

# MIXED USE DEVELOPMENT 614-632 HIGH STREET, PENRITH STORMWATER CONCEPT DESIGN - S.34



LOCALITY PLAN  
NOT TO SCALE  
COPYRIGHT OF SIX MAPS

DRAWINGS LIST			
SHEET No.	DWG No.	TITLE	REV
1	SW100	COVER SHEET	J
2	SW200	STORMWATER CONCEPT DESIGN - BASEMENT PLAN	J
3	SW201	STORMWATER CONCEPT DESIGN - GROUND FLOOR PLAN	J
4	SW202	STORMWATER CONCEPT DESIGN - ROOF PLAN	J
5	SW300	STORMWATER CONCEPT DESIGN - DETAILS SHEET	J
6	SW400	EROSION AND SEDIMENT CONTROL - PLAN AND DETAILS	J
7	SW500	STORMWATER CONCEPT DESIGN - MUSIC CATCHMENT PLAN	J
8	SW501	STORMWATER CONCEPT DESIGN - HGL ANALYSIS & LONG SECTION	J



**PREPARED BY:**  
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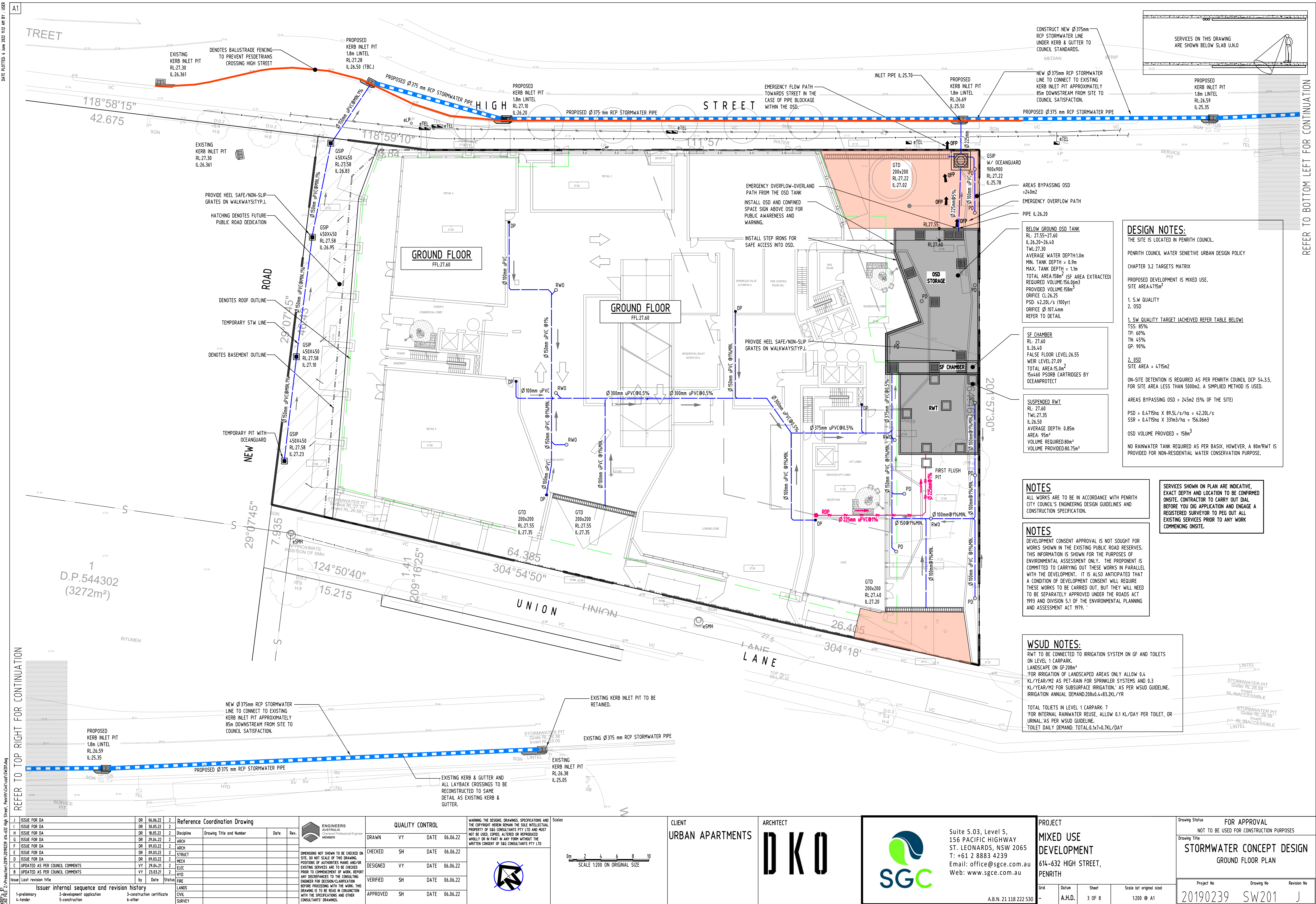
**ARCHITECT:**  
**DKO**

**CLIENT:**  
  
URBAN APARTMENTS









REFER TO TOP RIGHT FOR CONTINUATION

REFER TO BOTTOM LEFT FOR CONTINUATION

J	ISSUE FOR DA	DR	06.06.22	2
I	ISSUE FOR DA	DR	30.05.22	2
H	ISSUE FOR DA	DR	18.05.22	2
G	ISSUE FOR DA	DR	29.04.22	2
F	ISSUE FOR DA	DR	09.03.22	2
E	ISSUE FOR DA	DR	09.03.22	2
D	ISSUE FOR DA	DR	09.03.22	2
C	ISSUE FOR DA	DR	09.03.22	2
B	ISSUE FOR DA	DR	09.03.22	2
A	ISSUE FOR DA	DR	09.03.22	2

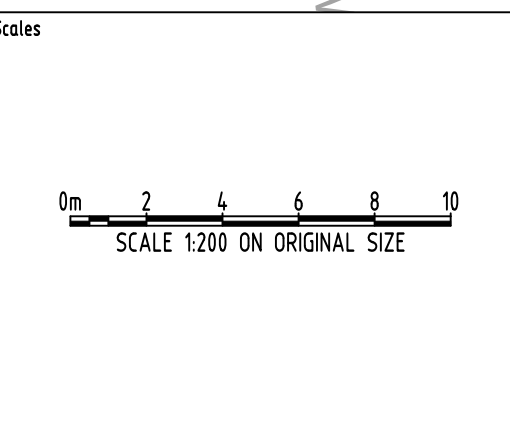
Issue	Last revision title	by	Date	Status
1	ISSUE FOR DA	DR	06.06.22	2
2	ISSUE FOR DA	DR	30.05.22	2
3	ISSUE FOR DA	DR	18.05.22	2
4	ISSUE FOR DA	DR	29.04.22	2
5	ISSUE FOR DA	DR	09.03.22	2
6	ISSUE FOR DA	DR	09.03.22	2
7	ISSUE FOR DA	DR	09.03.22	2
8	ISSUE FOR DA	DR	09.03.22	2
9	ISSUE FOR DA	DR	09.03.22	2
10	ISSUE FOR DA	DR	09.03.22	2

Discipline	Drawing Title and Number	Date	Rev.
ARCH	ARCH	06.06.22	2
STRUCT	STRUCT	06.06.22	2
MECH	MECH	06.06.22	2
ELEC	ELEC	06.06.22	2
HYD	HYD	06.06.22	2
FIRE	FIRE	06.06.22	2
LANDS	LANDS	06.06.22	2
CIVIL	CIVIL	06.06.22	2
SURVEY	SURVEY	06.06.22	2

ENGINEERS AUSTRALIA	Chartered Professional Engineer	MEMBER
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QUALITY CONTROL	DATE	REV.
DRAWN	06.06.22	2
CHECKED	06.06.22	2
DESIGNED	06.06.22	2
VERIFIED	06.06.22	2
APPROVED	06.06.22	2

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CLIENT  
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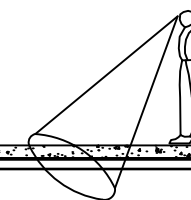
ARCHITECT  
DKO

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A.B.N. 21 118 222 530

PROJECT  
MIXED USE  
DEVELOPMENT  
614-632 HIGH STREET,  
PENRITH

Drawing Status	FOR APPROVAL
Drawing Title	NOT TO BE USED FOR CONSTRUCTION PURPOSES
Drawing Title	STORMWATER CONCEPT DESIGN
Drawing Title	GROUND FLOOR PLAN
Project No	20190239
Drawing No	SW201
Revision No	J





HIGH STREET

A18/0264  
TOWER B  
FOOTPRINT  
STOREYS

**NOTE:**  
DETAILED ROOF DRAINAGE TO BE DESIGNED  
AT C.C. STAGE.

DENOTES FALL TOWARDS  
RAIN WATER OUTLET (TYP.)

RAIN WATER OUTLET COLLECTING  
STORMWATER RUNOFF FROM  
ROOF AREAS. (TYP.)













OVERFLOW (TYP.)

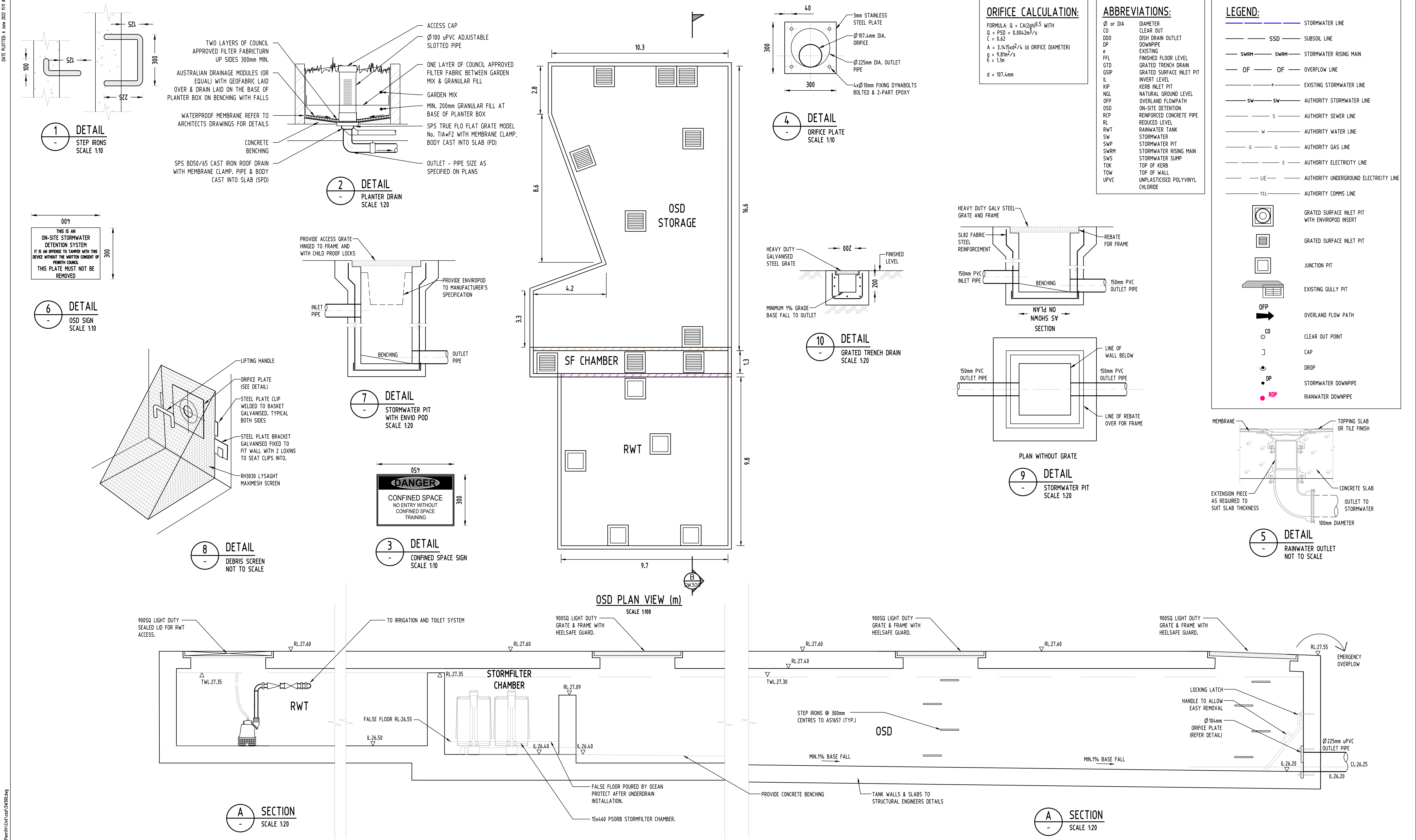
ROOF

1 UNION ROAD  
STOREYS

83-85 UNION ROAD  
8 STOREYS

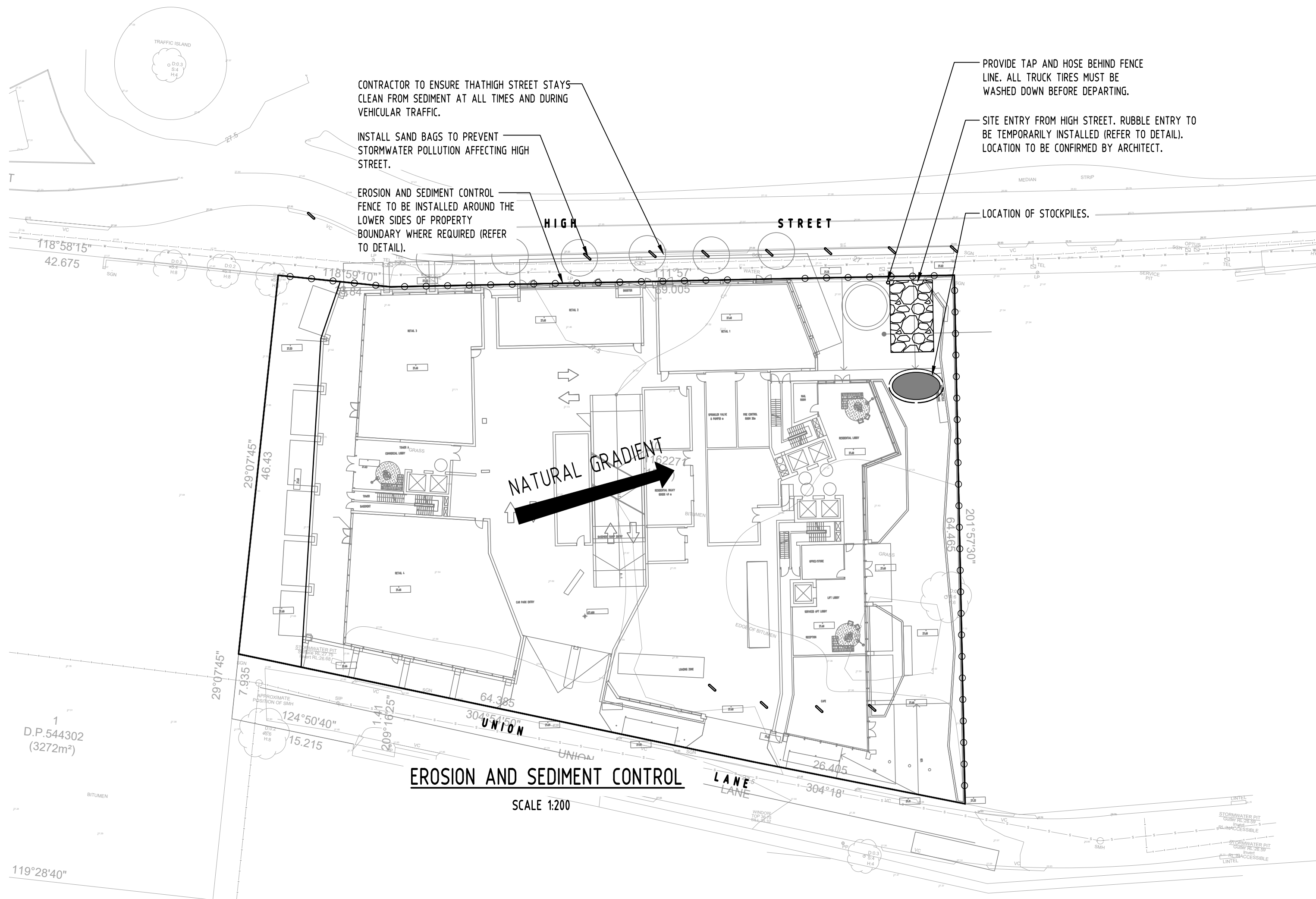
UNION LANE

<table><tr><td>J</td><td>ISSUE FOR DA</td><td>DR</td><td>06.06.22</td><td>2</td></tr><tr><td>I</td><td>ISSUE FOR DA</td><td>DR</td><td>30.05.22</td><td>2</td></tr><tr><td>H</td><td>ISSUE FOR DA</td><td>DR</td><td>18.05.22</td><td>2</td></tr><tr><td>G</td><td>ISSUE FOR DA</td><td>DR</td><td>29.04.22</td><td>2</td></tr><tr><td>F</td><td>ISSUE FOR DA</td><td>DR</td><td>09.03.22</td><td>2</td></tr><tr><td>E</td><td>ISSUE FOR DA</td><td>DR</td><td>09.03.22</td><td>2</td></tr><tr><td>D</td><td>ISSUE FOR DA</td><td>DR</td><td>09.03.22</td><td>2</td></tr><tr><td>C</td><td>UPDATED AS PER COUNCIL COMMENTS</td><td>XX</td><td>29.04.21</td><td>2</td></tr><tr><td>B</td><td>UPDATED AS PER COUNCIL COMMENTS</td><td>YY</td><td>30.03.21</td><td>2</td></tr><tr><td>A</td><td>ISSUE FOR DA</td><td>DR</td><td>06.06.22</td><td>2</td></tr></table>										J	ISSUE FOR DA	DR	06.06.22	2	I	ISSUE FOR DA	DR	30.05.22	2	H	ISSUE FOR DA	DR	18.05.22	2	G	ISSUE FOR DA	DR	29.04.22	2	F	ISSUE FOR DA	DR	09.03.22	2	E	ISSUE FOR DA	DR	09.03.22	2	D	ISSUE FOR DA	DR	09.03.22	2	C	UPDATED AS PER COUNCIL COMMENTS	XX	29.04.21	2	B	UPDATED AS PER COUNCIL COMMENTS	YY	30.03.21	2	A	ISSUE FOR DA	DR	06.06.22	2	<table><tr><td colspan="2">Reference Coordination Drawing</td></tr><tr><td>Discipline</td><td>Drawing Title and Number</td></tr><tr><td>ARCH</td><td></td></tr><tr><td>ARCH</td><td></td></tr><tr><td>STRUCT</td><td></td></tr><tr><td>MECH</td><td></td></tr><tr><td>ELEC</td><td></td></tr><tr><td>HYD</td><td></td></tr><tr><td>CIVIL</td><td></td></tr><tr><td>SURVEY</td><td></td></tr></table>										Reference Coordination Drawing		Discipline	Drawing Title and Number	ARCH		ARCH		STRUCT		MECH		ELEC		HYD		CIVIL		SURVEY		<table><tr><td colspan="2">ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER</td></tr><tr><td colspan="2">DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. 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## EROSION & SEDIMENTATION CONTROL NOTES

- CONTRACTOR SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE OF THE WORKS. THE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (E.G. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
- EXISTING DRAINS LOCATED WITHIN THE SITE SHALL ALSO BE ISOLATED BY SEDIMENT FENCING MATERIAL.
- NO PARKING OR STOCKPILING OF MATERIALS IS PERMITTED ON THE LOWER SIDE OF THE SEDIMENT FENCE.
- GRASS VERGES SHALL BE MAINTAINED AS MUCH AS PRACTICAL TO PROVIDE A BUFFER ZONE TO THE CONSTRUCTION SITE.
- CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING & LEAVING THE SITE DO SO IN A FORWARD DIRECTION.

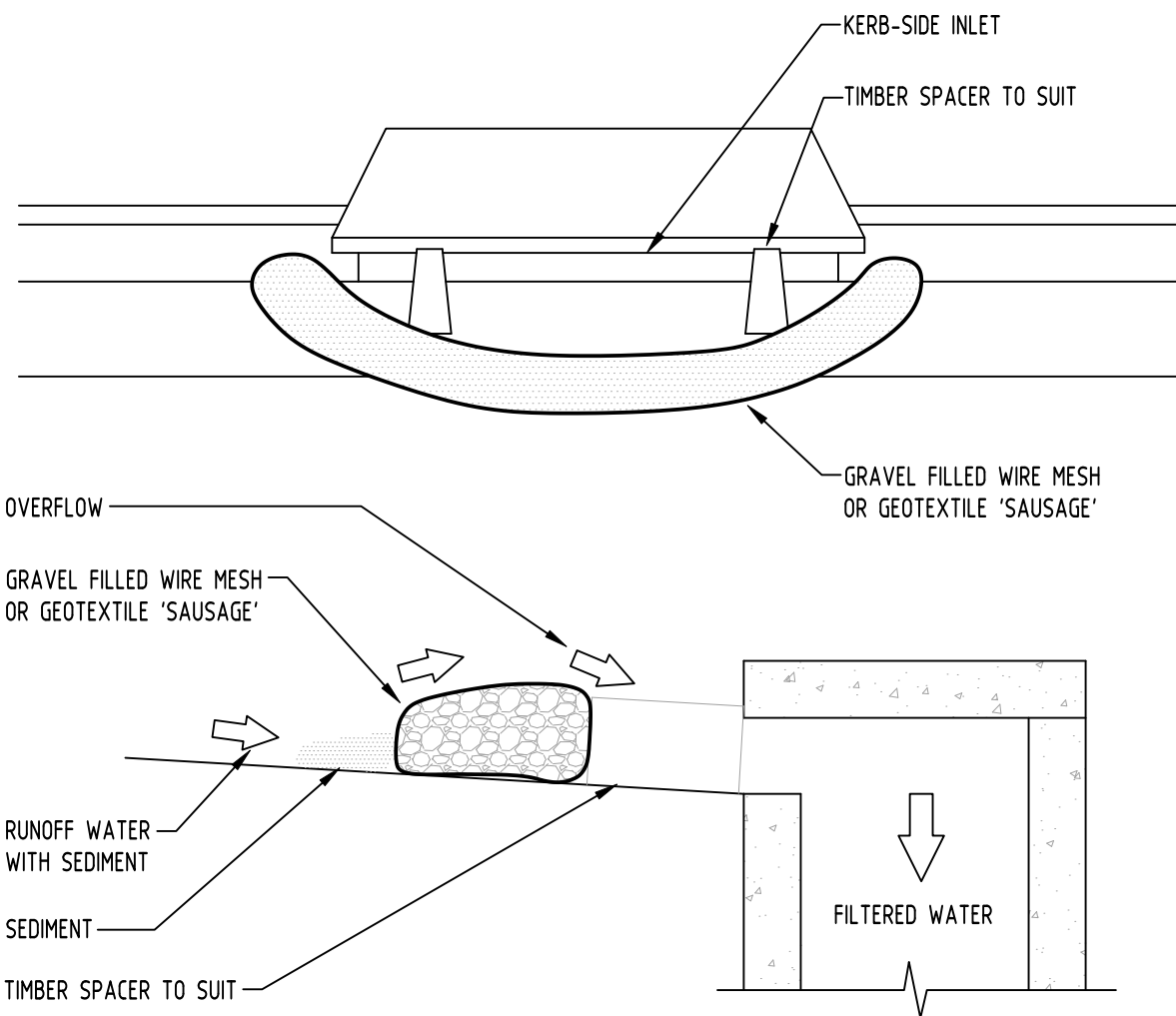
## GENERAL NOTES

- THIS PLAN IS A CONCEPT PLAN ONLY FOR STORMWATER DISPOSAL & EROSION CONTROL. IT IS NOT SUITABLE FOR CONSTRUCTION. THIS PLAN SHOULD BE ADAPTED BY THE BUILDER DURING DEMOLITION, EXCAVATION & CONSTRUCTION PHASES TO ENSURE ADEQUATE PERFORMANCE.
- ALL DRAINAGE LAYOUT & DETAILS ARE DIAGRAMMATIC & INDICATIVE ONLY. ACTUAL LOCATION, SIZES, LEVELS & GRADES MAY ALTER WHEN DETAIL DESIGN WORKS ARE DOCUMENTED.

## CLAY SOILS

A SYSTEM SHALL BE INSTALLED TO EITHER:

- TRANSPORT STORMWATER RUNOFF WITH SUSPENDED SOLIDS FROM SITE VIA PUMP TRUCKS.
- TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POEO 1997) AND SHALL BE APPROVED BY LOCAL COUNCIL.



## GRAVEL INLET FILTER (SAUSAGE) NOT TO SCALE

### CONSTRUCTION NOTES:

FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT

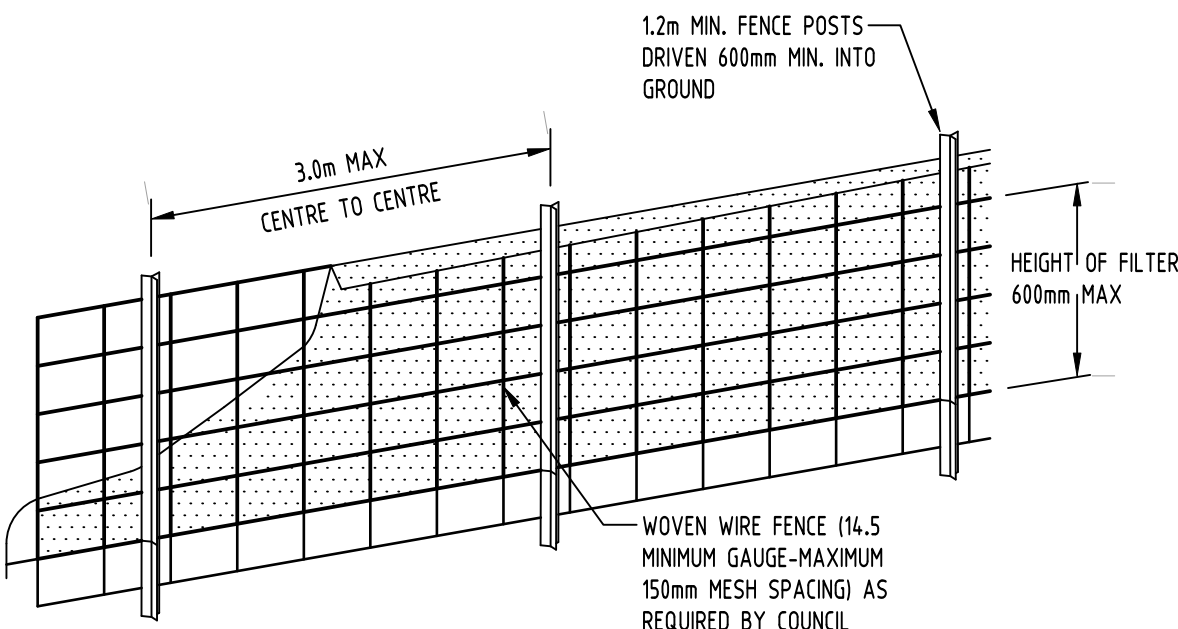
FILL THE SLEEVE WITH 25mm TO 50mm GRAVEL

FORM AN ELLIPTICAL CROSS-SECTION OF THE KERB INLET LEAVING A 100mm GAP AT THE TOP TO ACT AS AN EMERGENCY SPILLWAY

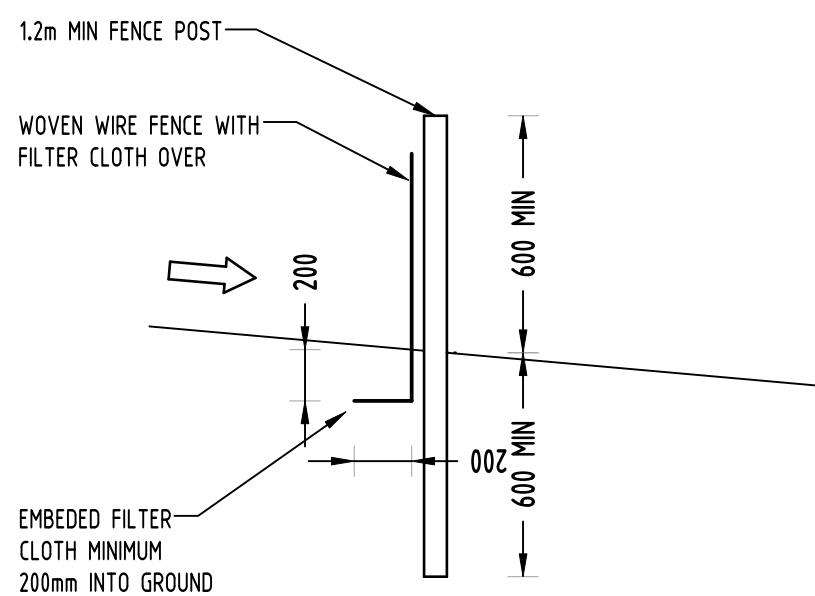
MAINTAIN THE OPENING WITH SPACER BLOCKS

FORM A SEAL WITH THE KERBING AND PREVENT SEDIMENT BYPASSING THE FILTER

FIT TO ALL KERB INLETS AT SAG POINTS



### DIAGRAMMATIC VIEW



### TYPICAL SECTION

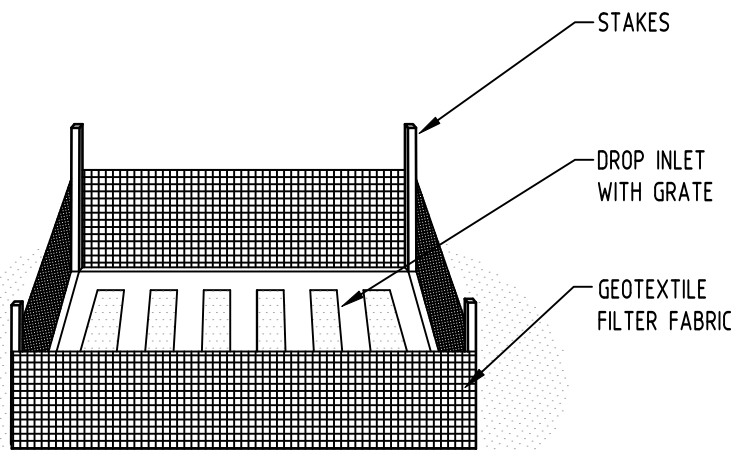
## SEDIMENT FENCE NOT TO SCALE

## GEOTEXTILE INLET FILTER

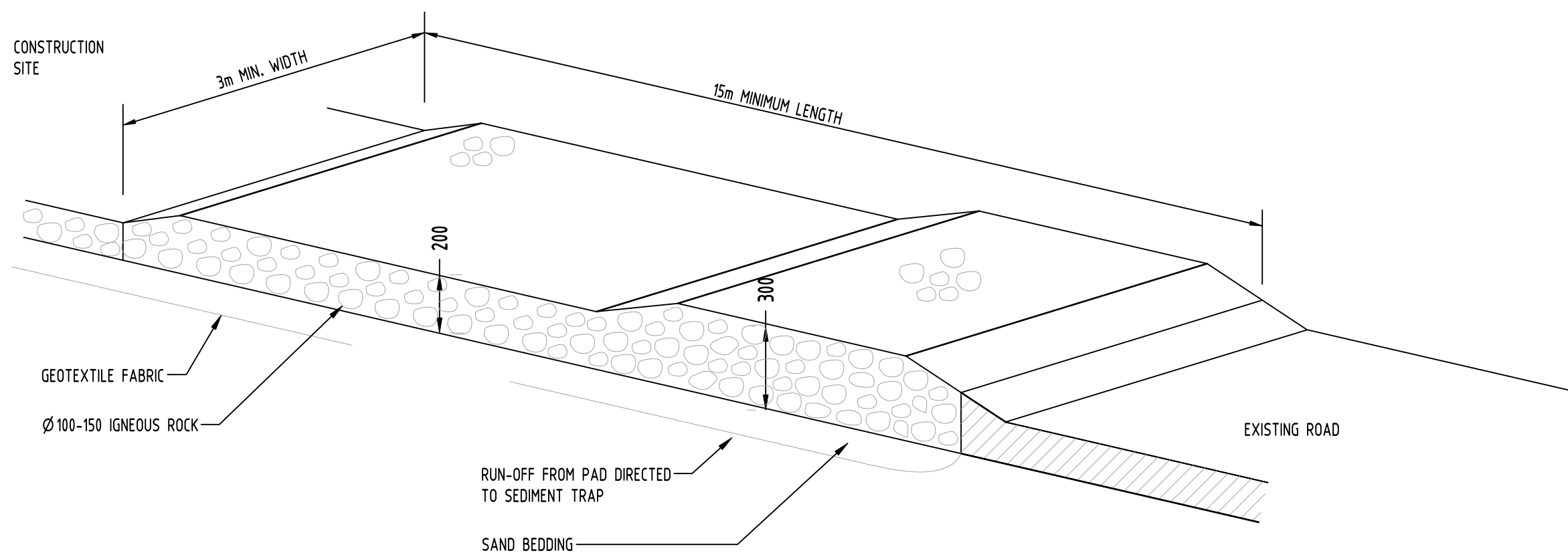
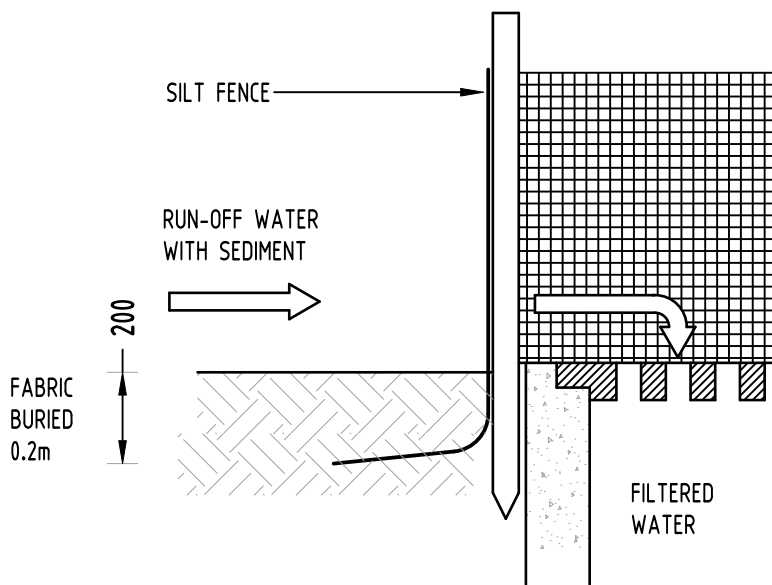
GEOTEXTILE INLET FILTER IS PLACED IN EVERY PIT WITHIN THE SITE TO ENSURE THE RUNOFF WATER DURING CONSTRUCTION NOT ENTER THE PITS.

## LEGEND

- SEDIMENT FENCE
- STABILISED SITE ACCESS
- SANDBAGS



## GEOTEXTILE INLET FILTER NOT TO SCALE



## TEMPORARY CONSTRUCTION EXIT RUBBLE ALTERNATIVE NOT TO SCALE

Issue	Last revision title	by	Date	Status
J	ISSUE FOR DA	DR	06.06.22	2
I	ISSUE FOR DA	DR	30.05.22	2
H	ISSUE FOR DA	DR	18.05.22	2
G	ISSUE FOR DA	DR	29.04.22	2
F	ISSUE FOR DA	DR	09.03.22	2
E	ISSUE FOR DA	DR	09.03.22	2
D	ISSUE FOR DA	DR	09.03.22	2
C	ISSUE FOR DA	DR	09.03.22	2
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Discipline	Drawing Title and Number	Date	Rev.
ARCH			
MECH			
ELEC			
HYD			
FIRE			
LANDS			
CIVIL			
SURVEY			

QUALITY CONTROL	DATE	REV.
DRAWN	VY	06.06.22
CHECKED	SH	06.06.22
DESIGNED	VY	06.06.22
VERIFIED	SH	06.06.22
APPROVED	SH	06.06.22

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SCALE 1:400 ON ORIGINAL SIZE

CLIENT	URBAN APARTMENTS
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ARCHITECT	DKO
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Web: [www.sgce.com.au](http://www.sgce.com.au)







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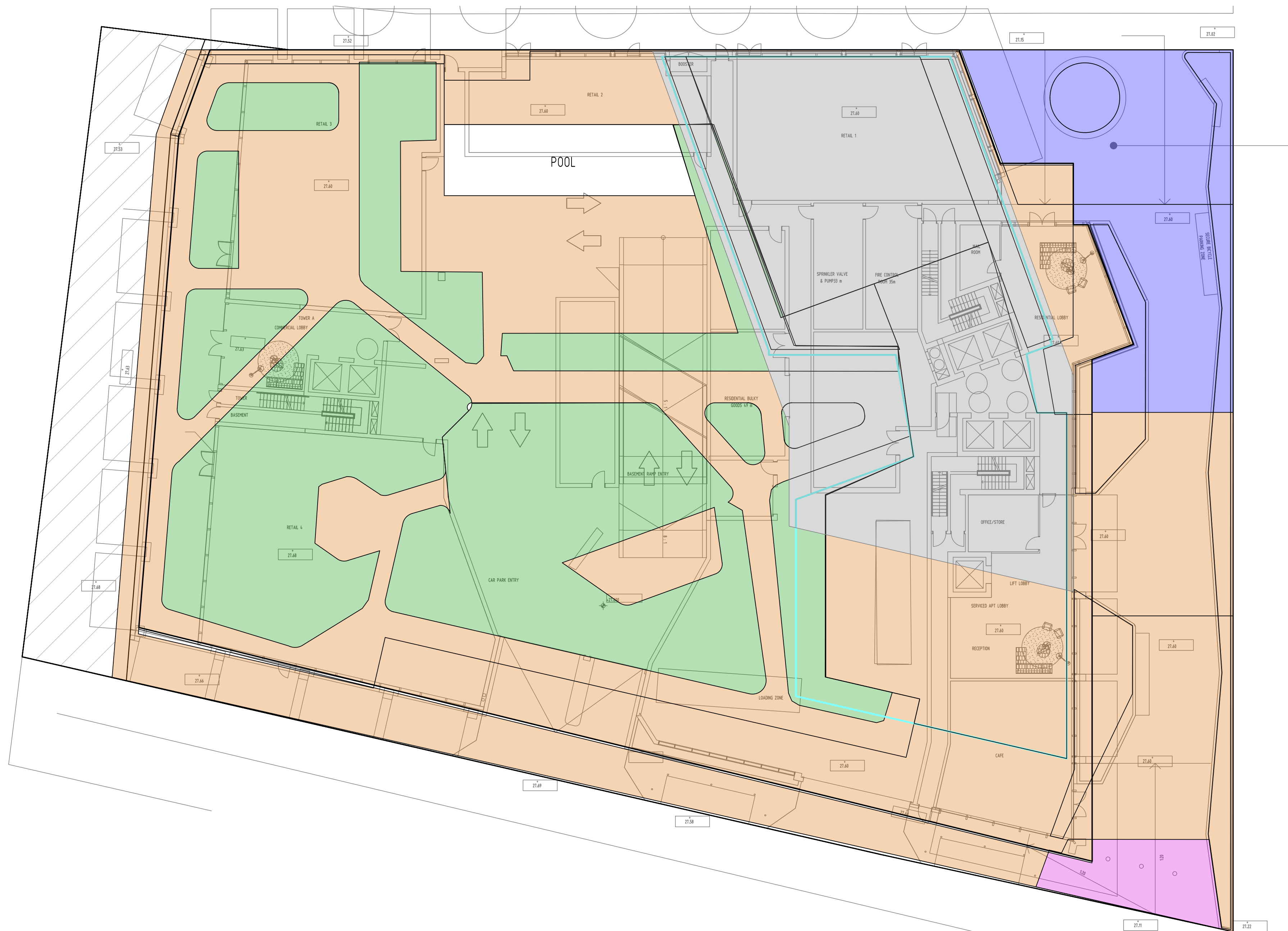
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MIXED USE DEVELOPMENT			
614-632 HIGH STREET, PENRITH			
Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	6 OF 8	1:400 @ A1

Drawing Status	FOR APPROVAL	
NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Drawing Title		
EROSION AND SEDIMENT CONTROL		
PLAN AND DETAILS		
Project No	Drawing No	Revision No
20190239	SW400	J



## LEGEND

	PAVED AREA TO SF CHAMBER (95% IMPERVIOUS) 2089 m <sup>2</sup>
	LANDSCAPE AREA TO SF CHAMBER (80% PERVIOUS) 1040 m <sup>2</sup>
	PAVED AREA TO OG (90% IMPERVIOUS) 332 m <sup>2</sup>
	ROOF TO RWT AND SF (100% IMPERVIOUS) 807 m <sup>2</sup>
	BYPASSING (100% PERVIOUS) 58 m <sup>2</sup>
	LAND DEDICATION TO OG (100% IMPERVIOUS) 275 m <sup>2</sup>



Re-use for Rainwater Tank

☒ Use stored water for irrigation or other purpose

Max Drawdown height (m)  Range: (0 - 2.96)

Annual Demand  
☒ Enabled

Annual Demand Properties  
Demand (kL/yr)   
Distribution

Daily Demand  
☒ Enabled

Daily Demand Properties  
Demand (kL/day)   
Distribution

Custom Demand  
☐ Enabled

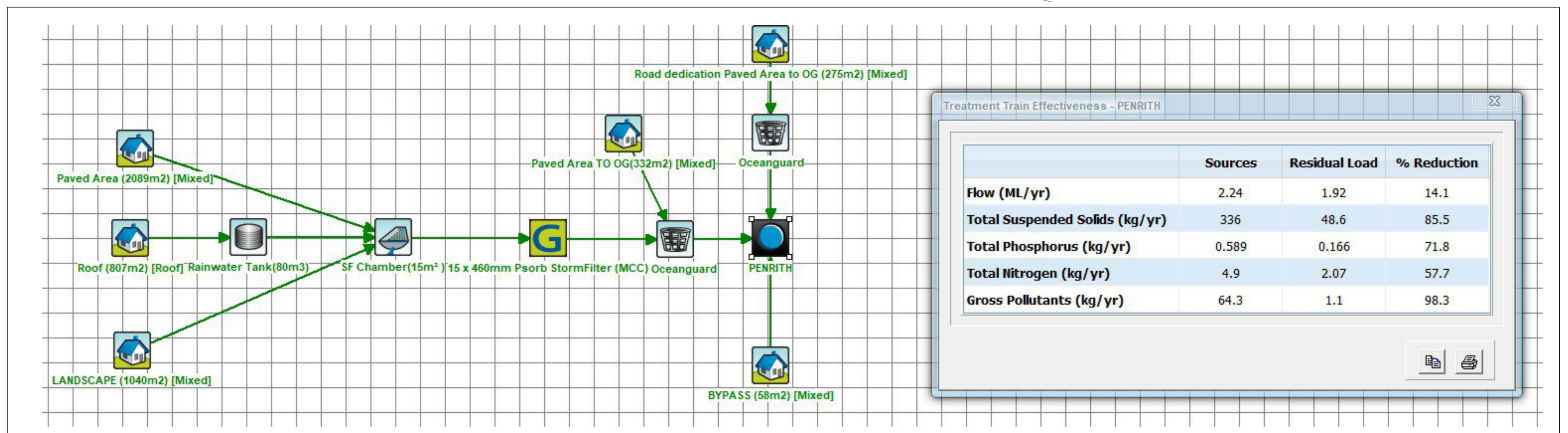
RWT DEMAND

Mode Water Balance - Rainwater Tank(80m3)

	Flow (ML/yr)	TSS (kg/yr)	TP (kg/yr)	TN (kg/yr)	GP (kg/yr)
Flow In	0.48	12.29	0.07	1.05	13.42
ET Loss	0.00	0.00	0.00	0.00	0.00
Infiltration Loss	0.00	0.00	0.00	0.00	0.00
Low Flow Bypass Out	0.00	0.00	0.00	0.00	0.00
High Flow Bypass Out	0.00	0.00	0.00	0.00	0.00
Pipe Out	0.16	2.43	0.02	0.30	0.00
Weir Out	0.00	0.00	0.00	0.00	0.00
Transfer Function Out	0.00	0.00	0.00	0.00	0.00
Reuse Supplied	0.31	3.82	0.04	0.50	0.00
Reuse Requested	0.34	0.00	0.00	0.00	0.00
% Reuse Demand Met	91.66	0.00	0.00	0.00	0.00
% Load Reduction	66.01	80.24	69.63	71.30	100.00

Decimal Places

RWT WATER BALANCE



MUSIC MODEL DIAGRAM & RESULT





- PLAN**

1000

PRECAST REINFORCED CONCRETE UNTEL

MASTIC JOINT

KERB LINE

DIRECTION OF FLOW

UP LINE

SAWCUT OR TOOLED JOINT

SECTION A - A

UNTEL LENGTH VARIES UNTEL SIZE REFERS TO INTERNAL OPENING

TRANSITION KERB FROM 50 TO 750 OVER 1000

TRANSITION KERB FROM 750 TO 750 OVER 1000

SLOPE 1:20

150 RAD.

200

150

900

150

OUTLET PIPE

INLET PIPE

BENCHING SLOPE 2H:1V MAX. REFER NOTE 10

SECTION B - B STANDARD PIT

100

FINISHED SURFACE

INSTALL GALVANISED GRATE AND FRAME REFER NOTE 6 AND DIAGRAM 1

DEPTH AS REQUIRED

SUB-SOIL DRAIN

150

600 MIN

150

REFER NOTE 15

SECTION B - B EXTENDED PIT CHAMBER

FOOTWAY

NOMINAL KERB LINE

INSTALL GALVANISED GRATE AND FRAME REFER NOTE 6 AND DIAGRAM 1

ROAD PAVEMENT

3Y16 AT 35 CENTRES

INSTALL SL81 MESH WITH 40 BOTTOM COVER IN ROOF OF EXTENDED PIT - REFER NOTE 13.

INSTALL SL82 MESH IN ALL WALLS AND FLOOR WHERE PIT DEPTH > 1500. REFER NOTE 3.

FOR EXTENDED PIT ONLY: 150 x 100 x 12 GALVANISED ANGLE TO BE PLACED LONG LEG UP.

BENCHING. REFER NOTE 12.

SUB-SOIL DRAIN

150

WIDTH TO SUIT PIPE (PIPE DIA. +150)

150

SECTION B - B

EDGE OF FRAME

110

200

UNTEL TYPE AS SPECIFIED

**DIAGRAM 1**

**NOTES:**

  1. CONCRETE TO BE 25MPa AT 28 DAYS.
  2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
  3. WHERE DEPTH OF PIT EXCEEDS 1500, WALLS AND BOTTOM TO BE REINFORCED IN ALL DIRECTIONS WITH SL82 MESH AT 40 COVER TO INSIDE FACE WITH N12 CORNER BARS 300 LEGS AT 400 CENTRES. PITS DEEPER THAN 2000 SHALL BE DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER.
  4. TRIMMER BARS TO BE PROVIDED AROUND PIPES GREATER THAN 750 DIAMETER.
  5. SAG PITS TO HAVE UNTEL LOCATED CENTRALLY OVER PIT.
  6. BACKFILL ADJACENT TO PITS TO BE APPROVED GRANULAR MATERIAL.
  7. A 3000 LENGTH OF APPROVED "FILTO" FABRIC" WRAPPED 100 SUB-SOIL DRAIN OR EQUIVALENT IS TO BE PROVIDED AND CONNECTED TO THE UPSTREAM PIT WALL.
  8. PIT GRATE AND FRAME TO BE "WELIOLK" GG51-D GULLY GRATE WITH SKIRTED BASE OR EQUIVALENT FOR ALL ROADS, FITTED WITH A LOCKABLE "J" BOLT OR EQUIVALENT. FOR SAG PITS, USE GG 5B 94 50 OR EQUIVALENT.
  9. APPROVED STEP IRONS SHALL BE PROVIDED WHERE THE PIT EXCEEDS 1200 IN DEPTH. THEY SHALL BE LOCATED AS DIRECTED AND STAGGERED TO GIVE 300 SPACING VERTICALLY AND 300 SPACING HORIZONTALLY.
  10. THE CENTRE LINES OF INTERSECTING PIPES ARE TO MEET AT THE DOWNSTREAM FACE OF THE PIT WHERE POSSIBLE.
  11. WHERE ENTERING PIPE EXCEEDS 450 IN DIAMETER, PIT CHAMBER TO BE EXTENDED AS PER SECTION B-B EXTENDED PIT CHAMBER.
  12. FLOOR OF PIT TO BE BENCH TO MID POINT OF OUTLET PIPE WHERE OUTLET PIPE GREATER THAN 800 DIAMETER.
  13. WHERE EXTENDED CHAMBER WIDTH EXCEEDS 1200, ROOF REINFORCEMENT TO BE DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER.
  14. CONTRACTOR TO ENSURE CLEARANCE BETWEEN UNTEL AND OPENED GRATE. REFER DIAGRAM 1.
  15. WHERE DEPTH OF PIT IS GREATER THAN 1200 INTERNAL WIDTH OF PIT TO BE INCREASED TO 900x900 FOR FULL DEPTH BELOW PAVEMENT.
  16. LIFTING LUGS TO BE FILLED AFTER INSTALLATION.

### COUNCIL STANDARD KERB INLET PIT DETAIL

[illegible]