

LEGEND / ANNOTATIONS			FINISHES	
AC	AIR CONDITIONING	HWU	HOT WATER UNIT	<div>AL-F1</div> aluminium
AS	ADJUSTABLE SHELF	L	LOUVRES METAL	<div>CN-F1</div> off-form concrete
APP	APPLIANCES	LN	LINEN	<div>CN-F2</div> concrete
CBD	CUPBOARD	M	MIRROR	<div>CN-F3</div> concrete
CLT	CROSS LAMINATED TIMBER	MB	METAL BALUSTRADE	<div>GT-F1</div> carpet
COL	COLUMN	MR	METAL ROOF	<div>GL-F1</div> glass type 1
CONC	CONCRETE	NGL	NATURAL GROUND LINE	<div>MI-F1</div> mirror
COS	CHECK ON SITE	OF	OVERFLOW	<div>MR-F1</div> metal roofing 1
CPT	CARPET	OG	OBSCURED GLAZING	<div>MR-F2</div> metal roofing 2
CT	COOK TOP	OV	OVEN	<div>MT-F1</div> sheet metal
D	DRAWER	P	PANTRY	<div>PC-F1</div> polished concrete
DP	DOWN PIPE	PBK	PAINTED BRICKWORK	<div>PF-F1</div> paint finish 1
DR	DRYER	PB	PLASTERBOARD	<div>PF-F2</div> paint finish 2
DW	DISH WASHER	PBM	PLASTERBOARD MOISTURE RESISTANT	<div>SO-F1</div> solid surface
EX	EXISTING	PR	PAINTED RENDER	<div>SS-F1</div> stainless steel
F	FIXED	R	RELOCATE	<div>ST-F1</div> stone type 1
FB	FACE BRICK	REF	REFRIGERATOR	<div>BS-F1</div> reconstituted stone
FC	FIBRE CEMENT SHEET	RB	ROBE	<div>TB-F1</div> solid timber
FCL	FINISHED CEILING LEVEL	RWT	RAIN WATER TANK	<div>TC-F1</div> timber cladding
FFL	FINISHED FLOOR LEVEL	SHR	SHOWER	<div>TD-F1</div> timber decking type 1
FGB	FRAMELESS GLASS BALUSTRADE	SK	SINK	<div>TF-F1</div> timber flooring type 1
FP	FIREPLACE	SL	SKYLIGHT	<div>TF-F2</div> timber flooring type 2
FS	FIXED SHELF	STK	STONework	<div>TS-F1</div> typical
FW	FLOOR WASTE	TBC	TO BE CONFIRMED	<div>TS-F2</div> tilted surface type 2
GB	GLASS BALUSTRADE	TC	TIMBER CLADDING	<div>TS-F3</div> tilted surface type 3
GD	GARAGE DOOR	TFB	TIMBER FLOOR BOARDS	
GL	GLAZING	TD	TIMBER DECKING BOARDS	
GO	GAS OUTLET	TUB	TUB (LAUNDRY)	
GPO	GENERAL PURPOSE OUTLET (DOUBLE)	TYP	TYPICAL	
GSS	GLAZED SHOWER SCREEN	VP	VENT PIPE	
GD	GRATED DRAIN	WC	TOILET	
H	HEIGHT	WM	WASHING MACHINE	
HTR	HEATED TOWEL RAIL	WPM	WATERPROOF MEMBRANE	

LEGEND	
<div></div>	EXISTING WALL
<div></div>	EXISTING WALL TO BE DEMOLISHED
<div></div>	MASONRY WALL
<div></div>	CLT WALL 80mm, 40mm INSULATION BOARD
<div></div>	WEATHERTIGHT MEMBRANE, 25mm
<div></div>	BATTENS & AIR GAP, EXTERNAL CLADDING
<div></div>	80mm INTERNAL CLT WALL
<div></div>	SMOKE DETECTOR
Note: Waterproofing of Wet Areas to comply with AS 3740. Membrane to comply with: To AS/NZS 4858. Extent of waterproofing: Waterproof or water resistant surfaces: To the requirements of NCC F1.7	

GENERAL NOTES

NOTE 1: ALL WORK TO BE COMPLETED IN ACCORDANCE WITH AUSTRALIAN STANDARDS AND NCC REQUIREMENTS.

NOTE 2: CONFIRM ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION.

NOTE 3: THE PROPOSED WORKS HAVE BEEN DESIGNED TO COMPLY WITH BASIX CERTIFICATE

NOTE 4: DEMOLISH ROOFING, ROOF FRAMING AND INTERNAL WALLS OF EXISTING RESIDENCE AS REQUIRED.

NOTE 5: RETAIN AND REUSE EXISTING BRICKS WHERE REQUIRED TO BRICK UP EXISTING OPENINGS AS NOTED IN THE DRAWINGS.

NOTE 6: PROVIDE FLOOR, WALL AND ROOF STRUCTURE AS REQUIRED AND TO ENGINEERS DETAILS.

NOTE 7: ALLOW TO PROVIDE NEW BRICK WALLS ONLY WHERE EXTENDING EXISTING WALLS, OR PATCHING UP, EXISTING EXTERNAL OPENING(S).

NOTE 8: PROVIDE NEW PLASTERBOARD CEILINGS AND WALLS WHERE INDICATED, UNLESS RETAINING EXISTING. WHERE EXISTING IS DAMAGED DURING CONSTRUCTION OR IS REQUIRED TO BE PATCHED UP, ALLOW TO MATCH EXISTING FINISH.

NOTE 9: PROVIDE NEW METAL ROOF SHEETING ON SARKING AND INSULATION TO NEW ROOF SURFACES. ALLOW TO FLASH AND CAP AS REQUIRED FOR WATERTIGHT FINISH.

NOTE 11: ALLOW FOR TIMBER FLOOR FRAMING TO ENGINEERS DETAILS. PROVIDE FLOOR FINISHES NOTED ON THE DRAWINGS. PROVIDE APPROPRIATE SETDOWNS TO ENSURE DIFFERENT FLOOR FINISHES, FINISH FLUSH.

NOTE 12: ALLOW FOR GUTTERS AND DOWNPIPES AS REQUIRED TO CONNECT TO THE EXISTING STORMWATER SYSTEM.

NOTE 13: PROVIDE INSULATION WITH MINIMUM INSULATING PROPERTIES AS SPECIFIED IN THE BASIX CERTIFICATION ATTACHED TO THIS APPLICATION.

NOTE 14: ALLOW TO PROVIDE TIMBER OR ALUMINIUM FRAMED WINDOWS AND DOORS TO ALL NEW WINDOWS AND DOORS, INSTALL FRAMING AND GLAZING IN ACCORDANCE WITH THE REQUIREMENTS OF THE BASIX CERTIFICATE.

NOTE 15: ALLOW TO CONNECT TO EXISTING ELECTRICAL AND SEWERAGE MAINS CONNECTION.

NOTE 16: RETAIN EXISTING METERBOX.

NOTE 17: ALLOW TO RETAIN ALL EXISTING BOUNDARY FENCING WHERE INDICATED

NOTE 18: NO LANDSCAPE WORK IS INCLUDED IN THE CONTRACT WORKS.

NOTE 19: REFER TO ALL OTHER CONSULTANTS DOCUMENTATION FOR FURTHER DETAIL.

NOTE 20: WATERPROOFING OF WET AREAS TO COMPLY WITH AS 3740-21-2. EXTENT OF WATERPROOFING TO COMPLY WITH AS/NZS 4858. EXTENT OF WATERPROOFING AND WATER RESISTANT SURFACES TO COMPLY WITH NCC F1.7

NOTE 21: ALLOW FOR ALL WORKS REQUIRED FOR THE INSTALLATION & OPERATION OF ALL FIXTURES, FITTINGS & EQUIPMENT. PROVIDE POWER FOR ALL EQUIPMENT & APPLIANCES.

NatHERS / BASIX COMMITMENTS. CERTIFICATE NO. 1317217S

NatHERS Specs Summary:

- Floor slabs:
 - Concrete ground floor: to entry/living, bedrooms, wet areas.
 - Timber ground floor: to kitchen, living/dining. R1 floor insulation.
- Timber first floor.

- Exterior walls:
 - Lightweight clad wall with foil + R3.5 batts in cavity to plasterboard lining, or wall system reaching a total R-value (R3.86).
- All external wall materials modelled light colour finishes as per plans.

- Glazing:
 - Single clear glass, with aluminium framing:
 - Modelled to garage glazing.
 - Type A (U-Value: 6.7, SHGC: 0.57).
 - Type B (U-Value: 6.7, SHGC: 0.70).

Thermally broken double glazed – clear glass:

- To all remaining glazing.
- Type A (U-Value: 3.6, SHGC: 0.47).
- Type B (U-Value: 3.6, SHGC: 0.54).

Thermally broken double glazed – low solar gain Low-E glass:

- To all remaining glazing.
- Type A (U-Value: 3.1, SHGC: 0.27).
- Type B (U-Value: 3.1, SHGC: 0.27).

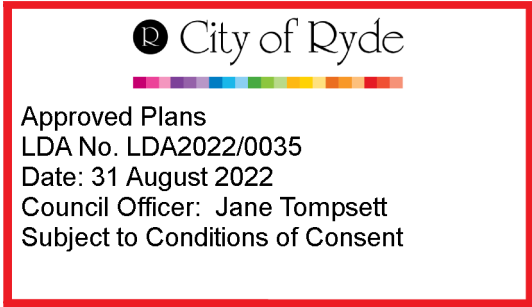
Double Glazed Skylights:

- U-Value: 4.2, SHGC: 0.72).

U-Value & SHGC are combined glass and frame figures.

- Ceiling:
 - R3.5 ceiling insulation to all ceilings to metal roof.
- 2 x 1400mm ceiling fan to be installed in living/dining room.
- 1 x 1400mm ceiling fan to be installed in entry/living area.
- 1 x 1400mm ceiling fan to be installed in each bedroom.
- 1 x 1400mm ceiling fan to be installed in study area.
- 2 x 1400mm ceiling fans to be installed in music/guest room.
- Modelled with sealed: LED downlights & wet area exhaust fans.

- Roof:
 - Metal roofs with “Anticon 90” glasswool/foil under (or similar R2.0 rated product), modelled with light colour finishes, and as ventilated.
- Please refer to NatHERS individual certificates for further details.



FOR DEVELOPMENT APPLICATION ONLY



LOCATION PLAN SITE AREA 577.5m2 LOT 27 DP 35543

PROJECT

NEW HOUSE
28 DONNELLY ST
PUTNEY NSW

ARCHITECT

Still Space Architecture Pty Ltd
Nina Still
Ph 0419 625 464 E: hello@stillspace.com.au

HYDRAULIC ENGINEER

NB Consulting Engineers Pty Ltd
Ph 02 9984 700 E: nb@nbconsulting.com.au

LANDSCAPE ARCHITECT

Outdoor Establishments
Ph 02 9966 8630 E: design@outdoorestablishments.com.au

SURVEYOR

Total Surveying Solutions
Ph 1300 877 000 E: info@totalsurveying.com.au

ARBORIST

Rain Tree Consulting
Ph 0419 250 248 E: mark@raintreeconsulting.com.au

STAGE

DA

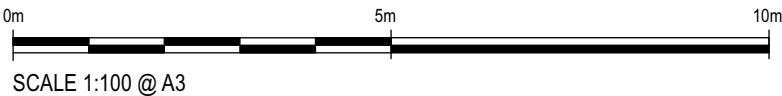
DATE

JULY 2022

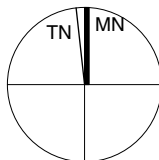
DRAWING SCHEDULE

SURVEY PLAN		
DA	000	TITLE
DA	001	LOCATION & SITE PLAN
DA	002	DEMOLITION PLAN Tree Removal only
DA	003	PROPOSED LOWER FLOOR PLAN
DA	004	PROPOSED GROUND FLOOR PLAN
DA	005	PROPOSED FIRST FLOOR PLAN
DA	006	PROPOSED ROOF PLAN
DA	007	PROPOSED ELEVATIONS & FINISHES
DA	008	PROPOSED SECTION 1
DA	009	PROPOSED SECTIONS & FINSHES
DA	010	SETBACKS
DA	011	GFA CALCULATIONS
DA	012	BASIX CERTIFICATE
DA	013	DRIVEWAY CROSSOVER
DA	014	SWMP
DA	100	TREE ZONE PLAN
DA	101	GFA & LANDSCAPE PLAN
DA	102	SITE PHOTOS
DA	200	CONCEPT RENDERING
DA	201	SUN SHADOW DIAGRAMS

Issue	Description	Date



NOTES:
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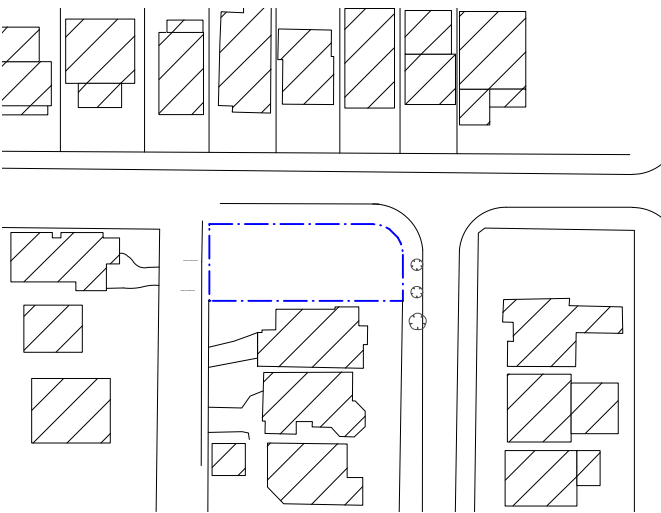
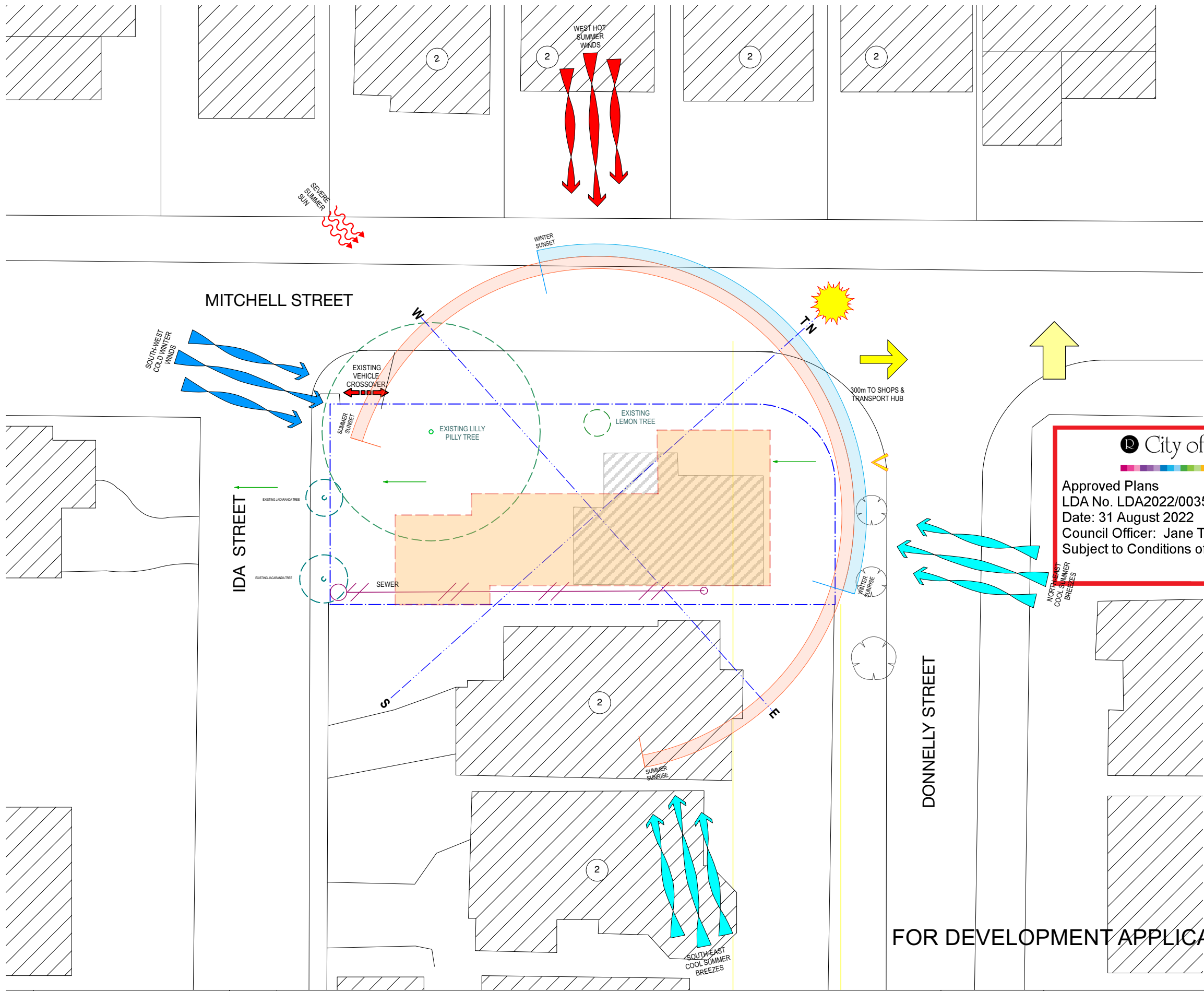


Still Space

Architecture Pty Ltd
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Nina Still ARB: 9333

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M: 0419 625 464

TITLE	TITLE PAGE	DA
PROJECT	NEW RESIDENCE	
ADDRESS	28 DONNELLY ST PUTNEY	
CLIENT	S & L CHAN	
SCALE	Refer to scale bar	
DATE	JULY 2022	A00
		A

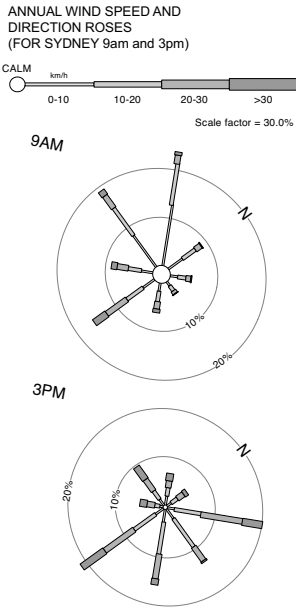


LOCATION SITE PLAN

Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

LEGEND:

- EXISTING BUILDINGS
- PROPOSED DEVELOPMENT ADDITIONS/ALTERATIONS
- NEIGHBOURING BUILDINGS
- STREET TREE
- SUBJECT SITE BOUNDARY
- INDICATIVE OVERLAND FLOWPATH
- PEDESTRIAN ACCESS
- BUILDING HEIGHT - 2 STOREY
- VIEWS THROUGH SITE

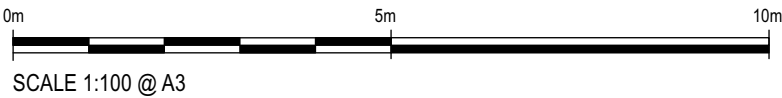


SITE AREA 577.5m2 LOT 27 DP 35543

SITE ANALYSIS PLAN

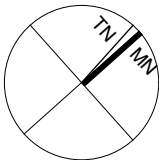
FOR DEVELOPMENT APPLICATION ONLY

Issue	Description	Date



SCALE 1:100 @ A3

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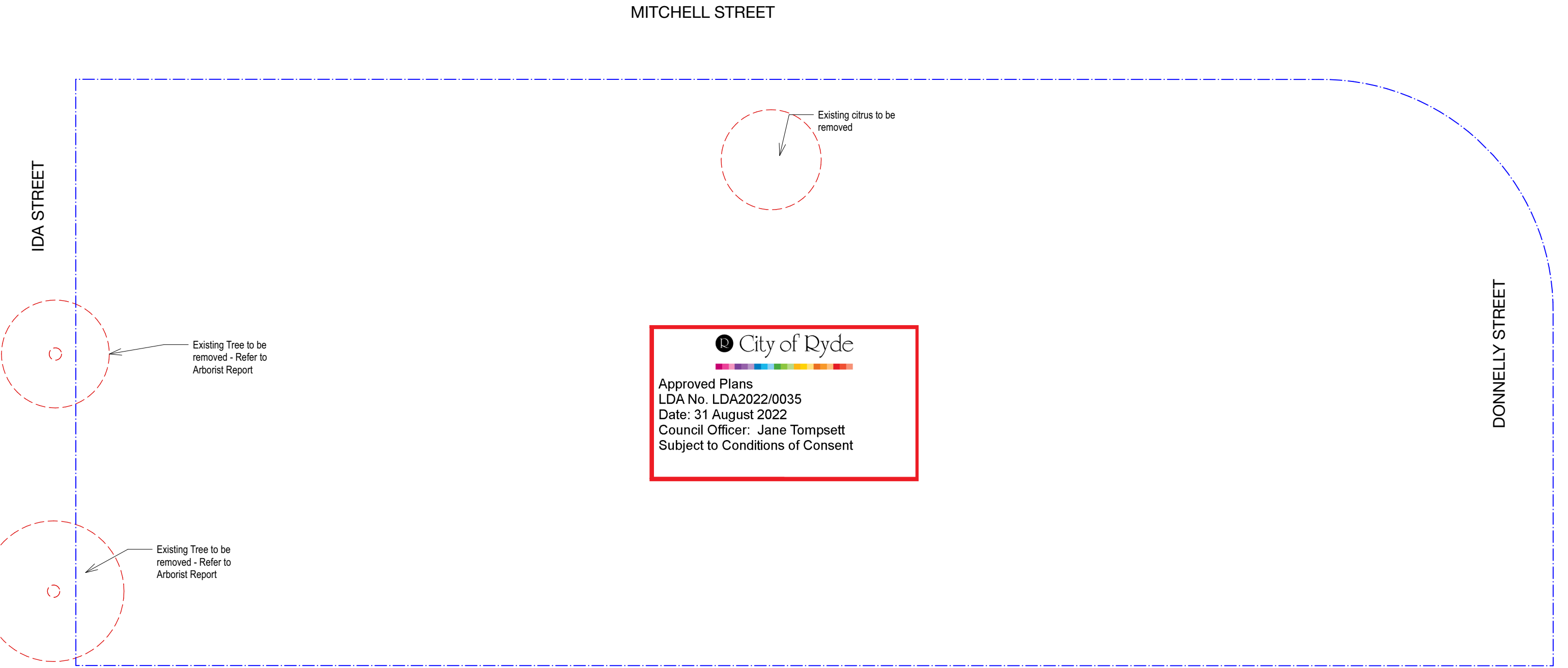
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TITLE	SITE PLAN
PROJECT	NEW RESIDENCE
ADDRESS	28 DONNELLY ST PUTNEY
CLIENT	S & L CHAN
SCALE	Refer to scale bar
DATE	JULY 2022

DA

A001

A



LEGEND

EXISTING WALL

EXISTING WALL TO BE DEMOLISHED

MASONRY WALL

CLT WALL 80mm, 40mm INSULATION BOARD
WEATHERTIGHT MEMBRANE, 25mm
BATTENS & AIR GAP, EXTERNAL CLADDING

80mm INTERNAL CLT WALL

SMOKE DETECTOR

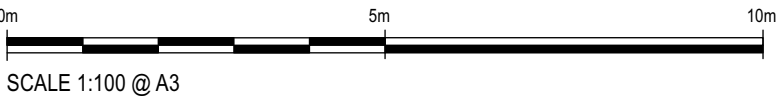
Note:
Waterproofing of Wet Areas to comply with AS 3740.
Membrane to comply with: To AS/NZS 4858.

Extent of waterproofing:
Waterproof or water resistant surfaces:
To the requirements of NCC F1.7

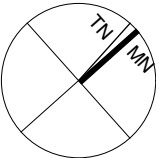
FOR DEVELOPMENT APPLICATION ONLY

DEMOLITION PLAN

Issue	Description	Date



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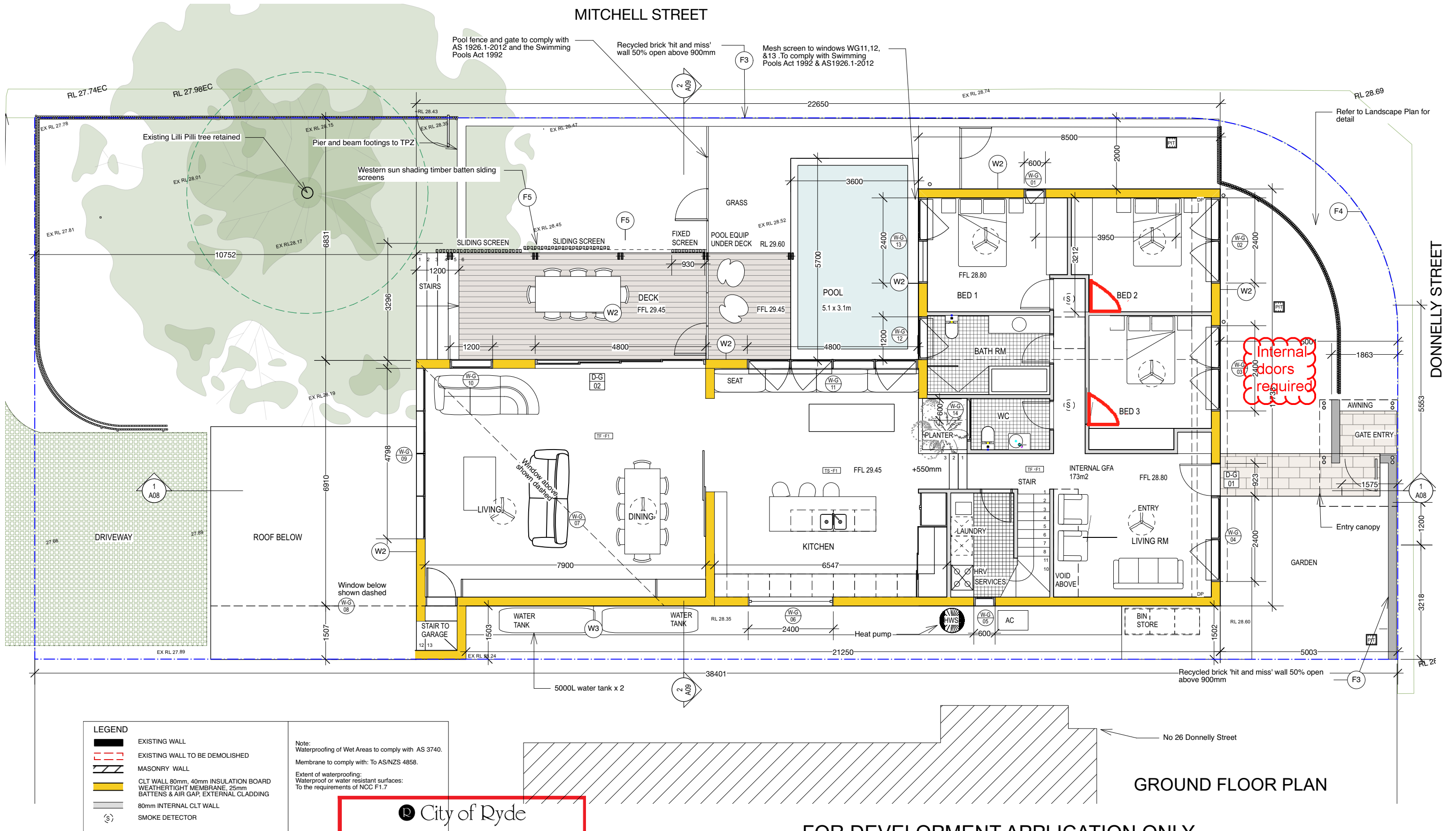
W: www.stillspace.com.au
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M: 0419 625 464

TITLE	DEMOLITION PLAN
PROJECT	NEW RESIDENCE
ADDRESS	28 DONNELLY ST PUTNEY
CLIENT	S & L CHAN
SCALE	Refer to scale bar
DATE	JULY 2022

DA

A002

A

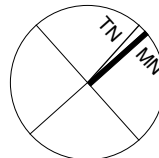


Issue	Description	Date



Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

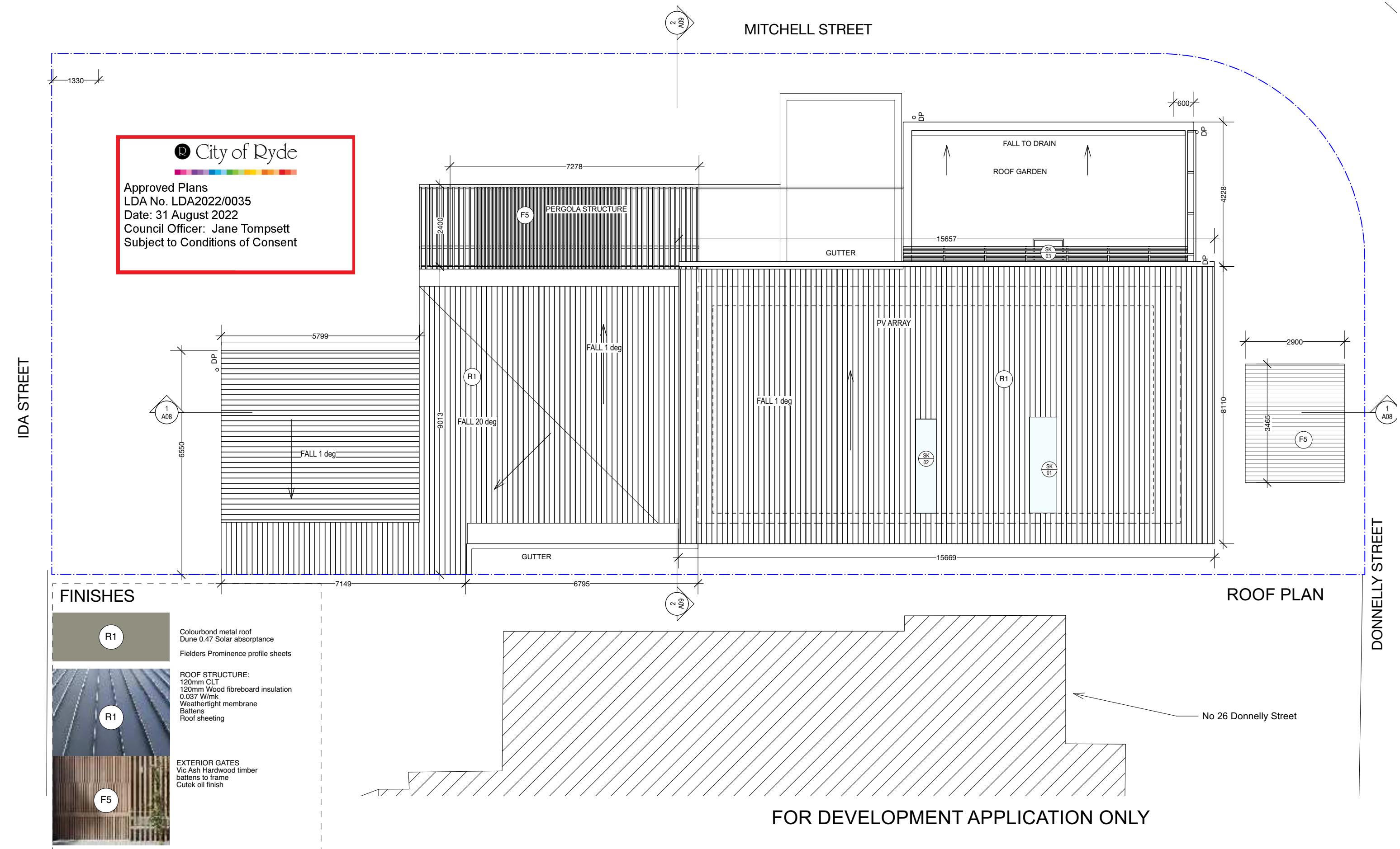
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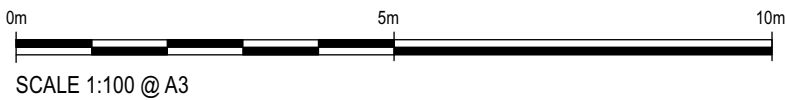
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TITLE	FLOOR PLAN GFP
PROJECT	NEW RESIDENCE
ADDRESS	28 DONNELLY ST PUTNEY
CLIENT	S & L CHAN
SCALE	Refer to scale bar
DATE	JULY 2022

DA
A004
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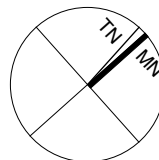


Issue	Description	Date



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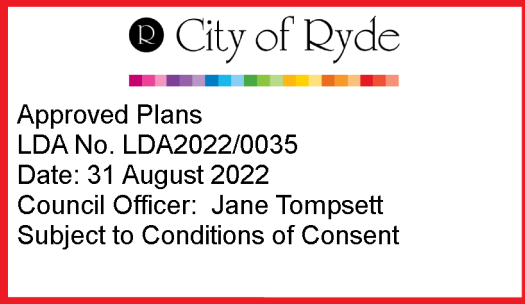
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TITLE	ROOF PLAN
PROJECT	NEW RESIDENCE
ADDRESS	28 DONNELLY ST PUTNEY
CLIENT	S & L CHAN
SCALE	Refer to scale bar
DATE	JULY 2022

DA

A006

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FOR DEVELOPMENT APPLICATION ONLY

Issue	Description	Date

SCALE 1:200 @ A1

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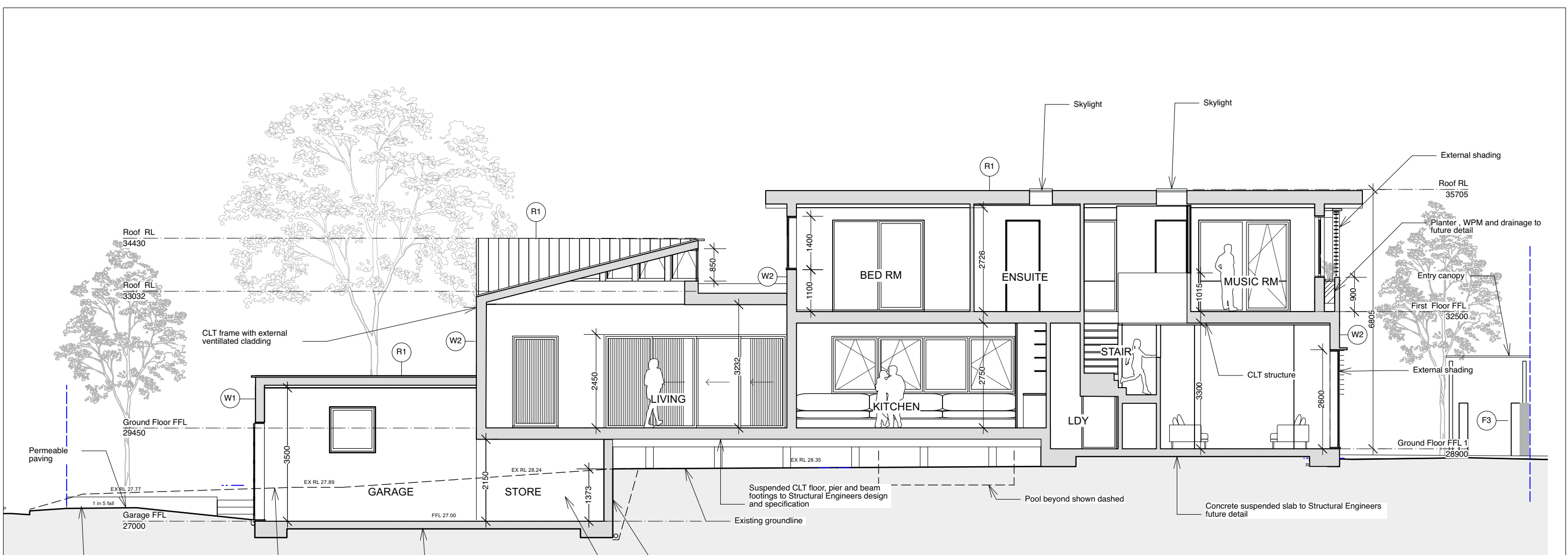
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 M: 0419 625 464

TITLE	ELEVATIONS
PROJECT	NEW RESIDENCE
ADDRESS	28 DONNELLY ST PUTNEY
CLIENT	S & L CHAN
SCALE	Refer to scale bar
DATE	JULY 2022


DA

A007

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SITE SECTION 1



City of Ryde

Approved Plans

LDA No. LDA2022/0035

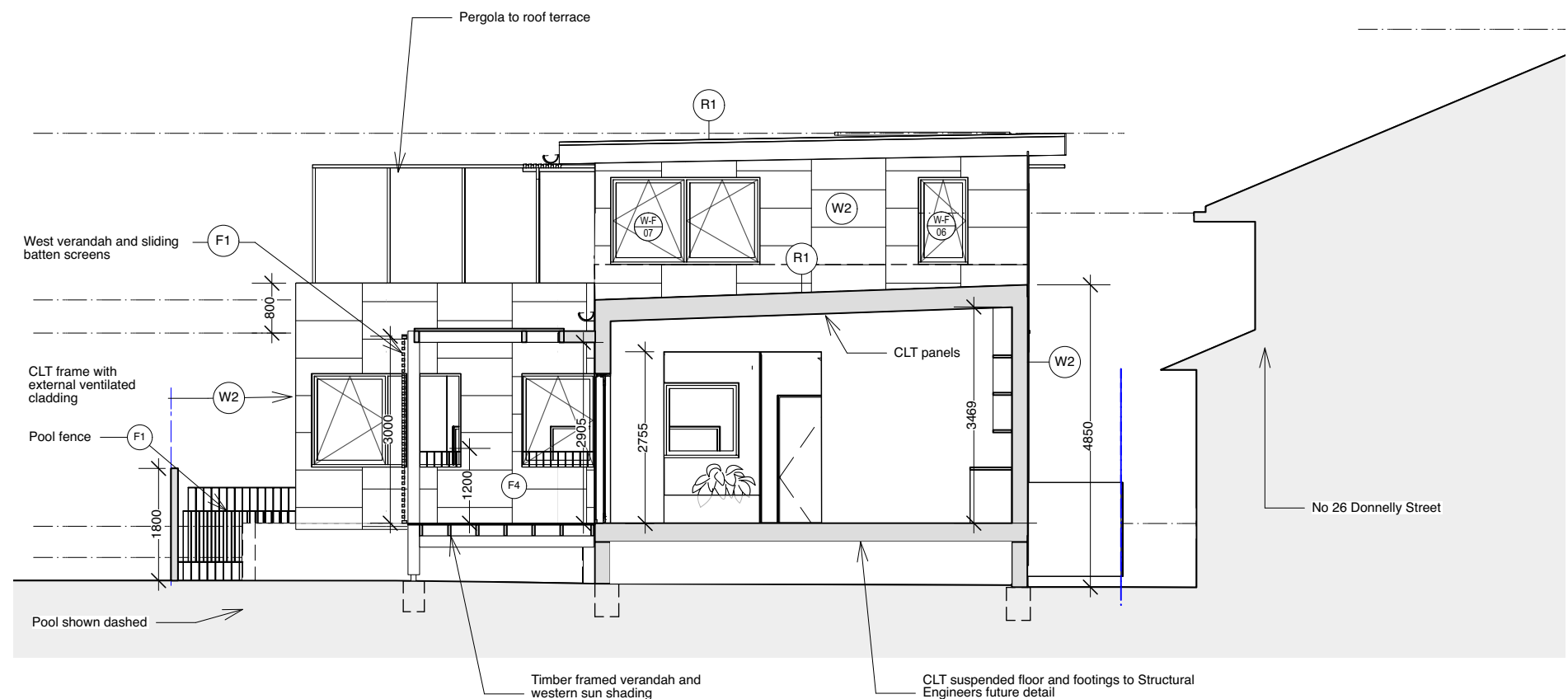
Date: 31 August 2022

Council Officer: Jane Tompsett

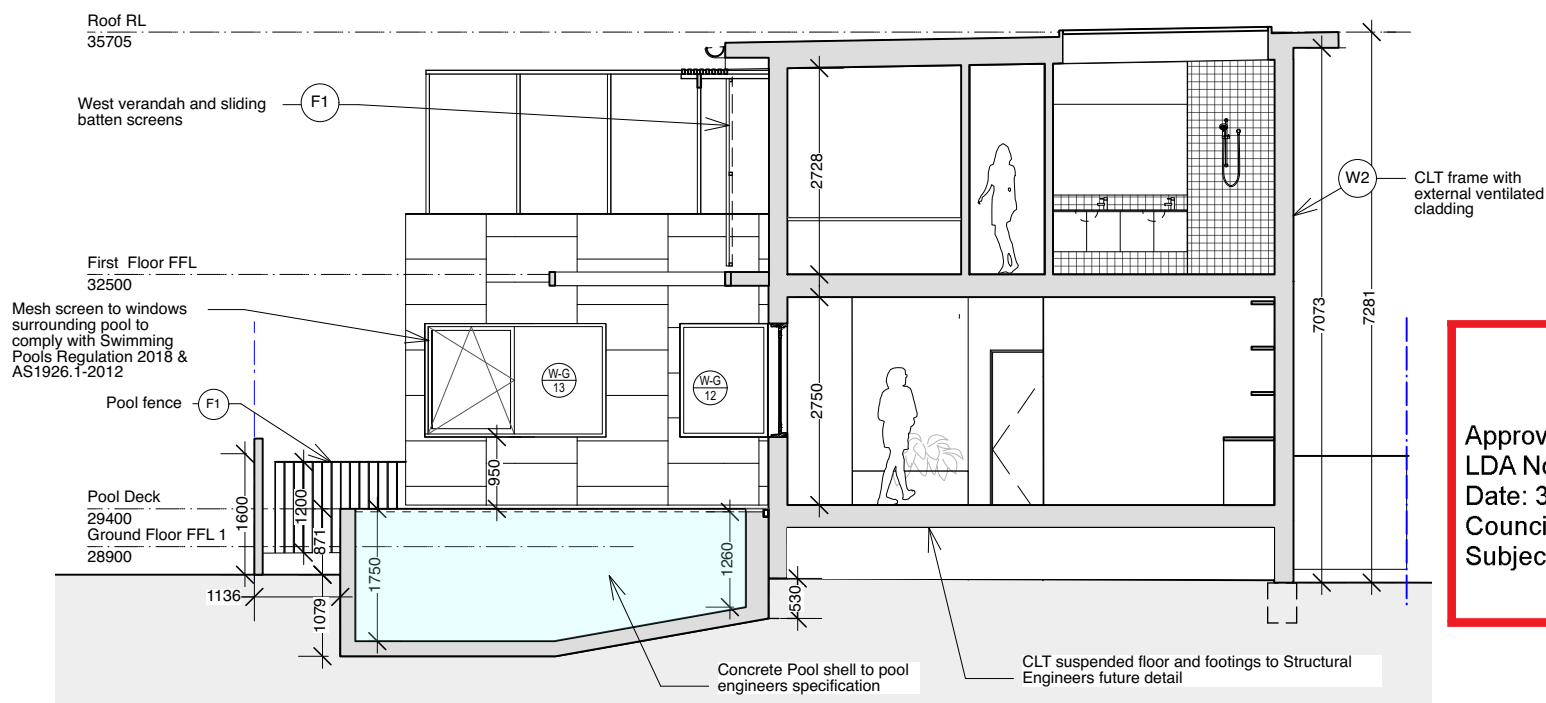
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FOR DEVELOPMENT APPLICATION ONLY

Issue	Description	Date	<div><div><div>0m5m10m</div><div>SCALE 1:100 @ A3</div></div><div><div>NOTES:</div><div>- Verify all dimensions on site. Do not scale drawings. Notify Architect of any discrepancies. If in doubt Ask.</div><div>- Comply with all relevant Codes, Standards and Authority requirements. Drawings to be read in conjunction with all other Consultants drawings and reports.</div><div>- All survey information and proposed building and finished surface levels shown are based on levels obtained from Surveyors drawing.</div><div>- No claim arising from neglect of these precautions shall be admitted.</div><div>- Copyright remains the property of Still Space Architecture Pty Ltd.</div></div></div> <div><div><div>TN</div><div>MN</div></div><div><div>Still Space Architecture</div><div>Architecture Pty Ltd</div><div>ABN: 49 623 852 282</div><div>Nina Still RAIA ARB: 9333</div><div>W: www.stillspace.com.au</div><div>E: nina@stillspace.com.au</div><div>M: 0419 625 464</div></div></div>	TITLE	SECTION	DA
				PROJECT	NEW RESIDENCE	
				ADDRESS	28 DONNELLY ST PUTNEY	
				CLIENT	S & L CHAN	
				SCALE	Refer to scale bar	
				DATE	JULY 2022	A008
					A	

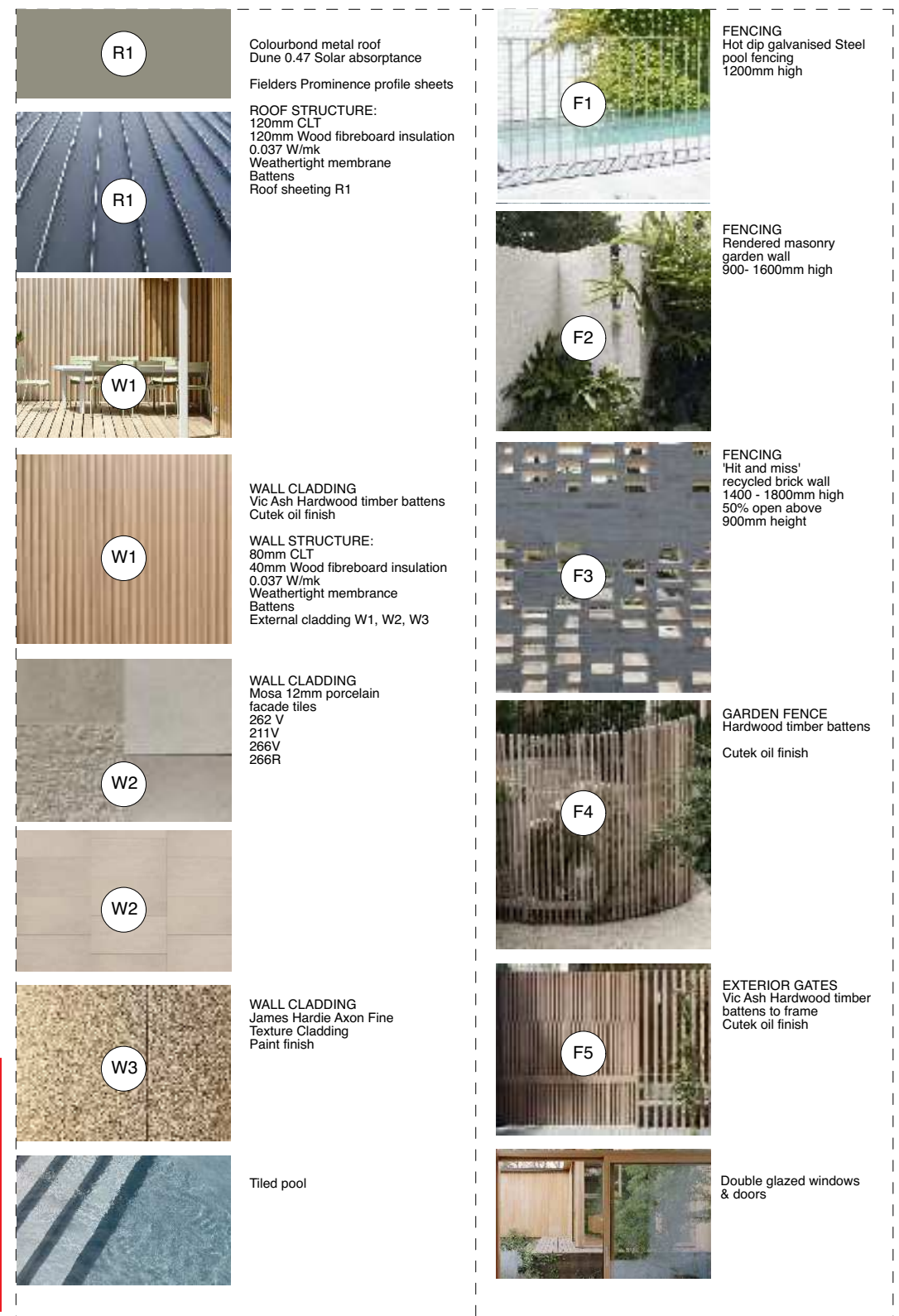


SECTION 2



SECTION 3 POOL

FINISHES & MATERIALS



FOR DEVELOPMENT APPLICATION ONLY

Issue	Description	Date

0m

5m

10m

SCALE 1:100 @ A3

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TITLE	SECTION & FINISHES	DA
PROJECT	NEW RESIDENCE	
ADDRESS	28 DONNELLY ST PUTNEY	
CLIENT	S & L CHAN	
SCALE	Refer to scale bar	
DATE	JULY 2022	A009
		A

Single Dwelling

Certificate number: 1317217S

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 Definitions" dated 10/09/2020 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary
Date of issue: Tuesday, 12 July 2022
To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	28 Donnelly St, Putney	
Street address	28 Donnelly Street Putney 2112	
Local Government Area	Ryde City Council	
Plan type and plan number	deposited 35543	
Lot no.	27	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 57	Target 50

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.	✓	✓	✓
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.	✓	✓	✓
The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓



Floor and wall construction	Area
floor - concrete slab on ground	90.0 square metres
floor - suspended floor/enclosed subfloor	91.0 square metres
floor - suspended floor above garage	All or part of floor area

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: electric heat pump.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: airconditioning ducting only; Energy rating: n/a		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: airconditioning ducting only; Energy rating: n/a		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: airconditioning ducting only; Energy rating: n/a		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: airconditioning ducting only; Energy rating: n/a		✓	✓

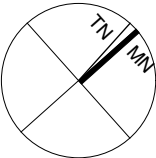
Ventilation			
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps: • at least 5 of the bedrooms / study; dedicated		✓	✓
• at least 3 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓
• all bathrooms/toilets; dedicated		✓	✓
• the laundry; dedicated		✓	✓
• all hallways; dedicated		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.	✓	✓	✓
The applicant must install a window and/or skylight in 3 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Swimming pool			
The applicant must install the following heating system for the swimming pool in the development (or alternatively must not install any heating system for the swimming pool): electric resistance		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system with the capacity to generate at least 3 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
Water Commitments			
Fixtures			
The applicant must install showerheads with a minimum rating of 4 star (> 4.5 but <= 6 L/min plus spray force and/or coverage tests) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 3 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 4500 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 rain runoff from at least 100 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: • all toilets in the development		✓	✓
• at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)		✓	✓
• a tap that is located within 10 metres of the swimming pool in the development		✓	✓
Swimming pool			
The swimming pool must not have a volume greater than 25 kilolitres.	✓	✓	
The swimming pool must have a pool cover.		✓	
The swimming pool must be outdoors.	✓	✓	

FOR DEVELOPMENT APPLICATION ONLY

Issue	Description	Date



Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

NOTES:
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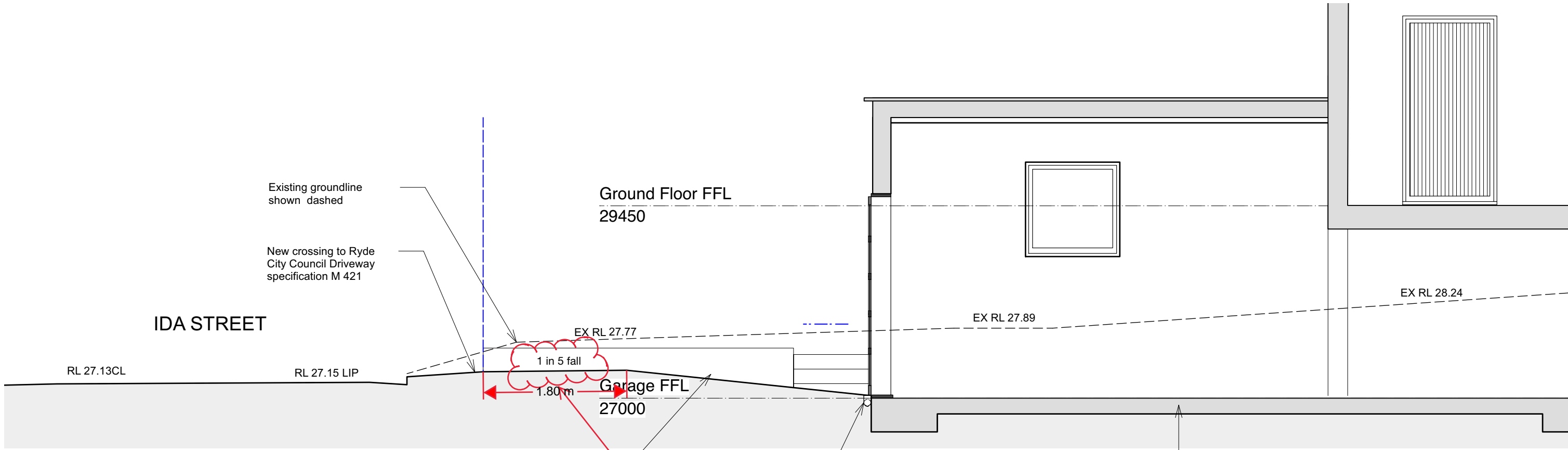
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Architecture Pty Ltd
ABN: 49 623 852 282
Nina Still RAIA ARB: 9333

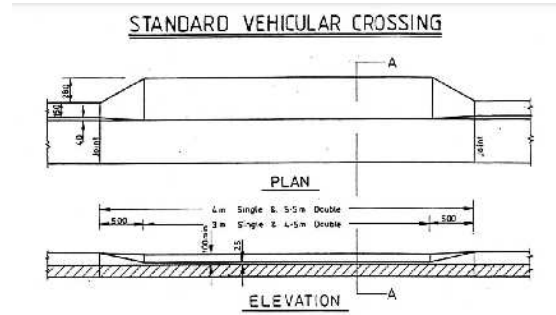
W: www.stillspace.com.au
E: nina@stillspace.com.au
M: 0419 625 464

TITLE	BASIX CERTIFICATE
PROJECT	NEW RESIDENCE
ADDRESS	28 DONNELLY ST PUTNEY
CLIENT	S & L CHAN
SCALE	Refer to scale bar
DATE	JULY 2022

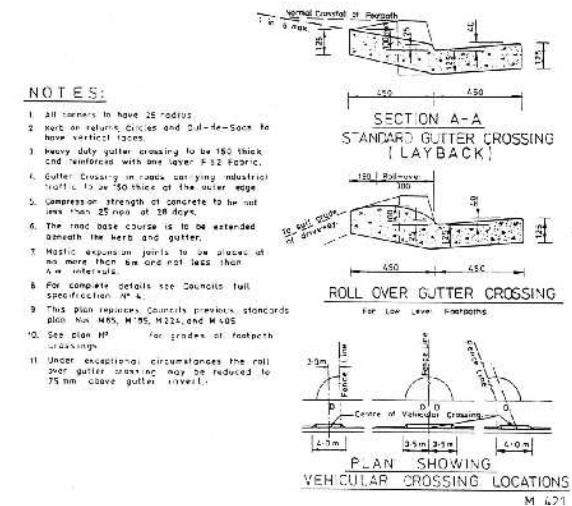
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DRIVEWAY SECTION



AS 2890.1
3.5 GRADIENTS OF DOMESTIC DRIVEWAYS Maximum gradients of driveways at domestic properties (see Clause 1.2.11) shall be as follows:
(a) Across footpath, i.e. between edge of the frontage roadway and property line — 1 in 20 (5%).
(b) Within the property — 1 in 5 (20%).
Grade changes should be designed and checked in accordance with Appendix D to ensure that vehicles will not scrape their undersides when negotiating them. Transitions may be required (see Clause 2.5.3(c)).



The proposed grade appears to be erroneous. The driveway profile shall be updated to reflect the proposed levels on the driveway ramp and in accordance with AS2890.1.2004.

City of Ryde

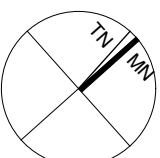
Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

FOR DEVELOPMENT APPLICATION ONLY

Issue	Description	Date



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TITLE	DRIVEWAY CROSSOVER
PROJECT	NEW RESIDENCE
ADDRESS	28 DONNELLY ST PUTNEY
CLIENT	S & L CHAN
SCALE	Refer to scale bar
DATE	JULY 2022

DA

A013

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Notice of Sediment and Erosion Control

Sediment and erosion control shall be effectively maintained at all during the course of construction as well as immediately after storm events and shall be repaired or replaced such that the barriers at the site are fully functional at all times and shall not be removed until the site has been stabilised or landscaped to the principal's satisfaction.

The contractor shall ensure that no spoil or fill encroaches upon adjacent areas for the duration of works.

The contractor shall ensure that kerb inlets and drains receiving stormwater shall be protected at all times during development.

Sediment fencing shall be secured by post (where metal star pickets are used plastic safety caps shall be used) at 2 metre intervals with geotextile fabric embedded at 200mm into soil.

All topsoil stripped from the site and stockpiled so it does not interfere with drainage lines and stormwater inlets and will be suitably covered with an impervious membrane material and screened by sediment fencing.

Subsoil drainage shall be provided to all retaining walls and embankments, with the lines feeding into the stormwater drainage system.

All activities that have the potential to pollute must comply with the requirements of the *Environment Operations Act 1997 (PDEO Act 1997)*.

Excavation of the site shall be limited to the immediate construction area.

All vegetation not in the immediate work area shall be retained.

Any topsoil stripped from the site shall be stockpiled at the site for re-use (for example to landscape the site). The stockpile shall be located away from any stormwater flow path and protected from erosion.

Waste (including skip bins) and construction materials, equipment and sediment barriers shall be at no times placed in public walkways, verges, Council roads or road reserves unless a permit has been obtained from Council.

Erosion and sediment control barriers shall be in place prior to the commencement of any earthworks at the site.

Erosion and sediment control barriers shall be emptied when not more than 40% capacity has been reached. Ensure all stormwater is directed away from the excavation area at all times, however in the event that the excavation site fills with water, water shall be removed in a manner that does not increase erosion, sedimentation or pollution of drainage systems whether natural or not.

Water may not be pumped directly across disturbed soil.

Any sediment spilled within the property or onto the roadways shall be removed and collected with a spade and dry broom (without water) and disposed of so as to prevent further erosion and pollution of waterways.

Spilled sediment should never be washed or swept into a watercourse or inlet to a stormwater system.

During dry weather where there is potential for dust movement, a light spray of water shall be applied to the site at regular intervals to avoid transfer of sediment, however, the water shall not be applied in such a way as to create runoff.

Sub-surface components of the site drainage system shall be installed to working order prior to the construction of any building.

Following building works where large areas of soil have been exposed, the land shall be fully protected from erosion from vegetation or other soil stabilisation within 20 days of completion of building works.

Vehicle loads of waste and construction material must be covered during transportation and must comply with the *POEO Act 1997* and the *Road Transport Act (NSW)1999*.

Stripping and excavation of the site shall not commence until such time as all necessary approvals have been obtained.

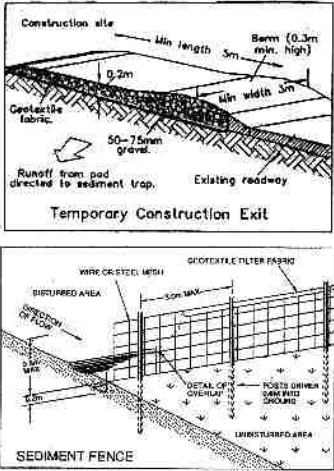
Prior to the installation of any roof material on a building, all necessary downpipes and gutters must be fixed and connected to the approved sub-surface draining system.

Unless specifically required to carry out the plans, stripping of the site shall be staged and the site shall not be wholly stripped at any one time.

The stormwater disposal system shall be installed at the earliest stage possible.

Excavated topsoil shall not be stockpiled at the site for any period greater than two weeks.

Landscaping works or temporary stabilisation with geotextile fabric shall be implemented at the earliest stage to ensure stabilisation of the soil.



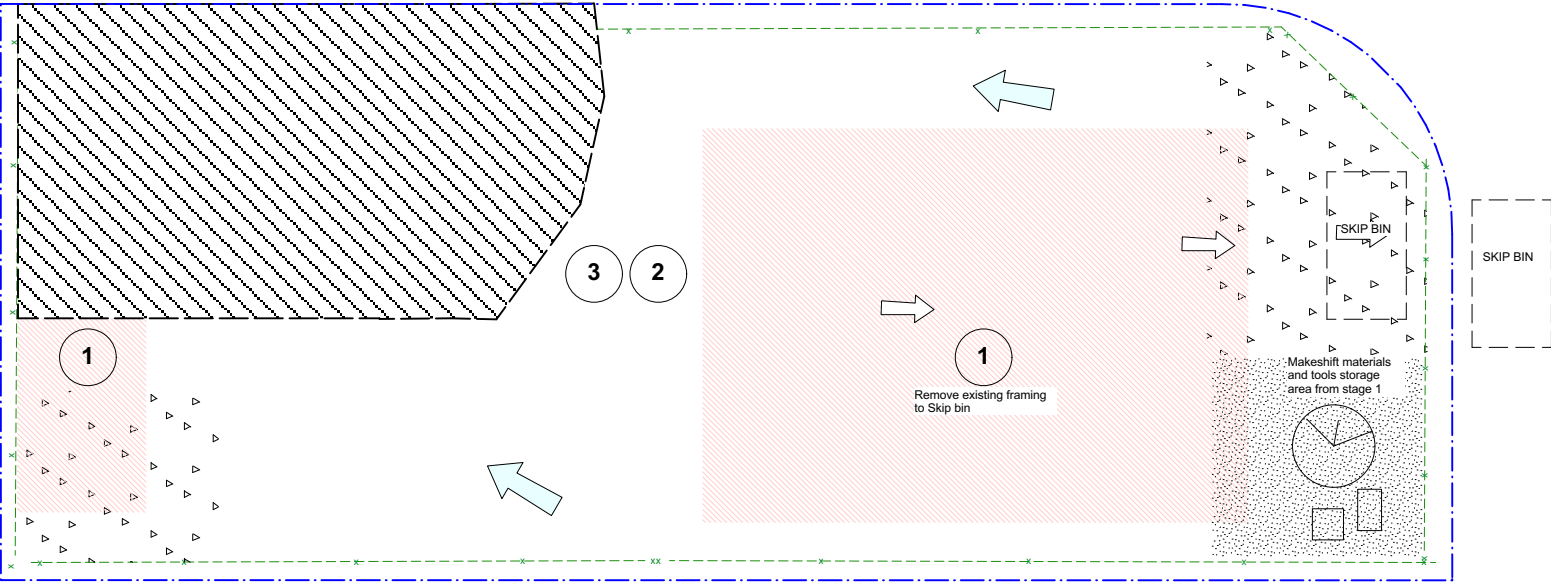
NOTES:

1. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSPECTED AND MAINTAINED DAILY BY THE SITE MANAGER.
2. MINIMISE DISTURBED AREAS.
3. ALL LOOSE MATERIAL STOCKPILES TO BE COVERED AND CLEAR OF ALL DRAINS, NATURAL WATER COURSES, GUTTERS AND FOOTPATHS.
4. ROAD AND FOOTPATH TO BE SWEEPED DAILY.
5. STABILIZE AND REVEGETATE SITE BEFORE REMOVING EROSION AND SEDIMENT DEVICES.
6. DRAINAGE TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
7. EXCESS MATERIALS (CEMENT, CONCRETE SLURRY, WATER AND SOLVENT FOR CLEANING PAINT BRUSHES AND TOOLS) MUST NOT BE WASHED INTO THE STORMWATER SYSTEM.

IDA STREET

MITCHELL STREET

DONNELLY STREET



GENERAL CONSTRUCTION PROCESS: STAGING

1. Demolition of existing structures, clearing of site of vegetation. Es accordance to Arborist report. **Demolition is subject to a separate application**
2. Construction of new house and external works
3. Remediation of landscaped areas, prepare for handover.

SITE WASTE MANAGEMENT PLAN

All Demolition to comply with the Work Health and Safety Regulation 2017

Water flowpath

Gravel access

Stockpile

Silt fence

Undisturbed vegetation

Demolished structure

Hardstand surface for vehicles & material storage

Tree protection zone

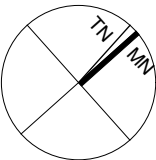


Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

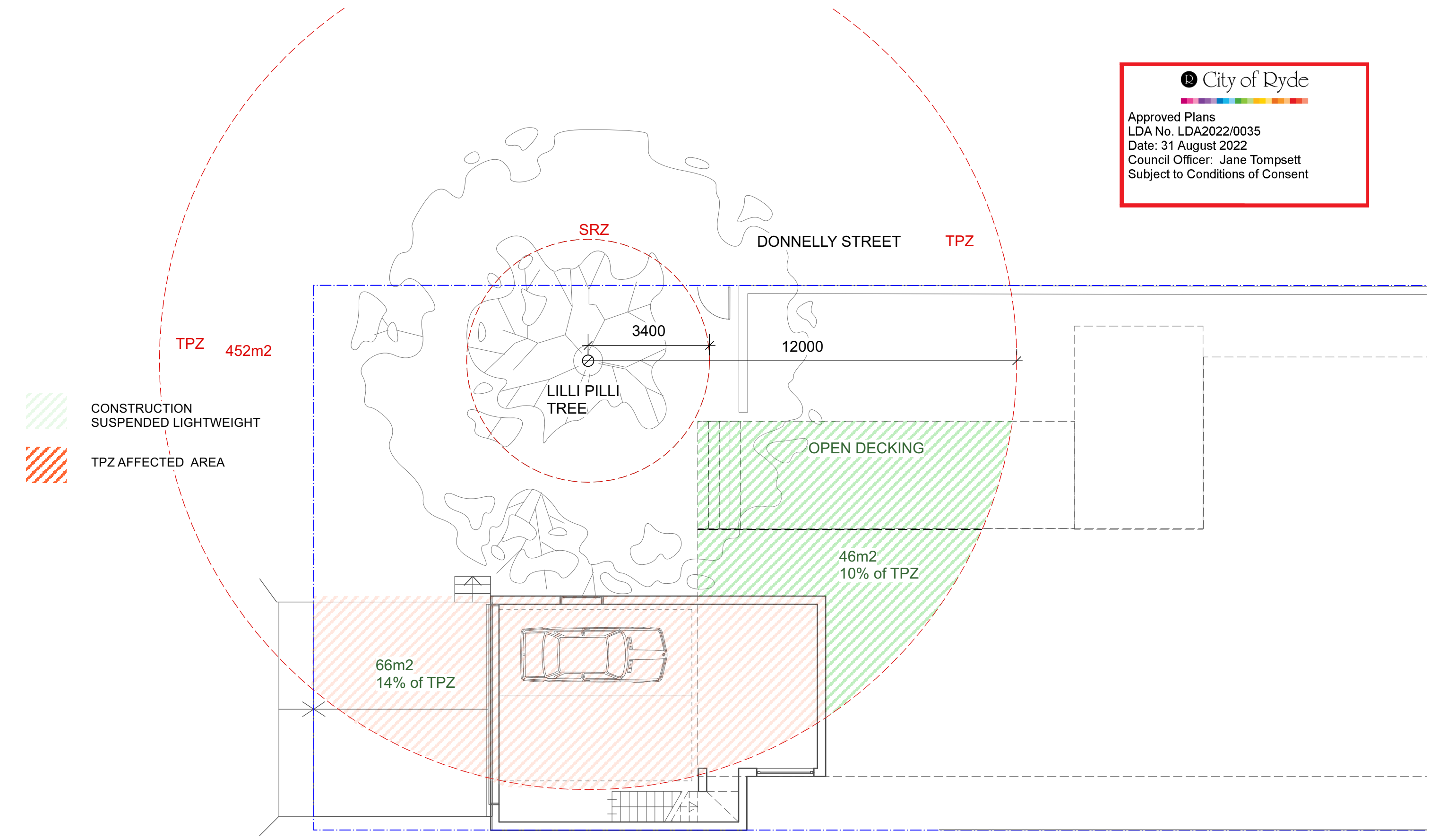
FOR DEVELOPMENT APPLICATION ONLY


Issue	Description	Date					TITLE	SWMP	DA A014 A
							PROJECT	NEW RESIDENCE	
							ADDRESS	28 DONNELLY ST PUTNEY	
							CLIENT	S & L CHAN	
							SCALE	Refer to scale bar	
							DATE	JULY 2022	

NOTES:
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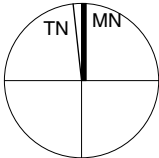
 City of Ryde

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Issue	Description	Date

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TITLE	TREE ZONE PLAN
PROJECT	NEW RESIDENCE
ADDRESS	28 DONNELLY ST PUTNEY
CLIENT	S & L CHAN
SCALE	Refer to scale bar
DATE	JULY 2022

DA

A100

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City of Ryde
Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
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CONCEPT RENDERINGS
Indicative only refer to Plans for detail

FOR DEVELOPMENT APPLICATION ONLY

Issue	Description	Date					TITLE	CONCEPT RENDERINGS	DA
							PROJECT	NEW RESIDENCE	
							ADDRESS	28 DONNELLY ST PUTNEY	
							CLIENT	S & L CHAN	
							SCALE	Refer to scale bar	
							DATE	JULY 2022	A

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outdoor establishments

in collaboration with



Donnelly Street Pool + Gardens

Landscape Concept Design for Development Application

S + L Chan c/o Still Space Architecture

28 Donnelly Street, Putney NSW 2112

landscape design package

L100	cover sheet + site plan	1:100 @ a1 / 1:200 @ a3
L101	landscape calculations + DCP notes	1:100 @ a1 / 1:200 @ a3
L102	landscape plan front garden	1:50 @ a1 / 1:100 @ a3
L103	landscape plan back garden	1:50 @ a1 / 1:100 @ a3
L104	landscape plan rooftop garden	1:50 @ a1 / 1:100 @ a3
L105	plant schedule + imagery	n/a

City of Ryde

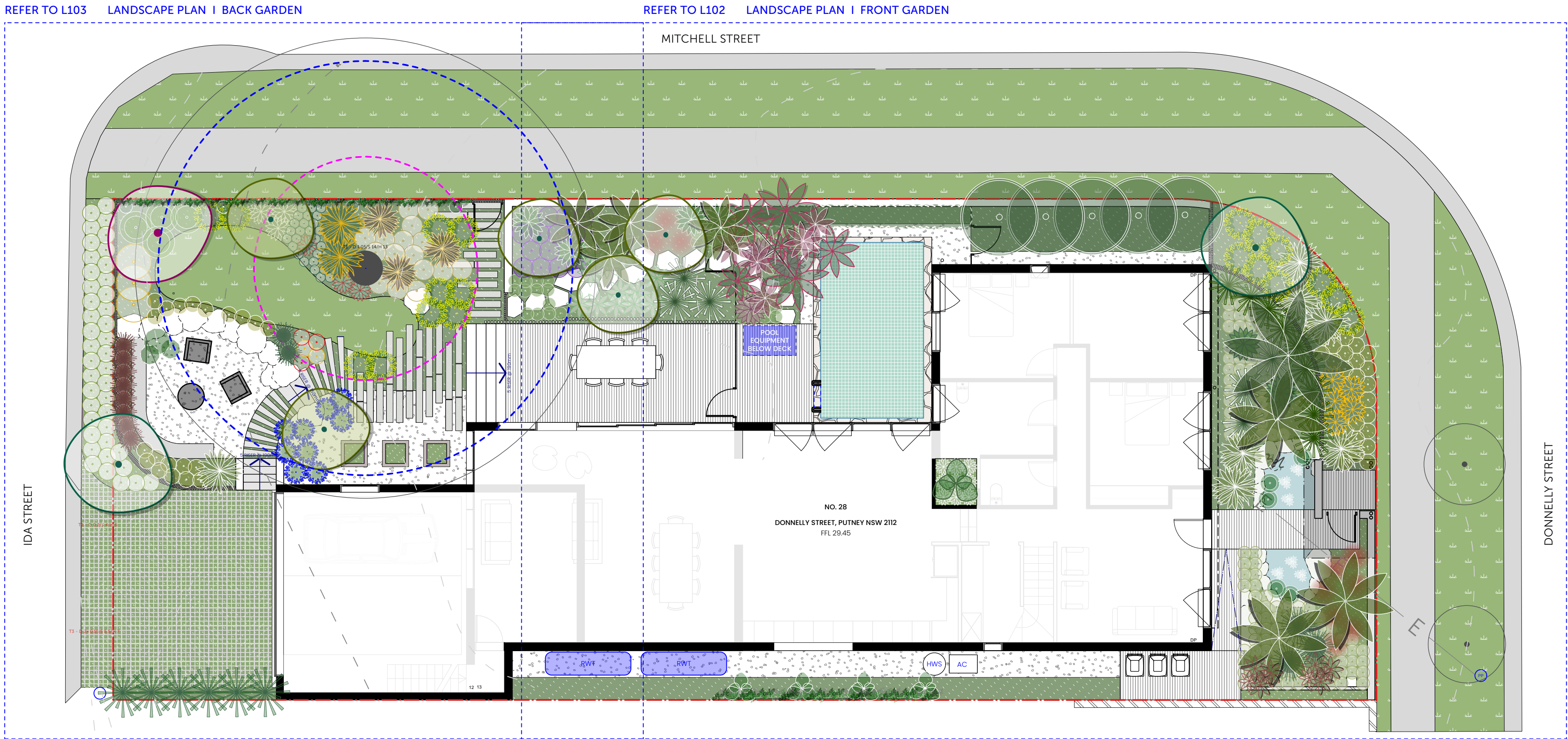
Approved Plans

LDA No. LDA2022/0035

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DEVELOPMENT APPLICATION GENERAL NOTES

PRELIMINARIES

1.01 GENERAL

- The landscape plans should be read in conjunction with the Architectural Plans, Engineer Plans and Survey prepared for the proposed development.

- Do not scale from drawings.

- All work to be carried out in accordance with the Landscape Technical Specification.

- All discrepancies or conflict to be brought to the attention of the Landscape Architect before construction or installation.

- All dimensions in mm unless stated otherwise.

- Use figured dimensions only.

- Verify all dimensions on site before the commencement of any works.

- Service location on plans are indicative only. Contractor shall locate and protect all services prior to construction.

- All work shall be carried out in accordance with current versions of Australian Standards, BCA and Local Government Regulations.

- Structural details shall be subject to Engineer's Specifications.

- Drainage shall be subject to Hydraulic Engineer's Specifications.

- All work shall be carried out in a professional manner by Qualified Tradesperson according to the Drawings & Specifications.

- This Landscape Drawings are copyright to Outdoor Establishments Pty Ltd.

1.02 PROTECTION OF ADJACENT FINISHES

The Contractor shall take all precautions to prevent damage to all or any adjacent finishes by providing adequate protection to these areas / surfaces prior to the commencement of the works.

1.03 PROTECTION OF EXISTING TREES

Existing trees identified to be retained shall be done so in accordance with *Protection of Trees on Development Sites AS4970-2009*. Where general works are occurring around such trees, or pruning is required, a qualified Arborist shall be engaged to oversee such works and manage tree health.

Existing trees designated on the drawing for retention shall be protected at all times during the construction period. Any soil within the drip-line of existing trees shall be excavated and removed by hand only. No stockpiling shall occur within the root zone of existing trees to be retained. Any roots larger in diameter than 50mm shall only be severed under instruction by a qualified arborist. Roots smaller than 50mm diameter shall be cut cleanly with a saw.

Temporary fencing shall be installed around the base of all trees to be retained prior to the commencement of landscape works. Where possible this fencing will be located around the drip line of these trees, or a minimum of 3m from the trunk. The fencing shall be maintained for the full construction period.

1.04 EROSION & POLLUTION CONTROL

The Contractor shall take all proper precautions to prevent the erosion of soil from the subject site. The Contractor shall install erosion & sediment control barriers and as required by council, and maintain these barriers throughout the construction period. Note that the sediment control measures adopted should reflect the soil type and erosion characteristics of the site.

Erosion & pollution control measures shall incorporate the following:

- Construction of a sediment trap at the vehicle access point to the subject site

- Sediment fencing using a geotextile filter fabric in the location indicated on the erosion control plan or as instructed on site by the Landscape Architect.

- Earth banks to prevent scour of stockpiles.

- Sandbag kerb sediment traps.

- Straw bale & geotextile sediment filter.

- Exposed banks shall be pegged with an approved Jute matting in preparation for mass planting.

SOFTWORKS

1.05 DRAINAGE

- All drainage works shall be constructed and stabilised as early as possible during development.

- Install new pits and grates to accommodate runoff from hard surfaces and connected to existing stormwater system to control flows.

- Subsoil drainage and ag. lines to be used in all garden beds.

1.06 IRRIGATION

- Irrigation is to comply with Council Conditions of Consent and Water Authorities.

- All turf and garden beds within the site boundary are to be irrigated unless stated otherwise.

- Irrigation spaced at min. 300mm centres and adjusted according to plant setout to provide adequate irrigation to all plants.

- Drip irrigation is to be fully concealed by 75mm min. of mulch.

1.07 MAINTENANCE

It is recommended a maintenance period of 12 months beginning from the approved completion of the specified construction work (Practical Completion). A qualified landscape maintenance contractor shall undertake the required landscape maintenance works.

This shall include, but not be limited to, the following items where and as required:

- Watering all planting and lawn areas / irrigation maintenance.

- Clearing litter and other debris from landscaped areas.

- Removing weeds, pruning and general plant maintenance.

- Replacement of damaged, stolen or unhealthy plants.

- Make good areas of soil subsidence or erosion.

- Topping up of mulched areas.

- Spray / treatment for insect and disease control.

- Fertilizing with approved fertilizers at correct rates.

- Mowing lawns & trimming edges each 14 days in summer or 18 days in winter.

- Adjusting ties to stakes.

- Maintenance of all paving, retaining and hardscape elements.

Donnelly Street Gardens

Cover Sheet + Site Plan

outdoor establishments

Project No.	210701
Stage	Development Application
Client	S + L Chan c/o Still Space Architecture
Address	28 Donnelly Street, Putney NSW 2112

Drawn By	SJ
Checked By	TG
Scale	1:100 @ A1/ 1:200 @A3
Date	13/07/22

Drawing No.	L100
Rev #	A

FOR DEVELOPMENT APPLICATION ONLY

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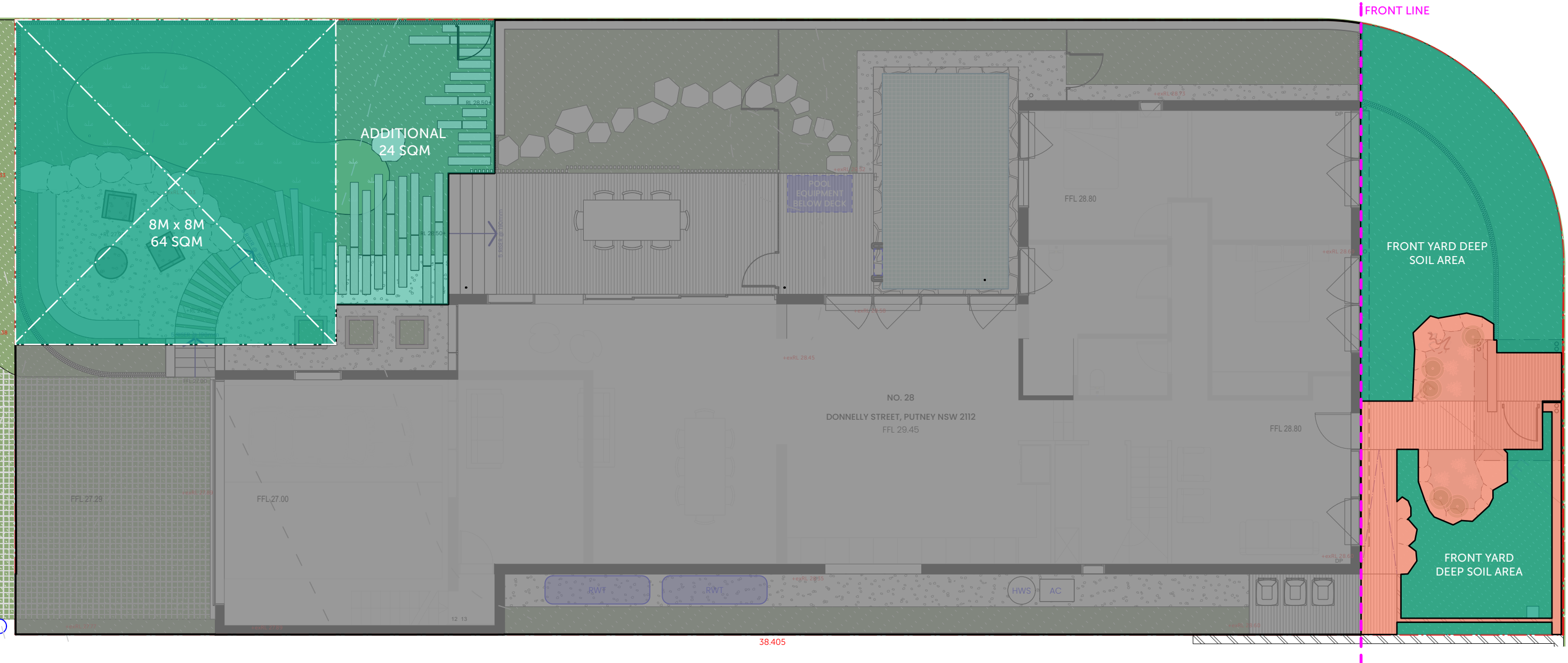
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I/65 NICHOLSON STREET ST LEONARDS SYDNEY NSW 2065

T: (02) 9966 8630

E: design@outdoorestablishments.com.au

MINIMUM DEEP SOIL AREA REQUIREMENTS - EXCEEDED



8 x 8M BACK GARDEN DEEP SOIL AREA 64 SQM	FRONT GARDEN (MAXIMUM 40%) HARD LANDSCAPE AREAS 21.5 SQM 38.34% ACHIEVED	FRONT GARDEN (MINIMUM 60%) DEEP SOIL AREAS 46.8 SQM 83.42% ACHIEVED	OTHER AREAS
---	---	--	-------------

PRIVATE OPEN SPACE



PRIVATE OPEN SPACE 48.3 SQM

EXISTING TREES SCHEDULE |

AS PER ARBORICULTURAL IMPACT ASSESSMENT REPORT BY RAIN TREE CONSULTING (29 JUNE 2022)

EXISTING TREE SCHEDULE				
	Species	Height x Spread (m)	DBH	Action
T1	Syzygium smithii	13 x 14	1050 mm	Retain
T2	Jacaranda mimosifolia	6 x 4	200mm	Remove
T3	Jacaranda mimosifolia	7 x 5.5	2 x 150mm	Remove

PROPOSED TREES QUANTITIES

PROPOSED TREES		
TREES/PALMS	Species	Quantities
	9	22

Donnelly Street Gardens

Landscape Calculations + DCP Notes

outdoor establishments

City of Ryde

Approved Plans

LDA No. LDA2022/0035

Date: 31 August 2022

Council Officer: Jane Tompsett

Subject to Conditions of Consent

SITE CALCULATIONS



SITE CALCULATION KEY: SITE AREA : 577.5 SQM

PERMIABLE AREAS 29.8 SQM 5.16%	NON PERMIABLE 98.3 SQM 17.01%	BUILDING AREA 237.8 SQM 41.17%	DEEP SOIL AREAS 35% REQUIRED 211.6 SQM 36.66% ACHIEVED
--------------------------------------	-------------------------------------	--------------------------------------	--

CITY OF RYDE DEVELOPMENT CONTROL PLAN 2014 | PART 3.3 DWELLING HOUSES AND DUAL OCCUPANCY

2.6.1 DEEP SOIL AREAS

DEEP SOIL AREAS ARE AREAS OF NATURAL GROUND WHICH HAVE A RELATIVELY NATURAL SOIL PROFILE. THEY ARE AREAS FREE OF STRUCTURES (INCLUDING UNDERGROUND STRUCTURES) AND HARD SURFACES. THEY ARE SUITABLE FOR THE GROWTH OF VEGETATION, PARTICULARLY MATURE TREES, AND IMPORTANTLY, THEY ALLOW WATER TO BE ABSORBED BY THE SOIL.

THE DEEP SOIL AREAS INCLUDE 2 SPECIAL AREAS, THE FRONT GARDEN, AND AN AREA WITH THE MINIMUM DIMENSIONS OF 8 M X 8 M IN THE BACK YARD WHICH IS SUFFICIENTLY LARGE TO SUPPORT AT LEAST ONE MATURE TREE.

CONTROLS:

- A) SITES ARE TO HAVE A DEEP SOIL AREA THAT IS AT LEAST 35% OF THE AREA OF THE ALLOTMENT. **COMPLIANT**
- B) THE DEEP SOIL AREA MUST INCLUDE:
- I. AN AREA WITH MINIMUM DIMENSIONS OF 8 M X 8 M IN THE BACK YARD; **COMPLIANT**
 - II. A FRONT GARDEN AREA WHICH IS TO BE COMPLETELY PERMEABLE WITH THE EXCEPTION OF THE DRIVEWAY, PEDESTRIAN PATH AND GARDEN WALLS. **COMPLIANT**

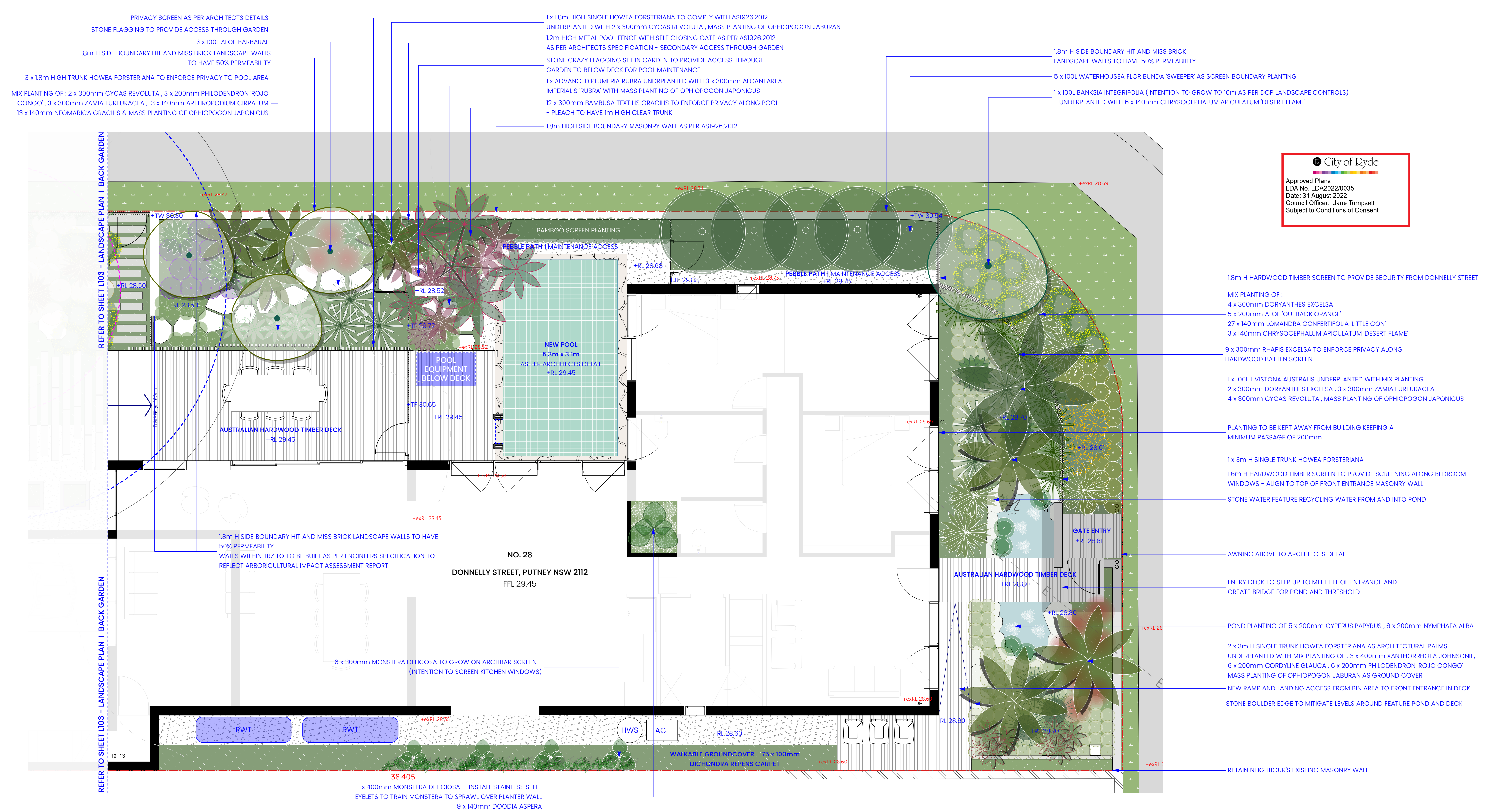
LANDSCAPING ENCOMPASSES THE PLANNING, DESIGN, CONSTRUCTION AND MAINTENANCE OF PRIVATE OPEN SPACE, GARDENS, DRIVEWAYS, PARKING AREAS, AND UTILITY AREAS. THIS INCLUDES BOTH SOFT AND HARD LANDSCAPE AREAS AND ALL DEEP SOIL AREAS.

CONTROLS:

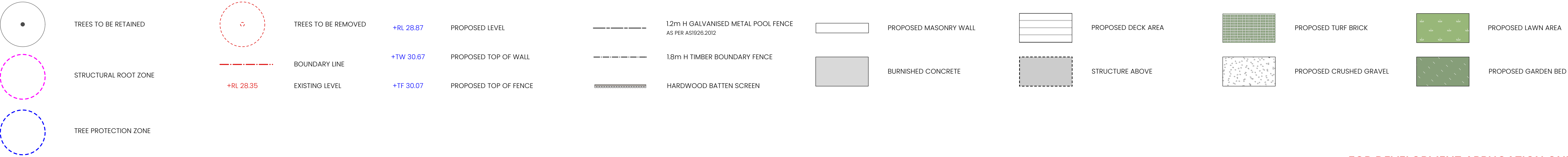
- C) PROVIDE USEFUL OUTDOOR SPACES FOR LIVEABILITY BY COORDINATING THE DESIGN OF PRIVATE OPEN SPACE, EXTERNAL LIVING AREAS, DRIVEWAYS, PARKING AREAS, SWIMMING POOLS, UTILITY AREAS, DEEP SOIL AREAS AND OTHER LANDSCAPED AREAS WITH THE DESIGN OF THE DWELLING. **COMPLIANT**
- E) PROVIDE A LANDSCAPED FRONT GARDEN. HARD PAVED AREAS ARE TO BE MINIMISED, AND AT A MAXIMUM, ARE TO BE NO MORE THAN 40% OF THE FRONT GARDEN AREAS. **COMPLIANT**
- F) A PATHWAY IS TO BE PROVIDED ALONG ONE SIDE OF THE DWELLING SO AS TO PROVIDE PEDESTRIAN ACCESS FROM THE FRONT GARDEN TO THE REAR YARD. THIS ACCESS IS NOT TO BE BLOCKED BY SUCH THINGS AS LANDSCAPING FEATURES, RAINWATER TANKS, HOT WATER HEATERS AND RETAINING WALLS. THE PATHWAY DOES NOT NEED TO BE PROVIDED ON ALLOTMENTS WHICH HAVE REAR LANE ACCESS OR ARE A CORNER ALLOTMENT. **N/A**
- H) THE FRONT GARDEN IS TO HAVE AT LEAST 1 TREE CAPABLE OF A MINIMUM MATURE HEIGHT OF 10 M WITH A SPREADING CANOPY. **COMPLIANT**
- I) WHERE THE BACKYARD DOES NOT HAVE A MATURE TREE AT LEAST 15 M HIGH, PLANT A MINIMUM OF ONE LARGE CANOPY TREE IN THE BACK YARD. THE TREE IS TO BE CAPABLE OF A MATURE HEIGHT OF AT LEAST 15 M AND IS TO HAVE A SPREADING CANOPY. THE TREE IS TO BE LOCATED IN THE 8 M X 8 M DEEP SOIL AREA. **COMPLIANT**
- J) LOCATE AND DESIGN LANDSCAPING TO INCREASE PRIVACY BETWEEN NEIGHBOURING DWELLINGS. **COMPLIANT**
- K) HEDGE PLANTING ON BOUNDARIES IS TO CONSIST OF PLANT SPECIES WHICH HAVE A MATURE HEIGHT NO GREATER THAN 2.7 M. **COMPLIANT**
- N) LANDSCAPING IS TO INCLUDE GROUND LEVEL PRIVATE OPEN SPACE FOR EACH DWELLING. **COMPLIANT**
- O) LANDSCAPING IS TO BE DESIGNED TO IMPROVE THE ENERGY EFFICIENCY OF BUILDINGS AND THE MICROCLIMATE OF EXTERNAL LIVING AREAS. **COMPLIANT**

PRIVATE OPEN SPACE IS A PRIVATE OUTDOOR RECREATIONAL AND RELAXATION SPACE FOR A DWELLING; AND IS LOCATED ADJACENT TO INTERNAL LIVING ROOMS AND MAY TAKE THE FORM OF A PAVED AREA, DECK, TERRACE, COURTYARD, LAWN AREA AND THE LIKE

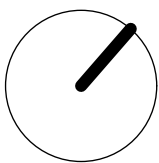
FOR DEVELOPMENT APPLICATION ONLY



LEGEND



Donnelly Street Gardens
Landscape Plan | Front Garden



outdoor
establishments

Project No. 210701
Stage Development Application

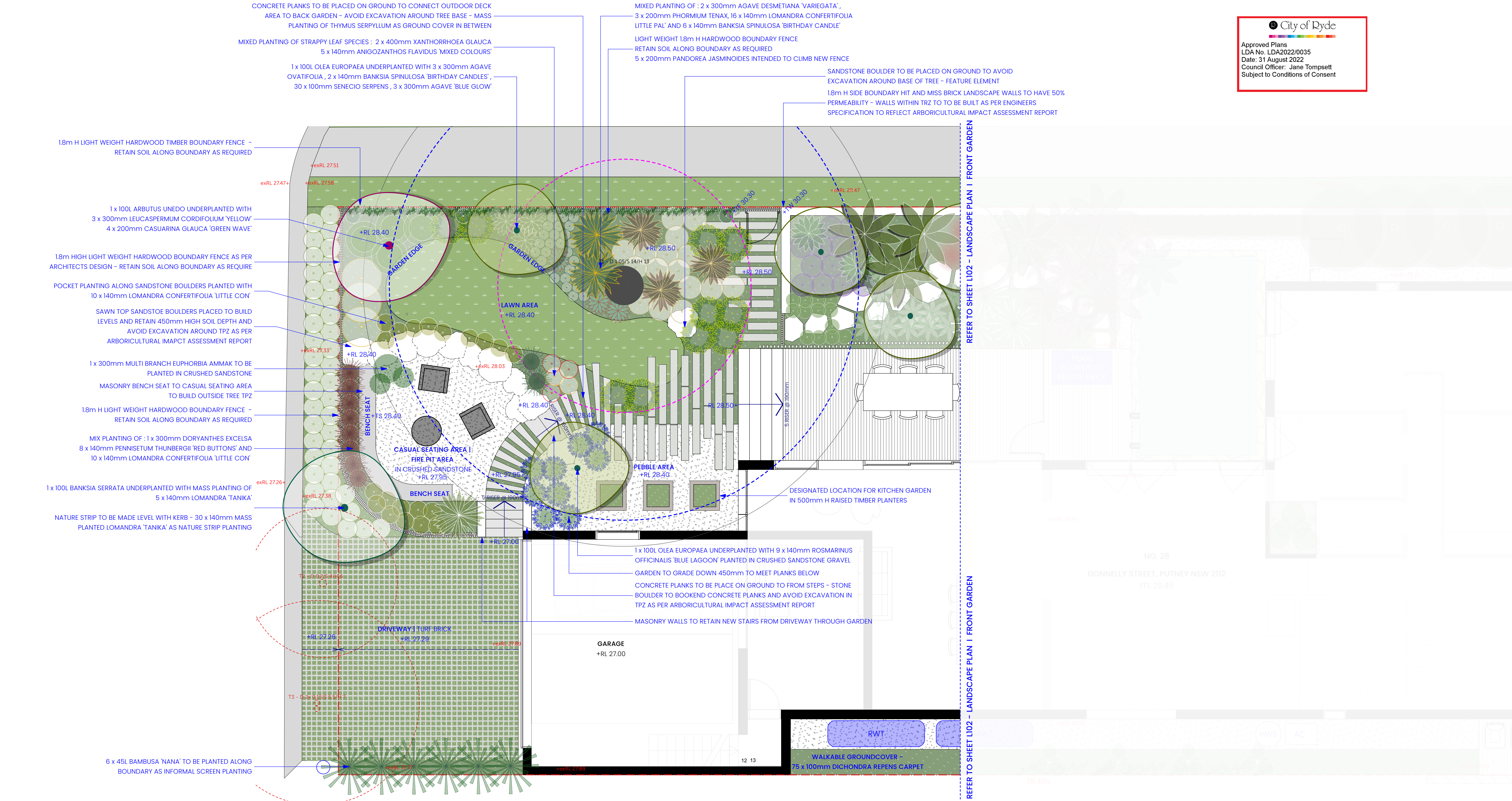
Client S + L Chan c/o Still Space Architecture
Address 28 Donnelly Street, Putney NSW 2112

Drawn By SJ
Checked By TG

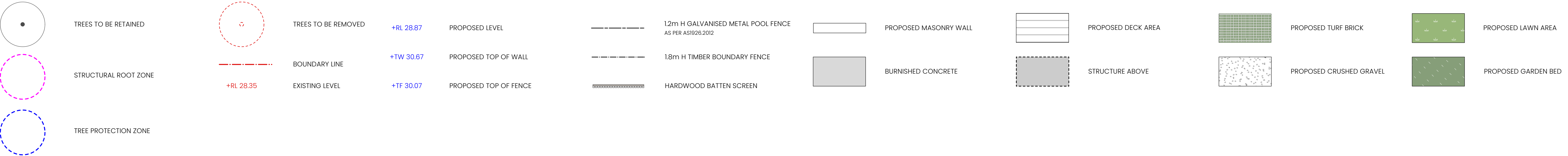
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Rev # A

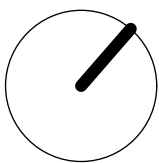
FOR DEVELOPMENT APPLICATION ONLY



LEGEND



Donnelly Street Gardens
Landscape Plan I Back Garden



outdoor
establishments

Project No. 210701
Stage Development Application

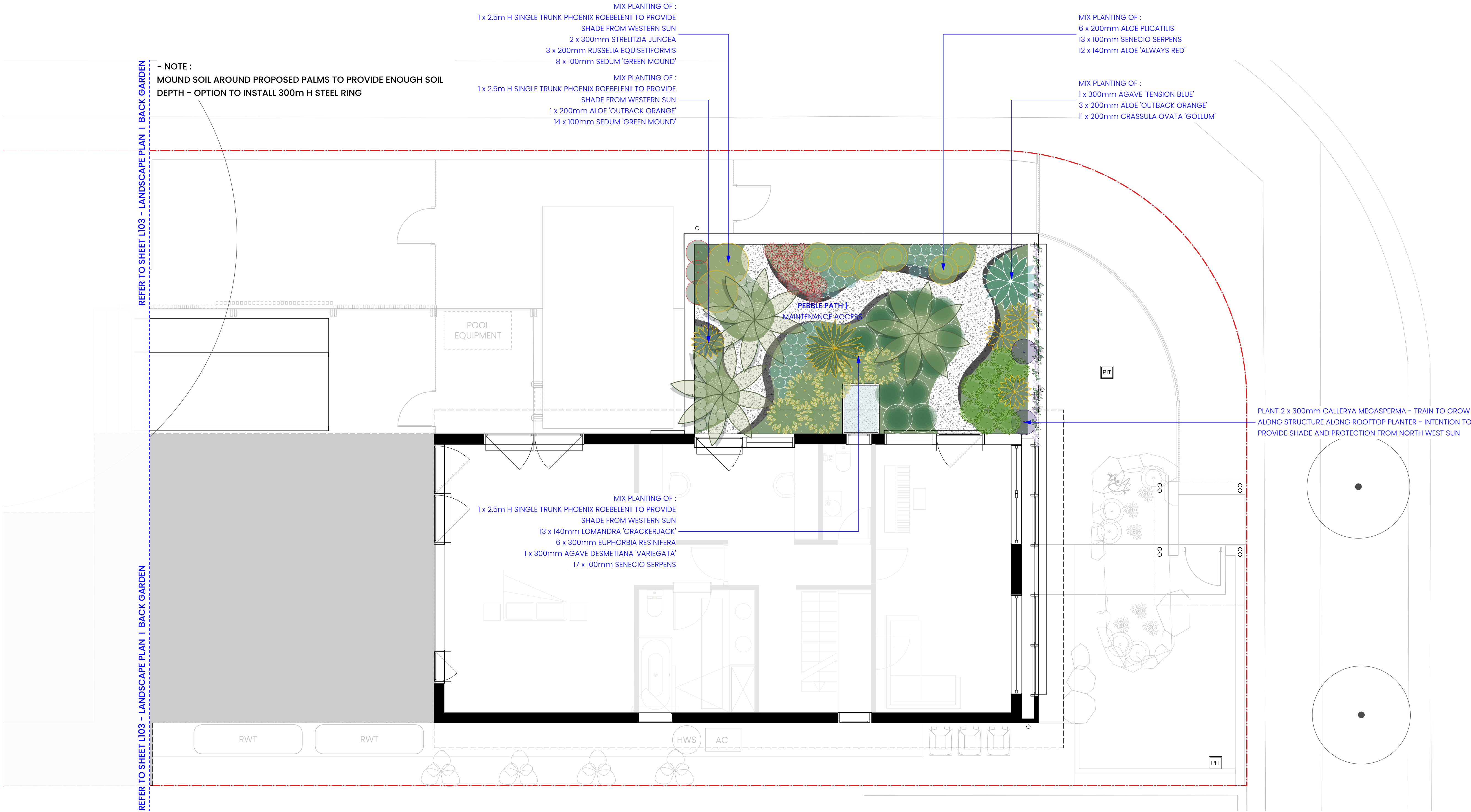
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Address 28 Donnelly Street, Putney NSW 2112

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Scale 1:50 @ A1/ 1:100 @A3
Date 13/07/22

Drawing No. L103
Rev # A

FOR DEVELOPMENT APPLICATION ONLY



City of Ryde

Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

LEGEND

TREES TO BE RETAINED

TREES TO BE REMOVED

STRUCTURAL ROOT ZONE

TREE PROTECTION ZONE

+RL 28.87

+TW 30.67

+TF 30.07

+RL 28.35

PROPOSED LEVEL

PROPOSED TOP OF WALL

PROPOSED TOP OF FENCE

BOUNDARY LINE

EXISTING LEVEL

12m H GALVANISED METAL POOL FENCE
AS PER AS1926.2012

1.8m H TIMBER BOUNDARY FENCE

HARDWOOD BATTEN SCREEN

PROPOSED MASONRY WALL

BURNISHED CONCRETE

PROPOSED DECK AREA

STRUCTURE ABOVE

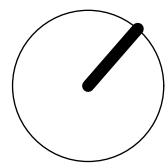
PROPOSED TURF BRICK

PROPOSED CRUSHED GRAVEL

PROPOSED LAWN AREA

PROPOSED GARDEN BED

Donnelly Street Gardens
Landscape Plan I Rooftop Garden



outdoor
establishments

Project No. 210701
Stage Development Application

Client S + L Chan c/o Still Space Architecture
Address 28 Donnelly Street, Putney NSW 2112

Drawn By SJ
Checked By TG

Scale 1:50 @ A1/ 1:100 @A3
Date 13/07/22

Drawing No. L104
Rev # A

FOR DEVELOPMENT APPLICATION ONLY

PLANTING SCHEDULE








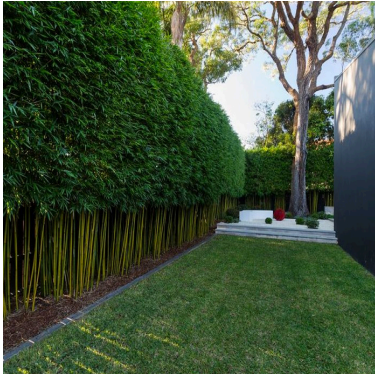
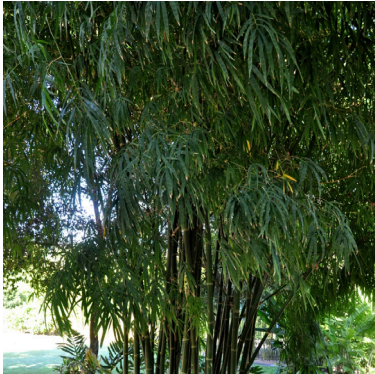






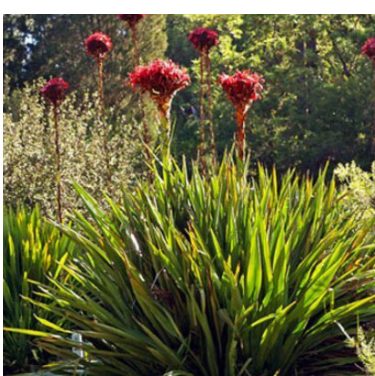



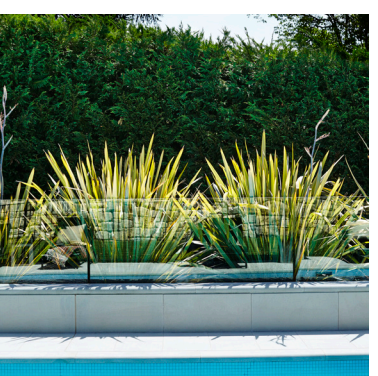


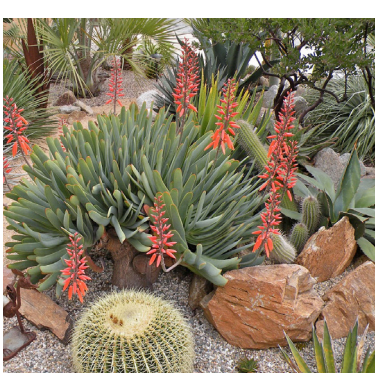

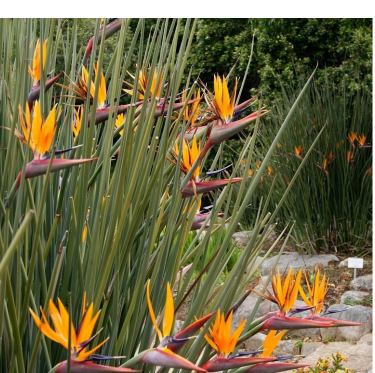
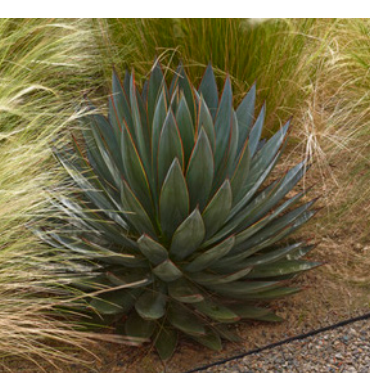
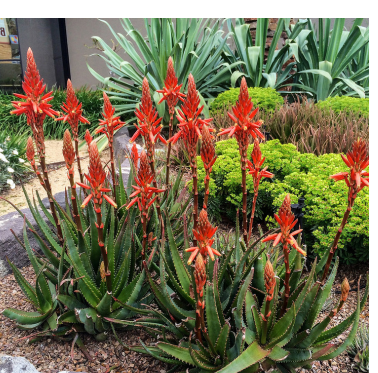
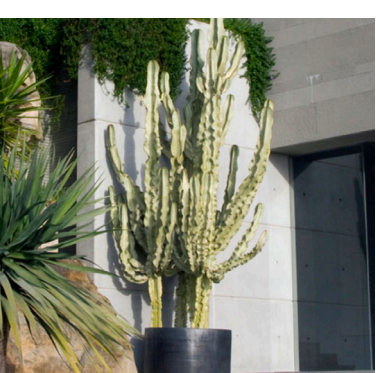


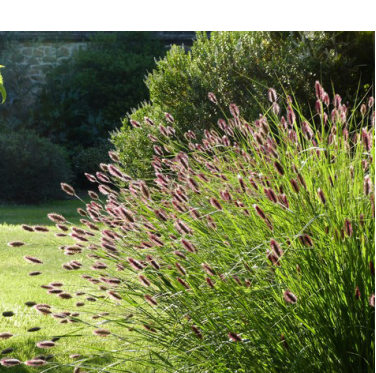

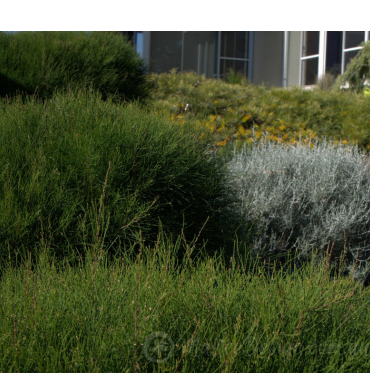



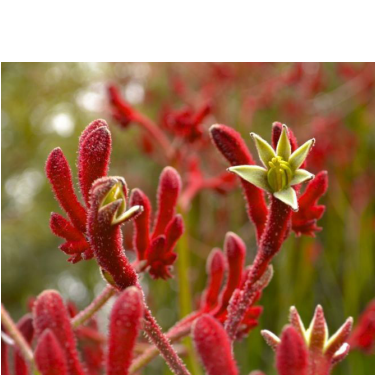
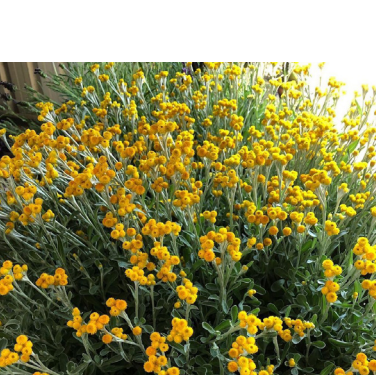

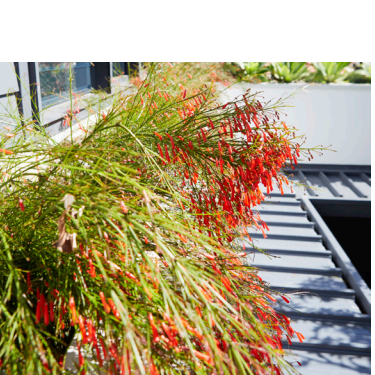
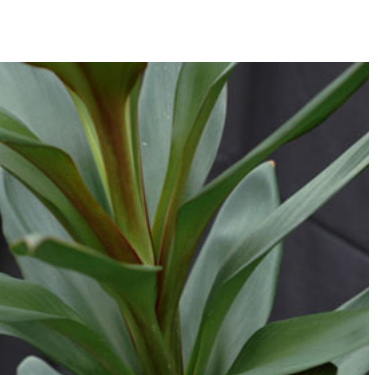











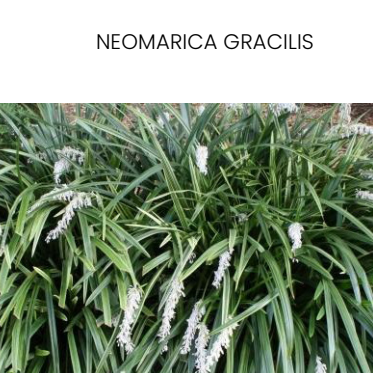
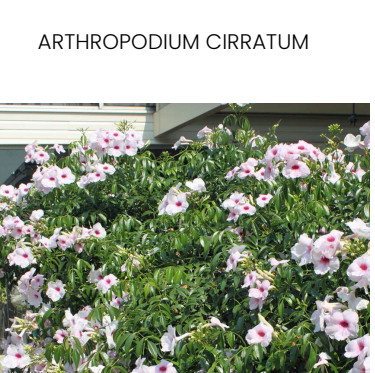

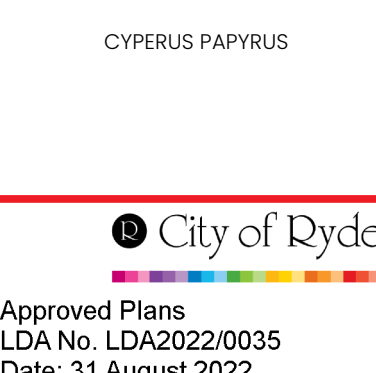
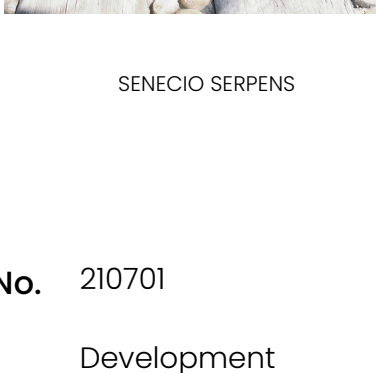
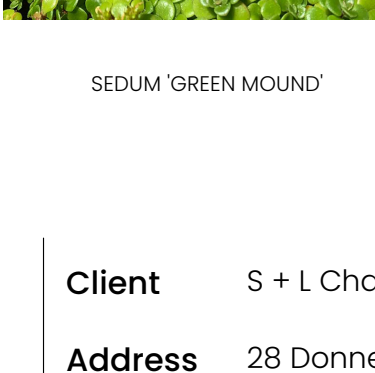
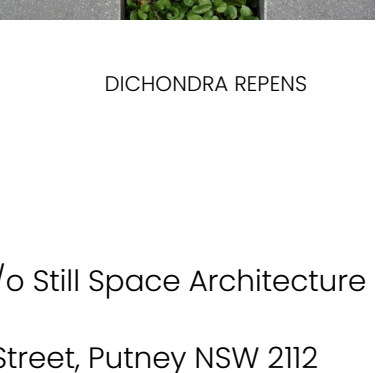

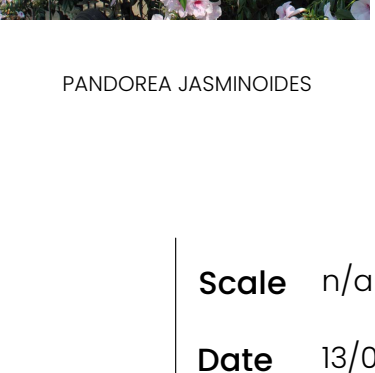

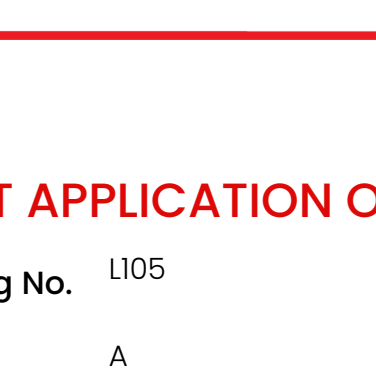







L102 FRONT + POOL GARDEN								
TREES								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
ALB	Aloe barberae	Aloe Tree	10-15m	exotic	100L	3	Full sun	Rose pink
BAN	Banksia integrifolia	Coastal Banksia	15m	native	100L	1	Full sun	yellow/summer to winter
PLU	Plumeria acutifolia	Frangipani	up to 8m	exotic	100L	1	full sun/part-shade	white/spring-summer
LIV	Livistona australis	Cabbage Tree Palm	Up to 20m	native	100L	1	Full part-shade	cream-white/summer
HOW	Howea forsteriana	Kentia Palm	4-15m	native	100L	7	Sun-full shade	
XAN	Xanthorrhoea johnsonii	Grass Tree	1-2m	native	400mm	3	Full Sun, Semi-Shade	white/ summer-autumn
SCREEN PLANTING								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
BAM	Bambusa textilis var. Gracilis	Slender Weavers Bamboo	6-8	exotic	300mm	12	part shade	n/a
RHA	Rhapis excelsa	Lady Palm	2-4m	exotic	300mm	9	full shade	no flower
WAT	Waterhousia floribunda 'Sweeper'	Weeping Lilly Pilly	10-15m	native	100L	5	full sun	white/spring-summer
SHRUBS								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
ALR	Alcantarea imperialis 'Rubra'	Rubra Giant Bromeliad	0.6-1m	exotic	300mm	3	full sun/semi-shade	creamy white/long-lasting
ALO	Aloe 'Outback Orange'	Outback Orange Aloe	0.6-1m	exotic	200mm	5	Full sun	orange/winter
DOR	Doryanthes excelsa	Gymea Lily	3-4m	Native	300mm	6	Full Sun, Semi-Shade	Red/spring
ARC	Arthropodium cirratum	New Zealand Rock Lily	0.6-1m	exotic	140mm	13	Part sun, semi-shade	White
LOC	Lomandra confertifolia 'Little con'	Mat Rush	3-6m	native	140mm	27	Full Sun, Semi-Shade	Cream/spring
COR	Cordyline glauca	Green Ti Plant	2-4m	exotic	200mm	6	part sun/semi-shade	foliage plant
CYR	Cycas revoluta	Sago Palm	up to 2m	exotic	300mm	7	Full sun, semi-shade	n/a
NEO	Neomarca gracilis	Walking Iris	300-600mm	exotic	140mm	13	full sun/semi-shade	white, purple/spring
MON	Monstera deliciosa	Swiss Cheese Plant	2-4m	exotic	300mm	5	part sun/semi-shade	cream/spring-summer
PHR	Philodendron 'Rojo Congo'	Rojo Congo	1-2m	exotic	200mm	9	part sun/semi-shade	no flower
ZAM	Zamia furfuracea	Cardboard Palm	1-1.5m	exotic	300mm	6	full sun/part shade	no flower
WATER PLANTING/SEDGES								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
JUU	Cyperus papyrus	Paper reed	.6-1m	native	200mm	5	Full Sun, Semi-Shade	yellow/Spring-summer
NYM	Nymphaea alba	White Water-Lily	1-.2m	exotic	200mm	6	Full sun	White/ July-August
GROUNDCOVERS								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
CHR	Chrysocephalum apiculatum 'Desert Flame'	Desert Flame	.15m	native	140mm	9	Full Sun, Semi-Shade	
DIR	Dichondra repens	Kidney Weed	100mm	native	100mm	75	part sun/semi-shade	no flower
DOO	Doodia aspera	Prickly Rasp Fern	300-600mm	native	140mm	9	part sun/semi-shade	no flower
OPH	Ophiopogon jaburan	Giant Mondo Grass	150-300mm	exotic	140mm	90	part sun/semi-shade	white/summer
L103 BACK GARDEN								
TREES								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
OLE	Olea europaea	Olive Tree	6m	exotic	100L	2	Full sun	small (fruiting plant)
ARB	Arbutus Uendo	Irish Strawberry Tree	5-7m	exotico	100L	1	Full sun	White/pink - Autumn/Winter
BAN	Banksia serrata	Old Man Banksia	1m	native	100L	1	Full sun	Green-yellow/ summer-winter
XAN	Xanthorrhoea johnsonii	Grass Tree	1-2m	native	400mm	2	Full Sun, Semi-Shade	white/ summer-autumn
SCREEN PLANTING								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
BAM	Bambusa 'Nana'	Dwarf Bamboo	Up to 10m	exotico	45L	6	Full sun, semi-shade	
SHRUBS								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
AGE	Agave desmettiana 'variegata'	Variegated Agave	600mm	exotic	300mm	2	Full Sun, Semi-Shade	Foliage plant
AGB	Agave 'Blue Glow'	Blue Glow Agave	600mm	exotic	300mm	3	Full Sun, Semi-Shade	n/a
AGW	Agave 'Whale's Tongue'	Whale's Tongue Agave	0.6-1m	exotic	300mm	3	Full sun	foliage plant
ANR	Anigozanthos flavidus 'Ruby Velvet'	Kangaroo Paw 'Ruby Velvet'	.3-.4m	native	140mm	3	Full sun	Red/autumn
ANG	Anigozanthos flavidus 'Yellow Gem'	Kangaroo Paw 'Yellow Gem'	.3-.4m	native	140mm	2	Full sun	yellow/spring-summer
CAS	Casuarina 'Green Wave'	Swamp Oak	1.5m	native	200mm	4	full sun/semi-shade	no flower
DOR	Doryanthes excelsa	Gymea Lily	3-4m	Native	300mm	6	Full Sun, Semi-Shade	Red/spring
EUP	Euphorbia ammak	African Candelabra	2m	exotic	300mm	1	Full sun	foliage plant
LEU	Leucospermum cordifolium 'Yellow'	Leucospermum	1.5-2m	Exotic	300mm	3	Full Sun	Yellow/spring
LOC	Lomandra confertifolia 'Little pal'	Mat Rush	.3-.6m	native	140mm	16	Full Sun, Semi-Shade	Cream/spring
LOC	Lomandra confertifolia 'Little con'	Mat Rush	.3-.6m	native	140mm	10	Full Sun, Semi-Shade	Cream/spring
LOM	Lomandra longifolia 'Tanika'	Tanika	up to 600mm	native	140mm	35	Full sun, part shade	Yellow/autumn-spring
PEN	Pennisetum thunbergii 'Red Buttons'	Fountain Grass	900mm	native	140mm	8	Full sun, part shade	Rosy red / Spring , summer
PHO	Phormium tenax	New Zealand Flax	1.2m	exotic	200mm	3	Full sun, semi-shade	n/a
CLIMBING PLANT								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
PAN	Pandorea jasminoides	Wonga Wonga Vine	2m	native	200mm	5	Full sun, part shade	white
GROUNDCOVERS								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
BAN	Banksia spinulosa 'Birthday Candles'	Dwarf Hairpin Banksia	.3-.6m	native	140mm	10	Full sun	Golden/autumn-winter
ROSM	Rosmarinus officialis 'Blue Logon'	Blue Logon Rosemary	400mm	exotic	140mm	9	Full sun, part shade	Purple
SEN	Senecio serpens	Blue Chalksticks	150mm	exotic	100mm	30	Full sun, semi-shade	White
L104 ROOFTOP GARDEN								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
PHO	Phoenix roebelenii	Pygmy Date Palm	3m	exotic	45L	3	light/full shade	insignificant (foliage plant)
ALO	Aloe 'Outback Orange'	Outback Orange Aloe	0.6-1m	exotic	200mm	4	Full sun	orange/winter
AGE	Agave desmettiana 'variegata'	Variegated Agave	600mm	exotic	300mm	1	Full Sun, Semi-Shade	Foliage plant
AGA	Agave 'Tennyson Blue'	Tennyson Blue Agave	.9-1.8m	exotic	300mm	1	Full sun	White-yellow
ALO	Aloe plicatilis	Fan Aloe	1-2m	exotic	200mm	6	Full sun/Light shade	orange/late winter-spring
ALR	Aloe 'Always Red'	Always Red	0.3-0.6m	exotic	140mm	12	Full Sun, Semi-Shade	Red/summer-winter
CRG	Crassula ovata 'Gollum'	Gollum Jade	.3-6m	exotic	200mm	11	Full Sun, Semi-Shade	Pinkish white/ Summer
EUR	Euphorbia Resinifera	Moroccan Mound	2m	extoic	300mm	6	sun	foliage plant
RUS	Russelia equisetiformis	Coral plant	1-1.75	exotic	200mm	3	Full Sun, Semi-Shade	foliage plant / red , yellow flowers
STJ	Strelitzia juncea	Narrow-leaved Bird of Paradise	1-2m	exotic	300mm	2	Full sun	Orange-Blue/ spring-summer
SED	Sedum 'Green Mound'	Green Mound	150mm	exotic	100mm	22	Full sun, semi-shade	Foliage plant
SEN	Senecio serpens	Blue Chalksticks	150mm	exotic	100mm	12	Full sun, semi-shade	White
CLIMBING PLANT								
Symbol	Botanical Name	Common Name	Height	Type	Pot Size	Quantity	Light	Flower Colour
CAM	Callerya megasperma	Native Wisteria	4-20m	native	300mm	2	Full sun, part shade	Purple

Donnelly Street Gardens

Plant Schedule + Imagery

outdoor establishments

PLANTING IMAGERY

TREES							
	BANKSIA INTEGRIFOLIA	BANKSIA SERRATA	ARBUTUS UENDO	OLEA EUROPAEA	ALOE BARBERAE	PLUMERIA ACUTIFOLIA	XANTHORRHOEA JOHNSONII
							
	BAMBUSA TEXTILIS VAR. GRACILIS	BAMBUSA 'NANA'	WATERHOUSIA FLORIBUNDA 'SWEEPER'	RHAPIS EXCELSA	HOWEA FORSTERIANA	PHOENIX ROEBELENI	LIVISTONA AUSTRALIS
							
	AGAVE DESMETTIANA 'VARIEGATA'	DORYANTHES EXCELSA	CYCAS REVOLUTA	ZAMIA FURFURACEA	AGAVE 'TENNYSON BLUE'	PHORMIUM TENAX	ALOE 'OUTBACK ORANGE'
							
SHRUBS , SUCCULENTS & GRASSES	CRASSULA OVATA 'GOLLUM'	ALOE PLICATILIS	EUPHORBIA RESINIFERA	STRELITZIA JUNCEA	AGAVE 'BLUE GLOW'	ALOE 'ALWAYS RED'	EUPHORBIA AMMAK
							
	LOMANDRA CONFERTIFOLIA 'LITTLE CON'	LOMANDRA LONGIFOLIA 'TANIKA'	PENNISETUM THUNBERGII 'RED BUTTONS'	LOMANDRA CONFERTIFOLIA 'LITTLE PAL'	CASUARINA 'GREEN WAVE'	LEUCOSPERMUM CORDIFOLIUM 'YELLOW'	BANKSIA SPINULOSA 'BIRTHDAY CANDLES'
							
	ANIGOZANTHOS FLAVIDUS 'YELLOW GEM'	ANIGOZANTHOS FLAVIDUS 'RUBY VELVET'	CHRYSOCEPHALUM 'DESERT FLAME'	ROSMARINUS OFFICIALIS 'BLUE LOGON'	RUSSELLIA EQUISETIFORMIS	CORDYLINE GLAUCA	PHILODENDRON 'ROJO CONGO'
							
	ALCANTAREA IMPERIALIS 'RUBRA'	MONSTERA DELICIOSA	DOODIA ASPERA	NEOMARICA GRACILIS	ARTHROPODIUM CIRRATUM	NYMPHAEA ALBA	CYPERUS PAPHYRUS
GROUNDCOVER & CLIMBER							
	SENECIO SERPENS	SEDUM 'GREEN MOUND'	DICHONDRA REPENS	OPHIOPOGON JABURAN	PANDOREA JASMINOIDES	CALLERYA MEGASPERMA	
							
	SENECIO SERPENS	SEDUM 'GREEN MOUND'	DICHONDRA REPENS	OPHIOPOGON JABURAN	PANDOREA JASMINOIDES	CALLERYA MEGASPERMA	
							
	SENECIO SERPENS	SEDUM 'GREEN MOUND'	DICHONDRA REPENS	OPHIOPOGON JABURAN	PANDOREA JASMINOIDES	CALLERYA MEGASPERMA	
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FOR DEVELOPMENT APPLICATION ONLY

Project No.	210701	Client	S + L Chan c/o Still Space Architecture	Drawn By	SJ	Scale	n/a	Drawing No.	L105
Stage	Development Application	Address	28 Donnelly Street, Putney NSW 2112	Checked By	TG	Date	13/07/22	Rev #	A



Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent



Consulting Engineers

STRUCTURAL - CIVIL - STORMWATER - REMEDIAL

Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

GENERAL NOTES: Dated - 23.06.2022

- 1. THESE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE LATEST ARCHITECTURAL DRAWINGS.
- 2. DO NOT SCALE FROM THESE DRAWING.
- 3. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.

STORMWATER NOTES:

- GENERAL:**
- A1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS (LATEST VERSION) AND THE REQUIREMENTS OF THE LOCAL COUNCIL AND ANY APPLICABLE AUTHORITIES.
- A2. ALL LEVELS SHOWN ARE TO THE AUSTRALIAN HEIGHT DATUM (AHD) UNLESS NOTED OTHERWISE.
- A3. THE LOCATION OF ALL DRAINAGE ELEMENTS ARE SHOWN INDICATIVELY BASED ON AVAILABLE SURVEY OR OTHER INFORMATION. ALL DRAINAGE ELEMENTS ARE TO BE INSTALLED WITH CONSIDERATION TO SITE CONSTRAINTS AND THE INTENT OF THE DRAINAGE CONCEPT.
- A4. ANY MATERIAL VARIATIONS TO THE DRAINAGE CONCEPT OR DETAILED STORMWATER ELEMENTS MUST BE APPROVED BY NORTHERN BEACHES CONSULTING ENGINEERS PTY LTD PRIOR TO COMMENCEMENT.
- A5. ANY EXCAVATION OR TRENCHING FOR SERVICES ADJACENT TO A STRUCTURE OR PROPERTY BOUNDARY MUST NOT ENCROACH ON THE 'ZONE OF INFLUENCE', REFER TO THE NCC FOR FURTHER DETAILS.
- GENERAL CONSTRUCTION NOTES:**
- B1. CONTRACTORS TO LOCATE ALL EXISTING SERVICES PRIOR TO EXCAVATION AND NOTIFY ENGINEER OF ANY POTENTIAL CLASHES WITH THE PROPOSED STORMWATER DRAINAGE SYSTEM.
- B2. ANY ELEMENTS OF THE EXISTING STORMWATER SYSTEM WHICH ARE PROPOSED TO BE RETAINED MUST BE INSPECTED AND APPROVED BY AN ENGINEER PRIOR TO CONSTRUCTION AS BOTH HAVING ADEQUATE CAPACITY TO CATER FOR THE RUNOFF DIRECTED TO IT AND BEING IN ADEQUATE CONDITION FOR USE.
- B3. EXISTING STORMWATER SYSTEM ALSO TO BE INSPECTED BY A SUITABLY QUALIFIED PLUMBER PRIOR TO CONSTRUCTION AND UPGRADED AS REQUIRED IN ACCORDANCE WITH AS3500.3.
- B4. CARE SHOULD BE TAKEN WHEN UNDERTAKING WORKS IN THE VICINITY OF TREES NOT TO DISTURB THE TREE ROOT SYSTEM. HAND DIGGING OF TRENCHES MAY BE REQUIRED SUBJECT TO THE PROJECT ARBORISTS REQUIREMENTS. REFER TO THE ARBORIST REPORT FOR EXCAVATION REQUIREMENTS SURROUNDING PROTECTED TREE ROOT ZONES.
- B5. SWIMMING POOL SURCHARGE OVERFLOW TO BE CONNECTED VIA GRAVITY TO THE SEWER IN ACCORDANCE WITH AS3500. DETAILS AND CERTIFICATION BY OTHERS.
- B6. EXTENT, ALIGNMENT, DEPTH AND CONDITION OF ANY COUNCIL STORMWATER PIPELINE WITHIN A DEVELOPMENT SITE MUST BE VERIFIED PRIOR TO CONSTRUCTION AND THE ENGINEER MUST BE NOTIFIED UPON VERIFICATION. ANY NEW CONNECTION TO A COUNCIL STORMWATER PIPELINE WILL BE SUBJECT TO COUNCIL APPROVAL AND MUST BE INSTALLED IN ACCORDANCE WITH THE LOCAL COUNCIL SPECIFICATIONS.
- PIPEWORK INSTALLATION:**
- C1. ALL PIPES TO BE MINIMUM 100mm Ø UNLESS NOTED OTHERWISE.
- C2. ALL PIPES TO BE UPVC SEWER GRADE TO AS 1254 UNLESS NOTED OTHERWISE.
- C3. ALL PIPES TO BE LAYED AT 1 % MINIMUM GRADE UNLESS NOTED OTHERWISE.
- C4. ALL CONNECTIONS INTO EXISTING PIPES MUST BE MADE IN THE DIRECTION OF FLOW
- C5. ANY NEW UPVC CONNECTIONS INTO EXISTING R.C. PIPES MUST BE MADE INTO THE TOP HALF OF THE PIPE USING A FLOWCON CONNECTION FITTING U.N.O
- C6. ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.M.D.D. BELOW PAVEMENTS. (NO COMPACTION REQUIRED BELOW LANDSCAPING) COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM. BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN. TRENCHES TO BE FILLED WITH NO-FINES GRANULAR MATERIAL AS SPECIFIED.
- C7. ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO UPVC.
- C8. MINIMUM PIPE COVER TO ALL IN-GROUND PIPEWORK SHALL BE CARRIED OUT IN ACCORDANCE WITH TABLE 7.1 - AS3500.3.
- C9. ALL SUSPENDED PIPE FIXINGS ARE TO BE CARRIED OUT IN ACCORDANCE WITH AS2032.
- C10. ENSURE THAT ALL STORMWATER PITS AND PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS.
- C11. ALL PIPEWORK MUST BE INSTALLED WITHIN THE SITE BOUNDARY OF THE DEVELOPMENT SITE. ANY NEW OR EXISTING PIPEWORK EXTENDING THROUGH PRIVATE PROPERTY BEYOND THE BOUNDARY OF THE DEVELOPMENT SITE MUST BE CONTAINED SOLELY WITHIN A DRAINAGE EASEMENT. IF NO DRAINAGE EASEMENT EXISTS, A NEW DRAINAGE EASEMENT MUST BE SOUGHT AND REGISTERED PRIOR TO UTILISING OR INSTALLING PIPEWORK THROUGH NEIGHBOURING PROPERTIES. CONTACT THE ENGINEER IF A DRAINAGE EASEMENT CANNOT BE OBTAINED.
- ROOF DRAINAGE:**
- D1. ALL DOWN PIPES TO BE 100mm Ø UNLESS NOTED OTHERWISE.
- D2. DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
- D3. PROVIDE CLEANING EYES AT ALL DOWNPIPES.
- D4. GUTTER GUARDS MUST BE INSTALLED ON ALL GUTTERS UNLESS NOTED OTHERWISE.
- D5. ALL EAVES GUTTER AND VALLEY GUTTER SYSTEMS MUST BE INSTALLED IN ACCORDANCE WITH AS3500.3 REQUIREMENTS.
- D6. ALL BOX GUTTER SYSTEMS MUST BE INSTALLED STRICTLY IN ACCORDANCE WITH THE DETAILS SHOWN ON THE APPROVED STORMWATER MANAGEMENT PLAN. IF NO DETAILS ARE SHOWN, THE BOX GUTTER SYSTEM MUST BE INSTALLED IN ACCORDANCE WITH AS3500.3. IF ANY CHANGE TO THE BOX GUTTER SYSTEM CONFIGURATION IS PROPOSED, THE ENGINEER MUST BE NOTIFIED FOR A RE-DESIGN. IF THE INSTALLED BOX GUTTER DOES NOT STRICTLY COMPLY WITH THE DESIGN DETAILED ON THE STORMWATER MANAGEMENT PLAN, CERTIFICATION OF THE HYDRAULIC SYSTEM MAY BE REFUSED.
- D7. ALL GREEN ROOFS, PEBBLED ROOFS AND PLANTERS WITH A CONCRETE BASE MUST BE WATERPROOFED AND HAVE DRAINAGE CELL INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION.
- PITS:**
- E1. ALL STORMWATER PITS MUST BE INSTALLED IN ACCORDANCE WITH AS3500.3.
- E2. ALL CONCRETE PITS TO BE CAST INSITU OR, IF PRECAST, APPROVED BY ENGINEER. CAST INSITU PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH 1 N12 TOP TIE UNLESS NOTED OTHERWISE. CAST INSITU PITS GREATER THAN 900 DEEP TO BE MINIMUM 900x600 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH N12 AT 300 EACH WAY UNLESS NOTED OTHERWISE.
- E3. MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS TO BE IN ACCORDANCE WITH TABLE B.2, AS3500.3.
- E4. ALL PITS GREATER THAN 1200mm DEEP SHALL HAVE STEP IRONS INSTALLED. STEP IRON INSTALLATION MUST BE IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS.

- E5. THE BOUNDARY OR SILT ARRESTOR PIT MUST INCORPORATE A SUMP OF MINIMUM 200mm DEPTH BELOW THE INVERT OF THE OUTLET PIPE AND A MAXI-MESH SCREEN AS PER LOCAL COUNCIL AND THE AUSTRALIAN STANDARD REQUIREMENTS. HOWEVER, UNLESS SPECIFICALLY REQUIRED BY COUNCILS POLICY OR IF THE SITE CONSISTS OF A CLAY OR ROCK SUBGRADE, ALL OTHER DRAINAGE PITS WILL NOT REQUIRE A SUMP.
- E6. ALL STORMWATER PITS TO BE LOCATED AT LOW POINTS TO PREVENT PONDED WATER.
- E7. FOR STORMWATER PITS LOCATED BELOW THE WATER TABLE, CUT INTO ROCK OR IN POORLY DRAINED SOILS, THE PIT SUMP MAY BE FILLED WITH MORTAR AND SCREEDED TOWARDS THE OUTLET AT MINIMUM 1% FALL, SUBJECT TO THE ENGINEERS APPROVAL.
- SUBSOIL DRAINAGE:**
- F1. ALL SUBSOIL DRAINAGE TO BE INSTALLED AS REQUIRED IN ACCORDANCE WITH AS3500.3 (SPECIFICALLY SECTION 6, 7 AND APPENDIX M) AND THE NCC.
- F2. INSTALLATION OF SUBSOIL DRAINAGE LINES IS GENERALLY REQUIRED WHERE SUBSURFACE WATER MOVEMENT COULD DAMAGE BUILDINGS OR CAUSE LOSS OF AMENITY THROUGH THE BUILD-UP OF EXCESSIVE MOISTURE OR LATERAL WATER PRESSURE. THIS INCLUDES ALONG WALLS THAT IMPEDE THE NATURAL FLOW OF GROUNDWATER, ON THE UPHILL SIDE OF CUT AND FILL SITES, ADJACENT TO DEEP FOOTINGS, BEHIND RETAINING WALLS AND ADJACENT TO BASEMENT WALLS. SUBSOIL DRAINAGE IS GENERALLY ALSO REQUIRED IN SHALLOW LANDSCAPED AREAS OVER ROCK OR POORLY DRAINED SOILS TO PREVENT OVERLY SATURATED LANDSCAPED AREAS.
- F3. THE INSTALLATION OF SUBSOIL DRAINAGE MAY REQUIRE TRENCHING THROUGH ROCK.
- F4. ALL SUBSOIL LINES ARE TO BE 100mm UPVC SLOTTED PIPE (UNSOCKETED), LAID AT (MIN.) 0.5% FALL UNO.
- F5. THE SUBSOIL LINE IS TO BE SURROUNDED BY SELECT FILTER MATERIAL, GENERALLY 10-20mm DIAMETER AGGREGATE.
- F6. THE TRENCH SHALL BE SIZED TO PROVIDE A MINIMUM 50mm BEDDING AND 100mm COVER ALL AROUND THE SUBSOIL LINE, GENERALLY MINIMUM 300mm WIDE X 300mm DEEP. THE TRENCH IS TO BE WRAPPED ALL-ROUND IN NON-WOVEN, GEOTEXTILE FABRIC OF STRENGTH CLASS A, WITH SUFFICIENT OVERLAP (LESSER OF TRENCH WIDTH OR 500mm).
- F7. WHERE THE IN-SITU SOILS HAVE A GRAIN SIZE SMALLER THAN THE GEOTEXTILE FABRIC, COURSE WASHED-SAND SHOULD BE USED AS A FILTER TO PREVENT BLOCKAGE OF THE GEOFABRIC.
- F8. THE BACKFILL LAYER OVER THE TRENCH SHALL BE NO-FINES COURSE WASHED-SAND. WHERE LANDSCAPED AREAS ARE PROPOSED OVER THE TRENCH, THE TOP 300mm OF BACKFILL MAY BE MIXED WITH UP TO 20% ORGANIC MATTER.
- F9. ALL SUBSOIL LINES ARE TO DISCHARGE INTO A GRATED PIT, AT A LEVEL MINIMUM 50mm ABOVE THE PIT OUTLET UNO. THE PROJECT BUILDER IS TO IMPLEMENT APPROPRIATE MEASURES TO PREVENT SUBSOIL LINE BLOCKAGE OR INFESTATION OF VERMIN.
- F10. THE HIGH-END OF THE SUBSOIL LINE IS TO BE TURNED UP AT 45° AND TERMINATE AT GROUND LEVEL WITH AN INSPECTION CAP TO ENABLE FUTURE FLUSH OUT AND MAINTENANCE.
- F11. 100mm Ø x 3000 LONG TAIL OUT SUBSOIL LINE TO BE PROVIDED ON THE UPSTREAM SIDE OF ALL LARGE PITS OR IN AREAS WITH HIGH SEEPAGE FLOWS. SUBSOIL LINE TO BE COVERED WITH GEOTEXTILE FILTER SOCK FOR THE FULL LENGTH AND END COVERED. BACKFILL MUST BE IN NO-FINES COARSE WASHED-SAND.
- CHARGED SYSTEM:**
- G1. ALL PIPEWORK IN A CHARGED SYSTEM TO BE 100mm Ø UPVC PRESSURE OR SEWER GRADE PIPES WITH ALL JOINTS PRESSURE SEALED TO A MINIMUM OF 1,000mm (UNLESS NOTED OTHERWISE) ABOVE THE INLET OF THE DISCHARGE POINT. ALL JOINTS TO BE SOLVENT WELDED IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS.
- G2. ALL CHARGED SYSTEMS MUST HAVE A BLEED OUT LINE AT THE LOW POINT IN THE CHARGED SYSTEM WHICH MUST BE CONNECTED TO A FLUSH OUT PIT VIA GRAVITY. THE BLEED LINE MUST BE MAINTAINED AND REGULARLY FLUSHED OUT.
- ON-SITE DETENTION NOTES:**
- H1. ORIFICE PLATE MUST BE INSTALLED PRIOR TO INSTALLATION OF THE ROOF DRAINAGE SYSTEM AND CONNECTION OF THE SITE STORMWATER SYSTEM TO THE ON-SITE DETENTION TANK.
- H2. THE HEIGHT DIFFERENCE (H*) BETWEEN THE ORIFICE CENTRELIN AND THE TOP WATER LEVEL OF THE ON-SITE DETENTION TANK MUST BE CONSTRUCTED IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN. IF H* CHANGES DUE TO SITE CONDITIONS, THE ENGINEER MUST BE NOTIFIED FOR AN ORIFICE PLATE SIZE ADJUSTMENT.
- H3. ANY PIPE FITTINGS FOR BELOW GROUND ON-SITE DETENTION TANKS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
- H4. ACCESS HATCHES MUST BE INSTALLED AT BOTH ENDS OF THE ON-SITE DETENTION TANK. IF THE DEPTH OF THE TANK IS GREATER THAN 1200mm, STEPS IRONS MUST BE INSTALLED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS.
- H5. ABOVE GROUND ON-SITE DETENTION BASINS MUST NOT EXCEED A PONDING DEPTH OF 300mm, UNLESS NOTED OTHERWISE. THE BUILDER MUST ENSURE THAT THE REQUIRED DETENTION VOLUME IS ACHIEVED DURING CONSTRUCTION. A WORK-AS-EEXECUTED PLAN DETAILING THE FINISHED LEVELS AND VOLUME OF THE ON-SITE DETENTION BASIN MUST BE CARRIED OUT AT THE COMPLETION OF WORKS BY A REGISTERED SURVEYOR AND APPROVED BY THE ENGINEER PRIOR TO FINAL CERTIFICATION.
- SURFACE DRAINAGE:**
- J1. WHEN LAND FALLS TOWARDS A BUILDING, INCLUDING LAND UPSLOPE OF THE PROPERTY BOUNDARY, GROUND SURFACE LEVELS ADJACENT TO THE BUILDING ARE TO BE REGRADED SUCH THAT THE FIRST METRE HAS MINIMUM 50mm FALL AWAY FROM THE BUILDING, GENERALLY IN ACCORDANCE WITH THE NCC.
- J2. ANY NEW DEVELOPMENT WORKS MUST NOT CREATE ANY TRAPPED SURFACE AREAS. IN SUCH CASES WHERE TRAPPED AREAS EXIST, SMALE DRAINS OR GRATED PITS WITH PIPED OUTLETS OF ADEQUATE CAPACITY MAY BE REQUIRED TO ROUTE RUNOFF AROUND THE BUILDING TO AN APPROVED DISCHARGE POINT. IF THE TRAPPED AREA IS BELOW THE NATURAL SURFACE LEVEL, A PUMP OUT SYSTEM MAY BE REQUIRED. IN EITHER CASE, THE PROJECT ENGINEER MUST BE CONTACTED FOR DESIGN DETAILS (AS REQUIRED) PRIOR TO CONSTRUCTION.
- J3. BUILDER TO PROVIDE A MINIMUM 100mm WIDE x 30mm HIGH OR 50mm DIA OVERFLOW FOR EVERY 6m2 OF EXPOSED AREA THAT IS TRAPPED OR SURROUNDED BY HOBS/BALUSTRADES/WALLS/ETC. THE FULL OVERFLOW DEPTH MUST BE LOCATED BELOW ANY ADJACENT INTERNAL FLOOR LEVELS OR OPENINGS TO PROTECT AGAINST WATER INGRESS DUE TO BLOCKAGE OF THE PRIMARY OUTLET(S).

RAINWATER RE-USE TANKS:

- K1. CONSIDERING THE ROOF CATCHMENT AREA, LOCATION OF PROPERTY, INTENDED USE OF RAINWATER AND GARDEN SIZE WE RECOMMEND PROVIDING A RAINWATER TANK FOR USE AS PER BASIX REQUIREMENTS, SYDNEY WATER AND NSW HEALTH REQUIREMENTS FOR NON DRINKING USE ONLY.
- K2: THE TANKS PROVIDED WILL REDUCE PRESSURE ON COUNCIL'S STORMWATER INFRASTRUCTURE.
- K3: REFERENCES: COOMBS P.J. # KUCZERA G. (2001), 'RAINWATER TANK DESIGN FOR WATER SUPPLY # STORMWATER MANAGEMENT.' STORMWATER INDUSTRY ASSOCIATION REGIONAL CONFERENCE. PATRICK DUPONT # STEVE SHACKLE, 'RAINWATER' AUSTRALIAN GOVERNMENT (2004), 'GUIDANCE ON USE OF RAINWATER TANKS'.
- K4: ALL CONNECTIONS TO PLUMBING AND RAINWATER TANKS TO BE IN ACCORDANCE WITH SYDNEY WATERS' GUIDE "INSTALLING A RAINWATER TANK" AVAILABLE AT www.sydneywater.com.au
- K5: PROVIDE A DUAL SUPPLY SYSTEM AND BACKFLOW PREVENTION SYSTEM IN ACCORDANCE WITH 'BASIX-DESIGN GUIDE FOR SINGLE DWELLINGS' BY NSW DEPARTMENT OF INFRASTRUCTURE, PLANING AND NATURAL RESOURCES.
- K6: IF NOT SPECIFIED ON PLANS, THE FIRST FLUSH SYSTEM IS TO HAVE A MINIMUM SIZE OF 20L PER 100m2 OF ROOF CATCHMENT AREA PRIOR TO ENTERING THE RAINWATER TANK. INDIVIDUAL SITE ANALYSIS IS REQUIRED IN HEAVILY POLLUTED AREAS TO DETERMINE IF LARGER VOLUMES OF FIRST FLUSH RAINWATER ARE TO BE DIVERTED. IF IN DOUBT, CHECK WITH LOCAL HEALTH AUTHORITIES.
- K7: SCREENED DOWNPIPE RAINWATER HEAD OR OTHER SUITABLE LEAF AND DEBRIS DEVICE TO BE INSTALLED ON EACH DOWNPIPE. SCREEN MESH TO BE 4-6mm AND DESIGNED TO BE SELF-CLEANING.
- K8: FIRST FLUSH DEVICES, OR APPROVED ALTERNATIVE, TO BE INSTALLED WITH AN AUTOMATED DIVERSION AND DRAINAGE SYSTEM, THAT IS, NO MANUAL DIVERSION AND DRAINAGE VALVES. REFER TYPICAL FLUSH OUT PIT FOR DETAILS.
- K9: BEFORE PURCHASING MATERIALS OR PAINT TO BE USED ON ROOF CATCHMENT AREAS, THE MANUFACTURER'S RECOMMENDATIONS ON LABELS AND BROCHURES FOR RAINWATER TANK SUITABILITY TO BE READ AND ADHERED TO.
- K10: PRE-STORAGE PITS FOR UNDERGROUND RAINWATER STORAGE TANKS AND FLUSH OUT PITS MAY ASSIST IN LIMITING SILT, AND PREVENT VERMIN, INSECTS (INCLUDING MOSQUITOES) AND DEBRIS FROM ENTERING THE RAINWATER STORAGE AREA.
- K11: BUILDER/PLUMBER TO ENSURE THE INSTALLATION OF THE RAINWATER TANK SYSTEM IS IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND THE RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK - HB 230-2008. IF IN DOUBT CONTACT ENGINEER.
- K12: RAINWATER TANK TO BE WATER PROOFED IN ACCORDANCE WITH HB 230-2008

STORMWATER RE-USE TANKS:

- ST1: BASIX RECOMMENDS PROVIDING A STORMWATER TANKS FOR USE AS PER BASIX REQUIREMENTS FOR THE FOLLOWING USES: a) TO WATER GARDEN AREAS
- ST2: THE TANKS PROVIDED WILL REDUCE PRESSURE ON COUNCIL'S STORMWATER INFRASTRUCTURE.
- ST3: IF NOT SPECIFIED ON PLANS, THE FIRST FLUSH SYSTEM IS TO HAVE A MINIMUM SIZE OF 20L PER 100m2 OF ROOF CATCHMENT AREA PRIOR TO ENTERING THE RAINWATER TANK. INDIVIDUAL SITE ANALYSIS IS REQUIRED IN HEAVILY POLLUTED AREAS TO DETERMINE IF LARGER VOLUMES OF FIRST FLUSH RAINWATER ARE TO BE DIVERTED. IF IN DOUBT, CHECK WITH LOCAL HEALTH AUTHORITIES.
- ST4: SCREENED DOWNPIPE RAINWATER HEAD OR OTHER SUITABLE LEAF AND DEBRIS DEVICE TO BE INSTALLED ON EACH DOWNPIPE. SCREEN MESH TO BE 4-6mm AND DESIGNED TO BE SELF-CLEANING.
- ST5: FIRST FLUSH DEVICES, OR APPROVED ALTERNATIVES, TO BE INSTALLED WITH AN AUTOMATED DIVERSION AND DRAINAGE SYSTEM, THAT IS, NO MANUAL DIVERSION AND DRAINAGE VALVES. REFER TYPICAL FLUSH OUT PIT FOR DETAILS.
- ST6: BEFORE PURCHASING MATERIALS OR PAINT TO BE USED ON ROOF CATCHMENT AREAS, THE MANUFACTURER'S RECOMMENDATIONS ON LABELS AND BROCHURES FOR RAINWATER TANK SUITABILITY TO BE READ AND ADHERED TO.

Development Engineering Service
Approved Engineering Plans
Application Number: LDA2022/0035
Council Officer: Emily Lu
Date: 02/08/2022

BEFORE YOU DIG NOTE:

NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE DEVELOPERS # EXCAVATORS MAY BE HELD FINANCIALLY RESPONSIBLE BY THE ASSET OWNER SHOULD THEY DAMAGE UNDERGROUND NETWORKS.

CARELESS DIGGING CAN:

- CAUSE DEATH OR SERIOUS INJURY TO WORKERS AND THE GENERAL PUBLIC
- INCONVENIENCE USERS OF ELECTRICITY, GAS, WATER AND COMMUNICATIONS
- LEAD TO CRIMINAL PROSECUTION AND DAMAGES CLAIMS
- CAUSE EXPENSIVE FINANCIAL LOSSES TO BUSINESS
- CUT OFF EMERGENCY SERVICES
- DELAY PROJECT COMPLETION TIMES WHILE THE DAMAGE IS REPAIRED



MINIMISE YOUR RISK AND CONTACT
www.byda.com.au BEFORE YOU DIG.

ONSITE DETENTION CALCULATIONS ACCORDING TO CITY OF RYDE COUNCIL

TOTAL SITE AREA	=	577.5 m ²
PRE DEVELOPED IMPERVIOUS AREA	=	201.8 m ² (35.0 %)
PROPOSED IMPERVIOUS AREA	=	281.0 m ² (48.7 %)
INCREASE IN IMPERVIOUS AREA	=	79.6 m ²

OSD REQUIREMENT:

THE DEVELOPMENT IS LOCATED WITHIN AN AREA THAT IS GENERALLY EXEMPT FROM OSD, IN ACCORDANCE WITH CITY OF RYDE COUNCIL DCP (2014) AND ADVICE GIVEN BY CITY OF RYDE DEVELOPMENT ENGINEER DANIEL PICE ON 14 JANUARY 2022. (REFER STORMWATER CERTIFICATE FOR MORE DETAILS). THEREFORE, OSD IS NOT REQUIRED FOR THIS DEVELOPMENT.

OSD STORAGE REQUIRED	=	NIL
RAINWATER 'BASIX' REQUIRED	=	10,000L (10,000L PROVIDED)
ROOF AREA DIRECT TO RWT	=	160.0 m ²
DISCHARGE METHOD		KERB # GUTTER
MAXIMUM CONC. DISCHARGE TO KERB (IDA STREET)		=25 L/s

DRAWING SCHEDULE:

STORMWATER DRAWINGS

- D01 - STORMWATER GENERAL NOTES
- D02 - STORMWATER MANAGEMENT - DRAINAGE PLANS
- D03 - STORMWATER MANAGEMENT - DRAINAGE PLANS
- D04 - STORMWATER MANAGEMENT - DETAILS

NOTE:

STORMWATER DRAWINGS DO NOT INCLUDE SUBSOIL AGRICULTURAL DRAINAGE DETAILS FOR D.A. SUBMISSION. NORTHERN BEACHES CONSULTING ENGINEERS PTY LTD MUST BE COMMISSIONED TO INCLUDE THESE DETAILS ONLY WHEN CONSTRUCTION CERTIFICATE AND/OR CONSTRUCTION DOCUMENTATION IS COMPLETE AND PROVIDED.

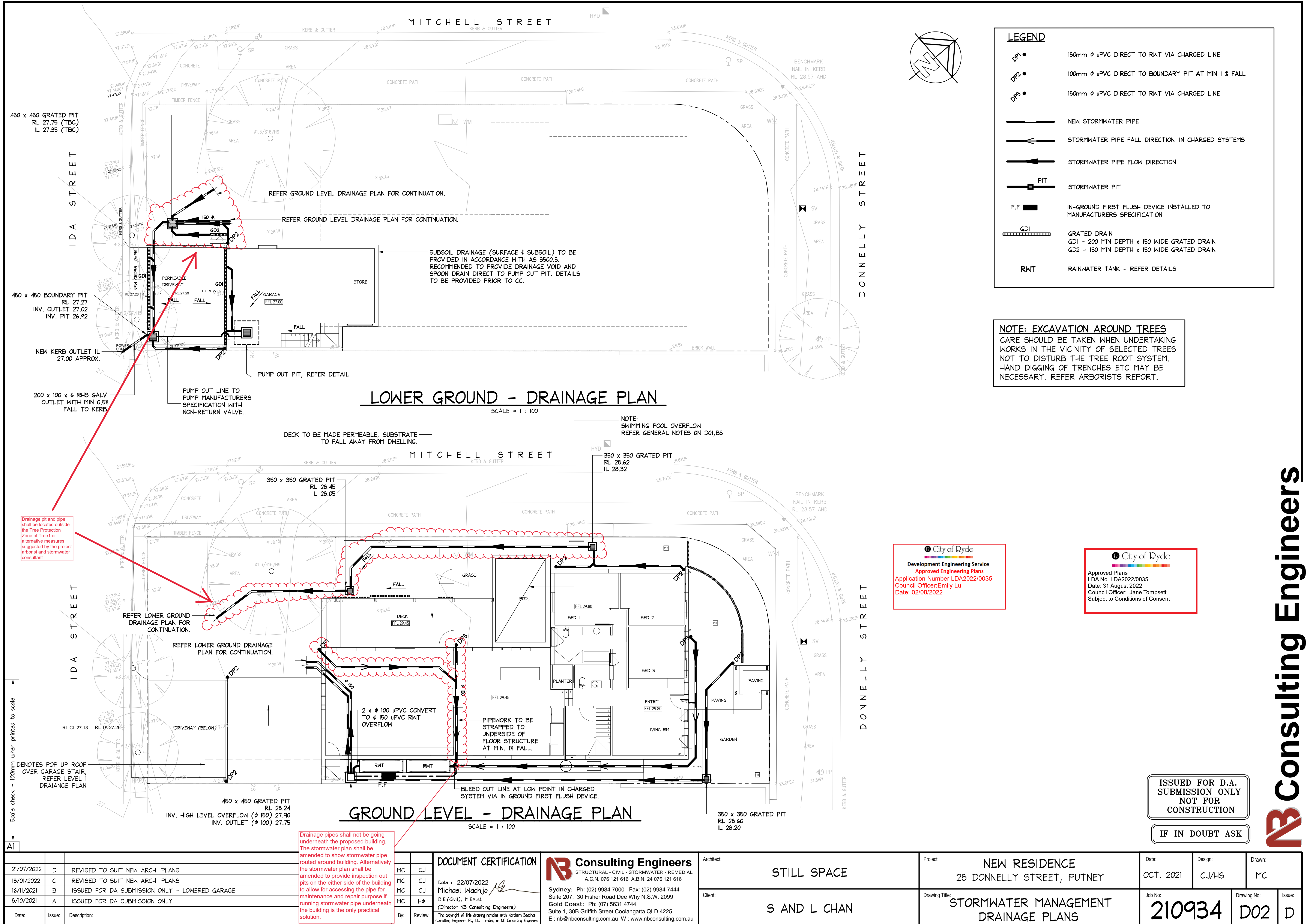
ISSUED FOR D.A.
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CONSTRUCTION

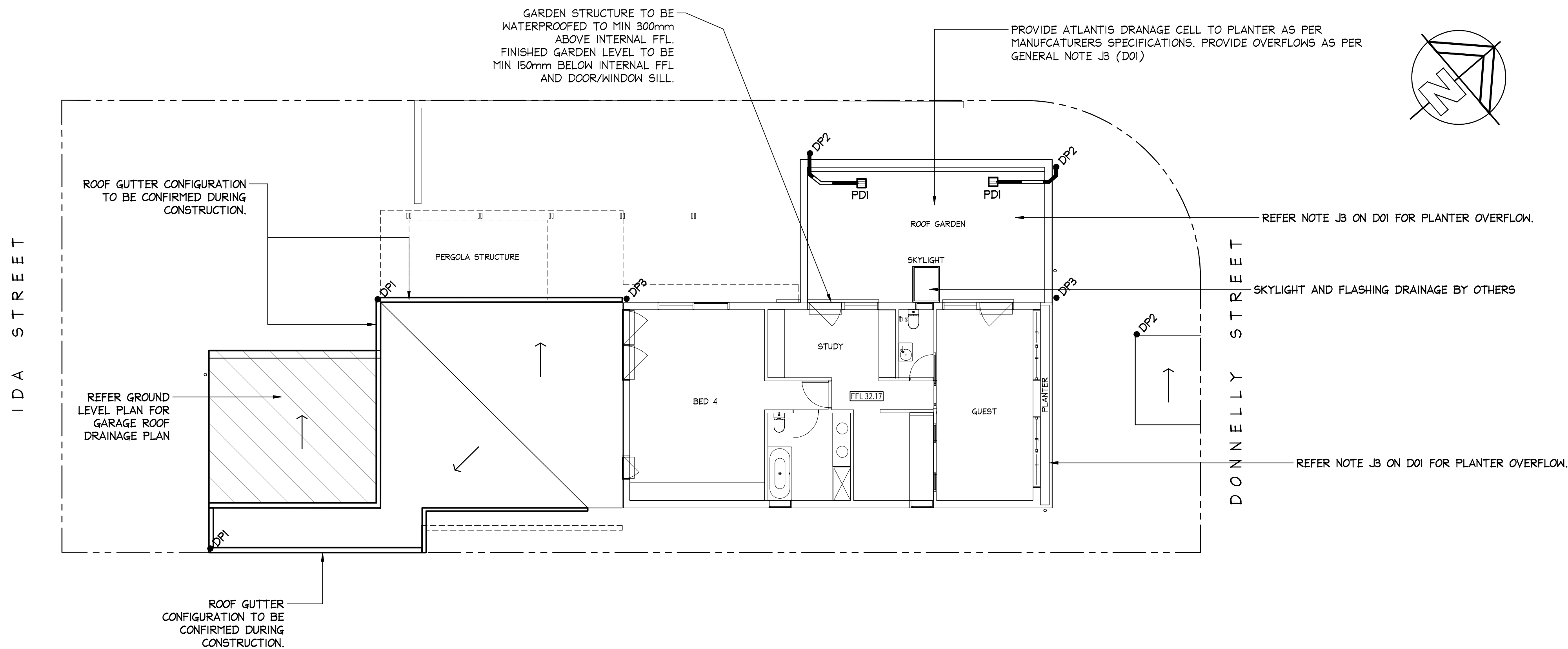
IF IN DOUBT ASK

AI

						DOCUMENT CERTIFICATION	Consulting Engineers STRUCTURAL - CIVIL - STORMWATER - REMEDIAL A.C.N. 076 121 616 A.B.N. 24 076 121 616 Sydney: Ph: (02) 9984 7000 Fax: (02) 9984 7444 Suite 207, 30 Fisher Road Dee Why N.S.W. 2099 Gold Coast: Ph: (07) 5631 4744 Suite 1, 30B Griffith Street Coolangatta QLD 4225 E : nb@nbconsulting.com.au W : www.nbconsulting.com.au	Architect: STILL SPACE Client: S AND L CHAN	Project: NEW RESIDENCE 28 DONNELLY STREET, PUTNEY	Date: OCT. 2021	Design: CJ/HS	Drawn: MC	Drawing Title: STORMWATER MANAGEMENT GENERAL NOTES AND DRAWING SCHEDULE	Job No: 210934	Drawing No: D01	Issue: C
21/07/2022	C	REVISED TO SUIT NEW ARCH PLANS	MC	CJ	Date : 22/07/2022 Michael Wachjo											
16/11/2021	B	ISSUED FOR DA SUBMISSION ONLY - LOWERED GARAGE	MC	CJ	B.E.(Civil), MIEAust. (Director NB Consulting Engineers)											
8/10/2021	A	ISSUED FOR DA SUBMISSION ONLY	MC	H4	The copyright of this drawing remains with Northern Beaches Consulting Engineers Pty Ltd. Trading as NB Consulting Engineers											
Date:	Issue:	Description:	By:	Review:												

NB Consulting Engineers





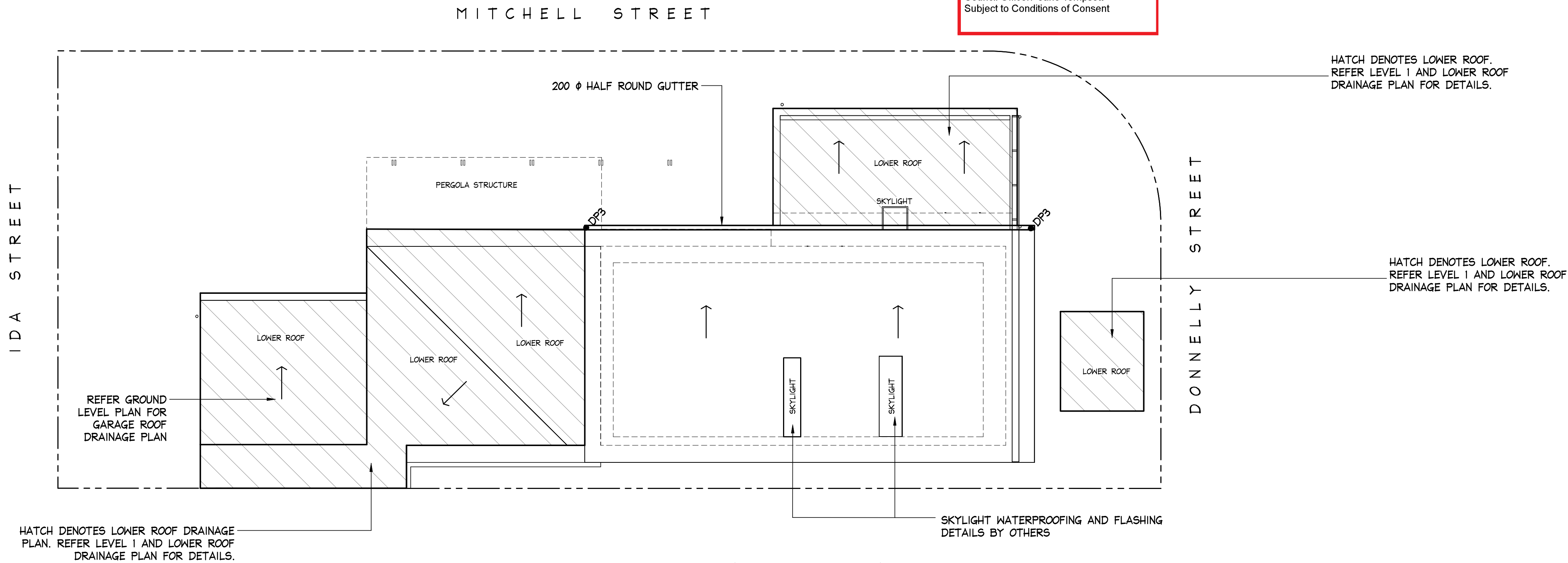
LEVEL 1 AND LOWER ROOF - DRAINAGE PLAN

SCALE = 1 : 100

LEGEND

- DP1 • 180mm Ø uPVC DIRECT TO RWT VIA CHARGED LINE
- DP2 • 100mm Ø uPVC DIRECT TO BOUNDARY PIT AT MIN 1 % FALL
- DP3 • 150mm Ø uPVC DIRECT TO RWT VIA CHARGED LINE
- NEW STORMWATER PIPE
- STORMWATER PIPE FALL DIRECTION IN CHARGED SYSTEMS
- STORMWATER PIPE FLOW DIRECTION
- PIT STORMWATER PIT
- F.F. IN-GROUND FIRST FLUSH DEVICE INSTALLED TO MANUFACTURERS SPECIFICATION
- GDI GRATED DRAIN
GDI - 200 MIN DEPTH x 150 WIDE GRATED DRAIN
GD2 - 150 MIN DEPTH x 150 WIDE GRATED DRAIN
- RWT RAINWATER TANK - REFER DETAILS
- FDI ATLANTIS PLANTER DRAIN, REFER DETAIL

NOTE: EXCAVATION AROUND TREES
CARE SHOULD BE TAKEN WHEN UNDERTAKING WORKS IN THE VICINITY OF SELECTED TREES NOT TO DISTURB THE TREE ROOT SYSTEM. HAND DIGGING OF TRENCHES ETC MAY BE NECESSARY. REFER ARBORISTS REPORT.



UPPER ROOF - DRAINAGE PLAN

SCALE = 1 : 100

City of Ryde
Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

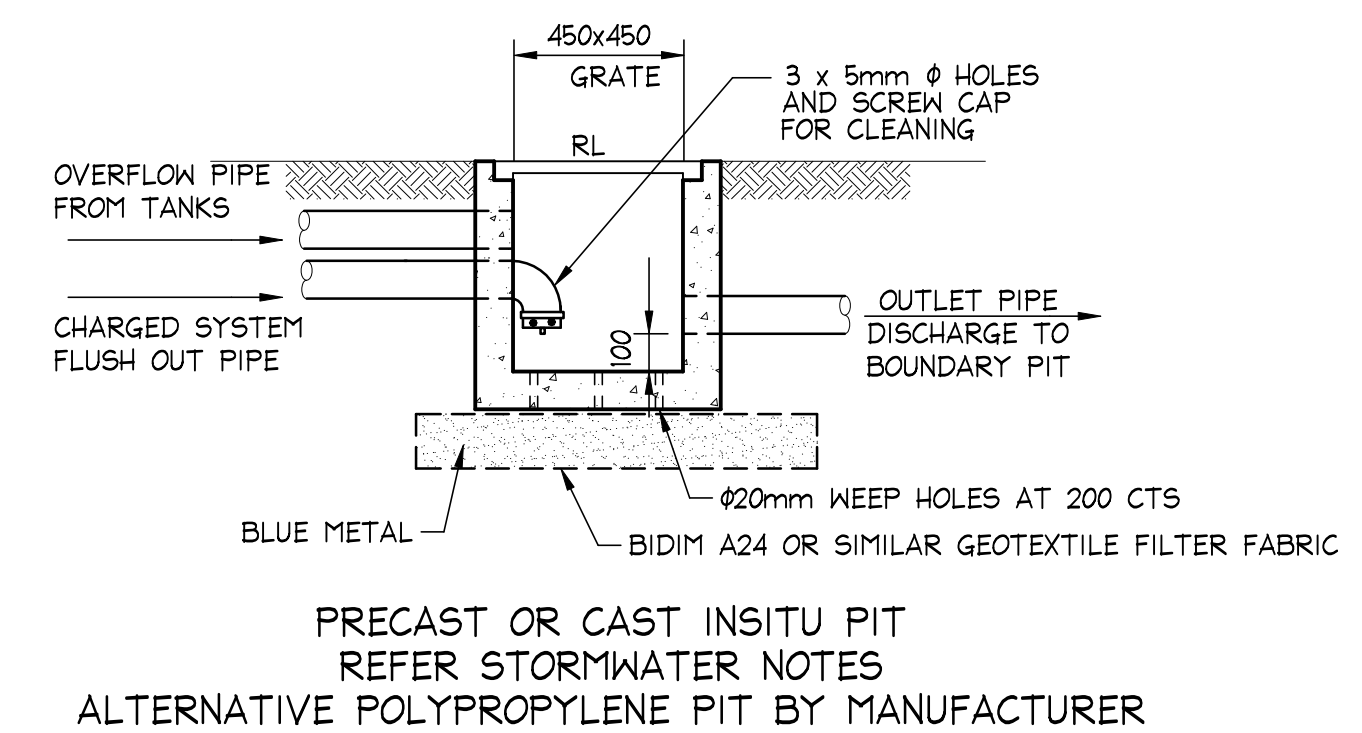
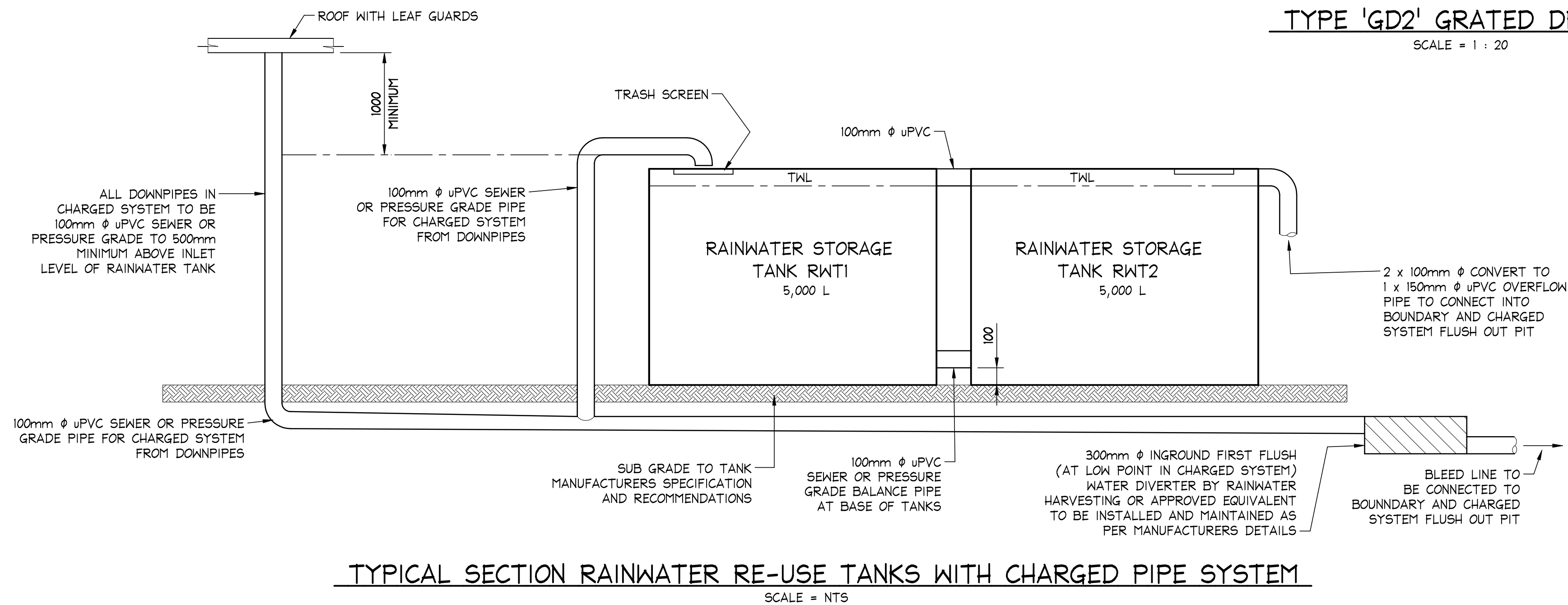
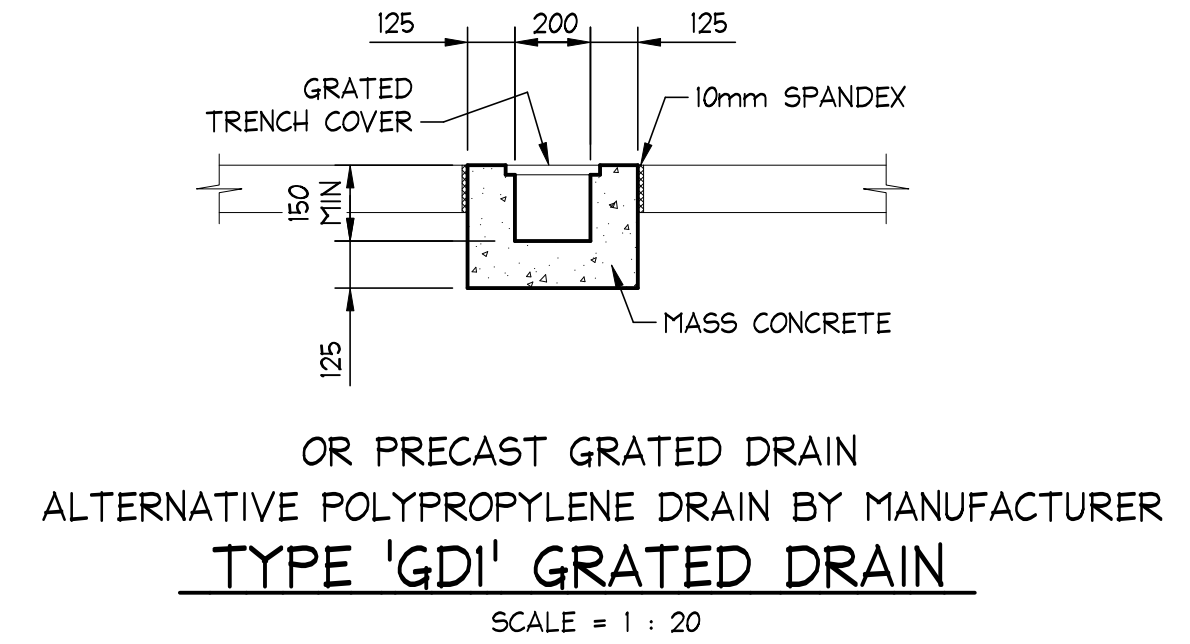
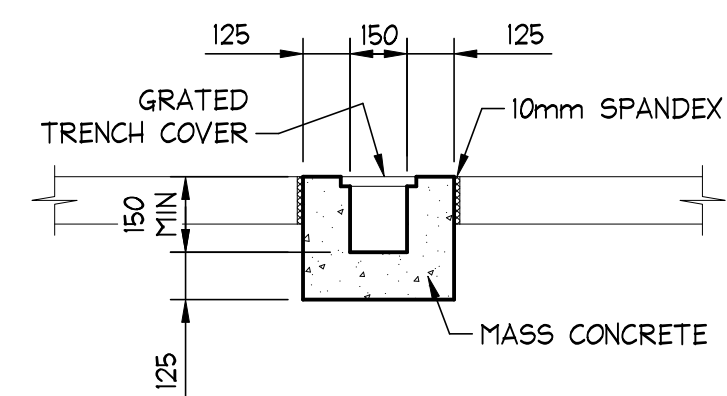
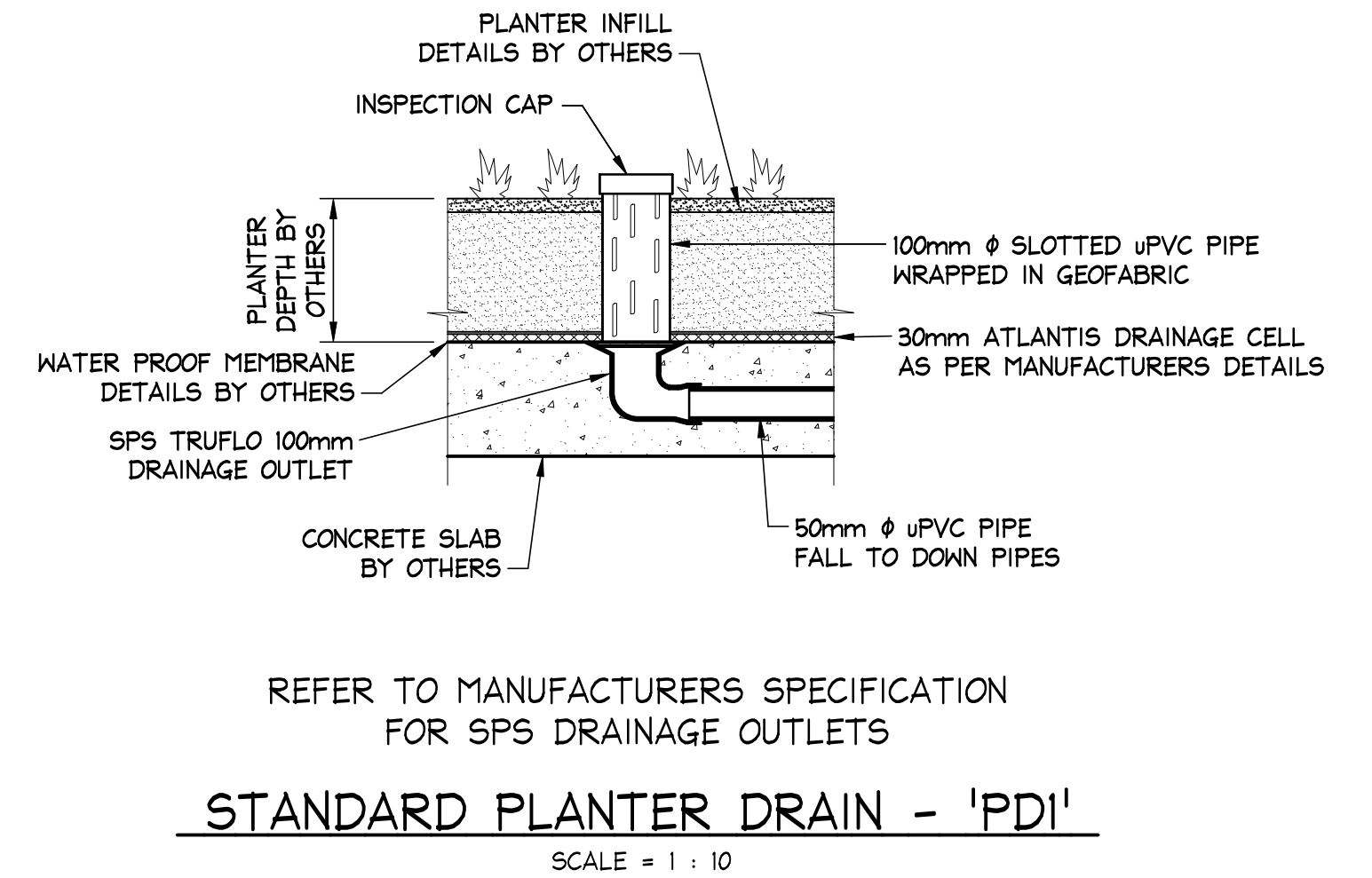
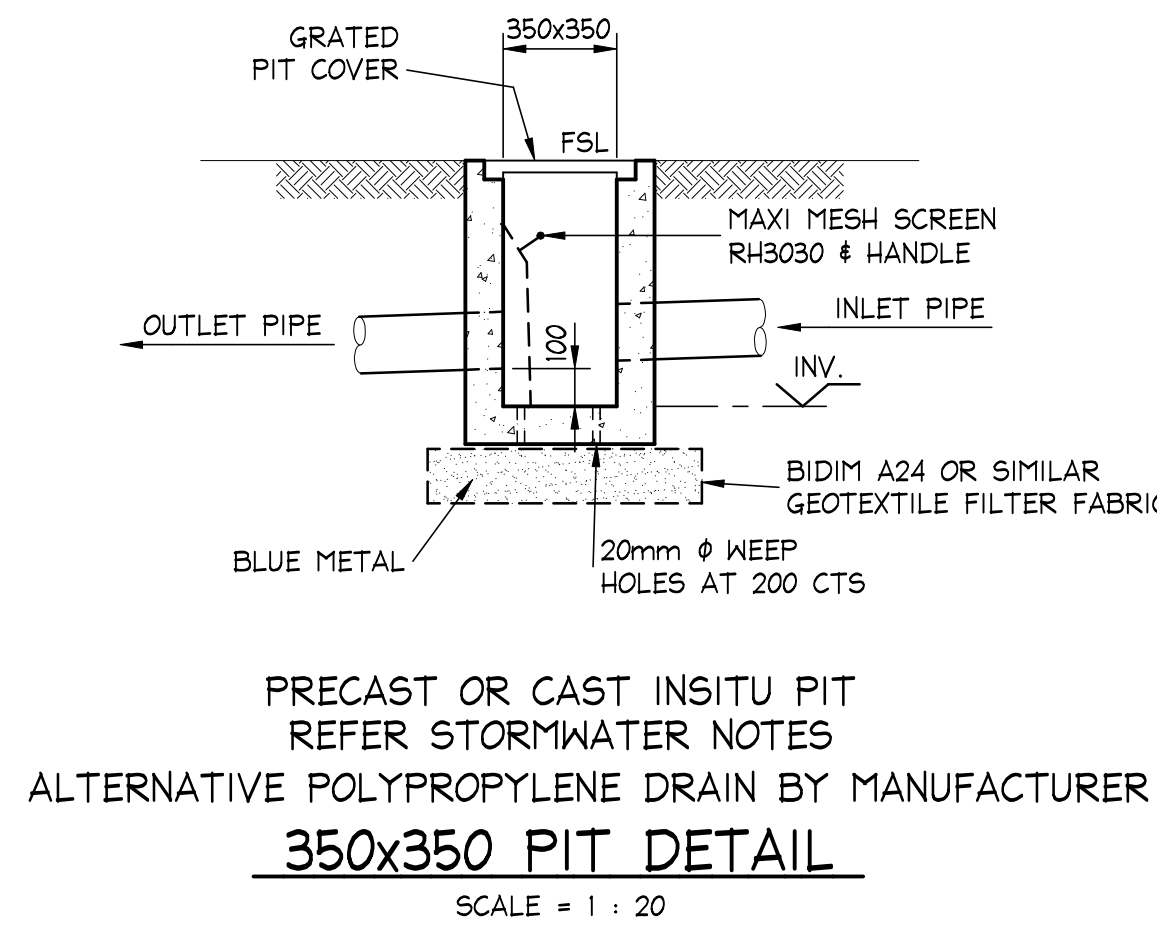
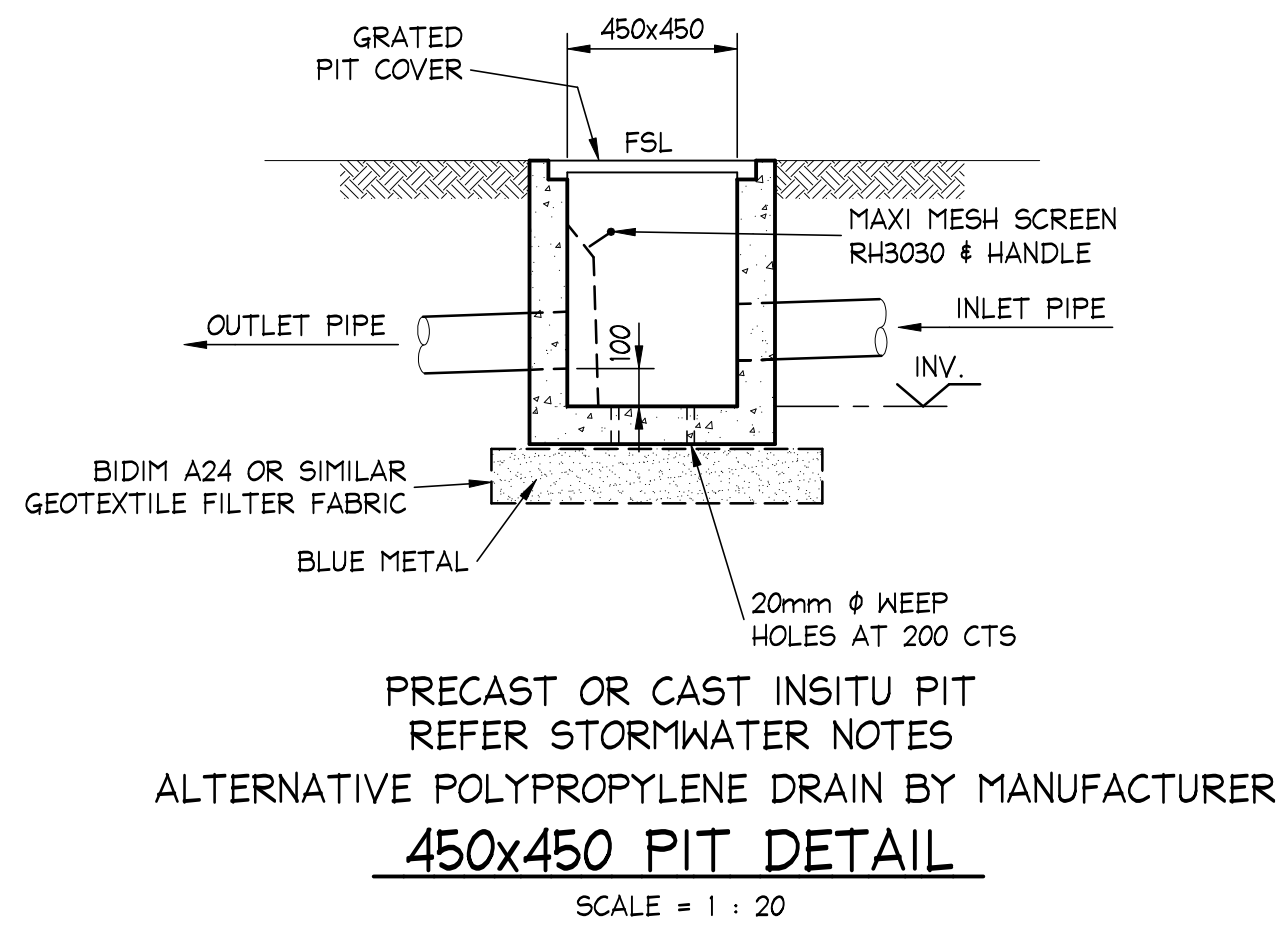
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DOCUMENT CERTIFICATION				Architect:		Project:	Date:	Design:	Drawn:
Date : 22/07/2022 Michael Wachjo B.E.(Civil), MIEAust. (Director NB Consulting Engineers) <small>The copyright of this drawing remains with Northern Beaches Consulting Engineers Pty Ltd. Trading as NB Consulting Engineers</small>				STILL SPACE		NEW RESIDENCE 28 DONNELLY STREET, PUTNEY	OCT. 2021	CJ/HS	MC
Sydney: Ph: (02) 9984 7000 Fax: (02) 9984 7444 Suite 207, 30 Fisher Road Dee Why N.S.W. 2099 Gold Coast: Ph: (07) 5631 4744 Suite 1, 30B Griffith Street Coolangatta QLD 4225 E : nb@nbconsulting.com.au W : www.nbconsulting.com.au				S AND L CHAN		STORMWATER MANAGEMENT DRAINAGE PLANS	Job No:	Drawing No:	Issue:
21/07/2022 B REVISED TO SUIT NEW ARCH PLANS 08/10/21 A ISSUED FOR DA SUBMISSION ONLY							210934	D03	B
Date:	Issue:	Description:	By:	Review:					

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Date: 31 August 2022
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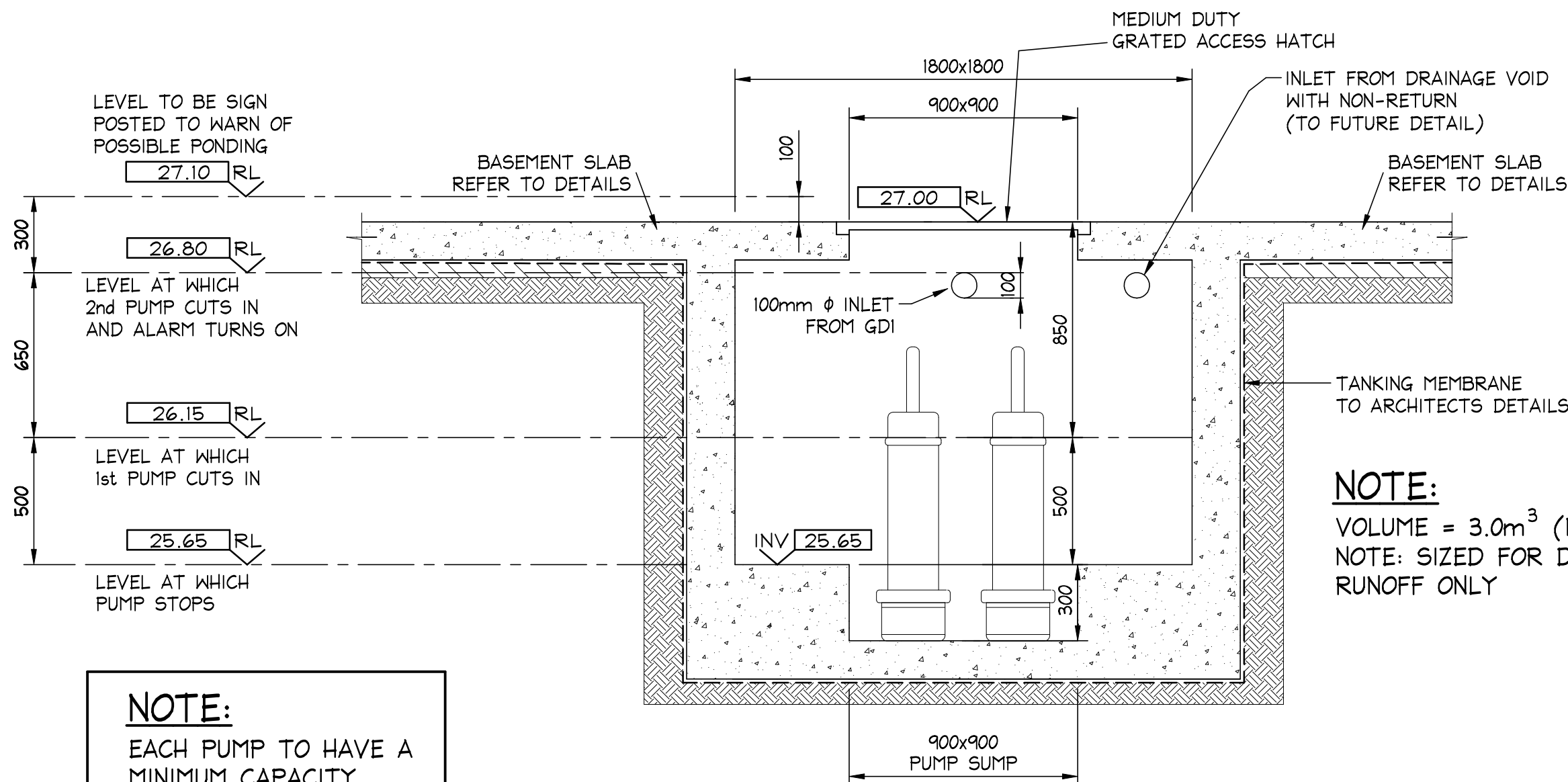
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21/07/2022	B	REVISED TO SUIT NEW ARCH PLANS	MC	CJ					
08/10/21	A	ISSUED FOR DA SUBMISSION ONLY	MC	Hφ					
Date:	Issue:	Description:	By:	Review:					

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NB Consulting Engineers



BASEMENT EMERGENCY PUMP OUT PIT DETAIL

SCALE = NTS

NOTE:
EACH PUMP TO HAVE A
MINIMUM CAPACITY
OF 5 l/s.

NOTE:
VOLUME = 3.0m³ (MINIMUM)
NOTE: SIZED FOR DRIVEWAY
RUNOFF ONLY

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BASEMENT PUMPING WELL

PROVIDE TWO CENTRIFUGAL DRAINAGE SUMP PUMPS WITH SINGLE-PHASE ELECTRIC MOTOR CAPABLE OF DISCHARGING 2.50L/S EACH AGAINST A TOTAL HEAD OF (2.2m) WITH 10 STARTS PER HOUR MAXIMUM. CLASS 1 ZONE 2 CERTIFIED PUMPS FOR HAZARDOUS AREAS ARE REQUIRED SWITCHING SHALL PROVIDE FOR ALTERNATIVE OPERATION OF THE PUMPS, HIGH LEVEL SWITCH ON/OFF, 2ND PUMP, AND A RED LIGHT ALARM PLACED PERMANENTLY IN THE BASEMENT AREA ACTIVATED BY HIGH LEVEL SWITCH ON.

BASEMENT HOLDING TANK

AREA DRAINING TO THE GARAGE PUMPING = 50 m² (DRIVEWAY TO THE BASEMENT)
NOTE: THE FOLLOWING CALCULATION HAS BEEN DONE ON THE ASSUMPTION THAT DRIVEWAY SURFACE DRAINAGE IS BLOCKED) STORAGE MUST BE PROVIDED FOR A BLACKOUT OF AT LEAST 3HRS, THE 1% AEP STORM RUNOFF IS:

$$Q = F \times C \times I \times A$$
$$= 1/3600 \times 0.9 \times 31.9 \times 50$$
$$= 0.40 \text{ L/s}$$

VOLUME ACCUMULATED (100 YEAR ARI, 3 HOUR STORM):

$$V_{10/120} = (0.40 \text{ L/s} \times 3 \text{ hrs} \times 3600 \text{ s}) / 1000$$
$$= 4.32 \text{ m}^3$$

VOLUME PUMPED IN 30 MINS:

$$PC_{30} = (5.0 \text{ L/s} \times 0.5 \text{ hrs} \times 3600 \text{ s}) / 1000$$
$$= 9.0 \text{ m}^3$$

VOLUME PUMPED IN 5 MINS:

$$PC_5 = (5.0 \text{ L/s} \times 0.083 \text{ hrs} \times 3600 \text{ s}) / 1000$$
$$= 1.5 \text{ m}^3$$

DESIGN WET WELL STORAGE CAPACITY

$$= V_{10/120} - PC_{30} = 3.0 \text{ m}^3$$

(MIN STORAGE PER AS3500.3)

PUMP OUT NOTES:

- TO ENSURE THAT SEEPAGE WATER IS NOT BEING PUMPED CONTINUALLY OUT TO THE STREET, THE PUMPS IN THE BASEMENT SHALL BE ADJUSTED TO PERMIT STORAGE IN THE BASEMENT PIPE SYSTEM (REFER DETAIL FOR RL) PRIOR TO THE PUMPS CUTTING IN. THE PUMPS SHOULD THEN DISCHARGE ALL WATER SO THAT ONLY MINIMAL WATER IS LEFT OVER THE PUMP INTAKE AS REQUIRED BY THE MANUFACTURER.
- THE PUMPS SHALL OPERATE ALTERNATELY TO RL INDICATED ON DETAILS, WITH BOTH PUMPS OPERATING IN UNISON AT RL INDICATED ON DETAILS, (WITH ALARM) IF THE WATER LEVEL CONTINUES TO RISE ABOVE THE MAXIMUM WATER LEVEL AFTER THE FIRST PUMP HAS COME ON. THE LOW AREA OF THE BASEMENT TO BE SIGN POSTED TO PERMIT ADDITIONAL STORAGE VOLUME (UP TO 200mm IN DEPTH) DURING A MAJOR STORM EVENT.
- ALL WORKS TO BE IN ACCORDANCE WITH AS 3500.3:2021 SECTION 8 PUMPED SYSTEMS.
- PUMPS SHALL BE IN DUPLICATE. THE MAXIMUM CAPACITY OF EACH PUMP SHALL BE SELECTED SO THAT THE CAPACITY OF THE SYSTEM RECEIVING THE DISCHARGE IS NOT EXCEEDED. THE PUMP CONTROLS SHALL BE SET UP TO ENABLE ALTERNATE PUMP OPERATION AT EACH START. IN THE EVENT THAT A PUMP FAILS TO OPERATE WHEN THE WATER LEVEL IN THE WET WELL REACHES THE PUMP START, THE OTHER PUMP SHALL BE ACTIVATED AND A VISIBLE ALARM INITIATED. IN THE EVENT THAT BOTH PUMPS FAIL TO OPERATE AN AUDIBLE ALARM SHALL BE INITIATED.
- PUMPING EQUIPMENT SHALL BE SECURELY FIXED TO THE WET WELL USING CORROSION RESISTANT FIXINGS.
- PUMPS SHALL BE FITTED WITH A GATE VALVE AND NON-RETURN VALVE ON THE DELIVERY SIDE OF EACH PUMP.
- PUMPS SHALL HAVE FLANGES OR UNIONS INSTALLED TO FACILITATE REMOVAL.
- PUMPS SHALL BE CONTROLLED SO AS TO LIMIT THE NUMBER OF STARTS PER HOUR TO WITHIN THE CAPACITY OF THE ELECTRICAL MOTORS AND EQUIPMENT, AND SHALL, AS FAR PRACTICABLE, EMPTY THE CONTENTS OF THE WET WELL AT EACH OPERATION.
- THE REQUIRED PUMPING RATE SHALL BE CALCULATED BASED ON AN ASSESSMENT OF THE EXPECTED INFLOW AND, WHERE APPROPRIATE, THE ALLOWABLE DISCHARGE RATE.
- ALL PUMP AND CONNECTION SPECIFICATIONS AND DETAILS ARE BY OTHERS TO MANUFACTURERS REQUIREMENTS. ANY DESIGN ELEMENTS NOTED BY NBCE ARE TO BE CHECKED BY THE PUMP MANUFACTURER AND/OR INSTALLER TO ENSURE COMPLIANCE WITH RELEVANT AUSTRALIAN STANDARDS, CODES AND BEST INDUSTRY PRACTICE. NBCE MUST BE NOTIFIED PRIOR TO CONSTRUCTION IF ANY STATED DESIGN REQUIREMENTS CANNOT BE ACHIEVED.

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DOCUMENT CERTIFICATION

Date: 22/07/2022
Michael Wachjo
B.E.(Civil), MIE Aust.
(Director NB Consulting Engineers)

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Architect:

STILL SPACE

Client:

S AND L CHAN

Project:

NEW RESIDENCE
28 DONNELLY STREET, PUTNEY

Drawing Title:

STORMWATER MANAGEMENT
DETAILS

Job No:

210934

Design:

CJ/HS

Drawn:

MC

Issue:

A

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NB Consulting Engineers

rain Tree consulting

Arboricultural Management

PO Box 326 AVALON NSW 2107

Mobile 0419 250 248

29 June 2022

28 DONNELLY STREET

PUTNEY, NSW

DEVELOPMENT PROPOSAL

ARBORICULTURAL IMPACT ASSESSMENT REPORT

Ref No- 8622



Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

Prepared for
Susan Chan
C/- Still Space Architecture
p: 0419 625 464

Prepared by
Mark A. Kokot
AQF Level 5 Consulting arborist



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INTRODUCTION

This report has been commissioned by Susan Chan C/- Still Space Architecture for the purpose of assessing potential impacts that may occur to significant trees in relation to a new development proposal. The new development proposal consists of constructing a new residence with garage and driveway access servicing Lot 27 in DP 35543 known as 28 Donnelly Street PUTNEY, NSW.

Recommendations for retention or removal of trees is based on the trees condition, accorded ULE category, current design and potential impacts to trees under this development application.

Development incursions within tree protection zones (TPZ) and impacts to trees have been outlined within Note 2 of Appendix- A where incursions are described as Minor (<10%) & Major (>10%) TPZ occupancy having low, moderate to high level impacts within the TPZ. Where site restrictions within notional root zone radiuses exists development impacts or encroachment disturbances are based on author's experience, observations of site conditions, soil type and topography.

Each tree assessed has been accorded a temporary identification number and is referred to by number throughout this report. For additional trees not plotted on provided documentation their location has been estimated by taking offsets from existing trees and structures. The trees inspected and their location may be referenced within the Tree Assessment Schedule and Tree Location Plan of Appendices D.

Care has been taken to obtain information from reliable sources. All data has been verified as far as possible, however, I can neither guarantee nor be responsible for the accuracy of information provided by others.



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METHODOLOGY

In preparation for this report a site and tree inspection was conducted 6th May 2022 by the author of this report. Documentation reviewed and/or works conducted to assist in the preparation of this report include:

- Undertaking a limited ground level visual tree inspection adopting components for Mattheck & Breloer 'The Body Language of Trees' 1994. On completion of the inspection the retention value of the tree was summarized utilizing the Tree Assessment Checklist provided within Appendix- B.
- Estimating tree height and measuring trunk diameter(s) to determine the estimated Structural Root Zone (SRZ) *the area required for tree stability*, and Tree Protection Zone (TPZ) radiuses as indicated within Appendix- C.
- Determining age, vitality & condition of the tree to withstand works within the tree protection zone.

Documents reviewed

Still Space Architecture *specific to:*

- Site Plan, Dwg No: A001, issue A dated October 2021
- Roof Plan LGL, Dwg No: A003, issue A dated October 2021
- Ground Floor Plan, Dwg No: A004, issue A dated October 2021
- Elevations, Dwg No: A007, issue A dated October 2021
- Section, Dwg No: A008 & A009, issue A dated October 2021

TSS, Total Surveying Solutions, job No. 170587

- Survey Plan No: 170587_A dated 3.4.2017

Note: Unless specified otherwise all development offsets within this report are taken from the centre of the tree based on survey plotted documentation.



SUMMARY OF ASSESSMENT*General observations*

- Three (3) trees have been assessed for the purpose of the development proposal. Of the three trees, two (2) small Jacaranda trees T2 & 3 are located within the small and narrow roadside verge of adjacent Ida Street. Given the trees location adjacent roadside kerb & gutter infrastructure the trees are likely to become problematic to infrastructure in the future indicating the trees have moderate to low retention values.

Within the site significant Lilly Pilly tree T1 is considered a mature and well-established tree. Based on site observation with exposed surface roots and age of tree the SRZ & TPZ is likely to be greater than determined after AS4970 Protection of Trees on Development Sites - 2009. Given the establishment of the tree it is likely that any Major (>10%) encroachments within the TPZ would likely interfere with the vitality of the tree.

The development proposal

- Tree 1: The development proposal consists of demolition of existing site features to allow construction of a new residential dwelling and associated infrastructure. Design has maintained clearance of the 3.4m Structural Root Zone (SRZ) and has adopted tree sensitive construction such as suspended structures to minimize the impact of design within the Tree Protection Zone (TPZ). Having suspended structures within the TPZ the extent or percentage of TPZ loss by excavation and suspended structure coverage has been separated in two sections, being the TPZ area lost by garage excavation at or near 15.2% and suspended structures occupying 10.1% of the TPZ. The combined TPZ occupancy or design footprint within the TPZ is considered at a Moderate to High level (20-25%) impact, being at or near 25.3% which includes part occupancy by the existing shed footprint.

Figure 1, Showing design footprint adjacent T1

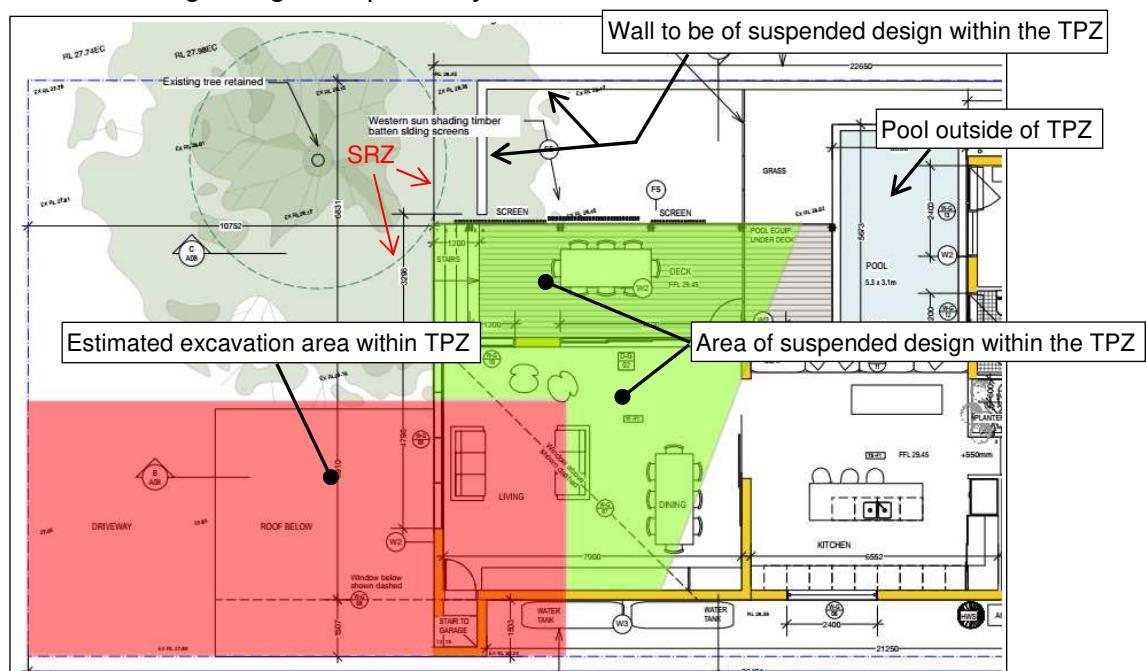
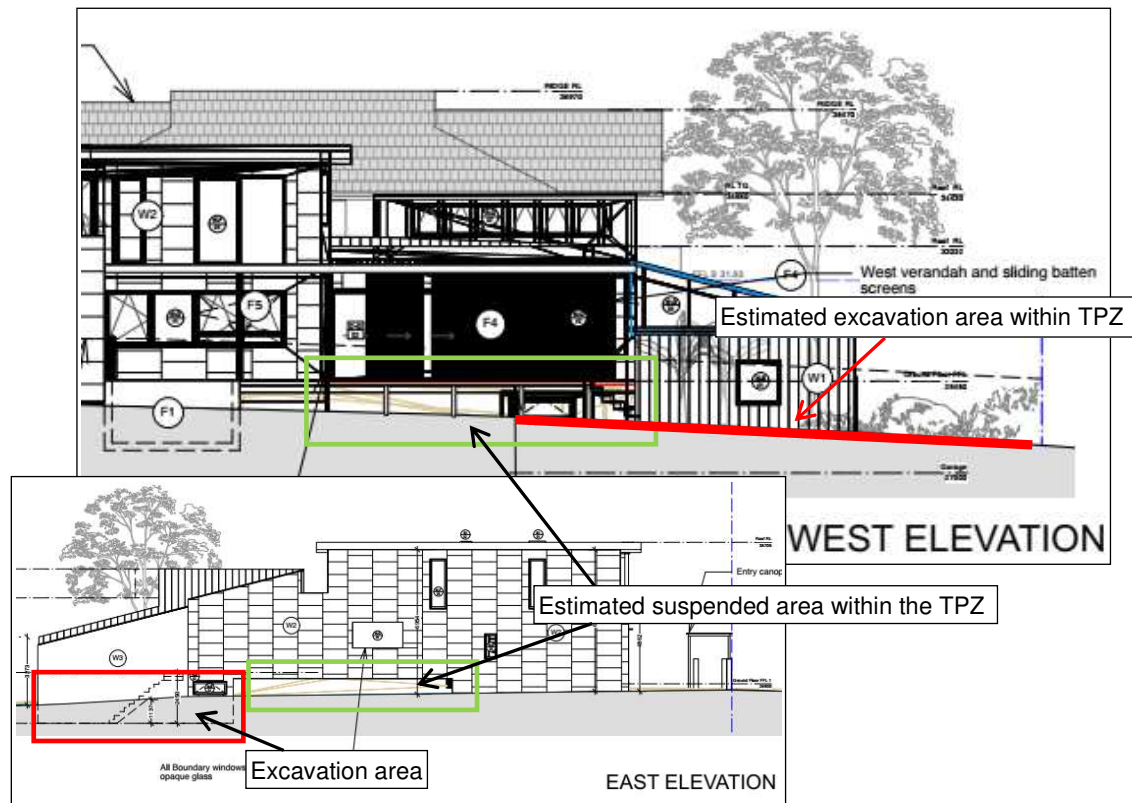


Figure 2, Showing elevations & suspended design adjacent T1



Mitigating impacts by design

3. Being a well-established tree where the available deep soil within the TPZ is mostly located within the site, the proposed Moderate to High (20-25%) design footprint within the TPZ will likely disrupt tree vitality in some manner. Mitigating design encroachment impacts based on Australian Standard AS 4970 – 2009 Protection of Trees on Development Sites are recommended with the following specific guidelines provided to appropriately manage the tree and Major (>10%) encroachments within the TPZ.

Specific tree management

- a) Prior to works the extent of any over excavation is recommended to be detailed within construction drawings for arborist review. Ideally the extent of over excavation should be limited to 0.2m (200mm) off the proposed garage footprint to limit encroachment within the TPZ. A colour coded cut & fill plan should be included that clearly identifies excavation areas within the 12.6 TPZ.
- b) Where suspended design is required a detailed footing plan is recommended to be provided for arborist review and certification. This should include identifying suspending the secondary wall proposed along Mitchell Street where the wall is to be constructed above or on ground level without trench excavation or leveling within the TPZ.



- c) *Tree protection fencing.* Given that the available area for construction access will likely be within the 12.6m TPZ a designated tree protection area (TPA) is to be installed. The TPA is to be managed as a Tree Protection Zone (TPZ) as indicated within Section 7, which includes mulch within the TPA and irrigation throughout the course of work.
- d) Initially for demolition & excavation a fenced TPA consisting of 1.8m high tree protection fencing shall be installed as indicated within Figure 3. Fencing should be positioned 6m E,SE of the tree, 5m to the S to allow for garage excavation and after removal of the existing shed extend to the western boundary.

Unless approved and certified otherwise by an appointed project arborist activities to be prevented within the TPZ include machine excavation, including trenching, storage & work preparation, wash down areas, soil level change, utility services and physical damage to trees. The location of inground services are recommended to be positioned outside of the TPA to avoid additional excavation within the TPZ.

- e) In specific the 3.4m SRZ radius is to be considered a development activity exclusion zone. No additional works including landscaping shall occur within the SRZ without prior arborist advice.
- f) The proposed inner TPA is to remain a development access exclusion area and only be modified to allow for decking and part dwelling construction with arborist advice and certification.

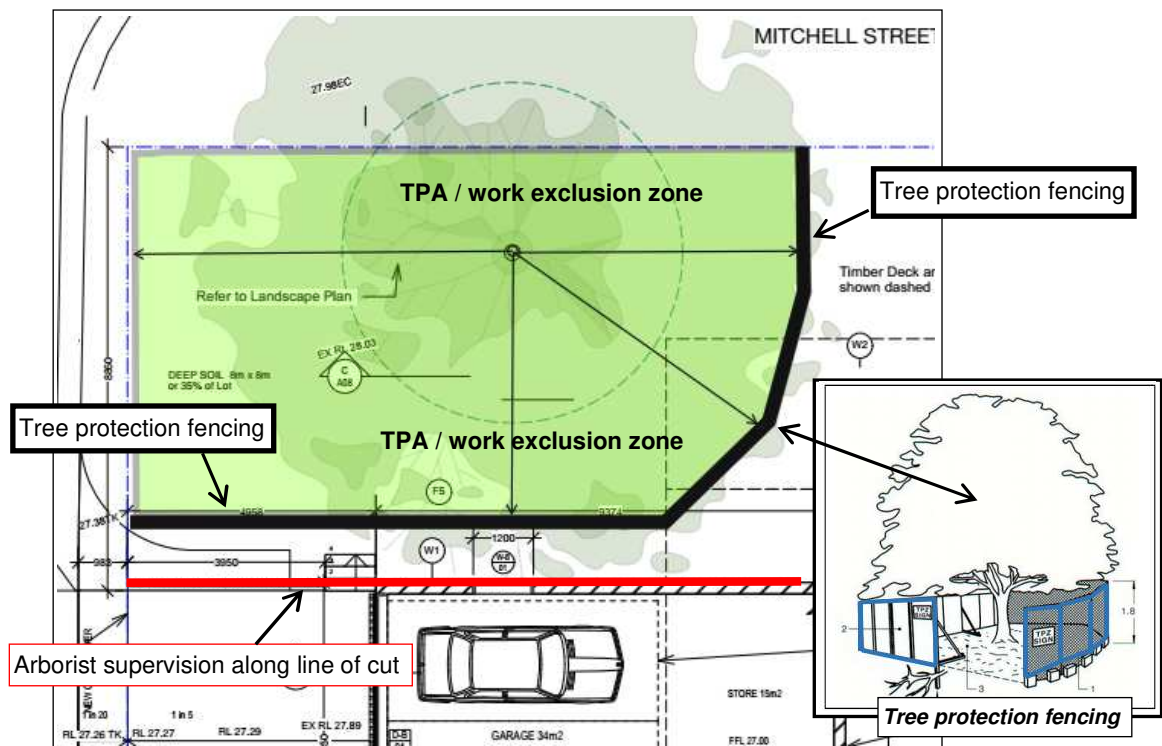
Where a reduced TPA is required certification of additional tree, tree root and ground protection measure are to be provided by an appointed project arborist. This may likely include ground protection as identified within Appendix- B item [C].

- g) *Excavation within the TPZ.* Within the TPZ pier footing holes and along the initial line of cut for driveway & garage excavation, manual (hand) excavation to a depth of 0.6m (600mm) is to be conducted under the supervision of an appointed site arborist, see Figure 3.

All roots encountered are to be treated in accordance with AS4970 – 2009 Section 4.5.4 *Root protection during works within the TPZ*, such that tree roots are not damaged or ripped beyond the point of excavation by site machinery. Root pruning should be conducted in accordance with Section 9 of Australian Standards AS 4373 Pruning of Amenity Trees 2007 specific to: *all cuts shall be clean cuts made with sharp tools such as secateurs, pruners, handsaws, chainsaws or specialized root pruning equipment.* For deep excavation areas exposed roots at the excavated cut face are to be protected with jute mesh, geotextile fabric or similar being secured in place to avoid drying of roots and the exposed soil profile. It should be acknowledged that the effects of root pruning are not always predictable (AS4373).

After root management has been conducted and certified machinery excavation is permitted within the TPZ.

Figure 3, Showing T1 management area



4. Trees 2 & 3: The design proposes tree removal with T3 being located within the proposed driveway crossover and T2 receiving likely SRZ interference.

CONCLUSIONS & RECOMMENDATIONS

5. With the consent of Council the removal of two (2) Council verge trees T2 & 3 are required to accommodate design. The trees are located in the area of the proposed driveway crossover which has been initially repositioned to reduce encroachment within the SRZ of significant tree 1.
6. The retention of significant T1 requires specific and detailed tree management where it is likely the extent of TPZ coverage may contribute to a decline in vitality due to tree age and establishment within the site. Given appropriate management during and post development the tree may reinstate or recover from TPZ disturbances provided the tree protection area (TPA) is maintained as a deep soil zone, is well mulched, and the tree appropriately irrigated during and post development.



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7. General tree protection requirements

- a) Prior to demolition works Tree Protection Fencing (TPF) and/or zones as identified within this report are recommended to be located under the guidance of an appointed site arborist. Unless specified otherwise the location of tree protection fencing is to be positioned to allow for adequate work access and/or be located at the extremity of the TPZ radius, see SRZ & TPZ distance column Appendix- D. Where design & construction access may be restrictive timber beam trunk protection is recommended to be installed, with ground protection mats provided to protect underlying tree roots within tree protection zones or designated tree protection areas (TPA).
- b) Unless approved otherwise activities prevented within the TPZ include: machine excavation, including trenching, storage & work preparation, wash down areas, soil level change, utility services and physical damage to trees.
- c) In accordance with AS4970 - 2009 (1.4.4) a Project or Site Arborist is to be engaged to monitor, supervise excavation within TPZ setbacks, advise and provide certification of protection works conducted. The project arborist is recommended to hold a minimum Australian Qualification Framework (AQF) Level 5 certification and be competent in methodology of protecting trees on development sites.
- d) The project arborist is to provide final certification outlining tree protection measures with photographic evidence of ongoing works retained for certification purposes (AS4970 S/5.5.2 *Final certification*).
- e) The project arborist is to be familiar with protection measures specific to Australian Standard AS4970 'Protection of Trees on Development Sites' – 2009 requirements with any modification in Tree Protection Fencing (TPF) or Zones (Z) to be compliant with AS4970 Section 4.5 *Other Tree Protection Measures*.
- f) Unless specified otherwise during approved excavation within TPZ setbacks excavation is to be conducted manually (by hand) under the supervision of an appointed project arborist.

Where approved by the arborist the pruning of roots at or <30mm(Ø) is to be conducted in accordance with AS4970 – 2009 Section 4.5.4 *Root protection during works within the TPZ*, such that tree roots are not damaged or ripped beyond the point of excavation by site machinery.

For deep excavations exposed roots at the excavated cut face are to be protected with jute mesh, geotextile fabric or similar being secured in place to avoid drying of roots and the exposed soil profile.



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Plan No. 0022 20 Bonnelly St, PUTNEY NSW – arborist – 29.6.2022

- g) During approved excavation within TPZ setbacks there shall be no over excavation beyond the line of cut as shown within construction drawings. Should over excavation be required the extent of excavation should be detailed within approved drawings or a construction management plan for arborist review and certification.
- h) *Additional inground services* which may include landscape works, fencing, sewer, stormwater, water and electrical services, final design and impact to trees shall be reviewed and endorsed by the project arborist prior to their installment. Where landscaping (excavation) is required within the SRZ further advice from an appointed project arborist is recommended.
- i) *Tree sensitive construction measures* such as pier and beam bridging over critical roots, suspended slabs, cantilevered building sections, screw piles and contiguous piling can minimise the impact of encroachment (AS4970). Where Bushfire BAL construction conflicts exist with tree management the appointed project arborist shall be consulted to advise on an appropriate design outcome.
- j) *Canopy pruning / tree removal*: where required tree removal and canopy reductions are to be approved by the Local Government Authority. Works are to be conducted by a suitably qualified AQF Level 3 certified arborist in accordance with AS4373 Pruning Standards, and specifically be conducted in accordance with Safe Work Australia – Guide to managing risks of tree trimming and removal works 2016 (www.swa.gov.au).
- k) To ensure tree(s) are appropriately protected the development site superintendent is recommended to be familiar with all tree protection and ongoing certification requirements.
The superintendent is responsible for informing all subcontractors of the responsibilities and requirements of tree protection prior to their engagement.
- l) *Hold points*: specific to no works are to commence without arborist advice, inspections & certifications:
 - 1) Prior to construction arboricultural certification is required ensuring that all trees have been adequately protected in accordance with this report, or Australian Standard AS 4970 – 2009 Protection of Trees on Development Sites.
 - 2) No works (including landscaping) shall occur within the SRZ of any tree without prior arborist advice and certification. Where excavation may be required prior exploratory tree root investigation are to identify the location, distribution and impact to underlying tree roots.
 - 3) No excavation shall occur within the TPZ without prior project arborist notification and/or site supervision.

- 4) No access or work activity is permitted within fenced or designated tree protection areas (TPA's) without arborist advice.
 - m) Should there be any uncertainty with tree protection requirements the site superintendent shall contact the appointed project arborist for advice prior to works occurring within tree protection zones (TPZ) or specified tree protection areas (TPA).
-



Should you require further liaisons in this matter please contact me direct on 0419 250 248

Yours sincerely

A handwritten signature in black ink, appearing to read 'Mark A Kokot'.

Mark A Kokot

AQF Level 5 consulting arborist

Diploma of Hort/Arboriculture (AQF5), Associate Diploma Parks Management (AQF4)
Certified Arborist / Tree Surgeon (AQF3), ISA Tree Risk Assessment Qualified 6/2024
Member: ISA, Arboriculture Australia & IACA, Working With Children No: WWC0144637E



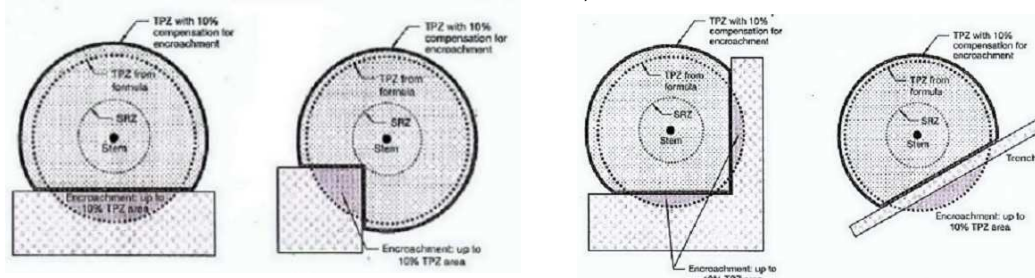
APPENDIX- A: Terminology & references

Acceptable Risk: Exposure to or reject risk of varying degrees. The acceptable risk is defined as 'The person who accepts some degree of risk in return for a benefit being exposed to some risk of varying degree. **Age classes:** (I) Immature refers to a well established but juvenile tree. (ESM) refers to an early semi mature tree not of juvenile appearance. (SM) Semi-mature refers to a tree at growth stages advancing into maturity and full size. (LSM) Late Semi- Mature, refers to a tree between semi-mature and close to mature. (EM) refers to a tree at the first stages of maturity. (M) Mature refers to a full size tree with some capacity for future growth. **Health:** Refers to a trees vigor exhibited by the crown density, leaf colour, presence of epicormic shoots, ability to withstand disease invasion and the degree of dieback. **Condition:** Refers to the tree's form and growth habit, as modified by its environment (aspect, suppression by other trees, soils) and the state of the scaffold (i.e. Trunk and major branches), including structural defects such as cavities, crooked trunks or weak trunk / branch junctions. These are not directly connected with health and it is possible for a tree to be healthy but in poor condition. **Decay:** (N) – an area of wood that is undergoing decomposition. (V) – decomposition of an area of wood by fungi or bacteria. **Decline:** Is the response of a tree to a reduction of energy levels resulting from stress. Recovery from decline is difficult and slow; is usually irreversible. **Defect:** A identifiable fault in a tree. **Epicormic Shoots:** Shoots that arise from latent or adventitious buds that occur on stems and branches and on suckers produced from the base of the tree. A symptom / result of stress related factors. **Footprint:** The area occupied by site structures, including the dwelling driveways and hard surfaces. **Included Bark:** (Inclusion) a genetic weak fault, pattern of development at branch junctions where the bark is turned inwards rather than pushed out, can pose a potential hazard. **Order of branches:** First order being those that are the first to extend from the main trunk or codominant limbs, second order branches extend from the first order and third order branches extend from the second order. **Probability:** The likelihood of some event happening. **Risk:** Is the probability of something adverse happening. **Suppression:** Restrained growth pattern from competition of other trees or structures. **Wound:** Damage inflicted upon a tree through injury to its living cells, may continue to develop further weakening of the structure compromising structural integrity.

NOTE 1: This report acknowledges the current **Australian Standards 'Protection of Trees on Development Sites'** AS 4970 – 2009 with reference to the Tree Protection Zone (TPZ): being a combination of the root and crown area requiring protection. The TPZ takes into consideration the Structural Root Zone (SRZ): The area required for tree stability. Determined by AS4970 - 2009 Figure 1, Table of determining the SRZ, section 3.3.5 of the standards. The standard states where a greater than 10% encroachment occurs the arborist is to take into consideration the schedule of determining impacts as set within AS4970 s. 3.3.4. Encroachments are referred to within this report as major or minor encroachments (AS4970 s. 3.3.2 & 3.3.3). Below is the terminology used for estimated percentage of development incursion used within this report. To retain specific trees and ensure their viability development must take into consideration protection of the TPZ radius.

NOTE 2: The extent of inclusion within the TPZ radius has been categorised as follows:

No impact (0%) incursion, Low to negligible impact (<10%) of minor consequence, 10 - <15% incursion of moderate to low impact, 15 - <20% Medium to moderate level of impact and incursion where the project arborist is to demonstrate the tree/s remain viable by tree sensitive construction techniques, 20 - <25% incursion of Medium to high level of impact, 25 - <35% of High level impact to significant >35% incursion where moderate to high level impacts may require design changes or further information to manage tree vitality. **WBF** = located within the building footprint where design necessitates tree removal. Showing acceptable incursion within the TPZ (AS4970)



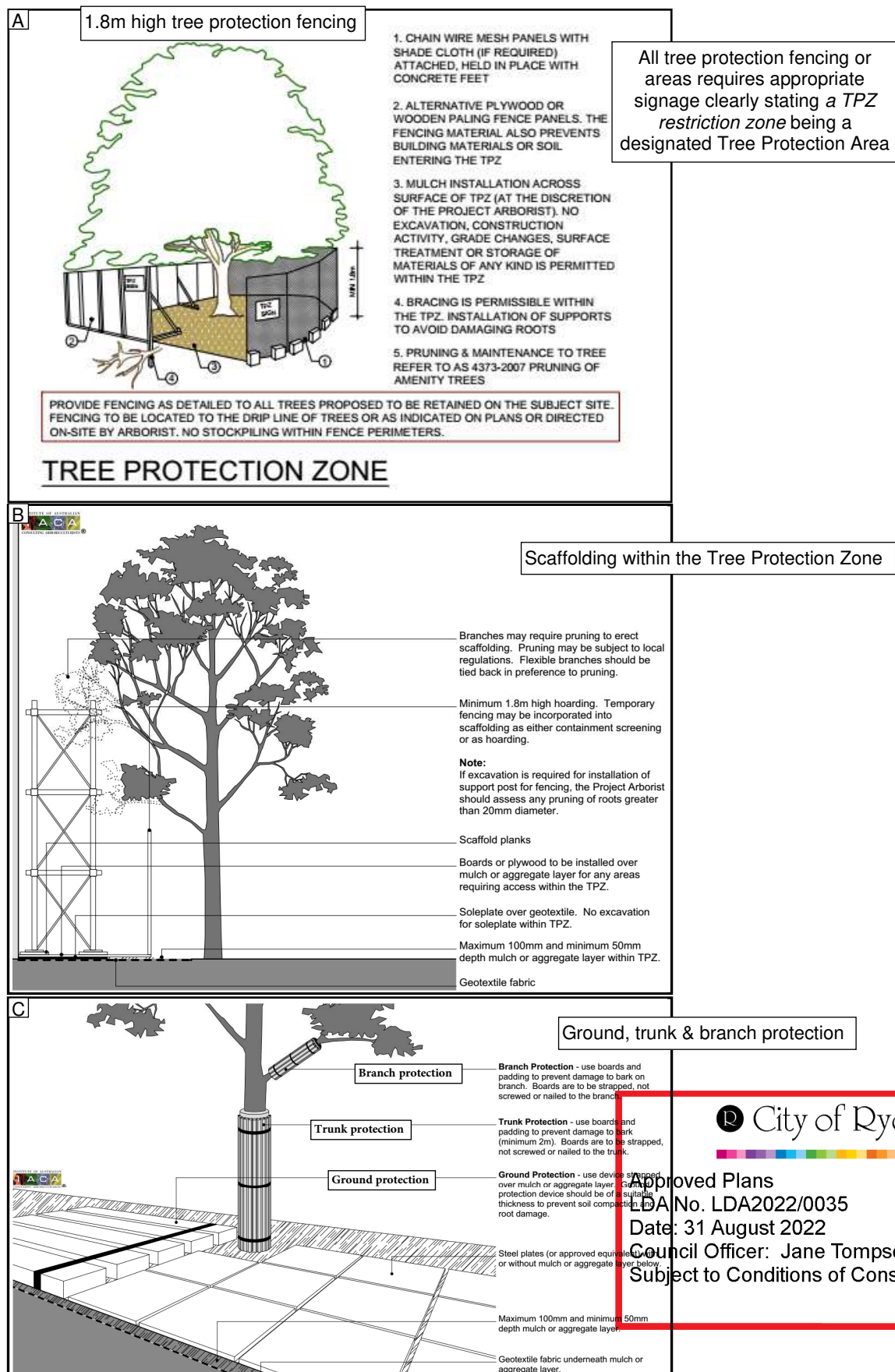
SELECTED REFERENCES:

- Barrell J. 1993, 'Preplanning Tree Surveys: Safe useful Life expectancy (SULE) is the Natural Progression', Arboricultural Journal 17: 1, February 1993, pp. 33-46.
- International Society of Arboriculture (ISA) 2013, Tree Risk Assessment Manual, Martin Graphics, Champaign Illinois U.S.
- Mattheck, C. & Breloer, H.(1994) *The Body Language of Trees*. Research for Amenity Trees No.4 the Stationary Office, London.
- Matheny N. & Clark J. 1998, Trees & Development 'A Technical Guide to Preservation of Trees During Land Development' International Society of Arboriculture, Champaign USA.
- ProSafe: TPZ encroachment calculator https://proofsafe.com.au/tpz_incursion_calculator.html Standards Australia 2009, Australian Standards 4970 Protection of Trees on Development Sites - Standards Australia, Sydney, Australia.
- Standards Australia 2007, Australian Standards 4373 Pruning of Amenity Trees - Standards Australia, Sydney, Australia.

City of Ryde

Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
Subject to Conditions of Consent

APPENDIX- B: Tree protection fencing, ground and trunk protection detail



APPENDIX- B: Visual Tree Inspection Checklist

VTA i) Landscape Significance (LS): The significance of a tree in the landscape is a combination of its amenity, environmental and heritage values.

Values may be subjective however, are based after IACA Sustainable Retention Index Value (SRVI) which offer a visual understanding of the relative importance of the tree to the environment. The Landscape Significance for this assessment is described in seven categories to assist in determining the retention value of trees.

1	Significant	2	Very High	3	High	4	Moderate	5	Low	6	Very Low	7	Insignificant
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ii) Visual Tree Assessment (VTA)

0	If appropriate to VTA - *exempt trees from Local Government Authority (LGA) Tree Management or Preservation Orders (TPO)	2E	Trees location likely to be affected by infrastructure restricting root growth potential, or tree has potential to cause infrastructure damage where risk mitigation or rectification works may compromise tree anchorage. Tree(s) may be contained by sloid structures with restricted anchoring root potential
0A	Noxious or invasive species located within heritage or biodiversity conservation area		
1	Trees that are dead, significantly declining >75% volume or obviously hazardous	3	This rating incorporates trees that may require further investigation of faults & defects such as pathogen ID, cavities or symptoms indicating internal decay to an extent that cannot be quantified under visual examination. Further inspections may be in the way of Plant Disease Diagnostic Unit (PDDU) pathogen testing, arborist climbing inspection within the canopy, root crown investigation and/or drill penetrating or Picus Sonic Tomograph ultrasound testing procedures to determine percentage of internal decay.
2	Trees that are structurally damaged. Have poor structure or weak & detrimental large stem inclusions capable of failure opposed to 2B. Tree may also be affected by extensive borer damage, fungal pathogens (wood rot) or viruses. Some symptoms may be reversible, remediated or controlled give appropriate management & diagnosis.		
2A	Tree defect or damage specific to basal and/or root plate damage, very shallow soils or steep topography resulting in poor anchorage where condition may become problematic in the near future, may include trees with included bark splits to ground level	4	Trees which appear specifically environmentally stressed by drought, poor soil or site conditions. Symptoms may be reversible given appropriate management
2B	Defect specific to stem inclusions development (weak branch attachments) where the condition may not be immediately detrimental however, require annual to biannual monitoring with control to prevent stem failure by installing slings, cable or bracing. Tree may also contain multi stems or codominant twin stems	5	Trees that have become exposed, are subject to wind loading pressure, or have tall forest form where exposure may result in windthrow or limb snap
		5A	Screen trees, and/or shrubs that are routinely hedged or pruned for height control
2C	Tree may contain minor wounds, pest or minor pathogen activity, altered from storm damaged to an extent that is not considered immediately detrimental, may also display average form. Likely to require close annual monitoring or minor corrective pruning	6	Trees may be typical for species type, of good form and visual condition for age class. May have suppressed one sided canopies or are visually low risk trees noted under a limited inspection only
2D	Trees significantly altered by recent storm or over pruning events which may reduce retention values due to average form- or tree extensively pruned for power line clearance	7	VTA restricted by canopy or plant material vine or ivy covering tree parts, or site conditions which do not allow access / fences to neighbouring sites

iii) Retention Value (RV): [1] Low risk - tree free of visual defects & viable for retention, [2] Medium – low risk - viable for retention with minor faults which may reduce ULE, [3] Medium risk - trees which containing issues or faults that are likely to become problematic in the near future, [4] M/High risk - trees to be considered for removal due to poor condition.

1	High retention	2	Medium retention	3	Low retention	4	Consider removal
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iv) U.L.E. categories Useful Life Expectancy (after Barrell 1996, modified by the author) A trees U.L.E. category is the life expectancy of the tree modified first by its age, health, condition, safety and location. U.L.E. assessments are not static but may be modified as dictated by changes in trees health and environment. The five categories of U.L.E. are as follows:

1. Long U.L.E. - Appear retainable at the time of assessment for over 40 years with an acceptable degree of risk assuming reasonable maintenance.
2. Medium U.L.E. - Appear to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk assuming reasonable maintenance.
3. Short U.L.E. - Trees appear to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk assuming reasonable maintenance.
4. Very short - Removal- Trees which should be scheduled for removal within the very short term or as specified within this report.
5. Small, young or regularly pruned – Trees under 5m in height that can be easily moved or replaced, includes screen plantings or hedge lines.

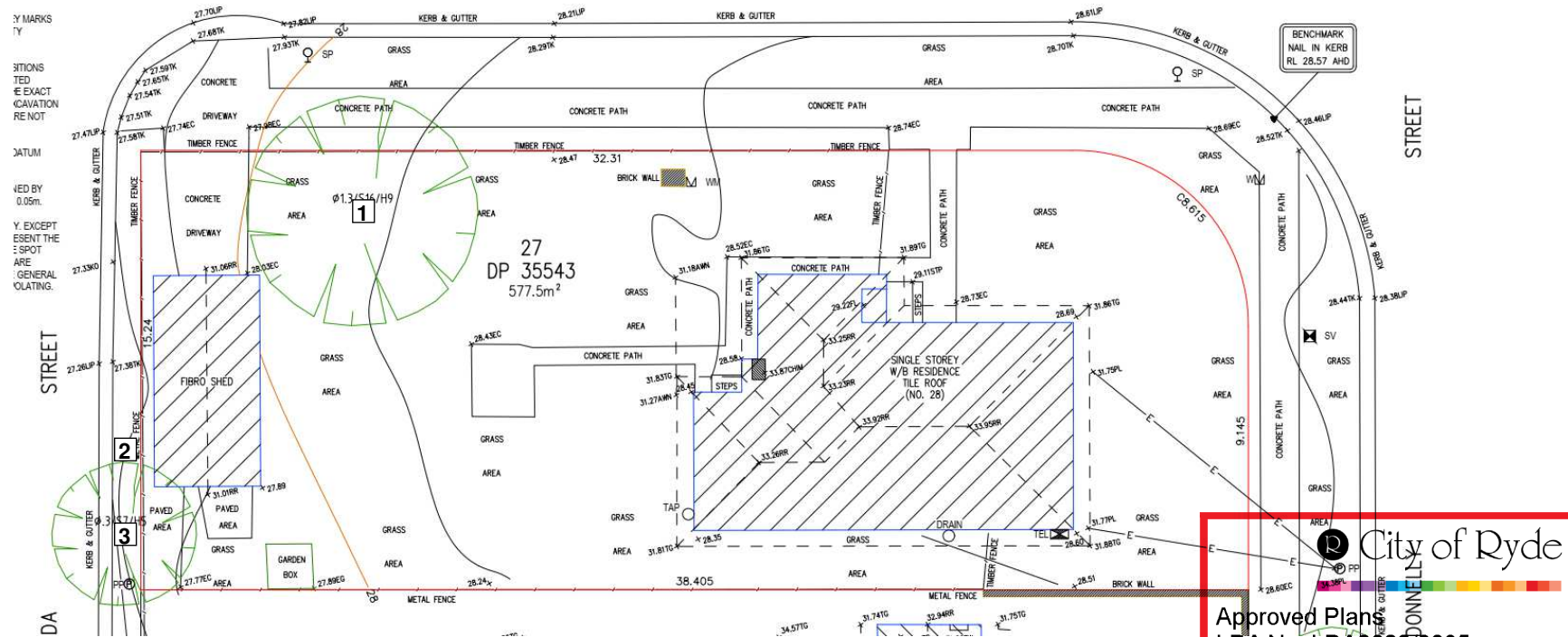
APPENDIX- C: Tree assessment schedule

Tree Assessment Schedule

Refer VTA Checklist Appendix- B

Tree No:	Species	Height x Span	DBH mm	SRZ TPZ	Age	Tree vitality	Significance	VTA	RV	ULE	Comments
1	<i>Syzygium smithii</i> Lilly pilly	13 x 14	1050	3.4m 12.6	M	Good	3- High	2C	2	2	Mature specimen, past pruning cuts on lower trunk with no significant visual faults
2	<i>Jacaranda mimosifolia</i> Jacaranda	6 x 4	200	1.8 2.4	ESM	Good	4- Moderate	2E	3	3	Within narrow medium strip where location to infrastructure likely to become problematic in the future
3	<i>Jacaranda mimosifolia</i> Jacaranda	7 x 5.5	150, 150	2 3.6	ESM	Good	4- Moderate	2E	3	3	Within narrow medium strip where location to infrastructure likely to become problematic in the future

Tree location plan



Ref No: 8622

28 Donnelly St, PUTNEY NSW – arborist – 29.6.2022

Approved Plans
LDA No. LDA2022/0035
Date: 31 August 2022
Council Officer: Jane Tompsett
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