

433-437 CANTERBURY ROAD, CAMPSIE

PROPOSED MIXED USE DEVELOPMENT

STORMWATER MANAGEMENT PLANS

GENERAL NOTES

- ALL LINES ARE TO BE Ø100 uPVC 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWERGRADE & SEALED.
- 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.
- ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
- ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC U.N.O.
- PITS LESS THAN 600mm DEEP MAY BE BRICK, PRECAST OR CONCRETE.
- ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
- ALL EXTERNAL SLABS TO BE WATERPROOFED.
- ALL GRATES TO HAVE CHILD PROOF LOCKS.
- ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
- ALL DPs TO HAVE LEAF GUARDS.
- ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
- ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
- COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
- ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
- REFER TO LANDSCAPE ARCHITECT'S DRAWINGS FOR LANDSCAPING.
- 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.
- ALL PIPES IN BALCONIES TO BE Ø50 PVC CAST IN CONCRETE SLAB. 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
- 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.



LOCALITY PLAN

N.T.S

DRAWING INDEX

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104	STORMWATER LAYOUT PLAN BASEMENT LEVEL 1
105	STORMWATER LAYOUT PLAN LOWER GROUND
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109	ON-SITE DETENTION DETAILS AND CALCULATIONS SHEET 1 OF 2
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114.2	STANDARD DETAILS DRAWINGS & PITS DETAILS

STORMWATER DRAINAGE MATERIALS AND TECHNICAL SPECIFICATIONS:

All Works to be installed to AS/NZS 3500.3.

FILTER MATERIAL

General: Provide filter materials consisting of natural clean washed sands and gravels and screened crushed rock conforming to AS/NZS 3500.3 clause 2.13.1.

EMBEDMENT MATERIAL

Stormwater drains: Conform to AS/NZS 3500.3 clause 6.3.5.1.

Subsoil drains: Conform to AS/NZS 3500.3 clause 6.4.2.1.

SURFACE DRAINS - CHANNEL DRAINS, GRATING AND SUMPS

General: Reinforced concrete channel drains, to structural engineers specifications, and drainage engineers dimensions.

Galvanised channel drains may also be used, and installed to manufacturers specifications, and drainage engineers dimensions.

PIPES

Stormwater pipes shall be reinforced concrete, PVC-U up to 225 diameter manufactured to AS 1254 or polypropylene with SN8 equivalent grade as shown on the Drawings.

Reinforced concrete pipes shall be socketed, rubber ring jointed, manufactured and tested in accordance with AS 4058 - 2007 and shall be 1, 2, 4 or 4 class as indicated on the Drawings.

Polypropylene pipes - to comply with AS/NZS 5065-2005 - Polyethylene and Polypropylene pipes and fittings for drainage and sewerage applications.

SUBSOIL DRAINAGE

Filter: Conform to AS/NZS 3500.3 clause 2.13.2.

PREFABRICATED PITS GENERAL

Requirement: Provide precast or prefabricated pits in conformance with AS/NZS 3500.3 clauses 2.12.8 and 7.5.

"Civil Cast" Prefabricated concrete pits to the sizes specified in the drainage design documentation may be used.

METAL ACCESS COVERS AND GRATES

Standard: To AS 3996.

STORMWATER DRAINAGE PUMPS GENERAL

Standard: To AS/NZS 3500.3 Section 8.

KS50 stormwater pump to be provided per design documentation.

STORMWATER DETENTION TANKS

Type: Reinforced concrete to structural engineer's specifications, with dimensions as specified in drainage design documentation.

F		ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC	Architect	Council	Scale	 <div>CIVIL & STORMWATER ENGINEERING SERVICES PTY LTD ABIN: 27 644 422 506 Shop 1, 143-147 Parramatta Road, Concord, NSW 2137 P:(02) 8397 6500 E:info@esgconsult.com.au</div>	Project	Drawing Title				
E		ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC	CDARCHITECTS	Canterbury-Bankstown Council			433-437 CANTERBURY ROAD, CAMPSIE PROPOSED MIXED USE DEVELOPMENT STORMWATER MANAGEMENT PLAN	COVER SHEET PLAN				
D		ISSUE FOR CONSTRUCTION CERTIFICATE	18/05/2023	GMS	OC	OC	LEVEL 2, 60 PARK STREET SYDNEY NSW 2000									
C		ISSUE FOR DEVELOPMENT APPLICATION	16/02/2023	DBF	OC	OC	P: 02 9267 2000									
B		ISSUE FOR DEVELOPMENT APPLICATION	26/09/2022	DBF	OC	OC	W: www.cdarchitects.com.au									
Issue	Description	Date	Designed	Engineer	Checked											
												Scale	A1	Project No.	Dwg. No.	Issue
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LEGEND

- > PROPOSED STORMWATER
- o VD Ø100mm VERTICAL DROP
- SURFACE FLOW DIRECTION
- SS --- SS --- Ø100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34 @MIN 1.0% SLOPE
- o CLEANING EYE (OR INSPECTION EYE)
- o IO INSPECTION OPENING
- x RL 27.56 FINISHED SURFACE LEVEL
- GRATED DRAIN (HD)
- FG Ø150mm FLOOR GRATE
- (HD) (HEAVY DUTY)
- Ø100 uPVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- Ø50mm SUBSOIL @ EVERY ALTERNATE PILE

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"

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 PARRAMATTA RIVER CATCHMENT TRUST OSD HANDBOOK.

DANGER

CONFINED SPACE
NO ENTRY WITHOUT
CONFINED SPACE
TRAINING

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

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:

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

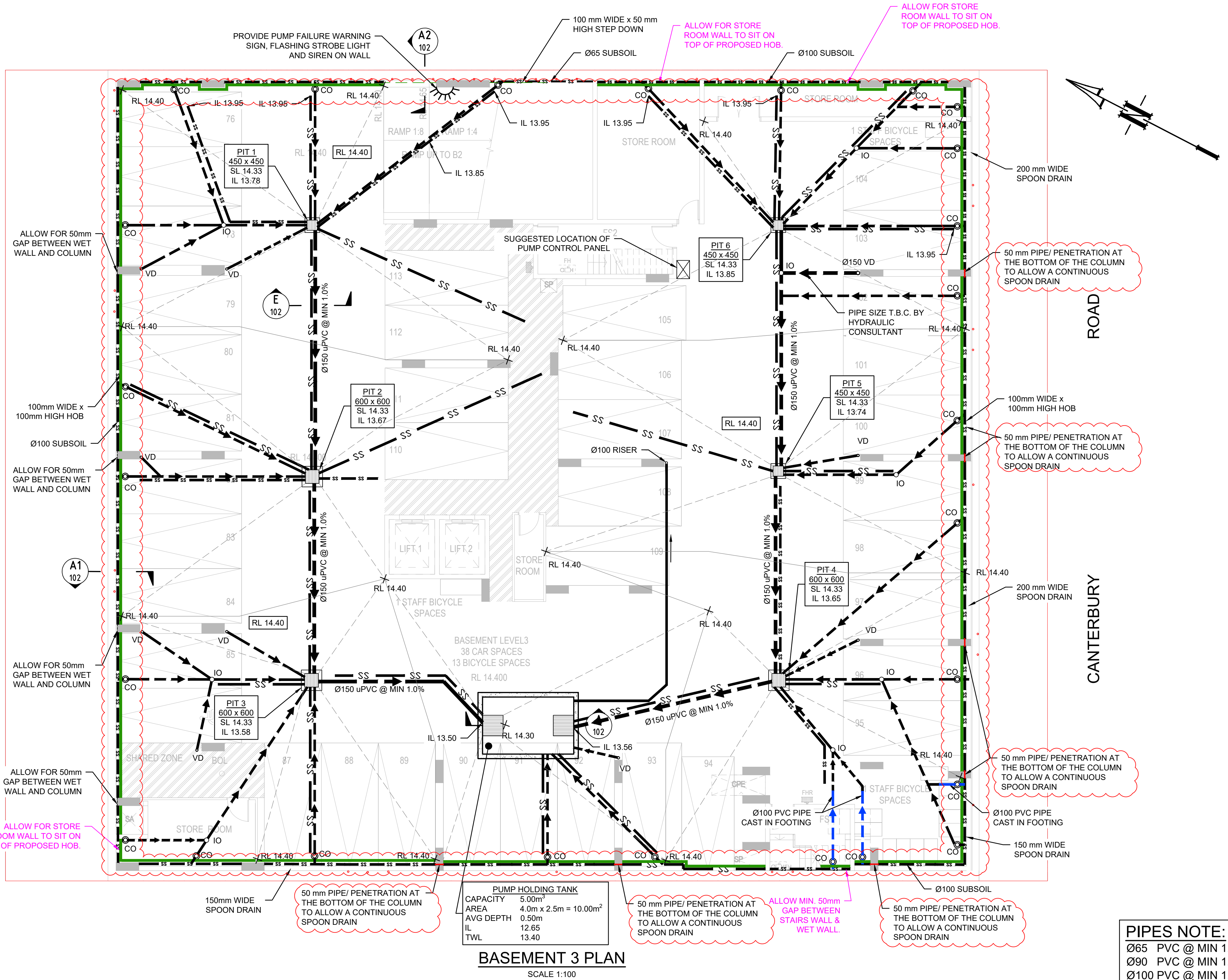
WARNING

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



BASEMENT 3 PLAN

SCALE 1:100

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

J	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC
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H	ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC
G	ISSUE FOR CONSTRUCTION CERTIFICATE (ARCHITECTURAL LAYOUT CHANGED)	19/09/2023	GMS	OC	OC
F	ISSUE FOR CONSTRUCTION CERTIFICATE	07/07/2023	GMS	OC	OC
Issue	Description	Date	Designed	Engineer	Checked

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Council
**Canterbury-Bankstown
Council**

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SCALE 1:100 @ A1

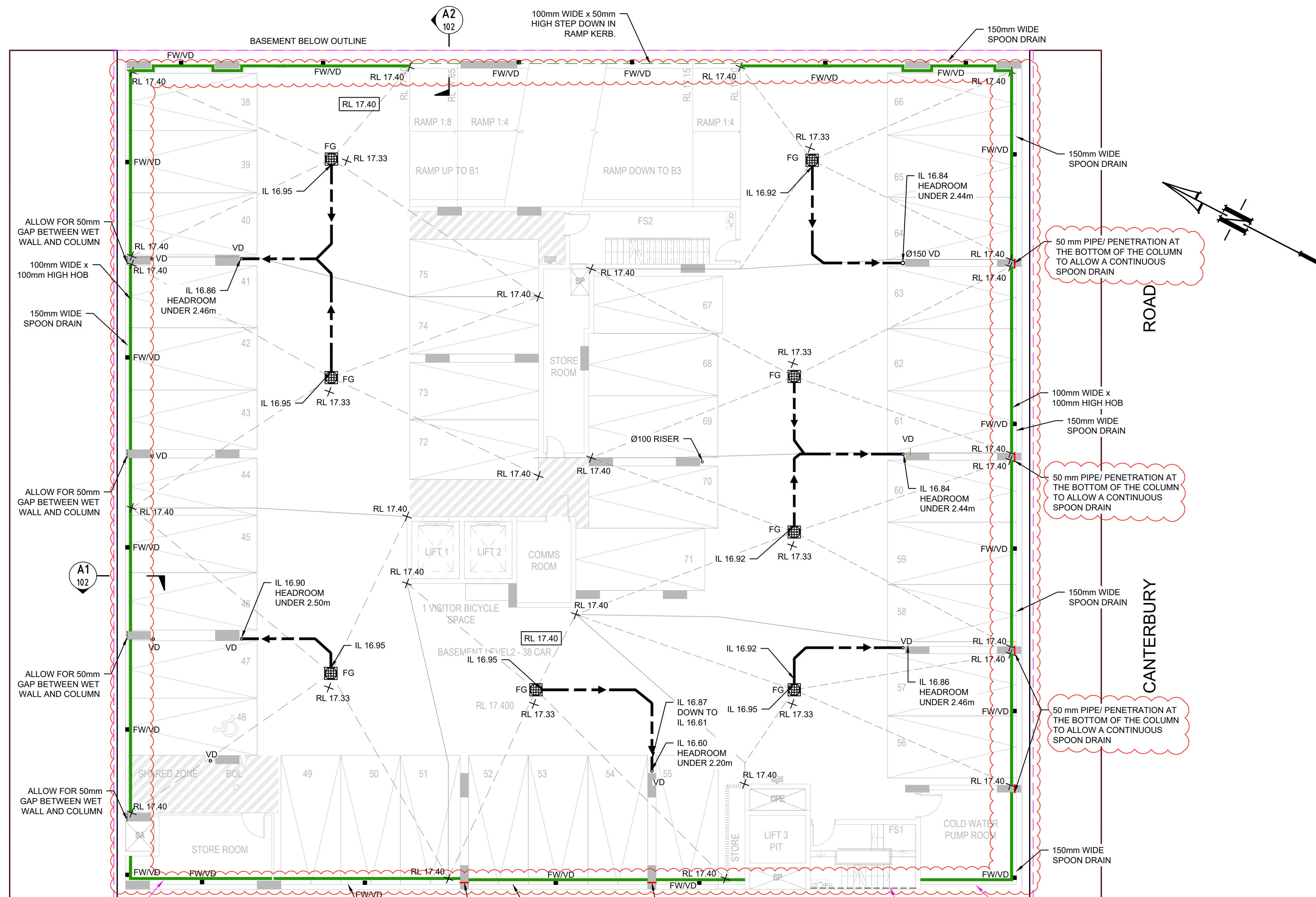
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Project
**433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN**



Drawing Title
**STORMWATER LAYOUT PLAN
BASEMENT LEVEL 3
SHEET 1 OF 2**

Scale A1 Project No. 150061 Dwg No. 101 Issue J



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

TYPICAL SPOON DRAIN FALL DETAILS
NTS

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I	ISSUE FOR COORDINATION	22/10/2024	MD	OC	OC	CDARCHITECTS	Canterbury-Bankstown Council	 <p>0 2 4 6 m SCALE 1:100 @ A1</p>				
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Issue	Description	Date	Designed	Engineer	Checked							
<p>1:100 A1 Project No. 150061 Dwg. No. 103 Issue J</p>												

LEGEND

	PROPOSED STORMWATER
	Ø100mm VERTICAL DROP
	SURFACE FLOW DIRECTION
	Ø100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34 @MIN 1.0% SLOPE
	CLEANING EYE (OR INSPECTION EYE)
	INSPECTION OPENING
	FINISHED SURFACE LEVEL
	GRATED DRAIN (HD)
	Ø150mm FLOOR GRATE
	(HD) (HEAVY DUTY)
	Ø100 uPVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB

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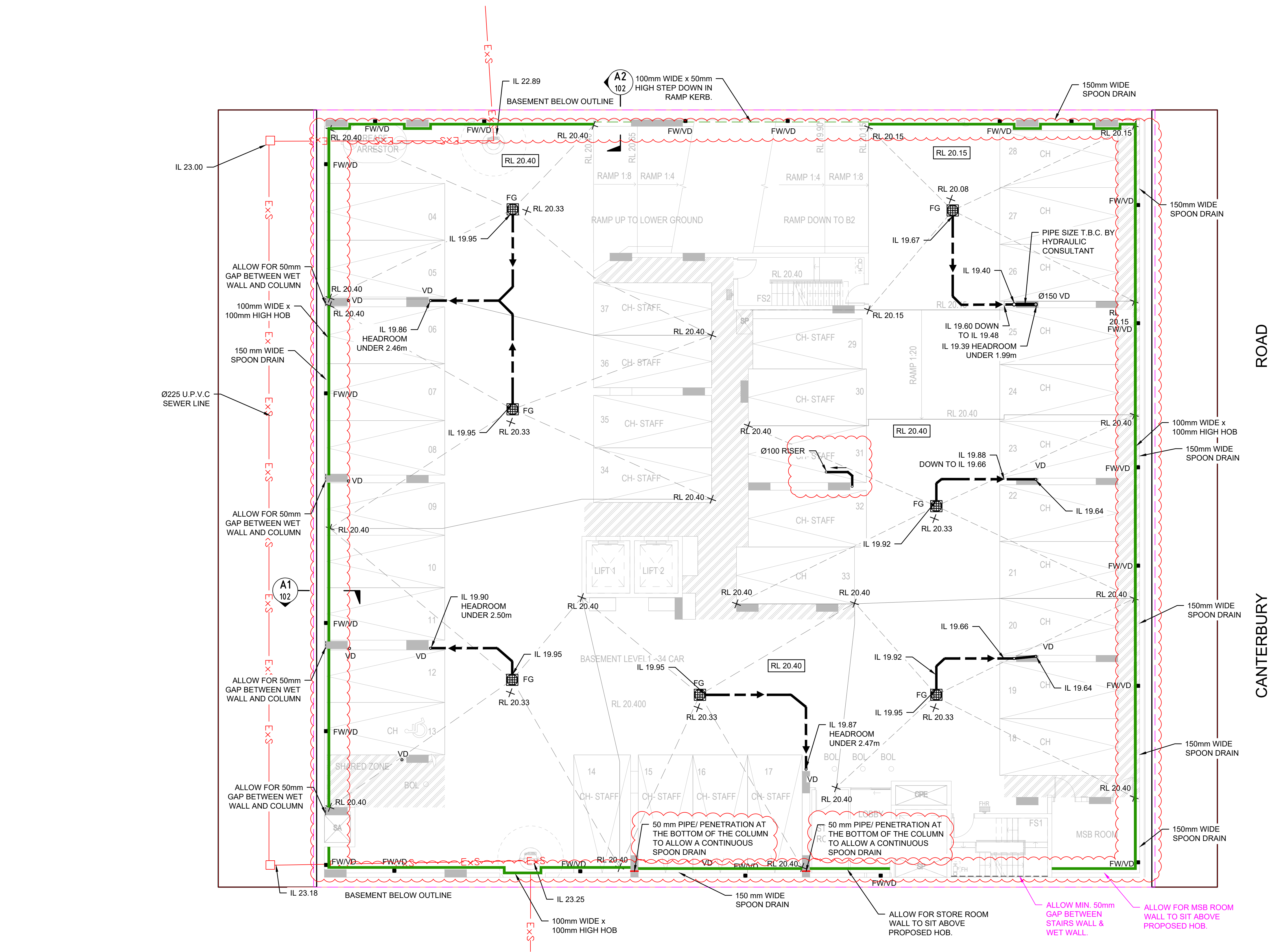
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NOTE:

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

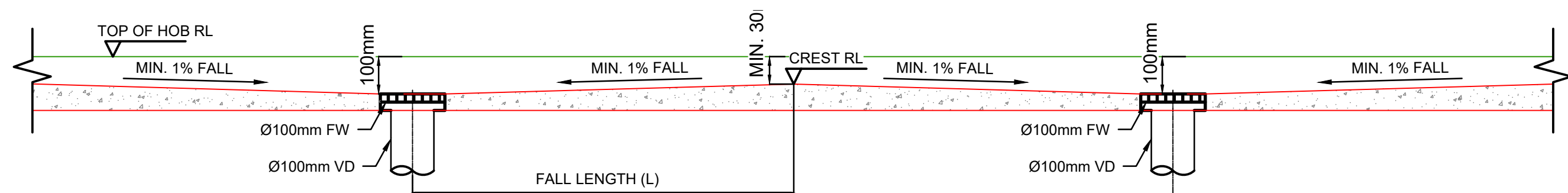
NOTE:

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



BASEMENT 1 PLAN

SCALE 1:100



TYPICAL SPOON DRAIN FALL DETAILS

NTS

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**433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN**

Drawing Title STORMWATER LAYOUT PLAN BASEMENT LEVEL 1	Scale 1:100	Project No. 150061	Dwg. No. 104	Issue J
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LEGEND

- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED STORMWATER DRAINING TO OSD
- PROPOSED STORMWATER BYPASSING OSD
- Ø100 PVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- Ø65 PVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- Ø50mm PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB
- PROPOSED STORMWATER PIPE TO RAINWATER TANK
- Ø100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34 RISER PIPE
- 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
- XRL 47.00 DESIGN SURFACE LEVEL
- +NS 26.45 EXISTING SURFACE LEVEL
- IL 47.00 INVERT LEVEL
- TD AC CONDENSER TUNDISH TO MANUFACTURER'S DETAILS
- OF Ø50mm EMERGENCY OVERFLOW SPITTERS/PIPES
- OF1 100x50mm RHS EMERGENCY OVERFLOW SPITTERS/PIPES
- OF2 150x50mm RHS EMERGENCY OVERFLOW SPITTERS/PIPES
- 300mm WIDE CUT IN ROOF HOB FOR EMERGENCY OVERFLOW U.N.O.
- OFG OVERFLOW FLOOR GRATE 200x200
- Ø100 PVC EMERGENCY OVERFLOW PIPE U.N.O.
- EXISTING STORMWATER
- ExW EXISTING WATER MAIN
- ExS EXISTING SEWER MAIN
- ExT EXISTING TELSTRA
- ExE EXISTING ELECTRICAL
- ExG EXISTING GAS
- ExOP EXISTING OPTIC FIBER
- SPB2 SUSPENDED PLANTER BOX RAINWATER OUTLET TO DRAIN SAND PIT AT LOW LEVEL

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 PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB AT MIN 1.0% SLOPE.

NOTE:

ALL PIPES ARE Ø100 PVC AT MIN 1.0% SLOPE U.N.O.

NOTE:

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

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 REDUNDANT PIPELINES WITHIN FOOTPATH AREA MUST BE REMOVED AND FOOTPATH/KERB REINSTATED.

LOWER GROUND PLAN

SCALE 1:100

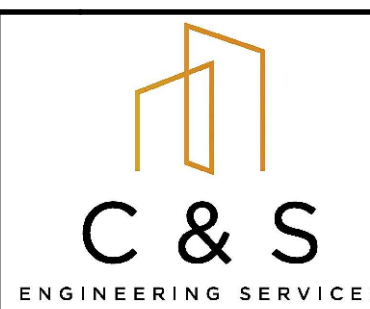
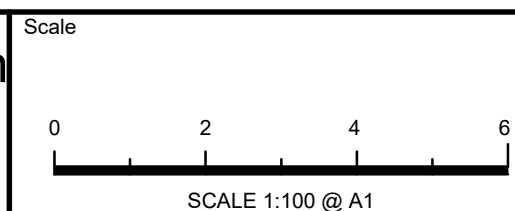
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UNLESS NOTED OTHERWISE

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PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN

Drawing Title
STORMWATER LAYOUT PLAN
LOWER GROUND

Scale	A1	Project No.	Dwg No.	Issue
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LEGEND

- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED STORMWATER DRAINING TO OSD
- PROPOSED STORMWATER BYPASSING OSD
- Ø100 PVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- Ø65 PVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- Ø50mm PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB
- PROPOSED STORMWATER PIPE TO RAINWATER TANK
- Ø100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34 RISER PIPE
- Ø300 CLEANING EYE
- RAINWATER TANK
- DOWNPIPE Ø100
- VERTICAL DROP Ø100
- PLANTER GRATE Ø150
- FLOOR GRATE Ø150
- FLOOR GRATE 200x200 (ALLOW MINIMUM 1.0% FALL TO FG)
- FLOOR GRATE 300x300 (ALLOW MINIMUM 1.0% FALL TO FW)
- RAINWATER OUTLET Ø260 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
- Ø50mm EMERGENCY OVERFLOW SPITTERS/PIPES
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- EXISTING STORMWATER
- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- EXISTING TELSTRA
- EXISTING ELECTRICAL
- EXISTING GAS
- EXISTING OPTIC FIBER
- SUSPENDED PLANTER BOX RAINWATER OUTLET TO DRAIN SAND PIT AT LOW LEVEL

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 PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB AT MIN 1.0% SLOPE.

GRATE 24.68
INVERT 24.18

SUSPENDED OSD TANK

VOLUME REQUIRED 54.94m³

VOLUME PROVIDED 42.32m³

TANK AREA 71.73m²

AVERAGE DEPTH 0.59m

ORIFICE CL 26.05

TWL 26.80

TOTAL VOLUME PROVIDED = RWT VOLUME + OSD VOLUME = 13.73m³ + 42.32m³ = 56.05m³

GROUND FLOOR PLAN

SCALE 1:100

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:
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 REDUNDANT PIPELINES WITHIN FOOTPATH AREA MUST BE REMOVED AND FOOTPATH/KERB REINSTATED.

NOTE
OSD ACCESS ARE DESIGNED AS GRATED LID AT LOCATION OF DRIVEWAY SLOPING TOWARDS STREET SIDE, AND FOR ALL OTHER LOCATIONS, ACCESS WHICH SLOPES TOWARDS BASEMENT ARE DESIGNED WITH SOLID INFILLED COVER TO PREVENT STORMWATER SURCHARGING TO BASEMENT LEVEL.

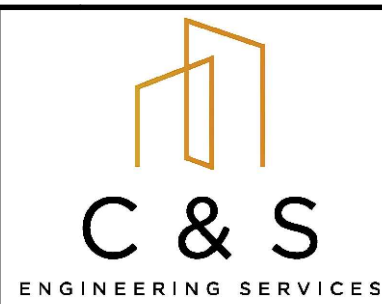
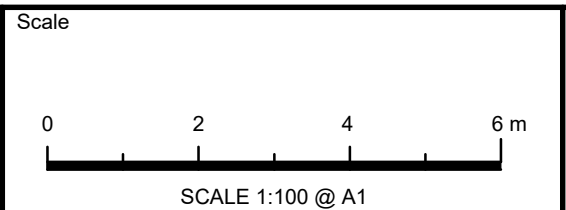
NOTE:
ALL PIPES ARE Ø100 PVC AT MIN 1.0% SLOPE U.N.O.

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

N	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC
M	ISSUE FOR COORDINATION	18/11/2024	MD	OC	OC
L	ISSUE FOR COORDINATION	07/11/2024	MD	OC	OC
K	ISSUE FOR COORDINATION	03/07/2024	MD	OC	OC
J	ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC
Issue	Description	Date	Designed	Engineer	Checked

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Council
Canterbury-Bankstown Council



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Project
**433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN**

Drawing Title
**STORMWATER LAYOUT PLAN
GROUND LEVEL**

Scale	A1	Project No.	Dwg. No.	Issue
1:100		150061	106	N

LEGEND

- > PROPOSED STORMWATER DRAINAGE PIPE
- > PROPOSED STORMWATER DRAINING TO OSD
- > PROPOSED STORMWATER BYPASSING OSD
- Ø100 PVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- 65 --- Ø65 PVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
- 50 --- Ø50mm PVC WRAPPED IN 10mm ABLEFLEX 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
- XRL 47.00 DESIGN SURFACE LEVEL
- +NS 26.45 EXISTING SURFACE LEVEL
- IL 47.00 INVERT LEVEL
- TD AC CONDENSER TUNDISH TO MANUFACTURER'S DETAILS
- OF Ø50mm EMERGENCY OVERFLOW SPITTERS/PIPES
- OF1 100x50mm RHS EMERGENCY OVERFLOW SPITTERS/PIPES
- OF2 150x50mm RHS EMERGENCY OVERFLOW SPITTERS/PIPES
- 300mm WIDE CUT IN ROOF HOB FOR EMERGENCY OVERFLOW U.N.O.
- OFG OVERFLOW FLOOR GRATE 200x200
- Ø100 PVC EMERGENCY OVERFLOW PIPE U.N.O.
- EXISTING STORMWATER
- ExW EXISTING WATER MAIN
- ExS EXISTING SEWER MAIN
- ExT EXISTING TELSTRA
- ExE EXISTING ELECTRICAL
- ExG EXISTING GAS
- ExOP EXISTING OPTIC FIBER
- SPB2 SUSPENDED PLANTER BOX RAINWATER OUTLET TO DRAIN SAND PIT AT LOW LEVEL

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

NOTE:
ALL STORMWATER DRAINAGE PIPES ARE Ø100 AT MIN 1.0% SLOPE U.N.O.

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

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:

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

OSD VOLUME REQUIRED = 54.94m³
25% OF OSD VOLUME REQUIRED = 0.25x54.94 = 13.73m³

VOLUME PROVIDED BY RAINWATER TANK = 13.79m³

VOLUME PROVIDED BY OSD = 42.32m³

TOTAL VOLUME PROVIDED = 42.32 + 13.73 = 56.05m³

LEVEL 1

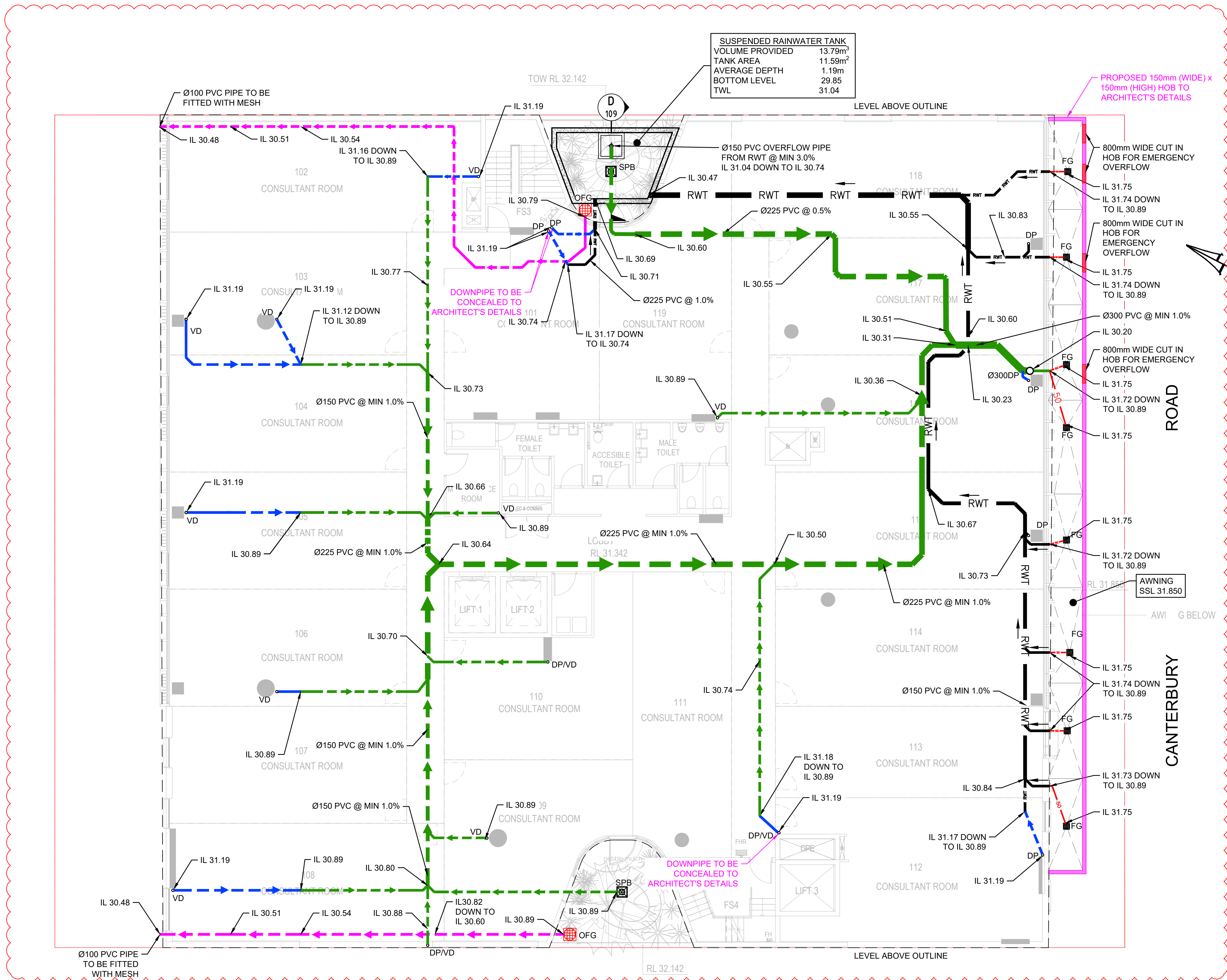
SCALE 1:100

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:

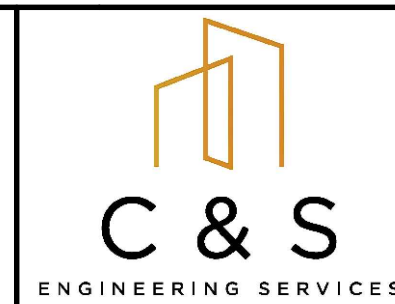
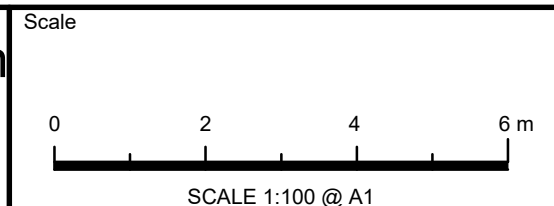
- 1- CONTRACTOR IS TO PROVIDE OVERFLOW OUTLETS & EMERGENCY OVERFLOW SPITTERS TO ALL TRAPPED AREAS.
- 2- DP/VD ARE Ø100mm PIPES U.N.O.
- 3- ALL TRANSFERRING PIPES ARE SUSPENDED U.N.O.
- 4- BALCONIES PIPES ARE Ø50mm PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB AT MIN 1.0% SLOPE.



G	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC
F	ISSUE FOR CONSTRUCTION	10/05/2024	MD	OC	OC
E	ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC
D	ISSUE FOR CONSTRUCTION CERTIFICATE (ARCHITECTURAL LAYOUT CHANGED)	19/09/2023	GMS	OC	OC
C	ISSUE FOR CONSTRUCTION CERTIFICATE	03/07/2023	GMS	OC	OC
Issue	Description	Date	Designed	Engineer	Checked

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**Canterbury-Bankstown
Council**



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Project
**433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN**

Drawing Title
**STORMWATER LAYOUT PLAN
LEVEL 1**

Scale	A1	Project No.	Dwg. No.	Issue
1:100		150061	106.1	G



	PROPOSED STORMWATER DRAINAGE PIPE
	PROPOSED STORMWATER DRAINING TO OSD
	PROPOSED STORMWATER BYPASSING OSD
	Ø100 PVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
	Ø65 PVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
	Ø50mm PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB
	PROPOSED STORMWATER PIPE TO RAINWATER TANK
	Ø100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34
	RISER PIPE
	Ø300 CLEANING EYE
	RAINWATER TANK
	DOWNPIPE Ø100
	VERTICAL DROP Ø100
	PLANTER GRATE Ø150
	FLOOR GRATE Ø150
	FLOOR GRATE 200x200 (ALLOW MINIMUM 1.0% FALL TO FG)
	FLOOR GRATE 300x300 (ALLOW MINIMUM 1.0% FALL TO FW)
	RAINWATER OUTLET Ø260 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
	Ø50mm EMERGENCY OVERFLOW SPITTERS/PIPES
	100x50mm RHS EMERGENCY OVERFLOW SPITTERS/PIPES
	150x50mm RHS EMERGENCY OVERFLOW SPITTERS/PIPES
	300mm WIDE CUT IN ROOF HOB FOR EMERGENCY OVERFLOW U.N.O.
	OVERFLOW FLOOR GRATE 200x200
	Ø100 PVC EMERGENCY OVERFLOW PIPE U.N.O.
	EXISTING STORMWATER
	EXISTING WATER MAIN
	EXISTING SEWER MAIN
	EXISTING TELSTRA
	EXISTING ELECTRICAL
	EXISTING GAS
	EXISTING OPTIC FIBER
	SUSPENDED PLANTER BOX RAINWATER OUTLET TO DRAIN SAND PIT AT LOW LEVEL

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



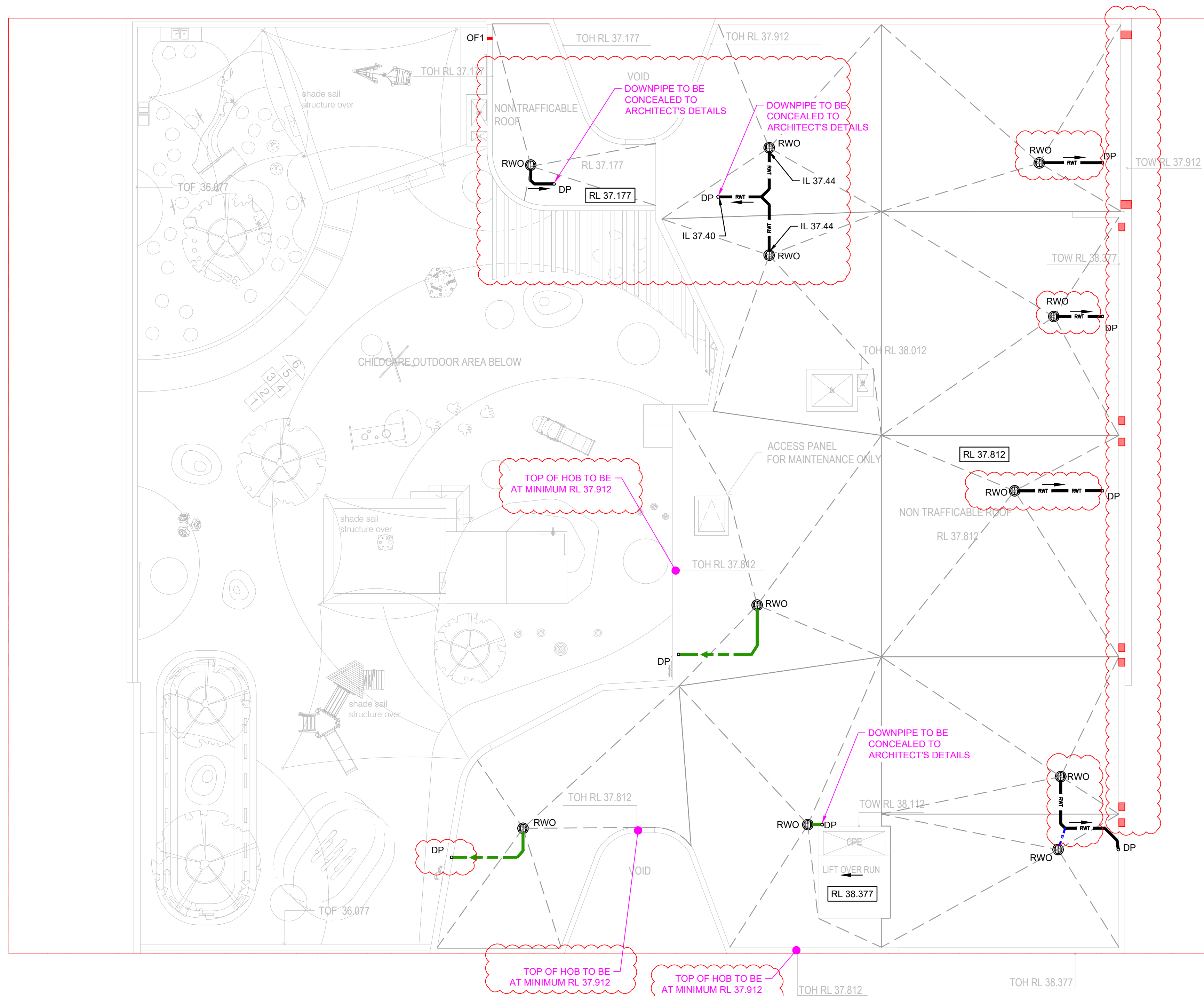
NOTES:

- 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 PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB AT MIN 1.0% SLOPE.

I	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC	<div>Architect</div> <div>CDARCHITECTS</div> <div>LEVEL 2, 60 PARK STREET</div> <div>SYDNEY NSW 2000</div> <div>P. 02 9267 2000</div> <div>W: www.cdarchitects.com.au</div>	<div>Council</div> <div>Canterbury-Bankstown Council</div>	<div>Scale</div> <div></div> <div>SCALE 1:100 @ A1</div>	<div></div> <div>C & S</div> <div>ENGINEERING SERVICES</div> <div>CIVIL & STORMWATER ENGINEERING</div> <div>SERVICES PTY LTD</div> <div>ABN: 27 644 422 506</div> <div>Shop 1, 143-147 Parramatta Road, Concord, NSW 2137</div> <div>P:(02) 8397 6500</div> <div>E:info@esqconsult.com.au</div>	<div>Project</div> <div>433-437 CANTERBURY ROAD, CAMPSIE</div> <div>PROPOSED MIXED USE DEVELOPMENT</div> <div>STORMWATER MANAGEMENT PLAN</div>	<div>Drawing Title</div> <div>STORMWATER LAYOUT PLAN LEVEL 2</div>			
H	ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC									
G	ISSUE FOR CONSTRUCTION CERTIFICATE	19/09/2023	GMS	OC	OC									
F	ISSUE FOR CONSTRUCTION CERTIFICATE	03/07/2023	GMS	OC	OC									
E	ISSUE FOR CONSTRUCTION CERTIFICATE	18/05/2023	GMS	OC	OC									
Issue	Description	Date	Designed	Engineer	Checked	<div>Scale</div> <div>1:100 A1</div> <div>Project No.</div> <div>150061</div> <div>Dwg. No.</div> <div>107</div> <div>Issue</div> <div>1</div>								

	PROPOSED STORMWATER DRAINAGE PIPE
	PROPOSED STORMWATER DRAINING TO OSD
	PROPOSED STORMWATER BYPASSING OSD
	0100mm PVC WRAPPED IN 10mm ABLEFLEX STORMWATER DRAINAGE PIPE CAST IN SLAB
	65mm PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB
	50mm PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB
	PROPOSED STORMWATER PIPE TO RAINWATER TANK
	0100mm SUBSOIL DRAINAGE TO BE WRAPPED IN GEOTEXTILE BIDIMA34
	RISER PIPE
	Ø300 CLEANING EYE
	RAINWATER TANK
	DOWNPIPE Ø100
	VERTICAL DROP Ø100
	PLANTER GRATE Ø150
	FLOOR GRATE Ø150
	FLOOR GRATE 200x200 (ALLOW MINIMUM 1.0% FALL TO FG)
	FLOOR GRATE 300x300 (ALLOW MINIMUM 1.0% FALL TO FW)
	RAINWATER OUTLET Ø260 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
	Ø50mm EMERGENCY OVERFLOW SPITTERS/PIPES
	100x50mm RHS EMERGENCY OVERFLOW SPITTERS/PIPES
	150x50mm RHS EMERGENCY OVERFLOW SPITTERS/PIPES
	300mm WIDE CUT IN ROOF HOB FOR EMERGENCY OVERFLOW U.N.O.
	OVERFLOW FLOOR GRATE 200x200
	Ø100 PVC EMERGENCY OVERFLOW PIPE U.N.O.
	EXISTING STORMWATER
	EXISTING WATER MAIN
	EXISTING SEWER MAIN
	EXISTING TELSTRA
	EXISTING ELECTRICAL
	EXISTING GAS
	EXISTING OPTIC FIBER
	SUSPENDED PLANTER BOX RAINWATER OUTLET TO DRAIN SAND PIT AT LOW LEVEL

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 PVC WRAPPED IN 10mm ABLEFLEX CAST IN SLAB AT MIN 1.0% SLOPE.

I	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC
H	ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC
G	ISSUE FOR CONSTRUCTION CERTIFICATE (ARCHITECTURAL LAYOUT CHANGED)	19/09/2023	GMS	OC	OC
F	ISSUE FOR CONSTRUCTION CERTIFICATE	03/07/2023	GMS	OC	OC
E	ISSUE FOR CONSTRUCTION CERTIFICATE	18/05/2023	GMS	OC	OC
Issue	Description	Date	Designed	Engineer	Checked
1	0	10mm or full page	10mm		20mm

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Council: Canterbury-Bankstown Council

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Project: 433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT STORMWATER MANAGEMENT PLAN

Drawing Title:
STORMWATER LAYOUT PLAN ROOF LEVEL

Scale	A1	Project No.	Dwg. No.	Issue
1:100		150061	108	1

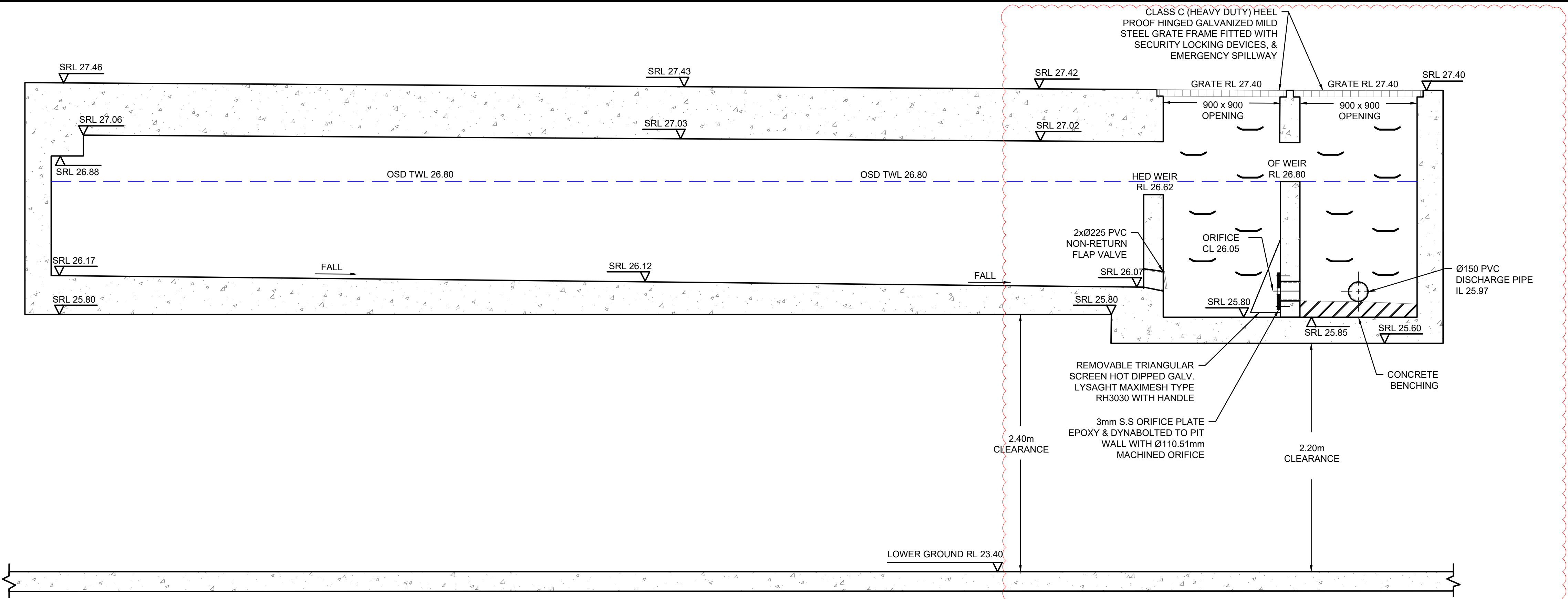
NOTE:
AS PER CANTERBURY DCP, UP TO 25% OF THE REQUIRED VOLUME FOR THE OSD CAN BE OFFSET INTO A RAINWATER RE-USE TANK.

OSD VOLUME REQUIRED = 54.94m³
25% OF OSD VOLUME REQUIRED = 0.25x54.94 = 13.73m³

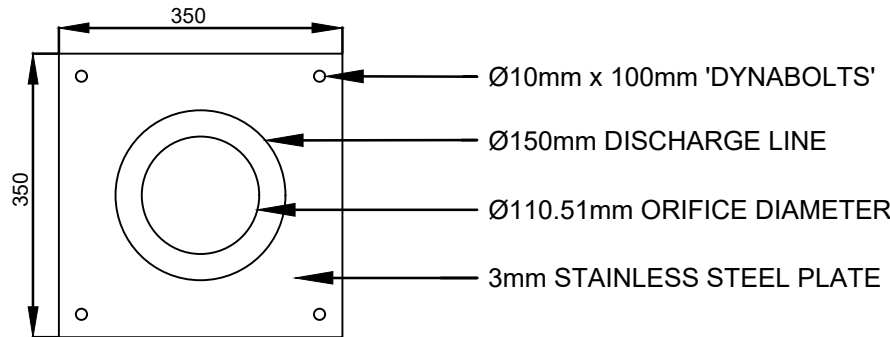
VOLUME PROVIDED BY RAINWATER TANK = 13.79m³

VOLUME PROVIDED BY OSD = 42.32m³

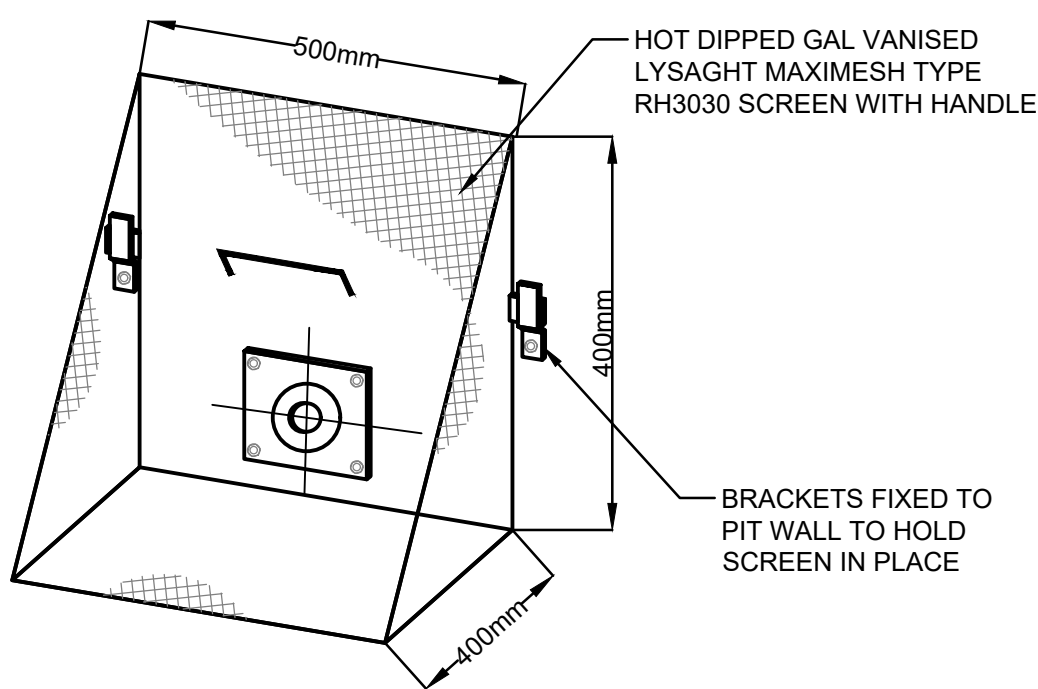
TOTAL VOLUME PROVIDED = 42.32 + 13.73 = 56.05m³



SUSPENDED OSD TANK DETAIL
SECTION B
N.T.S.



ORIFICE PLATE DETAIL
N.T.S.



TRASH SCREEN DETAIL
N.T.S.

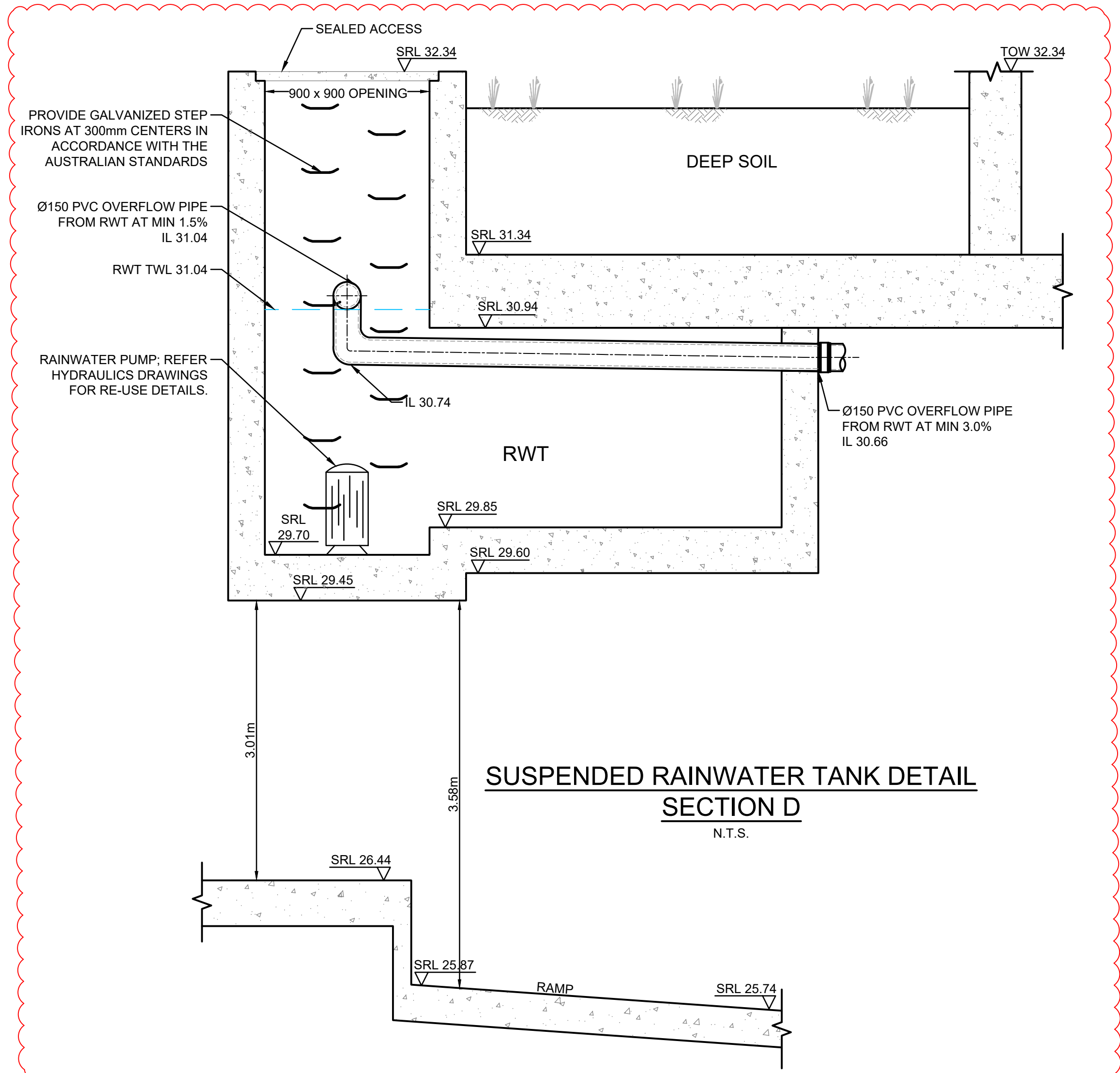
CANTERBURY COUNCIL

Area (m²) = 1465.06
C (100 yrs) ARAR 1987 p307 = 1.00

Storm Duration T (min)	I 100 yrs (mm/hr)	V of Hydrograph (m ³)	Inflow Peak discharge (L/s)	Required Storage (m ³)
5	258	31.50	105.00	24.91
6	243	35.60	98.89	27.69
7	231	39.48	94.01	30.25
8	220	42.98	89.53	32.43
9	211	46.37	85.87	34.50
10	203	49.57	82.61	36.38
11	196	52.64	79.76	38.14
12	189	55.38	76.92	39.56
13	183	58.09	74.47	40.95
14	178	60.85	72.44	42.39
15	173	63.36	70.40	43.59
16	168	65.63	68.37	44.54
17	164	68.08	66.74	45.66
18	160	70.32	65.11	46.59
20	152	74.23	61.86	47.86
25	138	84.24	56.16	51.28
30	127	93.03	51.68	53.47
35	117	99.99	47.61	53.84
40	110	107.44	44.77	54.70
45	104	114.27	42.32	54.94
50	98	119.65	39.88	53.72
55	94	126.24	38.25	53.72
60	89	130.39	36.22	51.28

MIN Storage m³ (Below Ground)= **54.94**
MIN Storage m³ (Above Ground) = **65.93**
Storage Provided m³ = 56.05
Area m² = 71.73
Av depth water = 0.59
Head in 1:100 (m) = 0.75
PSD (L/s) = **21.98**
Diameter (mm) = 110.51

(150/10,000 x Area)

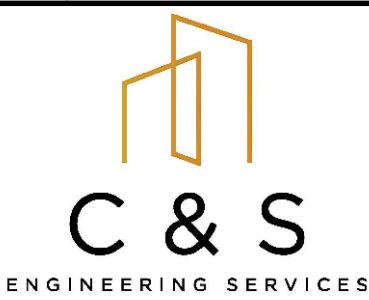


SUSPENDED RAINWATER TANK DETAIL
SECTION D
N.T.S.

K	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC
J	ISSUE FOR COORDINATION	03/07/2024	MD	OC	OC
I	ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC
H	ISSUE FOR CONSTRUCTION CERTIFICATE	08/09/2023	GMS	OC	OC
G	ISSUE FOR CONSTRUCTION CERTIFICATE	03/07/2023	GMS	OC	OC
Issue	Description	Date	Designed	Engineer	Checked

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Canterbury-Bankstown
Council

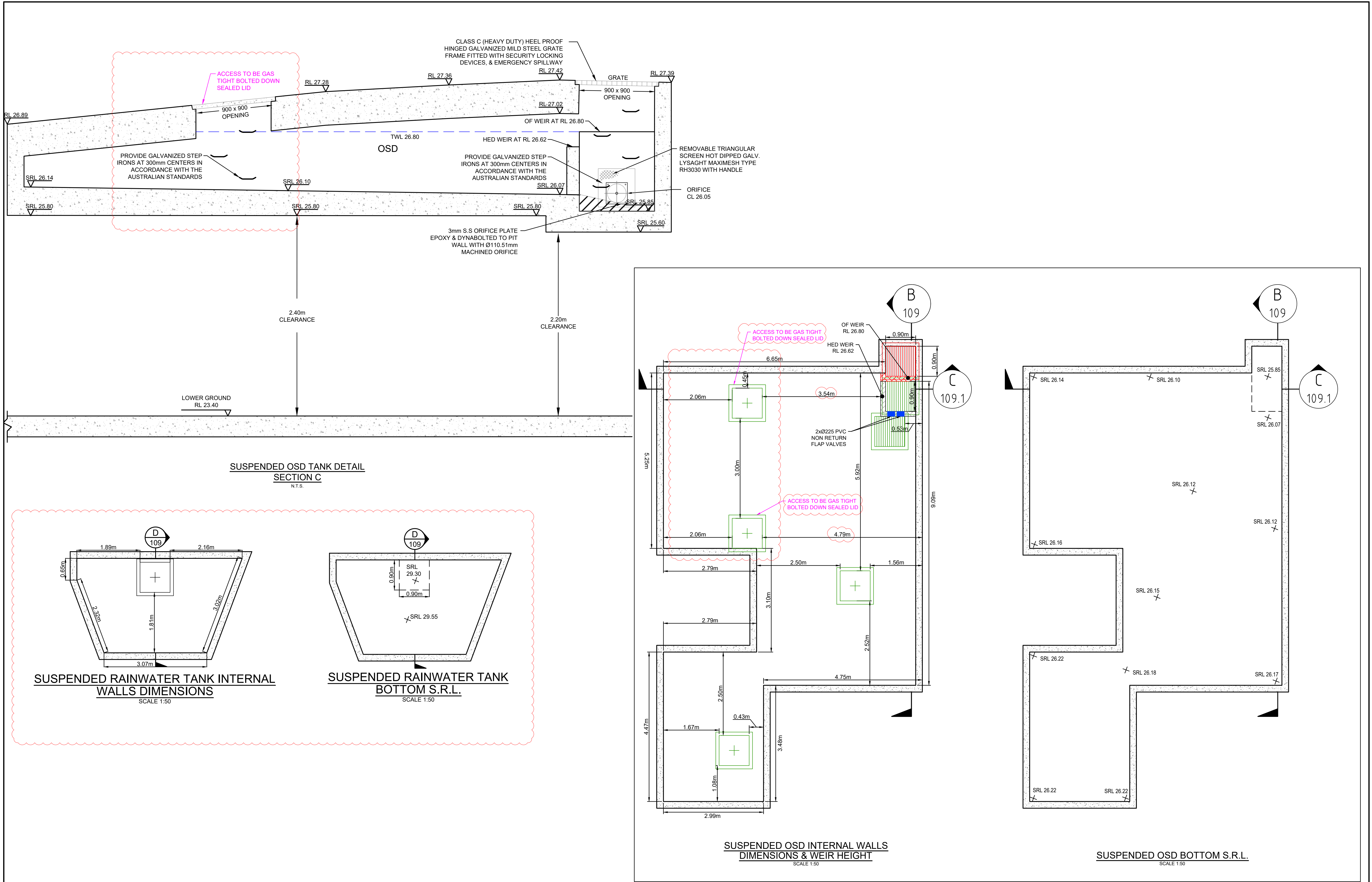


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433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN

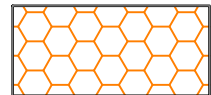
ON-SITE DETENTION
DETAILS AND CALCULATIONS
SHEET 1 OF 2

Scale	A1 As Shown	Project No.	150061	Dwg No.	109	Issue	K
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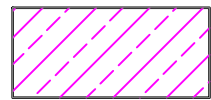


I		ISSUE FOR APPROVAL		03/02/2025		MD	OC	OC	CDARCHITECTS Canterbury-Bankstown Council	Council	<div>Scale</div> <div><div><div></div><div></div><div></div><div></div></div><div>0123m</div><div>SCALE 1:50 @ A1</div></div>	<div><div><div></div><div></div><div></div></div><div>C & S</div><div>ENGINEERING SERVICES</div></div>	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	433-437 CANTERBURY ROAD, CAMPSIE PROPOSED MIXED USE DEVELOPMENT STORMWATER MANAGEMENT PLAN	Drawing Title ON-SITE DETENTION DETAILS AND CALCULATIONS SHEET 2 OF 2			
H		ISSUE FOR COORDINATION		03/07/2024		MD	OC	OC											
G		ISSUE FOR CONSTRUCTION		21/09/2023		GMS	OC	OC											
F		ISSUE FOR CONSTRUCTION CERTIFICATE		08/09/2023		GMS	OC	OC											
E		ISSUE FOR CONSTRUCTION CERTIFICATE		03/07/2023		GMS	OC	OC											
Issue	Description	Date	Designed	Engineer	Checked														
<div><div><div></div><div></div><div></div><div></div></div><div>010m at full scale</div><div>100m200m</div></div>											Scale		A1	Project No.	150061	Dwg. No.	109.1	Issue	I

CATCHMENT LEGEND

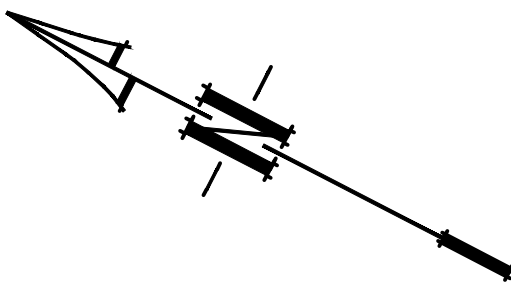
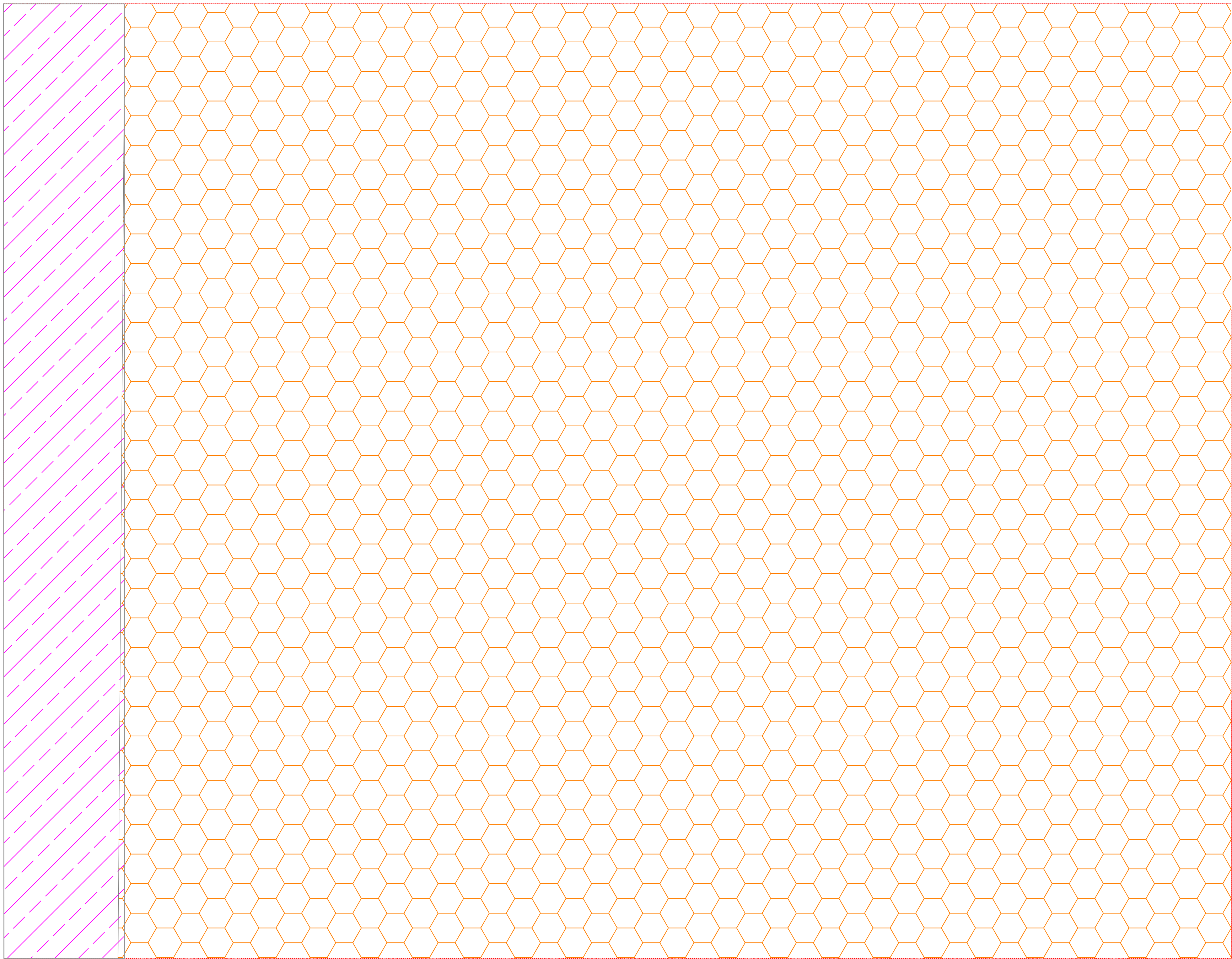


AREA DRAINED TO OSD =
1465.06Am² (97.0% IMPERVIOUS)



OSD BYPASSING AREA =
159.67m² (9.8% OF SITE)

TOTAL SITE AREA = 1624.73m²



ROAD

CANTERBURY

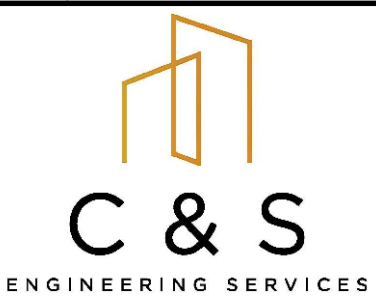
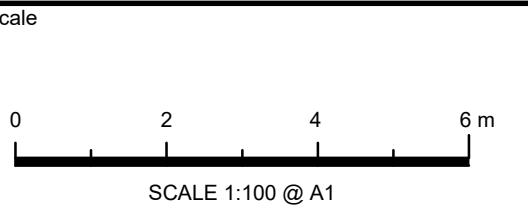
CATCHMENT PLAN

SCALE 1:100

H	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC
G	ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC
F	ISSUE FOR CONSTRUCTION CERTIFICATE	18/05/2023	GMS	OC	OC
E	ISSUE FOR DEVELOPMENT APPLICATION	27/04/2023	DBF	OC	OC
D	ISSUE FOR DEVELOPMENT APPLICATION	30/11/2022	DBF	OC	OC
Issue	Description	Date	Designed	Engineer	Checked

CDARCHITECTS
LEVEL 2, 60 PARK STREET
SYDNEY NSW 2000
P: 02 9267 2000
W: www.cdarchitects.com.au

Council
Canterbury-Bankstown
Council



CIVIL & STORMWATER ENGINEERING
SERVICES PTY LTD
ABN: 27 644 422 506
Shop 1, 143-147 Parramatta Road, Concord, NSW
2137
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Project
433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN

Drawing Title
CATCHMENT PLAN

Scale As Shown	A1 Project No. 150061	Dwg. No. 110	Issue H
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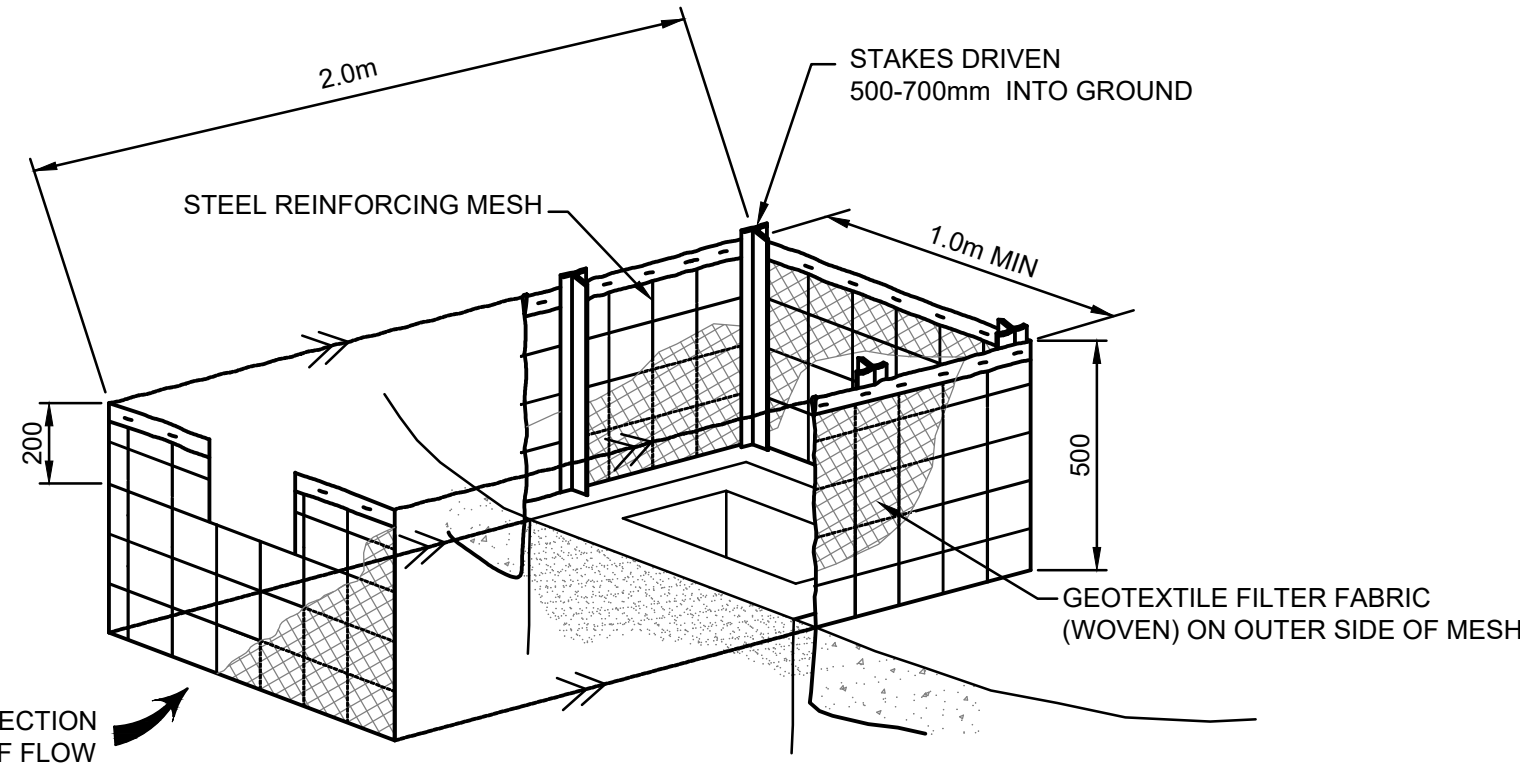
LEGEND

- ExW — EXISTING WATER MAIN
— ExS — EXISTING SEWER MAIN
— ExT — EXISTING TELSTRA
— ExE — EXISTING ELECTRICAL
— ExG — EXISTING GAS
— ExOP — EXISTING OPTIC FIBER
— 26.45 — EXISTING CONTOUR
X 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

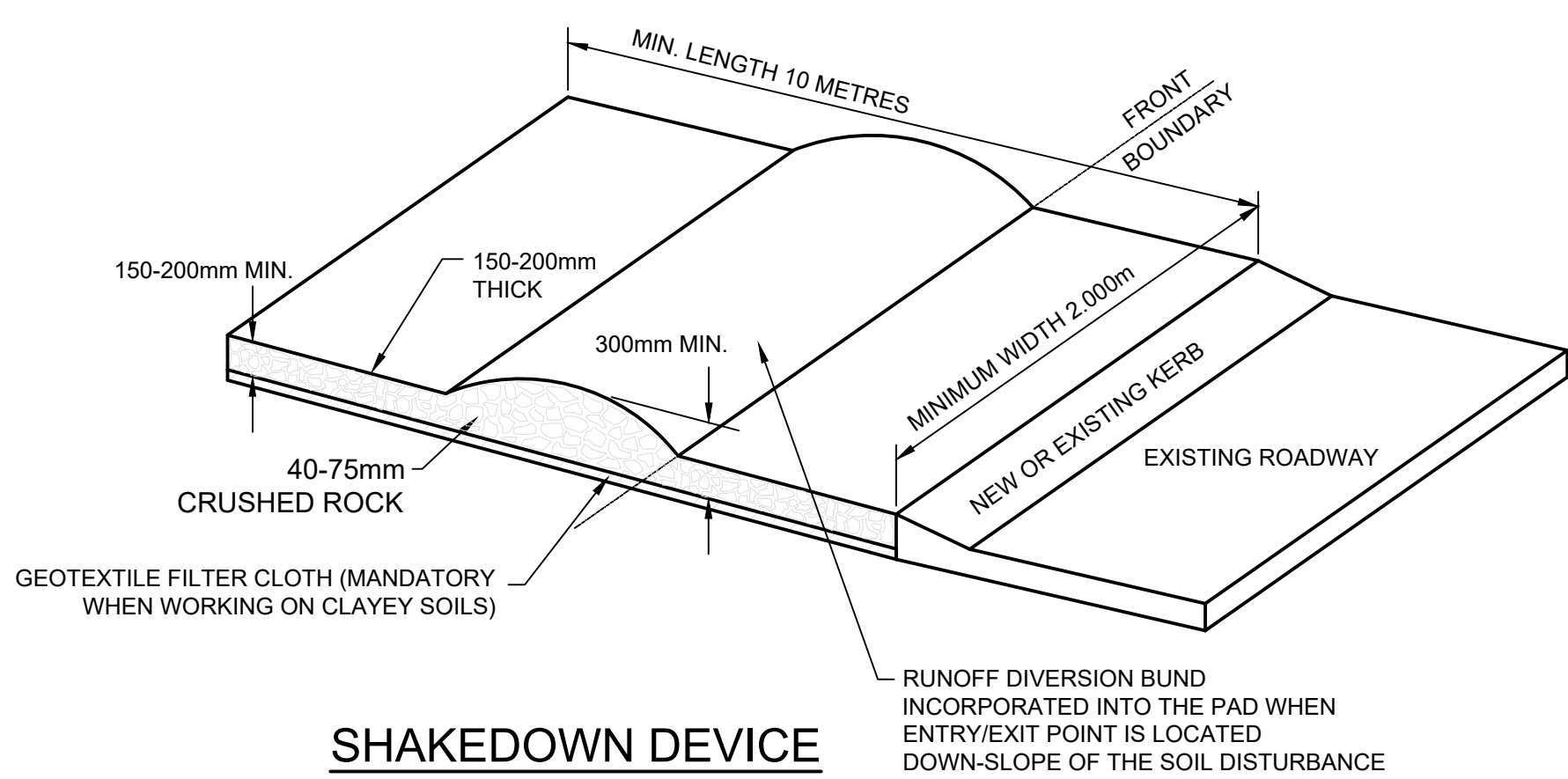
KERB INLET PROTECTION
SAG GULLIES
N.T.S.

SEDIMENT & EROSION NOTES

- 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.
- 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.
- PROVIDE GULLY GRATE INLET SEDIMENT TRAPS AT ALL GULLY PITS.
- PROVIDE SILT FENCING ALONG PROPERTY LINE AS DIRECTED BY SUPERINTENDENT.
- ADDITIONAL CONTROL DEVICES TO BE PLACED WHERE DIRECTED BY THE PRINCIPLE.
- ALTERNATIVE DESIGNS TO BE APPROVED BY SUPERINTENDENT PRIOR TO CONSTRUCTION.
- WASH DOWN/RUMBLE AREA TO BE CONSTRUCTED WITH PROVISIONS RESTRICTING ALL SILT AND TRAFFICKED DEBRIS FROM ENTERING THE STORMWATER SYSTEM.
- NO WORK OR STOCKPILING OF MATERIALS TO BE PLACED OUTSIDE OF SITE WORK BOUNDARY.
- APPROPRIATE EROSION AND SEDIMENT CONTROLS TO BE USED TO PROTECT STOCKPILES AND MAINTAINED THROUGH OUT CONSTRUCTION.
- IT IS THE CONTRACTORS RESPONSIBILITY TO TAKE DUE CARE OF NATURAL VEGETATION. NO CLEARING IS TO BE UNDERTAKEN WITHOUT PRIOR APPROVAL FROM THE SUPERINTENDENT.
- TO AVOID DISTURBANCE TO EXISTING TREES, EARTHWORKS WILL BE MODIFIED AS DIRECTED ON-SITE BY THE SUPERINTENDENT.
- THE LOCATION OF EROSION AND SEDIMENTATION CONTROLS WILL BE DETERMINED ON SITE BY THE SUPERINTENDENT.
- ACCESS TRACKS THROUGH THE SITE WILL BE LIMITED TO THOSE DETERMINED BY THE SUPERINTENDENT AND THE CONTRACTOR PRIOR TO ANY WORK COMMENCING.
- 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.



FIELD INLET SEDIMENT TRAP
N.T.S.

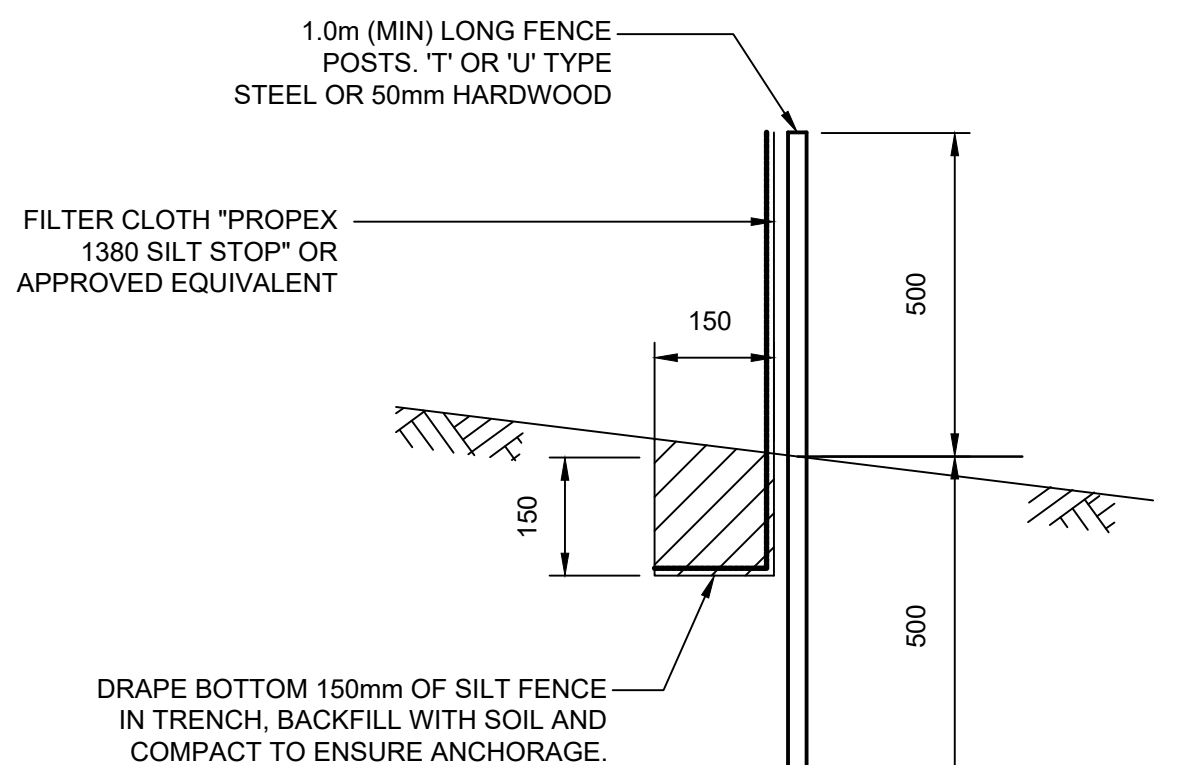


SHAKEDOWN DEVICE
N.T.S.

SEDIMENT & EROSION CONTROL PLAN
SCALE 1:100

SILT FENCE NOTES:

- FILTER CLOTH TO BE FASTENED SECURELY TO POSTS WITH GALVANISED WIRE TIES, STAPLES OR ATTACHMENT BELTS.
- POSTS SHOULD NOT BE SPACED MORE THAN 3.0m APART.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 150mm AND FOLDED.
- 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
- INSPECTIONS SHALL BE PROVIDED ON A REGULAR BASIS, ESPECIALLY AFTER RAINFALL AND EXCESSIVE SILT DEPOSITS REMOVED WHEN "BULGES" DEVELOP IN SILT FENCE
- 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.

H	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC
G	ISSUE FOR CONSTRUCTION	14/12/2023	MD	OC	OC
F	ISSUE FOR CONSTRUCTION	14/12/2023	MD	OC	OC
E	ISSUE FOR CONSTRUCTION	07/12/2023	MD	OC	OC
D	ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC
Issue	Description	Date	Designed	Engineer	Checked

Architect
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Council
Canterbury-Bankstown Council

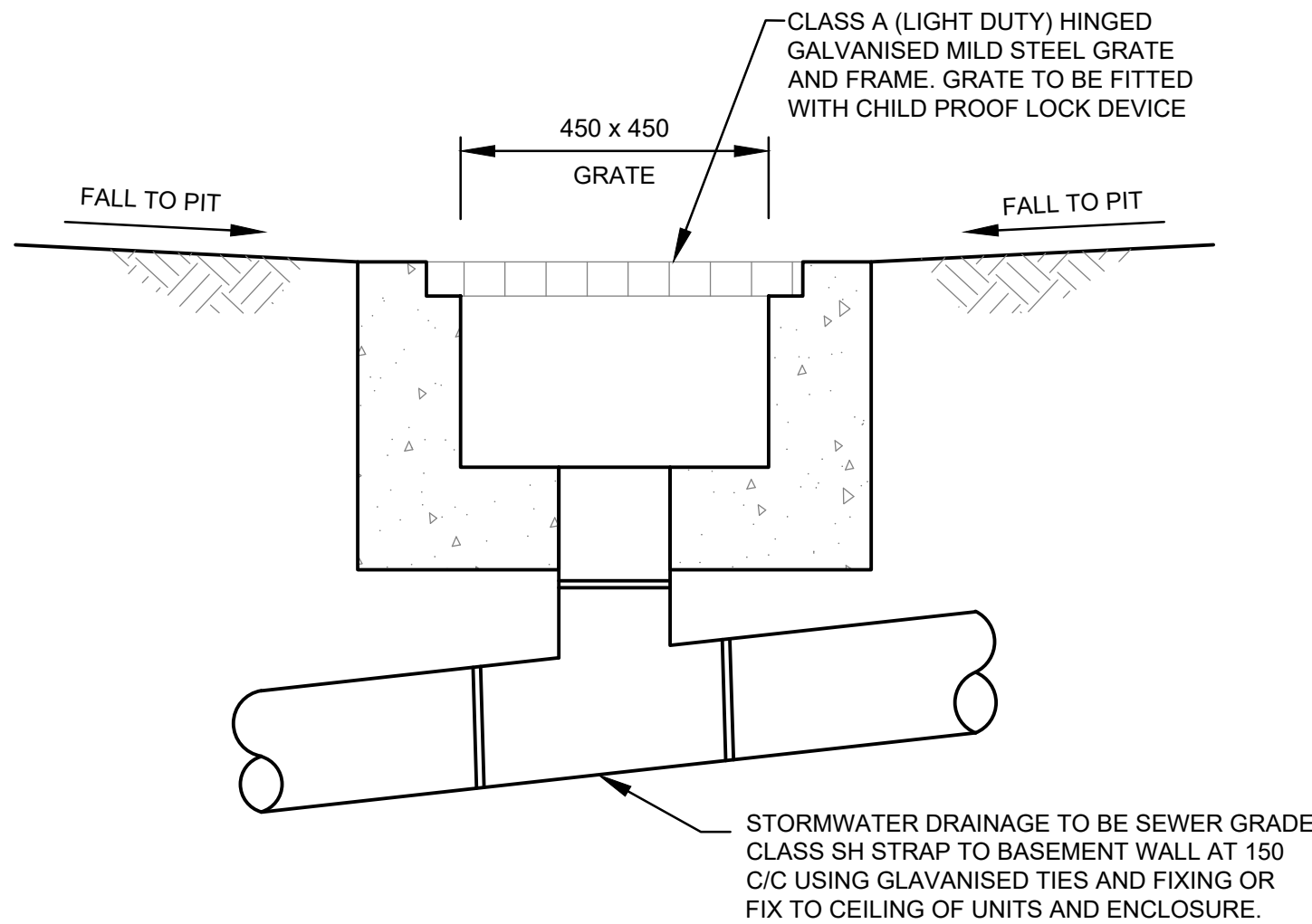
Scale
0 2 4 6 m
SCALE 1:100 @ A1

C & S
ENGINEERING SERVICES

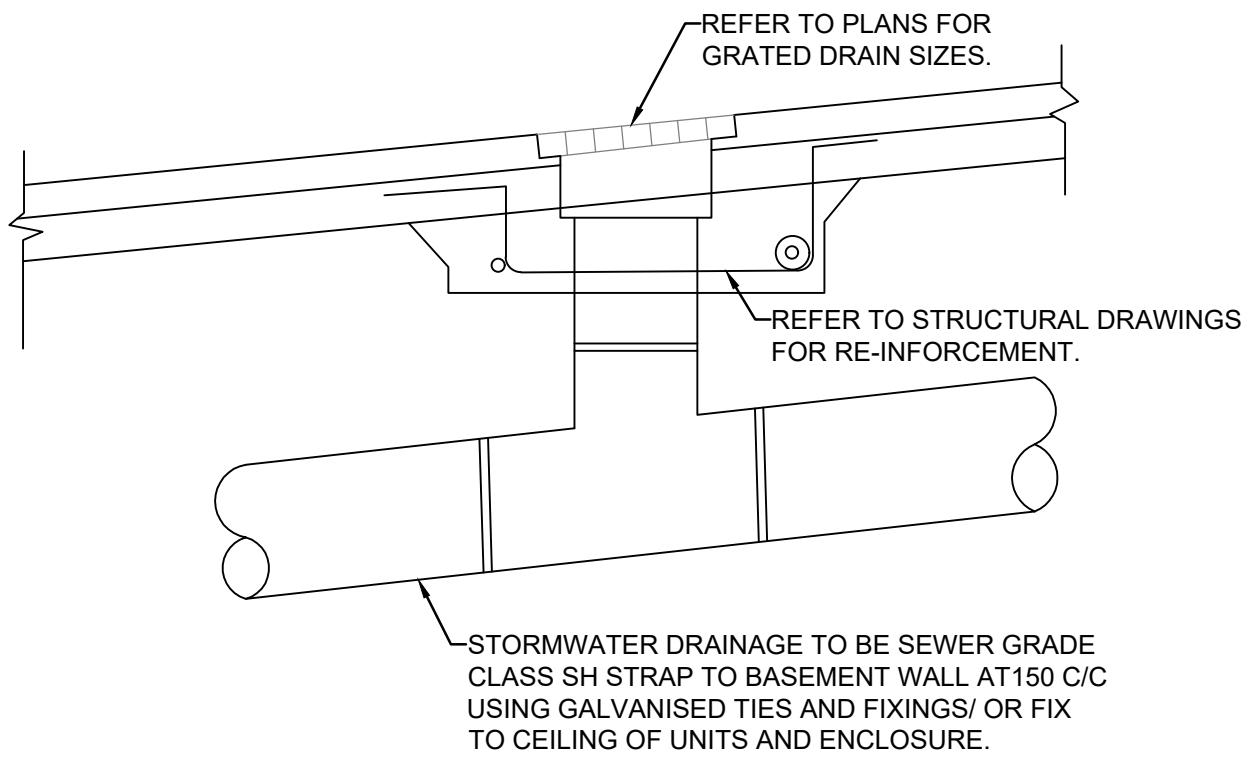
CIVIL & STORMWATER ENGINEERING
SERVICES PTY LTD
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Project
**433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN**

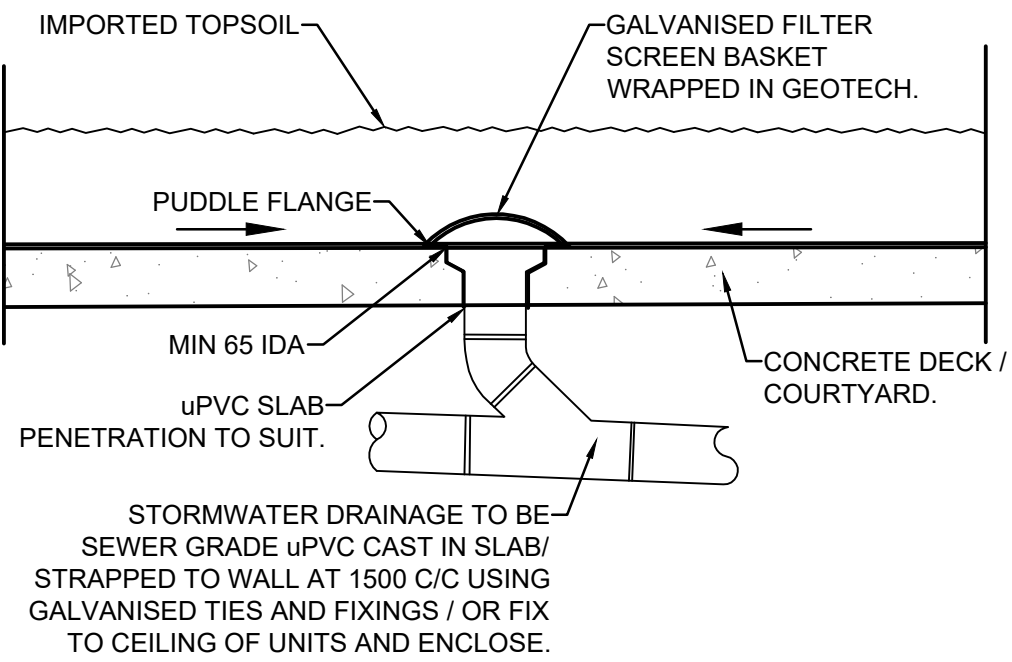
Drawing Title SEDIMENT & EROSION CONTROL PLAN & DETAILS	Scale As Shown	Project No. 150061	Dwg No. 112	Issue H
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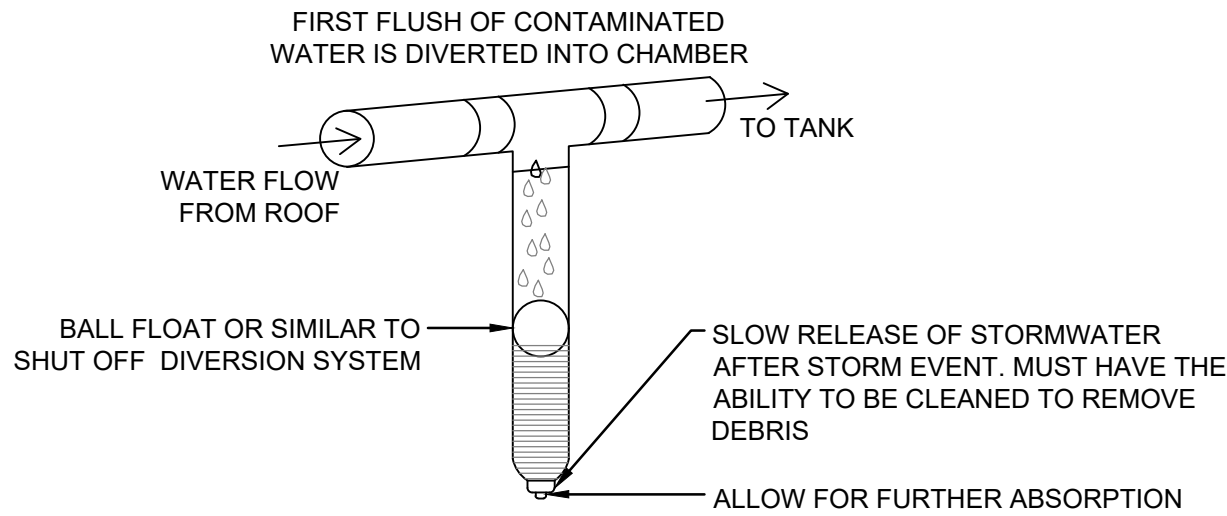
VERTICAL DROP PIT DETAIL
N.T.S.



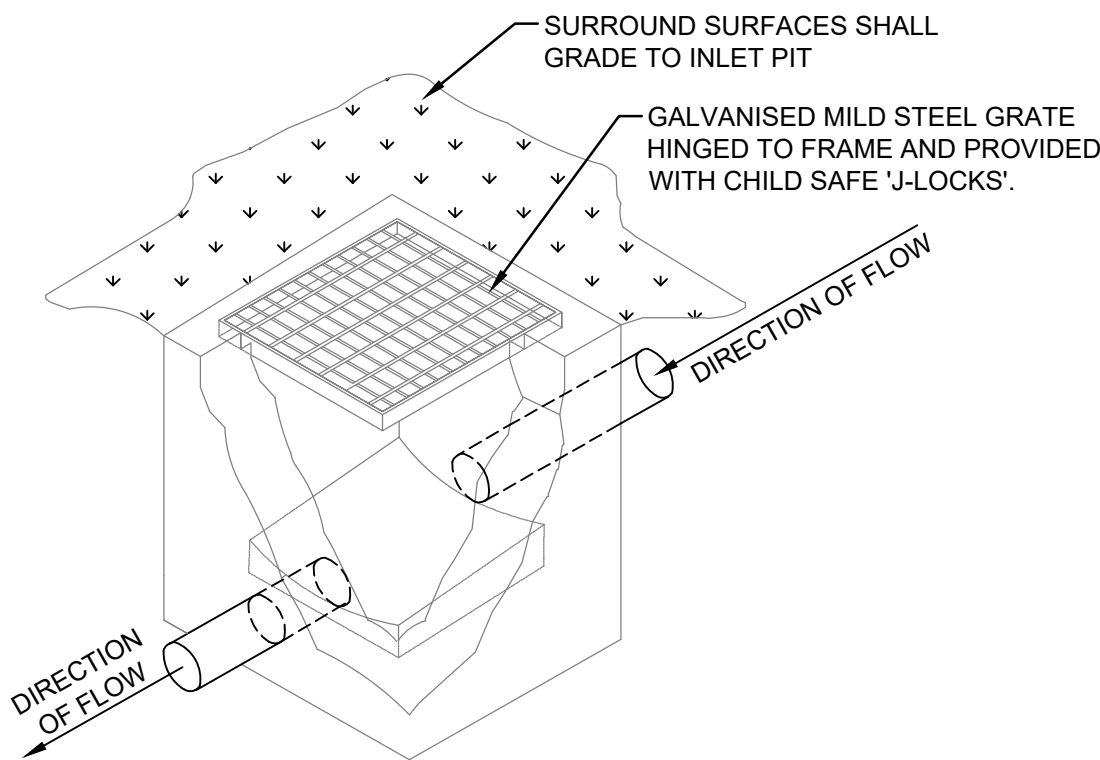
GRATED DRAIN DETAIL
N.T.S.



PLANTER GRATE DETAIL
N.T.S.

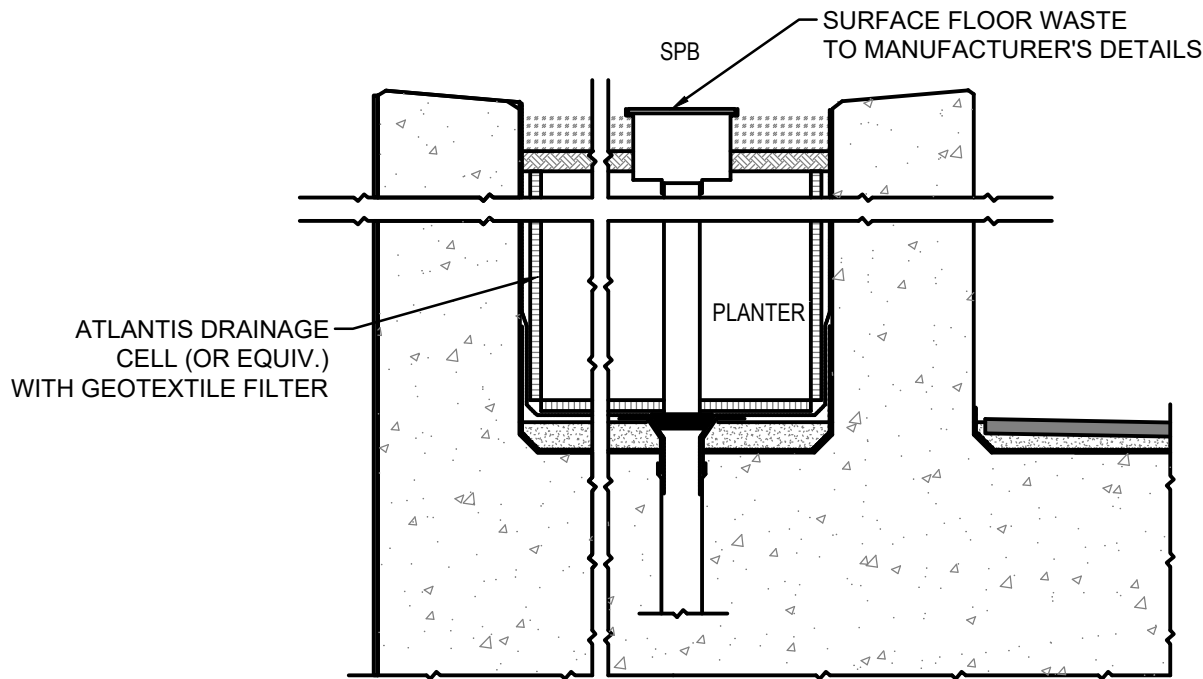


FIRST FLUSH WATER
DIVERTER DETAIL
N.T.S.



TYPICAL GRATED
INLET PIT DETAIL
N.T.S.

NOTE:
DETAIL TO BE CONFIRMED BY WATERPROOFING
CONSULTANT/ARCHITECT.



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

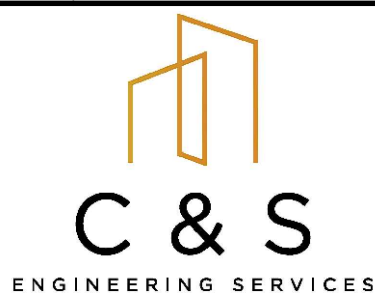
Stormwater Drainage System Maintenance Schedule			
Maintenance Action	Frequency	Responsibility	Procedure
General			
Inspect roof drainage system of building and remove any debris/sludge	Six Monthly	Strata/Maintenance Contractor	Remove any leaves or debris and sludge from gutters of building and flush 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.

E	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC
D	ISSUE FOR CONSTRUCTION	21/09/2023	GMS	OC	OC
C	ISSUE FOR CONSTRUCTION CERTIFICATE	03/07/2023	GMS	OC	OC
B	ISSUE FOR CONSTRUCTION CERTIFICATE	18/05/2023	GMS	OC	OC
A	ISSUE FOR DEVELOPMENT APPLICATION	06/04/2022	DBF	OC	OC
Issue	Description	Date	Designed	Engineer	Checked

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Council
**Canterbury-Bankstown
Council**

Scale

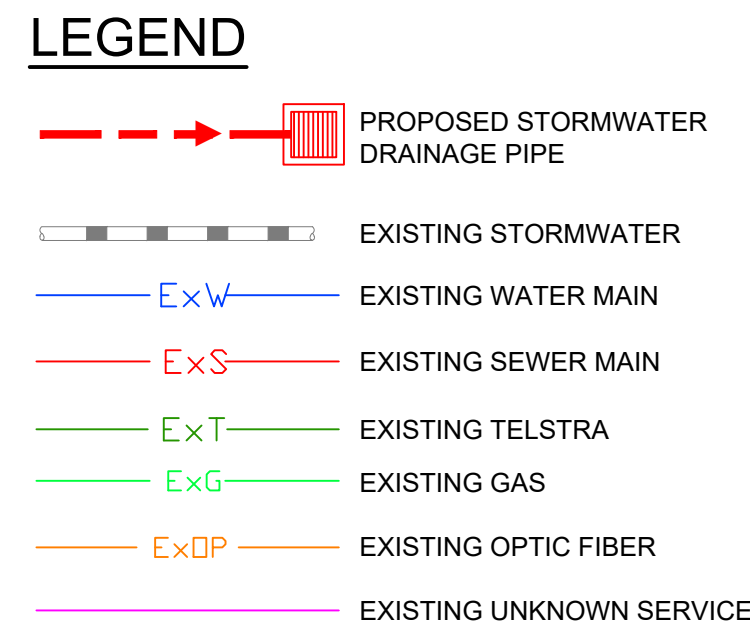


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Project
**433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN**

Drawing Title
**MISCELLANEOUS
DETAILS SHEET**

Scale	A1	Project No.	Dwg. No.	Issue
N.T.S.		150061	113	E



STREET

PERRY STREET, CAMPSIE

8-10 PERRY STREET, CAMPSIE

14 PERRY STREET, CAMPSIE

16 PERRY STREET, CAMPSIE

18 PERRY STREET, CAMPSIE

20 PERRY STREET, CAMPSIE

22 PERRY STREET, CAMPSIE

419 - 431 CANTEBURY ROAD, CAMPSIE

PROPOSED DEVELOPMENT
433 - 437 CANTEBURY ROAD, CAMPSIE

CANTEBURY ROAD

EXISTING 0400 OUTLET PIPE

EXISTING STORMWATER PIT
SL 20.57
IL 19.58

0375 RCP IL 19.61
EXISTING WATER OL 20.08
(PIPE SIZE TO BE CONFIRMED AND
PIPE TO BE ADJUSTED TO SUIT THE
PROPOSED STORMWATER WORK)

0375 RCP CLASS 3
@MIN. 1.0%

CARE TO BE TAKEN WHEN WORKING
AROUND EXISTING TREES. ALL DIGGING
METHODS & CONSTRUCTION WORKS TO BE
CONFIRMED BY ARBORIST IF REQUIRED.

0375 RCP IL 20.03
EXISTING UNKNOWN SERVICE OL 20.24
(PIPE SIZE TO BE CONFIRMED AND
PIPE TO BE ADJUSTED TO SUIT THE
PROPOSED STORMWATER WORK)

0375 RCP IL 20.07
EXISTING WATER OL 20.33
(PIPE SIZE TO BE CONFIRMED AND
PIPE TO BE ADJUSTED TO SUIT THE
PROPOSED STORMWATER WORK)

0375 RCP CLASS 3
@ MIN. 1.0%

0375 RCP IL 20.21
EXISTING UNKNOWN SERVICE OL 20.55
(PIPE SIZE TO BE CONFIRMED AND
PIPE TO BE ADJUSTED TO SUIT THE
PROPOSED STORMWATER WORK)

BUTTERFLY GRATED
SURFACE INLET PIT
900 x 900
SL 21.11
IL 20.07

IL 20.52

IL 21.01

0225 PVC

SEMI-DETACHED
BRICK HOUSE
No. 14

SEMI-DETACHED
BRICK HOUSE
No. 16

APPROX. 45.70m² AREA OF
PROPOSED EASEMENT WITHIN
No. 18 PERRY STREET, CAMPSIE

EXISTING PIT 1 TO BE RECONSTRUCTED
TO 600x600 DROP PIT
RL 24.68
IL 24.18
VERTICAL DROP FROM BASE OF PIT TO
IL 23.72

PROPOSED 1.0m WIDE
DRAINAGE EASEMENT.

0225 PVC

CONCRETE PANEL WAREHOUSE
No. 433
CANTERBURY ROAD

PROPOSED DEVELOPMENT
433 - 437 CANTEBURY ROAD, CAMPSIE



200 x 150 RHS
@ MIN 1.0%

PIT 2
600 x 900
SL 21.50
IL 20.57

CARE TO BE TAKEN WHEN WORKING
AROUND EXISTING TREES. ALL DIGGING
METHODS & CONSTRUCTION WORKS TO BE
CONFIRMED BY ARBORIST IF REQUIRED.

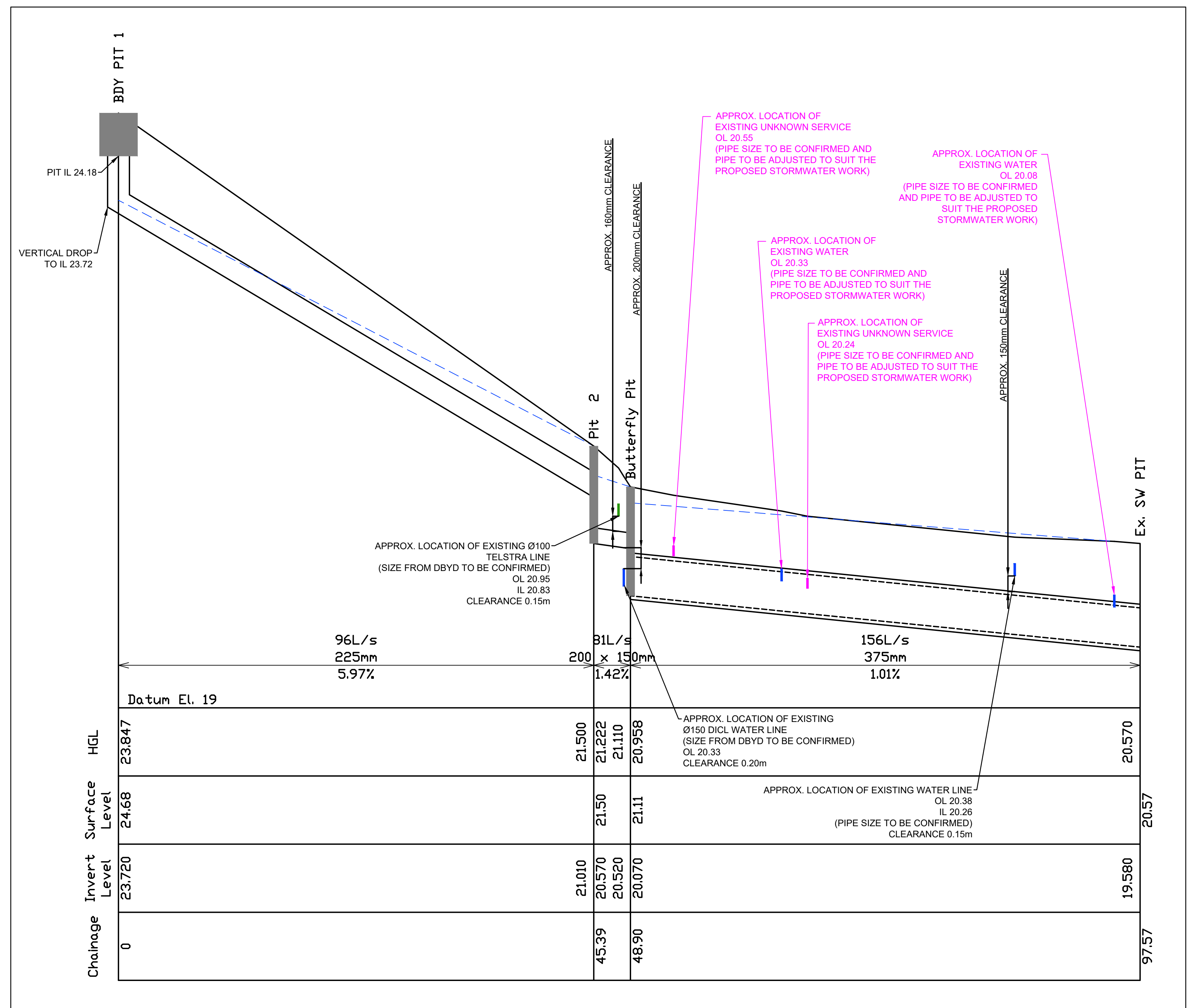
CARE TO BE TAKEN WHEN WORKING
AROUND EXISTING TREES. ALL DIGGING
METHODS & CONSTRUCTION WORKS TO BE
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CARE TO BE TAKEN WHEN WORKING
AROUND EXISTING TREES. ALL DIGGING
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E	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC	Architect	Council	Scale	Project	Drawing Title
D	ISSUE FOR CONSTRUCTION CERTIFICATE	16/02/2024	KTS	OC	OC	CDARCHITECTS	Canterbury-Bankstown Council			EASEMENT PLAN
C	ISSUE FOR CONSTRUCTION CERTIFICATE	18/05/2023	GMS	OC	OC	LEVEL 2, 60 PARK STREET			433-437 CANTERBURY ROAD, CAMPSIE	
B	ISSUE FOR DEVELOPMENT APPLICATION	17/03/2023	DBF	OC	OC	SYDNEY NSW 2000			PROPOSED MIXED USE DEVELOPMENT	
A	ISSUE FOR DEVELOPMENT APPLICATION	16/02/2023	DBF	OC	OC	P: 02 9267 2000			STORMWATER MANAGEMENT PLAN	
Issue	Description	Date	Designed	Engineer	Checked	W: www.cdarchitects.com.au				
0	10m at full size	100m								
Scale	A1	Project No.	Dwg. No.	Issue						
As Shown	150061	114	E							



- PIT 1 BASE FLOW = 90L/s
(OSD FULLY BLOCKED
FROM LOT No. 433-437)



20 YEAR ARI STORMWATER LONGITUDINAL SECTION





HORIZONTAL SCALE 1:250
VERTICAL SCALE 1:25

NOTE:

IT IS CONTRACTOR RESPONSIBILITY TO CONFIRM DETAILS OF EX. SERVICES (ALIGNMENT, SIZE, TYPE, DEPTH) PRIOR TO CONSTRUCTION.

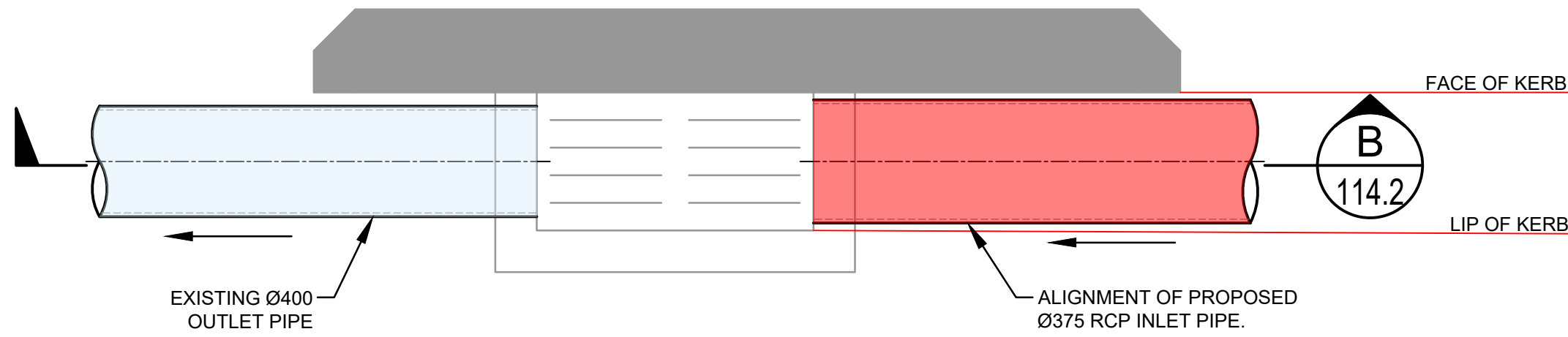
EX. SERVICES DETAILS SHOWN ON THIS SET OF DRAWINGS ARE INDICATIVE ONLY. CIVIL & STORMWATER ENGINEERING SERVICES PTY LTD NEED TO BE NOTIFIED IMMEDIATELY IN CASE ANY DISCREPANCIES ARE IDENTIFIED ON SITE.

SERVICES PROVIDERS TO BE NOTIFIED FOR WORKS CONDUCTED IN PROXIMITY TO THEIR EXISTING ASSETS; NECESSARY APPROVALS TO BE OBTAINED PRIOR TO CONSTRUCTION IF REQUIRED.

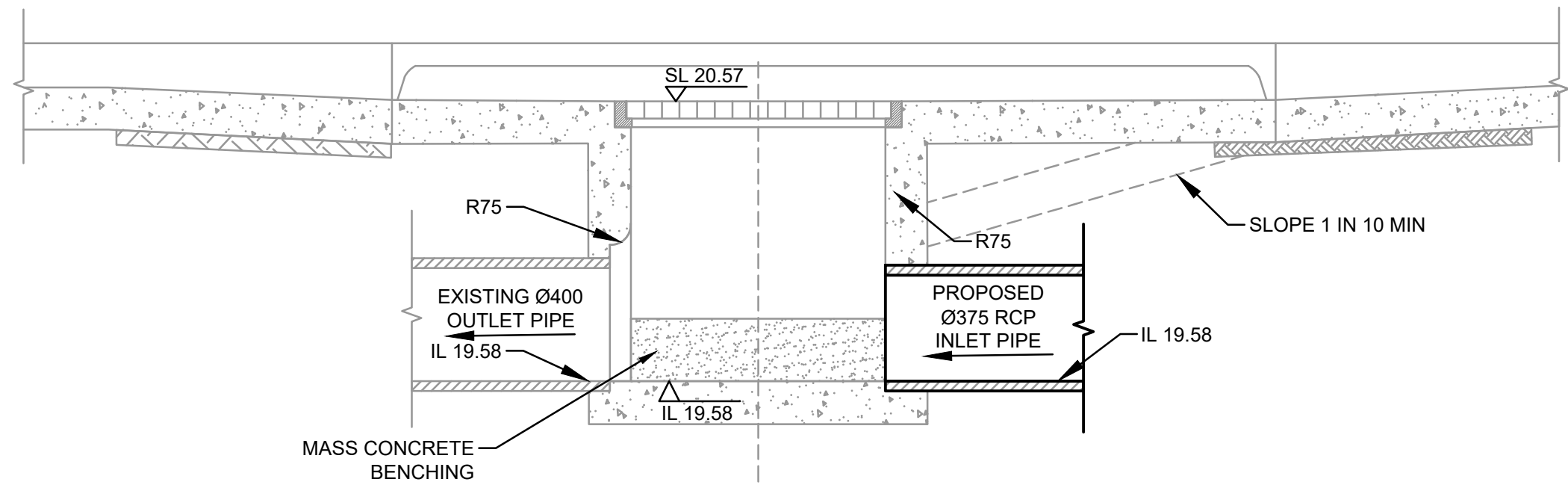
E	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC	<div>Architect</div> <div>CDARCHITECTS</div> <div>LEVEL 2, 60 PARK STREET</div> <div>SYDNEY NSW 2000</div> <div>P: 02 9267 2000</div> <div>W: www.cdarchitects.com.au</div>	<div>Council</div> <div>Canterbury-Bankstown</div> <div>Council</div>	<div>Scale</div> <div></div> <div>SCALE 1:250 @ A1</div> <div></div> <div>SCALE 1:25 @ A1</div>	<div></div> <div>CIVIL & STORMWATER ENGINEERING</div> <div>SERVICES PTY LTD</div> <div>ABN: 27 644 422 506</div> <div>Shop 1, 143-147 Parramatta Road, Concord, NSW 2137</div> <div>P:(02) 8397 6500</div> <div>E:info@esqconsult.com.au</div>	<div>Project</div> <div>433-437 CANTERBURY ROAD, CAMPSIE</div> <div>PROPOSED MIXED USE DEVELOPMENT</div> <div>STORMWATER MANAGEMENT PLAN</div>	<div>Drawing Title</div> <div>DRAINS MODEL & RESULTS</div>			
D	ISSUE FOR CONSTRUCTION CERTIFICATE	16/02/2024	KTS	OC	OC									
C	ISSUE FOR CONSTRUCTION CERTIFICATE	18/05/2023	GMS	OC	OC									
B	ISSUE FOR DEVELOPMENT APPLICATION	17/03/2023	DBF	OC	OC									
A	ISSUE FOR DEVELOPMENT APPLICATION	16/02/2023	DBF	OC	OC									
Issue	Description	Date	Designed	Engineer	Checked									
														
		Scale	A1	Project No.	Dwg. No.	Issue								
As Shown			150061	114.1	E									

NOTES:

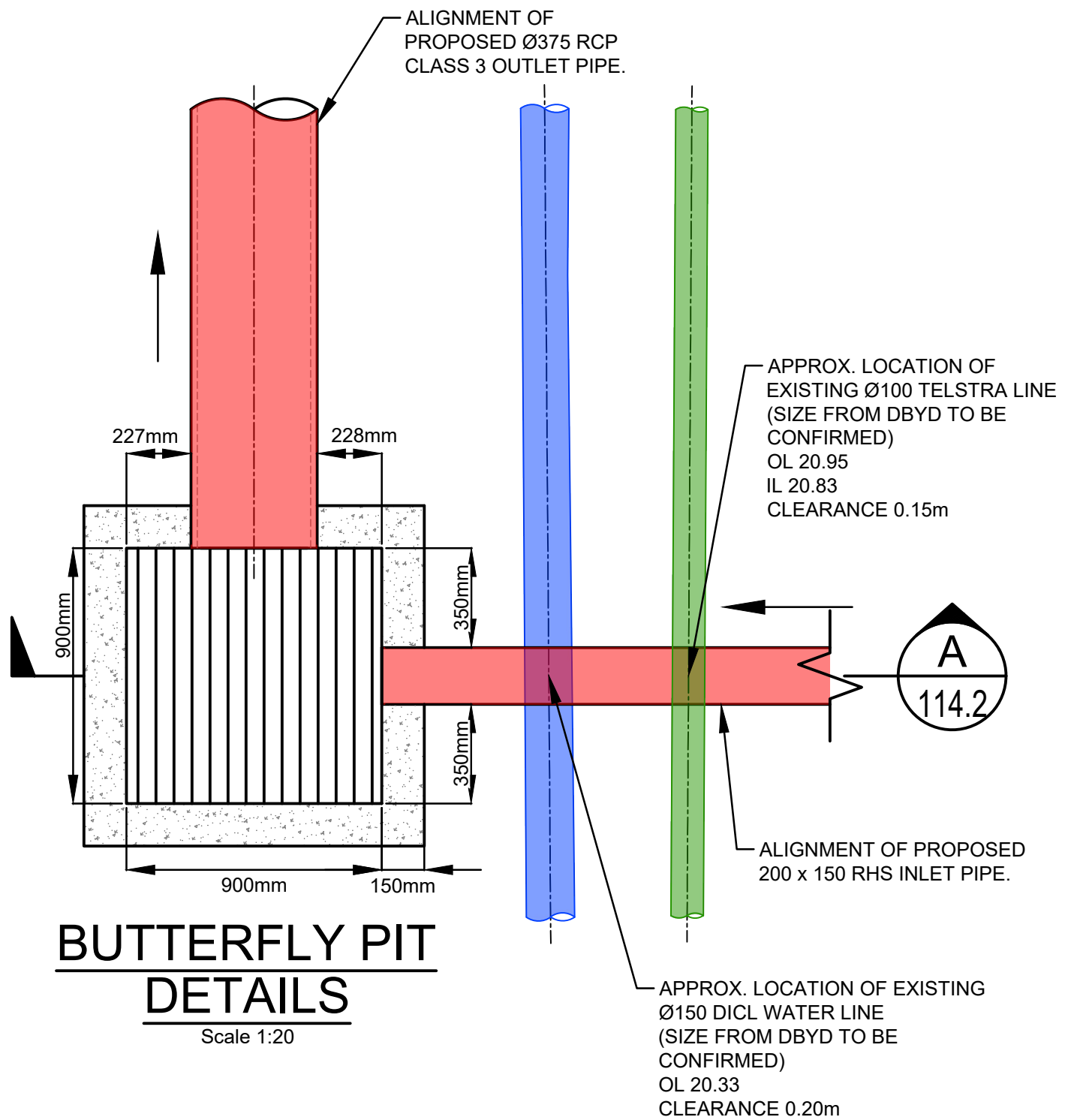
1. COMPRESSIVE STRENGTH OF CONCRETE (F_c) AT 28 DAYS TO BE MIN. 25MPa.
2. PITS DEEPER THAN 1800 TO BE CONSTRUCTED IN ACCORDANCE WITH CBC STANDARD S-104/2.
3. PROVIDE STEP IRON LADDER WHERE PIT IS DEEPER THAN 1200mm PLACED ON WALL CLEAR OF FLOW WHERE POSSIBLE. SEE CBC STANDARD S-122
4. ALL DIMENSIONS ARE IN MILLIMETRES



EXISTING KERB INLET PIT DETAILS
Scale 1:20

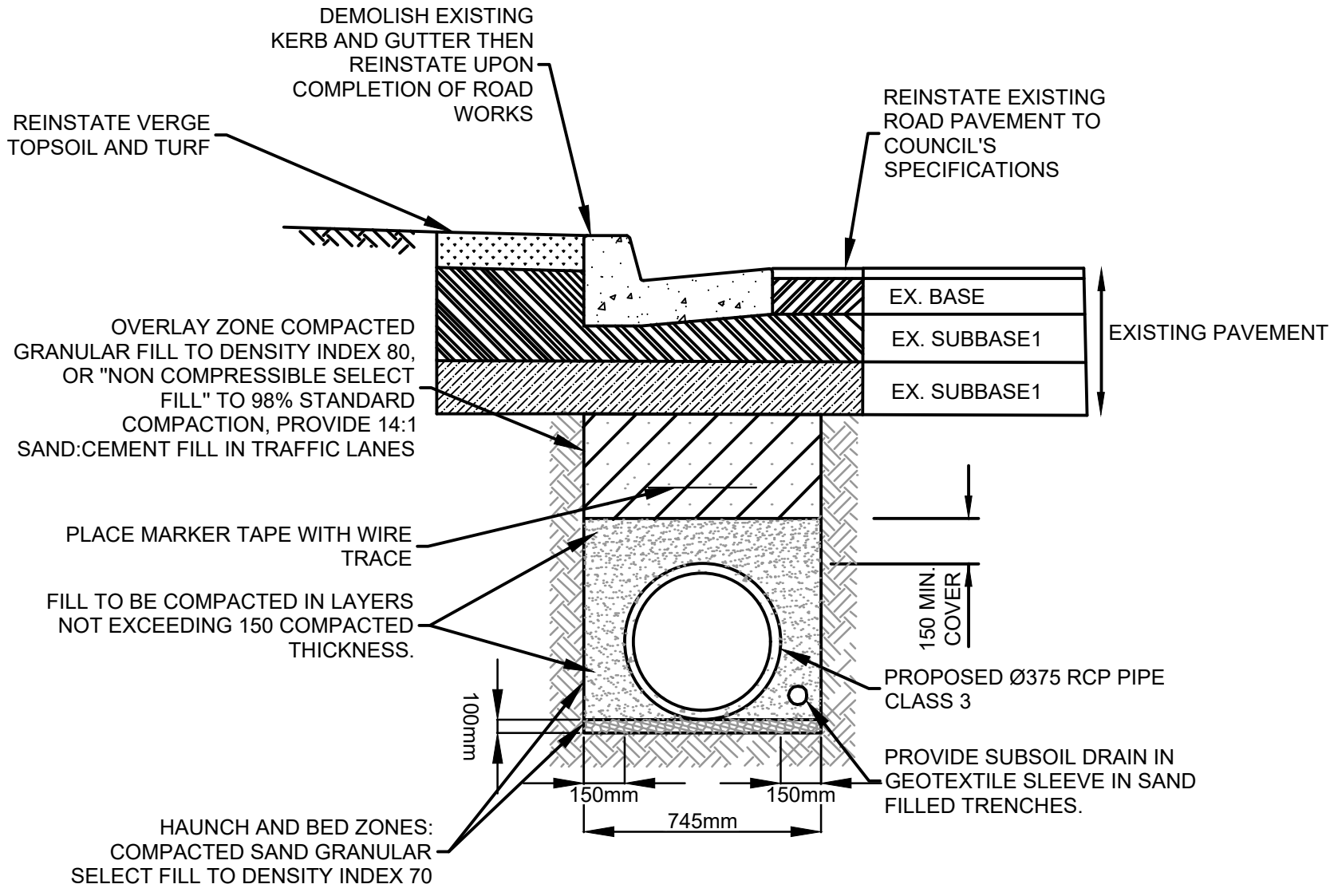


EXISTING KERB INLET PIT SECTION B
Scale 1:20

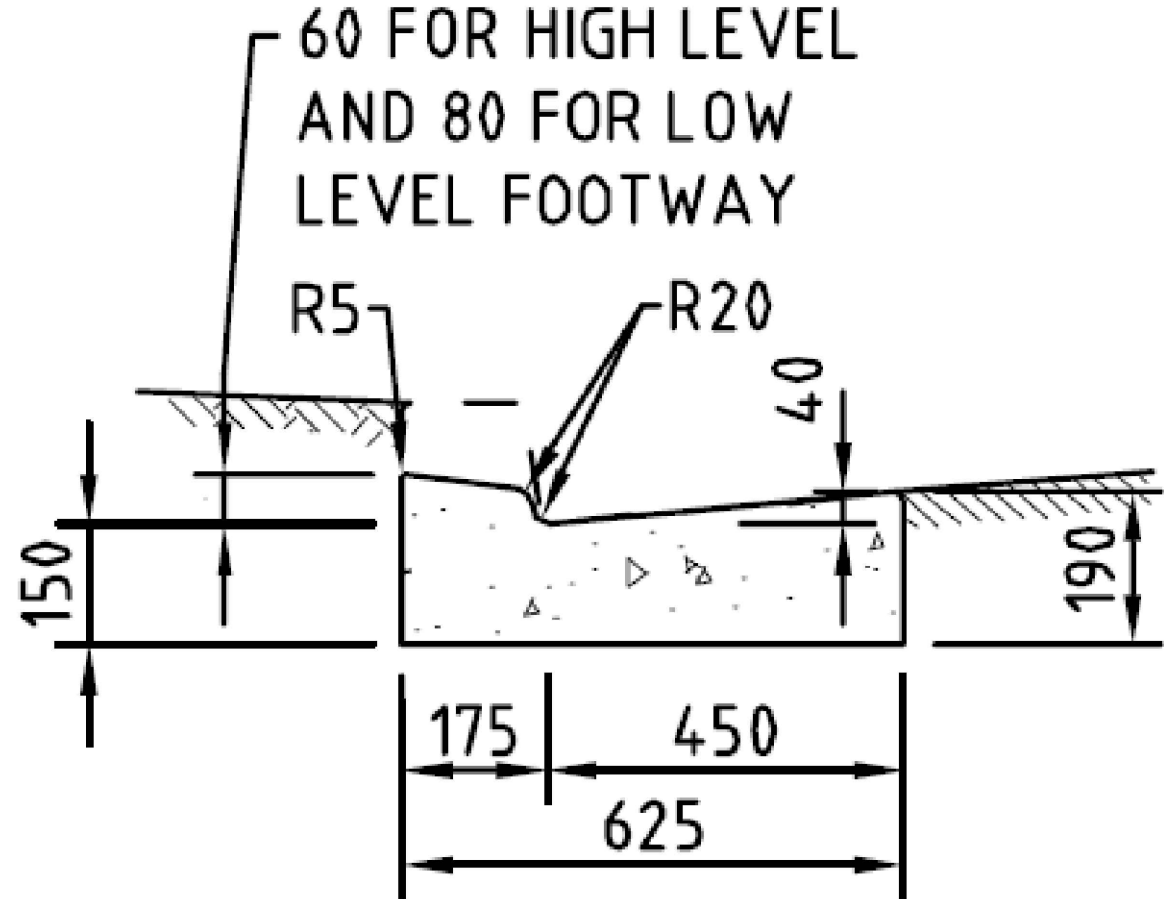


BUTTERFLY PIT DETAILS
Scale 1:20

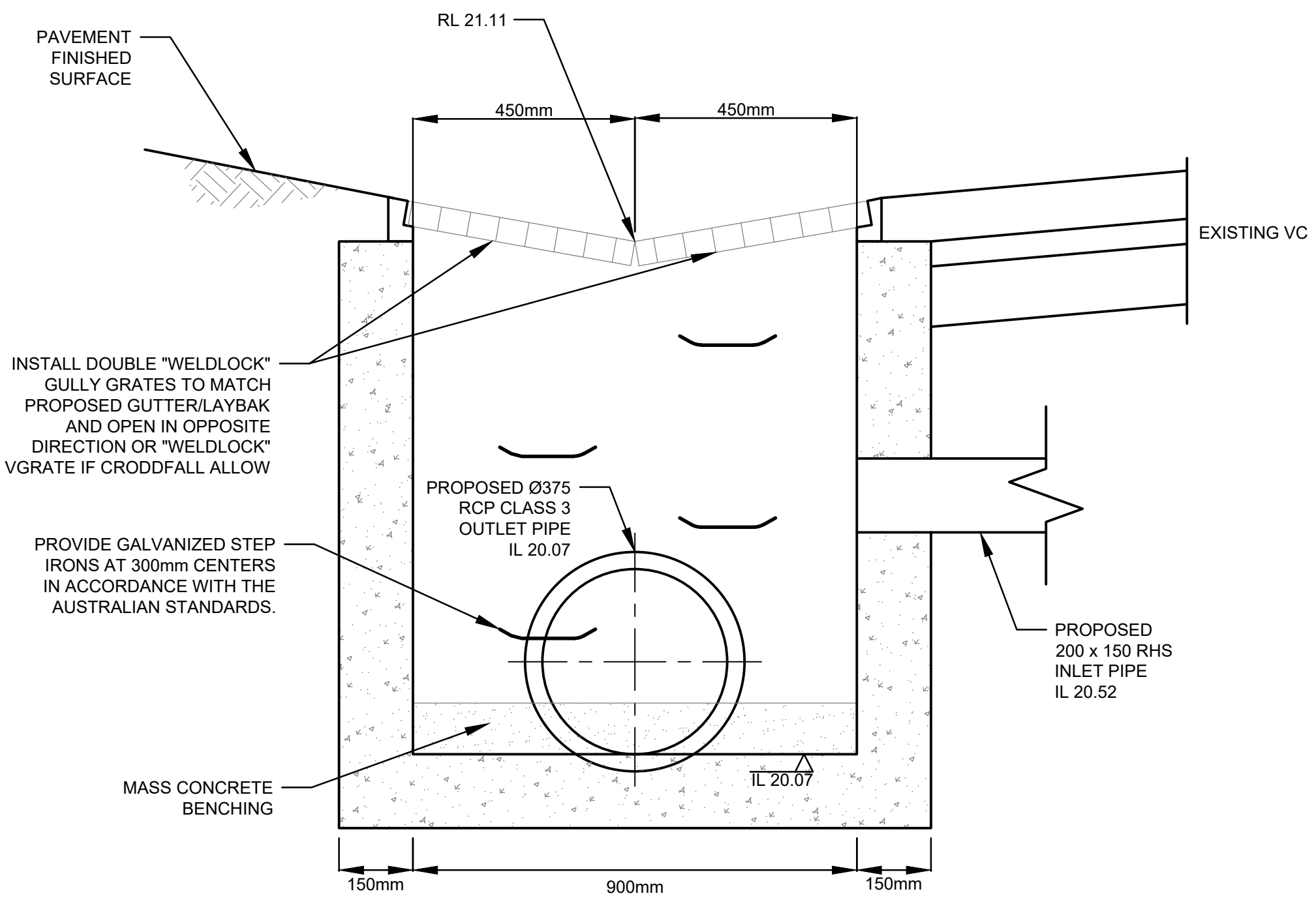
NOTE:
PITS DEEPER THAN 1.0m TO BE FITTED WITH STEP IRONS & TO STRUCTURAL ENGINEER'S DETAILS .



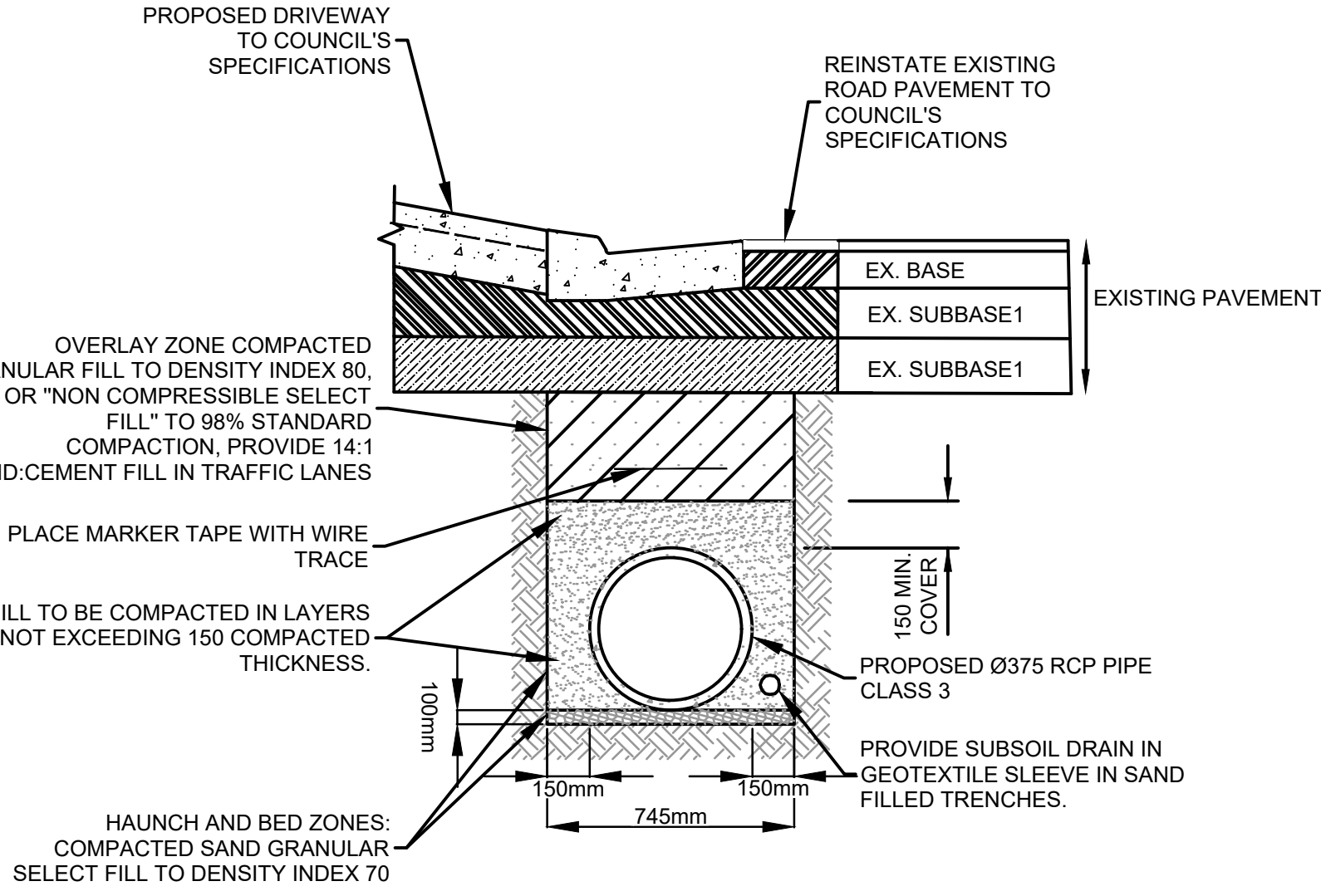
ROAD PAVEMENT CONCRETE [RCP] PIPE INSTALLATION AND BACKFILL UNDER KERB
N.T.S



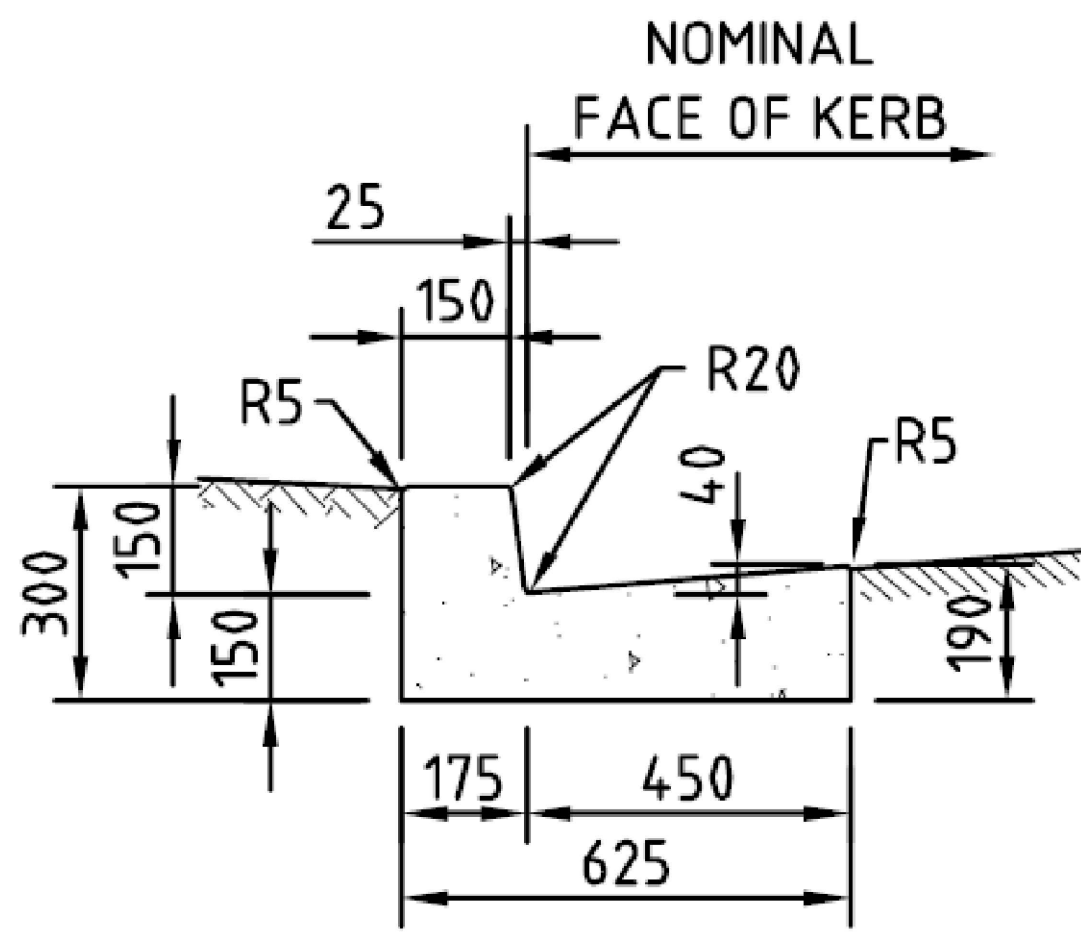
VEHICULAR KERB CROSSING (VKC)



BUTTERFLY PIT SECTION A
Scale 1:10



ROAD PAVEMENT CONCRETE [RCP] PIPE INSTALLATION AND BACKFILL UNDER KERB
N.T.S.

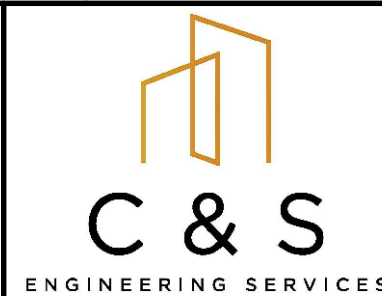
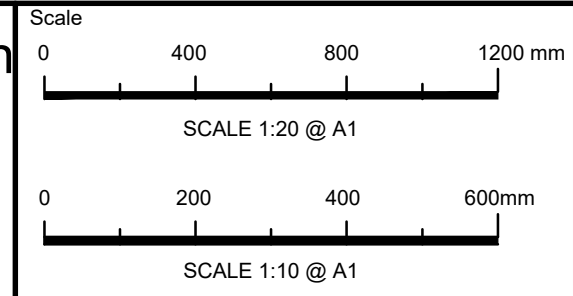


150mm KERB & GUTTER

B	ISSUE FOR APPROVAL	03/02/2025	MD	OC	OC
A	ISSUE FOR CONSTRUCTION CERTIFICATE	16/02/2024	KTS	OC	OC
Issue	Description	Date	Designed	Engineer	Checked

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LEVEL 2, 60 PARK STREET
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Council
Canterbury-Bankstown Council



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Project
433-437 CANTERBURY ROAD, CAMPSIE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER MANAGEMENT PLAN

Drawing Title	STANDARD DETAILS DRAWINGS & PITS DETAILS			
Scale	A1	Project No.	Dwg. No.	Issue
As Shown		150061	114.2	B