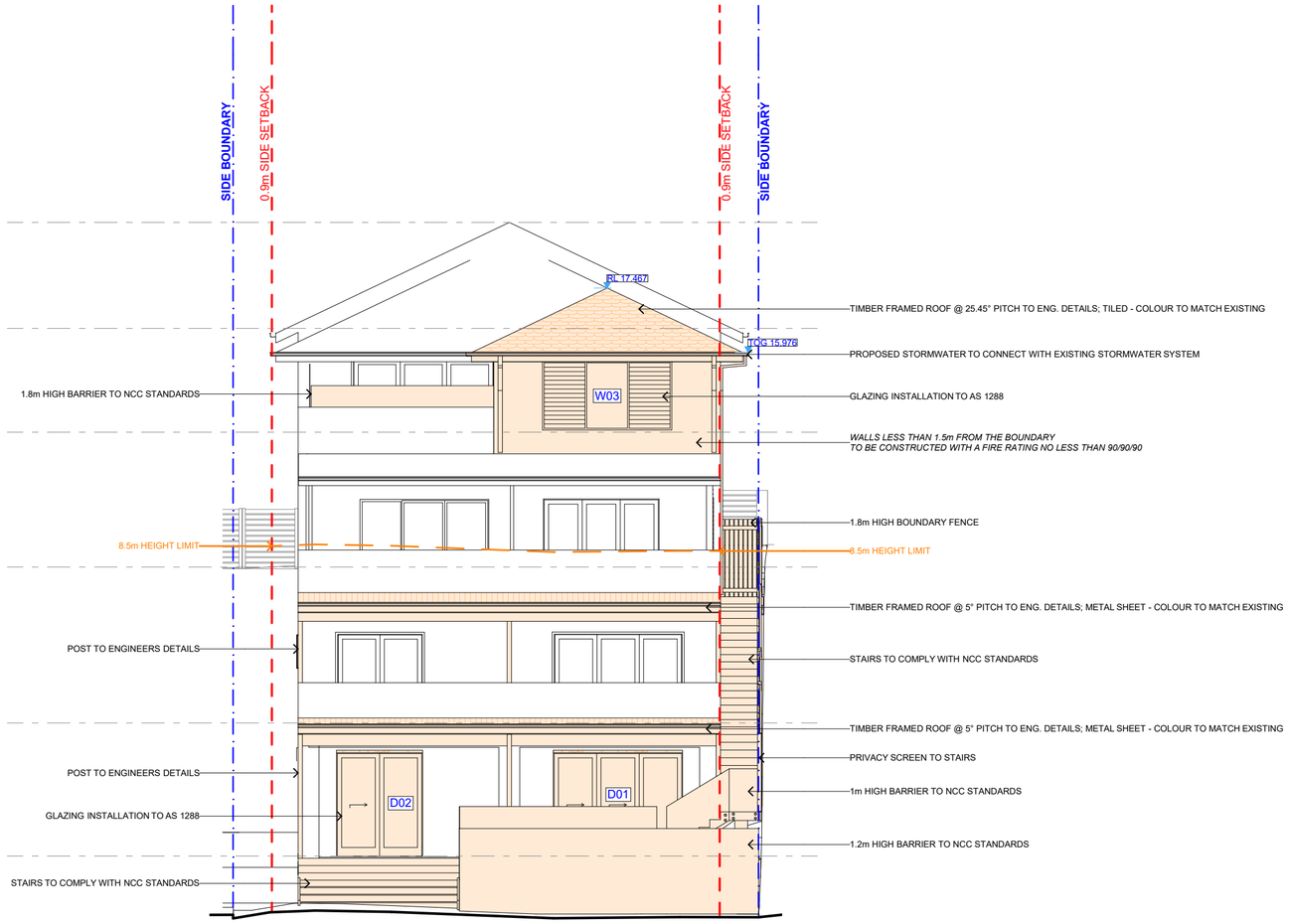
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA13

DATE
Tuesday, 21 September 2021

DRAWING NAME
NORTH ELEVATION

SCALE
1:100 @A2



1 EAST ELEVATION 1:100

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REV.	DATE	COMMENTS	DRWN
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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

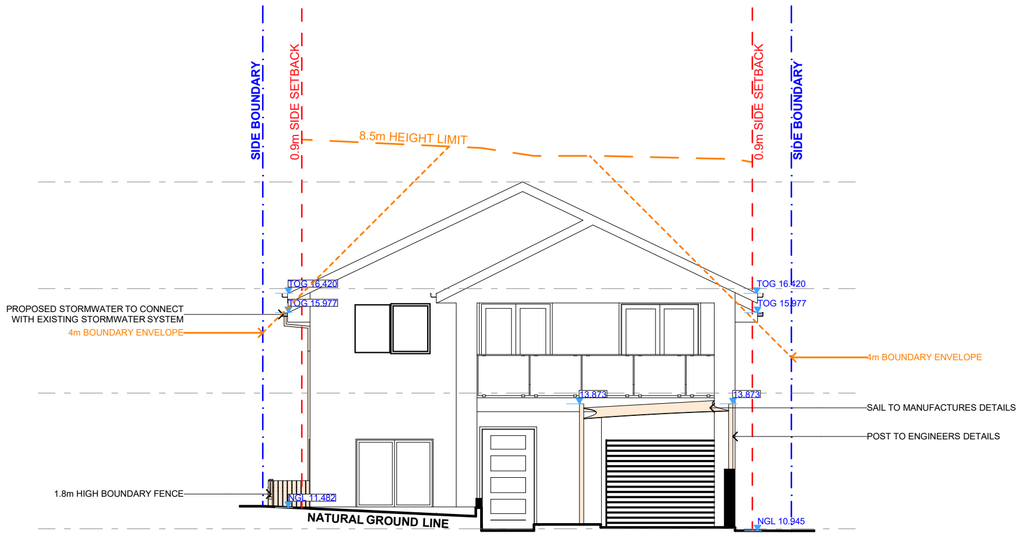
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA14

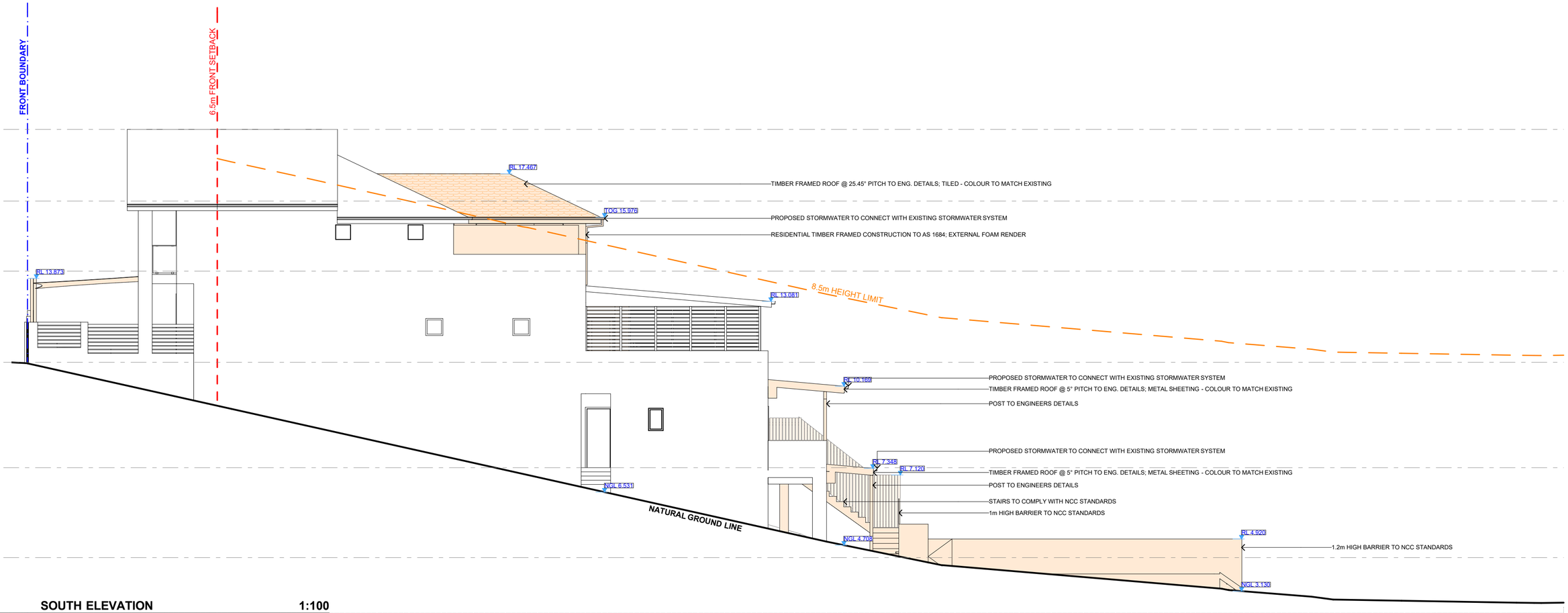
DATE
Tuesday, 21 September 2021

DRAWING NAME
EAST ELEVATION

SCALE
1:100 @A2



2 **WEST ELEVATION - PRIMARY ROAD** **1:100**



1 **SOUTH ELEVATION** **1:100**

ACTION PLANS

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REV.	DATE	COMMENTS	DRWN
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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

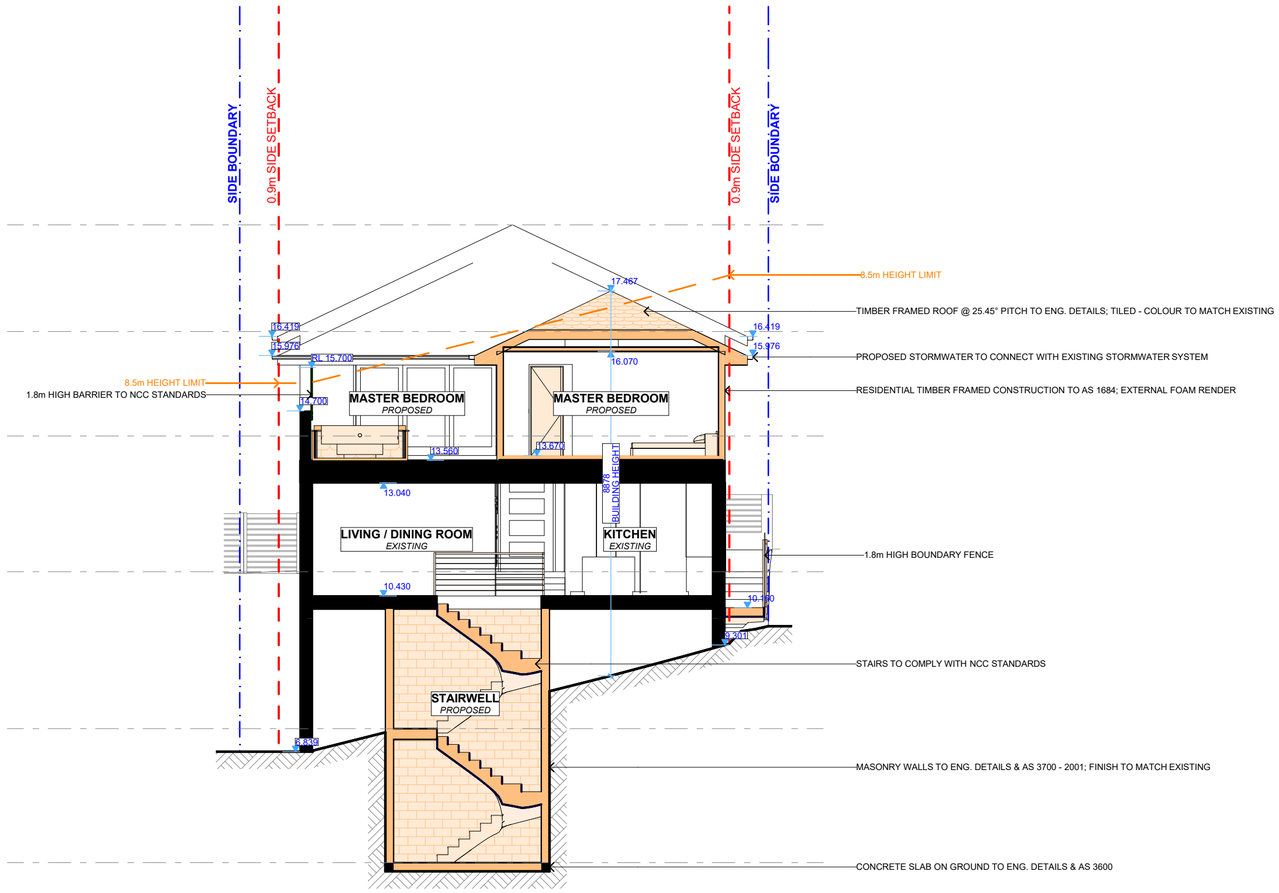
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA15

DATE
Tuesday, 21 September 2021

DRAWING NAME
SOUTH / WEST ELEVATION

SCALE
1:100 @A2



1 **PROPOSED CROSS SECTION** **1:100**

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REV.	DATE	COMMENTS	DRWN
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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

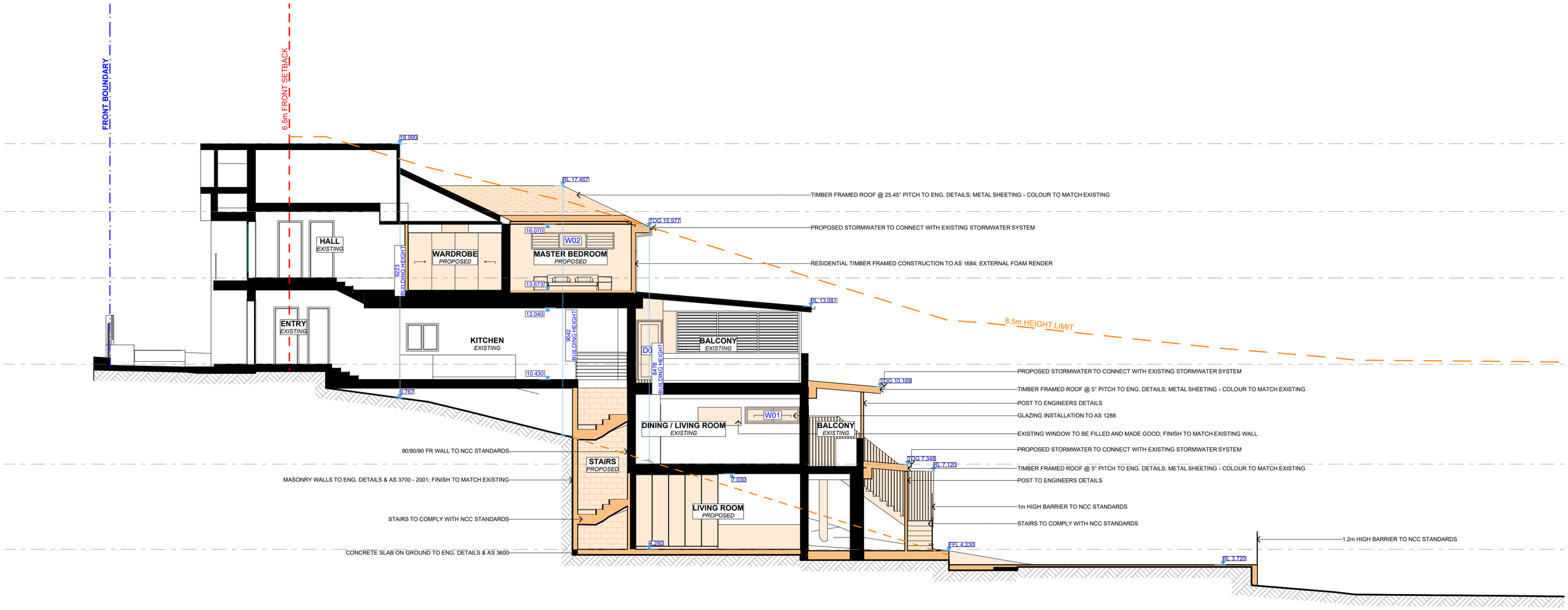
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA16

DATE
Tuesday, 21 September 2021

DRAWING NAME
PROPOSED CROSS SECTION

SCALE
1:100 @A2



1 **PROPOSED LONG SECTION** **1:100**

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REV.	DATE	COMMENTS	DRWN
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LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

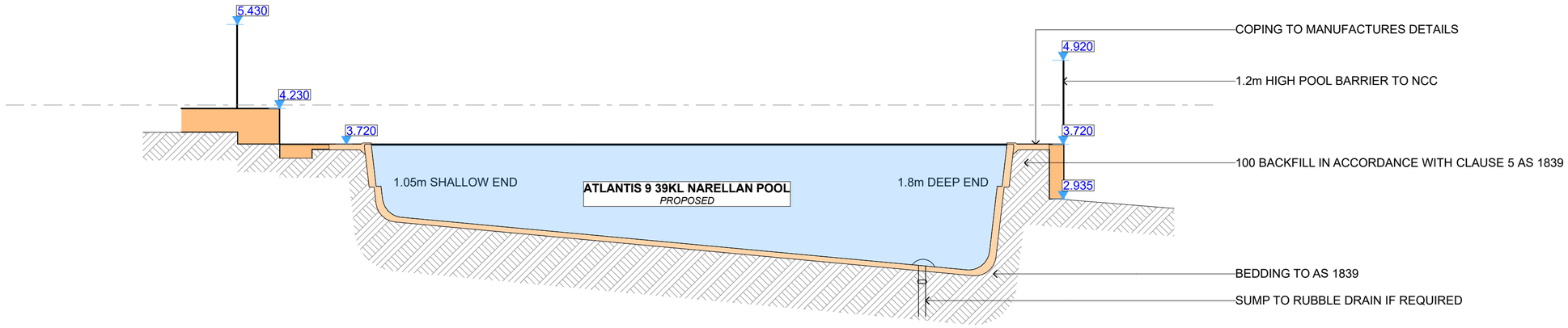
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA17

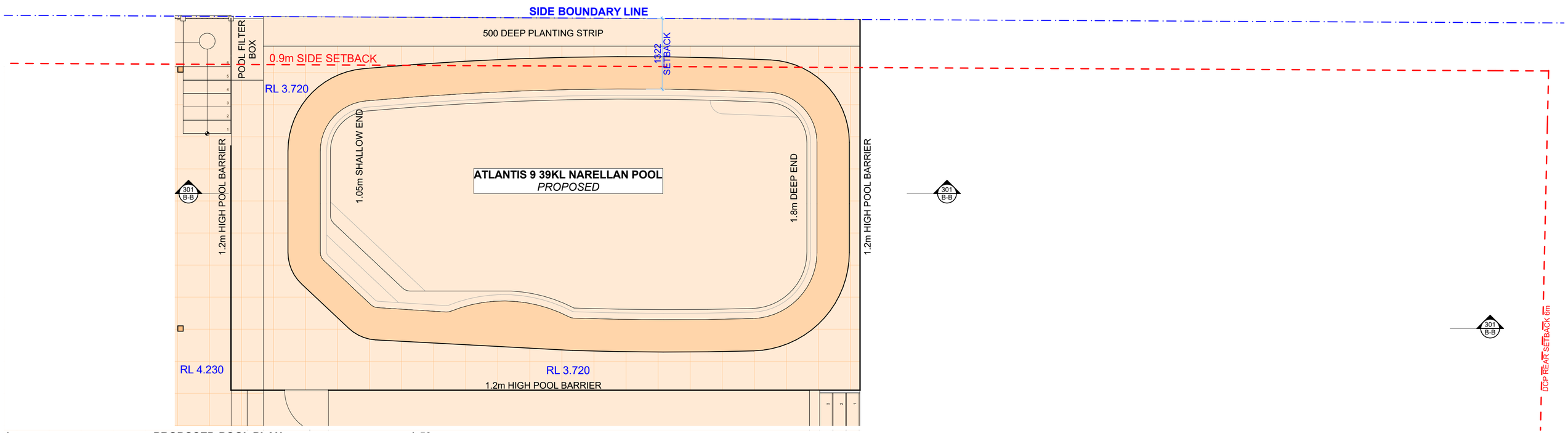
DATE
Tuesday, 21 September 2021

DRAWING NAME
PROPOSED LONG SECTION

SCALE
1:100 @A2



2 **PROPOSED POOL LONG SECTION** **1:50**



1 **PROPOSED POOL PLAN** **1:50**

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LEGEND

CLIENT
MORTEN & KYLIE SCHEIBYE

PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA18

DATE
Tuesday, 21 September 2021

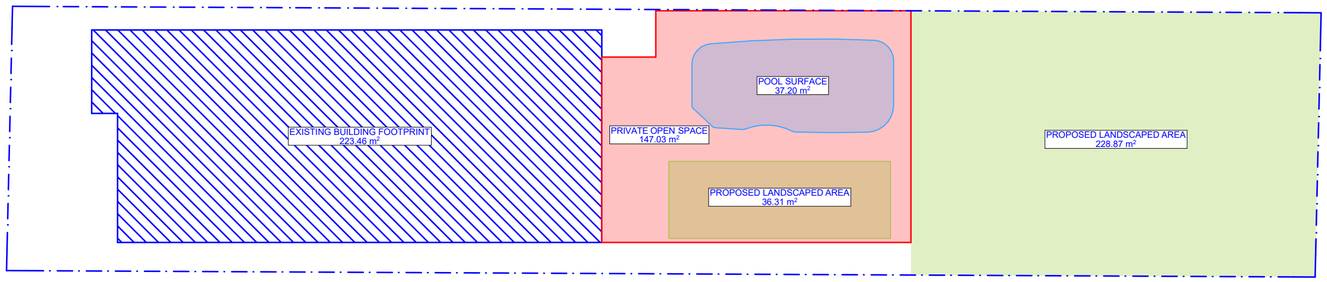
DRAWING NAME
PROPOSED POOL PLAN & LONG SECTION

SCALE
@A2

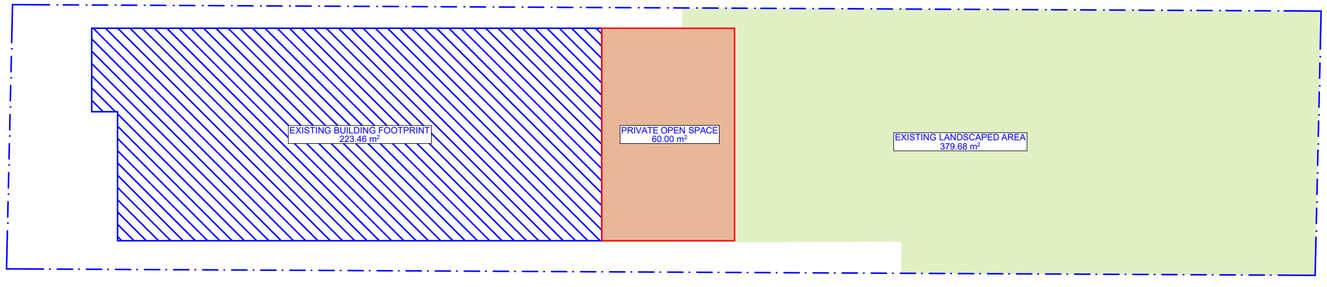
CONTROL TABLE

SITE AREA 735.7m²

	REQUIRED	PROPOSED
LANDSCAPED AREA	40% (294.28m²)	41.1% (302.38m²)
PRIVATE OPEN SPACE	60m²	147.03m²



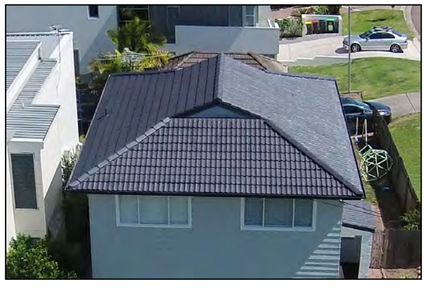
2 PROPOSED AREA CALCULATIONS 1:200



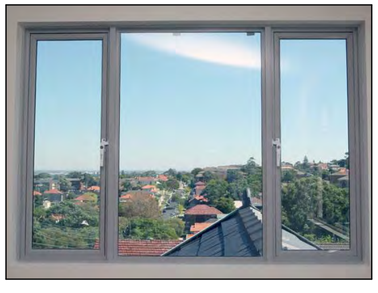
1 EXISTING AREA CALCULATIONS 1:200

METAL SHEET ROOFING -
COLOUR TO BE CONFIRMED BY CLIENT

FOAM RENDER -
COLOUR TO BE CONFIRMED BY CLIENT



TILED ROOF & DUTCH GABLE TO MATCH EXISTING



ALUMINIUN FRAMED WINDOWS
BY STEGBAR

3 SAMPLE BOARD

ACTION PLANS

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REV.	DATE	COMMENTS	DRWN
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LEGEND

CLIENT
MORTEN & KYLIE SCHEIBYE

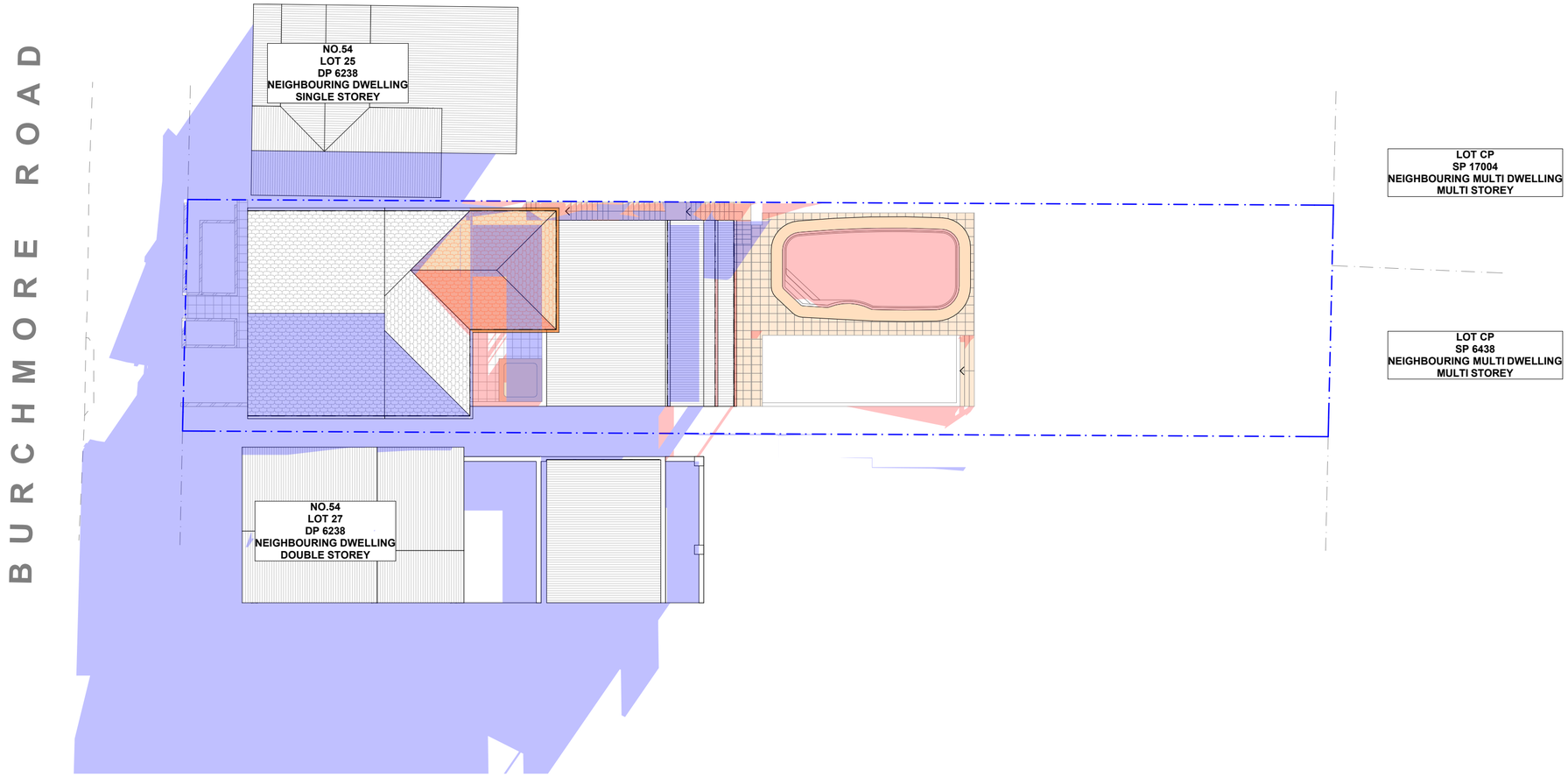
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA19

DATE
Tuesday, 21 September 2021

DRAWING NAME
AREA CALCULATIONS / SAMPLE BOARD

SCALE
1:200 @A2



1 **WINTER SOLSTICE 9AM** **1:200**

ACTION PLANS
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e:operations@actionplans.com.au
w: www.actionplans.com.au

REV.	DATE	COMMENTS	DRWN
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LEGEND

EXISTING SHADOWS

PROPOSED SHADOWS

CLIENT
MORTEN & KYLIE SCHEIBYE

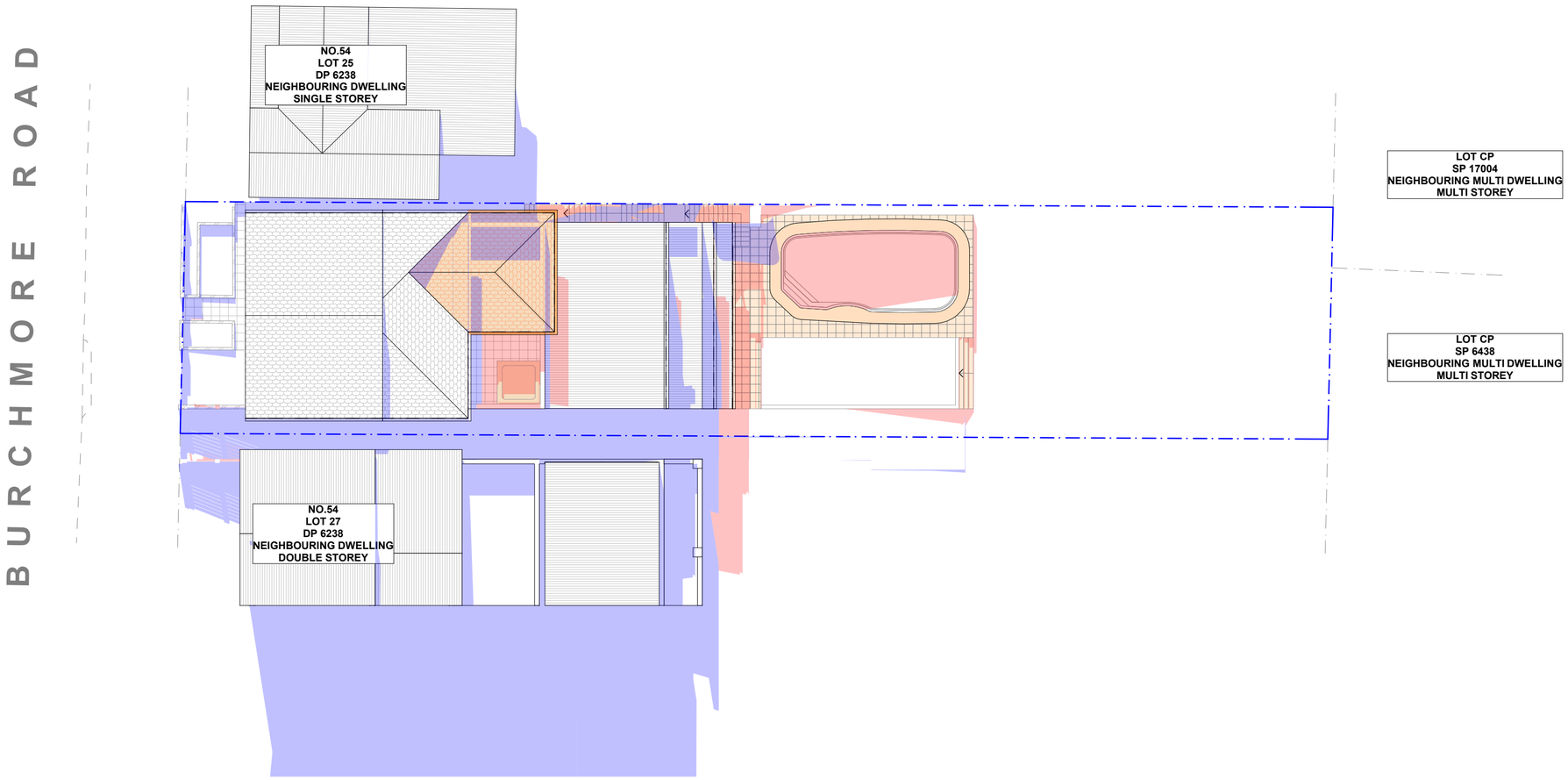
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA20

DATE
Tuesday, 21 September 2021

DRAWING NAME
WINTER SOLSTICE 9 AM

SCALE
1:200 @A2



1 **WINTER SOLSTICE 12PM** **1:200**

ACTION PLANS
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e:operations@actionplans.com.au
w: www.actionplans.com.au

REV.	DATE	COMMENTS	DRWN
A	05/03/2021	INITIAL DESIGN PLAN	AL
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LEGEND

- EXISTING SHADOWS
- PROPOSED SHADOWS

CLIENT
MORTEN & KYLIE SCHEIBYE

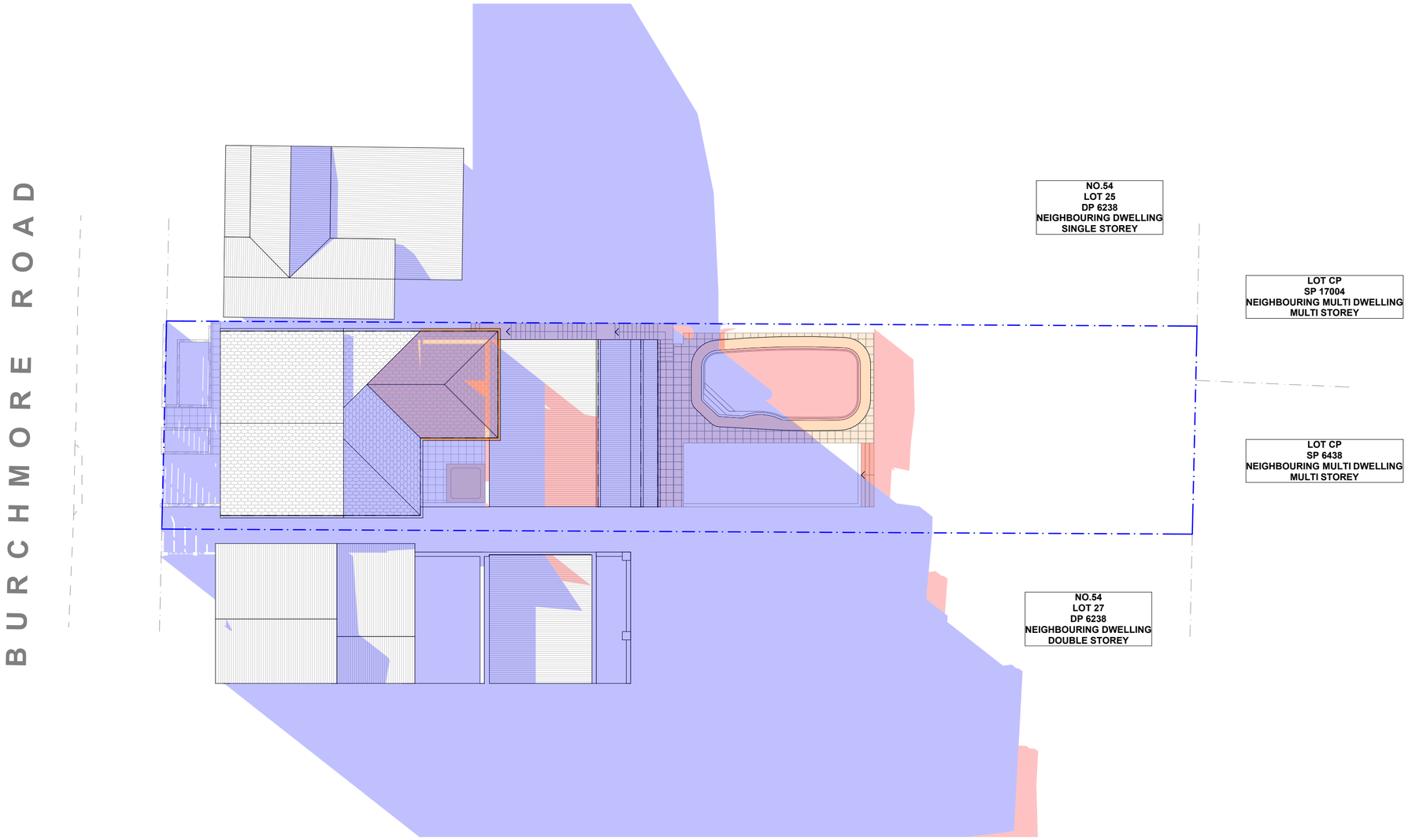
PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA21

DATE
Tuesday, 21 September 2021

DRAWING NAME
WINTER SOLSTICE 12 PM

SCALE
1:200 @A2



1 **WINTER SOLSTICE 3PM** **1:200**

ACTION PLANS
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e:operations@actionplans.com.au
w: www.actionplans.com.au

REV.	DATE	COMMENTS	DRWN
A	05/03/2021	INITIAL DESIGN PLAN	AL
B	21/05/2021	FIRST DESIGN AMENDMENT	AL
C	27/05/2021	SECOND DESIGN AMENDMENT	AL
D	30/06/2021	DA - PRELIMINARY ISSUE	DLR
E	14/09/2021	DA	DLR

NOTES

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 shall check and verify all levels and 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 and referred to the designer prior to the commencement of works.

LEGEND

- EXISTING SHADOWS
- PROPOSED SHADOWS

CLIENT
MORTEN & KYLIE SCHEIBYE

PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA22

DATE
Tuesday, 21 September 2021

DRAWING NAME
WINTER SOLSTICE 3 PM

SCALE
1:200 @A2

BASIX® Certificate

Building Sustainability Index www.basix.nsw.gov.au

Alterations and Additions

Certificate number: A420563

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Alterations and Additions Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary
Date of issue: Tuesday, 15, June 2021
To be valid, this certificate must be lodged within 3 months of the date of issue.

NSW GOVERNMENT | Planning, Industry & Environment

Description of project

Project address	
Project name	0783_52 BURCHMORE RD, MANLY VALE
Street address	52 BURCHMORE Road MANLY VALE 2093
Local Government Area	Northern Beaches Council
Plan type and number	Deposited Plan 6238
Lot number	26
Section number	
Project type	
Dwelling type	Separate dwelling house
Type of alteration and addition	My renovation work is valued at $50,000 or more, and includes a pool (and/or spa).

Certificate Prepared by (please complete before submitting to Council or PCA)

Name / Company Name: Action Plans

ABN (if applicable): 17118297587

Pool and Spa	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Rainwater tank			
The applicant must install a rainwater tank of at least 1739 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rainwater runoff from at least 94.15 square metres of roof area.		✓	✓
The applicant must connect the rainwater tank to a tap located within 10 metres of the edge of the pool.		✓	✓
Outdoor swimming pool			
The swimming pool must be outdoors.	✓	✓	✓
The swimming pool must not have a capacity greater than 45.5 kilolitres.	✓	✓	✓
The applicant must install a pool pump timer for the swimming pool.		✓	✓
The applicant must not incorporate any heating system for the swimming pool that is part of this development.		✓	✓

Fixtures and systems	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Lighting			
The applicant must ensure a minimum of 40% of new or altered light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Fixtures			
The applicant must ensure new or altered showerheads have a flow rate no greater than 9 litres per minute or a 3 star water rating.		✓	✓
The applicant must ensure new or altered toilets have a flow rate no greater than 4 litres per average flush or a minimum 3 star water rating.		✓	✓
The applicant must ensure new or altered taps have a flow rate no greater than 9 litres per minute or minimum 3 star water rating.		✓	

Construction	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Insulation requirements			
The applicant must construct the new or altered construction (floor(s), walls, and ceilings/roofs) in accordance with the specifications listed in the table below, except that a) additional insulation is not required where the area of new construction is less than 2m2, b) insulation specified is not required for parts of altered construction where insulation already exists.	✓	✓	✓

Construction	Additional insulation required (R-value)	Other specifications
concrete slab on ground floor.	nil	
floor above existing dwelling or building.	nil	
external wall: framed (weatherboard, fibro, metal clad)	R1.30 (or R1.70 including construction)	
flat ceiling, pitched roof	ceiling: R0.95 (up), roof: foil backed blanket (75 mm)	medium (solar absorptance 0.475 - 0.70)

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors			
The applicant must install the windows, glazed doors and shading devices, in accordance with the specifications listed in the table below. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The following requirements must also be satisfied in relation to each window and glazed door:		✓	✓
Each window or glazed door with standard aluminium or timber frames and single clear or toned glass may either match the description, or, have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below. Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions.		✓	✓
Each window or glazed door with improved frames, or pyrolytic low-e glass, or clear/air gap/clear glazing, or toned/air gap/clear glazing must have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below. Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. The description is provided for information only. Alternative systems with complying U-value and SHGC may be substituted.		✓	✓
For projections described in millimetres, the leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 mm above the head of the window or glazed door and no more than 2400 mm above the sill.	✓	✓	✓
Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.		✓	✓
Pergolas with fixed battens must have battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm.		✓	✓

Windows and glazed doors glazing requirements

Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing		Shading device	Frame and glass type
			Height (m)	Distance (m)		
W01	N	1.2	0	0	none	standard aluminium, single pyrolytic low-e, (U-value: 5.7, SHGC: 0.47)
W02	N	1.8	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)
W03	E	4.8	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium, single pyrolytic low-e, (U-value: 5.7, SHGC: 0.47)

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check

Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing		Shading device	Frame and glass type
			Height (m)	Distance (m)		
D01	E	7.2	0	0	eave/verandah/pergola/balcony >=900 mm	standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)
D02	E	4.8	0	0	eave/verandah/pergola/balcony >=900 mm	standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)
D03	S	6.3	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)

Legend
In these commitments, "applicant" means the person carrying out the development.
Commitments identified with a "✓" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
Commitments identified with a "✓" in the "Show on CC/CDC plans & specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
Commitments identified with a "✓" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate for the development may be issued.

ACTION PLANS
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w: www.actionplans.com.au

REV.	DATE	COMMENTS	DRWN
A	05/03/2021	INITIAL DESIGN PLAN	AL
B	21/05/2021	FIRST DESIGN AMENDMENT	AL
C	27/05/2021	SECOND DESIGN AMENDMENT	AL
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NOTES

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Do not scale measure from drawings. Figured dimensions are to be used only.
The Builder/Contractor shall check and verify all levels and 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 and referred to the designer prior to the commencement of works.
All window & door dimensions, orientation, glazing materials, opening types, frame types are to be confirmed by a suitably qualified person prior to the ordering of any such materials are to take place.
U value takes precedence over glazing type/colour in all cases.
all new glazing must meet the BASIX specified frame and glass type, *OR* meet the ecified U value and SHGC value.

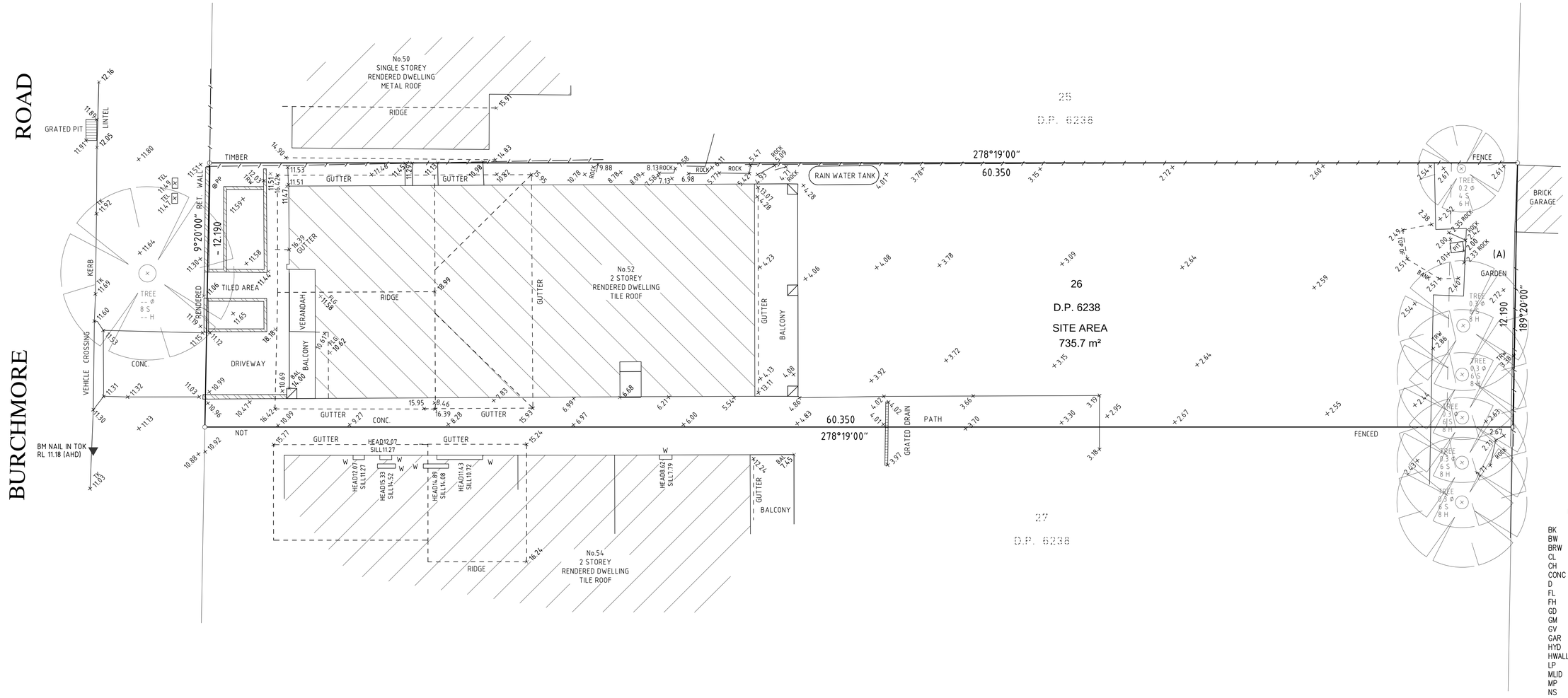
CLIENT
MORTEN & KYLIE SCHEIBYE

PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA23

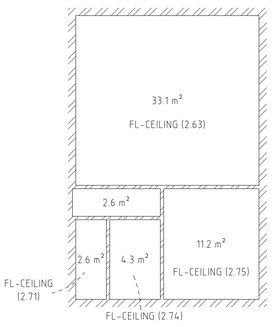
DATE
Tuesday, 21 September 2021

DRAWING NAME
BASIX COMMITMENTS

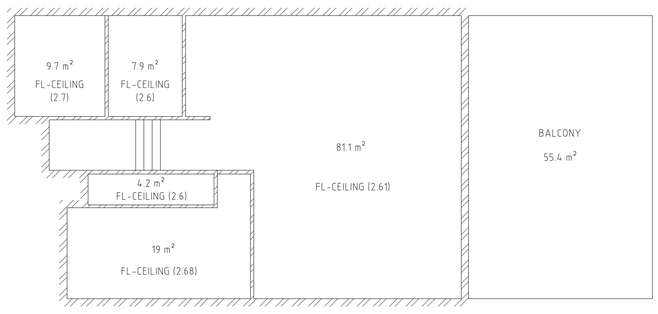


LEGEND

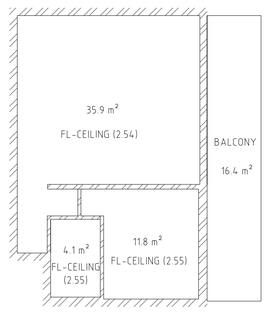
BK	–	BOTTOM OF KERB
BW	–	BOTTOM OF WALL
BRW	–	BOTTOM OF RETAINING WALL
CL	–	CENTRE LINE
CH	–	CHIMNEY
CONC	–	CONCRETE
D	–	DOOR
FL	–	FLOOR LEVEL
FH	–	FIRE HYDRANT
GD	–	GRATED DRAIN
GM	–	GAS METER
GV	–	GAS VALVE
GAR	–	GARDEN
HYD	–	HYDRANT
HWALL	–	HEAD WALL
LP	–	LIGHT POLE
MLID	–	METAL LID
MP	–	METAL POST
NS	–	NATURAL SURFACE
PARA	–	PARAPET
PP	–	POWER POLE
RET.	–	RETAINING
RR	–	ROOF RIDGE
RWT	–	RAIN WATER TANK
SIC	–	SEWER INSPECTION CAP
SMH	–	SEWER MANHOLE
SRW	–	STONE RETAINING WALL
SV	–	SEWER VENT
SWGP	–	STORM WATER GRATED PIT
TEL	–	TELSTRA
TA	–	TOP OF AWNING
TFCE	–	TOP OF FENCE
TG	–	TOP OF GUTTER
TK	–	TOP OF KERB
TP	–	TOP OF PARAPET
TR	–	TOP OF ROOF
TT	–	TOP OF TREE
TW	–	TOP OF WALL
TRW	–	TOP OF RET. WALL
US	–	UNDERSIDE
VC	–	VEHICLE CROSSING
W	–	WINDOW
WM	–	WATER METER
WS	–	WATER SWITCH
WV	–	WATER VENT



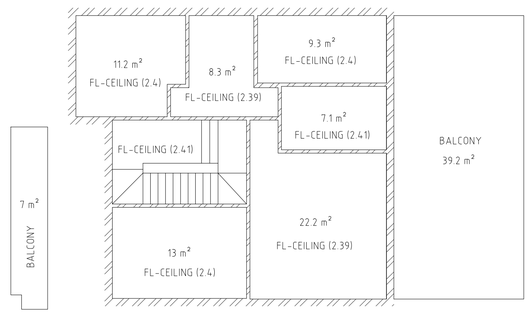
No.52 BASEMENT LAYOUT PLAN



No.52 GROUND FLOOR LAYOUT PLAN



No.52 GRANNY FLAT LAYOUT PLAN



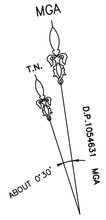
FRONT BALCONY

No.52 FIRST FLOOR LAYOUT PLAN

(A) DENOTES EASEMENT TO DRAIN WATER 3.05 WIDE.

SUBJECT LAND IS AFFECTED BY:

- A414167 -EASEMENT AS MORE FULLY SET OUT THEREIN AFFECTING THE PART SHOWN SO BURDENED IN VOL 2885 FOL 239
- AI987880 -RIGHT OF CARRIAGEWAY 1.25 WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE PART DESIGNATED (A) IN PLAN WITH A1987880
- AI987881 -RIGHT OF CARRIAGEWAY 1.25 WIDE AFFECTING THE PART DESIGNATED (A) IN PLAN WITH AI987881



SIMON HO
REGISTERED SURVEYOR
8304

NOTES:

1. ORIGIN OF LEVELS PM 769 RL11.555 (A.H.D.) (SOURCE: S.C.I.M.S. AS AT 10 SEP 2020).
2. BEARINGS ARE ON MGA NORTH
3. THIS PLAN IS PREPARED IN ACCORDANCE WITH COUNCIL'S DA GUIDE.
4. RELATIONSHIP OF IMPROVEMENTS AND DETAIL TO BOUNDARIES IS DIAGRAMMATIC ONLY AND SPECIFIC DETAILS, IF CRITICAL, WILL REQUIRE FURTHER SURVEY.
5. NO SERVICES OR UNDERGROUND SERVICES SEARCH HAS BEEN UNDERTAKEN. SERVICES SHOWN ARE BASED ON VISIBLE SURFACE INDICATORS EVIDENT AT THE DATE OF SURVEY & ARE CHARTED AS A GUIDE TO THE POSITION & NATURE OF THE SERVICE. ALL SERVICE AUTHORITIES SHOULD BE CONTACTED PRIOR TO ANY DEVELOPMENT.
6. RIDGE, EAVE & GUTTER HEIGHTS HAVE BEEN OBTAINED BY AN INDIRECT METHOD AND ARE ACCURATE FOR PLANNING PURPOSES ONLY.
7. ADJOINING BUILDINGS AND DWELLINGS HAVE BEEN PLOTTED FOR DIAGRAMMATIC PURPOSES ONLY AND SPECIFIC DETAILS, IF CRITICAL, WILL REQUIRE FURTHER SURVEY.
8. THE SPREAD & HEIGHT OF EACH TREE IS INDICATIVE ONLY AND SPECIFIC DETAILS, IF CRITICAL, WILL REQUIRE FURTHER SURVEY.

DATE	BY	REVISION	ISSUE

CLIENT: MR MORTEN SCHEIBYE

PLAN SHOWING PHYSICAL FEATURES AND LEVELS AT
No.52 BURCHMORE ROAD, MANLY VALE
LOT 25 IN D.P.6238

DIAL 1100 BEFORE YOU DIG

SURVCORP Consulting Surveyors PTY LTD

EMAIL: info@survcorp.com.au
Suite 28, 401 Pacific Highway, Artarmon NSW 2064
TEL: (02) 9966 8573

RATIO: 1:100		DATE: 13-10-2020	
DATUM: AHD		ISSUE: 0	SHEET: A1 1 OF 1
DRAWN: AE/BY			
REF. No: 4011		DATE OF SURVEY: 15-09-2020	

APPENDIX B

Council Stormwater Drainage & Flood Information

FLOOD INFORMATION REQUEST – COMPREHENSIVE

Property: 52 Burchmore Road MANLY VALE NSW 2093
Lot DP: Lot 26 DP 6238
Issue Date: 17/03/2021
Flood Study Reference: Manly Lagoon Flood Study 2013, BMT WBM

Flood Information for lot [1]:

Flood Risk Precinct – See Map A

Flood Planning Area – See Map A

Maximum Flood Planning Level (FPL) [2, 3, 4]: 3.68 m AHD

1% AEP Flood – See Flood Map B

1% AEP Maximum Water Level [2, 3]: 3.18 mAHD

1% AEP Maximum Depth from natural ground level[3]: 0.94 m

1% AEP Maximum Velocity: 0.48 m/s

1% AEP Provisional Flood Hazard: Transition **See Flood Map D**

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

Probable Maximum Flood (PMF) – See Flood Map C

PMF Maximum Water Level [4]: 5.66 m AHD

PMF Maximum Depth from natural ground level: 3.42 m

PMF Maximum Velocity: 0.73 m/s

PMF Flood Hazard: High **See Flood Map F**

PMF Hydraulic Categorisation: Floodway **See Flood Map G**

Flooding with Climate Change (See Flood Map H)

The following is for the 30% Rainfall intensity increase and 0.9m Sea Level Rise Scenario:

1% AEP Maximum Water Level with Climate change [3]: 3.43 m AHD

1% AEP Maximum Depth with Climate Change[3]: 1.19 m

Flood Life Hazard Category – See Map I

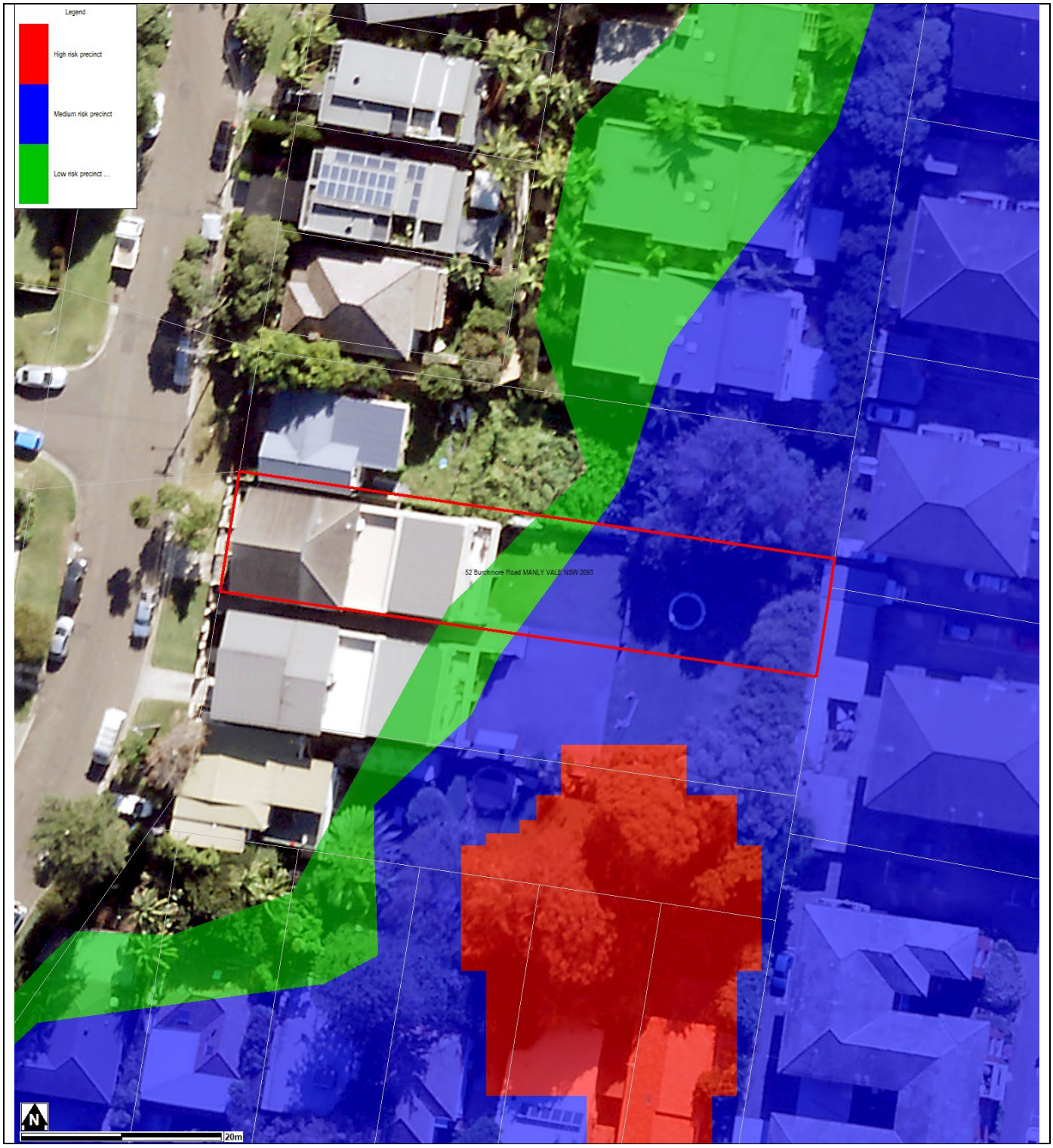
Indicative Ground Surface Spot Heights – See Map J

[1] The flood information does not take into account 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.

General Notes:

- 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 website.

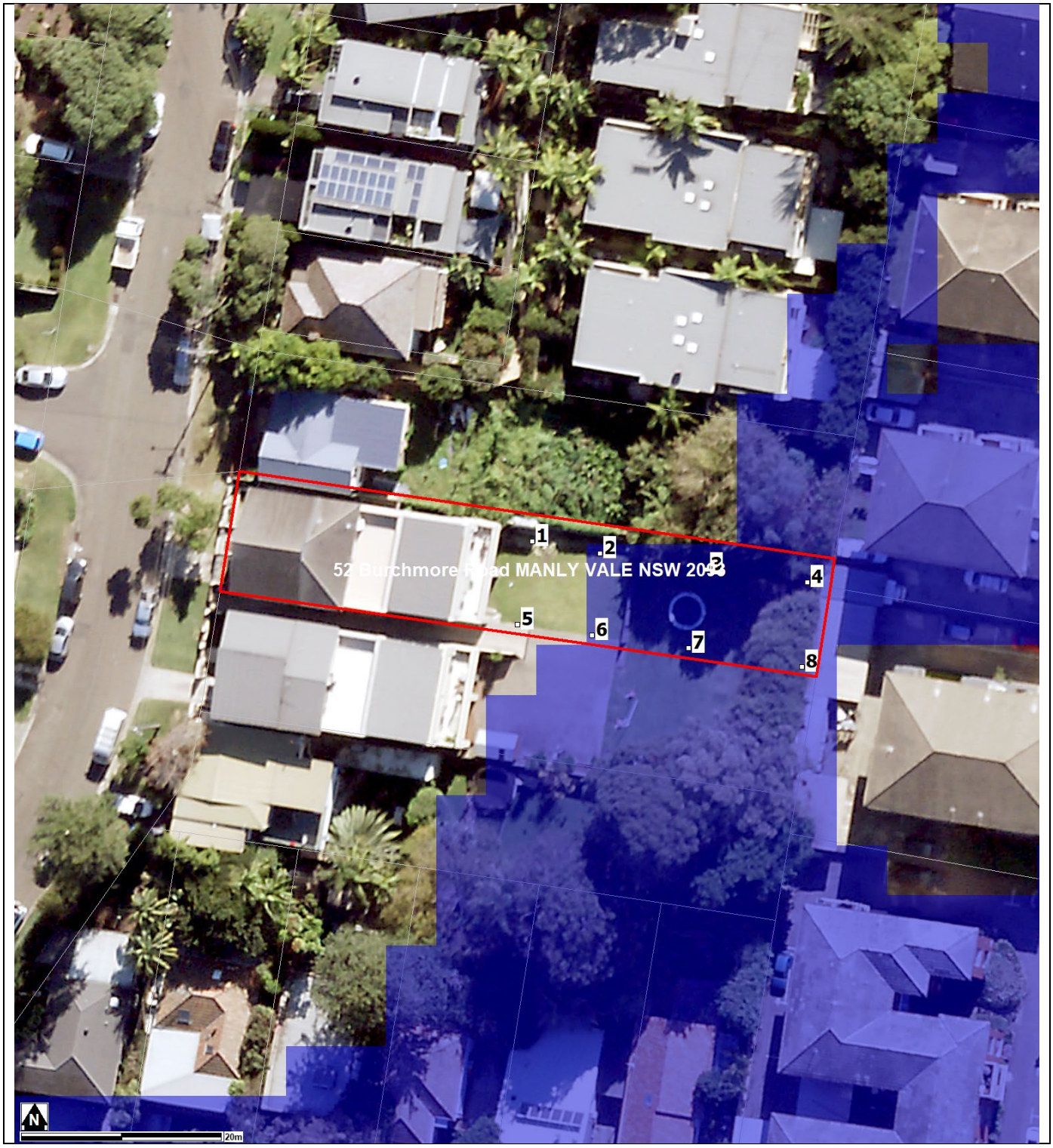
FLOOD MAP A: FLOOD RISK PRECINCT MAP



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.

FLOOD LEVEL POINTS



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

Flood Levels

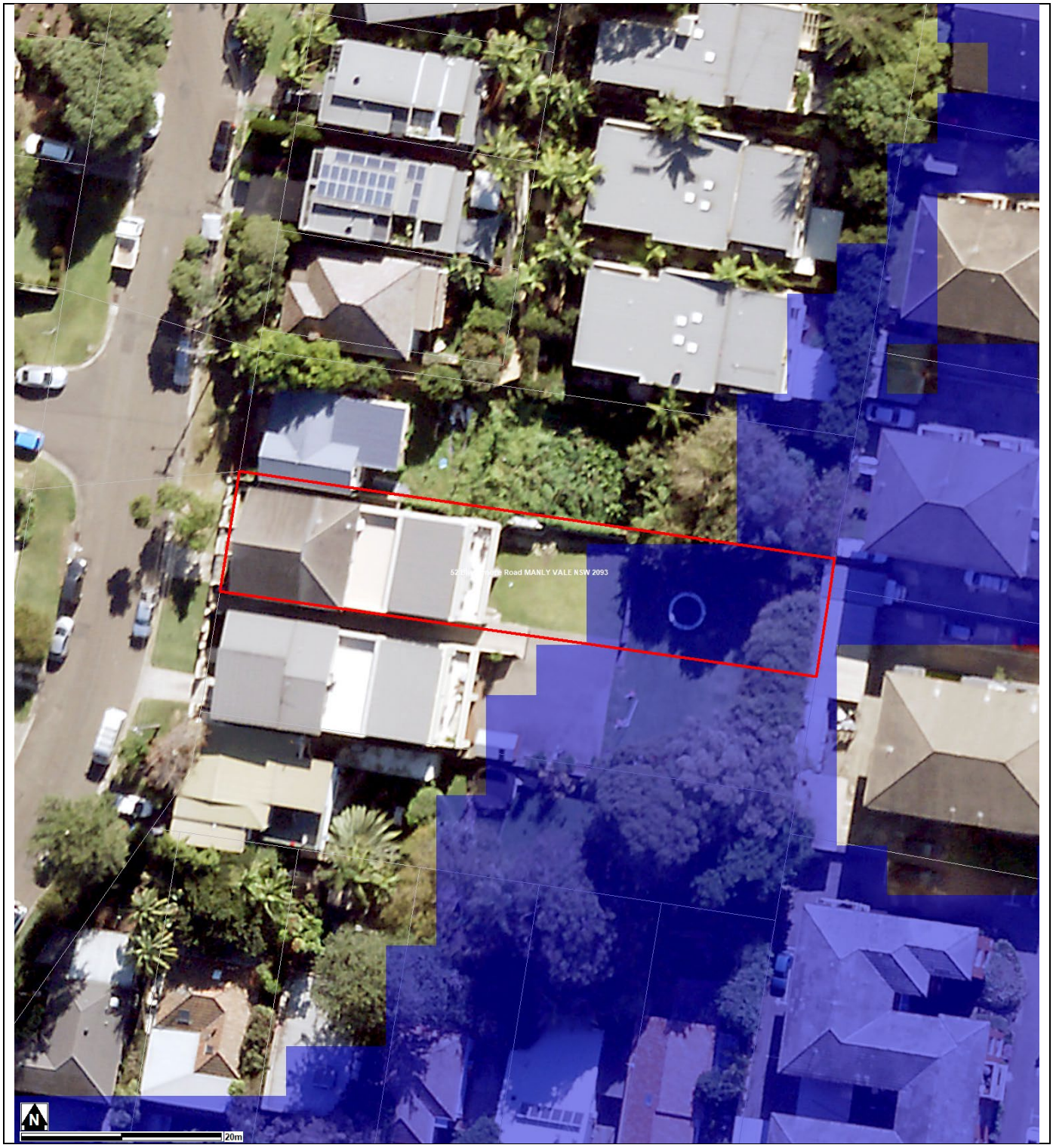
ID	5% AEP Max WL (m AHD)	5% AEP Max Depth (m)	1% AEP Max WL (m AHD)	1% AEP Max Depth (m)	1% AEP Max Velocity (m/s)	Flood Planning Level (m)	PMF Max WL (m AHD)	PMF Max Depth (m)	PMF Max Velocity (m/s)
1	N/A	N/A	N/A	N/A	N/A	N/A	5.66	0.80	0.05
2	3.11	0.10	3.18	0.14	0.01	3.68	5.66	2.46	0.26
3	3.11	0.46	3.18	0.53	0.06	3.68	5.66	3.00	0.45
4	3.11	0.39	3.18	0.46	0.04	3.68	5.66	2.94	0.55
5	N/A	N/A	N/A	N/A	N/A	3.68	5.66	2.06	0.23
6	3.11	0.56	3.18	0.64	0.02	3.68	5.66	3.11	0.32
7	3.11	0.83	3.18	0.90	0.26	3.68	5.66	3.38	0.66
8	3.11	0.48	3.18	0.55	0.03	3.68	5.66	3.03	0.44

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	N/A	N/A
2	3.43	0.30
3	3.43	0.78
4	3.43	0.71
5	N/A	N/A
6	3.43	0.89
7	3.43	1.16
8	3.43	0.81

WL – Water Level
PMF – Probable Maximum Flood
N/A = no peak water level/depth/velocity available in flood event.

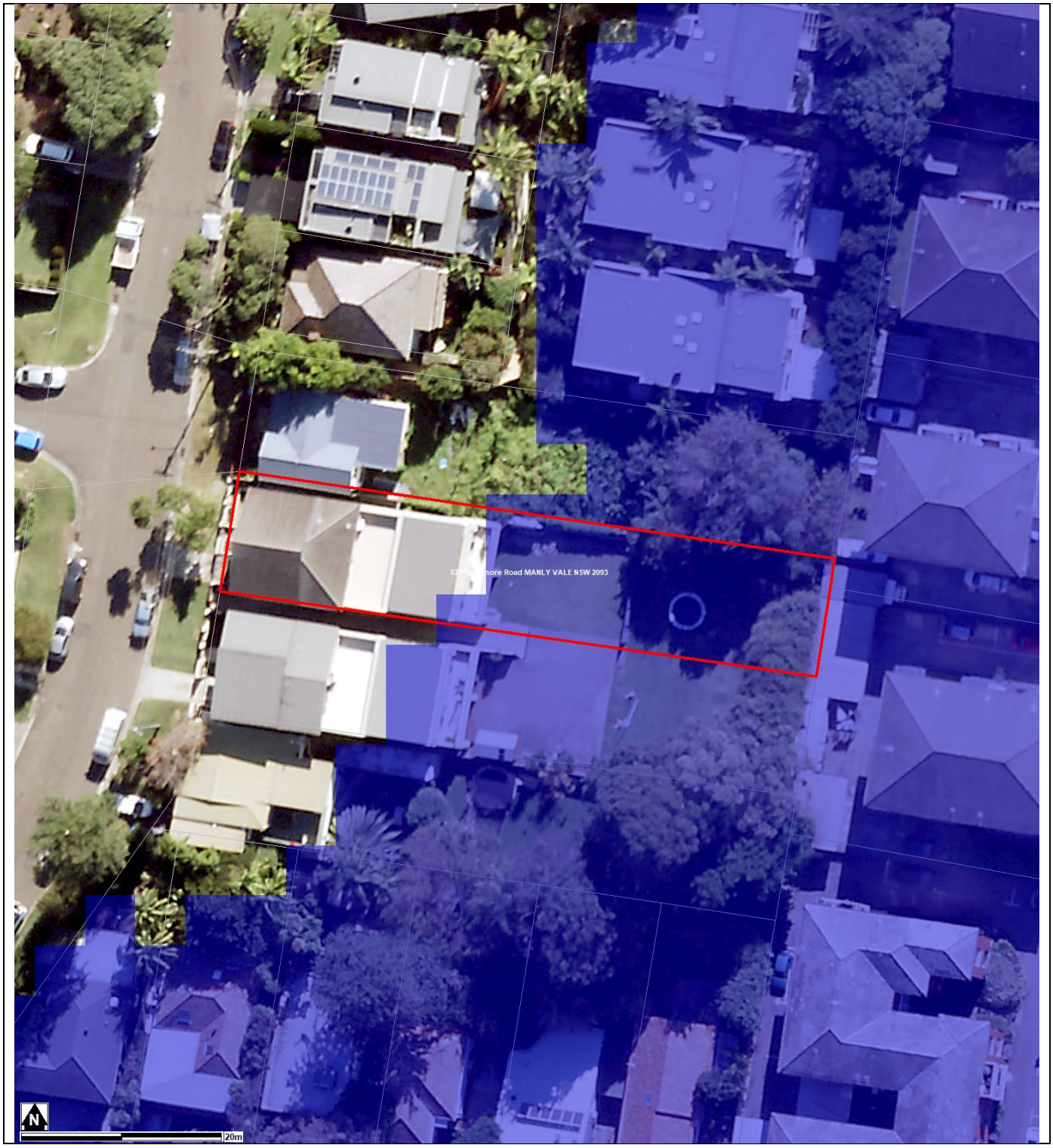
FLOOD MAP B: FLOODING - 1% AEP EXTENT



Notes:

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

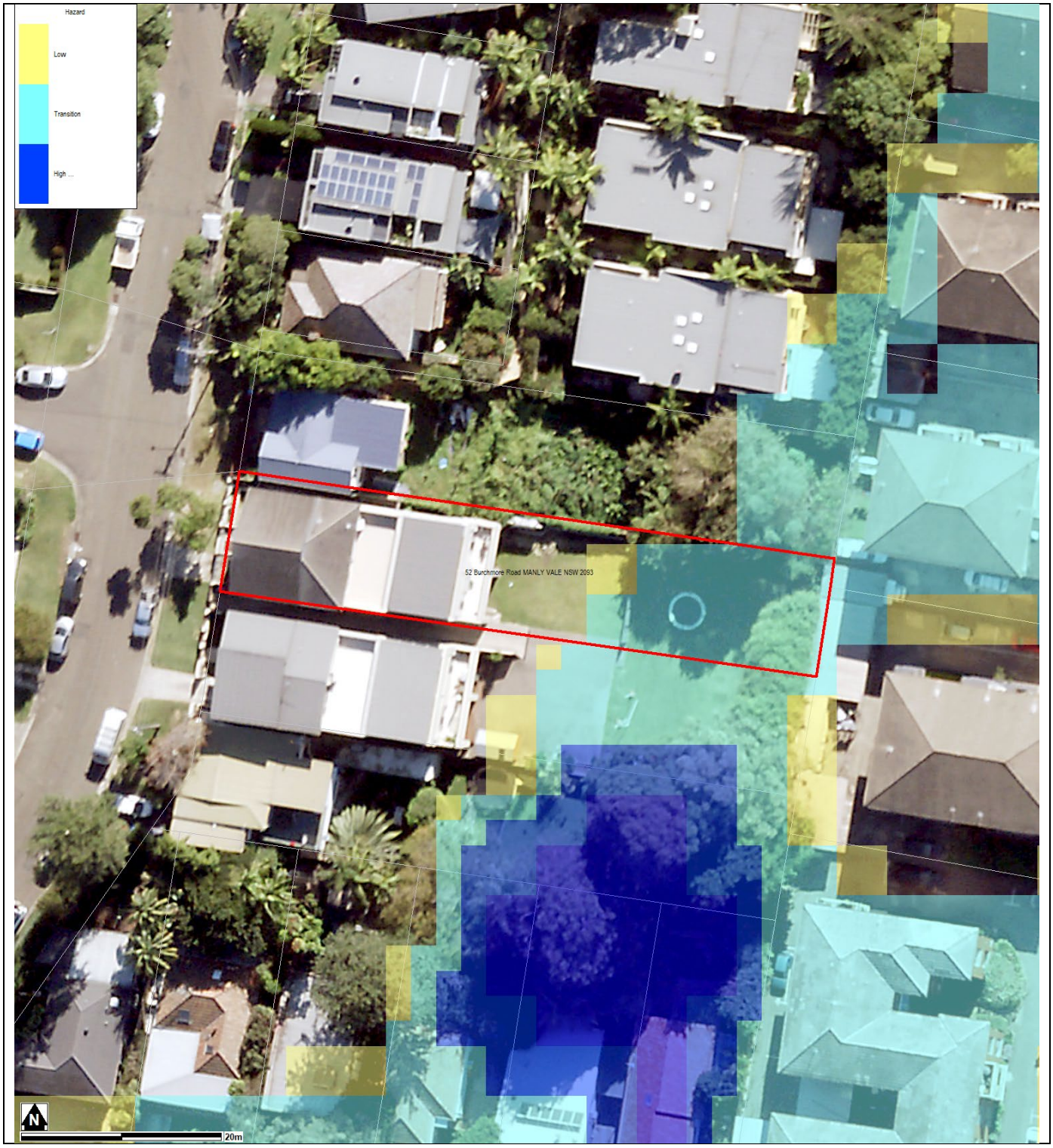
FLOOD MAP C: PMF EXTENT MAP



Notes:

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

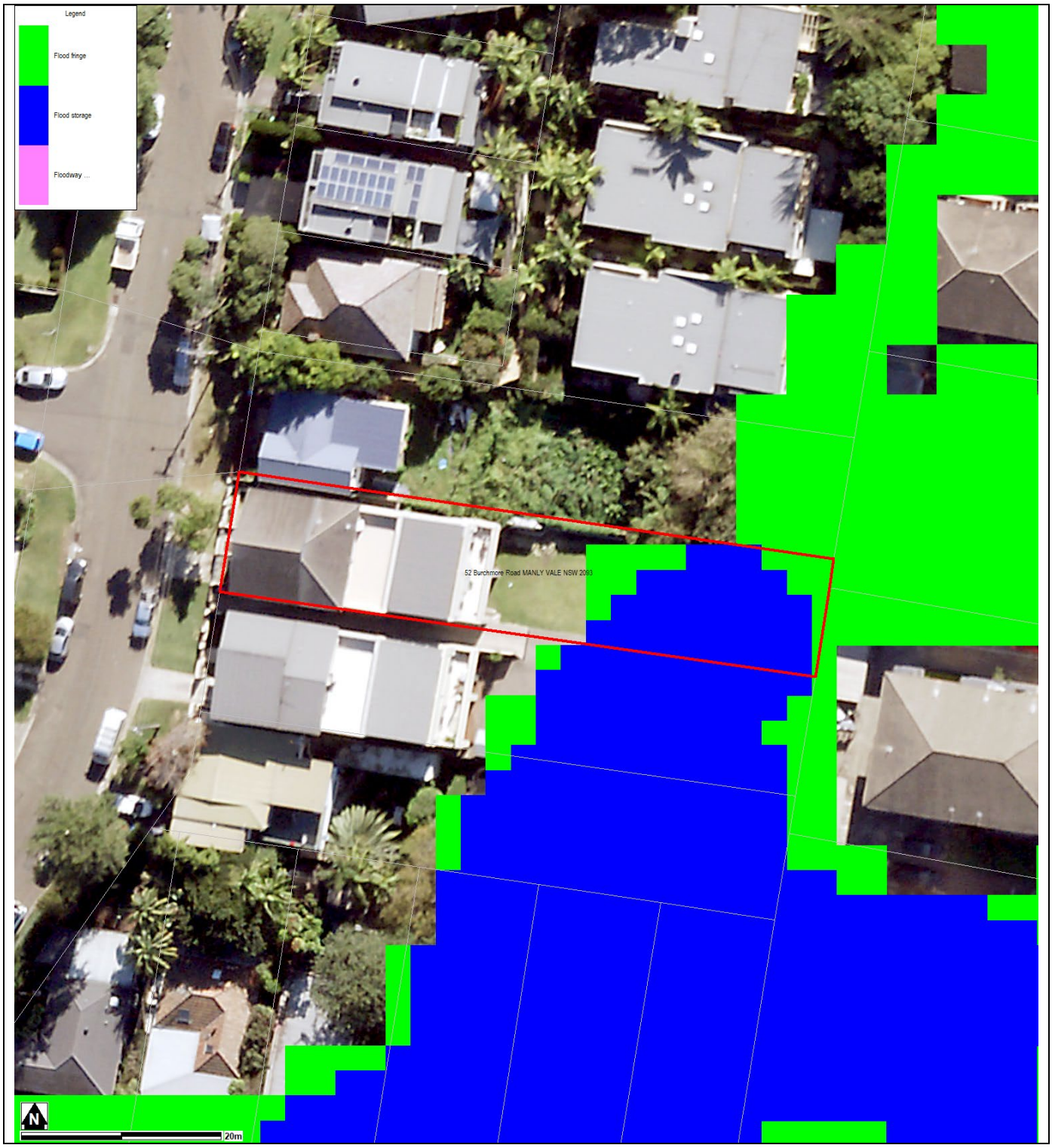
FLOOD MAP D: 1% AEP FLOOD HAZARD EXTENT MAP



Notes:

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

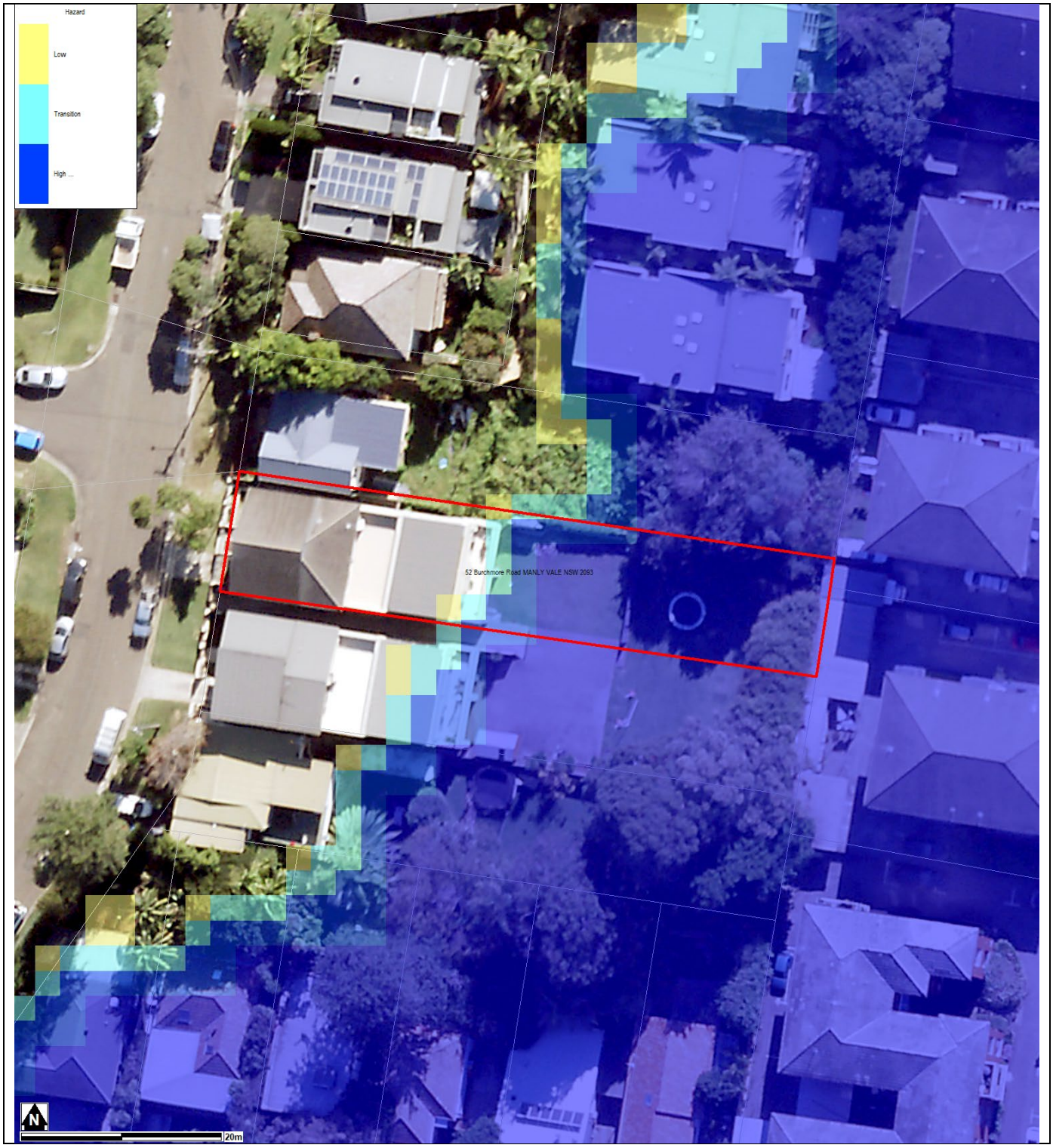
FLOOD MAP E: 1% AEP FLOOD HYDRAULIC CATEGORY EXTENT MAP



Notes:

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

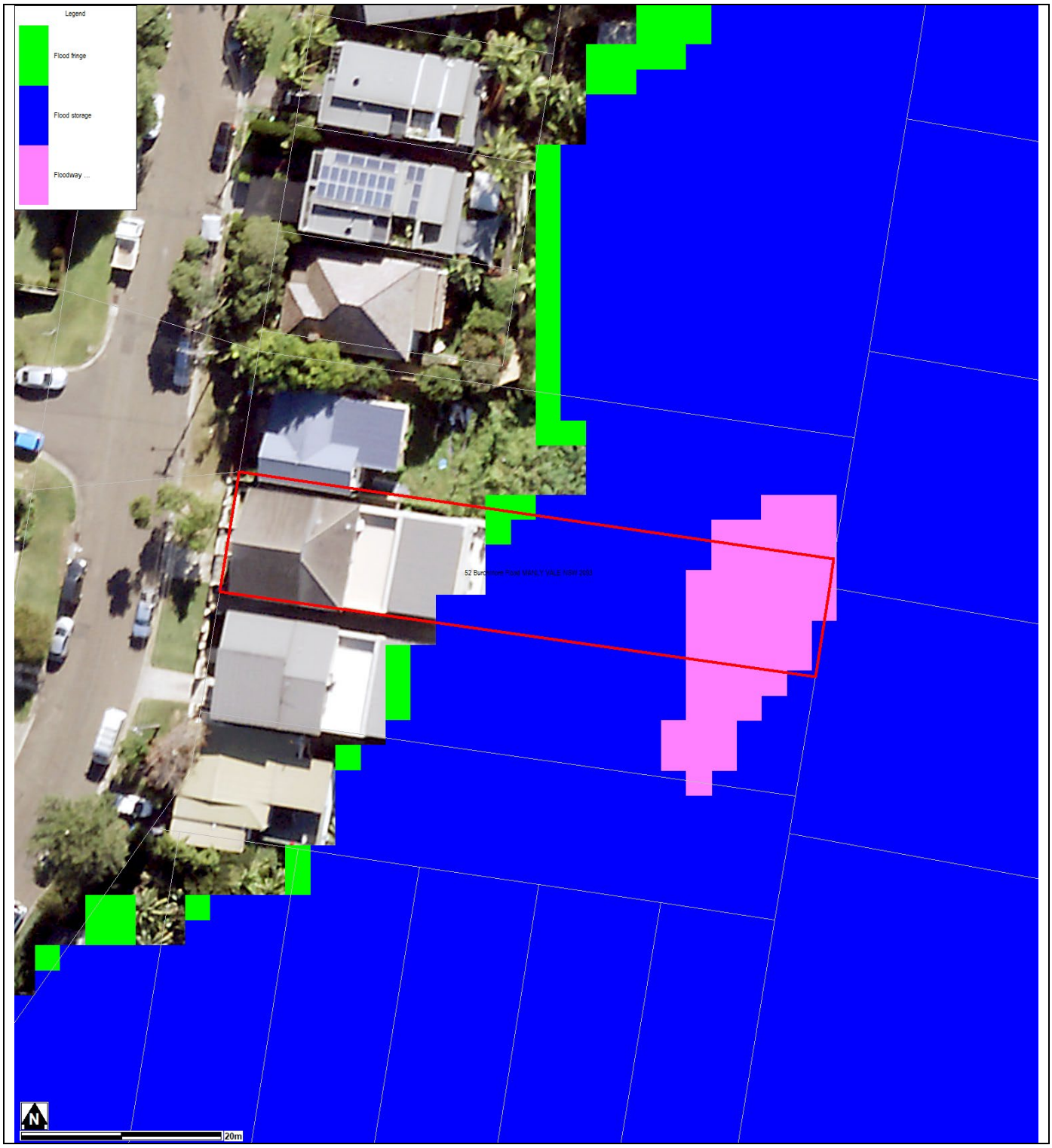
FLOOD MAP F: PMF FLOOD HAZARD EXTENT MAP



Notes:

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

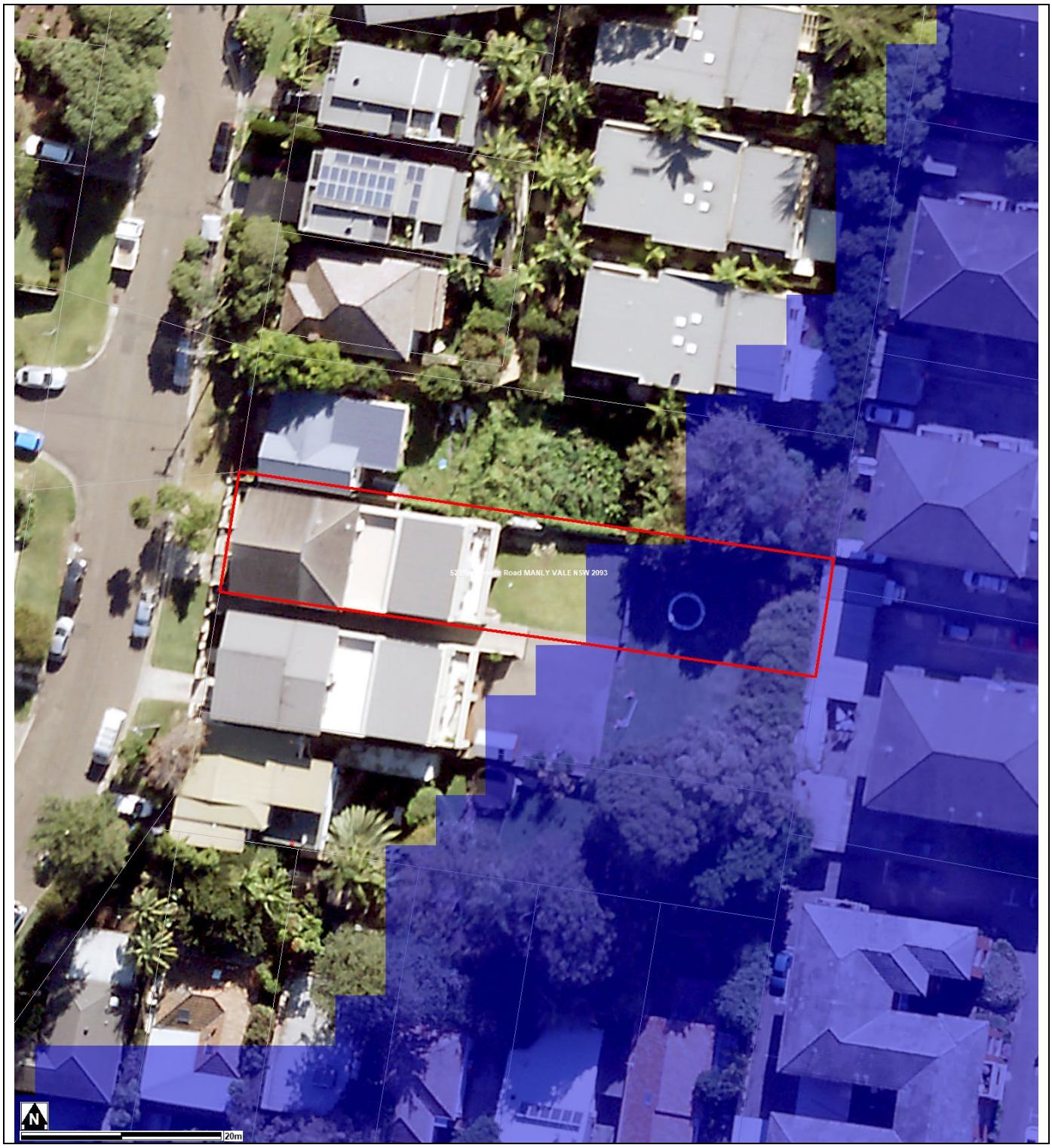
FLOOD MAP G: PMF FLOOD HYDRAULIC CATEGORY EXTENT MAP



Notes:

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

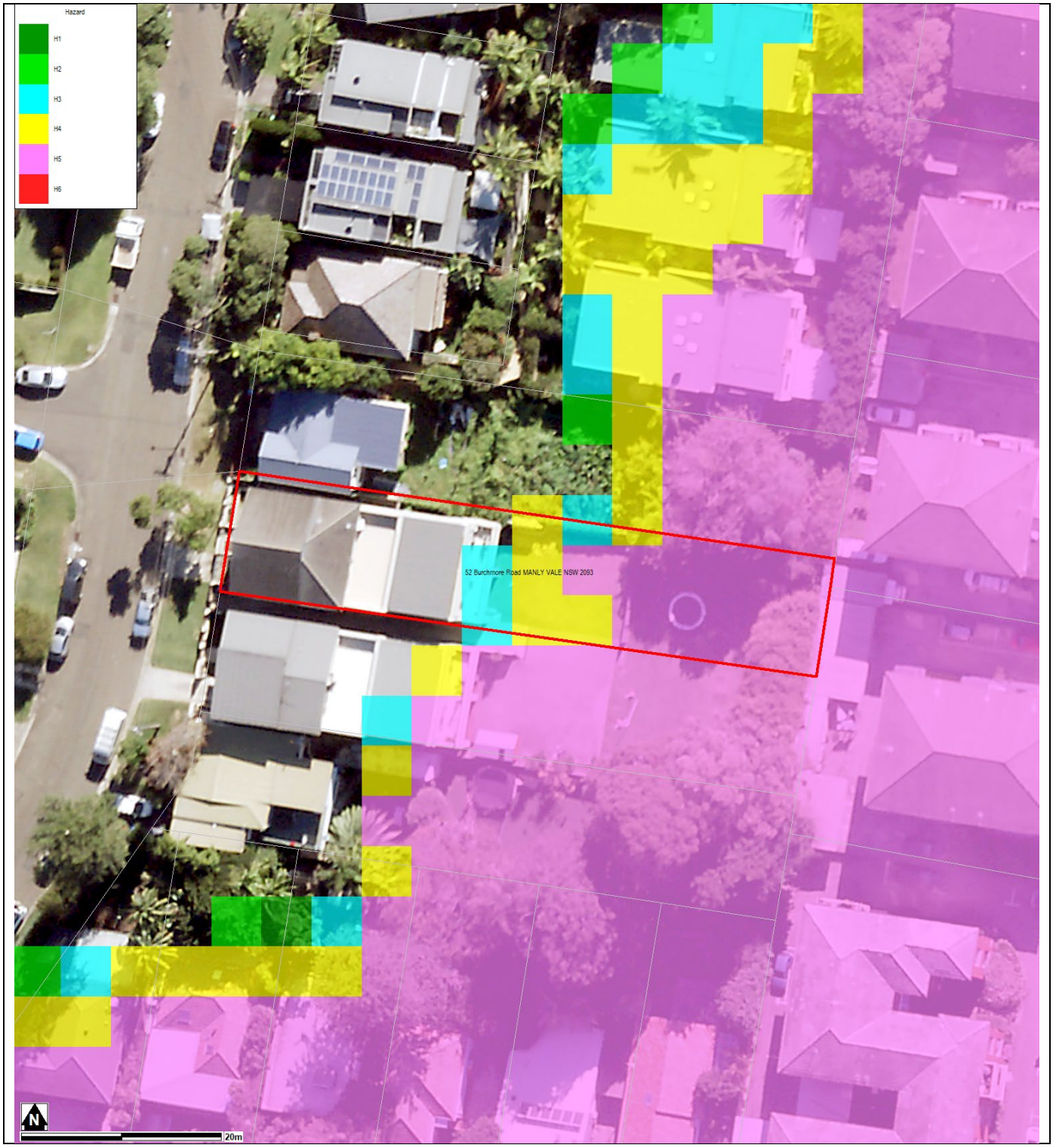
FLOOD MAP H: FLOODING – 1% AEP EXTENT PLUS CLIMATE CHANGE



Note:

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

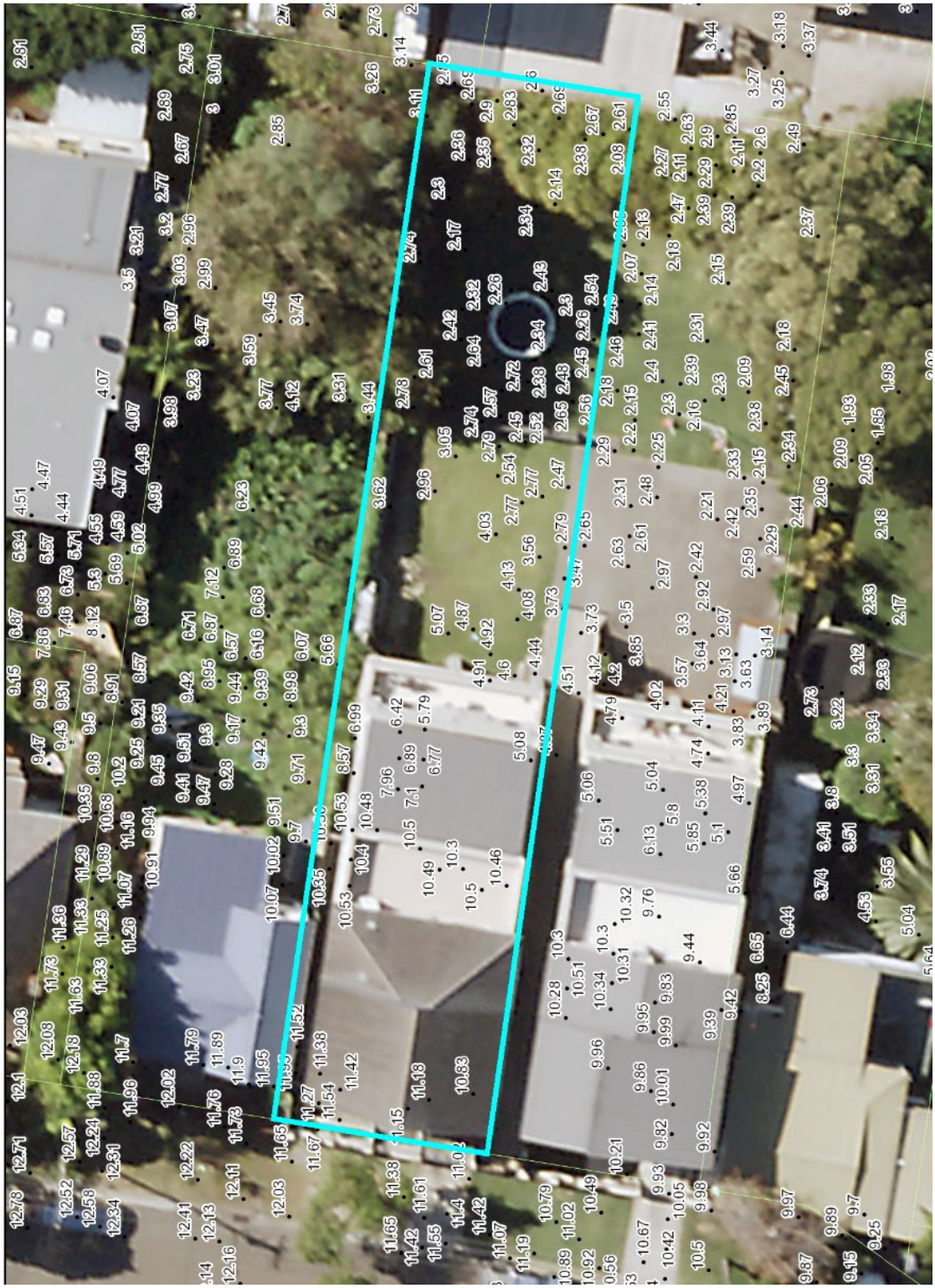
FLOOD MAP I: FLOOD LIFE HAZARD CATEGORY



Notes:

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

MAP J: 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 ± 0.2m vertically and ± 0.15m 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) – 6.3 Flood Planning	Manly DCP (2013) – 5.4.3 Flood Prone Land
Warringah LEP (2011) – 6.3 Flood Planning Warringah LEP (2000) – 47 Flood Affected Land *	Warringah DCP (2011) – E11 Flood Prone Land
Pittwater LEP (2014) – 7.3 Flood Planning Pittwater LEP (2014) – 7.4 Flood Risk Management	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. 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 floor level is above the Probable Maximum Flood level
- 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		X	
B) Building Components & Structural Soundness		X	
C) Floor Levels		X	
D) Car parking	X		
E) Emergency Response		X	
F) Fencing		X	
G) Storage of Goods		X	
H) Pools		X	

- 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

For further information please contact Council's Flood Team on 1300 434 434 or by email at floodplain@northernbeaches.nsw.gov.au .

APPENDIX C

Flood Blockage Calculations and Notes

Flood Storage Calculations

AREA A - BLOCKAGE

Average Natural Level: 3.00m (approximate)
Average Flood Depth: 0.18m
Blockage Area: 34m2
Flood Blockage: 6.12m3

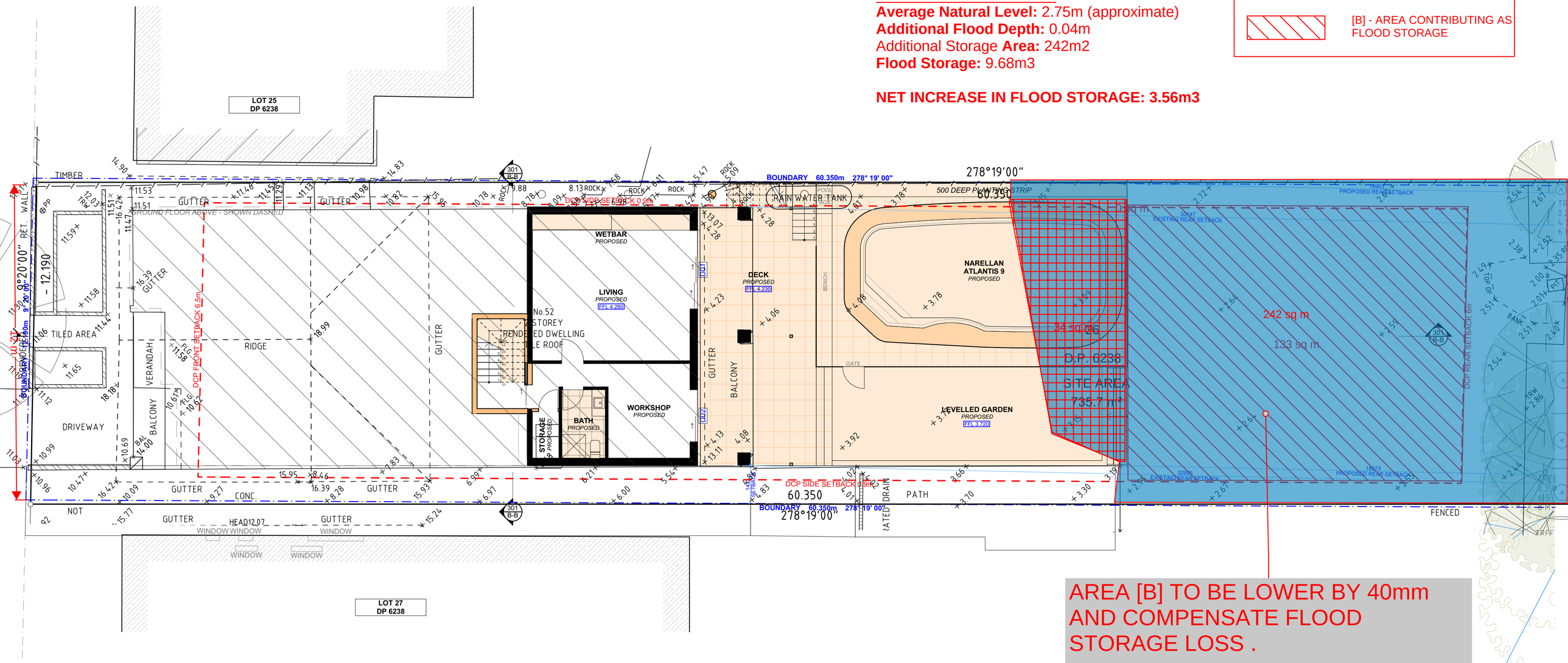
AREA B - STORAGE

Average Natural Level: 2.75m (approximate)
Additional Flood Depth: 0.04m
Additional Storage **Area:** 242m2
Flood Storage: 9.68m3

NET INCREASE IN FLOOD STORAGE: 3.56m3

LEGEND

- 1% AEP FLOOD EXTENT (3.18m AHD)
- [A] - AREA CONTRIBUTING AS FLOOD BLOCKAGE
- [B] - AREA CONTRIBUTING AS FLOOD STORAGE



AREA [B] TO BE LOWER BY 40mm AND COMPENSATE FLOOD STORAGE LOSS .

NATURAL SURFACE FALL TO THE REAR TO BE MAINTAINED.

FLOOD STORAGE CALCULATIONS

1 **PROPOSED BASMENT FLOOR PLAN**

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

REV.	DATE	COMMENTS	DRWN
A	05/03/2021	INITIAL DESIGN PLAN	AL
B	21/05/2021	FIRST DESIGN AMENDMENT	AL
C	27/05/2021	SECOND DESIGN AMENDMENT	AL
D	30/06/2021	DA - PRELIMINARY ISSUE	DLR

NOTES

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Do not scale measure from drawings. Figured dimensions are to be used only.
The Builder/Contractor shall check and verify all levels and 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 and referred to the designer prior to the commencement of works.

LEGEND

- EXISTING
- PROPOSED
- DEMOLISHED

CLIENT
MORTEN & KYLIE SCHEIBYE

PROJECT ADDRESS
52 BURCHMORE ROAD, MANLY VALE NSW 2093

DRAWING NO.
DA09

DATE
Wednesday, 30 June 2021

DRAWING NAME
PROPOSED BASEMENT FLOOR PLAN

SCALE
1:100 @A2