

NOT FOR CONSTRUCTION

LOT 50 DP 705739

30 FAIRLIGHT STREET, FAIRLIGHT

RESIDENTIAL APARTMENT DEVELOPMENT

CIVIL ENGINEERING PLANS - D.A. STAGE

GENERAL SPECIFICATION

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH OTHER SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRES, UNO (UNLESS NOTED OTHERWISE).
3. NO DIMENSION SHALL BE OBTAINED BY SCALING THE DRAWINGS.
4. ALL LEVELS AND SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORK.
5. DURING EXCAVATION WORK THE STRUCTURE SHALL BE MAINTAINED IN A STABLE AND NO PART SHALL BE OVERSTRESSED.
6. DETAIL SURVEY DATA WAS OBTAINED FROM IREDALE & ASSOCIATES, DRAWING DATED 22/09/15.
7. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS, THE SPECIFICATIONS AND COUNCIL REQUIREMENTS.
8. EXISTING SERVICES WHERE SHOWN HAVE BEEN PLOTTED FROM SUPPLIED DATA AND SUCH THEIR ACCURACY CAN NOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK.
9. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACK FILLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NORTHERN BEACHES COUNCIL. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
10. ON COMPLETION OF STORMWATER INSTALLATION, ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS, UNLESS DIRECTED OTHERWISE.

STORMWATER DRAINAGE

1. THE STORMWATER DRAINAGE DESIGN HAS BEEN DONE IN ACCORDANCE WITH THE NORTHERN BEACHES COUNCILS STORMWATER CONTROL POLICY S190 DATED 03/03/14.
2. ALL DRAINAGE LINES SHALL BE UPVC (CLASS SN4) SEWER GRADE DRAINAGE PIPE, U.N.O.
3. ALL DRAINAGE LINES SHALL BE LAID AT 1% MIN. FALL, UNO.
4. ALL LEVELS ARE AUSTRALIAN HEIGHT DATUM (AHD).
5. THE STORMWATER DRAINAGE DESIGN HAS BEEN CARRIED OUT IN ACCORDANCE WITH AS/NZS 3500.3.2-2003 PLUMBING AND DRAINAGE "STORMWATER DRAINAGE".
6. SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS, PLANTER BOXES AND EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM.
7. ALL GRATES TO BE GALVANISED STEEL WITH HINGES AND CHILD PROOF LOCK.



SITE LOCALITY PLAN

ALL DESIGN MEASURES SHOWN ON THIS DRAWING HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION PURPOSES TO DEMONSTRATE FEASIBILITY. ALL DESIGN MEASURES WILL BE SUBJECT TO DETAIL DESIGN AT THE CONSTRUCTION CERTIFICATE STAGE AND MAY BE SUBJECT TO VARIATION PROVIDED THAT THE DESIGN INTENT IS MAINTAINED.

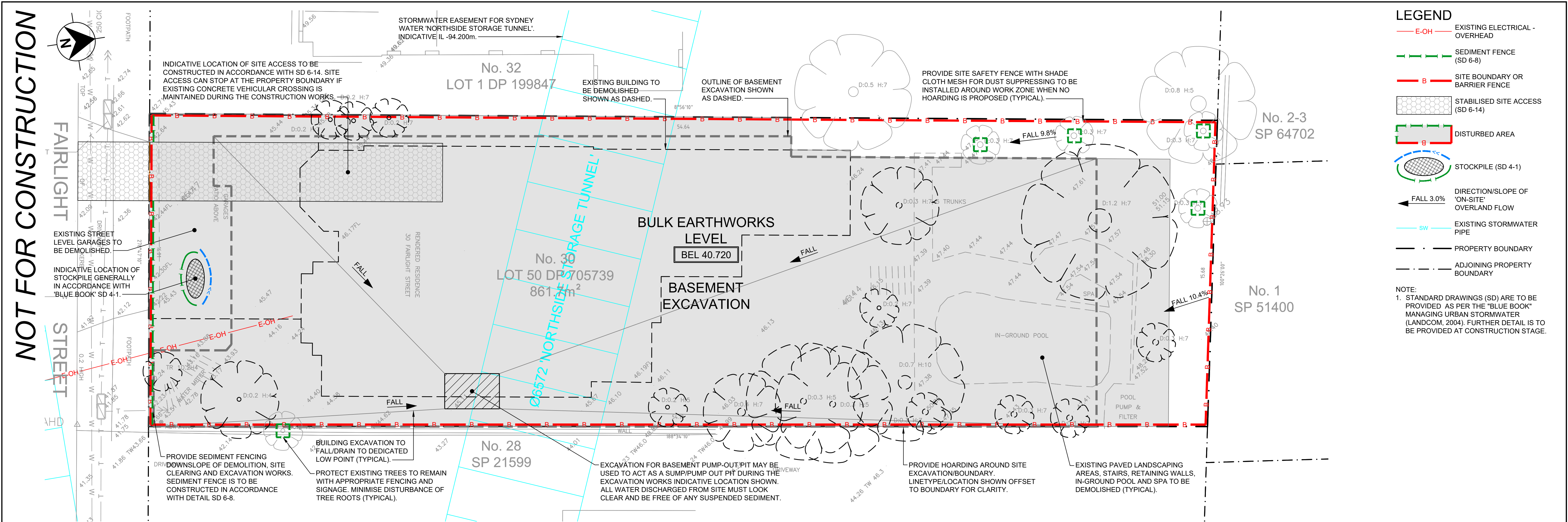
DRAWING SCHEDULE

NUMBER	NAME
DA01	COVER SHEET AND SPECIFICATION NOTES
DA02	CONCEPT EROSION AND SEDIMENT CONTROL AND TREE REMOVAL PLAN
DA03	BULK EARTHWORKS PLAN
DA04	DRAINS' MODEL SUMMARY
DA05	STORMWATER QUALITY AND 'MUSIC' MODELLING PLAN
DA06	CONCEPT STORMWATER DRAINAGE PLAN - BASEMENT FLOOR
DA07	CONCEPT STORMWATER DRAINAGE PLAN - GROUND FLOOR
DA08	CONCEPT STORMWATER DRAINAGE PLAN - LEVEL 1 AND 2
DA09	CONCEPT STORMWATER DRAINAGE PLAN - LEVEL 3 AND ROOF

DRAWING SHEET 01 OF 09

CAD File Name: N:\(B) Projects\19XXX\19068 30 Fairlight Street, Fairlight\E) Drawings\19068_DA01_Cover Sheet and Specification Notes.dwg

DESIGN	DRAWN	CHECKED	VERIFIED	DATE	AMENDMENTS/REVISION DETAILS	SCALE	COPYRIGHT	CLIENT	PROJECT
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02	E.B.	C.B.	C.N.	12/12/19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL				
						ISSUED FOR	L.G.A.	ARCHITECT	DRAWING TITLE
						D.A. APPROVAL	NORTHERN BEACHES	BIANCHINO	COVER SHEET AND SPECIFICATION NOTES
				PROJECT No.	SUB-PROJECT No.	DRAWING No.	ISSUE	SHEET SIZE	
				19068	01	DA01	02	A1	



EROSION AND SEDIMENT CONTROL NOTES

- TOTAL AREA OF DISTURBANCE TO BE KEPT TO A MINIMUM. 'NO-GO' AREAS FOR WORKERS ARE TO BE SET OUT TO ENSURE DISTURBED AREAS ARE KEPT AT A MINIMUM.
- SITE WORKS WILL NOT START UNTIL THE EROSION AND SEDIMENT CONTROL WORKS OUTLINED IN CLAUSES 2 TO 4 BELOW, ARE INSTALLED AND FUNCTIONAL.
- THE INGRESS TO AND EGRESS FROM THE SITE WILL BE CONFINED TO ONE STABILISED POINT. SEDIMENT OR BARRIER FENCING WILL BE USED TO RESTRICT ALL VEHICULAR MOVEMENTS TO THAT POINT. STABILISATION WILL BE ACHIEVED BY EITHER:
 - CONSTRUCTING A SEALED (e.g. CONCRETE OR ASPHALT) DRIVEWAY TO THE STREET; OR
 - CONSTRUCTING A STABILISED SITE ACCESS, ACCORDING TO STANDARD DRAWING SD 6-14 OR OTHER SUITABLE TECHNIQUE APPROVED BY THE COUNCIL.
- SEDIMENT (SD 6-8) AND BARRIER FENCES TO BE INSTALLED.
- MESH AND GRAVEL "SAUSAGE" PROTECTION (SD 6-11) TO BE PROVIDED TO PROTECT GUTTER INLETS NEAR THE ALLOTMENT.
- TOPSOIL TO BE STRIPPED AND STOCKPILED (SD 4-1) FOR LATER USE IN LANDSCAPING THE SITE.
- ALL STOCKPILES TO BE PLACED IN THE LOCATION SHOWN ON THE ESCP AND AT LEAST 2 METRES CLEAR OF ALL AREAS OF POSSIBLE AREAS OF CONCENTRATED WATER FLOW, INCLUDING DRIVEWAYS.
- LANDS TO THE REAR AND SIDES OF THE ALLOTMENT AND ON THE FOOTPATH WILL NOT BE DISTURBED DURING WORKS EXCEPT WHERE ESSENTIALS, e.g. DRAINAGE WORKS ACROSS THE FOOTPATH. WHERE WORKS ARE NECESSARY, THEY WILL BE UNDERTAKEN IN SUCH A WAY TO LEAVE THE LANDS IN A CONDITION OF HIGH EROSION HAZARDS FOR AS SHORT A PERIOD AS PRACTICABLE. THEY WILL BE REHABILITATED AS SOON AS POSSIBLE. STOCKPILES WILL NOT BE PLACED ON THESE LANDS AND THEY WILL NOT BE USED AS VEHICLE PARKING AREAS.
- ALL PIPE TRENCHES TO BE BACKFILLED AS QUICKLY AS POSSIBLE. IF TRENCH IS TO REMAIN OPEN WHILE SITE IS UNATTENDED/AFTER THE END OF A SHIFT, CONTRACTOR IS TO ENSURE THAT THE TRENCH IS APPROPRIATELY COVERED TO NOT ALLOW THE INGRESS OF WATER.
- APPROVED BINS FOR BUILDING WASTE, CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS AND LITTER WILL BE PROVIDED AND ARRANGEMENTS MADE FOR REGULAR COLLECTION AND DISPOSAL.
- TOPSOIL WILL BE RE-SPREAD AND ALL DISTURBED AREAS TO BE REHABILITATED WITHIN 20 WORKING DAYS OF THE COMPLETION OF WORKS.
- COUNCIL'S PERMISSION WILL BE SOUGHT IF ANY MATERIALS NEED TO BE PLACED ON FOOTPATHS OR NATURE STRIPS. SUCH MATERIALS WILL BE PLACED ON PLASTIC AND COVERED.

CAD File Name: N:\(B) Projects\19XXX\19068 30 Fairlight Street, Fairlight(E) Drawings\19068_DA02_Concept Erosion and Sediment Control and Tree Removal Plan.dwg

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SCALE
0 1 2 3 4 5m SCALE: 1:100 (A1 SHEET)
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L.G.A.
NORTHERN BEACHES



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Castle 240 Pty Ltd
ARCHITECT
BIANCHINO
Associates

PROJECT	30 FAIRLIGHT STREET, FAIRLIGHT
DRAWING TITLE	CONCEPT EROSION AND SEDIMENT CONTROL AND TREE REMOVAL PLAN
PROJECT No.	19068
SUB-PROJECT No.	01
DRAWING No.	DA02
ISSUE	02
SHEET SIZE	A1

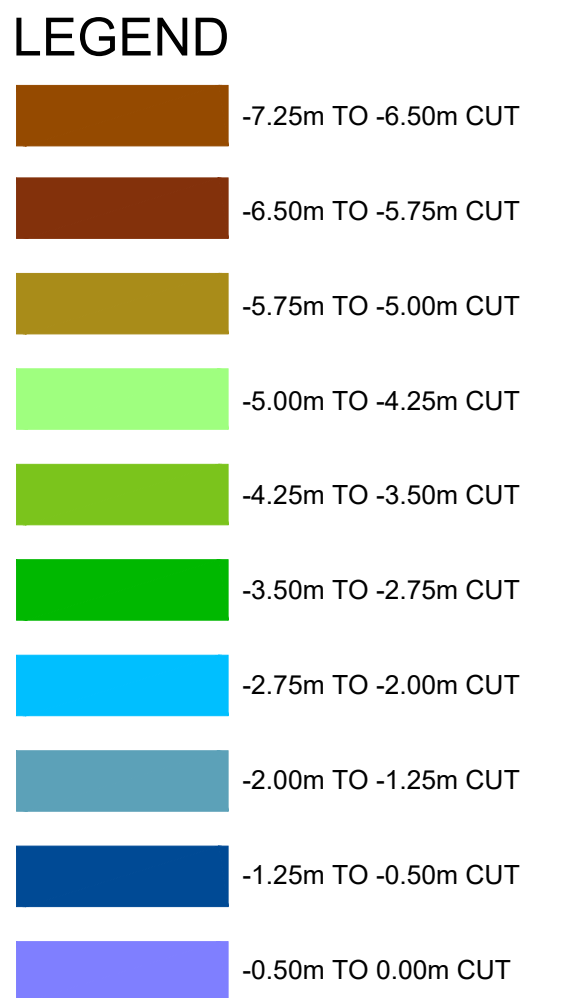
Miss Claudia Novati
MIEAust CPeng NER


Signature Date 12/12/19

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Signature _____ <i>CN</i>		Date <u>12/12/19</u>
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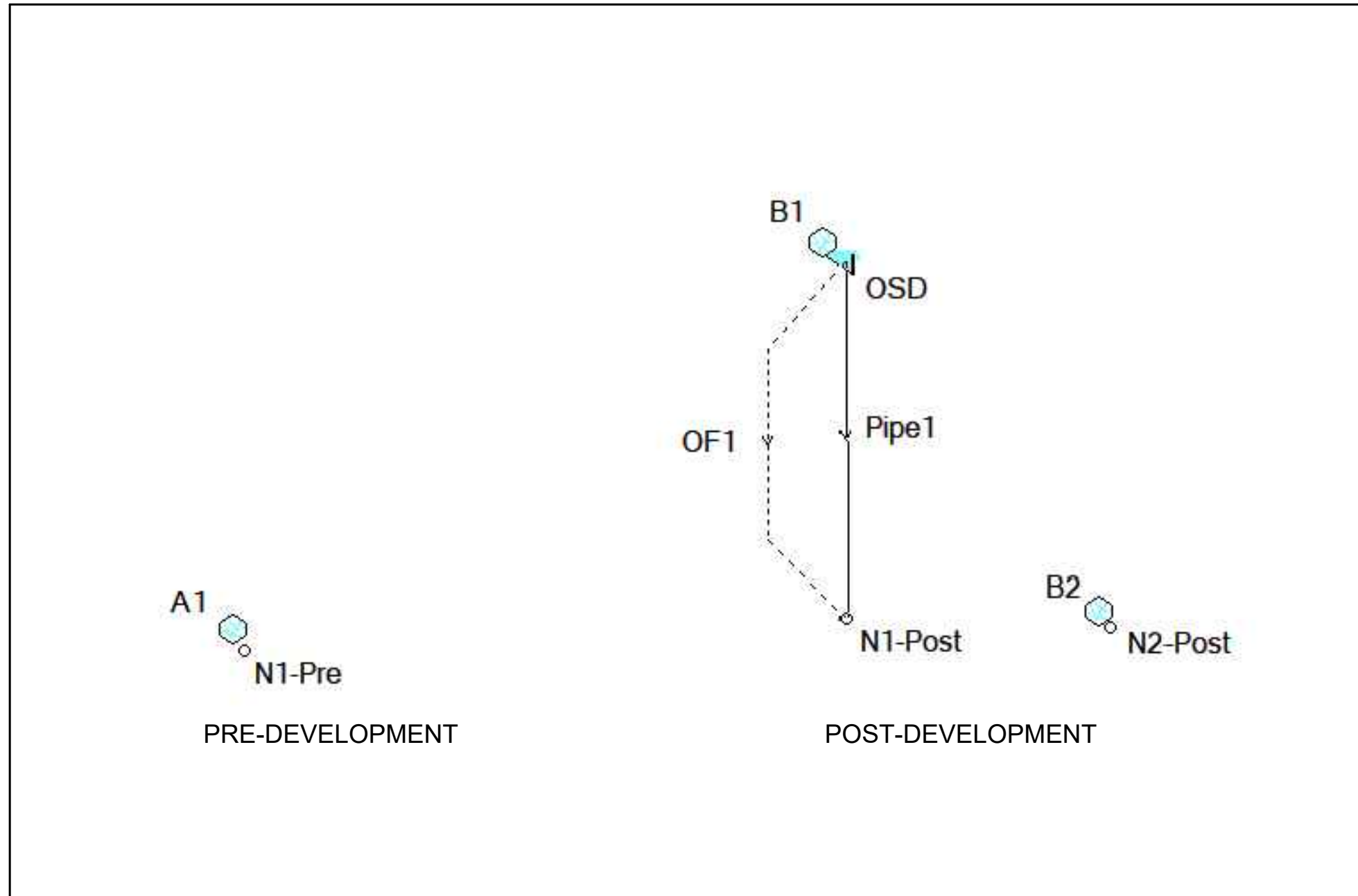
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01						L.T.	C.B.	C.N.		06/12/19	ISSUED FOR CO-ORDINATION		<div><div>012345m</div><div>SCALE: 1:100 (A1 SHEET)</div></div>		This drawing is copyright. Apart from any use permitted under the Copyright Act 1968, no part may be reproduced by any process, nor may any other exclusive right be exercised, without the permission of Novati Consulting Engineers Pty Ltd 2019.			Castle 240 Pty Ltd		30 FAIRLIGHT STREET, FAIRLIGHT										
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																				ARCHITECT		<div><div>BIANCHINO</div><div></div><div>ASSOCIATES</div></div>								
																				PROJECT No.		SUB-PROJECT No.		DRAWING No.		ISSUE		SHEET SIZE		
																				19068		01		DA03		02		A1		
													ISSUED FOR		L.G.A.															
													D.A. APPROVAL		NORTHERN BEACHES															

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PIT / NODE DETAILS			Version 15																				
Name	Type	Family	Size	Ponding Volume (cu.m)	Pressure Change Coeff. Ku	Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor	x	y	Bolt-down lid	Part Full Shock Loss	Inflow Hydrograph	Pit is	Internal Width (mm)	Inflow is Misaligned	Minor Pond (m)	Safe Pond Depth (m)	Major Safe Pond Depth			
N1-Pre	Node					41.75		0		1252.962	-583.36	2		No									
N1-Post	Node					41.75		0		1284.348	-581.638	47		No									
N2-Post	Node					45.25		0		1298.195	-582.179	236		No									
DETENTION BASIN DETAILS																							
Name	Elev	Surf. Area	Not Used	Outlet Type	K	Dia(mm)	Centre RL	Pit Family	Pit Type	x	y	HED	Crest RL	Crest Length	id								
OSD	42.2	0.36		Orifice		60	42.4			1284.289	-563.142	No			220								
	42.4	0.36																					
	42.401	8																					
	43.6	8																					
SUB-CATCHMENT DETAILS																							
Name	Pit or Node	Total Area (ha)	Paved Area %	Grass Area %	Supp Area %	Paved Time (min)	Grass Time (min)	Supp Time (min)	Paved Length (m)	Grass Length (m)	Supp Length (m)	Paved Slope(%)	Grass Slope %	Supp Slope %	Paved Rough	Grass Rough	Supp Rough	Lag Time or Factor	Gutter Length (m)	Gutter Slope %	Gutter FlowFactor	Rainfall Multiplier	
A1	N1-Pre	0.0861	35	65	0	0	0	0	59	59	0	10	10	0	0.01	0.17	0	0				1	
B1	OSD	0.0265	100	0	0	5	10	0										0				1	
B2	N2-Post	0.0597	75	25	0	5	10	0										0				1	
PIPE DETAILS																							
Name	From	To	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Type	Dia (mm)	I.D. (mm)	Rough	Pipe Is	No. Pipes	Chg From	At Chg	Chg (m)	RI (m)	Chg (m)	RL (m)	etc (m)				
Pipe1	OSD	N1-Post	4.26	42.35	41.82	12.44	uPVC, not	100	105	0.012	NewFixed	1	OSD	0									
OVERFLOW ROUTE DETAILS																							
Name	From	To	Travel Time (min)	Spill Level (m)	Crest Length (m)	Weir Coeff. C	Cross Section	Safe Depth Major (m)	SafeDepth Minor (m)	Safe Depth DxV (sq.m/sec)	Bed Slope (%)	D/S Area Contributing	id										
OF1	OSD	N1-Post	0.1	43.501	1	1.45	1.5m wide	0.2	0.2	0.4	1	0	222				4.2						
PIPE COVER DETAILS																							
Name	Type	Dia (mm)	Safe Cover (m)	Cover (m)																			
Pipe1	uPVC, not under roads,	105	0.3	-0.26	Unsafe																		
This model has no pipes with non-return valves																							

TABLE '1' - SUMMARY OF 'DRAINS' INPUTS



'DRAINS' MODEL DIAGRAM

Land use/surface type	Catchment I.D.	Total area (ha)	Impervious Area		Pervious Area	
			(ha)	(%)	(ha)	(%)
Pre-development Scenario						
Total (Zone 1: OSD Control)	A1	0.0862	0.0302	35	0.0560	65
Post-development Scenario						
Residential area	B2	0.0597	0.0447	75	0.0151	25
Roof area to RWT	B1	0.0265	0.0265	100	0.0000	0
TOTAL		0.0862	0.0712	83	0.0151	18

TABLE '2' - SUMMARY OF SITE CATCHMENT AREAS

Storm	Total Rainfall cu.m	Storm	Total Rainfall cu.m
AR&R 5 year, 5 minutes storm, average 159 mm/h, Zone 1	22.83	AR&R 100 year, 5 minutes storm, average 266 mm/h, Zone 1	38.19
AR&R 5 year, 10 minutes storm, average 123 mm/h, Zone 1	35.32	AR&R 100 year, 10 minutes storm, average 211 mm/h, Zone 1	60.59
AR&R 5 year, 20 minutes storm, average 91.0 mm/h, Zone 1	52.26	AR&R 100 year, 20 minutes storm, average 159 mm/h, Zone 1	91.32
AR&R 5 year, 30 minutes storm, average 75.0 mm/h, Zone 1	64.61	AR&R 100 year, 30 minutes storm, average 133 mm/h, Zone 1	114.58
AR&R 5 year, 1 hour storm, average 52.0 mm/h, Zone 1	89.6	AR&R 100 year, 1 hour storm, average 95.0 mm/h, Zone 1	163.68
AR&R 5 year, 2 hours storm, average 34.3 mm/h, Zone 1	118.2	AR&R 100 year, 2 hours storm, average 61.0 mm/h, Zone 1	210.21
AR&R 5 year, 3 hours storm, average 26.6 mm/h, Zone 1	137.5	AR&R 100 year, 3 hours storm, average 47.1 mm/h, Zone 1	243.46
AR&R 5 year, 6 hours storm, average 17.3 mm/h, Zone 1	178.85	AR&R 100 year, 6 hours storm, average 30.1 mm/h, Zone 1	311.17
AR&R 5 year, 12 hours storm, average 11.2 mm/h, Zone 1	231.55	AR&R 100 year, 12 hours storm, average 19.3 mm/h, Zone 1	399.04
AR&R 5 year, 24 hours storm, average 7.3 mm/h, Zone 1	300.25	AR&R 100 year, 24 hours storm, average 12.6 mm/h, Zone 1	521.04
AR&R 5 year, 48 hours storm, average 4.6 mm/h, Zone 1	379.54	AR&R 100 year, 48 hours storm, average 8.1 mm/h, Zone 1	669.14
AR&R 5 year, 72 hours storm, average 3.4 mm/h, Zone 1	423.1	AR&R 100 year, 72 hours storm, average 6.1 mm/h, Zone 1	752.95


TABLE '3' - 5YR ARI IFD DATA

TABLE '4' - 100YR ARI IFD DATA


	Average Recurrence Interval (years)	
	5	100
Catchment 1 - Pre-development Scenario		
Qpre (m³/s) - PSD	0.027	0.051
Catchment 2 - Post-development Scenario		
Qpost_{no OSD} (m³/s)	0.034	0.057
Qpost_{OSD 1} (m³/s)	0.005	0.008
Qpost_{OSD O/F} (m³/s)	0.000	0.000
Qpost_{By-pass} (m³/s)	0.022	0.038
Qpost_{OSD} (m³/s) - PSD	0.027	0.046
Peak OSD storage (m³) - SSR	4.0	8.7

TABLE '5' - SUMMARY OF PSD AND OSD RESULTS

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MIEAust CPEng NER

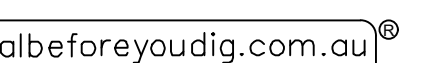

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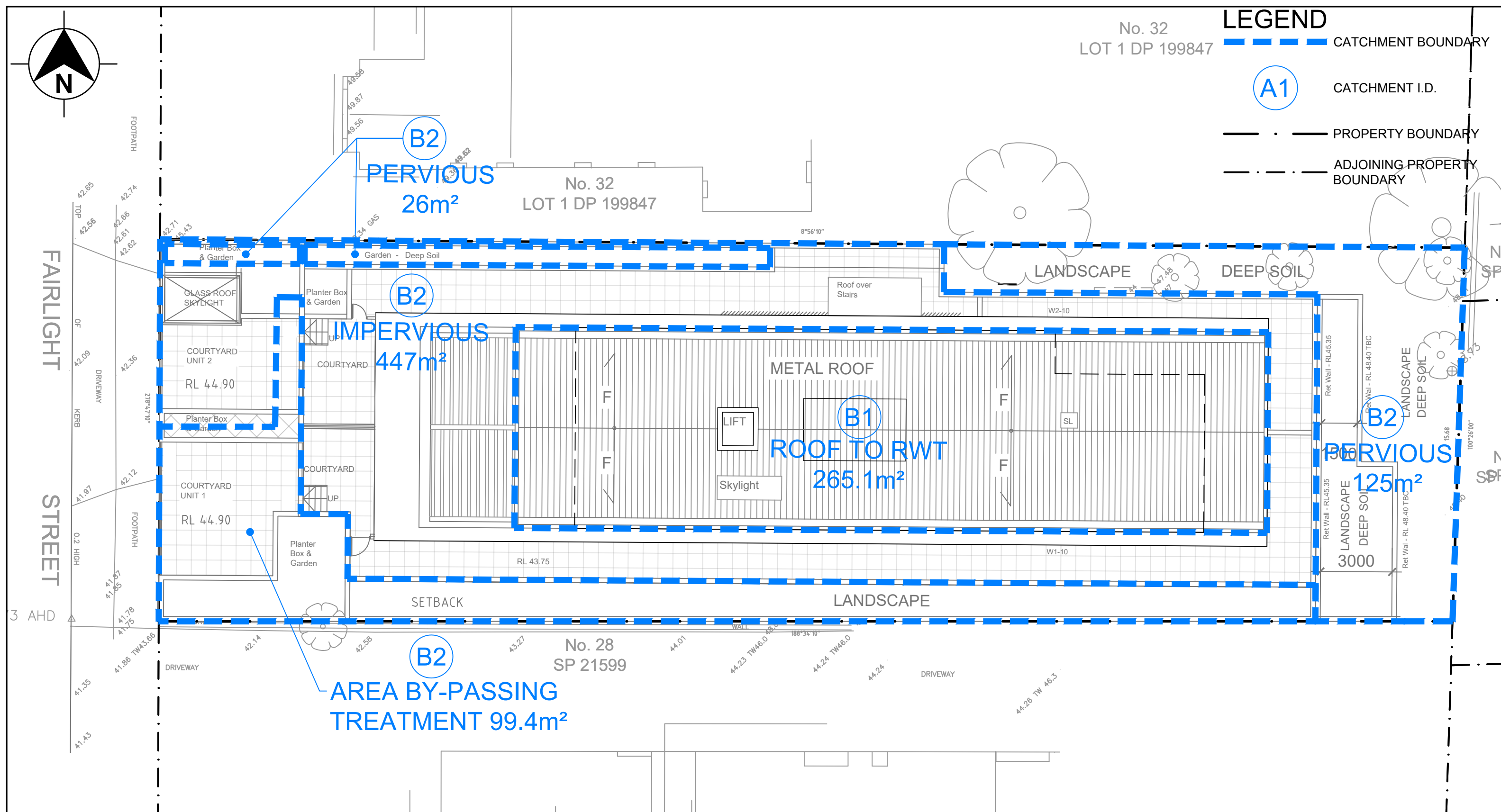
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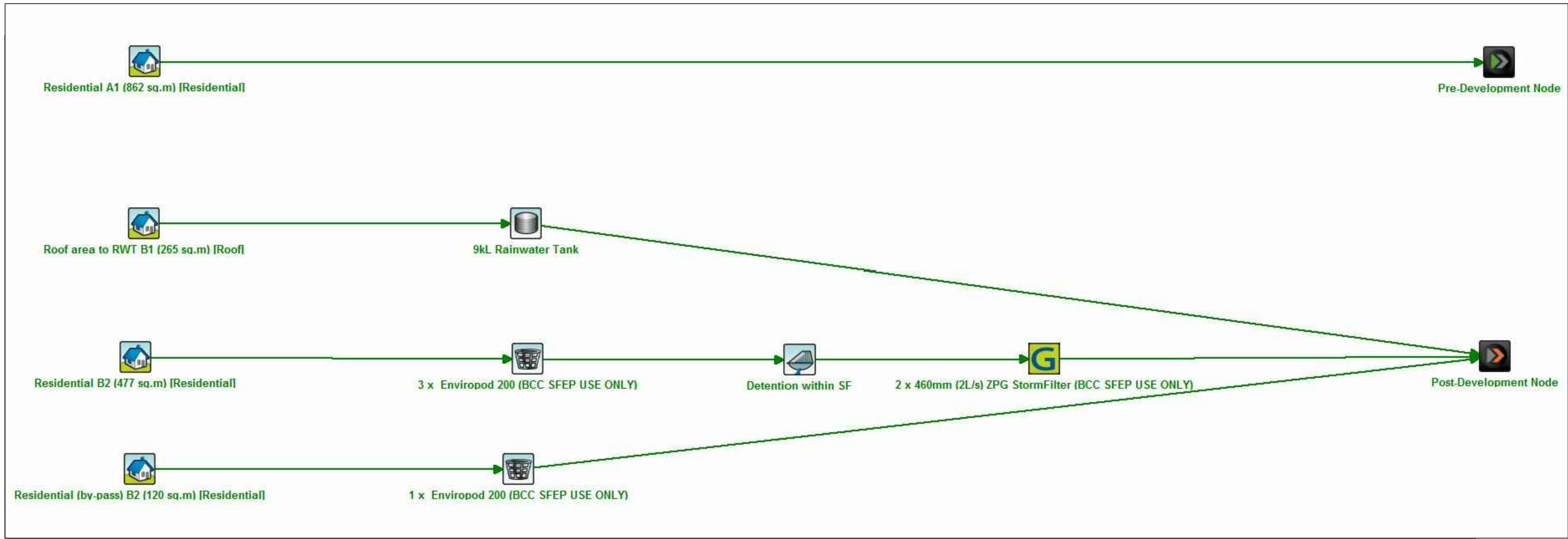
DRAWING SHEET 04 OF 09

CAD File Name: N:\(B) Projects\19XXX\19068 30 Fairlight Street, Fairlight(E) Drawings\19068_DA04_"DRAINS" Model Summary.dwg										DRAWING SHEET 04 OF 09																																															
<table><tr><th></th><th>DESIGN</th><th>DRAWN</th><th>CHECKED</th><th>VERIFIED</th><th>DATE</th><th>AMENDMENTS/REVISION DETAILS</th></tr><tr><td rowspan="5">I S S U E</td><td>01</td><td>E.B.</td><td>E.B.</td><td>C.N.</td><td>06/12/19</td><td>ISSUED FOR CO-ORDINATION</td></tr><tr><td>02</td><td>E.B.</td><td>C.B.</td><td>C.N.</td><td>12/12/19</td><td>ISSUED FOR DEVELOPMENT APPLICATION APPROVAL</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>								DESIGN	DRAWN	CHECKED	VERIFIED	DATE	AMENDMENTS/REVISION DETAILS	I S S U E	01	E.B.	E.B.	C.N.	06/12/19	ISSUED FOR CO-ORDINATION	02	E.B.	C.B.	C.N.	12/12/19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL																			SCALE N/A		COPYRIGHT This drawing is copyright. Apart from any use permitted under the Copyright Act 1968, no part may be reproduced by any process, nor may any other exclusive right be exercised, without the permission of Novati Consulting Engineers Pty Ltd 2019.				 Novati Consulting Engineers Pty Ltd CIVIL & ENVIRONMENTAL CONSULTING ENGINEERS ABN 56 163 789 393 info@nceengineers.com.au (02) 4861 2042 Shop 25A 310-312 Bong Bong Street, Bowral NSW 2576		CLIENT Castle 240 Pty Ltd		PROJECT 30 FAIRLIGHT STREET, FAIRLIGHT		
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											ARCHITECT BIANCHINO		PROJECT No.	SUB-PROJECT No.	DRAWING No.	ISSUE	SHEET SIZE																																								
													19068	01	DA04	02	A1																																								

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POST-DEVELOPMENT CATCHMENT PLAN



'MUSIC' MODEL DIAGRAM

Land use/surface type	MUSIC Zoning/Surface type	Sub-catchment areas (ha) (Imp.)	
Pre-development		A1	
Residential	Residential	0.0862	71%
Total		0.0862	
Post-development		B1	
Roof area to RWT	Roof Area	0.0265	100%
Residential	Residential	0.0497	30%
Area by-passing treatment	Residential	0.0100	10%
Total		0.0862	

TABLE '1' - SUMMARY OF SITE CATCHMENT AREAS

	Sandy clay loam
Soil storage capacity	108mm
Initial storage	30%
Field capacity	73mm
Infiltration capacity coefficient	250
Infiltration capacity exponent	1.3
Groundwater initial depth	10mm
Daily recharge rate	60%
Daily baseflow rate	45%
Daily deep seepage rate	0%

Notes:
Soil properties are as per Table 4 of Northern Beaches Council WSUD & MUSIC Modelling Guidelines

TABLE '2' - SOIL PARAMETERS

Internal Use	
Rural/urban	Urban
No. of bedrooms	3
Reuse plumbed for	Toilet+laundry+hot water+other (100%)
Annual internal (kL/dwelling or unit)	263
Daily internal use (kL/yr/dwelling or unit)	0.720
No. of Dwellings/units	7
Total daily use (kL)	5.0
External Use	
Residential	
No. of Dwellings	7
External residential use (kL/day)	1.05

TABLE '3' - WATER DEMAND SUMMARY

Land use category		Log10 TSS (mg/L)		Log10 TP (mg/L)		Log10 TN (mg/L)	
		Storm Flow	Base Flow	Storm Flow	Base Flow	Storm Flow	Base Flow
General Urban (incl. public open space)	Mean	2.15	1.20	-0.60	-0.85	0.30	0.11
	Std Dev	0.32	0.17	0.25	0.19	0.19	0.12
Residential							
Industrial							
Commercial							
Rural	Mean	1.95	1.15	-0.66	-1.22	0.30	-0.5
	Std Dev	0.32	0.17	0.25	0.19	0.19	0.12
Paved Road Areas	Mean	2.43	---	-0.30	---	0.34	---
	Std Dev	0.32	---	0.25	---	0.19	---
Roof Access	Mean	1.30	---	-0.89	---	0.30	---
	Std Dev	0.32	---	0.25	---	0.19	---
Unsealed Roads	Mean	3.00	1.20	-0.3	-0.85	0.34	0.11
	Std Dev	0.32	0.17	0.25	0.19	0.19	0.12
Forest	Mean	1.60	0.78	-1.10	-1.52	-0.05	-0.52
	Std Dev	0.20	0.13	0.22	0.13	0.24	0.13
Landscape Areas	Mean	2.15	1.20	-0.6	-0.85	0.30	0.11
	Std Dev	0.32	0.17	0.25	0.19	0.19	0.12
Revegetated Areas (inc. APZs)	Mean	1.95	1.15	-0.66	-1.22	0.30	-0.05
	Std Dev	0.32	0.17	0.25	0.19	0.19	0.12

Note: Stormwater Quality Parameters are as per Table 5 of Northern Beaches Council WSUD & MUSIC Modelling Guidelines.

TABLE '4' - STORMFLOW POLLUTANTS

Miss Claudia Novati
MIEAust CPEng NER
Signature _____ Date 12/12/19
Registered on the NER in the area(s) of practice of Civil/Environmental Engineering

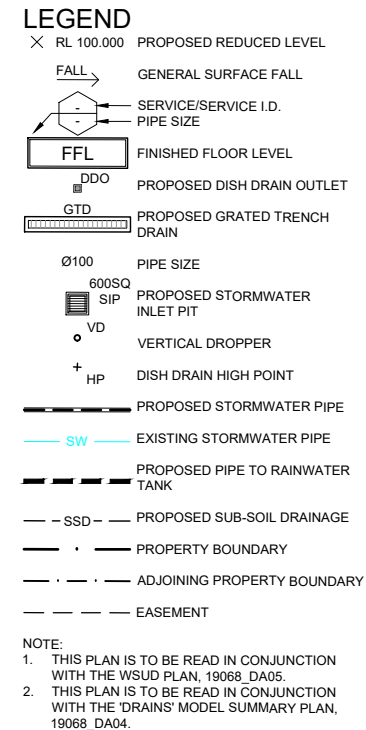
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						ISSUED FOR	L.G.A.	ARCHITECT	DRAWING No.
						D.A. APPROVAL	NORTHERN BEACHES	BIANCHINO	19068
									SUB-PROJECT No.
									01
									DA05
									ISSUE
									02
									SHEET SIZE
									A1

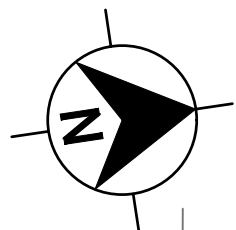
[illegible]

1. RAINWATER TANKS WHICH ARE CONNECTED FOR INTERNAL USE (TOILET FLUSHING AND WASHING MACHINE) AND EXTERNAL REUSE (GARDEN IRRIGATION).
2. RAINWATER TANKS SHALL COMPLY WITH THE FOLLOWING:
 - i. BE FITTED WITH A FIRST-FLUSH DEVICE THAT CAUSES INITIAL RAINWATER RUN-OFF TO BYPASS THE TANK AND MUST DRAIN TO A LANDSCAPED AREA. THE FIRST FLUSH DEVICE WILL NOT BE PERMITTED TO CONNECT TO THE STORMWATER SYSTEM
 - ii. HAVE A SIGN AFFIXED TO THE TANK STATING THE CONTENTS IS RAINWATER
 - iii. BE CONSTRUCTED OR INSTALLED IN A MANNER THAT PREVENTS MOSQUITOES BREEDING, SUCH AS THE USE OF MESH TO PROTECT INLETS AND OVERFLOWS
 - iv. HAVE ITS OVERFLOW CONNECTED TO AN EXISTING STORMWATER DRAINAGE SYSTEM THAT DOES NOT DISCHARGE TO AN ADJOINING PROPERTY, OR CAUSE A NUISANCE TO ADJOINING OWNERS
 - v. PUMPING EQUIPMENT MUST BE HOUSED IN A SOUNDPROOF ENCLOSURE
 - vi. WHERE THE RAINWATER TANK IS INTERCONNECTED TO A RETICULATED WATER SUPPLY IT MUST BE INSTALLED IN ACCORDANCE WITH PLUMBING CODE OF AUSTRALIA, PARTICULARLY BACKFLOW/CROSS CONNECTION PREVENTION REQUIREMENTS.
3. OSD IS REQUIRED FOR THIS DEVELOPMENT. REFER TO PLAN 19068 DA04. IT IS ASKED THAT THE VOLUME OF RAINWATER USE IS TO BE CREDITED AGAINST THE CALCULATED OSD STORAGE VOLUME SHOWN ON PLAN 19068 DA04.



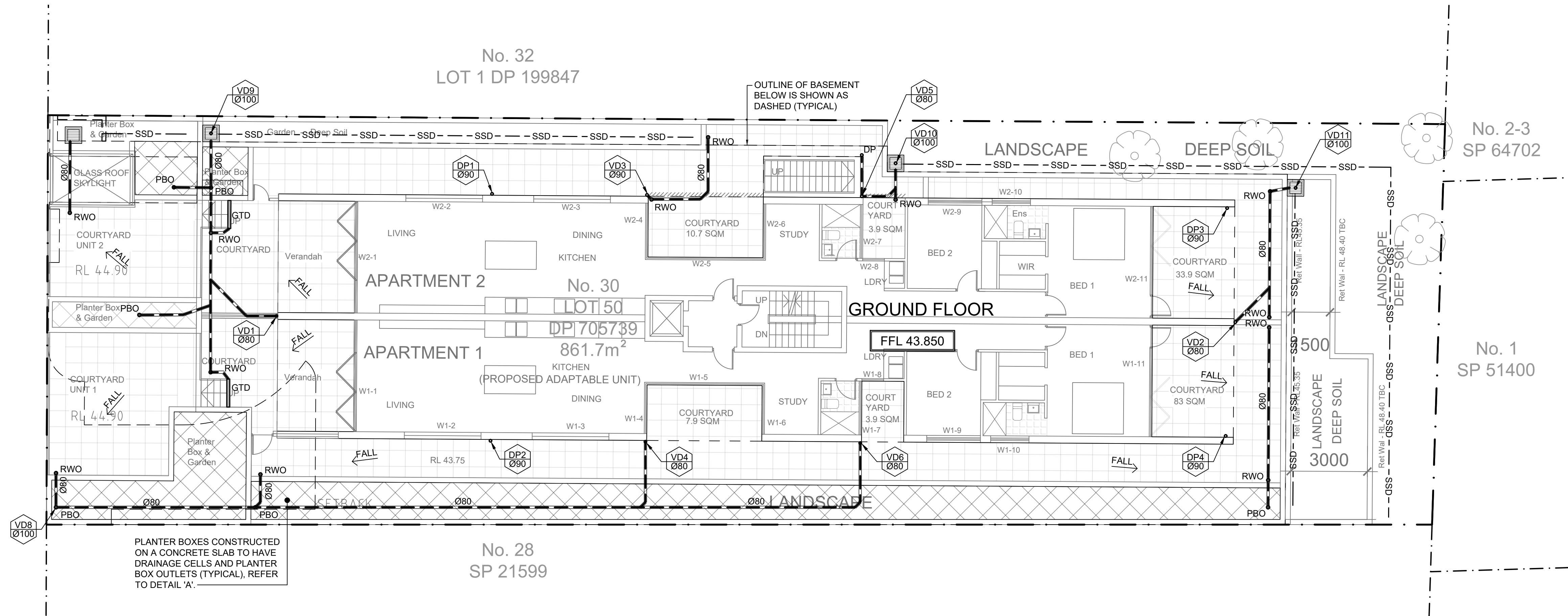
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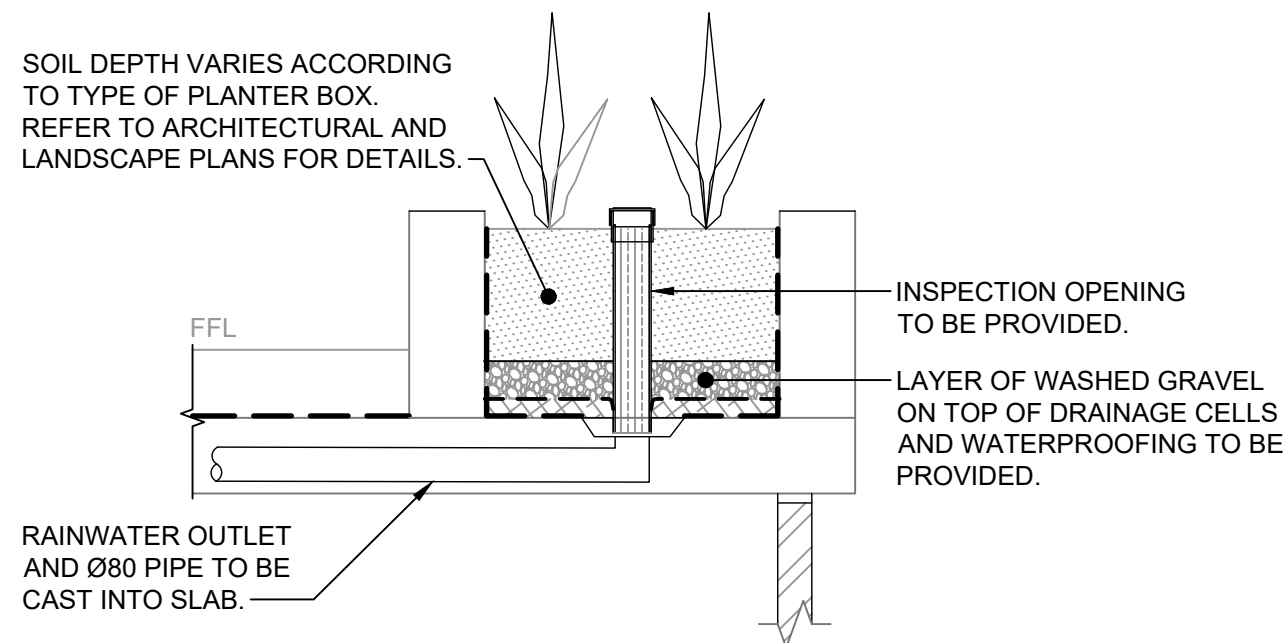


FAIRLIGHT

STREET



- LEGEND**
- FALL → GENERAL SURFACE FALL
 - DP1 Ø90 → SERVICE/SERVICE I.D. PIPE SIZE
 - DP → PROPOSED DOWNPIPE
 - VD → PROPOSED VERTICAL DROPPER
 - RWO → PROPOSED RAINWATER OUTLET
 - PBO → PROPOSED PLANTER BOX OUTLET Ø90 REFER TO DETAIL 'A'
 - GTD → GRATED TRENCH DRAIN
 - PROPOSED STORMWATER PIPE
 - SW → EXISTING STORMWATER PIPE
 - PROPOSED PIPE TO RAINWATER TANK
 - SSD → PROPOSED SUBØ90SOIL DRAINAGE
 - DRAINAGE CELLS PLANTER BOX - REFER TO DETAIL 'A'
 - PROPERTY BOUNDARY
 - ADJOINING PROPERTY BOUNDARY



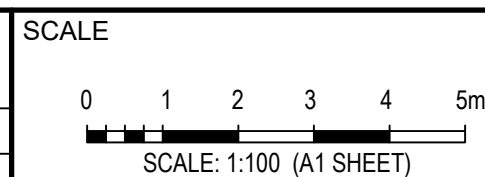
DETAIL 'A' - PLANTER BOX DRAINAGE

SCALE 1:20

NOTES: THIS DETAIL IS FOR CONCEPT ONLY, FURTHER DETAIL IS TO BE PROVIDED AT DETAILED DESIGN STAGE.

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L.G.A.
NORTHERN BEACHES



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Castle 240 Pty Ltd

ARCHITECT
BIANCHINO

Residential, 25 Maitland Street
Perth WA 6000 Australia
Telephone: (08) 9440 0674
Bianchino + Associates Pty Ltd

PROJECT					
30 FAIRLIGHT STREET, FAIRLIGHT					
DRAWING TITLE					
CONCEPT STORMWATER DRAINAGE PLAN Ø90 GROUND FLOOR					
PROJECT No.	SUB-PROJECT No.	DRAWING No.	ISSUE	SHEET SIZE	
19068	01	DA07	02	A1	

Miss Claudia Novati
MIEAust CPEng NER

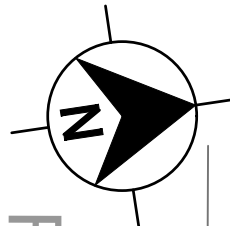
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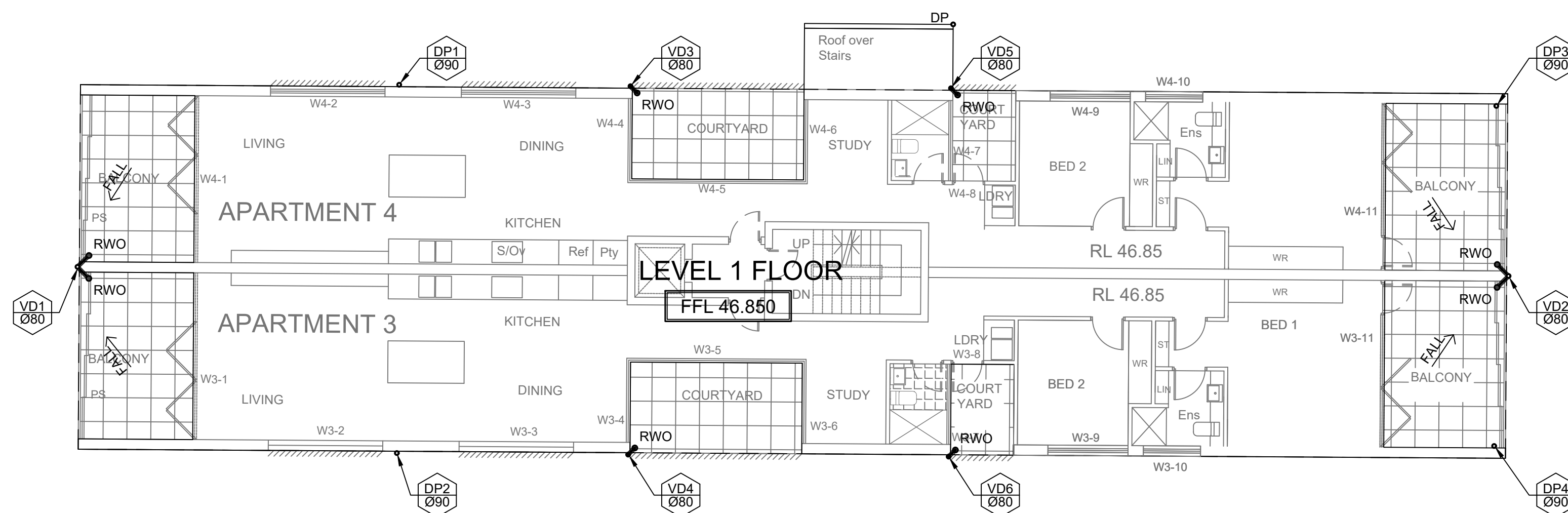
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DRAWING SHEET 07 OF 09

STREET

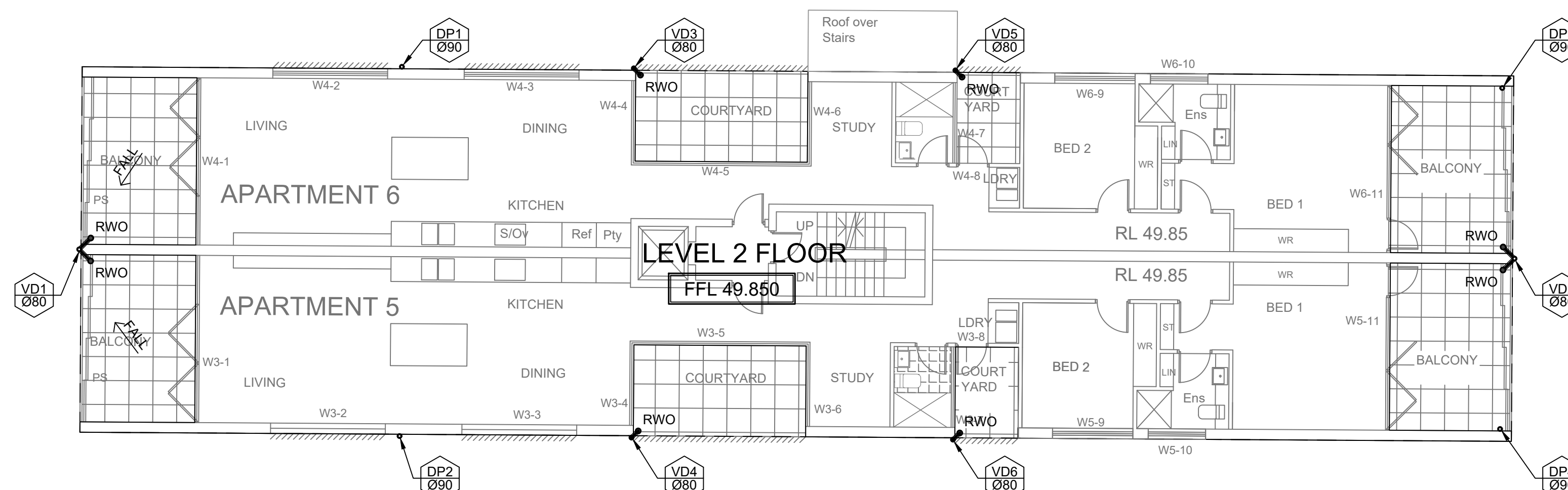


No. 2-3
SP 64702




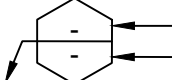





LEVEL 1 FLOOR PLAN

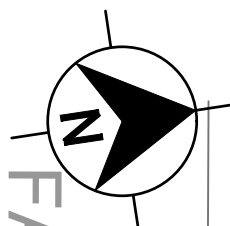
No. 2-3
SP 64702



LEVEL 2 FLOOR PLAN

LEGEND

	GENERAL SURFACE FALL
	SERVICE/SERVICE I.D. PIPE SIZE
	FINISHED FLOOR LEVEL
Ø100	PIPE SIZE
• DP	PROPOSED DOWNPIPE
• VD	PROPOSED VERTICAL DROPPER
• RWO	PROPOSED RAINWATER OUTLET
	PROPOSED STORMWATER PIPE
	PROPOSED PIPE TO RAINWATER TANK
	PROPERTY BOUNDARY
	ADJOINING PROPERTY BOUNDARY





FAIRLIGHT

STREET

No. 1
SP 51400

Miss Claudia Novati
MIEAust CPEng NER

 **National
Engineering
Register**


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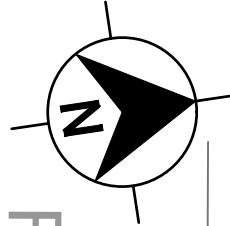
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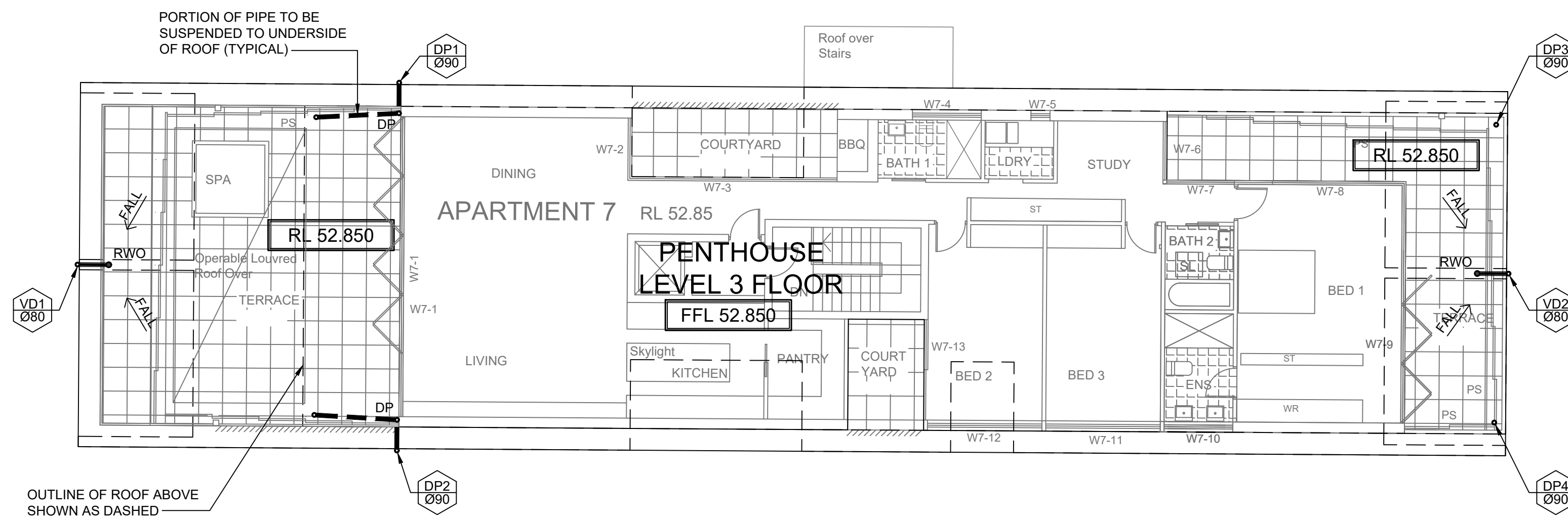
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									ISSUED FOR D.A. APPROVAL				L.G.A. NORTHERN BEACHES																		

STREET



No. 2-3
SP 64702

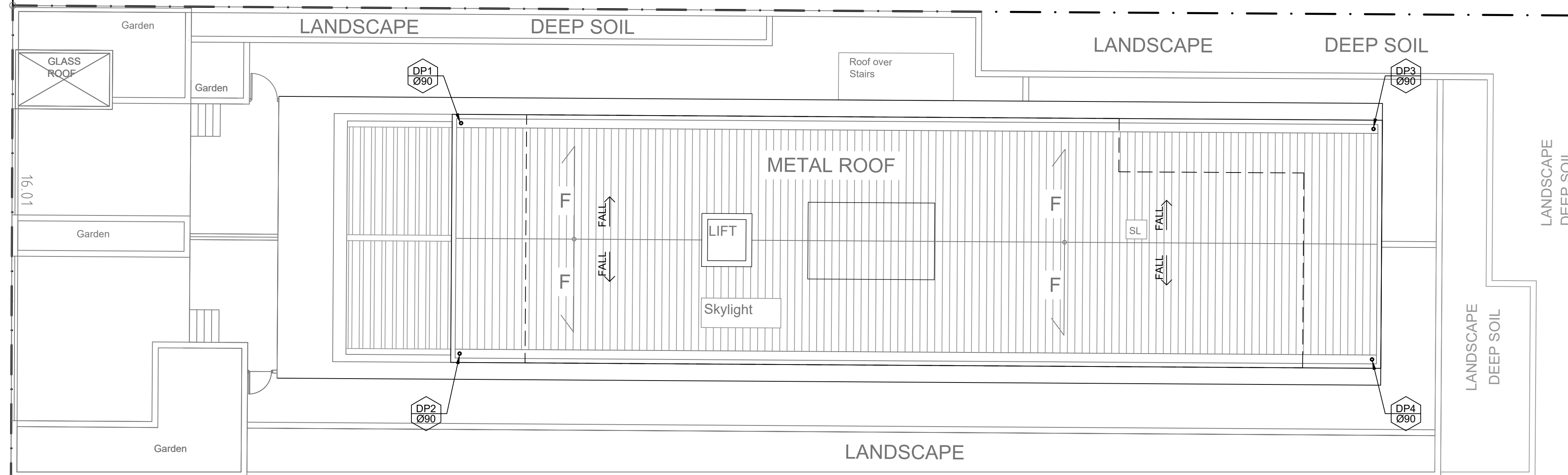


No. 1
SP 51400

FAIRLIGHT


STREET


No. 2-3
SP 64702



No. 1
SP 51400

Miss Claudia Novati
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 National Engineering Register

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													PROJECT No.	SUB-PROJECT No.	DRAWING No.	ISSUE	SHEET SIZE
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