

THE GRAND

FOR DEVELOPMENT APPLICATION

402 MACQUARIE STREET, LIVERPOOL, NSW 2170



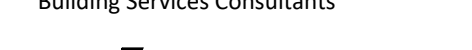
LOCALITY PLAN
SOURCE: GOOGLE MAPS - 01.05.2024
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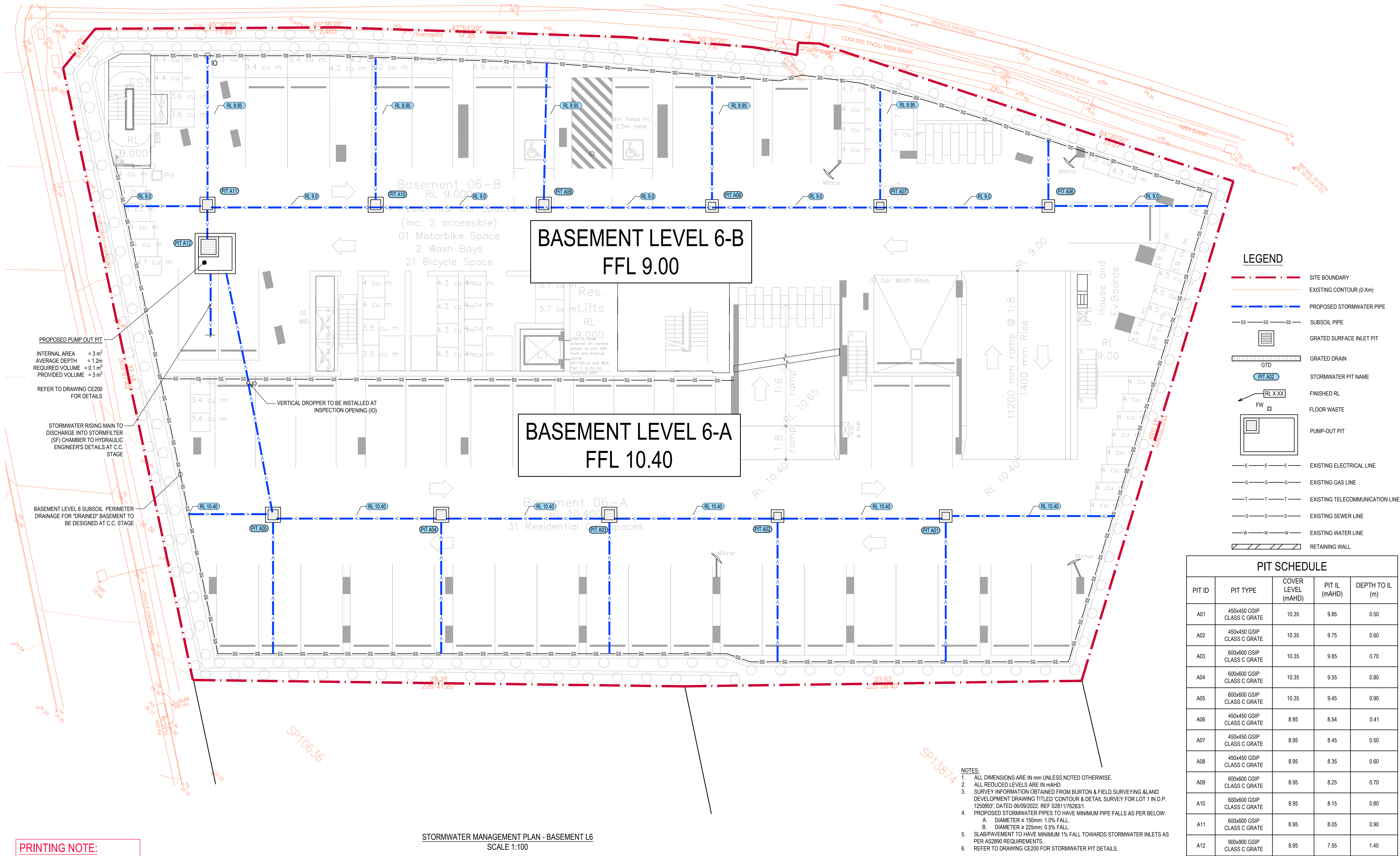
DRAWING SCHEDULE	
CE000	COVER SHEET
CE100	STORMWATER MANAGEMENT PLAN - BASEMENT L6
CE110	STORMWATER MANAGEMENT PLAN - BASEMENT L2
CE120	STORMWATER MANAGEMENT PLAN - BASEMENT L1
CE130	STORMWATER MANAGEMENT PLAN - GROUND FLOOR
CE200	STORMWATER DETAILS
CE210	ON-SITE DETENTION (OSD) DETAILS
CE300	WATER QUALITY (MUSIC) PLAN AND DETAILS
CE400	SEDIMENT AND EROSION CONTROL PLAN
CE410	SEDIMENT AND EROSION CONTROL DETAILS

PRINTING NOTE:
THIS DRAWING TO BE PRINTED IN COLOUR.



DEVELOPMENT APPLICATION

Revision	Description	Initial	Date	Client	Building Services Consultants			Project	Drawing Title	Drafted	Designed	Approved	Date	Scale	Sheet Size
				AUSTRALASIAN PROPERTY GROUP LEVEL 1204A, 275 ALFRED STREET NORTH, NORTH SYDNEY NSW 2060		Melbourne www.adpconsulting.com.au	Sydney adpconsulting@adpconsulting.com.au	Brisbane adpconsulting@adpconsulting.com.au	THE GRAND 402 MACQUARIE STREET, LIVERPOOL	<u>CIVIL ENGINEERING SERVICES</u> COVER SHEET	LE	LE	SS	JUN 2024	NTS
A	ISSUE FOR DEVELOPMENT APPLICATION	LE	07/06/2024	Architect OLSSON LEVEL 4, 68-72 WENTWORTH AVENUE, SURRY HILLS NSW 2010	 Member Firm						Job Number Drawing Number Revision North Point				
										SYD2903	CE000	A			



PRINTING NOTE:
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STORMWATER MANAGEMENT PLAN - BASEMENT L6
SCALE 1:100

- NOTES:
- ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
 - ALL REDUCED LEVELS ARE IN mAHD.
 - SURVEY INFORMATION OBTAINED FROM BURTON & FIELD SURVEYING & LAND DEVELOPMENT DRAWING TITLED 'CONTOUR & DETAIL SURVEY FOR LOT 1 IN D.P. 1250893', DATED 06/09/2022. REF S2811/76283/1.
 - PROPOSED STORMWATER PIPES TO HAVE MINIMUM PIPE FALLS AS PER BELOW:
 - A. DIAMETER ≤ 150mm: 1.0% FALL.
 - B. DIAMETER ≥ 225mm: 0.5% FALL.
 - SLAB/PAVEMENT TO HAVE MINIMUM 1% FALL TOWARDS STORMWATER INLETS AS PER AS2890 REQUIREMENTS.
 - REFER TO DRAWING CE200 FOR STORMWATER PIT DETAILS.

PIT SCHEDULE				
PIT ID	PIT TYPE	COVER LEVEL (mAHD)	PIT IL (mAHD)	DEPTH TO IL (m)
A01	450x450 GSIP CLASS C GRATE	10.35	9.85	0.50
A02	450x450 GSIP CLASS C GRATE	10.35	9.75	0.60
A03	600x600 GSIP CLASS C GRATE	10.35	9.65	0.70
A04	600x600 GSIP CLASS C GRATE	10.35	9.55	0.80
A05	600x600 GSIP CLASS C GRATE	10.35	9.45	0.90
A06	450x450 GSIP CLASS C GRATE	8.95	8.54	0.41
A07	450x450 GSIP CLASS C GRATE	8.95	8.45	0.50
A08	450x450 GSIP CLASS C GRATE	8.95	8.35	0.60
A09	600x600 GSIP CLASS C GRATE	8.95	8.25	0.70
A10	600x600 GSIP CLASS C GRATE	8.95	8.15	0.80
A11	600x600 GSIP CLASS C GRATE	8.95	8.05	0.90
A12	900x900 GSIP CLASS C GRATE	8.95	7.55	1.40

DEVELOPMENT APPLICATION

A1 1:100

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				AUSTRALASIAN PROPERTY GROUP LEVEL 1204A, 275 ALFRED STREET NORTH, NORTH SYDNEY NSW 2060
				Architect OLSSON LEVEL 4, 68-72 WENTWORTH AVENUE, SURRY HILLS NSW 2010
B	ISSUE FOR DEVELOPMENT APPLICATION	LE	01/07/2024	
A	ISSUE FOR DEVELOPMENT APPLICATION	LE	07/06/2024	

Building Services Consultants



Project
THE GRAND
402 MACQUARIE STREET, LIVERPOOL

Drawing Title
CIVIL ENGINEERING SERVICES
STORMWATER MANAGEMENT PLAN - BASEMENT L6

Drafted	Designed	Approved	Date	Scale	Sheet Size
LE	LE	SS	JUL 2024	1:100 @	A1
Job Number	Drawing Number	Revision	North Point		
SYD2903	CE100	B			



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DEVELOPMENT APPLICATION

A1 1:100

Revision	Description
B	ISSUE FOR DEVELOPMENT APPLICATION
A	ISSUE FOR DEVELOPMENT APPLICATION

Initial	Date	Client
		AUSTRALASIAN PROPERTY GROUP LEVEL 1204A, 275 ALFRED STREET NORTH, NORTH SYDNEY NSW 2060
Initial	Date	Architect
LE	24/06/2024	OLSSON LEVEL 4, 68-72 WENTWORTH AVENUE, SURRY HILLS NSW 2010
LE	07/06/2024	

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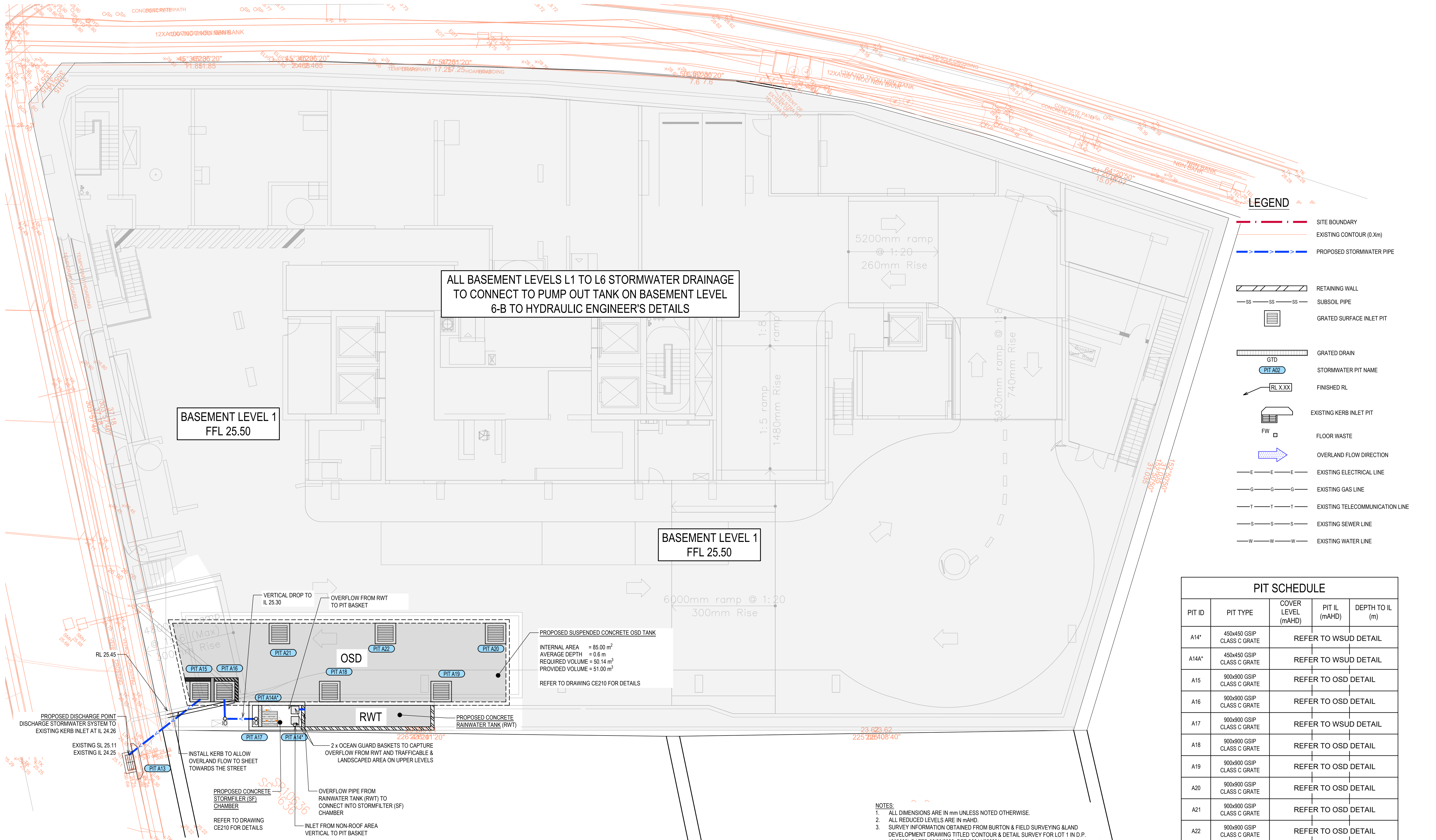
Project

THE GRAND
402 MACQUARIE STREET, LIVERPOOL

Drawing Title

CIVIL ENGINEERING SERVICES
STORMWATER MANAGEMENT PLAN - BASEMENT
L2

Drafted	Designed	Approved	Date	Scale	Sheet Size
LE	LE	SS	JUN 2024	1:100 @	A1
Job Number	Drawing Number	Revision	North Point		
SYD2903	CE110	B			



PIT SCHEDULE				
PIT ID	PIT TYPE	COVER LEVEL (mAHD)	PIT IL (mAHD)	DEPTH TO IL (m)
A14*	450x450 GSIP CLASS C GRATE	REFER TO WSUD DETAIL		
A14A*	450x450 GSIP CLASS C GRATE	REFER TO WSUD DETAIL		
A15	900x900 GSIP CLASS C GRATE	REFER TO OSD DETAIL		
A16	900x900 GSIP CLASS C GRATE	REFER TO OSD DETAIL		
A17	900x900 GSIP CLASS C GRATE	REFER TO WSUD DETAIL		
A18	900x900 GSIP CLASS C GRATE	REFER TO OSD DETAIL		
A19	900x900 GSIP CLASS C GRATE	REFER TO OSD DETAIL		
A20	900x900 GSIP CLASS C GRATE	REFER TO OSD DETAIL		
A21	900x900 GSIP CLASS C GRATE	REFER TO OSD DETAIL		
A22	900x900 GSIP CLASS C GRATE	REFER TO OSD DETAIL		

NOTE: * INSERT OCEAN GUARD BASKET BY OCEAN PROTECT TO PIT

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STORMWATER MANAGEMENT PLAN - BASEMENT L1
SCALE 1:100

A1 0 1 2 3 4 5 6 7 8 9 10 1:100

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				AUSTRALASIAN PROPERTY GROUP LEVEL 1204A, 275 ALFRED STREET NORTH, NORTH SYDNEY NSW 2060
				Architect OLSSON LEVEL 4, 68-72 WENTWORTH AVENUE, SURRY HILLS NSW 2010
C	ISSUE FOR DEVELOPMENT APPLICATION	LE	01/07/2024	
B	ISSUE FOR DEVELOPMENT APPLICATION	LE	24/06/2024	
A	ISSUE FOR DEVELOPMENT APPLICATION	LE	07/06/2024	

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Melbourne Sydney Brisbane
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Project

THE GRAND
402 MACQUARIE STREET, LIVERPOOL NSW 2170

Drawing Title

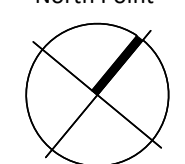
CIVIL ENGINEERING SERVICES
STORMWATER MANAGEMENT PLAN - BASEMENT L1

Drafted Designed Approved Date Scale Sheet Size

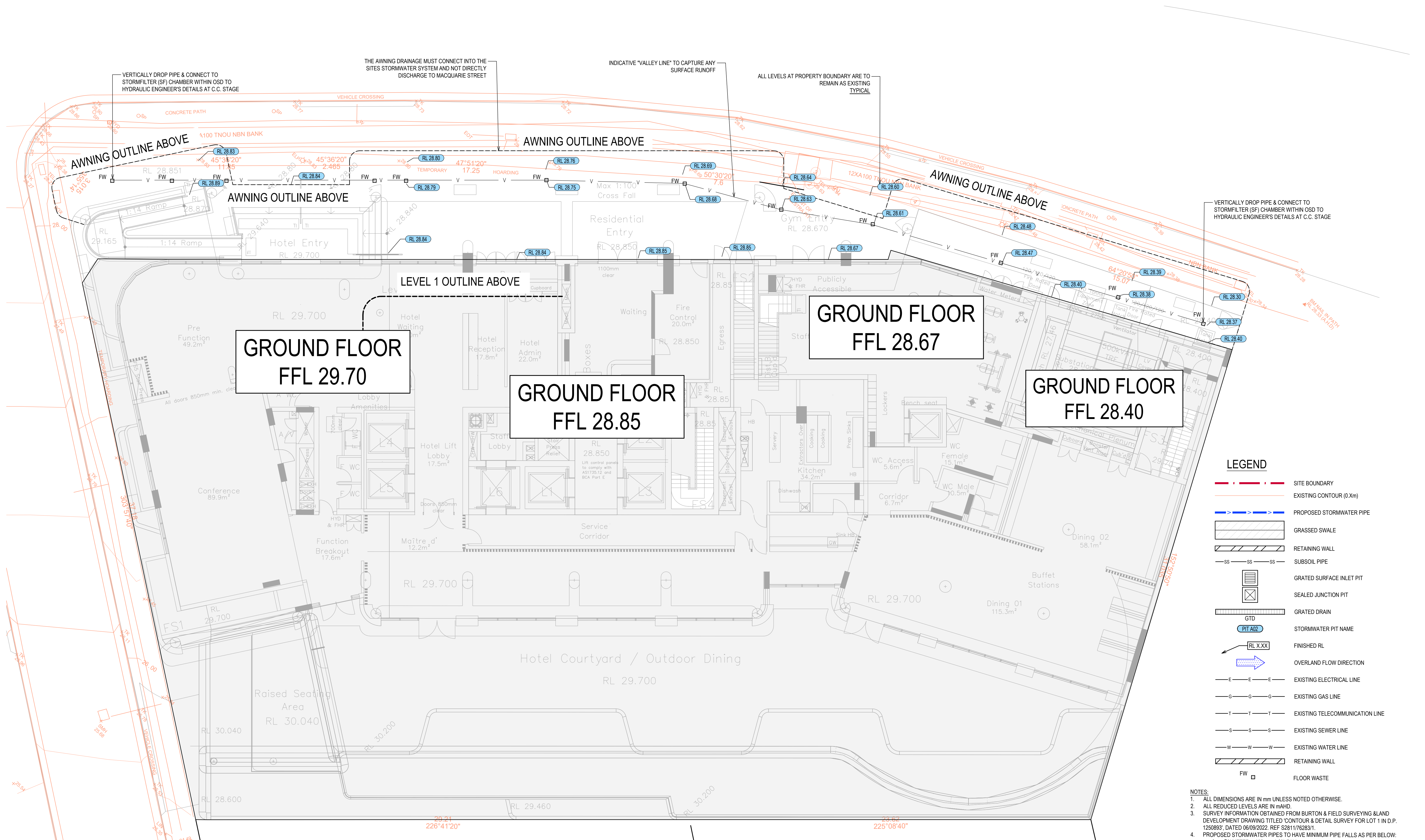
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Job Number Drawing Number Revision North Point

SYD2903 CE120 C



DEVELOPMENT APPLICATION



GROUND FLOOR
FFL 29.70

GROUND FLOOR
FFL 28.85

GROUND FLOOR
FFL 28.67

GROUND FLOOR
FFL 28.40

- LEGEND**
- SITE BOUNDARY
 - EXISTING CONTOUR (0.Xm)
 - PROPOSED STORMWATER PIPE
 - GRASSSED SWALE
 - RETAINING WALL
 - SUBSOIL PIPE
 - GRATED SURFACE INLET PIT
 - SEALED JUNCTION PIT
 - GRATED DRAIN
 - STORMWATER PIT NAME
 - FINISHED RL
 - OVERLAND FLOW DIRECTION
 - EXISTING ELECTRICAL LINE
 - EXISTING GAS LINE
 - EXISTING TELECOMMUNICATION LINE
 - EXISTING SEWER LINE
 - EXISTING WATER LINE
 - RETAINING WALL
 - FW FLOOR WASTE

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STORMWATER MANAGEMENT PLAN - GROUND FLOOR
SCALE 1:100

DEVELOPMENT APPLICATION

A1 1:100

Revision	Description
B	ISSUE FOR DEVELOPMENT APPLICATION
A	ISSUE FOR DEVELOPMENT APPLICATION

Initial	Date	Client
		AUSTRALASIAN PROPERTY GROUP LEVEL 1204A, 275 ALFRED STREET NORTH, NORTH SYDNEY NSW 2060
Initial	Date	Architect
LE	01/07/2024	OLSSON
LE	07/06/2024	LEVEL 4, 68-72 WENTWORTH AVENUE, SURRY HILLS NSW 2010

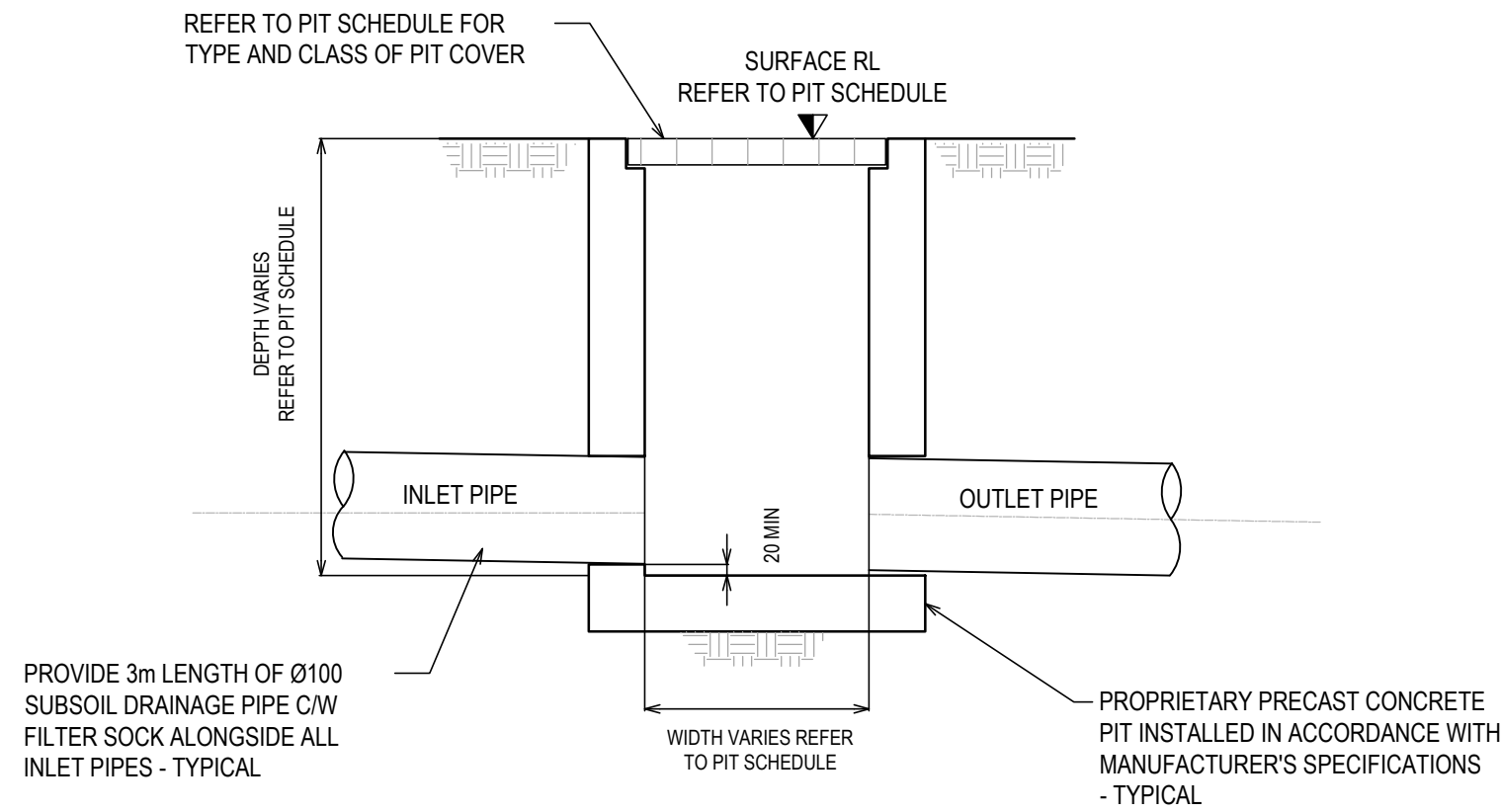
Building Services Consultants



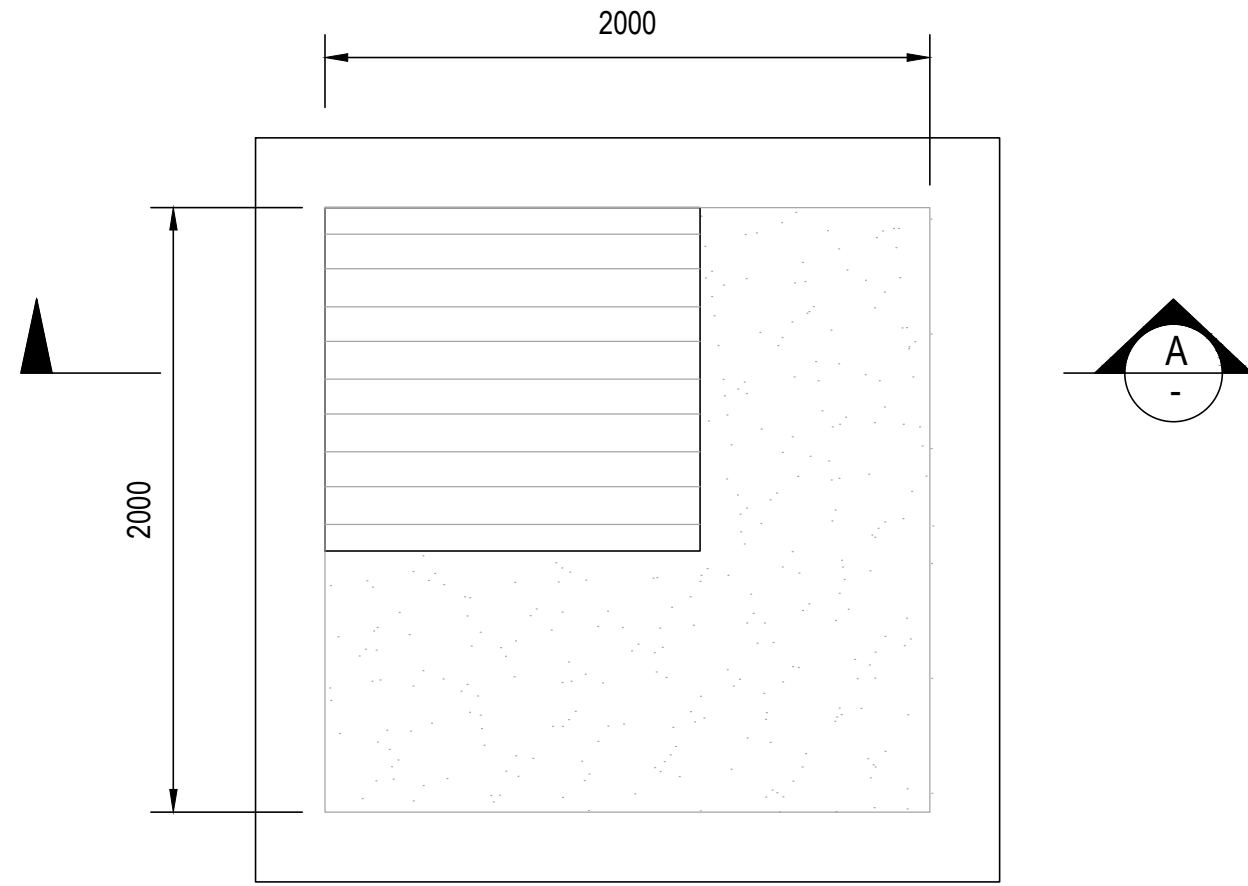
Project
THE GRAND
402 MACQUARIE STREET, LIVERPOOL

Drawing Title
CIVIL ENGINEERING SERVICES
STORMWATER MANAGEMENT PLAN - GROUND FLOOR

Drafted	Designed	Approved	Date	Scale	Sheet Size
LE	LE	SS	JUL 2024	1:100 @	A1
Job Number	Drawing Number	Revision	North Point		
SYD2903	CE130	B			



STORMWATER DRAINAGE PIT -
PRECAST PIT
NTS



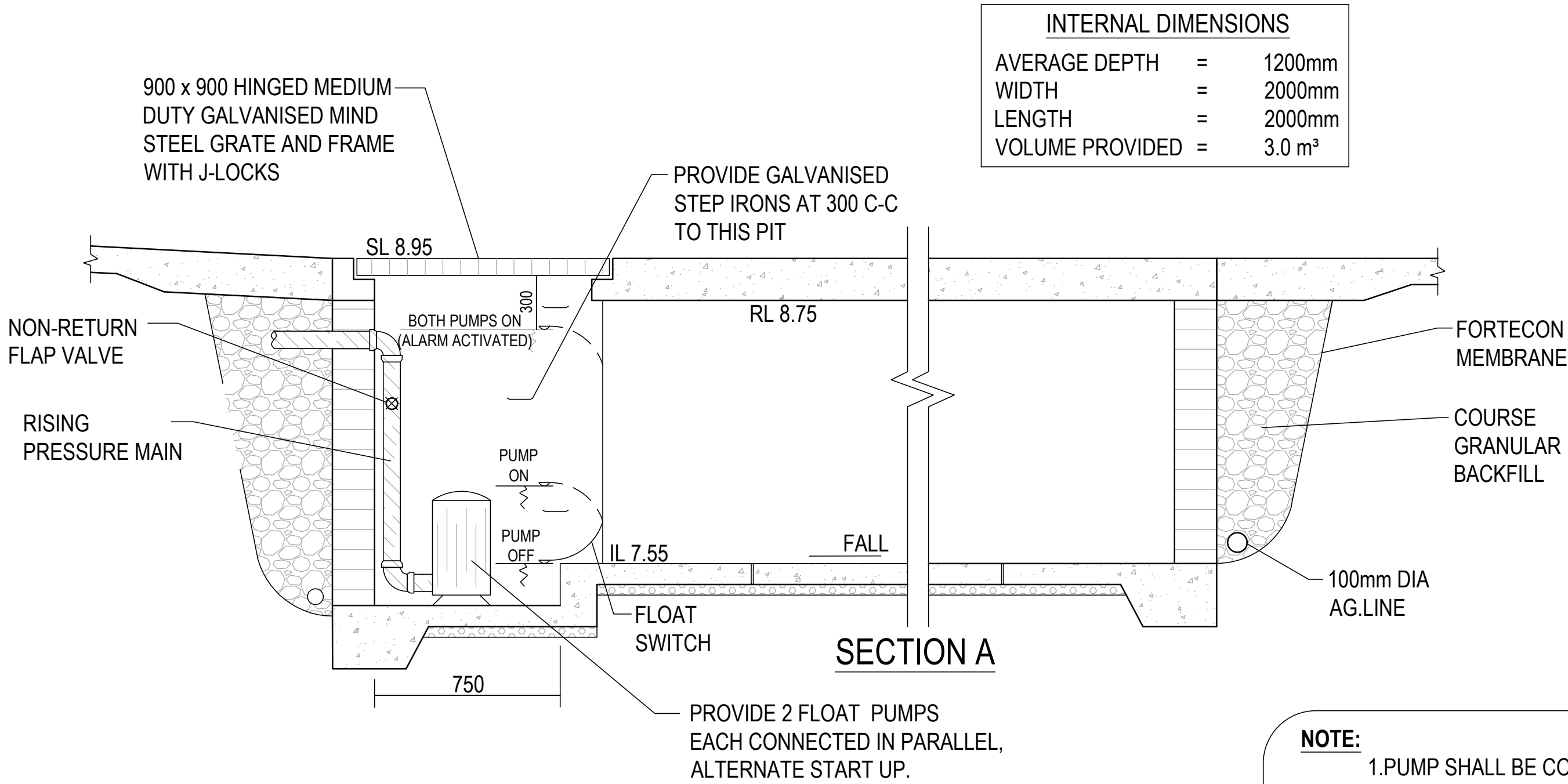
PLAN

PUMP HOLDING TANK
NTS

STANDARD PUMP OUT DESIGN NOTES:

THE PUMP OUT SYSTEM SHALL BE DESIGNED TO OPERATE 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 THE FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.
- A SECOND FLOAT HALL 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.



INTERNAL DIMENSIONS	
AVERAGE DEPTH	= 1200mm
WIDTH	= 2000mm
LENGTH	= 2000mm
VOLUME PROVIDED	= 3.0 m³

- NOTE:**
- 1.PUMP SHALL BE CONSTRUCTED TO THE STRUCTURAL ENGINEERS DETAILS
 2. ALL THE A.G LINES BEHIND THE BASEMENT WALLS ARE TO BE CONNECTED TO PUMP-OUT SYSTEM

PRINTING NOTE:
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A1 0 5 10 15 20 1:20

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				AUSTRALASIAN PROPERTY GROUP LEVEL 1204A, 275 ALFRED STREET, NORTH SYDNEY NSW 2060
				Architect OLSSON LEVEL 4, 68-72 WENTWORTH AVENUE, SURRY HILLS NSW 2010
A	ISSUE FOR DEVELOPMENT APPLICATION	LE	07/06/2024	

Building Services Consultants

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CONSULT AUSTRALIA

Member Firm

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Member Firm

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Project

THE GRAND

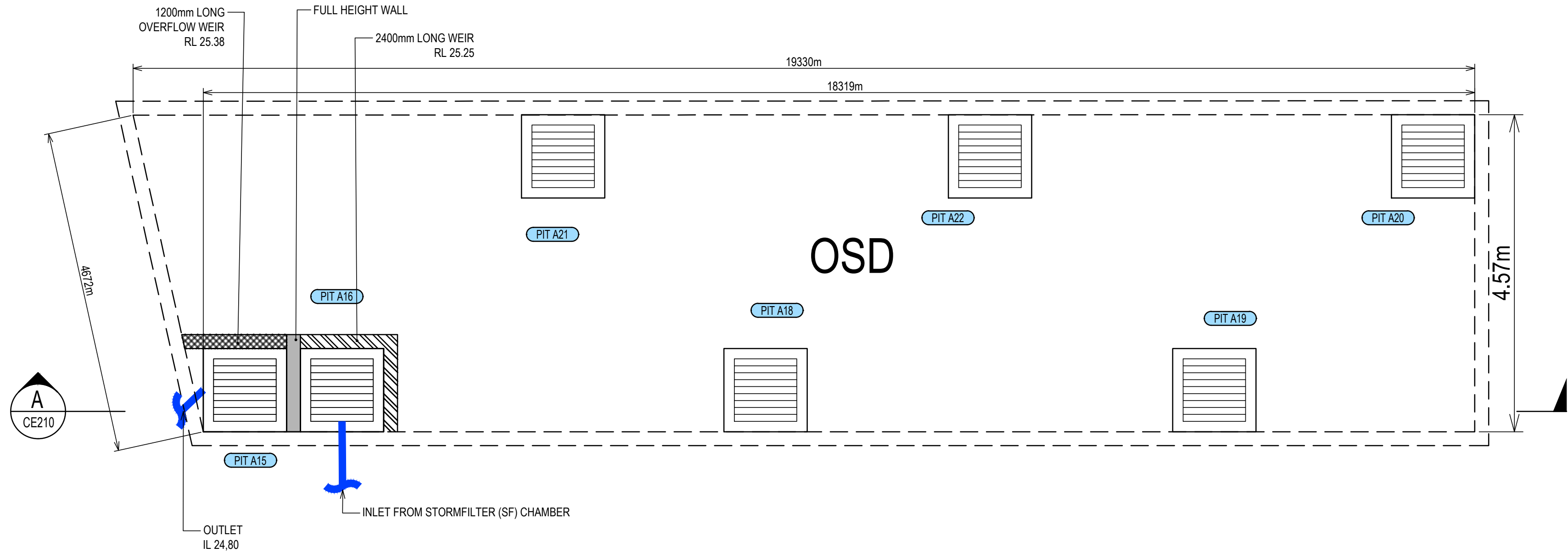
402 MACQUARIE STREET, LIVERPOOL

Drawing Title

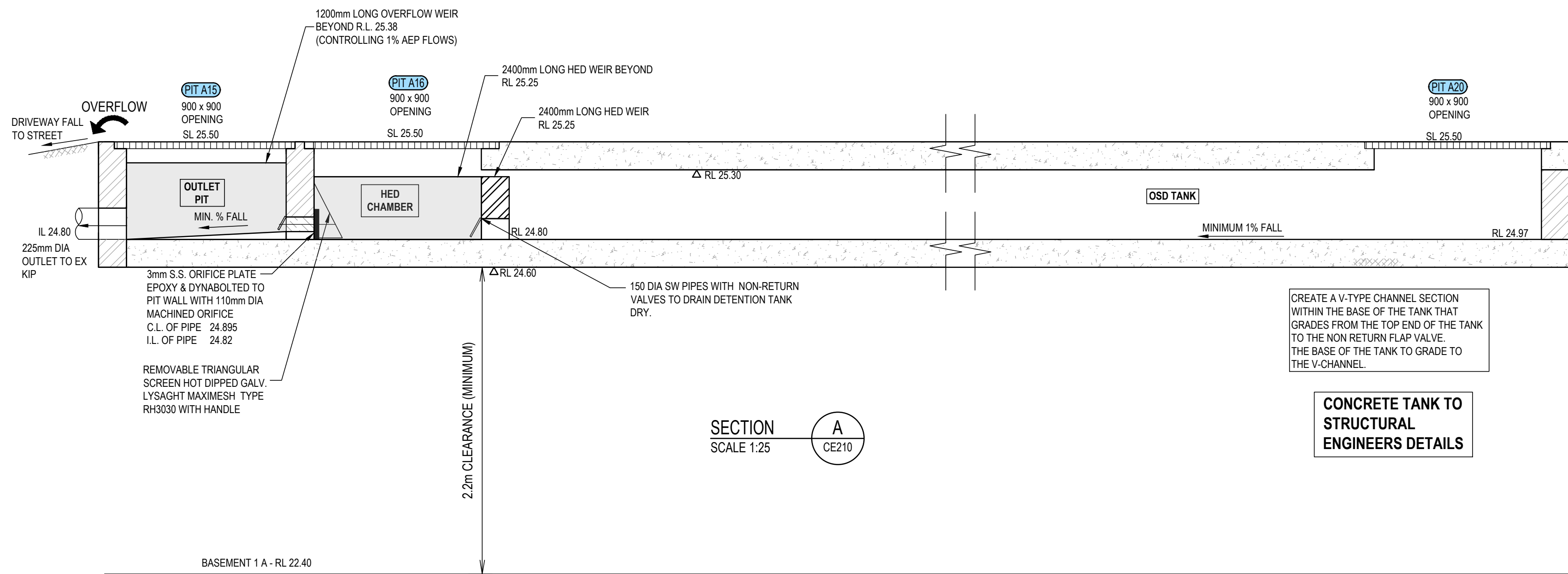
CIVIL ENGINEERING SERVICES

STORMWATER DETAILS

Drafted	Designed	Approved	Date	Scale	Sheet Size
LE	LE	SS	JUN 2024		@ A1
Job Number	Drawing Number	Revision	North Point		
SYD2903	CE200	A			



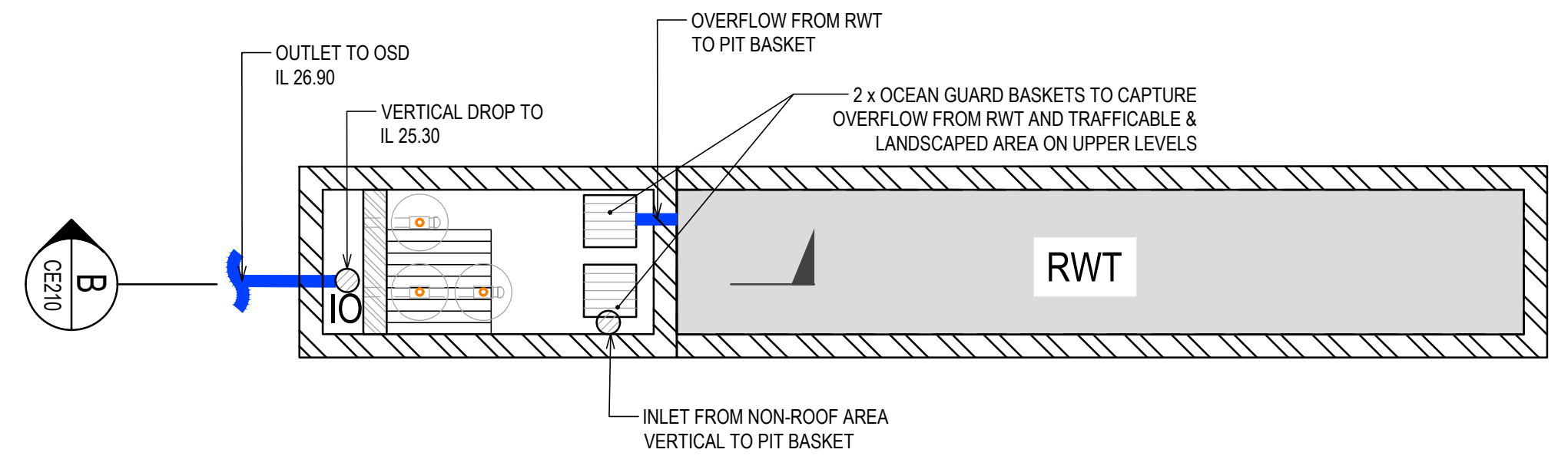
OSD PLAN
1:50



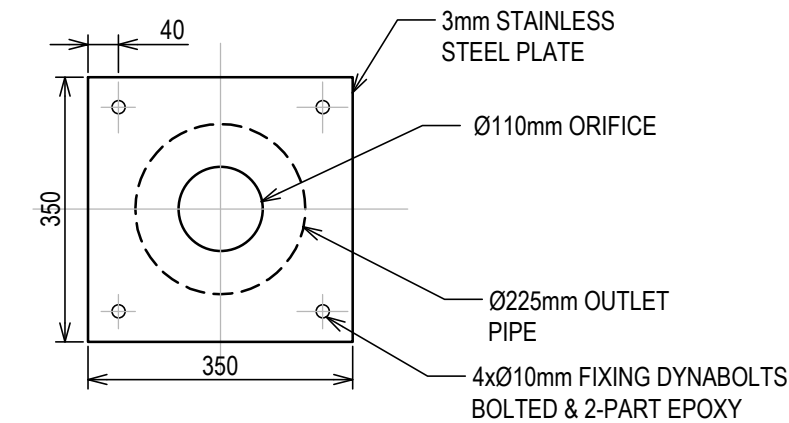
SECTION A
SCALE 1:25

CREATE A V-TYPE CHANNEL SECTION WITHIN THE BASE OF THE TANK THAT GRADES FROM THE TOP END OF THE TANK TO THE NON RETURN FLAP VALVE. THE BASE OF THE TANK TO GRADE TO THE V-CHANNEL.

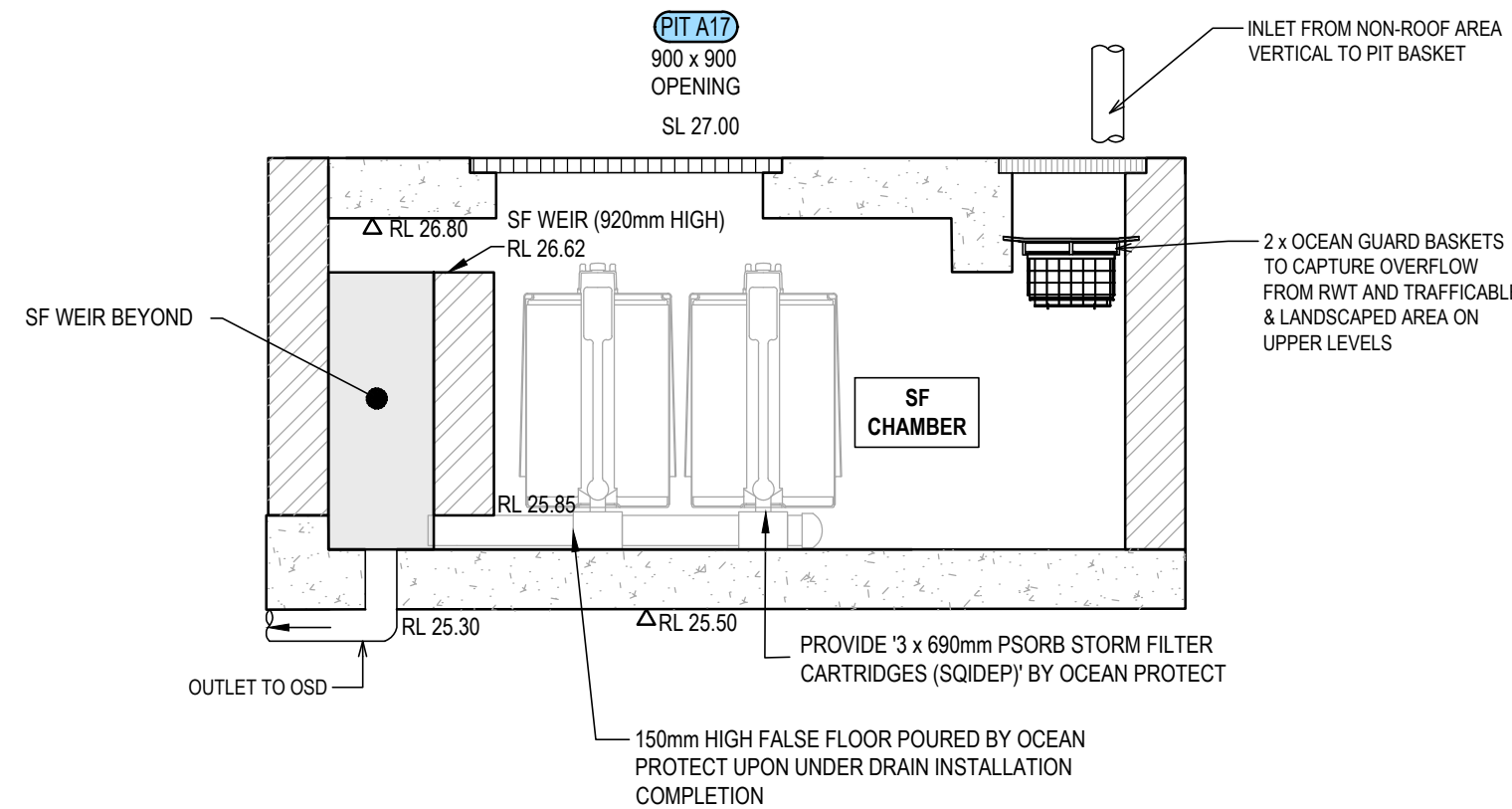
CONCRETE TANK TO
STRUCTURAL
ENGINEERS DETAILS



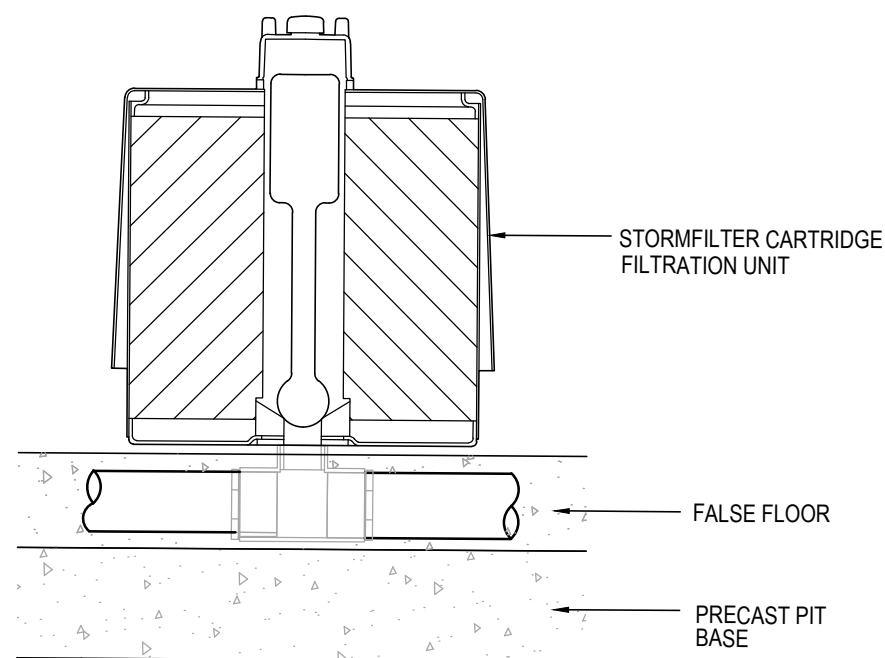
STORMFILTER (SF) CHAMBER & RAINWATER TANK (RWT) PLAN
1:50



ORIFICE PLATE DETAIL
SCALE 1:10



SECTION B
SCALE 1:25

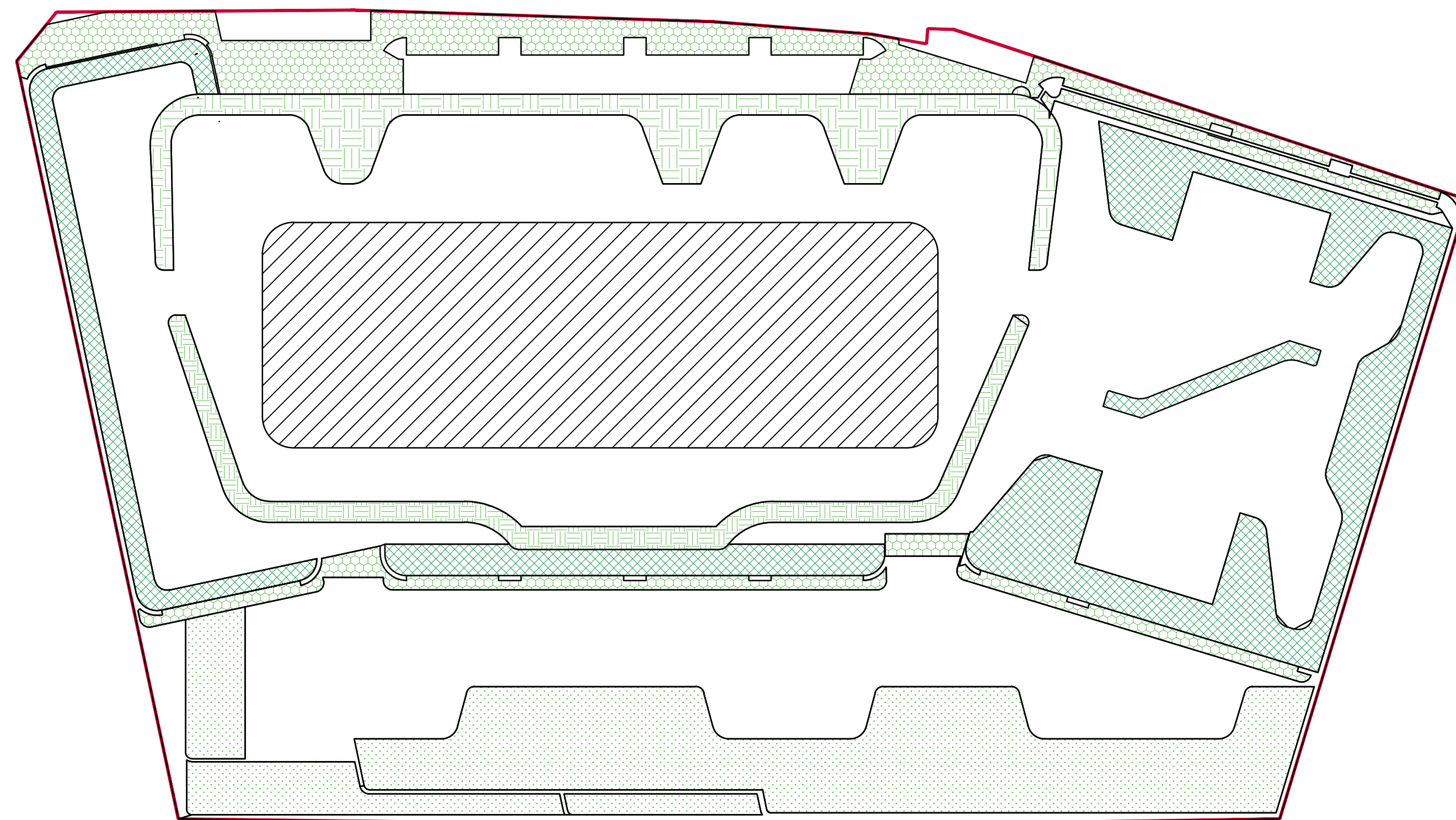


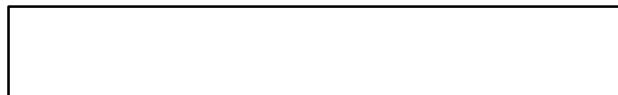
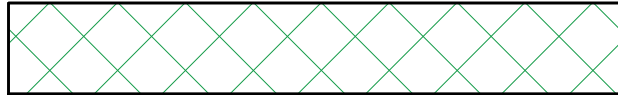
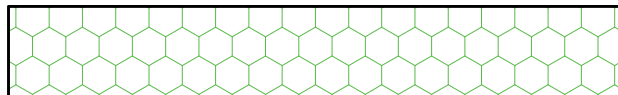
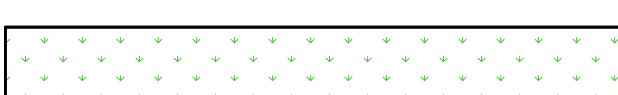
STORMFILTER
CARTRIDGE DETAIL
NOT TO SCALE

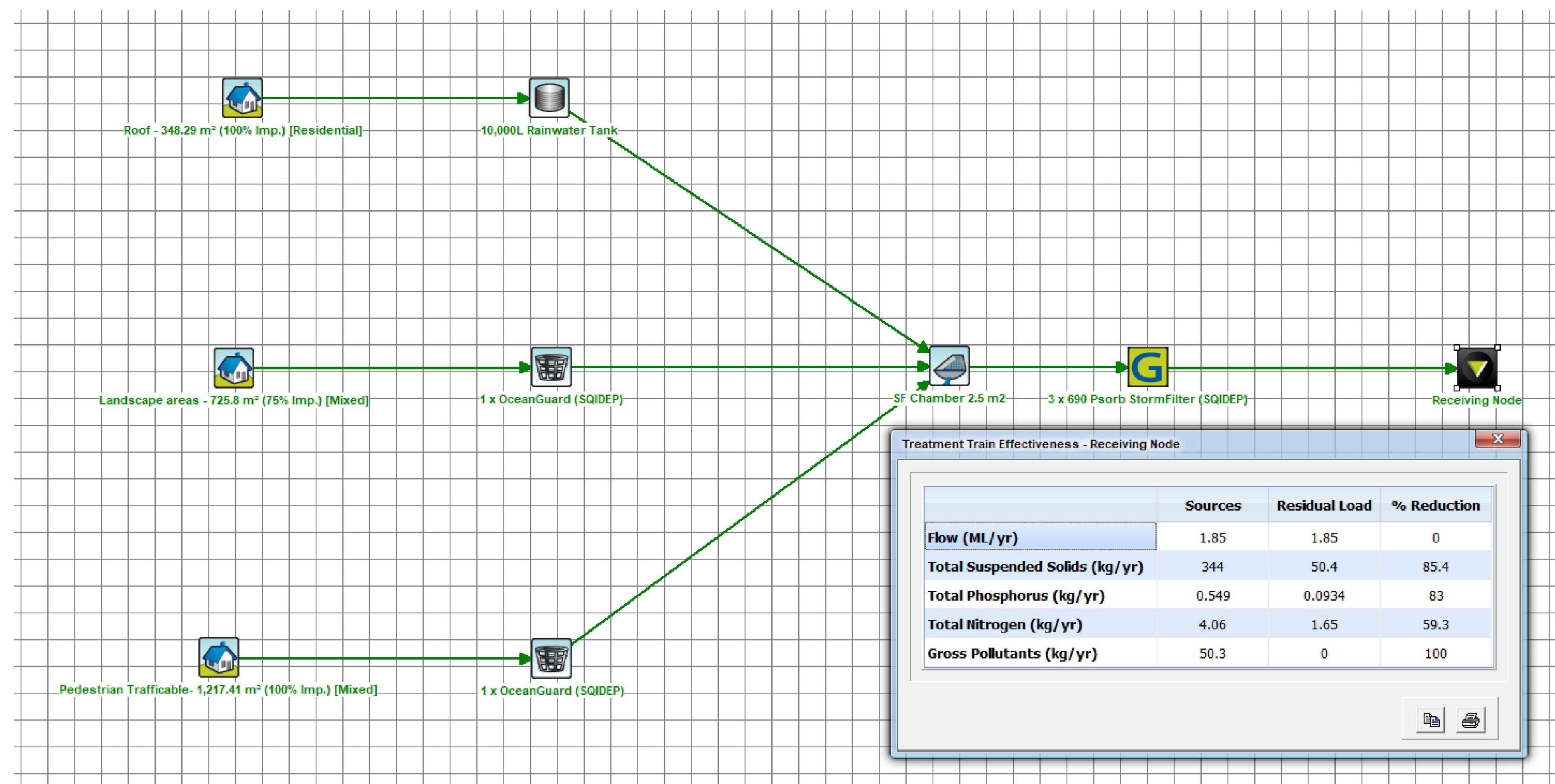
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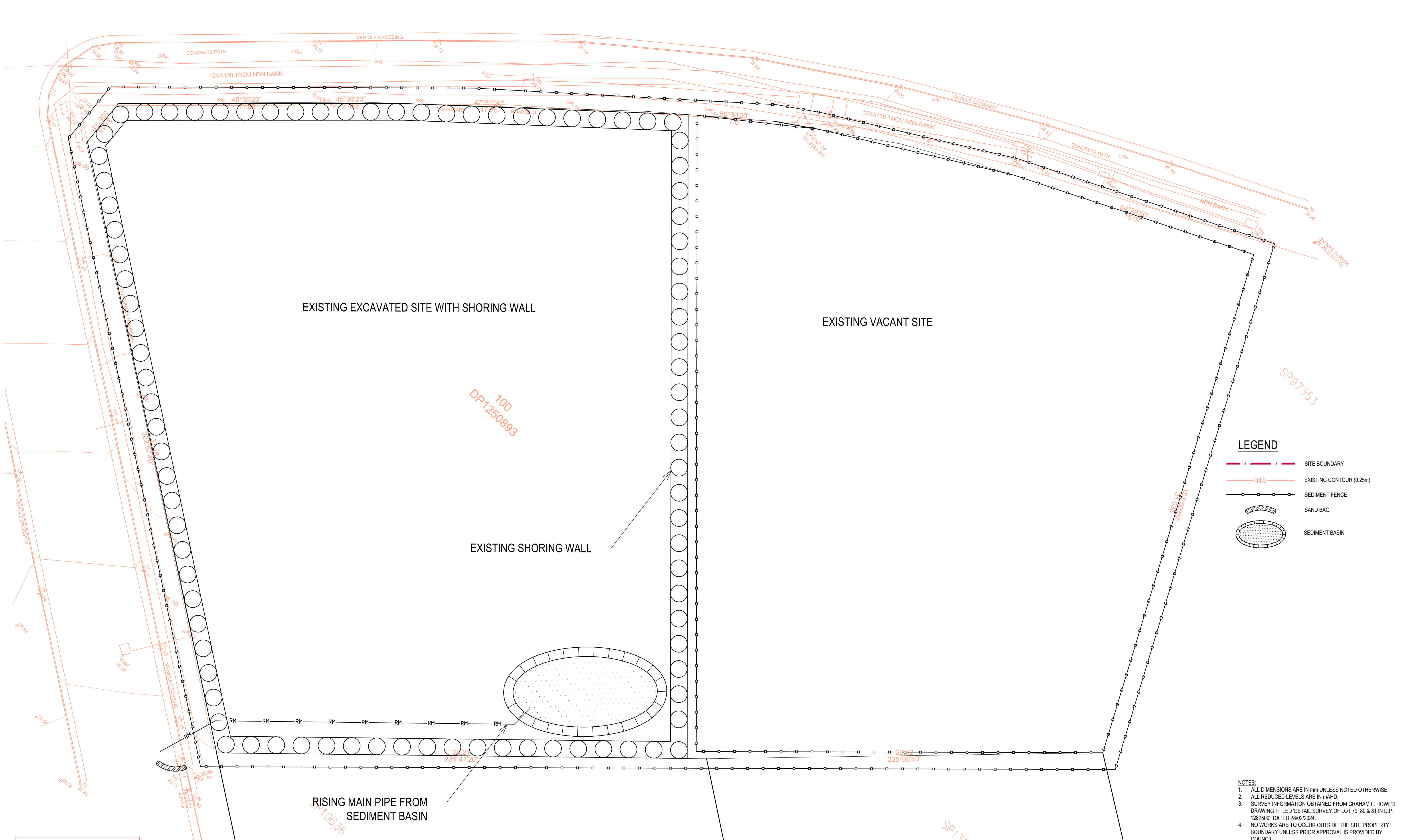
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B	ISSUE FOR DEVELOPMENT APPLICATION			AUSTRALASIAN PROPERTY GROUP LEVEL 1204A, 275 ALFRED STREET, NORTH SYDNEY NSW 2060		THE GRAND 402 MACQUARIE STREET, LIVERPOOL	CIVIL ENGINEERING SERVICES ON-SITE DETENTION (OSD) DETAILS	LE	LE	SS	JUN 2024	@	A1
A	ISSUE FOR DEVELOPMENT APPLICATION			Architect OLSSON LEVEL 4, 68-72 WENTWORTH AVENUE, SURRY HILLS NSW 2010				Job Number	Drawing Number	Revision	North Point		
								SYD2903	CE210	B			



TOTAL CATCHMENT AREA = 2,291.5 m ²		
	ROOF	= 348.29 m ²
	PAVED AREA	= 1,217.41 m ²
	LANDSCAPE ON LEVEL 30	= 139.5 m ²
	LANDSCAPE ON LEVEL 8	= 177.5 m ²
	LANDSCAPE ON LEVEL 1	= 156.0 m ²
	LANDSCAPE ON GROUND FLOOR LEVEL	= 252.8 m ²





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 - SURVEY INFORMATION OBTAINED FROM GRAHAM F. HOWE'S DRAWING TITLED 'DETAIL SURVEY OF LOT 79, 80 & 81 IN D.P. 1282509', DATED 28/02/2024.
 - NO WORKS ARE TO OCCUR OUTSIDE THE SITE PROPERTY BOUNDARY UNLESS PRIOR APPROVAL IS PROVIDED BY COUNCIL.
 - REFER TO DRAWING C310 FOR EROSION AND SEDIMENT CONTROL CONSTRUCTION SEQUENCE AND GENERAL INSTRUCTIONS NOTES.

DEVELOPMENT APPLICATION

Revision	Description
A	ISSUE FOR DEVELOPMENT APPLICATION

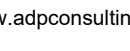
Initial	Date	Client
LE	07/06/2024	AUSTRALASIAN PROPERTY GROUP LEVEL 1204A, 275 ALFRED STREET, NORTH SYDNEY NSW 2060
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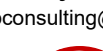


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Sydney
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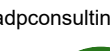


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CONSULTING



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Brisbane



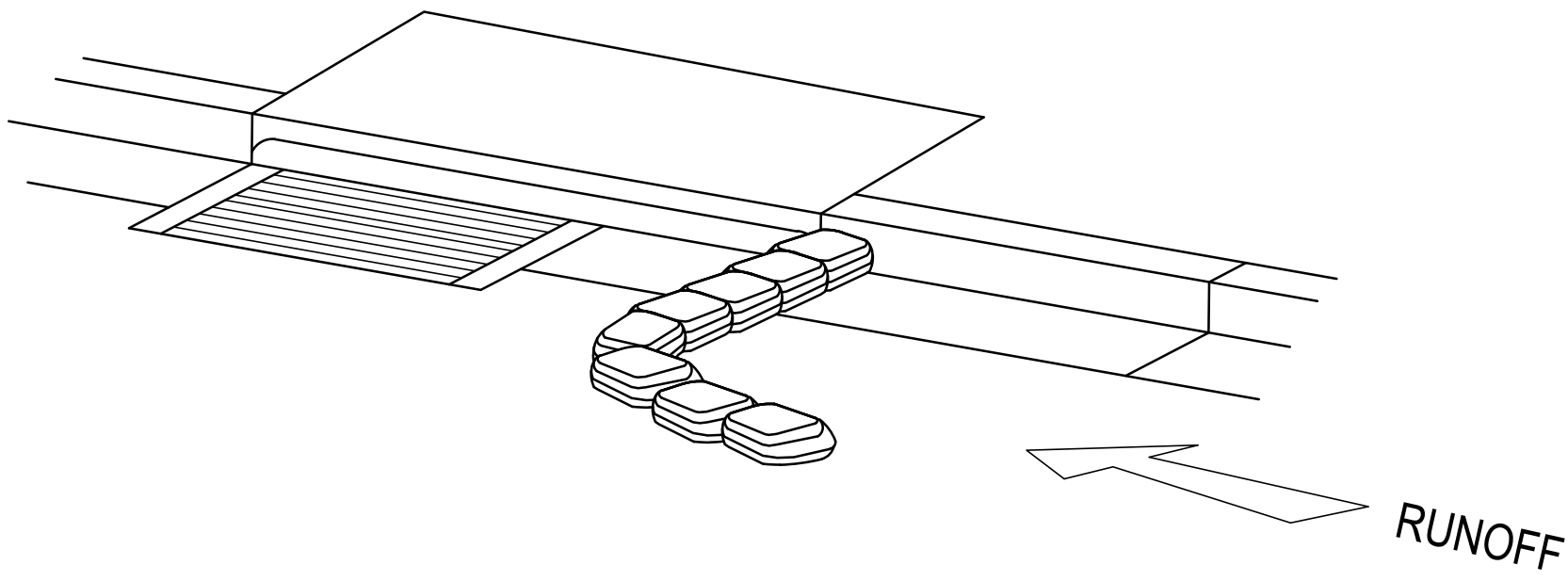
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Project
THE GRAND 402 MACQUARIE STREET, LIVERPOOL

Drawing Title
CIVIL ENGINEERING SERVICES SEDIMENT AND EROSION CONTROL PLAN

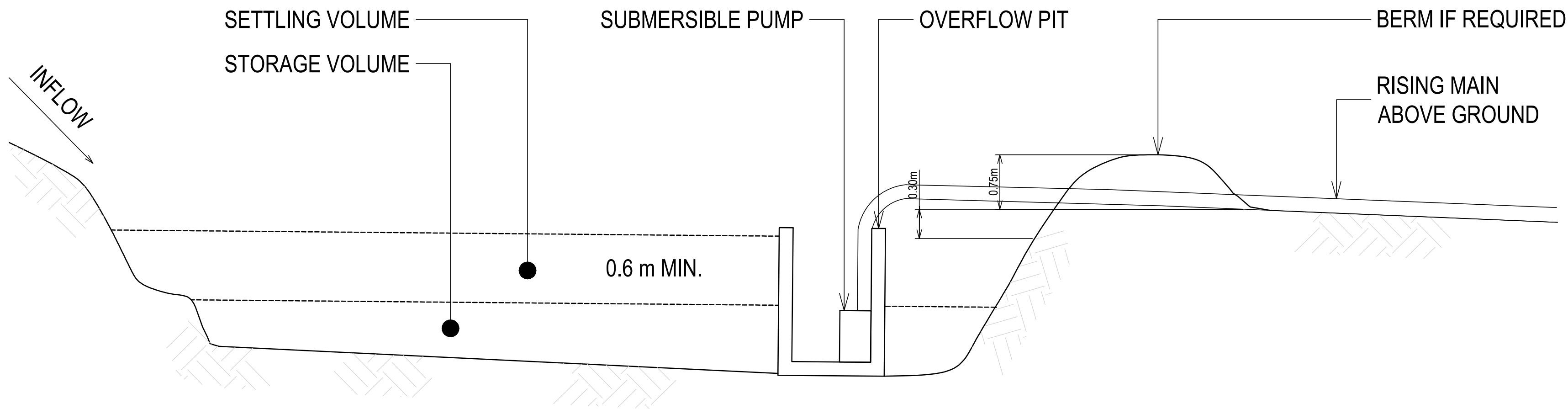
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SYD2903		CE400	A		

- NOTES:
1. PROVIDE THREE LAYERS OF SANDBAGS WITH THEIR ENDS OVERLAPPED AND ALSO OVERLAPPING ONTO THE KERB.
 2. CREATE A GAP IN THE SANDBAGS TO ACT AS A SPILLWAY.
 3. SANDBAG BARRIER TO BE MIN. 2m FROM THE INLET AND EXTEND MIN. 0.9m OUT FROM THE KERB.



GULLY INLET SANDBAG PROTECTION DETAIL

SCALE N.T.S.



TYPICAL SEDIMENT BASIN

SCALE N.T.S.

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THE GRAND 402 MACQUARIE STREET, LIVERPOOL

Drawing Title
CIVIL ENGINEERING SERVICES SEDIMENT AND EROSION CONTROL DETAILS

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