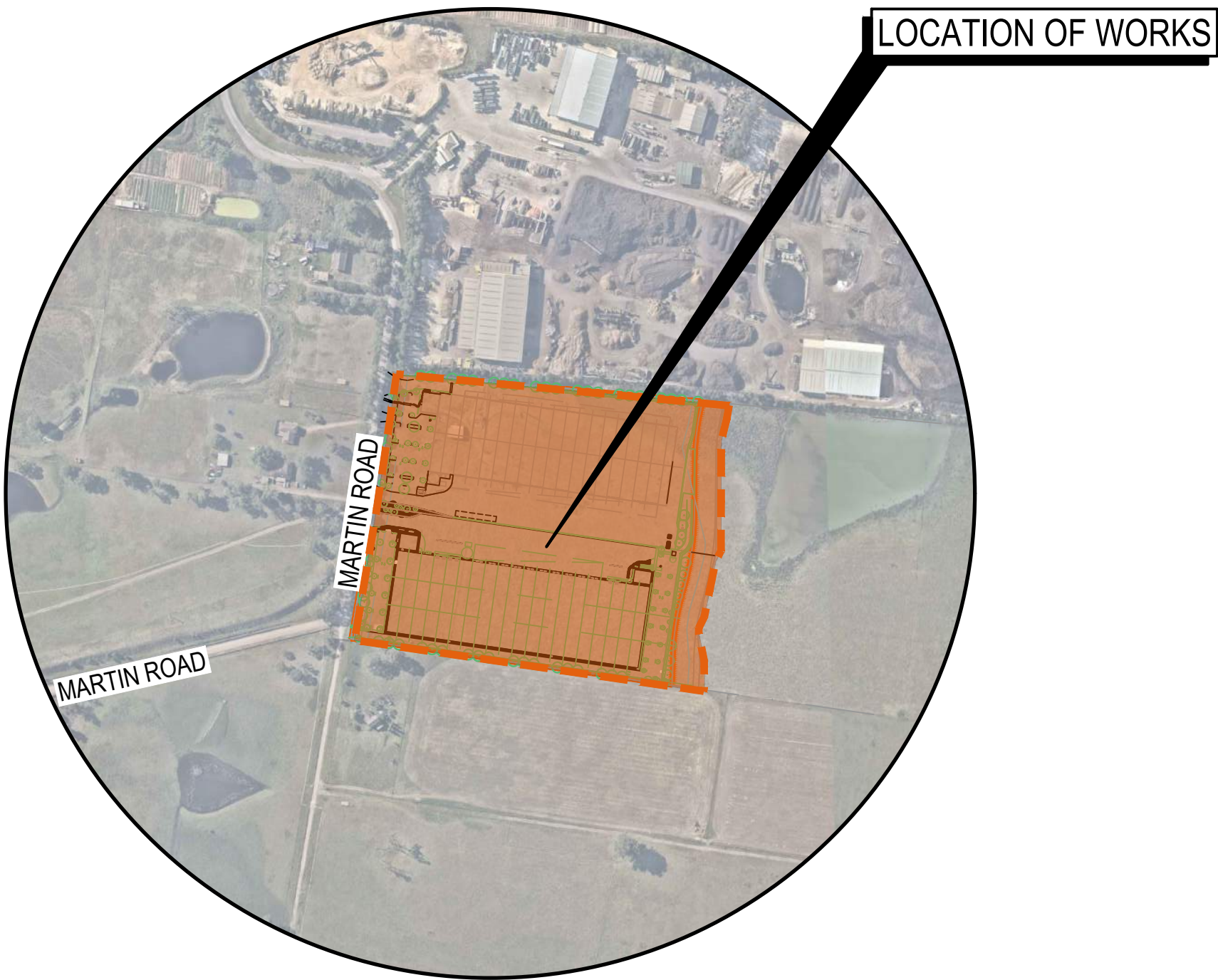


230 MARTIN ROAD BADGERYS CREEK

STATE SIGNIFICANT DEVELOPMENT APPLICATION (SSD-65529236)

DRAWING SCHEDULE

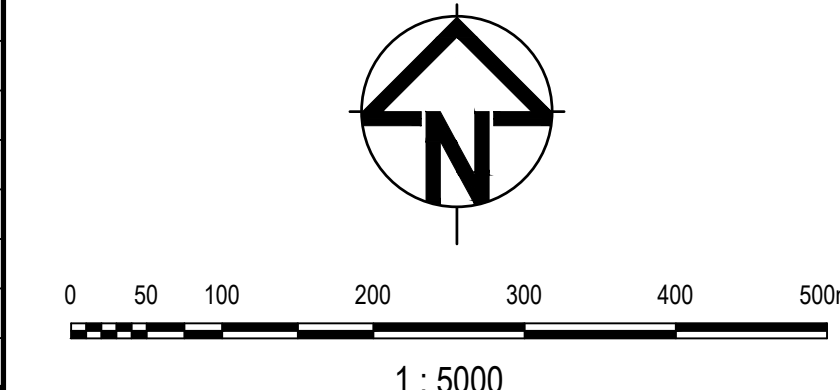
DRAWING NUMBER	DESCRIPTION
GENERAL	
MAR-AAP-DA-01-DRG-CV-0001	COVER SHEET, LOCALITY PLAN AND DRAWING SCHEDULE
MAR-AAP-DA-01-DRG-CV-0021	GENERAL NOTES
MAR-AAP-DA-01-DRG-CV-0061	GENERAL ARRANGEMENT PLAN
EARTHWORKS	
MAR-AAP-DA-01-DRG-CV-0101	BULK EARTHWORKS PLAN SHEET 1
MAR-AAP-DA-01-DRG-CV-0102	BULK EARTHWORKS PLAN SHEET 2
MAR-AAP-DA-01-DRG-CV-0121	BULK EARTHWORKS SITE SECTIONS SHEET 1
MAR-AAP-DA-01-DRG-CV-0122	BULK EARTHWORKS SITE SECTIONS SHEET 2
MAR-AAP-DA-01-DRG-CV-0141	RETAINING WALL PLAN SHEET 1
MAR-AAP-DA-01-DRG-CV-0142	RETAINING WALL PLAN SHEET 2
MAR-AAP-DA-01-DRG-CV-0143	RETAINING WALL PLAN SHEET 3
MAR-AAP-DA-01-DRG-CV-0144	RETAINING WALL PLAN SHEET 4
MAR-AAP-DA-01-DRG-CV-0145	RETAINING WALL PLAN SHEET 5
MAR-AAP-DA-01-DRG-CV-0146	RETAINING WALL PLAN SHEET 6
MAR-AAP-DA-01-DRG-CV-0147	RETAINING WALL PLAN SHEET 7
ROADWORKS	
MAR-AAP-DA-01-DRG-CV-0201	CIVIL WORKS PLAN SHEET 1
MAR-AAP-DA-01-DRG-CV-0202	CIVIL WORKS PLAN SHEET 2
MAR-AAP-DA-01-DRG-CV-0241	TYPICAL SITE SECTIONS
STORMWATER	
MAR-AAP-DA-01-DRG-CV-0481	TYPICAL STORMWATER DRAINAGE DETAILS
MAR-AAP-DA-01-DRG-CV-0491	BASIN DETAIL PLAN



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					Scales		Surveyor		Client & Architect		Status		Project		ARCADIS	
											FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION		230 MARTIN ROAD, BADGERYS CREEK		Arcadis Australia Pacific Pty Limited Level 16, 580 George Street SYDNEY NSW 2000 ABN 76 104 485 289 Tel No: +61 2 8907 9000 www.arcadis.com/au	
					1 : 5000						© Copyright reserved				Project Number 30183733	
											Original Issue Signatures		Title		Issue	
											Drawn J. LOPEZ		A1		MAR-AAP-DA-01-DRG-CV-0001	
											Designed K. ROBINSON		AHD		04	
											Design Manager K. MCAREAVEY		MGA/20-56			
											Verified J. HEYDON					
													COVER SHEET , LOCALITY PLAN AND DRAWING SCHEDULE			

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE LIVERPOOL CITY COUNCIL ENGINEERING GUIDELINES FOR DEVELOPMENT AND SUBDIVISION WORKS RELEVANT AUSTRALIAN STANDARDS. OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED.
2. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE SUPERINTENDENT FOR A DECISION BEFORE PROCEEDING WITH THE WORK.
3. ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE BUILDING CODE OF AUSTRALIA AS AMENDED AND THE APPROPRIATE AND CURRENT AUSTRALIAN STANDARDS.
4. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
5. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
6. ALL DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED ON SITE BY THE BUILDER PRIOR TO CONSTRUCTION OR FABRICATION.
7. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH LIVERPOOL CITY COUNCIL ENGINEERING DESIGN FOR DEVELOPMENT GUIDELINES, ENGINEERING CONSTRUCTION CODE OF STANDARD DRAWINGS. WHERE DISCREPANCIES OCCUR THE MORE STRINGENT SPECIFICATION WILL TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST AS REQUIRED. ALL COSTS TO BE BORNE BY THE APPLICANT.
9. THE CONTRACTOR SHALL NOT BE ALLOWED TO WORK WITHIN OR ADJACENT LAND WITHOUT PRIOR WRITTEN PERMISSION OF THE LAND OWNER.
10. THE CONTRACTOR SHALL PROVIDE MINIMUM 48 HOURS NOTICE TO THE PRINCIPAL FOR ALL INSPECTIONS.

1. ALL FINISHED SURFACE LEVELS ARE +/- 1m U.N.O.

1. ALL FINISHED SURFACE LEVELS ARE +/- 1m U.N.O.

1. ORIGIN OF LEVELS - REFER SURVEY NOTES.
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK, ANY DISCREPANCIES TO BE REPORTED TO THE SUPERINTENDENT.
3. MAKE SMOOTH CONNECTIONS WITH EXISTING WORKS.
4. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
5. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED IN ACCORDANCE WITH LIVERPOOL CITY ENGINEERING DESIGN FOR DEVELOPMENT GUIDELINES AND H33 BEDDING OR RELEVANT AUTHORITY STANDARD.
6. ALL BASE COURSE MATERIAL SHALL BE COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 S.2.1.
7. ALL SUB-BASE COURSE MATERIAL SHALL BE COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 S.2.2 (BEFORE PLACING FILL, PROOF ROLL EXPOSED SUBGRADE WITH AN 8 TONNE (MIN) DEADWEIGHT SMOOTH DROW NON-VIBRATORY ROLLER TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 20mm MOVEMENT UNDER ROLLER). SOFT SPOTS ARE TO BE REPLACED WITH SUITABLE SELECT FILL FOR A DEPTH OF AT LEAST 0.5m OR AS ADVISED BY THE GEOTECHNICAL ENGINEER.
8. SELECT MATERIAL FOR BACKFILLING SHALL BE GRANULAR MATERIAL WHICH IS NATURALLY OCCURRING, HAVING A PARTICLE SIZE DISTRIBUTION, DETERMINED IN ACCORDANCE WITH THE FOLLOWING: ALL MATERIAL CAN BE CRUSHED ROCK, NATURAL SOIL, GRAVEL AND SAND, OR OTHER APPROVED GRANULAR MATERIAL CONSISTING OF CLEAN, SOUND, DURABLE FRAGMENTS, FREE FROM ORGANIC MATTER FROM AN APPROVED SOURCE. GRADING LIMITS FOR SELECT FILL SHALL BE IN ACCORDANCE WITH AS 3725 AND LIVERPOOL CITY COUNCIL ENGINEERING DESIGN FOR DEVELOPMENT GUIDELINES.
9. ALL FREQUENCY OF COMPACTION TESTING SHALL BE IN ACCORDANCE WITH LIVERPOOL CITY COUNCIL ENGINEERING OR RELEVANT AUSTRALIAN STANDARDS.
10. FILL MATERIAL SHALL BE SPREAD IN LAYERS MAXIMUM 300mm THICK AND COMPACTED TO SPECIFICATION.
11. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED BY OTHERS, (eg ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.

1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 32MPa U.O IN REINFORCED CONCRETE NOTES.
2. ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON MIN. 175mm DGB20 COMPACTED TO MINIMUM 98% MODIFIED DRY DENSITY (AS 1289 5.2 I).
3. EXPANSION JOINTS (E.J) TO BE FORMED FROM 12mm COMPRESSIBLE JOINT FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LOCATED AT DRAINAGE PITS, ON TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX 9m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
4. WEAKENED PLANE JOINTS TO BE 3mm TO 5mm WIDE AND LOCATED AT 900mm CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
5. LIGHT BROOM FINISH TO ALL FOOTPATHS, PRAM RAMPS AND DRIVEWAYS.
6. IN THE REPLACEMENT OF KERB AND GUTTER -
EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm U.O FROM THE LIP OF GUTTER. UPON COMPLETION OF THE NEW KERB AND GUTTER NEW BASECOURSE AND SURFACE TO BE LAID 900mm WIDE U.O.
7. EXISTING KERB AND GUTTER IS TO BE COMPLETELY REMOVED WHERE NEW KERB AND GUTTER IS SHOWN.

1. ALL SIGNAGE TO BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE R.M.S REGULATORY SIGNS MANUAL.
2. ALL LAMP COLUMNS TO BE IN ACCORDANCE WITH LIVERPOOL CITY COUNCIL AND / OR ENDEAVOUR ENERGY ENERGY SPECIFICATIONS.

1. DETAILED GROUND SURVEY WITHIN THE SITE AND BOUNDARIES WERE SUPPLIED BY ENG LAND SERVICES, DRAWING REFERENCE: 23050801GN
SURVEY IS IN MGA2020 COORDINATE SYSTEM AND TO AUSTRALIAN HEIGHT DATUM.
2. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. ARCADIS DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASED ON ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.
3. SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT ARCADIS.

MARK ADOPTED: SSM 33801

RL: 62.465

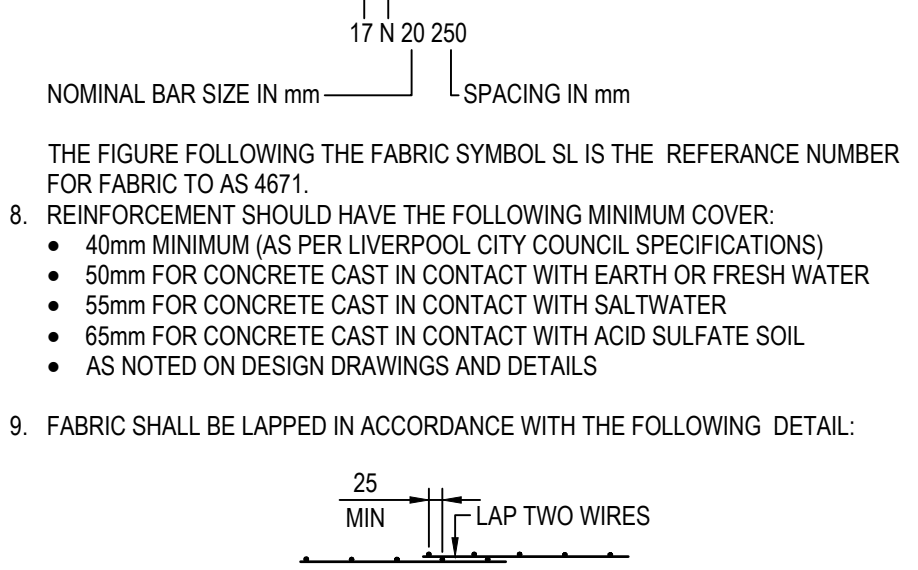
1. A TRAFFIC CONTROL PLAN IF REQUIRED IS TO BE PREPARED AND LODGED WITH COUNCIL BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.

1. THE CONTRACTOR SHALL REVIEW FORTIFY GEOTECH GEOTECHNICAL INVESTIGATION REPORT DATED OCTOBER - NOVEMBER 2023 REFERENCE NUMBER JS/2024 TO SATISFY THEMSELVES OF THE ANTICIPATED GROUND CONDITIONS DURING EARTHWORKS. THE CONTRACTOR MUST ALLOW FOR ADDITIONAL GEOTECHNICAL INVESTIGATIONS & TESTING DURING CONSTRUCTION TO VERIFY SUBGRADE CONDITIONS AND APPROPRIATE TREATMENTS ON SITE THAT ARE CONSISTENT WITH THE PARAMETERS USED IN THE PAVEMENT DESIGN.

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARYED BY THE CONTRACT DOCUMENTS AND LIVERPOOL CITY COUNCIL GUIDELINES FOR DEVELOPMENT AND SUBDIVISION WORKS - CONCRETE PAVEMENT NOTES.
2. CONCRETE QUALITY
ALL REQUIREMENTS OF THE CURRENT AUSTRALIAN STANDARD SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	AS3600 F _{ck} MPA AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE
VEHICULAR BASE	32	60	20
KERBS, PATHS AND PITS	32	80	20
DRAINAGE PITS	32	80	20
RETAINING WALL FOOTING	32	80	20
IN CONTACT WITH SALTWATER	40	80	20
IN CONTACT WITH ACID SULFATE SOIL	50	80	20

- CEMENT TYPE SHALL BE (AS 3600) TYPE SL
 - CEMENT TYPE SHALL BE TYPE SR FOR ALL ELEMENTS IN CONTACT WITH ACID SULFATE SOIL
 - PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379
3. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY ARCADIS
4. CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE 50mm TOP AND 70mm FOR EXTERNAL EDGES UNLESS NOTED OTHERWISE
5. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1m CENTRES BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
6. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED AND CURED IN ACCORDANCE WITH RMS SPECIFICATION R63.
7. REINFORCEMENT SYMBOLS:
- N - DENOTES GRADE 450 N BARS TO AS 4671 GRADE N
- R - DENOTES 230 R HOT ROLLED PLAIN BARS TO AS 4671
- SL - DENOTES HARD-DRAWN WIRE REINFORCING FABRIC TO AS 4671
- NUMBER OF BARS IN GROUP  BAR GRADE AND TYPE



PEDESTRIAN PAVEMENT JOINTS

1. ALL PEDESTRIAN PAVEMENTS ARE TO BE JOINED IN ACCORDANCE WITH LIVERPOOL CITY COUNCIL STANDARD DRAWINGS R23 AND R24.
2. WHERE POSSIBLE, JOINTS SHOULD BE LOCATED TO MATCH KERBING AND OR ADJACENT PAVEMENT JOINTS.
3. PEDESTRIAN PAVEMENT JOINT LOCATIONS TO BE CONFIRMED BY PAVEMENT DESIGN FOLLOWING IN-SITU MATERIAL TESTING AND LIVERPOOL CITY COUNCIL ENGINEERING DESIGN CODE.
4. REFER TO LANDSCAPE ARCHITECTS PLANS FOR ALL OTHER PEDESTRIAN PAVEMENT JOINT SPECIFICATIONS.

1. PAVEMENT IS TO BE INSTALLED IN ACCORDANCE WITH LIVERPOOL CITY COUNCIL ENGINEERING DESIGN FOR DEVELOPMENT GUIDELINES SECTION 3.6 PAVEMENT DESIGN.
2. SUBSOIL DRAINAGE TO BE PROVIDED IN ACCORDANCE WITH LIVERPOOL CITY COUNCIL ENGINEERING DESIGN FOR DEVELOPMENT GUIDELINES SECTION 3.6 (IX) SUBSOIL DRAINAGE.

GENERAL INSTRUCTIONS

1. THE SITE SUPERINTENDENT/ENGINEER WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE IMPLEMENTED AND MAINTAINED TO SUIT THE CONSTRUCTION STAGING AND METHODOLOGY AND THE SITE AND WEATHER CONDITIONS AT THE TIME.
2. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE
 - 2.1. WITH LOCAL AUTHORITY REQUIREMENTS
 - 2.2. EPA REQUIREMENTS
 - 2.3. LANDCOM MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th edition, MARCH 2004.
3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
4. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS OR THE STORMWATER OUTLET AND PIPES HAVE BEEN CONSTRUCTED. CONTRACTORS TO ENSURE ALL EROSION & SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.

6. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE.

7. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
8. SITE STABILISATION BY APPLICATION OF SEEDED HYDROMULCH WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

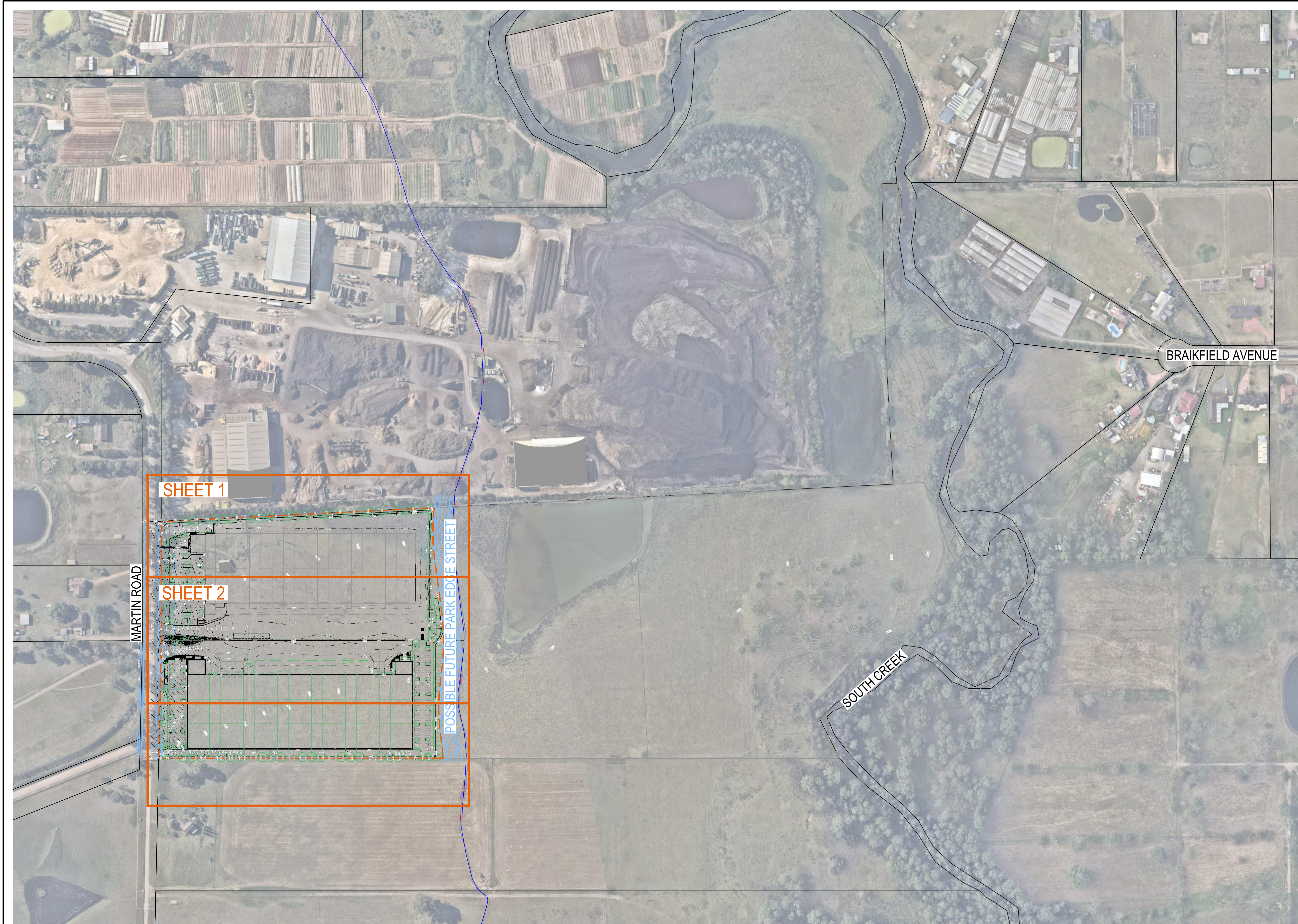
9. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE CONTRIBUTION TO DOWNPOLE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
10. CONTRACTOR TO DESIGN AND MANAGE ALL OF THE STOCKPILE REQUIREMENTS.
11. CONTRACTOR TO CONSIDER CONSTRUCTION ENVIRONMENTAL MANAGEMENT REPORT. ANY PROTECTED TREES TO BE REMOVED SHALL BE CONSULTED WITH THE ARBORIST.
12. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEMS AS IT IS RELATIVELY SEDIMENT FREE. I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
13. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

14. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
15. ALL TREES WITHIN THE EXTENT OF PROPOSED WORKS ARE TO BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.

1. TELSTRA'S PLANS SHOW ONLY THE PRESENCE OF CABLES AND PLANT. THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY FENCES ETC. AT THE TIME OF INSTALLATION AND TELSTRA DOES NOT WARRANT OR HOLD OUT THAT SUCH PLANS ARE ACCURATE THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY.
2. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR TELSTRA CABLES AND PLANT. BEFORE USING MACHINE EXCAVATORS TELSTRA PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY ITS LOCATION. TELSTRA WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO ITS PROPERTY AND LOSSES CAUSED TO TELSTRA AND ITS CUSTOMERS.

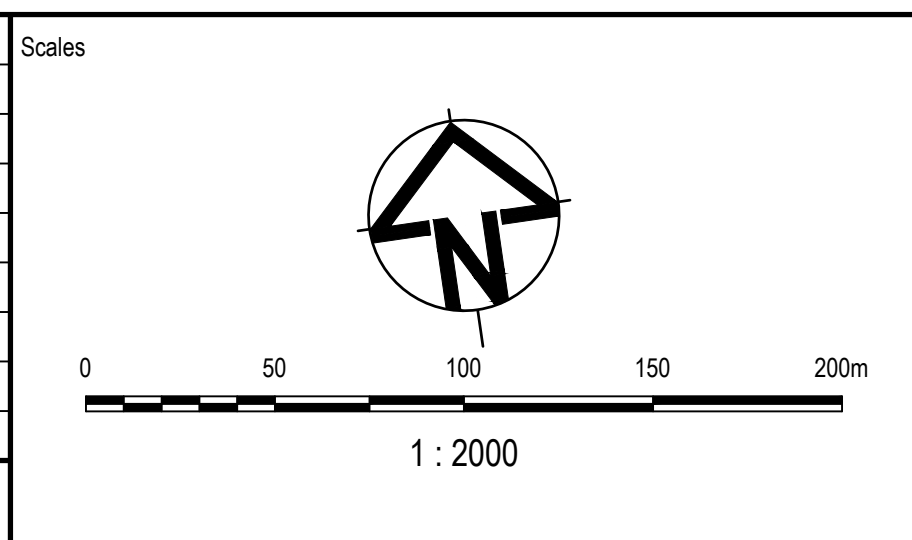
1. THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE.
ARCADIS CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.
2. CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY.
3. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
4. CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

[illegible]



LEGEND	
	DESIGN SURFACE CONTOUR
	EXISTING SURFACE CONTOUR
	EXTENT OF WORK BOUNDARY
	SHEET LAYOUT
	PROPOSED ARCHITECTURAL
	BY OTHERS

Issue	Description	DR	CH	VE	Date
04	FOR APPROVAL	JD	KR	KM	25.11.25
03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24

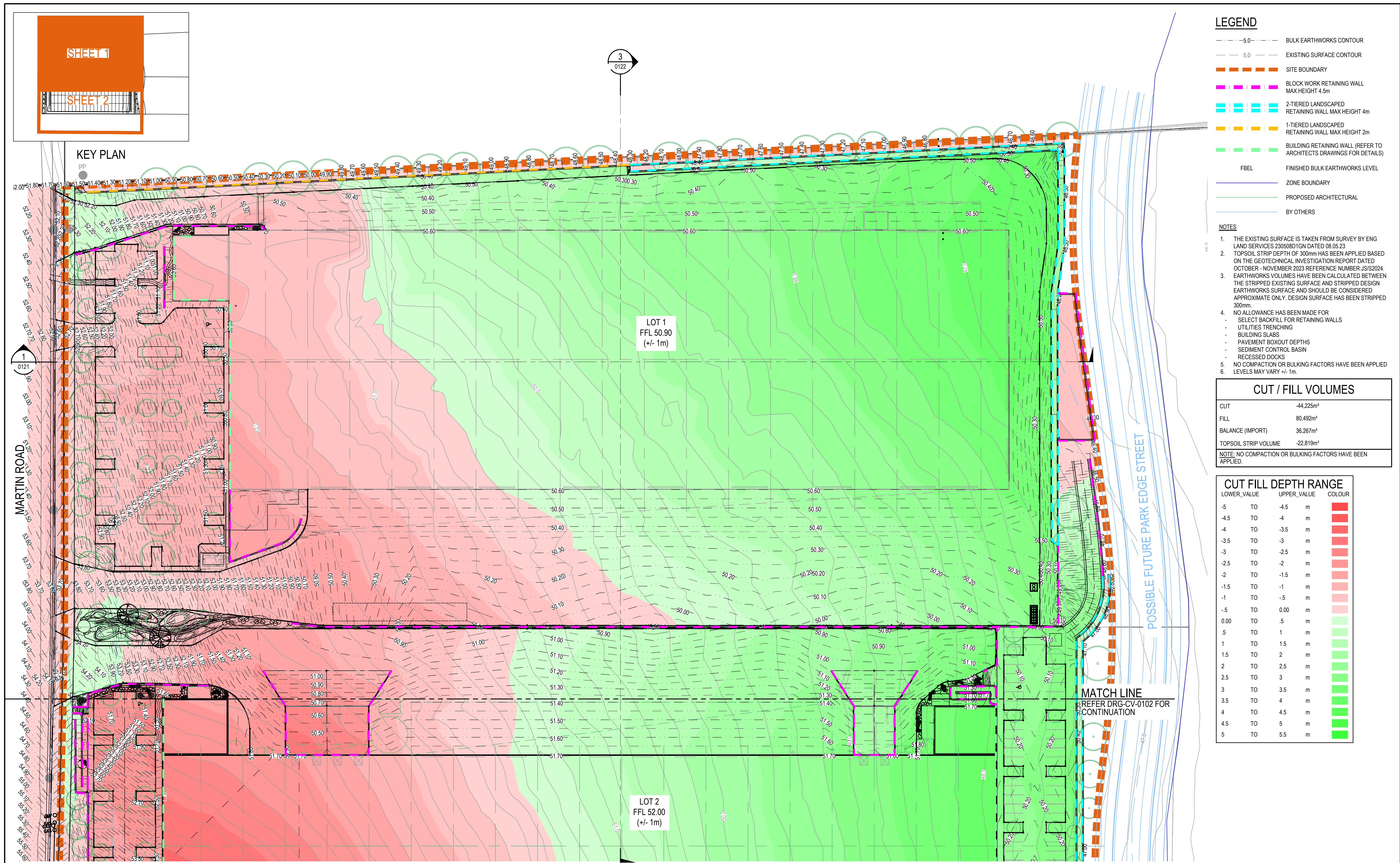


Status			
FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION			
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Original Issue Signatures			
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

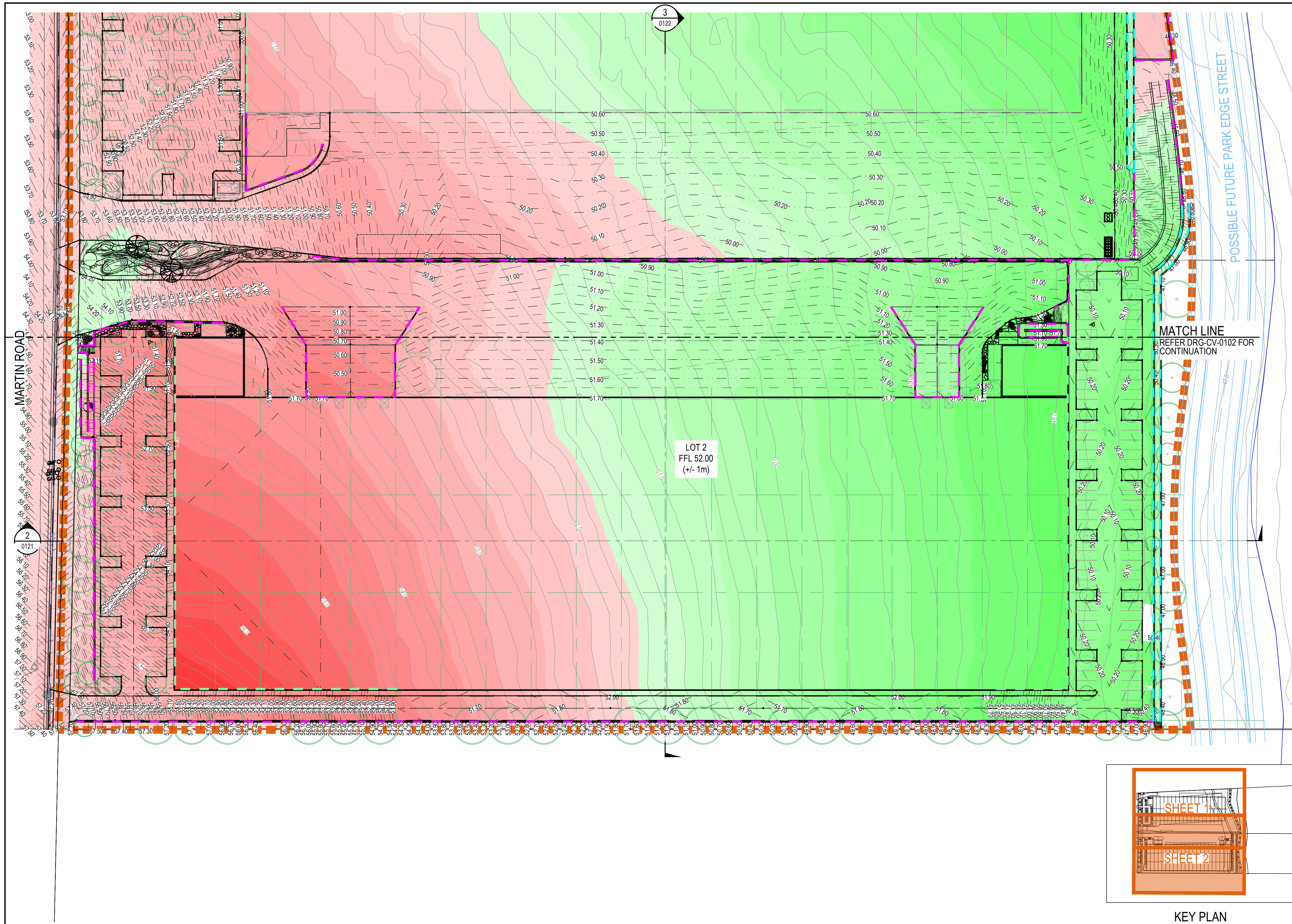
Project	
230 MARTIN ROAD, BADGERYS CREEK	
Title	
GENERAL ARRANGEMENT PLAN	

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Drawing No.	Project Number	Issue
MAR-AAP-DA-01-DRG-CV-0061	30183733	04



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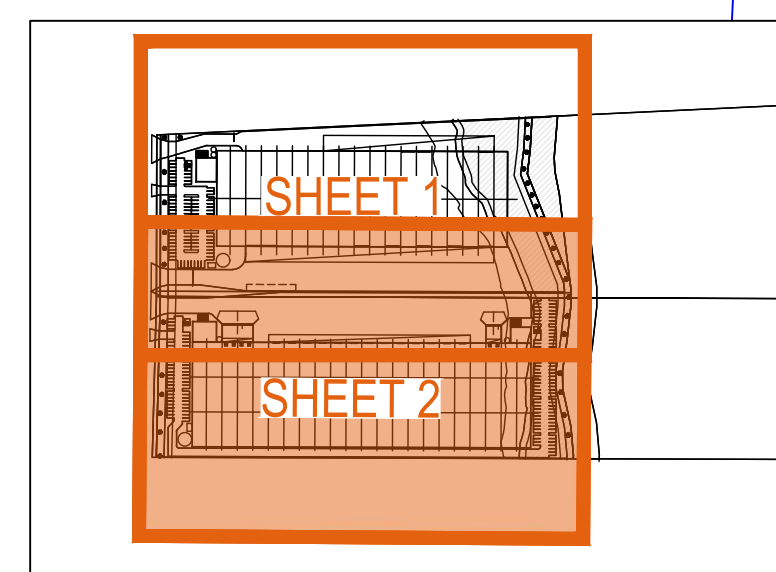
LEGEND

- BULK EARTHWORKS CONTOUR
- EXISTING SURFACE CONTOUR
- SITE BOUNDARY
- BLOCK WORK RETAINING WALL
MAX HEIGHT 4.5m
- 2-TIERED LANDSCAPED
RETAINING WALL MAX HEIGHT 4m
- 1-TIERED LANDSCAPED
RETAINING WALL MAX HEIGHT 2m
- BUILDING RETAINING WALL (REFER TO
ARCHITECTS DRAWINGS FOR DETAILS)
- FBEL
- FINISHED BULK EARTHWORKS LEVEL
- ZONE BOUNDARY
- PROPOSED ARCHITECTURAL
- BY OTHERS

- NOTES**
- THE EXISTING SURFACE IS TAKEN FROM SURVEY BY ENG LAND SERVICES 23050801GN DATED 08.05.23
 - TOPSOIL STRIP DEPTH OF 300mm HAS BEEN APPLIED BASED ON THE GEOTECHNICAL INVESTIGATION REPORT DATED OCTOBER - NOVEMBER 2023 REFERENCE NUMBER:JS/2024.
 - EARTHWORKS VOLUMES HAVE BEEN CALCULATED BETWEEN THE STRIPPED EXISTING SURFACE AND STRIPPED DESIGN EARTHWORKS SURFACE AND SHOULD BE CONSIDERED APPROXIMATE ONLY. DESIGN SURFACE HAS BEEN STRIPPED 300mm.
 - NO ALLOWANCE HAS BEEN MADE FOR
 - SELECT BACKFILL FOR RETAINING WALLS
 - UTILITIES TRENCHING
 - BUILDING SLABS
 - PAVEMENT BOXOUT DEPTHS
 - SEDIMENT CONTROL BASIN
 - RECESSED DOCKS
 - NO COMPACTION OR BULKING FACTORS HAVE BEEN APPLIED
 - LEVELS MAY VARY +/- 1m.

CUT / FILL VOLUMES	
CUT	-44,225m³
FILL	80,492m³
BALANCE (IMPORT)	36,267m³
TOPSOIL STRIP VOLUME	-22,819m³
NOTE: NO COMPACTION OR BULKING FACTORS HAVE BEEN APPLIED.	

CUT FILL DEPTH RANGE		
LOWER_VALUE	UPPER_VALUE	COLOUR
-5	TO -4.5	m
-4.5	TO -4	m
-4	TO -3.5	m
-3.5	TO -3	m
-3	TO -2.5	m
-2.5	TO -2	m
-2	TO -1.5	m
-1.5	TO -1	m
-1	TO -0.5	m
-0.5	TO 0.00	m
0.00	TO 0.5	m
0.5	TO 1	m
1	TO 1.5	m
1.5	TO 2	m
2	TO 2.5	m
2.5	TO 3	m
3	TO 3.5	m
3.5	TO 4	m
4	TO 4.5	m
4.5	TO 5	m
5	TO 5.5	m



KEY PLAN

Issue	Description	DR	CH	VE	Date
04	FOR APPROVAL	JD	KM	KM	25.11.25
03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24

Scales

1 : 500

100mm on Original

Surveyor

ENG LAND SERVICES

Client & Architect

EMKC³ development | cubed

Status

FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Original Issue Signatures

Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

Project

230 MARTIN ROAD,
BADGERYS CREEK

Title

BULK EARTHWORKS PLAN
SHEET 2

ARCADIS

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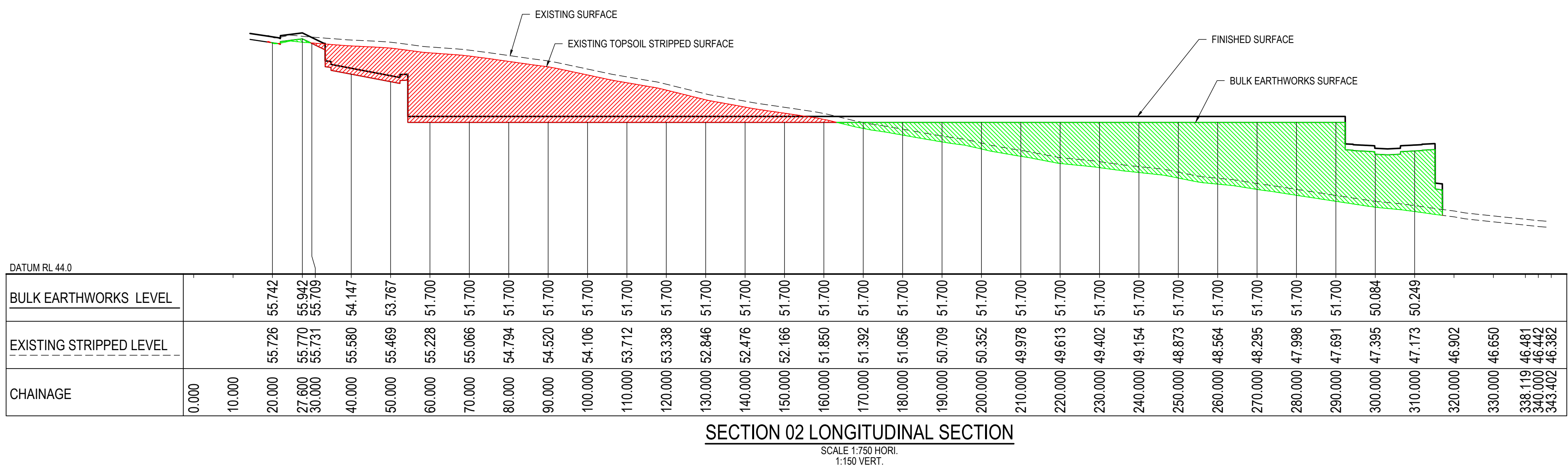
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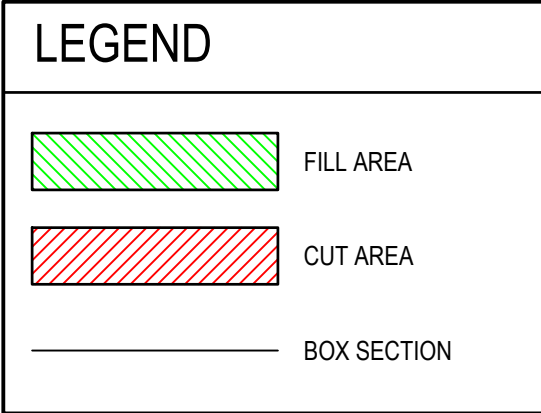
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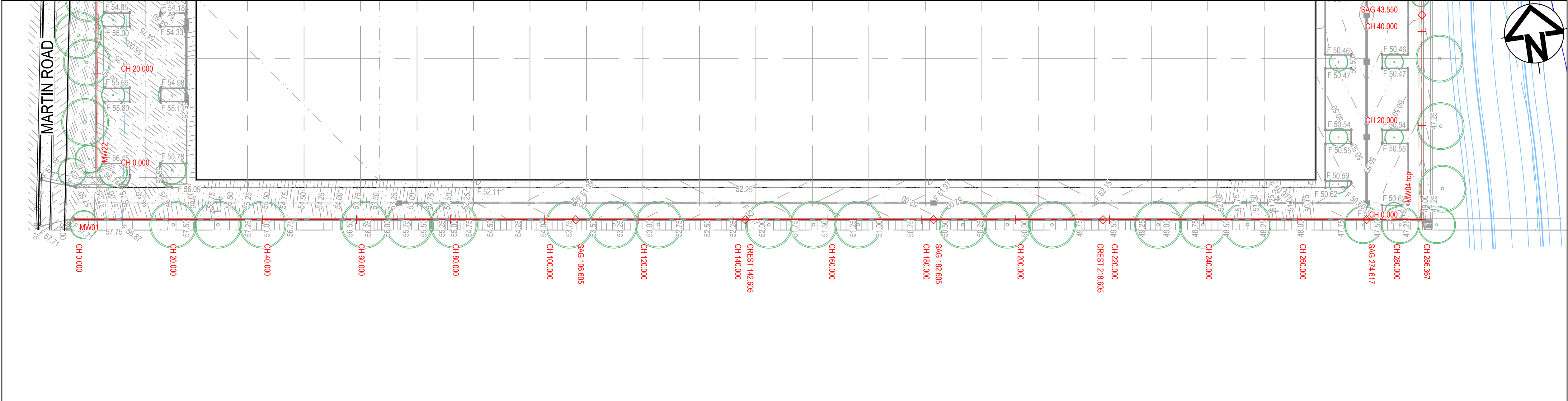
Issue

04

MAR-AAP-DA-01-DRG-CV-0102

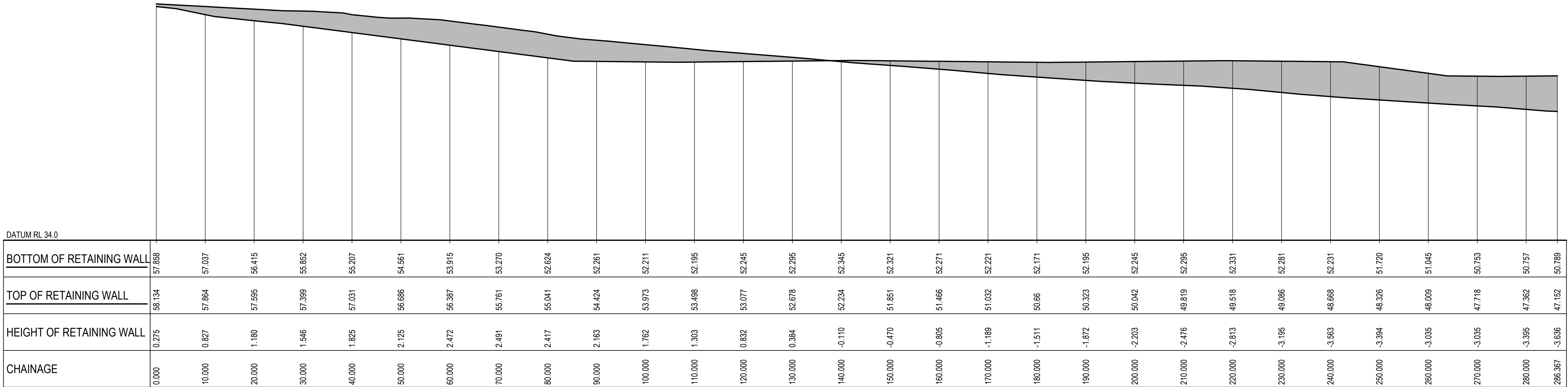
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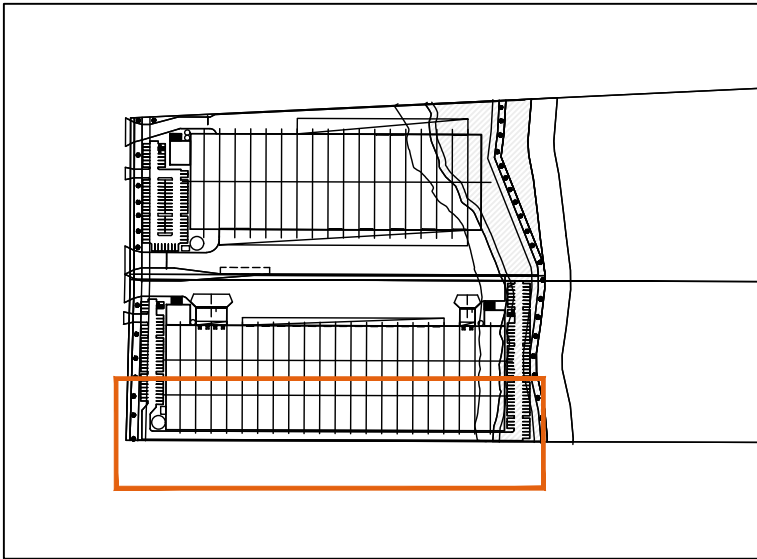


- LEGEND**
- PROPOSED SURFACE LEVEL AT TOP OF WALL
 - DESIGN SURFACE CONTOURS
 - EXISTING SURFACE CONTOURS
 - PROPOSED SURFACE LEVEL AT BOTTOM OF WALL
 - CHAINAGE AND CONTROL LINE
 - ZONE BOUNDARY
 - PROPOSED ARCHITECTURAL
 - BY OTHERS

RETAINING WALL PLAN
1:500

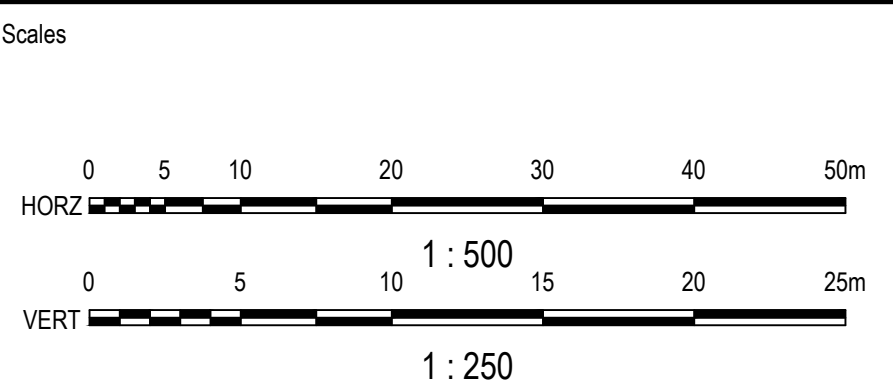


MW01 LONGITUDINAL SECTION
SCALE 1:500 HORI.
1:250 VERT.



KEY PLAN

04	FOR APPROVAL	JD	KM	KM	25.11.25
03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24
Issue	Description	DR	CH	VE	Date



Status

FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

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Original Issue Signatures			
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

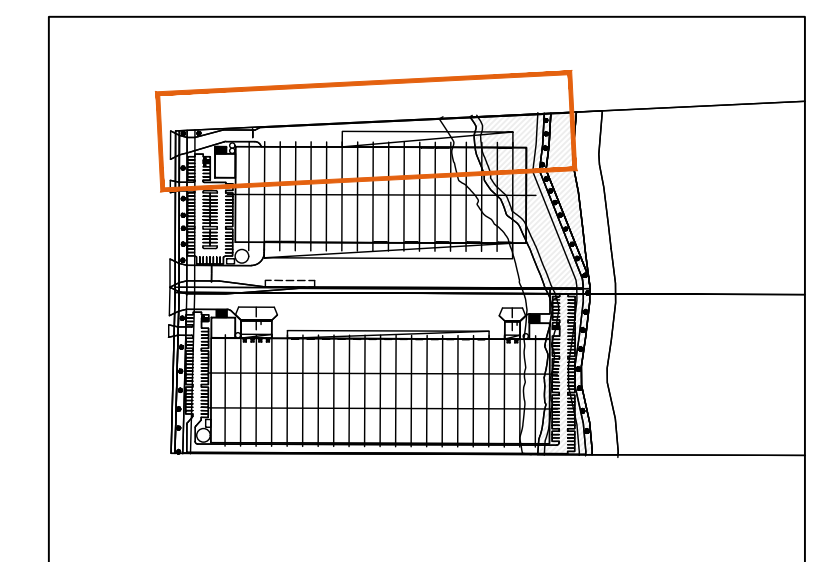
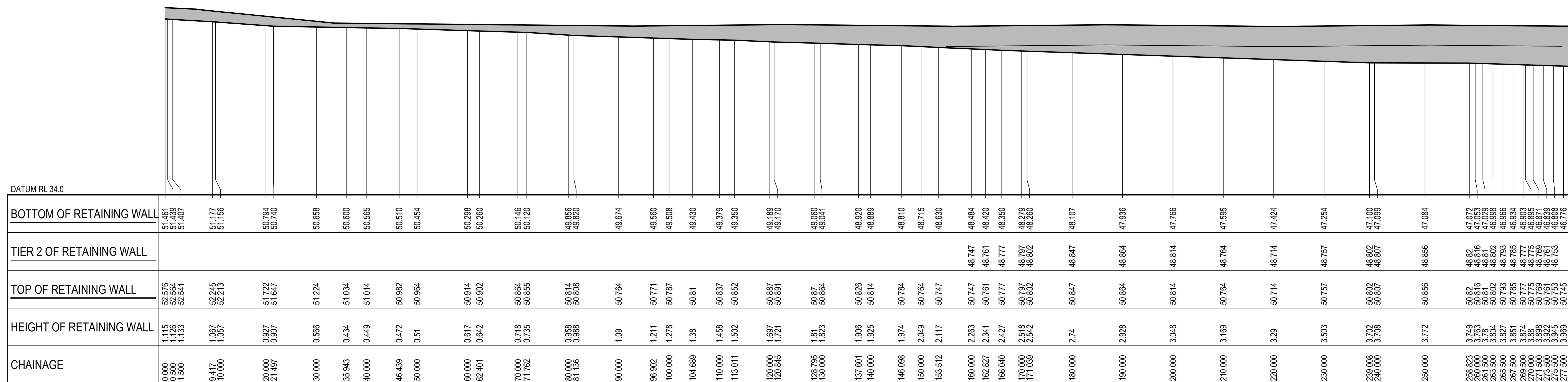
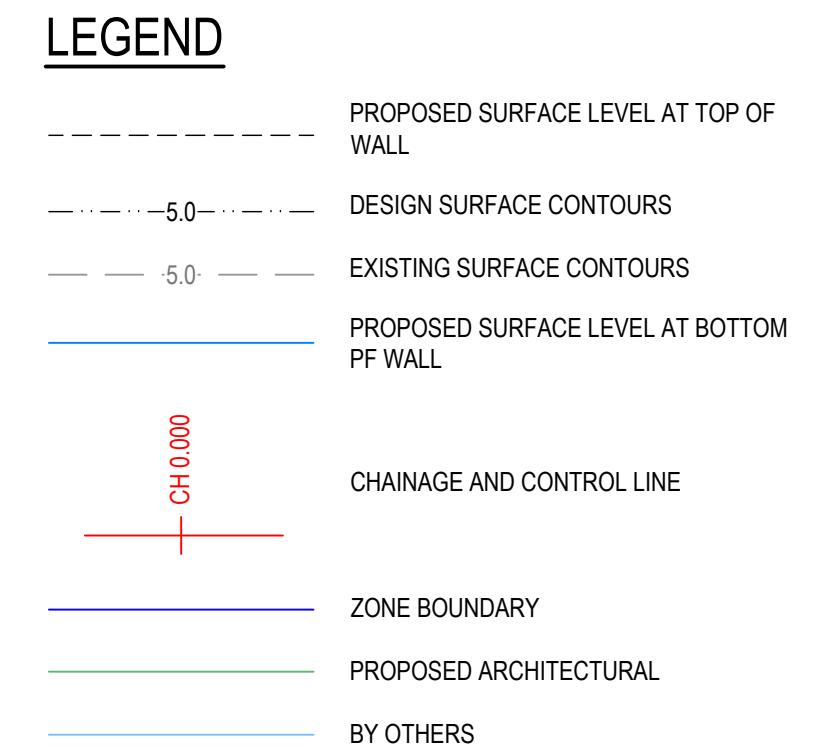
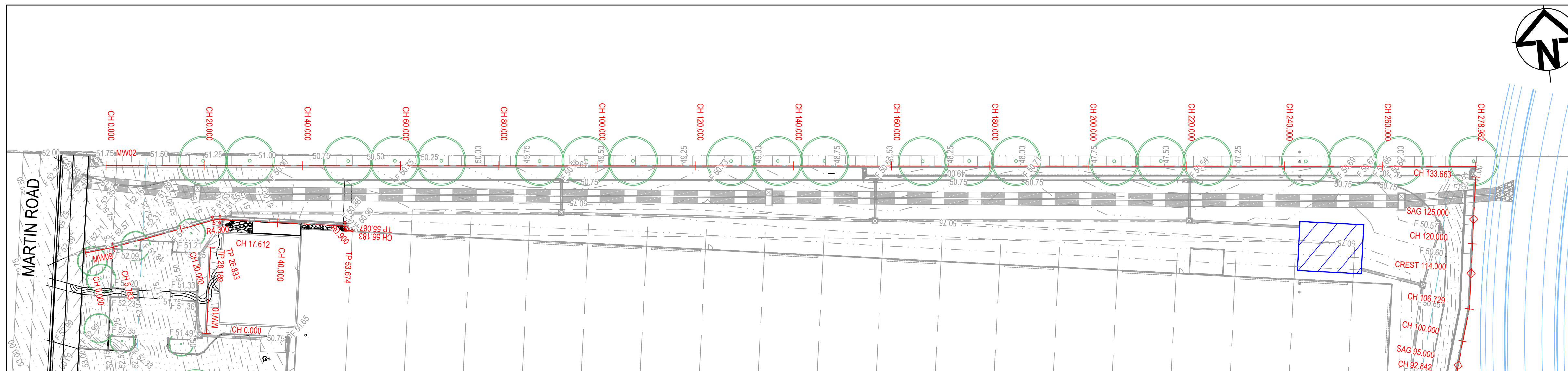
Project	230 MARTIN ROAD, BADGERYS CREEK	
Title	RETAINING WALL PLAN SHEET 1	

ARCADIS

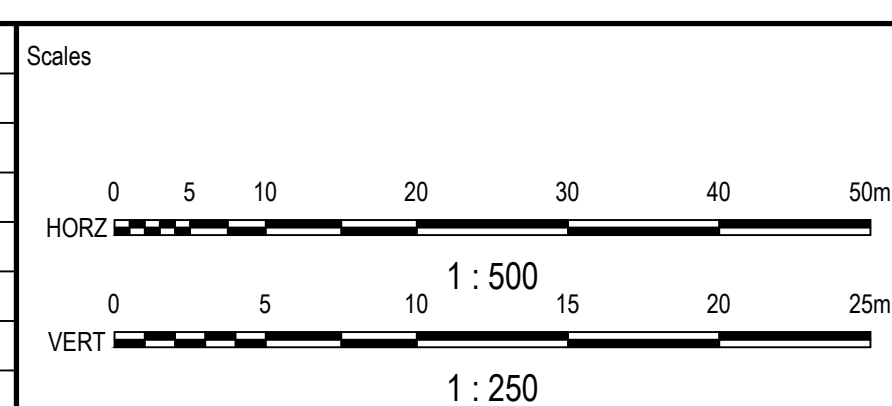
Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number	30183733
Issue	04

MAR-AAP-DA-01-DRG-CV-0141

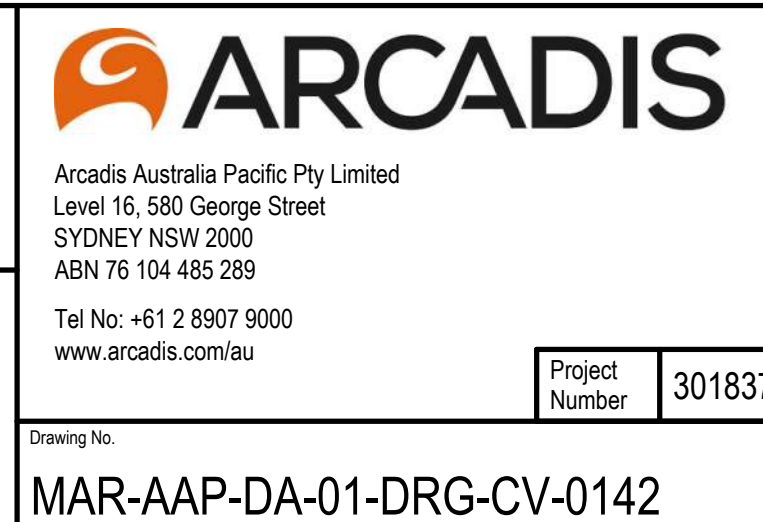


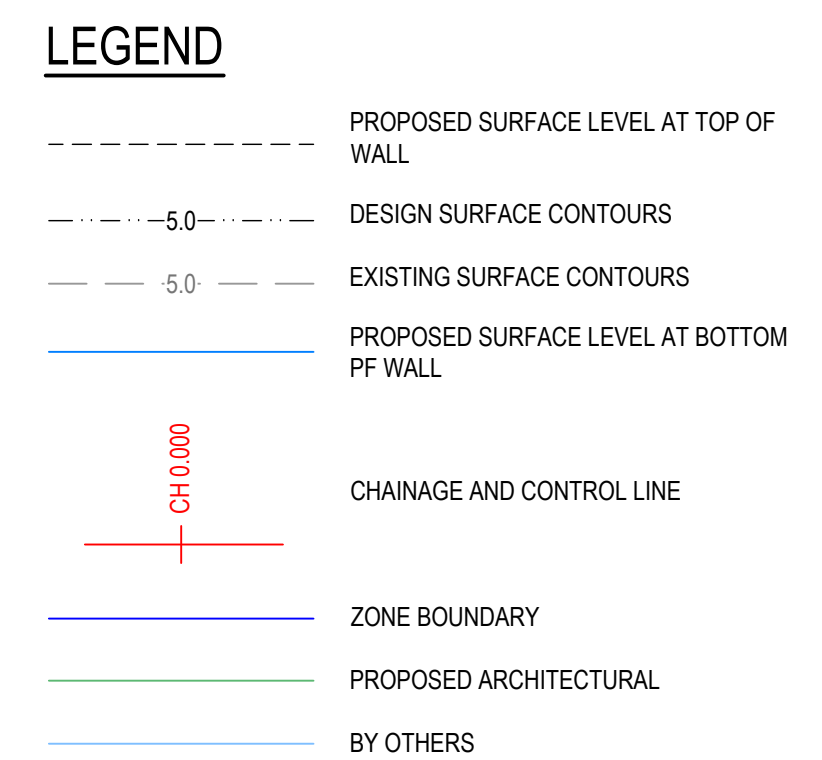
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03	FOR COORDINATION	JD	KR	KM 21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM 24.04.25
01	FOR APPROVAL	JL	KR	JH 13.09.24
Issue	Description	DR	CH	VE Date



Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION		
© Copyright reserved			
Original Issue Signatures			
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

Project	230 MARTIN ROAD, BADGERYS CREEK
Title	RETAINING WALL PLAN SHEET 2

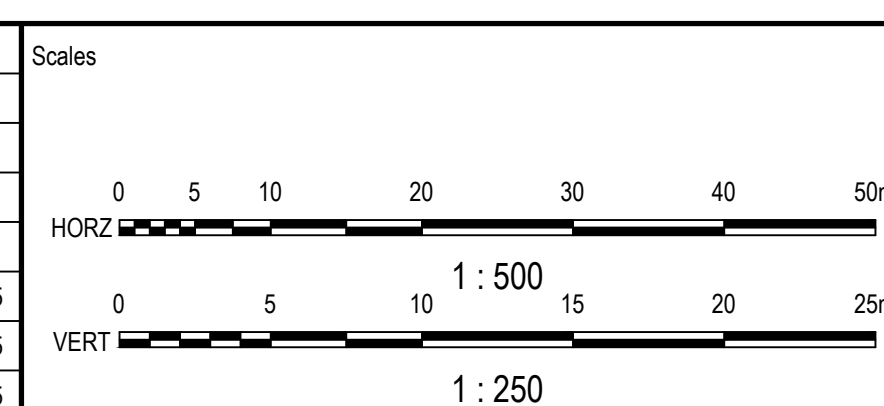




DATUM RL 34.0	
BOTTOM OF RETAINING WALL	50.399
TIER 2 OF RETAINING WALL	50.337
TOP OF RETAINING WALL	50.387
HEIGHT OF RETAINING WALL	0.752
CHAINAGE	0.000
	10.000
	20.000
	30.000
	40.000
	50.000
	60.000
	70.000
	80.000
	90.000
	100.000
	110.729
	120.000
	130.000
	140.000

This architectural drawing shows a side elevation of a building facade. The building features a series of vertical columns and horizontal lines representing windows and structural elements. A red rectangle is drawn over the upper portion of the facade, specifically highlighting a section of the upper floor or roofline. The drawing is oriented horizontally on the page.

04	FOR APPROVAL	JD	KM	KM	25.11.25
03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24
Issue	Description	DR	CH	VE	Date



Surveyor



	Client & Architect
--	--------------------



	Status
--	--------

FOR APPROVAL
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Original Issue Signatures

Drawn	110257
-------	--------

	J. LOPEZ

Designed	K. ROBINSON
----------	-------------

Design	K. MCAREAVE
--------	-------------

Manager	R. MCAREAVE
Modified	

Verified	J. HEYDON
----------	-----------

	Original
--	----------

Size	
------	--

Height
Datum

Grid	
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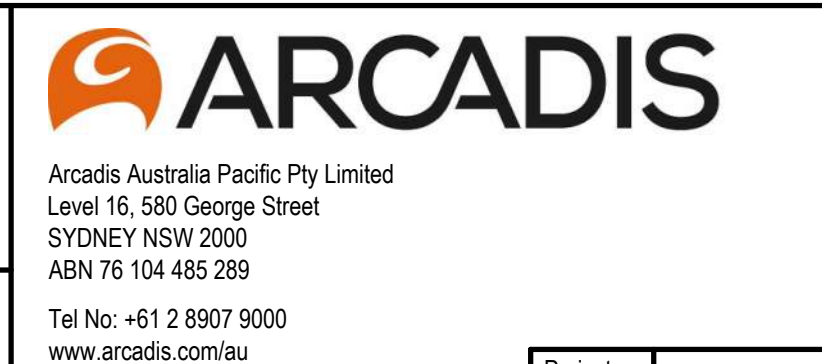
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	Project
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230 MARTIN ROAD,
BADGERYS CREEK

	Title
--	-------

RETAINING WALL
PLAN
SHEET 3



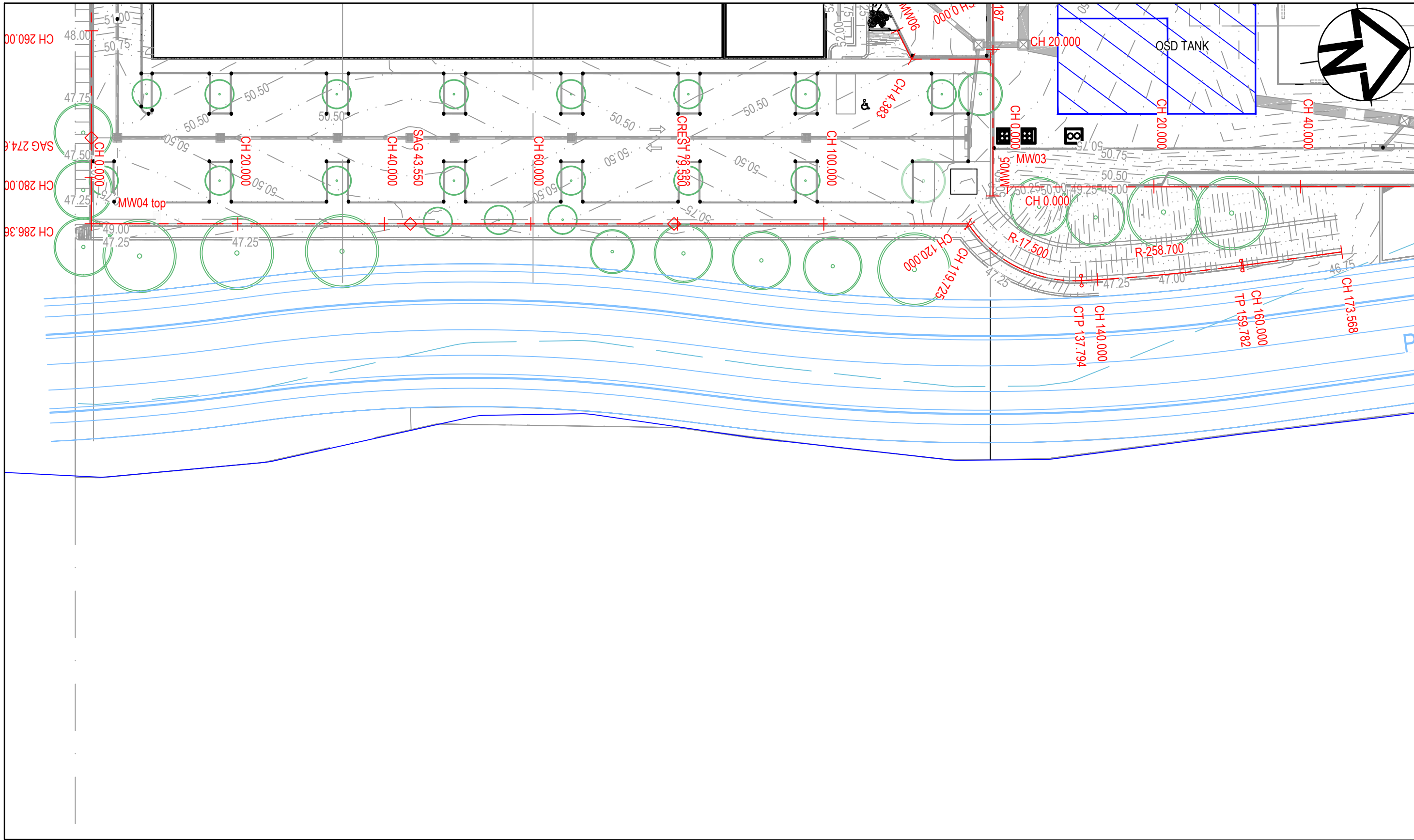
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MAR-AAP-DA-01-DRG-CV-0143

Project Number	30183733
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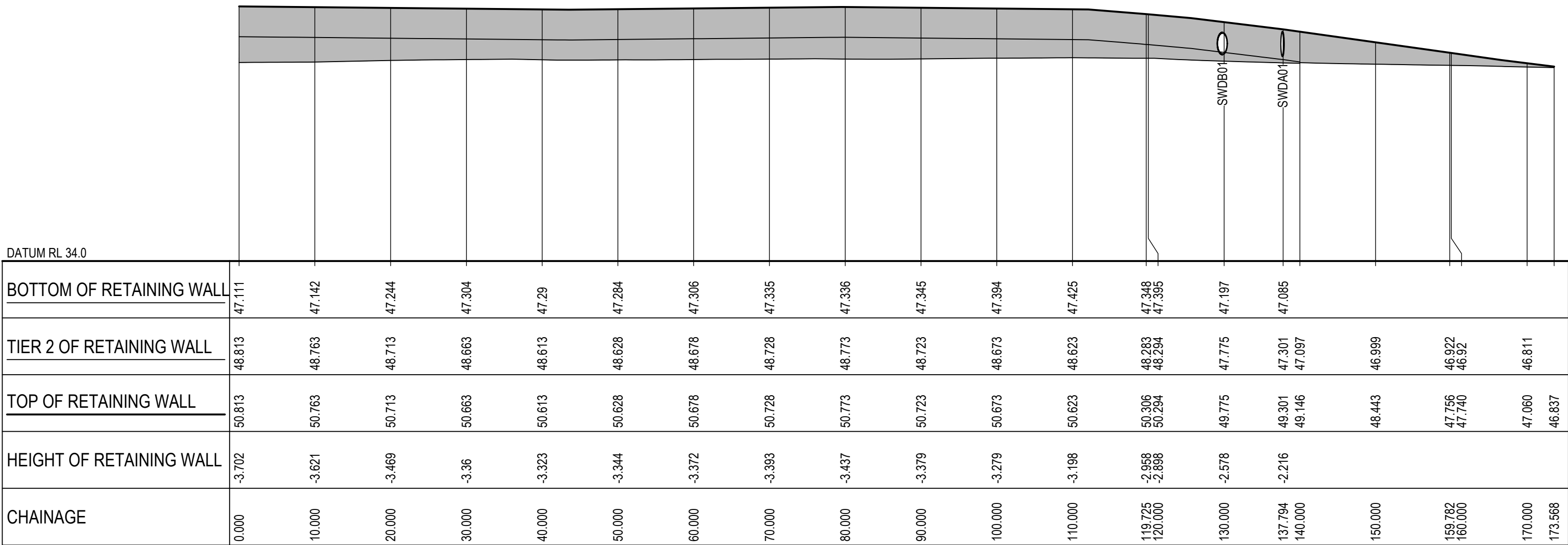
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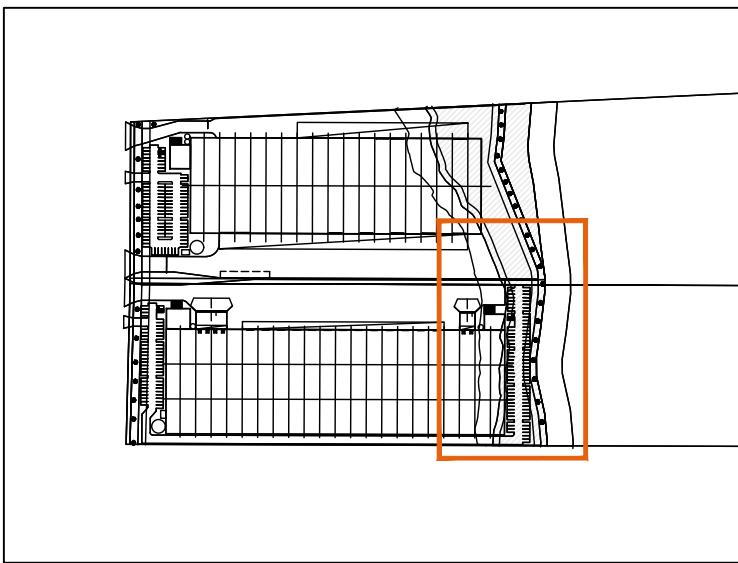


RETAINING WALL PLAN
1 : 500

- LEGEND**
- PROPOSED SURFACE LEVEL AT TOP OF WALL
 - DESIGN SURFACE CONTOURS
 - EXISTING SURFACE CONTOURS
 - PROPOSED SURFACE LEVEL AT BOTTOM PF WALL
 - CHAINAGE AND CONTROL LINE
 - ZONE BOUNDARY
 - PROPOSED ARCHITECTURAL
 - BY OTHERS

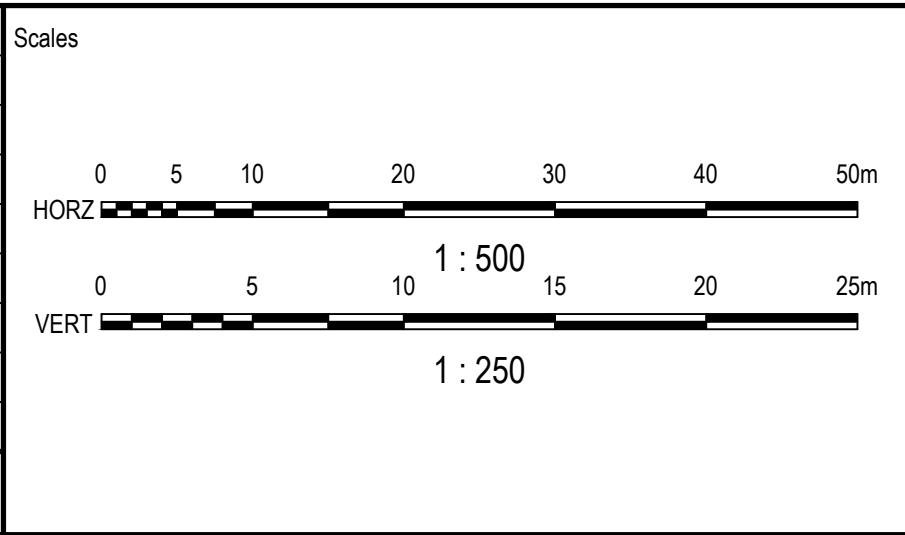


MW04 top LONGITUDINAL SECTION
SCALE 1:500 HORI.
1:250 VERT.



KEY PLAN

04	FOR APPROVAL	JD	KM	KM	25.11.25
03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24
Issue	Description	DR	CH	VE	Date



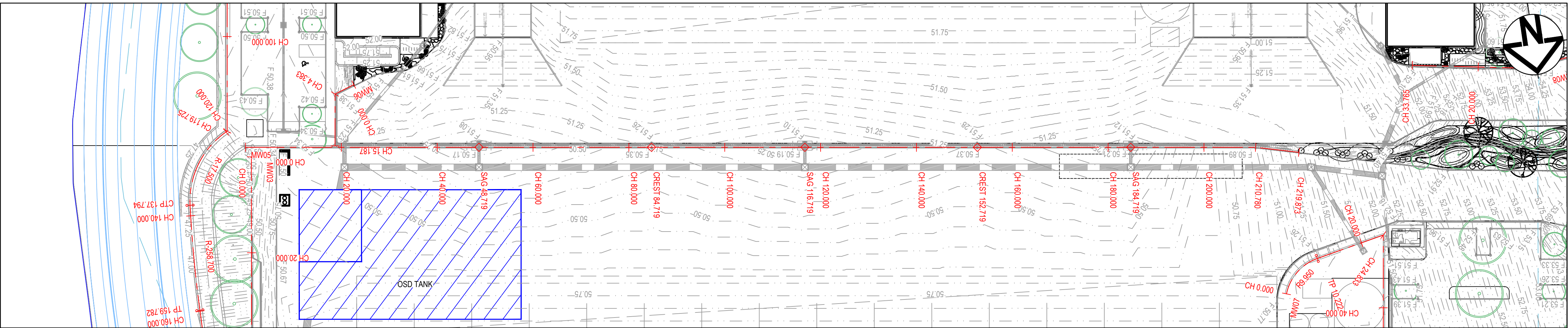
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Original Issue Signatures			
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

Project	230 MARTIN ROAD, BADGERYS CREEK	
Title	RETAINING WALL PLAN SHEET 4	

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Project Number	30183733
Issue	04

Drawing No. MAR-AAP-DA-01-DRG-CV-0144



RETAINING WALL PLAN
1 : 500

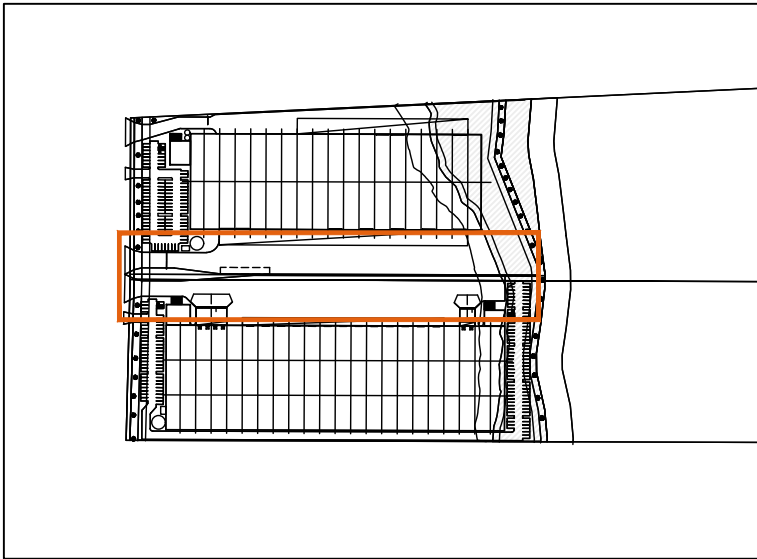
LEGEND

- PROPOSED SURFACE LEVEL AT TOP OF WALL
- DESIGN SURFACE CONTOURS
- EXISTING SURFACE CONTOURS
- PROPOSED SURFACE LEVEL AT BOTTOM OF WALL
- CHAINAGE AND CONTROL LINE
- ZONE BOUNDARY
- PROPOSED ARCHITECTURAL
- BY OTHERS

DATUM RL 37.0

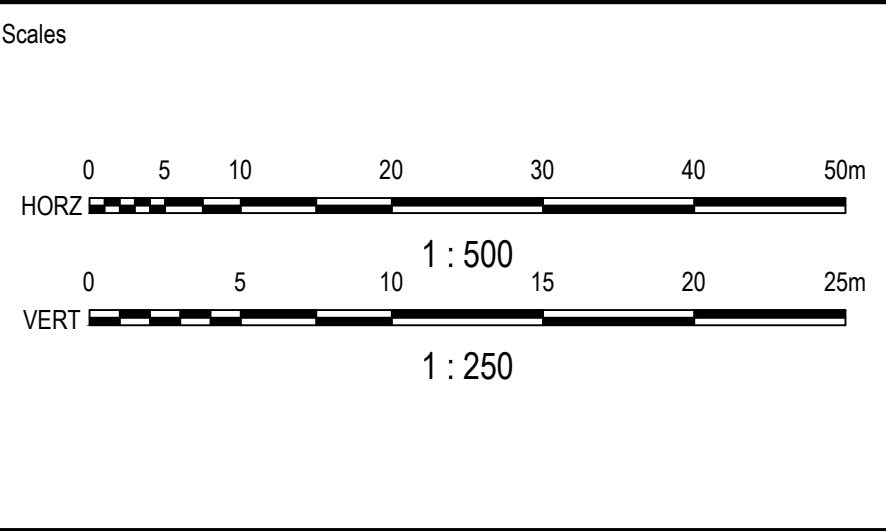
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HEIGHT OF RETAINING WALL	0.007	-0.001	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.108	1.901	1.684	1.562	0.153
TOP OF RETAINING WALL	50.569	50.51	52.678	52.628	52.578	52.541	52.591	52.641	52.691	52.688	52.638	52.588	52.571	52.621	52.671	52.721	52.688	52.648	52.601	52.651	52.601	52.681	52.606	51.651
BOTTOM OF RETAINING WALL	50.561	50.511	50.461	50.411	50.361	50.324	50.374	50.424	50.474	50.471	50.421	50.371	50.354	50.404	50.454	50.504	50.481	50.451	50.381	50.493	50.750	51.007	51.043	51.498

MW05 LONGITUDINAL SECTION
SCALE 1:500 HORI.
1:250 VERT.



KEY PLAN

Issue	Description	DR	CH	VE	Date
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03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24



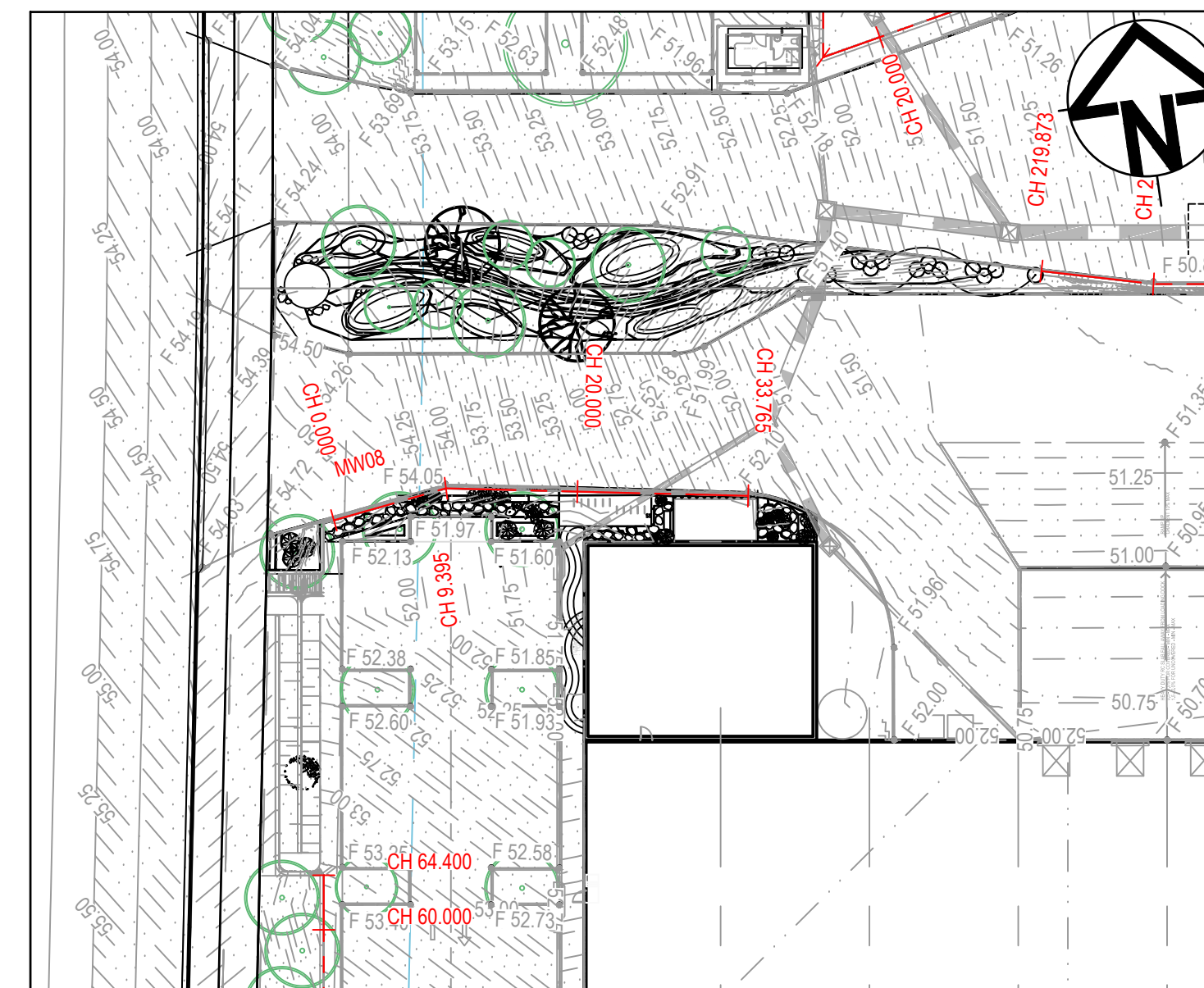
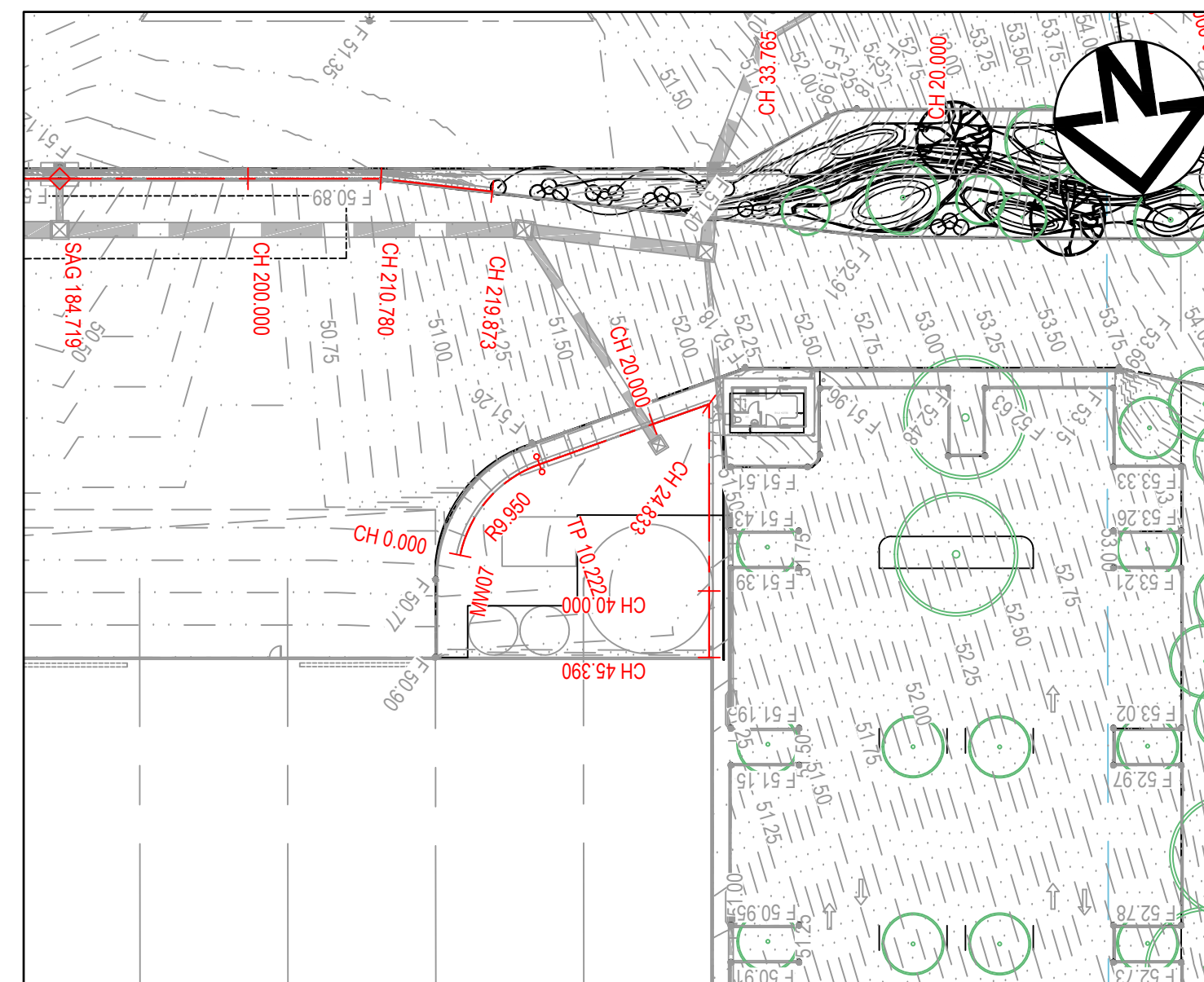
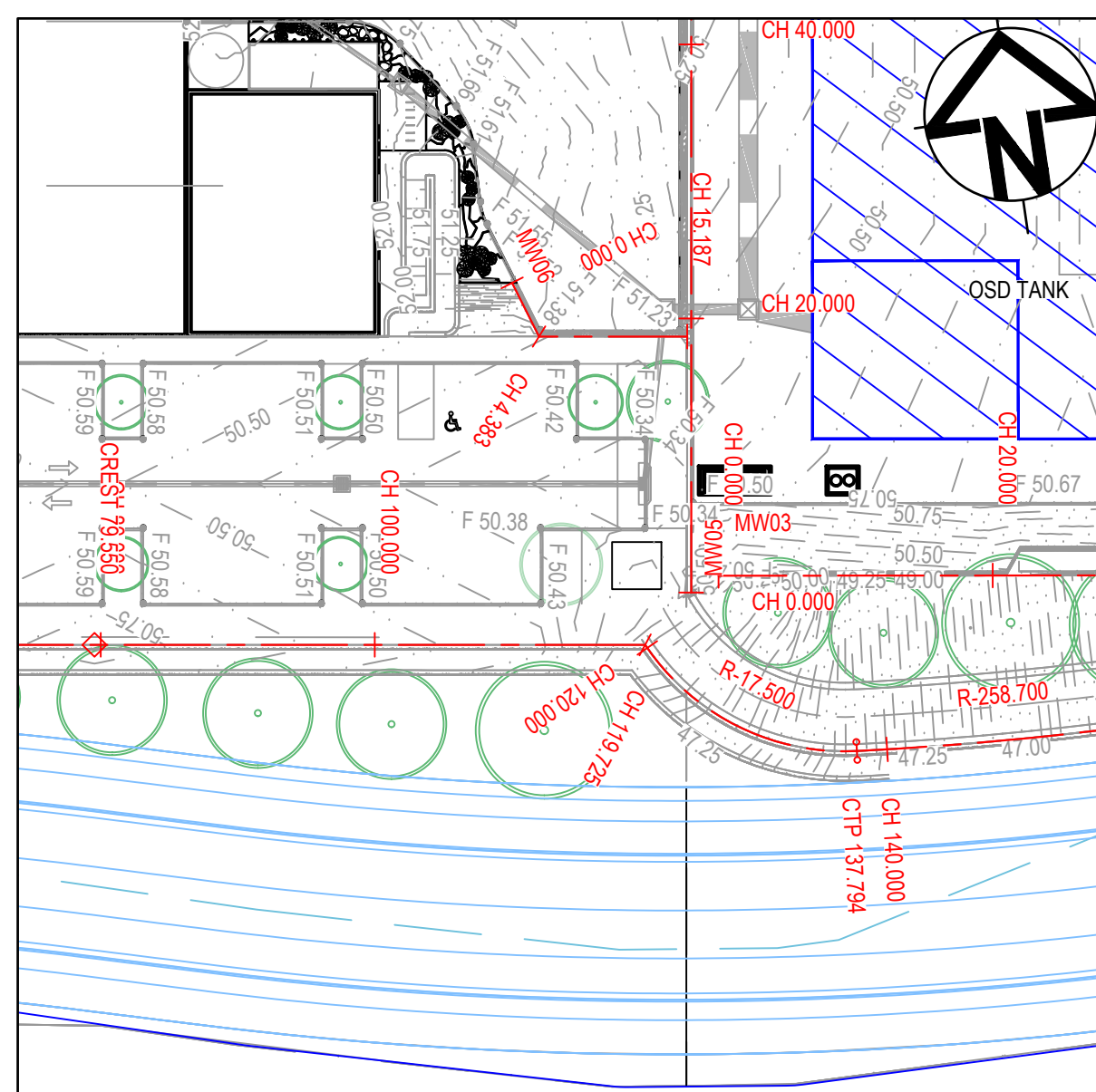
Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
Original Issue Signatures	© Copyright reserved
Drawn	J. LOPEZ
Designed	K. ROBINSON
Design Manager	K. MCAREAVEY
Verified	J. HEYDON

Project	230 MARTIN ROAD, BADGERYS CREEK
Title	RETAINING WALL PLAN SHEET 5

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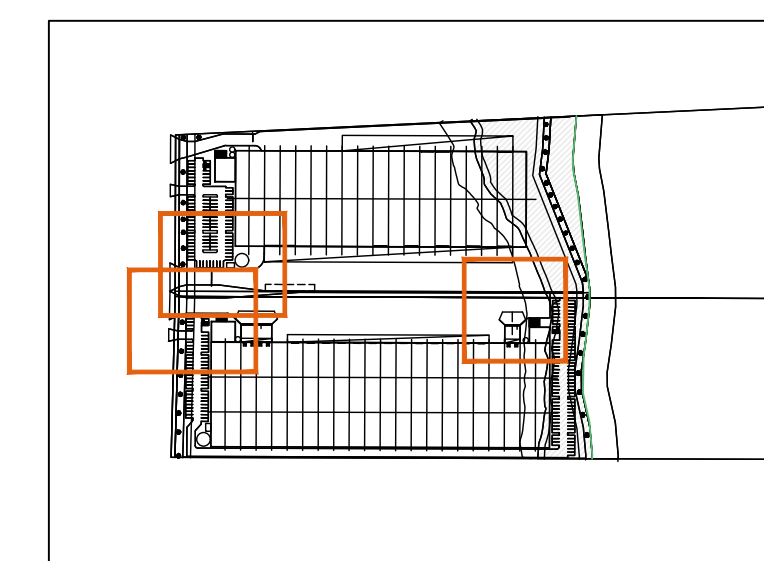
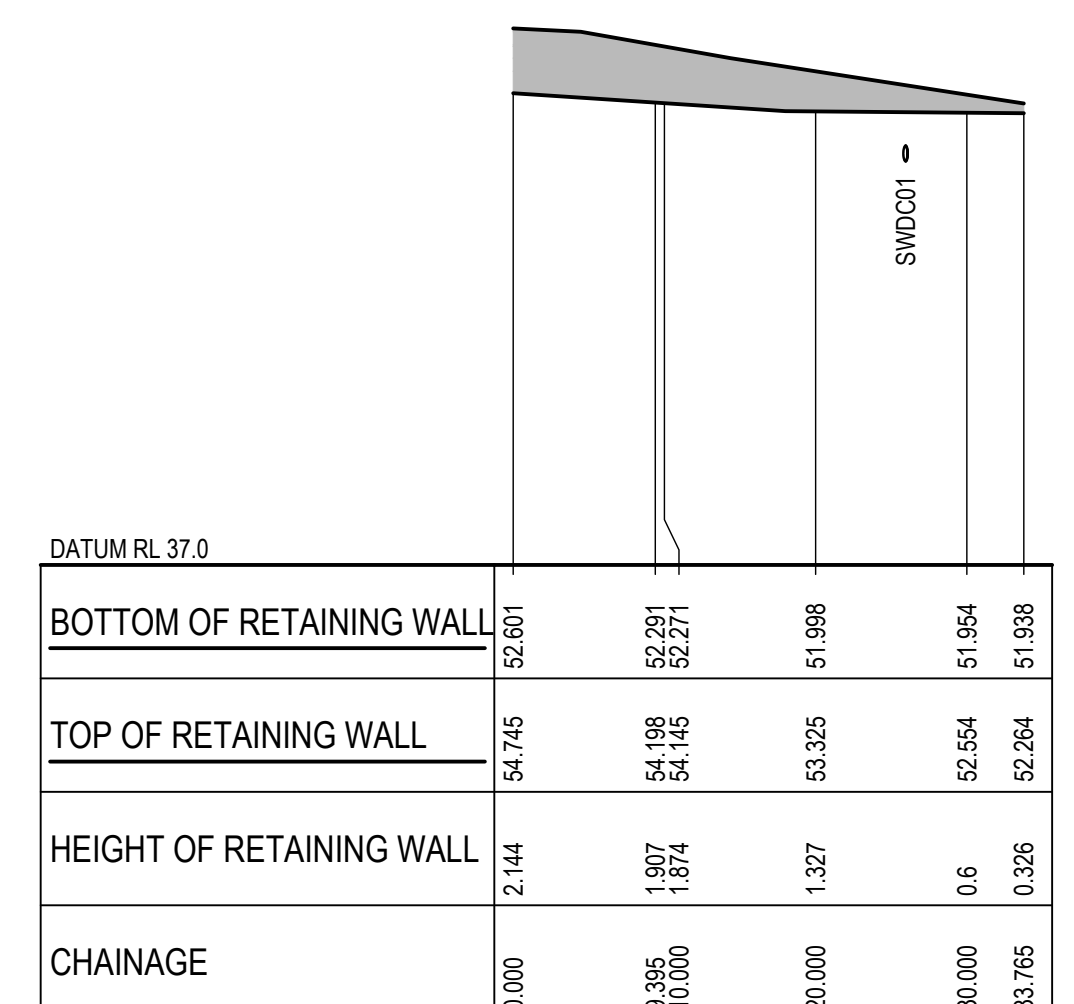
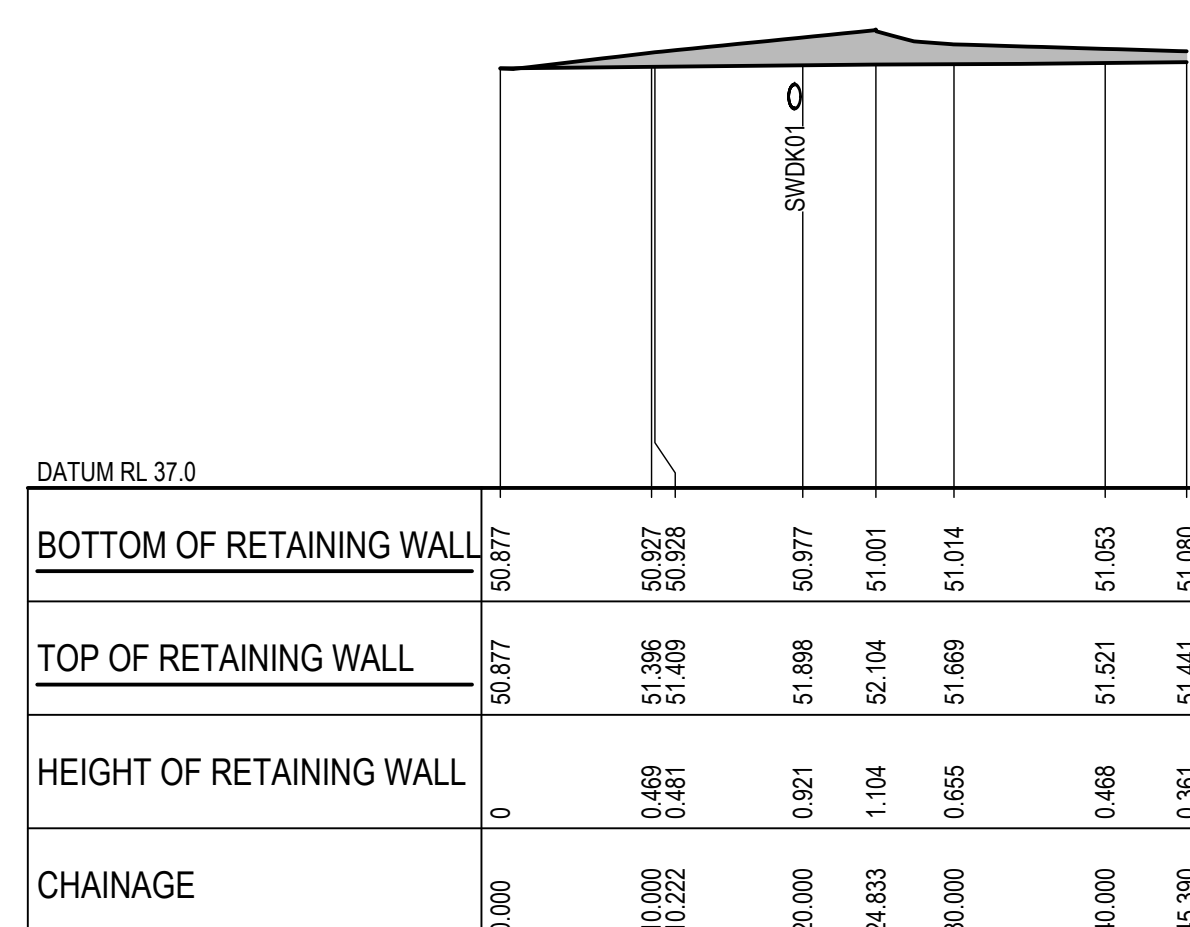
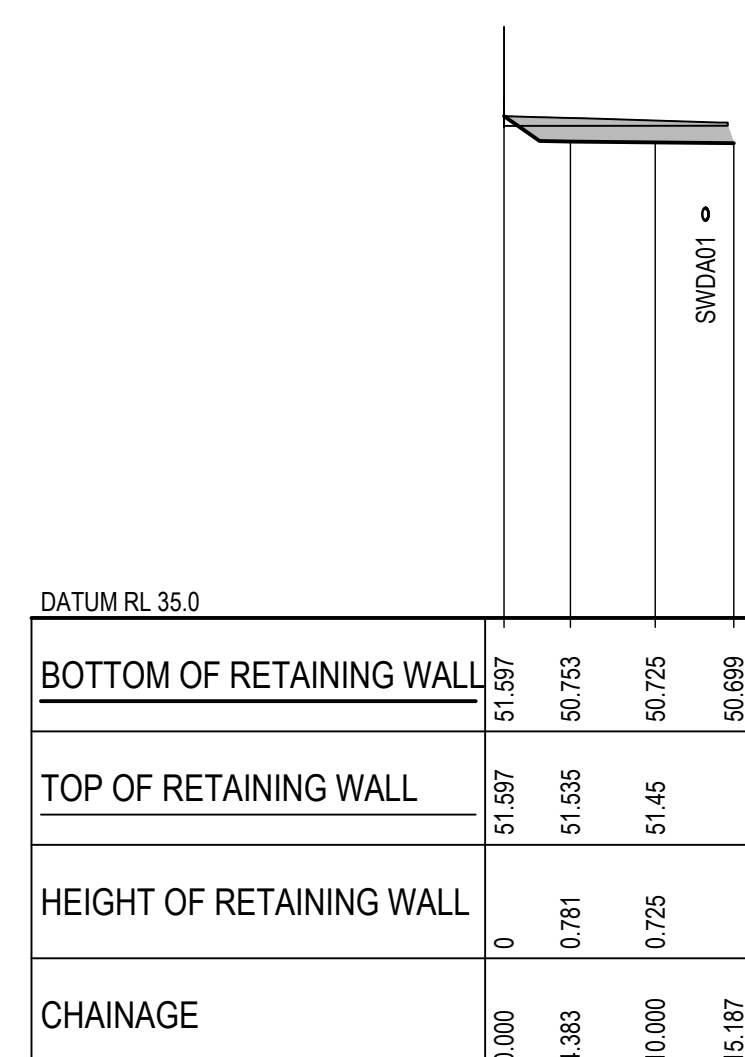
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Issue	04

MAR-AAP-DA-01-DRG-CV-0145

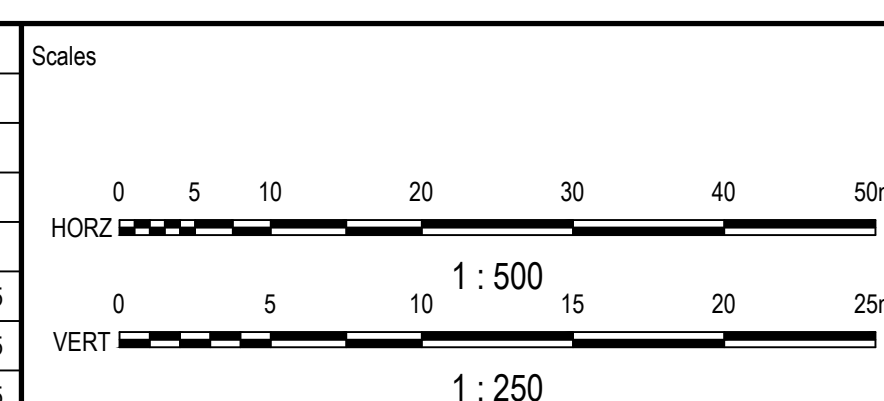


LEGEND

- | | |
|---|--|
|  | PROPOSED SURFACE LEVEL AT TOP OF WALL |
|  | DESIGN SURFACE CONTOURS |
|  | EXISTING SURFACE CONTOURS |
|  | PROPOSED SURFACE LEVEL AT BOTTOM OF WALL |
|  | CHAINAGE AND CONTROL LINE |
|  | ZONE BOUNDARY |
|  | PROPOSED ARCHITECTURAL |
|  | BY OTHERS |



04	FOR APPROVAL	JD	KM	KM	25.11.25
03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24
Issue	Description	DR	CH	VE	Date



	Survivor
--	----------



Client & Architect



Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION		
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Original Issue Signatures			
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

	Project
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230 MARTIN ROAD,
BADGERYS CREEK

Title

RETAINING WALL
PLAN
SHEET 6



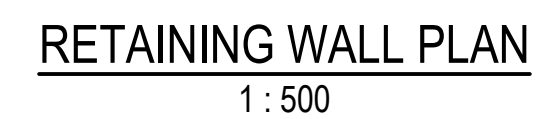
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SYDNEY NSW 2000
ABN 76 104 485 289
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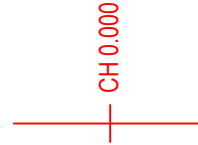
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MAR-AAP-DA-01-DRG-CV-0146

Project Number	30183733
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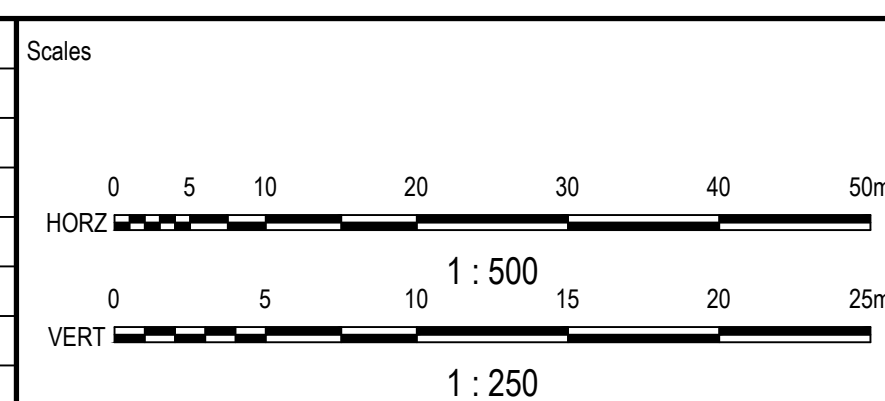
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- # LEGEND
- | | |
|---|--|
|  | PROPOSED SURFACE LEVEL AT TOP OF WALL |
|  | DESIGN SURFACE CONTOURS |
|  | EXISTING SURFACE CONTOURS |
|  | PROPOSED SURFACE LEVEL AT BOTTOM PF WALL |
|  | CHAINAGE AND CONTROL LINE |
|  | ZONE BOUNDARY |
|  | PROPOSED ARCHITECTURAL |
|  | BY OTHERS |



04	FOR APPROVAL	JD	KM	KM	25.11.25
03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24
Issue	Description	DR	CH	VE	Date



Surveyor



Client & Architect



Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION		
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	Original Issue Signatures		
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

	Project
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230 MARTIN ROAD,
BADGERYS CREEK

1	Title
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RETAINING WALL
PLAN
SHEET 7



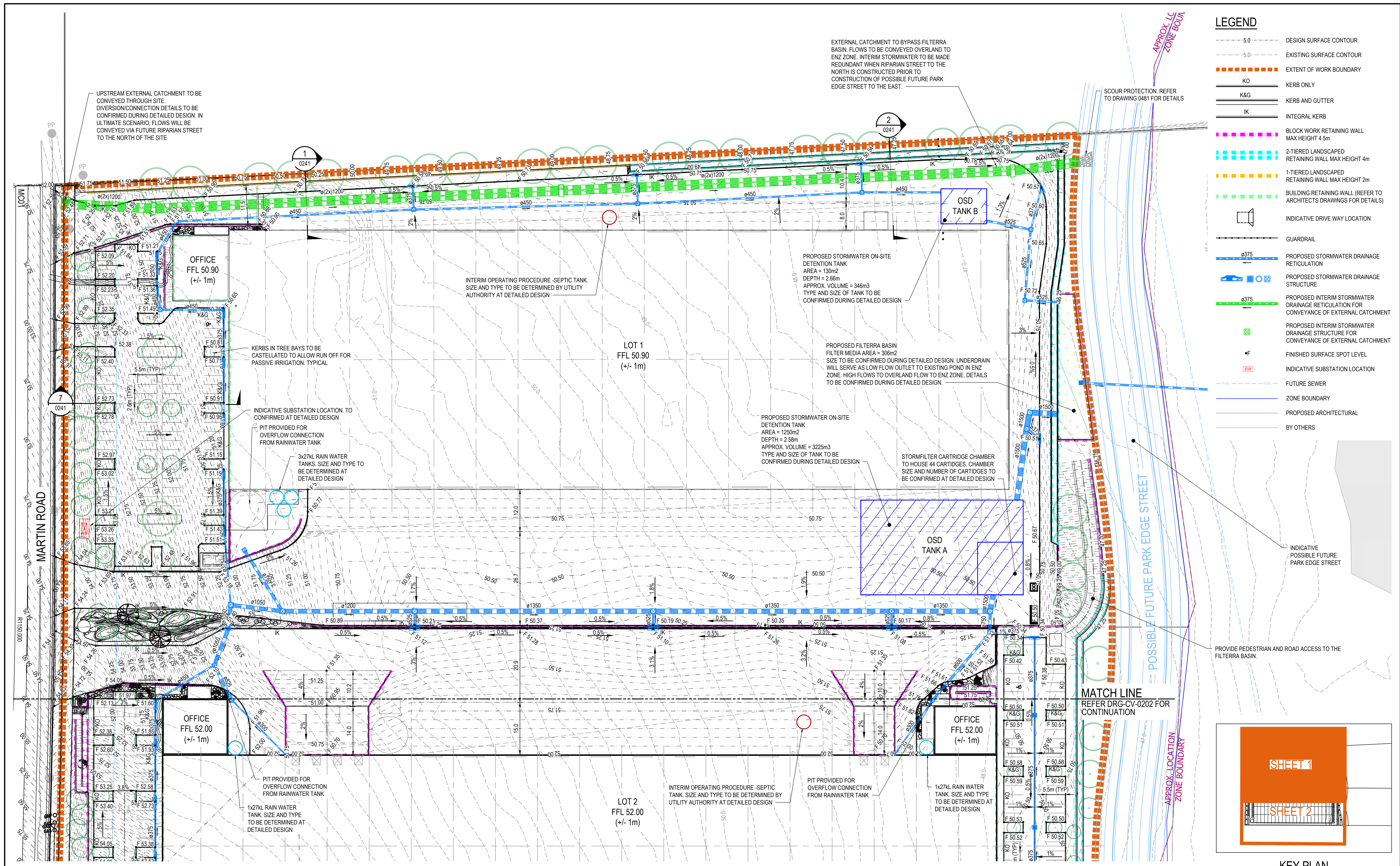
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Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
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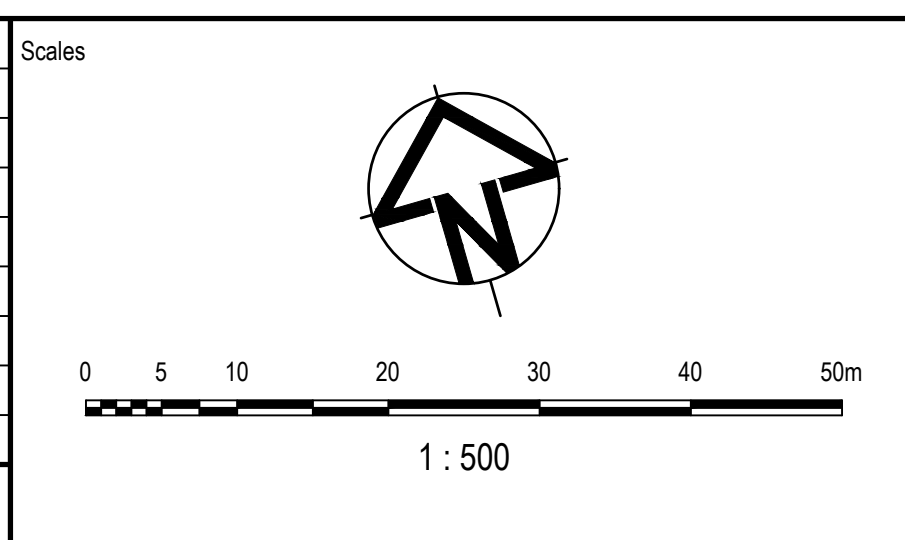
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Project Number	30183733
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04



Issue	Description	DR	CH	VE	Date
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03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24



FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION			
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Original Issue Signatures			
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

Project	230 MARTIN ROAD, BADGERYS CREEK
Title	CIVIL WORKS PLAN SHEET 1

KEY PLAN

SHEET 1

SHEET 2

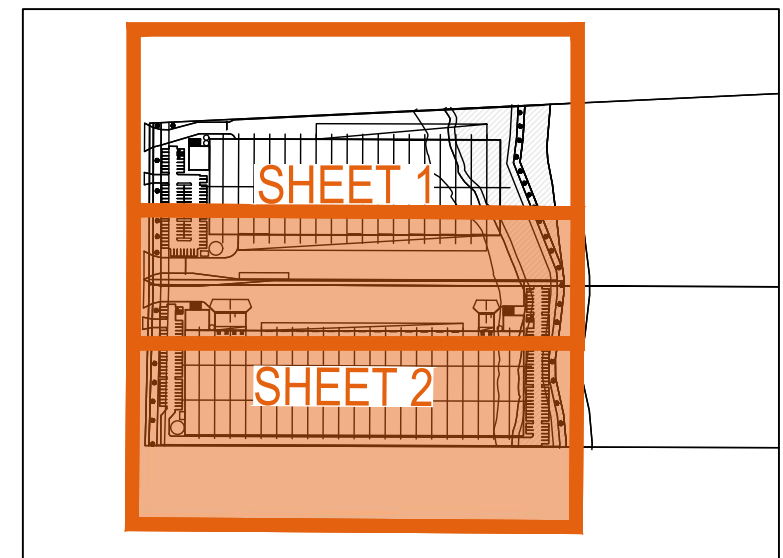
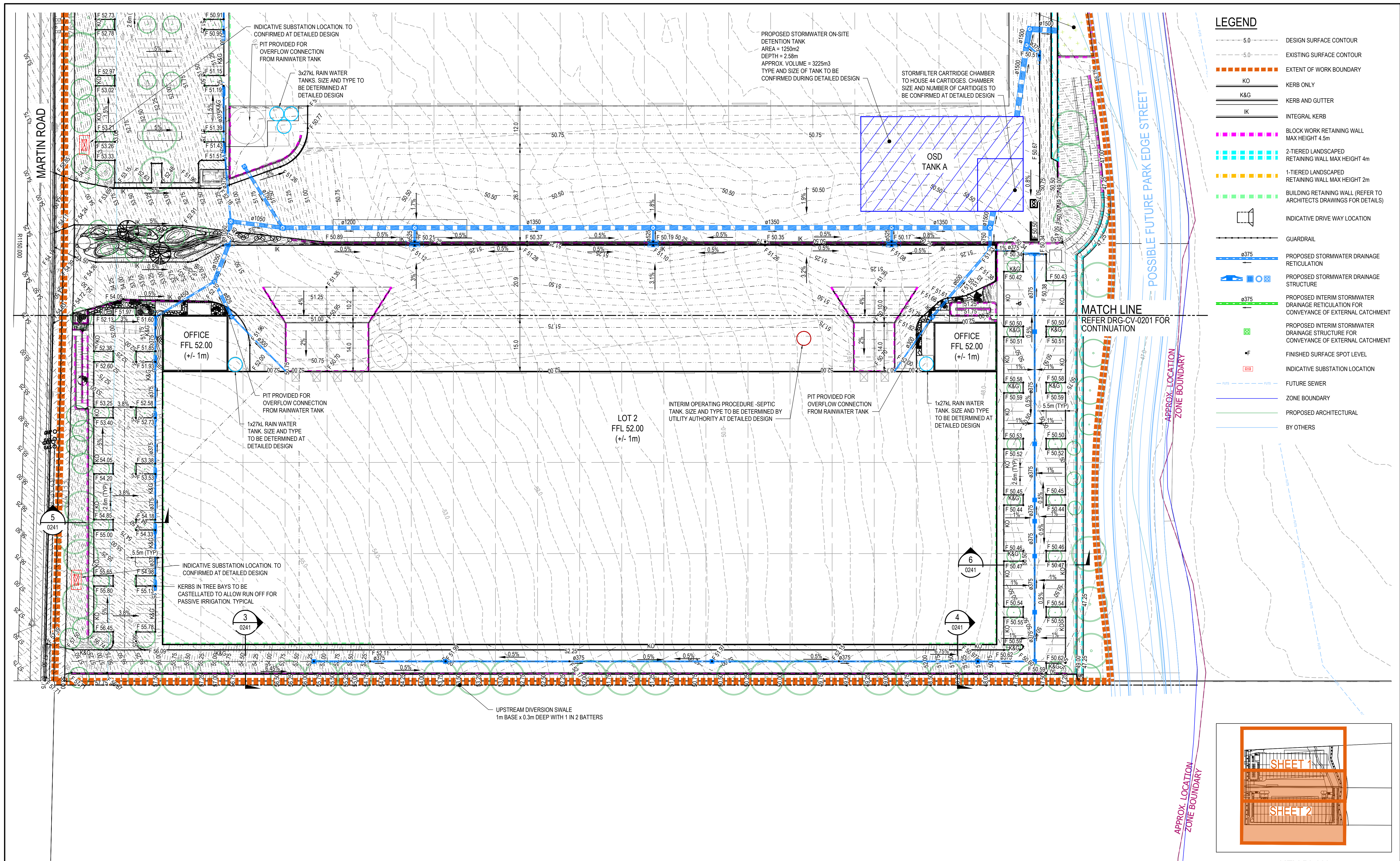
ARCADIS

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Project Number 30183733

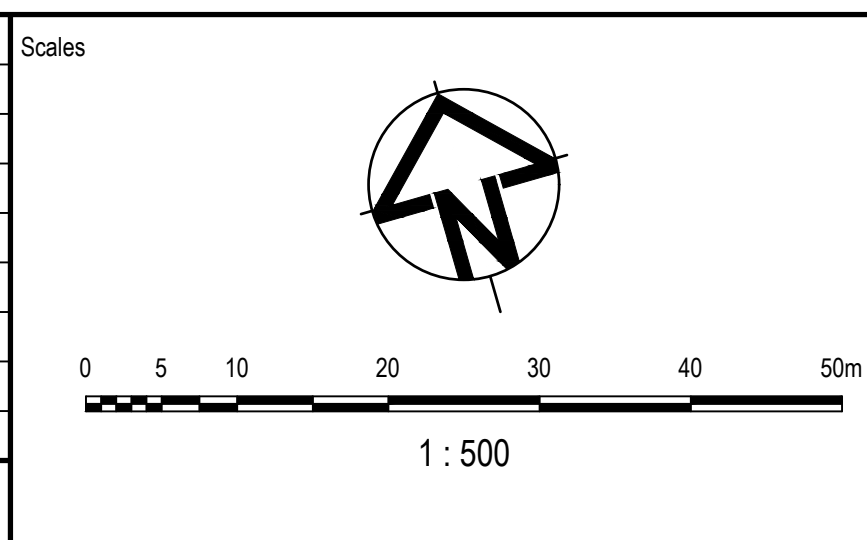
Issue 04

MAR-AAP-DA-01-DRG-CV-0201



KEY PLAN

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03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24



Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
Original Issue Signatures	
Drawn	J. LOPEZ
Designed	K. ROBINSON
Design Manager	K. MCAREAVEY
Verified	J. HEYDON
Original Size	A1
Height Datum	AHD
Grid	MGA/20-56

Project	230 MARTIN ROAD, BADGERYS CREEK
Title	CIVIL WORKS PLAN SHEET 2

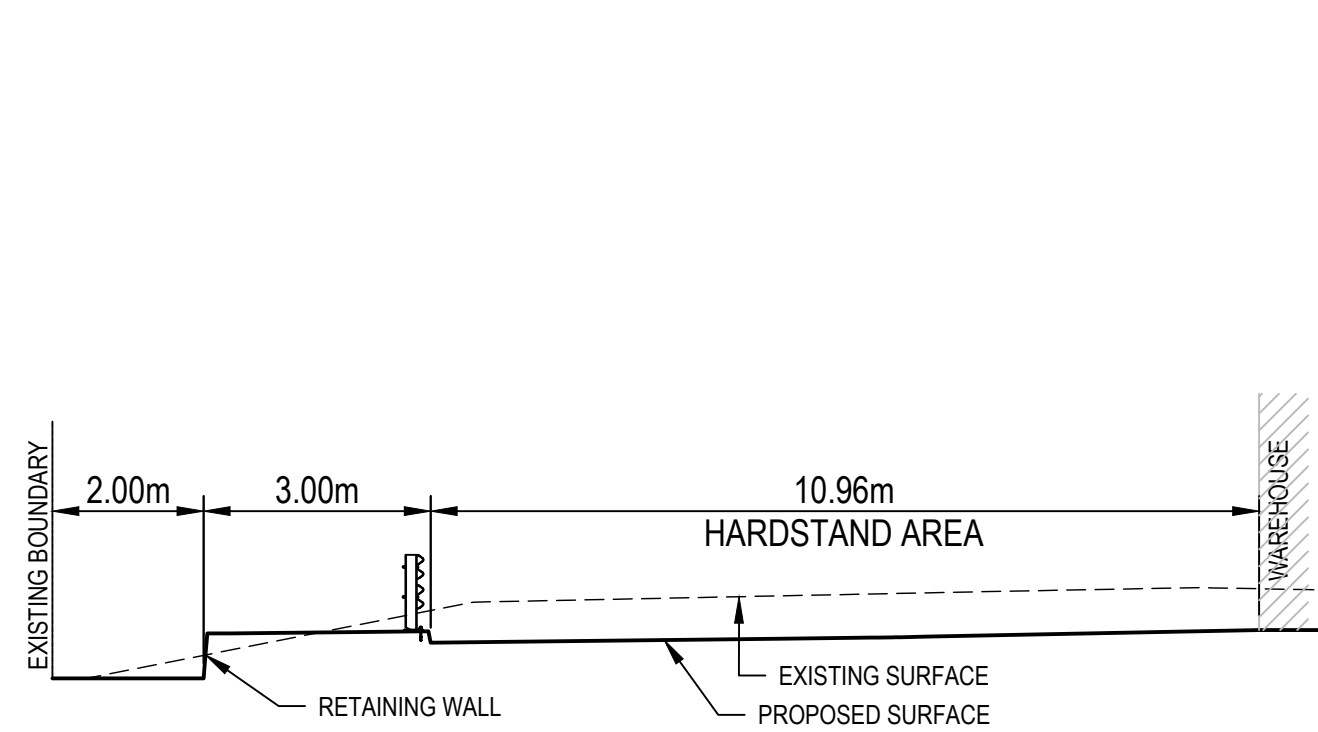
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SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
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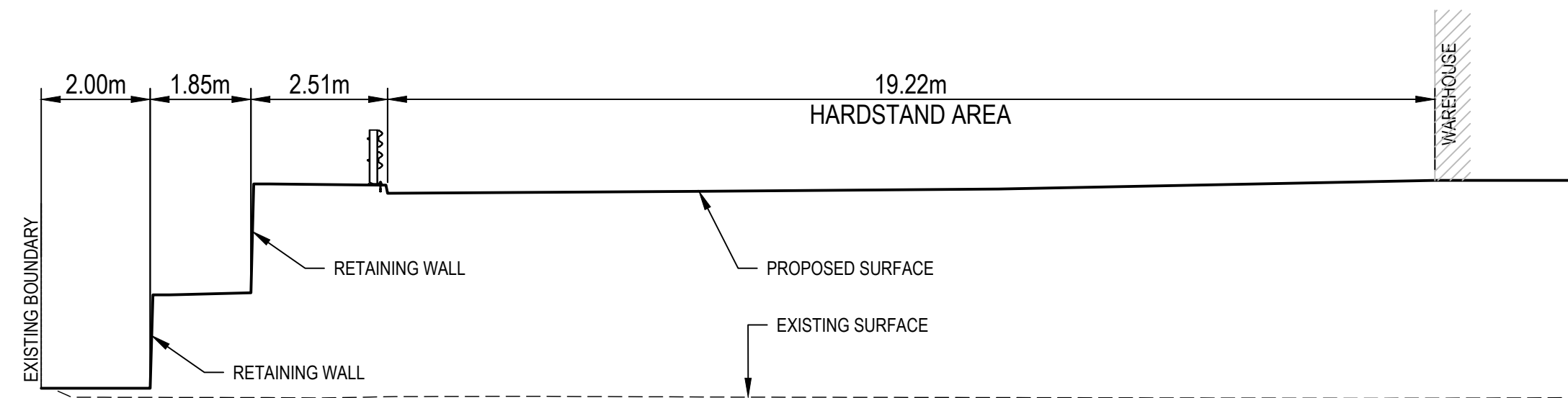
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Issue 04

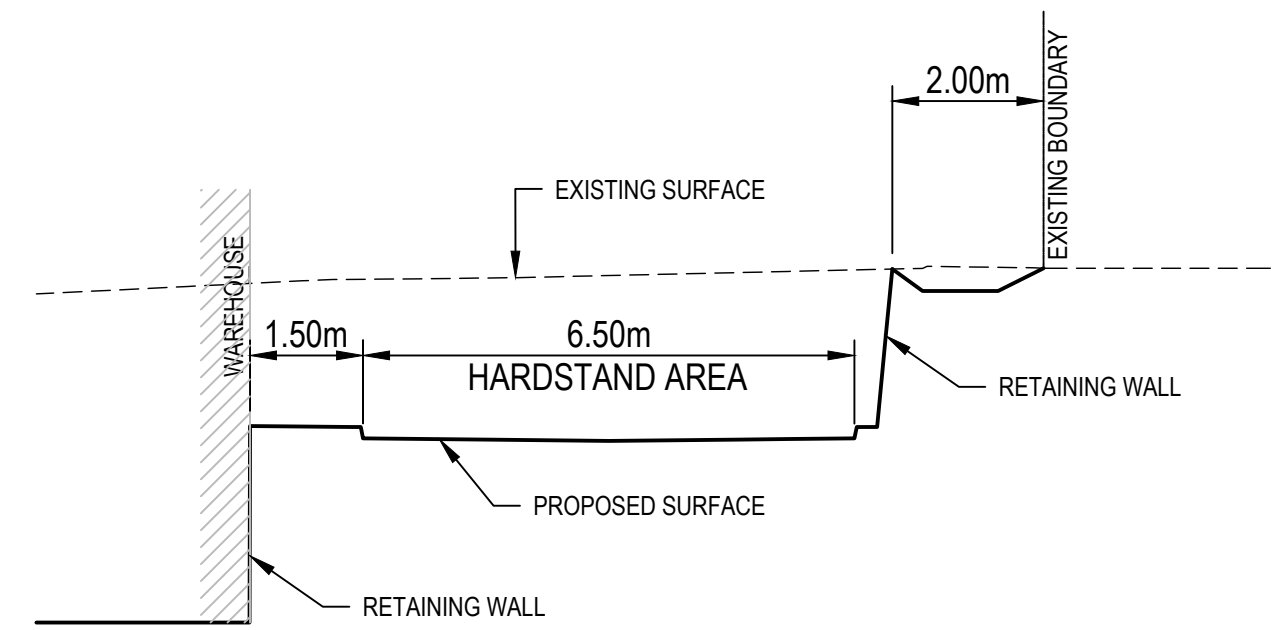
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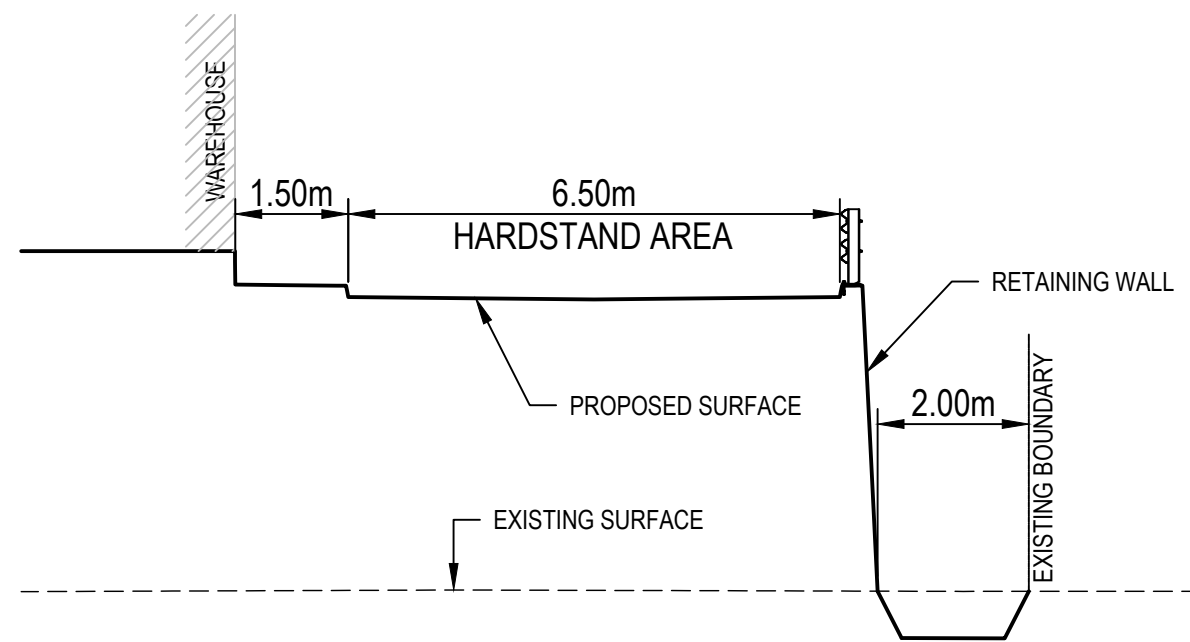
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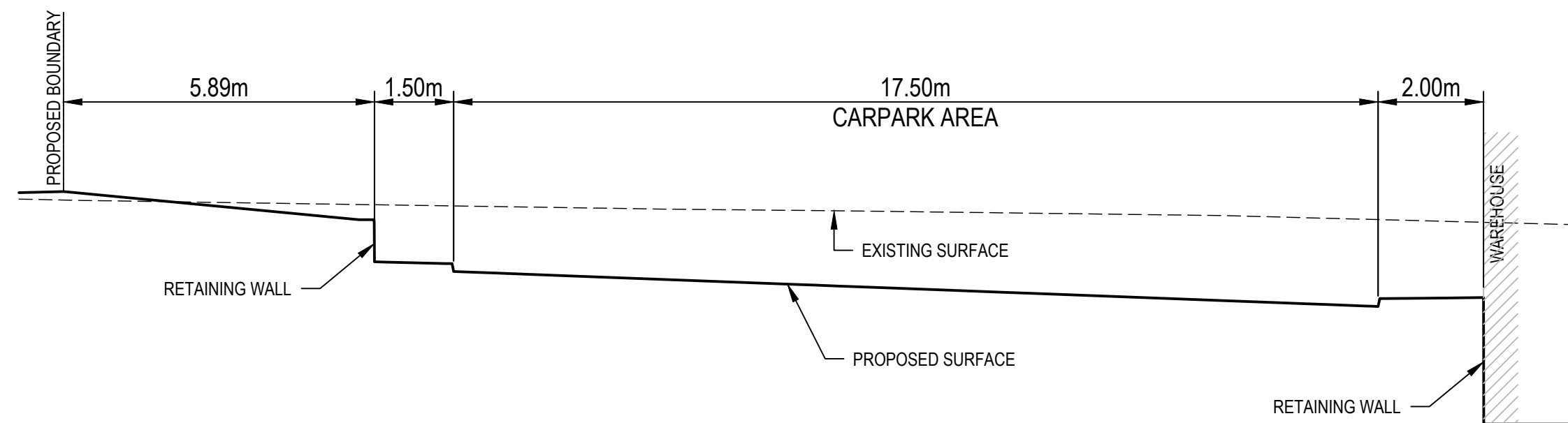
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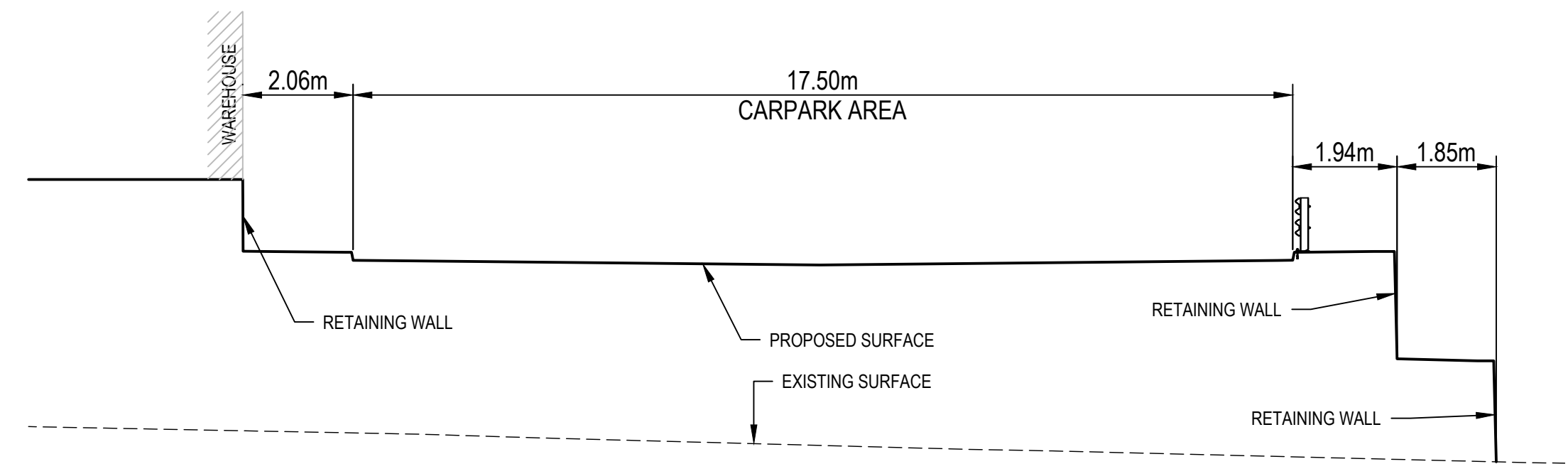
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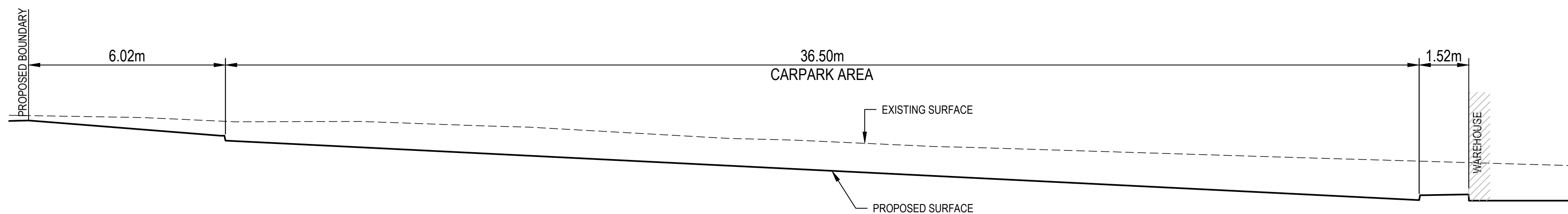
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SECTION 5
1 : 100

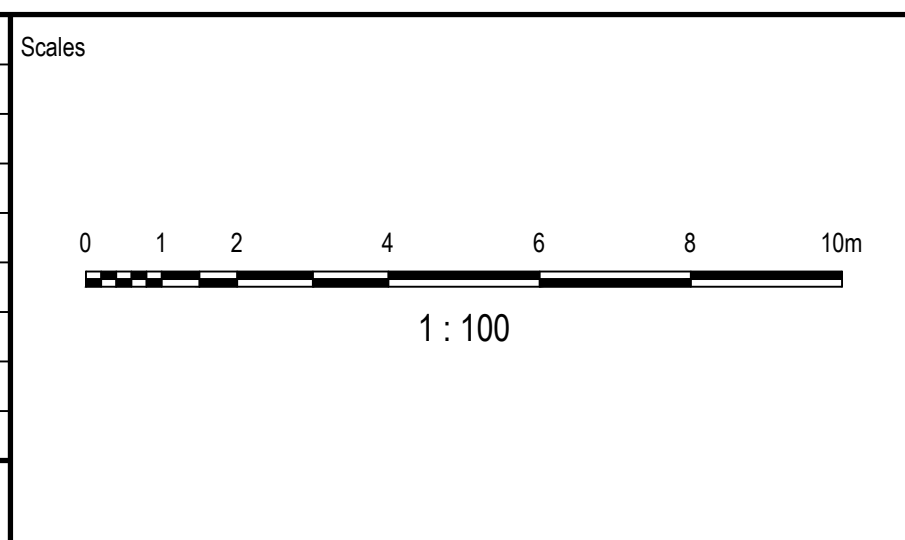


SECTION 6
1 : 100



SECTION 7
1 : 100

04	FOR APPROVAL	JD	KR	KM	25.11.25
03	FOR COORDINATION	JD	KR	KM	21.10.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24
Issue	Description	DR	CH	VE	Date



Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION		
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Original Issue Signatures			
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

Project	230 MARTIN ROAD, BADGERYS CREEK
Title	TYPICAL SITE SECTIONS

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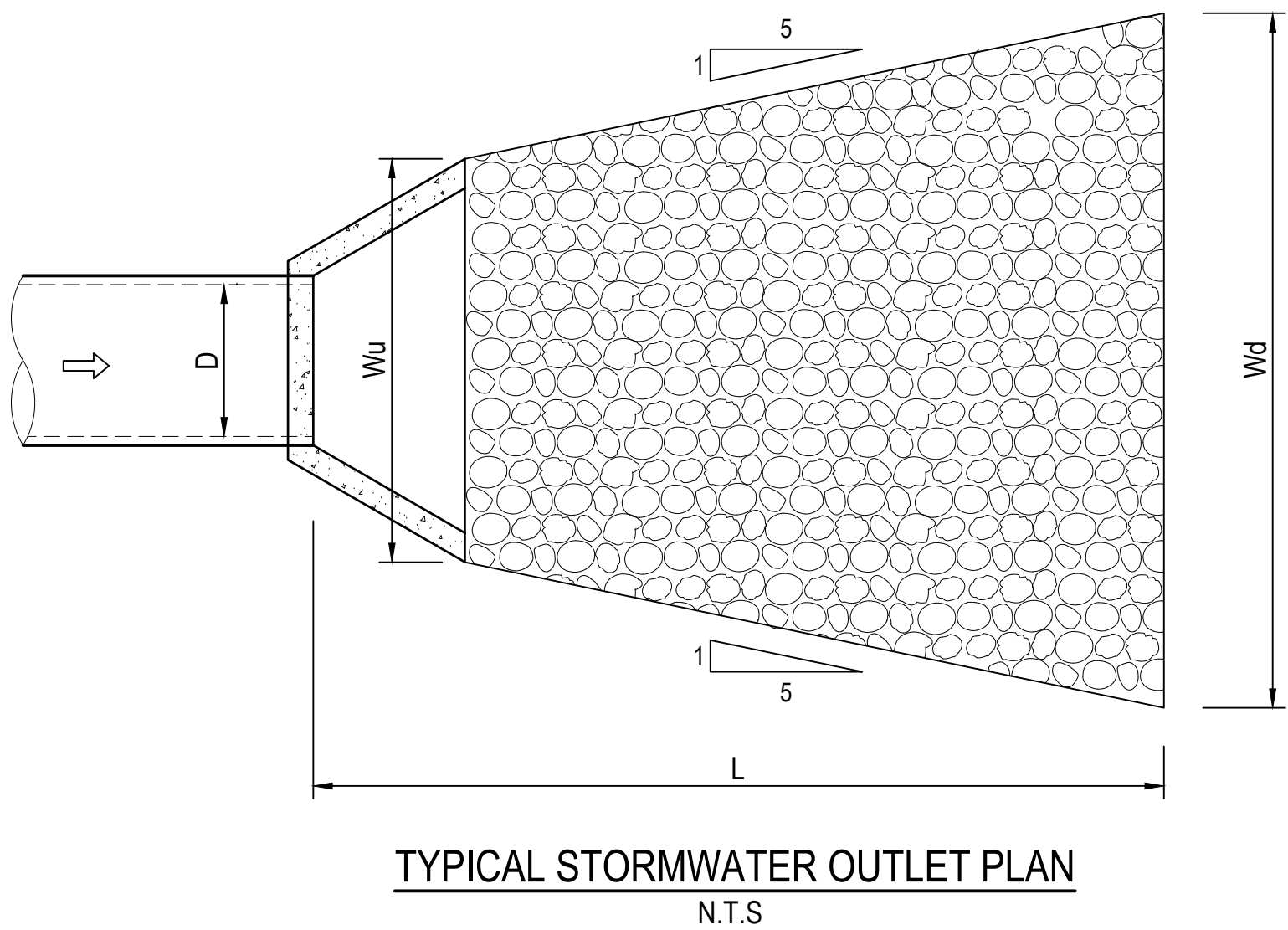
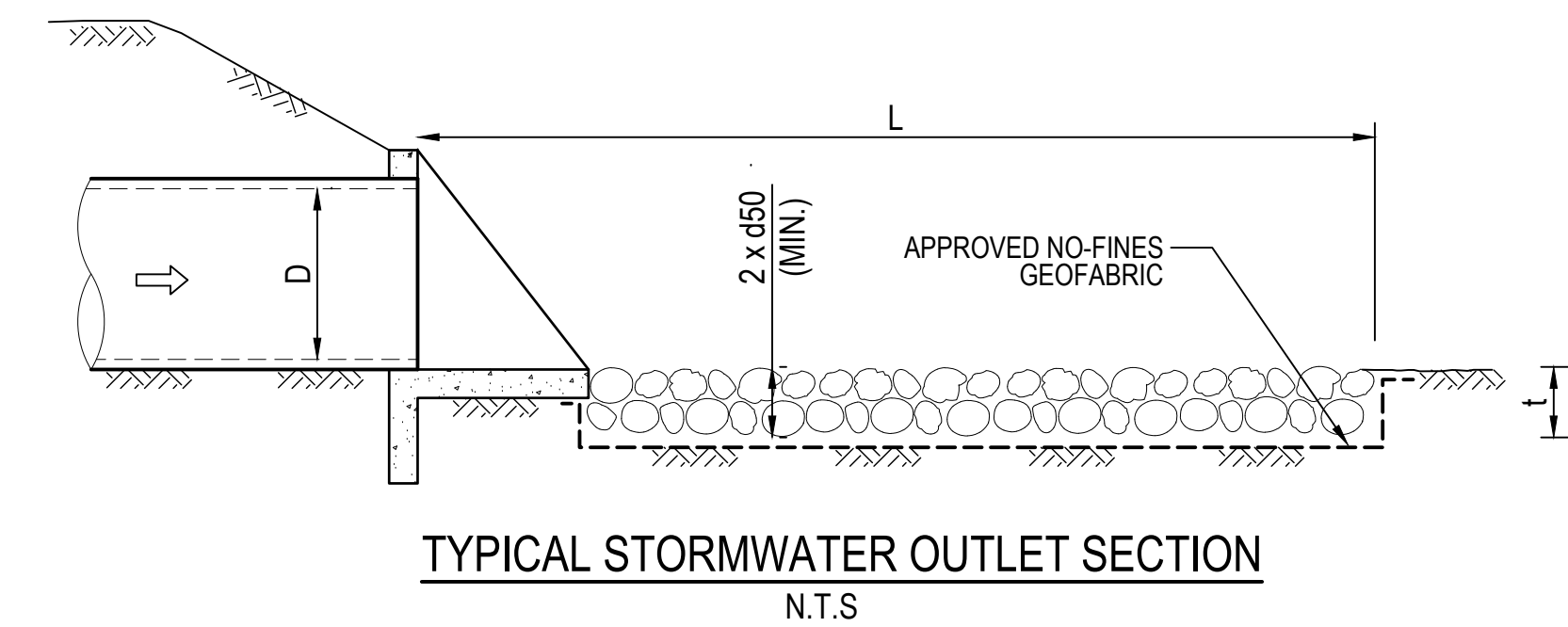
Project Number	30183733
Issue	04

MAR-AAP-DA-01-DRG-CV-0241

- ROCK PROTECTION NOTES**
1. NOMINAL ROCK SIZE TO BE AS PER OUTLET PROTECTION TABLE. ROCK GRADATION TO BE AS PER TABLE.
 2. SELECTED ROCKS TO BE DURABLE AND RESISTANT TO WEATHERING, AND SHOULD BE PROPORTIONED SO THAT NEITHER THE BREADTH NOR THE THICKNESS OF A SINGLE ROCK IS LESS THAN ONE-THIRD ITS LENGTH.
 3. ROCKS SHOULD BE PLACED IN STABLE POSITIONS WITH SEVERAL POINT CONTACTS, GENERALLY BALANCED REARWARD.
 4. ROCKS SHOULD FORM AN INTERLOCKING MASS WHEN COMPLETED WITH NO INDIVIDUAL ROCKS FREE TO MOVE.

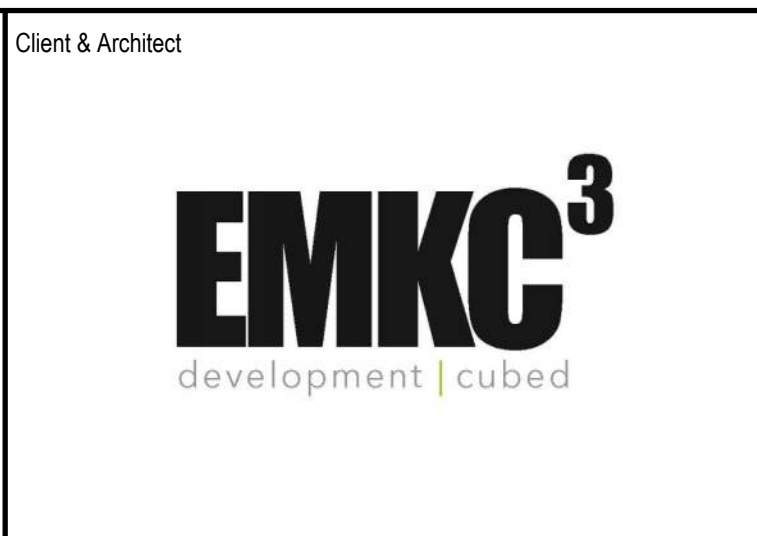
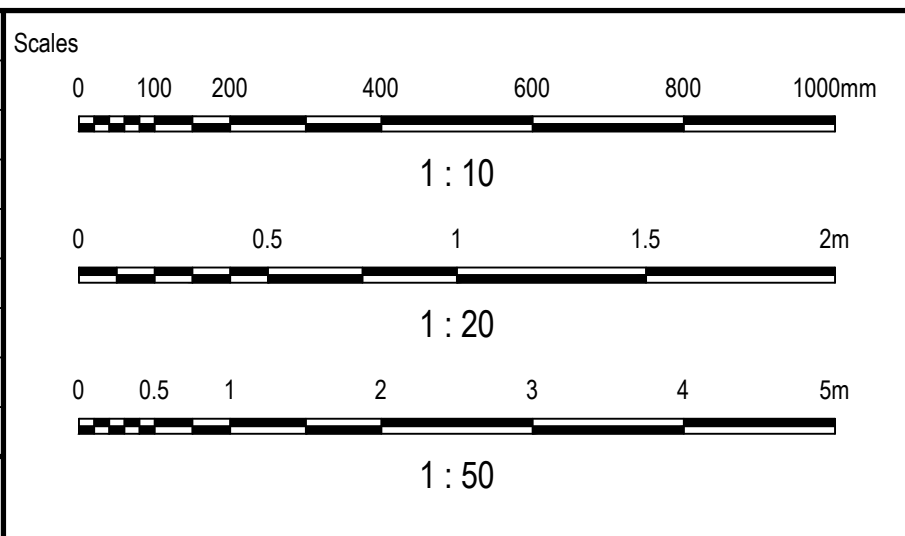
ROCK GRADATION TABLE

SMALLEST DIMENSIONS IN (mm)							% OF ROCK SMALLER THAN SIZE SHOWN
150d ₅₀	200d ₅₀	300d ₅₀	400d ₅₀	500d ₅₀	600d ₅₀		
300	380	525	630	750	850		100
200	300	450	550	650	750		50-70
150	200	300	400	500	600		35-50
50	75	100	130	150	175		2-10



SCOUR PROTECTION TABLE						
STRUCTURE	INLET/OUTLET	PIPE/CULVERT DIMENSION (mm)	ROCK SIZE, D50, X (mm)	LENGTH, L (m)	START WIDTH, WU (m)	END WIDTH, WD (m)
2x1200 dia	OUTLET	2x1200	400	3.60	7.89	7.89

02	FOR APPROVAL		JD	KM	KM	25.11.25	
01	FOR APPROVAL - RESPONSE TO TOA COMMENTS		JL	KR	JH	24.04.25	
Issue	Description		DR	CH	VE	Date	



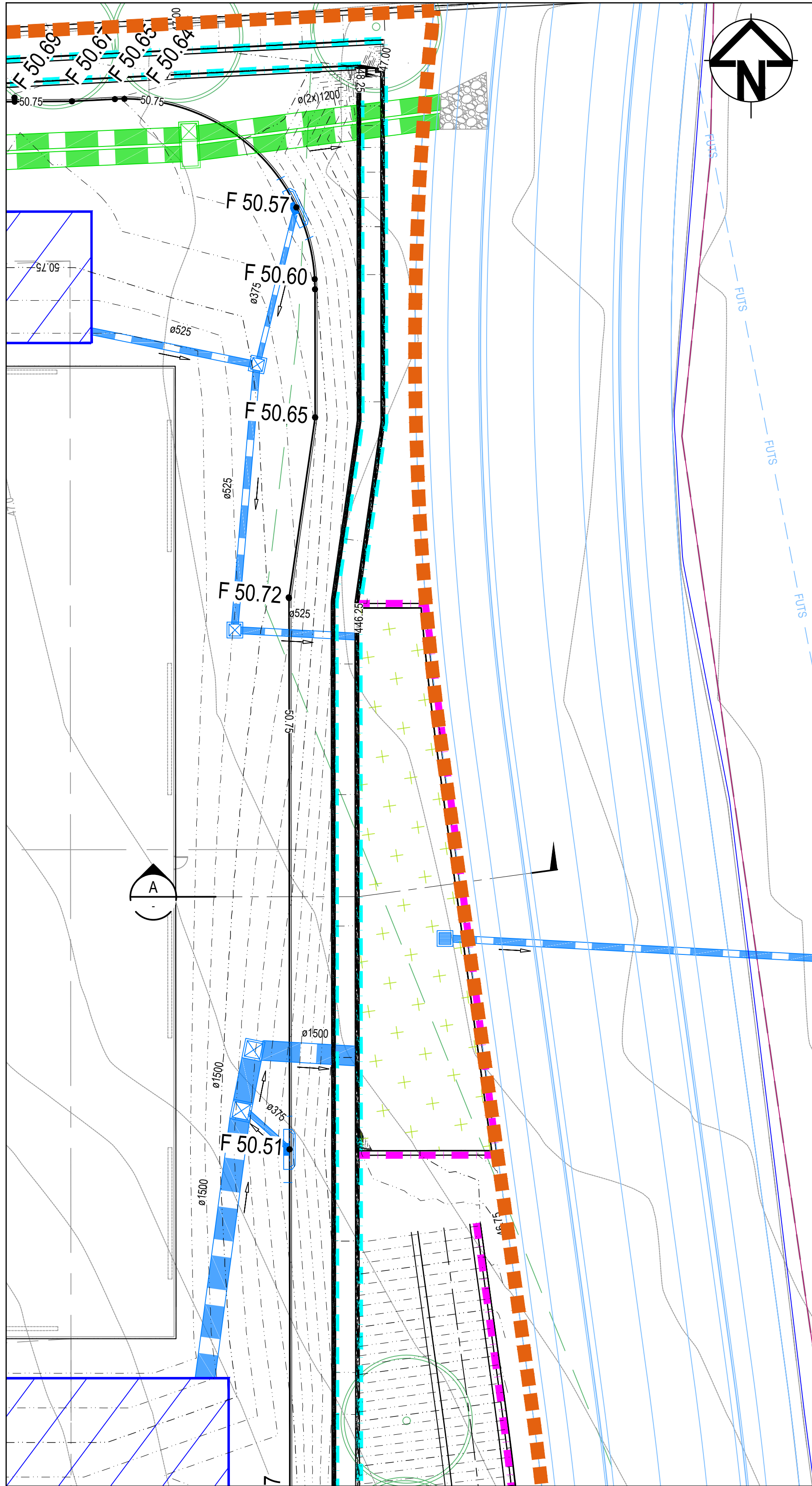
Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION		
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Original Issue Signatures			
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

Project	230 MARTIN ROAD, BADGERYS CREEK	
Title	TYPICAL STORMWATER DRAINAGE DETAILS	

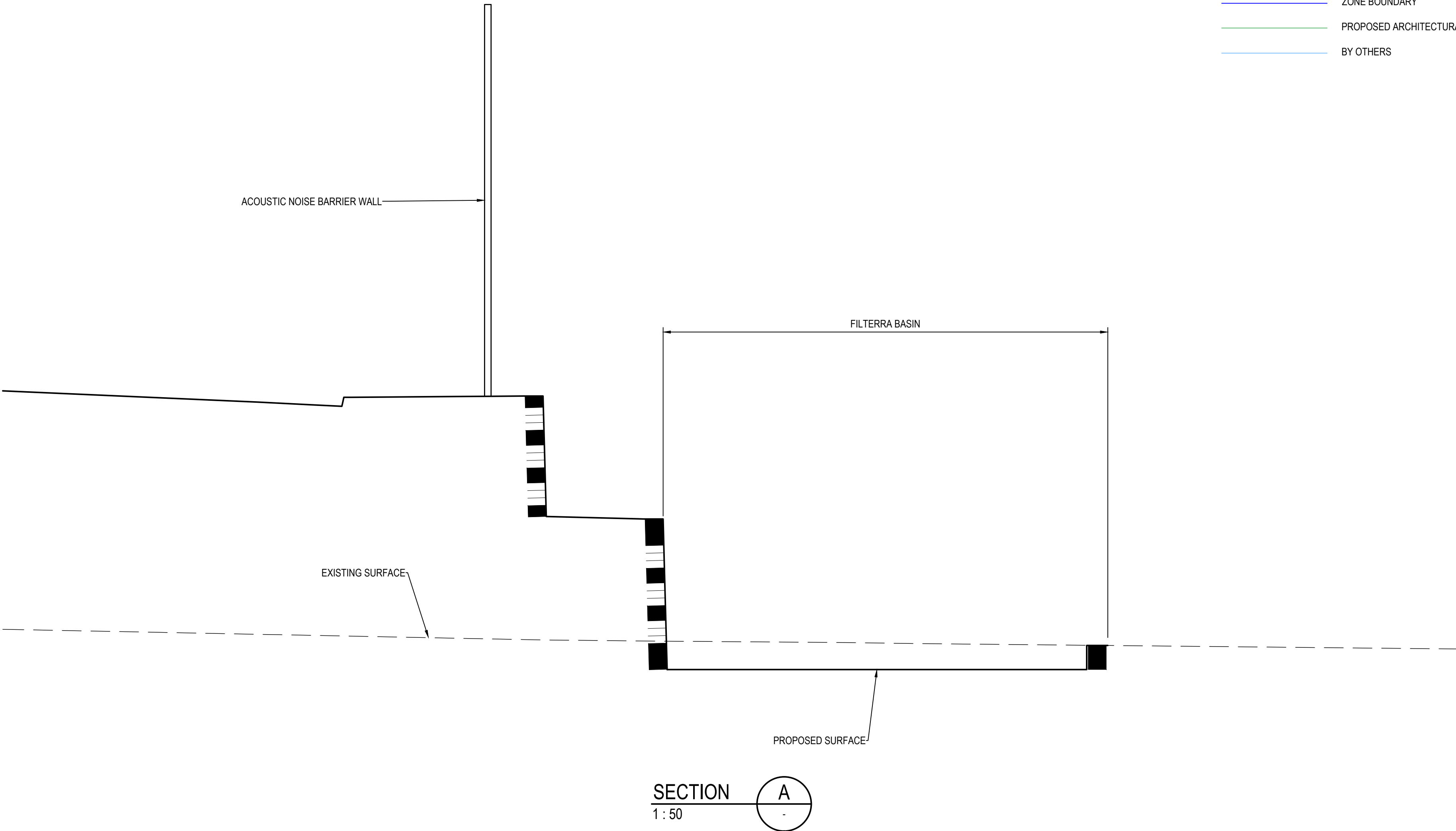
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Project Number	30183733
Issue	02

Drawing No: MAR-AAP-DA-01-DRG-CV-0481

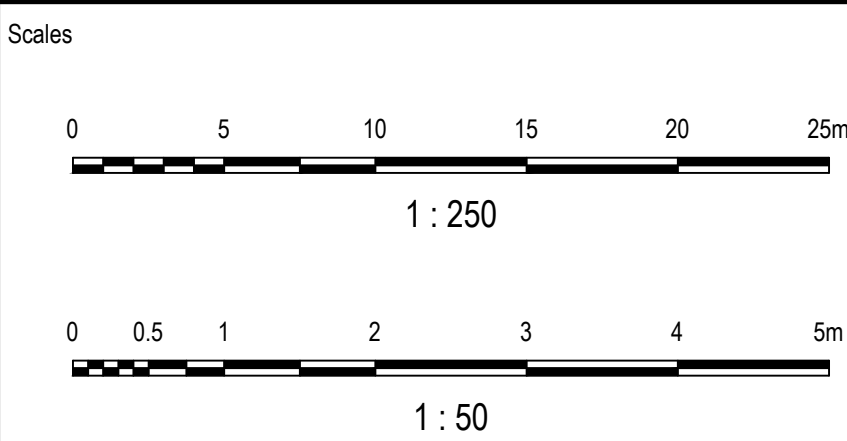


BASIN LAYOUT PLAN
1 : 250



- LEGEND**
- 5.0--- DESIGN SURFACE CONTOUR
 - 5.0--- EXISTING SURFACE CONTOUR
 - EXTENT OF WORK BOUNDARY
 - EXISTING STAGE BOUNDARY
 - BLOCK WORK RETAINING WALL
MAX HEIGHT 4.5m
 - 2-TIERED LANDSCAPED
RETAINING WALL MAX HEIGHT 4m
 - 1-TIERED LANDSCAPED
RETAINING WALL MAX HEIGHT 2m
 - BUILDING RETAINING WALL (REFER TO
ARCHITECTS DRAWINGS FOR DETAILS)
 - FILTERTERRA BASIN
 - ZONE BOUNDARY
 - PROPOSED ARCHITECTURAL
 - BY OTHERS

03	FOR APPROVAL	JD	KM	KM	25.11.25
02	FOR APPROVAL - RESPONSE TO TOA COMMENTS	JL	KR	KM	24.04.25
01	FOR APPROVAL	JL	KR	JH	13.09.24
Issue	Description	DR	CH	VE	Date



Status

FOR APPROVAL
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Original Issue Signatures			
Drawn	J. LOPEZ	Original Size	A1
Designed	K. ROBINSON	Height Datum	AHD
Design Manager	K. MCAREAVEY	Grid	MGA/20-56
Verified	J. HEYDON		

Project	230 MARTIN ROAD, BADGERYS CREEK
Title	BIORETENTION BASIN DETAIL PLAN

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Project Number	30183733
Issue	03

Drawing No.

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