

6 NIELD AVENUE, BALGOWLAH

STORMWATER MANAGEMENT PLAN





DRAWING INDEX:

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NOTES:

- ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.
- SITE LAYOUT BASED ON ARCHITECTURAL PLANS BY SEAN SMYTH DESIGN PTY LTD (JUNE 2024). SURVEY BY BEE & LETHBRIDGE PTY LTD (AUGUST 2020)
- LOCATION OF ALL SERVICES MUST BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
- ALL STORMWATER DRAINAGE PIPES AND ASSOCIATED DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE RELEVANT STANDARDS, THE BUILDING CODE OF AUSTRALIA, MANUFACTURER'S RECOMMENDATIONS, SYDNEY CATCHMENT AUTHORITY RECOMMENDED PRACTICE, AND LOCAL COUNCIL, AS APPLICABLE.
- ALL INVERT LEVELS PROVIDED ON THIS DRAWING ARE REDUCED TO AHD AND BASED ON INTERPOLATED SURFACE LEVELS AND SYSTEM REQUIREMENTS.
- WHERE POSSIBLE, PIPEWORK SHALL BE LOCATED EXTERNAL TO THE BUILDING.
- DOWNPIPES AND STORMWATER LINES TO BE SEALED DN100 uPVC UNLESS OTHERWISE NOTED.
- STORMWATER PIPES TO BE GRADED AT A MINIMUM 1% UNLESS NOTED OTHERWISE.
- ALTERNATIVE GUTTER AND DOWNPIPE CONFIGURATION MAY BE INSTALLED PROVIDED IT COMPLIES WITH AS3500.
- ALL PIPE AND CONDUITS TO BE MARKED IN ACCORDANCE WITH AS1345 – 1995.
- TRENCHES AND SERVICE SEPARATIONS IN ACCORDANCE WITH AS/NZS 5601, AS/NZS 3500, AND AS/CA S009.

LEGEND:

	DOWNPIPE
	STORMWATER PIPE
	DRAINAGE PIT
	INSPECTION OPENING

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
3	FRM	1/07/2024	ARCH DWGS UPDATED PER RFI	FRM
2	SHA	01/12/2023	FOR DA SUBMISSION	LES
1	SHA	25/05/2022	FOR DA SUBMISSION	LES
0	SHA	28/04/2022	FOR DA SUBMISSION	LES

Scale

NA

DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED

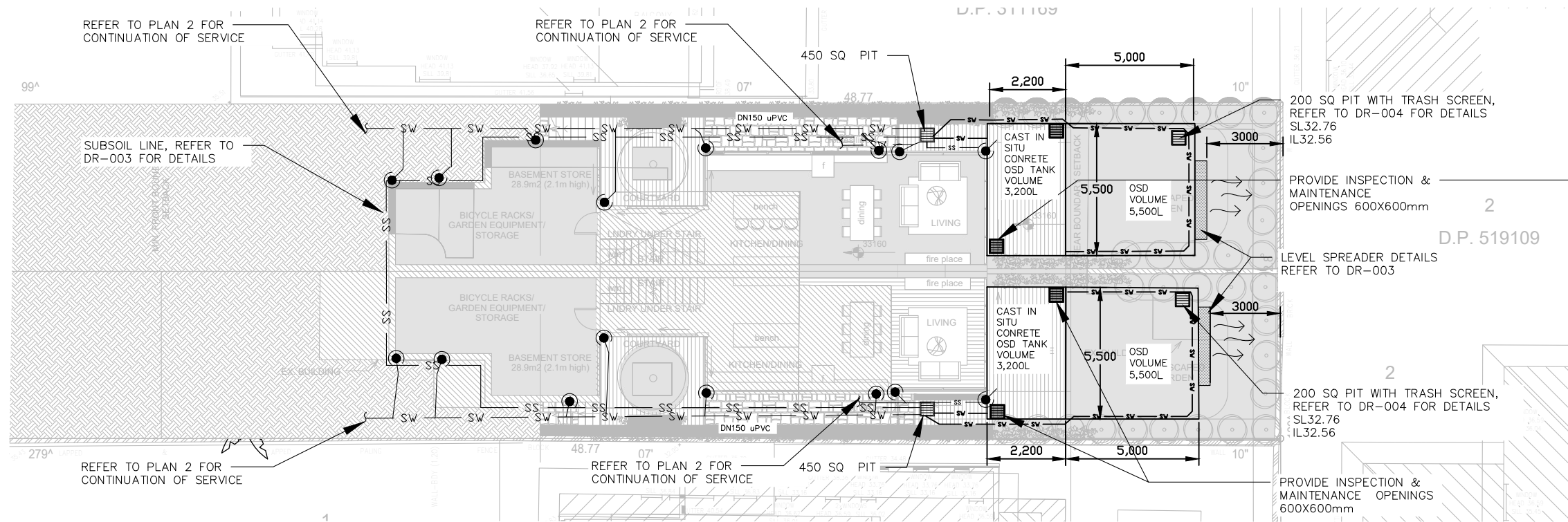
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DRAWN	SHA	CHECKED	LES
APPROVED	LES	DATE	01/12/2023

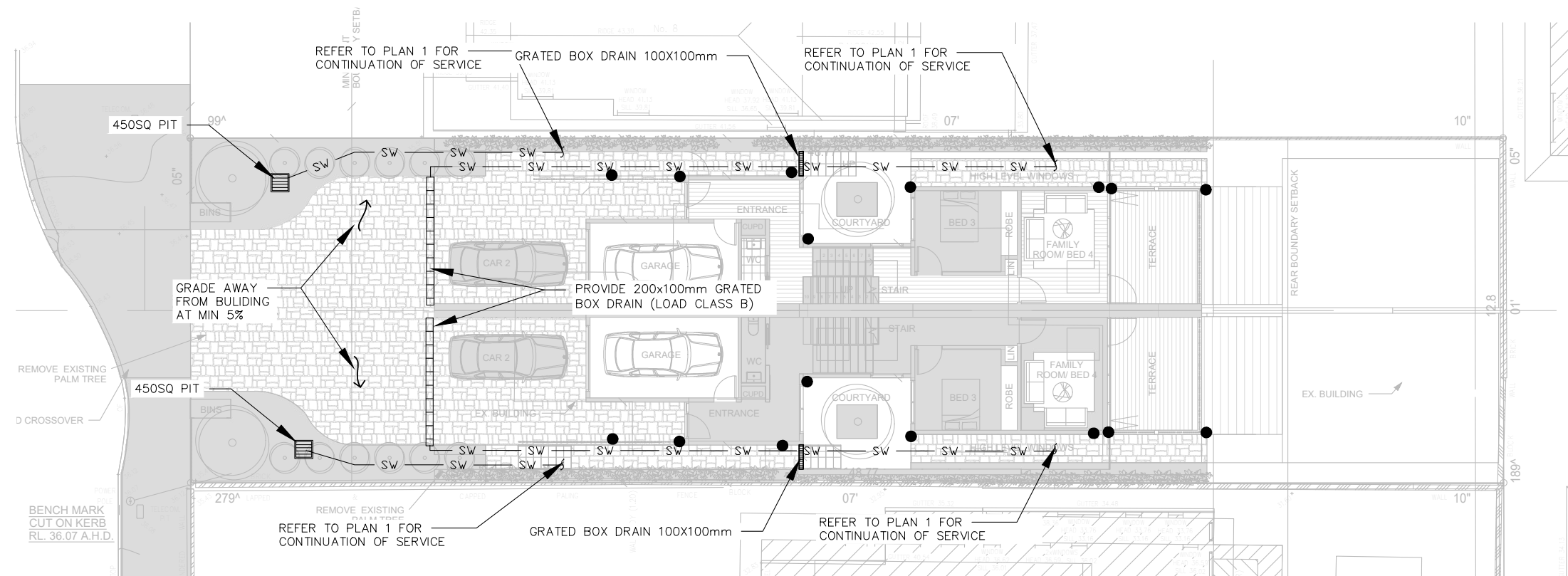


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AS3500.3:2021

6 NIELD AVENUE, BALGOWLAH			
LEGEND			
Size	Status	Dwg No.	Rev.
A3	FOR DA SUBMISSION	DR-000	3



PLAN 1
PIPE LAYOUT- LOWER GROUND
1:200



PLAN 2
PIPE LAYOUT- UPPER GROUND
1:200

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REVISIONS	No.	BY	DATE	DESCRIPTION	APPD
	4	DD	7/05/2024	FOR DA SUBMISSION	FRM
	3	DD	27/02/2024	FOR DA SUBMISSION	LES
	2	SHA	01/12/2023	FOR DA SUBMISSION	LES
	1	SHA	25/05/2022	FOR DA SUBMISSION	LES
	0	SHA	28/04/2022	FOR DA SUBMISSION	LES

Scale
1:200
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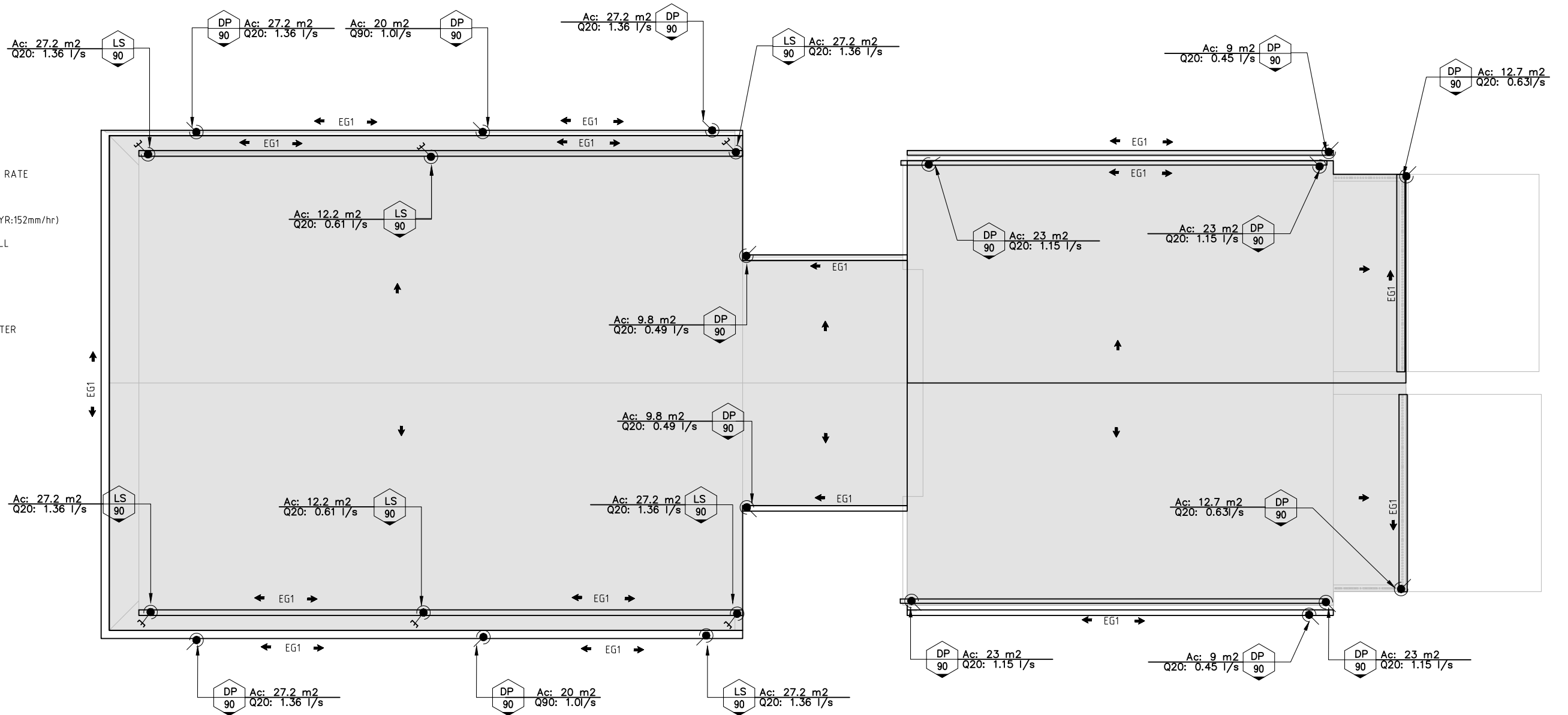
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6 NIELD AVENUE, BALGOWLAH			
PIPE LAYOUTS			
Size A3	Status FOR DA SUBMISSION	Drw No. DR-001	Rev. 4

NOMENCLATURE
 DP - DOWNPIPE
 LS - LEVEL SPREADER
 A_c - PLAN CATCHMENT AREA
 Q₂₀ - 20YR 5 MINUTE ARI FLOW RATE

GUTTER SIZING
 EAVES GUTTER DESIGNED TO ARI (20YR:152mm/hr)
 EG1 - MIN CSA 7,200 mm²
 GUTTERING TO HAVE A MIN 1:200 FALL

LEGEND
 TYPE DIA DOWNPIPE TYPE AND DIAMETER
 ← DIRECTION OF FALL



PLAN 3
 ROOF LAYOUT
 1:100

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	3	DD	27/02/2024	FOR DA SUBMISSION	LES
	2	SHA	01/12/2023	FOR DA SUBMISSION	LES
	1	SHA	25/05/2022	FOR DA SUBMISSION	LES
	0	SHA	28/04/2022	FOR DA SUBMISSION	LES

Scale
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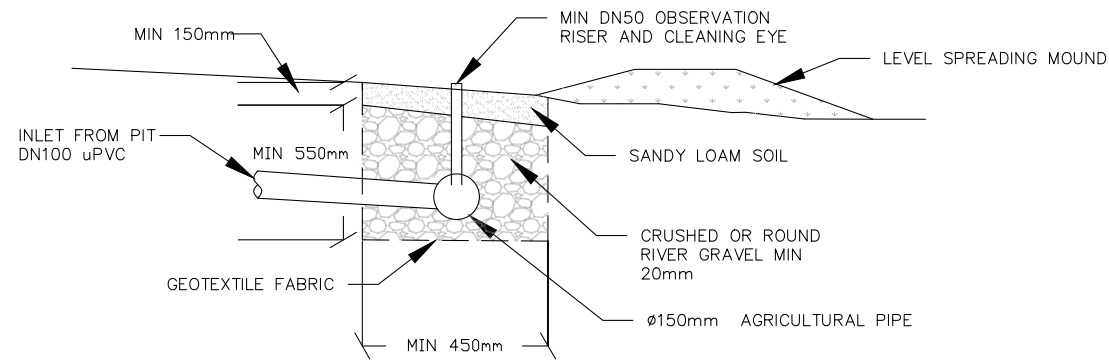
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DRAWN	DD	CHECKED	LES
APPROVED	LES	DATE	27/02/2024

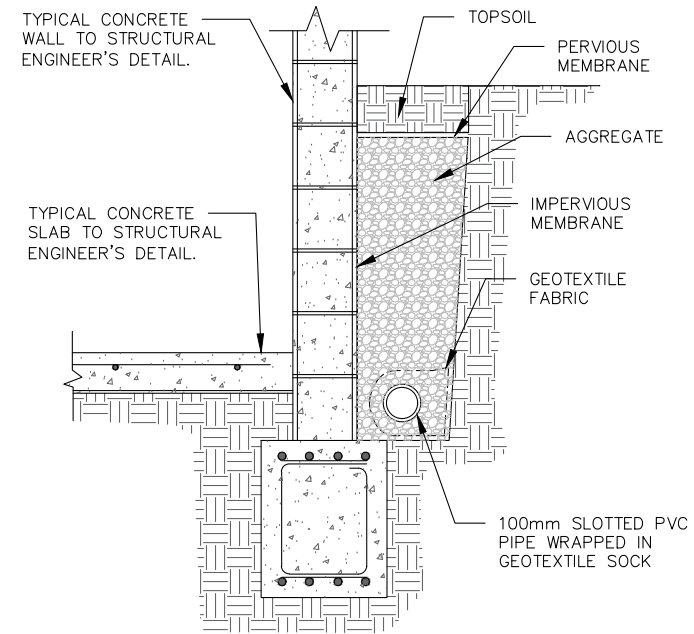


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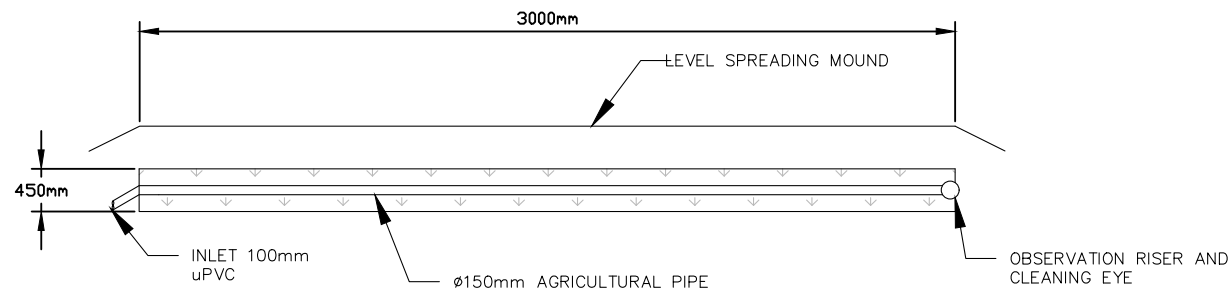
6 NIELD AVENUE, BALGOWLAH			
ROOF LAYOUT			
Size	Status	Drwg No.	Rev.
A3	FOR DA SUBMISSION	DR-002	3



SECTION 1
LEVEL SPREADER CROSS-SECTION
NA



DETAIL 1
TYPICAL SUBSOIL DETAIL
NA



PLAN 4
LEVEL SPREADER PLAN VIEW
NA

LEVEL SPREADER TRENCH CONSTRUCTION

1. THE BASE OF THE BED MUST BE LEVEL TO ENSURE EVEN DISTRIBUTION OF STORMWATER. IT MUST ALSO BE SCARIFIED TO OVERCOME ANY SMEARING DURING EXCAVATION. BASE LEVELS SHOULD BE CHECKED WITH A DUMPY / LASER LEVEL.
2. LEVEL SPREADING MOUND TO BE CONSTRUCTED PARALLEL TO THE NATURAL CONTOURS OF THE GROUND
3. INSPECTION PORT ON DOWNHILL SIDE OF THE BED. MADE FROM 50 MM PVC PIPE WITH PERFORATIONS AT THE AGGREGATE LEVEL OF THE BED.
4. BED DIMENSIONS ARE TYPICAL ONLY.

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Scale
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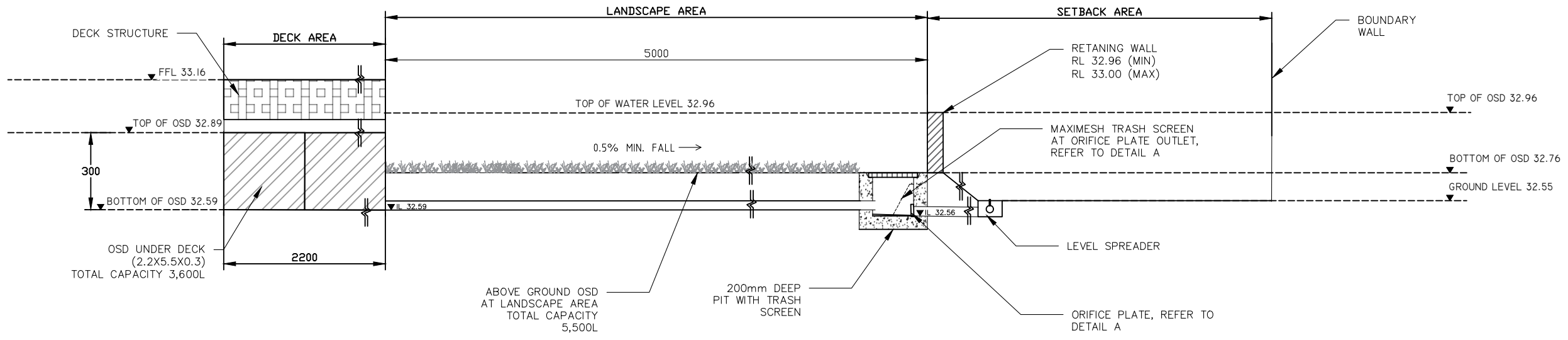
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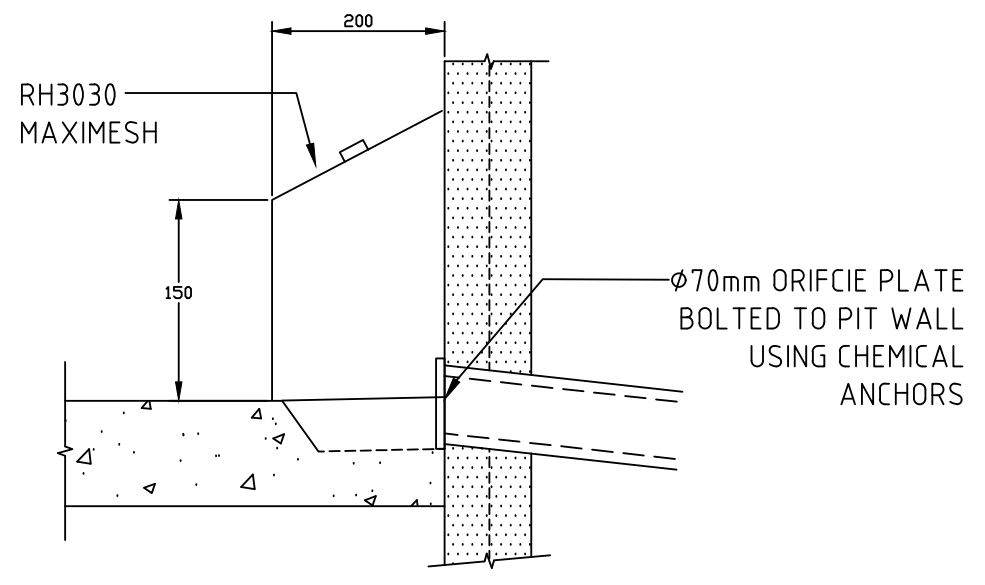
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6 NIELD AVENUE, BALGOWLAH			
DETAILS SHEET 1			
Size A3	Status FOR DA SUBMISSION	Dwg No. DR-003	Rev. 2



SECTION 2 OSD CROSS-SECTION NA



DETAIL A ORIFICE PLATE-SECTION NA

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No.	BY	DATE	DESCRIPTION	APPD
1	FRM	0.07.2024	RFI RESPONSE - F/BOARD TO 200mm	FRM
0	DD	03/05/2024	FOR DA SUBMISSION	LES

Scale
NA

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APPROVED	LES	DATE	03/05/2024



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6 NIELD AVENUE, BALGOWLAH			
DETAILS SHEET 2			
Size A3	Status FOR DA SUBMISSION	Dwg No. DR-004	Rev. 1

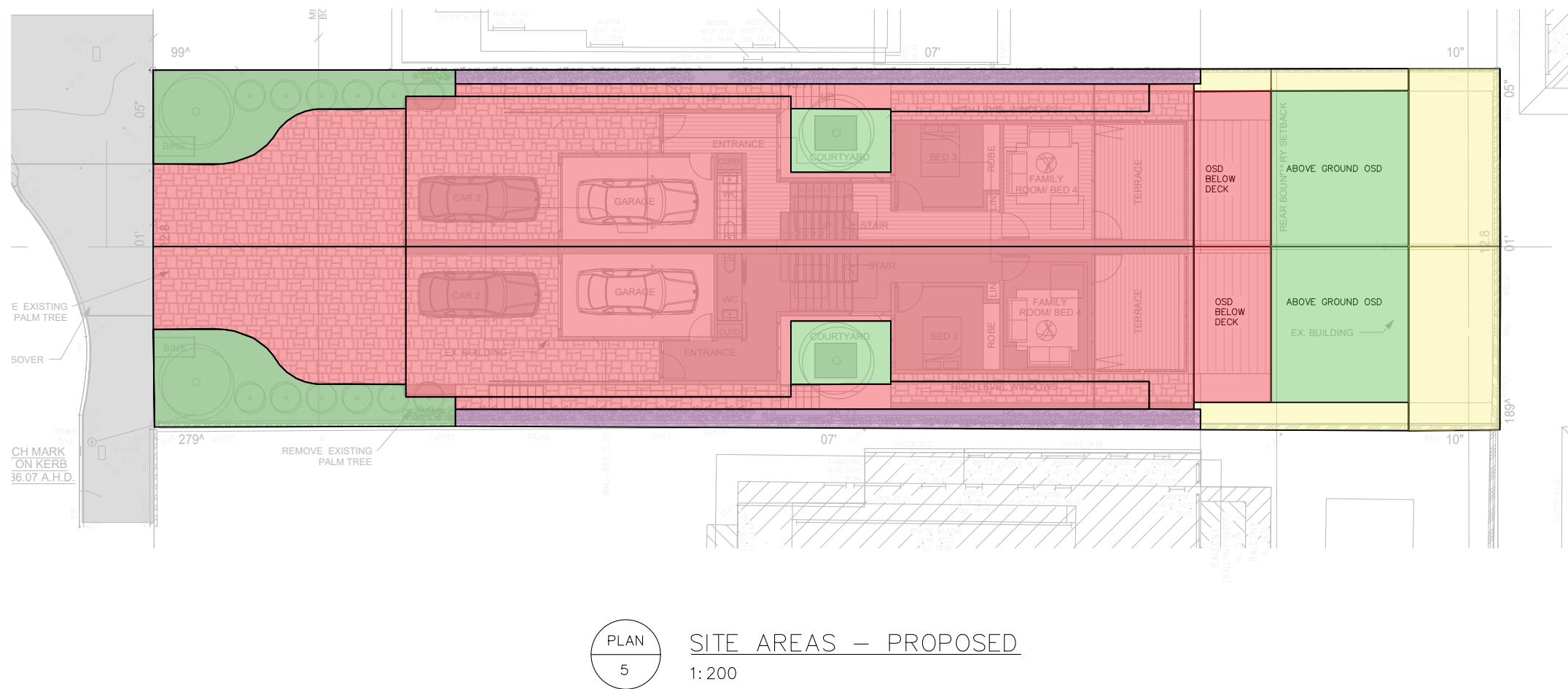
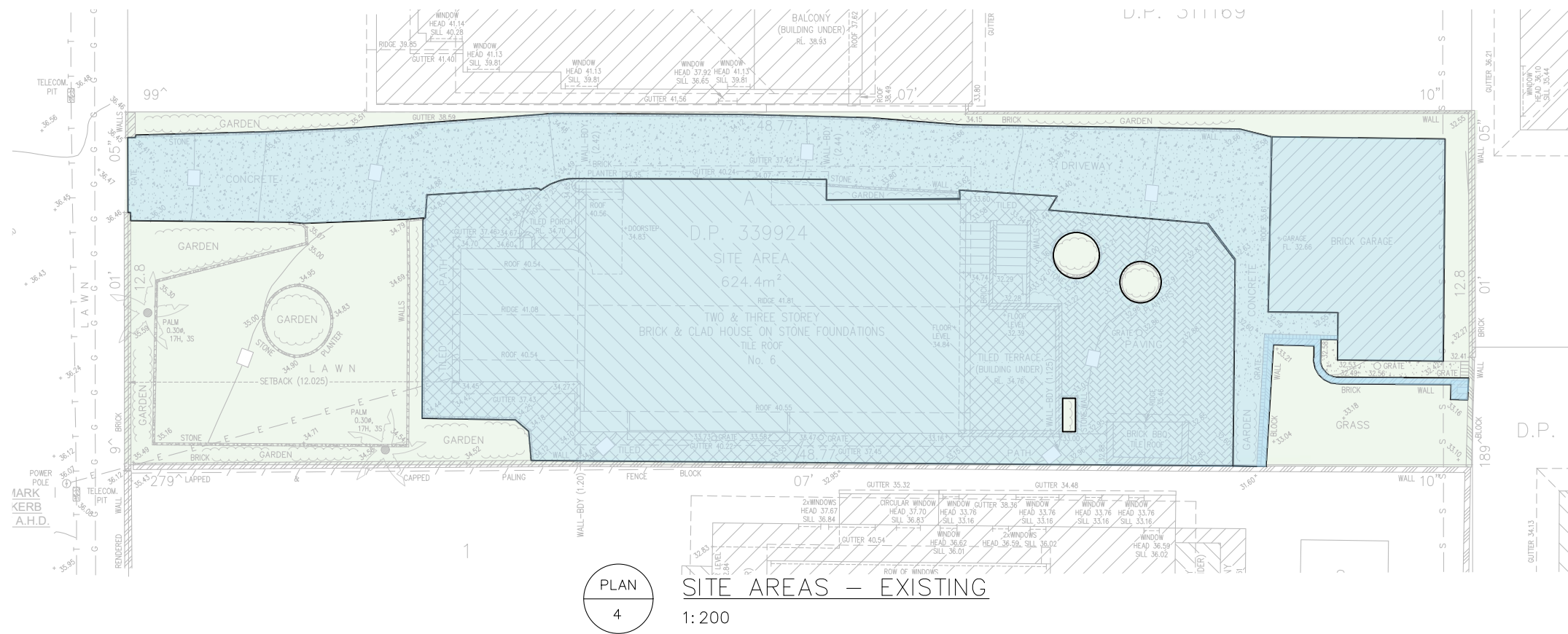


TABLE 1 – PSD (SON), POST DEVELOPMENT FLOWS

ARI	PSD STATE OF THE NATURE (l/s)	PSD STATE OF THE NATURE (l/s)	POST DEVELOPED FLOWS (l/s)		
			OSD (l/s)	BYPASS OSD (l/s)	TOTAL
0.2EY	7	7	4	1	5
20 YEAR	7	12	5	2	7
100 YEAR	7	17	5	2	7

AS PER CONDITION 9.10.5 OF NORTHERN BEACH COUNCIL'S WATER MANAGEMENT FOR DEVELOPMENT POLICY:
 STORAGE IN LANDSCAPE AREA REQUIRES FIRST 20% VOLUME IN AN AREA ABLE TO TOLERATE FREQUENT INUNDATION AND ADDITIONAL 20% VOLUME TO COMPENSATE FOR LOSS

TOTAL STORAGE REQUIRED = 7,755L
 TOTAL STORAGE PROVIDED = 8,700L
 MADE UP OF THE FOLLOWING
 STORABLE FREQUENCY WETTABLE ZONE REQUIRED = (20% OF REQUIRED OSD) = 20% OF 7,755L = 1,551L
 STORABLE FREQUENCY WETTABLE ZONE PROVIDED
 OSD UNDER DECK OF SIZE (Width: 2.2m Length: 5.5m Height: 0.3m) = 2.2x5.5x0.3 = 3,600L

LANDSCAPE AREA REQUIRED STORAGE = (20% OF 4,555L) + 4,555L
 LANDSCAPE AREA REQUIRED STORAGE = 911L + 4,555L = 5,466L
 LANDSCAPE AREA PROVIDED STORAGE = (0.20m X 5.5m X 5.0m) = 5,500L

TOTAL STORAGE PROVIDED = 3,600L + 5,500L = 9,100L

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6 NIELD AVENUE, BALGOWLAH

SITE AREAS

Size	Status	Drwg No.	Rev.
A3	FOR DA SUBMISSION	DR-005	3