

62-62A COPELAND STREET, LIVERPOOL PROPOSED RESIDENTIAL FLAT BUILDING

STORMWATER CONCEPT PLANS



LOCALITY PLAN
N.T.S

DRAWING INDEX	
Drawing No.	DESCRIPTION
000	COVER SHEET PLAN
101	STORMWATER CONCEPT PLAN BASEMENT LEVEL 2 SHEET 1 OF 2
102	STORMWATER CONCEPT PLAN BASEMENT LEVEL 2 SHEET 2 OF 2
103	STORMWATER CONCEPT PLAN BASEMENT LEVEL 1
104	STORMWATER CONCEPT PLAN GROUND LEVEL
105	ON-SITE DETENTION DETAILS AND CALCULATION SHEET
106	CATCHMENT PLAN AND MUSIC RESULTS
107	SEDIMENT & EROSION CONTROL PLAN & DETAILS
108	MAINTENANCE SCHEDULE & MISCELLANEOUS DETAILS

NOT FOR CONSTRUCTION

					Architect CDArchitects Level 2, 60 Park Street, Sydney NSW 2000 P: 02 9267 2000 W: www.cdarchitects.com.au					Council Liverpool City Council					Scale					 C & S ENGINEERING SERVICES CIVIL & STORMWATER ENGINEERING SERVICES PTY LTD ABN: 27 644 422 506 Shop 1, 143-147 Parramatta Road, Concord, NSW 2137 P:(02) 8397 6500 E:info@esgconsult.com.au					Project 62-62A COPELAND STREET, LIVERPOOL PROPOSED RESIDENTIAL FLAT BUILDING STORMWATER CONCEPT PLAN DEVELOPMENT APPLICATION					Drawing Title COVER SHEET PLAN																													
A					ISSUE FOR DEVELOPMENT APPLICATION					17/03/2023					MGH					EH					OC					P: 02 9267 2000 W: www.cdarchitects.com.au					Scale N.T.S.					A1					Project No. 230020					Dwg. No. 000					Issue A				

LEGEND

- PROPOSED STORMWATER
- VD Ø100mm VERTICAL DROP
- SURFACE FLOW DIRECTION
- SS — SS — Ø100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34 @ MIN 1.0% SLOPE
- ⊙ CLEANING EYE (OR INSPECTION EYE)
- IO INSPECTION OPENING
- × RL 27.56 FINISHED SURFACE LEVEL
- ▬ GRATED DRAIN (HD)
- FG Ø150mm FLOOR GRATE (HD) (HEAVY DUTY)

DANGER

WHEN EXCAVATING WITHIN ANY SITE, FOOTPATH AND ROADWAY, ALL SERVICES SHALL BE LOCATED PRIOR TO COMMENCEMENT OF THE EXCAVATION WORKS.

CONTACT "DIAL BEFORE YOU DIG" ON PHONE No. 1100 OR GO TO THE WEB SITE

"www.1100.com.au"

WARNING

PUMP OUT SYSTEM FAILURE IN BASEMENT WHEN LIGHT IS FLASHING AND SIREN SOUNDING

BASEMENT PUMP OUT FAILURE WARNING SIGN

SIGN SHALL BE PLACED IN A CLEAR AND VISIBLE LOCATION WHERE VEHICLES ENTER THE BASEMENT

COLOURS:

"WARNING" = RED
BORDER AND OTHER LETTERING = BLACK

CONFINED SPACE DANGER SIGN

A) A CONFINED SPACE DANGER SIGN SHALL BE POSITIONED IN A LOCATION AT ALL ACCESS POINTS, SUCH THAT IT IS CLEARLY VISIBLE TO PERSONS PROPOSING TO ENTER THE BELOW GROUND TANK'S CONFINED SPACE.

B) MINIMUM DIMENSIONS OF THE SIGN - 300mm x 450mm (LARGE ENTRIES, SUCH AS DOORS) - 250mm x 180mm (SMALL ENTRIES SUCH AS GRATES & MANHOLES)

C) THE SIGN SHALL BE MANUFACTURED FROM COLOUR BONDED ALUMINUM OR POLYPROPYLENE

D) SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN

COLOURS:

"DANGER" & BACKGROUND = WHITE
ELLIPTICAL AREA = RED
RECTANGLE CONTAINING ELLIPSE = BLACK
BORDER AND OTHER LETTERING = BLACK

DANGER

CONFINED SPACE
NO ENTRY WITHOUT
CONFINED SPACE
TRAINING

MOORE

STREET

STREET

COPELAND

BASEMENT 2 PLAN

SCALE 1:100

PUMP HOLDING TANK
CAPACITY 14m³
AREA 4.0m x 3.5m = 14.00m²
AVG DEPTH 1.00m
IL 7.73
TWL 8.98

ALLOW FOR 150mm GAP BETWEEN WET WALL AND FIRE STAIRS/ LANDING

ALLOW FOR PLANT ROOM WALL TO SIT ABOVE PROPOSED HOB

GREEN HATCH DENOTING LOCATION OF 450x450 PUMP SUMP

SUGGESTED LOCATION OF PUMP CONTROL PANEL

PROVIDE PUMP FAILURE WARNING SIGN, FLASHING STROBE LIGHT AND SIREN ON WALL

NOTE

FOR CLEANING OPENINGS (CO) BEHIND STORAGE CAGES, ALLOW 600x600 OPENING WITHIN THE REAR MESH FOR MAINTENANCE PURPOSES.

NOTE

ALLOW FOR 600x600 ACCESS TO CLEANING OPENINGS (CO) BETWEEN WET WALLS AND ROOMS WALLS. FOR FIRE COMPARTMENTS, ACCESS HATCH TO COMPLY WITH FIRE CONSULTANT'S REQUIREMENTS

NOTE

PROVIDE 100mm DEEP LAYER OF 10mm BLUE METAL AGGREGATE UNDER THE SLAB ON GROUND IN BETWEEN FOOTINGS. REFER DETAIL ON DRAWING 102

NOTE

FIRE COLLARS TO BE APPROVED BY THE CONTRACTOR AND IN ACCORDANCE TO THE FIRE RATING REPORT OF THE FIRE ENGINEER.

NOTE:

ALL STORMWATER DRAINAGE PIPES ARE Ø100 uPVC U.N.O.

PIPES NOTE:

Ø65 PVC @ MIN 1.0%
Ø90 PVC @ MIN 1.0%
Ø100 PVC @ MIN 1.0%
Ø150 PVC @ MIN 1.0%
Ø225 PVC @ MIN 0.5%
Ø300 PVC @ MIN 0.4%
UNLESS NOTED OTHERWISE

NOT FOR CONSTRUCTION

Issue	Description	Date	Designed	Engineer	Checked
B	ISSUE FOR DEVELOPMENT APPLICATION	17/07/2023	MGH	EH	OC
A	ISSUE FOR DEVELOPMENT APPLICATION	17/03/2023	MGH	EH	OC

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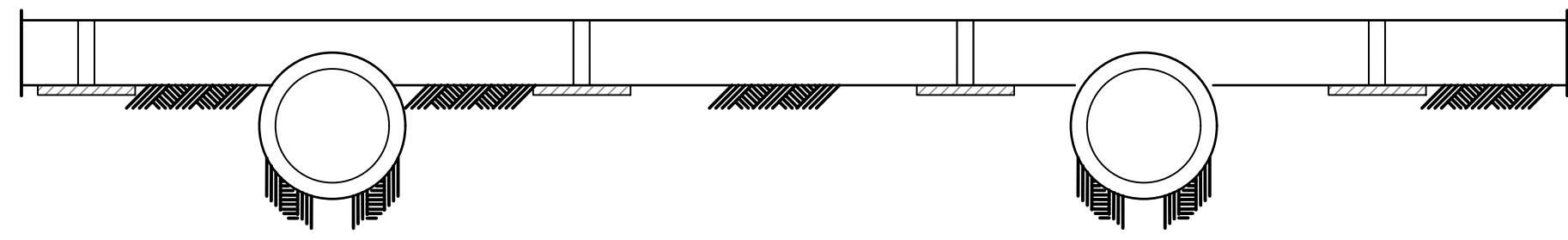
Scale
0 2 4 6 m
SCALE 1:100 @ A1

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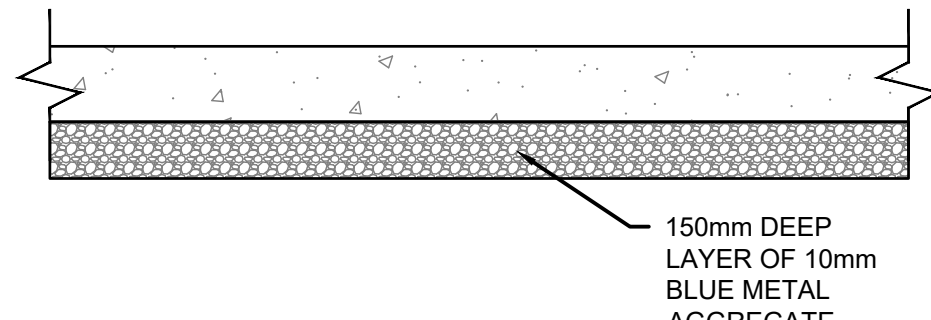
Project
**62-62A COPELAND STREET, LIVERPOOL
PROPOSED RESIDENTIAL
FLAT BUILDING
STORMWATER CONCEPT PLAN
DEVELOPMENT APPLICATION**

Drawing Title	Scale	A1	Project No.	Dwg. No.	Issue
STORMWATER CONCEPT PLAN BASEMENT LEVEL 2 SHEET 1 OF 2	1:100		230020	101	B



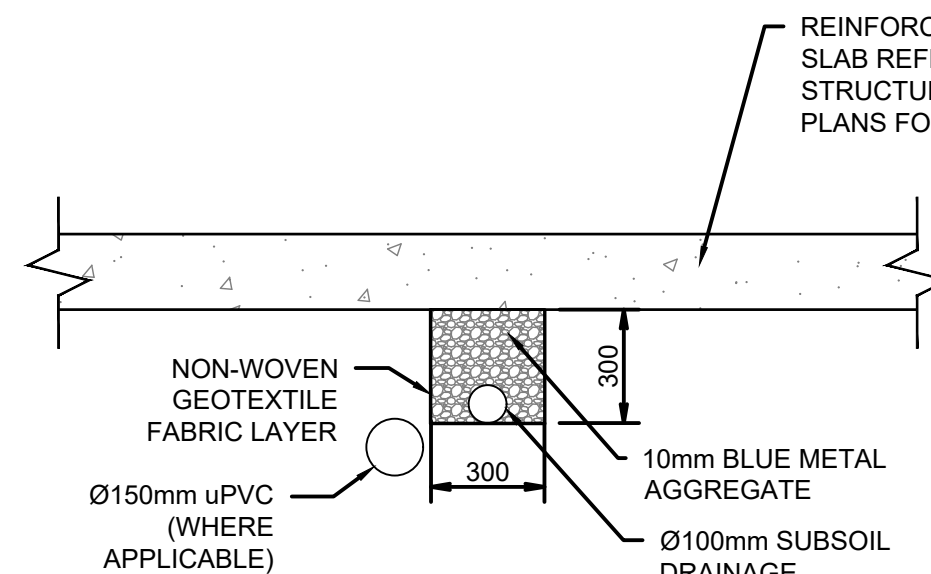
TYPICAL SHOTCRETE WALL PLAN

N.T.S.



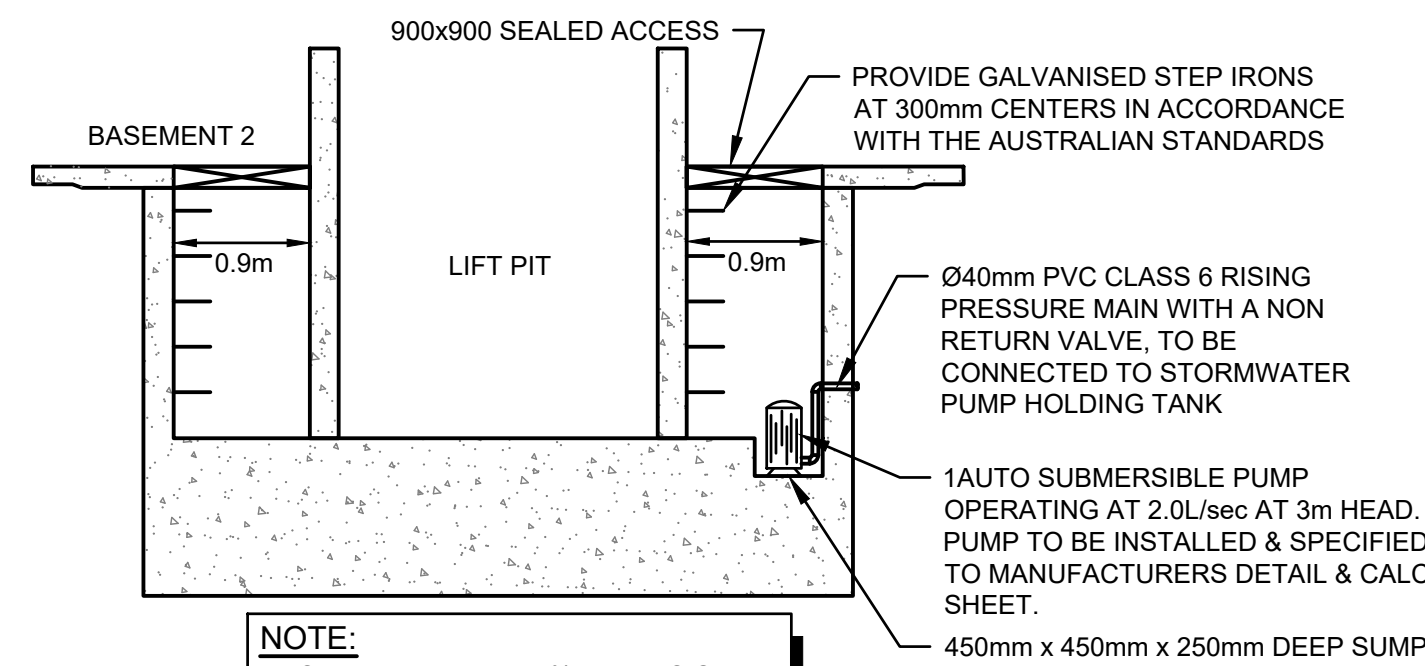
BLUE METAL LAYER DETAIL

N.T.S.



SECTION B

N.T.S.



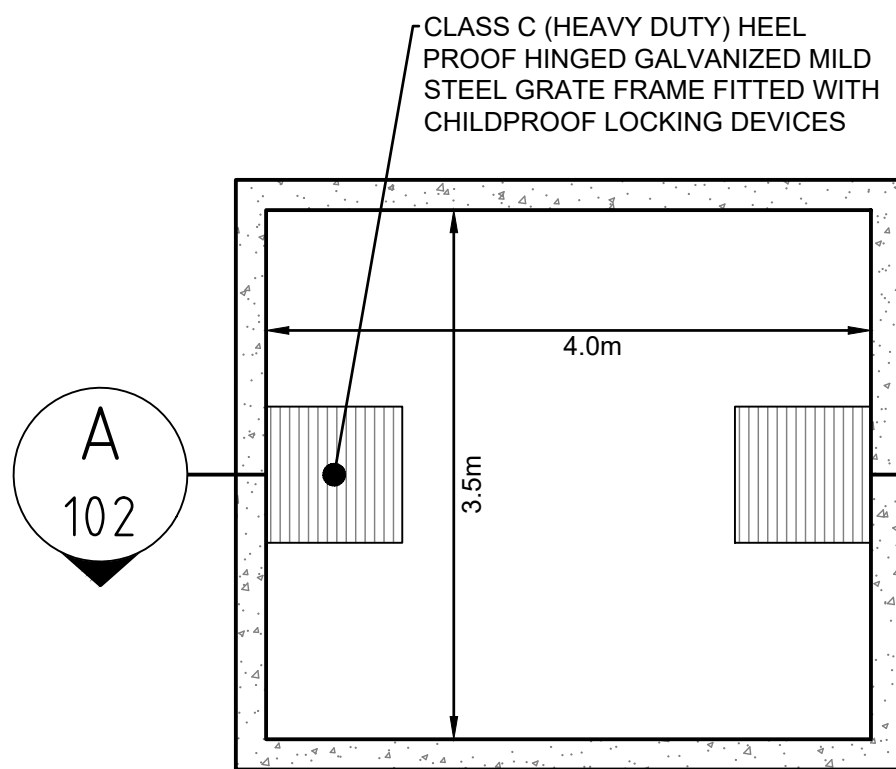
LIFT PIT DRAINAGE DETAIL

N.T.S.



SECTION A
STORMWATER PUMP-OUT SUMP

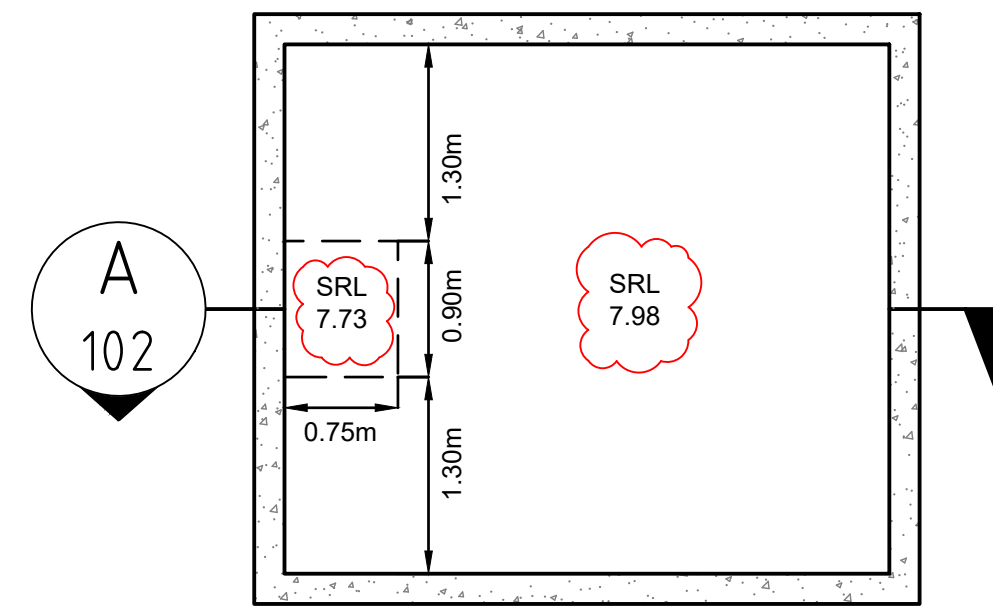
N.T.S.



NOTE:
ALL THE AGG LINES BEHIND BASEMENT WALLS TO BE CONNECTED TO PUMP-OUT SUMP.

PUMP-OUT SUMP DETAIL
PLAN VIEW

SCALE 1:50



PUMP-OUT SUMP DETAIL
SRL

SCALE 1:50

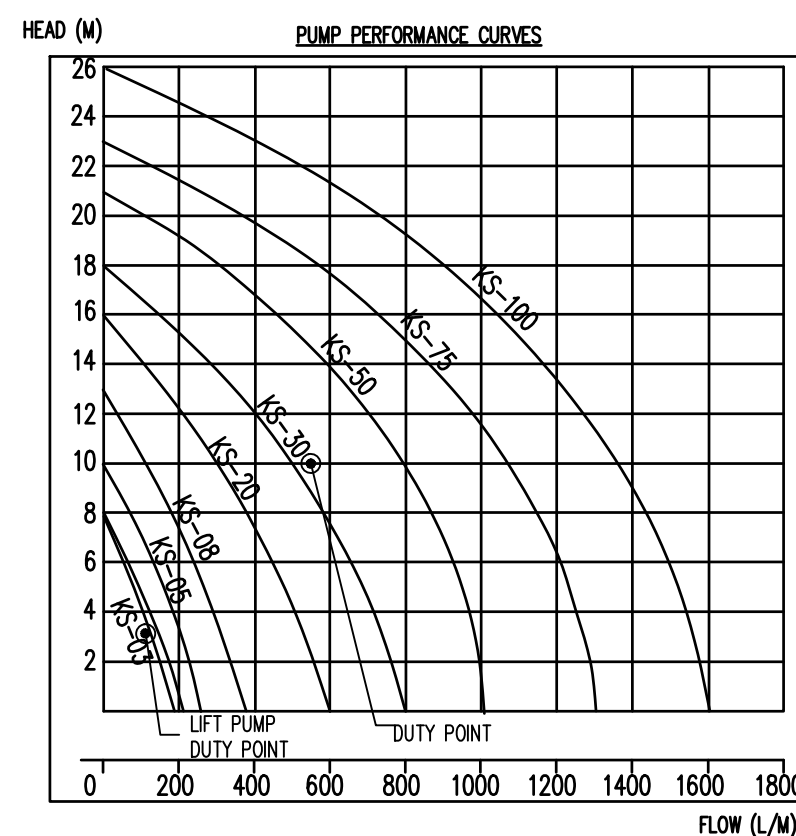
PUMP STORAGE VOLUME CALCULATION

AREA DRAINING TO SUMP= 151.68 m²

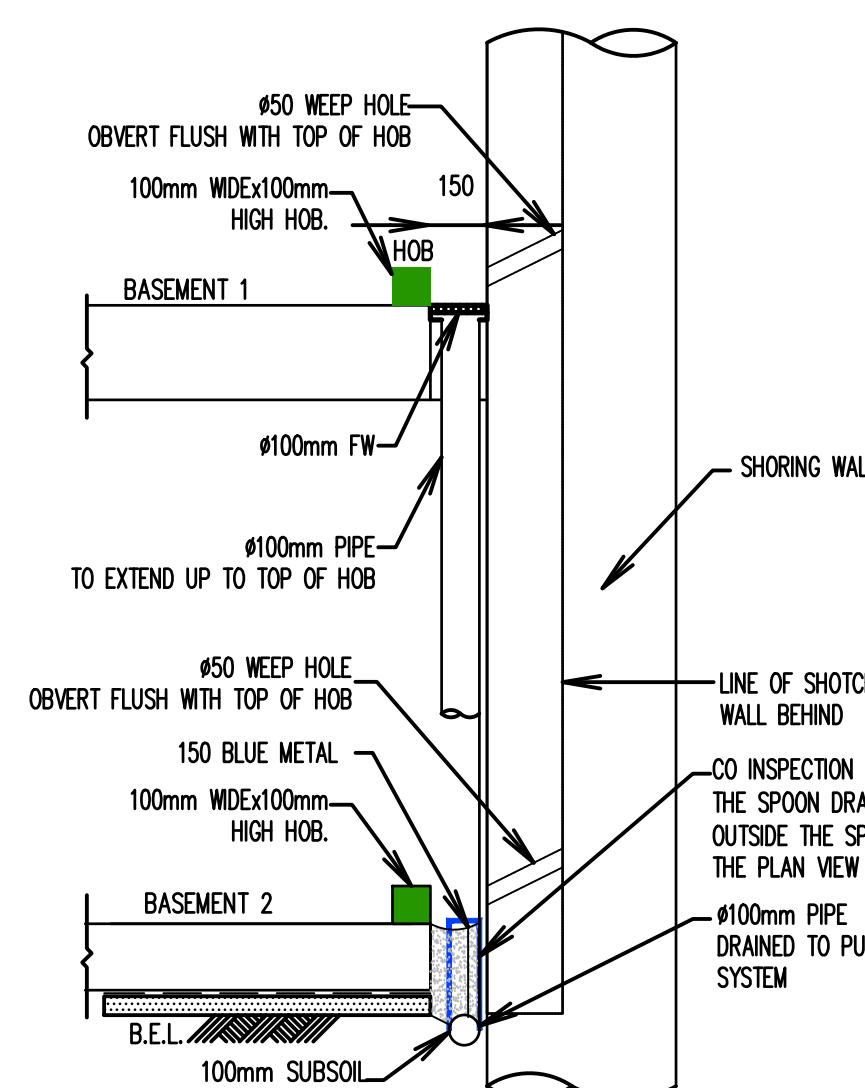
SUMP SIZE BASED ON 50 YEAR 2 HR STORM, I= 41.0 mm/hr,
Q=CIA/3600= 1 x 41.0 x 151.68/3600 = 1.73 L/sec
VOLUME REQUIRED = 1.73x(2x60x60) =12456L = 12.46m³
STORAGE PROVIDED 4.0x3.5x1.00= 14.00m³

PUMP OUT RATE BASED ON 100YR 5MIN STORM, I=222 mm/hr
(MIN RATE REQUIRED AS PER AS3500.3 IS 10 L/sec)
Q=CIA/3600= 1 x 222 x 151.68/3600 = 9.35 L/sec

DUAL KS-50 PUMP OR EQUIVALENT TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL WHICH WILL ALLOW FOR THE PUMP TO OPERATE ALTERNATIVELY ON HIGH LEVEL WITH ALARM AT 15 L/sec AT 10m HEAD

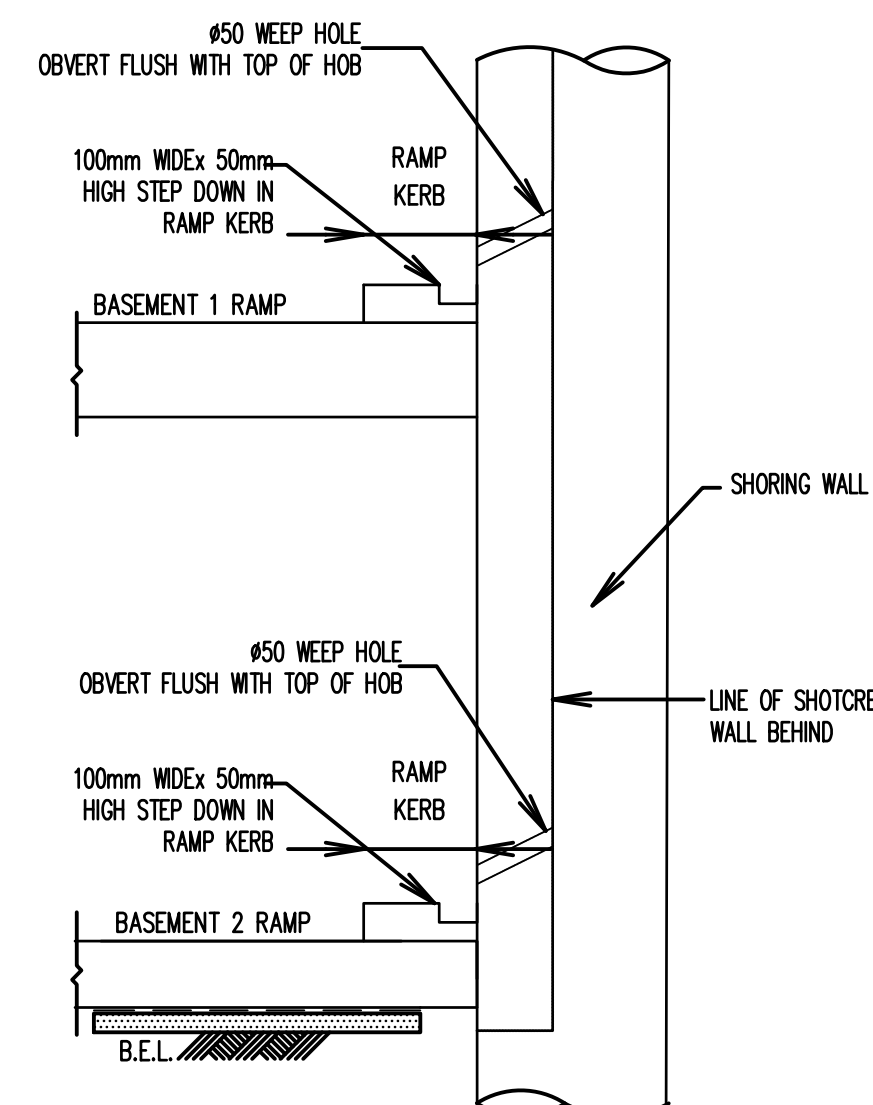


Type	Output		Outlet		Rated Head Capacity		Maximum Head Capacity		Weight	Dimension		
	HP	kW	mm	Inch	M	LPM	M	LPM		L (mm)	W (mm)	H (mm)
KS-03	1/3	0.25	40	1 1/2"	3	130	8	180	9	188	141	305
KS-04	1/2	0.4	50	2"	5	150	8	220	11	218	160	355
KS-05	1/2	0.4	50	2"	5	160	10	250	14	230	155	375
KS-08	1	0.75	50	2"	6	240	13	380	21	290	180	425
KS-20	2	1.5	80	3"	10	300	16	600	31	278	382	475
KS-30	3	2.2	80	3"	10	500	18	800	47	390	250	450
KS-50	5	3.7	100	4"	10	800	21	1100	48	450	240	530
KS-75	7 1/2	5.5	100	4"	15	800	23	1300	60	550	310	590
KS-100	10	7.5	150	6"	18	900	25	1600	70	550	310	610



TYPICAL SPOON DRAIN DETAILS
SECTION A1

N.T.S.



TYPICAL SPOON DRAIN DETAILS AT BASEMENT RAMP

SECTION A2

N.T.S.

NOT FOR CONSTRUCTION

MOORE STREET

STREET

LEGEND

- PROPOSED STORMWATER
- VD Ø100mm VERTICAL DROP
- SURFACE FLOW DIRECTION
- SS Ø100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34 @MIN 1.0% SLOPE
- CLEANING EYE (OR INSPECTION EYE)
- IO INSPECTION OPENING
- RL 27.56 FINISHED SURFACE LEVEL
- GRATED DRAIN (HD)
- FG Ø150mm FLOOR GRATE (HD) (HEAVY DUTY)

NOTE

FOR FLOOR WASTES BEHIND STORAGE CAGES, ALLOW 600x600 OPENING WITHIN THE REAR MESH FOR MAINTENANCE PURPOSES.

NOTE

ALLOW FOR 600x600 ACCESS TO FLOOR WASTES TRAPPED BETWEEN WET WALLS AND ROOMS WALLS. FOR FIRE COMPARTMENTS, ACCESS HATCH TO COMPLY WITH FIRE CONSULTANT'S REQUIREMENTS

NOTE:

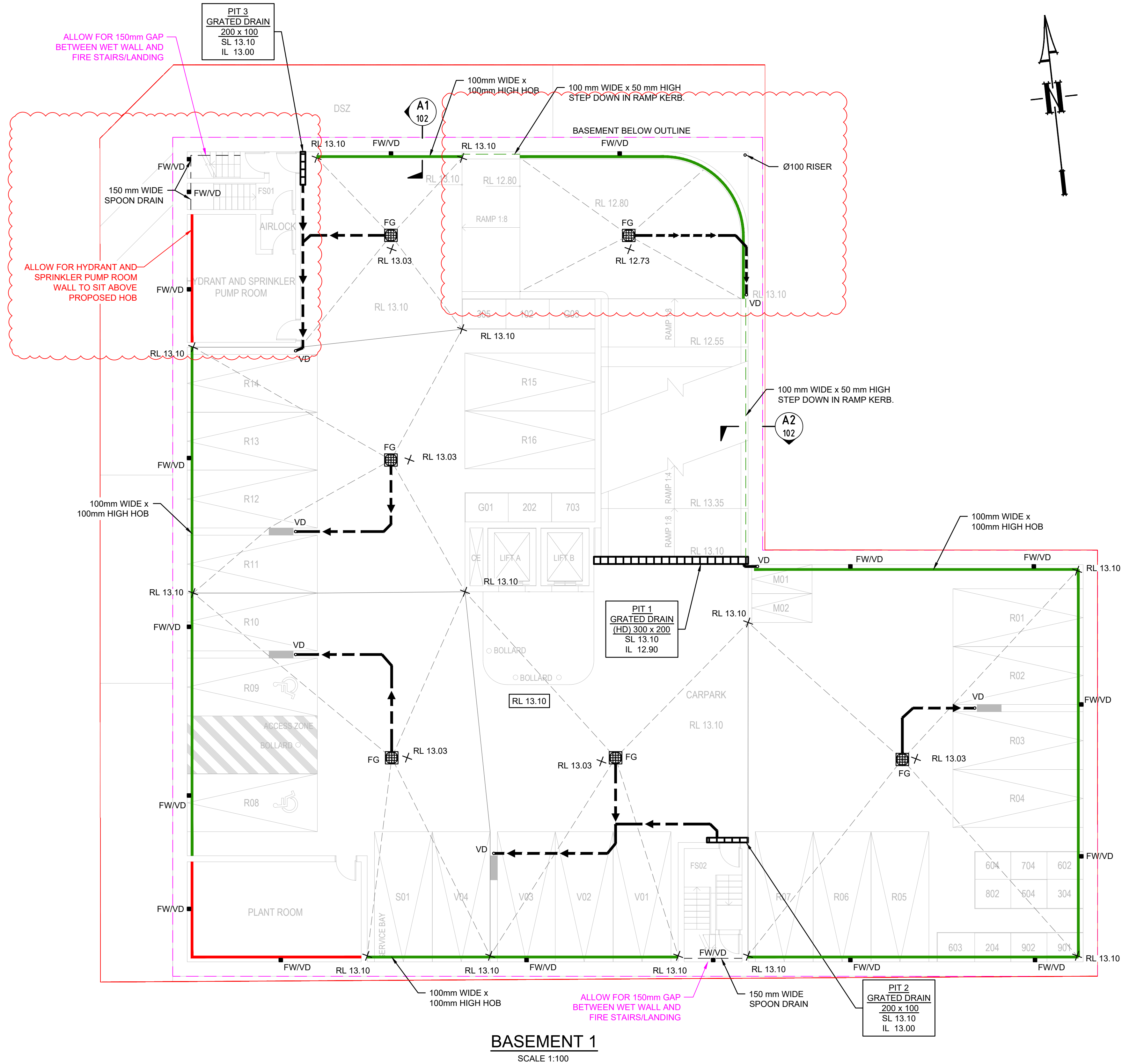
ALL STORMWATER DRAINAGE PIPES ARE Ø100 uPVC U.N.O

NOTE:

ALLOW BENCHING WITHIN SPOON DRAIN TO ACHIEVE MIN 1.0% FALL TO FLOOR WASTES

STREET

COPELAND



BASEMENT 1
SCALE 1:100

NOTE

FIRE COLLARS TO BE APPROVED BY THE CONTRACTOR AND IN ACCORDANCE TO THE FIRE RATING REPORT OF THE FIRE ENGINEER.

PIPES NOTE:

Ø65 PVC @ MIN 1.0%
Ø90 PVC @ MIN 1.0%
Ø100 PVC @ MIN 1.0%
Ø150 PVC @ MIN 1.0%
Ø225 PVC @ MIN 0.5%
Ø300 PVC @ MIN 0.4%
UNLESS NOTED OTHERWISE

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Issue	Description	Date	Designed	Engineer	Checked

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Scale
0 2 4 6 m
SCALE 1:100 @ A1

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Project
**62-62A COPELAND STREET, LIVERPOOL
PROPOSED RESIDENTIAL
FLAT BUILDING
STORMWATER CONCEPT PLAN
DEVELOPMENT APPLICATION**

Drawing Title
**STORMWATER CONCEPTPLAN
BASEMENT LEVEL 1**
Scale 1:100 A1 Project No. 230020 Dwg No. 103 Issue B

LEGEND

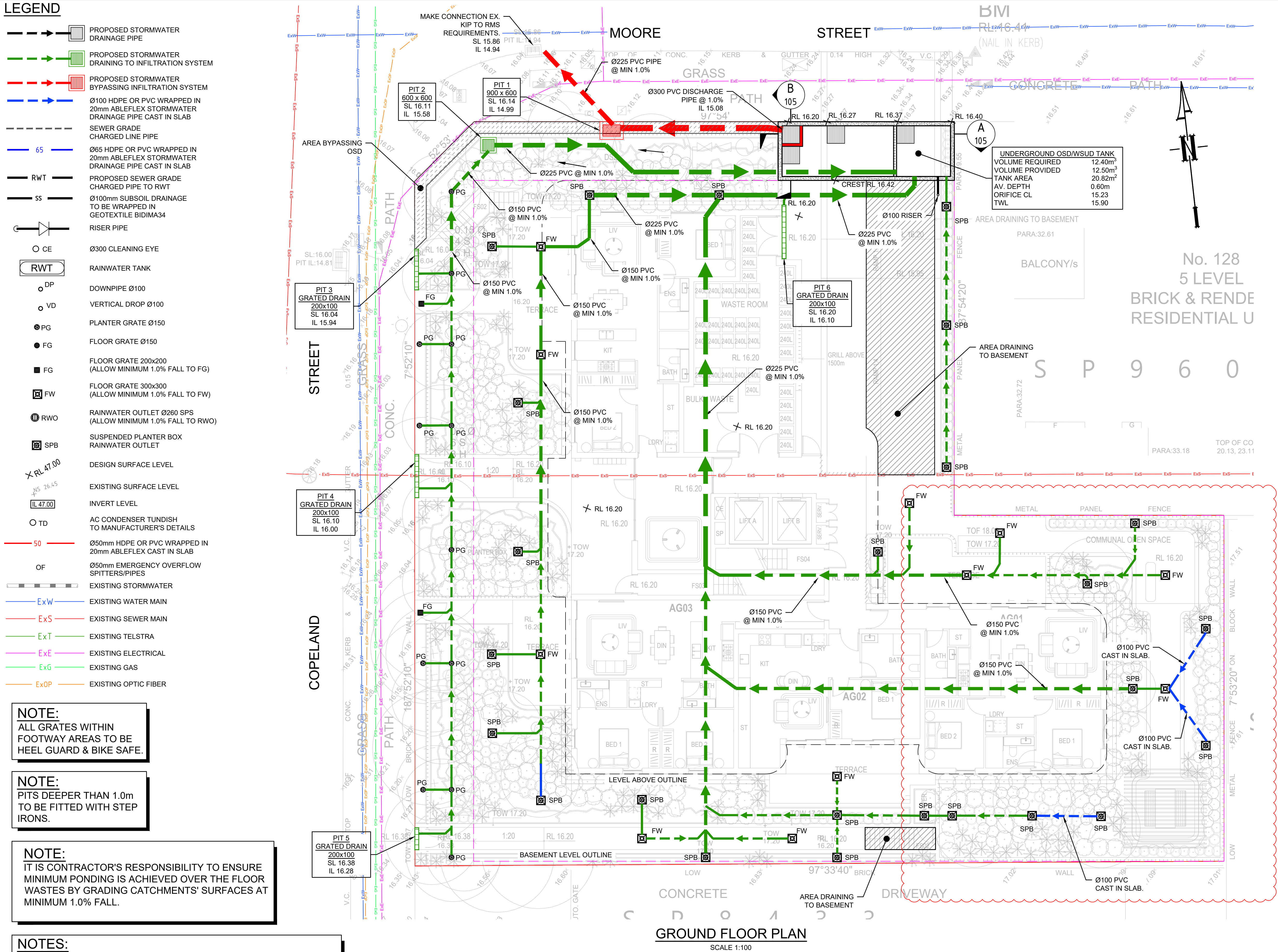
- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED STORMWATER DRAINING TO INFILTRATION SYSTEM
- PROPOSED STORMWATER BYPASSING INFILTRATION SYSTEM
- 0100 HDPE OR PVC WRAPPED IN 20mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- SEWER GRADE CHARGED LINE PIPE
- 065 HDPE OR PVC WRAPPED IN 20mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- PROPOSED SEWER GRADE CHARGED PIPE TO RWT
- 0100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34 RISER PIPE
- 0300 CLEANING EYE
- RAINWATER TANK
- DOWNPIPE 0100
- VERTICAL DROP 0100
- PLANTER GRATE 0150
- FLOOR GRATE 0150
- FLOOR GRATE 200x200 (ALLOW MINIMUM 1.0% FALL TO FG)
- FLOOR GRATE 300x300 (ALLOW MINIMUM 1.0% FALL TO FW)
- RAINWATER OUTLET 0260 SPS (ALLOW MINIMUM 1.0% FALL TO RWO)
- SUSPENDED PLANTER BOX RAINWATER OUTLET
- DESIGN SURFACE LEVEL
- EXISTING SURFACE LEVEL
- INVERT LEVEL
- AC CONDENSER TUNDISH TO MANUFACTURER'S DETAILS
- 050mm HDPE OR PVC WRAPPED IN 20mm ABLEFLEX CAST IN SLAB
- 050mm EMERGENCY OVERFLOW SPITTERS/PIPES
- EXISTING STORMWATER
- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- EXISTING TELSTRA
- EXISTING ELECTRICAL
- EXISTING GAS
- EXISTING OPTIC FIBER

NOTE:
ALL GRATES WITHIN FOOTWAY AREAS TO BE HEEL GUARD & BIKE SAFE.

NOTE:
PITS DEEPER THAN 1.0m TO BE FITTED WITH STEP IRONS.

NOTE:
IT IS CONTRACTOR'S RESPONSIBILITY TO ENSURE MINIMUM PONDING IS ACHIEVED OVER THE FLOOR WASTES BY GRADING CATCHMENTS' SURFACES AT MINIMUM 1.0% FALL.

NOTES:
1- CONTRACTOR IS TO PROVIDE OVERFLOW OUTLETS & EMERGENCY OVERFLOW SPITTERS TO ALL TRAPPED AREAS.
2- DP/VD ARE 0100mm PIPES U.N.O.
3- ALL TRANSFERRING PIPES ARE SUSPENDED U.N.O.
4- BALCONIES PIPES ARE 050mm HDPE OR PVC WRAPPED IN 20mm ABLEFLEX CAST IN SLAB AT MIN 1.0% SLOPE.



GROUND FLOOR PLAN
SCALE 1:100

GENERAL NOTES

1. ALL LINES ARE TO BE 0100 uPVC 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWERGRADE & SEALED.
2. EXISTING SERVICES LOCATIONS SHOWN INDICATIVE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600mm DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
7. ALL EXTERNAL SLABS TO BE WATERPROOFED.
8. ALL GRATES TO HAVE CHILD PROOF LOCKS.
9. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
10. ALL DP's TO HAVE LEAF GUARDS.
11. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
12. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
13. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
14. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
15. REFER TO LANDSCAPE ARCHITECT'S DRAWINGS FOR LANDSCAPING.
16. CARE TO BE TAKEN AROUND EXISTING SEWER. STRUCTURAL ADVICE IS REQUIRED FOR SEWER PROTECTION AGAINST ADDITIONAL LOADING FROM NEW PITS, PIPES, RETAINING WALLS AND OSD BASIN WATER LEVELS.
17. ALL PIPES IN BALCONIES TO BE 050mm PVC WRAPPED IN 20mm ABLEFLEX CAST IN SLAB AT MIN 1.0% SLOPE. CONTRACTOR TO PROVIDE A BREAK / OPEN VOID IN RAIL / BALLUSTRADE FOR STORMWATER EMERGENCY OVERFLOW. ALL ENCLOSED AREAS/PLANTER BOXES TO BE FITTED WITH FLOOR WASTES & DRAINED TO OSD DOWNPIPES TO BE CHECKED BY ARCHITECT & PLUMBER PRIOR TO CONSTRUCTION.
18. THE OSD BASIN / TANK IS TO BE BUILT TO THE CORRECT LEVELS & SIZE AS PER THIS DESIGN. ANY VARIATIONS ARE TO BE DONE UNDER CONSULTATION FROM OUR OFFICE ONLY. ANY AMENDMENTS WITHOUT OUR APPROVAL WOULD RESULT IN ADDITIONAL FEES FOR REDESIGN AT OC STAGE OR IF A SOLUTION CANNOT BE FOUND, RECONSTRUCTION IS REQUIRED UNDER THE CONTRACTOR'S EXPENSES.

NOTE:
PIPES CAST IN CONCRETE BEAMS/SLABS MUST BE WRAPPED WIT ABLEFLEX.

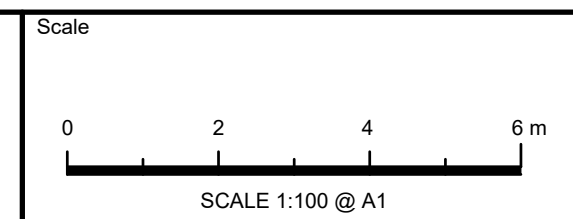
PIPES NOTE:
065 PVC @ MIN 1.0%
090 PVC @ MIN 1.0%
0100 PVC @ MIN 1.0%
0150 PVC @ MIN 1.0%
0225 PVC @ MIN 0.5%
0300 PVC @ MIN 0.4%
UNLESS NOTED OTHERWISE

NOTE:
REFER ARCHITECTURAL DRAWINGS FOR FINAL SET-OUT LEVELS.

NOTE:
ALL LINEAR GRATED DRAINS TO BE MIN. 100mm DEEP.

NOT FOR CONSTRUCTION

									Architect
									CDArchitects
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	1cm at full size			10cm			20cm		W: www.cdarchitects.com.au

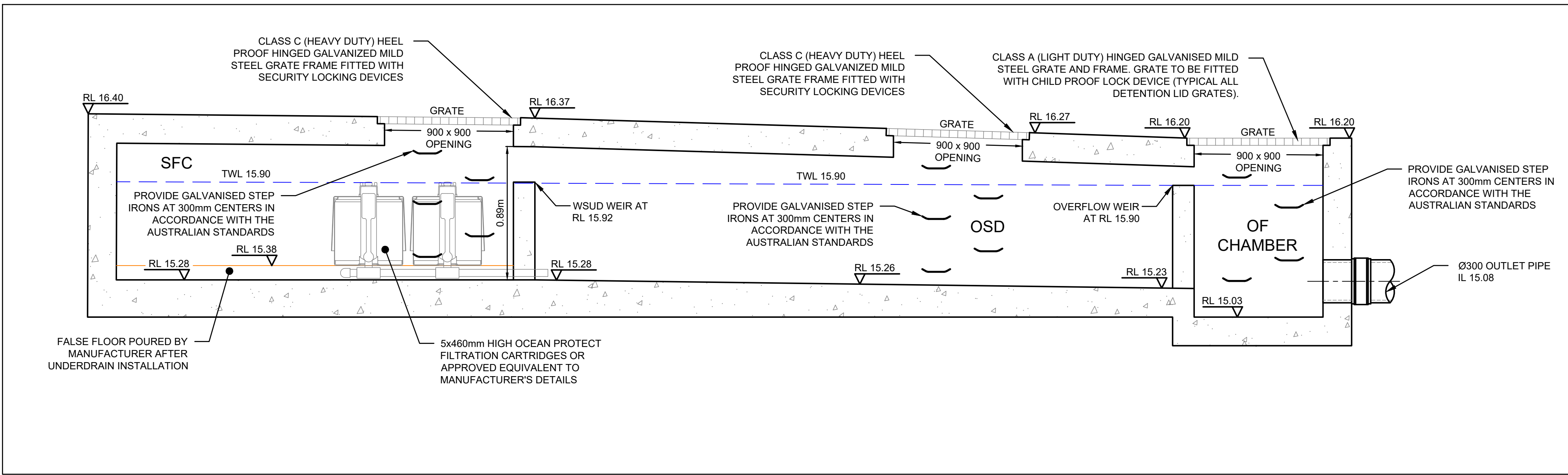


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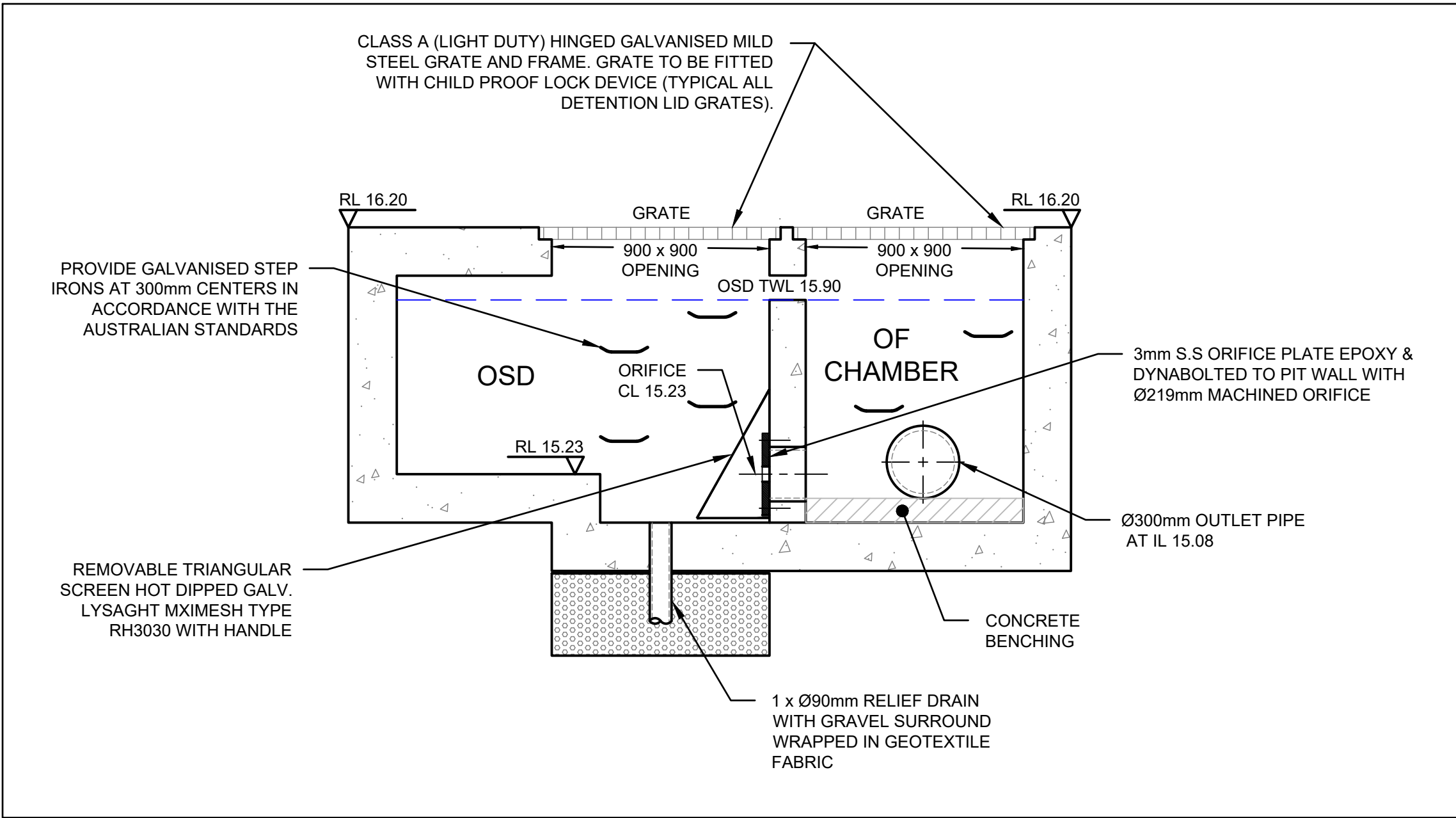
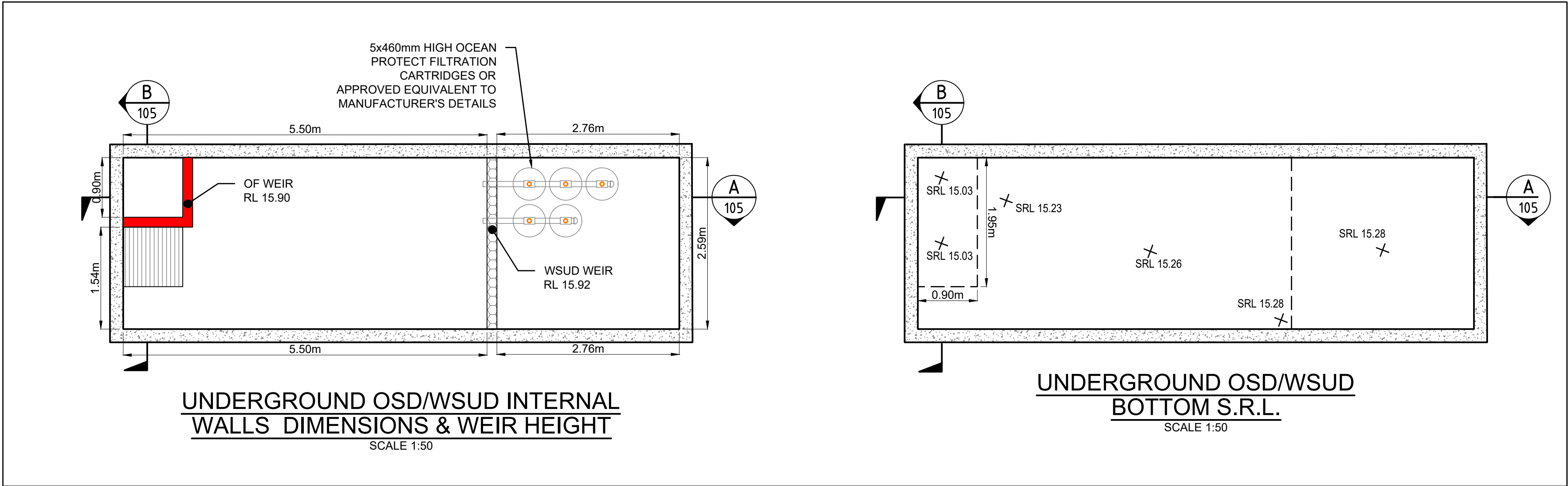
Project
62-62A COPELAND STREET, LIVERPOOL
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DEVELOPMENT APPLICATION

Drawing Title STORMWATER CONCEPT PLAN GROUND LEVEL			
Scale 1:100	Project No. 230020	Dwg. No. 104	Issue B

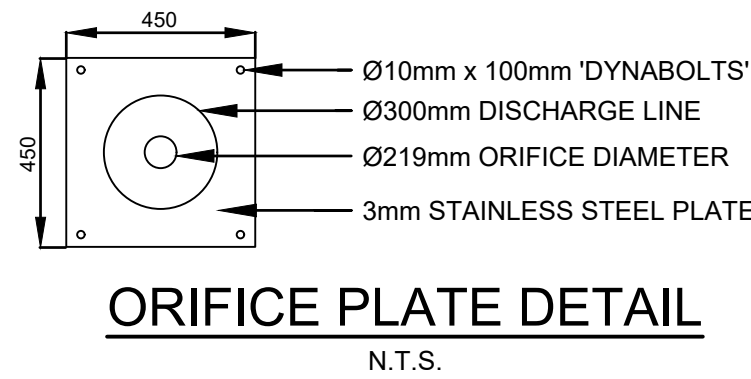
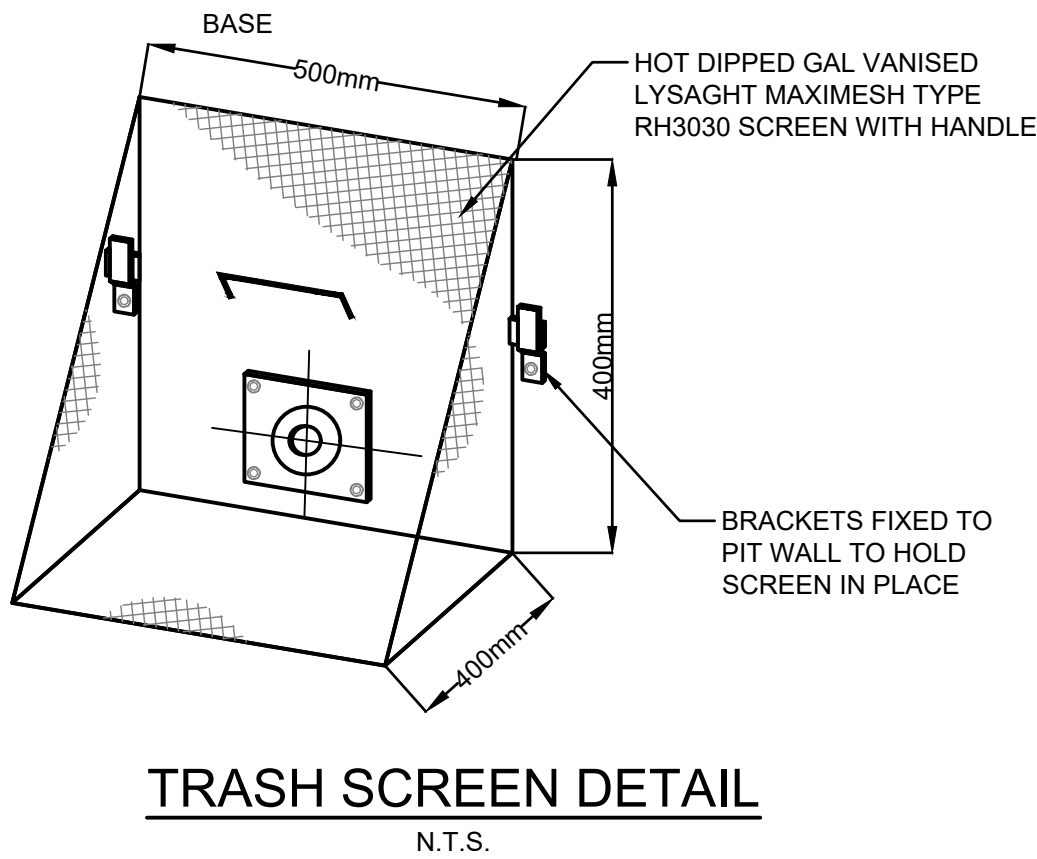


DRAINS RESULTS				
STORM EVENT (ARI)	PRE-DEV INTERNAL FLOWS (L/s)	OSD POST-DEV FLOWS (L/s)	BYPASS FLOWS (L/s)	TOTAL POST-DEV FLOWS (L/s)
5YR	39	39	0	39
10YR	45	43	0	43
20YR	52	48	0	48
50YR	55	51	1	52
100YR	61	54	1	55

OSD/WSUD SECTION A
N.T.S.

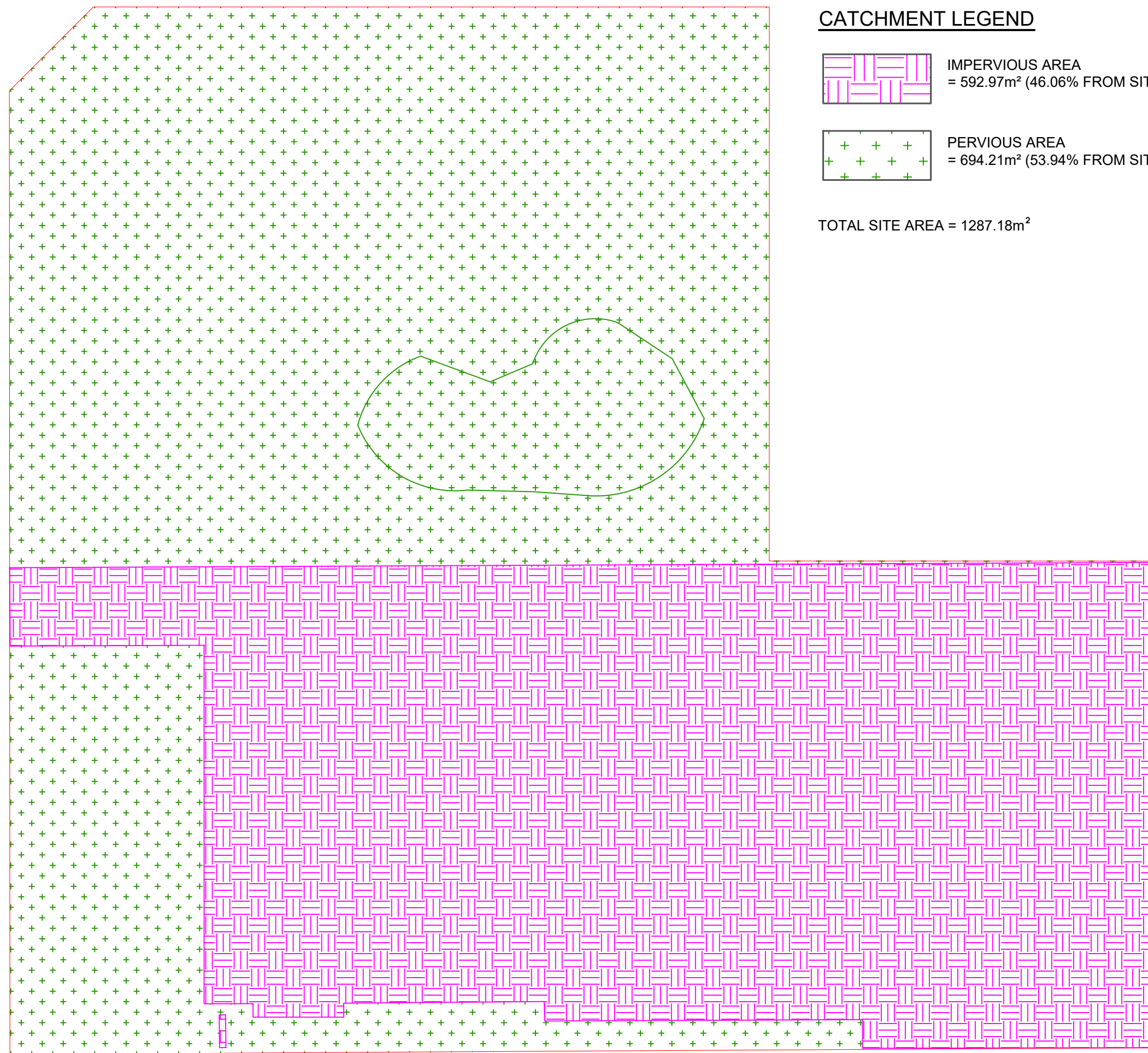


OSD/WSUD SECTION B
N.T.S.



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Architect CDArchitects Level 2, 60 Park Street, Sydney NSW 2000						Council Liverpool City Council		Scale 0 400 800 1200 mm SCALE 1:20 @ A1 0 1 2 3 m SCALE 1:50 @ A1		CIVIL & STORMWATER ENGINEERING SERVICES PTY LTD ABN: 27 644 422 506 Shop 1, 143-147 Parramatta Road, Concord, NSW 2137 P:(02) 8397 6500 E:info@esgconsult.com.au		Project 62-62A COPELAND STREET, LIVERPOOL PROPOSED RESIDENTIAL FLAT BUILDING STORMWATER CONCEPT PLAN DEVELOPMENT APPLICATION		Drawing Title ON-SITE DETENTION DETAILS AND CALCULATION SHEET	
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Issue Description						Date Designed Engineer Checked									
1cm at full size						20mm									
												Scale A1 Project No. 230020 Dwg. No. 105 Issue A			

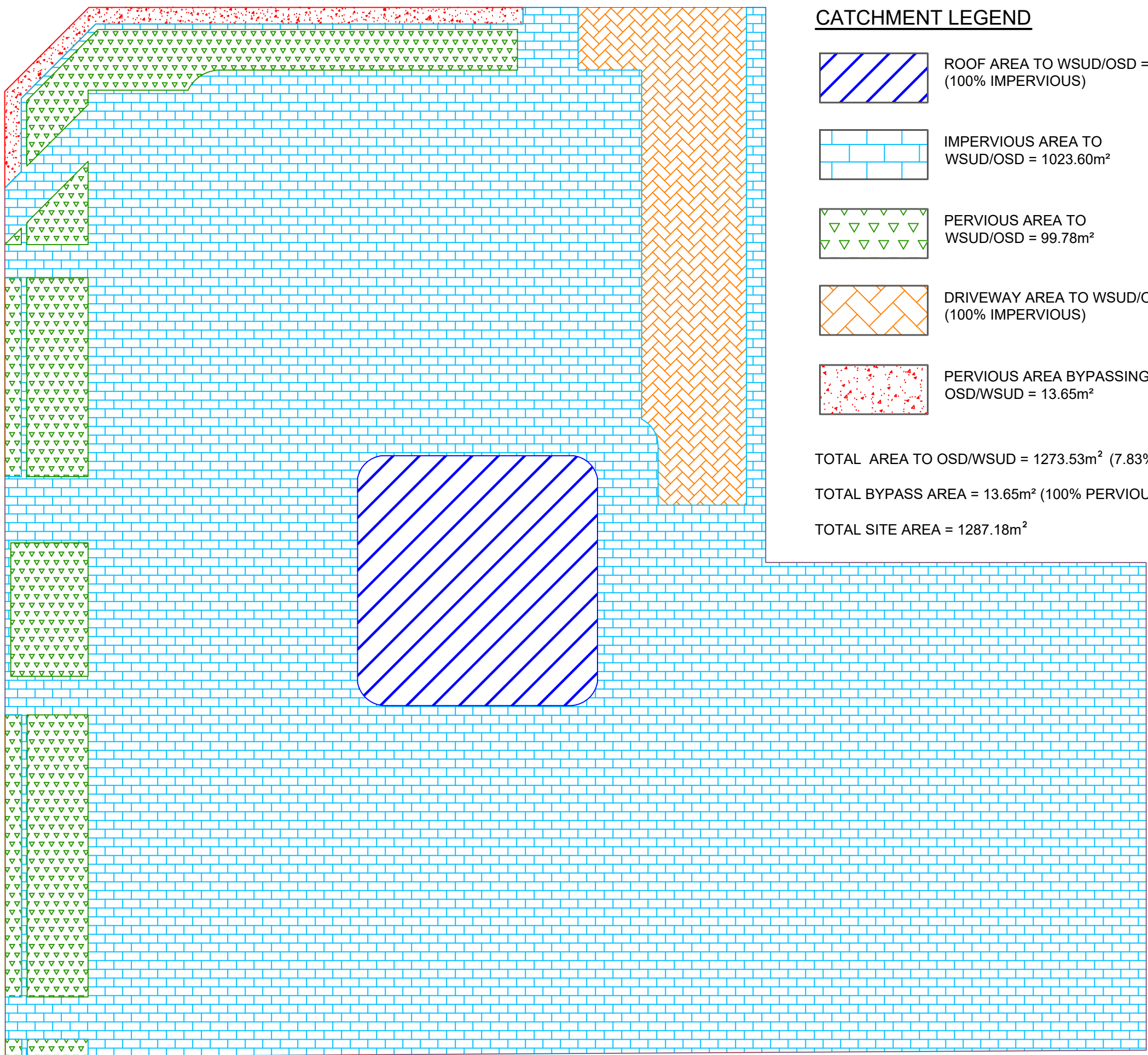


CATCHMENT LEGEND

IMPERVIOUS AREA
= 592.97m² (46.06% FROM SITE)

PERVIOUS AREA
= 694.21m² (53.94% FROM SITE)

TOTAL SITE AREA = 1287.18m²



CATCHMENT LEGEND

ROOF AREA TO WSUD/OSD = 78.01m²
(100% IMPERVIOUS)

IMPERVIOUS AREA TO
WSUD/OSD = 1023.60m²

PERVIOUS AREA TO
WSUD/OSD = 99.78m²

DRIVEWAY AREA TO WSUD/OSD = 72.14m²
(100% IMPERVIOUS)

PERVIOUS AREA BYPASSING
OSD/WSUD = 13.65m²

TOTAL AREA TO OSD/WSUD = 1273.53m² (7.83% PERVIOUS)

TOTAL BYPASS AREA = 13.65m² (100% PERVIOUS)

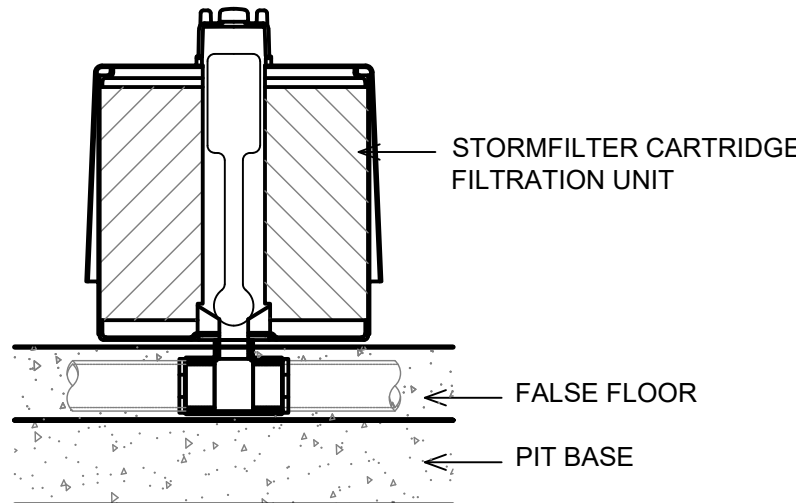
TOTAL SITE AREA = 1287.18m²

PRE - DEVELOPMENT CATCHMENT PLAN
SCALE 1:150

POST - DEVELOPMENT CATCHMENT PLAN
SCALE 1:150

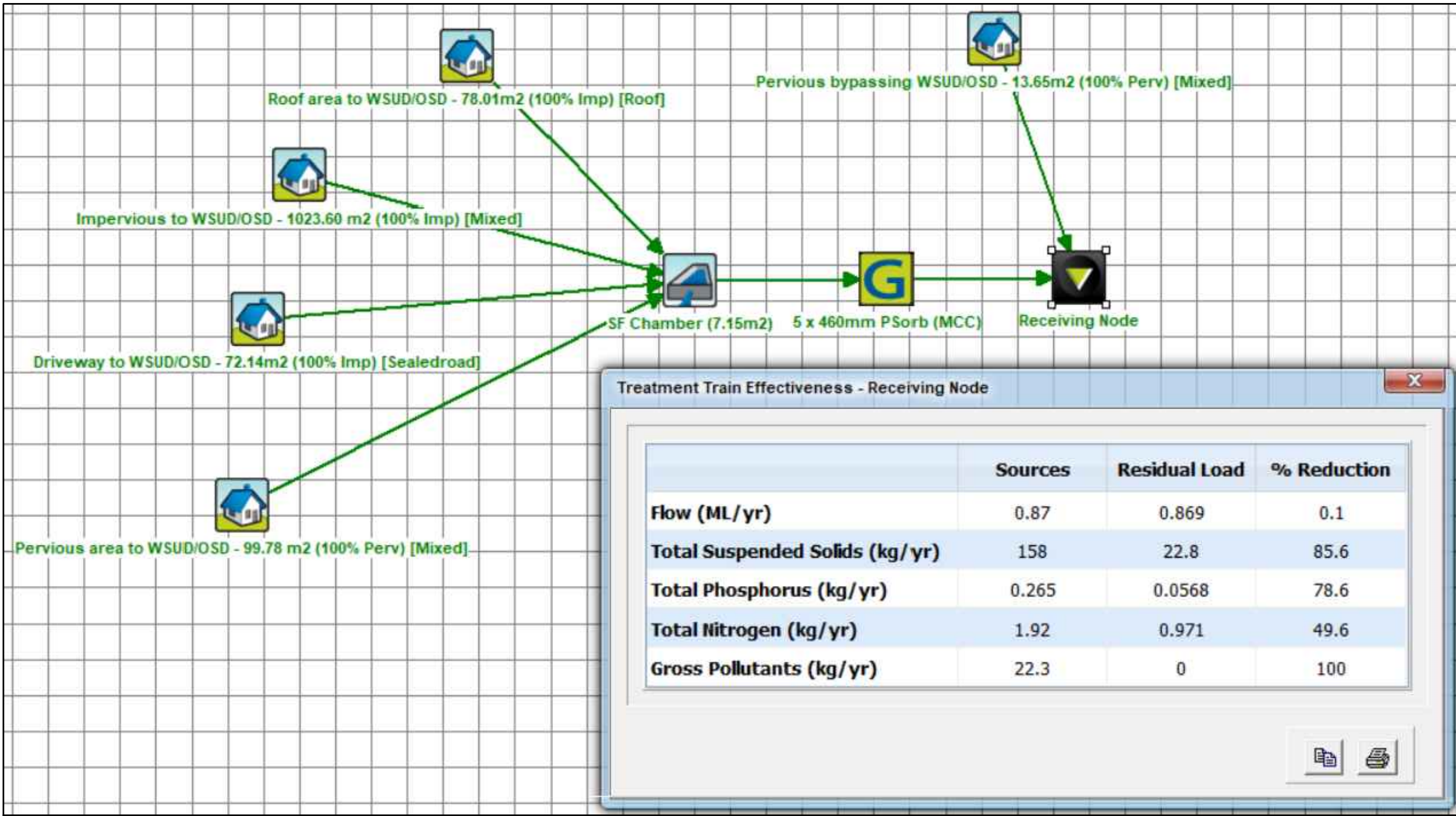
GENERAL NOTES

1. INLET AND OUTLET PIPES TO BE IN ACCORDANCE WITH APPROVED PLANS.
2. A HIGH FLOW BYPASS ARRANGEMENT OR DISSIPATION STRUCTURE MAY BE REQUIRED TO MINIMISE RE-SUSPENSION OF SOLIDS OR ANY SIGNIFICANT INERTIAL FORCES ON THE CARTRIDGES.
3. ALL WATER QUALITY TREATMENT DEVICES REQUIRE PERIODIC MAINTENANCE. REFER TO OPERATION AND MAINTENANCE MANUAL FOR GUIDELINES AND ACCESS REQUIREMENTS.
4. SITE SPECIFIC PRODUCTION DRAWING WILL BE PROVIDED ON PLACEMENT OF ORDER.
5. THE INVERT LEVEL OF THE INLET PIPE MUST BE GREATER THAN THE RL OF THE FALSE FLOOR WITHIN THE CARTRIDGE CHAMBER.
6. CONCRETE STRUCTURE AND ACCESS COVERS DESIGNED AND PROVIDED BY OTHERS. ACCESS COVERS TO BE A MINIMUM 900 X 900 ABOVE CARTRIDGES. OH&S REGARDING ACCESS COVERS AND TANK ACCESS TO BE ASSESSED BY OTHERS ON SITE.
7. THE STRUCTURE THICKNESSES SHOWN ARE FOR REPRESENTATIONAL PURPOSES.
8. DRAWINGS NOT TO SCALE.



**STORMFILTER CARTRIDGE
DETAIL**

Filtration Unit Maintenance Schedule					
Facility Component Requiring Maintenance	Maintenance Activity	When Maintenance Activity Is Required	Expected Facility Performance After Maintaining	INSPECTION/MINOR MAINTENANCE (TIMES/YEAR)	MAJOR MAINTENANCE (TIMES/YEAR)
StormFilter® Cartridges and Containment Structure	Trash and Debris Removal	Floatable objects or other trash is present in the filter. Remove to avoid hindrance of filtration and eliminate unsightly debris and trash.	Permanent removal from storm system.	2 (and after major storms)	1 (except in case of a spill)
	Cartridge Replacement and Sediment Removal	1. Media has been contaminated by high levels of pollutants, such as after a spill.	1. New media is able to effectively treat stormwater.	-	-
Drainage System Piping	Flushing With Water	Drainage system is obstructed by debris or sediment.	Outflow is not restricted.	-	-



MUSIC RESULTS
N.T.S.

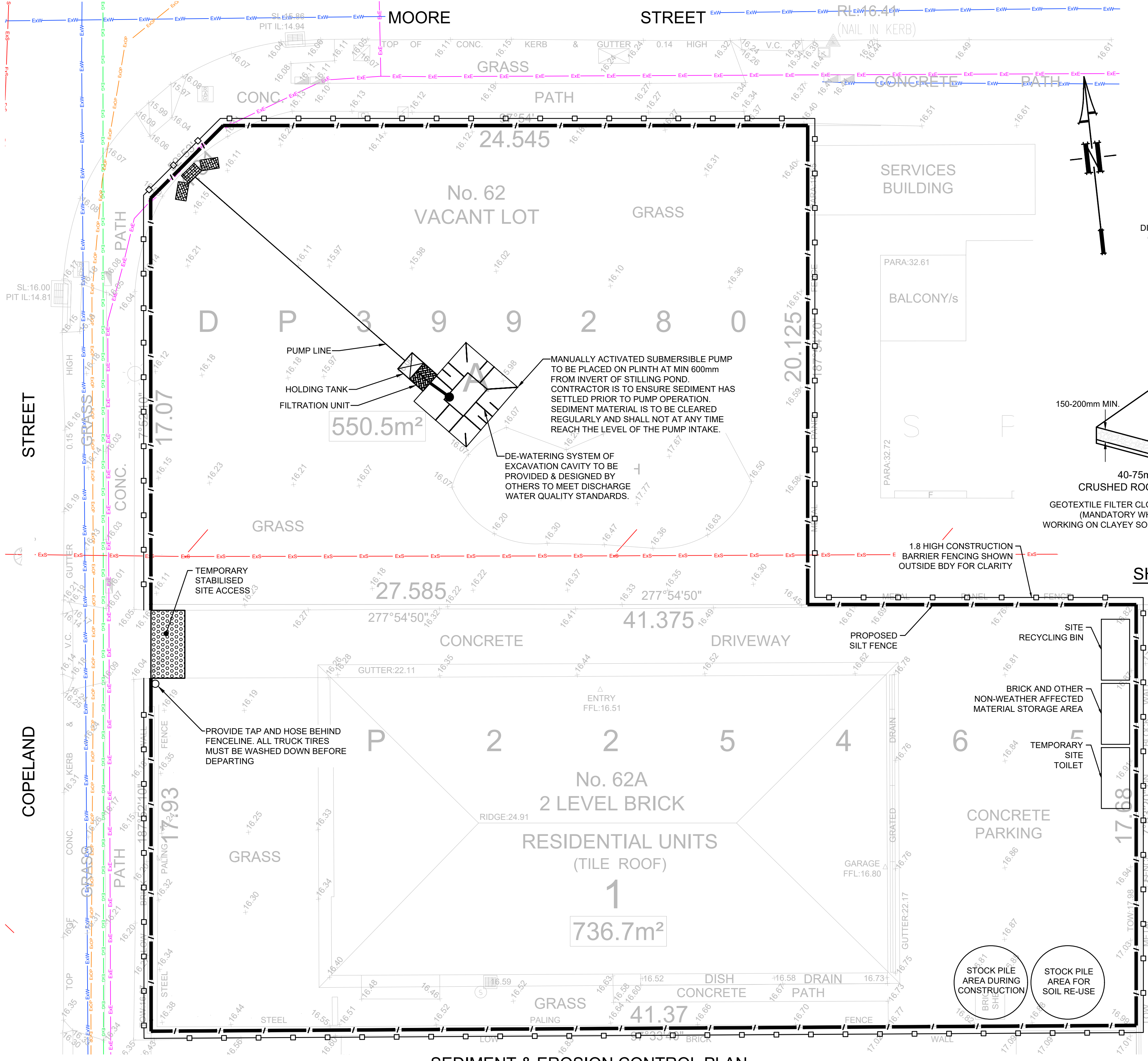
NOT FOR CONSTRUCTION

LEGEND

- E x W — EXISTING WATER MAIN
— E x S — EXISTING SEWER MAIN
— E x T — EXISTING TELSTRA
— E x E — EXISTING ELECTRICAL
— E x G — EXISTING GAS
— E x O P — EXISTING OPTIC FIBER
— 26.45 — EXISTING CONTOUR
X EL 47.00 EXISTING SURFACE LEVEL
X RL 47.00 DESIGN SURFACE LEVEL
SILT FENCE
STABILISED SITE ACCESS
1.8 HIGH CONSTRUCTION BARRIER FENCING
TREES TO BE RETAINED
TREES TO BE REMOVED
INLET PROTECTION

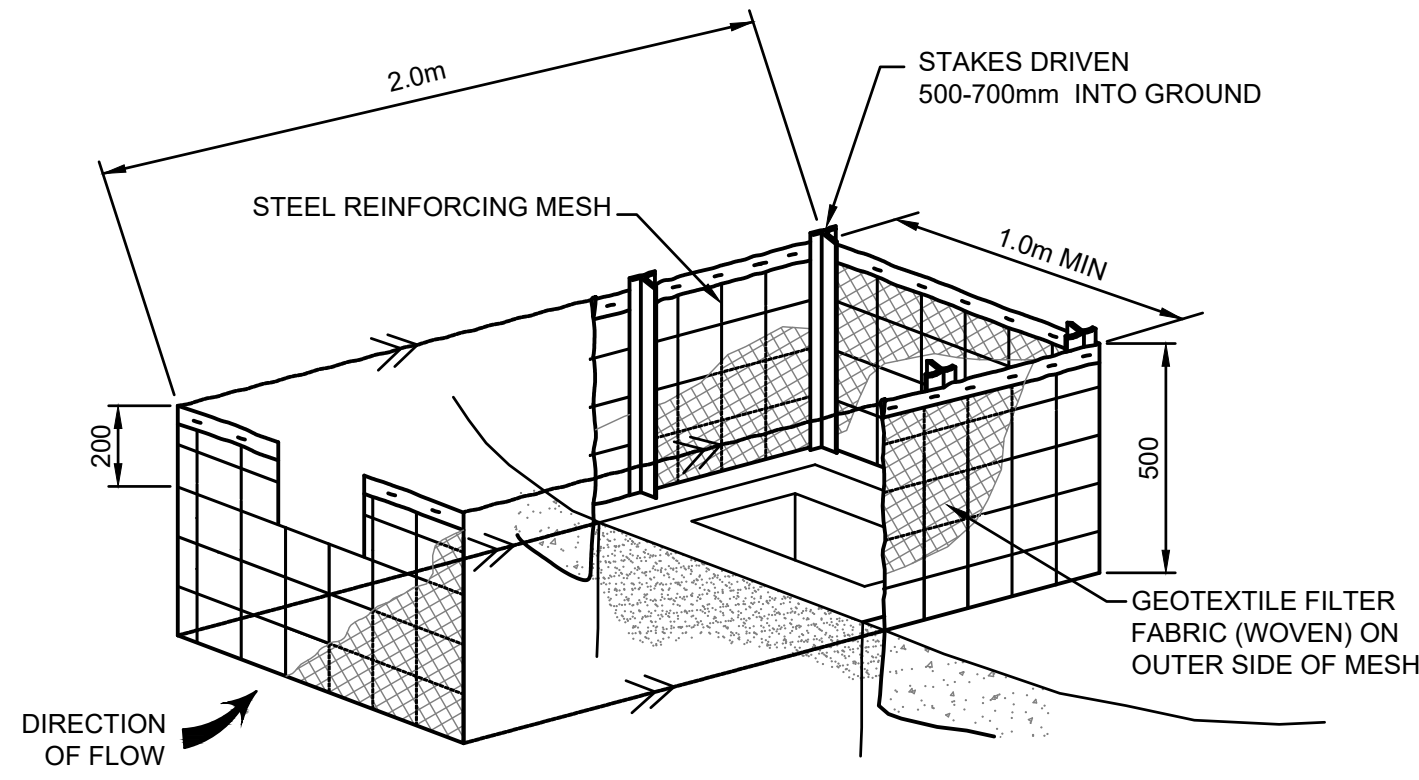
SEDIMENT & EROSION NOTES

1. IMMEDIATELY FOLLOWING SETTING OUT OF THE WORKS, BUT PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORKS, THE CONTRACTOR AND SUPERINTENDENT SHALL WALK THE SITE TO NOMINATE THE LOCATIONS AND TYPES OF SEDIMENT AND EROSION CONTROL MEASURES TO BE ADOPTED. THESE MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CLEARING OR EARTHWORKS AND MAINTAINED UNTIL THE WORKS ARE COMPLETED AND NO LONGER POSE AN EROSION HAZARD, UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.
2. IMMEDIATELY FOLLOWING SETTING OUT OF THE WORKS, BUT PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORKS, THE CONTRACTOR AND SUPERINTENDENT SHALL WALK THE SITE TO IDENTIFY AND MARK TREES WHICH ARE TO BE PRESERVED. NOTWITHSTANDING THE ABOVE, THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO MINIMISE DISTURBANCE TO EXISTING VEGETATION AND GROUND COVER OUTSIDE THE MINIMUM AREAS REQUIRED TO COMPLETE THE WORKS AND SHALL BE RESPONSIBLE FOR RECTIFICATION, AT ITS OWN COST, OF ANY DISTURBANCE BEYOND THOSE AREAS.
3. PROVIDE GULLY GRATE INLET SEDIMENT TRAPS AT ALL GULLY PITS.
4. PROVIDE SILT FENCING ALONG PROPERTY LINE AS DIRECTED BY SUPERINTENDENT.
5. ADDITIONAL CONTROL DEVICES TO BE PLACED WHERE DIRECTED BY THE PRINCIPLE.
6. ALTERNATIVE DESIGNS TO BE APPROVED BY SUPERINTENDENT PRIOR TO CONSTRUCTION.
7. WASH DOWN/RUMBLE AREA TO BE CONSTRUCTED WITH PROVISIONS RESTRICTING ALL SILT AND TRAFFICKED DEBRIS FROM ENTERING THE STORMWATER SYSTEM.
8. NO WORK OR STOCKPILING OF MATERIALS TO BE PLACED OUTSIDE OF SITE WORK BOUNDARY.
9. APPROPRIATE EROSION AND SEDIMENT CONTROLS TO BE USED TO PROTECT STOCKPILES AND MAINTAINED THROUGH OUT CONSTRUCTION.
10. IT IS THE CONTRACTORS RESPONSIBILITY TO TAKE DUE CARE OF NATURAL VEGETATION. NO CLEARING IS TO BE UNDERTAKEN WITHOUT PRIOR APPROVAL FROM THE SUPERINTENDENT.
11. TO AVOID DISTURBANCE TO EXISTING TREES, EARTHWORKS WILL BE MODIFIED AS DIRECTED ON-SITE BY THE SUPERINTENDENT.
12. THE LOCATION OF EROSION AND SEDIMENTATION CONTROLS WILL BE DETERMINED ON SITE BY THE SUPERINTENDENT.
13. ACCESS TRACKS THROUGH THE SITE WILL BE LIMITED TO THOSE DETERMINED BY THE SUPERINTENDENT AND THE CONTRACTOR PRIOR TO ANY WORK COMMENCING.
14. ALL SETTING OUT IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE. THE SUPERINTENDENT'S SURVEYOR SHALL PEG ALL ALLOTMENT BOUNDARIES, PROVIDE COORDINATE INFORMATION TO THESE PEGS AND PLACE BENCH MARKS. THE CONTRACTOR SHALL SET OUT THE WORKS FROM AND MAINTAIN THESE PEGS.



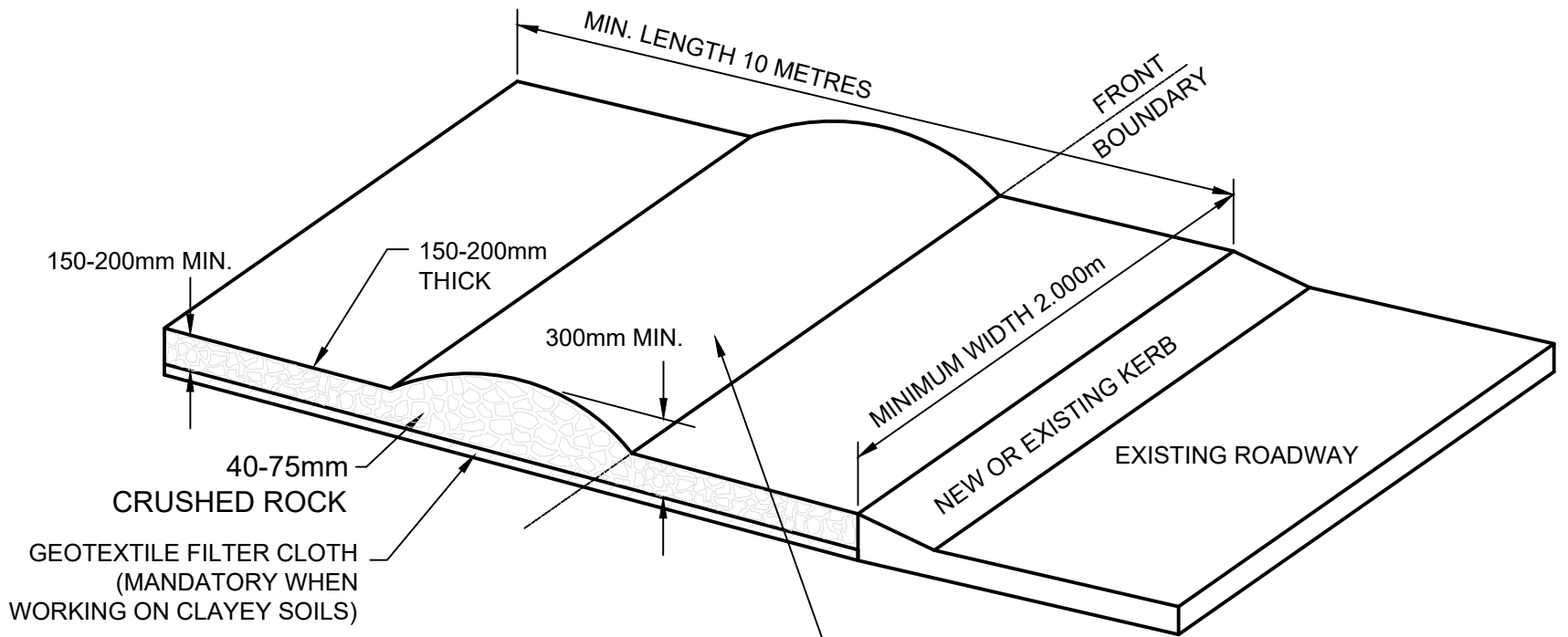
SEDIMENT & EROSION CONTROL PLAN

SCALE 1:100



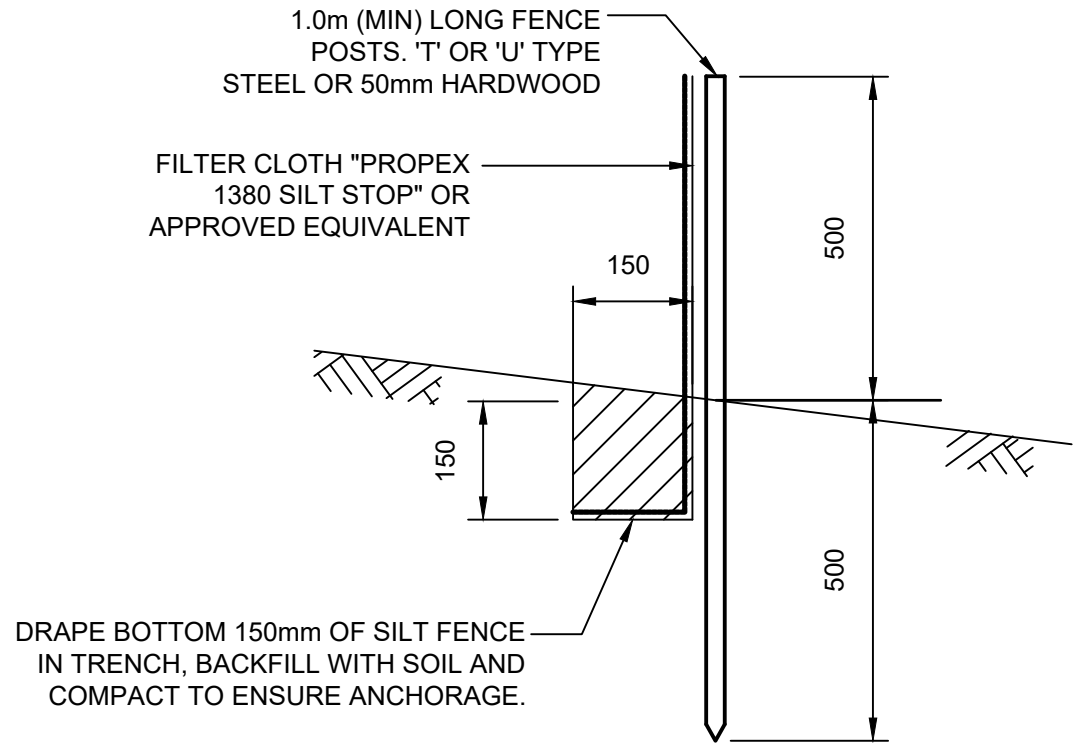
FIELD INLET SEDIMENT TRAP

N.T.S.



SHAKEDOWN DEVICE

N.T.S.

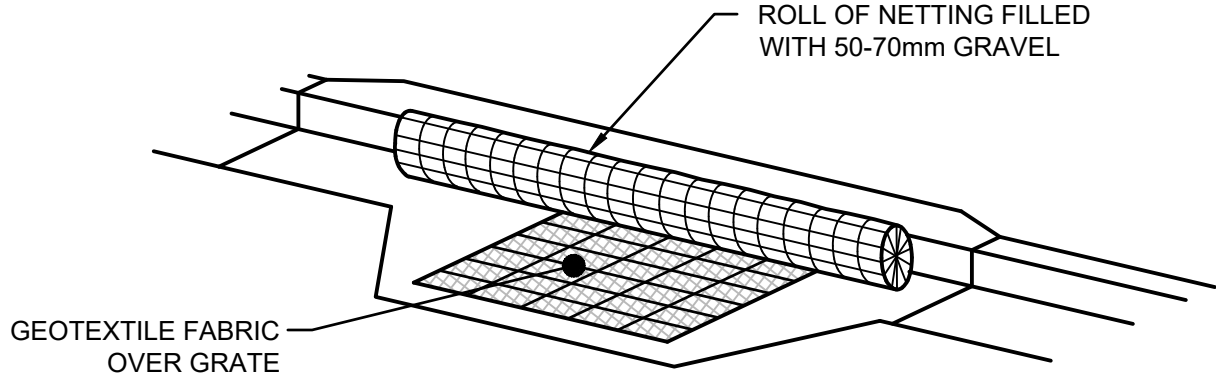


SILT FENCE DETAIL

N.T.S.

SILT FENCE NOTES:

1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS WITH GALVANISED WIRE TIES, STAPLES OR ATTACHMENT BELTS.
2. POSTS SHOULD NOT BE SPACED MORE THAN 3.0m APART.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 150mm AND FOLDED.
4. FOR EXTRA STRENGTH TO SILT FENCE, WOVEN WIRE (14mm GAUGE, 150mm MESH SPACING) TO BE FASTENED SECURELY BETWEEN FILTER CLOTH AND POSTS BY WIRE TIES OR STAPLES.
5. INSPECTIONS SHALL BE PROVIDED ON A REGULAR BASIS, ESPECIALLY AFTER RAINFALL AND EXCESSIVE SILT DEPOSITS REMOVED WHEN "BULGES" DEVELOP IN SILT FENCE.
6. SEDIMENT FENCES SHALL BE CONSTRUCTED WITH SEDIMENT TRAPS AND EMERGENCY SPILLWAYS AT SPACINGS NO GREATER THAN 40m ON FLAT TERRAIN DECREASING TO 20m SPACINGS ON STEEP TERRAIN.



KERB INLET PROTECTION

SAG GULLIES

N.T.S.

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					Architect CDArchitects Level 2, 60 Park Street, Sydney NSW 2000 P: 02 9267 2000 W: www.cdarchitects.com.au	Council Liverpool City Council	Scale 0 2 4 6 m SCALE 1:100 @ A1	 C & S ENGINEERING SERVICES E: info@esgconsult.com.au	CIVIL & STORMWATER ENGINEERING SERVICES PTY LTD ABN: 27 644 422 506 Shop 1, 143-147 Parramatta Road, Concord, NSW 2137 P: (02) 8397 6500 E: info@esgconsult.com.au	Project 62-62A COPELAND STREET, LIVERPOOL PROPOSED RESIDENTIAL FLAT BUILDING STORMWATER CONCEPT PLAN DEVELOPMENT APPLICATION	Drawing Title SEDIMENT & EROSION CONTROL PLAN & DETAILS Scale A1 Project No. 230020 Dwg No. 107 Issue A
A	ISSUE FOR DEVELOPMENT APPLICATION	17/03/2023	MGH	EH	OC						
Issue	Description	Date	Designed	Engineer	Checked						

