

30 MACMILLAN STREET
SEAFORTH NSW
DA ISSUE

STORMWATER SERVICES LEGEND

PIPEWORK SYMBOLOGY & ABBREVIATIONS

	AGM	AMENDMENT
	ASM	AUTHORITY GAS MAIN
	ASWM	AUTHORITY SEWER MAIN
	AWM	AUTHORITY STORMWATER MAIN
		AUTHORITY WATER MAIN
		CASTIN
		DISCONNECTED SERVICE
	ELEC	ELECTRICAL SERVICE
	GRW	GREY WATER
		INSET BORDER
	IR	IRRIGATION LINE
	eIR	IRRIGATION LINE - EXISTING
	NCW	NON-POTABLE COLD WATER
	eNCW	NON-POTABLE COLD WATER - EXISTING
	NHW	NON-POTABLE HOT WATER
	eNHW	NON-POTABLE HOT WATER - EXISTING
	NHW-R	NON-POTABLE HOT WATER RETURN
	RR	RAINWATER RE-USE
	eRR	RAINWATER RE-USE - EXISTING
	RW	RECLAIMED WATER
	eRW	RECLAIMED WATER - EXISTING
		STORMWATER CATCHMENT
	SWD	STORMWATER DRAINAGE
	eSWD	STORMWATER DRAINAGE - EXISTING
	SWRM	STORMWATER RISING MAIN
	eSWRM	STORMWATER RISING MAIN - EXISTING
	SSD	SUBSOIL DRAINAGE
	eSSD	SUBSOIL DRAINAGE - EXISTING
	SOF	SYPHONIC OVERFLOW
	eSOF	SYPHONIC OVERFLOW - EXISTING
	SSW	SYPHONIC STORMWATER
	eSSW	SYPHONIC STORMWATER - EXISTING

DRAWING SCHEDULE

DRAWING NUMBER	DRAWING SCALE	DRAWING TITLE
SW-000	NTS	COVER SHEET AND LEGEND - STORMWATER SERVICES
SW-100	1:100	LOWER GROUND FLOOR PLAN - STORMWATER SERVICES
SW-101	1:100	GROUND FLOOR PLAN - STORMWATER SERVICES
SW-102	1:100	LEVEL 1 PLAN - STORMWATER SERVICES
SW-103	1:100	ROOF PLAN - STORMWATER SERVICES
SW-200	1:200	SEDIMENT AND EROSION CONTROL PLAN - STORMWATER SERVICES

SYMBOLS

	RISER
	DROP / RISE
	DROPPER
	TEE DROPPER
	PIPEWORK CAP
	PIPEWORK CONTINUATION
	UNDOCUMENTED CONTINUED LINE
	PIPEWORK SECTION
	DIRECTION ARROW
	NEW CONNECTION
	NEXT DRAWING
	DIRECTION OF FLOW
	SERVICE DESCRIPTION
	SERVICE SIZE
	DIRECTION OF FLOW
	STOP VALVE
	CHECK VALVE
	3-WAY VALVE
	BALL VALVE
	REDUCED PRESSURE ZONE DEVICE
	PRESSURE RELIEF VALVE
	PRESSURE LIMITING VALVE
	DOUBLE CHECK VALVE
	INFRA RED SENSOR
	WATER FILTER
	REFLUX VALVE
	REFLUX VALVE IN PIT
	PATHBOX
	EXPANTION JOINT
	PRESSURE GAUGE
	FLOW SWITCH
	PRESSURE SWITCH
	WATER POINT
	HOSE TAP
	PUMP
	CONTROL PANEL
	CLEAROUT TO SURFACE
	SYPHONIC OUTLET
	RAINWATER OUTLET
	SPREADER
	OVERLAND FLOW ARROW
	STORMWATER FLOW ARROW
	PENETRATION / CORE HOLE IN SLAB
	BEAM PENETRATION
	REDUCER
	STORMWATER GRATE
	STORMWATER COVER
	TRENCH GRATE
	REVISION
	KERB ENTRY PIT
	HAY BALE
	RAINWATER HEAD

ABBREVIATIONS

AS	Australian Standards
BCA	Building Code Of Australia
BDO	Balcony Drain Outlet
BR	Brass
BV	Ball Valve
BWL	Bottom Water Level
CHV	Check Valve
CI	Cast Iron
CIC	Cast In Column
CICL	Cast Iron Cement Lined
CIS	Cast In Slab
CL	Ceiling Level
COS	Clear Out To Surface
CP	Chrome Plated
CU	Copper
CV	Control Valve
DCV	Double Check Valve
DCV-A	Double Check Valve Assembly
DIA	Diameter
DICL	Ductile Iron Cement Lined
DP	Downpipe
DWG	Drawing
e	Existing
ECV	Expansion Control valve
EJ	Expansion Joint
ELEC	Electrical Service
FCR	For Continuation Refer
FFL	Finished Floor Level
FRC	Fibre Reinforced Concrete
FSL	Finished Surface Level
GAL	Galvanised
GD	Grated Drain
GDO	Grated Drain Outlet
GL	Ground Level
GMS	Galvanised Mild Steel
GO	Gutter Outlet
GV	Gate Valve
H/L	High Level
HD	Heavy Duty
HDPE	High Density Polyethylene
HP	High Point
HV	High Voltage
ID	Inside Diameter
IL	Invert Level
IO	Inspection Opening
IS	Inspection Shaft
IV	Isolation Valve
JU	Jump Up
KIP	Kerb Inlet Pit
KPA	Kilopascal
KW	Kilowatt
L	Litres
L/L	Low Level
L/S	Litres Per Second
LD	Light Duty
LV	Low Voltage
M	Metre
M.HEAD	Metres Head
M/S	Metres per Second
M3/HR	Cubic Metres per Hour
MDPE	Medium Density Polyethylene

ABBREVIATIONS cont.

MIN	Minimum
MJD	Movement Joint Drain
MM	Millimetres
MS	Mild Steel
NRV	Non-Return Valve
NTS	Not To Scale
O/F	Overflow
OD	Outside Diameter
OJ	Oblique Junction
PDO	Planter Drain Outlet
PG	Pressure Gauge
PLV	Pressure Limiting Valve
PRV	Pressure Relief Valve
PVC	Polyvinyl Chloride
RCP	Reinforced Concrete Pipe
RHS	Rectangular Hollow Section
RL	Reduced Level
RPZD	Reduced Pressure Zone Device
RV	Reflux Valve
RWH	Rain Water Head
RWO	Rainwater Outlet
S/S	Stainless Steel
SDO	Spoon Drain Outlet
SL	Surface Level
SO	Syphonic Outlet
SOF	Syphonic Overflow
SPD	Spreader
SQ	Square
SSL	Structural Slab Level
STD	Sprinkler Test Drain
SV	Stop Valve
SWIP	Stormwater Inspection Pit
SWMH	Stormwater Manhole
SWP	Stormwater Pit
SWS	Stormwater Sump
SYP	Syphonic
TB	Thrust Block
TBR	To Be Removed
TEL	Telecommunication Service
TG	Trench Grate
TWL	Top Water Level
TYP	Typical
U/S	Underside
UNO	Unless Noted Otherwise
UPVC	Unplasticised Polyvinyl Chloride
UV	Ultra Violet
VCP	Vitrified Clay Pipe
WL	Water Level

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REV	DATE	DESCRIPTION	DRN	APP
A	05.11.20	PRELIMINARY ISSUE	MA	PC
B	16.11.20	DA ISSUE	MA	PC

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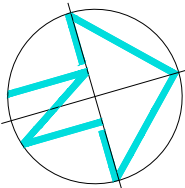


Drawing Title:

**COVER SHEET AND LEGEND
STORMWATER SERVICES**

Project:

**30 MACMILLAN STREET
SEAFORTH, NSW**



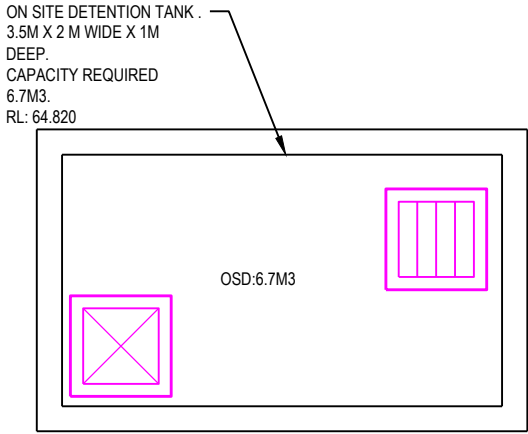
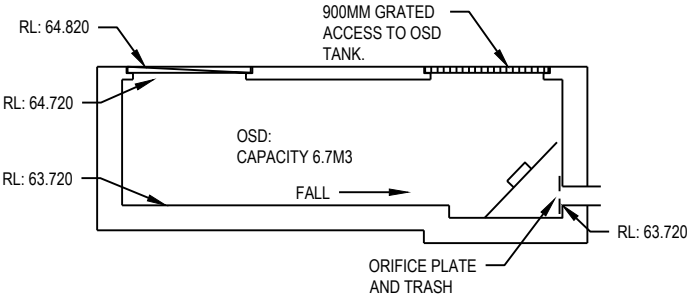
DRAWN	ENGINEER	CHECKED	SCALE
MA	MA	PC	NTS
PROJECT No.		DRAWING No.	REVISION
ADC200921		SW-000	B

ORIGINAL SIZE: A3

SITE AREA: 449.2M2
EXISTING IMPERVIOUS AREA: 232M2 - 52%
EXISTING PERVIOUS AREA: 217.2M2 - 48%

SITE AREA: 449.2M2
PROPOSED IMPERVIOUS AREA: 312M2 - 69%
PROPOSED PERVIOUS AREA: 137.2M2 - 31%

ADDITIONAL IMPERVIOUS AREA : 80M2- 17%
SITE LOCATION WITHIN ZONE 1 CATCHEMNT.
ADDITIONAL IMPERVIOUS AREA ABOVE 50M2.
OSD IS REQUIRED FOR THIS SITE.
OSD CAPACITY 6.7M3
PSD 14L/S



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PROJECT: 30 Macmillan Street Seaforth

CALCULATIONS

Designer : Matt Adam

Job No.: M2020 H

Date : 09.11.20

Page : Page 1 of 1

ON-SITE DETENTION SIZING
MASS CURVE METHOD

Existing Site Details

Total Site Area = 449.2 m² Existing Site Impervious Area = 232 m²
Runoff Coefficient C₁₀ = 0.5788 % Existing site impervious area = 51.6 %
Pre-Developed C₁₀ = 0.745 ARI 10yr 1hr event = 61 mm/hr
Pre-Developed C₁₀ = 0.707 ARI 5yr 5min event to be used for PSD = 162 mm/hr
Permitted Site Discharge = 14.30 l/s

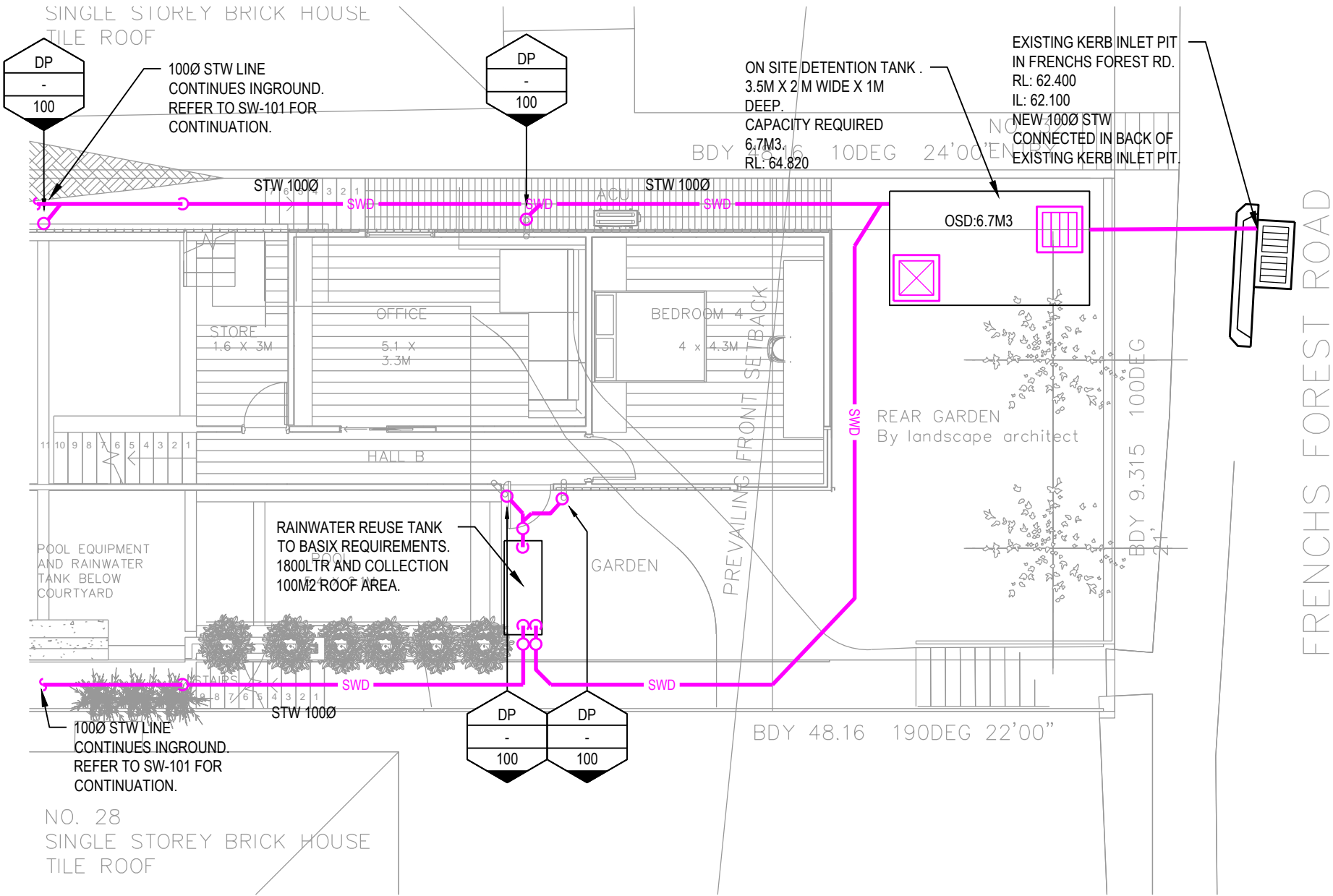
Developed Site Details

Developed site impervious Area = 312 m² % Developed site impervious area = 69.5 %
Post-Developed C₁₀ = 0.802 Average Recurrence Interval (ARI) = 1 in 100
Post-Developed C₁₀ = 0.962

On-Site Detention Storage Calculation

TIME (mins)	INTENSITY (mm/hr)	FLOW TO OUTLET (l/s)	MASS CURVE (m ³)	PSD VOLUME (m ³)	STORAGE (m ³)
5	267	32.06	9.82	4.29	5.3
6	252	30.26	10.89	5.15	5.7
10	212	25.45	15.27	8.58	6.7
20	163	19.57	23.49	17.16	6.3
30	136	16.33	29.39	25.74	3.7
40	118	14.17	34.00	34.32	-0.3
50	105	12.61	37.82	42.90	-5.1
60	95	11.41	41.06	51.48	-10.4
70	0.00	0.00	0.00	60.06	-60.1
120	62	7.44	53.60	102.96	-49.4
180	0.00	0.00	0.00	154.45	-154.4
360	47	5.64	121.90	308.89	-187.0
720	29	3.48	150.42	617.78	-467.4
1440	18	2.16	186.73	1235.57	-1048.8
2880	12	1.44	248.98	2471.13	-2222.2
4320	9	1.08	280.10	3706.70	-3426.6
		0.00	0.00	0.00	0.0
		0.00	0.00	0.00	0.0

Required OSD Storage = 6.7



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Architect:

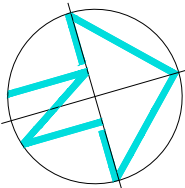


Drawing Title:

LOWER GROUND FLOOR PLAN
STORMWATER SERVICES

Project:

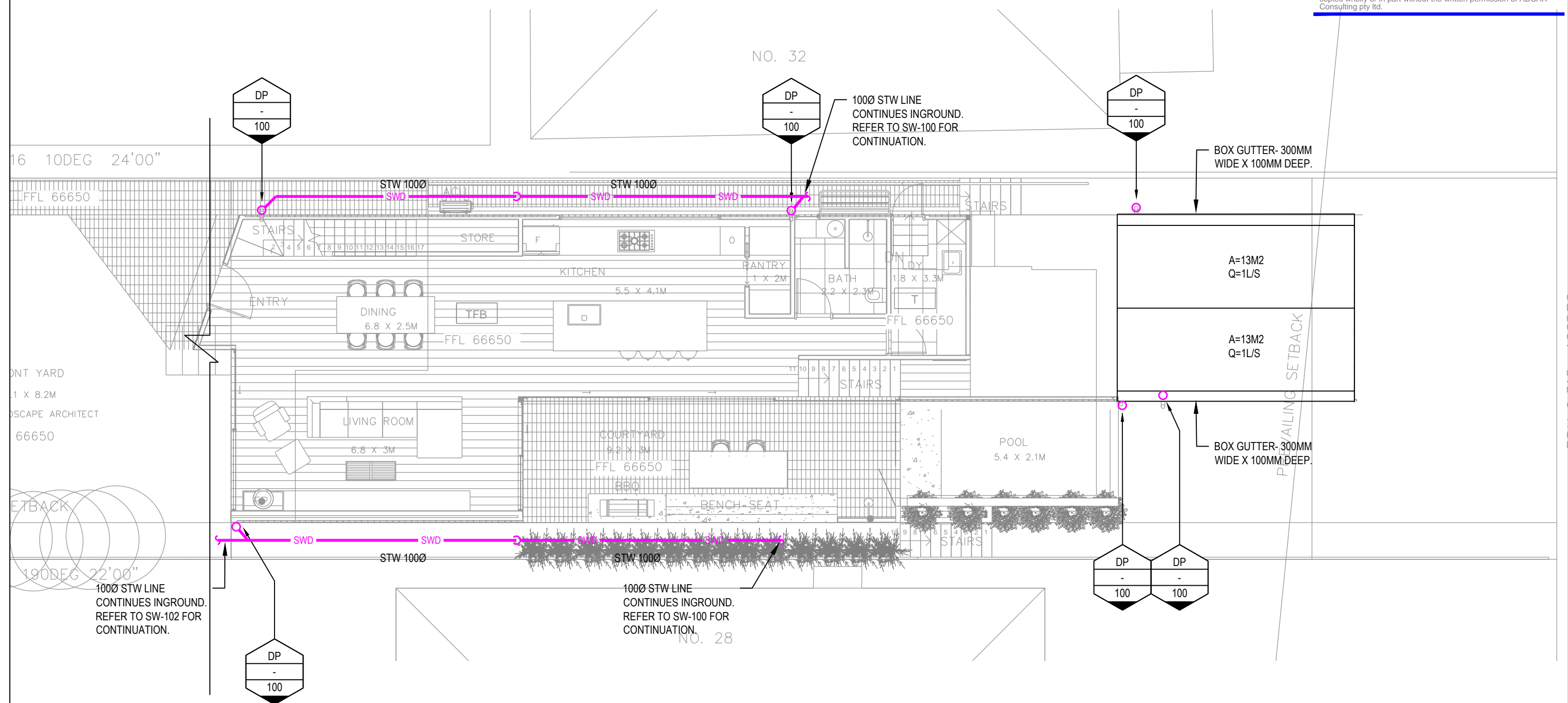
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ORIGINAL SIZE: A3

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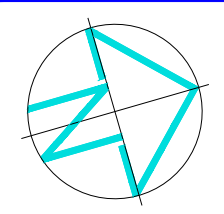
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Architect:


Drawing Title:
**GROUND FLOOR PLAN
STORMWATER SERVICES**

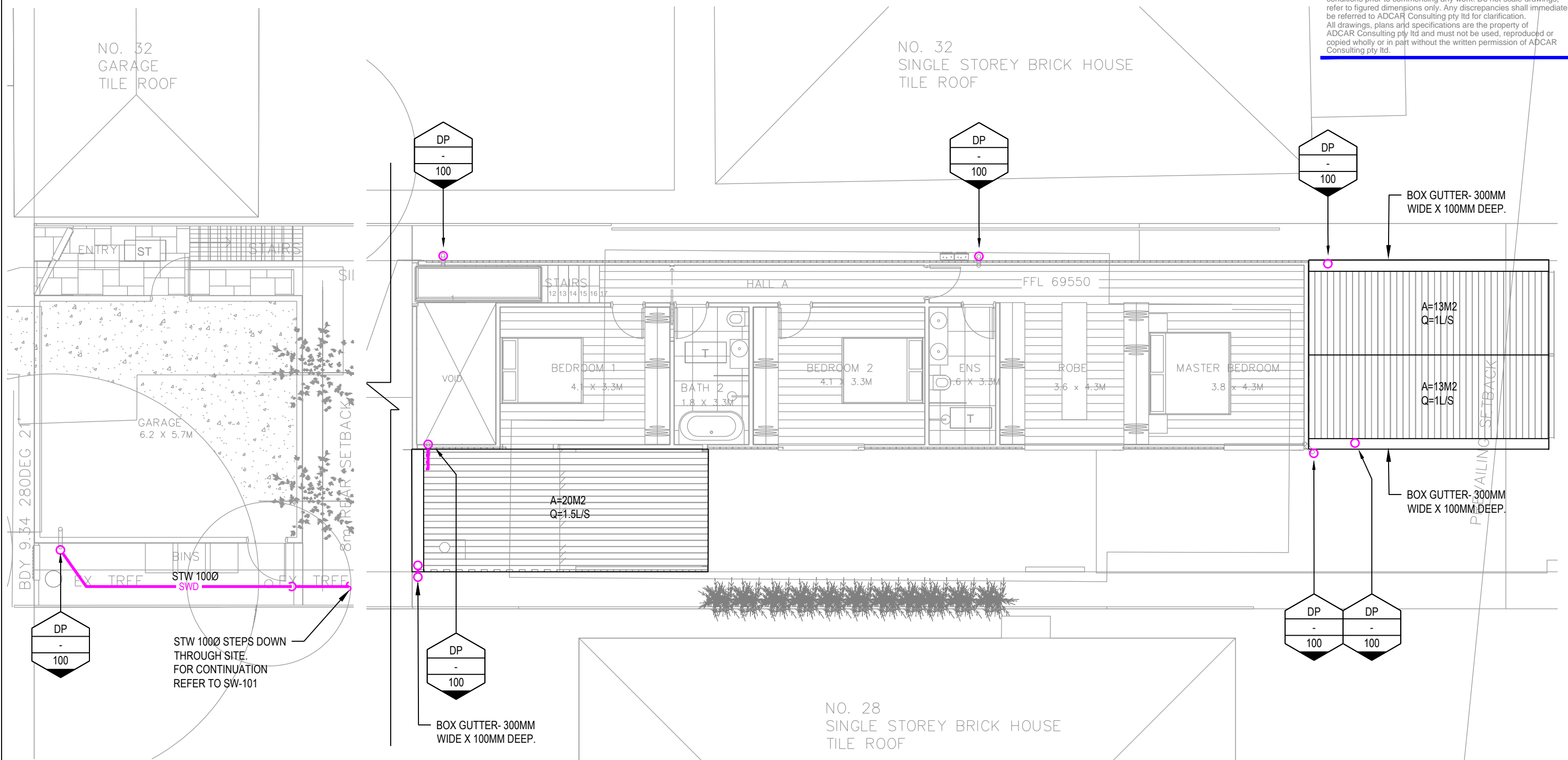
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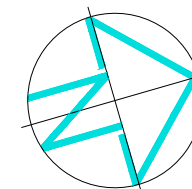


Drawing Title:

FIRST FLOOR PLAN STORMWATER SERVICES

Project:

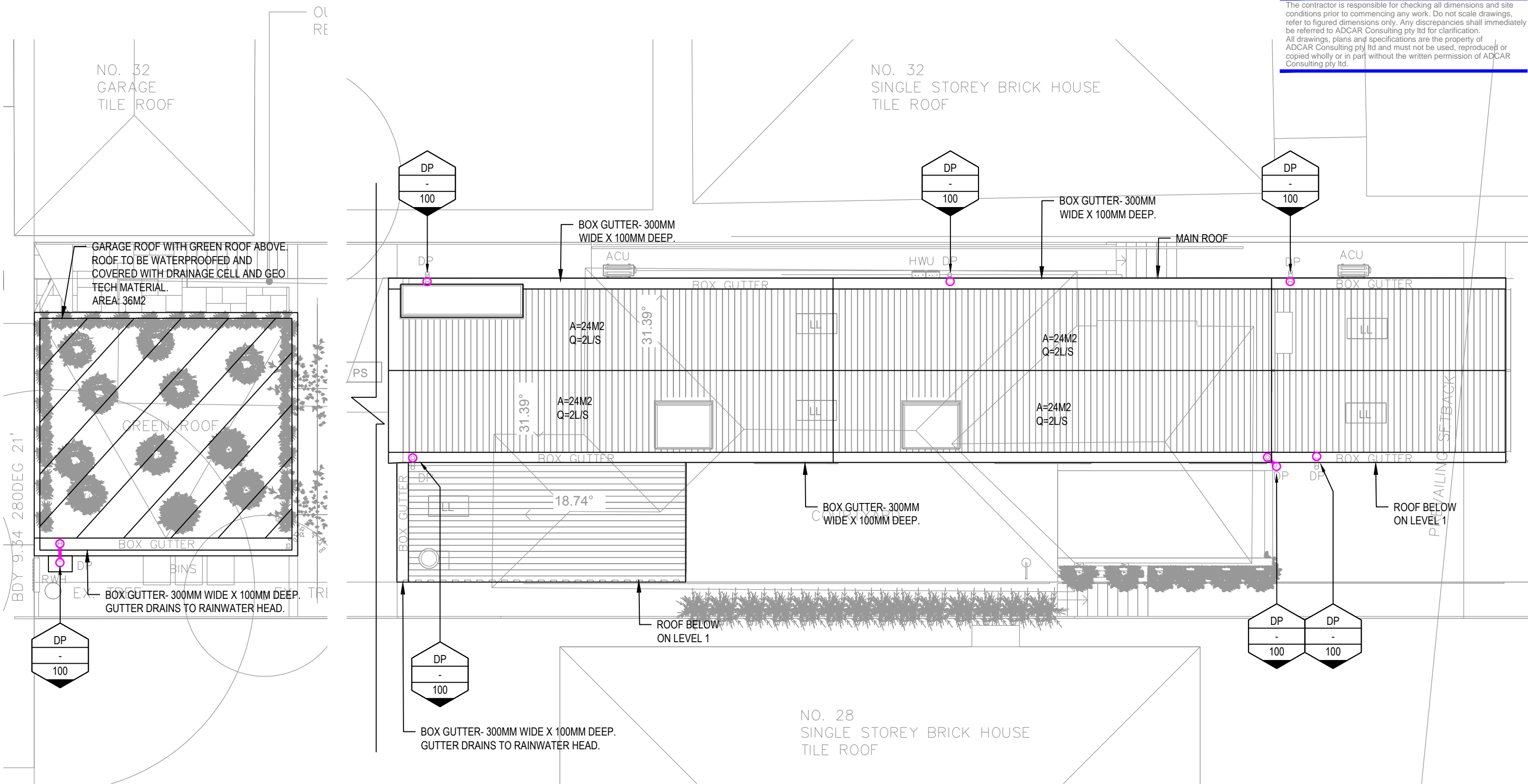
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PROJECT No. ADC200921		DRAWING No. SW-102	REVISION B

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Architect:

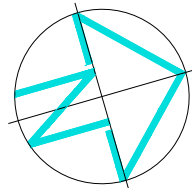


Drawing Title:

ROOF PLAN
STORMWATER SERVICES

Project:

30 MACMILLAN STREET
SEAFORTH, NSW



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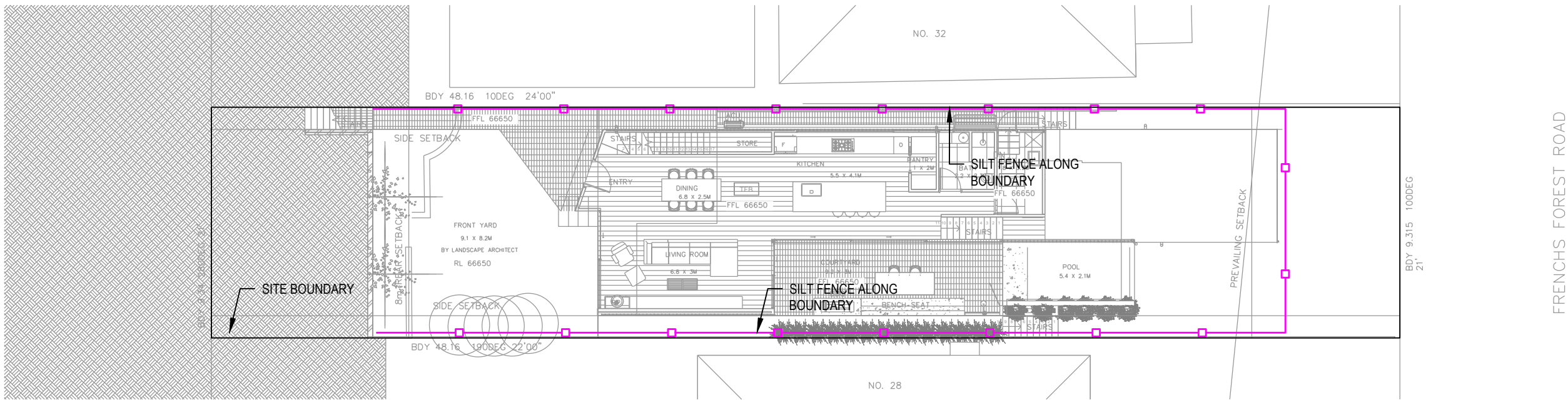
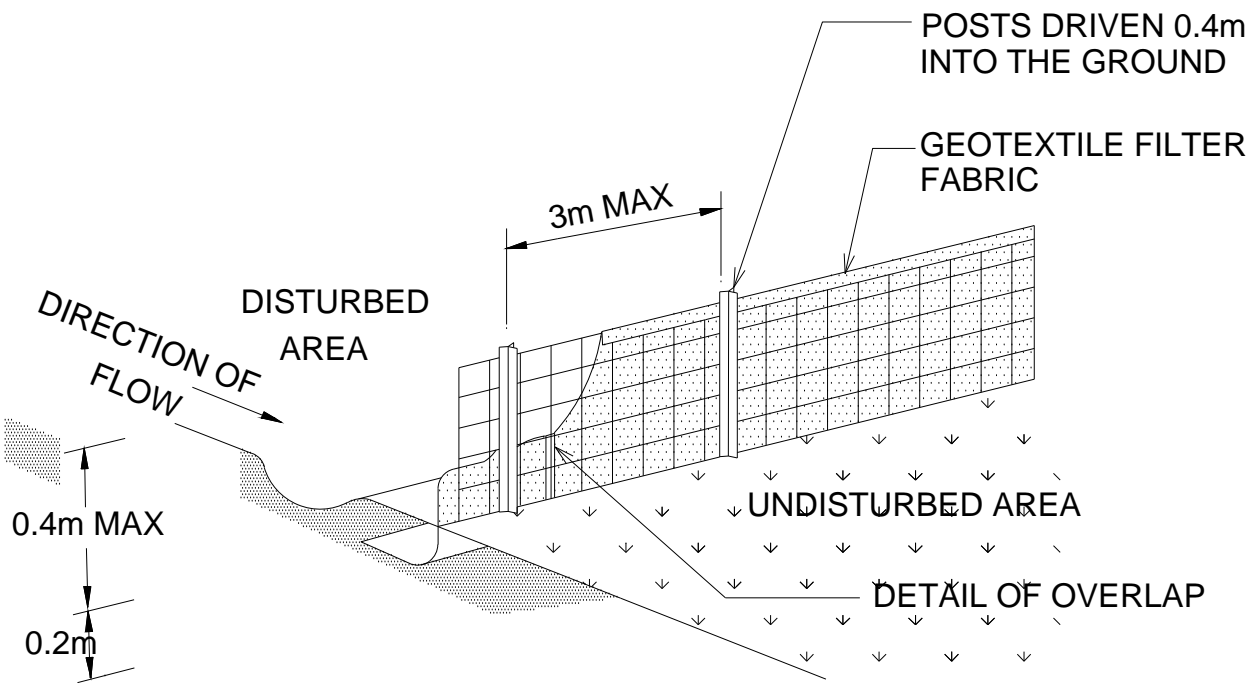
ORIGINAL SIZE: A3

EROSION CONTROL NOTES

- 1. ALL INITIAL SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING TOPSOIL STRIPPING AND EARTHWORKS.
- 2. IMMEDIATELY ANY BATTER OR FOOTPATH IS COMPLETED, THE SECTION SHALL BE TOPSOILED AND SEEDED OR TURFED.
- 3. THE RECOMMENDED SEED MIX AND FERTILIZER SPREAD RATE SHALL BE AS DIRECTED BY SUPERINTENDENT.
- 4. IMMEDIATELY AREAS ARE SEEDED, THEY SHALL BE PROPERLY WATERED TO PROMOTE GROWTH. THE GROWTH SHALL BE WATERED UNTIL REVEGETATION TO SUPERINTENDENT'S SATISFACTION IS ACHIEVED.
- 5. A STRIP OF TURF SHALL BE PLACED IMMEDIATELY BEHIND THE KERB ON ALL NEW ROADS TO ACT AS A FILTER STRIP.
- 6. PLACE KERB INLET SEDIMENT TRAPS, DETAILED ABOVE, URBAN EROSION AND SEDIMENT CONTROL MANUAL, ON ALL INLET PITS.
- 7. THE CONTRACTOR SHALL NOTE THAT HIS CONTRACT IS NOT COMPLETED UNTIL THE REVEGETATION IS ACCEPTED BY COUNCIL. SOME AREAS MAY REQUIRE THE PLACEMENT OF TURF TO ACHIEVE SATISFACTORY REVEGETATION.
- 8. ALL VEHICLE MOVEMENTS TO BE RESTRICTED TO AREAS OF CONSTRUCTION ONLY.

ORDER OF CONSTRUCTION:

- REFER TO DETAILED CONSTRUCTION SCHEDULE FOR SPECIFIC DETAILS.
- 1. PROVIDE SILT FENCE AROUND BOUNDARIES AS SHOWN ON THE PLAN. RETURNS TO BE PROVIDED EVERY 20m MAXIMUM.
 - 2. CONSTRUCT SILT TRAPS AROUND EXISTING PITS & SEDIMENT TRAP.
 - 3. PROVIDE DIVERSION BANKS ALONG THE SIDES AS SHOWN ON THE PLAN. BANKS TO SPILL ONTO SCALLOPED SILT FENCING.
 - 4. PROVIDE TEMPORARY ENTRY/EXIT AREA AS SHOWN.
 - 5. STRIP TOPSOIL FROM IMMEDIATE WORK AREA AND REMOVE SURPLUS AS DIRECTED. STOCKPILE REMAINED ON SITE IN AREA DESIGNATED WITH DIVERSION BANK IN PLACE UPSLOPE AND SILT FENCE IN PLACE DOWNSLOPE.
 - 6. CONSTRUCT BULK EARTHWORKS
 - 7. CONSTRUCT DRAINAGE & OSD WORKS TO SPECIFICATION.
 - 8. DURING CONSTRUCTION OF DRAINAGE PIPELINES TEMPORARY PROTECTION TO BE PROVIDED AROUND PITS & PIPE OPENINGS. ALL SPOIL TO BE STOCKPILED ON HIGH SIDE OF TRENCH PRIOR TO BACKFILLING.
 - 9. PROVIDE TURF STRIPS BEHIND ROADS.
 - 10. REMOVE SEDIMENT CONTROL MEASURES.



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Architect:

Drawing Title:

**SEDIMENT AND EROSION CONTROL PLAN
STORMWATER SERVICES**

Project:

**30 MACMILLAN STREET
SEAFORTH, NSW**

DRAWN MA	ENGINEER MA	CHECKED PC	SCALE 1:200
PROJECT No. ADC200921		DRAWING No. SW-200	REVISION B