



PROPOSED SENIORS HOUSING 103-109 LAYCOCK STREET, CRANEBROOK STORMWATER CONCEPT DESIGN



DRAWINGS LIST			
SHEET No.	DWG No.	TITLE	REV
1	SW100	COVER SHEET	D
2	SW200	STORMWATER CONCEPT DESIGN - GROUND FLOOR PLAN	D
3	SW201	STORMWATER CONCEPT DESIGN - ROOF PLAN	D
4	SW300	STORMWATER CONCEPT DESIGN - DETAILS SHEET - 1	D
5	SW301	STORMWATER CONCEPT DESIGN - DETAILS SHEET - 2	D
6	SW400	EROSION AND SEDIMENT CONTROL - PLAN AND DETAILS	D
7	SW500	STORMWATER CONCEPT DESIGN - MUSIC CATCHMENT AND OSD CATCHMENT PLAN	D

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

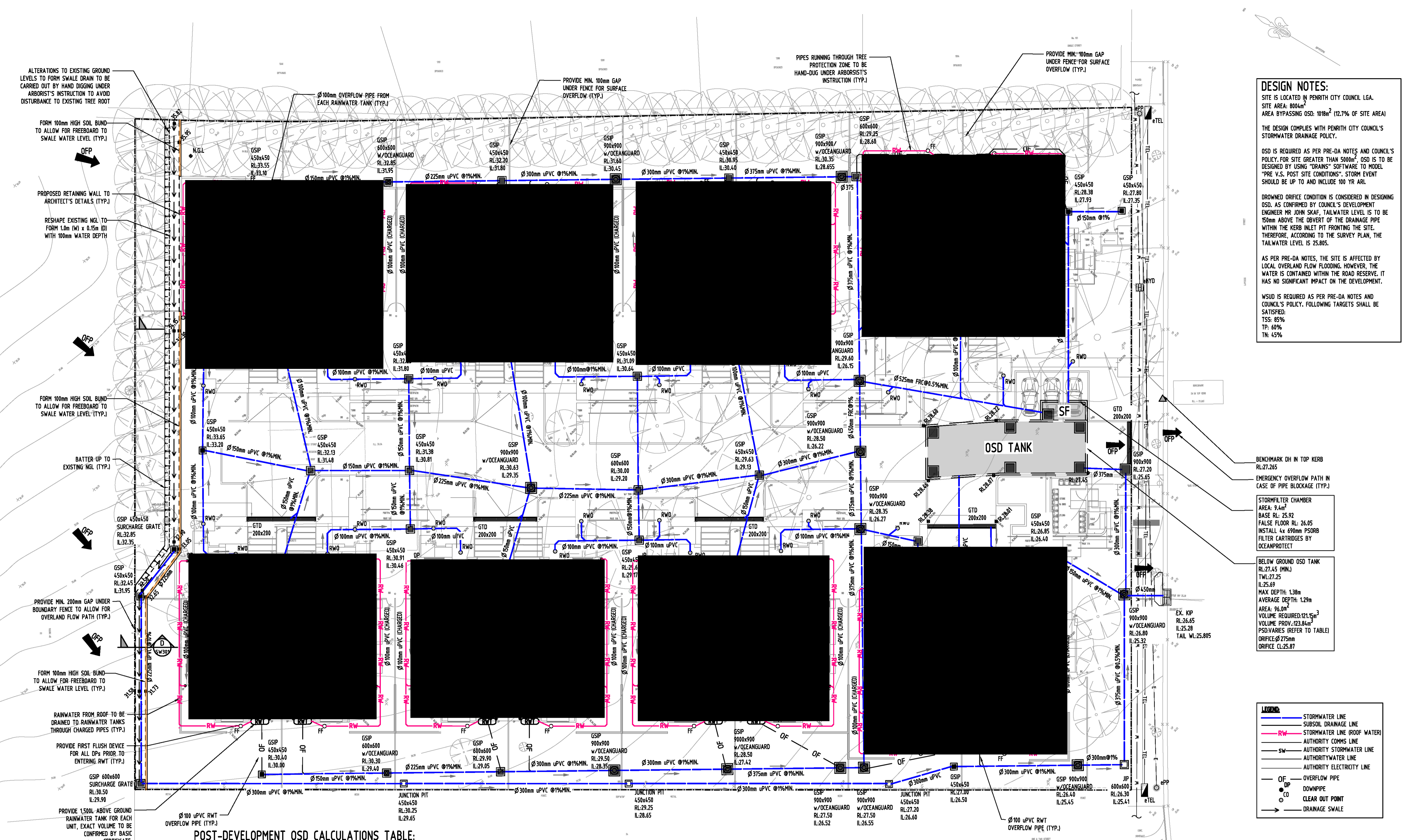


PREPARED BY:
SGC Consulting Engineers
Suite 5.03, Level 5
156 Pacific Highway
St Leonards, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au



CLIENT:
GREATER WESTERN
GROUP P/L

DATE PLOTTED: 27 July 2021 10:59 AM BY: USER



DESIGN NOTES:

SITE IS LOCATED IN PENRITH CITY COUNCIL LGA.
 SITE AREA: 8004m²
 AREA BYPASSING OSD: 1018m² (12.7% OF SITE AREA)

THE DESIGN COMPLIES WITH PENRITH CITY COUNCIL'S STORMWATER DRAINAGE POLICY.

OSD IS REQUIRED AS PER PRE-DA NOTES AND COUNCIL'S POLICY. FOR SITE GREATER THAN 5000m², OSD IS TO BE DESIGNED BY USING "DRAINS" SOFTWARE TO MODEL "PRE V.S. POST SITE CONDITIONS". STORM EVENT SHOULD BE UP TO AND INCLUDE 100 YR ARL.

DROWNED ORIFICE CONDITION IS CONSIDERED IN DESIGNING OSD, AS CONFIRMED BY COUNCIL'S DEVELOPMENT ENGINEER MR JOHN SKAF. TAILWATER LEVEL IS TO BE 150mm ABOVE THE OVERTOP OF THE DRAINAGE PIPE WITHIN THE KERB INLET PIT FRONTING THE SITE. THEREFORE, ACCORDING TO THE SURVEY PLAN, THE TAILWATER LEVEL IS 25.805.

AS PER PRE-DA NOTES, THE SITE IS AFFECTED BY LOCAL OVERLAND FLOW FLOODING, HOWEVER, THE WATER IS CONTAINED WITHIN THE ROAD RESERVE. IT HAS NO SIGNIFICANT IMPACT ON THE DEVELOPMENT.

WSUD IS REQUIRED AS PER PRE-DA NOTES AND COUNCIL'S POLICY. FOLLOWING TARGETS SHALL BE SATISFIED:
 TSS: 85%
 TP: 60%
 TN: 45%

BENCHMARK DH IN TOP KERB RL:27.265

EMERGENCY OVERFLOW PATH IN CASE OF PIPE BLOCKAGE (TYP.)

STORMFILTER CHAMBER
 AREA: 9.4m²
 BASE RL: 25.92
 FALSE FLOOR RL: 26.05
 INSTALL 4x 600mm PSORB FILTER CARTRIDGES BY OCEANPROTECT

BELOW GROUND OSD TANK
 RL:27.45 (MIN.)
 TWL:27.25
 IL:25.69
 MAX DEPTH: 1.38m
 AVERAGE DEPTH: 1.29m
 AREA: 96.0m²
 VOLUME REQUIRED: 121.15m³
 VOLUME PROV.: 123.84m³
 PSD: VARIES (REFER TO TABLE)
 ORIFICE: Ø275mm
 ORIFICE CL: 25.87

POST-DEVELOPMENT OSD CALCULATIONS TABLE:

LOT AREA (m ²)	PRE-DEV IMPERVIOUS (%)	POST-DEV IMPERVIOUS (%)	STORM (YR)	PRE-DEV FLOW (m ³ /s)	POST-DEV FLOW UNDETAINED (m ³ /s)	PIPE OUTFLOW OSD TANK (m ³ /s)	WEIR OUTFLOW OSD TANK (m ³ /s)	BYPASSING (m ³ /s)	TOTAL PSD (m ³ /s)	OSD VOLUME (m ³)
8004	6	80	5(20%)	0.133	0.219	0.108	N/A	0.034	0.132	TANK: 121.15
			10(10%)	0.178	0.277	0.126	N/A	0.045	0.156	
			100(1%)	0.326	0.450	0.175	N/A	0.074	0.223	

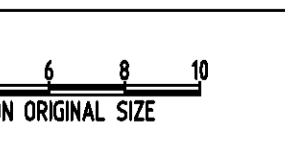
OSD TANK NOTE:
 INSTALL WITH THE FOLLOWING ITEMS:
 - 900SQ HEAVY DUTY STEEL GRATED LID FOR ACCESS AND MAINTENANCE PURPOSES.
 - CONFINED SPACE SIGN ABOVE OSD FOR PUBLIC AWARENESS AND WARNING.
 - STEP IRONS. REFER TO DETAILS.

NOTE:
 DOWNSPIPE LOCATIONS TO BE CONFIRMED AT CC STAGE.

Issue	Last revision title	by	Date	Status
D	ISSUE FOR DA	HN	27.07.21	1
C	ISSUE FOR DA	HN	09.07.21	1
B	ISSUE FOR DA	HN	18.12.20	1
P4	ISSUE FOR DA	HN	04.11.20	1
P3	ISSUE FOR DA	HN	27.10.20	1
A	ISSUE FOR DA	FZ	29.10.20	2
P2	PRELIMINARY	FZ	25.09.20	1
P1	PRELIMINARY	FZ	27.08.20	1

Discipline	Drawing Title and Number	Date	Rev.
ARCH			
STRUCT			
MECH			
ELEC			
HYD			
FIRE			
LANDS			
CIVIL			
SURVEY			

QUALITY CONTROL	DATE
DRAWN	27.07.21
DESIGNED	27.07.21
VERIFIED	27.07.21
APPROVED	27.07.21



CLIENT
GREATER WESTERN GROUP P/L

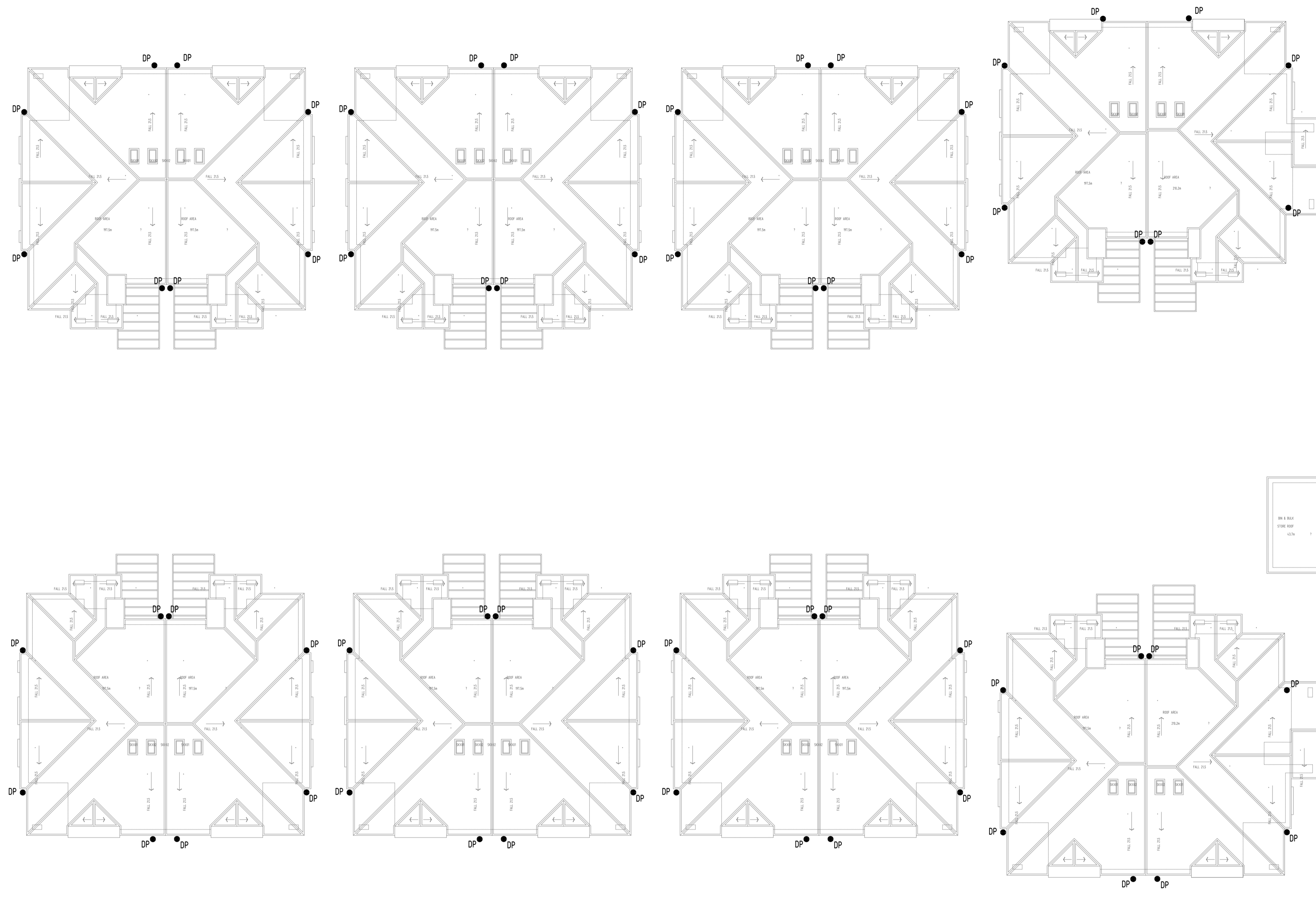
ARCHITECT
ALVARO



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 SENIORS HOUSING
 103-109 LAYCOCKS STREET, CRANE BROOK

Project No	Drawing No	Revision No
20190170	SW200	D



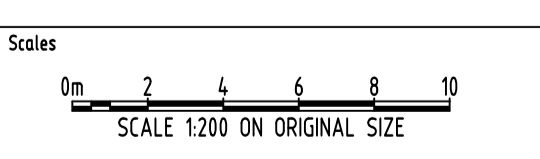
NOTE:
DOWNPIPE LOCATIONS TO BE CONFIRMED AT CC STAGE

C:\Users\user\Documents\2019\20190717_103-109 Laycock Street, Cranebrook\Civil\Task\SW201.dwg

Reference Coordination Drawing			
Discipline	Drawing Title and Number	Date	Rev.
D	ISSUE FOR DA	MN 27.07.21	1
C	ISSUE FOR DA	MN 09.07.21	1
B	ISSUE FOR DA	MN 18.12.20	1
P4	ISSUE FOR DA	MN 06.11.20	1
P3	ISSUE FOR DA	MN 27.10.20	1
A	ISSUE FOR DA	FZ 29.10.2019	2
P2	PRELIMINARY	FZ 15.09.2019	1
P1	PRELIMINARY	FZ 27.08.2019	1
Issue	Last revision title	by	Date Status
Issuer internal sequence and revision history 1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other			

QUALITY CONTROL			
Discipline	Date	By	Status
DRAWN	MN DATE 27.07.21		
CHECKED	SH DATE 27.07.21		
DESIGNED	MN DATE 27.07.21		
VERIFIED	SH DATE 27.07.21		
APPROVED	SH DATE 27.07.21		

WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD.



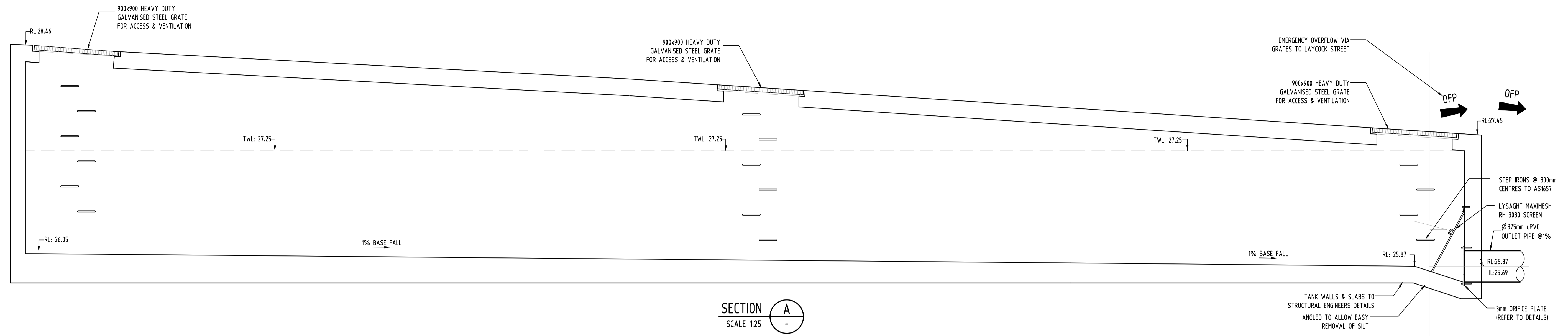
CLIENT
GREATER WESTERN GROUP P/L

ARCHITECT
ALVARO

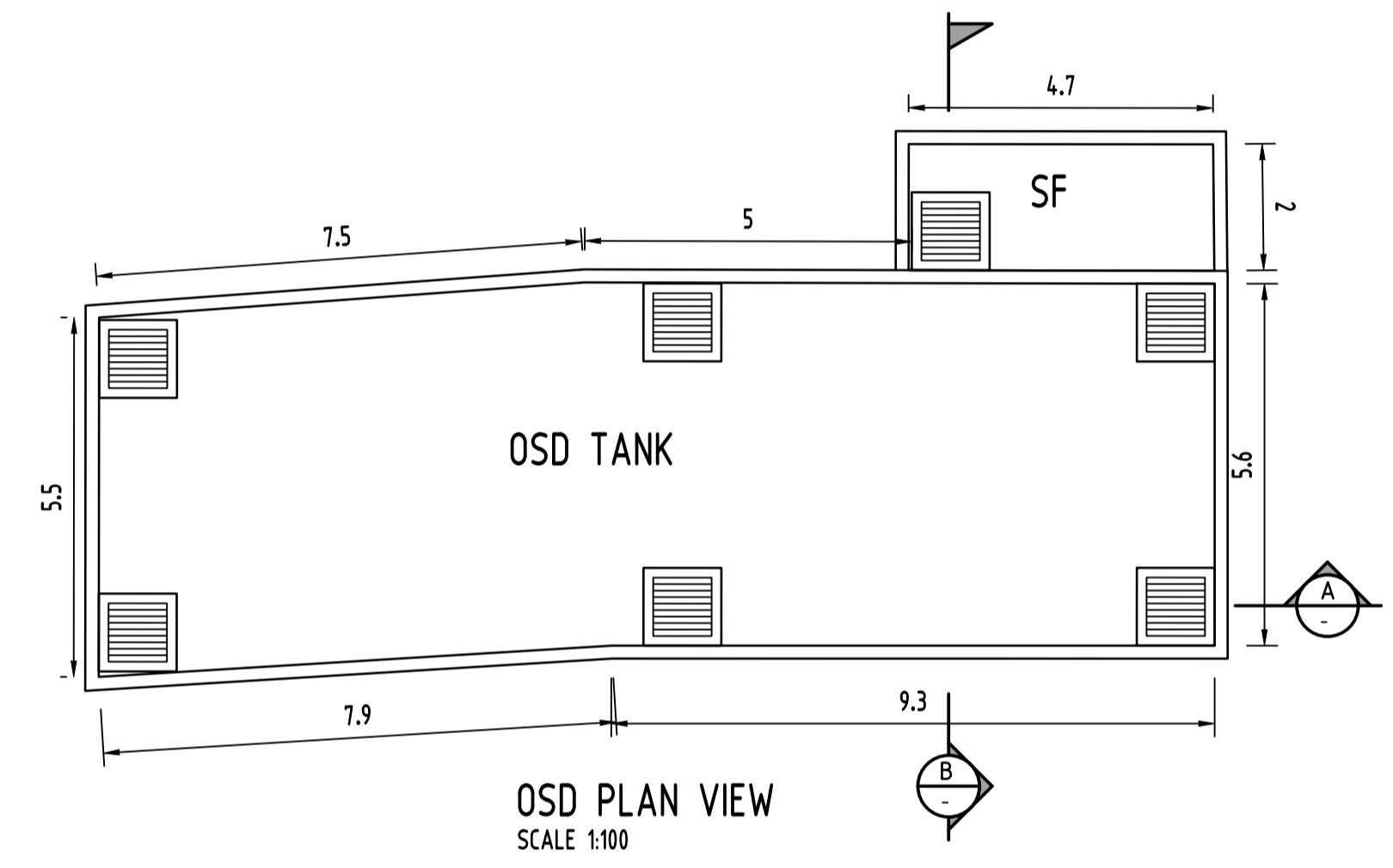
SGC
Engineering Value
Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au
A.B.N. 21 118 222 530

PROJECT
PROPOSED SENIORS HOUSING
103-109 LAYCOCKS STREET, CRANEBROOK

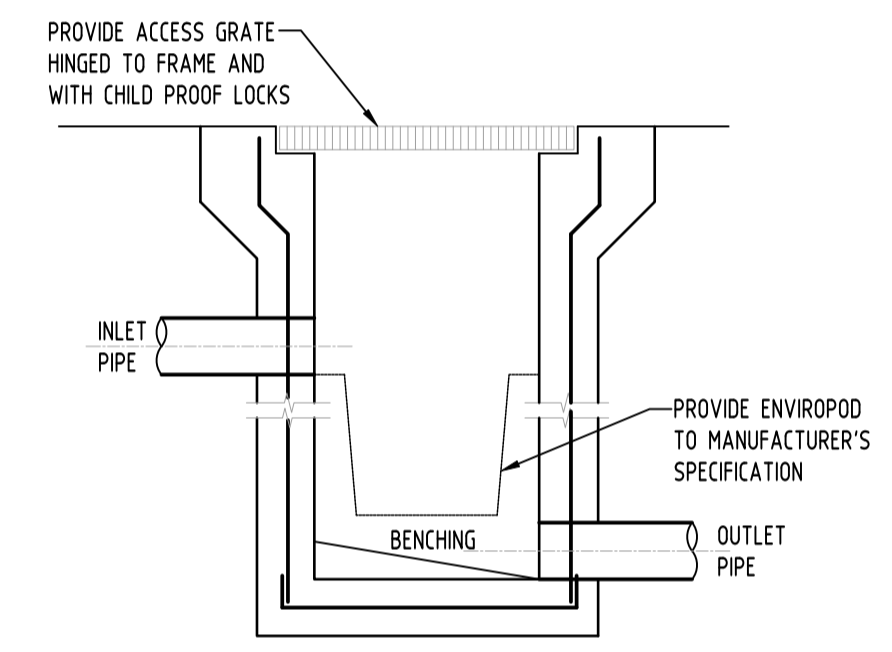
Drawing Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Drawing Title	STORMWATER CONCEPT DESIGN ROOF PLAN		
Project No	Drawing No	Revision No	
20190170	SW201	D	



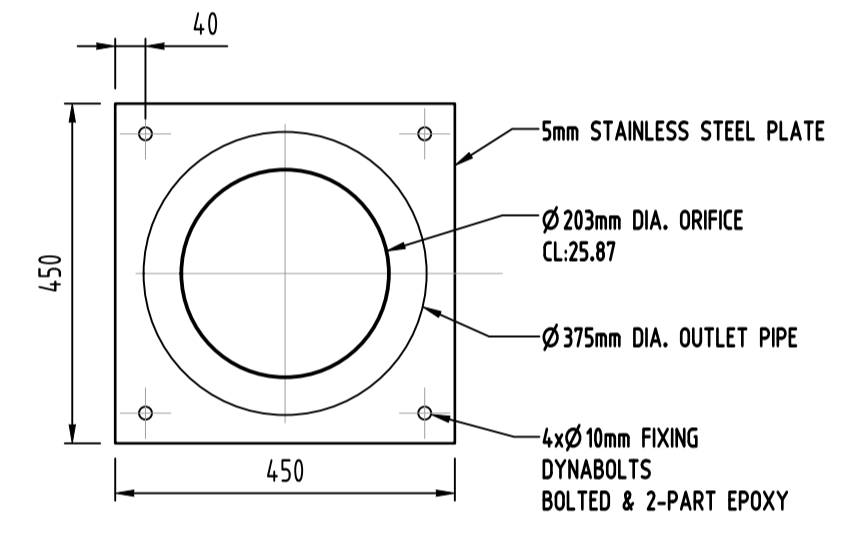
SECTION A
SCALE 1:25



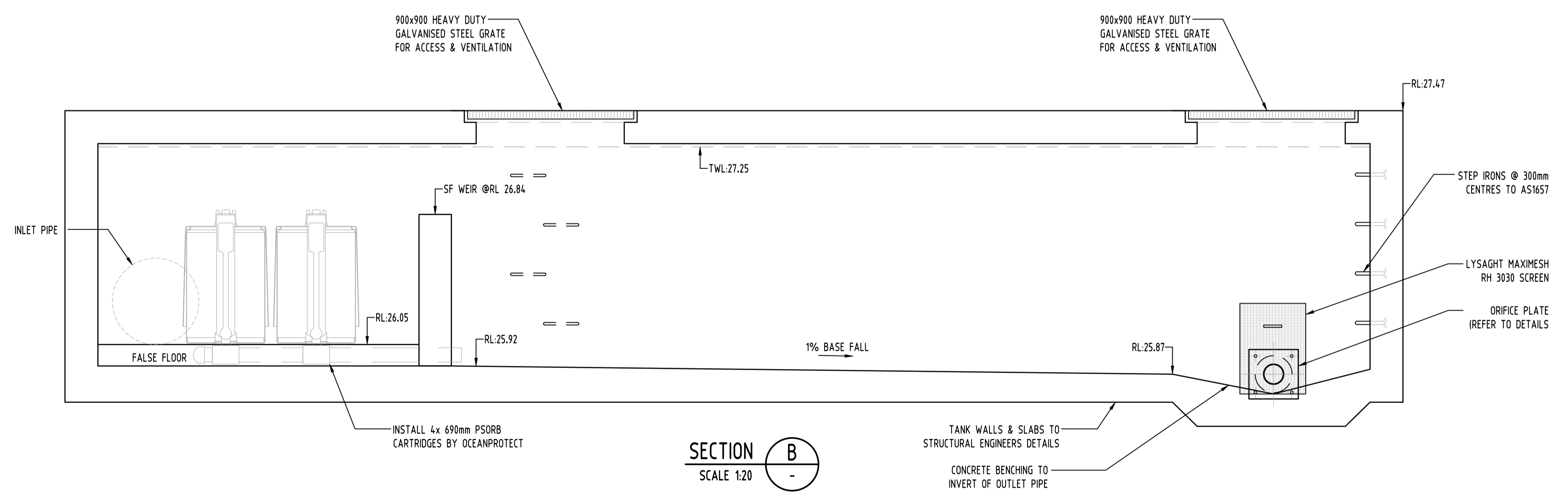
OSD PLAN VIEW
SCALE 1:100



5
DETAIL
STORMWATER PIT WITH OCEANGUARD
SCALE NTS



1
DETAIL
ORIFICE PLATE
SCALE 1:20



SECTION B
SCALE 1:20

Issue	Last revision title	by	Date	Status
D	ISSUE FOR DA	MN	27.07.21	1
C	ISSUE FOR DA	MN	09.07.21	1
B	ISSUE FOR DA	MN	18.12.20	1
P4	ISSUE FOR DA	MN	06.11.20	1
P3	ISSUE FOR DA	MN	27.10.20	1
A	ISSUE FOR DA	FZ	25.09.2019	1
P2	PRELIMINARY	FZ	25.09.2019	1
P1	PRELIMINARY	FZ	27.08.2019	1

Discipline	Drawing Title and Number	Date	Rev.
STRUCT		27.07.21	1
MECH		27.07.21	1
ELEC		27.07.21	1
HYD		27.07.21	1
FIRE		27.07.21	1
LANDS		27.07.21	1
CIVIL		27.07.21	1
SURVEY		27.07.21	1

QUALITY CONTROL	DATE	DATE
DRAWN	MN	27.07.21
CHECKED	SH	27.07.21
DESIGNED	MN	27.07.21
VERIFIED	SH	27.07.21
APPROVED	SH	27.07.21

WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD

CLIENT
GREATER WESTERN GROUP P/L

ARCHITECT
ALVARO

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

PROJECT
PROPOSED SENIORS HOUSING DEVELOPMENT
103-109 LAYCOCK STREET, CRANE BROOK

Project No	Drawing No	Revision No
20190170	SW300	D



DATE PLOTTED: 27 July 2021 09:30 AM BY: USER

CAD FILE: Z:\Production\309\30910101\30910101.dwg Layer: Street Cranebrook\Cranebrook\Cranebrook.dwg

A1



EXTERNAL CATCHMENT PLAN
N.T.S.

UPSTREAM CATCHMENT CALCULATION:

CATCHMENT 1 AREA = 0.33 ha
 FLOW LENGTH: 71m
 TERRAIN SLOPE: 6.33%

$T_c = 11 \text{ minutes (100\% PERVIOUS)}$
 $I (100y-1mins) = 190 \text{ mm/hr}$

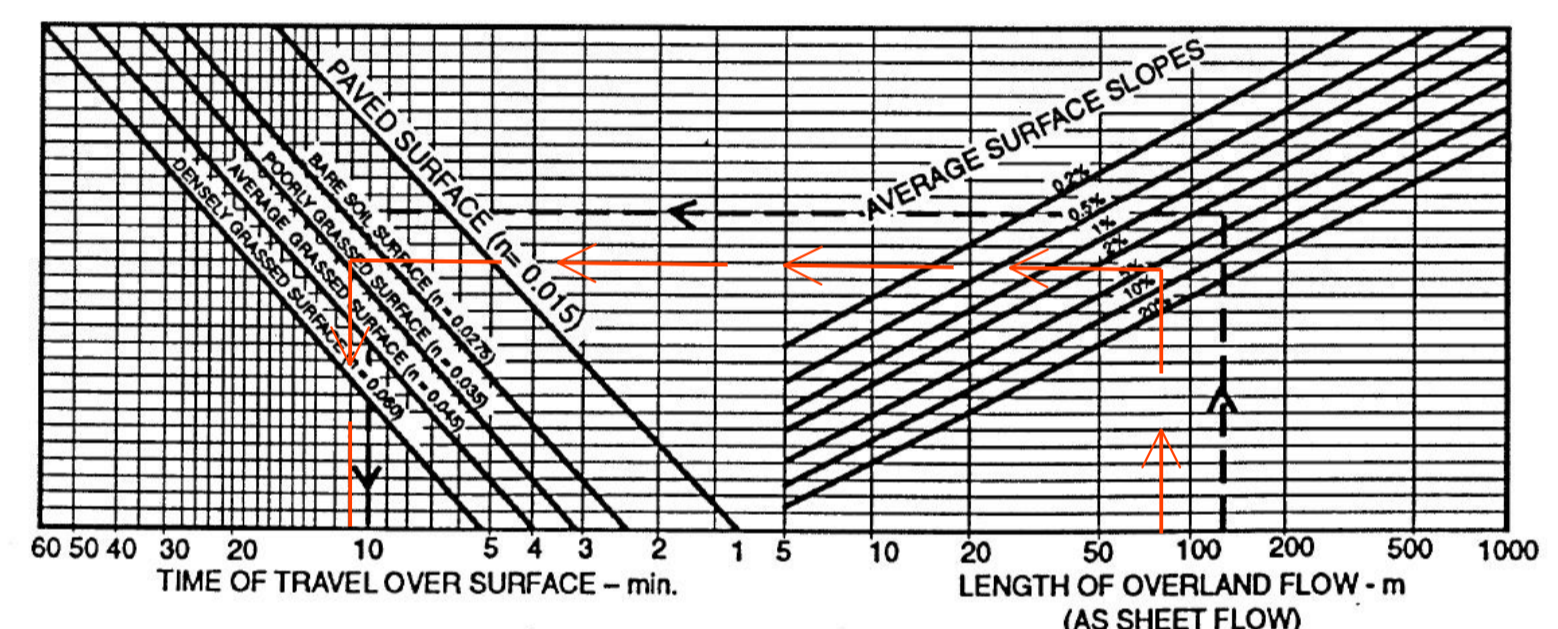
USING RATIONAL METHOD: $(c=0.7)$
 $Q-CAT1 = cIA = 0.7 \times 190 \times 3300 / 3600 = 122 \text{ L/s}$

TRAPEZOIDAL SWALE $\pm 0.7m$ (BASE W) $\times 0.15m$ (D)
 WATER LEVEL: 100mm
 SLOPE: 10.0%
 MANNINGS'S 'n' = 0.035 (TURF)

$Q_{\text{-swale}} = 90 \text{ L/s}$
 $Q_{\text{-pipe}} = 67 \text{ L/s } (\phi 225\text{mm uPVC @1\%})$
 $Q_{\text{-total}} = 157 \text{ L/s} > 122 \text{ L/s} - \text{OK}$

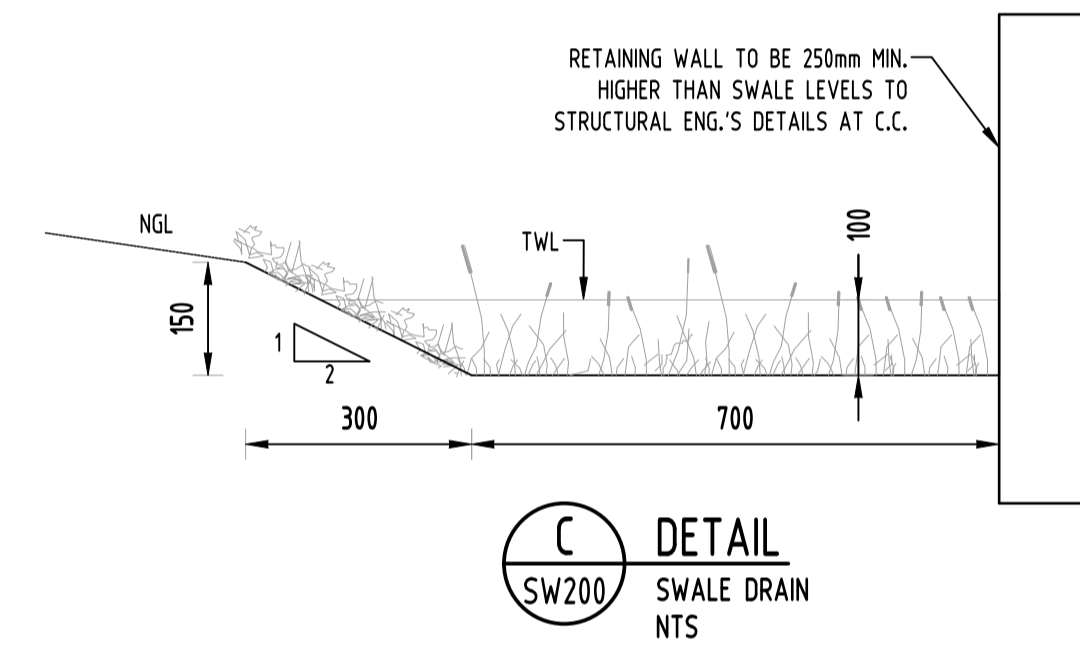
Water Level	0.10 m
Flow width	0.8 m
A	0.06 m²
P	0.847213595 m
Rh	0.070820393 m
Manning's "n"	0.035
Channel Slope	0.1 m/m
Q =	0.09 m³/s

SWALE DRAIN CALCULATION
N.T.S.

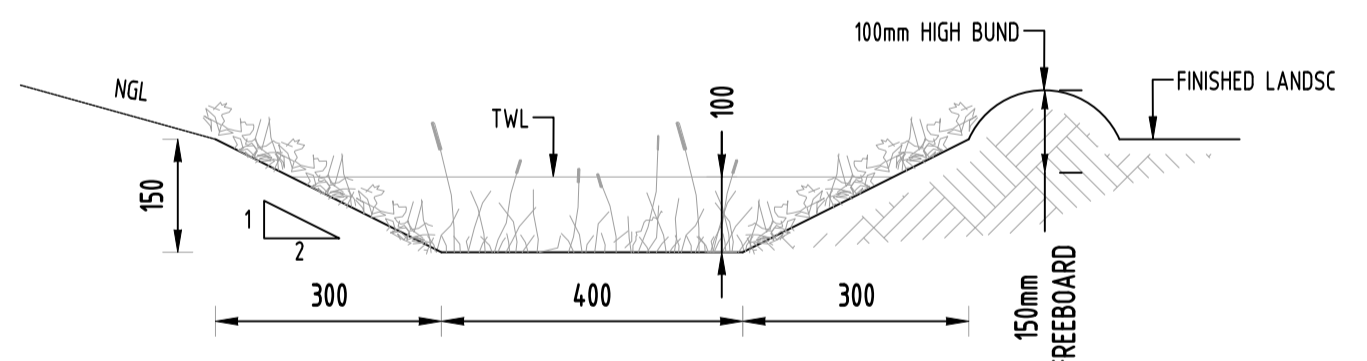


Overland sheet flow times - shallow sheet flow only
Source: ARR-1977

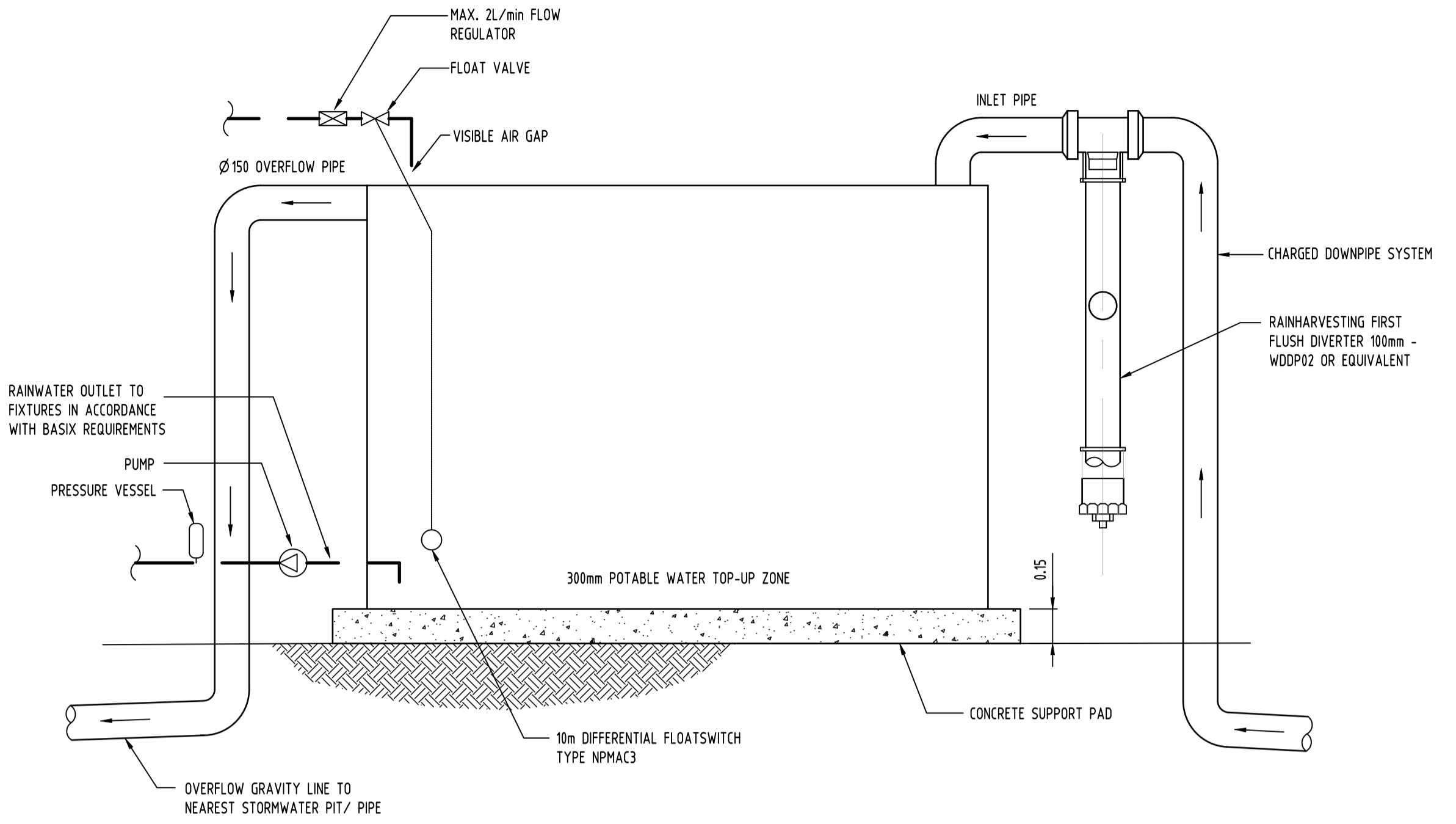
TIME OF CONCENTRATION



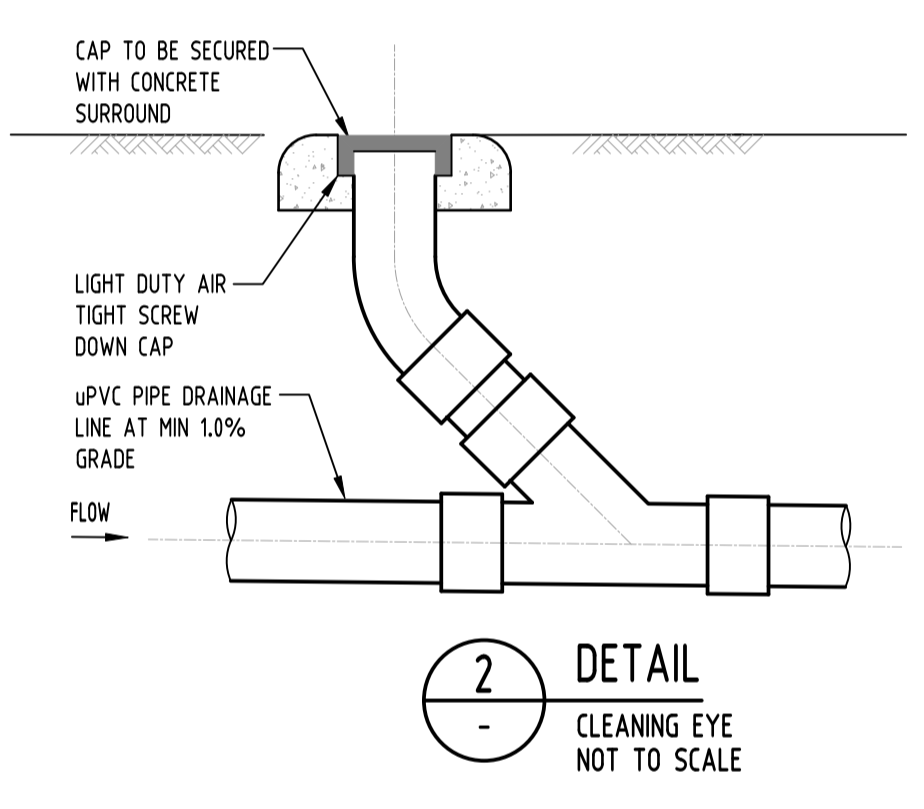
C DETAIL
SWALE DRAIN
N.T.S.



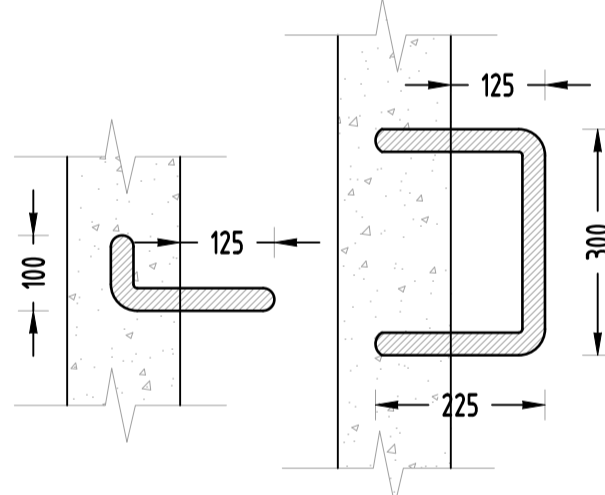
D DETAIL
SWALE DRAIN
N.T.S.



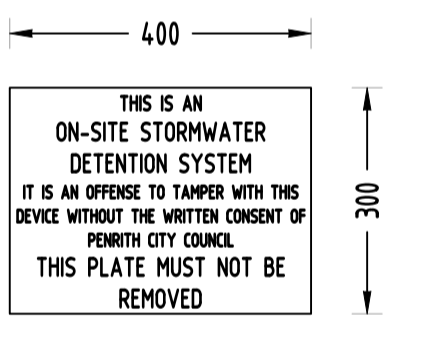
RAINWATER TANK DETAIL
SCALE NTS



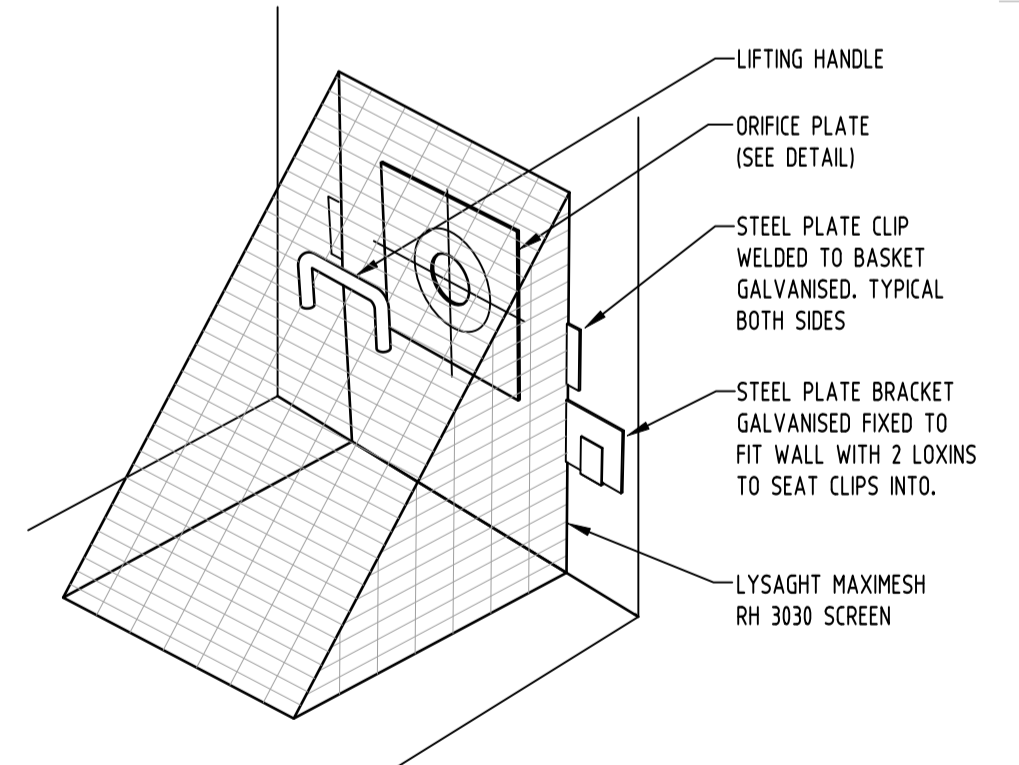
2 DETAIL
CLEANING EYE
NOT TO SCALE



6 DETAIL
STEP IRONS
NOT TO SCALE



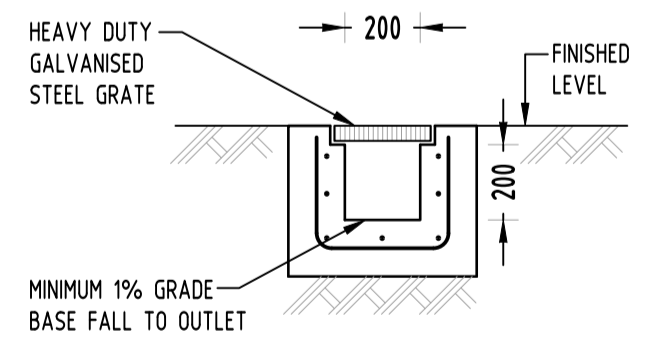
7 DETAIL
OSD SIGN
NOT TO SCALE



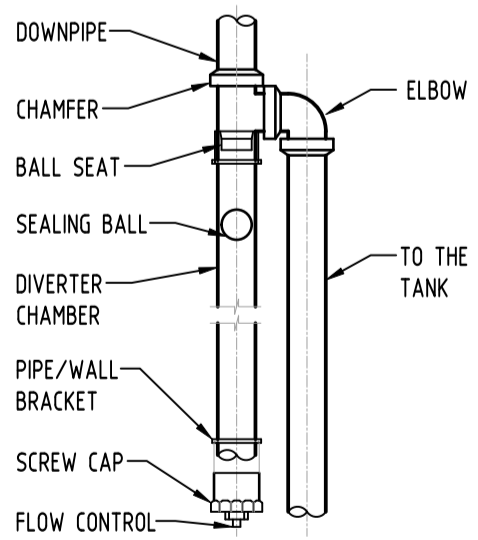
8 DETAIL
TRASH SCREEN
NOT TO SCALE



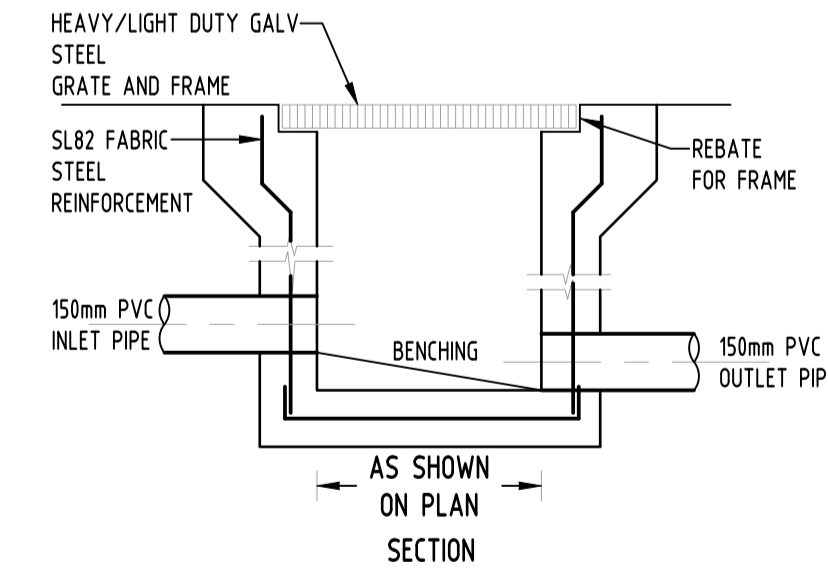
9 DETAIL
CONFINED SPACE SIGN
NOT TO SCALE



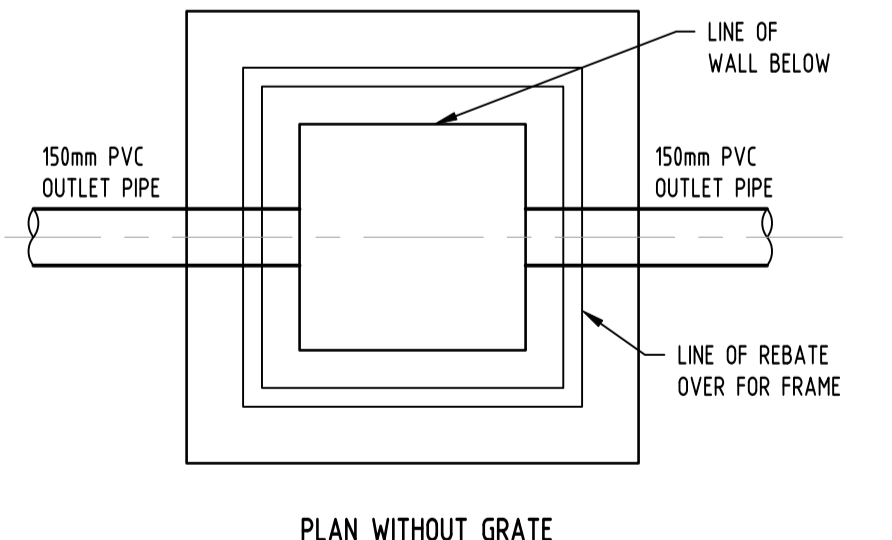
1 DETAIL
GRATED TRENCH DRAIN



4 DETAIL
FIRST FLUSH DIVERTER
SCALE 1:20



3 DETAIL
STORMWATER PIT
NOT TO SCALE



PLAN WITHOUT GRATE

Issue	Last revision title	by	Date	Status
D	ISSUE FOR DA	MN	27.07.21	1
C	ISSUE FOR DA	MN	09.07.21	1
B	ISSUE FOR DA	MN	18.12.20	1
P4	ISSUE FOR DA	MN	06.11.20	1
P3	ISSUE FOR DA	MN	27.10.20	1
A	ISSUE FOR DA	FZ	29.10.2019	2
P2	PRELIMINARY	FZ	25.09.2019	1
P1	PRELIMINARY	FZ	27.08.2019	1

Discipline	Drawing Title and Number	Date	Rev.
ARCH	ARCH		
STRUCT	STRUCT		
MECH	MECH		
ELEC	ELEC		
HYD	HYD		
FIRE	FIRE		
LANDS	LANDS		
SURVEY	SURVEY		

Checked	SH	DATE	27.07.21
DESIGNED	MN <td>DATE</td> <td>27.07.21</td>	DATE	27.07.21
VERIFIED	SH <td>DATE</td> <td>27.07.21</td>	DATE	27.07.21
APPROVED	SH <td>DATE</td> <td>27.07.21</td>	DATE	27.07.21

WARNING: THE DESIGN, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SAG CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SAG CONSULTANTS PTY LTD

CLIENT
GREATER WESTERN GROUP P/L

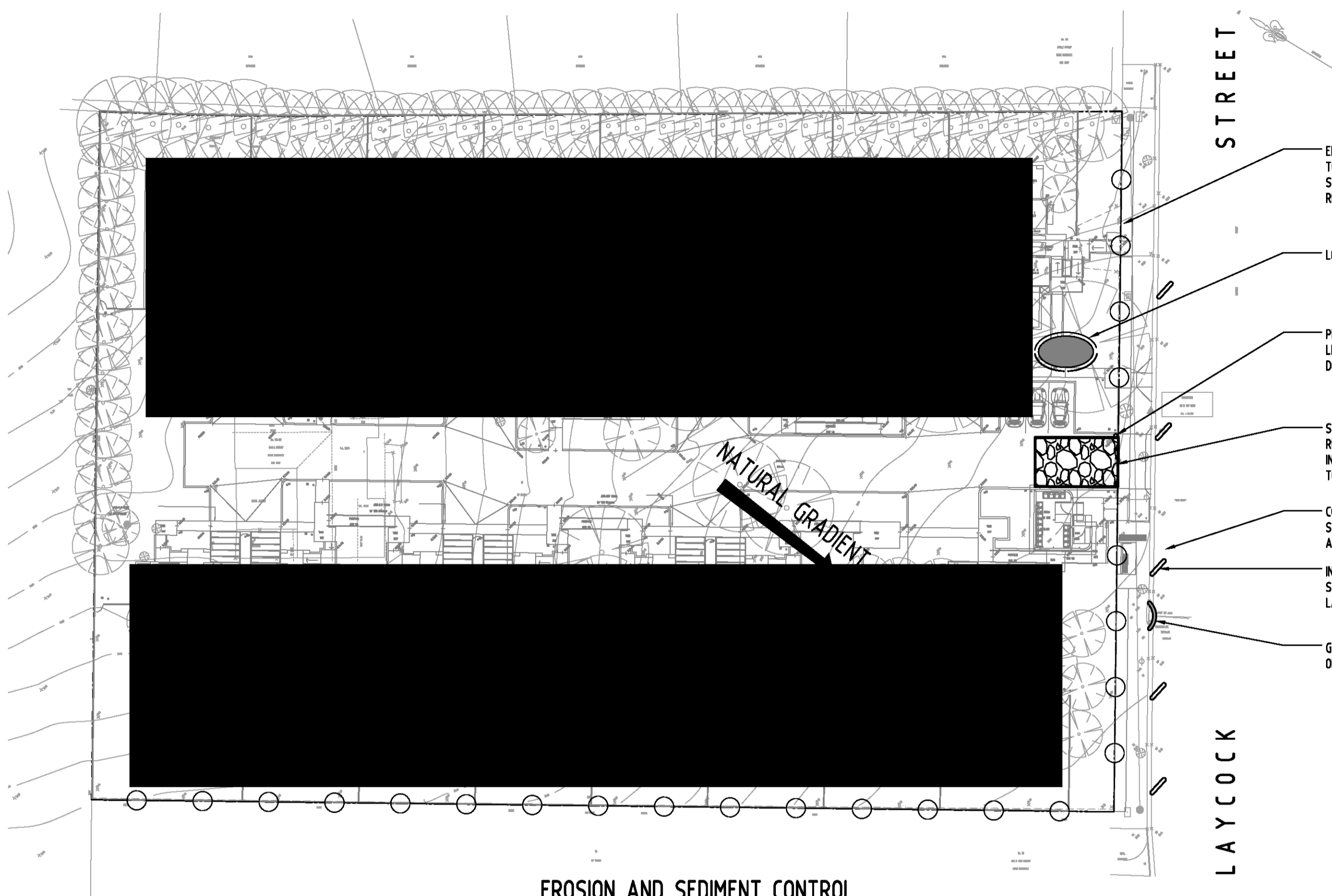
ARCHITECT
ALVARO

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

PROJECT
PROPOSED SENIORS HOUSING DEVELOPMENT
103-109 LAYCOCK STREET,
CRANEBROOK

Project No	Drawing No	Revision No
20190170	SW301	D





EROSION AND SEDIMENT CONTROL
SCALE 1:400

- EROSION AND SEDIMENT CONTROL FENCE TO BE INSTALLED AROUND THE LOWER SIDES OF PROPERTY BOUNDARY WHERE REQUIRED (REFER TO DETAIL).
- LOCATION OF STOCKPILES
- PROVIDE TAP AND HOSE BEHIND FENCE LINE. ALL TRUCK TIRES MUST BE WASHED DOWN BEFORE DEPARTING.
- SITE ENTRY FROM LAYCOCK STREET. RUBBLE ENTRY TO BE TEMPORARILY INSTALLED (REFER TO DETAIL). LOCATION TO BE CONFIRMED BY ARCHITECT.
- CONTRACTOR TO ENSURE THAT LAYCOCK STREET STAYS CLEAN FROM SEDIMENT AT ALL TIMES AND DURING VEHICULAR TRAFFIC.
- INSTALL SAND BAGS TO PREVENT STORMWATER POLLUTION AFFECTING LAYCOCK STREET.
- GRAVEL FILLED WIRE MESH OR GEOTEXTILE 'SAUSAGE'

EROSION & SEDIMENTATION CONTROL NOTES

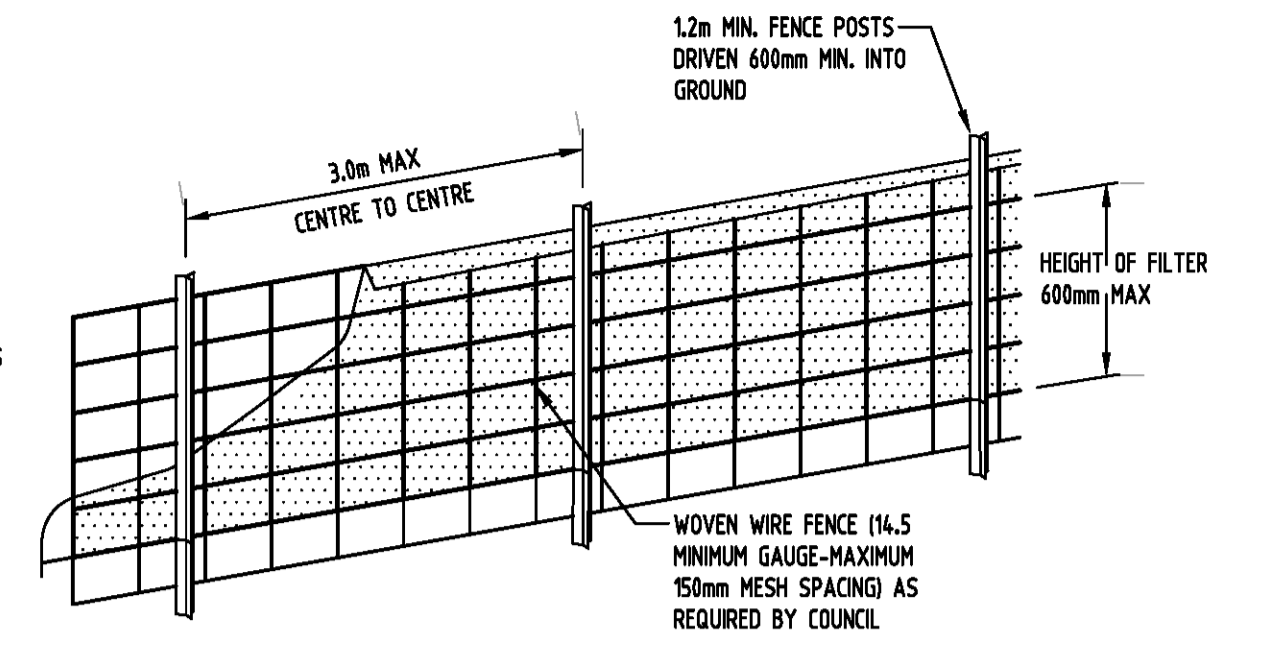
1. CONTRACTOR SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE OF THE WORKS. THE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HIMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
2. EXISTING DRAINS LOCATED WITHIN THE SITE SHALL ALSO BE ISOLATED BY SEDIMENT FENCING MATERIAL.
3. NO PARKING OR STOCKPILING 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

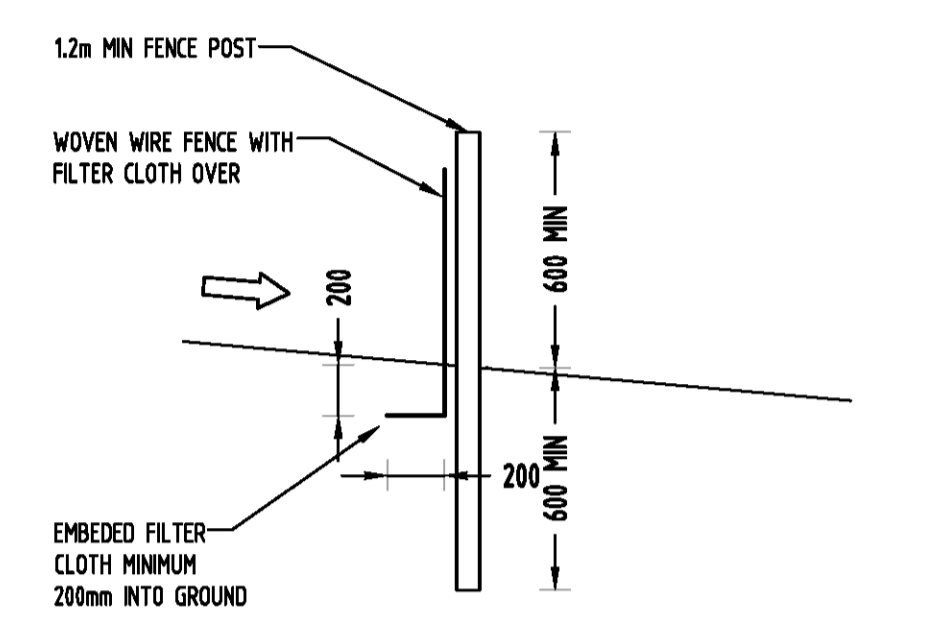
1. THIS PLAN IS A CONCEPT PLAN ONLY FOR STORMWATER DISPOSAL & EROSION CONTROL. IT IS NOT SUITABLE FOR CONSTRUCTION. THIS PLAN SHOULD BE ADAPTED BY THE BUILDER DURING DEMOLITION, EXCAVATION & CONSTRUCTION PHASES TO ENSURE ADEQUATE PERFORMANCE.
2. ALL DRAINAGE LAYOUT & DETAILS ARE DIAGRAMMATIC & INDICATIVE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

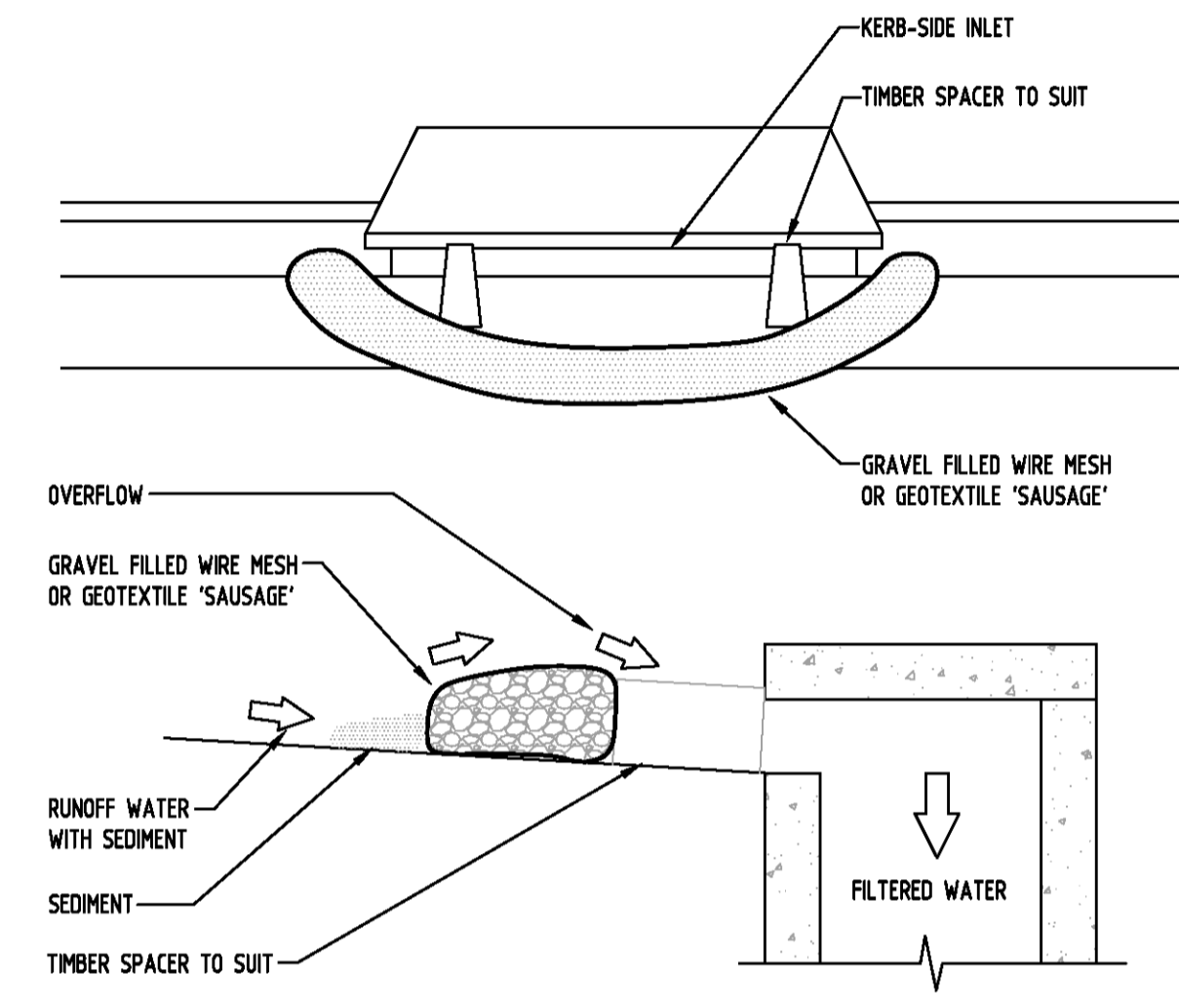


TYPICAL SECTION

SEDIMENT FENCE
NOT TO SCALE

GEOTEXTILE INLET FILTER

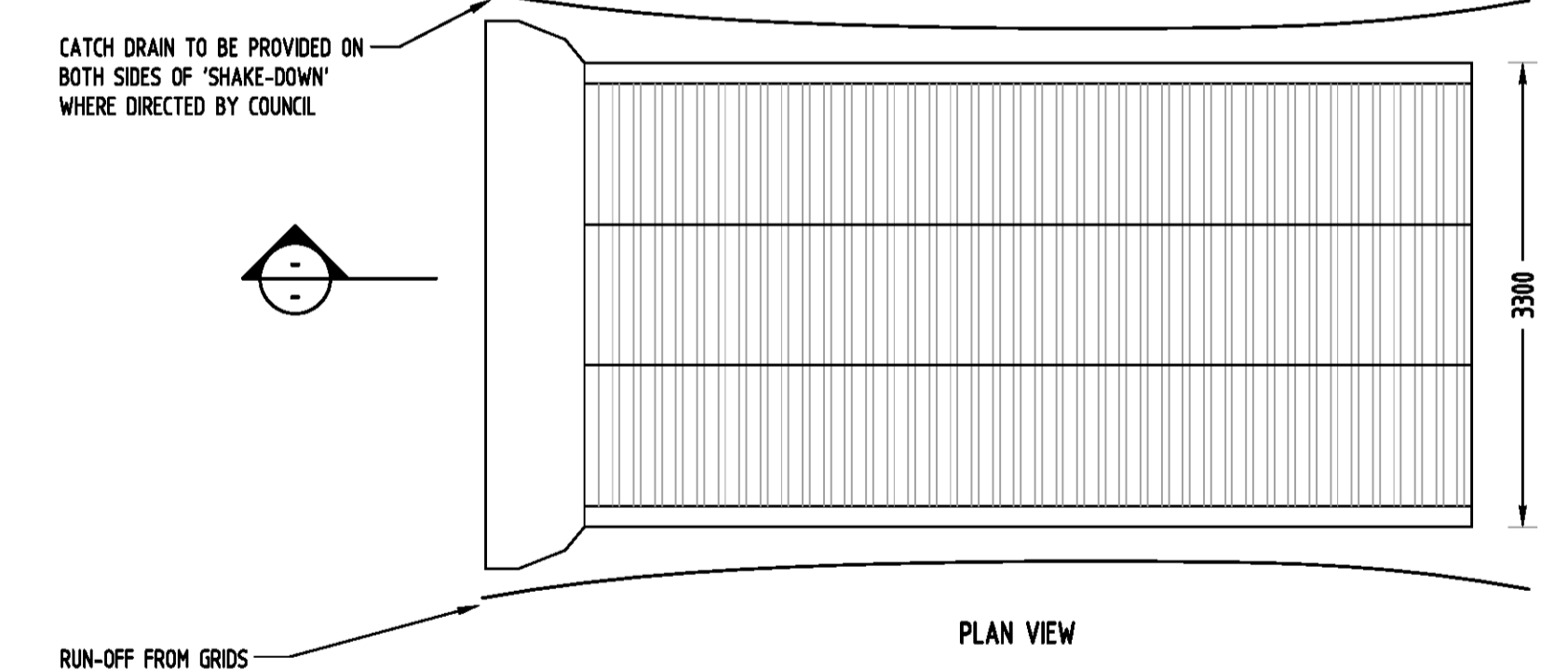
GEOTEXTILE INLET FILTER IS PLACED IN EVERY PIT WITHIN THE SITE TO ENSURE THE RUNOFF WATER DURING CONSTRUCTION NOT ENTER THE PITS.



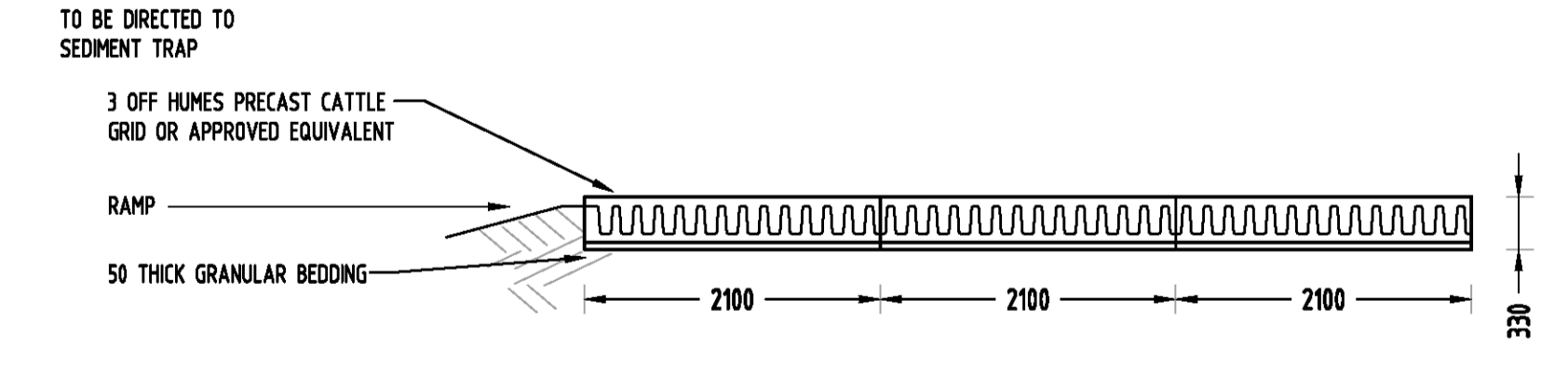
CONSTRUCTION NOTES:

- 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

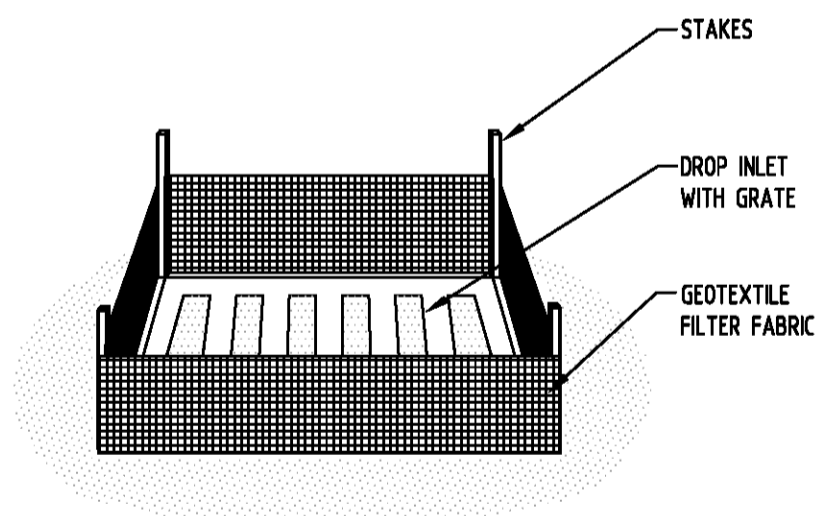
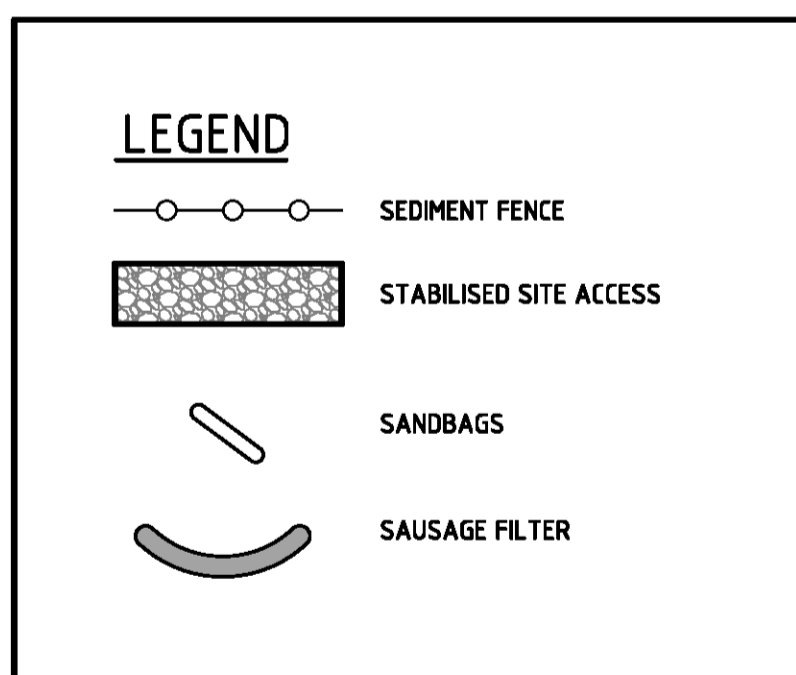


PLAN VIEW

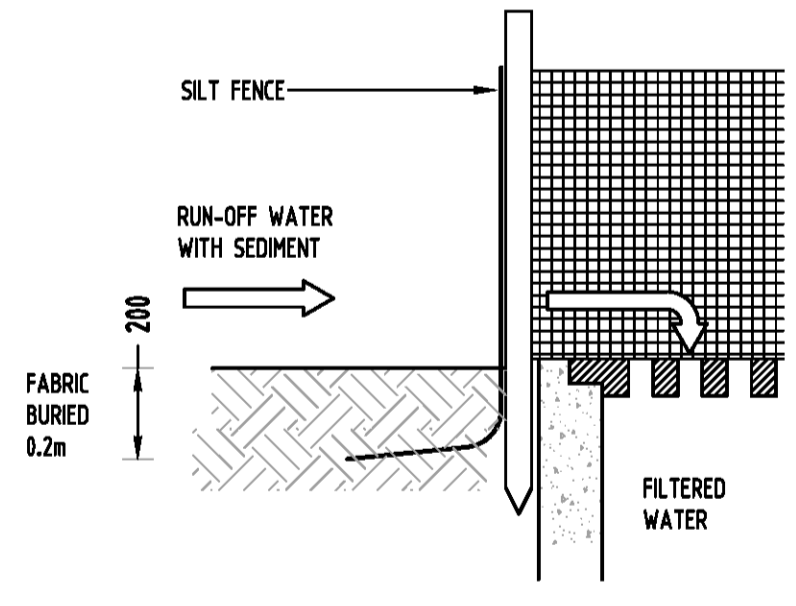


TYPICAL SECTION

'CATTLE GRID' ALTERNATIVE
TEMPORARY CONSTRUCTION EXIT
NOT TO SCALE



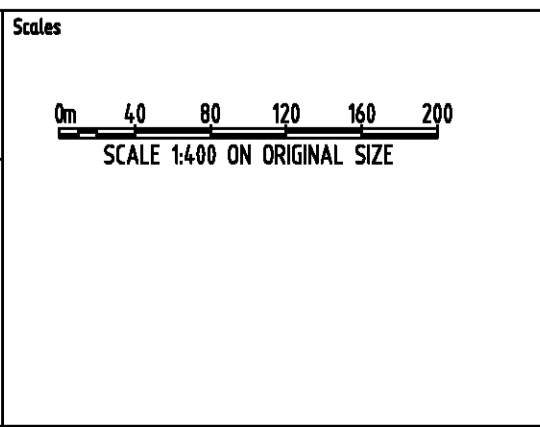
GEOTEXTILE INLET FILTER
NOT TO SCALE



Issue	Last revision title	by	Date	Status
D	ISSUE FOR DA	MN	27.07.21	1
C	ISSUE FOR DA	MN	09.07.21	1
B	ISSUE FOR DA	MN	18.12.20	1
P4	ISSUE FOR DA	MN	04.11.20	1
P3	ISSUE FOR DA	MN	27.10.20	1
A	ISSUE FOR DA	FZ	25.05.2019	2
P2	PRELIMINARY	FZ	25.05.2019	1
P1	PRELIMINARY	FZ	27.08.2019	1

Discipline	Drawing Title and Number	Date	Rev.
LANDS			
CIVIL			
SURVEY			

QUALITY CONTROL	DATE	DATE
DRAWN	MN	DATE 27.07.21
CHECKED	SH	DATE 27.07.21
DESIGNED	MN	DATE 27.07.21
VERIFIED	SH	DATE 27.07.21
APPROVED	SH	DATE 27.07.21



CLIENT
GREATER WESTERN GROUP P/L

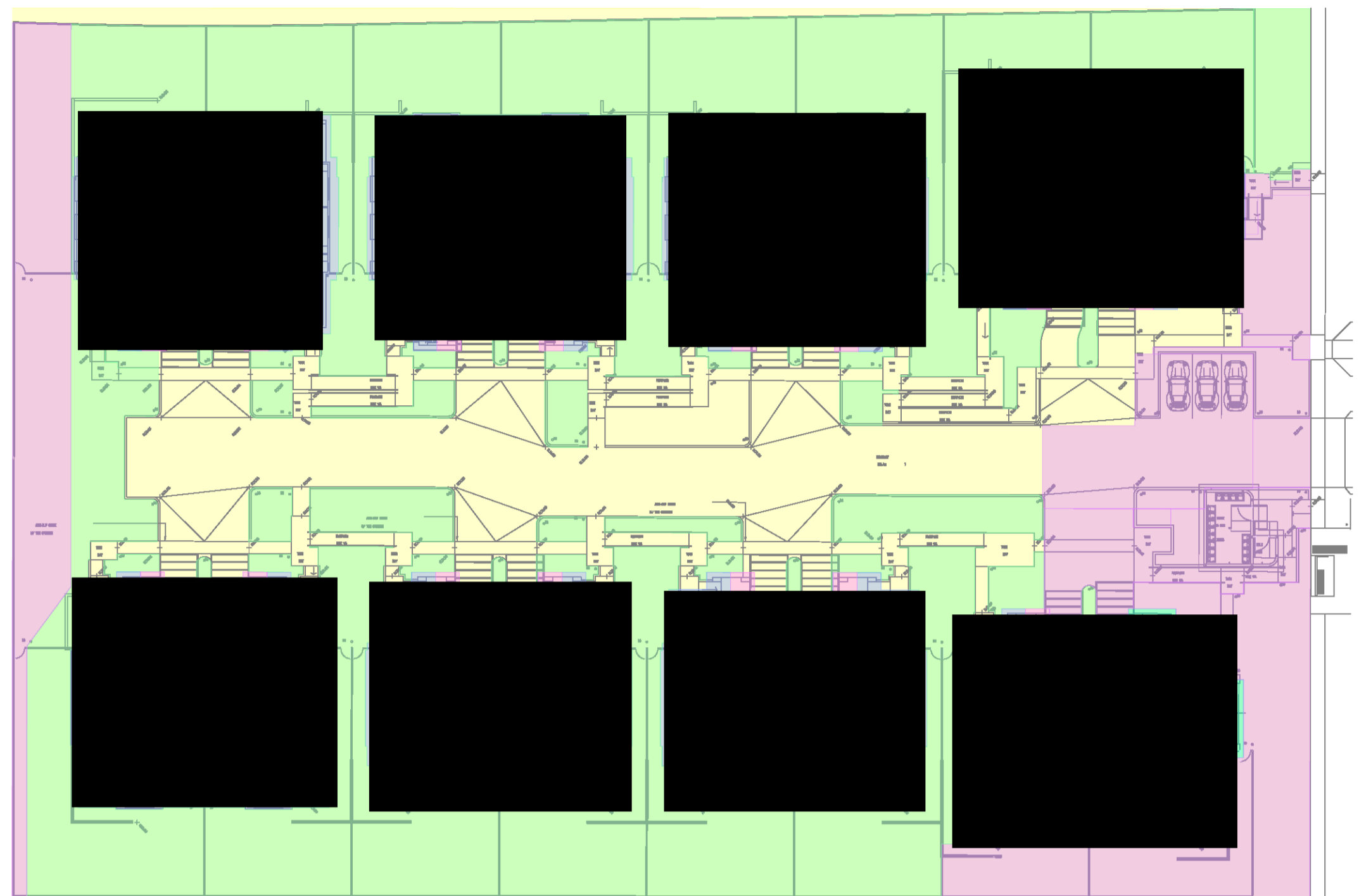
ARCHITECT
ALVARO

SGC
Engineering Value

PROJECT
PROPOSED SENIORS HOUSING DEVELOPMENT
103-109 LAYCOCK STREET, CRANE BROOK

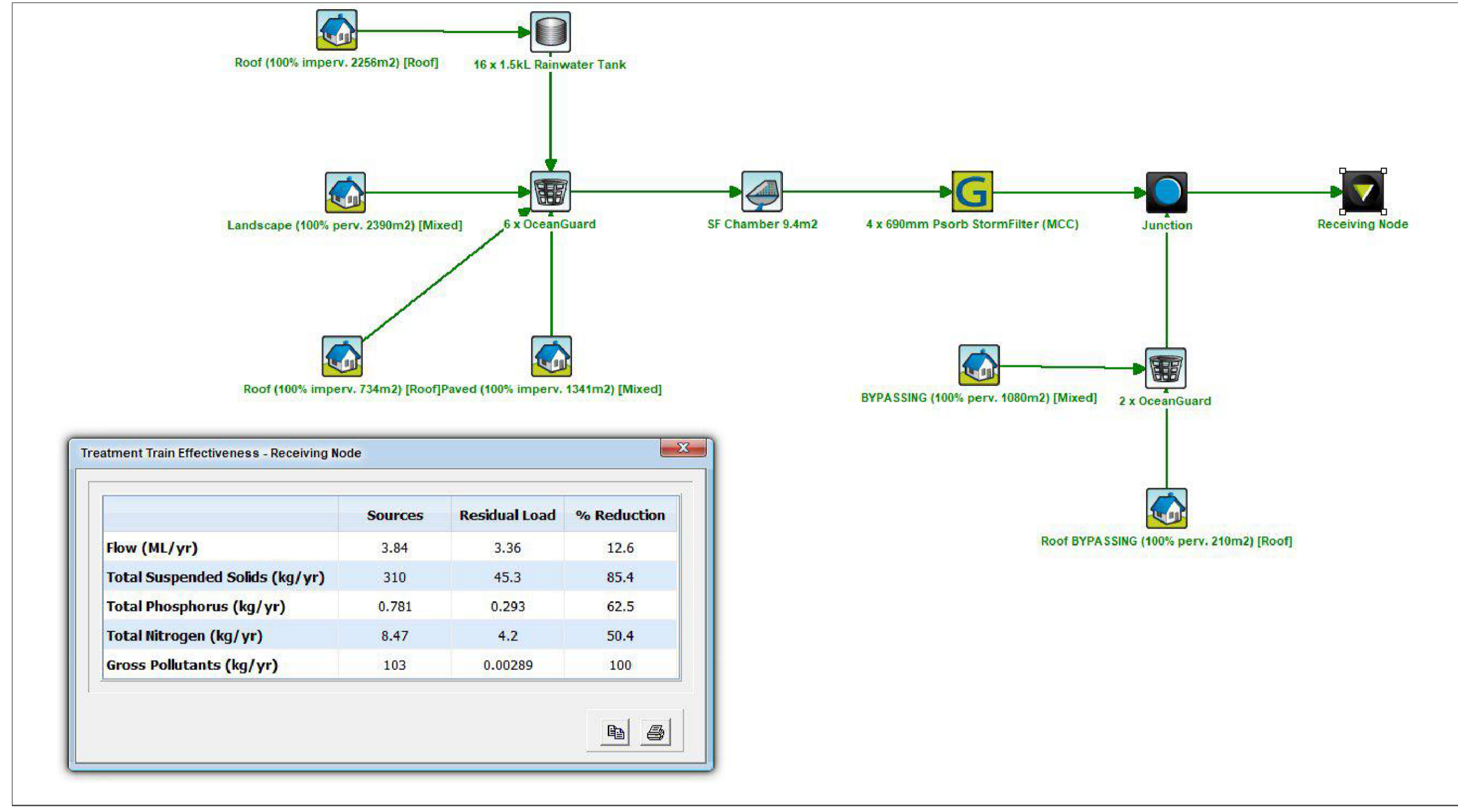
Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	6 OF 7	AS SHOWN

Drawing Status	FOR APPROVAL
Drawing Title	NOT TO BE USED FOR CONSTRUCTION PURPOSES
Drawing Title	EROSION AND SEDIMENT CONTROL PLAN AND DETAILS
Project No	Drawing No
20190170	SW400
Revision No	D

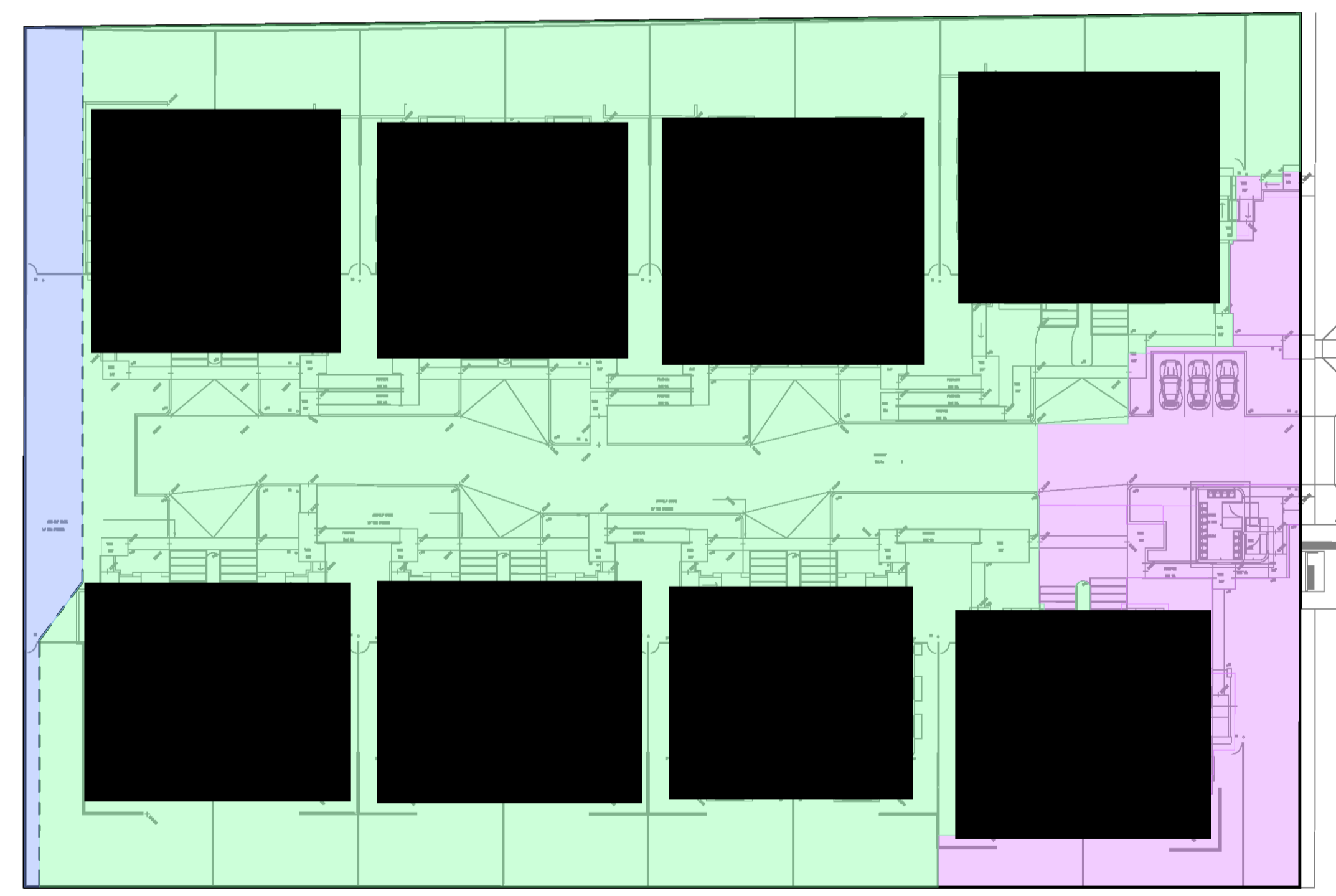


- ROOF AREA TO OCEANGUARD & SF (734m²)
- ROOF AREA TO RAINWATER TANK, OCEANGUARD AND SF (2256m²)
- LANDSCAPING AREA TO OCEANGUARD & SF (2390m²)
- BYPASS AREA (1080m²)
- ROOF BYPASSING (210m²)
- PAVED AREA TO SF (1341m²)

MUSIC CATCHMENT PLAN
SCALE 1:400

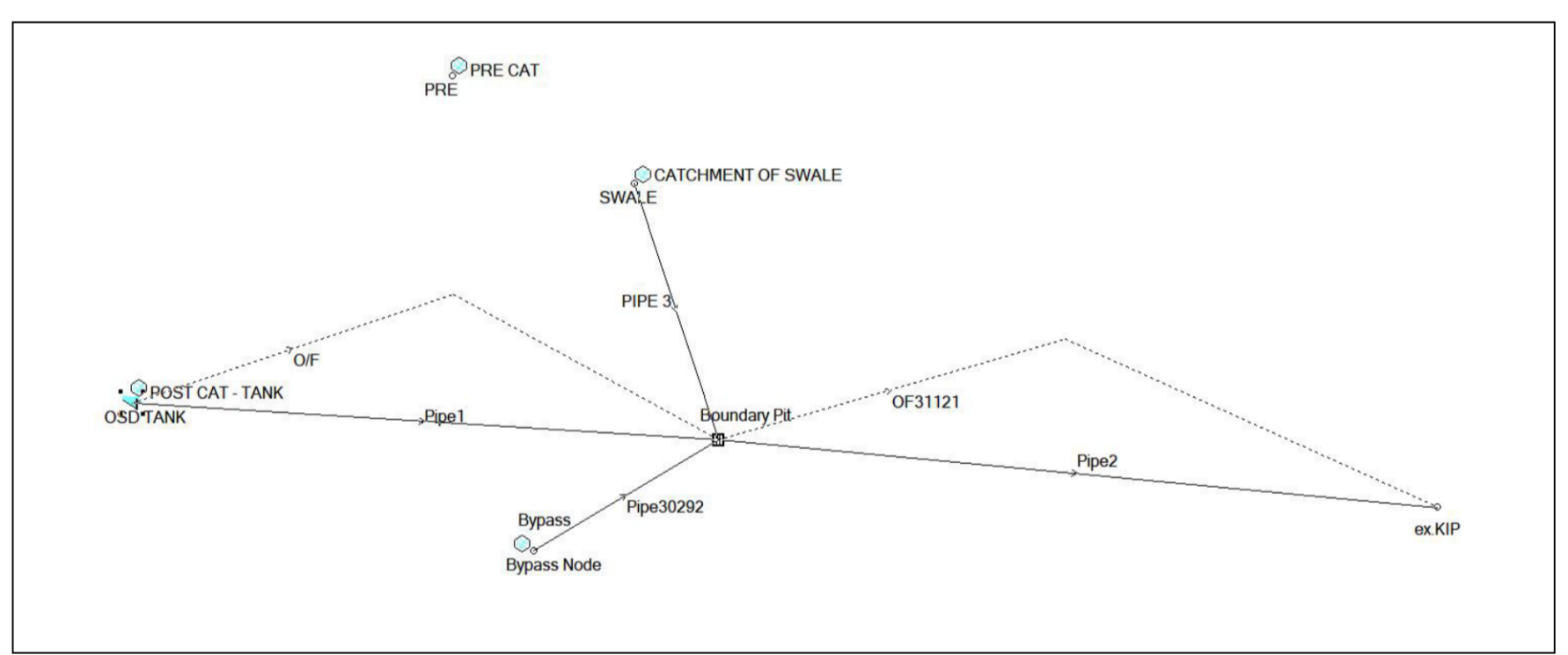


MUSIC RESULTS

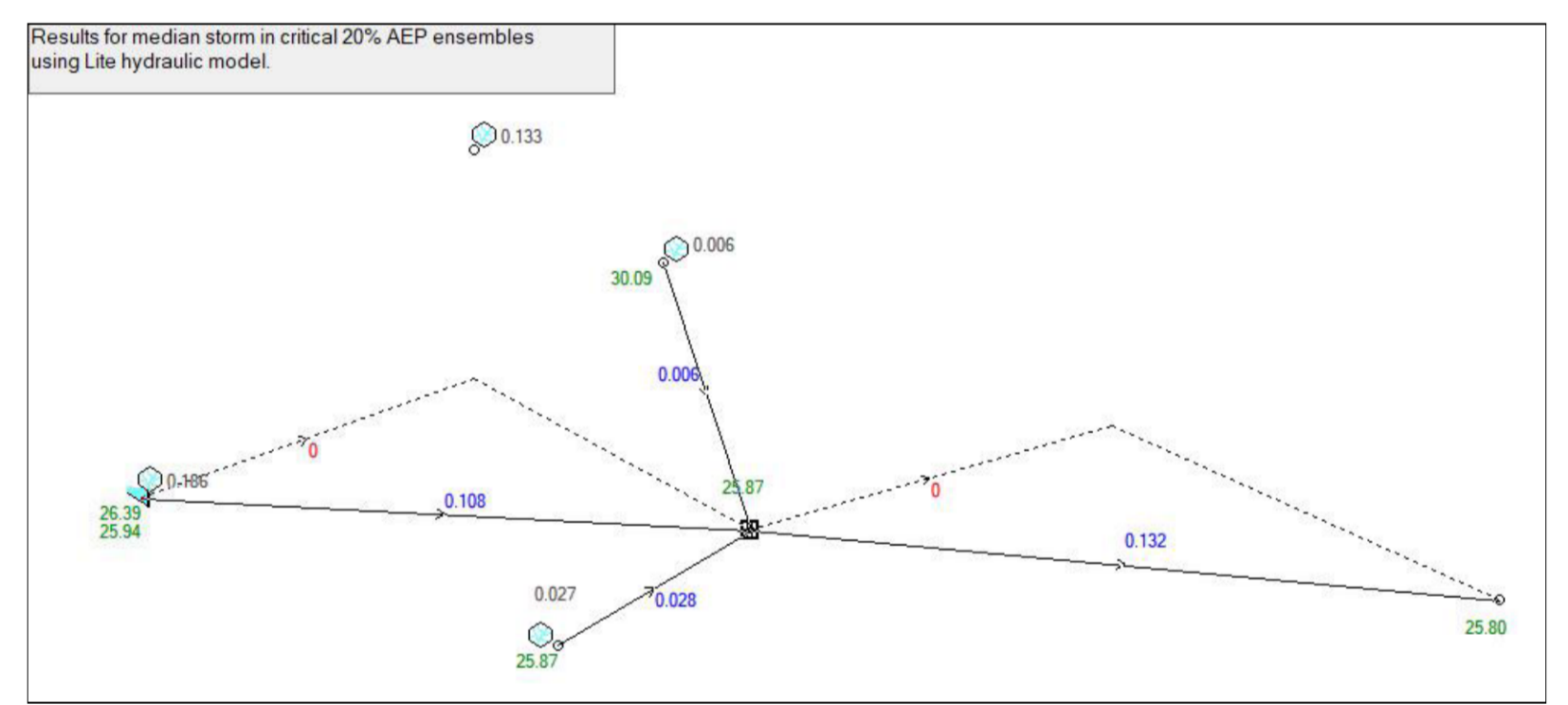


- AREA INTO OSD TANK (6717m²)
- BYPASSING AREA (1016m²)
- BYPASSING AREA THROUGH SWALE (276m²)

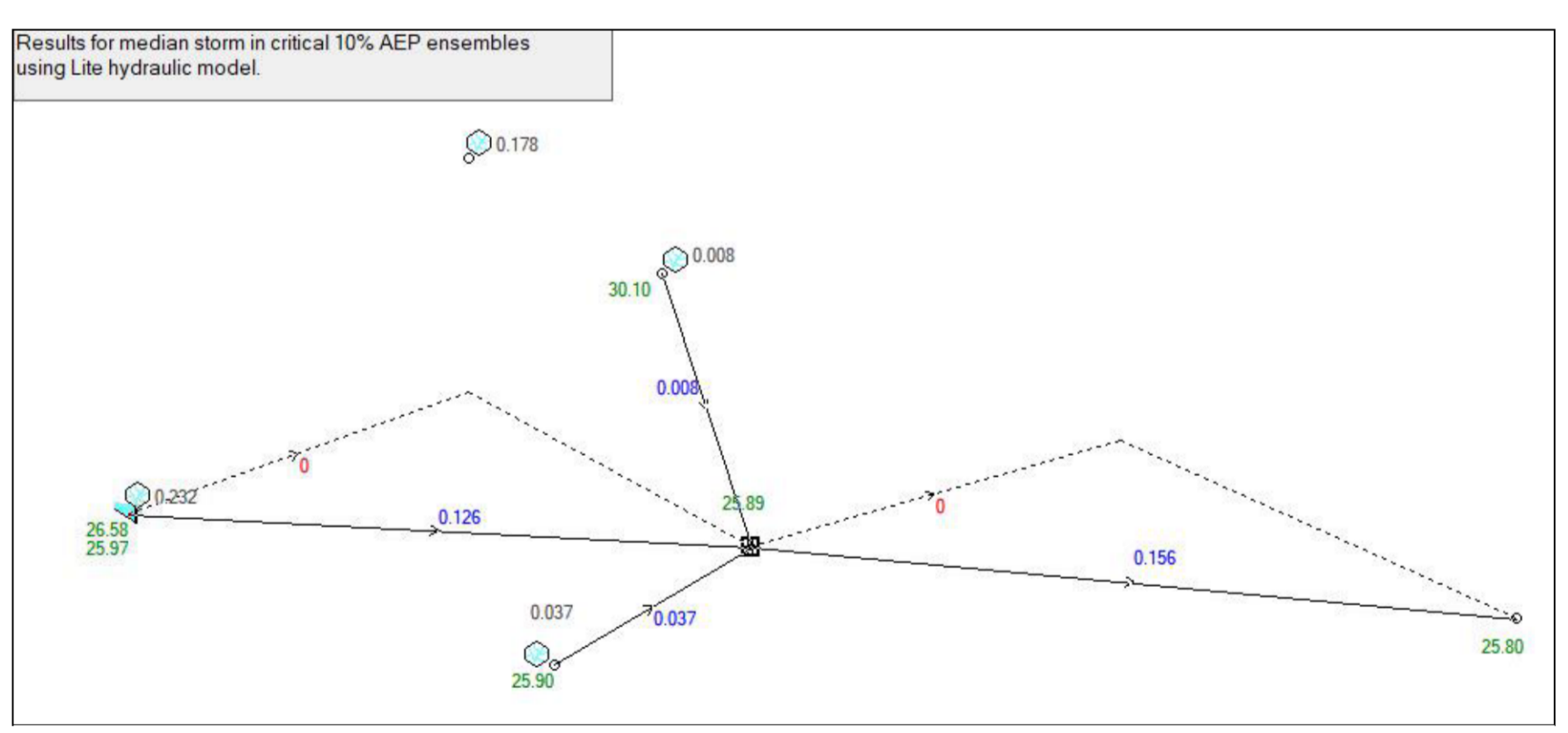
OSD CATCHMENT PLAN
SCALE 1:400



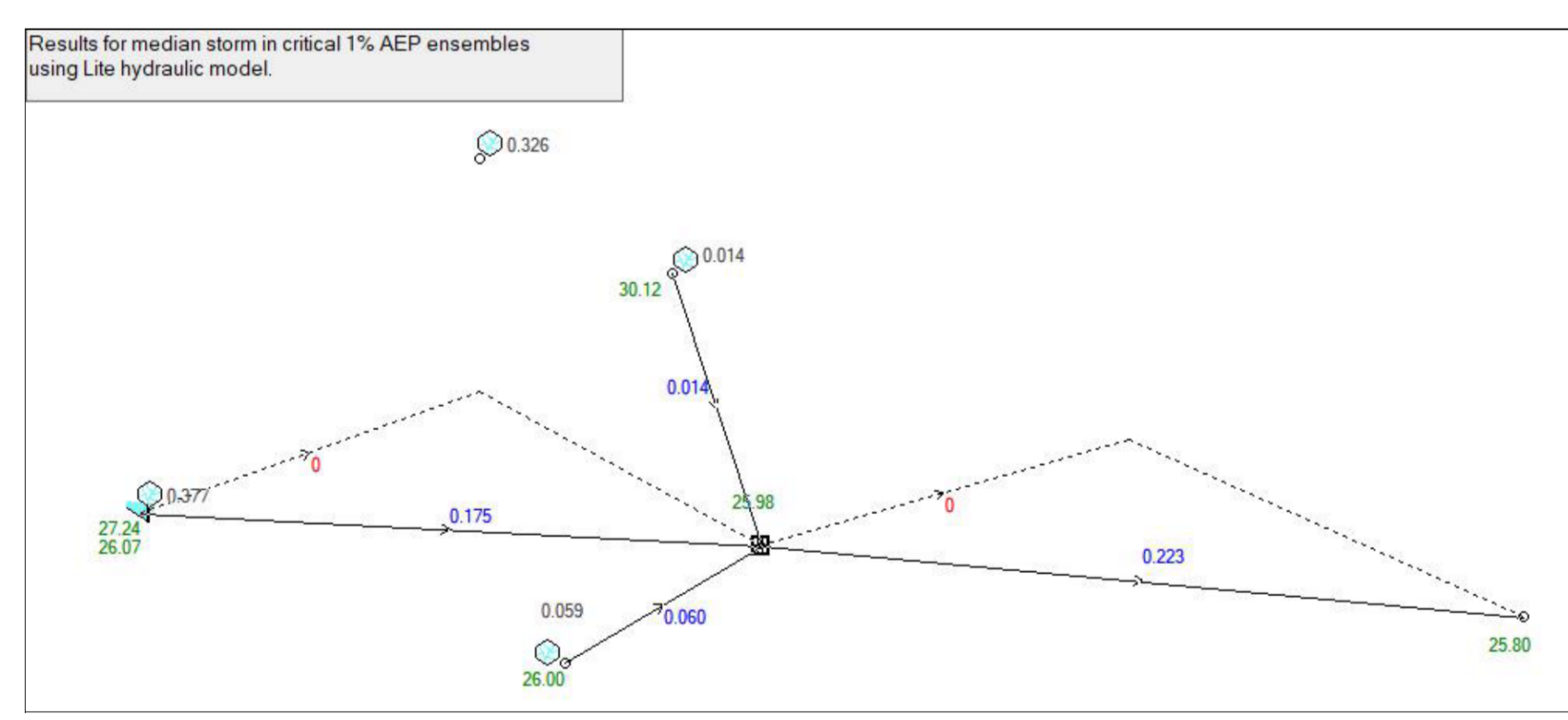
DRAINS MODEL



DRAINS RESULTS - 20% AEP



DRAINS RESULTS - 10% AEP



DRAINS RESULTS - 1% AEP

Issue No	Issue Description	Discipline	Date	Status
D	ISSUE FOR DA	MN	27.07.21	1
C	ISSUE FOR DA	MN	09.07.21	1
B	ISSUE FOR DA	MN	18.12.20	1
P4	ISSUE FOR DA	MN	06.11.20	1
P3	ISSUE FOR DA	MN	27.10.20	1
A	ISSUE FOR DA	FZ	25.09.2019	2
P1	PRELIMINARY	FZ	25.09.2019	1
P1	PRELIMINARY	FZ	27.08.2019	1

Discipline	Date	Rev.
STRUCT	27.07.21	1
MEDI	27.07.21	1
ELEC	27.07.21	1
HYD	27.07.21	1
LANDS	27.07.21	1
CIVIL	27.07.21	1
SURVEY	27.07.21	1

Quality Control	Date
DRAWN	27.07.21
CHECKED	27.07.21
DESIGNED	27.07.21
VERIFIED	27.07.21
APPROVED	27.07.21

WARNING: THE DESIGN, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD.

CLIENT
GREATER WESTERN GROUP P/L

ARCHITECT
ALVARO

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 SENIORS HOUSING DEVELOPMENT
103-109 LAYCOCK STREET,
CRANE BROOK

Drawing Status: **FOR APPROVAL**
NOT TO BE USED FOR CONSTRUCTION PURPOSES
Drawing Title: **STORMWATER CONCEPT DESIGN MUSIC CATCHMENT AND OSD CATCHMENT PLAN**
Project No: **20190170**
Drawing No: **SW500**
Revison No: **D**