

EARTHWORKS VOLUMES:

CUT: 17619m³
 FILL: 21773m³
 IMPORT: 4154m³

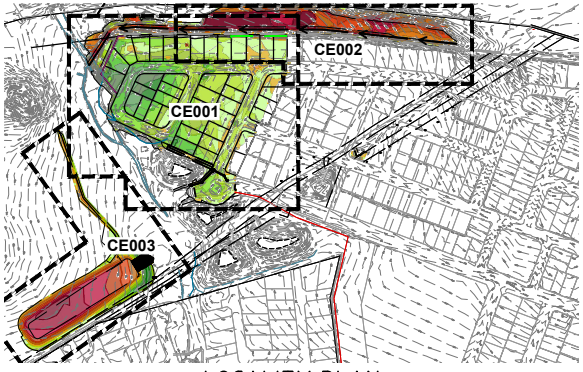
VOLUMES HAVE NOT BEEN ADJUSTED FOR BULKING OR COMPACTION, NOR DO THEY ALLOW FOR TRENCH SPOIL, UN-CONTROLLED FILL AREAS OR FILLING OF EXISTING DAMS.

EARTHWORKS DEPTH RANGE
 Fin EXISTING TO Fin DESIGN (0.25m INTERVALS)

FILL 1.75m +	CUT 0.00m - 0.25m
FILL 1.50m - 1.75m	CUT 0.25m - 0.50m
FILL 1.25m - 1.50m	CUT 0.50m - 0.75m
FILL 1.00m - 1.25m	CUT 0.75m - 1.00m
FILL 0.75m - 1.00m	CUT 1.00m - 1.25m
FILL 0.50m - 0.75m	CUT 1.25m - 1.50m
FILL 0.25m - 0.50m	CUT 1.50m - 1.75m
FILL 0.00m - 0.25m	CUT 1.75m +

LEGEND

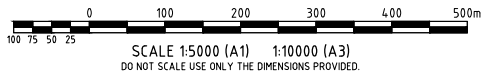
- 26.0 --- ULTIMATE SURFACE CONTOURS
- TOP OF BATTER
- TOE OF BATTER / CHANGE IN GRADE
- MOUNTABLE KERB
- KERB AND GUTTER REFER TO CS-3300 (TYP)
- LAYBACK KERB AND CHANNEL IN ACCORDANCE WITH CS3300
- SPECIAL LAYBACK KERB
- SWALE
- + = AMOUNT OF FILL
- = AMOUNT OF CUT
- FSL = FINISHED SURFACE LEVEL
- CONCRETE BLOCK RETAINING WALL
- CONCRETE SLEEPER RETAINING WALL
- EXISTING ACOUSTIC FENCE



LOCALITY PLAN
SCALE 1:5000 (A1)

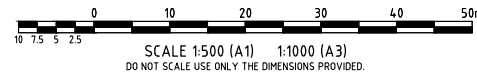
WARNING
BEWARE OF SERVICES

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LAYOUT PLAN
SCALE 1:500 (A1)

NOTE: TIE NEATLY INTO EXISTING PHASE



PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED _____ DATE _____

GENERAL MANAGER INFRASTRUCTURE
CITY OF PALMERSTON

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED. THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

User: NICOLAS PRINS File Name: S:\12624\DATA\MAN\2025\1\2\CURRENT\UPM\B00611-CE001-CE002.dwg Date: 18/10/2024 2:28:39 PM

1		PAD LEVELS AMENDED & RETAINING WALL ADDED	NP	NP	WR	WR	17/10/24	5294036
0		ISSUED FOR CONSTRUCTION	MMC	ES	WPR	WPR	08/08/24	
No.	Amendments	Drawn	Design	Design	Chk	Appd	Date	

THE HEIGHTS
DURACK

Registered Engineer
21/10/2024
Date Register

ENGINEERING CERTIFICATION

Empower
ENGINEERS & PROJECT MANAGERS
ABN 23 010 743 692

Client: **URBEX PTY LTD**

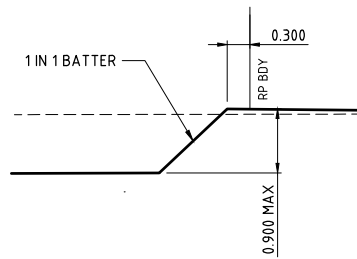
Project: **THE HEIGHTS - STAGE 11**

Title: **EARTHWORKS MANAGEMENT LAYOUT PLAN SHEET 1 OF 3**

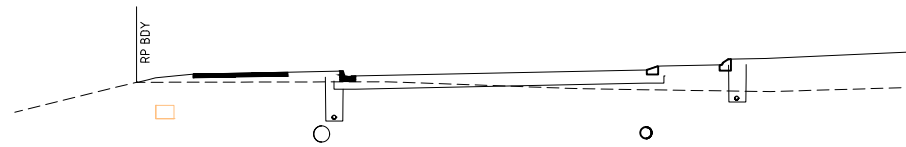
Da'um
AHD
PSM
RL
(MGA) COORD

FOR CONSTRUCTION

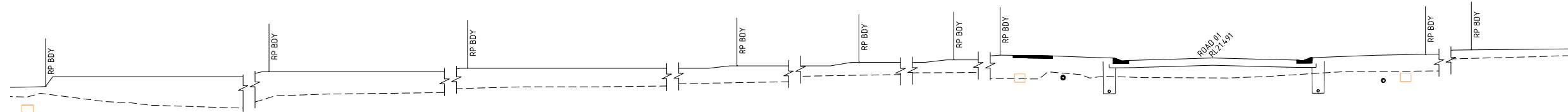
Project No. Drawing No. Rev
B00611-CE001 1



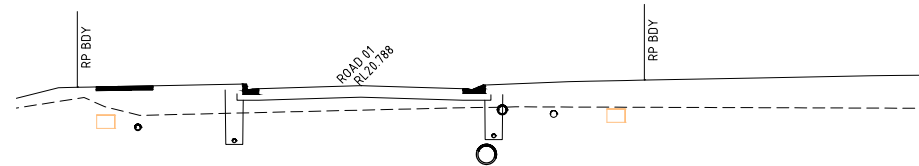
A TYPICAL INTER-ALLOTMENT BATTER DETAIL
 CE001 SCALE 1:50 (A1)



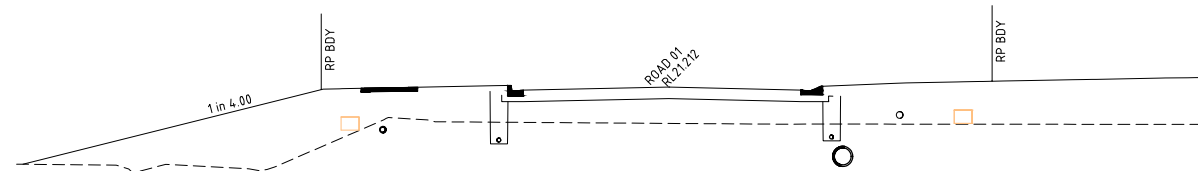
6 SECTION
 CE001 SCALE 1:100 (A1)



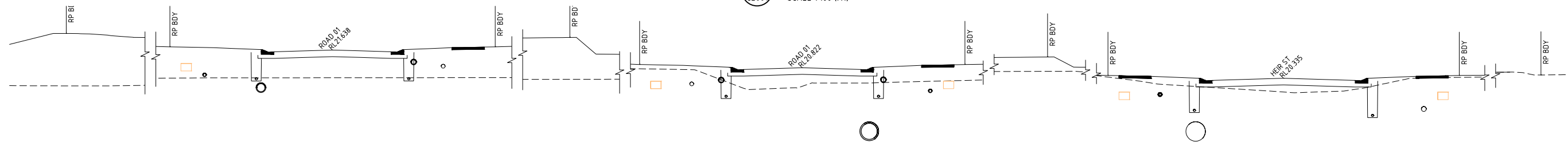
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 CE001 SCALE 1:100 (A1)



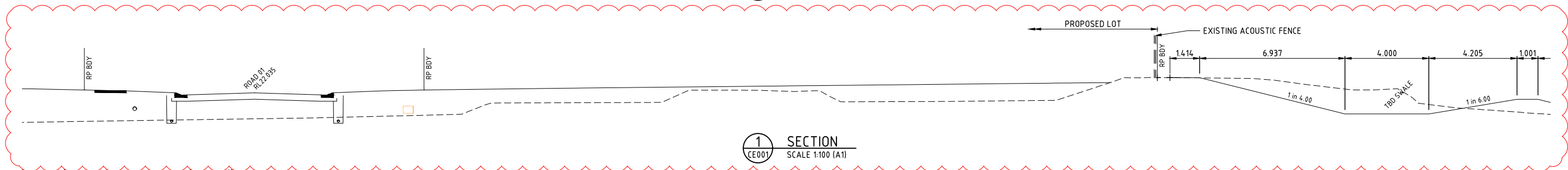
4 SECTION
 CE001 SCALE 1:100 (A1)



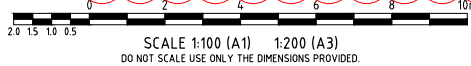
3 SECTION
 CE001 SCALE 1:100 (A1)



2 SECTION
 CE001 SCALE 1:100 (A1)



1 SECTION
 CE001 SCALE 1:100 (A1)



SCALE 1:100 (A1) 1:200 (A3)
 DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED _____ DATE _____

GENERAL MANAGER INFRASTRUCTURE
 CITY OF PALMERSTON

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WARNING
BEWARE OF SERVICES

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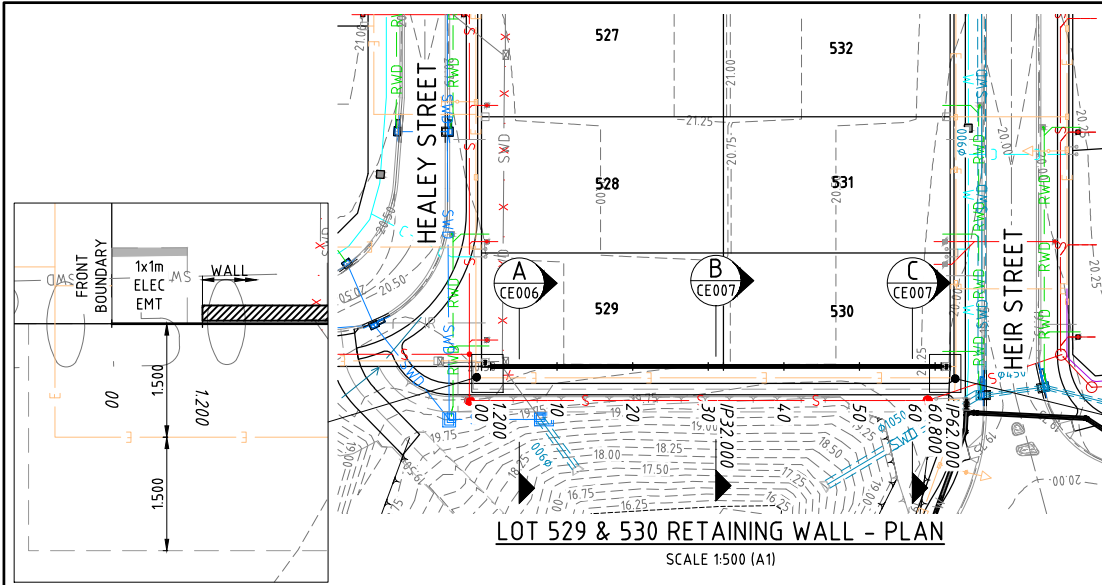
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 Date: 23/10/2024 12:53 PM

No.	Amendments	Drawn	Design	Design Chk	Appd	Date	 Registered Engineer 23/10/2024 Date Register 5294036 ENGINEERING CERTIFICATION
2	MINOR AMENDMENTS	NP	NP	WR	WR	23/10/24	
1	SECTIONS AMENDED	NP	NP	WR	WR	17/10/24	
0	ISSUED FOR CONSTRUCTION	MMC	ES	WPR	WPR	08/08/24	

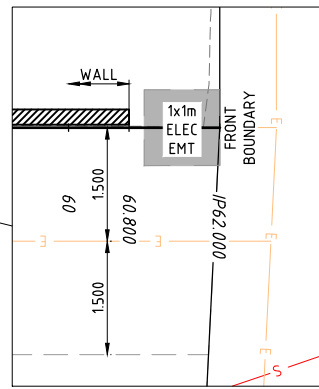
THE HEIGHTS
 DURACK

Empower
 ENGINEERS &
 PROJECT MANAGERS
 ABN 23 010 743 692

Client	URBEX PTY LTD	Datum	AHD
Project	THE HEIGHTS - STAGE 11	PSM	RL
Title	EARTHWORKS MANAGEMENT SECTIONS AND DETAILS SHEET 1 OF 2	(MGA) COORD	FOR CONSTRUCTION
Project No.	B00611-CE004	Drawing No.	2



LOT 529 & 530 RETAINING WALL - PLAN
SCALE 1:500 (A1)



INSET
SCALE 1:50 (A1)

LEGEND

- 26.0--- RETAINING WALL ALIGNMENT
- ULTIMATE SURFACE CONTOURS
- TOP OF BATTER
- TOE OF BATTER / CHANGE IN GRADE
- ROAD CONTROL LINE
- MOUNTABLE KERB
- KERB AND GUTTER REFER TO CS-3300 (TYP)
- LAYBACK KERB AND CHANNEL IN ACCORDANCE WITH CS3300
- SWD STORMWATER DRAINAGE
- RWD ROOFWATER DRAINAGE
- E ELECTRICAL CONDUIT
- S SEWERAGE RETICULATION
- W WATER RETICULATION
- C-C-C WATER CONDUIT CROSSINGS
- SWD EXISTING STORMWATER PIPES

CONCRETE BLOCK RETAINING WALL DESIGN PARAMETERS:

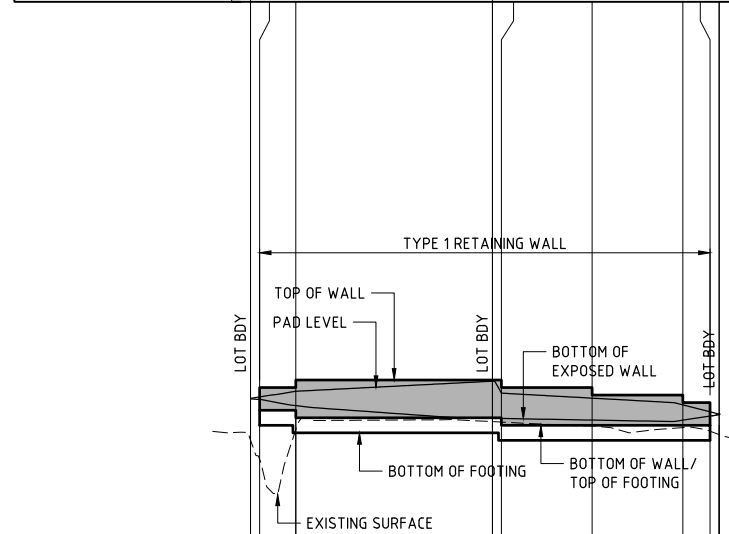
1. COMPLY WITH AS4678-2002 "EARTH RETAINING STRUCTURES".
2. MINIMUM DESIGN LIFE OF 60 YEARS.
3. MINIMUM SUPERIMPOSED DESIGN LIVE LOAD OF 5kPa.
4. WALL POSTS, FOUNDATIONS & FENCE BRACKETS DESIGNED TO CARRY ADDITIONAL LOADS IMPOSED BY WIND ON A 2m (MAX) HIGH FENCE & WEIGHT IMPOSED BY A 2m HIGH HARDWOOD ACOUSTIC FENCE WITH ZERO PERMEABILITY.
5. COMPLY WITH ALL RELEVANT COUNCIL STANDARDS.
6. PROVIDE ENGINEERING CERTIFICATION THAT DESIGN IS IN ACCORDANCE WITH AS4768-2002 AND CONSTRUCTION IS IN ACCORDANCE WITH THE INITIAL DESIGN.
7. RETAINING WALL DESIGN HAS ASSUMED 200mm HIGH 200 SERIES MASONRY BLOCK WALL.
8. RETAINING WALL DESIGNER TO INCLUDE DOCUMENTATION DETAILING FOR DRAINAGE DISCHARGE AND/OR WEEP HOLES.
9. RETAINING WALL AND ALL FOOTINGS TO BE CONTAINED WITHIN THE PROPERTY BOUNDARY OF FUTURE PROPERTIES.
10. CONTRACTOR MAY ELECT TO INSTALL CONCRETE SLEEPER WALL OR SIMILAR AS CERTIFIED BY THE CERTIFYING ENGINEER AND ACCEPTED BY THE SUPERINTENDENT.

NOTES:-

1. INSTALL TEMPORARY SAFETY FENCING AT THE TOP OF ALL RETAINING WALLS GREATER THAN 1m HIGH.
2. REFER TO DWG Nos. B00611-CE006 TO B00611-CE008 FOR PLAN LOCATIONS OF TYPES RETAINING WALLS

INSET
SCALE 1:50 (A1)

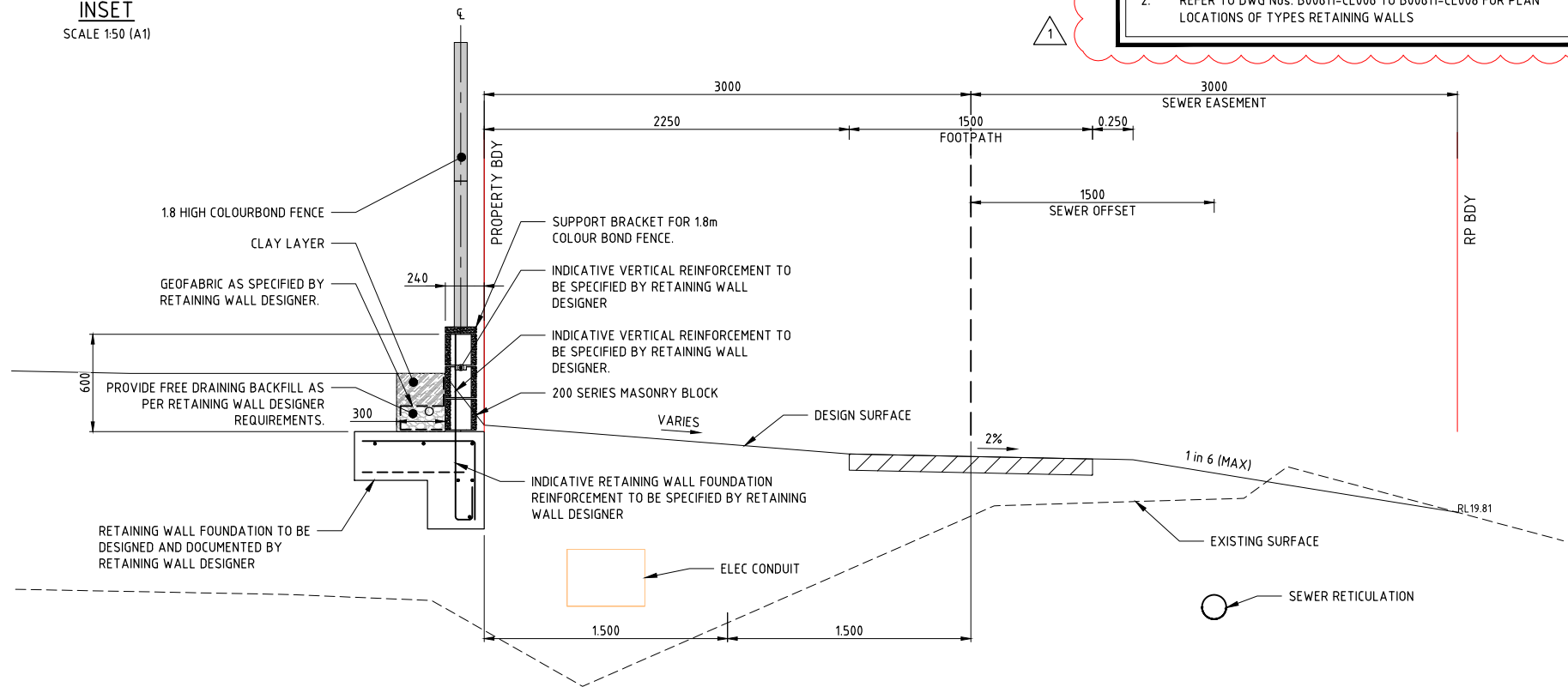
CHAINAGE	0	1200	6000	32000	33200	45200	57200	60800	62000
TOP OF WALL	-	20800	21000	20800	20800	20800	20400	20400	-
LOT No. (LOW SIDE)									
LOT No. (HIGH SIDE)			529			530			



DATUM R.L. 13.000	0	1200	6000	32000	33200	45200	57200	60800	62000
HEIGHT OF WALL		0.6	1.0	1.0	1.0	0.8	0.6		
BOTTOM OF WALL		20200	20000	19800					
CHAINAGE	0	1200	6000	32000	33200	45200	57200	60800	62000

LOTS 529 & 530 RETAINING WALL - ELEVATION

SCALE 1:500 (HORIZ.) 1:100 (VERT.) (A1)



A
CE006 RETAINING WALL - TYPE 1
SCALE 1:20 (A1)

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED _____ DATE _____
GENERAL MANAGER INFRASTRUCTURE
CITY OF PALMERSTON

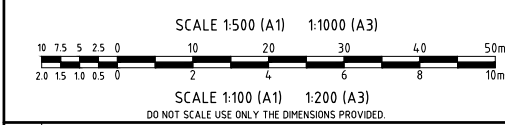
THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED. THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

WARNING
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RETAINING WALL DESIGN IS INDICATIVE ONLY. DESIGN AND CONSTRUCTION BY CONTRACTOR. RETAINING WALL DESIGNER MUST ALLOW FOR RAPID DRAW DOWN OF FLOW IN ADJACENT PONDS.

User: NICHOLAS PRINS File Name: S:\1262\DATA\MAN\2024\20240811_2024\1\2 CURRENT\UPM\B00611-RET



FACE AREA: 53.840m²

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
1	DRAWING TITLE & NOTES AMENDED	NP	NP	WR	WR	17/10/24
0	ISSUED FOR CONSTRUCTION	MMC	ES	WPR	WPR	08/08/24

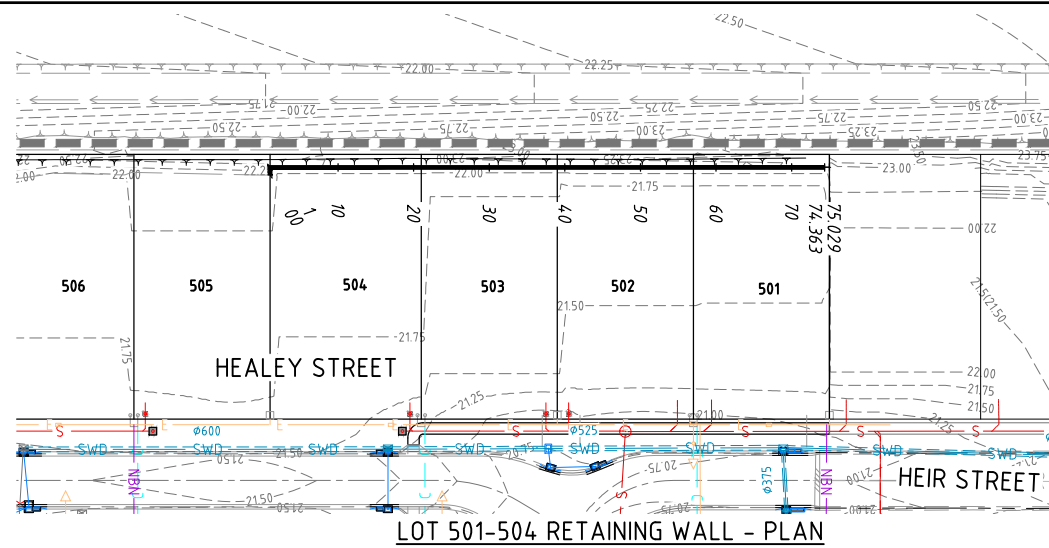
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THE HEIGHTS
DURACK

Empower
ENGINEERS & PROJECT MANAGERS
ABN 23 010 743 692

Client **URBEX PTY LTD**
Project **THE HEIGHTS - STAGE 11**
Title **RETAINING WALL LAYOUT AND SECTIONS PLAN SHEET 1 OF 3**

Datum **AHD PSM RL (MGA) COORD**
FOR CONSTRUCTION
Project No. **B00611-CE006**
Drawing No. **1**
Rev **1**



LOT 501-504 RETAINING WALL - PLAN
SCALE 1:500 (A1)

- LEGEND**
- RETAINING WALL ALIGNMENT
 - - - - -26.0- - - ULTIMATE SURFACE CONTOURS
 - - - - - TOP OF BATTER
 - - - - - TOE OF BATTER / CHANGE IN GRADE
 - - - - - ROAD CONTROL LINE
 - - - - - MOUNTABLE KERB
 - - - - - KERB AND GUTTER REFER TO CS-3300 (TYP)
 - - - - - LAYBACK KERB AND CHANNEL IN ACCORDANCE WITH CS3300
 - SWD — STORMWATER DRAINAGE
 - RWD — ROOFWATER DRAINAGE
 - E — ELECTRICAL CONDUIT
 - S — SEWERAGE RETICULATION
 - W — WATER RETICULATION
 - C — WATER CONDUIT CROSSINGS
 - SWD — EXISTING STORMWATER PIPES

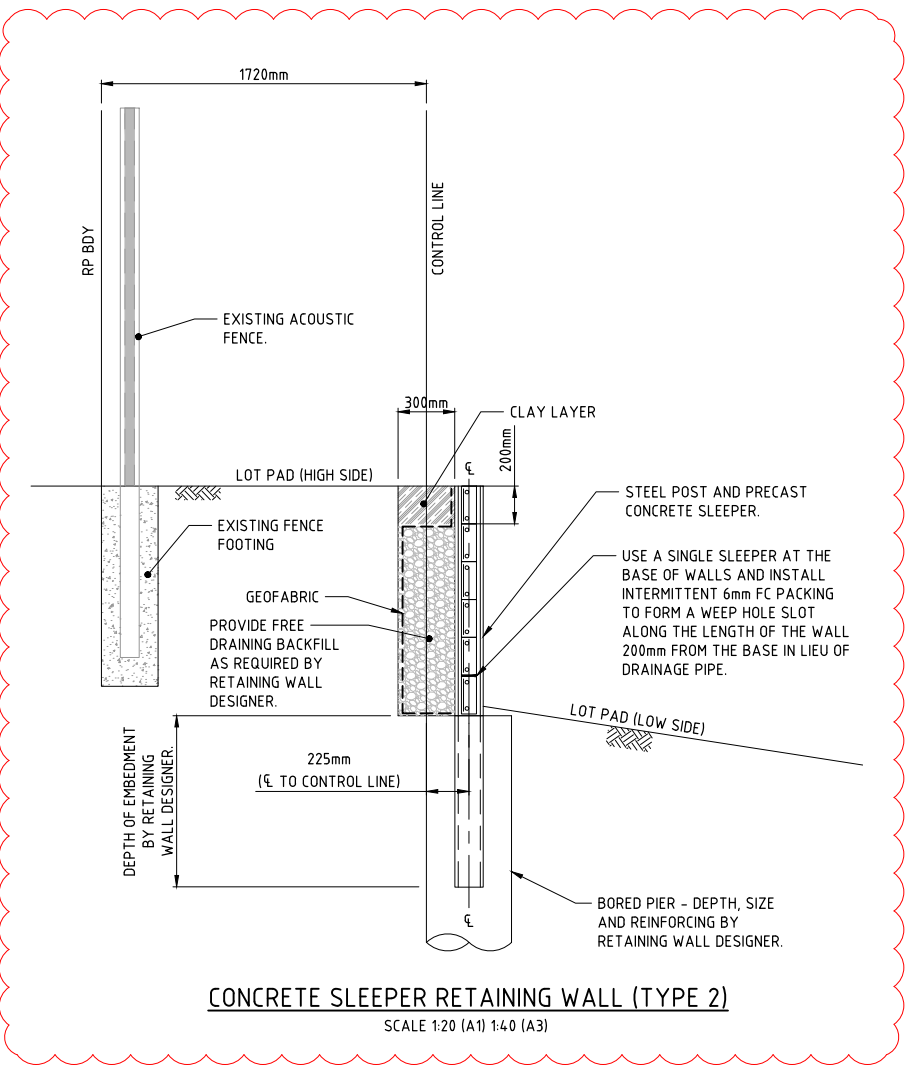
- CONCRETE SLEEPER WALL DESIGN PARAMETERS:**
- COMPLY WITH AS4678-2002 "EARTH RETAINING STRUCTURES"
 - MINIMUM DESIGN LIFE OF 60 YEARS
 - MINIMUM SUPERIMPOSED DESIGN LIVE LOAD OF 5kPa
 - WALL POSTS, FOUNDATIONS & FENCE BRACKETS DESIGNED TO CARRY ADDITIONAL LOADS IMPOSED BY WIND ON A 2m (MAX) HIGH FENCE (TYPES 3, 3A & 4)
 - COMPLY WITH ALL RELEVANT BRISBANE CITY COUNCIL STANDARDS.
 - PROVIDE RPEQ CERTIFICATION - FORM 15 & FORM 12 FOR EACH WALL TYPE & EACH ALLOTMENT
 - CONCRETE SLEEPER RETAINING WALLS HAVE BEEN DESIGNED TO SUIT 200mm HIGH SLEEPERS AT 2.0m CENTRES.

- NOTES:-**
- INSTALL TEMPORARY SAFETY FENCING AT THE TOP OF ALL RETAINING WALLS GREATER THAN 1m HIGH.
 - REFER TO DWG Nos. B00611-CE006 TO B00611-CE008 FOR PLAN LOCATIONS OF TYPES RETAINING WALLS

CHAINAGE	0.000	21.000	39	57.000	74.363 75.029
TOP OF WALL	22.835	23.035	23.235	23.435	
LOT No.		LOT 504	LOT 503	LOT 502	LOT 501

DATUM R.L.17.000	HEIGHT OF WALL	0.6	1.0	1.2	1.4
	BOTTOM OF WALL				22.035
	CHAINAGE	0.000	21.000	39	57.000
					74.363 75.029

RETAINING WALL No. RW LOTS 501-504 ELEVATION
SCALE 1:500 (HORIZ.) 1:100 (VERT.)



CONCRETE SLEEPER RETAINING WALL (TYPE 2)
SCALE 1:20 (A1) 1:40 (A3)

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PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

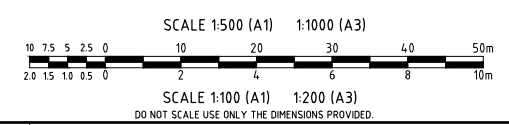
SIGNED _____ DATE _____

GENERAL MANAGER INFRASTRUCTURE
CITY OF PALMERSTON

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User: NICHOLAS PRINS File Name: S:\2024\data\main\2024\dwg\01\2024\14_civil-dwg\12_current\UPM\B00611-RET



No.	Amendments	Drawn	Design	Design Chk	Appd	Date
1	TYPICAL DETAIL AMENDED	NP	NP	WR	WR	23/10/24
0	ORIGINAL ISSUE	NP	NP	WR	WR	11/10/24

THE HEIGHTS
DURACK

Empower
ENGINEERS & PROJECT MANAGERS
ABN 23 010 743 692

Client: **URBEX PTY LTD**
Project: **THE HEIGHTS - STAGE 11**
Title: **RETAINING WALL LAYOUT AND SECTIONS PLAN SHEET 3 OF 3**

Datum: **AHD PSM RL (MGA) COORD**

NOT FOR CONSTRUCTION

Project No. Drawing No. Rev
B00611-CE008 1