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**Law &
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**Consulting Structural
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A.B.N. 97003 543 913

RD:2025/53-Csw

28th April 2025

The General Manager
Northern Beaches Council
PO Box 82
MANLY NSW 1655

Dear Sir or Madam,

**RE: STORMWATER DRAINAGE ASSET PLAN FOR
15 WILLUNGA CRESCENT, FORESTVILLE.**

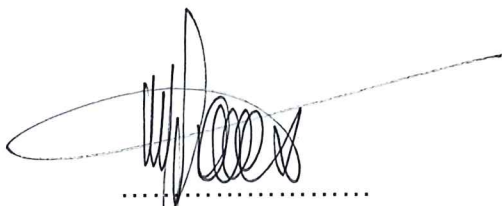
We refer to the attached sketches 1 and 2 which details the slab and pergola posts which are located adjacent to and over the easement.

We have indicated suspended footing beams and slabs will need to be required to bridge the easement to support the pergola posts and fence support posts.

We note that bedrock is close to surface level so all structures will be supported on bedrock.

Should you have any queries in regard to the above, please do not hesitate to contact the undersigned.

Yours faithfully,

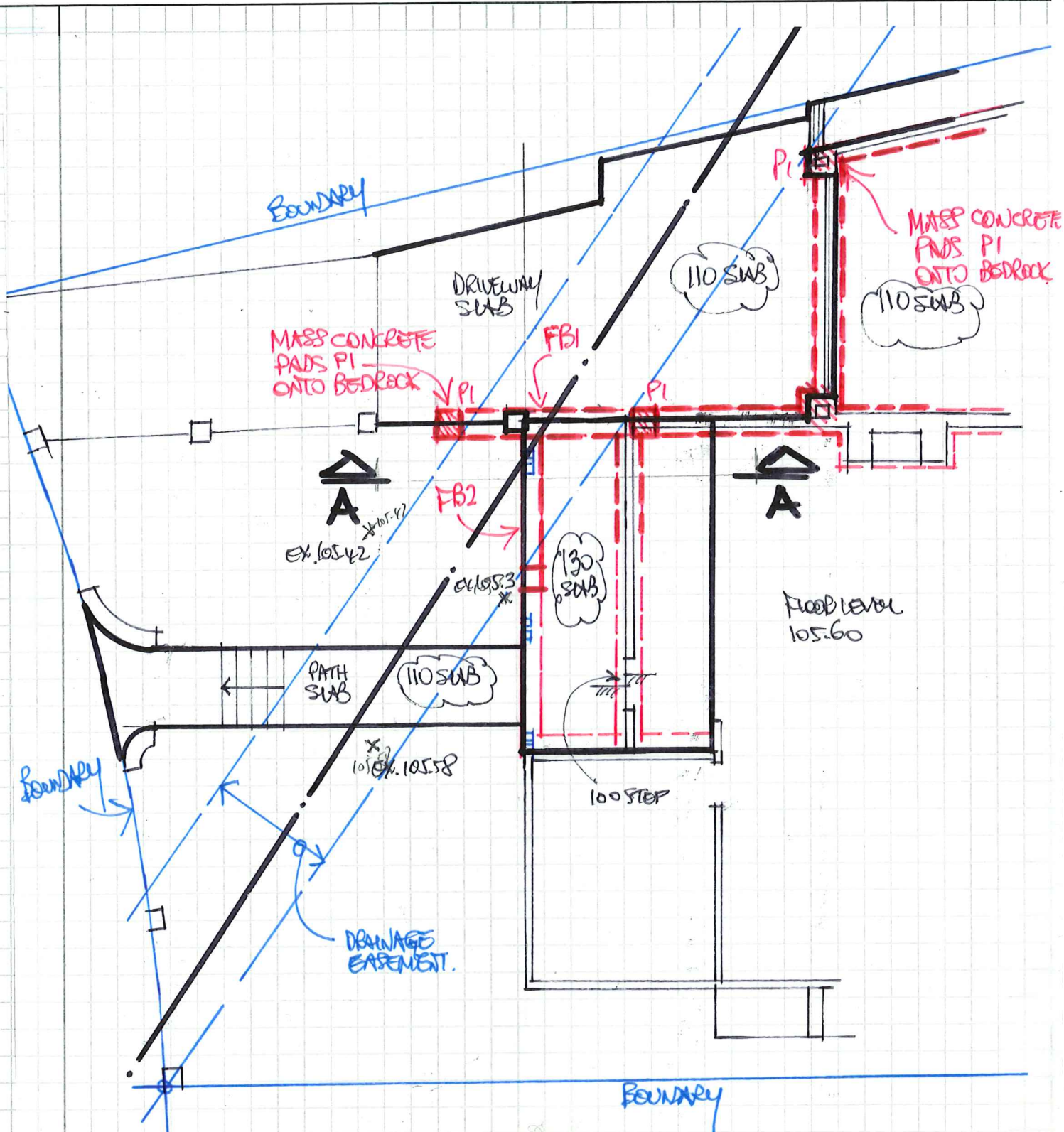


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Maurice J. Dawson
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15 WILLUNGA CRESCENT, FORESTVILLE

#2025/53 — [1] 28/4/25

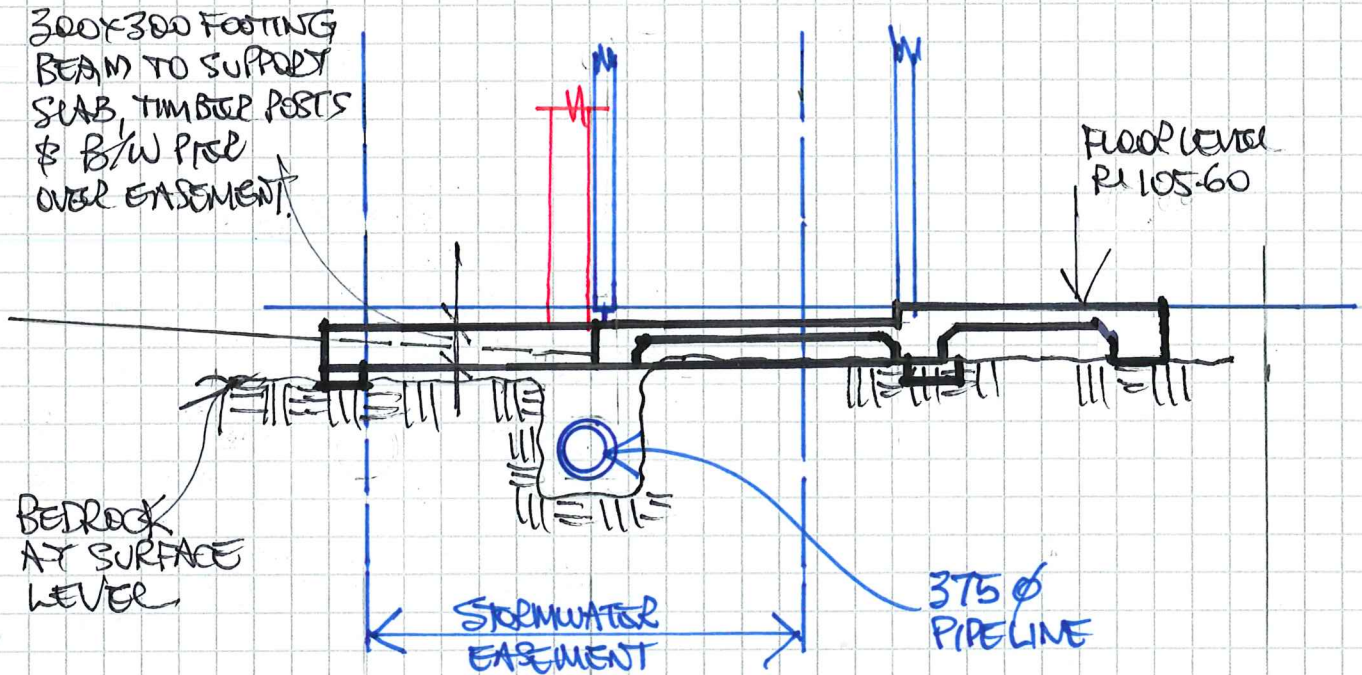
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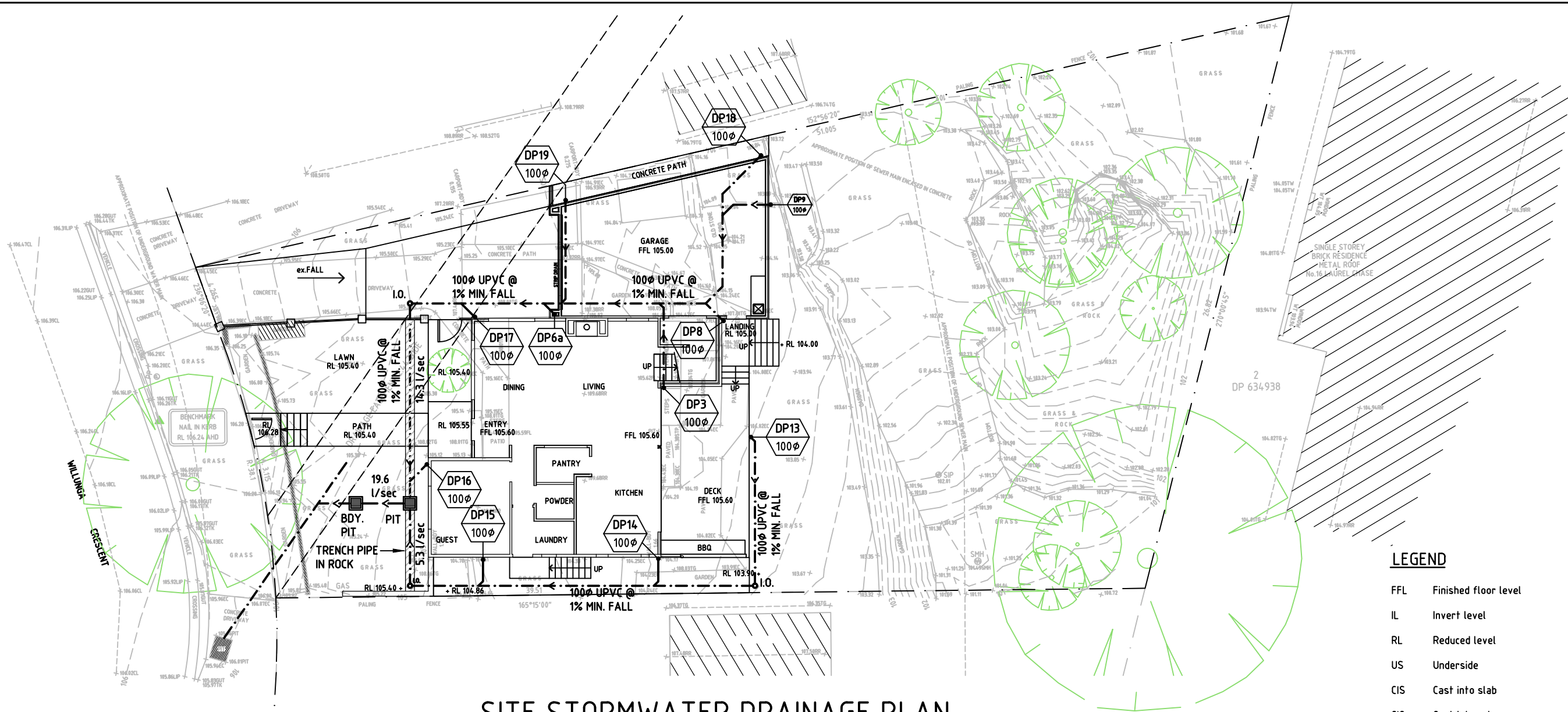
**FOOTING / SUB PWN AROUND
COUNCIL ASSETS 1:100**

15 WILLUNGA CRESCENT, FORESTVILLE

2025/53 — [2] 28/4/25



SECTION A-A 1:50



SITE STORMWATER DRAINAGE PLAN

SCALE 1:200

GENERAL NOTES - STORM WATER

- SW1 All S.W. pipework to be carried out in U.P.V.C. to AS 1260 CLASS SH.
- SW2 All D.P. to be carried out in U.P.V.C. to AS 1415 parts 1-5 CLASS SWV.
- SW3 All S.W. pipes to grade at 1% min. U.N.O.
- SW4 All S.W. pipework to be 100φmm U.N.O.
- SW5 All gutters to be as noted in schedule.
- SW6 All D.P.'S to be as noted.
- SW7 All grated pits to be 300x300 precast concrete U.N.O.
- SW8 All covered pits to be 600x600 precast concrete U.N.O.
- SW10 All covers, grates & frames to be heavy duty where subject to vehicular traffic.
- SW11 All covers, grates & frames to be medium duty where subject to pedestrian traffic or landscaped areas.
- SW12 All drainage to maintain a min. cover of 100mm.
- SW13 For exact location of buildings, levels, walls, d.p.'s etc. refer to architectural detail drawings.

- SW14 The contractor shall submit to the builder for approval, samples of the nominated equipment, fittings and fixtures to be used for the project. This also applies and must be strictly adhered to when offering alternatives to specified items.
- SW15 Any discrepancy or variations of design shall be refereed to 'The Principle' for decision prior to the commencement of any such work.
- SW16 The contractor shall be responsible for the set out and placement pf all core holes, wall, floor and beam penetrations. All penetrations shall be approved prior placement, seal holes and repair chases in walls after installation of pipework.
- SW17 All floor and wall penetrations shall be fire rated to comply with the requirements of the Building Code of Australia.
- SW18 The drawings documented hereafter do not purport to show all architectural, structural or hydraulic services details. They are a guide only, and it shall be the contractors responsibility to allow for all necessary fittings, pipes, penetrations, droppers, risers and ancillary items for a complete and compliant installation.

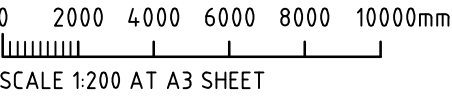
- SW19 The contractor shall test all installed services to the requirements and satisfaction of the relevant authorities and superintendent.
- SW20 Provide fail safe overflow spitters no less than 50mm diameter for all balconies and terraces.
- SW21 All drainage pipes less than 300mm in diameter shall be sewer grade U.P.V.C. with solvent welded joints (U.N.O.) All pipe junctions and tapers shall be via proprietry made fittings.
- SW22 Final location of rainwater downpipes shall be co-ordinated on-site with the builder, to the approval of the architect and engineer and in accordance with AS3500, AS4198 and AR&R97.
- SW23 All box gutters and rainwater heads shall be fitted with failsafe overflows sized and installed to AS3500.
- SW24 All drainpipes located in noise sensitive areas as deemed by the architect, acoustic engineer or equivalent persons, shall be acoustically insulated using a system no less in standard than 'SOUNDLAGG 4525C' installed to the manufacturers recommendations.

SUBSOIL DRAINAGE

- SS1 Subsoil drainage shall be consistent with the structural engineers details and subject to the findings of the geotechnical report.
- SS2 Subsoil drains shall be slotted flexible U.P.V.C. 100mm diameter fitted with geo-frabric filter sock.
- SS3 Subsoil drainage shall be laid at a minimum grade of 0.5% U.N.O.
- SS4 Subsoil drainage should be installed on the upstream end of any proposed paved areas and connected to the piped drainage system or watercourse.
- SS5 Additional subsoil drainage shall be laid to suit site conditions and groundwater presence as directed.
- SS6 Inspection openings are to be provided at each end and regular intervals for clean-out purposes.

LEGEND

- FFL Finished floor level
- IL Invert level
- RL Reduced level
- US Underside
- CIS Cast into slab
- CIC Cast into column
- STW Stormwater
- TOW Top of wall
- U.N.O Unless noted otherwise
- SPR. Spreader
- S.S. Sub-soil drainage
- Existing surface level
- DP Down pipe
- RWO Rainwater outlet
- RWH Rainwater head
- Grated stormwater pit
- Dropper
- First flush device



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Designer : ELEVATE DESIGN & DRAFTING

T: 0422 961 738

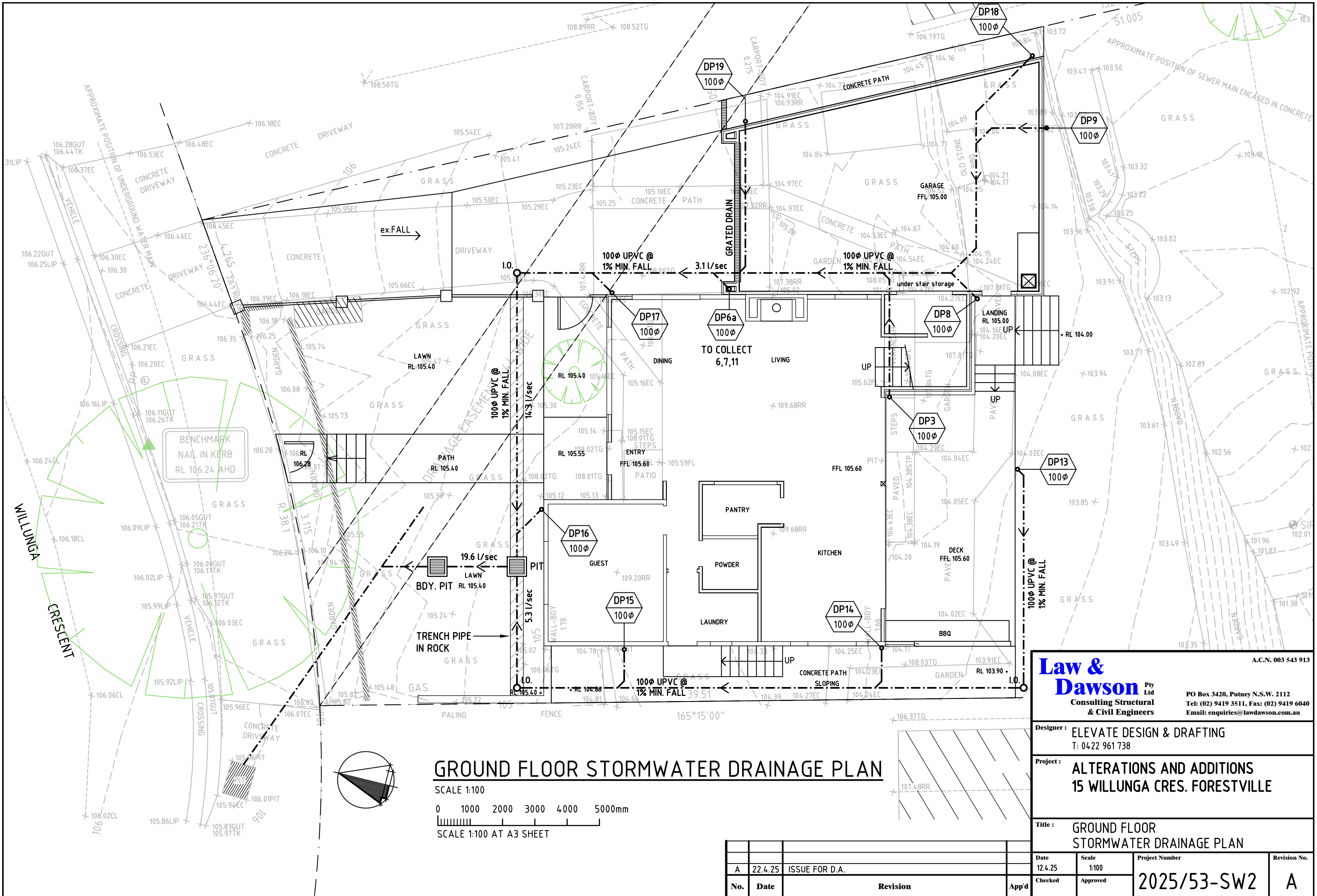
Project : ALTERATIONS AND ADDITIONS

15 WILLUNGA CRES. FORESTVILLE

Title : SITE STORMWATER DRAINAGE PLAN

Date	Scale	Project Number	Revision No.
12.4.25	1:200	2025/53-SW1	A
Checked	Approved		

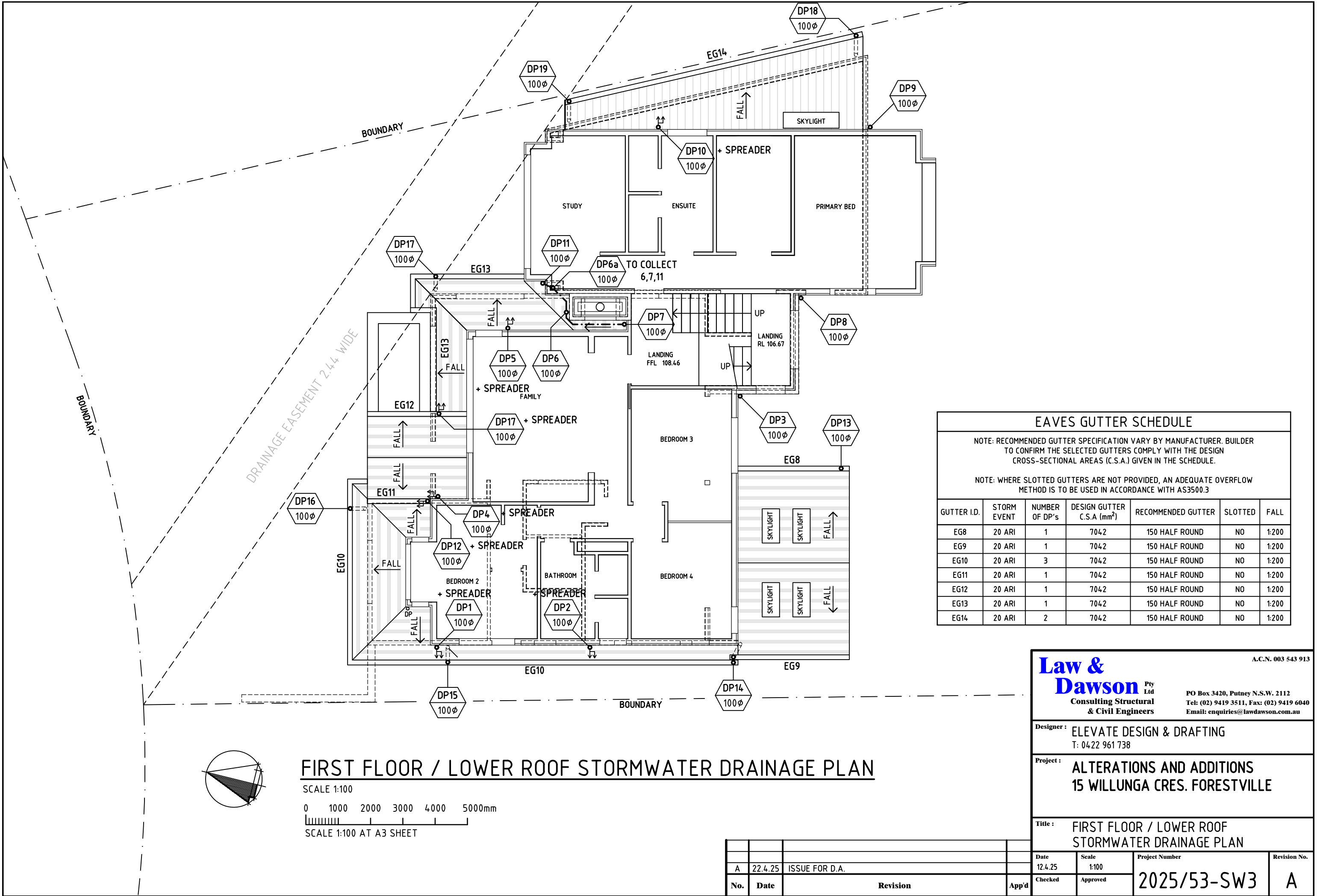
A	22.4.25	ISSUE FOR D.A.	
No.	Date	Revision	App'd



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Designer :		ELEVATE DESIGN & DRAFTING T: 0422 961 738		
Project :		ALTERATIONS AND ADDITIONS 15 WILLUNGA CRES. FORESTVILLE		
Title :		GROUND FLOOR STORMWATER DRAINAGE PLAN		
Date	12.4.25	Scale	1:100	Project Number
Checked		Approved		2025/53-SW2
No.	Date	Revision		Revision No.
A	22.4.25	ISSUE FOR D.A.		A



EAVES GUTTER SCHEDULE						
NOTE: RECOMMENDED GUTTER SPECIFICATION VARY BY MANUFACTURER. BUILDER TO CONFIRM THE SELECTED GUTTERS COMPLY WITH THE DESIGN CROSS-SECTIONAL AREAS (C.S.A.) GIVEN IN THE SCHEDULE.						
NOTE: WHERE SLOTTED GUTTERS ARE NOT PROVIDED, AN ADEQUATE OVERFLOW METHOD IS TO BE USED IN ACCORDANCE WITH AS3500.3						
GUTTER I.D.	STORM EVENT	NUMBER OF DP's	DESIGN GUTTER C.S.A (mm²)	RECOMMENDED GUTTER	SLOTTED	FALL
EG8	20 ARI	1	704.2	150 HALF ROUND	NO	1:200
EG9	20 ARI	1	704.2	150 HALF ROUND	NO	1:200
EG10	20 ARI	3	704.2	150 HALF ROUND	NO	1:200
EG11	20 ARI	1	704.2	150 HALF ROUND	NO	1:200
EG12	20 ARI	1	704.2	150 HALF ROUND	NO	1:200
EG13	20 ARI	1	704.2	150 HALF ROUND	NO	1:200
EG14	20 ARI	2	704.2	150 HALF ROUND	NO	1:200

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Project :

ALTERATIONS AND ADDITIONS

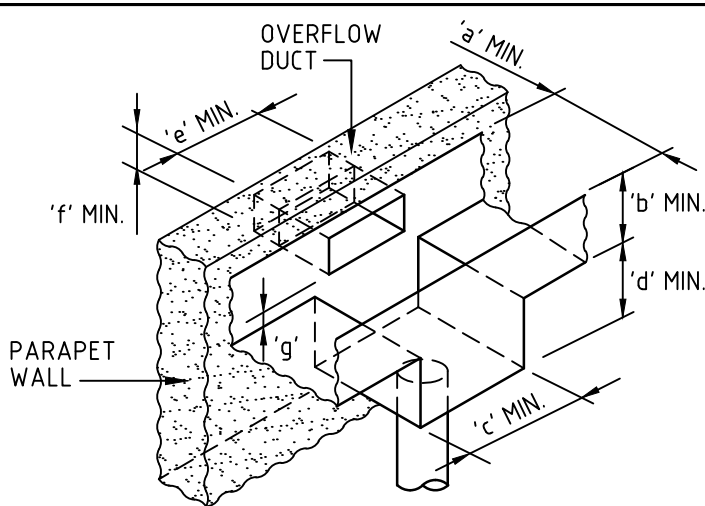
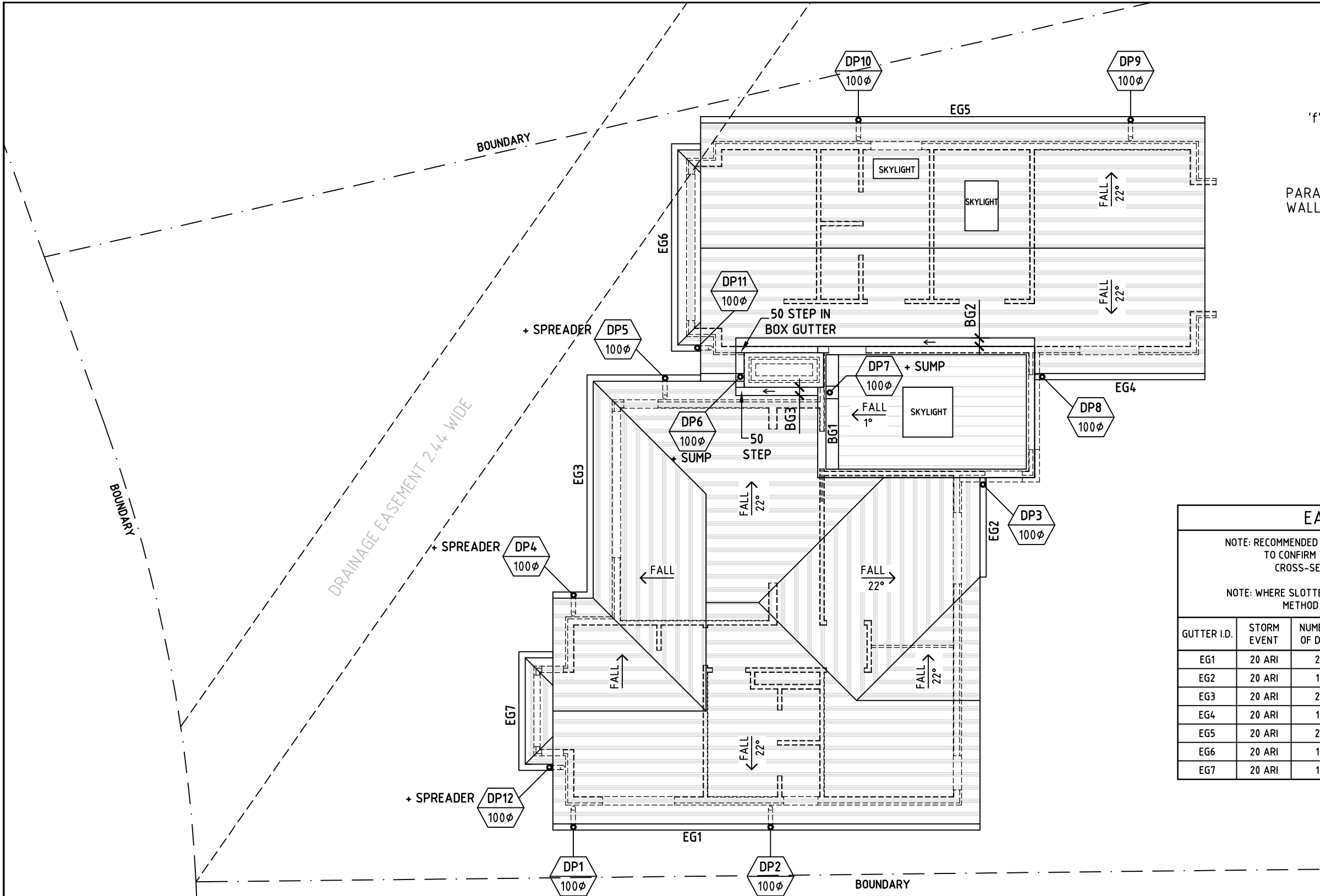
15 WILLUNGA CRES. FORESTVILLE

Title :

FIRST FLOOR / LOWER ROOF

STORMWATER DRAINAGE PLAN

No.	Date	Revision	App'd	Date	Scale	Project Number	Revision No.
A	22.4.25	ISSUE FOR D.A.		12.4.25	1:100	2025/53-SW3	A



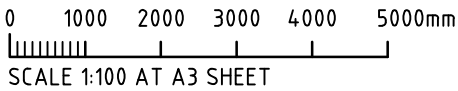
BOX GUTTER TYPE 2 N.T.S.
NOTE:-
STANDARD DETAIL EXTRACTED FROM AS3500.3-2003

EAVES GUTTER SCHEDULE						
NOTE: RECOMMENDED GUTTER SPECIFICATION VARY BY MANUFACTURER. BUILDER TO CONFIRM THE SELECTED GUTTERS COMPLY WITH THE DESIGN CROSS-SECTIONAL AREAS (C.S.A.) GIVEN IN THE SCHEDULE.						
NOTE: WHERE SLOTTED GUTTERS ARE NOT PROVIDED, AN ADEQUATE OVERFLOW METHOD IS TO BE USED IN ACCORDANCE WITH AS3500.3						
GUTTER I.D.	STORM EVENT	NUMBER OF DP's	DESIGN GUTTER C.S.A (mm²)	RECOMMENDED GUTTER	SLOTTED	FALL
EG1	20 ARI	2	7042	150 HALF ROUND	NO	1:200
EG2	20 ARI	1	7042	150 HALF ROUND	NO	1:200
EG3	20 ARI	2	7042	150 HALF ROUND	NO	1:200
EG4	20 ARI	1	7042	150 HALF ROUND	NO	1:200
EG5	20 ARI	2	7042	150 HALF ROUND	NO	1:200
EG6	20 ARI	1	7042	150 HALF ROUND	NO	1:200
EG7	20 ARI	1	7042	150 HALF ROUND	NO	1:200

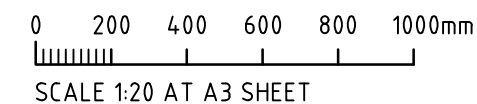
UPPER ROOF STORMWATER DRAINAGE PLAN

SCALE 1:100

BOX GUTTER SCHEDULE									
GUTTER I.D.	STORM EVENT	GUTTER TYPE	NUMBER OF DP's	GUTTER WIDTH (a)	MIN. GUTTER DEPTH (b)	MIN. GUTTER FALL	RAINWATER SUMP/HEAD SIZE (a x c x d)	OVERFLOW SIZE (e),(f) if req'd	BOX GUTTER TYPE 2 & 3 (g), (h)
BG1	100 ARI	2	1	200	120	1:100	200x4.00x50	150mm, 70mm	(g) 9mm
BG2	100 ARI	2	1	200	120	1:100	200x4.00x50	150mm, 70mm	(g) 15mm
BG3	100 ARI	2	1	200	120	1:100	200x4.00x50	150mm, 70mm	(g) 15mm



				STORMWATER DRAINAGE PLAN			
				Date	Scale	Project Number	Revision No.
A	22.4.25	ISSUE FOR D.A.		12.4.25	1:100	2025/53-SW4	A
No.	Date	Revision	App'd	Checked	Approved		



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Designer : ELEVATE DESIGN & DRAFTING T: 0422 961 738			
Project : ALTERATIONS AND ADDITIONS 15 WILLUNGA CRES. FORESTVILLE			
Title : STORMWATER DETAILS			
Date	Scale	Project Number	Revision No.
12.4.25	1:20	2025/53-SW5	A
Checked	Approved		

A	22.4.25	ISSUE FOR D.A.	
No.	Date	Revision	App'