



# PROPOSED RESIDENTIAL DEVELOPMENT 44-48 RODLEY AVENUE, PENRITH STORMWATER CONCEPT DESIGN



DRAWINGS LIST			
SHEET No.	DWG No.	TITLE	REV
1	SW100	COVER SHEET	D
2	SW200	STORMWATER CONCEPT DESIGN - BASEMENT 2 PLAN	D
3	SW201	STORMWATER CONCEPT DESIGN - GROUND FLOOR PLAN	D
4	SW202	STORMWATER CONCEPT DESIGN - ROOF PLAN	D
5	SW300	STORMWATER CONCEPT DESIGN - DETAILS SHEET	D
6	SW400	EROSION AND SEDIMENT CONTROL - PLAN AND DETAILS	D
7	SW500	MUSIC MODEL CATCHMENT PLAN	D

LOCALITY PLAN  
NOT TO SCALE  
COPYRIGHT OF GOOGLE MAP, VERSION 3



**PREPARED BY:**  
SGC Consulting Engineers  
Suite 5.03, Level 5  
156 Pacific Highway  
ST. LEONARDS, NSW 2065  
T: +61 2 8883 4239  
Email: office@sgce.com.au  
Web: www.sgce.com.au

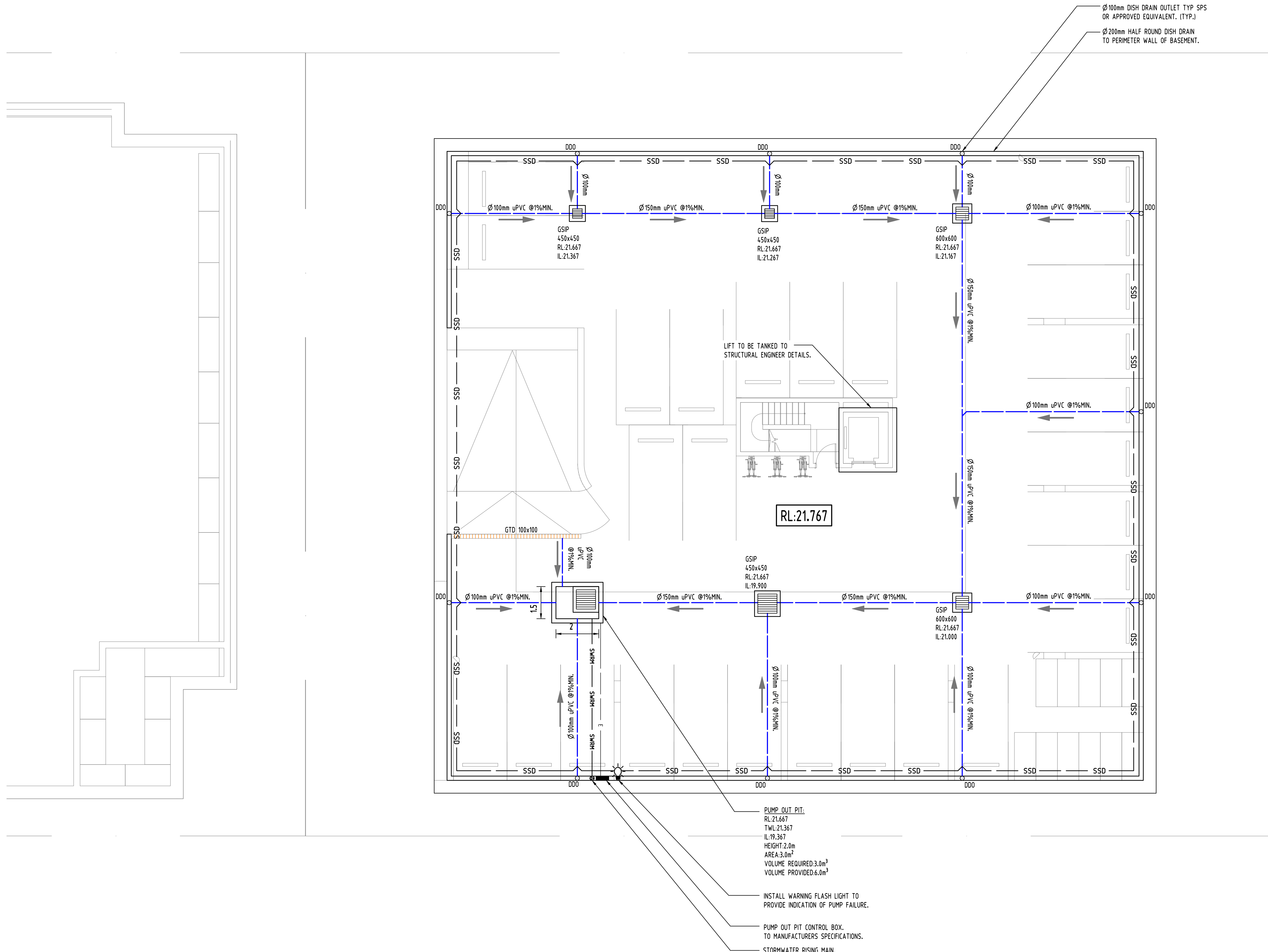
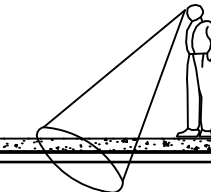
**ARCHITECT:**



**CLIENT:**

INGLOW INVESTMENTS  
TWO P/L

SERVICES ON THIS DRAWING ARE SHOWN BELOW S.JOB U.N.O



**PUMP-OUT PIT NOTE:**  
 INSTALL WITH THE FOLLOWING ITEMS:  
 - 900SQ HEAVY DUTY STEEL GRATED LID FOR ACCESS AND MAINTENANCE PURPOSES.  
 - CONFINED SPACE SIGN ABOVE PUMP OUT PIT FOR PUBLIC AWARENESS AND WARNING.  
 - STEP IRONS, REFER TO DETAILS.  
 - PUMP OUT PIT CONTROL BOX (CTRL) TO MANUFACTURERS SPECIFICATIONS. LOCATIONS TO BE CONFIRMED WITH ARCHITECT.  
 - PUMPS TO OPERATE IN ALTERNATE MODE TO INCREASE LIFESPAN  
 - INSTALL VISIBLE FLASHING LIGHT SYSTEM IN CASE OF PUMP FAILURE

**SUBSOIL DESIGN CALCS:**  
 THE AREA OF DRIVEWAY RAMP IS COVERED THEREFORE IN ACCORDANCE WITH AS3500, THE MINIMUM PUMPOUT PIT SIZE IS 3m<sup>2</sup>.

**NOTES**  
 BASEMENT DRAINAGE DESIGN SUBJECT TO GEOTECHNICAL INVESTIGATION AND STRUCTURAL DESIGN OF WALLS AND SLABS IN CC STAGE.  
 ALL SUBSOIL DRAINAGE (SSD) TO BE 100AG AND ALL DISH DRAIN OUTLETS (DDO) TO BE Ø100mm U.N.O

**NOTE:**  
 ALL STORMWATER PUMPS TO BE CLASS 1 ZONE 2 FLAME SAFE TO ELECTRICAL CONSULTANT'S REQUIREMENTS.

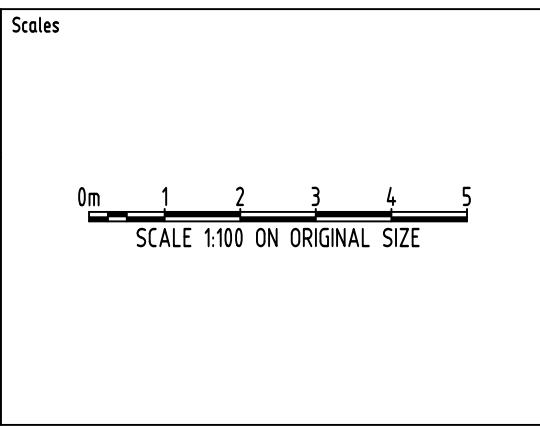
- PUMP OUT PIT:  
RL:21.667  
TWL:21.367  
IL:19.367  
HEIGHT:2.0m  
AREA:3.0m<sup>2</sup>  
VOLUME REQUIRED:3.0m<sup>3</sup>  
VOLUME PROVIDED:6.0m<sup>3</sup>
- INSTALL WARNING FLASH LIGHT TO PROVIDE INDICATION OF PUMP FAILURE.
- PUMP OUT PIT CONTROL BOX, TO MANUFACTURERS SPECIFICATIONS.
- STORMWATER RISING MAIN.

Reference Coordination Drawing				
Discipline	Drawing Title and Number	Date	Rev.	
ARCH				
ARCH				
STRUCT				
MECH				
ELEC				
HYD				
FRG				
JONDS				
CIVIL				
SURVEY				

Issuer internal sequence and revision history				
Issue	Issue title	Date	Status	By
1	preliminary			
2	development application			
3	construction certificate			
4	tender			
5	construction			
6	other			

QUALITY CONTROL				
DRAWN	YR	DATE		
CHECKED	SH	DATE	05.01.21	
DESIGNED	YR	DATE	05.01.21	
VERIFIED	SH	DATE	05.01.21	
APPROVED	SH	DATE	05.01.21	



CLIENT  
**INGLOW INVESTMENTS TWO P/L**

ARCHITECT  
**MORSON GROUP**

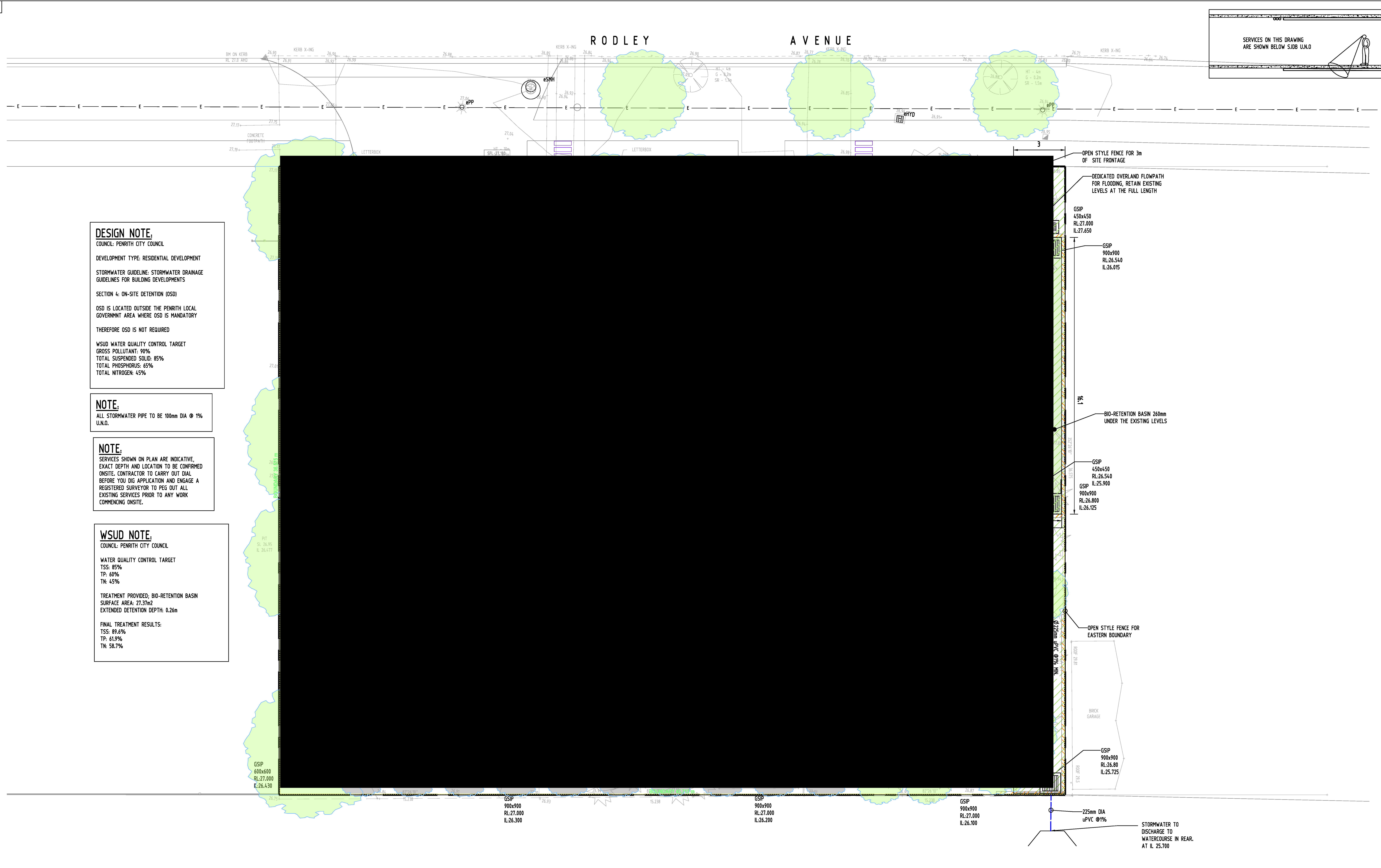


Suite 5.03, Level 5,  
 156 PACIFIC HIGHWAY  
 ST. LEONARDS, NSW 2065  
 T: +61 2 8883 4239  
 Email: office@sgce.com.au  
 Web: www.sgce.com.au

PROJECT  
**PROPOSED RESIDENTIAL DEVELOPMENT**  
 44-48 RODLEY AVENUE,  
 PENRITH

Drawing Status <b>FOR APPROVAL</b>		
NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Drawing Title <b>STORMWATER CONCEPT DESIGN BASEMENT 2 PLAN</b>		
Project No <b>20200104</b>	Drawing No <b>SW200</b>	Revision No <b>D</b>





SERVICES ON THIS DRAWING ARE SHOWN BELOW S.I.D.B. U.N.O.

**DESIGN NOTE:**  
 COUNCIL: PENRITH CITY COUNCIL  
 DEVELOPMENT TYPE: RESIDENTIAL DEVELOPMENT  
 STORMWATER GUIDELINE: STORMWATER DRAINAGE GUIDELINES FOR BUILDING DEVELOPMENTS  
 SECTION 4: ON-SITE DETENTION (OSD)  
 OSD IS LOCATED OUTSIDE THE PENRITH LOCAL GOVERNMENT AREA WHERE OSD IS MANDATORY  
 THEREFORE OSD IS NOT REQUIRED  
 WSUD WATER QUALITY CONTROL TARGET  
 GROSS POLLUTANT: 90%  
 TOTAL SUSPENDED SOLID: 85%  
 TOTAL PHOSPHORUS: 65%  
 TOTAL NITROGEN: 45%

**NOTE:**  
 ALL STORMWATER PIPE TO BE 100mm DIA @ 1% U.N.O.

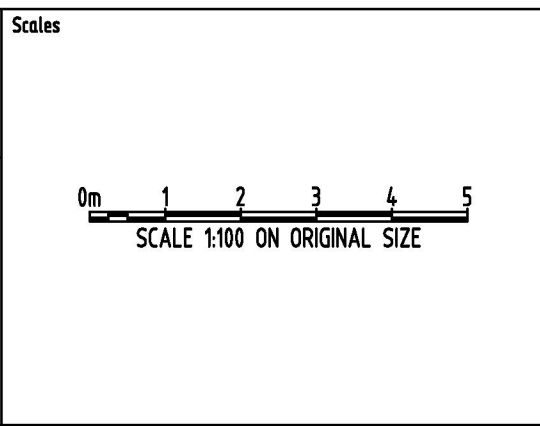
**NOTE:**  
 SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

**WSUD NOTE:**  
 COUNCIL: PENRITH CITY COUNCIL  
 WATER QUALITY CONTROL TARGET  
 TSS: 85%  
 TP: 60%  
 TN: 45%  
 TREATMENT PROVIDED: BIO-RETENTION BASIN  
 SURFACE AREA: 27.37m<sup>2</sup>  
 EXTENDED DETENTION DEPTH: 0.26m  
 FINAL TREATMENT RESULTS:  
 TSS: 89.4%  
 TP: 61.9%  
 TN: 58.7%

Reference Coordination Drawing				
Discipline	Drawing Title and Number	Date	Rev.	
D	ARCHITECTURAL UPDATES AND DRAINAGE AMENDMENT	05.01.21	2	STRUCT
C	DRAINAGE AMENDMENT	11.11.20	2	MECH
B	ISSUE FOR DA	04.11.20	2	ELEC
A	ISSUE FOR DA	09.03.20	2	HYD
Issue	Issue Title	by	Date	Status
<b>Issuer internal sequence and revision history</b> 1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other				

QUALITY CONTROL			
DRAWN	YR	DATE	05.01.21
CHECKED	SH	DATE	05.01.21
DESIGNED	YR	DATE	05.01.21
VERIFIED	SH	DATE	05.01.21
APPROVED	SH	DATE	05.01.21

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CLIENT  
 INGLOW INVESTMENTS  
 TWO P/L

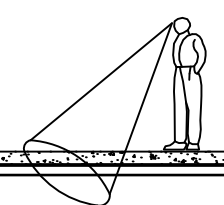
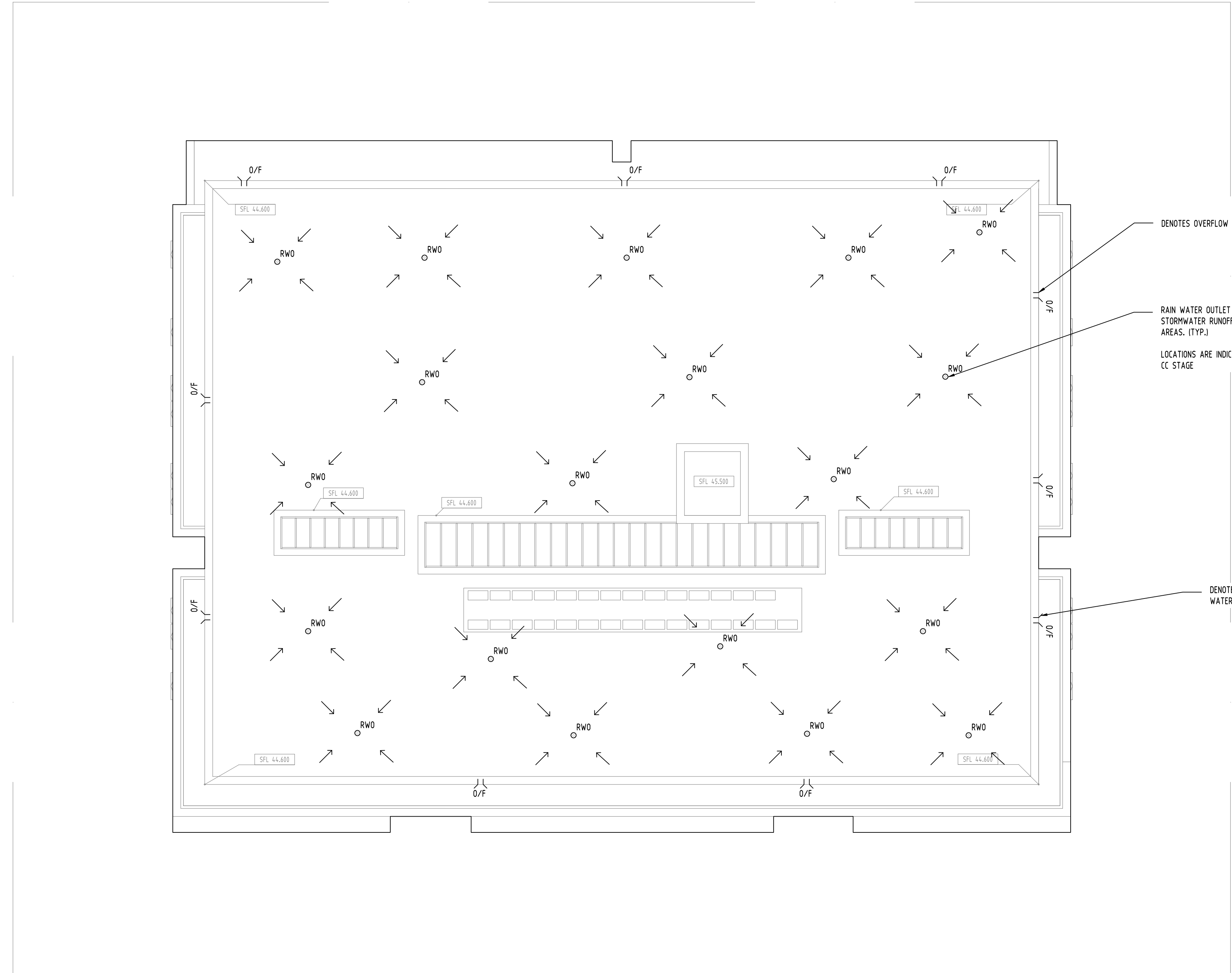


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PROJECT  
 PROPOSED RESIDENTIAL  
 DEVELOPMENT  
 44-48 RODLEY AVENUE,  
 PENRITH

Drawing Status			FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Drawing Title			STORMWATER CONCEPT DESIGN GROUND FLOOR PLAN
Project No	Drawing No	Revision No	
20200104	SW201	D	
Grid	Dotm	Sheet	Scale (at original size)
-	A.H.D.	3/7	1:100 @ A1

SERVICES ON THIS DRAWING  
ARE SHOWN BELOW S.JOB U.N.O

DENOTES OVERFLOW (TYP.)

RAIN WATER OUTLET COLLECTING  
STORMWATER RUNOFF FROM ROOF  
AREAS. (TYP.)

LOCATIONS ARE INDICATIVE, TBC AT  
CC STAGE

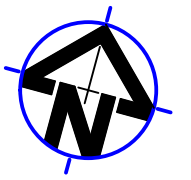
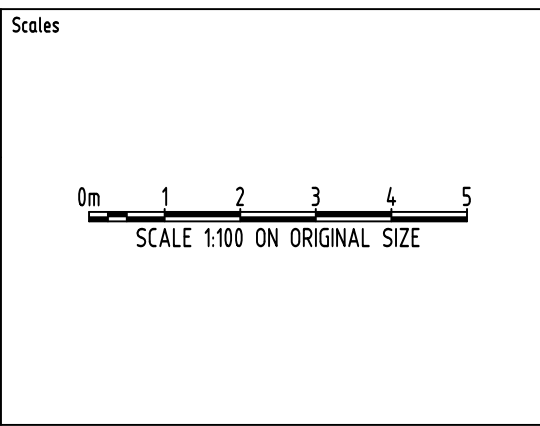
DENOTES FALL TOWARDS RAIN  
WATER OUTLET (TYP.)

Reference Coordination Drawing				
Discipline	Drawing Title and Number	Date	Rev.	
ARCH				
ARCH				
STRUCT				
MECH				
ELEC				
HYD				
IRG				
JONDS				
CIVIL				
SURVEY				

ENGINEERS AUSTRALIA  
Chartered Professional Engineer  
MEMBER

QUALITY CONTROL			
DRAWN	YR	DATE	05.01.21
CHECKED	SH	DATE	05.01.21
DESIGNED	YR	DATE	05.01.21
VERIFIED	SH	DATE	05.01.21
APPROVED	SH	DATE	05.01.21

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CLIENT  
INGLOW INVESTMENTS  
TWO P/L



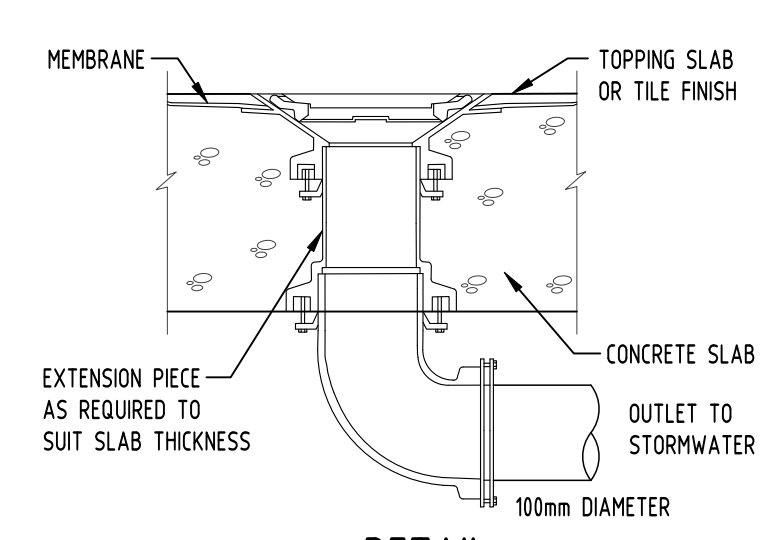

Suite 5.03, Level 5,  
156 PACIFIC HIGHWAY  
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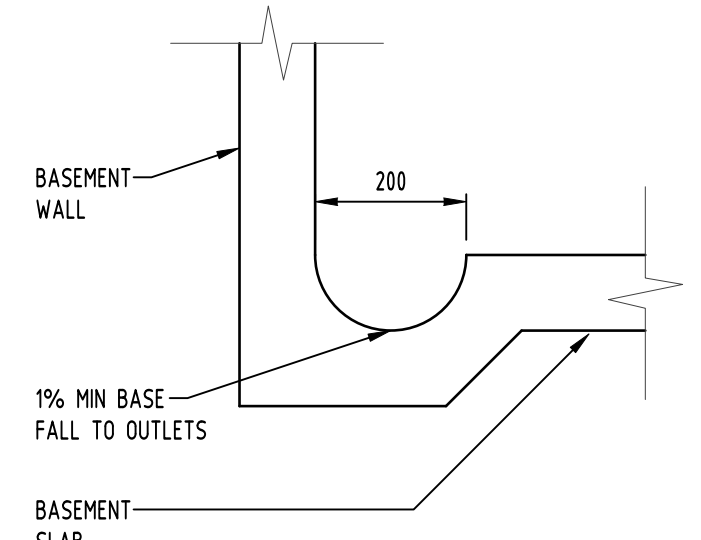
PROJECT  
PROPOSED RESIDENTIAL  
DEVELOPMENT  
44-48 RODLEY AVENUE,  
PENRITH

Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Drawing Title STORMWATER CONCEPT DESIGN ROOF PLAN		
Project No 20200104	Drawing No SW202	Revision No D
Grid	Datum	Sheet
-	A.H.D.	4/7
Scale (at original size) 1:100 @ A1		

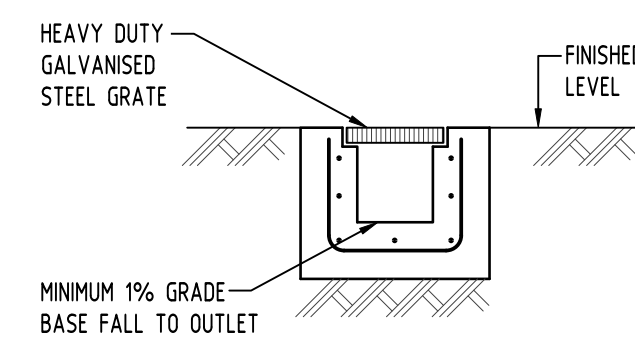
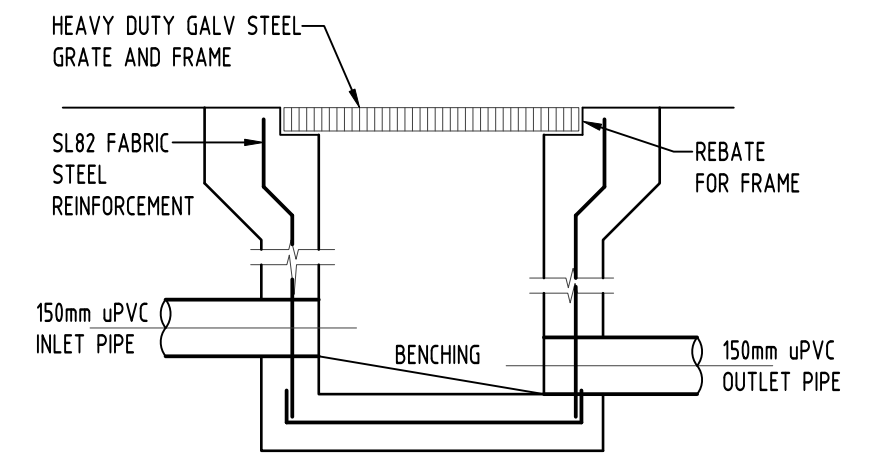




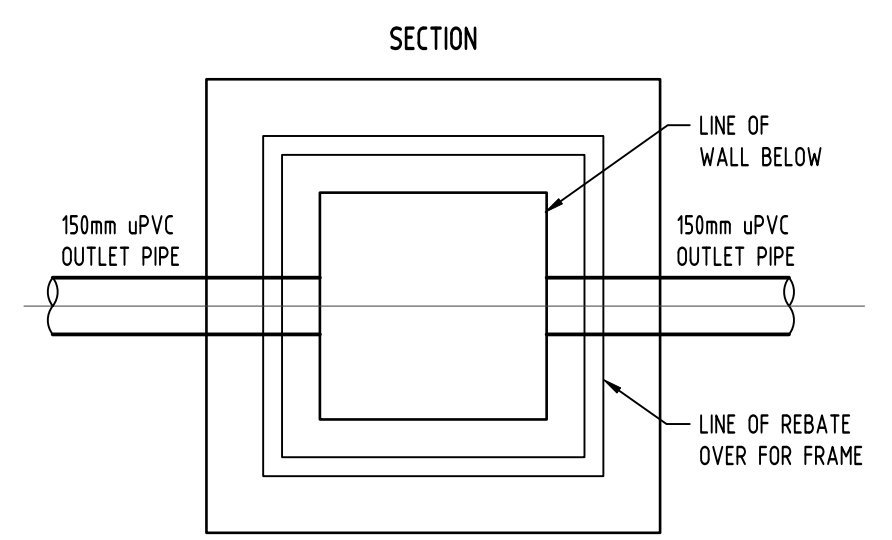
**DETAIL**  
RAINWATER OUTLET  
NOT TO SCALE



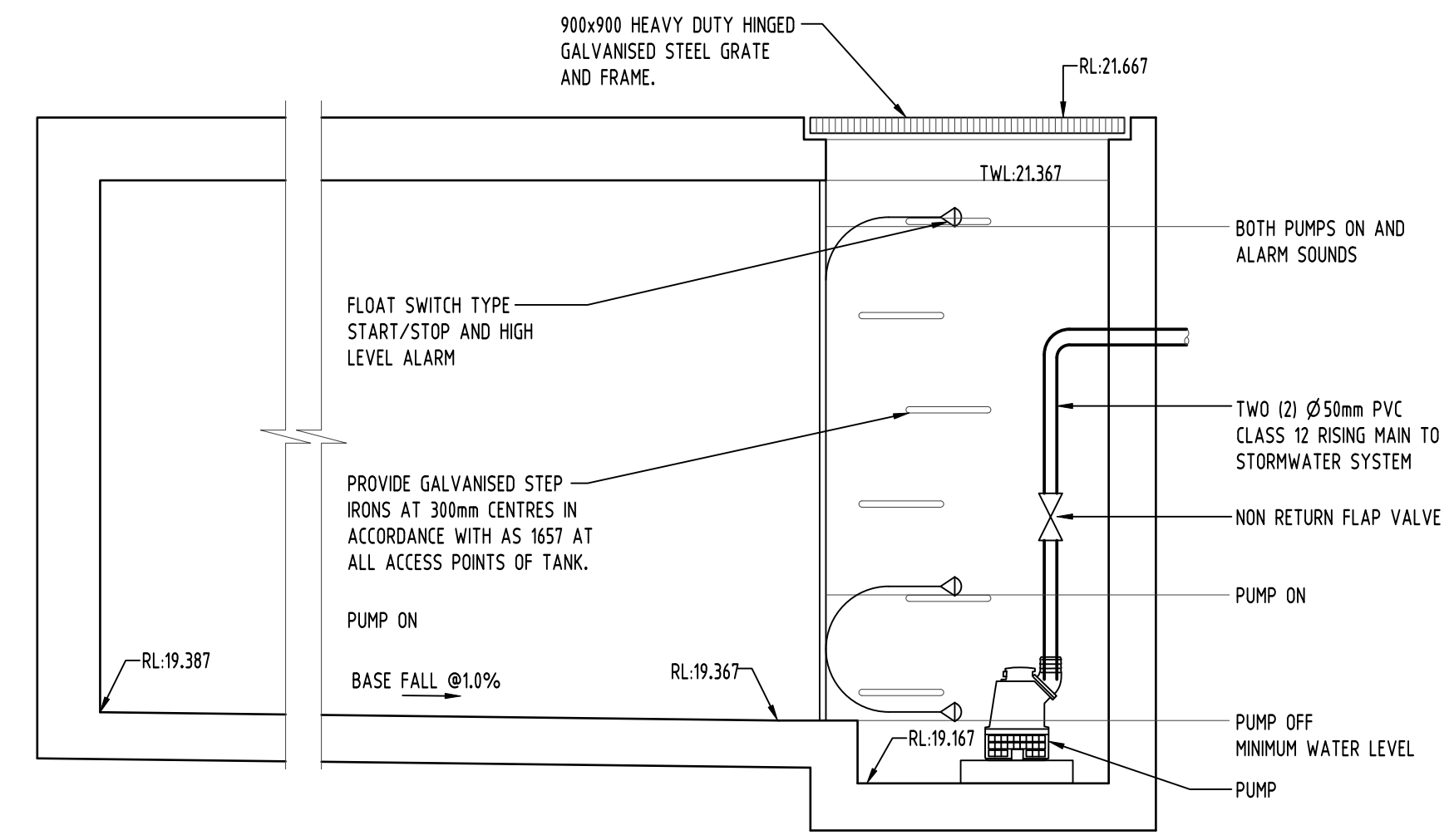
**DETAIL**  
DISH DRAIN  
SCALE 1:10



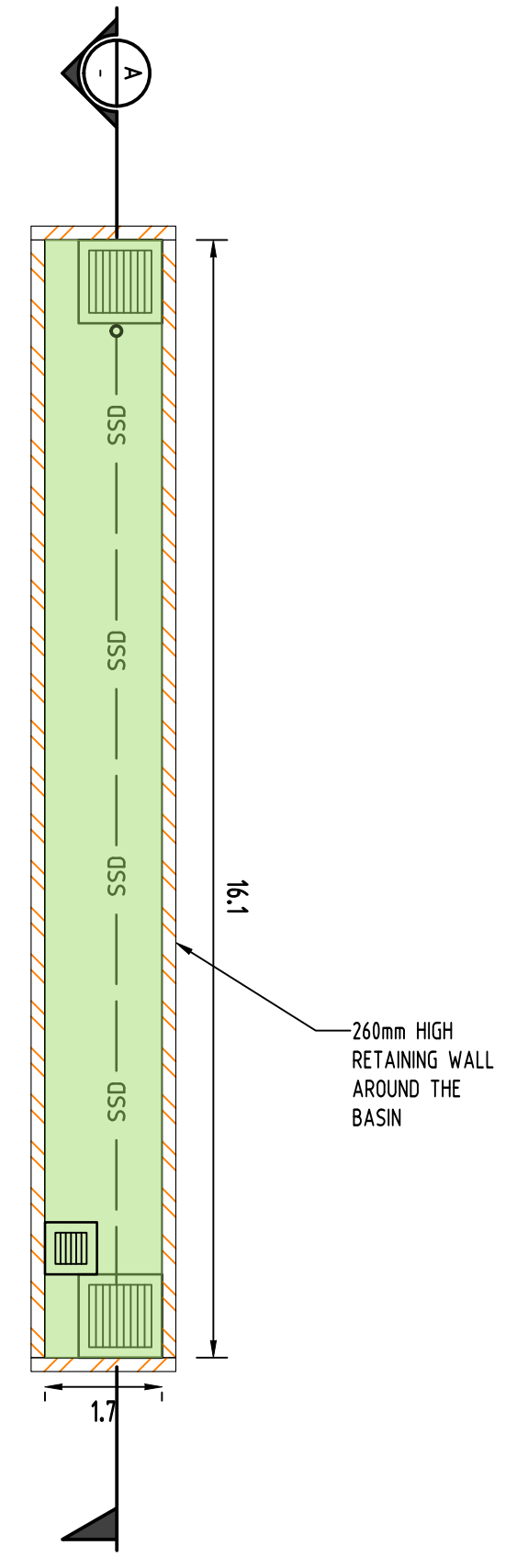
**DETAIL**  
GRATED TRENCH DRAIN  
SCALE 1:20



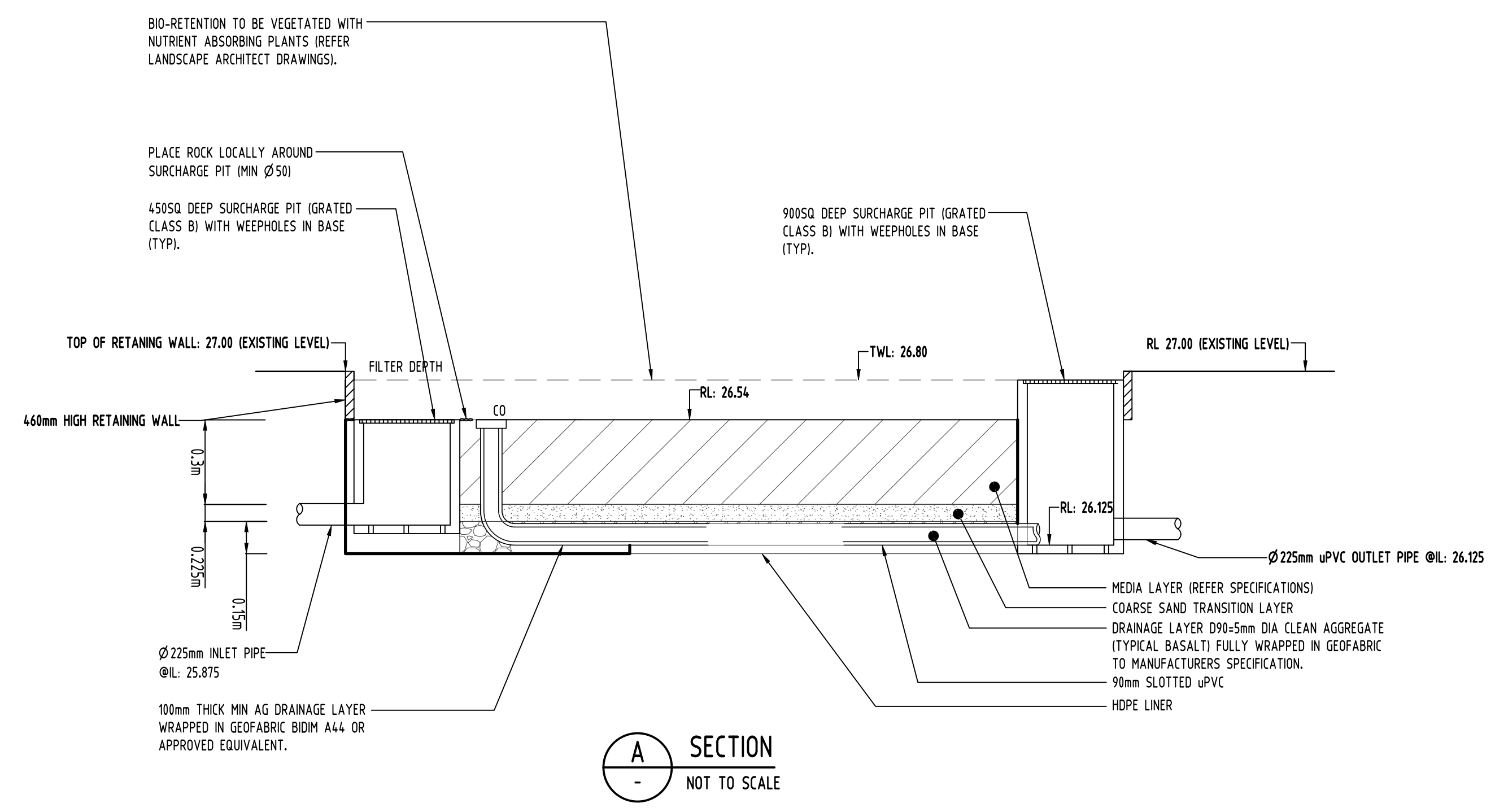
**DETAIL**  
STORMWATER PIT  
SCALE 1:20



**DETAIL**  
SUBSOIL PUMP OUT PIT  
NOT TO SCALE



**BIO-RETENTION PLAN**  
NOT TO SCALE

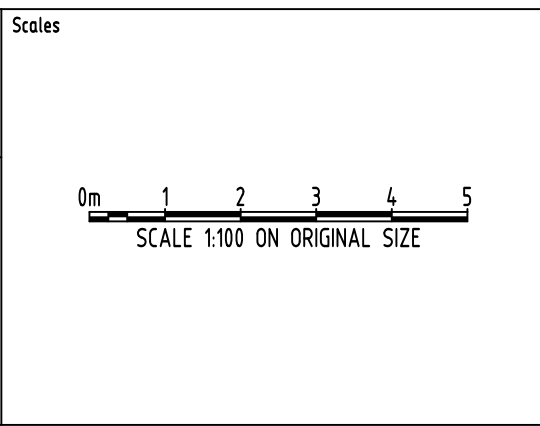


**SECTION A-A**  
NOT TO SCALE

Reference Coordination Drawing				
Discipline	Drawing Title and Number	Date	Rev.	
D	ARCHITECTURAL UPDATES AND DRAINAGE AMENDMENT	YR 05.01.21	2	STRUCT
C	DRAINAGE AMENDMENT	YR 11.11.20	2	MECH
B	ISSUE FOR DA	YR 04.11.20	2	ELEC
A	ISSUE FOR DA	JD 09.03.20	2	HYD
Issue	Issue Title	by	Date	Status
<b>Issue internal sequence and revision history</b> 1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other				

QUALITY CONTROL			
DRAWN	YR	DATE	
CHECKED	SH	DATE	05.01.21
DESIGNED	YR	DATE	05.01.21
VERIFIED	SH	DATE	05.01.21
APPROVED	SH	DATE	05.01.21

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CLIENT  
**INGLOW INVESTMENTS**  
TWO P/L



**SGC**  
Engineering Value

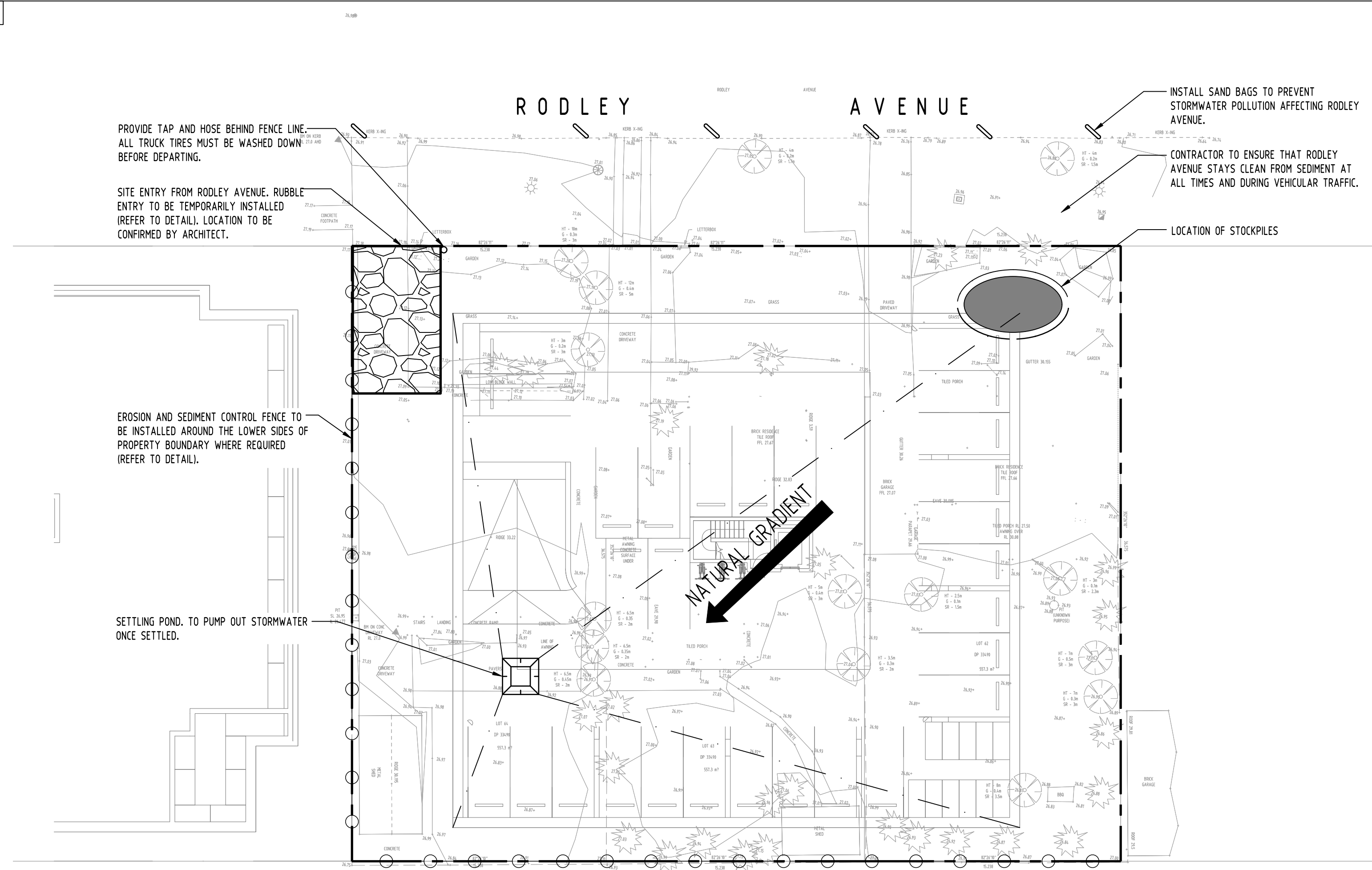
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156 PACIFIC HIGHWAY  
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PROJECT  
**PROPOSED RESIDENTIAL DEVELOPMENT**  
44-48 RODLEY AVENUE,  
PENRITH

Drawing Status <b>FOR APPROVAL</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Drawing Title <b>STORMWATER CONCEPT DESIGN DETAILS SHEET</b>		
Project No <b>20200104</b>	Drawing No <b>SW300</b>	Revision No <b>D</b>





**EROSION AND SEDIMENT CONTROL**  
SCALE 1:200

**EROSION & SEDIMENTATION CONTROL NOTES**

1. CONTRACTOR SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE OF THE WORKS. THE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
2. EXISTING DRAINS LOCATED WITHIN THE SITE SHALL ALSO BE ISOLATED BY SEDIMENT FENCING MATERIAL.
3. NO PARKING OR STOCKPIPING OF MATERIALS IS PERMITTED ON THE LOWER SIDE OF THE SEDIMENT FENCE.
4. GRASS VERGES SHALL BE MAINTAINED AS MUCH AS PRACTICAL TO PROVIDE A BUFFER ZONE TO THE CONSTRUCTION SITE.
5. CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING & LEAVING THE SITE DO SO IN A FORWARD DIRECTION.

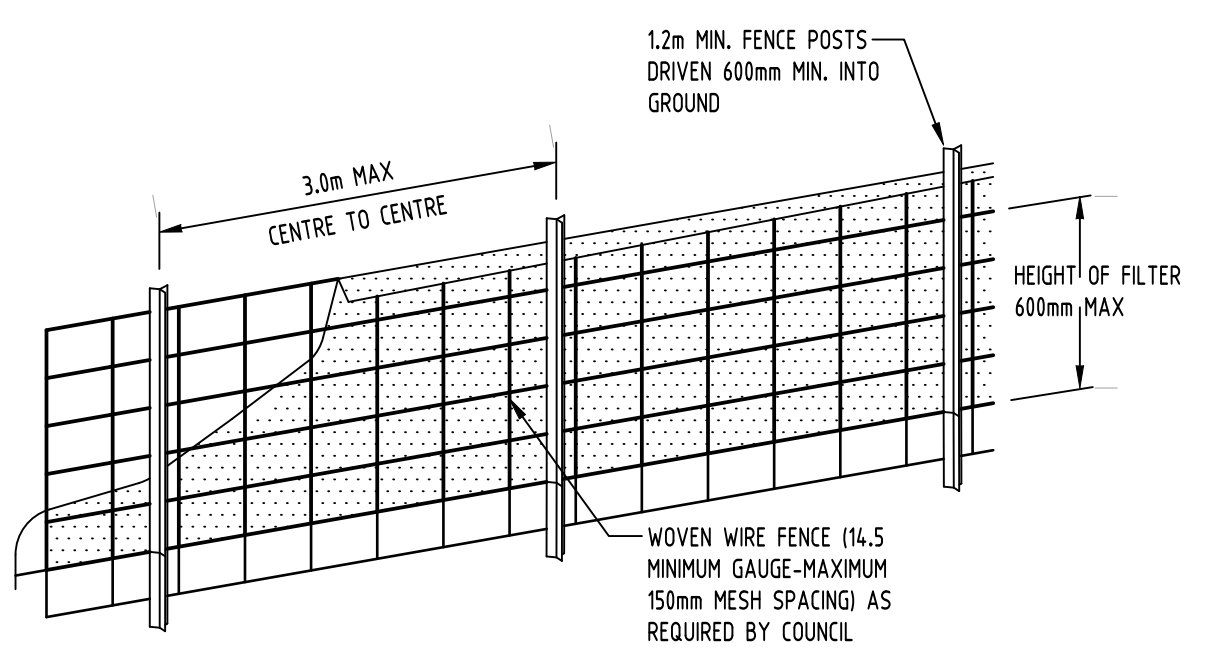
**GENERAL NOTES**

1. THIS PLAN IS A CONCEPT PLAN ONLY FOR STORMWATER DISPOSAL & EROSION CONTROL. IT IS NOT SUITABLE FOR CONSTRUCTION. THIS PLAN SHOULD BE ADAPTED BY THE BUILDER DURING DEMOLITION, EXCAVATION & CONSTRUCTION PHASES TO ENSURE ADEQUATE PERFORMANCE.

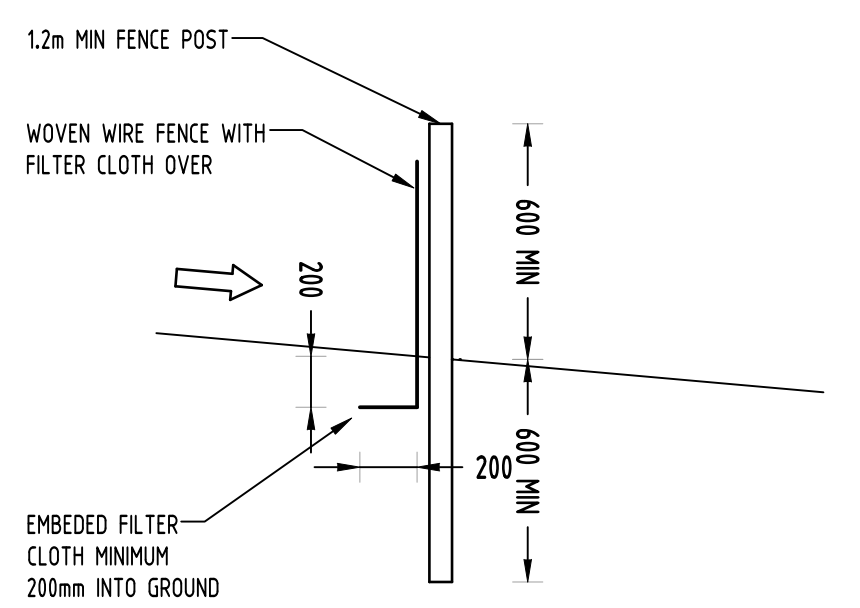
2. ALL DRAINAGE LAYOUT & DETAILS ARE DIAGRAMMATIC & INDICATIVE ONLY. ACTUAL LOCATION, SIZES, LEVELS & GRADES MAY ALTER WHEN DETAIL DESIGN WORKS ARE DOCUMENTED.

**CLAY SOILS**

- A SYSTEM SHALL BE INSTALLED TO EITHER:
1. TRANSPORT STORMWATER RUNOFF WITH SUSPENDED SOLIDS FROM SITE VIA PUMP TRUCKS.
  2. TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POE 1997) AND SHALL BE APPROVED BY LOCAL COUNCIL



DIAGRAMMATIC VIEW

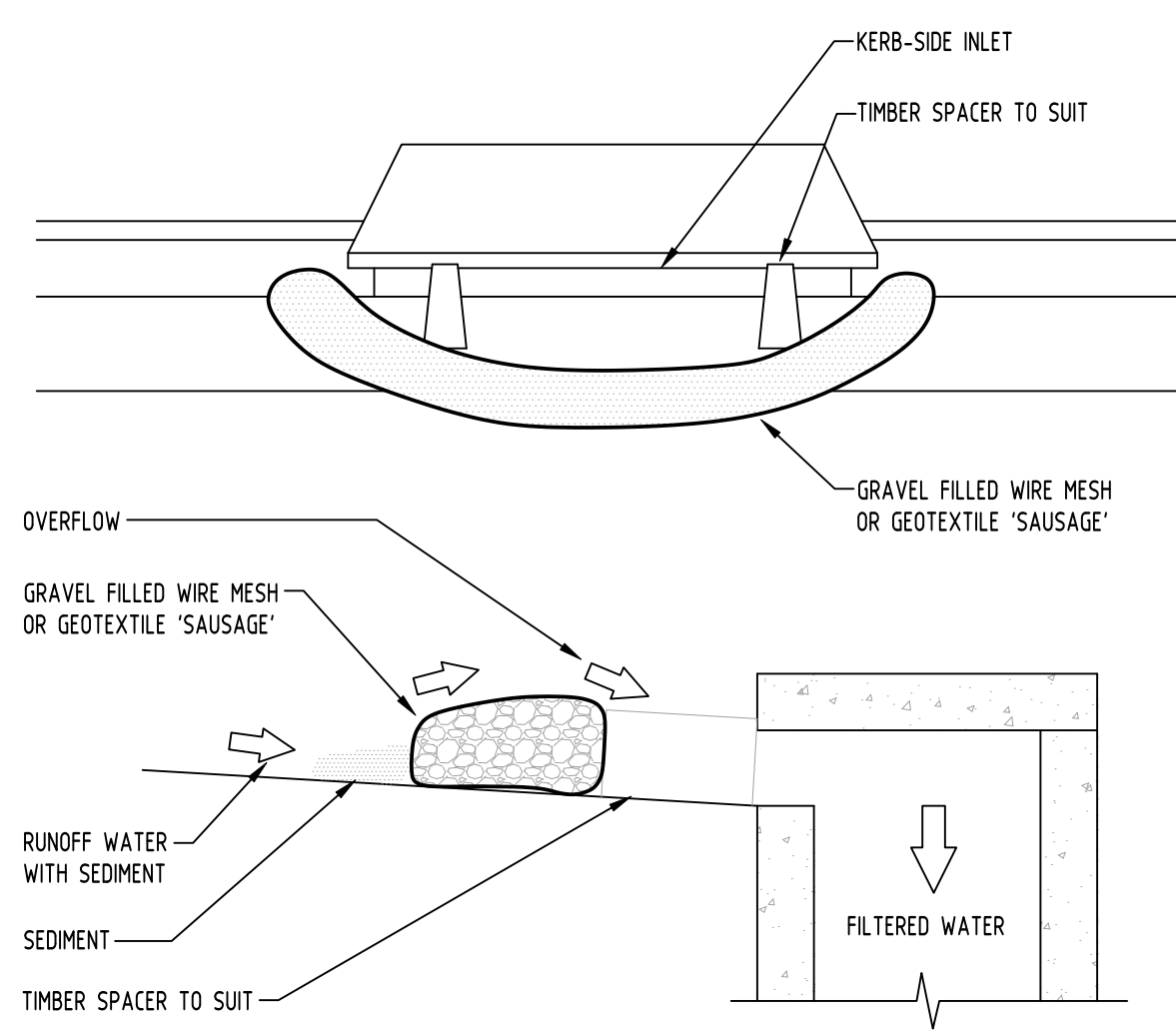


TYPICAL SECTION

**SEDIMENT FENCE**  
NOT TO SCALE

**GEOTEXTILE INLET FILTER**

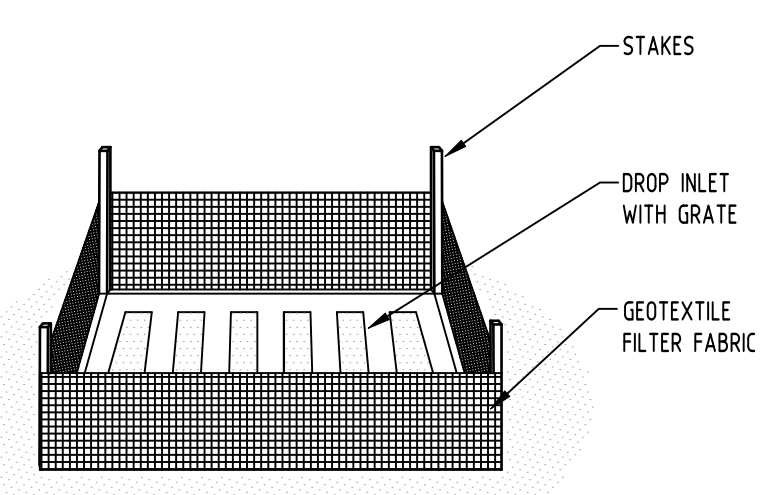
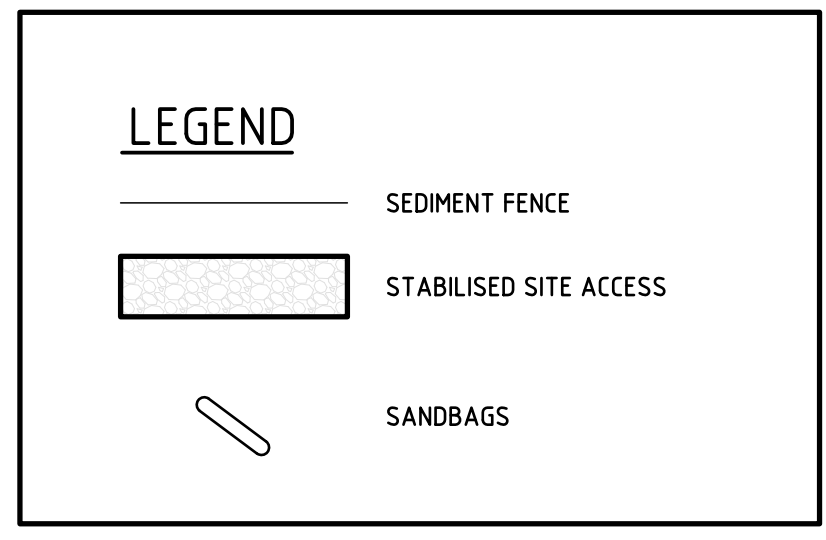
GEOTEXTILE INLET FILTER IS PLACED IN EVERY PIT WITHIN THE SITE TO ENSURE THE RUNOFF WATER DURING CONSTRUCTION NOT ENTER THE PITS.



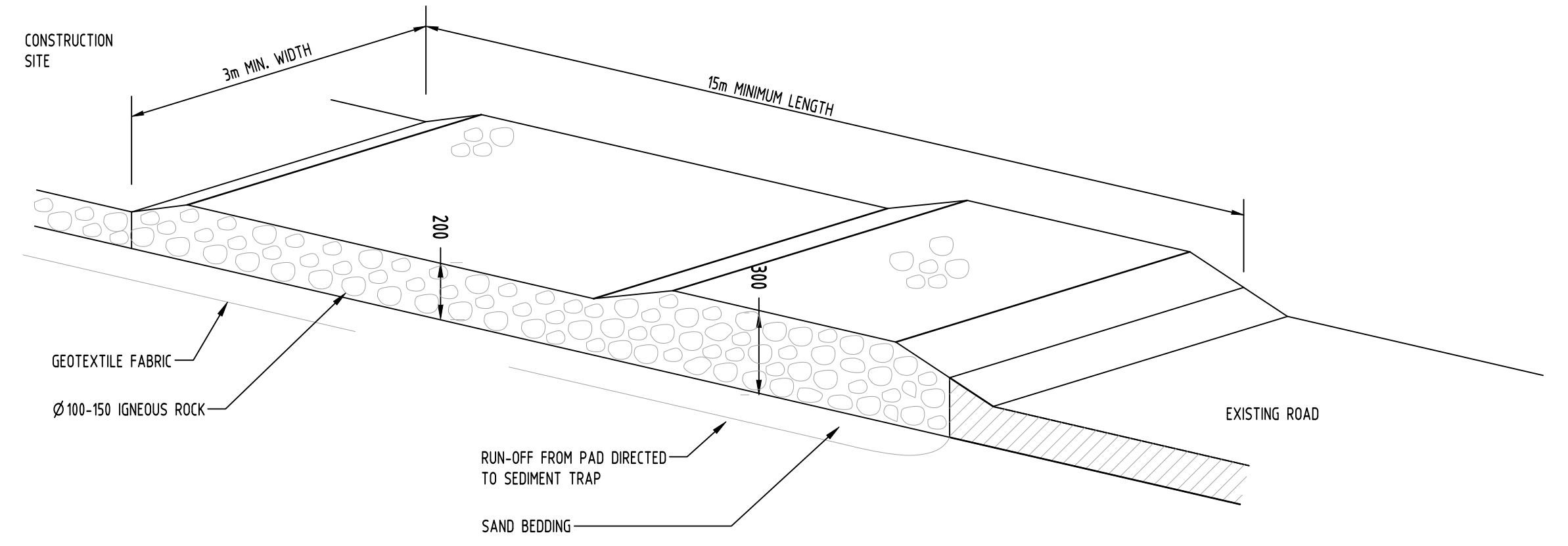
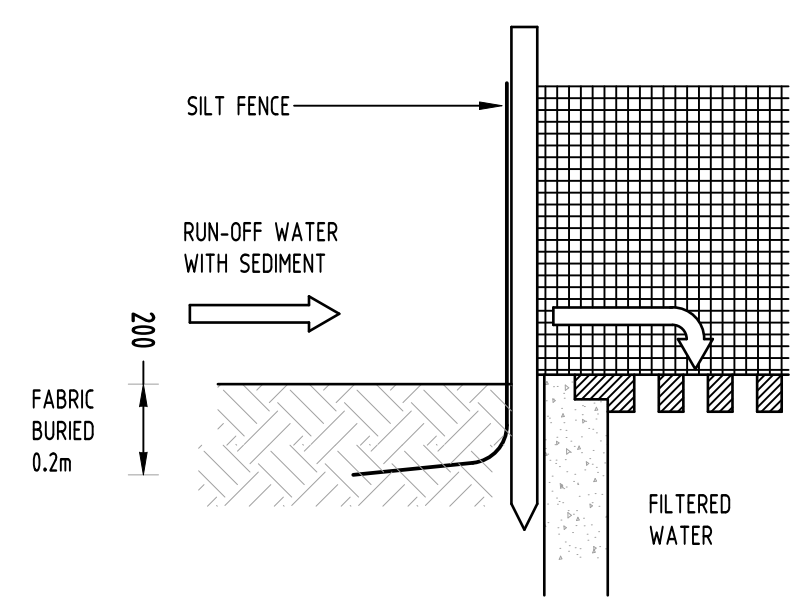
**CONSTRUCTION NOTES:**

- FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT
- FILL THE SLEEVE WITH 25mm TO 50mm GRAVEL
- FORM AN ELLIPTICAL CROSS-SECTION OF THE KERB INLET LEAVING A 100mm GAP AT THE TOP TO ACT AS AN EMERGENCY SPILLWAY
- MAINTAIN THE OPENING WITH SPACER BLOCKS
- FORM A SEAL WITH THE KERBING AND PREVENT SEDIMENT BYPASSING THE FILTER
- FIT TO ALL KERB INLETS AT SAG POINTS

**GRAVEL INLET FILTER (SAUSAGE)**  
NOT TO SCALE



**GEOTEXTILE INLET FILTER**  
NOT TO SCALE

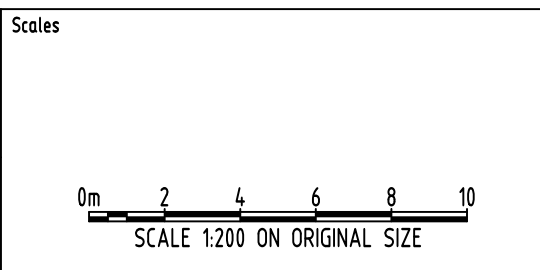


**TEMPORARY CONSTRUCTION EXIT**  
**RUBBLE ALTERNATIVE**  
NOT TO SCALE

Reference Coordination Drawing			
Discipline	Drawing Title and Number	Date	Rev.
D	ARCHITECTURAL UPDATES AND DRAINAGE AMENDMENT	YR 05.01.21	2
C	DRAINAGE AMENDMENT	YR 11.11.20	2
B	ISSUE FOR DA	YR 04.11.20	2
A	ISSUE FOR DA	JD 09.03.20	2
Issue	JDst revision title	by Date	Status
<b>Issuer internal sequence and revision history</b> 1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other SURVEY			

QUALITY CONTROL			
DRAWN	YR	DATE	05.01.21
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CLIENT  
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TWO P/L

ARCHITECT  
**MORSON GROUP**

**SGC**  
Engineering Value

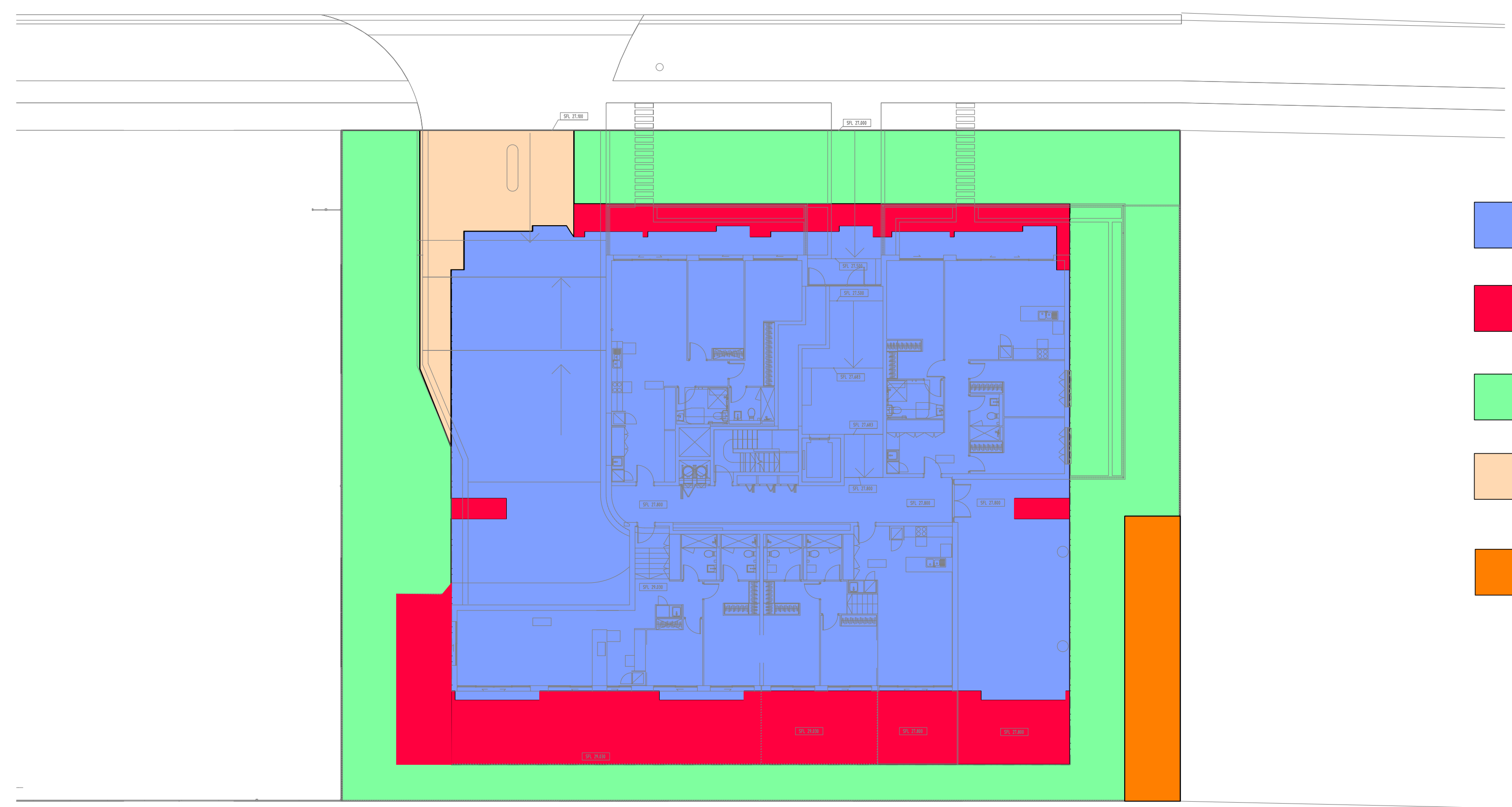
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Web: www.sgce.com.au

PROJECT  
**PROPOSED RESIDENTIAL DEVELOPMENT**  
44-48 RODLEY AVENUE,  
PENRITH

Drawing Status	FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Drawing Title	<b>EROSION AND SEDIMENT CONTROL PLAN AND DETAILS</b>
Project No	20200104
Drawing No	SW400
Revision No	D
Grid	-
Datum	A.H.D.
Sheet	6/7
Scale (at original size)	1:200 @ A1

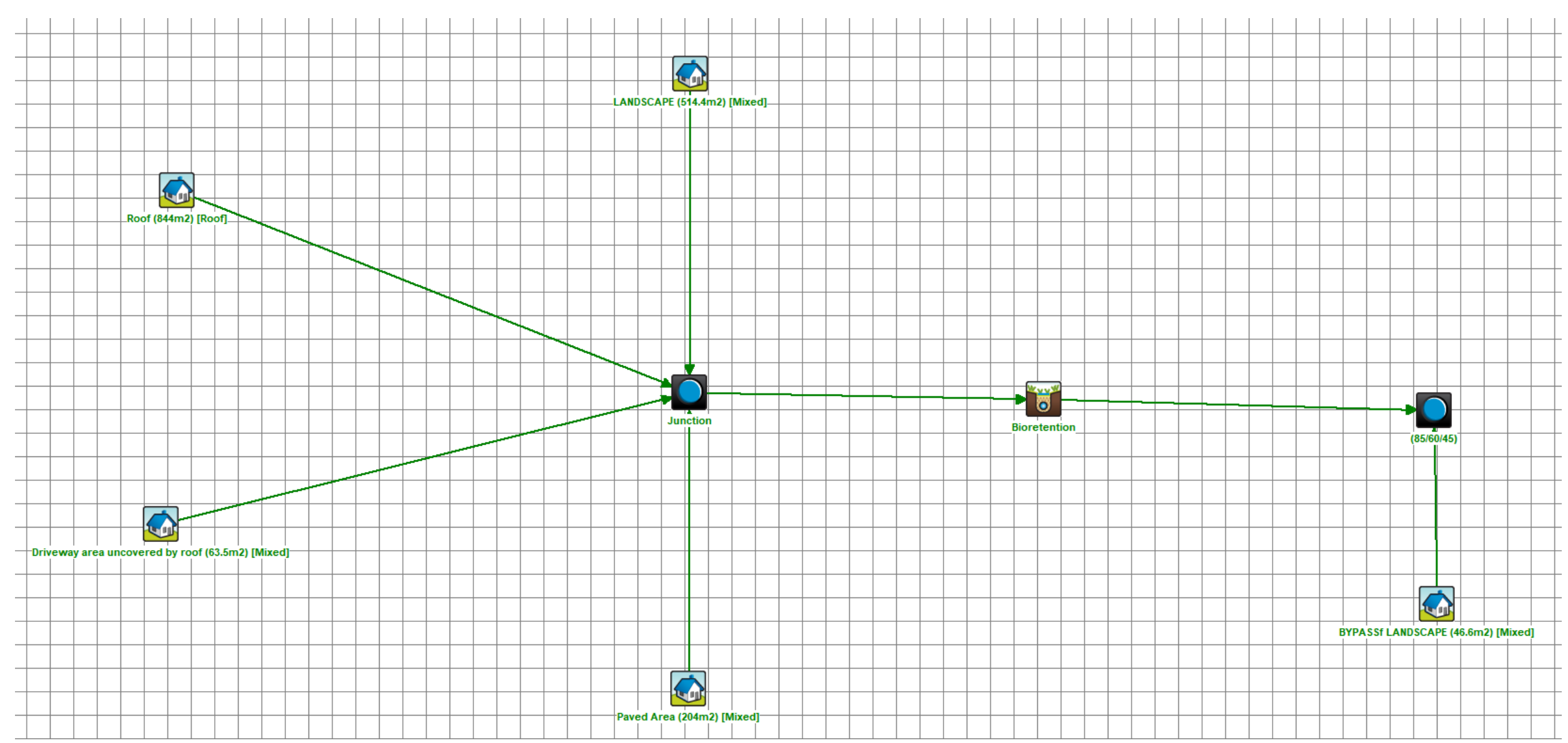


SERVICES ON THIS DRAWING  
ARE SHOWN BELOW S.JOB U.N.O



- ROOF AREA TO BIO-RETENTION BASIN (844m<sup>2</sup>)
- PAVED AREA TO BIO-RETENTION BASIN (204m<sup>2</sup>)
- LANDSCAPING AREA TO BIO-RETENTION BASIN (514.4m<sup>2</sup>)
- DRIVEWAY AREA UNCOVERED BY ROOF BIO-RETENTION BASIN (63.5m<sup>2</sup>)
- LANDSCAPE AREA TO BYPASS BIO-RETENTION BASIN (4.6m<sup>2</sup>)

**MUSIC MODEL SITE AREA BREAK UP**  
SCALE 1:200



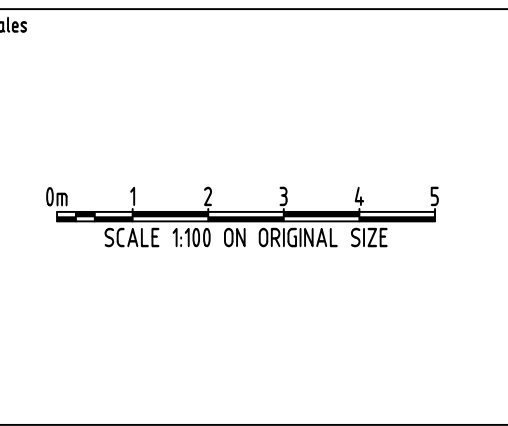
	Sources	Residual Load	% Reduction
<b>Flow (ML/yr)</b>	0.73	0.686	6.1
<b>Total Suspended Solids (kg/yr)</b>	54.4	6.66	87.8
<b>Total Phosphorus (kg/yr)</b>	0.144	0.0573	60.1
<b>Total Nitrogen (kg/yr)</b>	1.6	0.696	56.5
<b>Gross Pollutants (kg/yr)</b>	19.8	0	100

Discipline	Drawing Title and Number	Date	Rev.
ARCH			
ARCH			
STRUCT			
MECH			
ELEC			
HYD			
FRG			
JONDS			
CIVIL			
SURVEY			

Discipline	Drawing Title and Number	Date	Rev.
ARCH			
ARCH			
STRUCT			
MECH			
ELEC			
HYD			
FRG			
JONDS			
CIVIL			
SURVEY			

**QUALITY CONTROL**

DRAWN	YR	DATE	05.01.21
CHECKED	SH	DATE	05.01.21
DESIGNED	YR	DATE	05.01.21
VERIFIED	SH	DATE	05.01.21
APPROVED	SH	DATE	05.01.21



CLIENT  
**INGLOW INVESTMENTS  
TWO P/L**

ARCHITECT  
**MORSON  
GROUP**

**SGC**  
Engineering Value

Suite 5.03, Level 5,  
156 PACIFIC HIGHWAY  
ST. LEONARDS, NSW 2065  
T: +61 2 8883 4239  
Email: office@sgce.com.au  
Web: www.sgce.com.au

A.B.N. 21 118 222 530

PROJECT  
**PROPOSED RESIDENTIAL  
DEVELOPMENT**  
44-48 RODLEY AVENUE,  
PENRITH

Drawing Status	FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Drawing Title	STORMWATER CONCEPT DESIGN MUSIC MODEL CATCHMENT PLAN
Project No	20200104
Drawing No	SW202
Revision No	D
Grid	-
Datum	A.H.D.
Sheet	7/7
Scale (at original size)	1:100 @ A1