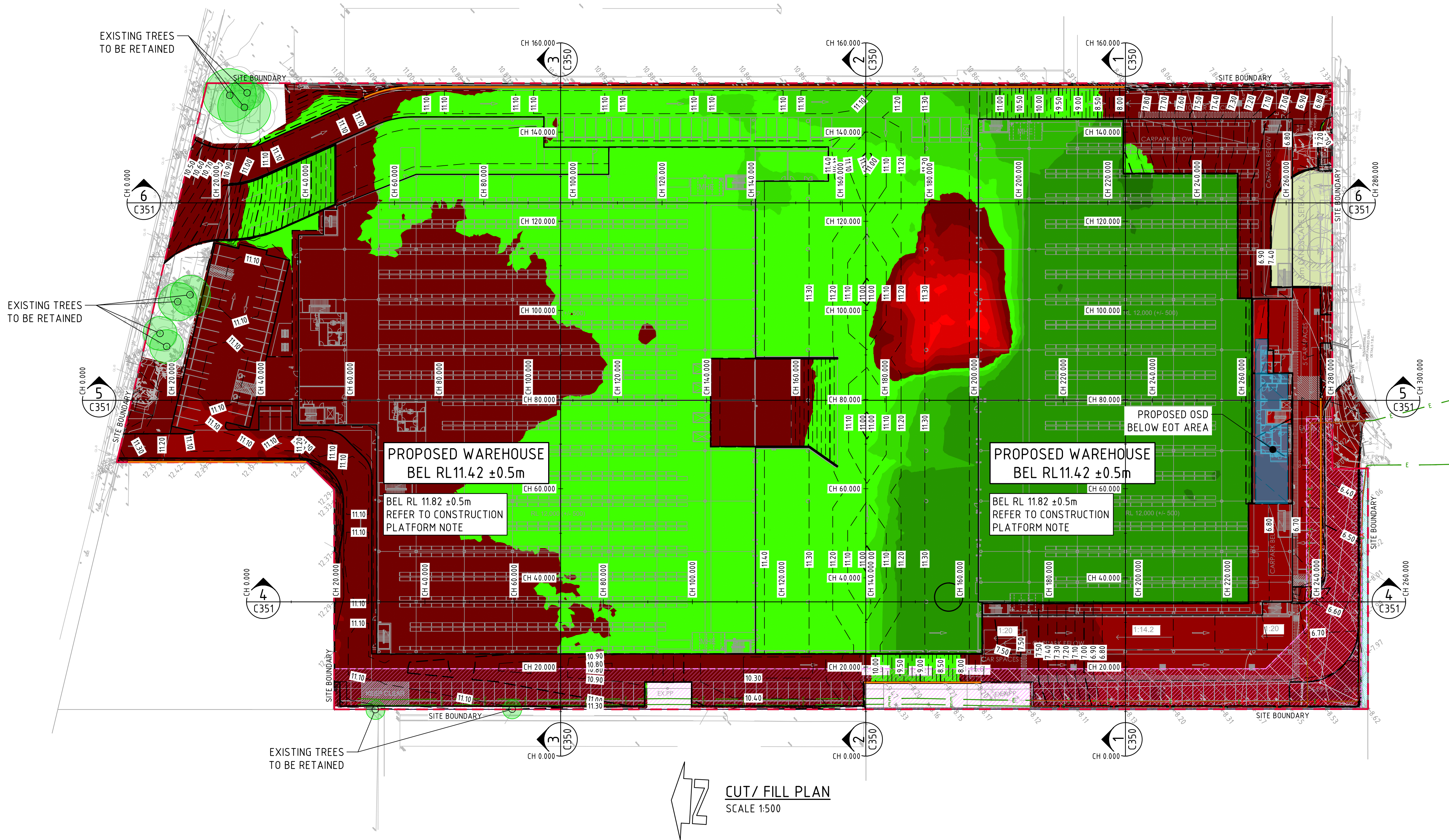
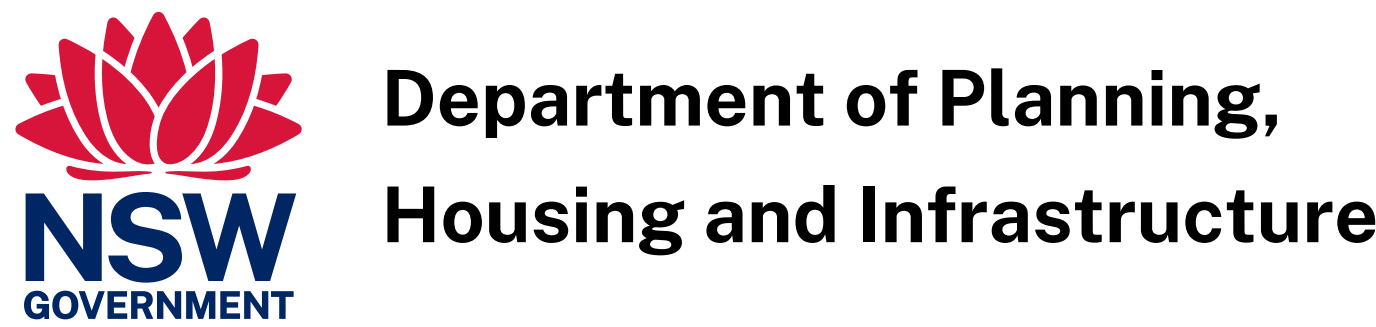




DEPTH RANGE			
No.	FROM DEPTH	TO DEPTH	COLOUR
1	-5.000	-4.000	Red
2	-4.000	-3.000	Red
3	-3.000	-2.000	Red
4	-2.000	-1.000	Red
5	-1.000	0.000	Red
6	0.000	1.000	Green
7	1.000	2.000	Green
8	2.000	3.000	Green
9	3.000	4.000	Green
10	4.000	5.000	Green
11	5.000	6.000	Green



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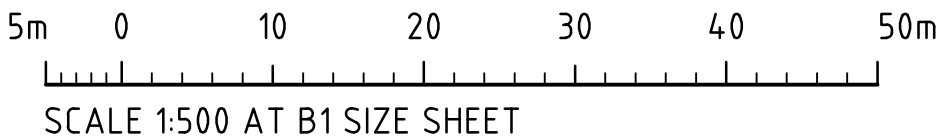
Approved Application No: SSD-58978472

Approved on: 19 August 2026

Signed: JF

Sheet No: 6 of 28

FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION



ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION	06.03.26	E			
ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION	17.10.25	D			
ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION	14.10.25	C			
REVISED AS CLOUDED	10.09.25	B			
ISSUED FOR INFORMATION	10.09.25	A			
AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE



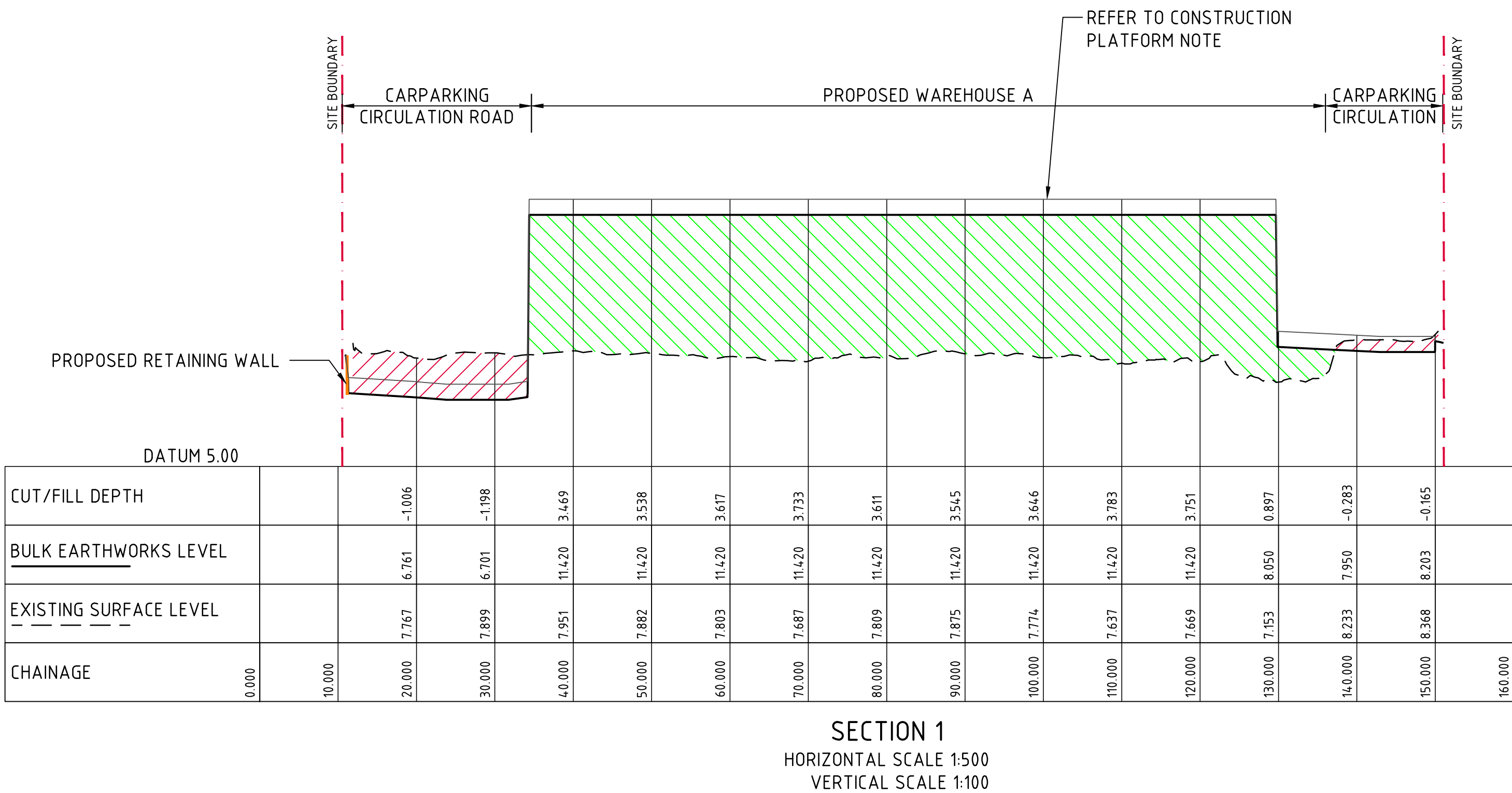
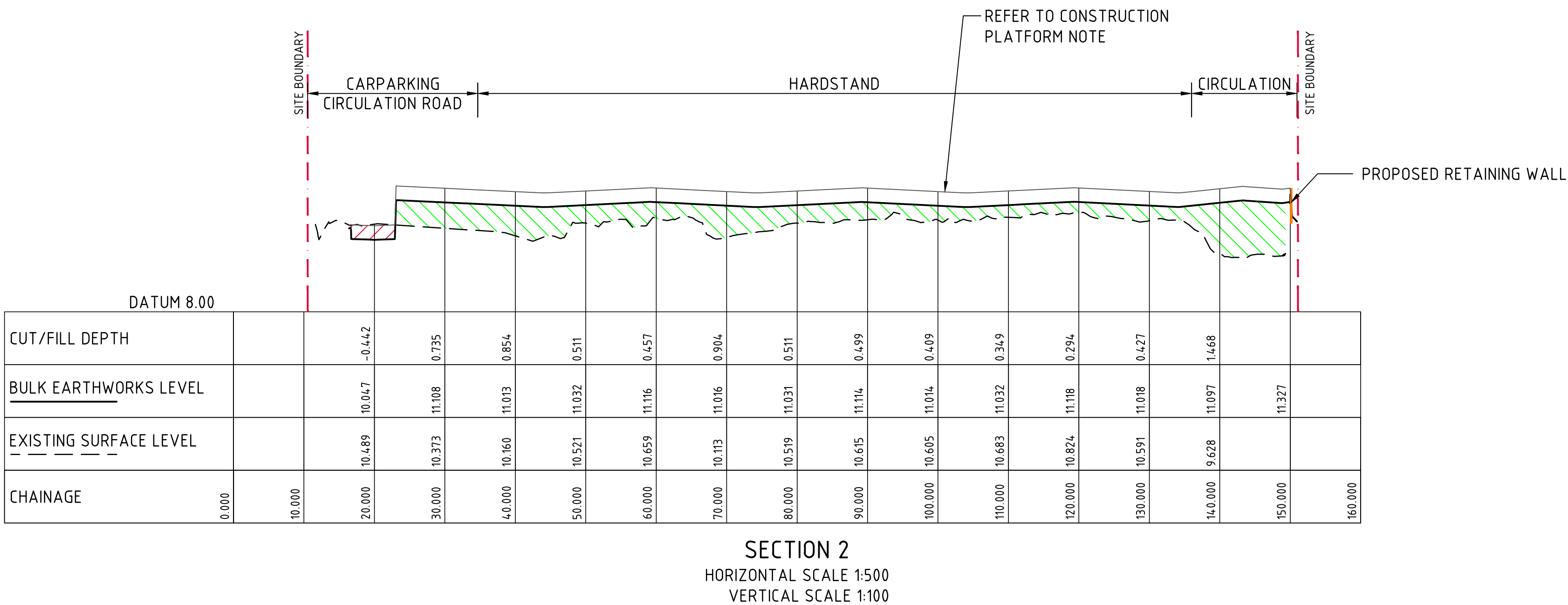
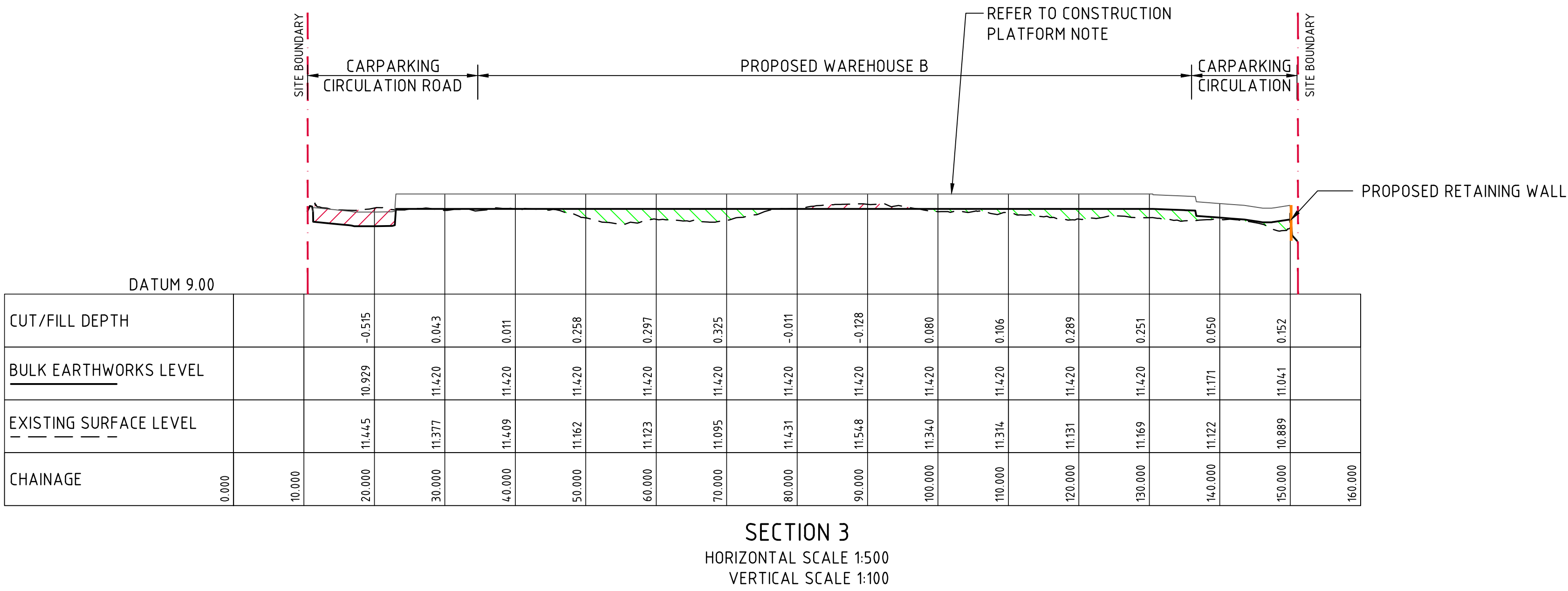
PROJECT MARVEL MOOREBANK 20 KELSO CRESCENT, MOOREBANK NSW 2170					
DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE
HC	GP	DATE	XC	B1	AS SHOWN
CAD REF: C014972.02-SSDA310					



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DRAWING TITLE CUT / FILL PLAN	
DRAWING No C014972.02-SSDA310	ISSUE E



**Department of Planning,
Housing and Infrastructure**

**NSW
GOVERNMENT**

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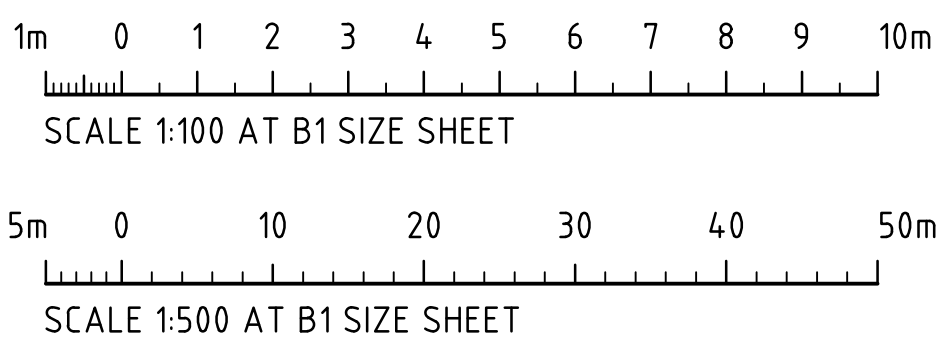
Approved Application No: SSD-58978472

Approved on: 19 August 2026

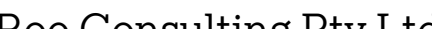
Signed: JF

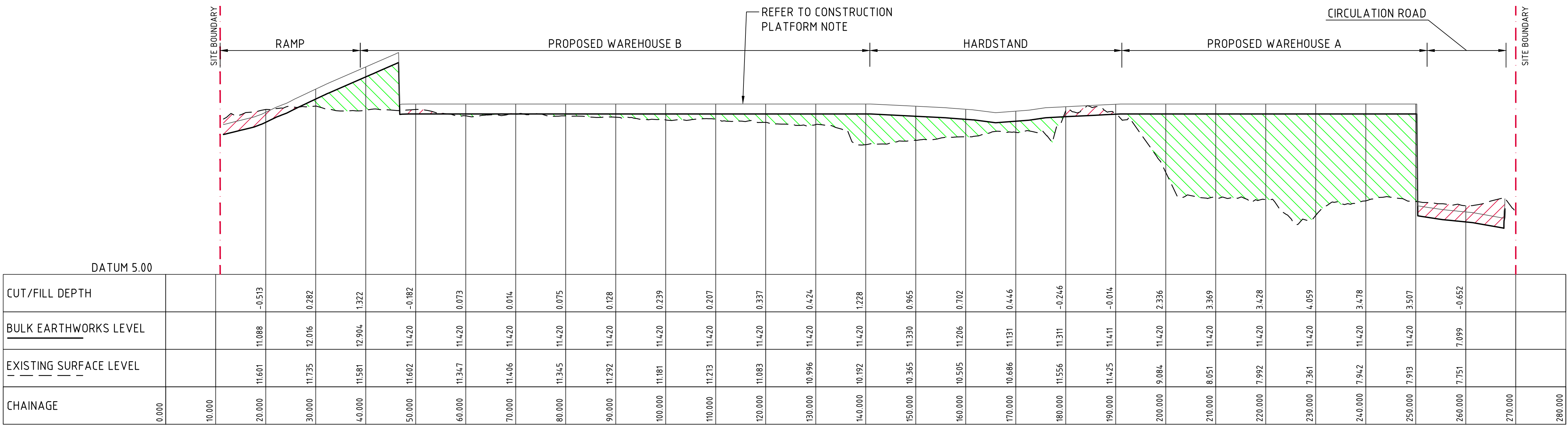
Sheet No: 7 of 28

- CONSTRUCTION PLATFORM NOTE:**
- CONTRACTOR TO ALLOW FOR A CONSTRUCTION PLATFORM COMPRISING 100mm DGS20 (COMPACT TO 98% MMDD WITHIN 2% OF OMC) OVER 300mm CBR 35% SANDSTONE (COMPACT TO 100% SMDD WITHIN 2% OF OMC).
 - BUILDING BEL (AS SHOWN TO BE RL 11.42 ±0.5m). TOP OF CONSTRUCTION PLATFORM TO BE 400mm ABOVE (BEL=11.82 ±0.5m OVER BUILDING FOOTPRINT).
 - ALLOW TO VARY LEVELS OVER CENTRAL HARDSTAND/BREEZEWAY AS SHOWN. TOP OF PLATFOORM TO BE 400mm ABOVE NOMINATED BEL. REFER SECTIONS FOR FURTHER CLARIFICATION OF PROFILE.

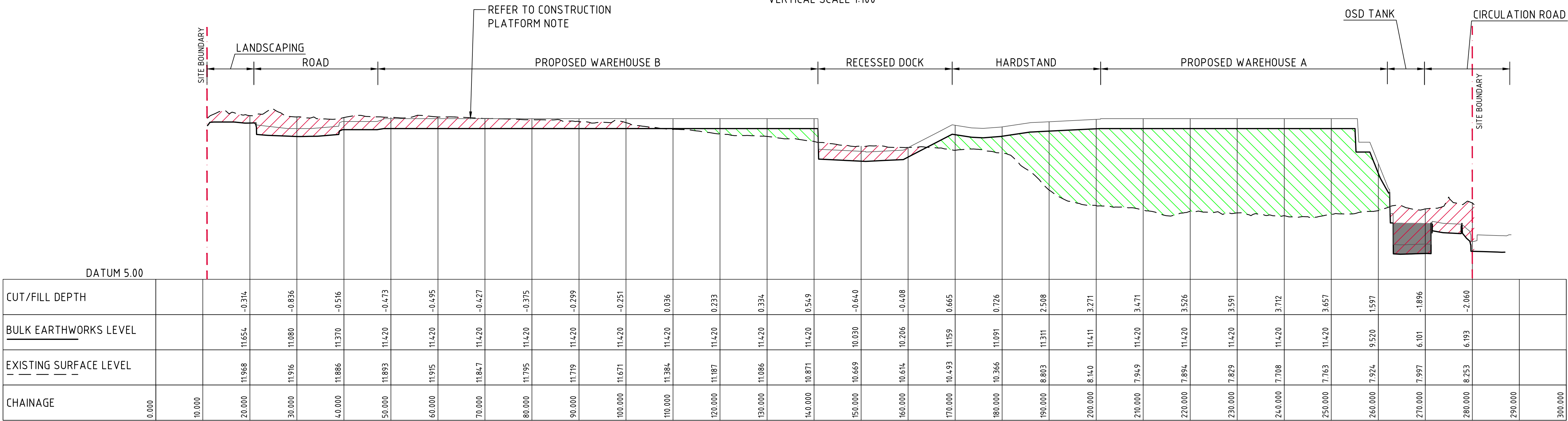


FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION

					ARCHITECT			CLIENT			PROJECT			CONSULT AUSTRALIA			Costin Roe Consulting Pty Ltd. ABN 50 003 696 446			CRC COSTIN ROE CONSULTING			DRAWING TITLE BULK EARTHWORKS SECTIONS SHEET 1					
											MARVEL MOOREBANK 20 KELSO CRESCENT, MOOREBANK NSW 2170						PO Box N419 Sydney NSW 1220 Level 4, 8 Windmill Street, Millers Point NSW 2000 p: +61 2 9251 7699 f: +61 2 9241 3731 e: mail@costinroe.com.au w: costinroe.com.au											
ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION					06.03.26		C							DESIGNED		DRAWN		DATE		CHECKED		SIZE		SCALE		CAD REF:		
ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION					14.10.25		B							HC		QP				XC		B1		AS SHOWN		C014972.02-SSDA350		
ISSUED FOR INFORMATION					16.09.25		A																					
AMENDMENTS					DATE		ISSUE		AMENDMENTS					DATE		ISSUE							DRAWING No		C014972.02-SSDA350		ISSUE	



- LEGEND:**
- DENOTES BULK EARTHWORKS PROFILE
 - DENOTES EXISTING PROFILE
 - DENOTES CONSTRUCTION PLATFORM
 - DENOTES AREA IN CUT
 - DENOTES AREA IN FILL



**Department of Planning,
Housing and Infrastructure**

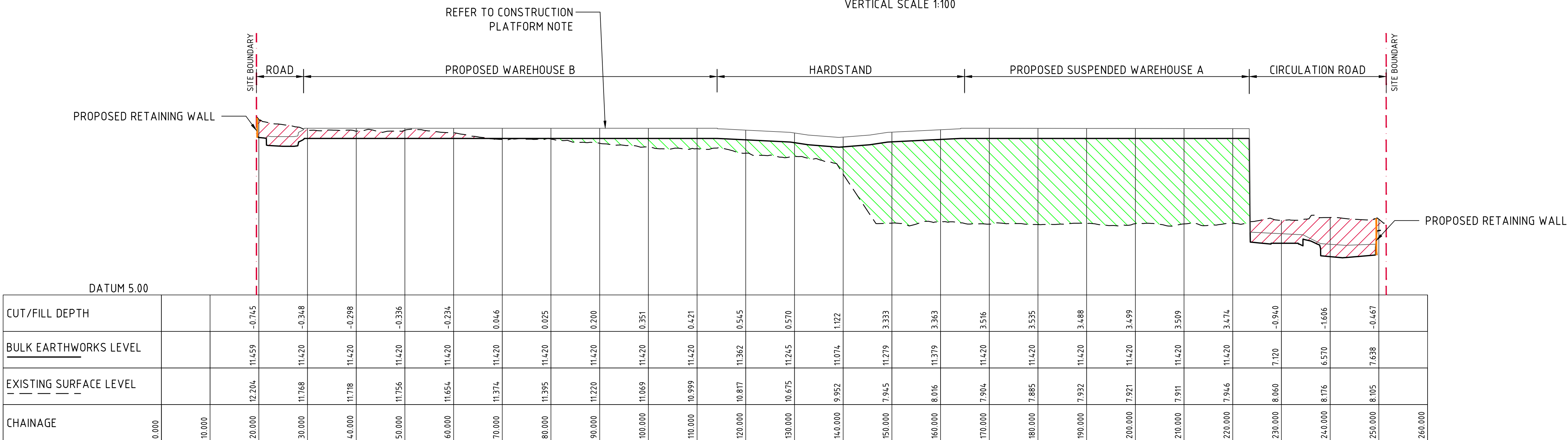
Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD-58978472

Approved on: 19 August 2026

Signed: JF

Sheet No: 8 of 28



CONSTRUCTION PLATFORM NOTE:

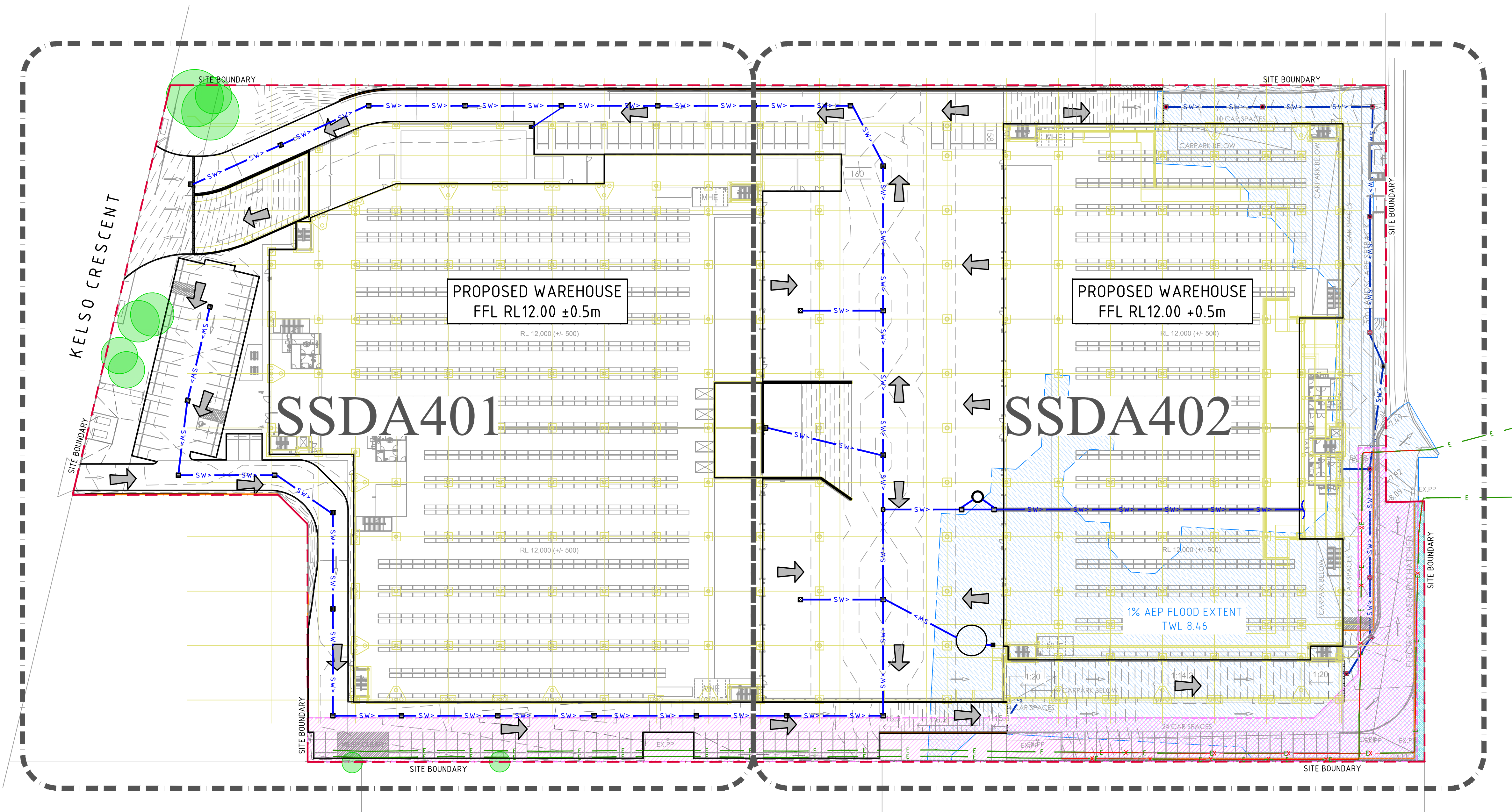
- CONTRACTOR TO ALLOW FOR A CONSTRUCTION PLATFORM COMPRISING 100mm DGS20 (COMPACT TO 98% MMDD WITHIN 2% OF OMC) OVER 300mm CBR 35% SANDSTONE (COMPACT TO 100% SMDD WITHIN 2% OF OMC).
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- ALLOW TO VARY LEVELS OVER CENTRAL HARDSTAND/BREEZEWAY AS SHOWN. TOP OF PLATFORM TO BE 400mm ABOVE NOMINATED BEL. REFER SECTIONS FOR FURTHER CLARIFICATION OF PROFILE.

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT B1 SIZE SHEET

5m 0 10 20 30 40 50m
SCALE 1:500 AT B1 SIZE SHEET

FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION

						ARCHITECT			CLIENT			PROJECT			CONSULT AUSTRALIA			Costin Roe Consulting Pty Ltd. ABN 50 003 696 446			CRC COSTIN ROE CONSULTING			CIVIL & STRUCTURAL ENGINEERS			DRAWING TITLE BULK EARTHWORKS SECTIONS SHEET 2		
ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION			06.03.26			C												PO Box N419 Sydney NSW 1220									DRAWING No		
ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION			14.10.25			B												Level 4, 8 Windmill Street, Millers Point NSW 2000									C014972.02-SSDA351		
ISSUED FOR INFORMATION			16.09.25			A												p: +61 2 9251 7699 f: +61 2 9241 3731									ISSUE		
AMENDMENTS			DATE			ISSUE			AMENDMENTS			DATE			ISSUE			e: mail@costinroe.com.au w: costinroe.com.au											



STORMWATER DRAINAGE KEY PLAN - LOWER GF 1 & GROUND FLOOR
SCALE 1:500

STORMWATER DRAINAGE NOTES:

STORMWATER DRAINAGE NOTES ARE APPLICABLE FOR PRIVATE INTERNAL STORMWATER DRAINAGE WORKS ONLY. REFERENCE SHOULD BE MADE TO THE RELEVANT COUNCIL/ ROADS AUTHORITY GUIDELINES AND SPECIFICATIONS FOR ALL STORMWATER DRAINAGE WORKS NOT PART OF THE PRIVATE INTERNAL WORKS.

- ALL STORMWATER WORKS TO BE COMPLETED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS3500.3 PLUMBING AND DRAINAGE, PART 3: STORMWATER DRAINAGE.
- THE MINOR (PIPED) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 20 YEAR ARI STORM EVENT AND THE MAJOR (OVERLAND) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 100 YEAR ARI STORM EVENT.
- ALL FINISHED PAVEMENT LEVELS SHALL BE AS INDICATED ON FINISHED LEVELS PLANS.
- PIT SIZES SHALL BE AS INDICATED IN THE SCHEDULE WHILE PIPE SIZES AND DETAILS ARE PROVIDED ON PLAN.
- EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED BY SURVEY PRIOR TO COMMENCING WORKS ON SITE.
- ALL STORMWATER PIPES $\phi 375$ OR GREATER SHALL BE CLASS 2 (WITH HS2 SUPPORT) REINFORCED CONCRETE WITH RUBBER RING JOINTS UNLESS NOTED OTHERWISE.
- ALL PIPES UP TO AND INCLUDING $\phi 300$ TO BE uPVC GRADE SN8 UNO.
- PIPE CLASS NOMINATED ARE FOR IN-SERVICE LOADING CONDITIONS ONLY. CONTRACTOR IS TO MAKE ANY NECESSARY ADJUSTMENTS REQUIRED FOR CONSTRUCTION CONDITIONS.
- ALL CONCRETE PITS GREATER THAN 1000mm DEEP SHALL BE REINFORCED USING N12-200 EACH WAY CENTERED IN WALL AND BASE. LAP MINIMUM 300mm WHERE REQUIRED. ALL CONCRETE FOR PITS SHALL BE $f'c \geq 25$ MPa. PRECAST PITS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
- IN ADDITION TO ITEM 9 ABOVE, ALL CONCRETE PITS GREATER THAN 3000mm DEEP SHALL HAVE WALLS AND BASE THICKNESS INCREASED TO 200mm.
- PIPES SHALL BE LAID AS PER PIPE LAYING DETAILS. PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE PIPE IS FULLY AND EVENLY SUPPORTED. RAM AND PACK FILLING AROUND AND UNDER BACK OF PIPES AND PIPE FAUCETS, WITH NARROW EDGED RAMMERS OR OTHER SUITABLE TAMPING DETAILS.
- CONCRETE PIPES UNDER, OR WITHIN THE ZONE OF INFLUENCE OF PAVED AREAS SHALL BE LAID USING HS2 TYPE SUPPORT, AS A MINIMUM, IN ACCORDANCE WITH AS 3725. AGGREGATE BACKFILL SHALL NOT BE USED FOR PIPE BEDDING AND OR HAUNCH/SIDE SUPPORT.
- WHERE PIPE LINES ENTER PITS, PROVIDE 2m LENGTH OF STOCKING WRAPPED SLOTTED $\phi 100$ uPVC TO EACH SIDE OF PIPE.
- ALL SUBSOIL DRAINAGE LINES SHALL BE $\phi 100$ SLOTTED uPVC WITH APPROVED FILTER WRAP LAID IN 300mm WIDE GRANULAR FILTER UNLESS NOTED OTHERWISE. LAY SUBSOIL LINES TO MATCH FALLS OF LAND AND/OR 1 IN 200 MINIMUM. PROVIDE CAPPED CLEANING EYE (RODDING POINT) AT UPSTREAM END OF LINE AND AT 30m MAX. CTS. PROVIDE SUBSOIL LINES TO ALL PAVEMENT/ LANDSCAPED INTERFACES, TO REAR OF RETAINING WALLS (AS NOMINATED BY STRUCTURAL ENGINEER) AND AS SHOWN ON PLAN.
- WHERE SUBSOIL DRAINAGE PASSES UNDER A PAVEMENT OR A SLAB, UNSLOTTED UPVC ARE TO BE PROVIDED UNLESS NOTED OTHERWISE.
- ALL PIPE GRADES 1 IN 200 MINIMUM UNO.
- PROVIDE STEP IRONS IN PITS DEEPER THAN 1000mm.
- MIN. 600 COVER TO PIPE OBVERT BENEATH ROADS & MIN. 400 COVER BENEATH LANDSCAPED AND PEDESTRIAN AREAS.
- PIT COVERS IN TRAFFICABLE PAVEMENT SHALL BE CLASS D 'HEAVY DUTY'. WHERE FORKLIFT USE IS REQUIRED EXTERNAL TO THE BUILDING PIT COVERS SHALL BE MIN. CLASS E. PIT COVERS IN CONTAINER PAVEMENTS ARE TO BE MIN. CLASS G. REFER TO ENGINEER FOR SPECIAL DETAILS. THOSE LOCATED IN NON-TRAFFICABLE AREAS SHALL BE CLASS B 'MEDIUM DUTY' UNO.
- PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
- DOWN PIPES (DP) TO BE AS PER HYDRAULIC ENGINEERS DETAILS WITH CONNECTOR TO MATCH DP SIZE U.N.O. ON PLAN. PROVIDE CLEANING EYE AT GROUND LEVEL.
- PIPE LENGTHS NOMINATED ON PLAN OR LONGSECTIONS ARE MEASURED FROM CENTER OF PITS TO THE NEAREST 0.5m AND DO NOT REPRESENT ACTUAL LENGTH. THE CONTRACTOR IS TO ALLOW FOR THIS.
- WHERE CONNECTION TO EXISTING INGROUND DRAINAGE SYSTEMS, OPEN SWALES, CHANNELS OR ANY OTHER EXISTING SYSTEM, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND INVERT ON SITE AT THE BEGINNING OF THE CONSTRUCTION PERIOD. REFER ANY VARIANCE FROM DOCUMENTATION OR SURVEYS TO THE ENGINEER FOR CLARIFICATION.

PIT SCHEDULE - NETWORK X				
PIT No.	GRATE RL	TYPE	GRATE SIZE	COMMENT
PIT A01	11.55	SGGP	900X900	
PIT A02	11.55	SGGP	900X900	
PIT A03	11.60	SGGP	900X900	
PIT A04	11.64	SGGP	900X900	
PIT A05	11.60	SGGP	900X900	
PIT A06	11.60	SGGP	900X900	
PIT A07	11.58	SGGP	900X900	
PIT A08	11.52	SGGP	900X900	
PIT A09	11.43	SGGP	900X900	
PIT A10	11.35	SGGP	900X900	
PIT A11	11.00	SGGP	900X900	
PIT A12	10.80	SGGP	900X900	
PIT A13	10.80	SGGP	900X900	
PIT A14	11.55	SGGP	900X900	
PIT A14A	11.92	SJP	900X900	
PIT A15	11.66	SJP	900X900	
PIT A16	11.91	SGGP	900X900	
PIT A17	11.98	SGGP	900X900	
PIT A18	7.45	SGGP	900X900	
PIT A19	7.40	SGGP	900X900	

PIT SCHEDULE - NETWORK B				
PIT No.	GRATE RL	TYPE	GRATE SIZE	COMMENT
PIT B01	11.51	SGGP	900X900	GD
PIT B02	11.60	SGGP	900X900	
PIT B03	11.60	SGGP	900X900	
PIT B04	11.60	SGGP	900X900	
PIT B05	11.60	SGGP	900X900	
PIT B05A	11.87	SGGP	600X600	
PIT B06	11.60	SGGP	900X900	
PIT B07	11.60	SGGP	900X900	
PIT B08	11.60	SGGP	900X900	
PIT B09	11.55	SGGP	900X900	
PIT B10	11.55	SGGP	900X900	
PIT B11	11.55	SGGP	900X900	

PIT SCHEDULE - NETWORK C				
PIT No.	GRATE RL	TYPE	GRATE SIZE	COMMENT
PIT C01	8.48	SGGP	900X900	
PIT C02	7.94	SGGP	900X900	
PIT C03	7.34	SGGP	900X900	
PIT C04	7.45	SGGP	900X900	
PIT C05	7.45	SGGP	900X900	

PIT SCHEDULE - NETWORK D				
PIT No.	GRATE RL	TYPE	GRATE SIZE	COMMENT
PIT D01	8.18	SGGP	900X900	
PIT D02	8.00	SGGP	900X900	
PIT D03	7.20	SGGP	900X900	
PIT D04	7.20	SGGP	900X900	
PIT D05	7.35	SGGP	900X900	
PIT D06	7.05	SGGP	900X900	
PIT D07	7.45	SGGP	900X900	

NOTE:

PITS TO BE FITTED WITH 'ATLAN STORMSACK' INSERT. SHOWN THUS
TOTAL NUMBER OF PIT INSERTS $\diamond = 13$



Department of Planning, Housing and Infrastructure

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Approved Application No: SSD-58978472

Approved on: 19 August 2026

Signed: JF

Sheet No: 9 of 28

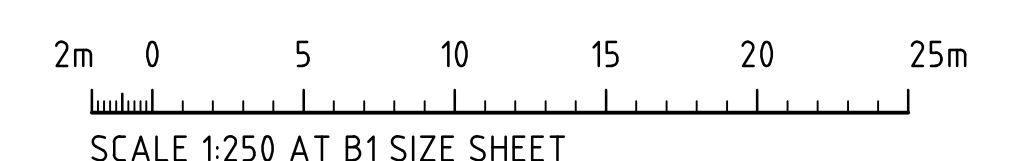
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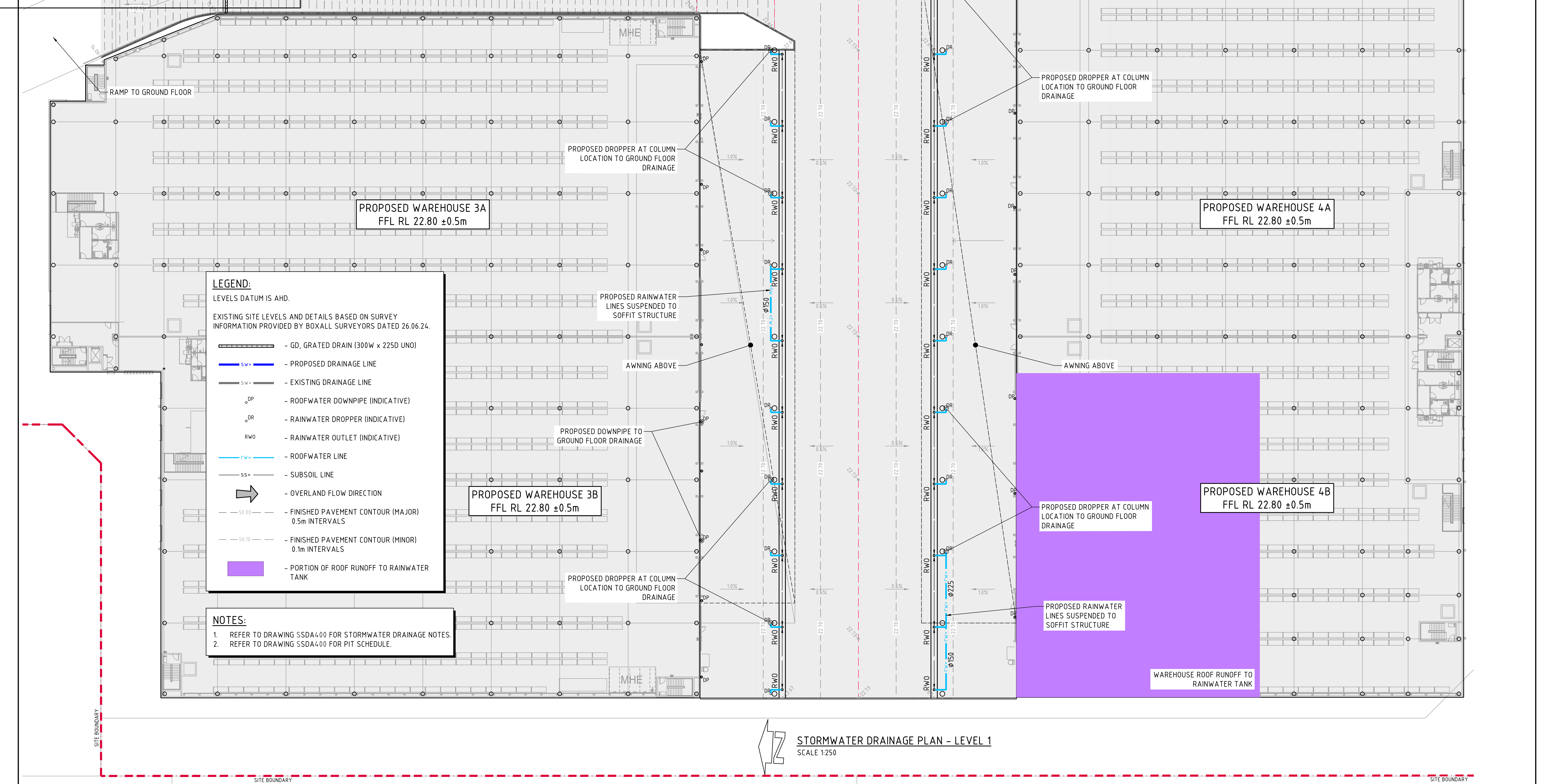
FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION

						ARCHITECT			CLIENT			PROJECT			CONSULT AUSTRALIA			COSTIN ROE CONSULTING PTY LTD.			CRC			DRAWING TITLE		
						P ACE ARCHITECTS			VAUGHAN CONSTRUCTIONS			MARVEL MOOREBANK			CONSULT AUSTRALIA			Costin Roe Consulting Pty Ltd.			CIVIL & STRUCTURAL ENGINEERS			STORMWATER DRAINAGE KEY PLAN		
												20 KELSO CRESCENT, MOOREBANK						ABN 50 003 696 446						LOWER GF 1 & GROUND FLOOR		
												NSW 2170						PO Box N419 Sydney NSW 1220								
ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION			14.10.25			B												Level 4, 8 Windmill Street, Millers Point NSW 2000								
ISSUED FOR INFORMATION			16.09.25			A												p: +61 2 9251 7699			f: +61 2 9241 3731					
AMENDMENTS			DATE			ISSUE			AMENDMENTS			DATE			ISSUE			e: mail@costinroe.com.au			w: costinroe.com.au			DRAWING No		
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																								ISSUE		
																								R		

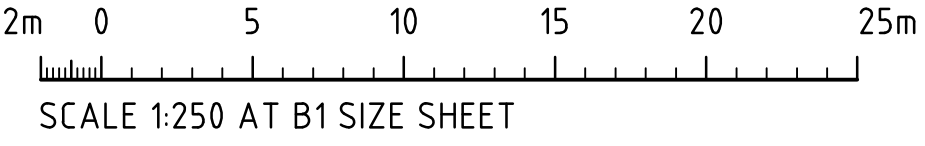


 STORMWATER DRAINAGE PLAN
AT LOWER GF 1 & GROUND FLOOR - SHEET 2
SCALE 1:250





FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION



ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION		14.10.25	B		
ISSUED FOR INFORMATION		16.09.25	A		
AMENDMENTS		DATE	ISSUE	AMENDMENTS	DATE

ARCHITECT

PACE
ARCHITECTS

CLIENT

VAUGHAN
CONSTRUCTIONS

PROJECT

MARVEL MOOREBANK
20 KELSO CRESCENT, MOOREBANK
NSW 2170

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
HC	QP	DATE	XC	B1	AS SHOWN	C014972.02-SSDA410

CONSULT AUSTRALIA

Costin Roe Consulting Pty Ltd.
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CRC
COSTIN ROE CONSULTING

CIVIL & STRUCTURAL ENGINEERS

DRAWING TITLE

**STORMWATER DRAINAGE PLAN
LEVEL 1**

DRAWING No

C014972.02-SSDA410

ISSUE

B



SIDE ZONE MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
75.0	100
9.5	100 TO 50
2.36	100 TO 30
0.60	50 TO 15
0.075	25 TO 0
SELECT FILL MATERIAL IN ACCORDANCE WITH TABLE 1 AS 3725	



BEDDING & HAUNCH MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
2.36	100 TO 50
0.60	90 TO 20
0.30	60 TO 10
0.15	25 TO 0
0.075	10 TO 0

SIDE ZONE WIDTH	
PIPE SIZE (mm)	t_c (mm)
$\leq 900\phi$	150
1050 ϕ	175
1200 ϕ	200
1350 ϕ	225
1500 ϕ	250
1650 ϕ	275
1800 ϕ	300

ENGINEER TO SPECIFY TRENCH WIDTHS FOR PIPE SIZES GREATER THAN 1800 ϕ .



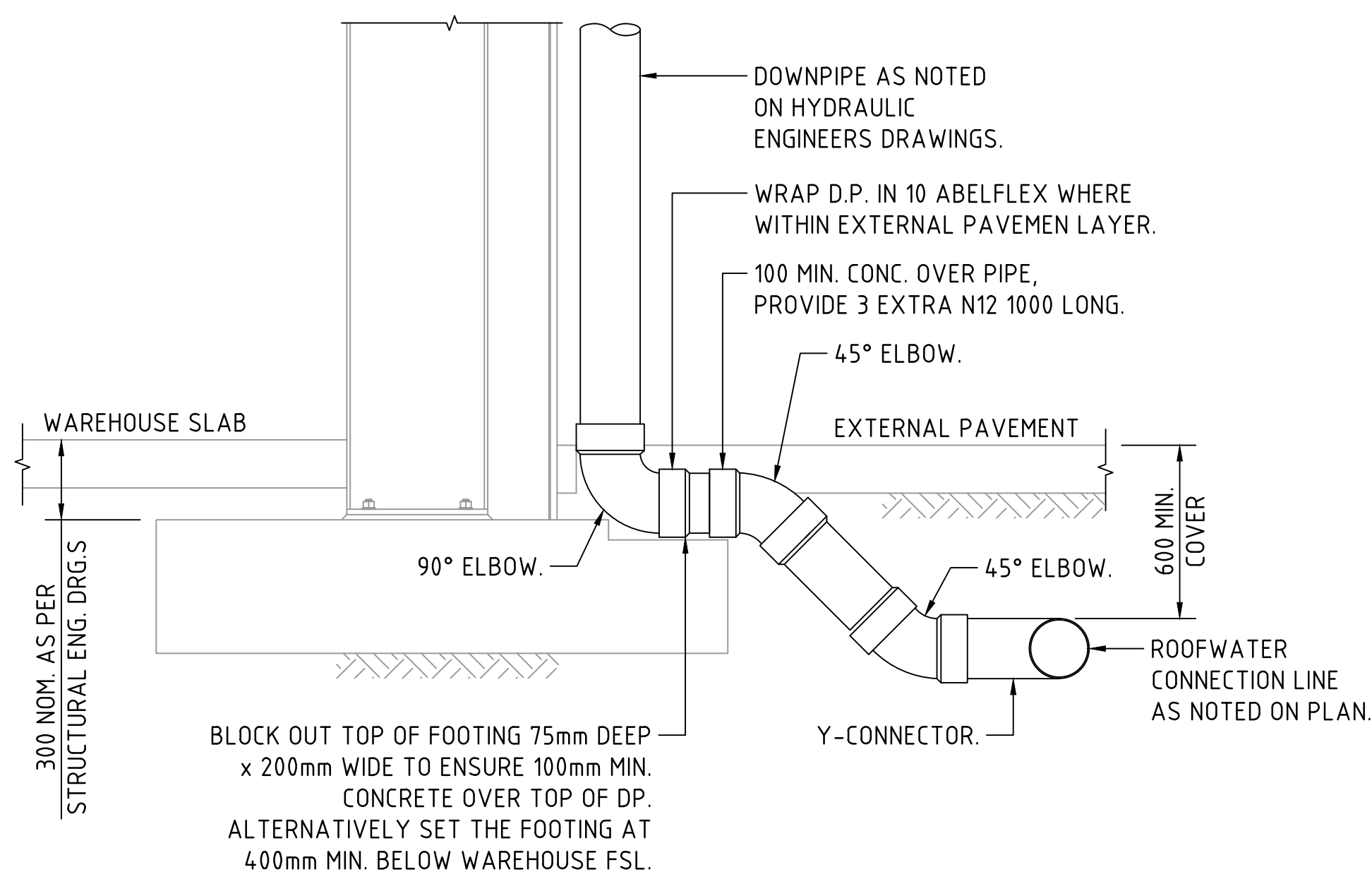
SCALE 1:20
D $\leq$ 1350, MAX FILL = 4.0m
D > 1350, MAX FILL = 3.0m

BEDDING & HAUNCH MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
2.36	100 TO 50
0.60	90 TO 20
0.30	60 TO 10
0.15	25 TO 0
0.075	10 TO 0

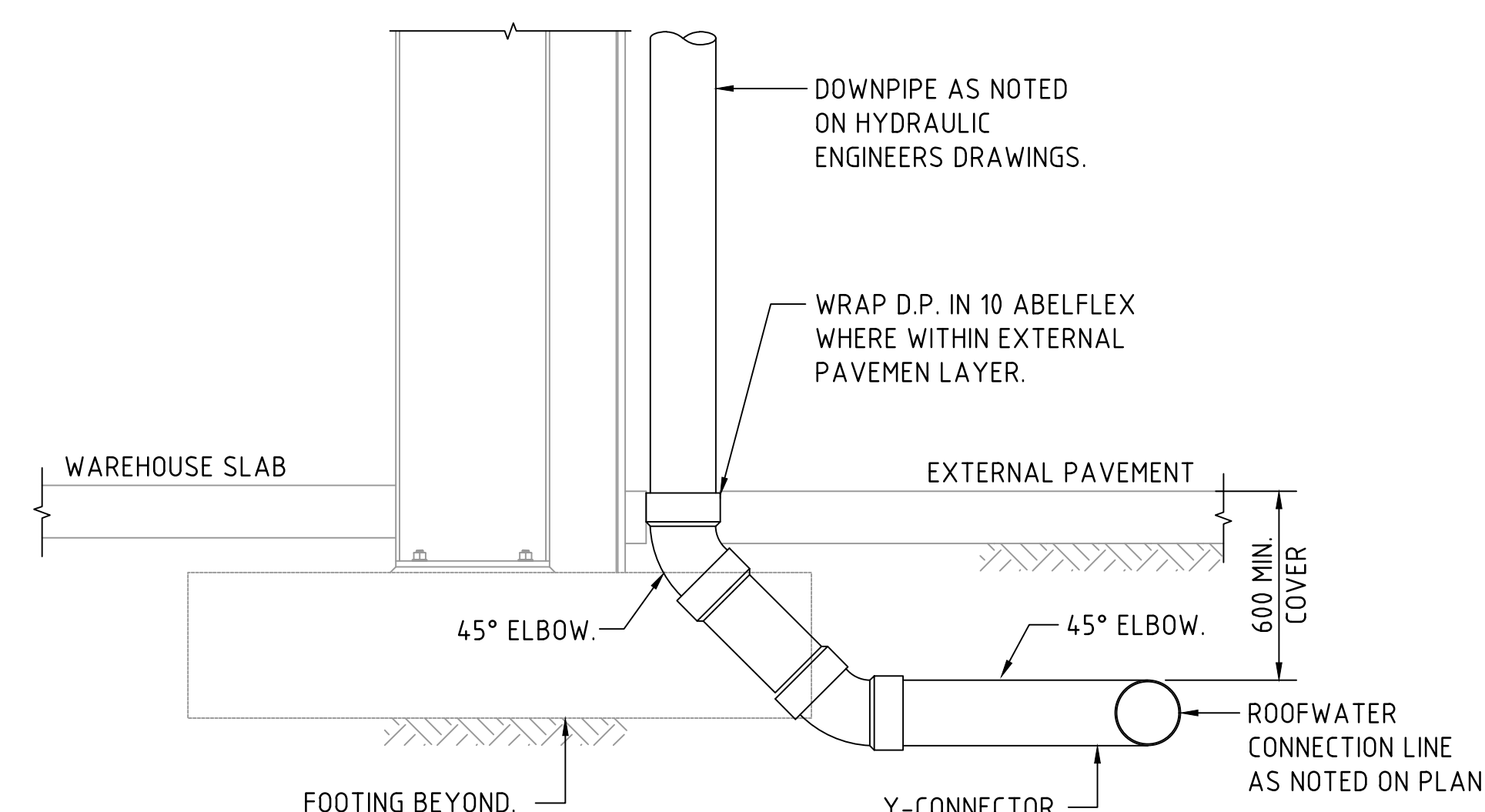


SCALE 1:20
D ≤ 1050, MAX FILL = 6.0m
D > 1050, MAX FILL = 4.8m

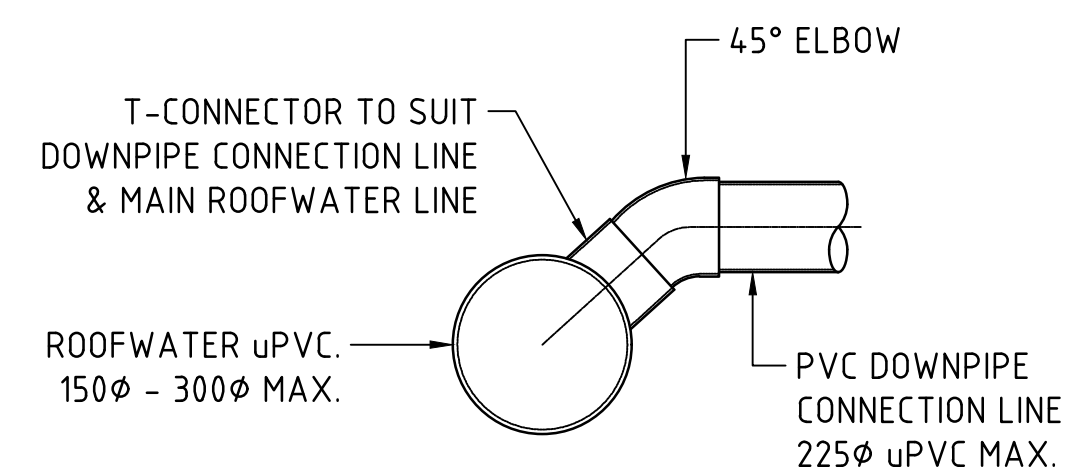
SIDE ZONE MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
75.0	100
9.5	100 TO 50
2.36	100 TO 30
0.60	50 TO 15
0.075	25 TO 0
SELECT FILL MATERIAL IN ACCORDANCE WITH TARIF 1 AS 3725	



DOWNPIPE TURN-UP DETAIL A
(AT FOOTING LOCATION)
SCALE 1:20



DOWNPIPE TURN-UP DETAIL B
(CLEAR OF FOOTING)
SCALE 1:20



DOWN PIPE CONNECTION TO uPVC PIPE
SCALE 1:20

1. PROPRIETARY T-PIECE CONNECTORS SHALL BE USED TO WHERE DIRECT CONNECTIONS ARE REQUIRED TO uPVC PIPES.
2. ALL JOINTS TO BE SEALED WITH SOLVENT WELDED JOINTS.
3. THE PVC PIPE SHALL NOT PROTRUDE BEYOND THE INNER SURFACE OF THE STORMWATER PIPE.

DOWNPIPE CONNECTION DETAILS



**Department of Planning,
Housing and Infrastructure**

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD-58978472

Approved on: 19 August 2026

Signed: JF

Sheet No: 14 of 28

ISSUED FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION	14.10.25	B			
ISSUED FOR INFORMATION	16.09.25	A			
AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE

ARCHITECT



P/ACE
ARCHITECTS

CLIENT



VAUGHAN
CONSTRUCTIONS

PROJECT
MARVEL MOOREBANK
20 KELSO CRESCENT, MOOREBANK
NSW 2170

DESIGNED HC	DRAWN QP	DATE DATE	CHECKED XC	SIZE B1	SCALE AS SHOWN	CAD REF: C014972.02-SSDA450
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CRC
COSTIN ROE
CONSULTING

**CIVIL &
STRUCTURAL
ENGINEERS**

DRAWING TITLE
STORMWATER DRAINAGE DETAILS
SHEET 1

DRAWING No C014972.02-SSDA450

ISSUE
B

FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION

