Regulated Design Record				
Project Address:				
Project Title:				
Consent No:		Body Corporate Reg No:		
Drawing Title:			Drawing No:	
Rev	**Date dd.mm.yy**	**Description**	**DP Full Name**	**Reg No**

754-774 CANTERBURY ROAD, BELMORE
PROPOSED RESIDENTIAL FLAT BUILDING

STORMWATER MANAGEMENT PLANS

LOCALITY PLAN

N.T.S

DRAWING INDEX	
Drawing No.	DESCRIPTION
000	COVER SHEET PLAN
101	STORMWATER LAYOUT PLAN BASEMENT LEVEL 1 SHEET 1 OF 2
102	STORMWATER LAYOUT PLAN BASEMENT LEVEL 1 SHEET 2 OF 2
103	STORMWATER LAYOUT PLAN LOWER GROUND LEVEL
104	ON-SITE DETENTION DETAILS AND CALCULATIONS SHEET
105	STORMWATER LAYOUT PLAN LEVEL 1
106	SEDIMENT & EROSION CONTROL PLAN & DETAILS
107	MISCELLANEOUS DETAILS SHEET

Issue	Description	Date	Designed	Engineer	Checked
B	ISSUE FOR CONSTRUCTION CERTIFICATE	02/02/2023	MD	EH	OC
A	ISSUE FOR S4.55 APPROVAL	25/07/2022	MD	EH	OC

10cm at full size

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Project
754-774 CANTERBURY ROAD, BELMORE
PROPOSED RESIDENTIAL FLAT BUILDING
STORMWATER MANAGEMENT PLANS
CONSTRUCTION CERTIFICATE

Drawing Title
COVER SHEET PLAN

Scale A1	Project No.	Dwg. No.	Issue
N.T.S.	210752	000	B

Regulated Design Record				
Project Address:				
Project Title:				
Consent No:		Body Corporate Reg No:		
Drawing Title:			Drawing No:	
Rev	**Date dd.mm.yy**	**Description**	**DP Full Name**	**Reg No**

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"

LEGEND

- PROPOSED STORMWATER
- Ø100 HDPE OR PVC WRAPPED IN 20mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- SURFACE FLOW DIRECTION
- SS — SS — Ø100mm SUBSOIL DRAINAGE @ 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:
ALL STORMWATER DRAINAGE PIPES ARE Ø100 UPVC U.N.O.

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

STANDARD PUMP OUT DESIGN NOTES

THE PUMP OUT SYSTEM SHALL BE DESIGN TO BE OPERATED IN THE FOLLOWING MANNER:

1 - THE PUMP SHALL BE PROGRAMMED TO WORK ALTERNATELY TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.

2 - A FLOAT SHALL BE PROVIDED TO ENSURE OF THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS AT THE MINIMUM WATER LEVEL. THE SAME FLOAT SHALL BE SET TO TURN ONE OF THE PUMPS ON UPON THE WATER LEVEL IN THE TANK RISING TO APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL. THE PUMP SHALL OPERATE UNTIL THE TANK IS DRAINED TO THE MINIMUM WATER LEVEL.

3 - A SECOND FLOAT SHALL BE PROVIDE AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHALL START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.

4 - AN ALARM SYSTEM SHALL BE PROVIDE WITH A FLASHING STROBE LIGHT AND A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.

5 - A CONFINED SPACE DANGER SIGN SHALL BE PROVIDED AT ALL ACCESS POINT TO THE PUMP-OUT STORAGE TANK IN ACCORDANCE WITH THE UPPER PARRAMATA RIVER CATCHMENT TRUST OSD HANDBOOK.

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

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

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.

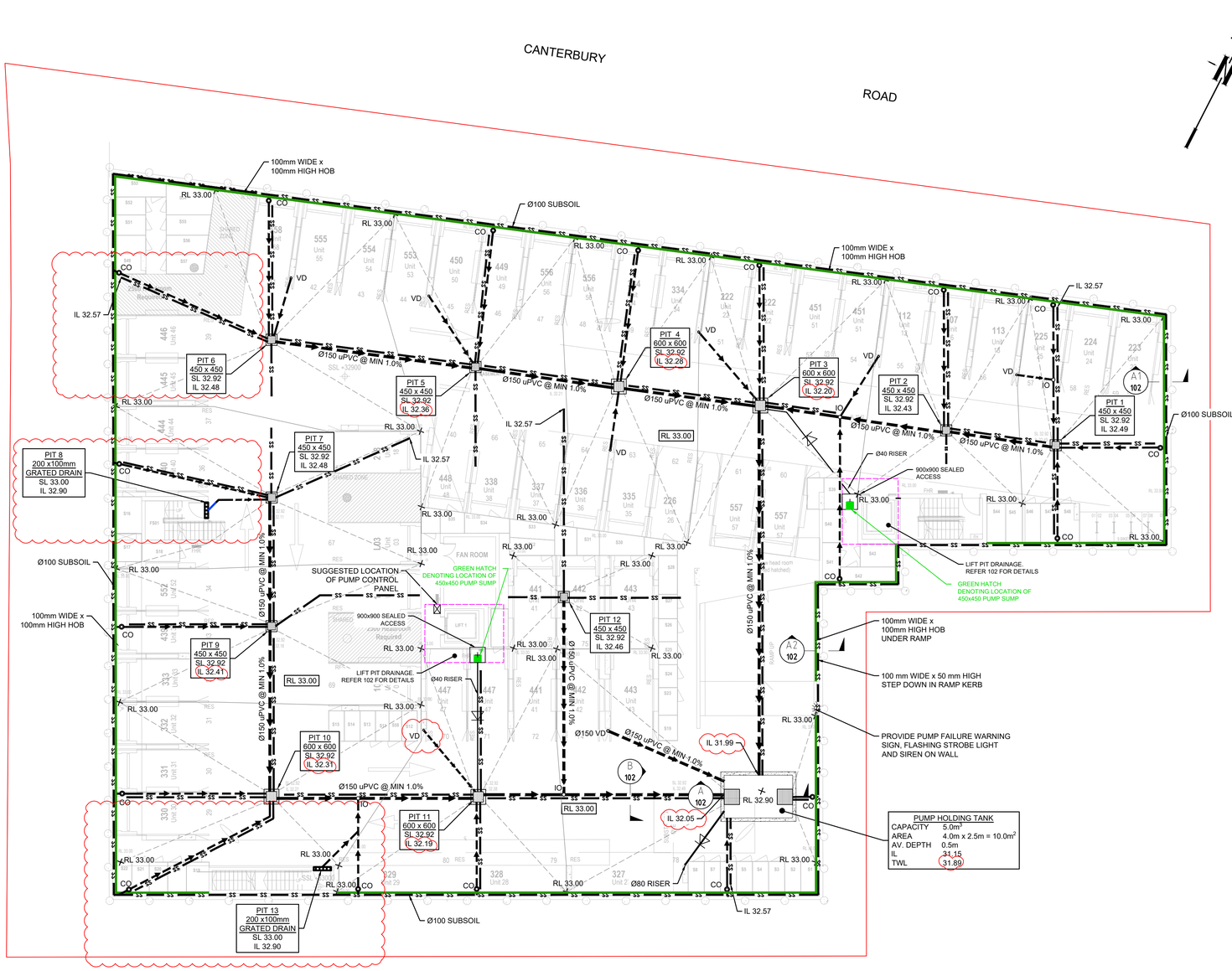
B) MINIMUM DIMENSIONS OF THE SIGN - 300mm x 450mm (LARGE ENTRIES, SUCH AS DOORS) -250mm x 180mm (SMALL ENTRIES SUCH AS GRATES & MANHOLES)

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



BASEMENT 1 PLAN

SCALE 1:150

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

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

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

NOTE:
PROVIDE MIN. 1.0% FALL WITHIN THE SPOON DRAIN.

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1cm at full size 10cm 20cm

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Scale
0 3 6 9m
SCALE 1:150 @ A1

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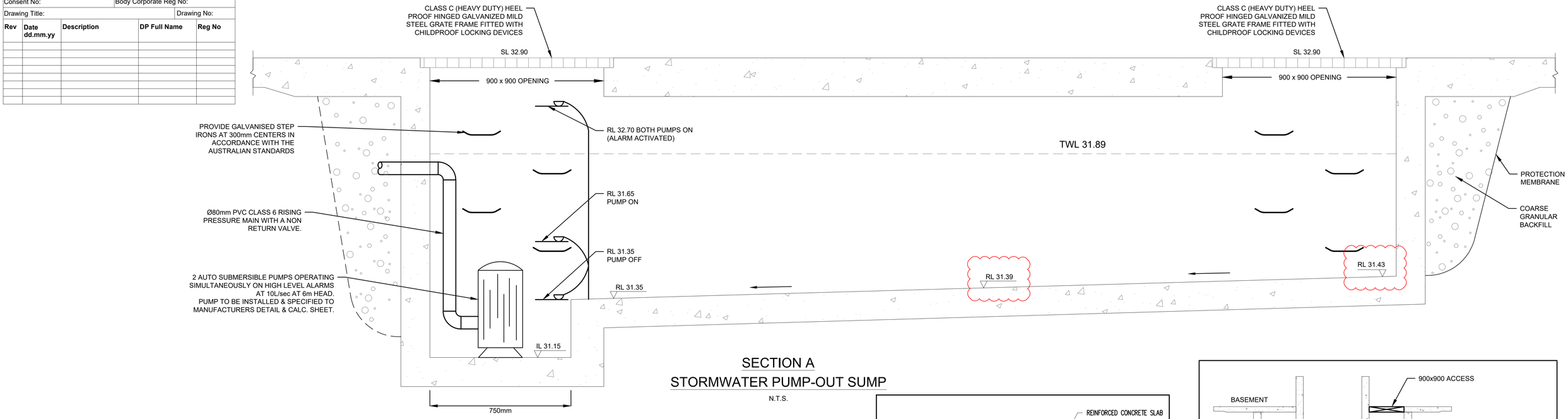
CONSTRUCTION CERTIFICATE

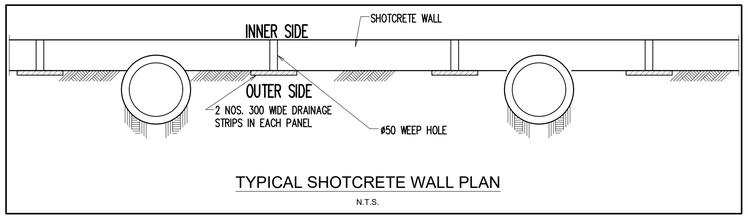
Drawing Title
STORMWATER LAYOUT PLAN
BASEMENT LEVEL 1
SHEET 1 OF 2

Scale A1	Project No.	Dwg. No.	Issue
1:150	210752	101	D

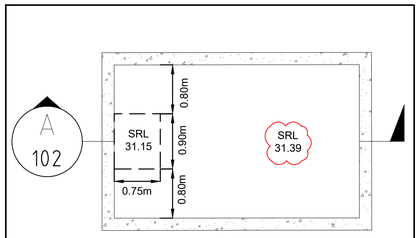
Regulated Design Record				
Project Address:				
Project Title:				
Consent No:		Body Corporate Reg No:		
Drawing Title:			Drawing No:	
Rev	**Date dd.mm.yy**	**Description**	**DP Full Name**	**Reg No**



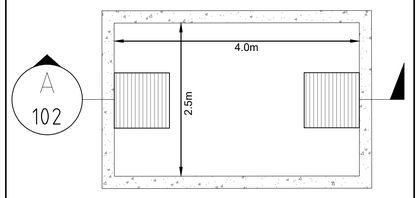
SECTION A
STORMWATER PUMP-OUT SUMP
N.T.S.



TYPICAL SHOTCRETE WALL PLAN
N.T.S.

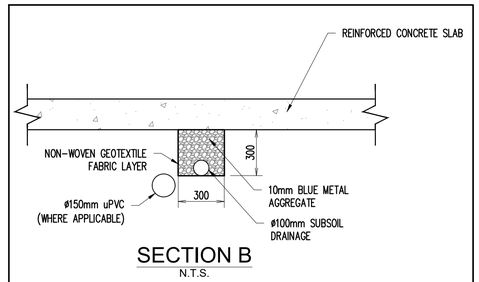


PUMP-OUT SUMP DETAIL
SRL
SCALE 1:50

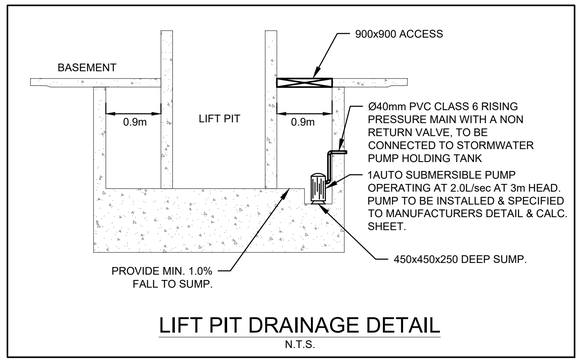


NOTE:
ALL THE AG LINES BEHIND BASEMENT WALLS TO BE CONNECTED TO PUMP-OUT SUMP.

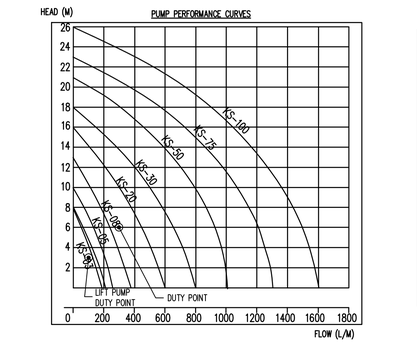
PUMP-OUT SUMP DETAIL
PLAN VIEW
SCALE 1:50



SECTION B
N.T.S.



LIFT PIT DRAINAGE DETAIL
N.T.S.



PUMP STORAGE VOLUME CALCULATION

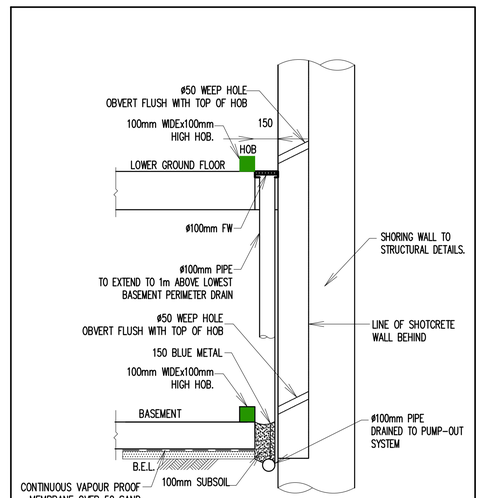
AREA DRAINING TO SUMP= 7.56 m^2

SUMP SIZE BASED ON 100 YEAR 2 HR STORM, I= 57.6 mm/hr,
Q=CIA/3600= 1 x57.60 x 7.56/3600 = 0.12L/sec
VOLUME REQUIRED = 0.12x(2x60x60) =870.91L = 0.87m^3
STORAGE PROVIDED 4.0x2.5x0.5= 5.0m^3

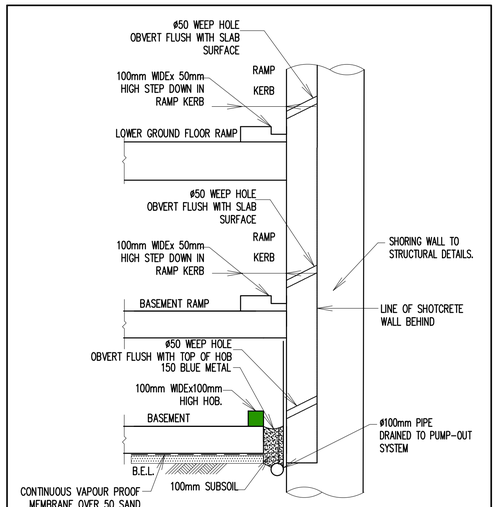
PUMP OUT RATE BASED ON 100YR 5MIN STORM, I=258 mm/hr
(MIN RATE REQUIRED AS PER AS3500.3 IS 10 L/sec)
Q=CIA/3600= 1 x 258 x 7.56/3600 = 0.54 L/sec

DUAL KS-20 PUMP OR EQUIVALENT TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL WHICH WILL ALLOW FOR THE PUMP TO OPERATE SIMULTANEOUSLY ON HIGH LEVEL WITH ALARM AT 10 L/sec AT 6m HEAD

	Type	Output		Outlet		Rated Head Capacity		Maximum Head	Maximum Capacity	Weigh	Dimension		
		HP	kW	mm	Inch	M	LPM	M	LPM	Kg	L(mm)	W(mm)	H(mm)
LIFT PUMP	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	208	140	359
	KS-05	1/2	0.4	50	2"	5	160	10	260	14	230	156	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	182	475
	KS-30	3	2.2	80	3"	10	500	18	800	42	390	250	450
	KS-50	5	3.7	100	4"	10	800	21	1100	48	450	240	530
	KS-75	7 1/2	5.6	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.

D	ISSUE FOR CONSTRUCTION CERTIFICATE	02/02/2023	MD	EH	OC
C	ISSUE FOR S4.55 APPROVAL	25/07/2022	MD	EH	OC
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1cm at full size 10cm 20cm

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Council
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Scale
0 1 2 3 m
SCALE 1:50 @ A1

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Project
754-774 CANTERBURY ROAD, BELMORE
PROPOSED RESIDENTIAL FLAT BUILDING
STORMWATER MANAGEMENT PLANS
CONSTRUCTION CERTIFICATE

Drawing Title
STORMWATER LAYOUT PLAN
BASEMENT LEVEL 1
SHEET 2 OF 2

Scale	Project No.	Dwg. No.	Issue
A1 As Shown	210752	102	D

Regulated Design Record				
Project Address:				
Project Title:				
Consent No:		Body Corporate Reg No:		
Drawing Title:			Drawing No:	
Rev	**Date dd.mm.yy**	**Description**	**DP Full Name**	**Reg No**

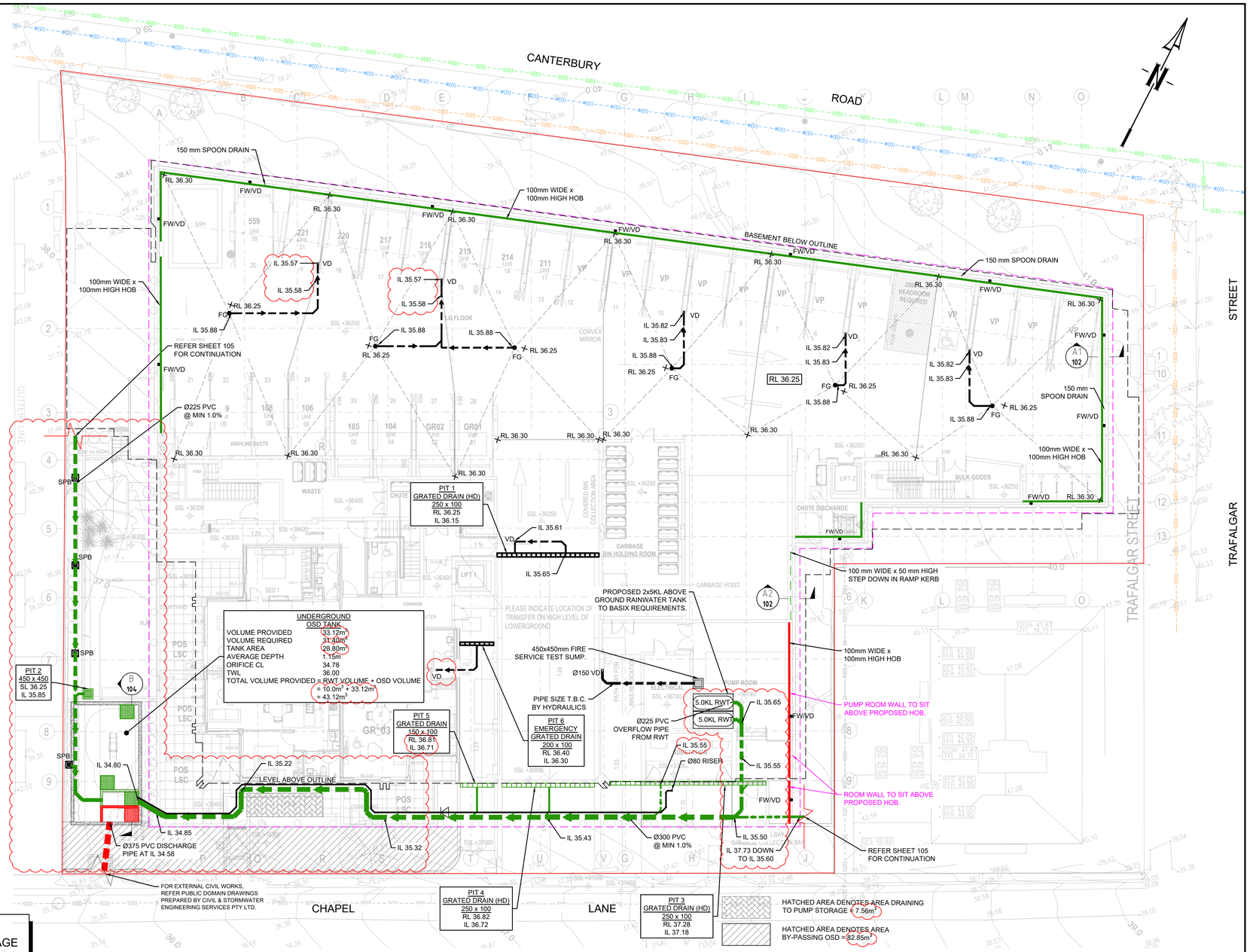
LEGEND

- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED STORMWATER DRAINING TO OSD
- PROPOSED STORMWATER BYPASSING OSD
- Ø100 HDPE OR PVC WRAPPED IN 20mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- 65 — Ø65 HDPE OR PVC WRAPPED IN 20mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- RWT — PROPOSED STORMWATER PIPE TO RAINWATER TANK
- SS — Ø100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34
- RISER PIPE
- CE — Ø300 CLEANING EYE
- RWT — RAINWATER TANK
- DP — DOWNPIPE Ø100
- VD — VERTICAL DROP Ø100
- PG — PLANTER GRATE Ø150
- FG — FLOOR GRATE Ø150
- FG — FLOOR GRATE 200x200 (ALLOW MINIMUM 1.0% FALL TO FG)
- FW — FLOOR GRATE 300x300 (ALLOW MINIMUM 1.0% FALL TO FW)
- RWO — RAINWATER OUTLET Ø260 SPS (ALLOW MINIMUM 1.0% FALL TO RWO)
- SPB — SUSPENDED PLANTER BOX RAINWATER OUTLET
- X RL 47.00 — DESIGN SURFACE LEVEL
- NS 26.45 — EXISTING SURFACE LEVEL
- IL 47.00 — INVERT LEVEL
- TD — AC CONDENSER TUNDISH TO MANUFACTURER'S DETAILS
- 50 — Ø50mm HDPE OR PVC WRAPPED IN 20mm ABLEFLEX CAST IN SLAB
- OF — Ø50mm EMERGENCY OVERFLOW SPITTERS/PIPES U.N.O.
- EXISTING STORMWATER
- W(D) — EXISTING WATER MAIN
- S(D) — EXISTING SEWER MAIN
- C(D) — EXISTING COMMUNICATIONS CABLE
- E — EXISTING ABOVE GROUND ELECTRICITY CABLE
- G(D) — EXISTING GAS
- GRATED DRAIN (HD)
- CLEANING EYE (OR INSPECTION EYE)
- IO — INSPECTION OPENING
- (HD) — HEAVY DUTY

GENERAL NOTES

1. ALL LINES ARE TO BE Ø90 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 DPs 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 ADVIICE 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 Ø50mm HDPE OR 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:
ALL LINEAR GRATED DRAINS TO BE MIN. 100mm DEEP.



LOWER GROUND PLAN

SCALE 1:150

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

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

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

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

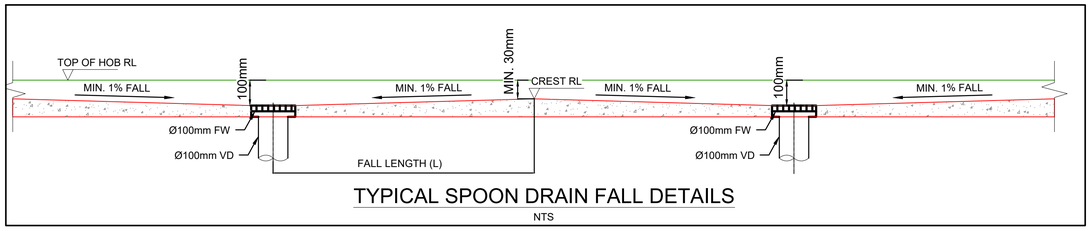
NOTE:
ALL GRATES WITHIN FOOTWAY AREAS TO BE HEEL GUARD & BIKE SAFE.

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

NOTES:
1- CONTRACTOR IS TO PROVIDE OVERFLOW OUTLETS & EMERGENCY OVERFLOW SPITTERS TO ALL TRAPPED AREAS.
2- DP/VD ARE Ø100mm PIPES U.N.O.
3- ALL TRANSFERRING PIPES ARE SUSPENDED U.N.O.
4- BALCONIES PIPES ARE Ø50mm HDPE OR PVC WRAPPED IN 20mm ABLEFLEX CAST IN SLAB AT MIN 1.0% SLOPE.

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

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



TYPICAL SPOON DRAIN FALL DETAILS

NTS

Issue	Description	Date	Designed	Engineer	Checked
D	ISSUE FOR CONSTRUCTION CERTIFICATE	02/02/2023	MD	EH	OC
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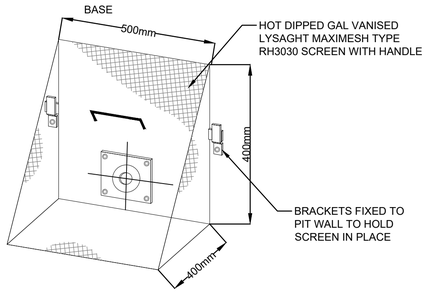
STORMWATER MANAGEMENT PLANS
CONSTRUCTION CERTIFICATE

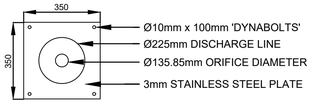
Drawing Title
STORMWATER LAYOUT PLAN
LOWER GROUND LEVEL

Scale	Project No.	Dwg. No.	Issue
A1 As Shown	210752	103	D

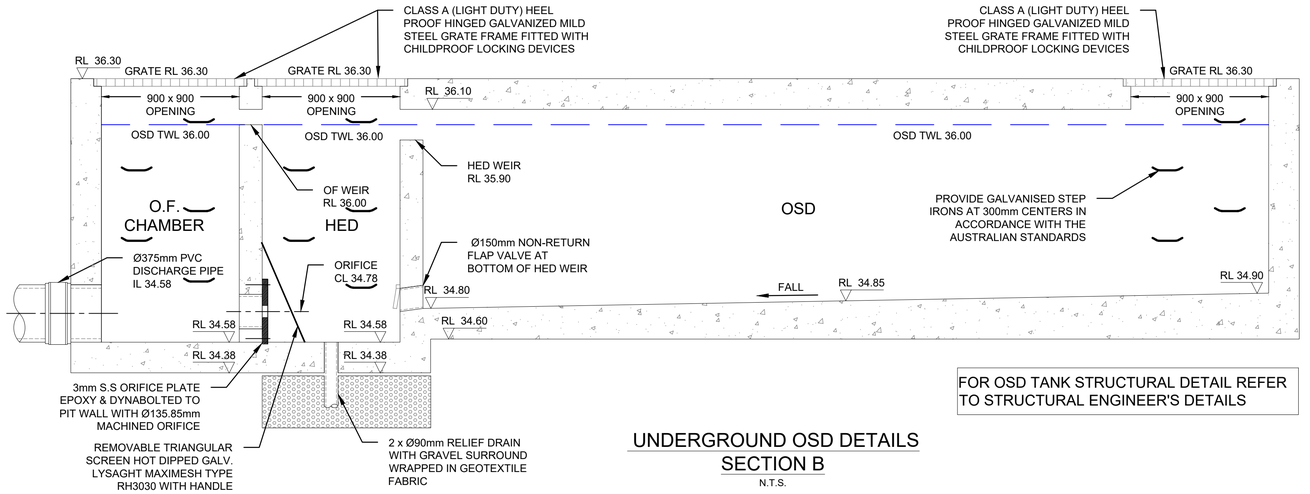
Regulated Design Record				
Project Address:				
Project Title:				
Consent No:		Body Corporate Reg No:		
Drawing Title:			Drawing No:	
Rev	**Date dd.mm.yy**	**Description**	**DP Full Name**	**Reg No**



TRASH SCREEN DETAIL
N.T.S.



ORIFICE PLATE DETAIL
N.T.S.



UNDERGROUND OSD DETAILS SECTION B
N.T.S.

FOR OSD TANK STRUCTURAL DETAIL REFER TO STRUCTURAL ENGINEER'S DETAILS

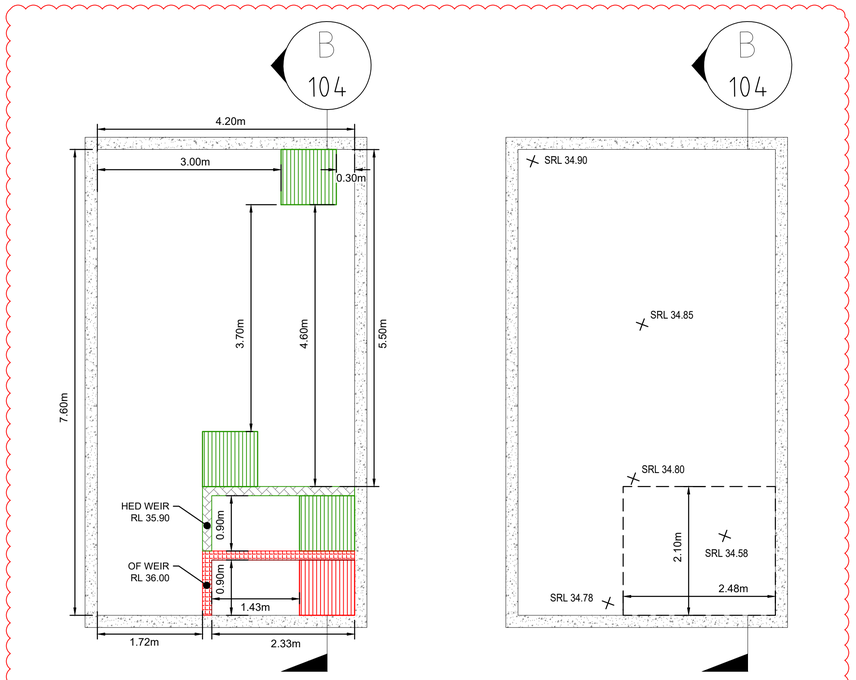
NOTE:
AS PER CANTERBURY DCP, UP TO 25% OF THE REQUIRED VOLUME FOR THE OSD CAN BE OFFSET INTO A RAINWATER RE-USE TANK.

VOLUME PROVIDED BY RAINWATER TANK = 10.0m^3

VOLUME PROVIDED BY OSD = 33.12m^3

TOTAL VOLUME PROVIDED = 43.12m^3

NOTE:
ALL ACCESS COVERS TO THE OSD TO BE FITTED WITH NON CORROSIVE, CHILDPROOF LOCKING DEVICES.



UNDERGROUND OSD INTERNAL WALLS DIMENSIONS & WEIR HEIGHT
SCALE 1:50

UNDERGROUND OSD BOTTOM S.R.L.
SCALE 1:50

CANTERBURY COUNCIL

Area (m^2) = 2928.47

C (10yrs) ARAR 1987 p307 = 0.85

Storm Duration T (min)	I 10 yrs (mm/hr)	V of Hydrograph (m^3)	Inflow Peak discharge (L/s)	Required Storage (m^3)
5	173	35.76	119.20	22.58
6	163	40.43	112.31	24.62
7	155	44.85	106.80	26.40
8	147	48.62	101.28	27.53
9	141	52.46	97.15	28.74
10	135	55.81	93.02	29.45
11	130	59.12	89.57	30.12
12	126	62.51	86.81	30.88
13	121	65.03	83.37	30.77
14	118	68.29	81.30	31.40
15	114	70.69	78.55	31.16
16	111	73.42	76.48	31.25
17	108	75.90	74.41	31.10
18	105	78.13	72.35	30.69
20	100	82.68	68.90	29.97
25	90	93.02	62.01	27.12
30	83	102.94	57.19	23.87
35	76	109.97	52.36	17.72
40	71	117.41	48.92	11.98
45	67	124.64	46.16	6.04
50	63	130.22	43.41	-1.56
55	60	136.42	41.34	-8.54
60	57	141.38	39.27	-16.75

MIN Storage m^3 (Below Ground)= **31.40**

MIN Storage m3 (Above Ground) = **37.67**

Storage Provided m^3= 33.12

Area m^2= 28.80

Av depth water= 1.15

Head in 1:10 (m) = 1.22

PSD (L/s) = **43.93** (150/10,000 x Area)

Diameter (mm) = 135.85

Stormwater Drainage System Maintenance Schedule

Maintenance Action	Frequency	Responsibility	Procedure
General			
Inspect roof drainage system of building and remove any debris/sludge	Six Monthly	Strata/Maintenance Contractor	Remove any leaves or debris and sludge from gutters of building and flush downpipes of building to remove any blockages. Pits downstream of downpipes to be cleaned of flushed debris.
Inspect pits and trench drains on site and remove debris/litter/sludge	Monthly or following Rain Period	Strata/Maintenance Contractor	Remove grate. Remove any debris/litter/sludge from within pits.
Inspect site for litter and floatable debris and remove	Fortnightly	Strata/Maintenance Contractor	Remove litter from site and sweep all driveway and pathways in order to remove leaves or sediments that may enter into the drainage system.
Basement Pump out			
Inspect and clean flap valve,	Six Monthly	Strata/Maintenance Contractor	Remove grate and check flap valve and pipe for blockages and clean. Check hinges for rust and test operation by moving flap to full extent.
Check hinge operation.	Annually	Strata/Maintenance Contractor	Inspect hinge and check its operation.
Check attachment of flap valve to wall pit.	Annually	Strata/Maintenance Contractor	Remove grate and ensure valve fixings are secure.
Check flap valve seal.	Six Monthly	Strata/Maintenance Contractor	Remove grate and fill pit with water, ensure flap seals against side of pit with minimal leakage.
Inspect walls for cracking or spalling.	Annually	Strata/Maintenance Contractor	Remove grate to inspect internal walls, remove vegetation to inspect external wall, repair as required.
Inspect sump and clean.	Six Monthly	Strata/Maintenance Contractor	Remove grate and clean sediment/sludge from sump.
Inspect grate for damage or blockage.	Six Monthly	Strata/Maintenance Contractor	Check both sides of grate for corrosion (particularly welds and corners); also check for damage and blockages.
Inspect outlet pipe and remove blockages	Six Monthly	Strata/Maintenance Contractor	Remove grate and flush outlet pipe to ensure it drains freely. Check for debris on upstream side of return line.
Outlets			
Inspect & remove any blockage of orifices	Six monthly	Strata/Maintenance Contractor	Remove grate & screen to inspect orifice. See plan for location of outlets
Check attachment of orifice plates to wall of chamber and/or pit (gaps less than 5 mm)	Annually	Strata/Maintenance Contractor	Remove grate and screen. Ensure plates are mounted securely, tighten fixings if required. Seal gaps as required.
Check orifice diameters are correct and retain sharp edges	Five yearly	Strata/Maintenance Contractor	Compare diameter to design (see Work-as-Executed) and ensure edge is not pitted or damaged.
Inspect screen and clean	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and screens if required to clean them.
Check attachment of screens to wall of chamber or pit	Annually	Strata/Maintenance Contractor	Remove grate(s) and screen(s). Ensure screen fixings are secure. Repair as required.
Check screen(s) for corrosion	Annually	Strata/Maintenance Contractor	Remove grate(s) and examine screen(s) for rust or corrosion, especially at corners or welds.
Inspect walls (internal and external, if appropriate) for cracks or spalling	Annually	Strata/Maintenance Contractor	Remove grate(s) to inspect internal walls. Repair as required. Clear vegetation from external walls if necessary and repair as required.
Inspect outlet sumps & remove any sediment/sludge	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and screen(s). Remove sediment/sludge build-up and check orifices are clear.
Inspect grate(s) for damage or blockage	Six monthly	Strata/Maintenance Contractor	Check both sides of a grate for corrosion, (especially corners and welds) damage or blockage.
Inspect outlet pipe & remove any blockage	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and screen(s). Ventilate underground storage if present. Check orifices and remove any blockages in outlet pipe. Flush outlet pipe to confirm it drains freely. Check for sludge/debris on upstream side of return line.
Check step irons for corrosion	Annually	Strata/Maintenance Contractor	Remove grate. Examine step irons and repair any corrosion or damage
Check fixing of step irons is secure	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and ensure fixings are secure prior to placing weight on step iron.
Storage			
Inspect storage & remove any sediment/sludge in pit	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and screen(s). Remove sediment/sludge build-up.
Inspect internal walls of storage (and external, if appropriate) for cracks or spalling	Annually	Strata/Maintenance Contractor	Remove grate(s) to inspect internal walls. Repair as required. Clear vegetation from external walls if necessary and repair as required.
Inspect & remove any debris/litter/mulch etc blocking grates	Six monthly	Strata/Maintenance Contractor	Remove blockages from grate(s) and check if storage is blocked.
Inspect areas draining to the storage(s) & remove debris/mulch/litter etc likely to block screens/grates	Six monthly	Strata/Maintenance Contractor	Remove debris and floatable material likely to be carried to grates.
Compare storage volume to volume approved. (Rectify if loss > 5%)	Annually	Strata/Maintenance Contractor	Compare actual storage available with Work-as Executed plans. If volume loss is greater than 5%, arrange for reconstruction to replace the volume lost. Council to be notified of the proposal.
Inspect storages for subsidence near pits	Annually	Strata/Maintenance Contractor	Check along drainage lines and at pits for subsidence likely to indicate leakages.

Issue	Description	Date	Designed	Engineer	Checked
C	ISSUE FOR CONSTRUCTION CERTIFICATE	02/02/2023	MD	EH	OC
B	ISSUE FOR S4.55 APPROVAL	25/07/2022	MD	EH	O.C.
A	ISSUE FOR COORDINATION	27/05/2022	MD	EH	OC

0 1cm at full size 10cm 20cm

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Canterbury Bankstown City Council

Scale
0 1 2 3 m
SCALE 1:50 @ A1

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Project
754-774 CANTERBURY ROAD, BELMORE
PROPOSED RESIDENTIAL FLAT BUILDING
STORMWATER MANAGEMENT PLANS
CONSTRUCTION CERTIFICATE

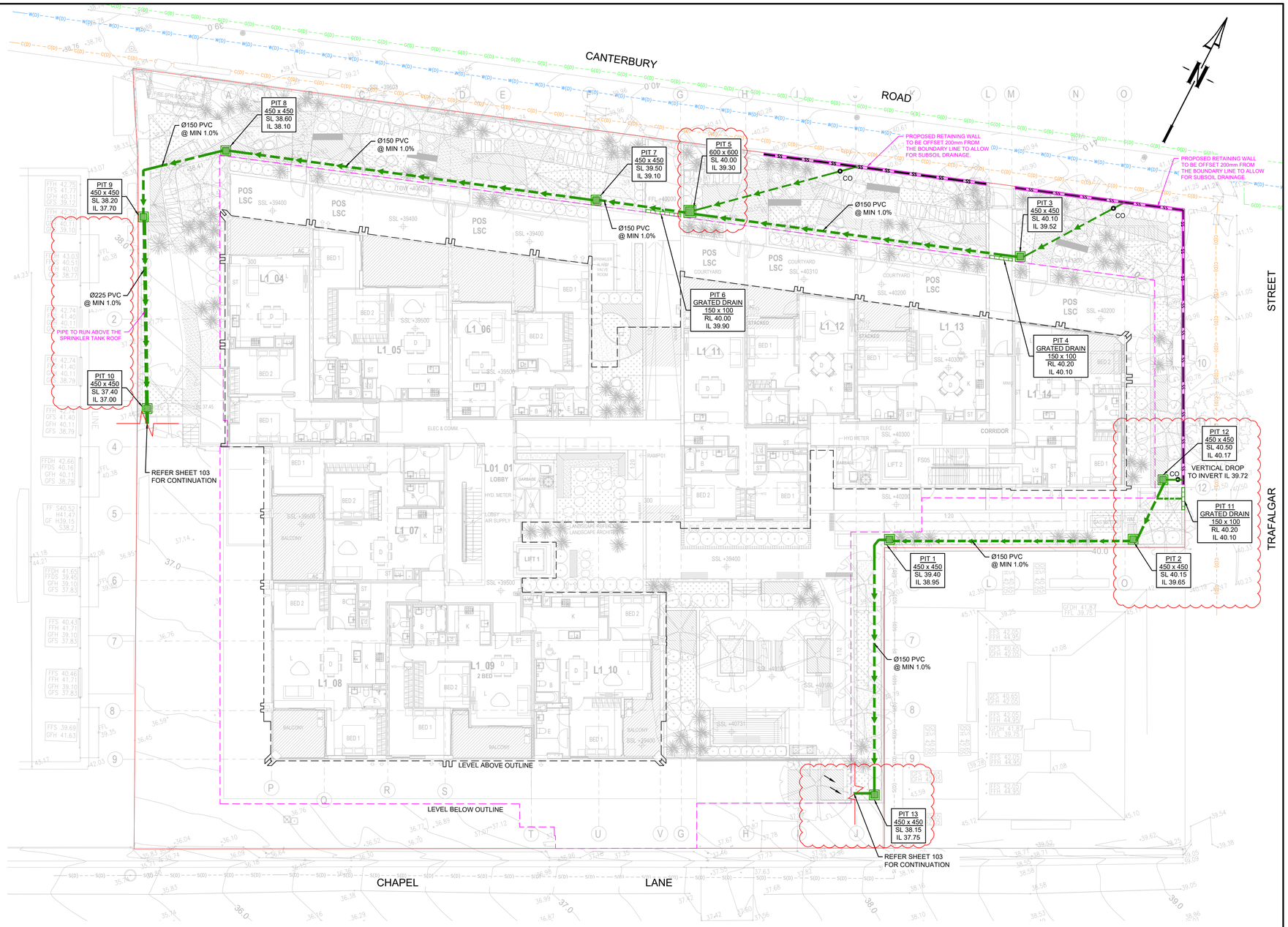
Drawing Title
ON-SITE DETENTION DETAILS AND CALCULATION SHEET

Scale	Project No.	Dwg. No.	Issue
A1 As Shown	210752	104	C

Regulated Design Record				
Project Address:				
Project Title:				
Consent No:		Body Corporate Reg No:		
Drawing Title:			Drawing No:	
Rev	**Date dd.mm.yy**	**Description**	**DP Full Name**	**Reg No**

LEGEND

- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED STORMWATER DRAINING TO OSD
- PROPOSED STORMWATER BYPASSING OSD
- Ø100 HDPE OR PVC WRAPPED IN 20mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- 65 — Ø65 HDPE OR PVC WRAPPED IN 20mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- RWT — PROPOSED STORMWATER PIPE TO RAINWATER TANK
- SS — Ø100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34
- RISER PIPE
- CE — Ø300 CLEANING EYE
- RWT — RAINWATER TANK
- DP — DOWNPIPE Ø100
- VD — VERTICAL DROP Ø100
- PG — PLANTER GRATE Ø150
- FG — FLOOR GRATE Ø150
- FG — FLOOR GRATE 200x200 (ALLOW MINIMUM 1.0% FALL TO FG)
- FW — FLOOR GRATE 300x300 (ALLOW MINIMUM 1.0% FALL TO FW)
- RWO — RAINWATER OUTLET Ø260 SPS (ALLOW MINIMUM 1.0% FALL TO RWO)
- SPB — SUSPENDED PLANTER BOX RAINWATER OUTLET
- RL 47.00 — DESIGN SURFACE LEVEL
- EXISTING SURFACE LEVEL
- IL 47.00 — INVERT LEVEL
- TD — AC CONDENSER TUNDISH TO MANUFACTURER'S DETAILS
- 50 — Ø50mm HDPE OR PVC WRAPPED IN 20mm ABLEFLEX CAST IN SLAB
- OF — Ø50mm EMERGENCY OVERFLOW SPITTERS/PIPES U.N.O.
- EXISTING STORMWATER
- W(D) — EXISTING WATER MAIN
- S(D) — EXISTING SEWER MAIN
- C(D) — EXISTING COMMUNICATIONS CABLE
- E — EXISTING ABOVE GROUND ELECTRICITY CABLE
- G(D) — EXISTING GAS



LEVEL 1 PLAN

SCALE 1:150

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 .

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

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

NOTES:
1- CONTRACTOR IS TO PROVIDE OVERFLOW OUTLETS & EMERGENCY OVERFLOW SPITTERS TO ALL TRAPPED AREAS.
2- DP/VD ARE Ø100mm PIPES U.N.O.
3- ALL TRANSFERRING PIPES ARE SUSPENDED U.N.O.
4- BALCONIES PIPES ARE Ø50mm HDPE CAST IN SLAB.

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

Issue	Description	Date	Designed	Engineer	Checked
B	ISSUE FOR CONSTRUCTION CERTIFICATE	02/02/2023	MD	EH	OC
A	ISSUE FOR S4.55 APPROVAL	25/07/2022	MD	EH	OC

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Council
Canterbury Bankstown City Council

Scale
0 3 6 9m
SCALE 1:150 @ A1

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Project
754-774 CANTERBURY ROAD, BELMORE
PROPOSED RESIDENTIAL FLAT BUILDING
STORMWATER MANAGEMENT PLANS
CONSTRUCTION CERTIFICATE

Drawing Title
STORMWATER LAYOUT PLAN LEVEL 1

Scale	A1	Project No.	Dwg. No.	Issue
1:150		210752	105	B

Regulated Design Record				
Project Address:				
Project Title:				
Consent No:		Body Corporate Reg No:		
Drawing Title:			Drawing No:	
Rev	**Date dd.mm.yy**	**Description**	**DP Full Name**	**Reg No**

LEGEND

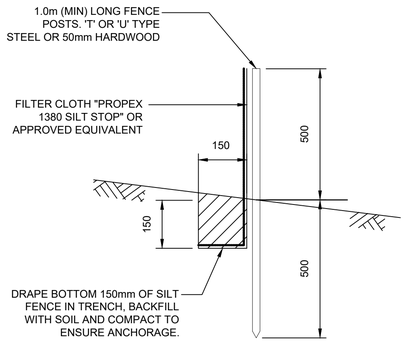
- W(D) W(D) — EXISTING WATER MAIN
- S(D) S(D) — EXISTING SEWER MAIN
- C(D) C(D) — EXISTING COMMUNICATIONS CABLE
- E E E E E — EXISTING ABOVE GROUND ELECTRICITY CABLE
- G(D) G(D) — EXISTING GAS
- 26.45 — EXISTING CONTOUR
- NS 26.45 — EXISTING SURFACE LEVEL
- X EL: 47.00 — EARTHWORKS LEVEL
- X RL 47.00 — 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

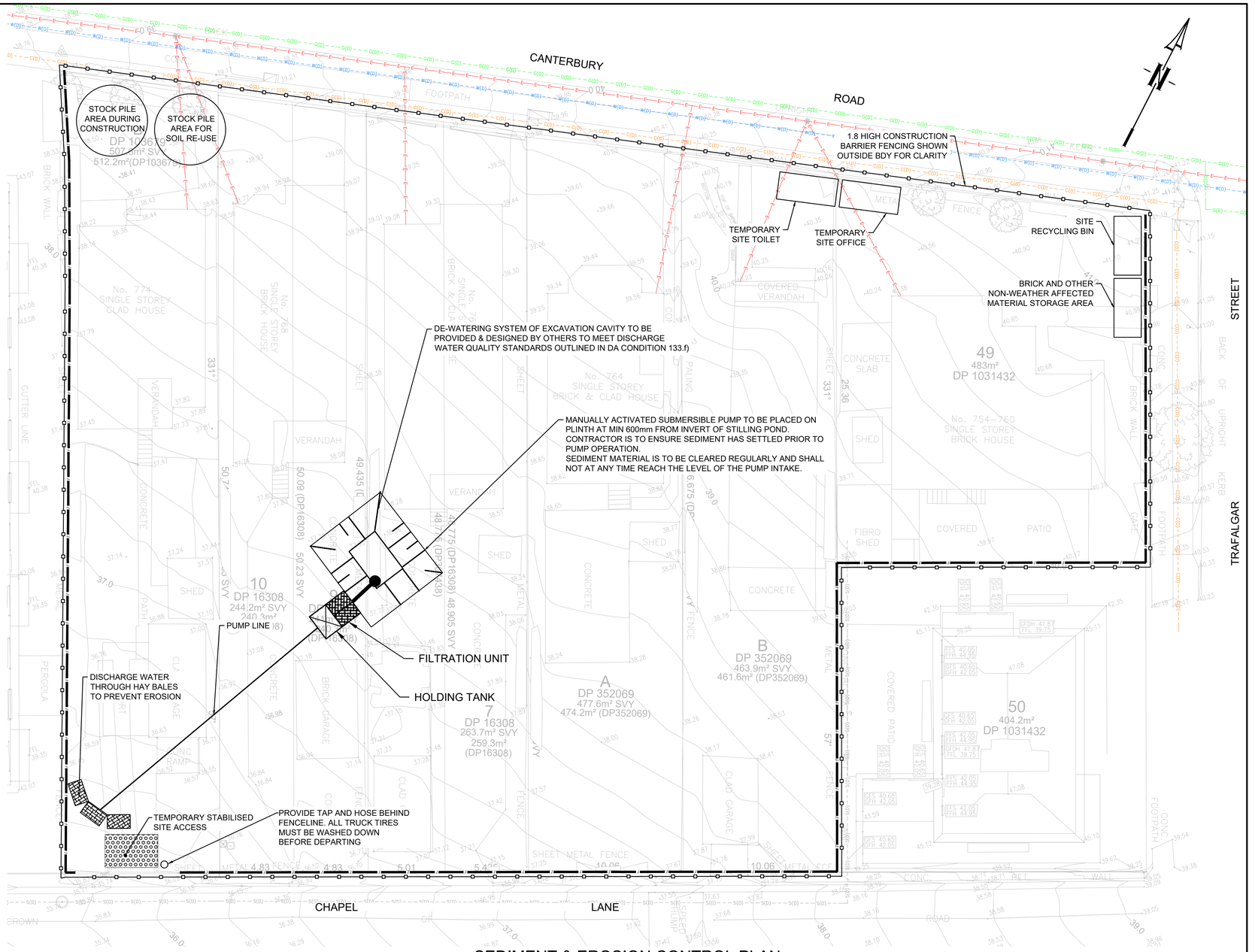
1. IMMEDIATELY FOLLOWING SETTING OUT OF THE WORKS, BUT PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORKS, THE CONTRACTOR AND SUPERINTENDENT SHALL WALK THE SITE TO NOMINATE THE LOCATIONS AND TYPES OF SEDIMENT AND EROSION CONTROL MEASURES TO BE ADOPTED. THESE MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY 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.

SILT FENCE NOTES:

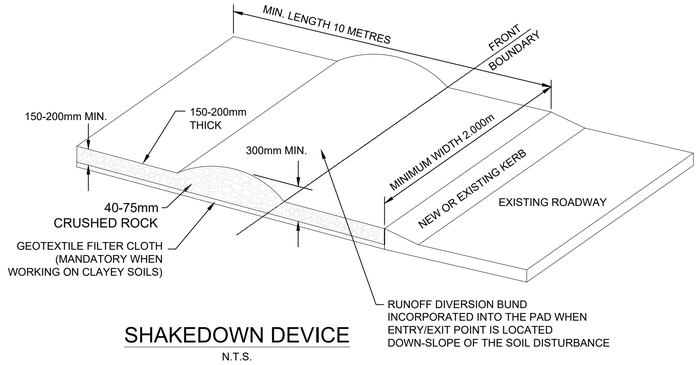
1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS WITH GALVANISED WIRE TIES, STAPLES OR ATTACHMENT BELTS.
2. POSTS SHOULD NOT BE SPACED MORE THAN 3.0m APART.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 150mm AND FOLDED.
4. FOR EXTRA STRENGTH TO SILT FENCE, WOVEN 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.



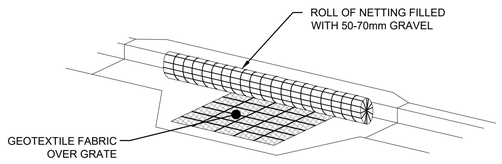
SILT FENCE DETAIL
N.T.S



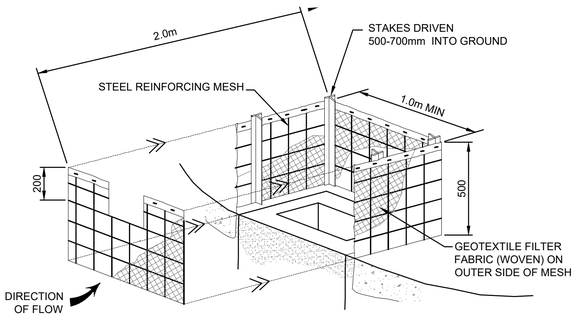
SEDIMENT & EROSION CONTROL PLAN
SCALE 1:150



SHAKEDOWN DEVICE
N.T.S.



KERB INLET PROTECTION
SAG GULLIES
N.T.S.



FIELD INLET SEDIMENT TRAP
N.T.S.

Issue	Description	Date	Designed	Engineer	Checked
B	ISSUE FOR CONSTRUCTION CERTIFICATE	02/02/2023	MD	EH	OC
A	ISSUE FOR S4.55 APPROVAL	25/07/2022	MD	EH	OC

0 1cm at full size 100cm 200cm

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Council
Canterbury Bankstown City Council

Scale
0 3 6 9m
SCALE 1:150 @ A1

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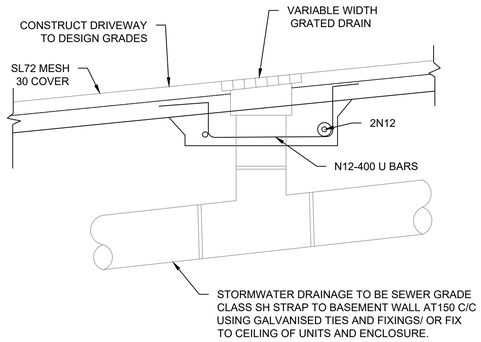
Project
754-774 CANTERBURY ROAD, BELMORE
PROPOSED RESIDENTIAL FLAT BUILDING
STORMWATER MANAGEMENT PLANS
CONSTRUCTION CERTIFICATE

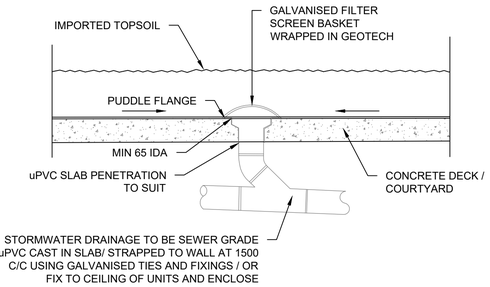
Drawing Title
SEDIMENT & EROSION CONTROL PLAN & DETAILS

Scale	Project No.	Dwg. No.	Issue
As Shown A1	210752	106	B

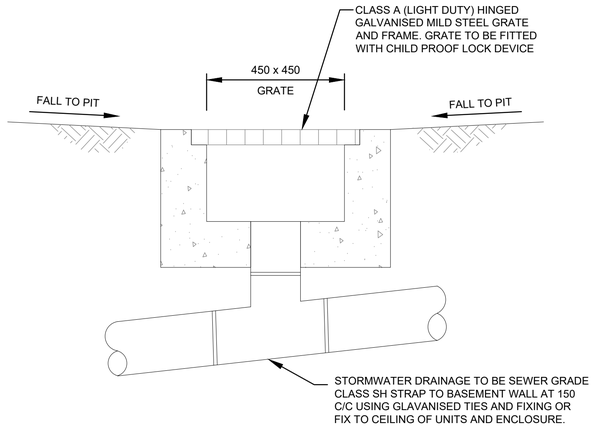
Regulated Design Record				
Project Address:				
Project Title:				
Consent No:		Body Corporate Reg No:		
Drawing Title:			Drawing No:	
Rev	**Date dd.mm.yy**	**Description**	**DP Full Name**	**Reg No**



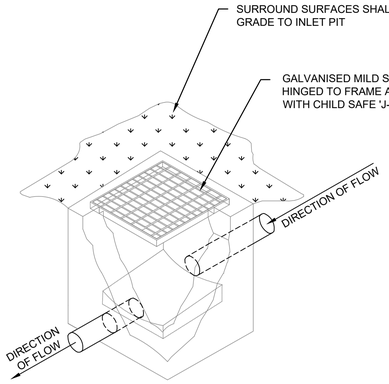
GRATED DRAIN DETAIL
N.T.S.



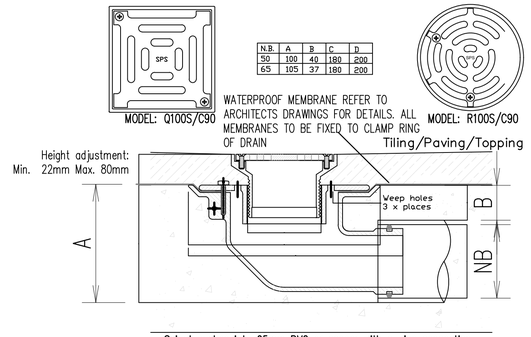
PLANTER GRATE DETAIL
N.T.S.



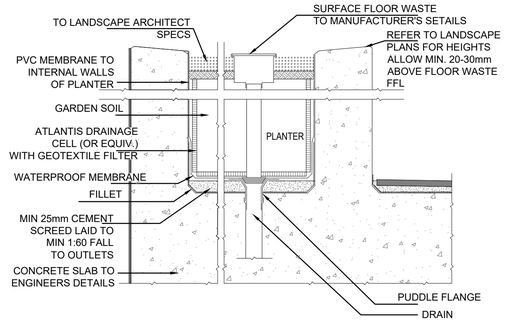
VERTICAL DROP PIT DETAIL
SCALE 1:10



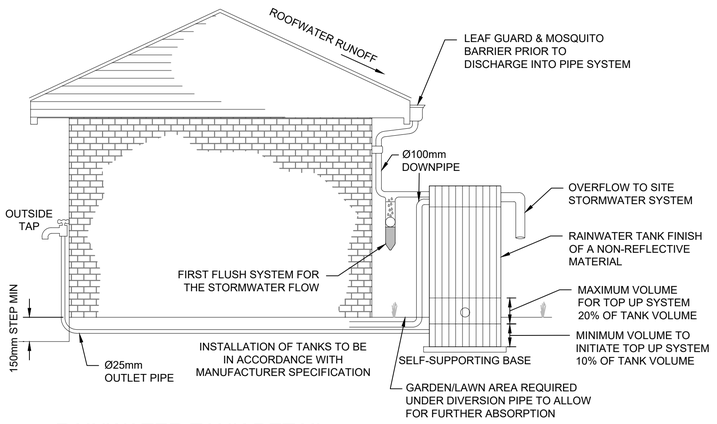
TYPICAL GRATED INLET PIT DETAIL
N.T.S.



TYPICAL CAST IN FLOOR WASTE/RAINWATER OUTLET



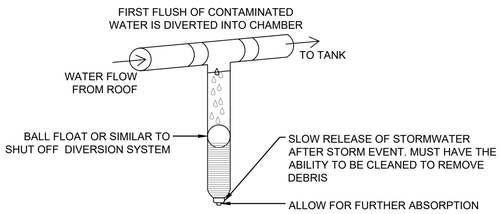
TYPICAL SUSPENDED PLANTER BOX FLOOR WASTE DETAIL
N.T.S.



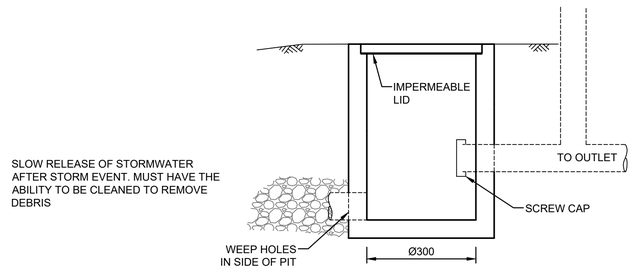
RAINWATER TANK DETAIL
N.T.S.

STORAGE TANK NOTES:

1. TANK WATER TAPS SHALL BE MARKED "RAINWATER NOT TO HUMAN CONSUMPTION".
2. RAINWATER TANKS SHALL BE CONNECTED TO MAINS WATER SUPPLY AS BACKUP.
3. THE PUMPS ARE TO BE INSULATED IN ACCORDANCE WITH COUNCIL POLICY.
4. PUMPS SHALL PROVIDE MINIMUM 150 kPa PRESSURE.
5. EACH TANK TO BE CONNECTED TO AN OUTDOOR TAP FOR IRRIGATION USE.
6. RAINWATER TANKS TO BE CLEANED OUT EVERY 6 MONTHS.
7. WATER TANK AND ASSOCIATED STRUCTURE TO BE THE SAME COLOR, OR A COLOR COMPLEMENTARY TO THE DWELLING.
8. TOP TANK TO BE BELOW TOP OF NEAREST FENCE, OR 1.8 METERS WHICHEVER IS LESS.
9. THE WATER TANK SHOULD BE LOCATED AT LEAST 900mm FROM ANY PROPERTY BOUNDARY
10. PLUMBING FROM THE WATER TANK IS TO BE KEPT SEPARATED FROM THE RETICULATED WATER SUPPLY SYSTEM.
11. TANK TO BE BUILT ON SELF-SUPPORTING BASE.
12. PROVIDE BACK-FLOW PREVENTION DEVICE AT MAINS WATER METER.
13. ROOF DRAINING TO TANK MUST NOT CONTAIN LEAD, TAR BASED PAINTS OR ASBESTOS.
14. WATER TO BE DRAWN FROM ANAEROBIC ZONE OF TANK.



FIRST FLUSH WATER DIVERTER DETAIL
N.T.S.



CLEANING EYE DETAIL
N.T.S.

Issue	Description	Date	Designed	Engineer	Checked
B	ISSUE FOR CONSTRUCTION CERTIFICATE	02/02/2023	MD	EH	OC
A	ISSUE FOR S4.55 APPROVAL	25/07/2022	MD	EH	OC

0 1cm at full size 10cm 20cm

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Council
Canterbury Bankstown City Council

Scale

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Project
754-774 CANTERBURY ROAD, BELMORE
PROPOSED RESIDENTIAL FLAT BUILDING
STORMWATER MANAGEMENT PLANS
CONSTRUCTION CERTIFICATE

Drawing Title
MISCELLANEOUS DETAILS SHEET

Scale	Project No.	Dwg. No.	Issue
N.T.S. A1	210752	107	B