

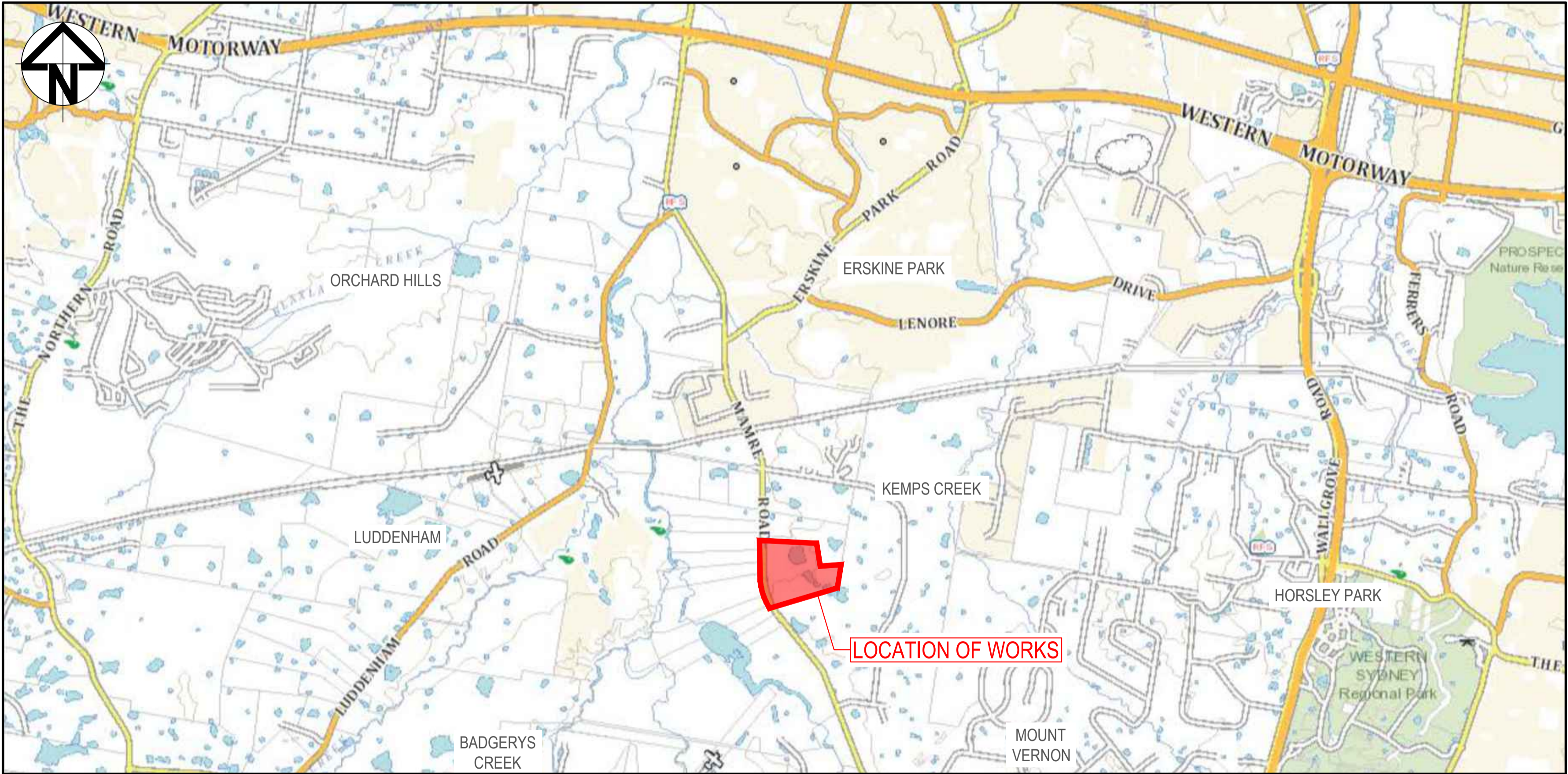
ASPECT INDUSTRIAL ESTATE

ROAD NO. 4 CIVIL WORKS PACKAGE

SUBDIVISION WORKS CERTIFICATE

788-882 MAMRE ROAD, KEMPS CREEK

SSD-10448



THIS APPROVAL IS FOR CIVIL WORKS ONLY. SEPARATE APPROVAL REQUIRED FOR LANDSCAPING WORKS AND STREET TREES.

THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ITT & RELEVANT COUNCIL CONSTRUCTION SPECIFICATIONS, AUSTRALIAN STANDARDS & AUTHORITY GUIDELINES

LOCALITY PLAN
NOT TO SCALE

			Bar Scales	THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L	Client 	Scales		Drawn		Project ASPECT INDUSTRIAL ESTATE MAMRE ROAD, KEMPS CREEK SWC04	Civil Engineers and Project Managers				
						Designed		MH			 <div>Level 7, 153 Walker Street North Sydney NSW 2060 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au</div>				
						Checked		DS				Title COVER SHEET AND LOCALITY PLAN	Status FOR CONSTRUCTION	A1	
						Approved		DS							
2		ISSUED FOR CONSTRUCTION	23-03-23												
1		ISSUED FOR CONSTRUCTION	20-03-23												
A		ISSUED FOR SWC APPROVAL	17-02-23												
Issue		Description	Date							Project - Drawing No. 18-596-C9500		Issue 2			

F:\18-596 Mamre Road\6.0 Drgs\Civil\Final\CC\9500_SWC04 CC\18-596-C9501.dwg

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 AT & L.
3. MAKE SMOOTH CONNECTION 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 WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL, REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm layers TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
6. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
7. ASPHALTIC CONCRETE SHALL CONFORM TO TNSW SPECIFICATION R116.
8. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH TNSW FORM 3051 (UNBOUND), TNSW FORM 3052 (BOUND) COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m OF BASECOURSE MATERIAL PLACED.
9. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH TNSW FORM 3051, 3051.1 AND COMPACT TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 PER 50m² OF SUB-BASE COURSE MATERIAL PLACED.

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.
2. AT & L 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.
3. CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY.
4. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
5. 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.
6. PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR IS TO CONFIRM THE ALIGNMENT AND LEVELS OF ALL EXISTING SERVICES AT ALL LOCATIONS WHERE THE PROPOSED SERVICES ARE TO CROSS, CONNECT TO, OR ARE LOCATED IN CLOSE PROXIMITY TO THE EXISTING SERVICES.

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. CONCRETE QUALITY
ALL REQUIREMENTS OF THE CURRENT ACSE CONCRETE SPECIFICATION DOCUMENT 1 SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	AS 3600 F'c MPa AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE
VEHICULAR BASE	32	60	20
KERBS, PATHS, AND PITS	25	80	20

- CEMENT TYPE SHALL BE (ACSE SPECIFICATION) TYPE SL
 - 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 AT & L.
 4. CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE 40mm 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 TINSW SPECIFICATION R63.
 7. REINFORCEMENT SYMBOLS:
N DENOTES GRADE 450 N BARS TO AS 1302 GRADE N
R DENOTES 230 R HOT ROLLED PLAIN BARS TO AS 1302
SL DENOTES HARD-DRAWN WIRE REINFORCING FABRIC TO AS 1304
- NUMBER OF BARS IN GROUP BAR GRADE AND TYPE

 17 N 20 250

NOMINAL BAR SIZE in mm SPACING in mm
- THE FIGURE FOLLOWING THE FABRIC SYMBOL SL IS THE REFERENCE NUMBER FOR FABRIC TO AS 1304.
8. FABRIC SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING DETAIL:

1. IF REQUIRED ANY DEWATERING WORKS TO BE AS PER THE DEWATERING PROCEDURE AS CONTAINED WITHIN THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP).

1. DEMOLITION OF EXISTING DWELLING TO BE CONDUCTED IN ACCORDANCE WITH THE PROVISIONS OF AS2601-2001- DEMOLITION OF STRUCTURES BY CONTRACTORS EXPERIENCED IN THIS CLASS OF WORK AND HOLDING REQUIRED CURRENT PERMITS AND LICENSES AS REQUIRED.
2. EXISTING INTERNALS FENCING, CATTLE YARDS, UTILITIES AND OTHER REDUNDANT STRUCTURES TO BE DEMOLISHED AND REMOVED TO AN APPROVED WASTE MANAGEMENT FACILITY.
3. DAM DECOMMISSIONING TO BE COMPLETED AS PER THE DAM DECOMMISSIONING PROCEDURE AS CONTAINED WITHIN THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP).
4. ALL EXISTING SERVICES (INCLUDING SEPTIC TANKS) SHALL BE REMOVED FROM SITE.
5. ALL UNDERGROUND CABLES AND PIPES SHALL BE GRUBBED OUT AND CAPPED AT THE BOUNDARY OF THE SITE.

CONTINUED FROM BELOW

ALL OVERHEAD SERVICES SHALL BE REMOVED FROM WITHIN THE SITE BOUNDARY AND MADE SAFE AT THE TERMINATION LOCATION. ANY POLES SHALL BE REMOVED FROM THE SITE.

ALL EXISTING SERVICES TO BE CONSIDERED AS LIVE UNTIL THE CONTRACTOR HAS TESTED AND CONFIRMED TO THE SUPERINTENDENT THAT THE SERVICES ARE DEAD / REDUNDANT.

1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25 MPa U.N.O IN REINFORCED CONCRETE NOTES.
2. ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON MIN 100mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 95% MODIFIED DRY DENSITY (AS 1289 S 2.1).
3. EXPANSION JOINTS (E-J) TO BE FORMED FROM 10mm COMPRESSIBLE CORK FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LOCATED AT DRAINAGE FITTS, ON TANGENT PORTIONS OF CURVES AND ELSEWHERE AT MAX 12m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
4. WEAKENED PLANE JOINTS TO BE MIN 3mm WIDE AND LOCATED AT 3m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
5. BROOM FINISH TO ALL RAMPED AND VEHICULAR CROSSINGS. ALL OTHER KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISHED.
6. IN THE REPLACEMENT OF KERB AND GUTTER -
IF REQUIRED EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm U.N FROM THE LIP OF GUTTER. UPON COMPLETION OF THE NEW KERB AND GUTTER NEW BASECOURSE AND SURFACE TO BE LAID 900mm WIDE U.N.O.

1. **STORMWATER DESIGN CRITERIA:**
 - (A) AVERAGE RECURRENT FLOW INTERVAL:
 - 1:100 YEARS MAJOR STORM (OVERLAND FLOW)
 - 1:20 YEARS MINOR STORM (PIPED NETWORK)
 - (B) RAINFALL INTENSITIES:
 - TIME OF CONCENTRATION 5 MINUTES
 - 1:100 YEARS = 219 mm/hr
 - 1:20 YEARS = 167 mm/hr
 - (C) RUNOFF COEFFICIENTS:
 - ROOF AREAS: C 100 =1.0
 - EXTERNAL PAVEMENTS: C 100 =1.0
2. PIPES 300 DIA. AND LARGER ARE TO BE REINFORCED CONCRETE (RCP) OR FIBERGLASS REINFORCED CONCRETE (FRCC) CLASS 3 APPROVED SPOUT AND SOCKET WITH RUBBER RING JOINTS, U.N.O. ALL ROAD CROSSINGS TO BE CLASS 4 U.N.O..
3. PIPES UP TO 300 DIA SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS.
4. EQUIVALENT STRENGTH VCP OR FRC PIPES MAY BE USED, SUBJECT TO THE APPROVAL OF PENRITH CITY COUNCIL.
5. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE 6. ENSURE ALL VERTICALS AND DOWNPIES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT.
6. PIPES TO BE INSTALLED TO TYPE HS2 SUPPORT IN ACCORDANCE WITH AS 3725 IN ALL CASES BACKFILL TRENCH WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
7. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500 3.1 (1998) AND AS/NZS 3500 3.2 (1998).

CONTINUED FROM BELOW

F. ANY DAMAGE TO THE STRUCTURAL INTEGRITY OF THE PRE-CAST PIT WILL BE REPAIRED AND STRUCTURALLY CERTIFIED TO THE SATISFACTION OF THE SUPERINTENDENT / PENRITH CITY COUNCIL.

G. ALL PRE-CAST PIT PENETRATIONS SHALL BE CUT SO THAT IT IS FLUSH WITH THE INTERNAL WALL.

H. PIPE JOINTING/SEALING OF PIPE PENETRATION TO BE WITH A NON-SHRINK MORTAR MIX, E.G. LANKO 702 DURABED OR SIMILAR APPROVED.

I. SUBSOIL DRAINAGE FLUSHING AND/OR INTERMEDIATE RISERS TO BE INSTALLED AT 40m CENTRES, AND AT ALL UPSTREAM ENDPOINTS

J. ANY ADDITIONAL PENETRATIONS TO ANY STRUCTURAL CONCRETE (E.G. STORMWATER PITS, CULVERTS, HEADWALLS ETC) SHALL BE CORE DRILLED AND STEEL BLOWN OUT TO MANUFACTURERS REQUIREMENTS, IF REQUIRED.

1. STRIP VEGETATION AND TOPSOIL FROM EMBANKMENT AREA AND STOCKPILE TOPSOIL FOR LATER USE. CUT BACK AREA TO FIRM GROUND.
2. CONSTRUCT EMBANKMENT IN PRESENCE OF QUALIFIED AND EXPERIENCED GEOTECHNICAL ENGINEER IF NOT ROCK.
3. IN THE CASE WHERE THE EMBANKMENT AREAS SHOW ANY FAILURE, THE CONTRACTOR IS TO ENGAGE A QUALIFIED AND EXPERIENCED GEOTECHNICAL ENGINEER TO DETERMINE THE CAUSE AND METHOD OF RECTIFICATION
4. COMPACT CLAY STABILISED WITH GYPSUM (3% BY DRY MASS, MINIMUM) AS APPROVED BY A QUALIFIED AND EXPERIENCED GEOTECHNICAL ENGINEER INTO THE CUT-OFF TRENCH OF LAYERS NOT EXCEEDING 150mm LOOSE THICKNESS TO A DRY DENSITY EQUIVALENT TO 98% OF THAT DETERMINED BY STANDARD COMPACTION (AS 1289.5.1.1) AND AT A MOISTURE CONTENT OF -2% TO +2% OF OPTIMUM MOISTURE CONTENT.
5. GYPSUM STABILISED NATURAL SOILS EXPOSED IN EMBANKMENT AREA WITH MINIMUM 3% GYPSUM BY DRY MASS AND COMPACT AS FOR #4. ALL TO THE APPROVAL OF A QUALIFIED AND EXPERIENCED GEOTECHNICAL ENGINEER.
6. CONSTRUCT BODY OF EMBANKMENT WITH CLAYEY MATERIAL WON FROM SITE. COMPACT THE CLAYEY MATERIAL APPROVED BY A QUALIFIED AND EXPERIENCED GEOTECHNICAL ENGINEER IN LAYERS NOT EXCEEDING 150mm THICKNESS TO A DRY DENSITY EQUIVALENT TO 98% OF THAT DETERMINED BY STANDARD COMPACTION (AS 1289.5.1.1) AND AT A MOISTURE CONTENT OF -2% TO +2% OF OPTIMUM MOISTURE CONTENT. MOST IMPORTANTLY, IF SHRINKAGE CRACKS OCCUR, AS DIRECTED BY A QUALIFIED AND EXPERIENCED GEOTECHNICAL ENGINEER.
7. OVERFILL THE EMBANKMENT AND TRIM OFF, SO THAT THE ENTIRE BODY OF THE EMBANKMENT IS COMPACTED.
8. TRIM THE EMBANKMENTS BATTERS TO THE OVERFILLED MATERIAL, STABILISE THE UPSTREAM CLAY BATTERS WITH WELL MIXED GYPSUM (3% BY DRY MASS, MINIMUM) AND COMPACT TO MIN. 98% STD -2% TO +2% OMC.
9. PLACE ROCK RIP-RAP AS SHOWN.
10. RECOVER TOPSOIL FROM STOCKPILE AND SPREAD OVER EMBANKMENT AND CUT BATTERS (A THIN COVER OF TOPSOIL ONLY HAS BEEN NOMINATED). ONLY LIGHTLY TRACK-ROLL THE TOPSOIL AND THEN LANDSCAPE IN ACCORDANCE WITH THE LANDSCAPE AREA DRAWINGS.
11. WATER AND FERTILISE LANDSCAPE AS REQUIRED BY CLIMATIC CONDITIONS TO ENSURE THE LANDSCAPE IS SUCCESSFUL.
12. AT THE COMPLETION OF WORK WRITTEN CONFIRMATION AND CERTIFICATION IS TO BE PROVIDED FROM A QUALIFIED AND EXPERIENCED GEOTECHNICAL ENGINEER THAT THE EMBANKMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THESE DRAWINGS.

1. THE CONTRACTOR IS RESPONSIBLE FOR ENGAGING A SUITABLY QUALIFIED EROSION AND SEDIMENT CONSULTANT FOR THE DURATION OF THE CONTRACT WITH THE EXPERTISE IN DESIGNING AND DOCUMENTING THE CONTROLS TO ALLOW THE INSTALLATION AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROLS. SUITABLE EROSION AND SEDIMENT CONTROLS SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR REQUIRED TO SUIT THE CONSTRUCTION STAGING
2. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH
 - a. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.
 - b. LOCAL AUTHORITY REQUIREMENTS
 - c. EPA REQUIREMENTS
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 DEDICATED FENCES ARE ERECTED AROUND PITS.
5. CONTRACTOR IS 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. TO THIS END, WORKS SHOULD BE UNDERTAKEN / INSTALLED AS DIRECTED BY THE CONTRACTORS EROSION AND SEDIMENT CONTROL CONSULTANT.

8. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST FROM SETTLING AND CONTROLLING WEEDS.
9. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.
10. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARDOUS 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 POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
11. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
12. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS 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 WITHIN 14 DAYS AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

OTHER MATTERS

14. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
15. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
 - (A) PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE
 - (B) ENSURING THAT NOTHING IS NAILED TO THEM
 - (C) PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS:
 - (i) ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE GREATER
 - (ii) A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH
 - (iii) CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.

SUITABLE EROSION AND SEDIMENT CONTROLS SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT ALL STAGES OF WORKS, THROUGHOUT THE FULL TERM OF THE CONTRACT, WHERE SHOWN ON A/T/ DRAWINGS OR WHERE DIRECTED BY THE SUPERINTENDENT OR PENNETH CITY COUNCIL'S ENGINEERS. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING, DOCUMENTING, INSTALLING AND MAINTAINING THE SEDIMENT AND EROSION CONTROLS IN ORDER TO SUIT THE SELECTED CONSTRUCTION SCHEDULE. THIS IS TO BE DOCUMENTED IN THE FORM OF A SOIL AND WATER MANAGEMENT PLAN TO BE DEVELOPED BY THE CONTRACTOR AND THEIR EROSION NO SEDIMENT CONSULTANT AND PROVIDED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION COMMENCEMENT.

1. WHERE EARTHWORKS ARE TO BE CONSTRUCTED ON OR AGAINST ANY EMBANKMENTS OR AGAINST ANY SLOPES AND THE EMBANKMENT/SLOPE IS STEEPER THAN 10(H):1(V) IN ANY DIRECTION, THE CONTRACTOR SHALL CUT TERRACES INTO THE SLOPE TO A MINIMUM DEPTH OF 300mm, EXCEPT WHERE SLOPES ARE STEEPER THAN 4(H):1(V) WHERE, MINIMUM DEPTH SHALL BE 600mm, TO ALLOW ADEQUATE KEY AND COMPACTION OF MATERIAL.
2. THE CONTRACTOR SHALL PRODUCE A MATERIAL TRACKING REGISTER FOR ALL IMPORT AND EXPORT MATERIAL INCLUDING DEMOLITION WASTE. FOR INSTANCES WHERE CONTAMINATED MATERIAL IS EXPORTED FROM THE SITE, THE CONTRACTOR SHALL ENSURE A CHAIN OF CUSTODY REPORT AND CERTIFICATES ARE PROVIDED FOR THE CONTAMINATED MATERIAL.

1. THE CONTRACTOR IS TO PROVIDE STRUCTURAL CERTIFICATION ON ALL STRUCTURAL ELEMENTS, INCLUDING DESIGN CERTIFICATION AND FINAL CONSTRUCTION CERTIFICATION. THIS INCLUDES:

- * ALL RETAINING WALLS
- * CULVERTS EXCLUDING BASE SLABS
- * HEADWALLS
- * STORMWATER STRUCTURES

ALL STRUCTURAL CERTIFICATES MUST BE PREPARED BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER.

1. THESE DRAWINGS SHOULD BE READ IN CONJUNCTION WITH PENRITH CITY COUNCIL'S LATEST REVISION OF THE 'ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS'
- 2.1. WHERE THERE IS A CONFLICT THE FOLLOWING IS TO OCCUR
- 2.1. NOTIFY THE DESIGN ENGINEER AND/OR SUPERINTENDENT
- 2.2. THE PENRITH CITY COUNCIL'S SPECIFICATION TAKES PRECEDENCE
3. REFER PELLIS SULLIVAN MEYINIK REPORT PSM3739-006S REV 6 (DATED 13 OCT 2020) FOR BULK EARTHWORKS SPECIFICATIONS.
4. REFER SITE IMAGE LANDSCAPE SPECIFICATION (CURRENT REVISION) FOR LANDSCAPE SPECIFICATION.

2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23
Issue	Description	Date

Bar Scales

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Client



Scales

Scales		Drawn	MH
		Designed	MH
Grid	GDA2020	Checked	DS
Height Datum	AHD	Approved	DS



The logo for GDA2020 features a stylized blue globe with a white swoosh and a small blue dot, followed by the text 'GDA2020' in a bold, blue, sans-serif font.

Proje

ASPECT INDUSTRIAL ESTATE
MAMRE ROAD,
KEMPS CREEK
SWC04

Title

NOTES AND LEGENDS
SHEET
SHEET 1

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Status

FOR CONSTRUCTION

Project - Drawing No.
18-596-C9502

Issue
2

OVERALL LEGEND - COMBINED

	EXISTING BOUNDARY
	EXISTING CONTOUR
	PROPOSED BOUNDARY
	PROPOSED EASEMENT
	FUTURE BOUNDARY
	BATTER
	PROPOSED SURFACE LEVE
	STAGE 1A CONTOUR (0.2m INTERVAL)
	PROPOSED MAJOR CONTOUR (1.0m INTERVAL)
	PROPOSED MINOR CONTOUR (0.20m INTERVAL)
	K&G
	KERB AND GUTTER (REFER PCC DWG. SD1003/1)
	PRAM RAMP (REFER PCC DWG. SD1002)
	STAGE 1A STORMWATER BOX CULVERT REFER TO 7000 SERIES DRAWINGS FOR DETAILS.
	STAGE 1A STORMWATER PIPE REFER TO 7000 SERIES DRAWINGS FOR DETAILS.
	STORMWATER BOX CULVERT (NUMBERED CELLS) (REFER TO DRAWING C9601).
	STORMWATER PIPE (REFER TO DRAWING C9601).
	KERB INLET PIT (REFER TO DRAWING C9601).
	SURFACE INLET PIT (REFER TO DRAWING C9601).
	JUNCTION PIT (REFER PCC DWG. SD2002 U.N.O)
	SUBSOIL DRAINS WITH FLUSHING POINTS
	REFER QALCHEK DRAWINGS FOR DETAILS PROPOSED GRAVITY SEWER
	PROPOSED GRAVITY SEWER MANHOLE REFER QALCHEK DRAWINGS FOR DETAILS
	PROPOSED GRAVITY SEWER MAINTENANCE SHAFT REFER QALCHEK DRAWINGS FOR DETAILS
	PROPOSED STREET LIGHT REFER EDGEWATER DRAWINGS FOR DETAILS
	PROPOSED CATCHMENT (REFER TO DRAWING C9711).
	PROPOSED CATCHMENT (REFER TO DRAWING C9711).
	FLOW DIRECTION (REFER TO DRAWING C9711).
	FENCE TYPE 1 (REFER TO DRAWING C9711).
	EXISTING FENCE TYPE 1 REFER 8000 SERIES DRAWINGS FOR DETAILS
	EXISTING FENCE TYPE 4 REFER 8000 TO SERIES FOR DETAILS.
	EXISTING FENCE TO BE REMOVED (REFER TO DRAWINGS C9951).
	BARRIER LINES (REFER TO DRAWING CC9650).
	C3 CLEARWAY LINE (REFER TO DRAWING CC9650).
	TB/TB1 GIVEWAY LINES (REFER TO DRAWING CC9650).
	LINEMARKING TYPE (REFER TO DRAWING C9650).
	PROPOSED SIGN (REFER TO DRAWING CC9650).
	PROPOSED SIGN POST LOCATION (REFER TO DRAWING C9650).
	SWC01 WORKS REFER TO C7000 PACKAGE FOR DETAILS
	SWC02 WORKS REFER TO C8000 PACKAGE FOR DETAILS
	SWC03 WORKS REFER TO C9000 PACKAGE FOR DETAILS

PAVEMENT LEGEND

	ROAD 4 PAVEMENT 70mm THICKNESS AC14 (C450, E=2700 Mpa) ON 7mm SPRAYED SEAL (CL170) 150mm THICKNESS UNBOUND BASECOURSE (R71, TINSW3051, E=350MPa) ON 150mm THICKNESS UNBOUND SUB-BASECOURSE (R71, TINSW3051, E=250MPa) ON 370mm THICKNESS SELECT MATERIAL ZONE (R44, CBR 15%) ON COMPACTED SUBGRADE MIN CBR 3%. IF SUBGRADE < 3% - MIN 150mm STABILISED SUBGRADE (3-4% LIME BY MASS).
	CUL-DE-SAC PAVEMENT 75mm THICKNESS AC14 (A15E BINDER (SBS PMB MODIFIED BINDER), E = 2000 MPa) on 7mm SPRAYED SEAL (CL170) ON 150mm THICKNESS UNBOUND BASECOURSE (R71, TINSW3051, E=350MPa) ON 150mm THICKNESS UNBOUND SUB-BASECOURSE (R71, TINSW3051, E=250MPa) ON 370mm THICKNESS SELECT MATERIAL ZONE (R44, CBR 15%) ON COMPACTED SUBGRADE MIN CBR 3%. IF SUBGRADE < 3% - MIN 150mm STABILISED SUBGRADE (3-4% LIME BY MASS).
	FOOTPATH PAVEMENT 125mm THICKNESS CONCRETE WITH SL72 (40mm PLACED CENTRALLY) ON 30mm THICKNESS SAND BEDDING OR GRANULAR BASE ON COMPACTED SUBGRADE. (REFER TO PENRITH CITY COUNCIL STANDARD DWG SD1001 FOR JOINTING DETAILS). SLIP-FORM CYCLEWAYS MUST BE CONSTRUCTED IN ACCORDANCE WITH PENRITH CITY COUNCIL ENGINEERING CONSTRUCTION SPECIFICATION.
	LANDSCAPED TREATMENT REFER LANDSCAPE ARCHITECT DOCUMENTATION FOR DETAILS.
	LANDSCAPED TEMPORARY BATTER REFER LANDSCAPE ARCHITECT DOCUMENTATION FOR DETAILS. ALL BATTERS TO BE TREATED WITH POLYMER BASED SEDIMENT CONTROL PRODUCT

PAVEMENT DESIGN CRITERIA:
ASSUMED ESA = 1.3x10'
ASSUMED CBR = 3.0% ; CBR TO BE CONFIRMED ON SITE IN ACCORDANCE
WITH COUNCIL SPECIFICATIONS
IF SUBGRADE < 3% - MIN 150mm STABILISED SUBGRADE (3-4% LIME BY MASS)

NOTES:
- REFER PSM3739-039L FOR PAVEMENT DESIGN DETAILS AND SPECIFICATIONS
- ALL PAVEMENT MATERIALS ARE TO SATISFY THE REQUIREMENTS OF THOSE
STATED WITHIN THESE DRAWINGS AND PENRITH CITY COUNCIL'S
SPECIFICATIONS, WHICHEVER IS GREATER.
- THE CONTRACTOR IS TO ARRANGE FOR SAMPLING OF THE SUBGRADE
WITHIN ROADS, TO CONFIRM CBR AND PROVIDE A GEOTECHNICAL REPORT
CONFIRMING THE PAVEMENT COMPOSITION IN COMPLIANCE WITH PCC'S
SPECIFICATION, SUPPORTED BY NATA ACCREDITED TEST RESULTS.
- WHERE CBR RESULTS ARE LESS THAN 3% AND INSITU LIME STABILISATION IS
REQUIRED, CBR SAMPLING IS TO BE COMPLETED POST INSITU LIME
STABILISATION TO CONFIRM RESULTANT CBRS HAVE REACHED THE
MINIMUM 3% REQUIREMENT. A GEOTECHNICAL REPORT, SUPPORTED BY
NATA ACCREDITED TEST RESULTS SHALL BE PROVIDED FOR VALIDATION.

CONSTRUCTION TOLERANCES

BULK EARTHWORKS			PAVEMENT / ACCESS TRACKS	
EARTHWORKS	-50mm / +0mm	OF FINISHED SURFACE LEVEL (AFTER COMPACTION AND TRIMMING)	CONCRETE	
			KERB	-5mm / +5mm ALONG THE TOP OF KERB OVER A LENGTH OF 5 METRES
			KERB	-5mm / +5mm ALONG THE FACE OF KERB OVER A LENGTH OF 5 METRES
			PATH	-0mm / +10mm OF FOOTPATH/SHARED PATH FINISHED SURFACE LEVEL
			PATH	SURFACE OF THE PATH, INCLUDING JOINTS, MUST NOT POND WATER.
STORMWATER				
PIPES/CULVERTS	WITHIN 20mm	OF THE DESIGN INVERT LEVEL AT ANY POINT		
PIPES/CULVERTS	WITHIN 100mm	OF THE PLAN POSITION SHOWN ON THE DRAWINGS OR SPECIFIED AT ANY POINT		
HEADWALLS	WITHIN 20mm	OF THE DESIGN INVERT LEVEL AT ANY POINT		
HEADWALLS	WITHIN 100mm	OF THE PLAN POSITION SHOWN ON THE DRAWINGS OR SPECIFIED AT ANY POINT		
CHAMBERS	WITHIN 20mm	OF THE INVERT LEVEL SHOWN ON THE DRAWINGS	VERGE	
CHAMBERS	WITHIN 200mm	LONGITUDINALLY OF THE PLAN POSITION, WITH REFERENCE TO THE CONTROL LINE FOR THE ROAD SHOWN ON THE DRAWINGS	TURF	-10mm / +0mm OF PAVEMENT FINISHED SURFACE LEVEL (AFTER COMPACTION) TO THE ADJOINING MATERIAL (FOOTPATHS, KERBS, ETC)
			MULCH	-10mm / +0mm OF PAVEMENT FINISHED SURFACE LEVEL (AFTER COMPACTION) TO THE ADJOINING MATERIAL (FOOTPATHS, KERBS, ETC)
LINTELS	AS PER THE TOLERANCES SPECIFIED FOR THE ADJOINING MATERIAL			
COVERS	AS PER THE TOLERANCES SPECIFIED FOR THE ADJOINING MATERIAL		RETAINING / NOISE WALLS	
			WALL	-20mm / +20mm FROM ANY POINT ON THE WALL THE LEVEL MUST NOT DEVIATE FROM THAT SPECIFIED
GRATES	AS PER THE TOLERANCES SPECIFIED FOR THE ADJOINING MATERIAL		WALL	-10mm / +10mm INCLINATION OF THE FACE OF THE COMPLETED WALL MUST NOT DEVIATE FROM THE SPECIFIED INCLINATION PER METER HEIGHT (BLOCK WALL)
			WALL	-5mm / +0mm INCLINATION OF THE FACE OF THE COMPLETED WALL MUST NOT DEVIATE FROM THE SPECIFIED INCLINATION PER METER HEIGHT (PANEL WALL)
OPEN DRAINS	WITHIN 50mm	OF THE DESIGN LEVEL AT ANY POINT PROVIDED THAT THERE IS A CONTINUOUS DOWNGRADE (WITHOUT PONDING) IN THE DIRECTION OF FLOW NOT LESS THAN 0.5% AT ANY POINT	WALL	-20mm / +20mm FLATNESS OF THE FACE OF THE WALL MUST BE SUCH THAT THE MAXIMUM DEVIATION FROM A 4.5 M STRAIGHT EDGE

PAVEMENT / ACCESS TRACKS

SUBBASE	-10mm / +10mm	OF PAVEMENT COURSE THICKNESS (AFTER COMPACTION & TRIMMING)	TOLERANCE FOR EMBANKMENT BATTERS	
SUBBASE	-10mm / +0mm	OF FINISHED SURFACE LEVEL (AFTER COMPACTION AND TRIMMING)	LOCATION	TOLERANCE (mm)
SUBBASE	-5mm / +5mm	ALONG THE FINISHED SURFACE (LAID IN ANY DIRECTION) OVER A LENGTH OF 3 METRES	SLOPE 1H:1V OR FLATTER	SLOPE STEEPER THAN 1H:1V
BASECOURSE	-0mm / +20mm	OF PAVEMENT COURSE THICKNESS (AFTER COMPACTION & TRIMMING)	AT LEVEL OF TOP OF FORMATION/ UNDERSIDE OF PAVEMENT	+0/-150
BASECOURSE	-0mm / +10mm	OF FINISHED SURFACE LEVEL (AFTER COMPACTION AND TRIMMING)	BETWEEN TOP OF FORMATION AND 1m BELOW TOP OF FORMATION	+150/-150
BASECOURSE	-5mm / +5mm	ALONG THE FINISHED SURFACE (LAID IN ANY DIRECTION) OVER A LENGTH OF 3 METRES	BEYOND 1m BELOW TOP OF FORMATION	+300/-300
SEAL	-0mm / +10mm	OF PAVEMENT FINISHED SURFACE LEVEL (AFTER ROLLING AGGREGATE)	REFER TO TINSW R44 SPECIFICATION	
SEAL	-5mm / +10mm	ALONG THE FINISHED SURFACE OVER THE CARRIAGEWAY WIDTH AT THE DATE OF PRACTICAL COMPLETION		
SEAL		SURFACE OF THE COURSE, INCLUDING LONGITUDINAL AND TRANSVERSE JOINTS, MUST NOT POND WATER.		
ASPHALT	-0mm / +10mm	OF PAVEMENT FINISHED SURFACE LEVEL (AFTER COMPACTION)		
ASPHALT	-5mm / +5mm	ALONG THE FINISHED SURFACE OVER THE CARRIAGEWAY WIDTH AT THE DATE OF PRACTICAL COMPLETION		
ASPHALT	-8mm / +8mm	ALONG THE FINISHED SURFACE OVER THE CARRIAGEWAY WIDTH AT THE COMPLETION OF THE DEFECT LIABILITY PERIOD		
ASPHALT		SURFACE OF THE COURSE, INCLUDING LONGITUDINAL AND TRANSVERSE JOINTS, MUST NOT POND WATER.		

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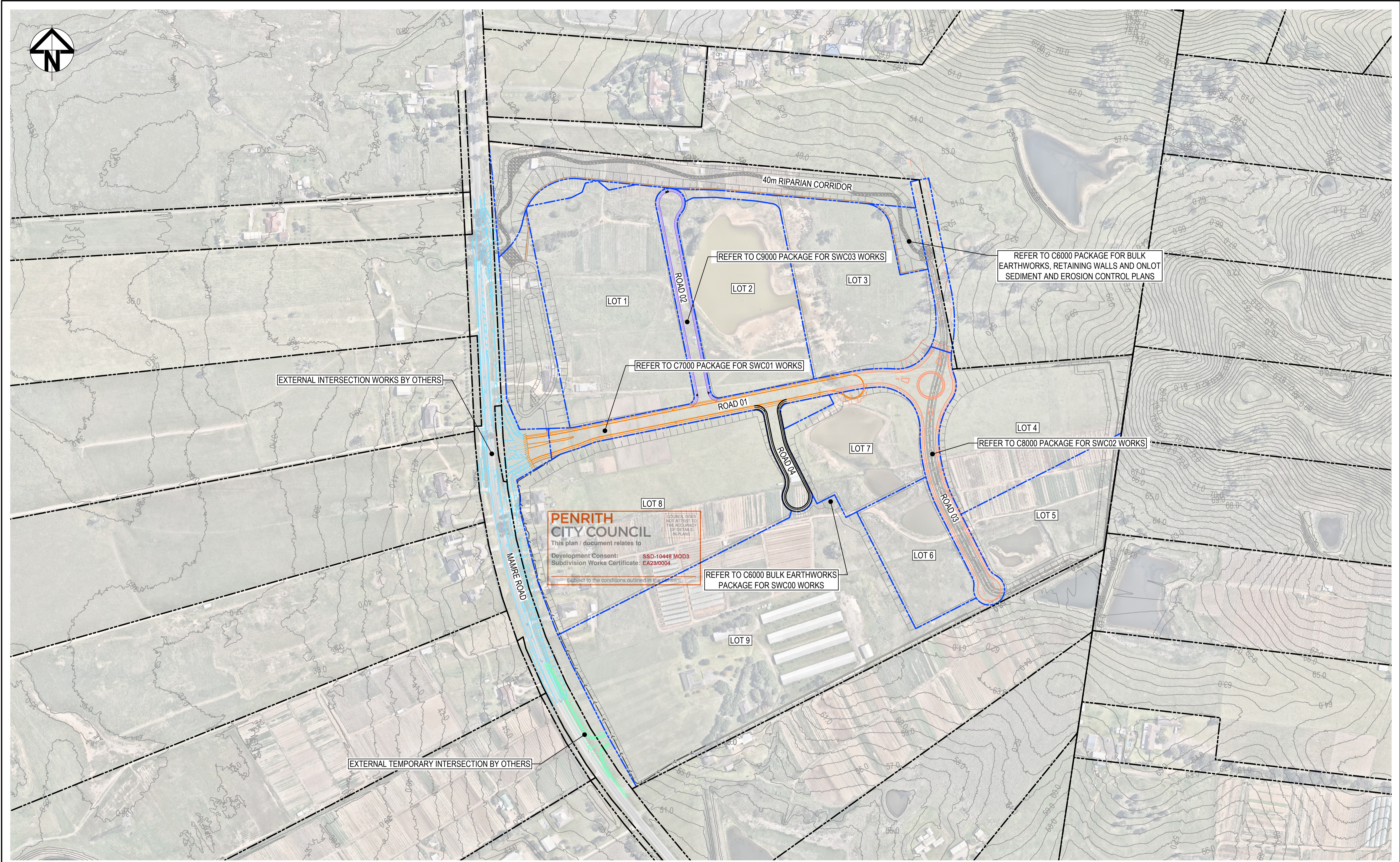
PENRITH
CITY COUNCIL

This plan / document relates to

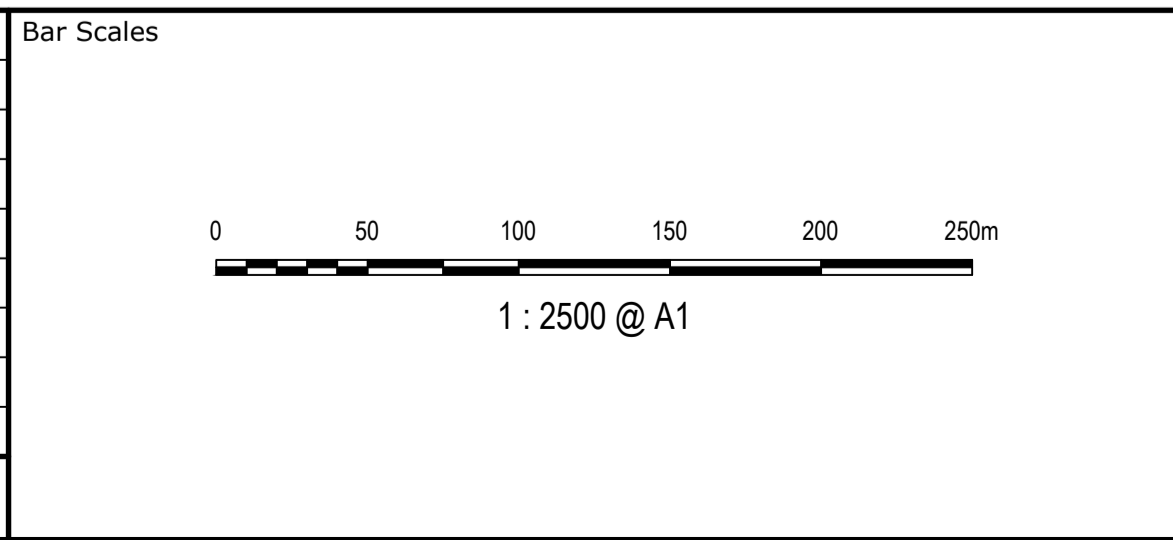
Development Consent: **SSD-10448 MOD3**
Subdivision Works Certificate: **EA23/0004**

Subject to the conditions outlined in the consent

COUNCIL DOES NOT ATTEST TO THE ACCURACY OF DETAILS IN PLANS



2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23
Issue	Description	Date



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Scales 1:2500

Grid GDA2020

Height Datum AHD

Drawn MH

Designed MH

Checked DS

Approved DS

Project ASPECT INDUSTRIAL ESTATE
MAMRE ROAD,
KEMPS CREEK
SWC04

Title GENERAL ARRANGEMENT
PLAN

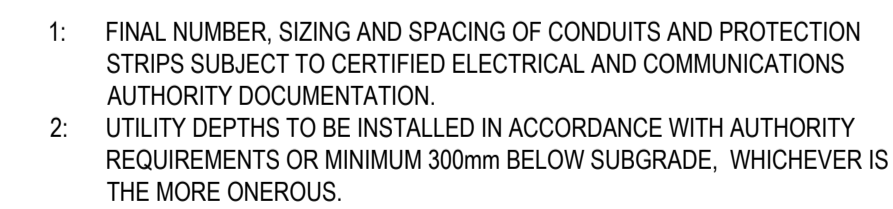
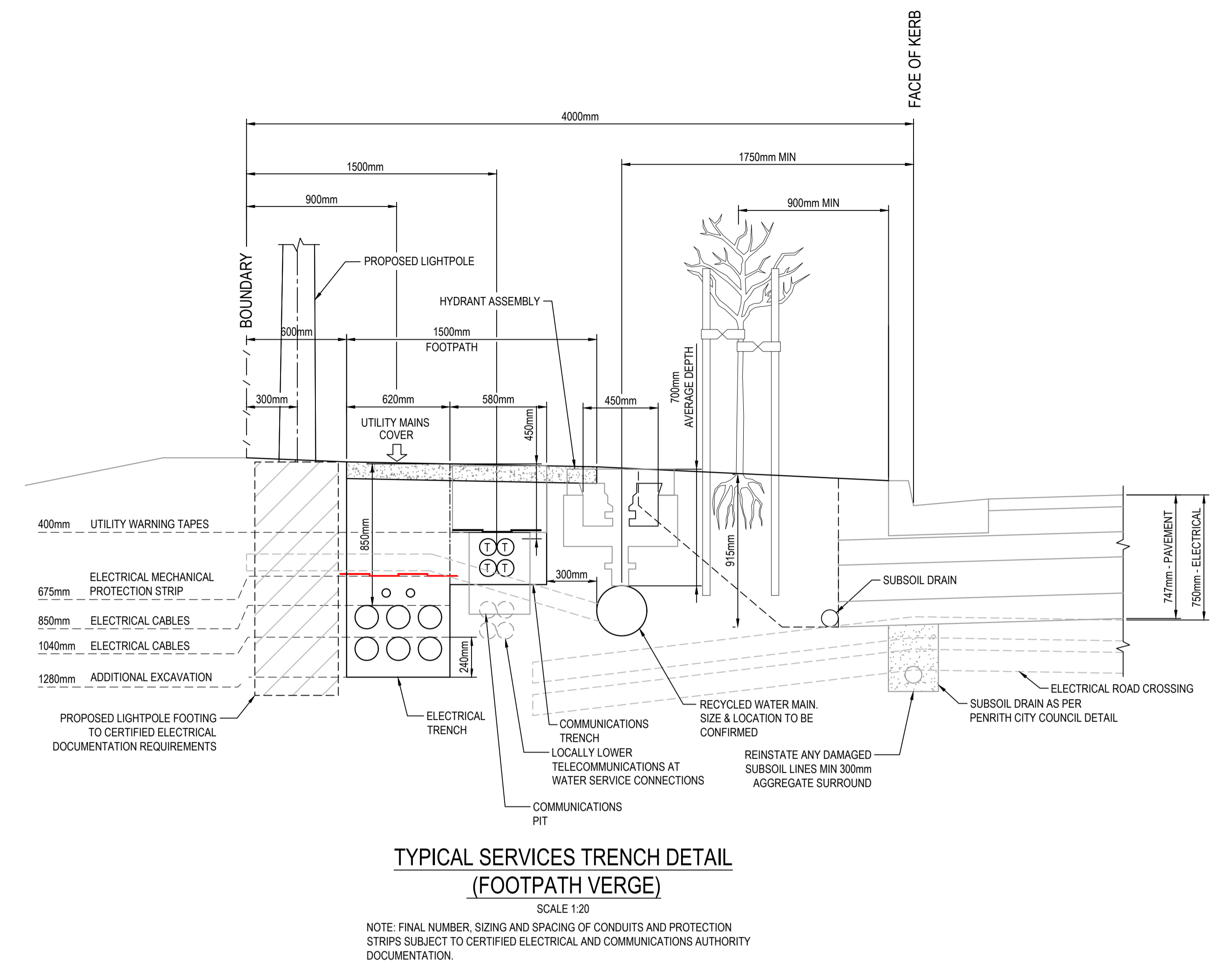
Civil Engineers and Project Managers

Level 7, 153 Walker Street
North Sydney NSW 2060
ABN 96 130 882 405
Tel: 02 9439 1777
Fax: 02 9923 1055
www.atl.net.au
info@atl.net.au

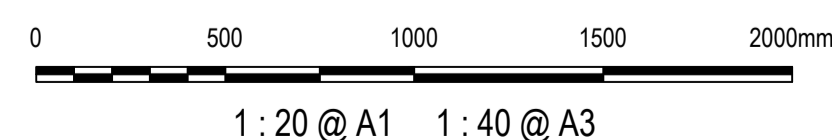
Status FOR CONSTRUCTION	A1
Project - Drawing No. 18-596-C9505	Issue 2

1 : 50

			Bar Scales		THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L		Client 		<table><tr><td rowspan="2">Scales</td><td rowspan="2">1:50</td><td>Drawn</td><td>MH</td></tr><tr><td>Designed</td><td>MH</td></tr><tr><td>Grid</td><td>GDA2020</td><td>Checked</td><td>DS</td></tr><tr><td>Height Datum</td><td>AHD</td><td>Approved</td><td>DS</td></tr></table>		Scales	1:50	Drawn	MH	Designed	MH	Grid	GDA2020	Checked	DS	Height Datum	AHD	Approved	DS	Project ASPECT INDUSTRIAL ESTATE MAMRE ROAD, KEMPS CREEK SWC04		Civil Engineers and Project Managers  Level 7, 153 Walker Street North Sydney NSW 2060 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au	
Scales	1:50	Drawn	MH																									
		Designed	MH																									
Grid	GDA2020	Checked	DS																									
Height Datum	AHD	Approved	DS																									
									Title TYPICAL ROAD SECTION		Status FOR CONSTRUCTION		A1															
<table><tr><td>2</td><td>ISSUED FOR CONSTRUCTION</td><td>23-03-23</td></tr><tr><td>1</td><td>ISSUED FOR SWC APPROVAL</td><td>20-03-23</td></tr><tr><td>A</td><td>ISSUED FOR SWC APPROVAL</td><td>17-02-23</td></tr><tr><td>Issue</td><td>Description</td><td>Date</td></tr></table>			2	ISSUED FOR CONSTRUCTION	23-03-23	1	ISSUED FOR SWC APPROVAL	20-03-23	A	ISSUED FOR SWC APPROVAL	17-02-23	Issue	Description	Date							Project - Drawing No. 18-596-C9510		Issue 2					
2	ISSUED FOR CONSTRUCTION	23-03-23																										
1	ISSUED FOR SWC APPROVAL	20-03-23																										
A	ISSUED FOR SWC APPROVAL	17-02-23																										
Issue	Description	Date																										



SCALE 1:20

Bar Scales

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Client	
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Approved	DS
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Title	
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TYPICAL DETAILS
SHEET 1

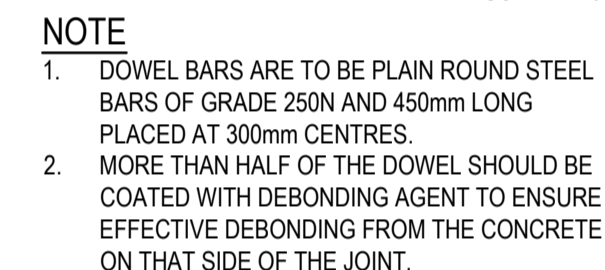
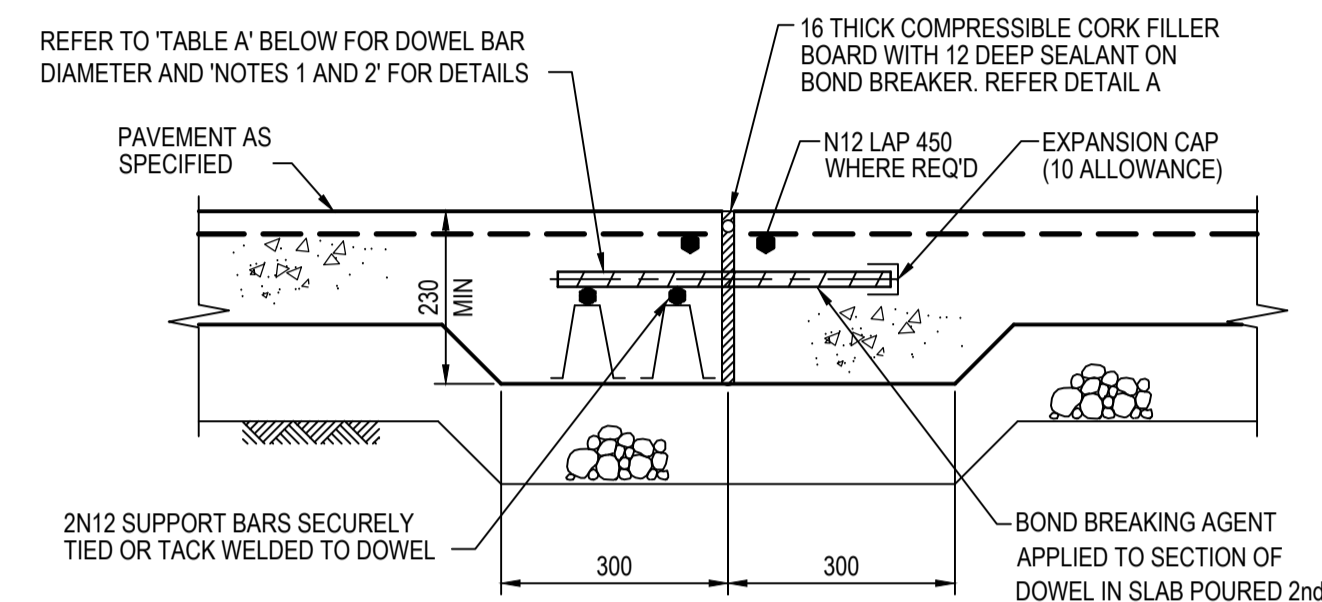
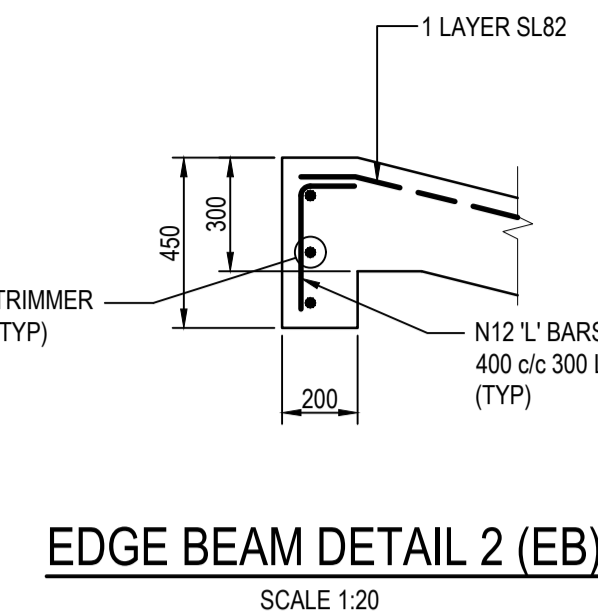
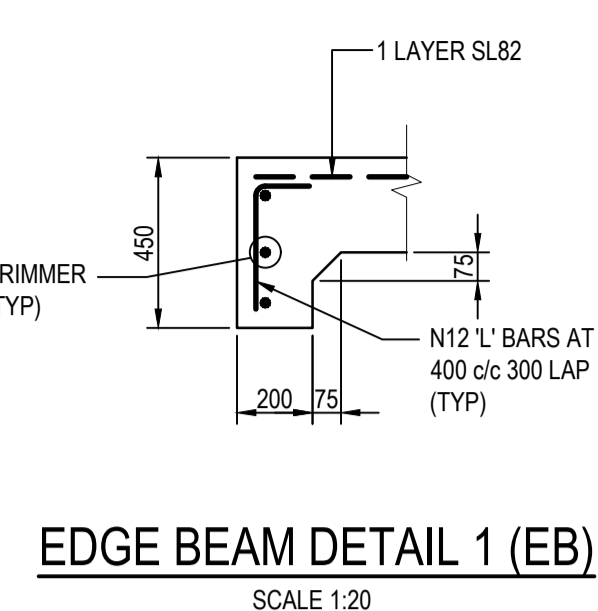
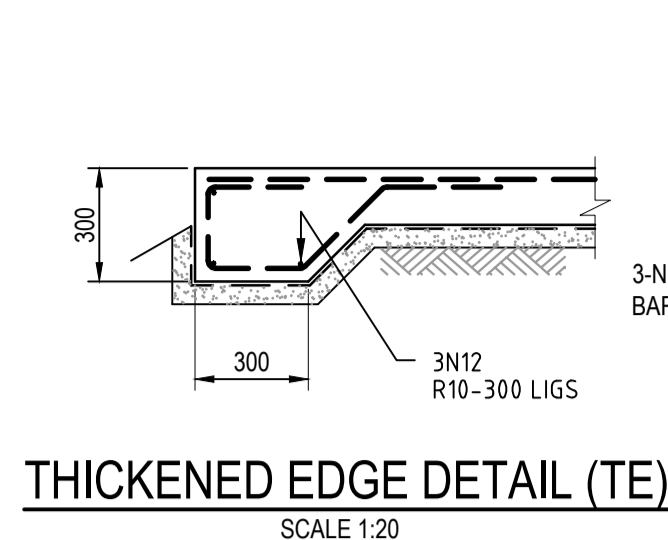
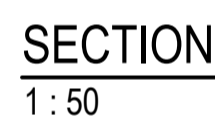
Civil Engineers and Project Managers

at&i

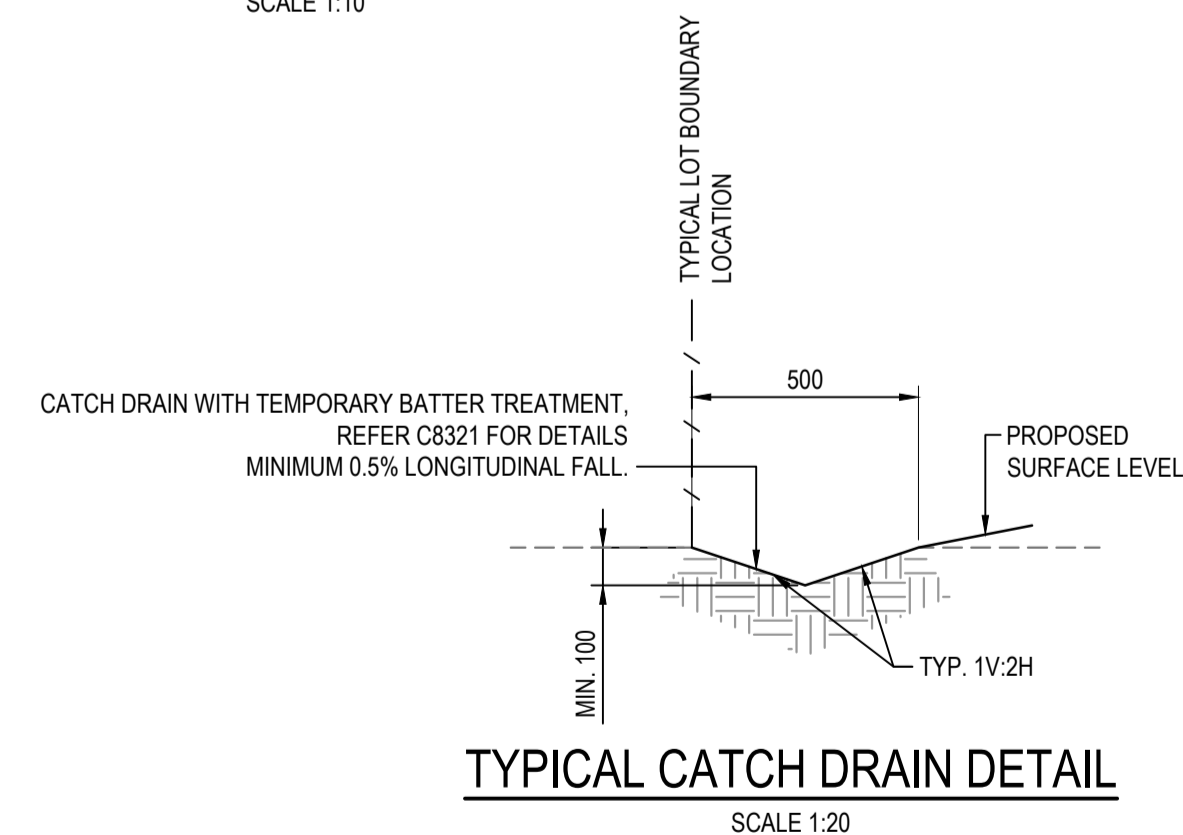
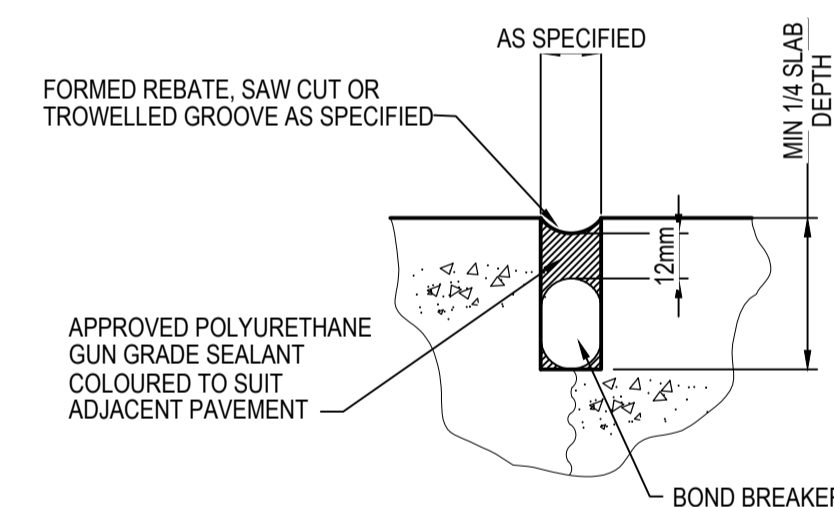
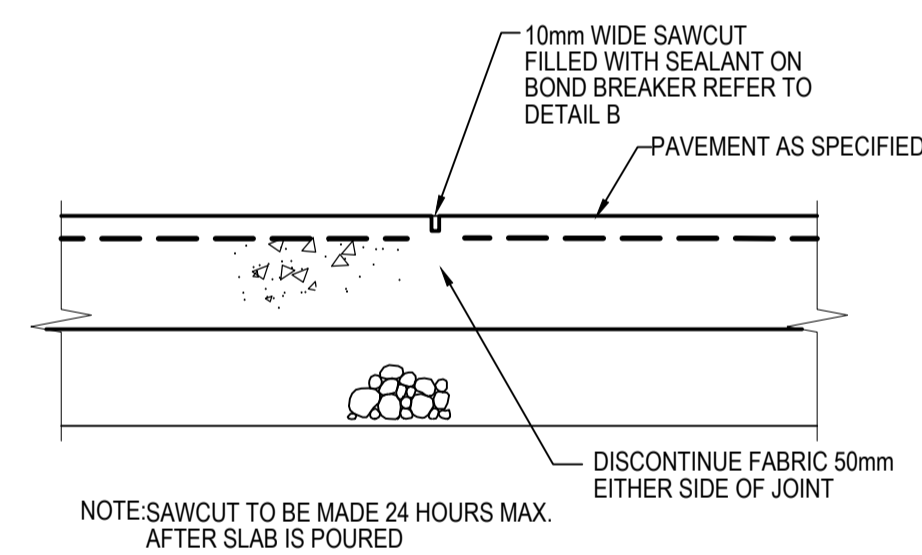
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Project - Drawing No.
18-596-C9515

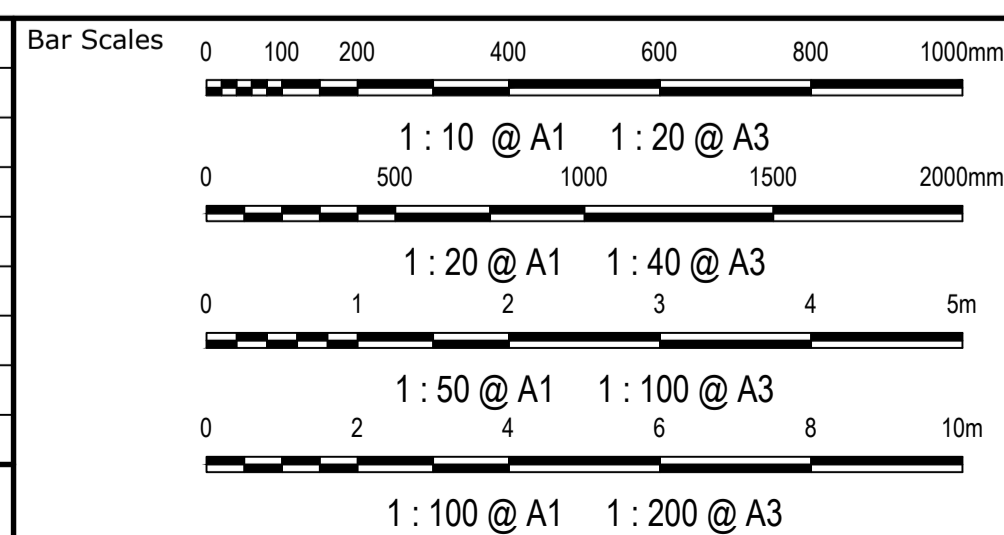
A1



SLAB THICKNESS	DOWEL DIA
125<D≤160	24
160<D≤200	28
200<D≤250	32
D>250	36



2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
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PERMISSION OF AT&L



Scales	AS SHOWN	Drawn	MH
		Designed	MH
Grid	GDA2020	Checked	DS
Height Datum	AHD	Approved	DS



The logo for GDA2020 features a stylized blue globe with a white swoosh and a small blue circle, followed by the text 'GDA2020' in a bold, blue, sans-serif font.

Project	ASPECT INDUSTRIAL ESTATE MAMRE ROAD, KEMPS CREEK SWC04
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TYPICAL DETAILS
SHEET 2

Civil Engineers and Project Managers



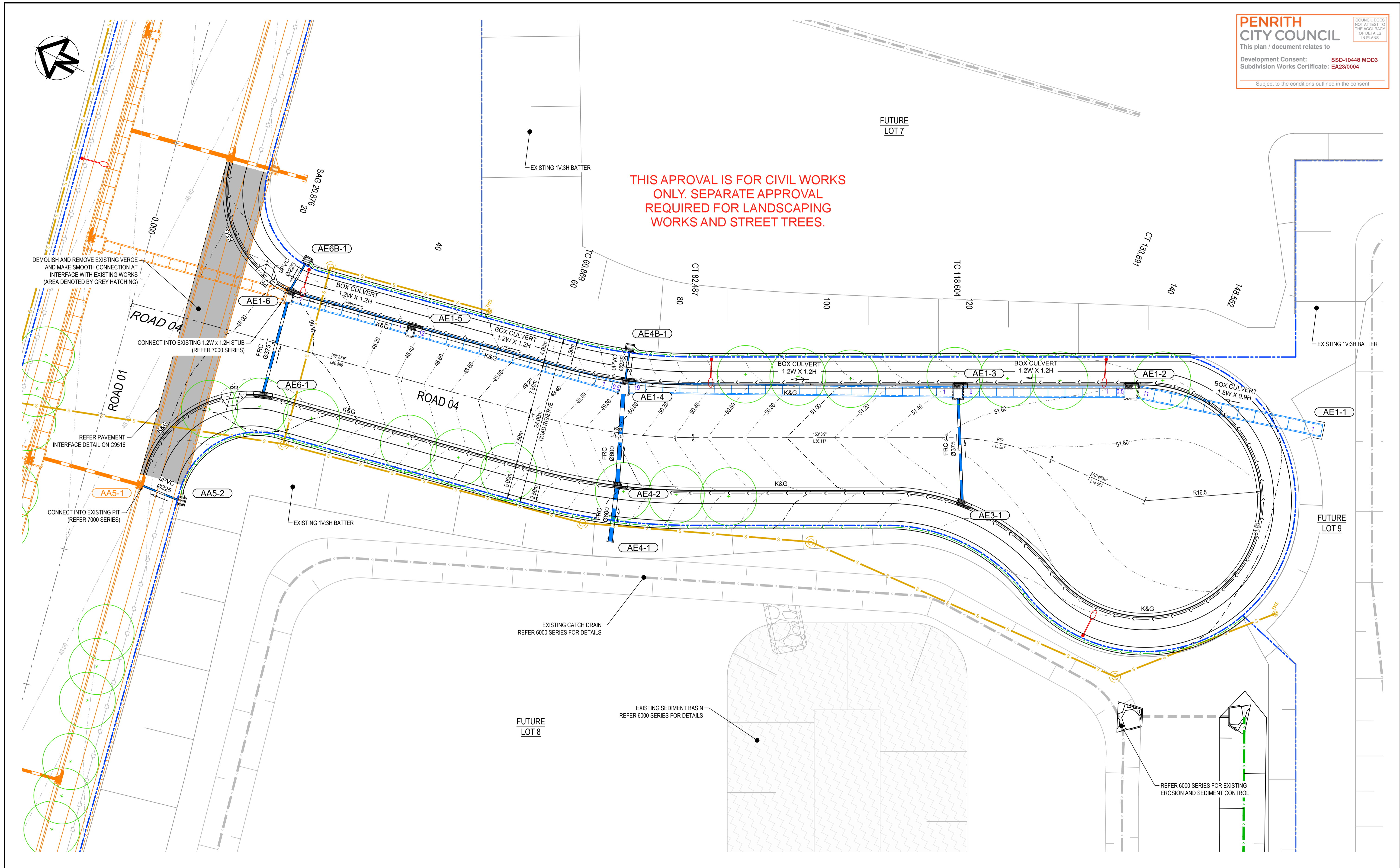
Level 7, 153 Walker Street
North Sydney NSW 2060
ABN 96 130 882 405
Tel: 02 9439 1777
Fax: 02 9923 1055
www.atl.net.au
info@atl.net.au

Status	FOR CONSTRUCTION
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Project - Drawing No.
18-596-C9516

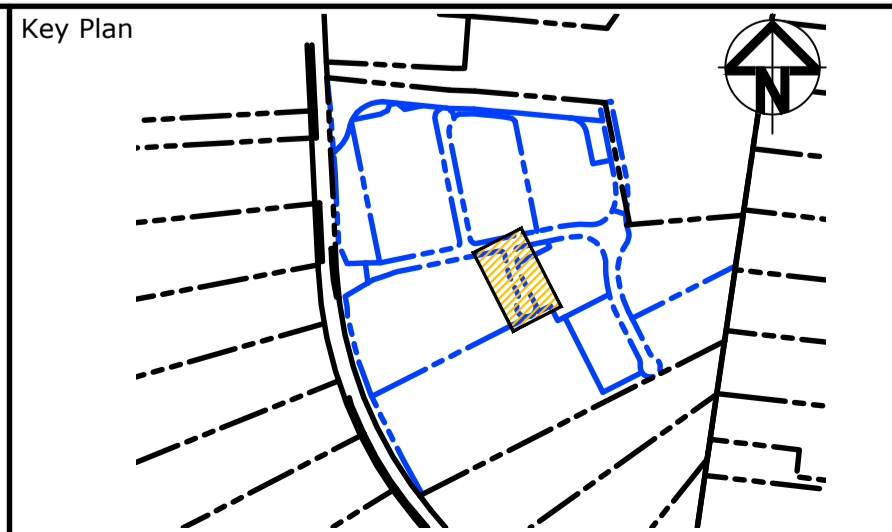
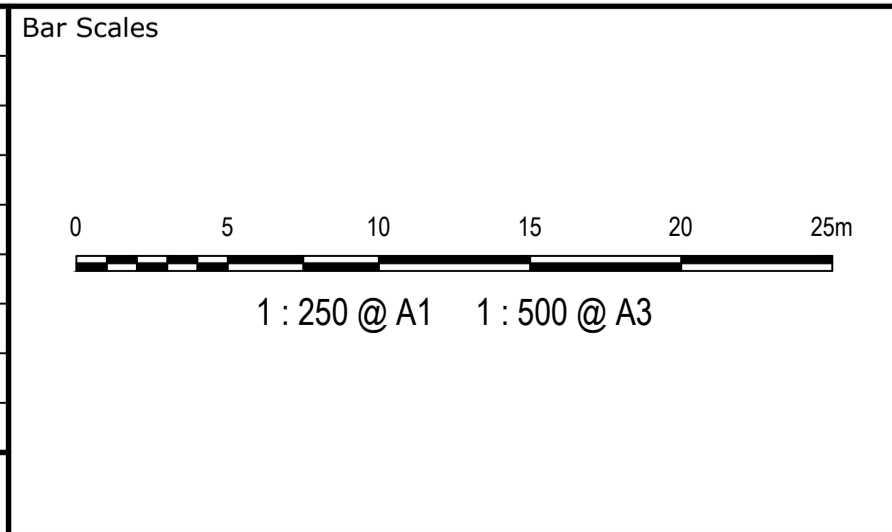
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Issue
2



THIS APPROVAL IS FOR CIVIL WORKS
ONLY. SEPARATE APPROVAL
REQUIRED FOR LANDSCAPING
WORKS AND STREET TREES.


Issue	Description	Date
2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23

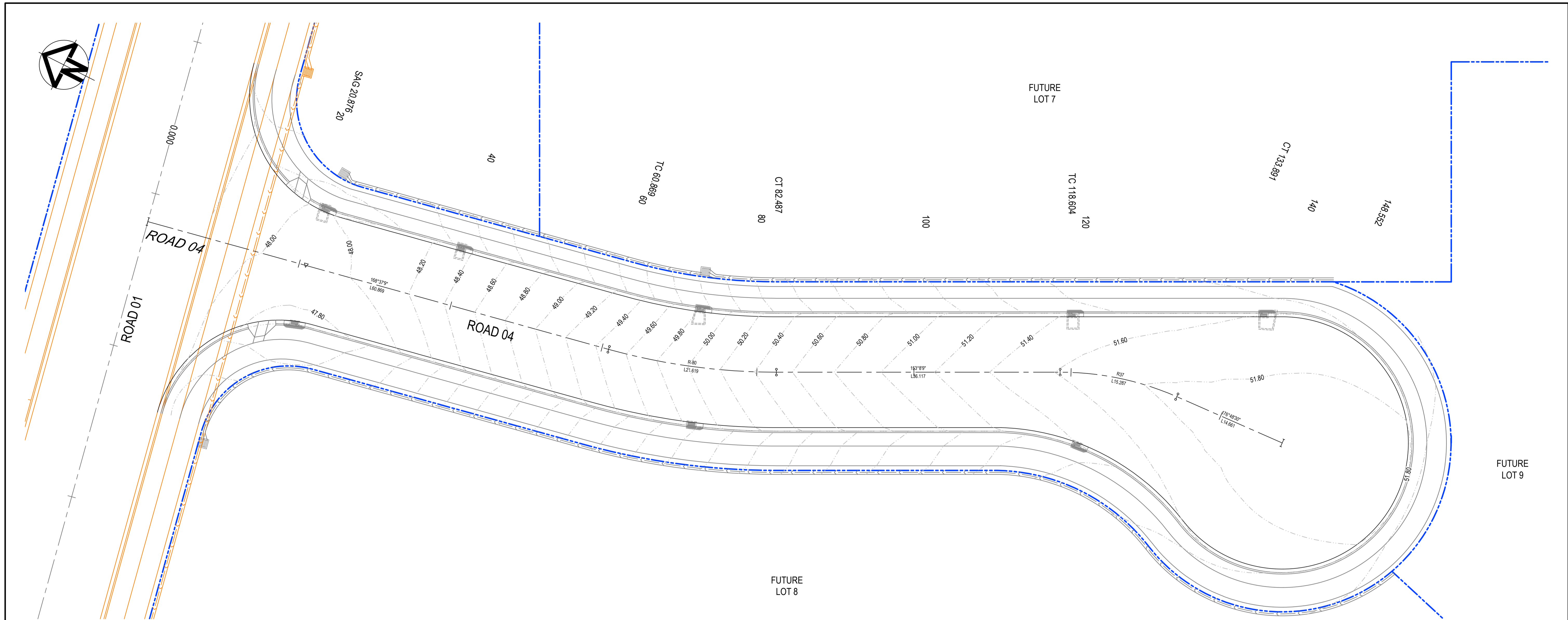


Scales	1:250	Drawn	MH
		Designed	MH
Grid	GDA2020	Checked	DS
Height Datum	AHD	Approved	DS

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Project	ASPECT INDUSTRIAL ESTATE MAMRE ROAD, KEMPS CREEK SWC04
Title	ROADWORKS AND STORMWATER DRAINAGE PLAN

Civil Engineers and Project Managers	
	Level 7, 153 Walker Street North Sydney NSW 2060 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au
Status	
FOR CONSTRUCTION	A1
Project - Drawing No.	Issue
18-596-C9601	2



C1 ROAD->ROAD 04 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	295095.345	6253109.922		168°37'08.79"			
TC	60.869	295107.356	6253050.250	49.485	168°37'08.79"			
IP 2	71.678	295109.502	6253039.588	50.025		R = -80.000	21.619	15°28'59.94"
CT	82.487	295114.417	6253029.887	50.517	153°08'08.85"			
TC	118.604	295130.737	6252997.668	51.614	153°08'08.85"			
IP 3	126.248	295134.241	6252990.750	51.754		R = 37.000	15.287	23°40'21.39"
CT	133.891	295134.673	6252983.008	51.853	176°48'30.25"			
IP 4	148.552	295135.489	6252968.370	52.000	176°48'30.25"			

PENRITH

CITY COUNCIL

This plan / document relates to

Development Consent: **SSD-10448 MOD3**

Subdivision Works Certificate: **EA23/0004**

COUNCIL DOES NOT ATTEST TO THE ACCURACY OF DETAILS IN PLANS

Subject to the conditions outlined in the consent

2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23
Issue	Description	Date

Bar Scales

Key Plan

Client

Scales	1:250	Drawn	MH
		Designed	MH
Grid	GDA2020	Checked	DS
Height Datum	AHD	Approved	DS
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Project	ASPECT INDUSTRIAL ESTATE MAMRE ROAD, KEMPS CREEK SWC04
Title	CONTROL LINE SETOUT PLAN

at&l

Civil Engineers and Project Managers

Level 7, 153 Walker Street
North Sydney NSW 2060
ABN 96 130 882 405
Tel: 02 9439 1777
Fax: 02 9923 1055
www.atl.net.au
info@atl.net.au

Status

FOR CONSTRUCTION

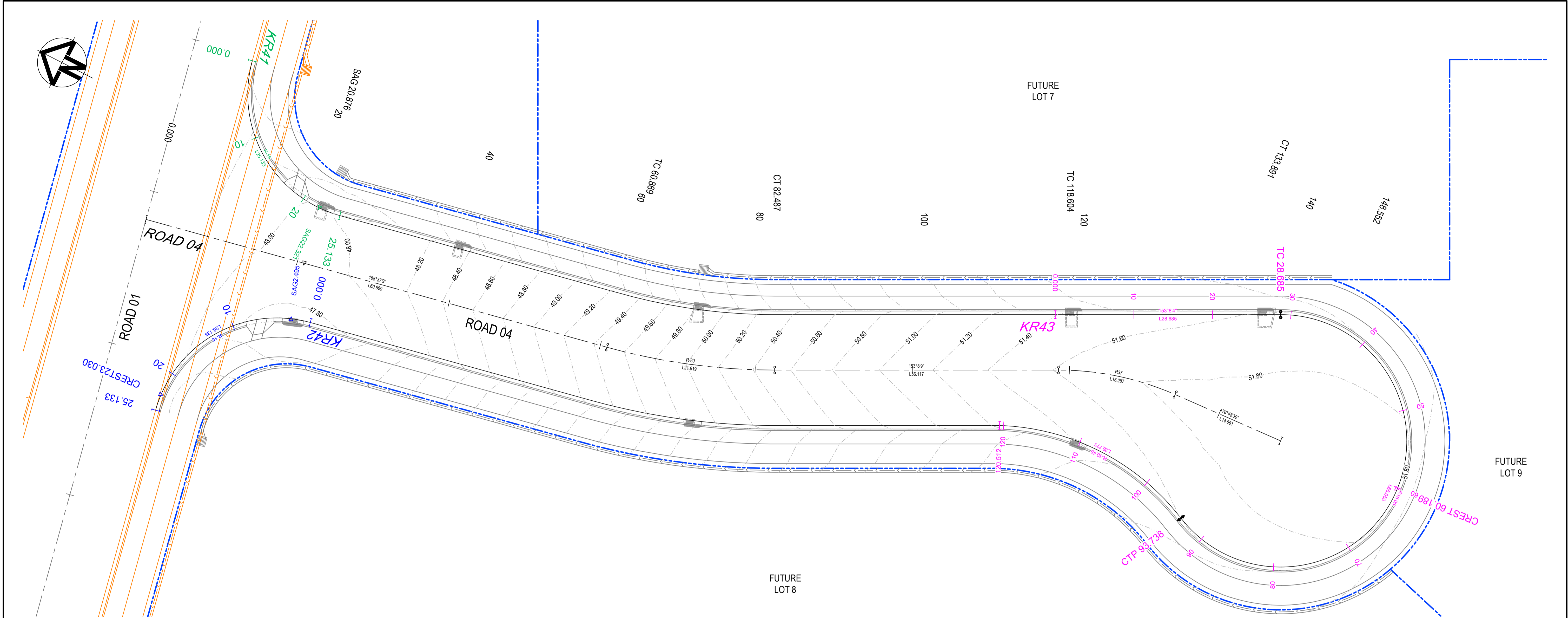
Project - Drawing No.

18-596-C9605

Issue

2

F:\18-596 Mamre Road\6.0 Drgs\Civil\Final\CC\9500_SWC04 CC\18-596-C9605.dwg



LIP OF KERB - (KR41) HORIZONTAL POINTS								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	295119.452	6253106.970	48.320	258°37'10.18"			
IP 2	12.566	295103.766	6253103.813	48.122		R = -16.000	25.133	90°00'01.39"
IP 3	25.133	295106.923	6253088.128	48.007	168°37'08.79"			
LIP OF KERB - (KR42) HORIZONTAL POINTS								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	295093.101	6253085.346	47.753	348°37'08.79"			
IP 2	12.566	295089.943	6253101.031	47.894		R = -16.000	25.133	89°59'58.61"
IP 3	25.133	295074.258	6253097.874	48.044	258°37'10.18"			
LIP OF KERB - (KR43) HORIZONTAL POINTS								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	295136.844	6253001.212	51.395	153°08'04.03"			
TC	28.685	295149.807	6252975.623	51.627	153°08'04.03"			
IP 2	44.948	295161.439	6252952.659	51.742		R = 16.050	32.526	116°06'47.69"
CC	61.211	295135.700	6252952.321	51.839	269°14'51.73"			
IP 3	77.474	295109.960	6252951.983	51.721		R = 16.050	32.526	116°06'47.69"
CC	93.738	295120.986	6252975.245	51.604	25°21'39.42"			
IP 4	107.125	295127.120	6252988.187	51.458		R = -30.450	26.775	50°22'49.86"
IP 5	120.512	295121.063	6253001.165	51.227	334°58'49.56"			

PENRITH
CITY COUNCIL

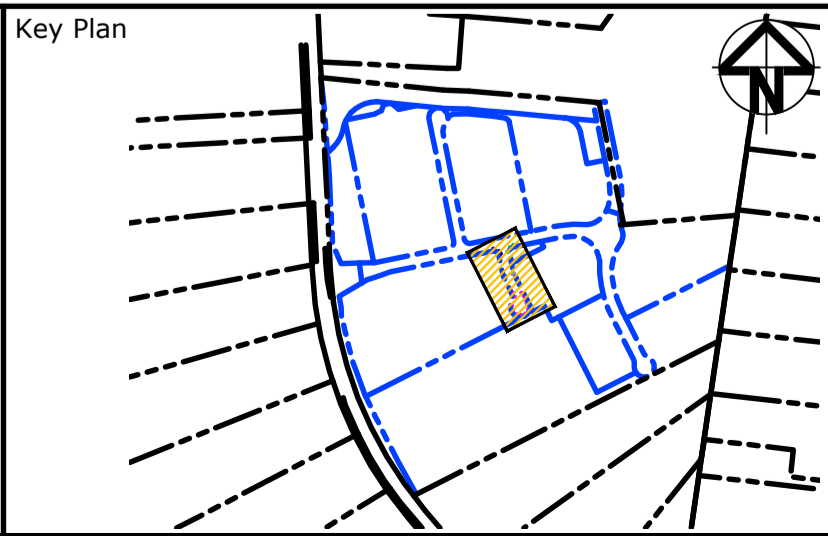
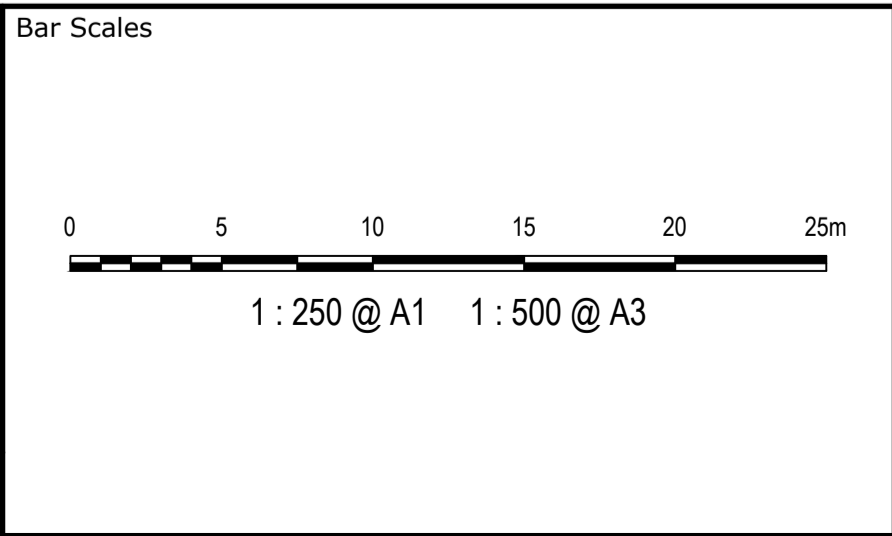
This plan / document relates to

Development Consent: **SSD-10448 MOD3**
Subdivision Works Certificate: **EA23/0004**

Subject to the conditions outlined in the consent

COUNCIL DOES NOT ATTEST TO THE ACCURACY OF DETAILS IN PLANS

2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23
Issue	Description	Date



Client

Scales

1:250

Grid GDA2020

Height Datum AHD

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Project

ASPECT INDUSTRIAL ESTATE
MAMRE ROAD,
KEMPS CREEK
SWC04

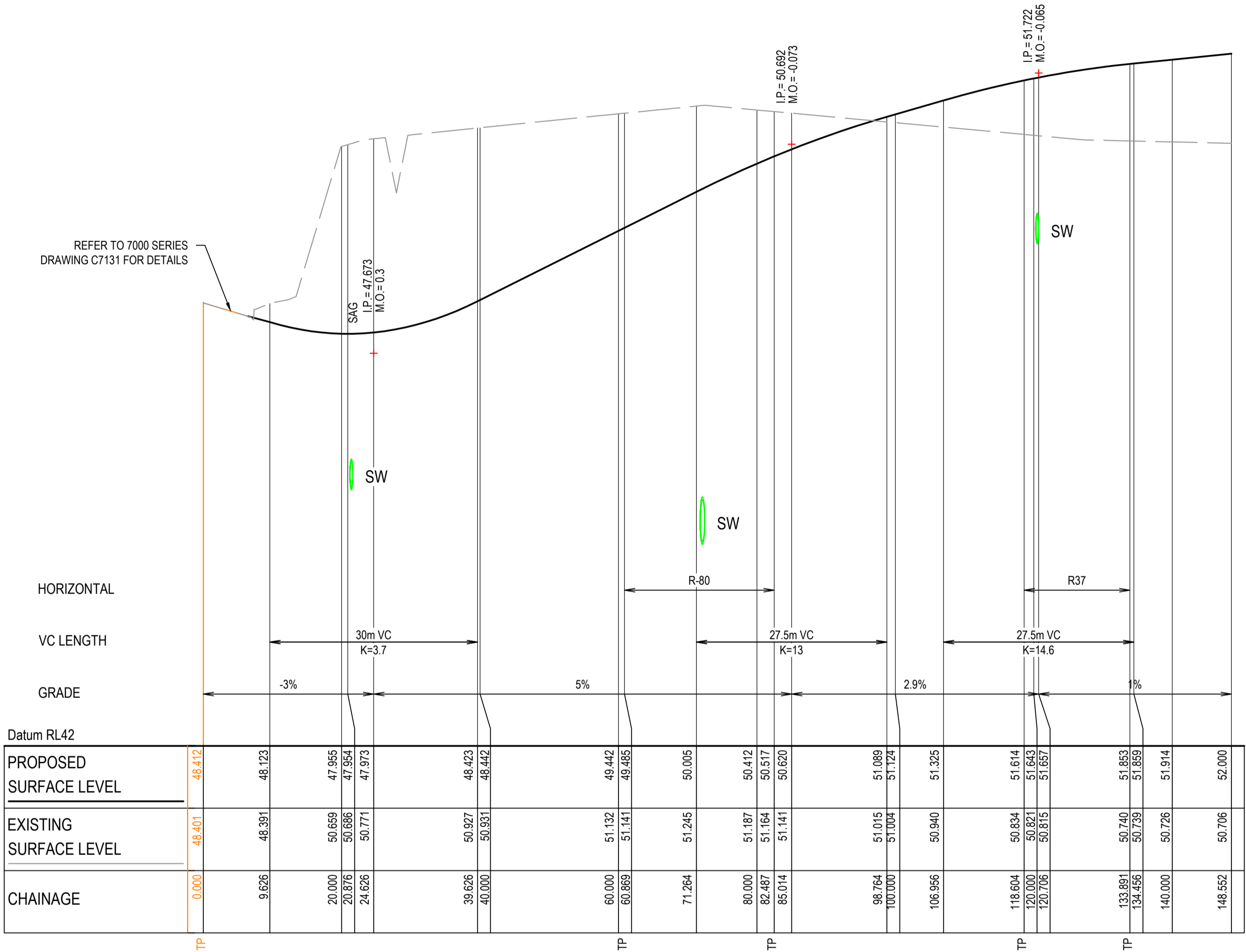
Title

CUL-DE-SAC & KERB RETURN
CONTROL LINE SETOUT
PLAN

Civil Engineers and Project Managers

Level 7, 153 Walker Street
North Sydney NSW 2060
ABN 96 130 882 405
Tel: 02 9439 1777
Fax: 02 9923 1055
www.atl.net.au
info@atl.net.au

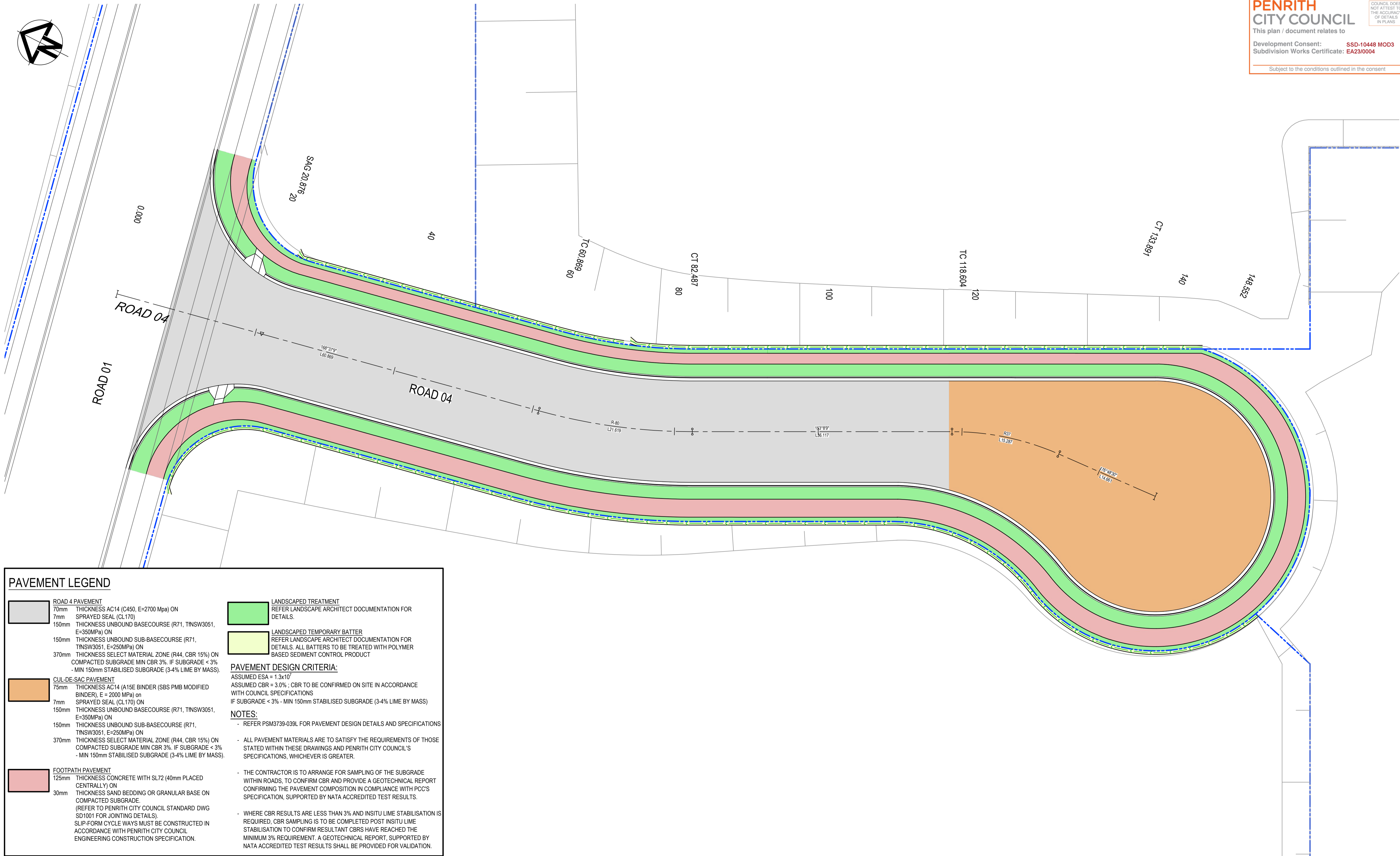
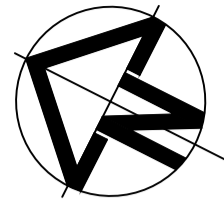
Status	FOR CONSTRUCTION	A1
Project - Drawing No.	18-596-C9610	Issue 2



ROAD 04 LONGITUDINAL SECTION

SCALE 1:500 HORI.
1:50 VERT.

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PAVEMENT LEGEND

ROAD 4 PAVEMENT
70mm THICKNESS AC14 (C450, E=2700 Mpa) ON
7mm SPRAYED SEAL (CL170)
150mm THICKNESS UNBOUND BASECOURSE (R71, TINSW3051,
E=350MPa) ON

150mm THICKNESS UNBOUND SUB-BASECOURSE (R71,
TINSW3051, E=250MPa) ON
370mm THICKNESS SELECT MATERIAL ZONE (R44, CBR 15%) ON
COMPACTED SUBGRADE MIN CBR 3%. IF SUBGRADE < 3%
- MIN 150mm STABILISED SUBGRADE (3-4% LIME BY MASS).

CUL-DE-SAC PAVEMENT
75mm THICKNESS AC14 (A15E BINDER (SBS PMB MODIFIED
BINDER), E = 2000 MPa) on
7mm SPRAYED SEAL (CL170) ON
150mm THICKNESS UNBOUND BASECOURSE (R71, TINSW3051,
E=350MPa) ON

150mm THICKNESS UNBOUND SUB-BASECOURSE (R71,
TINSW3051, E=250MPa) ON
370mm THICKNESS SELECT MATERIAL ZONE (R44, CBR 15%) ON
COMPACTED SUBGRADE MIN CBR 3%. IF SUBGRADE < 3%
- MIN 150mm STABILISED SUBGRADE (3-4% LIME BY MASS).

FOOTPATH PAVEMENT
125mm THICKNESS CONCRETE WITH SL72 (40mm PLACED
CENTRALLY) ON
30mm THICKNESS SAND BEDDING OR GRANULAR BASE ON
COMPACTED SUBGRADE.

(REFER TO PENRITH CITY COUNCIL STANDARD DWG
SD1001 FOR JOINTING DETAILS).
SLIP-FORM CYCLEWAYS MUST BE CONSTRUCTED IN
ACCORDANCE WITH PENRITH CITY COUNCIL
ENGINEERING CONSTRUCTION SPECIFICATION.

LANDSCAPED TREATMENT
REFER LANDSCAPE ARCHITECT DOCUMENTATION FOR
DETAILS.

LANDSCAPED TEMPORARY BATTER
REFER LANDSCAPE ARCHITECT DOCUMENTATION FOR
DETAILS. ALL BATTERS TO BE TREATED WITH POLYMER
BASED SEDIMENT CONTROL PRODUCT

PAVEMENT DESIGN CRITERIA:

ASSUMED ESA = 1.3×10^7
ASSUMED CBR = 3.0% ; CBR TO BE CONFIRMED ON SITE IN ACCORDANCE
WITH COUNCIL SPECIFICATIONS
IF SUBGRADE < 3% - MIN 150mm STABILISED SUBGRADE (3-4% LIME BY MASS)

NOTES:

- REFER PSM3739-039L FOR PAVEMENT DESIGN DETAILS AND SPECIFICATIONS

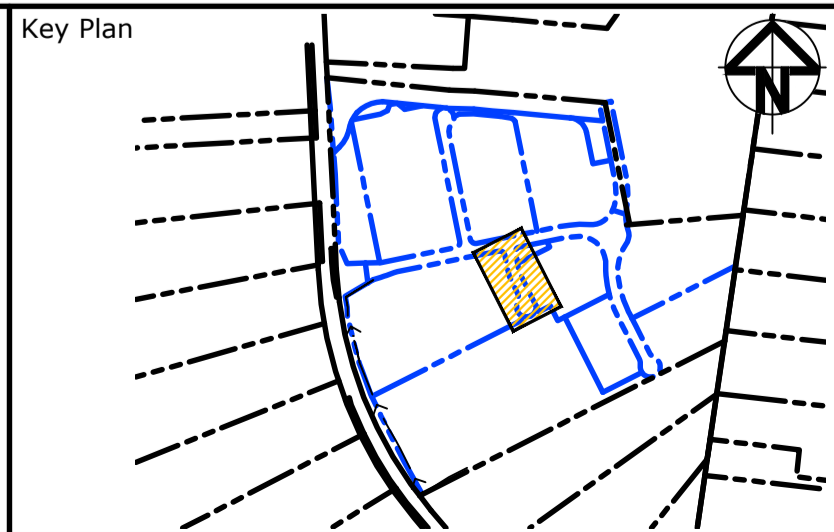
- ALL PAVEMENT MATERIALS ARE TO SATISFY THE REQUIREMENTS OF THOSE
STATED WITHIN THESE DRAWINGS AND PENRITH CITY COUNCIL'S
SPECIFICATIONS, WHICHEVER IS GREATER.

- THE CONTRACTOR IS TO ARRANGE FOR SAMPLING OF THE SUBGRADE
WITHIN ROADS, TO CONFIRM CBR AND PROVIDE A GEOTECHNICAL REPORT
CONFIRMING THE PAVEMENT COMPOSITION IN COMPLIANCE WITH PCC'S
SPECIFICATION, SUPPORTED BY NATA ACCREDITED TEST RESULTS.

- WHERE CBR RESULTS ARE LESS THAN 3% AND INSITU LIME STABILISATION IS
REQUIRED, CBR SAMPLING IS TO BE COMPLETED POST INSITU LIME
STABILISATION TO CONFIRM RESULTANT CBR'S HAVE REACHED THE
MINIMUM 3% REQUIREMENT. A GEOTECHNICAL REPORT, SUPPORTED BY
NATA ACCREDITED TEST RESULTS SHALL BE PROVIDED FOR VALIDATION.

Issue	Description	Date
2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23

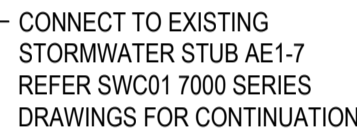
Bar Scales
0 5 10 15 20 25m
1 : 250 @ A1 1 : 500 @ A3



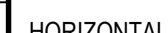
Scales	1:250	Drawn	MH
		Designed	MH
Grid	GDA2020	Checked	DS
Height Datum	AHD	Approved	DS
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Project	ASPECT INDUSTRIAL ESTATE MAMRE ROAD, KEMPS CREEK SWC04
Title	PAVEMENT PLAN

Civil Engineers and Project Managers	
Level 7, 153 Walker Street North Sydney NSW 2060 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au	
Status	FOR CONSTRUCTION
Project - Drawing No.	A1
18-596-C9660	Issue 2



100mm on Original



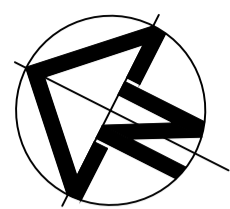
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ANY FORM OR USED FOR ANY
OTHER PURPOSE OTHER THAN
THAT ORIGINALLY INTENDED
WITHOUT THE WRITTEN
PERMISSION OF AT&L



Title

STORMWATER DRAINAGE
LONGITUDINAL SECTION

at&I



LEGEND:

EXISTING BOUNDARY

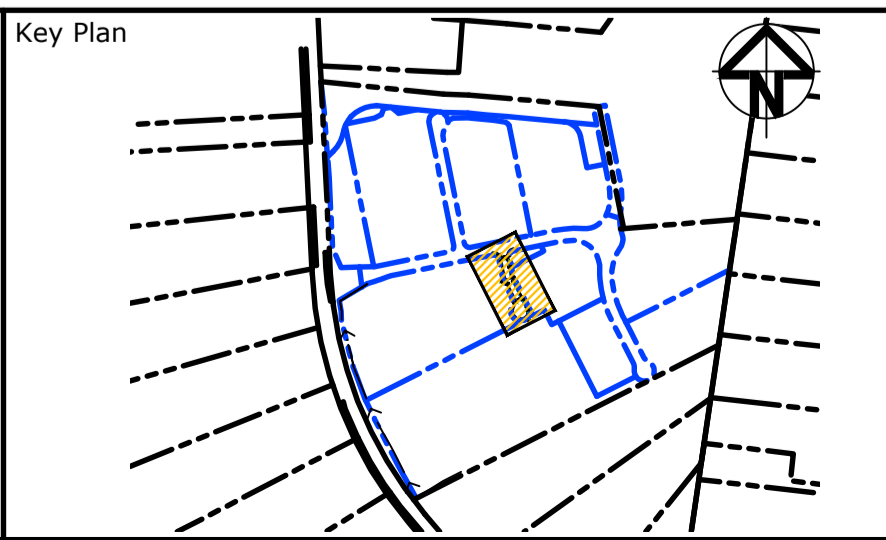
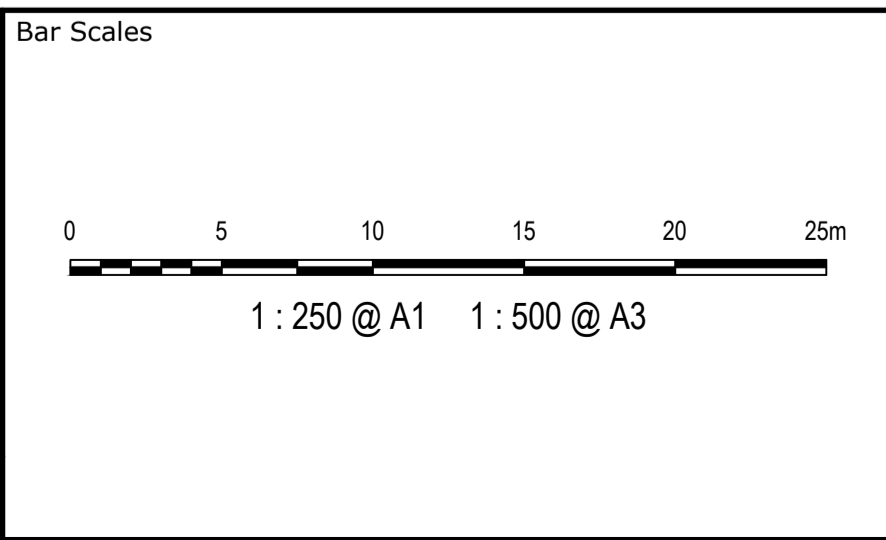
PROPOSED BOUNDARY

SWC01 CATCHMENT (REFER C7412)

PROPOSED CATCHMENT

FLOW DIRECTION

2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23
Issue	Description	Date



Client

Scales	1:2500	Drawn	MH
		Designed	MH
Grid	GDA2020	Checked	DS
Height Datum	AHD	Approved	DS
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Project

ASPECT INDUSTRIAL ESTATE
MAMRE ROAD,
KEMPS CREEK
SWC04

Title

STORMWATER DRAINAGE
CATCHMENT
PLAN
(POST-DEVELOPED)

Civil Engineers and Project Managers

Level 7, 153 Walker Street
North Sydney NSW 2060
ABN 96 130 882 405
Tel: 02 9439 1777
Fax: 02 9923 1055
www.atl.net.au
info@atl.net.au

Status

FOR CONSTRUCTION

A1

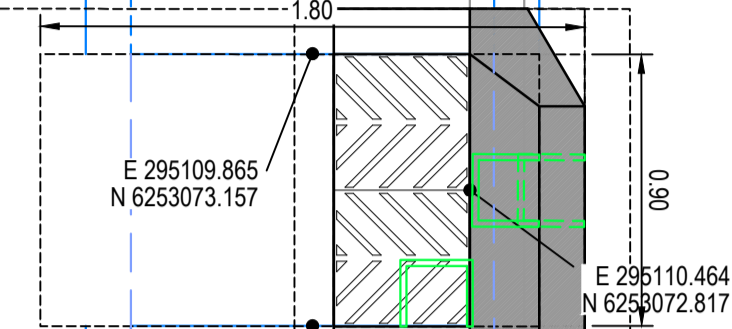
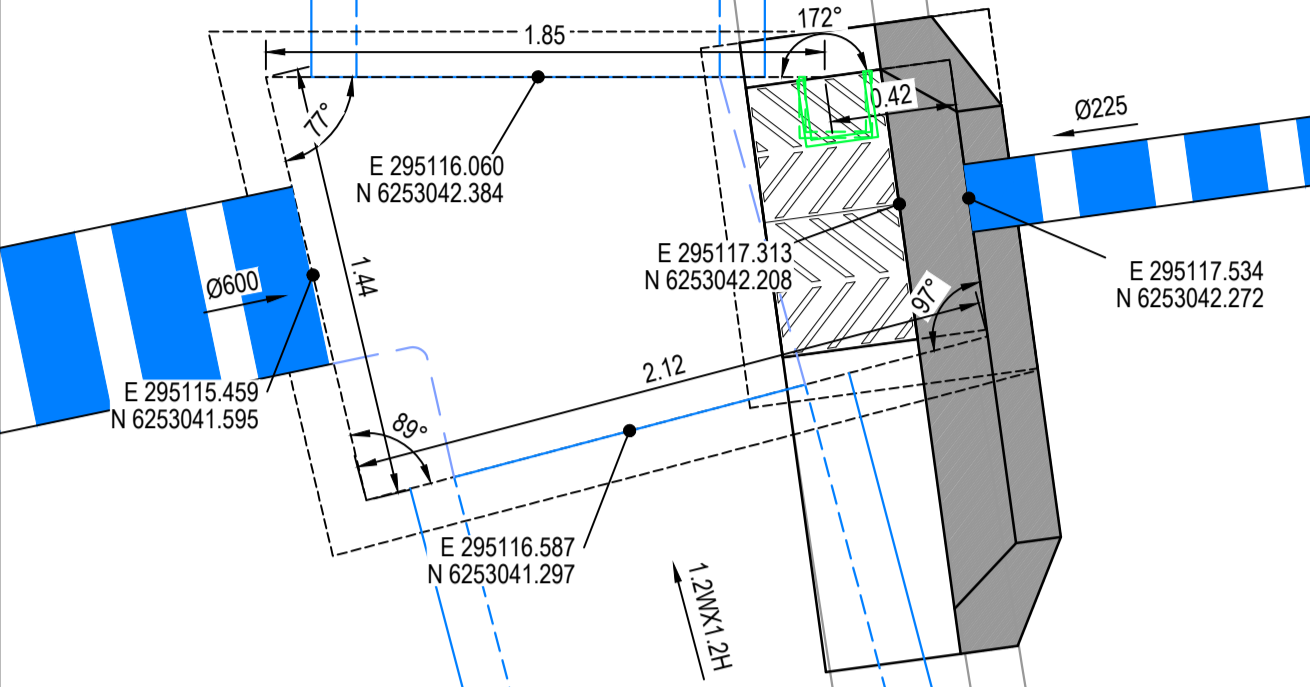
Project - Drawing No.

18-596-C9711

Issue

2

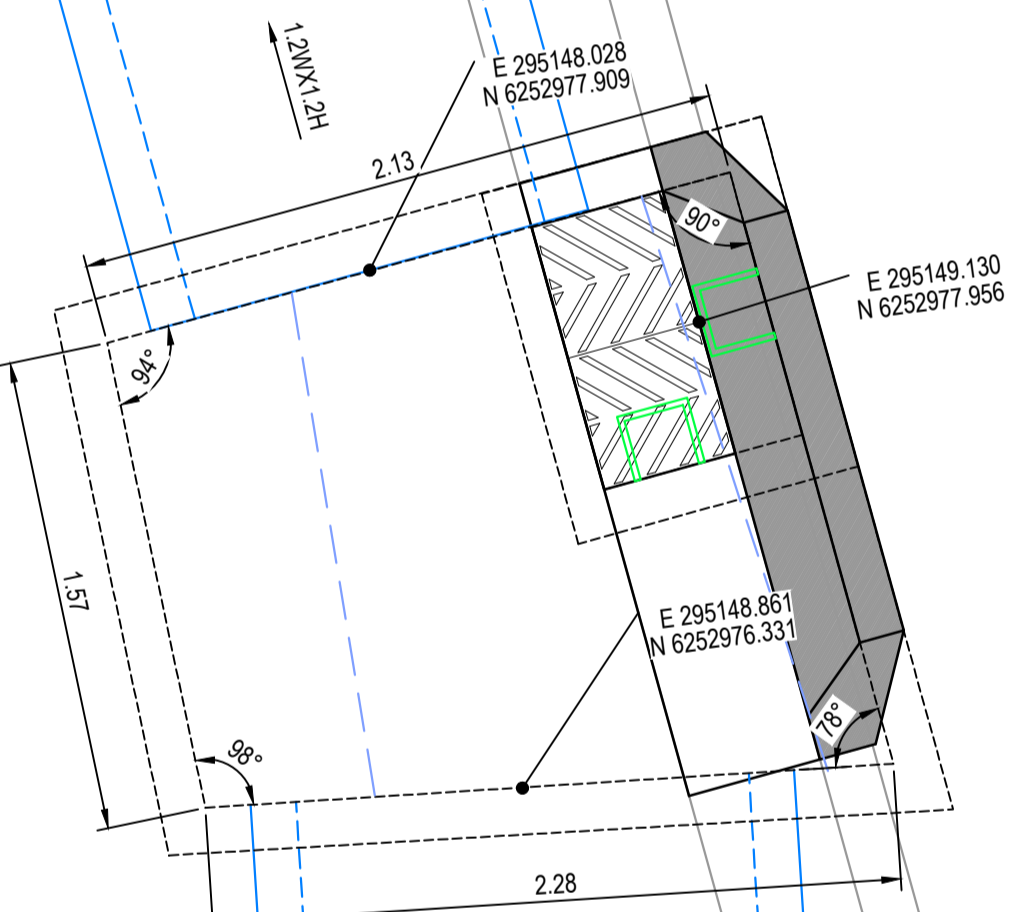
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PIT AE1-6PIT AE1-5

PIT AE1-4



PIT AE1-3

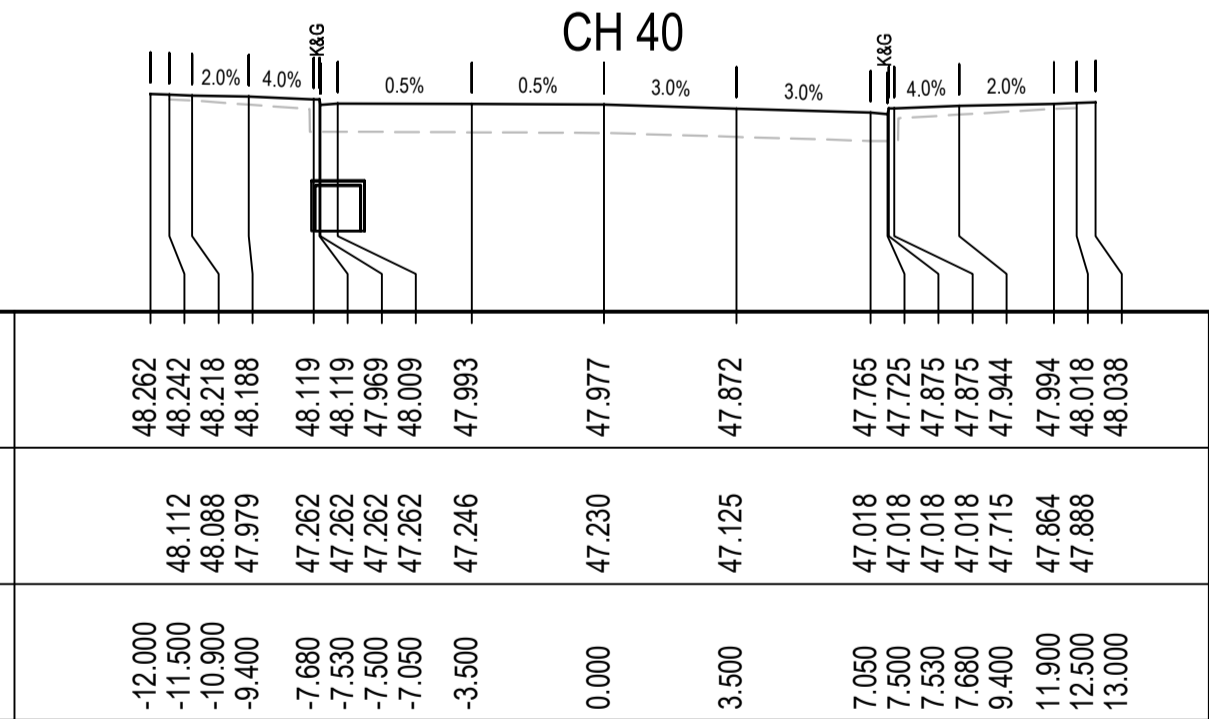
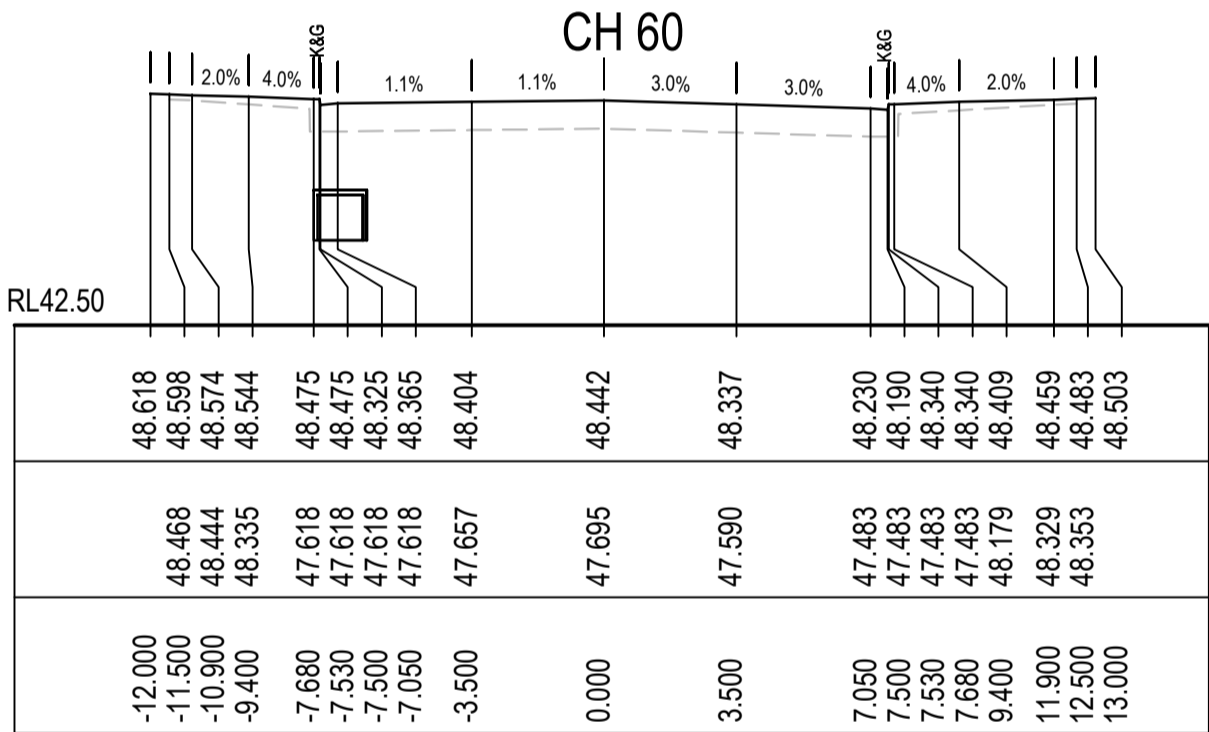
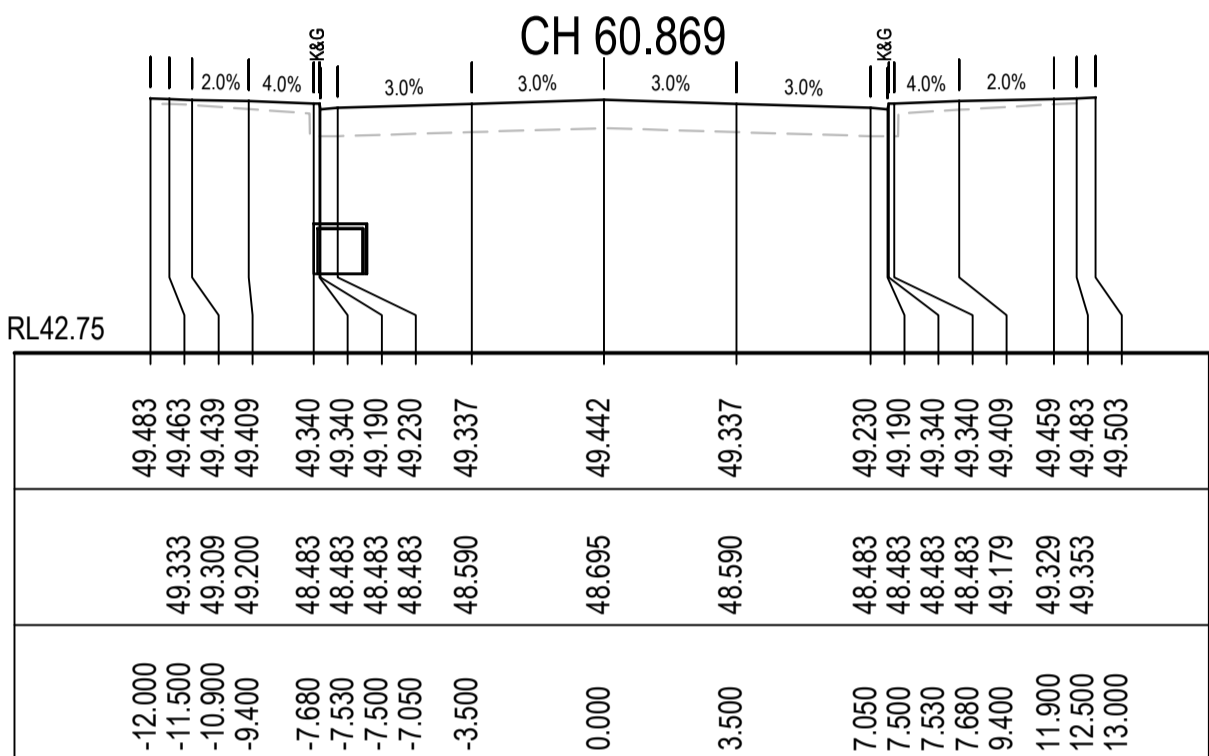
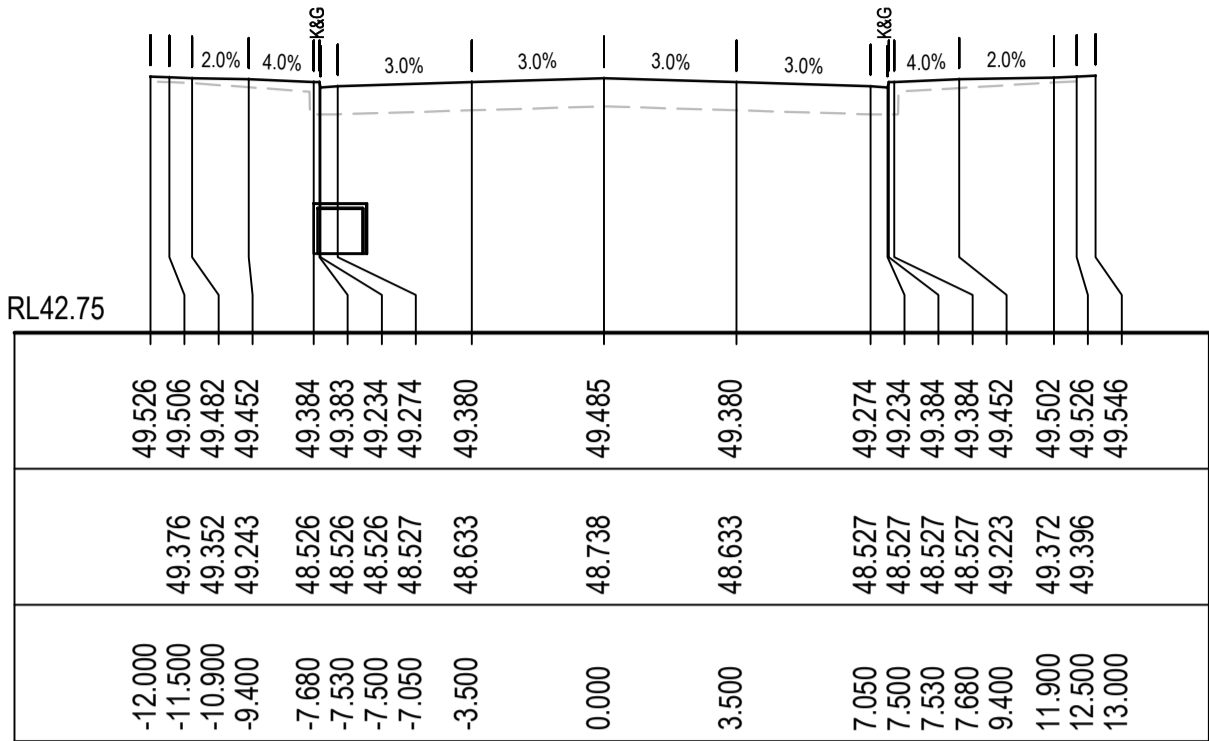


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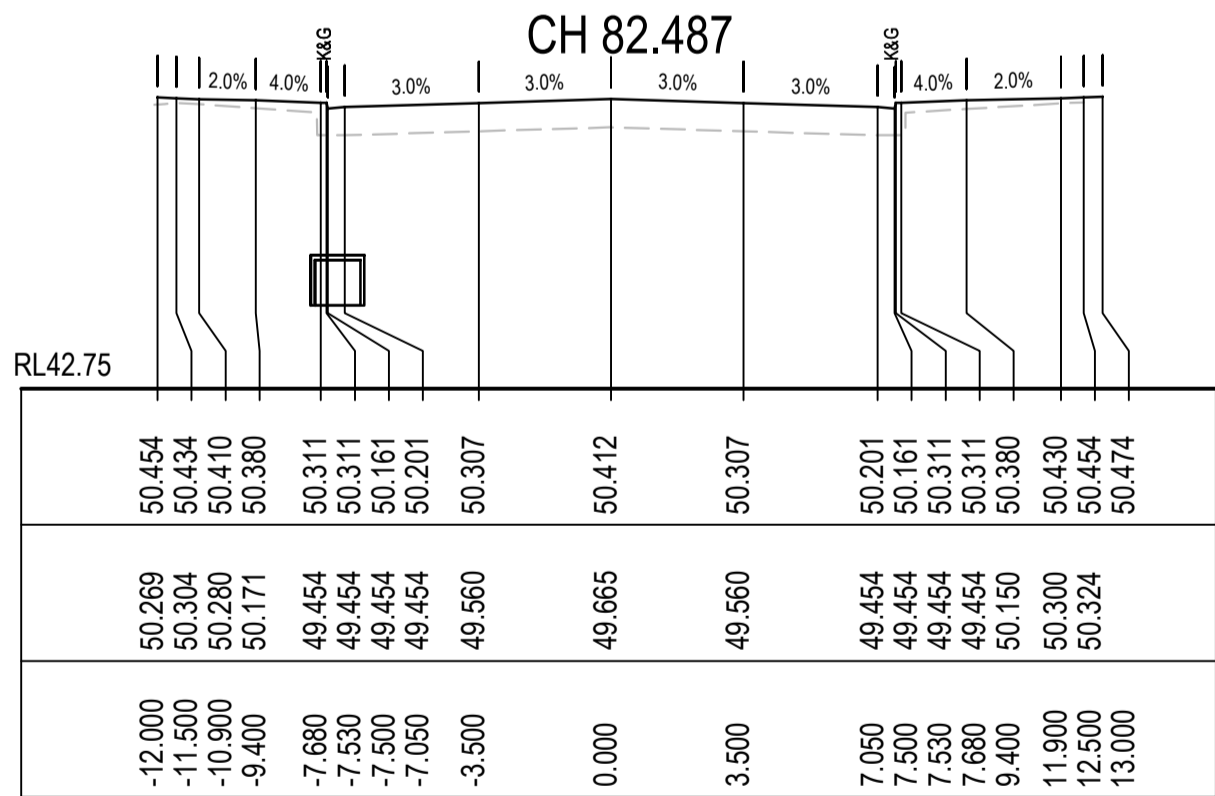
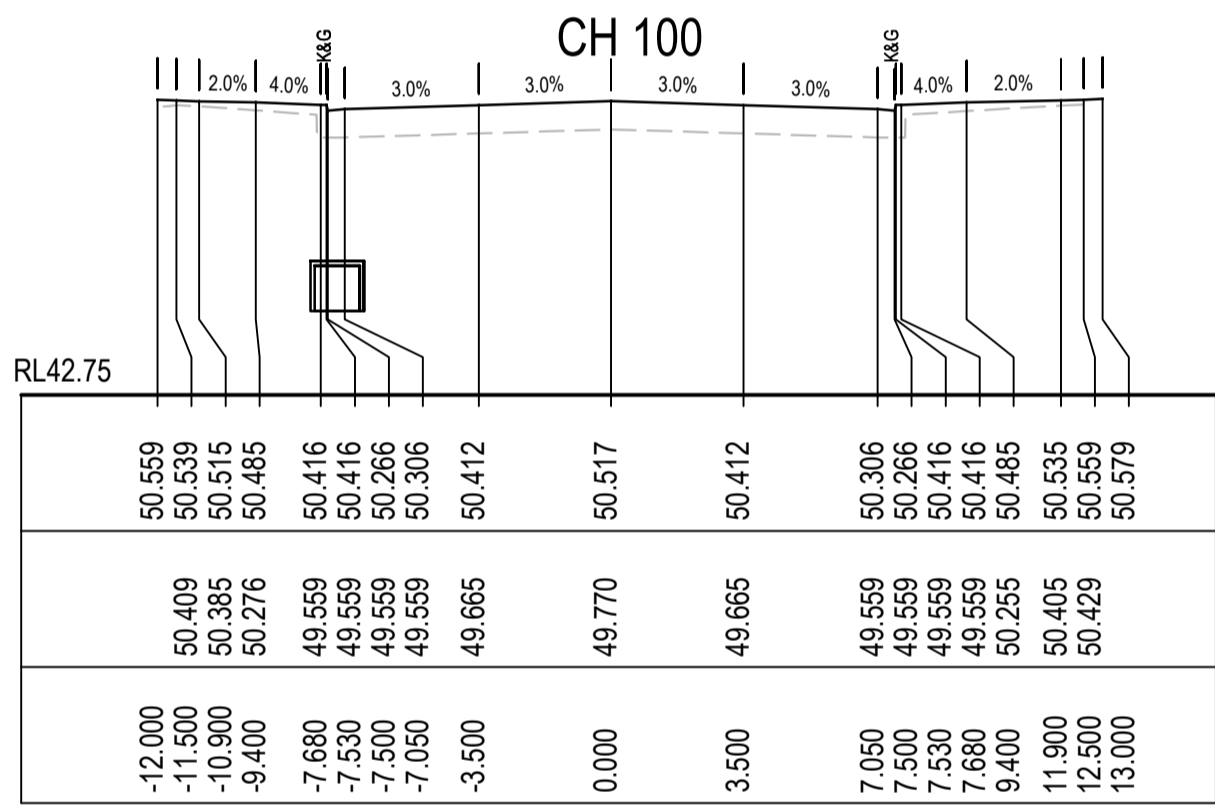
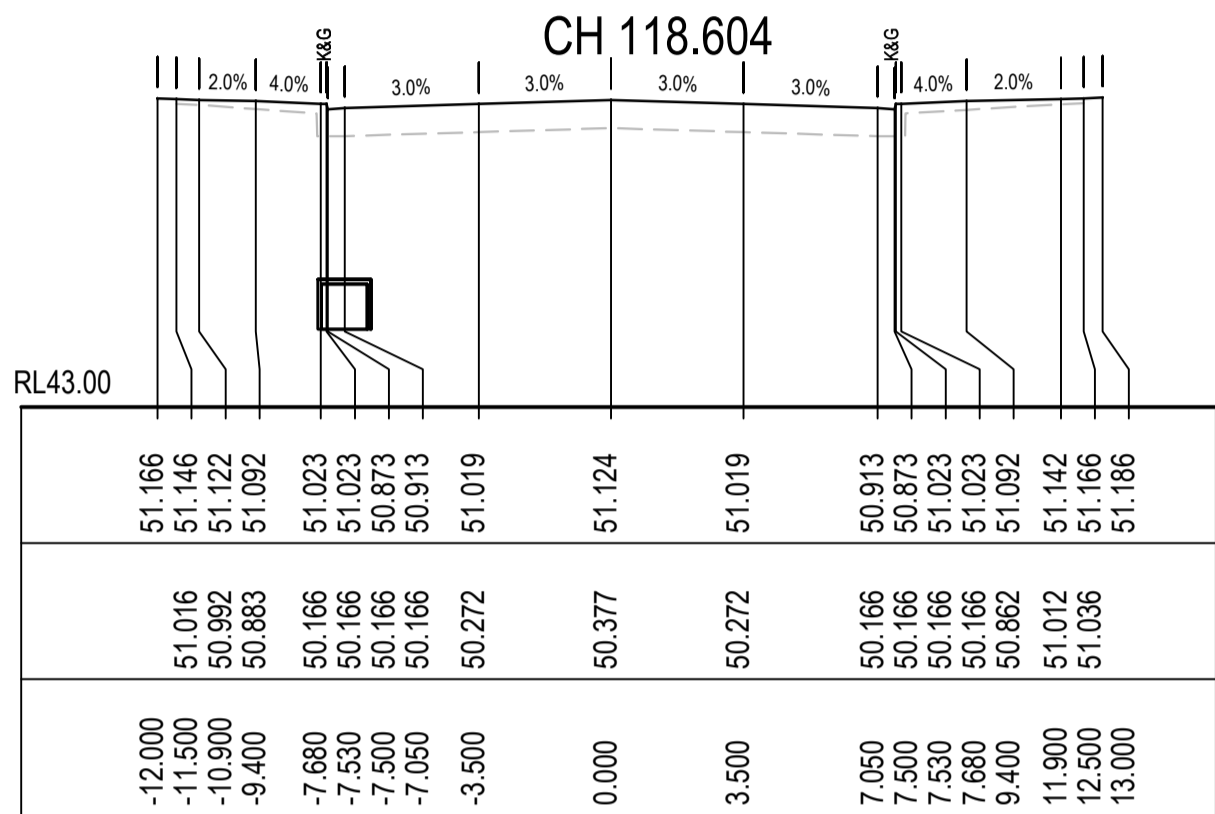
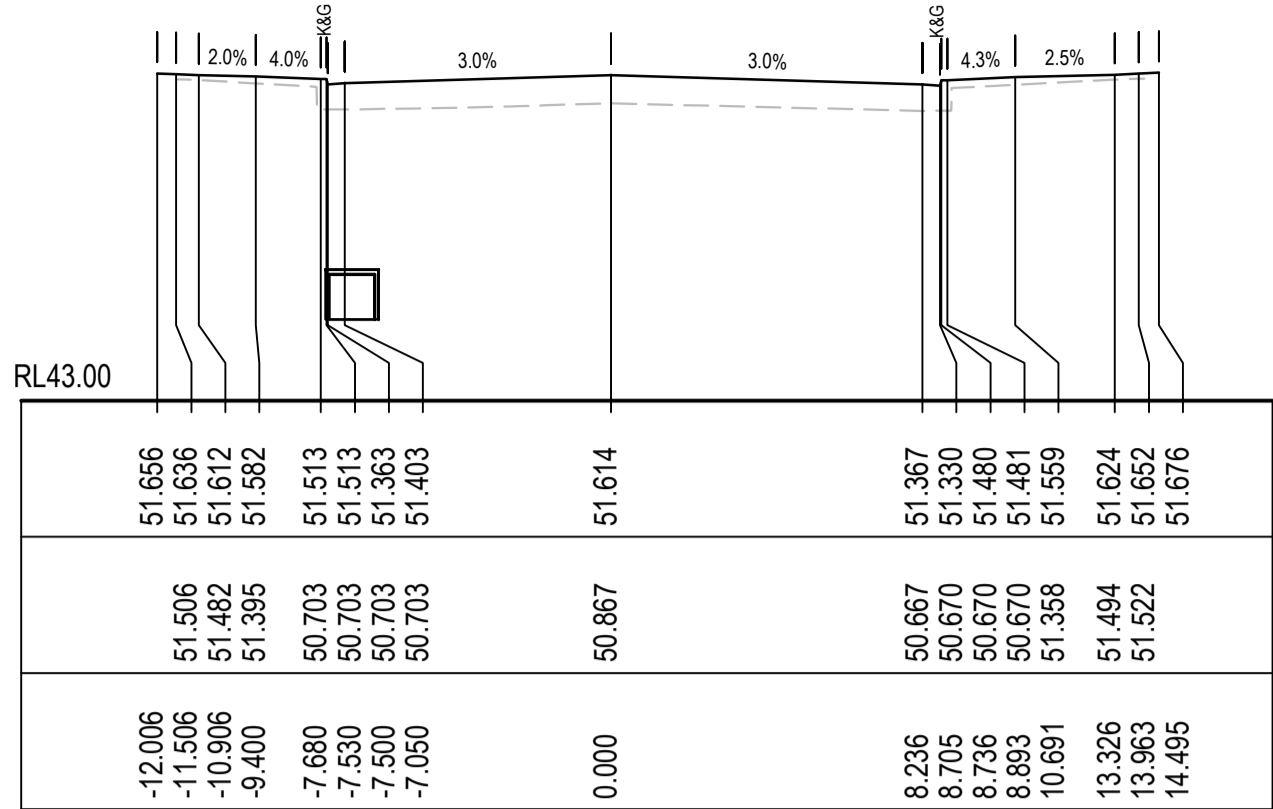
STORMWATER NOTES:

- STORMWATER PIT CHAMBER DIMENSIONS SHOWN ON THIS PLAN ARE SHOWN AS A GUIDE ONLY. CONTRACTOR TO CONFIRM CHAMBER DIMENSIONS ON SITE WITH SITE SUPERINTENDENT
- ALL PITS TO HAVE MASS CONCRETE (N20) BENCHING TO ENSURE SMOOTH FLOW & SMOOTH TRANSITION FROM ENTRY PIPES TO EXIT PIPES.
- BENCHING MUST BE PLACED TO ENSURE SURFACE IS SMOOTH & FREE FROM VOIDS AND CRACKS.
- BENCHING MUST BE A MIN. HEIGHT EQUAL TO HALF THE BARREL OF THE PIPE.
- ENSURE ALL STEP IRONS ARE LOCATED ON THE CLOSEST FACE TO THE OPENING TO ALLOW FREE ACCESS TO THE CHAMBER.
- WHERE SUBSOIL IS INSTALLED INTO THE PIT, EXTEND SUBSOIL THROUGH BENCHING TO DISCHARGE FREELY INTO CHAMBER.
- PIT WIDTHS ARE TO ALLOW FOR PIPE DIAMETER + 150mm TO PIT WALL MIN.
- IF IN DOUBT, SEEK CLARIFICATION FROM THE SUPERINTENDENT.

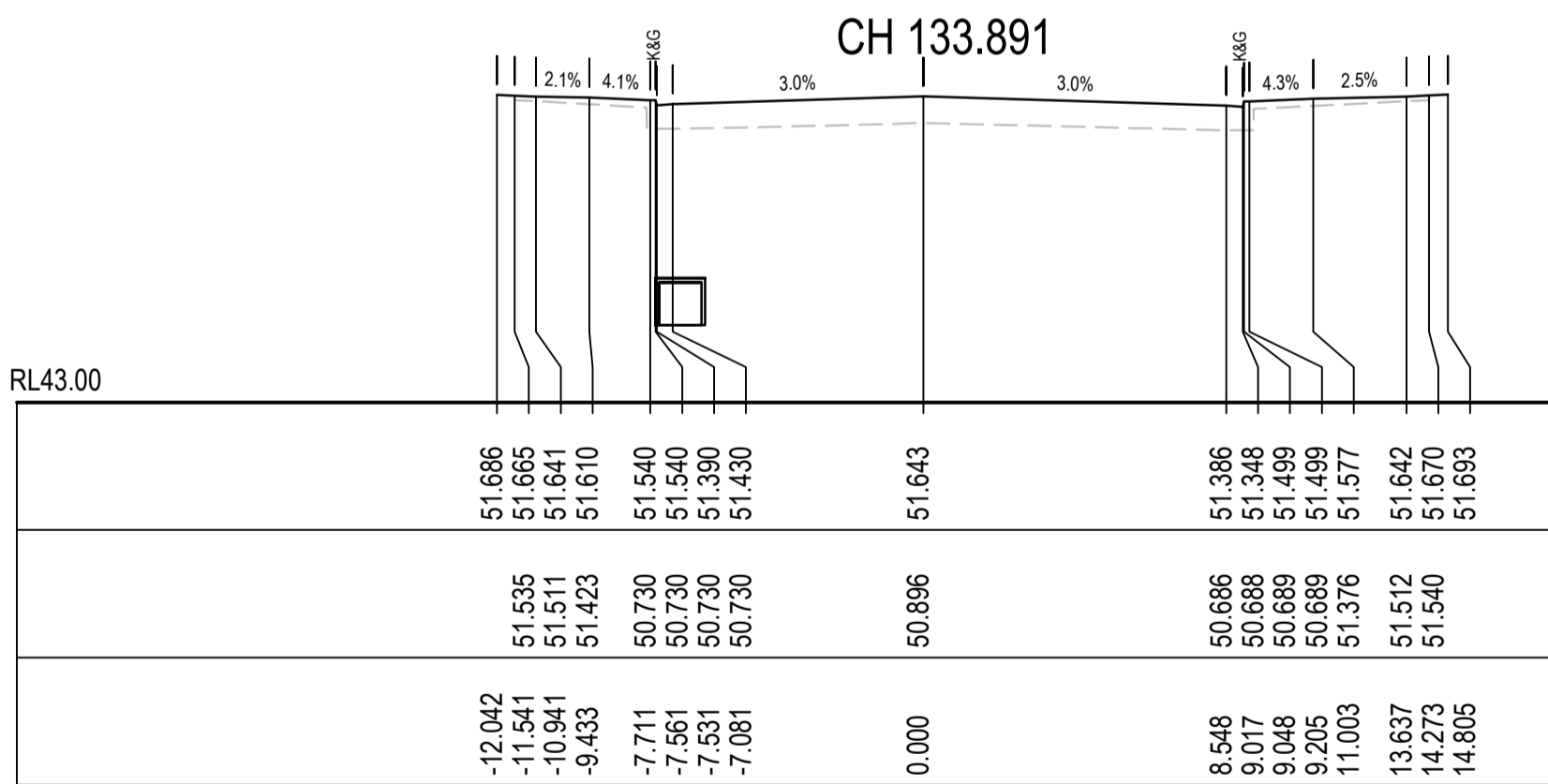
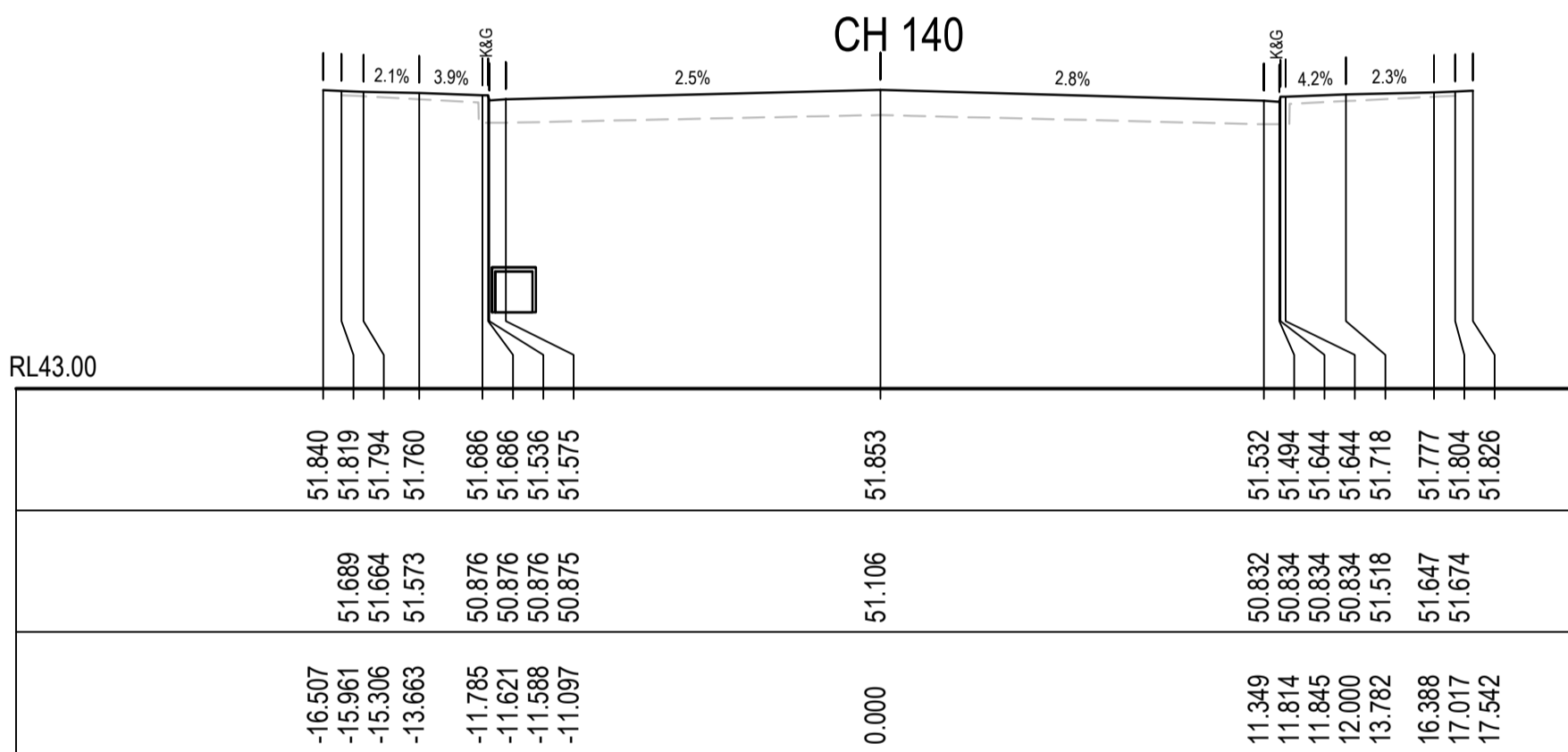
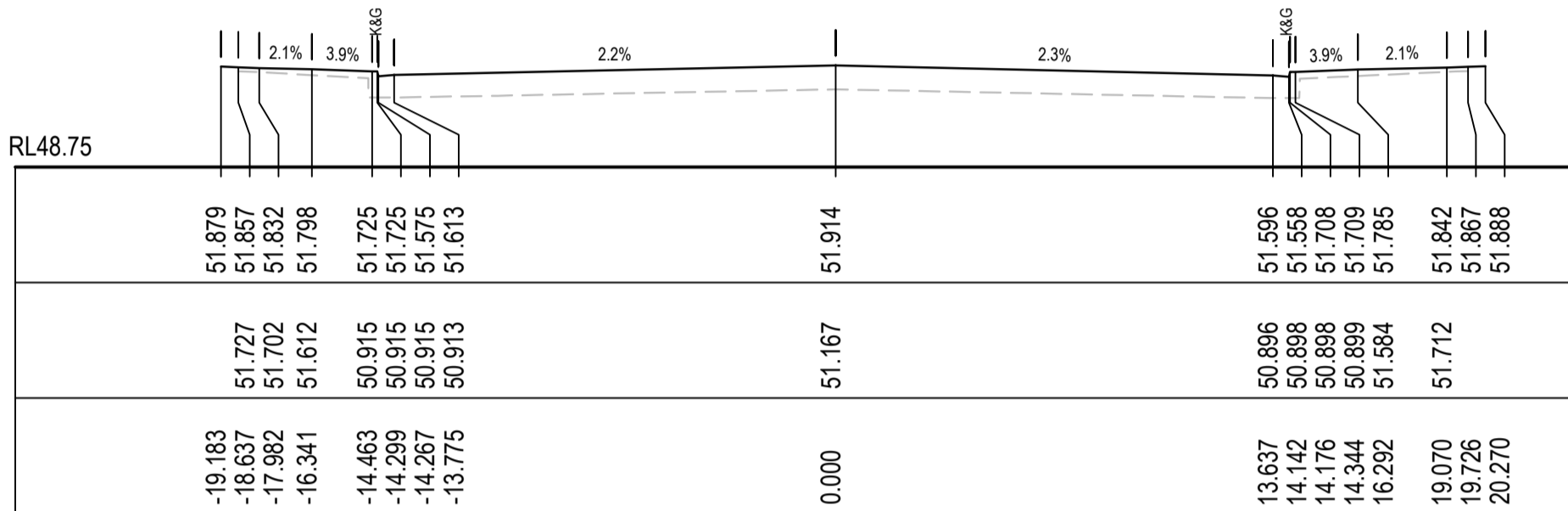
100mm on Original



CH 25

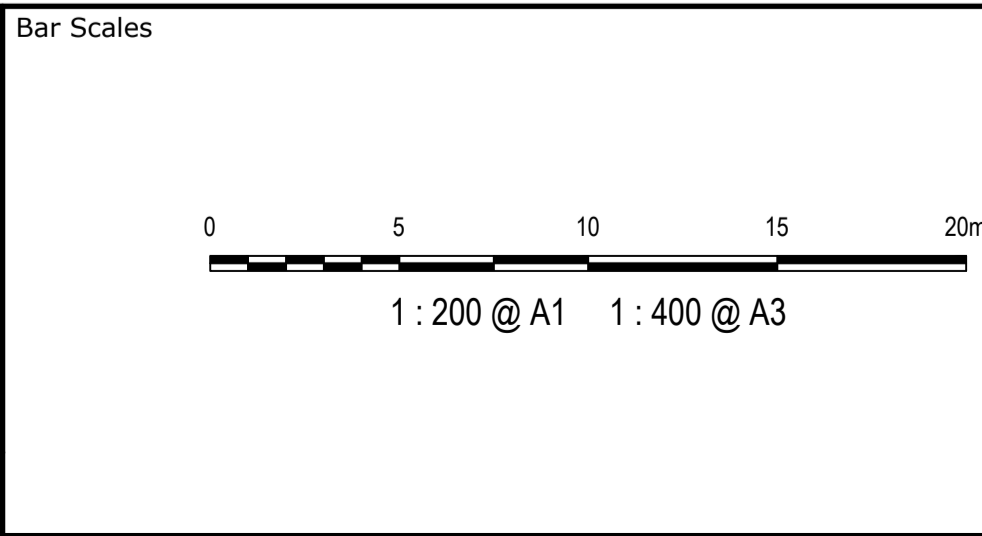


CH 80



CH 120

Issue	Description	Date
2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23



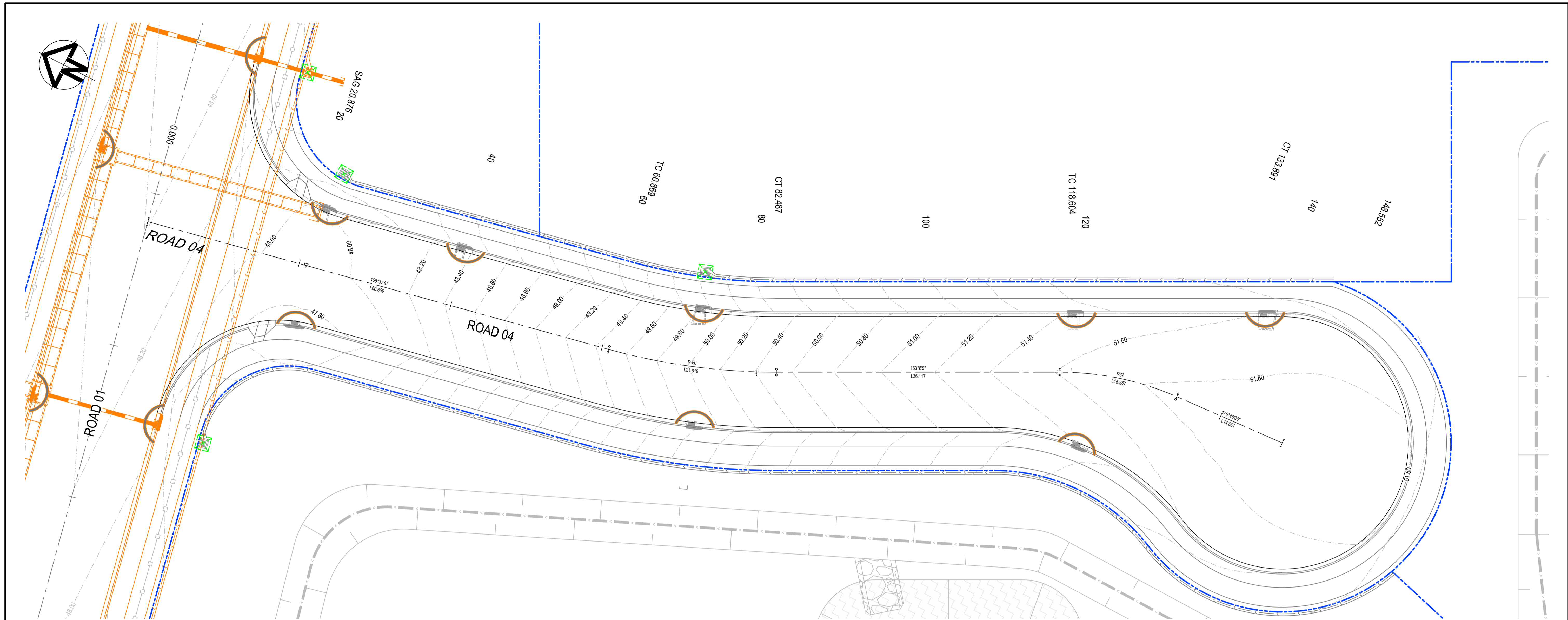
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OTHER PURPOSE OTHER THAN
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Scales	Drawn	MH
1:200	Designed	MH
Grid	Checked	DS
GDA2020	Approved	DS
Height Datum	Approved	DS
AHD		

Project	ASPECT INDUSTRIAL ESTATE MAMRE ROAD, KEMPS CREEK SWC04
Title	ROAD CROSS SECTIONS ROAD 04

Civil Engineers and Project Managers	at&l Level 7, 153 Walker Street North Sydney NSW 2060 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au
Status	FOR CONSTRUCTION
Project - Drawing No.	18-596-C9801
Issue	2



LEGEND

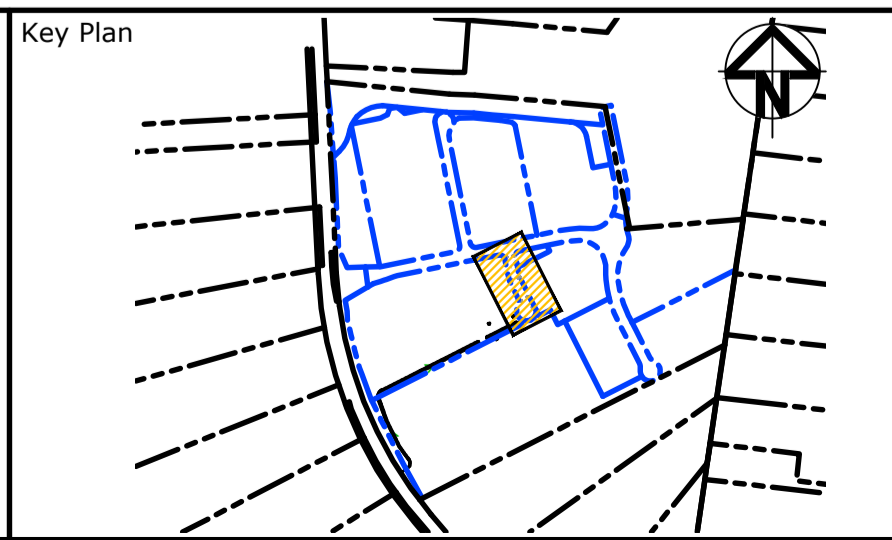
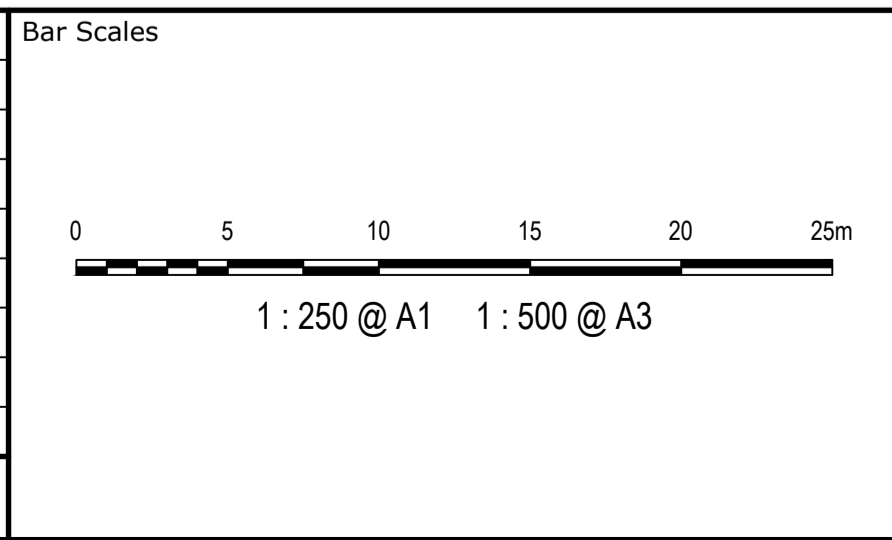
- EXISTING SEDIMENT FENCE (SD 6-8)
- EXISTING CATCH DRAIN
- EXISTING BARRIER FENCE
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- EXISTING ROCK RIFFLE CHECK DAM (SD 5-4)
- GEOTEXTILE INLET (SD 6-12)
- EXISTING STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
- SITE ACCESS GATE
- PIPE CROSSING

NOTE:

- REFER TO C6000 PACKAGE ALSO FOR EROSION AND SEDIMENT CONTROL DETAILS
- DETAILS FOR SCOUR PROTECTION TO BE DETERMINED BY CONTRACTORS CPESC, INCLUDING LENGTHS AND WIDTHS. IF THE CPESC CONFIRMS ROCK STABILISATION IS REQUIRED FOR THE INLETS/OUTLET, CPESC TO CONFIRM ROCK SIZING
- ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.

PENRITH CITY COUNCIL
This plan / document relates to
Development Consent: **SSD-10448 MOD3**
Subdivision Works Certificate: **EA23/0004**
Subject to the conditions outlined in the consent

Issue	Description	Date
2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23



Scales	1:250	Drawn	MH
		Designed	MH
Grid	GDA2020	Checked	DS
Height Datum	AHD	Approved	DS
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Project	ASPECT INDUSTRIAL ESTATE MAMRE ROAD, KEMPS CREEK SWC04
Title	EROSION AND SEDIMENT CONTROL PLAN

Civil Engineers and Project Managers	
Level 7, 153 Walker Street North Sydney NSW 2060 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au	
Status	FOR CONSTRUCTION
Project - Drawing No.	18-596-C9851
Issue	2

NTS

NTS

NTS

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NTS

2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23
A	ISSUED FOR SWC APPROVAL	17-02-23
Issue	Description	Date

Bar Scales

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	Client
--	--------

Scales	AS SHOWN	Drawn	MH
		Designed	MH
Grid	GDA2020	Checked	DS
Height Datum	AHD	Approved	DS



The logo for GDA2020, featuring a stylized blue globe icon with a white dot and a curved line, followed by the text 'GDA2020' in a bold, blue, sans-serif font.

Project	ASPECT INDUSTRIAL ESTATE MAMRE ROAD, KEMPS CREEK SWC04
Client	
Location	
Site Area	
Project Status	
Prepared By	
Checked By	
Approved By	
Date	

Title	EROSION AND SEDIMENT CONTROL DETAILS
-------	--

Civil Engineers and Project Managers



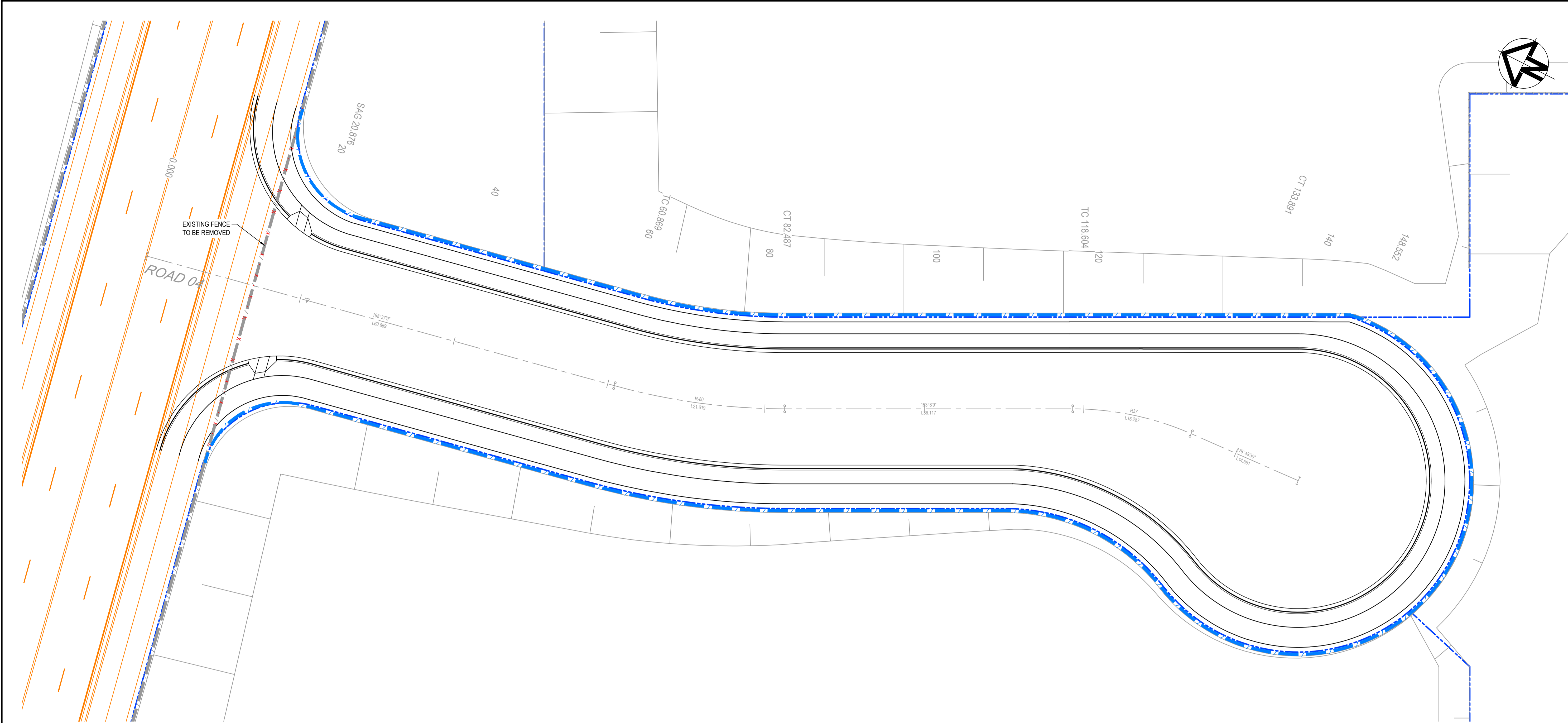
Level 7, 153 Walker Street
North Sydney NSW 2060
ABN 96 130 882 405
Tel: 02 9439 1777
Fax: 02 9923 1055
www.atl.net.au
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Status	FOR CONSTRUCTION
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Project - Drawing No.
18-596-C9860

A1

Issue
2



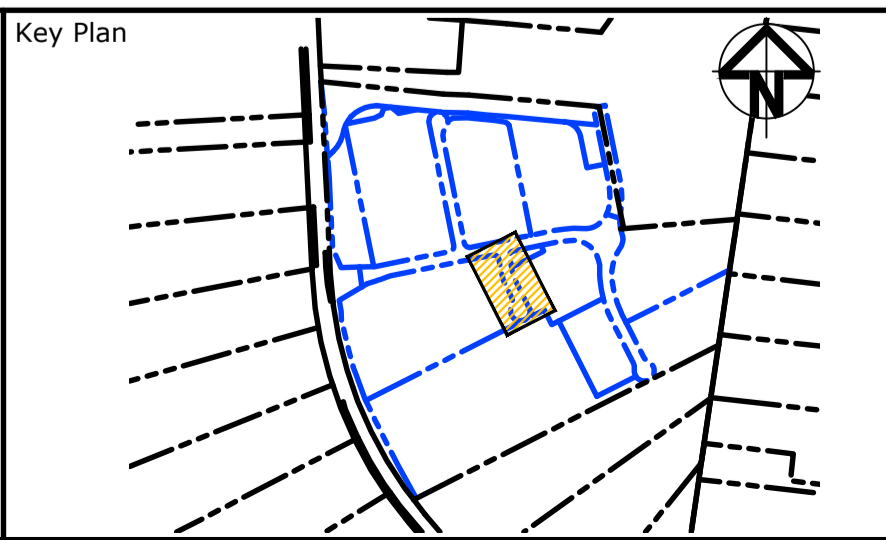
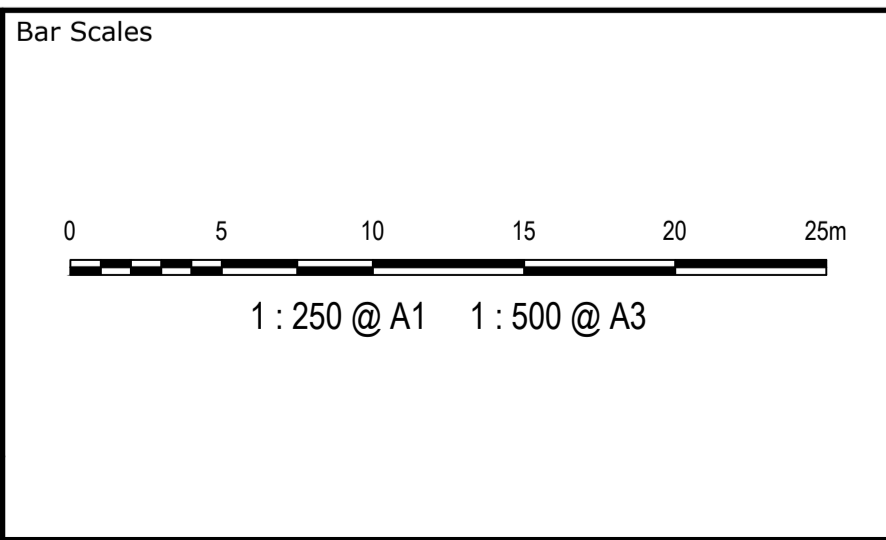
FENCING LEGEND	
	FENCE TYPE 1 TEMPORARY ATF (OR SIMILAR APPROVED) FENCE
	EXISTING FENCE TYPE 1 TEMPORARY ATF (OR SIMILAR APPROVED) FENCE, REFER 8000 SERIES DRAWINGS FOR DETAILS

NOTE	
1.	FENCES TO BE LOCATED ON BOUNDARIES. IF IN DOUBT THE CONTRACTOR SHALL CONTACT THE SUPERINTENDENT FOR CONFIRMATION.
2.	REFER 8000 SERIES DRAWINGS FOR THE WIDER ESTATE FENCE LOCATIONS AND DETAILS.

PENRITH
CITY COUNCIL
This plan / document relates to
Development Consent: **SSD-10448 MOD3**
Subdivision Works Certificate: **EA23/0004**
Subject to the conditions outlined in the consent

COUNCIL DOES NOT ATTEST TO THE ACCURACY OF DETAILS IN PLANS

Issue	Description	Date
2	ISSUED FOR CONSTRUCTION	23-03-23
1	ISSUED FOR SWC APPROVAL	20-03-23



Client

Scales	1:250	Drawn	JP
		Designed	MH
Grid	GDA2020	Checked	DS
Height Datum	AHD	Approved	DS
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Project

**ASPECT INDUSTRIAL ESTATE
MAMRE ROAD,
KEMPS CREEK
SWC04**

Title

**PROPOSED FENCING
PLAN**

Civil Engineers and Project Managers

Level 7, 153 Walker Street
North Sydney NSW 2060
ABN 96 130 882 405
Tel: 02 9439 1777
Fax: 02 9923 1055
www.atl.net.au
info@atl.net.au

Status	FOR CONSTRUCTION	A1
Project - Drawing No.	18-596-C9951	Issue 2