

LEGEND	
TAG	LABEL
REL 00.000	NEW REDUCED LEVEL
+ 00.00	EXISTING LEVEL
S.L. 00.00	SURFACE LEVEL
I.L. 00.00	INVERT LEVEL
GFL. 00.00	GROUND FLOOR LEVEL
FFL. 00.00	FINISH FLOOR LEVEL
TWL. 00.00	TOP WATER LEVEL
A,B,C,D, etc.	REFER TO PIPE SCHEDULE
PIT P1	SURFACE INLET PIT
PIT OP1	OVERLAND FLOW PIT
---	100mm AG. LINE
○DP	REFER DOWNPIPE SCHEDULE
○DT	REFER DOWNPIPE SCHEDULE
○WP1	REFER DOWNPIPE SCHEDULE
○WP2	REFER DOWNPIPE SCHEDULE
□RW	RAIN WATER HEAD
→	GROUND FALL
→	OVERLAND FLOW
→	DRAINAGE PIPE
---	AERIAL PIPE
⊠	SEALED PIT: 450x450
⊠	PIT: 450x450
⊠	PIT: 600x600
▨	W:200mm x D:200mm GRATED DRAIN
⊙	BALCONY FLOOR GRATE
⊙	FLOOR WASTE (REFER PAGE SW200)

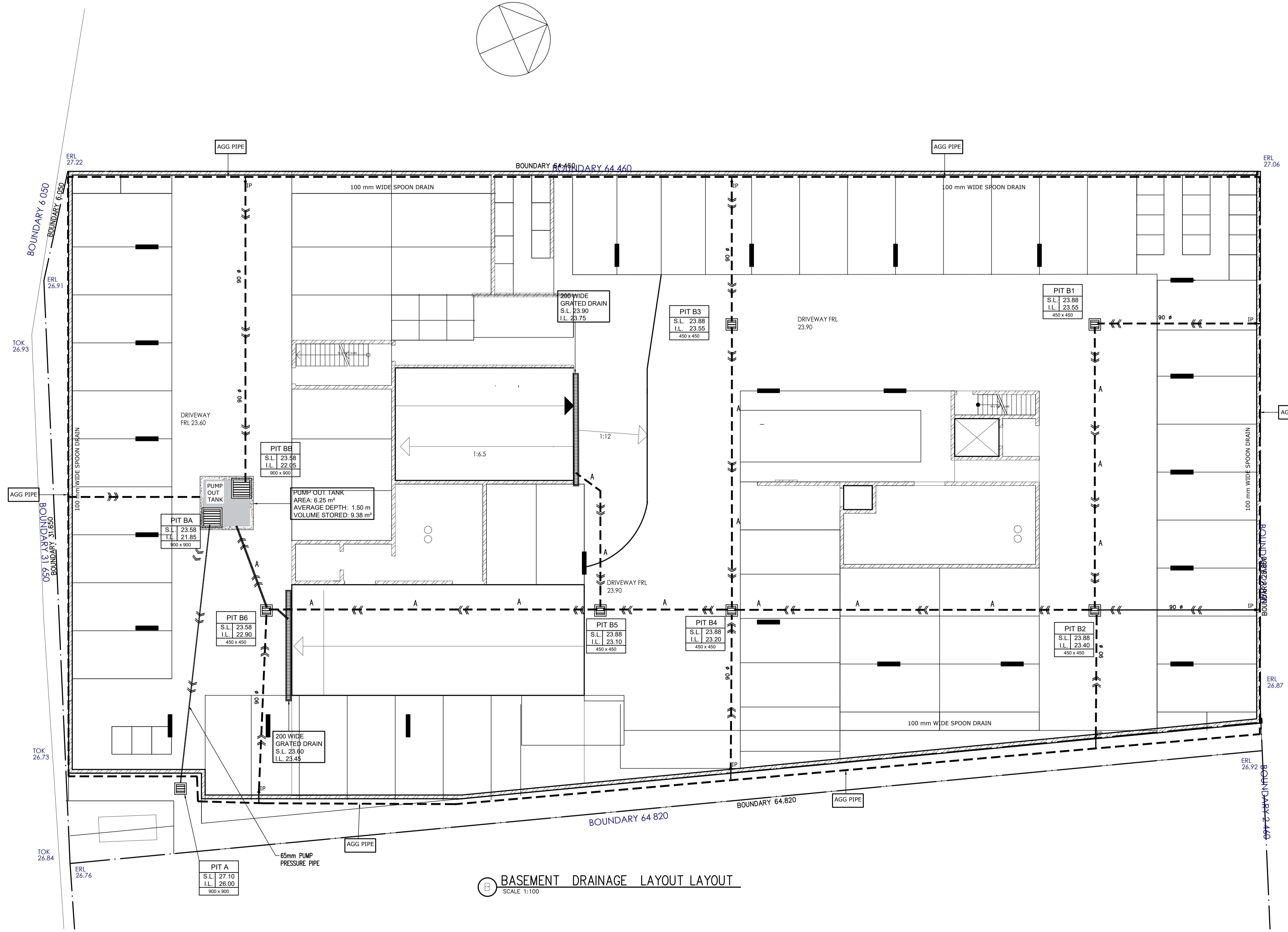
PIPE SCHEDULE TO ALL GUTTERS			
TAG	PIPE Ø	MATERIAL	Min. GRADE
A	100	PVC	1%
B	150	PVC	1%
C	225	PVC	1%
D	150x100 GAL. PIPE	STEEL	2%
DP	150	PVC	-
WP	150	PVC	-

DOWN PIPE SCHEDULE	
○ DP	DP CARRYING CLEAN ROOF SURFACE WATER TO RWT
○ WP1	WP CARRYING SURFACE WASTE WATER TO ON SITE DETENTION TANK (OSD)
○ WP2	WP CARRYING SURFACE WASTE WATER TO BASEMENT PUMP OUT PIT
○ DT	DOWN TURN PIPE TO LEVELS BELOW

RAINWATER TANKS WITH PUMPS TO SUPPLY GARDEN TAPS & CAR WASH BAY

⚠ DANGER
 CONFINED SPACE
 NO ENTRY WITHOUT CONFINED SPACE TRAINING

TO BE PLACED AT ALL TANK ACCESS GRATES



(B) BASEMENT DRAINAGE LAYOUT LAYOUT
 SCALE 1:100

Revision	Amendment	Issue date	Issue	Issued to	Issue date
D	PRELIMINARY DESIGN UPDATED	01/07/2020			
C	PRELIMINARY DESIGN	23/06/2020			
B	PRELIMINARY DESIGN	16/04/2020			
A	PRELIMINARY DESIGN	24/02/2020			



SUITE 303 / 29-31 LEXINGTON DRIVE
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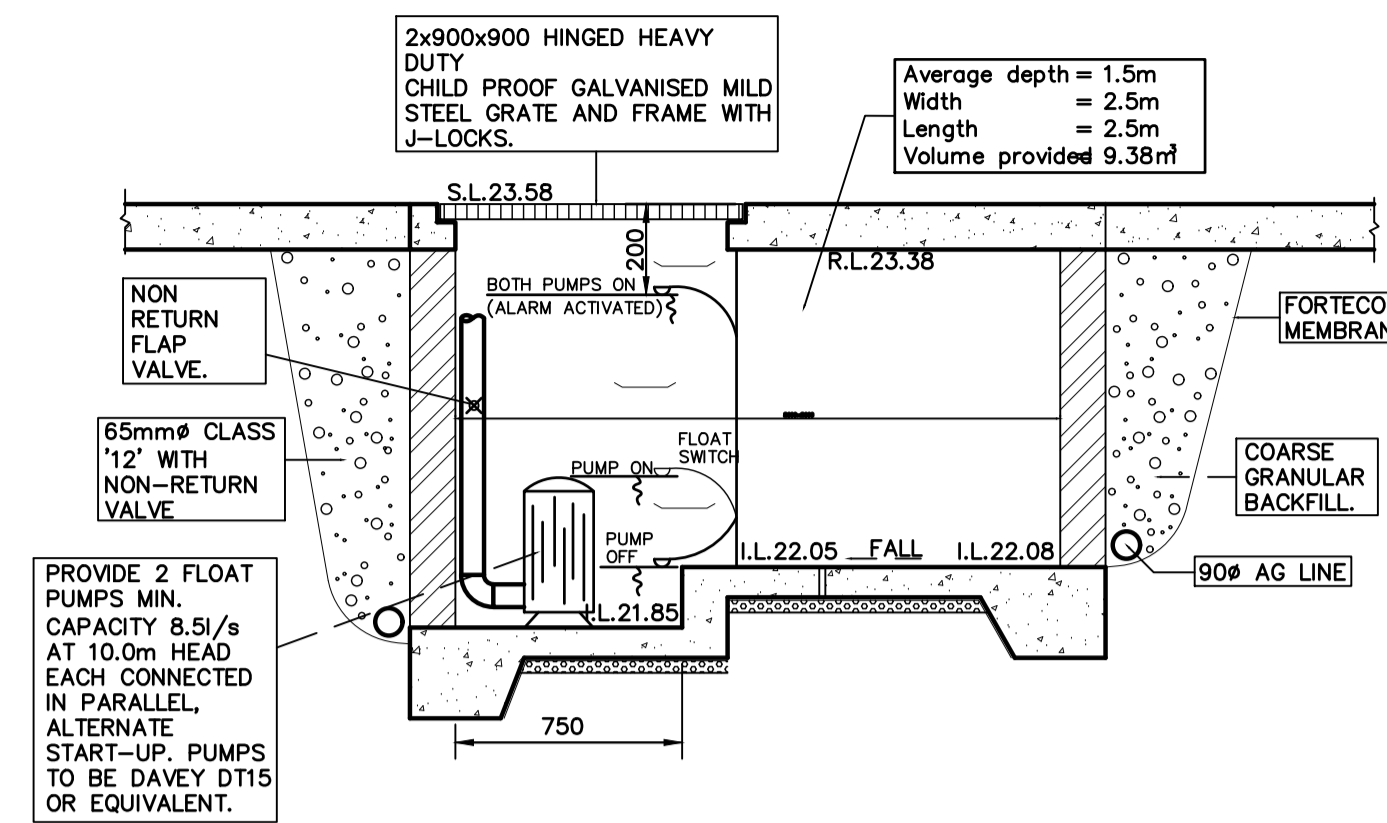
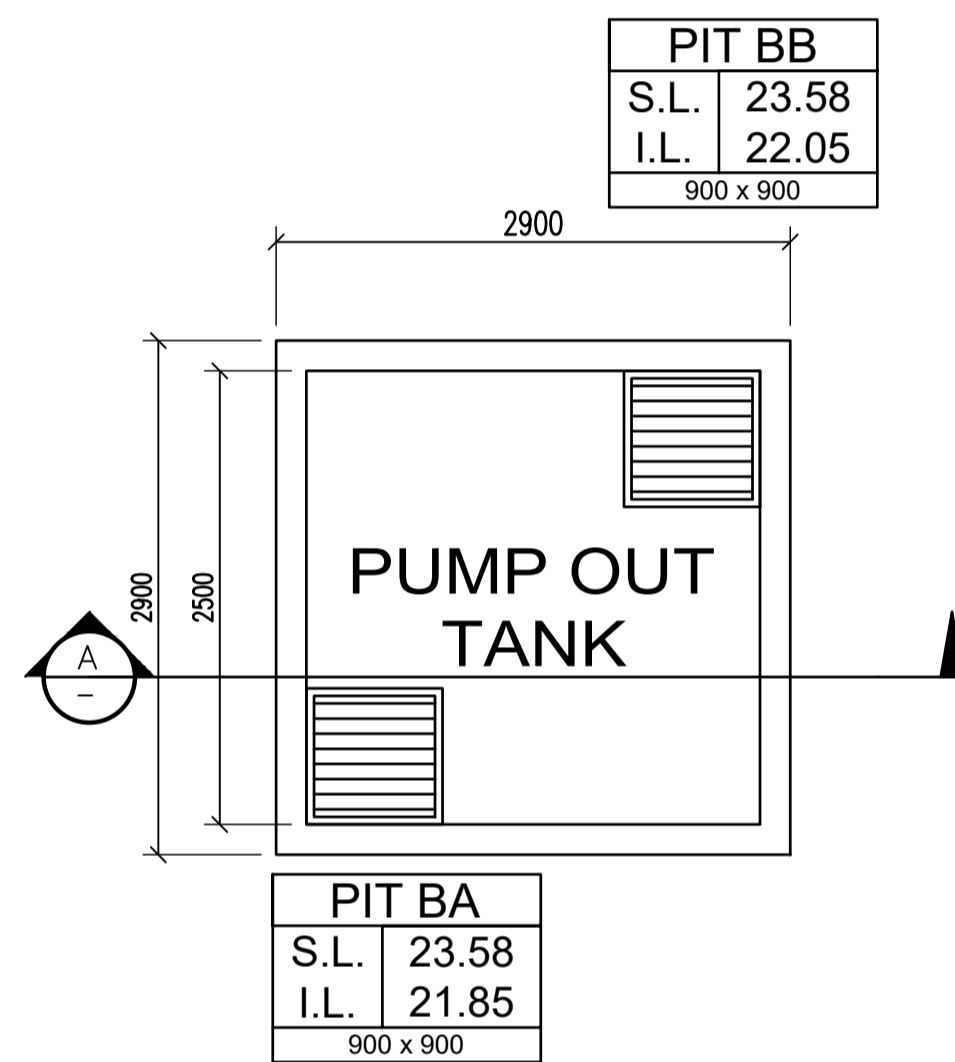
Project
**PROPOSED DEVELOPMENT
 608-612 HIGH STREET,
 PENRITH**
 Client
 -
 Architect / Project Manager
 -

Drawing Title BASEMENT DRAINAGE LAYOUT PLAN			
Scales A1 - 1:100	Designed D.K.	Drafted M.W.	
Drawing No. C18087 -SW 100	Approved A.C.	Revision D	

STANDARD PUMP OUT DESIGN NOTES

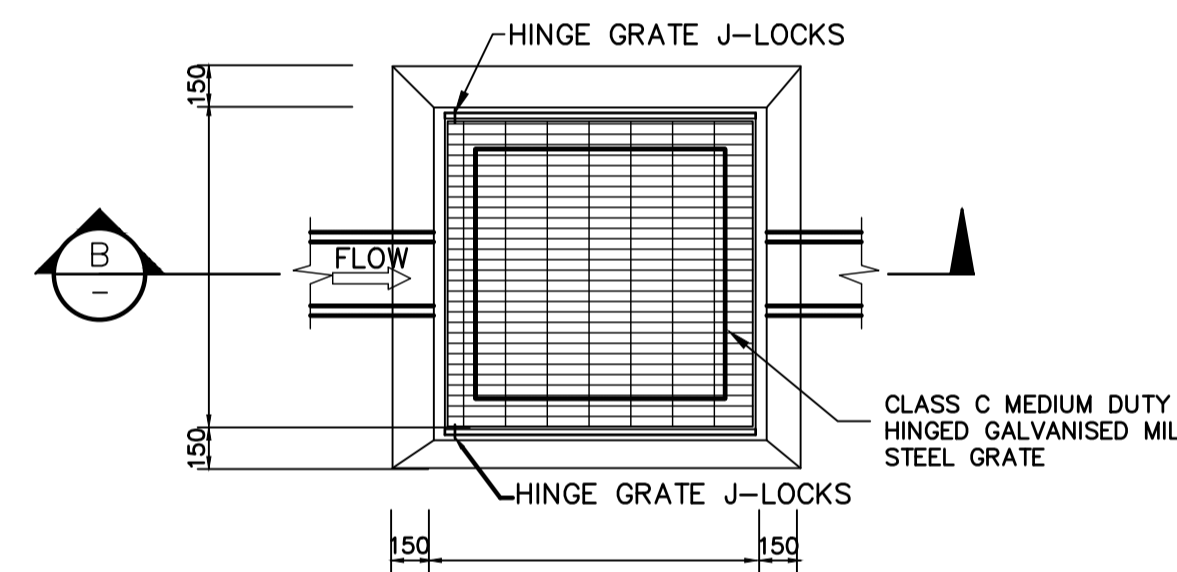
THE PUMP OUT SYSTEM SHALL BE DESIGNED TO BE OPERATED IN THE FOLLOWING MANNER:-

- THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY SO AS TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.
- A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT 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.
- A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300MM ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE AND DRAIN THE TANK TO THE LEVEL OF THE LOW-LEVEL FLOAT.
- A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.
- AN ALARM SYSTEM SHALL BE PROVIDED 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.

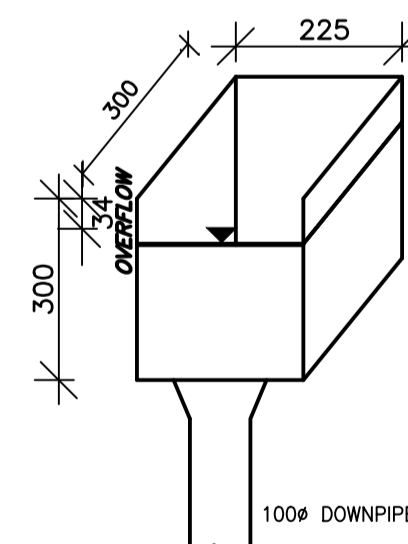


SECTION A
PUMP OUT TANK
N.T.S.

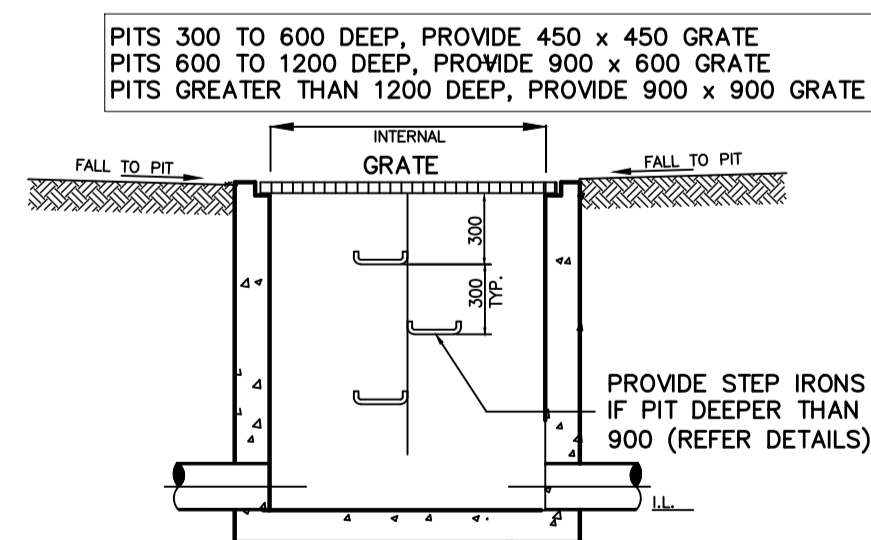
PUMP HOLDING TANK
AREA = 6.25 Sq.m
AVERAGE DEPTH = 1500mm
TWL = RL 23.38
VOLUME AVAILABLE = 9.38 Cu.m



PLAN
TYPICAL PIT DETAILS
N.T.S.



RAIN WATER HEAD DETAIL



SECTION B
GRADED PIT



TO BE PLACED AT ALL TANK ACCESS GRATES

STANDARD PUMP OUT DESIGN NOTES

THE PUMP SYSTEM SHALL BE OPERATED IN THE FOLLOWING MANNER:-

- THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE
- A FLOAT SHALL BE PROVIDED TO ENSURE THAT 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 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.
- A SECOND FLOAT SHALL BE PROVIDED 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.
- AN ALARM SYSTEM SHALL BE PROVIDED 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.
- A CONFINED SPACE DANGER SIGN SHALL BE PROVIDED AT ALL ACCESS POINTS TO THE PUMP OUT STORAGE TANK.

PUMP-OUT TANK MAINTENANCE SCHEDULE

MAINTENANCE CONTRACT

NOTE: A 24 HOUR X 12 MONTHLY EMERGENCY AND MAINTENANCE CONTRACT SHALL BE OBTAINED FROM A COMPANY CAPABLE OF EXECUTING THE WORK AND SHALL BE KEPT IN FORCE BY THE PROPERTY OWNER(S) FOR THE LIFE OF THE BUILDING.

THE MAINTENANCE CONTRACT SHALL BE CARRIED OUT EVERY THREE (3) MONTHS AND SHALL INCLUDE THE FOLLOWING ACTIVITIES:

- CLEAN OUT ALL PITS OF SILT AND DEBRIS.
- CHECK AND CLEAN OUT, IF NECESSARY, ALL PIPELINES.
- CHECK:
 - PUMPS FOR WEAR
 - PUMP OIL SEALS
 - PUMP STRAINER AND CLEAN
- CARRY OUT ROUTINE MAINTENANCE TO PUMPS AS RECOMMENDED BY THE MANUFACTURER.
- CHECK OPERATIONAL SEQUENCE OF LEVEL SWITCHES, PUMPS AND CONTROL PANEL.
- THE EMERGENCY CONTRACT SHALL PROVIDE FOR A 24 HOUR X 7 DAY PER WEEK SERVICE.

THE CONTRACTOR SHALL PROVIDE A NAME PLATE STATING NAME, WORKING HOURS, TELEPHONE NUMBER AND OUT OF HOURS NUMBER AND SUCH NAME PLATE SHALL BE FIXED TO THE FRONT OF THE CONTROL PANEL.

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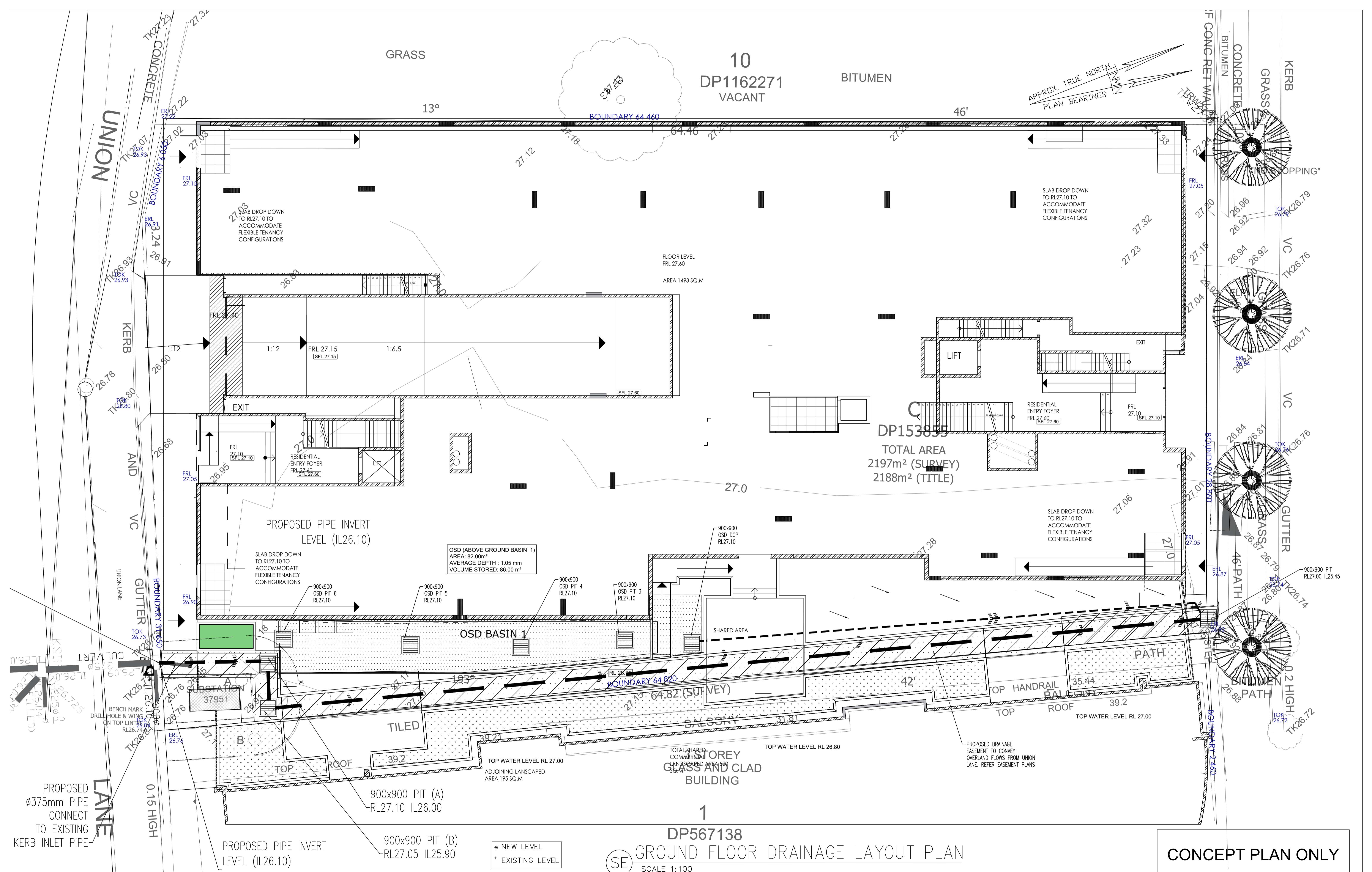


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Project
**PROPOSED DEVELOPMENT
608-612 HIGH STREET,
PENRITH**
Client
-
Architect / Project Manager
-

Drawing Title
**PUMP OUT TANK
AND DETAILS**

Scale	Designed	Drafted
A1 - 1:100	D.K.	M.W.
Drawing No.	Approved	Revision
C18087 -SW 101	A.C.	D



SE **GROUND FLOOR DRAINAGE LAYOUT PLAN**
SCALE 1:100

CONCEPT PLAN ONLY

Revision	Amendment	Issue date	Issue	Issued to	Issue date
D	PRELIMINARY DESIGN UPDATED	01/07/2020			
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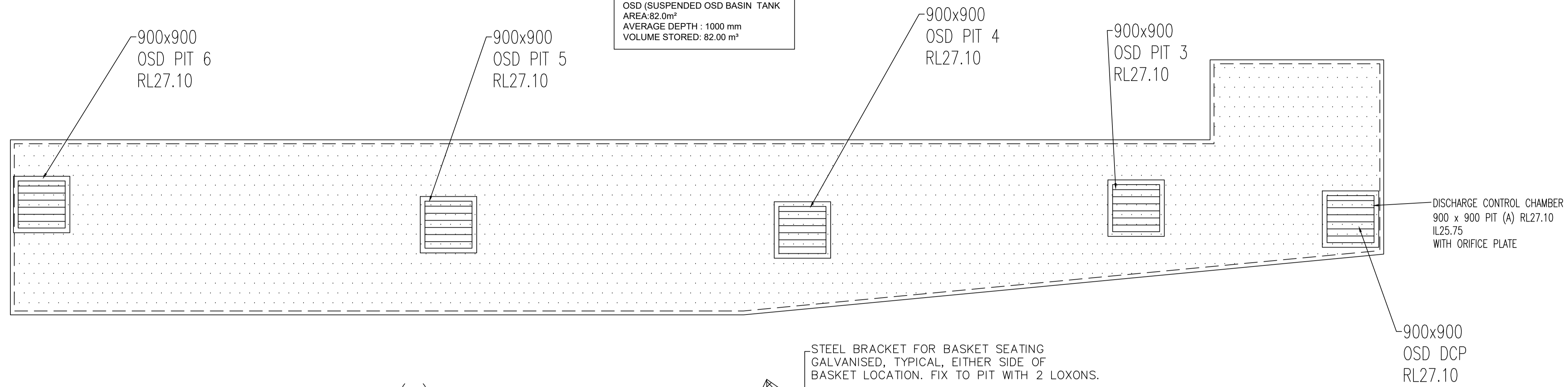


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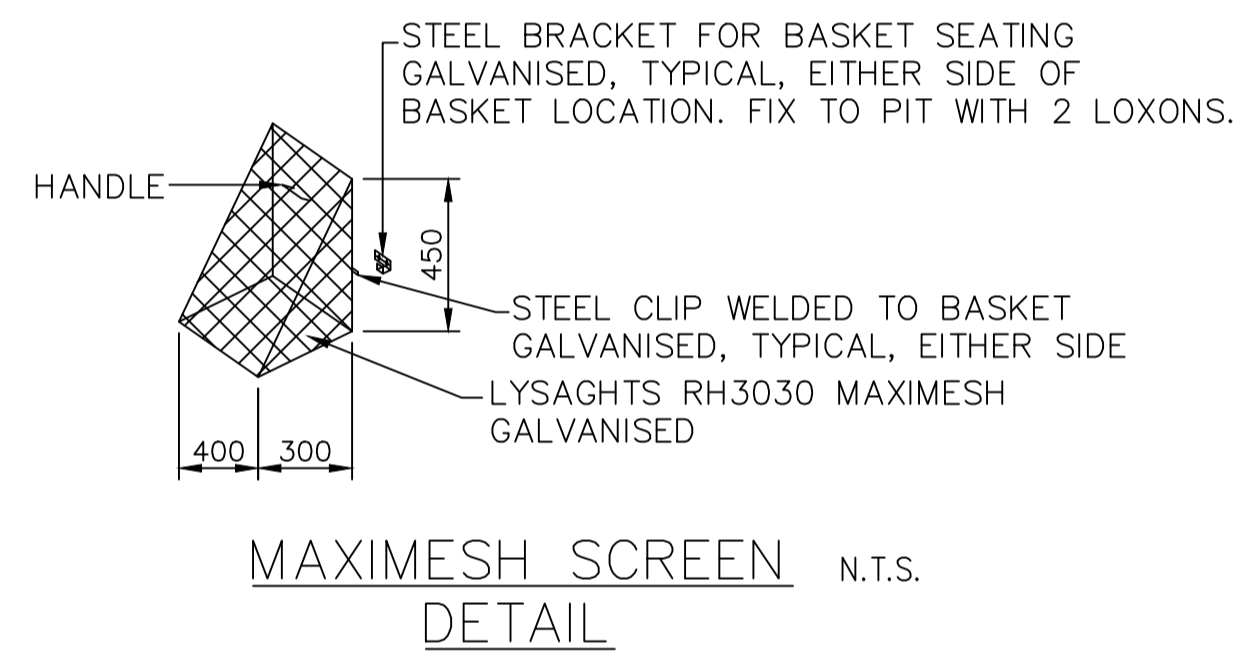
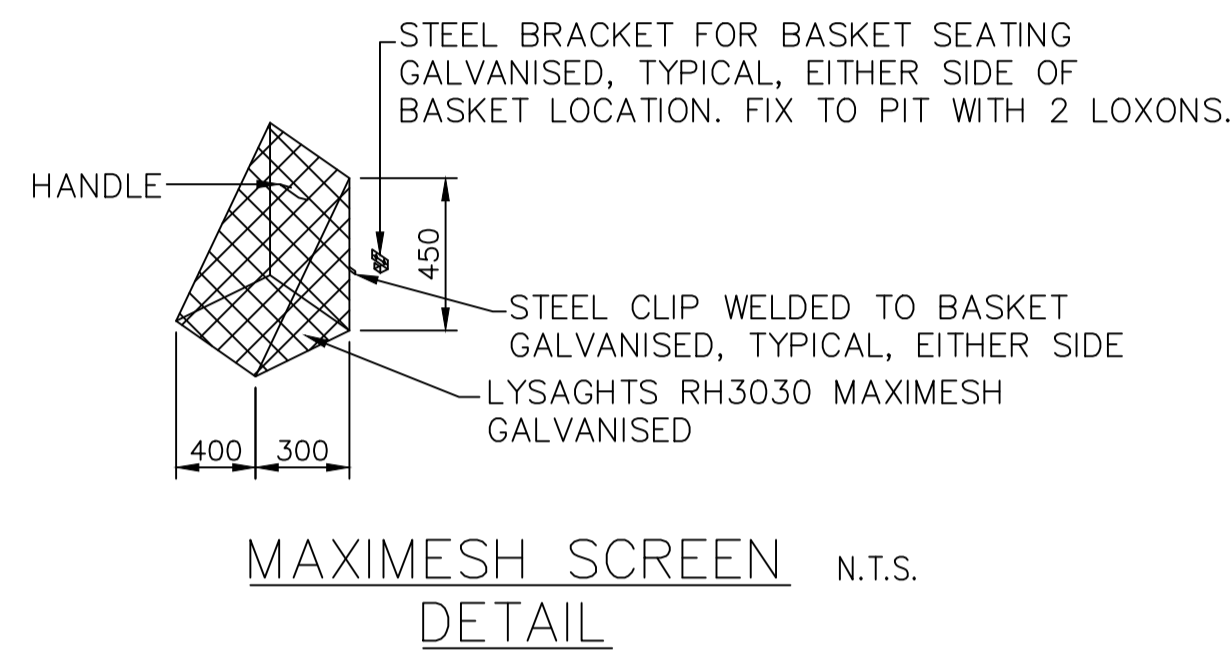
Project
PROPOSED DEVELOPMENT
608-612 HIGH STREET,
PENRITH
Client
-
Architect / Project Manager
-

Drawing Title		
GROUND FLOOR DRAINAGE LAYOUT AND OSD TANK		
Scales	Designed	Drafted
A1 - 1:100	D.K.	M.W.
Drawing No.	Approved	Revision
C18087 -SW200	A.C.	D

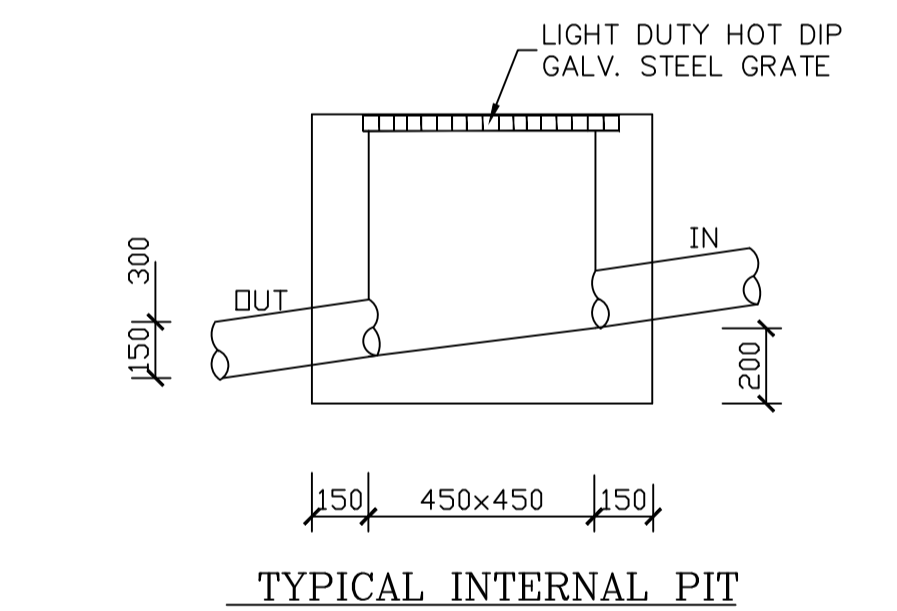
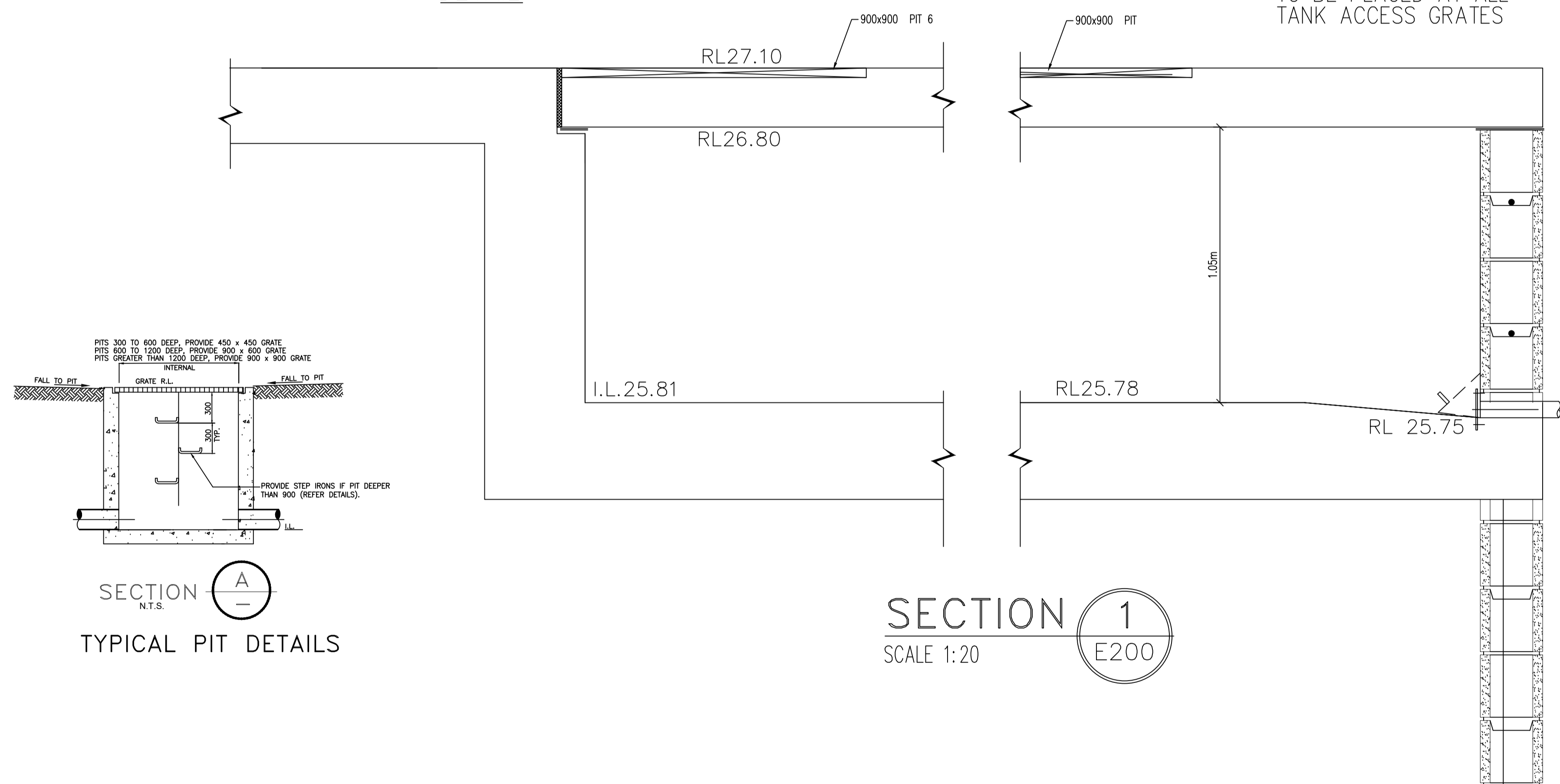
TOP WATER LEVEL RL 26.80
 OSD (SUSPENDED OSD BASIN TANK)
 AREA: 82.0m²
 AVERAGE DEPTH: 1000 mm
 VOLUME STORED: 82.00 m³



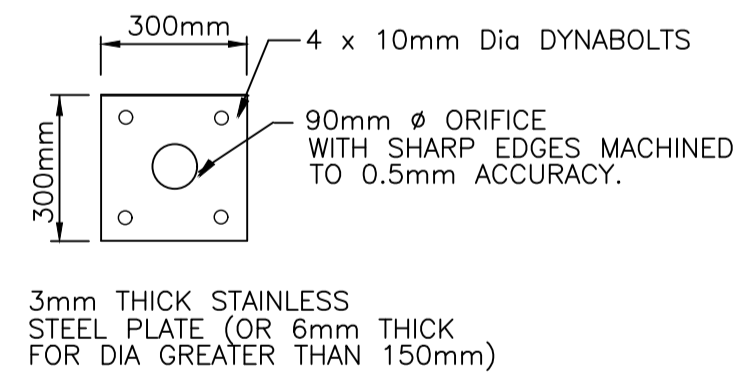
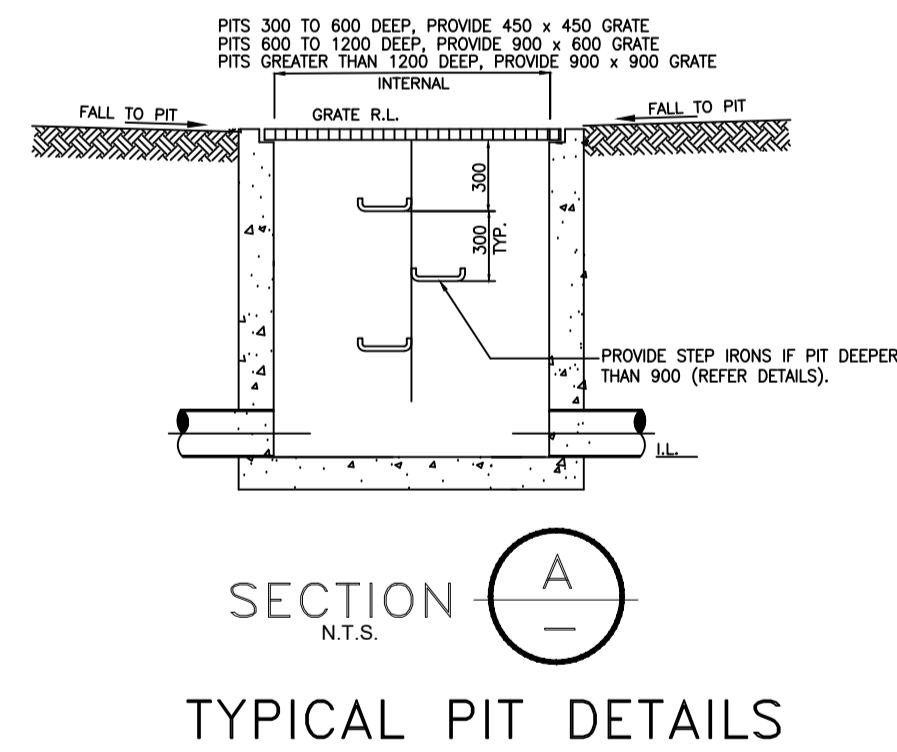
SE SUSPENDED OSD BASIN (1) PLAN
 SCALE 1:50



TO BE PLACED AT ALL TANK ACCESS GRATES



OSD WARNING SIGN
 N.T.S.



ORIFICE PLATE 1 DETAIL
 N.T.S.

SE SUSPENDED ON SITE DETENTION TANK (1) SECTION
 SCALE 1:50

- NOTES
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS, STRUCTURAL DRAWINGS AND THE SPECIFICATION.
 - PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR SHALL SATISFY HIMSELF OF THE CORRECT LOCATION OF EXISTING SERVICES WHETHER INDICATED OR NOT ON THE PLANS. ANY DAMAGE TO EXISTING SERVICES SHALL BE RECTIFIED AT THE CONTRACTOR'S EXPENSE.
 - TRAFFIC MANAGEMENT MEASURES HAVE TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION, ALL IN ACCORDANCE WITH COUNCIL'S REQUIREMENTS. THE CONTRACTOR SHALL MAINTAIN SAFE PEDESTRIAN ACCESS ALONG THE FOOTPATH.
 - THE CONTRACTOR SHALL EFFECT TEMPORARY DRAINAGE MEASURES TO AVOID LOCALISED PONDING OF SURFACE RUN-OFF.
 - REFER TO ARCHITECT'S DRAWINGS FOR ALL DETAILS (LEVELS, GRADING ETC.) OF DRIVEWAYS, CONCRETE AND PAVED AREAS, AND RETAINING WALL TYPES AND LOCATIONS.
 - REFER TO LANDSCAPE ARCHITECT'S DRAWINGS FOR DETAILS AND EXTENT OF ALL LANDSCAPED AREAS.
 - ALL SWD PIPES ARE UPVC AT 1.0% MINIMUM GRADE (UNO).
 - SWD PITS CAN BE PRE-CAST SIZED AS FOLLOWS:
 450mm SQ. UP TO 600mm DEEP
 600mm SQ. UP TO 1000mm DEEP
 - ALL PITS LOCATED IN TRAFFICABLE AREAS, (IE, DRIVEWAYS) TO HAVE MEDIUM DUTY GRATED COVERS SUITABLE FOR WITHSTANDING LOADS ASSOCIATED WITH SMALL TRUCKS.
 - PROVIDE STEP IRONS TO ALL PITS GREATER THAN 1.2m DEEP.
 - THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO COMMENCEMENT OF WORKS.
 - TOPSOIL SHALL BE STRIPPED DN STOCKPILED OUTSIDE HAZARD AREAS SUCH AS DRAINAGE LINES. THIS TOPSOIL IS TO BE RESPREAD LATER ON AREAS TO BE REVEGETATED.
 - THE CONTRACTOR SHALL REGULARLY MAINTAIN ALL SEDIMENT AND EROSION CONTROL DEVICES AND REMOVE ACCUMULATED SILT FROM SUCH DEVICES. ALL SILT REMOVED SHALL BE DISPOSED OF AS DIRECTED BY THE SUPERINTENDENT. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE AT LEAST UNTIL ALL DISTURBED AREAS ARE REVEGETATED AND FURTHER AS MAY BE DIRECTED BY THE SUPERINTENDENT OR COUNCIL.
 - THE CONTRACTOR SHALL MAINTAIN DUST CONTROL UNTIL FINAL COMPLETION OF WORKS.



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Project
 PROPOSED DEVELOPMENT
 608-612 HIGH STREET,
 PENRITH
 Client
 -
 Architect / Project Manager
 -

Drawing Title
 OSD TANK AND STORMFILTER
 SECTIONS AND DETAILS
 Scales
 A1 - 1:100
 Drawing No.
 C18087 -SW201
 Designed
 D.K.
 Approved
 A.C.
 Drafted
 M.W.
 Revision
 D

Revision	Amendment	Issue date	Issue	Issued to	Issue date
D	PRELIMINARY DESIGN UPDATED	01/07/2020			
C	PRELIMINARY DESIGN	23/06/2020			
B	PRELIMINARY DESIGN	16/04/2020			
A	PRELIMINARY DESIGN	24/02/2020			

LEGEND	
TAG	LABEL
RL 00.000	NEW REDUCED LEVEL
+ 00.00	EXISTING LEVEL
S.L. 00.00	SURFACE LEVEL
I.L. 00.00	INVERT LEVEL
GFL. 00.00	GROUND FLOOR LEVEL
FFL. 00.00	FINISH FLOOR LEVEL
A,B,C,D, etc.	REFER TO PIPE SCHEDULE
PIT P1	SURFACE INLET PIT
PIT OP1	OVERLAND FLOW PIT
100mm AG. LINE	100mm AG. LINE
○DP	REFER DOWNPIPE SCHEDULE
⊙DT	REFER DOWNPIPE SCHEDULE
○WP1	REFER DOWNPIPE SCHEDULE
○WP2	REFER DOWNPIPE SCHEDULE
□RWH	RAIN WATER HEAD
→	GROUND FALL
→	OVERLAND FLOW
→	DRAINAGE PIPE
→	AERIAL PIPE
⊠	SEALED PIT: 450x450
⊠	PIT: 450x450
⊠	PIT: 600x600
▨	W:200mm x D:200mm GRATED DRAIN
⊙FG	BALCONY FLOOR GRATE
⊙FW	FLOOR WASTE (REFER PAGE SW200)

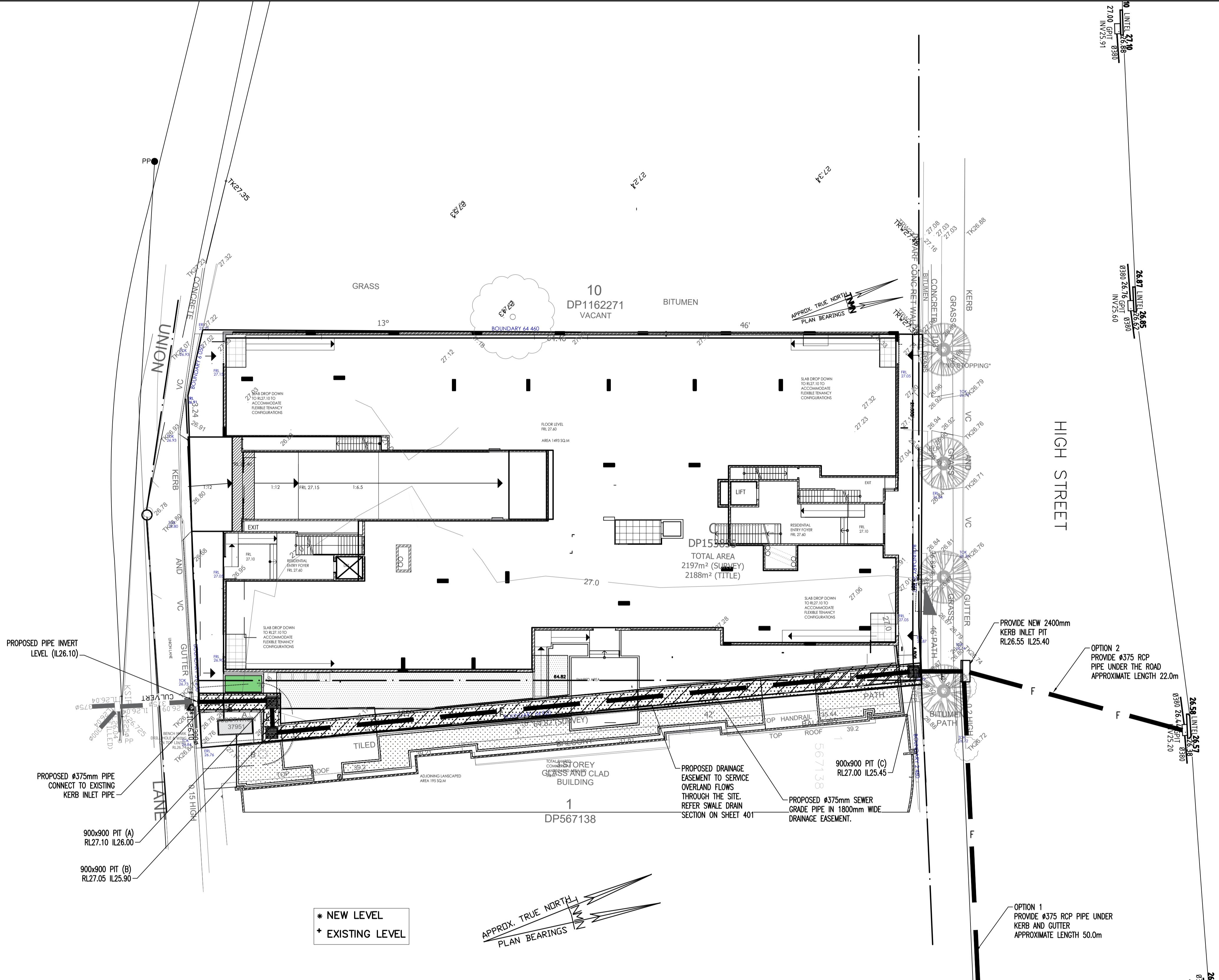
PIPE SCHEDULE			
TAG	PIPE Ø	MATERIAL	Min. GRADE
A	100	PVC	1%
B	150	PVC	1%
C	225	PVC	1%
D	150x100 GAL. PIPE	STEEL	2%
E	375	UPVC sewer Grade	0.5%
F	375	RCP PIPE	0.5%

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.dialbeforeyoudig.com.au"



(SE) **DRAINAGE EASEMENT LAYOUT PLAN**
SCALE 1:200

EASEMENT LEGEND	
	1800mm WIDE PROPOSED DRAINAGE EASEMENT

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D	PRELIMINARY DESIGN UPDATED	01/07/2020			
C	PRELIMINARY DESIGN	23/06/2020			
B	PRELIMINARY DESIGN	16/04/2020			
A	PRELIMINARY DESIGN	24/02/2020			

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STRUCTURAL & CIVIL ENGINEERS

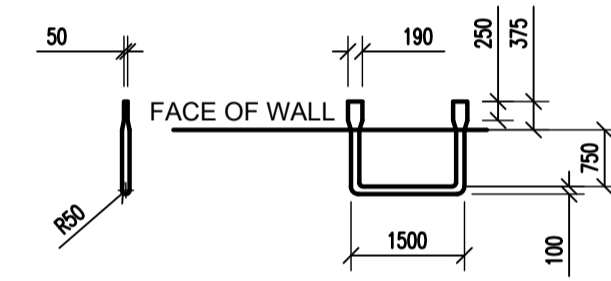
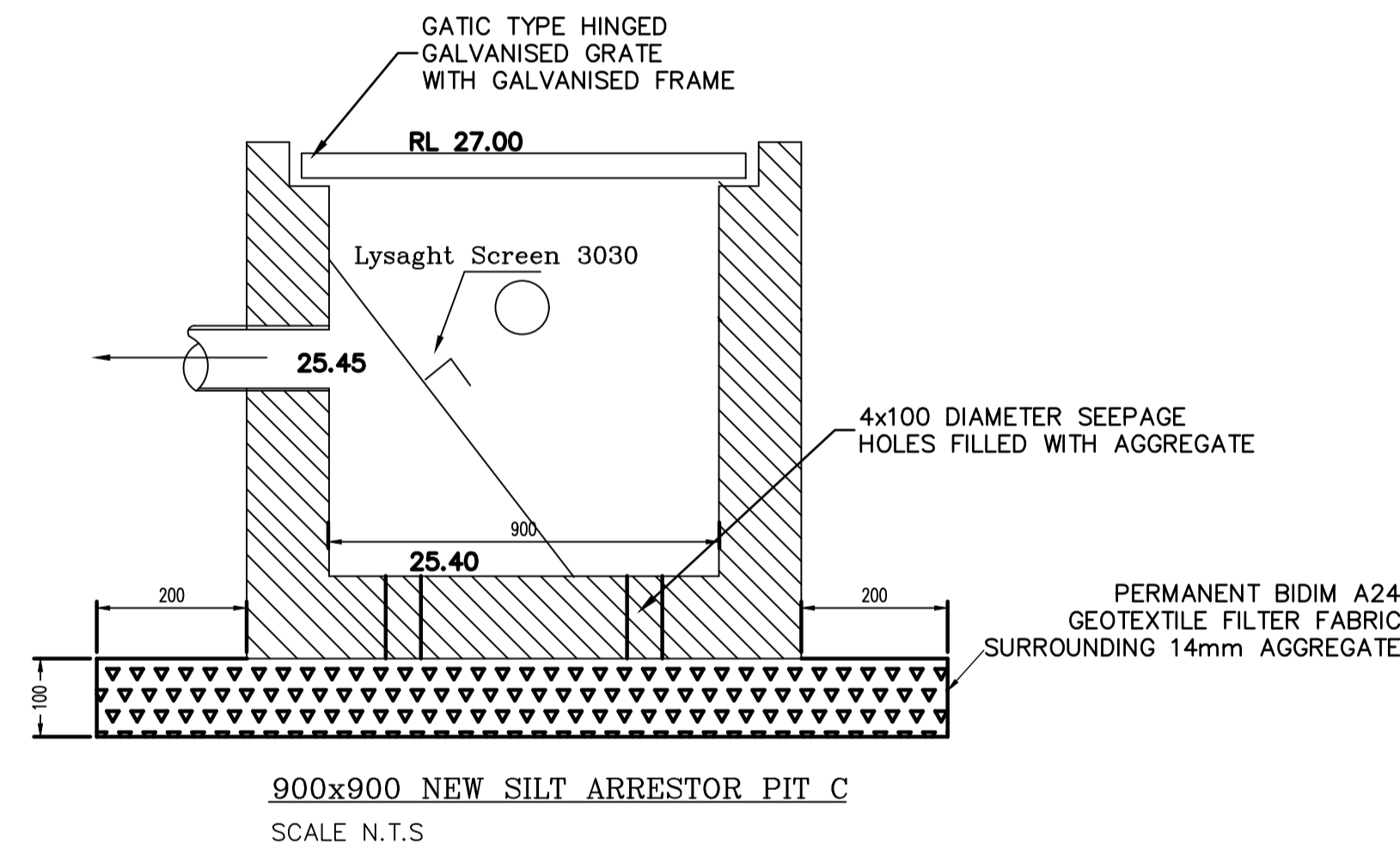
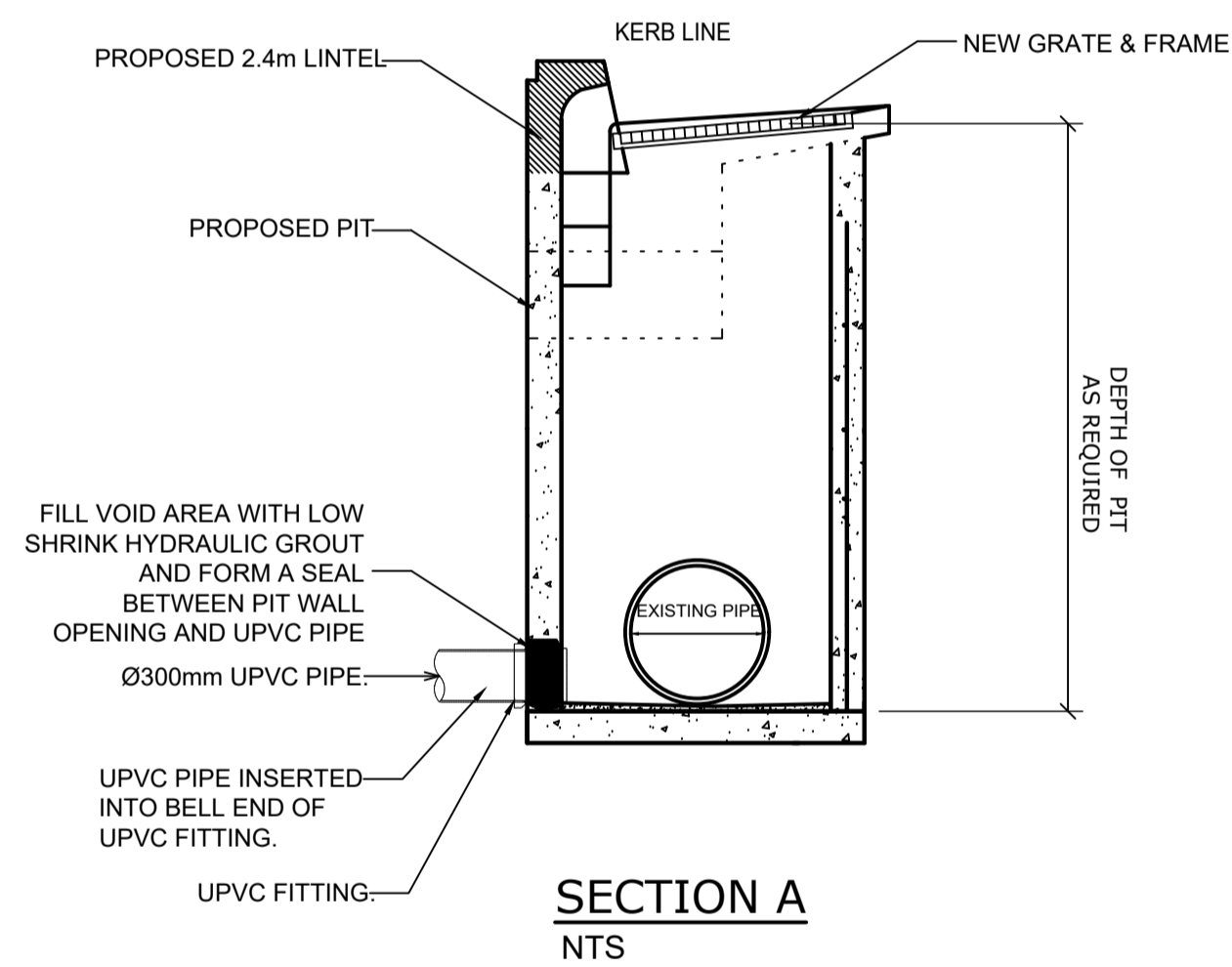
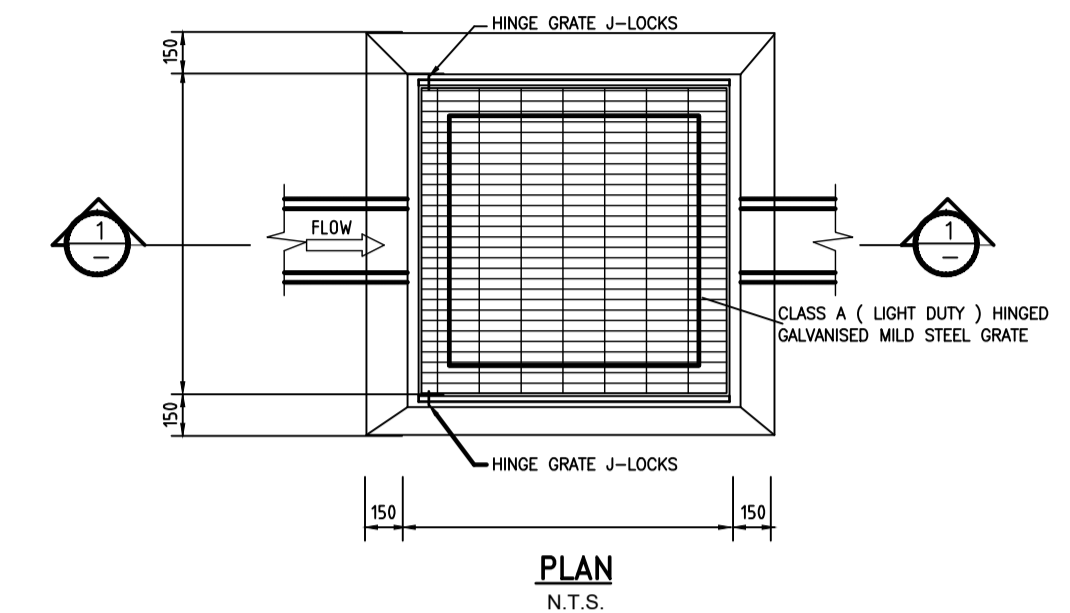
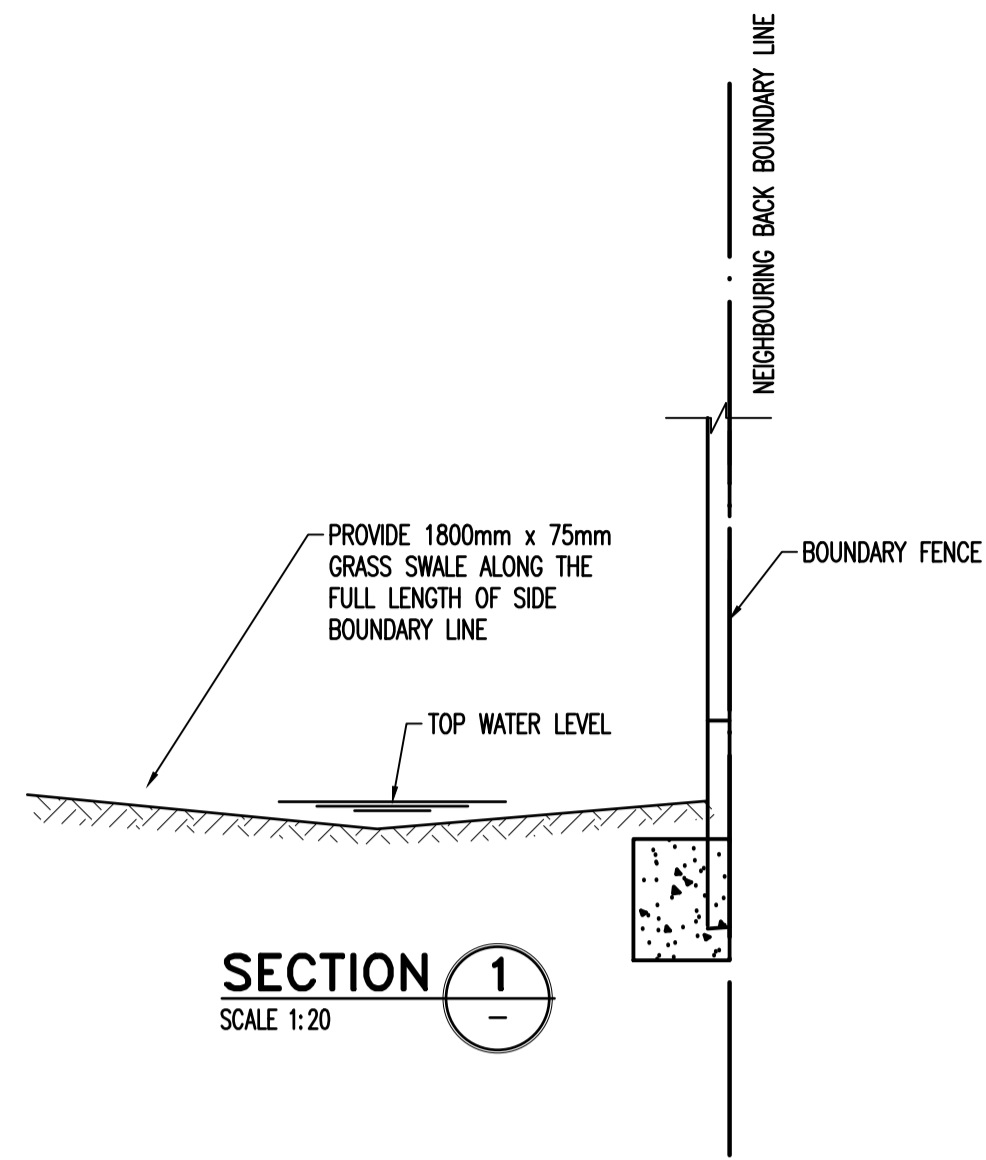
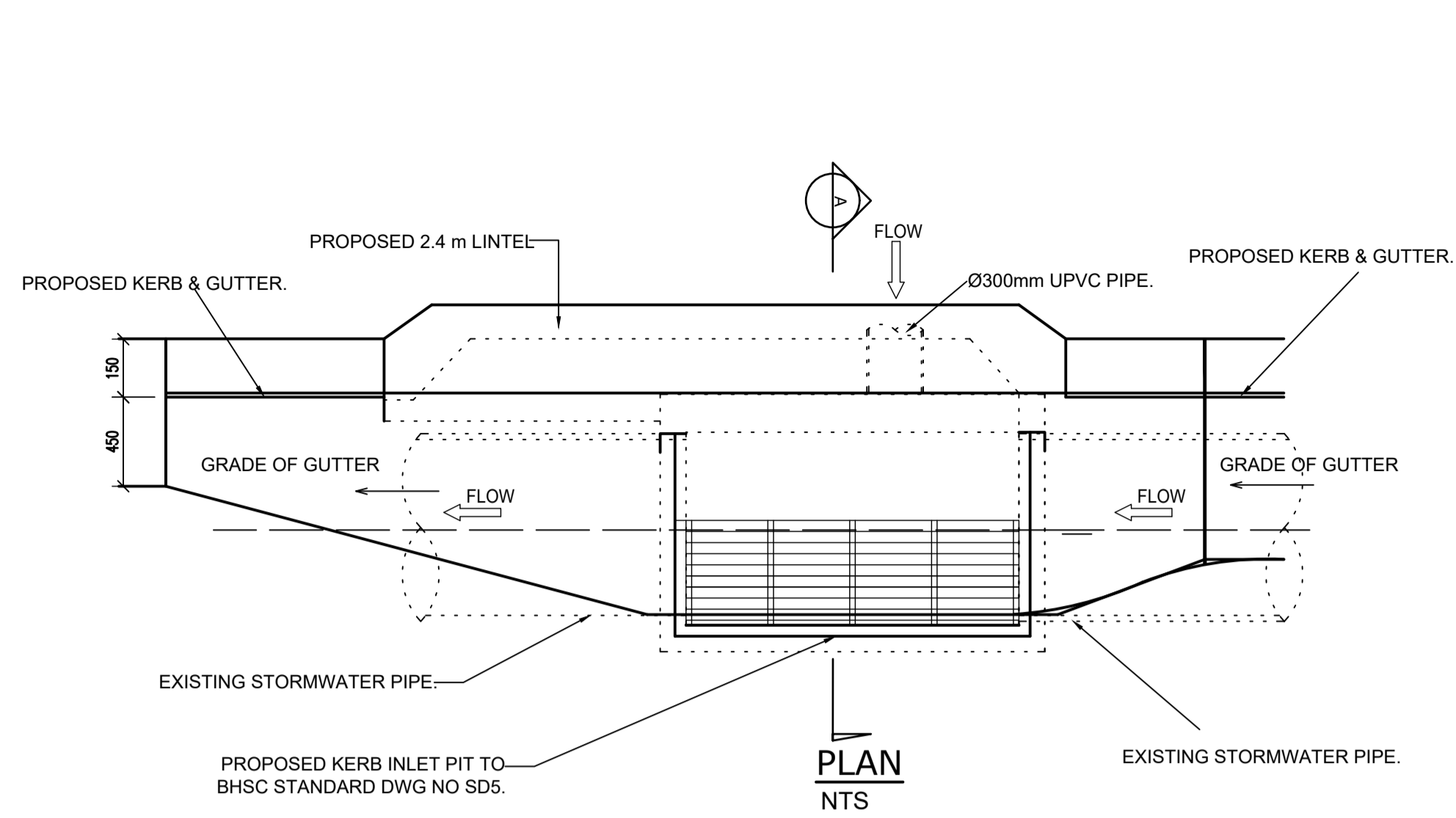
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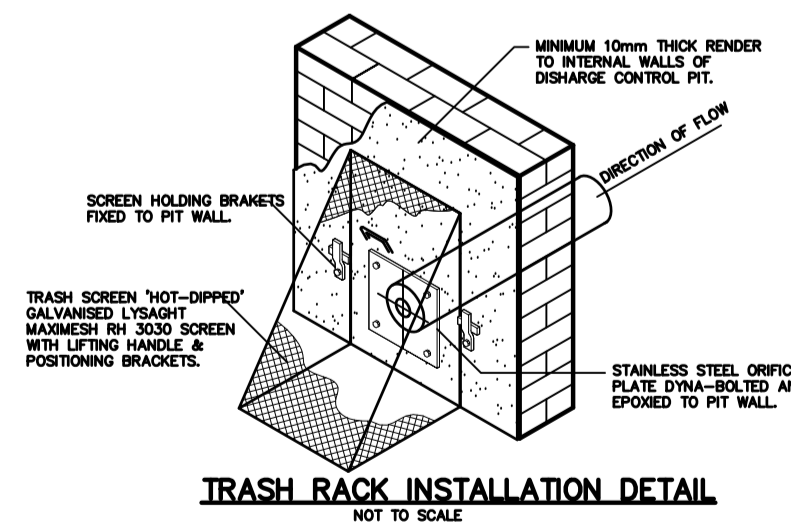
Project	PROPOSED DEVELOPMENT 608-612 HIGH STREET, PENRITH
Client	-
Architect / Project Manager	-

Drawing Title		
PROPOSED DRAINAGE EASEMENT AND OVERFLOW PATH PLAN		
Scales	Designed	Drafted
A1 - 1:100	D.K.	M.W.
Drawing No.	Approved	Revision
C18087 -SW 300	A.C.	D

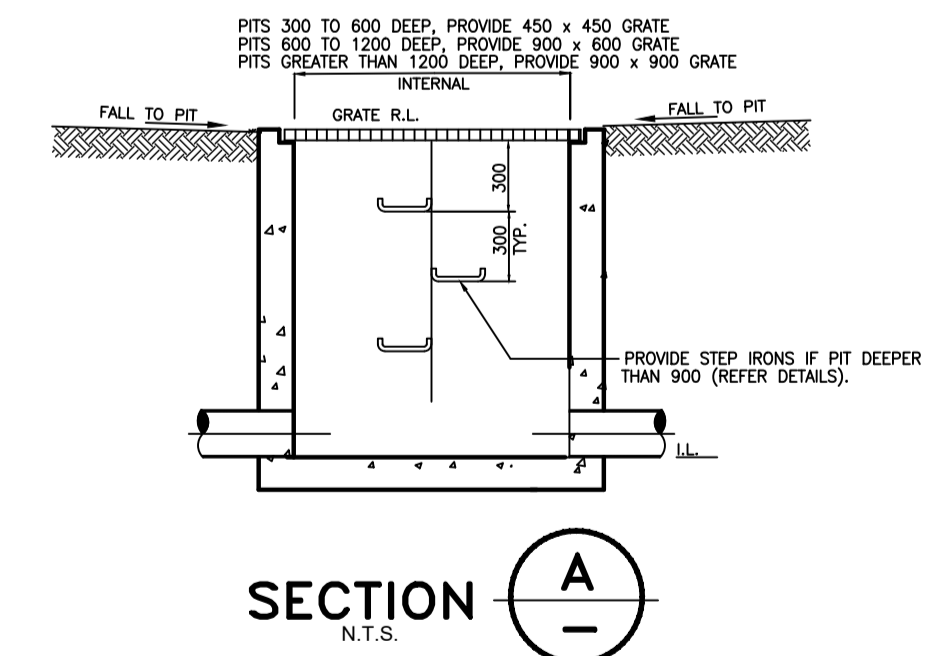


STEP IRONS FOR DRAINAGE PITS
 NOTE:
 1. FIRST RUNG 150mm DOWN FROM TOP, THEN SPACED AT 300 CENTRES.
 2. STEP IRON MATERIAL, 20m DIAMETER MILD STEEL, HEAVY GALVANISED.

STEP IRONS FOR DRAINAGE PITS 1:100



NOTE SERVICES
 APPROXIMATE LOCATIONS OF EXISTING SERVICES SHOWN EXACT LOCATIONS & DEPTHS TO BE ACCURATELY LOCATED BY BUILDER CONTRACTOR BY CONTACTING THE RELEVANT AUTHORITIES BEFORE COMMENCEMENT OF ANY WORKS



TYPICAL INTERNAL PIT DETAILS
 N.T.S.

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Project
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Client
 -
Architect / Project Manager
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Drawing Title			
PROPOSED DRAINAGE EASEMENT PIT DETAILS AND SECTIONS			
Scales A1 - 1:100	Designed D.K.	Drafted M.W.	
Drawing No. C18087 -SW 301	Approved A.C.	Revision D	