

EAST END STAGE 3 & 4
HUNTER, MORGAN, NEWCOMEN, KING STREETS, NEWCASTLE NSW 2300



LOCALITY PLAN
IMAGE FROM SIXMAPS
16.02.2022

DRAWING SCHEDULE	
Sheet Number	Sheet Title
C000	COVER PAGE
C005	GENERAL ARRANGEMENT PLAN
C100	STORMWATER MANAGEMENT PLAN STAGE 3 BASEMENT 03
C101	STORMWATER MANAGEMENT PLAN STAGE 3 BASEMENT 02
C102	STORMWATER MANAGEMENT PLAN STAGE 3 BASEMENT 01
C103	STORMWATER MANAGEMENT PLAN STAGE 3 GROUND FLOOR PLAN
C104	STORMWATER MANAGEMENT PLAN STAGE 4S BASEMENT 03
C105	STORMWATER MANAGEMENT PLAN STAGE 4S BASEMENT 02 AND 4N GROUND
C106	STORMWATER MANAGEMENT PLAN STAGE 4S BASEMENT 01 AND 4N LEVEL 1
C107	STORMWATER MANAGEMENT PLAN STAGE 4S LOWER GROUND

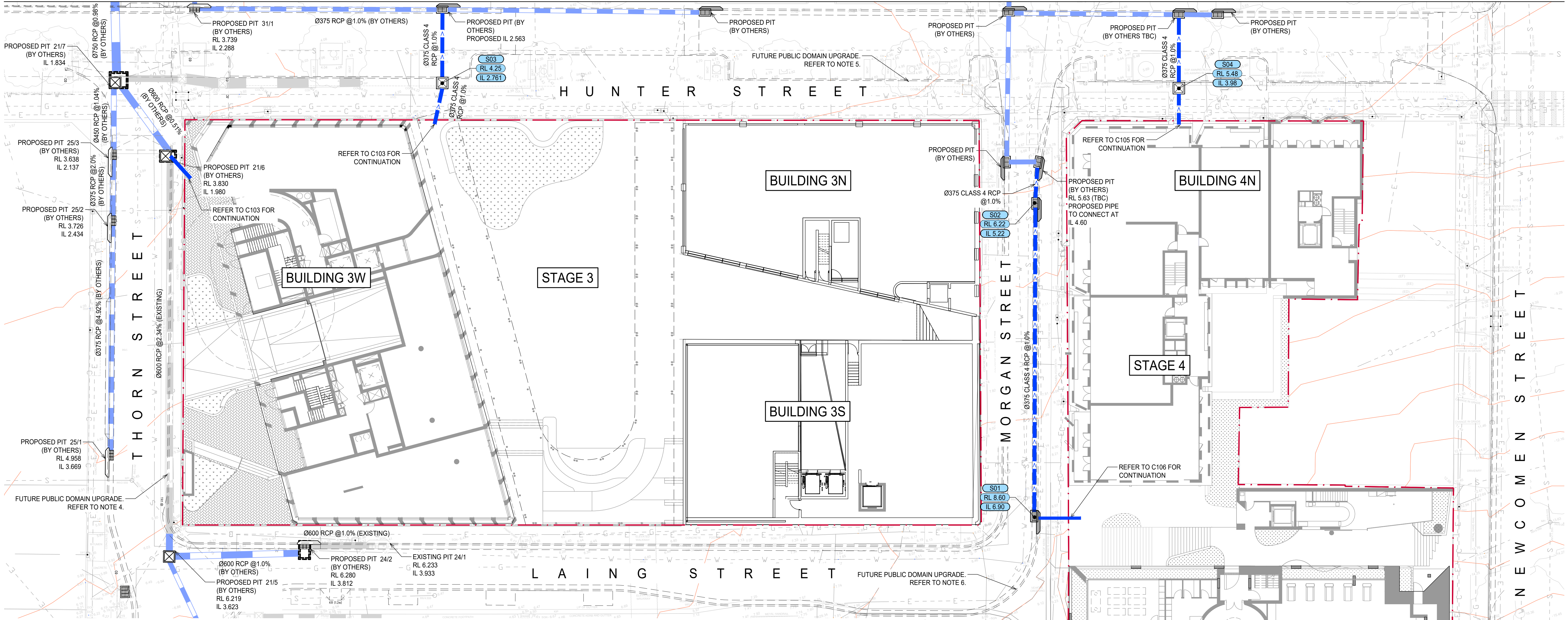
C108	STORMWATER MANAGEMENT PLAN STAGE 4S UPPER GROUND
C170	MUSIC CATCHMENT PLAN STAGE 3
C171	MUSIC CATCHMENT PLAN STAGE 4N
C172	MUSIC CATCHMENT PLAN STAGE 4S
C200	STORMWATER DETAILS SHEET 01
C201	STORMWATER DETAILS SHEET 02
C202	STORMWATER DETAILS SHEET 03
C320	SEDIMENT & EROSION CONTROL PLAN
C350	SEDIMENT & EROSION CONTROL DETAILS

PRINTING NOTE:
THIS DRAWING TO BE PRINTED IN COLOUR.



FOR APPROVAL

	Architect	Client		North	Project	Scale at A1	Drawn	Approved
	SJB ARCHITECTURE LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW	IRIS CAPITAL LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000	XAVIER KNIGHT		EAST END STAGE 3 & 4 HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300	NTS	MS	SS
B ISSUE FOR APPROVAL	AA MS 31.03.2023				Sheet Subject	Job No	Drawing No	Revision
A ISSUE FOR COORDINATION	AA MS 27.03.2023				COVER PAGE	220901	C000	B



LEGEND

SITE BOUNDARY

PROPOSED STORMWATER LINE

EXISTING STORMWATER LINE

FUTURE STORMWATER LINE (BY OTHERS)

EXISTING ELECTRICAL LINE

EXISTING GAS LINE

EXISTING TELECOMMUNICATION LINE

EXISTING SEWER LINE

EXISTING WATER LINE

1. GENERAL

2. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS ARE IN METRES (U.N.O.).

3. SURVEY INFORMATION HAS BEEN OBTAINED FROM MONTH & POWYS SURVEY TITLED "DETAIL SURVEY OF NEWCASTLE CBD AREA, HUNTER STREET, NEWCASTLE", REF. NO. 07/158, DATED 13/12/2007.

4. FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON THORN STREET HAVE BEEN TAKEN FROM PLANS PREPARED BY NORTHPROP UNDER THE PROJECT TITLED "HUNTER STREET MALL - STREETSCAPE REVITALISATION - DETAILED DESIGN - STAGE 2 - CIVIL ENGINEERING PACKAGE" AND APPROVED UNDER SECTION 138 OF THE ROADS ACT.

5. FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON HUNTER STREET HAVE BEEN TAKEN FROM PRELIMINARY PLANS PREPARED BY NORTHPROP UNDER THE PROJECT TITLED "EAST END REDEVELOPMENT PROJECT - CONCEPT DESIGN - STAGES 3,4,6,7 AND 8 - CIVIL ENGINEERING PACKAGE".

6. FUTURE PUBLIC DOMAIN STREET UPGRADE WORKS ON MORGAN AND LAING STREETS ARE SHOWN INDICATIVELY AND WILL FORM PART OF A FUTURE PACKAGE.

7. REFER TO THE "INFRASTRUCTURE SERVICES REPORT" BY XAVIER KNIGHT FOR A REVIEW OF EXISTING AND PROPOSED INFRASTRUCTURE WORKS.

8. REFER TO THE "UPSTREAM CATCHMENT REPORT" BY XAVIER KNIGHT FOR A REVIEW OF STORMWATER RUNOFF ON THE SURROUNDING STREETS.

9. ALL WORKS IN THIS PACKAGE PROPOSED OUTSIDE THE LOT BOUNDARIES ARE SUBJECT TO S138 ROADS ACT APPROVAL.

10. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.

GENERAL ARRANGEMENT PLAN

SCALE 1:200

PIT ID	PIT TYPE	COVER LEVEL (mAHD)	PIT IL (mAHD)	DEPTH TO IL (m)
S01	1.8m KIP CLASS D GRATE	8.60	6.90	1.70
S02	1.8m KIP CLASS D GRATE	6.22	5.22	1.00
S03	1200x1200 JP CLASS D GRATE	4.25	2.761	1.49
S04	1200x1200 JP CLASS D GRATE	5.60	3.98	1.62

FOR APPROVAL

A1

0 2 4 6 8 10 12 14 16 18 20

1:200

Architect

SJB ARCHITECTURE

LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW

Client

IRIS CAPITAL

LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000

XAVIER KNIGHT

T : 02 8810 5800 E : info@xavierknight.com.au

A : Level 7, 210 Clarence Street, Sydney NSW 2000

xavierknight.com.au

North

Project

EAST END STAGE 3 & 4

HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300

Sheet Subject

GENERAL ARRANGEMENT PLAN

Scale at A1

1:200

Drawn

MS

Approved

SS

Job No

220901

Drawing No

C005

Revision

B

B

ISSUE FOR APPROVAL

AA

MS

31.03.2023

A

ISSUE FOR COORDINATION

AA

MS

27.03.2023

Rev

Description

Eng

Draft

Date

LEGEND

- SITE BOUNDARY
- PROPOSED STORMWATER LINE
- PROPOSED GRATED DRAIN
- RISING MAIN
- VALLEY LINE
- OUTLINE OF LEVEL ABOVE
- GRATED SURFACE INLET PIT
- SEALED JUNCTION PIT
- DOWN PIPE OUTLET
- VERTICAL DROP
- PLANTER DRAIN
- STORMWATER RISING MAIN
- FLOOR WASTE
- PIT TAG/NUMBER
- FINISHED RL

PUMP-OUT PIT CALCS

100yr 2hr ARI STORM = 59.70 mm/hr
ARI x 2 = 119.4 mm

TOTAL UNCOVERED AREA DRAINING INTO BASEMENT AND PUMP OUT PIT:

- EXPOSED DRIVEWAY = 47 m²
- VERTICAL WALL FACE OVER DRIVEWAY = 198 x 0.5 = 99.0 m² (1H: 2V RAINFALL ANGLE)
TOTAL AREA = 146 m²

UNDERGROUND PUMP TANK VOLUME REQUIRED
V = 146 x 119.40/ 1000 = 17.4 m³

THEREFORE, 18.0 m³ VOLUME PIT WAS PROVIDED

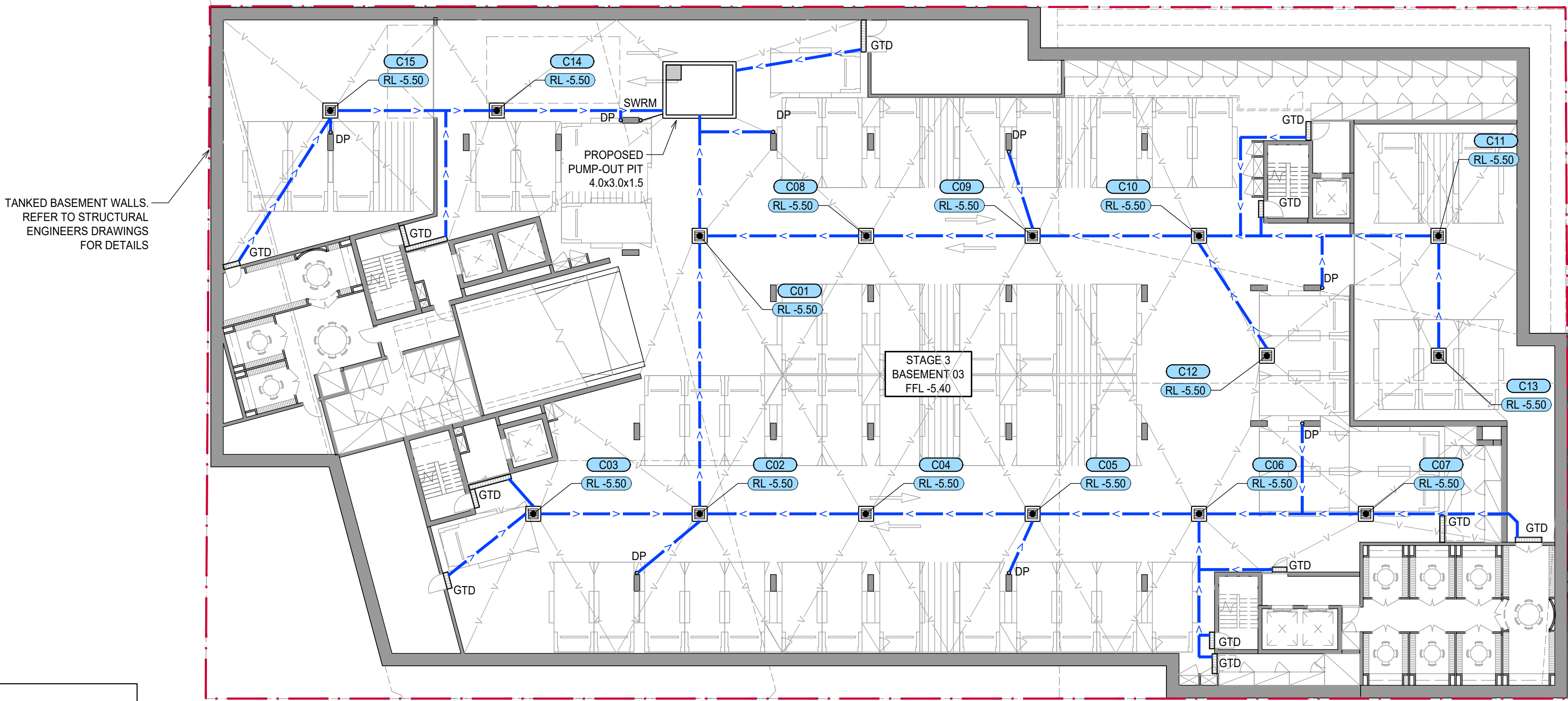
PUMP SPECIFICATION

i₁₀₀ (5 min) = 316 mm/hr

PUMP-OUT RATE BASED ON 100-YR 5 min STORM
= C 1 A / 3600
= 0.9 x 316x 146 / 3600
= 11.53 L/s
= 692 L/min

PUMP-OUT PIT TO BE INSTALLED WITH FOLLOWING ITEMS:

- 2 x SUBMERSIBLE PUMPS TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL WHICH WILL ALLOW FOR THE PUMP TO OPERATE SIMULTANEOUSLY ON HIGH-LEVEL ALARMS WITH DUTY OF 11.53 L/s AT 8.15 m HEAD.
- 900SQ HEAVY DUTY GALVANIZED STEEL GRATE AND FRAME.
- WARNING FLASHING LIGHT TO PROVIDE INDICATION OF PUMP FAILURE.
- CONFINED SPACE SIGN FOR PUBLIC AWARENESS AND WARNING.
- STEP IRONS.



PIT SCHEDULE

PIT ID	PIT TYPE	COVER LEVEL (mAHD)	PIT IL (mAHD)	DEPTH TO IL (m)
C01	900x900 GSIP CLASS D GRATE	-5.50	-6.47	0.97
C02	600x600 GSIP CLASS D GRATE	-5.50	-6.30	0.80
C03	600x600 GSIP CLASS D GRATE	-5.50	-5.90	0.40
C04	450x450 GSIP CLASS D GRATE	-5.50	-6.20	0.70
C05	450x450 GSIP CLASS D GRATE	-5.50	-6.10	0.60
C06	450x450 GSIP CLASS D GRATE	-5.50	-6.00	0.50
C07	450x450 GSIP CLASS D GRATE	-5.50	-5.90	0.40
C08	450x450 GSIP CLASS D GRATE	-5.50	-6.30	0.80
C09	900x900 GSIP CLASS D GRATE	-5.50	-6.20	0.70
C10	600x600 GSIP CLASS D GRATE	-5.50	-6.10	0.60
C11	600x600 GSIP CLASS D GRATE	-5.50	-5.90	0.40
C12	450x450 GSIP CLASS D GRATE	-5.50	-6.01	0.51
C13	450x450 GSIP CLASS D GRATE	-5.50	-5.90	0.40
C14	450x450 GSIP CLASS D GRATE	-5.50	-6.00	0.50
C15	450x450 GSIP CLASS D GRATE	-5.50	-5.90	0.40

GENERAL

- ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE
- ALL PIPES ARE TO BE MINIMUM Ø100mm uPVC STRAPPED TO UNDERSIDE OF SLAB U.N.O.
- ALL PIPES ARE TO BE AT 1% MINIMUM GRADE U.N.O.
- SLAB TO BE GRADED 1% TOWARDS PITS TO MEET REQUIREMENTS OF AS 2890.

FOR APPROVAL

A1 0 2 4 6 8 10 12 14 16 18 20 1:200

B	ISSUE FOR APPROVAL	AA	MS	31.03.2023
A	ISSUE FOR COORDINATION	AA	MS	27.03.2023
Rev	Description	Eng	Draft	Date

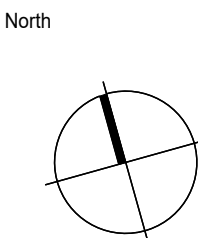
Architect
SJB ARCHITECTURE
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW

Client
IRIS CAPITAL
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000



T : 02 8810 5800 E : info@xavierknight.com.au
A : Level 7, 210 Clarence Street, Sydney NSW 2000
xavierknight.com.au

This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.



Project
EAST END STAGE 3 & 4
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300

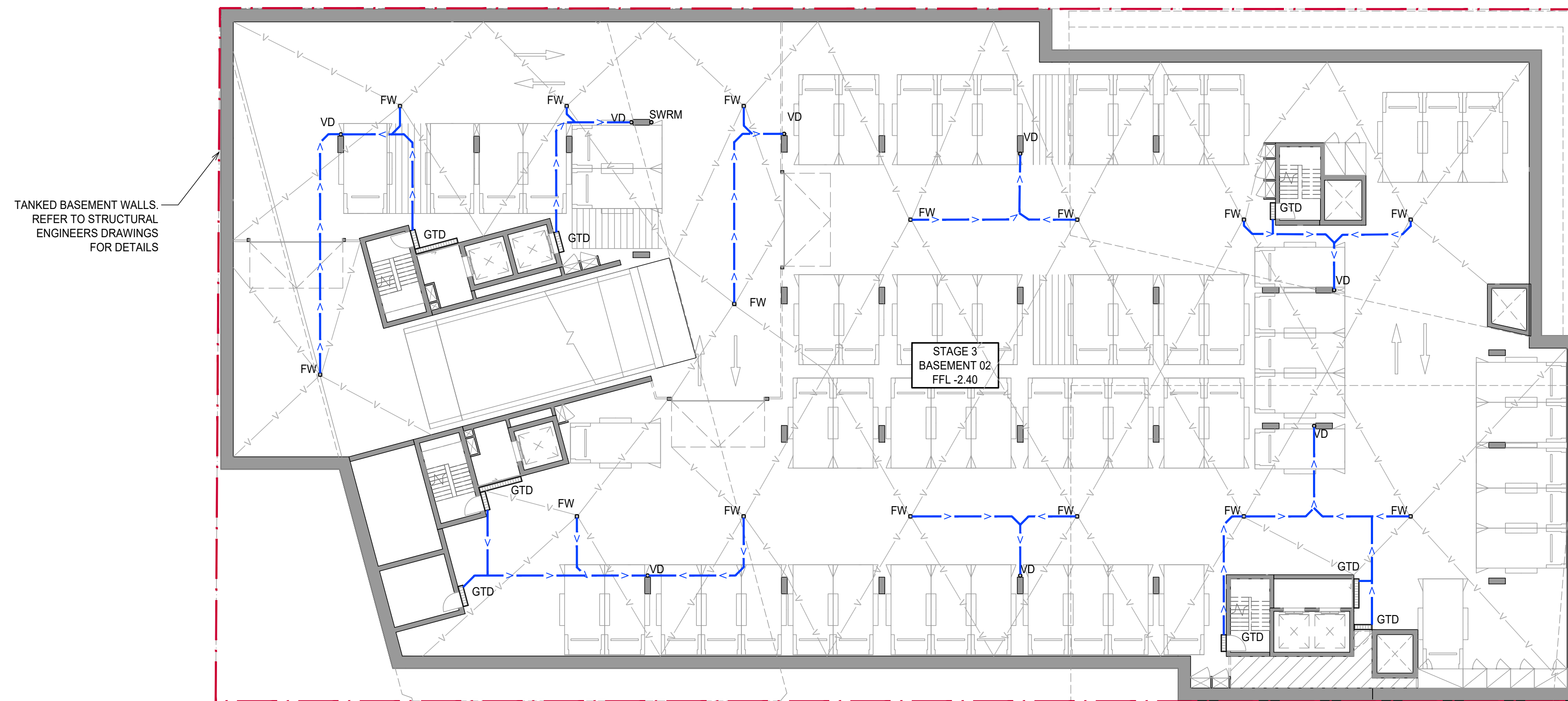
Sheet Subject
STORMWATER MANAGEMENT PLAN
STAGE 3 BASEMENT 03

Scale at A1	Drawn	Approved
1:200	MS	SS

Job No	Drawing No	Revision
220901	C100	B

LEGEND

- | | |
|--------|--------------------------|
| | PROPOSED STORMWATER LINE |
| | PROPOSED GRATED DRAIN |
| | RIISING MAIN |
| | VALLEY LINE |
| | OUTLINE OF LEVEL ABOVE |
| | GRATED SURFACE INLET PIT |
| | SEALED JUNCTION PIT |
| DP ○ | DOWN PIPE OUTLET |
| VD ○ | VERTICAL DROP |
| PD ○ | PLANTER DRAIN |
| SWRM ○ | STORMWATER RISING MAIN |
| FW □ | FLOOR WASTE |
| | PIT TAG/NUMBER |
| | FINISHED RL |

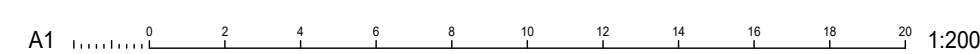



STORMWATER DRAINAGE PLAN - STAGE 3 BASEMENT 02
SCALE 1:200

GENERAL






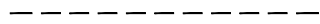



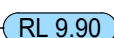
1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE
2. ALL PIPES ARE TO BE MINIMUM Ø100mm uPVC STRAPPED TO UNDERSIDE OF SLAB U.N.O.
3. ALL PIPES ARE TO BE AT 1% MINIMUM GRADE U.N.O.
4. SLAB TO BE GRADED 1% TOWARDS PITS TO MEET REQUIREMENTS OF AS 2890.

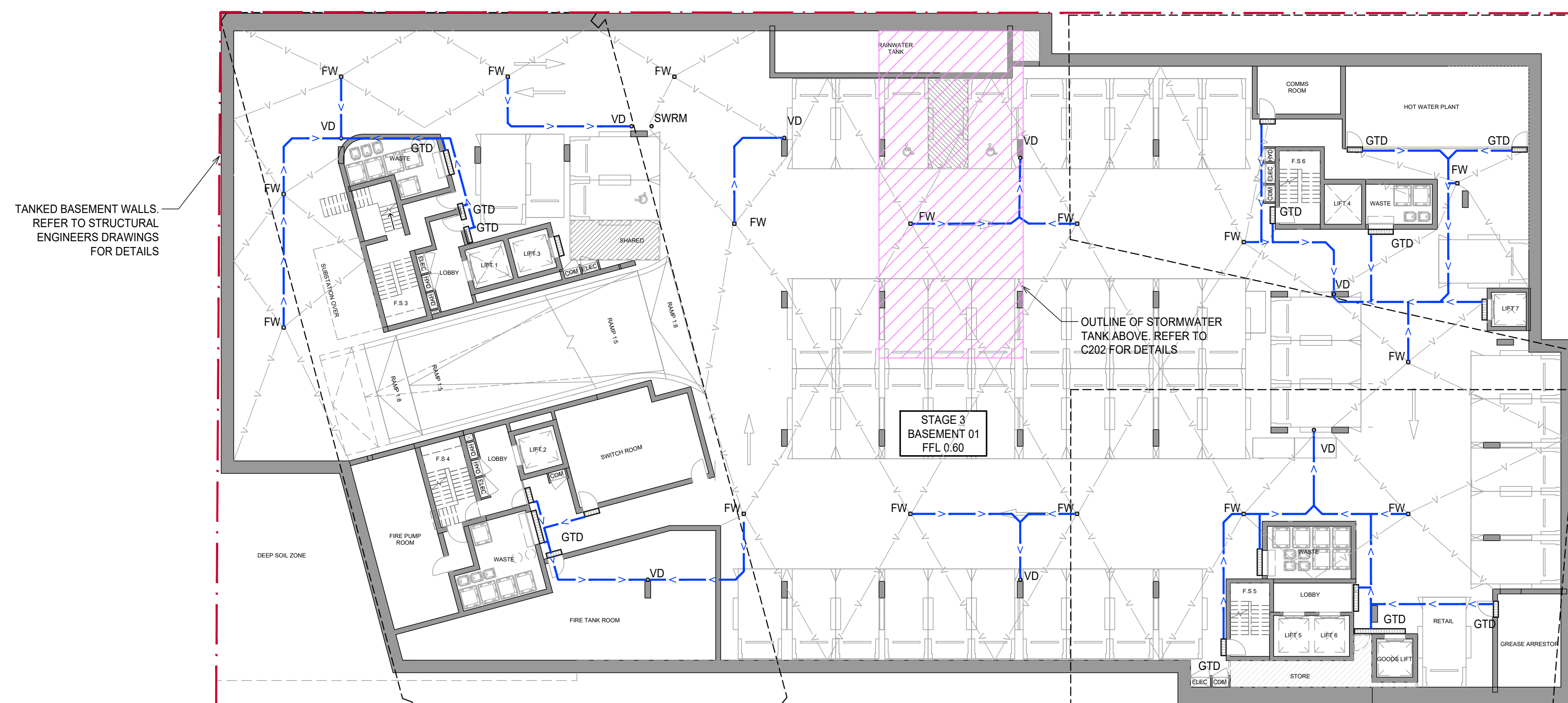
FOR APPROVAL



	Architect	Client			Project	Scale at A1	Drawn	Approved
	SJB ARCHITECTURE LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW	IRIS CAPITAL LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000	 XAVIER KNIGHT	T : 02 8810 5800 E : info@xavierknight.com.au A : Level 7, 210 Clarence Street, Sydney NSW 2000 xavierknight.com.au	EAST END STAGE 3 & 4 HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300	1:200	MS	SS
B ISSUE FOR APPROVAL	AA MS 31.03.2023			This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.	Sheet Subject	Job No	Drawing No	Revision
A ISSUE FOR COORDINATION	AA MS 27.03.2023				STORMWATER MANAGEMENT PLAN STAGE 3 BASEMENT 02	220901	C101	B
Rev Description	Eng Draft Date	Eng Draft Date						

LEGEND

- | | |
|---|--------------------------|
|  | SITE BOUNDARY |
|  | PROPOSED STORMWATER LINE |
|  | PROPOSED GRATED DRAIN |
|  | RISING MAIN |
|  | VALLEY LINE |
|  | OUTLINE OF LEVEL ABOVE |
|  | GRATED SURFACE INLET PIT |
|  | SEALED JUNCTION PIT |
| DP ○ | DOWN PIPE OUTLET |
| VD ○ | VERTICAL DROP |
| PD ○ | PLANTER DRAIN |
| SWRM ○ | STORMWATER RISING MAIN |
| FW □ | FLOOR WASTE |
|  | PIT TAG/NUMBER |
|  | FINISHED RL |



STORMWATER DRAINAGE PLAN - STAGE 3 BASEMENT 01
SCALE 1:200

GENERAL














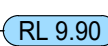

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE
2. ALL PIPES ARE TO BE MINIMUM Ø100mm uPVC STRAPPED TO UNDERSIDE OF SLAB U.N.O.
3. ALL PIPES ARE TO BE AT 1% MINIMUM GRADE U.N.O.
4. SLAB TO BE GRADED 1% TOWARDS PITS TO MEET REQUIREMENTS OF AS 2890.

FOR APPROVAL



	Architect	Client		North	Project	Scale at A1	Drawn	Approved
	SJB ARCHITECTURE LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW	IRIS CAPITAL LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000	XAVIER KNIGHT		EAST END STAGE 3 & 4 HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300	1:200	MS	SS
B ISSUE FOR APPROVAL	AA MS 31.03.2023				Sheet Subject	Job No	Drawing No	Revision
A ISSUE FOR COORDINATION	AA MS 27.03.2023				STORMWATER MANAGEMENT PLAN STAGE 3 BASEMENT 01	220901	C102	B
Rev Description	Eng Draft Date							

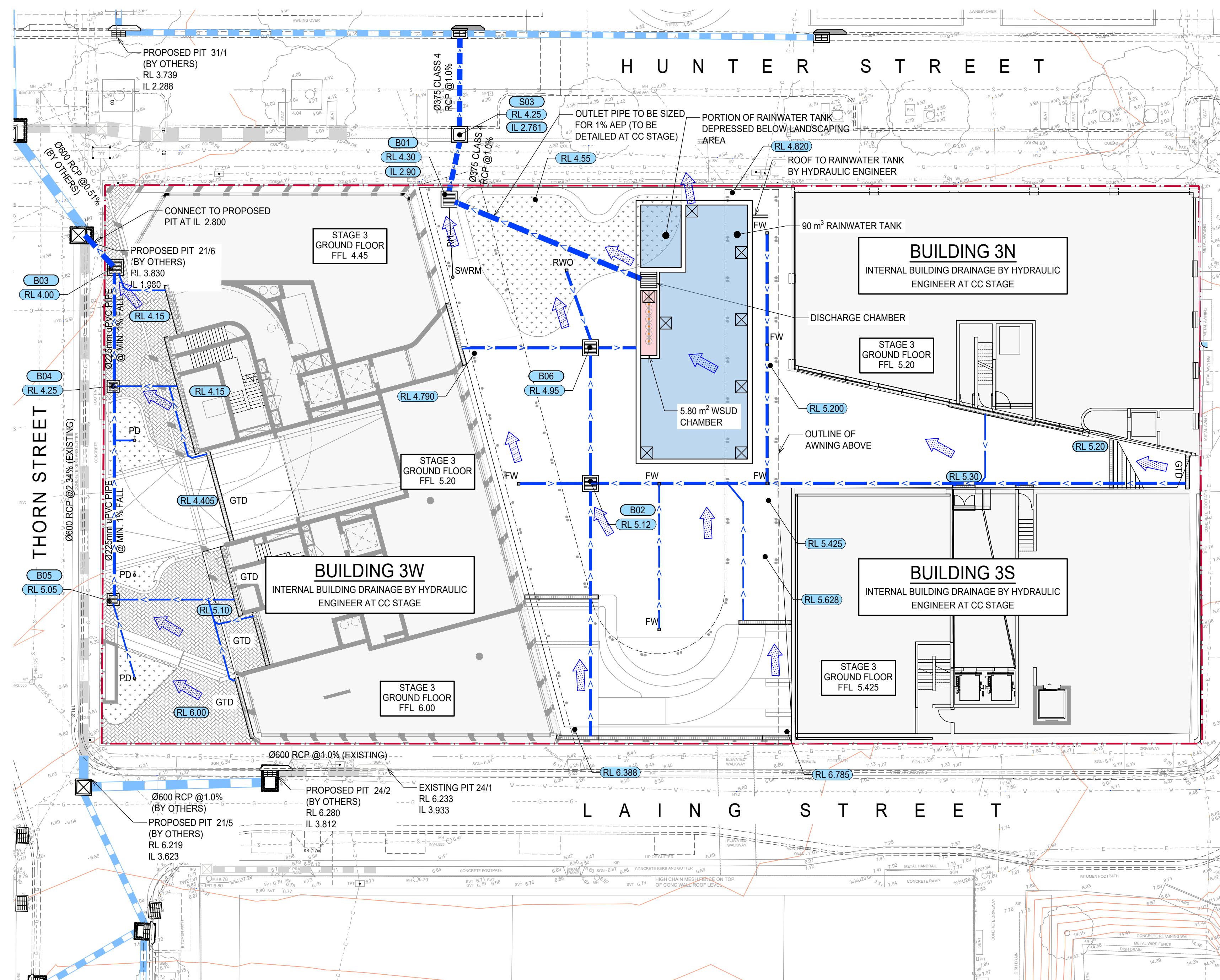
LEGEND

- | | |
|---|------------------------------------|
|  | SITE BOUNDARY |
|  | PROPOSED STORMWATER LINE |
|  | EXISTING STORMWATER LINE |
|  | FUTURE STORMWATER LINE (BY OTHERS) |
|  | EXISTING ELECTRICAL LINE |
|  | EXISTING GAS LINE |
|  | EXISTING TELECOMMUNICATION LINE |
|  | EXISTING SEWER LINE |
|  | EXISTING WATER LINE |
|  | PROPOSED GRATED DRAIN |
|  | GRATED SURFACE INLET PIT |
|  | SEALED JUNCTION PIT |
| DP ○ | DOWN PIPE OUTLET |
| SWRM ○ | STORMWATER RISING MAIN |
| PD ○ | PLANTER DRAIN |
| FW □ | FLOOR WASTE |
|  | PIT TAG/NUMBER |
|  | FINISHED RL |
|  | OVERLAND FLOW DIRECTION |

PIT SCHEDULE					
PIT ID	PIT TYPE	COVER LEVEL (mAHD)	PIT IL (mAHD)	DEPTH TO IL (m)	NOTES
B01	1200x1200 GSP CLASS B GRATE	4.30	2.90	1.40	FITTED WITH OCEANGUARD
B02	900x900 GSP CLASS B GRATE	5.12	4.05	1.07	FITTED WITH OCEANGUARD
B03	900x900 GSP CLASS B GRATE	4.00	3.03	0.97	FITTED WITH OCEANGUARD
B04	600x600 GSP CLASS B GRATE	4.25	3.65	0.60	FITTED WITH OCEANGUARD
B05	600x600 GSP CLASS B GRATE	5.10	4.50	0.60	FITTED WITH OCEANGUARD
B06	600x600 GSP CLASS B GRATE	4.95	3.95	1.00	FITTED WITH OCEANGUARD

1. GENERAL
2. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS ARE IN METRES (U.N.O.).
3. SURVEY INFORMATION HAS BEEN OBTAINED FROM MONTHEAT & POWYS SURVEY TITLED "DETAIL SURVEY OF NEWCASTLE CBD AREA, HUNTER STREET, NEWCASTLE", REF. NO. 07/158, DATED 13/12/2007.
4. FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON THORN STREET HAVE BEEN TAKEN FROM PLANS PREPARED BY NORTHPROP UNDER THE PROJECT TITLED "HUNTER STREET MALL - STREETScape REVITALISATION - DETAILED DESIGN - STAGE 2 - CIVIL ENGINEERING PACKAGE" AND APPROVED UNDER SECTION 138 OF THE ROADS ACT.
5. FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON HUNTER STREET HAVE BEEN TAKEN FROM PRELIMINARY PLANS PREPARED BY NORTHPROP UNDER THE PROJECT TITLED "EAST END REDEVELOPMENT PROJECT - CONCEPT DESIGN - STAGES 3,4,6,7 AND 8 - CIVIL ENGINEERING PACKAGE" .
6. FUTURE PUBLIC DOMAIN STREET UPGRADE WORKS ON MORGAN AND LAING STREETS ARE SHOWN INDICATIVELY AND WILL FORM PART OF A FUTURE PACKAGE.
7. ALL WORKS IN THIS PACKAGE PROPOSED OUTSIDE THE LOT BOUNDARIES ARE SUBJECT TO S138 ROADS ACT APPROVAL.
8. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.

FOR APPROVAL



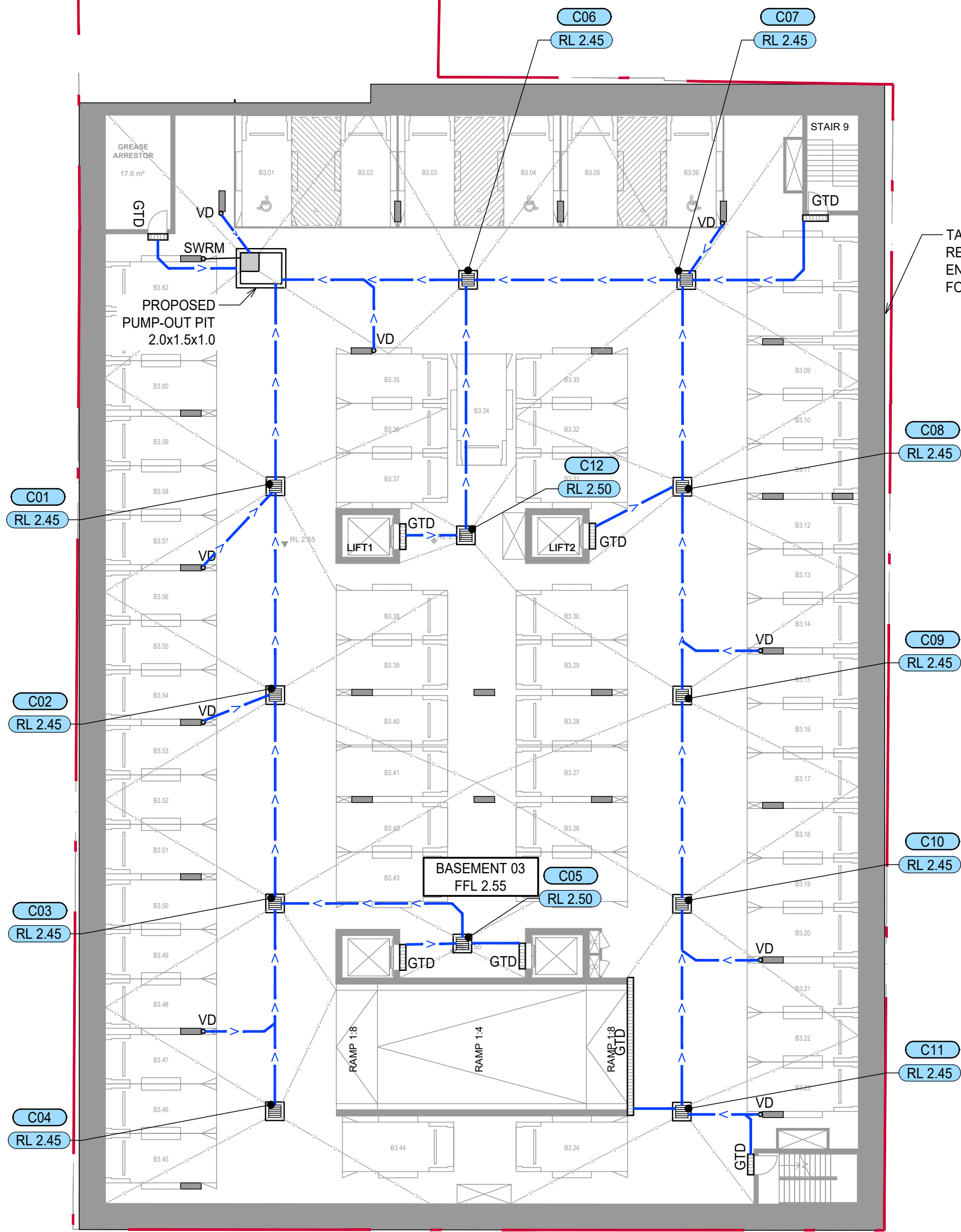
STORMWATER DRAINAGE PLAN - STAGE 3 GROUND FLOOR
SCALE 1:200



	Architect	Client		North	Project	Scale at A1	Drawn	Approved
	SJB ARCHITECTURE LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW	IRIS CAPITAL LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000	XAVIER KNIGHT		EAST END STAGE 3 & 4 HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300	1:200	MS	SS
B	ISSUE FOR APPROVAL	NV	MS	31.03.2023	Sheet Subject	Job No	Drawing No	Revision
A	ISSUE FOR COORDINATION	NV	MS	27.03.2023	This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.	220901	C103	B
Rev	Description	Eng	Draft	Date	STORMWATER MANAGEMENT PLAN STAGE 3 GROUND FLOOR PLAN			

LEGEND

- SITE BOUNDARY
- PROPOSED STORMWATER LINE
- GTD PROPOSED GRATED DRAIN
- RM RISING MAIN
- V VALLEY LINE
- OUTLINE OF LEVEL ABOVE
- GRATED SURFACE INLET PIT
- SEALED JUNCTION PIT
- DP DOWN PIPE OUTLET
- VD VERTICAL DROP
- PD PLANTER DRAIN
- SWRM STORMWATER RISING MAIN
- FW FLOOR WASTE
- PIT A02 PIT TAG/NUMBER
- RL 9.90 FINISHED RL



PUMP-OUT PIT NOTE

PROVIDE 3m³ PUMP-OUT PIT TO MEET THE MINIMUM REQUIREMENTS.

PUMP-OUT PIT TO BE INSTALLED WITH FOLLOWING ITEMS:

- 2 x SUBMERSIBLE PUMPS WITH DUTY OF 5 L/s AT 8.15 m HEAD.
- 900SQ HEAVY DUTY GALVANIZED STEEL GRATE AND FRAME.
- WARNING FLASHING LIGHT TO PROVIDE INDICATION OF PUMP FAILURE.
- CONFINED SPACE SIGN FOR PUBLIC AWARENESS AND WARNING.
- STEP IRONS.

PIT SCHEDULE

PIT ID	PIT TYPE	COVER LEVEL (mAHD)	PIT IL (mAHD)	DEPTH TO IL (m)
C01	900x900 GSIP CLASS D GRATE	2.45	1.75	0.70
C02	600x600 GSIP CLASS D GRATE	2.45	1.85	0.60
C03	600x600 GSIP CLASS D GRATE	2.45	1.95	0.50
C04	450x450 GSIP CLASS D GRATE	2.45	2.05	0.40
C05	450x450 GSIP CLASS D GRATE	2.50	2.05	0.45
C06	450x450 GSIP CLASS D GRATE	2.45	1.55	0.90
C07	450x450 GSIP CLASS D GRATE	2.50	1.65	0.85
C08	450x450 GSIP CLASS D GRATE	2.50	1.75	0.75
C09	900x900 GSIP CLASS D GRATE	2.45	1.85	0.60
C10	600x600 GSIP CLASS D GRATE	2.45	1.95	0.50
C11	600x600 GSIP CLASS D GRATE	2.45	2.05	0.40
C12	450x450 GSIP CLASS D GRATE	2.50	2.05	0.45

GENERAL

- ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE
- ALL PIPES ARE TO BE MINIMUM Ø100mm uPVC STRAPPED TO UNDERSIDE OF SLAB U.N.O.
- ALL PIPES ARE TO BE AT 1% MINIMUM GRADE U.N.O.
- SLAB TO BE GRADED 1% TOWARDS PITS TO MEET REQUIREMENTS OF AS 2890.

STORMWATER DRAINAGE PLAN - STAGE 4S BASEMENT 03

SCALE 1:200

A1 0 2 4 6 8 10 12 14 16 18 20 1:200

Rev	Description	Eng	Draft	Date
B	ISSUE FOR APPROVAL	NV	MS	31.03.2023
A	ISSUE FOR COORDINATION	NV	MS	27.03.2023

Architect
SJB ARCHITECTURE
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW

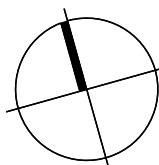
Client
IRIS CAPITAL
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000



T : 02 8810 5800 E : info@xavierknight.com.au
A : Level 7, 210 Clarence Street, Sydney NSW 2000
xavierknight.com.au

This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.

North



Project
EAST END STAGE 3 & 4
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300

Sheet Subject
STORMWATER MANAGEMENT PLAN
STAGE 4S BASEMENT 03

Scale at A1
1:200

Drawn
MS

Approved
SS

Job No
220901

Drawing No
C104

Revision
B

FOR APPROVAL



Project
AST END STAGE 3 & 4
UNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300

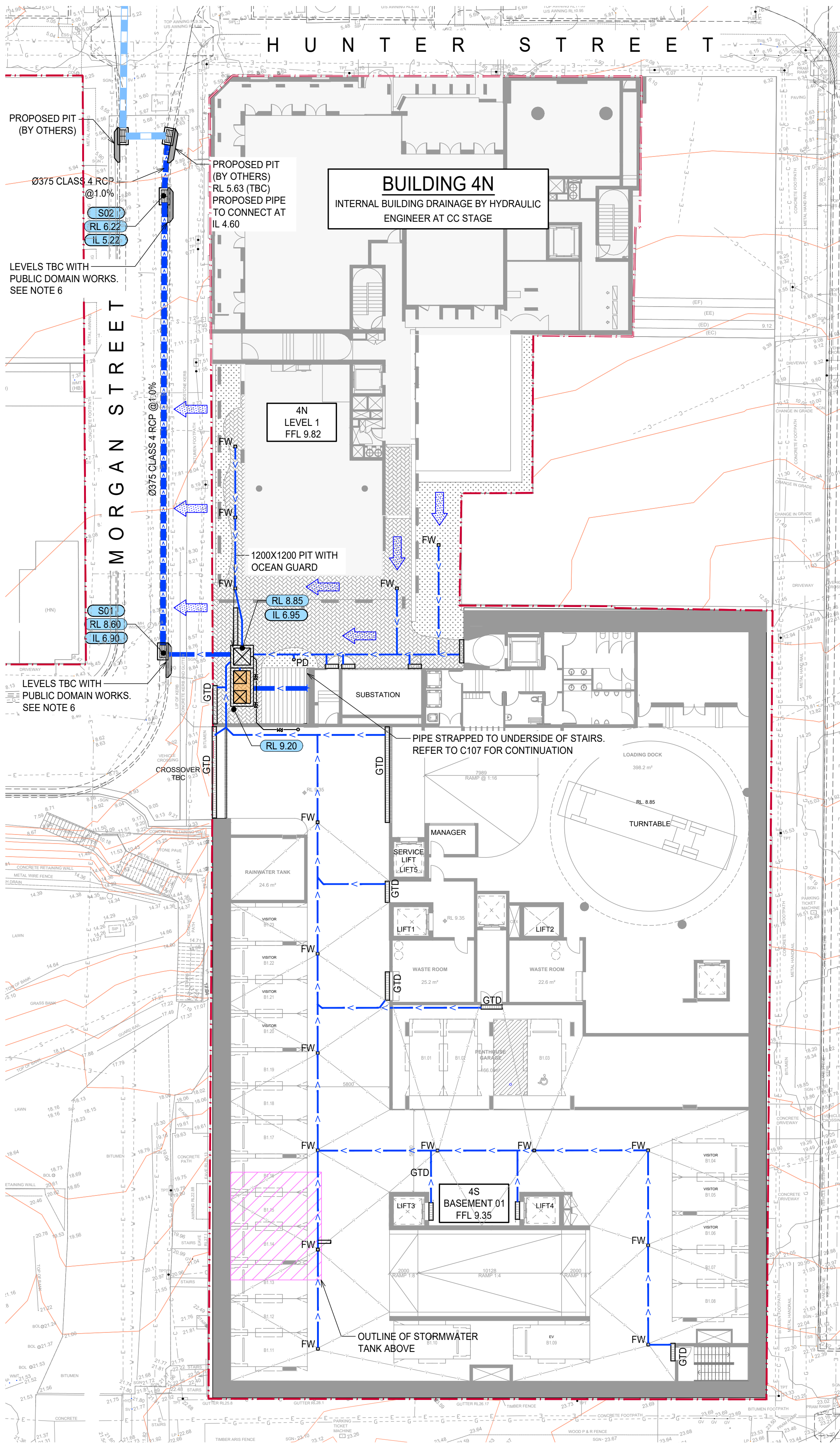
Sheet Subject
TORMWATER MANAGEMENT PLAN
STAGE 4S BASEMENT 02 AND 4N GROUND

1. GENERAL
2. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS ARE IN METRES (U.N.O.)
3. SURVEY INFORMATION HAS BEEN OBTAINED FROM MONTHEAT & POWYS SURVEY TITLED "DETAIL SURVEY OF NEWCASTLE CBD AREA, HUNTER STREET, NEWCASTLE", REF. NO. 07/158, DATED 13/12/2007.
4. FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON THORN STREET HAVE BEEN TAKEN FROM PLANS PREPARED BY NORTHPOR UNDER THE PROJECT TITLED "HUNTER STREET MALL - STREETScape REvITALISATION - DETAILED DESIGN - STAGE 2 - CIVIL ENGINEERING PACKAGE" AND APPROVED UNDER SECTION 138 OF THE ROADS ACT.
5. FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON HUNTER STREET HAVE BEEN TAKEN FROM PRELIMINARY PLANS PREPARED BY NORTHPOR UNDER THE PROJECT TITLED "EAST END REDEVELOPMENT PROJECT - CONCEPT DESIGN - STAGES 3,4,6, 7 AND 8 - CIVIL ENGINEERING PACKAGE".
6. FUTURE PUBLIC DOMAIN STREET UPGRADE WORKS ON MORGAN AND LAING STREETS ARE SHOWN INDICATIVELY AND WILL FORM PART OF A FUTURE PACKAGE.
7. ALL WORKS IN THIS PACKAGE PROPOSED OUTSIDE THE LOT BOUNDARIES ARE SUBJECT TO S138 ROADS ACT APPROVAL.
8. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
9. ALL PIPES ARE TO BE MINIMUM Ø100mm uPVC STRAPPED TO UNDERSIDE OF SLAB U.N.O.
10. ALL PIPES ARE TO BE AT 1% MINIMUM GRADE U.N.O.
11. SLAB TO BE GRADED 1% TOWARDS PITS TO MEET REQUIREMENTS OF AS 2890.

FOR COORDINATION



			Architect			Client			Project			Scale at A1			Drawn			Approved					
			SJB ARCHITECTURE			IRIS CAPITAL			EAST END STAGE 3 & 4			1:200			MS			SS					
			LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW			LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000			HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300														
									xavierknight.com.au														
									This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.														
												Sheet Subject			Job No			Drawing No			Revision		
			B ISSUE FOR APPROVAL			NV MS 31.03.2023						STORMWATER MANAGEMENT PLAN			220901			C105			B		
			A ISSUE FOR COORDINATION			NV MS 27.03.2023						STAGE 4S BASEMENT 02 AND 4N GROUND											
			Rev Description			Eng Draft Date																	



LEGEND

- SITE BOUNDARY
- PROPOSED STORMWATER LINE
- GTD PROPOSED GRATED DRAIN
- RISING MAIN
- VALLEY LINE
- OUTLINE OF LEVEL ABOVE
- GRATED SURFACE INLET PIT
- SEALED JUNCTION PIT
- DP DOWN PIPE OUTLET
- VD VERTICAL DROP
- PD PLANTER DRAIN
- SWRM STORMWATER RISING MAIN
- FW FLOOR WASTE
- PIT A02 PIT TAG/NUMBER
- RL 9.90 FINISHED RL
- OVERLAND FLOW DIRECTION

- GENERAL
- ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS ARE IN METRES (U.N.O.).
- SURVEY INFORMATION HAS BEEN OBTAINED FROM MONTHET & POWYS SURVEY TITLED "DETAIL SURVEY OF NEWCASTLE CBD AREA, HUNTER STREET, NEWCASTLE", REF. NO. 07/158, DATED 13/12/2007.
- FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON THORN STREET HAVE BEEN TAKEN FROM PLANS PREPARED BY NORTHROP UNDER THE PROJECT TITLED "HUNTER STREET MALL - STREETSCAPE REVITALISATION - DETAILED DESIGN - STAGE 2 - CIVIL ENGINEERING PACKAGE" AND APPROVED UNDER SECTION 138 OF THE ROADS ACT.
- FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON HUNTER STREET HAVE BEEN TAKEN FROM PRELIMINARY PLANS PREPARED BY NORTHROP UNDER THE PROJECT TITLED "EAST END REDEVELOPMENT PROJECT - CONCEPT DESIGN - STAGES 3, 4, 6, 7 AND 8 - CIVIL ENGINEERING PACKAGE".
- FUTURE PUBLIC DOMAIN STREET UPGRADE WORKS ON MORGAN AND LAING STREETS ARE SHOWN INDICATIVELY AND WILL FORM PART OF A FUTURE PACKAGE.
- ALL WORKS IN THIS PACKAGE PROPOSED OUTSIDE THE LOT BOUNDARIES ARE SUBJECT TO S138 ROADS ACT APPROVAL.
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL PIPES ARE TO BE MINIMUM Ø100mm uPVC STRAPPED TO UNDERSIDE OF SLAB U.N.O.
- ALL PIPES ARE TO BE AT 1% MINIMUM GRADE U.N.O.
- SLAB TO BE GRADED 1% TOWARDS PITS TO MEET REQUIREMENTS OF AS 2890.

STORMWATER DRAINAGE PLAN - STAGE 4S BASEMENT 01 AND 4N LEVEL 1
SCALE 1:200

FOR COORDINATION

A1 0 2 4 6 8 10 12 14 16 18 20 1:200

Architect			
SJB ARCHITECTURE			
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW			
Client			
IRIS CAPITAL			
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000			
XAVIER KNIGHT			
T: 02 8810 5800 E: info@xavierknight.com.au			
A: Level 7, 210 Clarence Street, Sydney NSW 2000			
xavierknight.com.au			
This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.			
North			
Project			
EAST END STAGE 3 & 4			
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300			
Sheet Subject			
STORMWATER MANAGEMENT PLAN			
STAGE 4S BASEMENT 01 AND 4N LEVEL 1			
Scale at A1			
1:200			
Drawn			
MS			
Approved			
SS			
Job No			
220901			
Drawing No			
C106			
Revision			
B			
Rev Description			
Eng Draft Date			
B ISSUE FOR APPROVAL NV MS 31.03.2023			
A ISSUE FOR COORDINATION NV MS 27.03.2023			

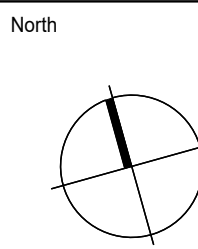
Architect
SJB ARCHITECTURE
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW

Client
IRIS CAPITAL
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000



T: 02 8810 5800 E: info@xavierknight.com.au
A: Level 7, 210 Clarence Street, Sydney NSW 2000
xavierknight.com.au

This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.



Project
EAST END STAGE 3 & 4
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300

Sheet Subject
STORMWATER MANAGEMENT PLAN
STAGE 4S BASEMENT 01 AND 4N LEVEL 1

Scale at A1
1:200

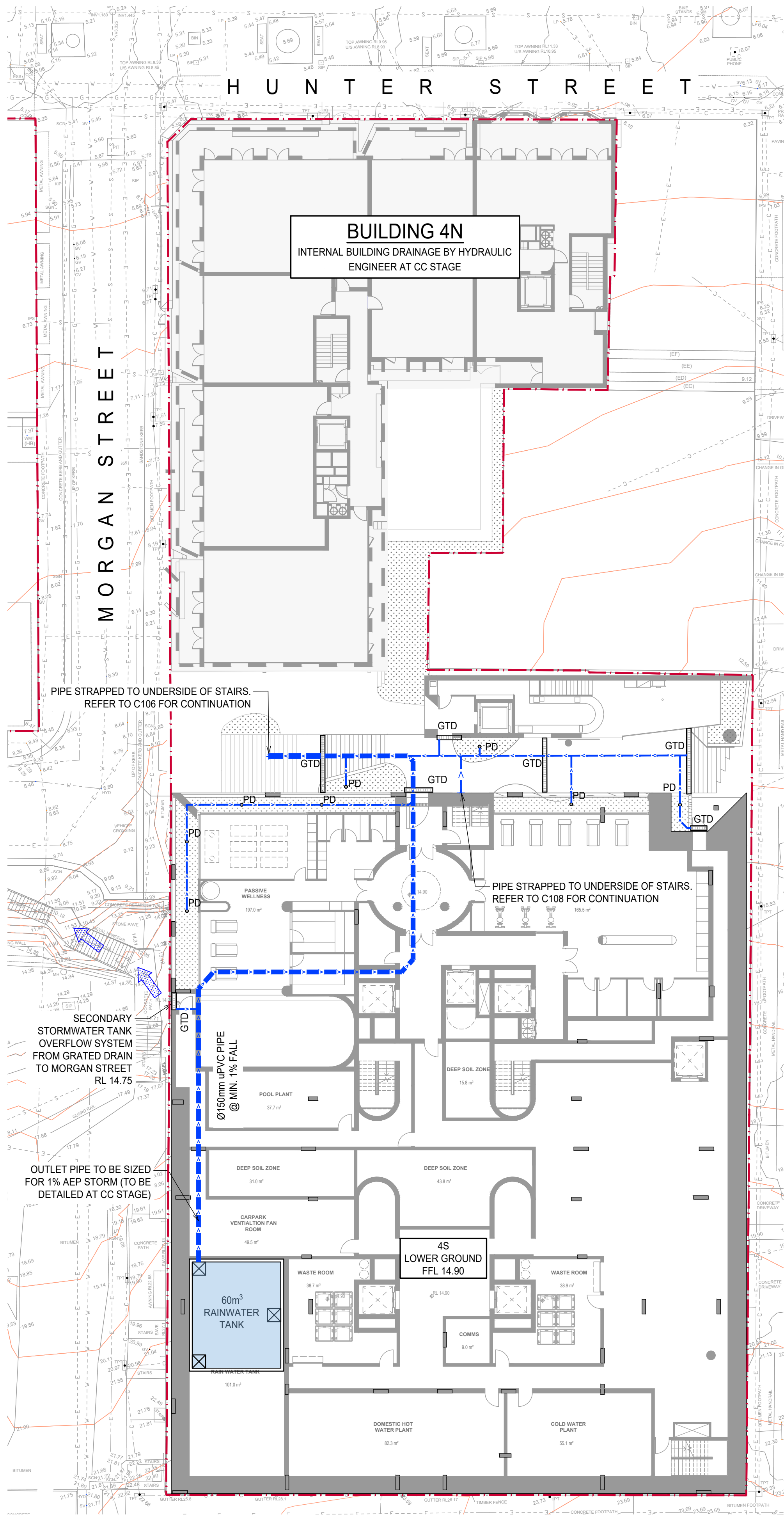
Drawn
MS

Approved
SS

Job No
220901

Drawing No
C106

Revision
B



LEGEND

- SITE BOUNDARY
- PROPOSED STORMWATER LINE
- GTD — PROPOSED GRATED DRAIN
- RISING MAIN
- VALLEY LINE
- OUTLINE OF LEVEL ABOVE
- GRATED SURFACE INLET PIT
- SEALED JUNCTION PIT
- DP — DOWN PIPE OUTLET
- VD — VERTICAL DROP
- PD — PLANTER DRAIN
- SWRM — STORMWATER RISING MAIN
- FW — FLOOR WASTE
- PIT A02 — PIT TAG/NUMBER
- RL 9.90 — FINISHED RL

- GENERAL
- ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS ARE IN METRES (U.N.O.).
- SURVEY INFORMATION HAS BEEN OBTAINED FROM MONTHET & POWYS SURVEY TITLED "DETAIL SURVEY OF NEWCASTLE CBD AREA, HUNTER STREET, NEWCASTLE", REF. NO. 07/158, DATED 13/12/2007.
- FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON THORN STREET HAVE BEEN TAKEN FROM PLANS PREPARED BY NORTHROP UNDER THE PROJECT TITLED "HUNTER STREET MALL - STREETSCAPE REVITALISATION - DETAILED DESIGN - STAGE 2 - CIVIL ENGINEERING PACKAGE" AND APPROVED UNDER SECTION 138 OF THE ROADS ACT.
- FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON HUNTER STREET HAVE BEEN TAKEN FROM PRELIMINARY PLANS PREPARED BY NORTHROP UNDER THE PROJECT TITLED "EAST END REDEVELOPMENT PROJECT - CONCEPT DESIGN - STAGES 3,4,6,7 AND 8 - CIVIL ENGINEERING PACKAGE".
- FUTURE PUBLIC DOMAIN STREET UPGRADE WORKS ON MORGAN AND LAING STREETS ARE SHOWN INDICATIVELY AND WILL FORM PART OF A FUTURE PACKAGE.
- ALL WORKS IN THIS PACKAGE PROPOSED OUTSIDE THE LOT BOUNDARIES ARE SUBJECT TO S138 ROADS ACT APPROVAL.
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL PIPES ARE TO BE MINIMUM Ø100mm uPVC STRAPPED TO UNDERSIDE OF SLAB U.N.O.
- ALL PIPES ARE TO BE AT 1% MINIMUM GRADE U.N.O.
- SLAB TO BE GRADED 1% TOWARDS PITS TO MEET REQUIREMENTS OF AS 2890.

FOR COORDINATION

A1 0 2 4 6 8 10 12 14 16 18 20 1:200

Architect			
SJB ARCHITECTURE			
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW			
Client			
IRIS CAPITAL			
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000			
Project			
EAST END STAGE 3 & 4			
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300			
Sheet Subject			
STORMWATER MANAGEMENT PLAN STAGE 4S LOWER GROUND			
Scale at A1			
1:200			
Drawn			
MS			
Approved			
SS			
Job No			
220901			
Drawing No			
C107			
Revision			
B			
Rev Description			
Eng Draft Date			
B ISSUE FOR APPROVAL NV MS 31.03.2023			
A ISSUE FOR COORDINATION NV MS 27.03.2023			

Architect
SJB ARCHITECTURE
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW

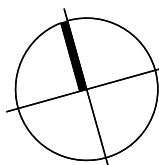
Client
IRIS CAPITAL
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000



T : 02 8810 5800 E : info@xavierknight.com.au
A : Level 7, 210 Clarence Street, Sydney NSW 2000
xavierknight.com.au

This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.

North



Project
EAST END STAGE 3 & 4
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300

Sheet Subject
STORMWATER MANAGEMENT PLAN STAGE 4S LOWER GROUND

Scale at A1
1:200

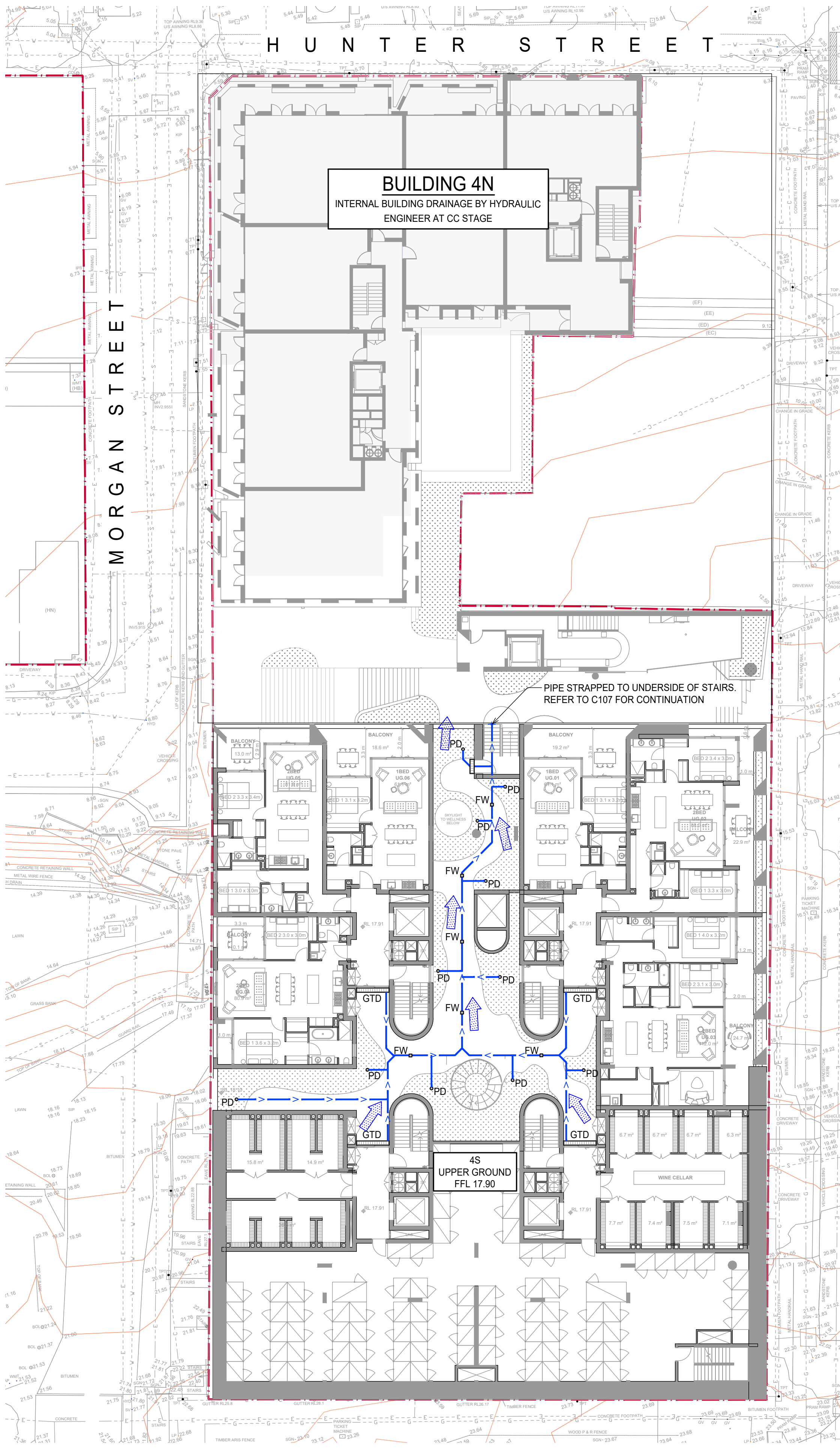
Drawn
MS

Approved
SS

Job No
220901

Drawing No
C107

Revision
B



STORMWATER DRAINAGE PLAN - STAGE 4S UPPER GROUND
SCALE 1:200

LEGEND

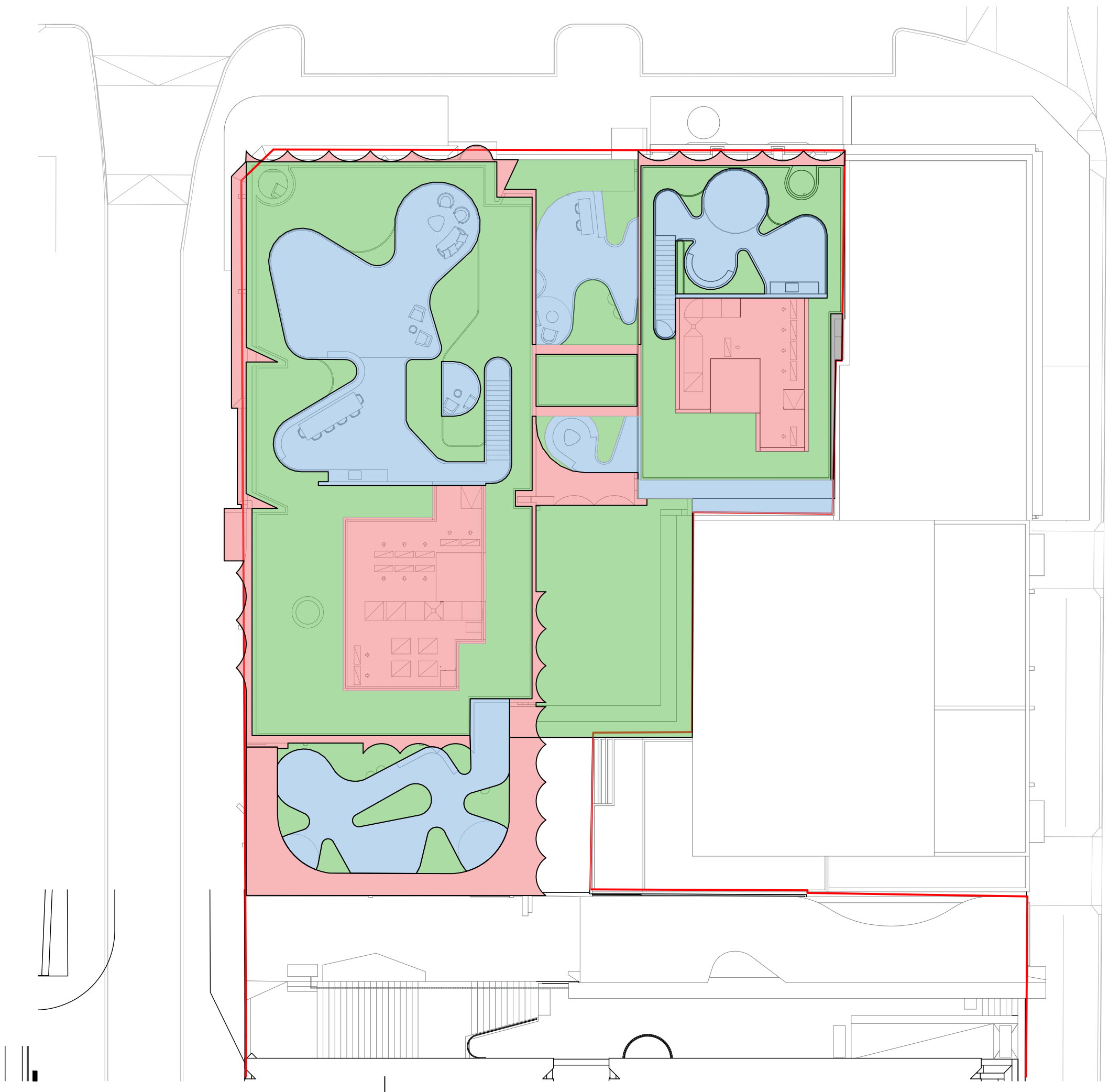
- SITE BOUNDARY
- PROPOSED STORMWATER LINE
- GTD
- PROPOSED GRATED DRAIN
- RISING MAIN
- VALLEY LINE
- OUTLINE OF LEVEL ABOVE
- GRATED SURFACE INLET PIT
- SEALED JUNCTION PIT
- DP
- DOWN PIPE OUTLET
- VD
- VERTICAL DROP
- PD
- PLANTER DRAIN
- SWRM
- STORMWATER RISING MAIN
- FW
- FLOOR WASTE
- PIT TAG/NUMBER
- FINISHED RL
- OVERLAND FLOW DIRECTION

- GENERAL
- ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS ARE IN METRES (U.N.O.).
- SURVEY INFORMATION HAS BEEN OBTAINED FROM MONTHET & POWYS SURVEY TITLED "DETAIL SURVEY OF NEWCASTLE CBD AREA, HUNTER STREET, NEWCASTLE", REF. NO. 07/158, DATED 13/12/2007.
- FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON THORN STREET HAVE BEEN TAKEN FROM PLANS PREPARED BY NORTHROP UNDER THE PROJECT TITLED "HUNTER STREET MALL - STREETSCAPE REVITALISATION - DETAILED DESIGN - STAGE 2 - CIVIL ENGINEERING PACKAGE" AND APPROVED UNDER SECTION 138 OF THE ROADS ACT.
- FUTURE PUBLIC DOMAIN STREET AND STORM DRAINAGE UPGRADE WORKS ON HUNTER STREET HAVE BEEN TAKEN FROM PRELIMINARY PLANS PREPARED BY NORTHROP UNDER THE PROJECT TITLED "EAST END REDEVELOPMENT PROJECT - CONCEPT DESIGN - STAGES 3,4,6,7 AND 8 - CIVIL ENGINEERING PACKAGE".
- FUTURE PUBLIC DOMAIN STREET UPGRADE WORKS ON MORGAN AND LAING STREETS ARE SHOWN INDICATIVELY AND WILL FORM PART OF A FUTURE PACKAGE.
- ALL WORKS IN THIS PACKAGE PROPOSED OUTSIDE THE LOT BOUNDARIES ARE SUBJECT TO S138 ROADS ACT APPROVAL.
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL PIPES ARE TO BE MINIMUM Ø100mm uPVC STRAPPED TO UNDERSIDE OF SLAB U.N.O.
- ALL PIPES ARE TO BE AT 1% MINIMUM GRADE U.N.O.
- SLAB TO BE GRADED 1% TOWARDS PITS TO MEET REQUIREMENTS OF AS 2890.

FOR APPROVAL

A1 0 2 4 6 8 10 12 14 16 18 20 1:200

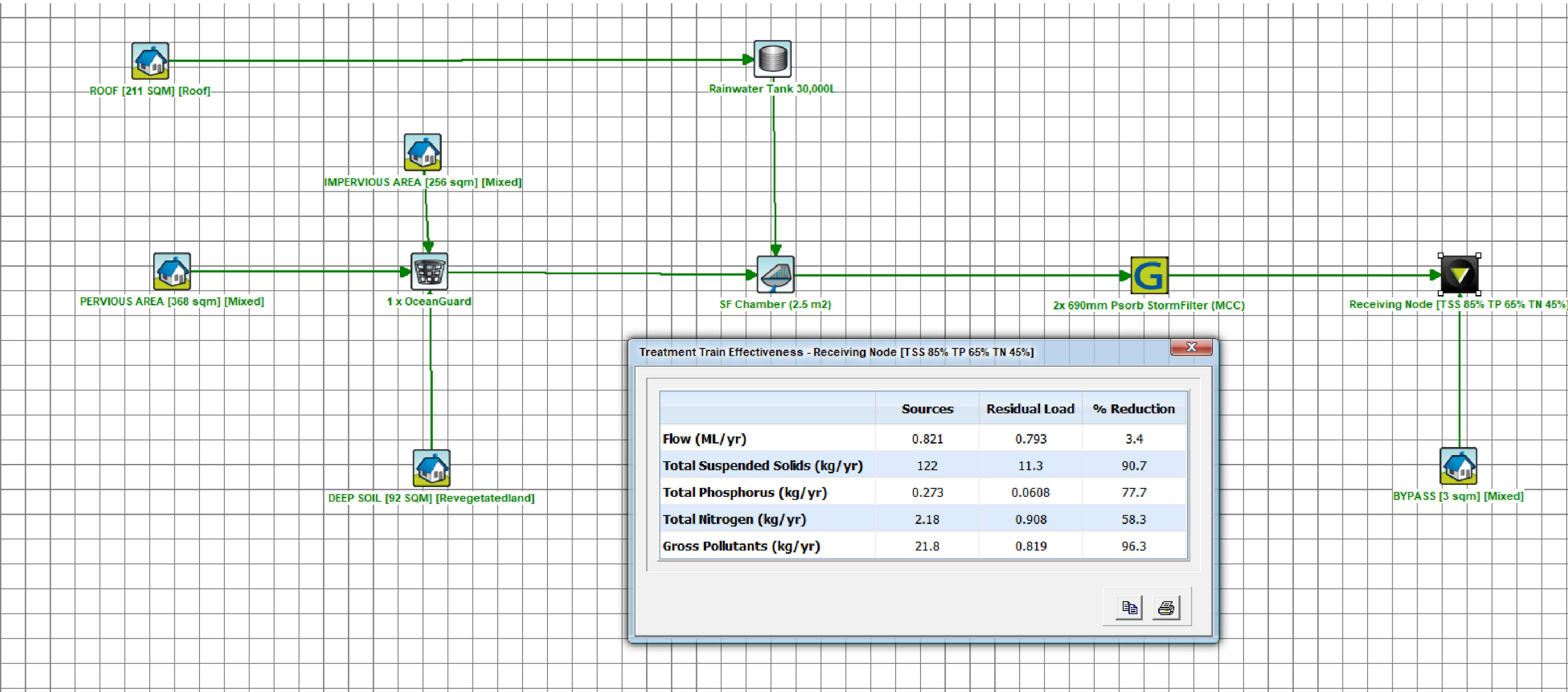
Architect			
SJB ARCHITECTURE			
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW			
Client			
IRIS CAPITAL			
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000			
XAVIER KNIGHT			
T : 02 8810 5800 E : info@xavierknight.com.au			
A : Level 7, 210 Clarence Street, Sydney NSW 2000			
xavierknight.com.au			
This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.			
North			
Project			
EAST END STAGE 3 & 4			
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300			
Sheet Subject			
STORMWATER MANAGEMENT PLAN			
STAGE 4S UPPER GROUND			
Scale at A1			
1:200			
Drawn			
AA			
Approved			
SS			
Job No			
220901			
Drawing No			
C108			
Revision			
A			
A ISSUE FOR APPROVAL			
AA 31.03.2023			
Rev Description			
Eng Draft Date			



MUSIC CATCHMENT PLAN STAGE 4N
SCALE 1:200

LEGEND

- PERVIOUS LAND USE TO OCEAN GUARD AND WSUD CHAMBER (460.0 m²)
- IMPERVIOUS LAND USE TO OCEAN GUARD AND WSUD CHAMBER (256 m²)
- ROOF LAND USE TO RWT AND WSUD CHAMBER (211 m²)
- IMPERVIOUS BYPASS AREA (3 m²)



FOR APPROVAL

A1 0 2 4 6 8 10 12 14 16 18 20 1:200

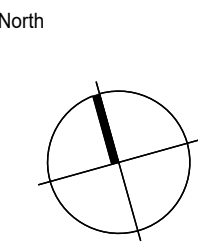
A	ISSUE FOR APPROVAL	NV	NV 31.03.2023
Rev	Description	Eng	Draft Date

Architect
SJB ARCHITECTURE
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW

Client
IRIS CAPITAL
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000

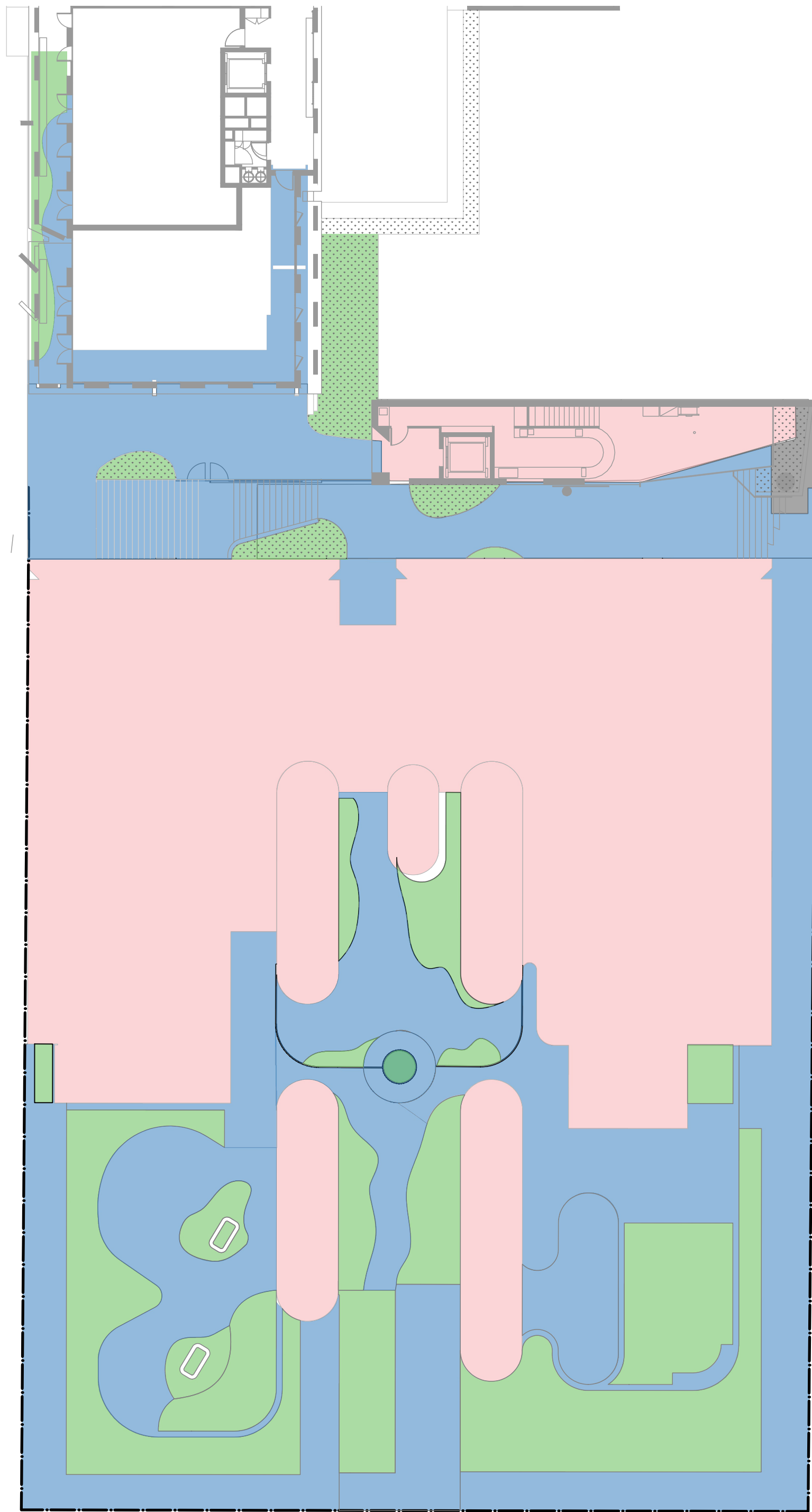


T : 02 8810 5800 E : info@xavierknight.com.au
A : Level 7, 210 Clarence Street, Sydney NSW 2000
xavierknight.com.au
This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.



Project
EAST END STAGE 3 & 4
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300
Sheet Subject
MUSIC CATCHMENT PLAN STAGE 4N

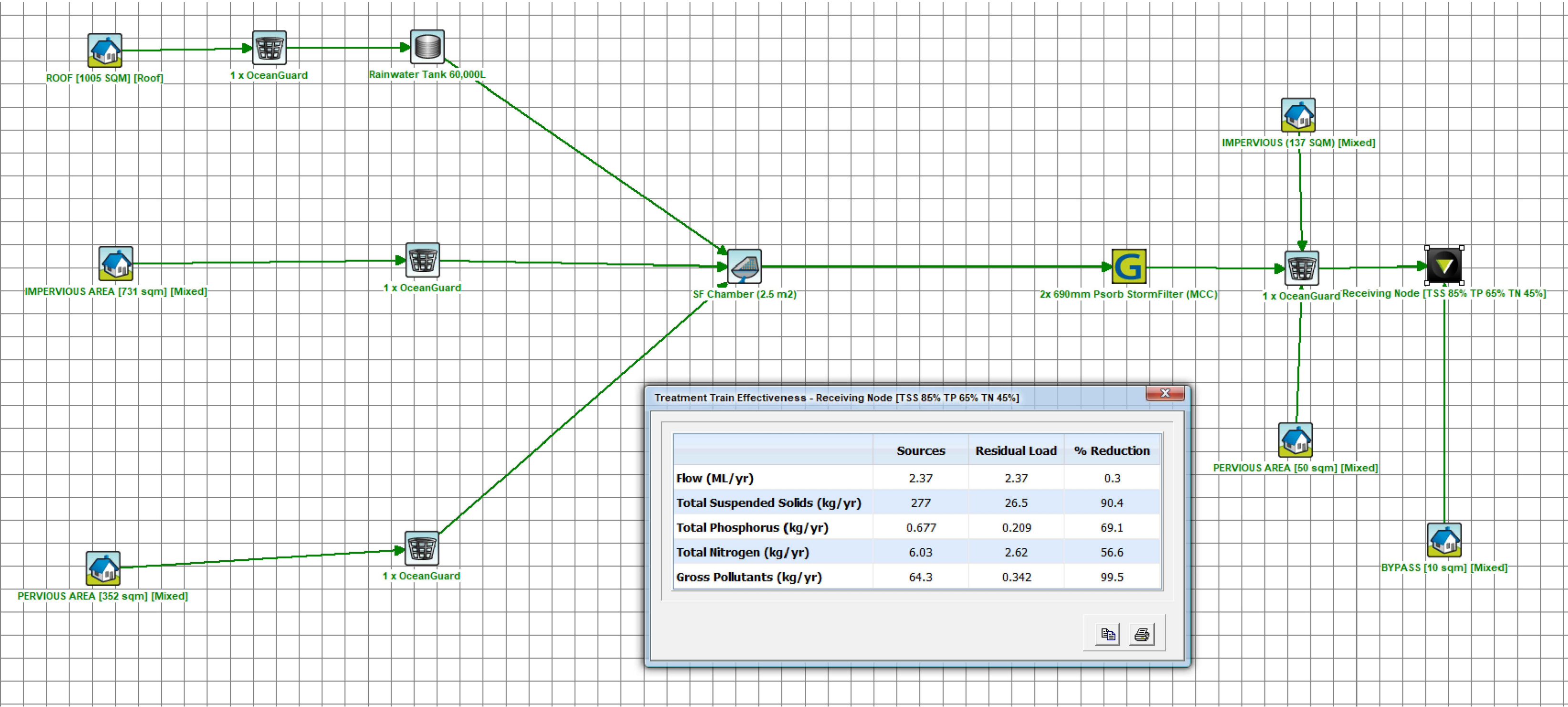
Scale at A1	Drawn	Approved
NTS	NV	SS
Job No	Drawing No	Revision
220901	C171	A



MUSIC CATCHMENT PLAN STAGE 4S
SCALE 1:200

LEGEND

- PERVIOUS LAND USE TO OCEAN GUARD AND WSUD CHAMBER (402.0 m²)
- IMPERVIOUS LAND USE TO OCEAN GUARD AND WSUD CHAMBER (869 m²)
- ROOF LAND USE TO RWT AND WSUD CHAMBER (1005 m²)
- IMPERVIOUS BYPASS AREA (10 m²)



FOR APPROVAL

A1 0 2 4 6 8 10 12 14 16 18 20 1:200

Architect			
SJB ARCHITECTURE			
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW			
Client			
IRIS CAPITAL			
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000			
Project			
EAST END STAGE 3 & 4			
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300			
Sheet Subject			
MUSIC CATCHMENT PLAN STAGE 4S			
Scale at A1			
1:200			
Drawn			
NV			
Approved			
SS			
Job No			
220901			
Drawing No			
C172			
Revision			
A			
Rev Description			
Eng Draft Date			
A ISSUE FOR APPROVAL NV NV 31.03.2023			

Architect
SJB ARCHITECTURE
LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW

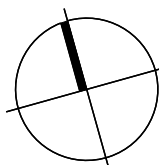
Client
IRIS CAPITAL
LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000



T : 02 8810 5800 E : info@xavierknight.com.au
A : Level 7, 210 Clarence Street, Sydney NSW 2000
xavierknight.com.au

This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.

North



Project
EAST END STAGE 3 & 4
HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300

Sheet Subject
MUSIC CATCHMENT PLAN STAGE 4S

Scale at A1
1:200

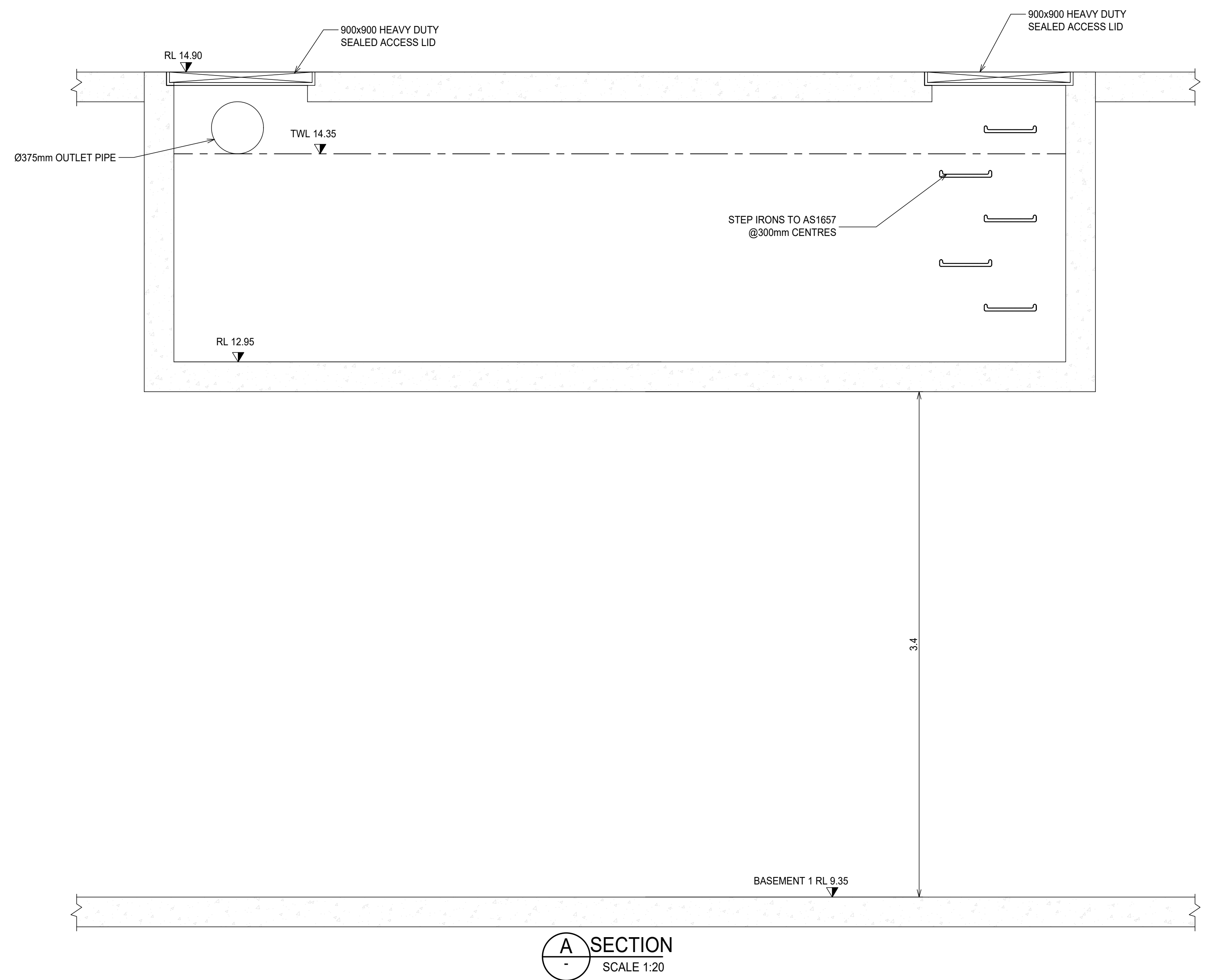
Drawn
NV

Approved
SS

Job No
220901

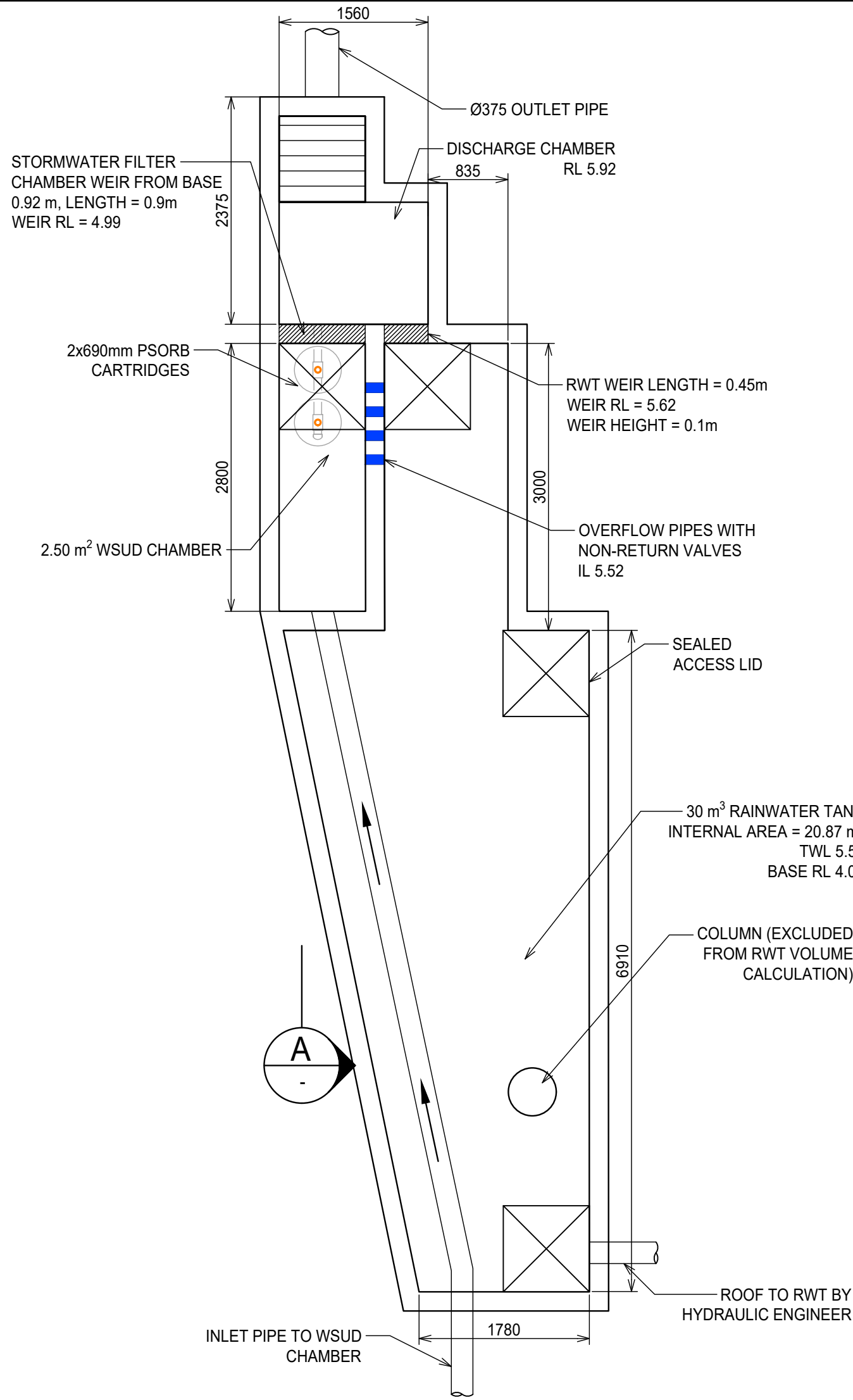
Drawing No
C172

Revision
A

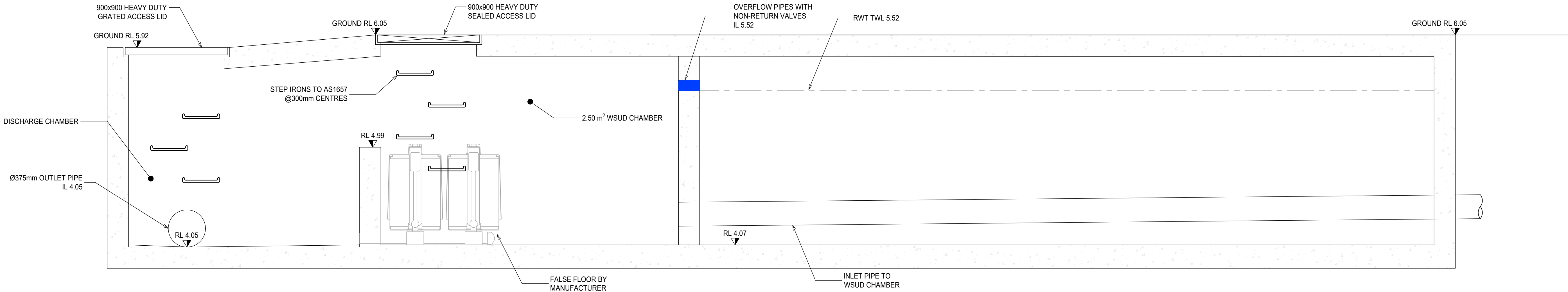


FOR APPROVAL

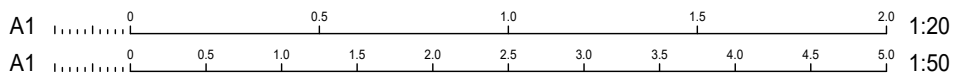
<div>Architect</div> <div>SJB ARCHITECTURE</div> <div>LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW</div>				<div>Client</div> <div>IRIS CAPITAL</div> <div>LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000</div>				<div>Project</div> <div>EAST END STAGE 3 & 4</div> <div>HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300</div>				<div>Scale at A1</div> <div>AS SHOWN</div>				<div>Drawn</div> <div>NV</div>				<div>Approved</div> <div>SS</div>			
<div>North</div>				<div>Sheet Subject</div> <div>STORMWATER DETAILS SHEET 01</div>				<div>Job No</div> <div>220901</div>				<div>Drawing No</div> <div>C200</div>				<div>Revision</div> <div>A</div>							
<div><div><div><div></div></div><div><div></div></div></div><div><div><div></div></div><div><div></div></div></div></div> <div>XAVIER KNIGHT</div> <div>T : 02 9810 5800 E : info@xavierknight.com.au A : Level 7, 210 Clarence Street, Sydney NSW 2000 xavierknight.com.au This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.</div>																							
<div>B ISSUE FOR APPROVAL</div> <div>NV NV 31.03.2023</div>																							
<div>A ISSUE FOR COORDINATION</div> <div>NV NV 27.03.2023</div>																							
<div>Rev Description</div> <div>Eng Draft Date</div>																							



RAINWATER TANK/ WSUD CHAMBER 4N PLAN
SCALE 1:50



SECTION A-A
SCALE 1:20

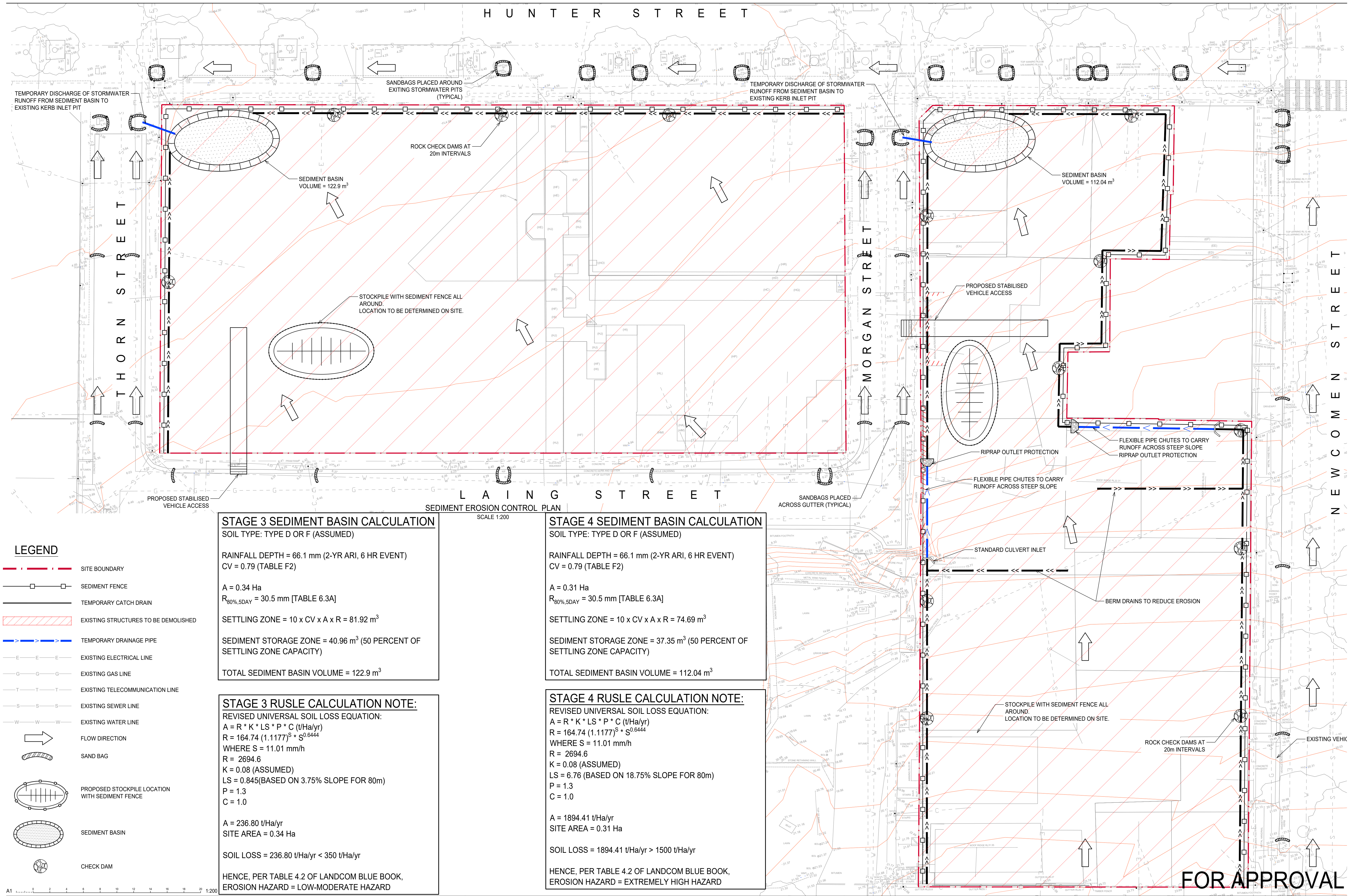


<div>Architect</div> <div>SJB ARCHITECTURE</div> <div>LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW</div>	<div>Client</div> <div>IRIS CAPITAL</div> <div>LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000</div>	<div><div></div><div>XAVIER KNIGHT</div></div> <div>T : 02 8810 5800 E : info@xavierknight.com.au A : Level 7, 210 Clarence Street, Sydney NSW 2000 xavierknight.com.au This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.</div>	<div>North</div> <div>Project</div> <div>EAST END STAGE 3 & 4 HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300</div> <div>Sheet Subject</div> <div>STORMWATER DETAILS SHEET 02</div>	<div>Scale at A1</div> <div>AS SHOWN</div> <div>Job No</div> <div>220901</div> <div>Drawn</div> <div>NV</div> <div>Drawing No</div> <div>C201</div> <div>Approved</div> <div>SS</div> <div>Revision</div> <div>A</div>
<div>Rev</div> <div>Description</div> <div>Eng</div> <div>Draft</div> <div>Date</div>	<div>B</div> <div>ISSUE FOR APPROVAL</div> <div>NV</div> <div>NV</div> <div>31.03.2023</div>	<div>A</div> <div>ISSUE FOR COORDINATION</div> <div>NV</div> <div>NV</div> <div>27.03.2023</div>		

FOR APPROVAL



Scale at A1	Drawn	Approved
1:50	AA	SS
Job No	Drawing No	Revision
220901	C202	A



LEGEND

SITE BOUNDARY

SEDIMENT FENCE

TEMPORARY CATCH DRAIN

EXISTING STRUCTURES TO BE DEMOLISHED

TEMPORARY DRAINAGE PIPE

EXISTING ELECTRICAL LINE

EXISTING GAS LINE

EXISTING TELECOMMUNICATION LINE

EXISTING SEWER LINE

EXISTING WATER LINE

FLOW DIRECTION

SAND BAG

PROPOSED STOCKPILE LOCATION WITH SEDIMENT FENCE

SEDIMENT BASIN

CHECK DAM

STAGE 3 SEDIMENT BASIN CALCULATION

SOIL TYPE: TYPE D OR F (ASSUMED)

RAINFALL DEPTH = 66.1 mm (2-YR ARI, 6 HR EVENT)

CV = 0.79 (TABLE F2)

A = 0.34 Ha

$R_{90\%,5DAY} = 30.5 \text{ mm}$ [TABLE 6.3A]

SETTLING ZONE = $10 \times CV \times A \times R = 81.92 \text{ m}^3$

SEDIMENT STORAGE ZONE = 40.96 m^3 (50 PERCENT OF SETTLING ZONE CAPACITY)

TOTAL SEDIMENT BASIN VOLUME = 122.9 m^3

STAGE 3 RUSLE CALCULATION NOTE:

REVISED UNIVERSAL SOIL LOSS EQUATION:

$A = R * K * LS * P * C \text{ (t/Ha/yr)}$

$R = 164.74 \text{ (1.1177)}^S * S^{0.6444}$

WHERE S = 11.01 mm/h

R = 2694.6

K = 0.08 (ASSUMED)

LS = 0.845(BASED ON 3.75% SLOPE FOR 80m)

P = 1.3

C = 1.0

A = 236.80 t/Ha/yr

SITE AREA = 0.34 Ha

SOIL LOSS = 236.80 t/Ha/yr < 350 t/Ha/yr

HENCE, PER TABLE 4.2 OF LANDCOM BLUE BOOK, EROSION HAZARD = LOW-MODERATE HAZARD

STAGE 4 SEDIMENT BASIN CALCULATION

SOIL TYPE: TYPE D OR F (ASSUMED)

RAINFALL DEPTH = 66.1 mm (2-YR ARI, 6 HR EVENT)

CV = 0.79 (TABLE F2)

A = 0.31 Ha

$R_{90\%,5DAY} = 30.5 \text{ mm}$ [TABLE 6.3A]

SETTLING ZONE = $10 \times CV \times A \times R = 74.69 \text{ m}^3$

SEDIMENT STORAGE ZONE = 37.35 m^3 (50 PERCENT OF SETTLING ZONE CAPACITY)

TOTAL SEDIMENT BASIN VOLUME = 112.04 m^3

STAGE 4 RUSLE CALCULATION NOTE:

REVISED UNIVERSAL SOIL LOSS EQUATION:

$A = R * K * LS * P * C \text{ (t/Ha/yr)}$

$R = 164.74 \text{ (1.1177)}^S * S^{0.6444}$

WHERE S = 11.01 mm/h

R = 2694.6

K = 0.08 (ASSUMED)

LS = 6.76 (BASED ON 18.75% SLOPE FOR 80m)

P = 1.3

C = 1.0

A = 1894.41 t/Ha/yr

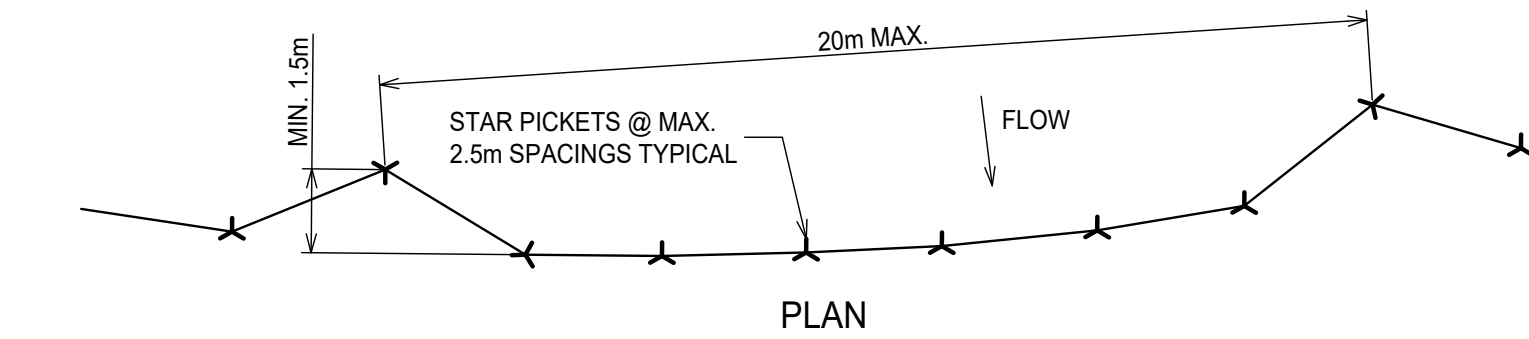
SITE AREA = 0.31 Ha

SOIL LOSS = 1894.41 t/Ha/yr > 1500 t/Ha/yr

HENCE, PER TABLE 4.2 OF LANDCOM BLUE BOOK, EROSION HAZARD = EXTREMELY HIGH HAZARD

FOR APPROVAL

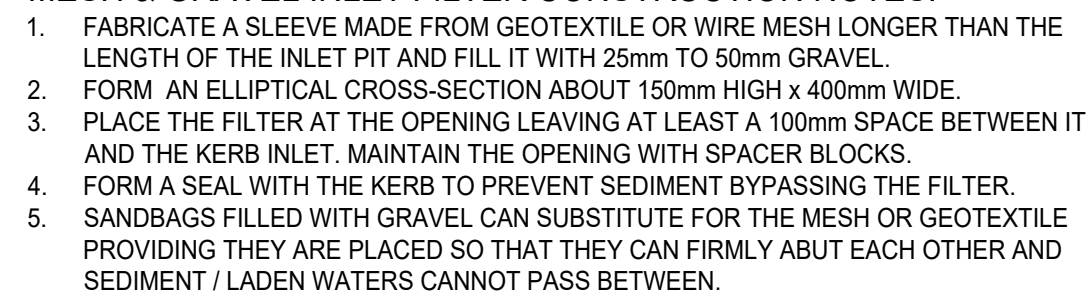
			<div>Architect</div> <div>SJB ARCHITECTURE</div> <div>LEVEL 2, 490 CROWN ST, SURRY HILLS, NSW</div>			<div>Client</div> <div>IRIS CAPITAL</div> <div>LEVEL 41/264 GEORGE ST, SYDNEY NSW 2000</div>			<div><div></div><div>XAVIER KNIGHT</div><div>T : 02 8810 5800 E : info@xavierknight.com.au A : Level 7, 210 Clarence Street, Sydney NSW 2000 xavierknight.com.au <div>This drawing is copyright and is the property of XAVIER KNIGHT CONSULTING ENGINEERS Pty. Ltd. and must not be used without authorisation.</div></div></div>			<div>North</div> <div><div></div></div>			<div>Project</div> <div>EAST END STAGE 3 & 4</div> <div>HUNTER, MORGAN, NEWCOMEN, KING STREET NEWCASTLE NSW 2300</div> <div>Sheet Subject</div> <div>SEDIMENT & EROSION CONTROL PLAN</div>			<div>Scale at A1</div> <div>1:200</div> <div>Drawn</div> <div>AA</div> <div>Approved</div> <div>SS</div>		
<div>A ISSUE FOR APPROVAL</div> <div>Rev Description</div>			<div>AA AA 31.03.2023</div> <div>Eng Draft Date</div>									<div>Job No</div> <div>220901</div> <div>Drawing No</div> <div>C320</div> <div>Revision</div> <div>A</div>								



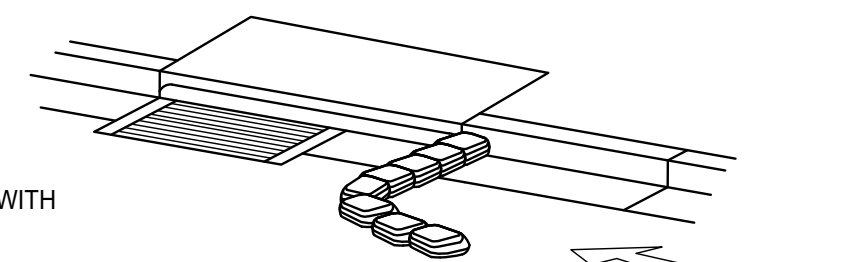
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150 mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND @ 2.5 m INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150 mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



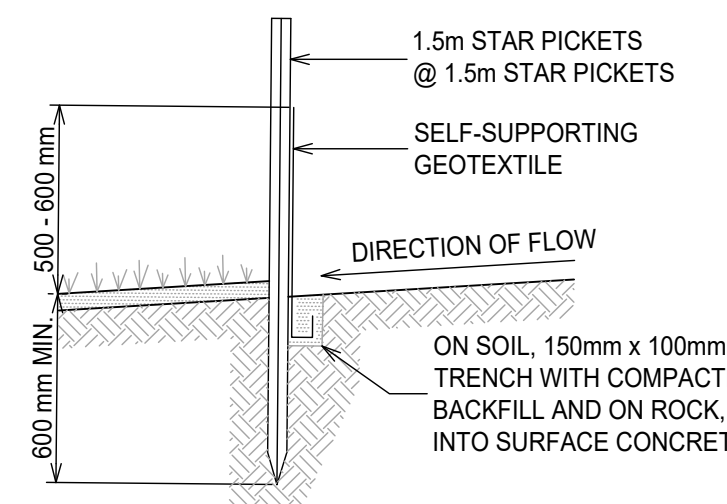
1. THIS DEVICE IS TO BE LOCATED AT ALL EXITS FROM CONSTRUCTION SITE.
2. THIS DEVICE IS TO BE REGULARLY CLEANED OF DEPOSITED MATERIAL SO AS TO MAINTAIN A 50mm DEEP SPACE BETWEEN PLANKS.
3. ANY UNSEALED ROAD BETWEEN THIS DEVICE AND NEAREST ROADWAY IS TO BE TOPPED WITH 100mm THICK 40-70mm SIZE AGGREGATE.
4. ALTERNATIVELY, THREE(3) PRECAST CONCRETE CATTLE GRIDS (AS MANUFACTURED BY "HUMES CONCRETE MAY BE USED. 1, 2 & 3 ABOVE ALSO APPLY.



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



SCALE N.T.S.



The diagram illustrates a cross-section of a slope with a sediment fence. On the left, a horizontal line represents the ground surface, with an arrow labeled 'FLOW' pointing to the right. A vertical line labeled 'EARTH BANK' points to the ground surface. The slope itself is represented by a hatched area. A vertical line labeled 'STABILISE STOCKPILE SURFACE' points to the top of the slope. The slope is labeled '2:1 SLOPE (MAX.)' on both sides. A vertical line labeled 'SEDIMENT FENCE' points to a fence structure at the base of the slope.

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE PLACED FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED E.S.C.P. OR S.W.M.P. TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES DOWNSLOPE.



NOTE:
REFER TO PROPOSED CONTOURS FOR EXACT PROFILE OF
CATCH DRAIN REQUIRED IN FINAL STATE

SCALE N.T.S.

FOR APPROVAL