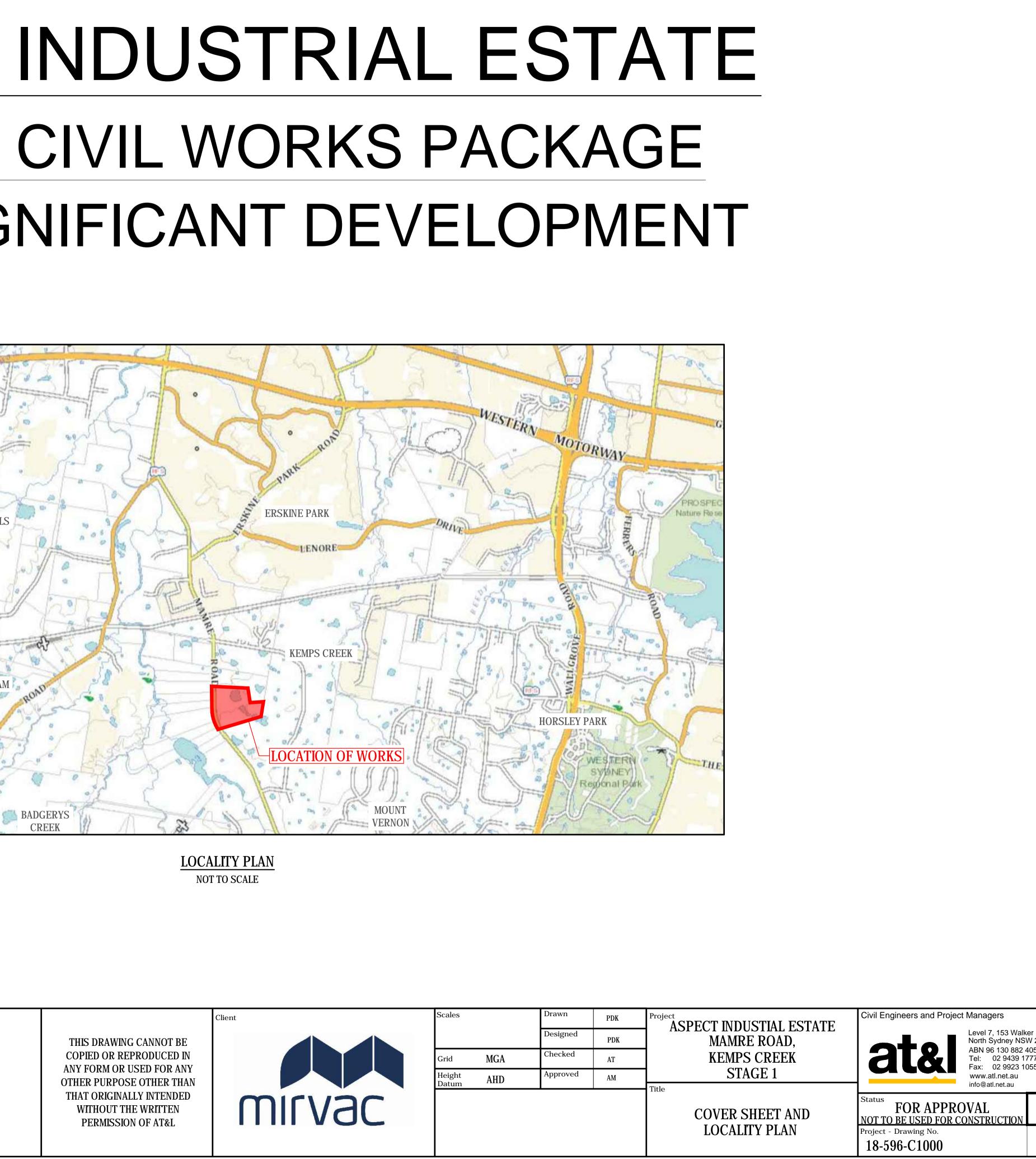


			Bar Scales
С	ISSUED FOR DEVELOPMENT APPLICATION	15-10-20	
В	ISSUED FOR DEVELOPMENT APPLICATION	12-10-20	
Α	ISSUED FOR DEVELOPMENT APPLICATION	15-05-20	
Issue	Description	Date	



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A1

Issue

	DRAWING LIST
DRAWING No.	DRAWING TITLE
18-596-C1000	COVER SHEET AND LOCALITY PLAN
18-596-C1001	DRAWING LIST
18-596-C1002	NOTES AND LEGENDS SHEET
18-596-C1003	GENERAL ARRANGEMENT PLAN
18-596-C1005	TYPICAL ROAD SECTIONS SHEET 1
18-596-C1006	TYPICAL ROAD SECTIONS SHEET 2
18-596-C1010	TYPICAL SECTIONS SHEET 1
18-596-C1011	TYPICAL SECTIONS SHEET 2
18-596-C1012	TYPICAL SECTIONS SHEET 3
18-596-C1020	BULK EARTHWORKS CONTOUR PLAN
18-596-C1021	BULK EARTHWORKS SECTIONS SHEET 1
18-596-C1022	BULK EARTHWORKS SECTIONS SHEET 2
18-596-C1025	BULK EARTHWORKS CUT/FILL PLAN
18-596-C1030	BULK EARTHWORKS PLAN SHEET 1
18-596-C1031	BULK EARTHWORKS PLAN SHEET 2
18-596-C1032	BULK EARTHWORKS PLAN SHEET 3
18-596-C1033	BULK EARTHWORKS PLAN SHEET 4
18-596-C1034	BULK EARTHWORKS PLAN SHEET 5
18-596-C1035	BULK EARTHWORKS PLAN SHEET 6
18-596-C1036	BULK EARTHWORKS PLAN SHEET 7
18-596-C1037	BULK EARTHWORKS PLAN SHEET 8
18-596-C1038	BULK EARTHWORKS PLAN SHEET 9
18-596-C1039	BULK EARTHWORKS PLAN SHEET 10
18-596-C1040	STORMWATER DRAINAGE OVERALL PLAN
18-596-C1045	STORMWATER DRAINAGE CATCHMENT PLAN (PRE-DEVELOPED)
18-596-C1046	STORMWATER DRAINAGE CATCHMENT PLAN (POST-DEVELOPED)
18-596-C1050	ROADWORKS AND STORMWATER DRAINAGE SHEET 1
18-596-C1051	ROADWORKS AND STORMWATER DRAINAGE SHEET 2
18-596-C1052	ROADWORKS AND STORMWATER DRAINAGE SHEET 3
18-596-C1053	ROADWORKS AND STORMWATER DRAINAGE SHEET 4
18-596-C1054	ROADWORKS AND STORMWATER DRAINAGE SHEET 5
18-596-C1055	ROADWORKS AND STORMWATER DRAINAGE SHEET 6
18-596-C1056	ROADWORKS AND STORMWATER DRAINAGE SHEET 7
18-596-C1057	ROADWORKS AND STORMWATER DRAINAGE SHEET 8
18-596-C1058	ROADWORKS AND STORMWATER DRAINAGE SHEET 9
18-596-C1070	ROAD 01 LONGITUDINAL SECTION SHEET 1
18-596-C1071	ROAD 02 LONGITUDINAL SECTION SHEET 1
18-596-C1072	ROAD 02 LONGITUDINAL SECTION SHEET 2
18-596-C1080	RETAINING WALL GENERAL ARRANGEMENT PLAN
18-596-C1081	RETAINING WALL PROFILES SHEET 1
18-596-C1082	RETAINING WALL PROFILES SHEET 2
18-596-C1090	SERVICES AND UTILITIES COORDINATION OVERALL PLAN
18-596-C1091	SERVICES AND UTILITIES COORDINATION PLAN SHEET 1

18-596-C1092	SERVICES AND UTILITIES COORDINATION PLAN SHEET 2
18-596-C1093	SERVICES AND UTILITIES COORDINATION PLAN SHEET 3
18-596-C1110	EROSION AND SEDIMENT CONTROL PLAN SHEET 1
18-596-C1111	EROSION AND SEDIMENT CONTROL PLAN SHEET 2
18-596-C1112	EROSION AND SEDIMENT CONTROL PLAN SHEET 3
18-596-C1113	EROSION AND SEDIMENT CONTROL PLAN SHEET 4
18-596-C1114	EROSION AND SEDIMENT CONTROL PLAN SHEET 5
18-596-C1115	EROSION AND SEDIMENT CONTROL PLAN SHEET 6
18-596-C1116	EROSION AND SEDIMENT CONTROL PLAN SHEET 7
18-596-C1117	EROSION AND SEDIMENT CONTROL PLAN SHEET 8
18-596-C1118	EROSION AND SEDIMENT CONTROL PLAN SHEET 9
18-596-C1119	EROSION AND SEDIMENT CONTROL PLAN SHEET 10
18-596-C1120	EROSION AND SEDIMENT CONTROL DETAILS
18-596-C1150	VEHICLE TURN PATHS PLAN SHEET 1
18-596-C1151	VEHICLE TURN PATHS PLAN SHEET 2
18-596-C1152	VEHICLE TURN PATHS PLAN SHEET 3
18-596-C1153	VEHICLE TURN PATHS PLAN SHEET 4

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Issue	Description	Date	
·····	100mm on Original		

	Client	Scales		Drawn	PDK	Project
THIS DRAWING CANNOT BE				Designed	PDK	
COPIED OR REPRODUCED IN		Grid	MGA	Checked	AT	7
ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN		Height Datum	AHD	Approved	AM	
THAT ORIGINALLY INTENDED WITHOUT THE WRIITEN PERMISSION OF AT&L	mirvac					<b>–</b> Title

	Civil Engineers and Project Managers			
ASPECT INDUSTIAL ESTATE MAMRE ROAD, KEMPS CREEK STAGE 1	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			
DRAWING LIST	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION	A1		
	Project - Drawing No.	Issue		
	18-596-C1001	С		

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#### SITEWORKS NOTES

- **ORIGIN OF LEVELS:- REFER SURVEY NOTES.**
- CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO AT & L.
- MAKE SMOOTH CONNECTION WITH EXISTING WORKS.
- ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
- 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 COMAPACTED 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)
- PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
- ASPHALTIC CONCRETE SHALL CONFORM TO R.M.S SPECIFICATION R116.
- ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S FORM 3051 (UNBOUND), R.M.S 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.
- ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S FORM 3051, 3051.1 AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH A.S 1289 5. FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m<sup>3</sup> OF SUB-BASE COURSE MATERIAL PLACED.
- AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL IN (9) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH R.M.S FORM 3051 AND 3051.1 WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF AT & L.
- SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THE CONTRACTOR IS TO SEEK ACCEPTANCE OF THE PRODUCT FROM AT&L. THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.
- 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
- 13. ALL WORKS CARRIED OUT ADJACENT TO AND WITHIN TRANSGRID'S EASEMENT TO COMPLY WITH TRANSGRID'S GUIDELINES AND REQUIREMENTS.
- 4. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH PENRITH CITY COUNCIL'S ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS

#### SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY CARDNO HARD & FORESTER PTY LTD and LAND PARTNERS PTY LTD, BEING REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. AT & L DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.

PRIOR TO THE COMMENCEMENT OF THE WORKS. THE CONTRACTOR SHALL UNDERTAKE A DETAILED BOUNDARY SURVEY AND COMPARE AGAINST THE DESIGN FOR DISCREPANCIES SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION

BETWEEN THE SURVEY DATA, DESIGN DATA AND ACTUAL FIELD DATA, CONTACT AT & L IMMEDIATELY.

THE FOLLOWING NOTES HAVE BEEN TAKEN DIRECTLY FROM THE ORIGINAL SURVEY DOCUMENTS.

THE TITLE BOUNDARIES SHOWN HEREON WERE NOT MARKED AT THE TIME OF SURVEY AND HAVE BEEN DETERMINED BY PLAN DIMENSIONS ONLY AND NOT BY FIELD SURVEY.

SERVICES SHOWN HEREON HAVE BEEN LOCATED WHERE POSSIBLE BY FIELD SURVEY. IF NOT ABLE TO BE SO LOCATED, SERVICES HAVE BEEN PLOTTED FROM THE RECORDS OF RELEVANT AUTHORITIES WHERE AVAILABLE AND HAVE BEEN NOTED ACCORDINGLY ON THE PLAN. WHERE SUCH RECORDS DO NOT EXIST OR ARE INADEQUATE A NOTATION HAS BEEN MADE HEREON.

PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR POSSIBLE LOCATION OF FURTHER UNDERGROUND SERVICES AND DETAILED LOCATIONS OF ALL SERVICES.

#### DEWATERING

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

#### EXISTING UNDERGROUND SERVICES

- 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.
- 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.
- 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.
- 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.

#### **CONCRETE NOTES**

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- 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.

- NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY AT & L.
- CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR **DURABILITY SHALL BE 40mm TOP AND 70mm FOR EXTERNAL** EDGES UNLESS NOTED OTHERWISE.
- 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.
- THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, 6. 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 R.M.S SPECIFICATION R83.

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

17 N 20250

NOMINAL BAR SIZE IN mm THE FIGURE FOLLOWING THE FABRIC SYMBOL SL IS THE **REFERANCE NUMBER FOR FABRIC TO AS 1304.** 

8. FABRIC SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING DETAIL:

- LAP TWO WIRES

## **DECOMMISSIONING / DEMOLITION**

- 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.
- EXISTING INTERNALS FENCING, CATTLE YARDS, UTILITIES AND OTHER REDUNDANT STRUCTURES TO BE DEMOLISHED AND REMOVED TO AN APPROVED WASTE MANAGEMENT FACILITY.
- 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.
- ALL UNDERGROUND CABLES AND PIPES SHALL BE GRUBBED OUT AND CAPPED AT THE BOUNDARY OF THE SITE.

CONTINUED ABOVE

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100mm on Original

#### **DECOMMISSIONING / DEMOLITION** 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.

# **KERBING NOTES**

6

ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25 MPa U.N.O IN REINFORCED CONCRETE NOTES.

- ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON MIN. 100mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 95% MODIFIED DRY DENSITY (AS 1289 5.2.1).
- 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 PITS. ON TANGENT POINTS 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.
- 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.
- BROOM FINISH TO ALL RAMPED AND VEHICULAR CROSSINGS. ALL OTHER KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISHED.

IN THE REPLACEMENT OF KERB AND GUTTER :-IF REQUIRED EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm U.N.O FROM THE LIP OF GUTTER. UPON COMPLETION OF THE NEW KERB AND GUTTER NEW BASECOURSE AND SURFACE TO BE LAID 900mm WIDE

## STORMWATER DRAINAGE NOTES

STORMWATER DESIGN CRITERIA: (A) AVERAGE RECURRENCE 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:

U.N.O.

HEIGHT

14

ROOF AREAS:C100=1.0EXTERNAL PAVEMENTS:C100=1.0

PIPES 300 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS '3' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS, U.N.O. ALL ROAD CROSSINGS TO BE CLASS '4' U.N.O.

PIPES UP TO 300 DIA SHALL BE SEWER GRADE UPVC WITH SOLVENT

- WELDED JOINTS. EQUIVALENT STRENGTH VCP OR FRC PIPES MAY BE USED, SUBJECT TO THE APPROVAL OF PENRITH CITY COUNCIL.
- ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE 6. ENSURE ALL VERTICALS AND DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN
- 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)
- 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).
- ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
- WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED.
- 10. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARI NOT TO BE REDUCED WITHOUT APPROVAL.
- GRATES AND COVERS SHALL CONFORM TO AS 3996 AND PENRITH CITY COUNCIL CONSTRUCTION SPECIFICATIONS.
- AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF
- PERSONNEL FALLING DOWN PITS. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE
- STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTE TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS. ALL STORMWATER PITS ARE TO BE CAST IN-SITU IN ACCORDANCE WITH
- THE STORMWATER DETAILS AND SPECIFICATIONS, UNLESS APPROVED BY THE SUPERINTENDENT / PENRITH CITY COUNCIL. IF APPROVED AND IN ADDITION TO THE SPECIFICATION,
- ALL PRE-CAST PITS ARE TO BE STRUCTURALLY CERTIFIED TO MEET RELEVANT AUSTRALIAN STANDARDS (AS3600, AS3996).
- ALL PRECAST PITS TO BE FOUNDED ON CONCRETE BLINDING LAYER WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 100KPA UP TO 3.0M DEPTH TO INVERT AND 150KPA FROM 3.0M TO 6.0M DEPTH TO INVERT (MINIMUM 100MM THICK 25MPA OR DEEPER TO ENSURE MINIMUM SPECIFIED BEARING CAPACITY IS ACHIEVED).
- PRE-CAST STORMWATER PITS ARE TO BE CUSTOM MADE WITH OPENINGS WITHIN +50MM OD OF PIPE, HEIGHTS AND PIPE PENETRATIONS DURING MANUFACTURE. ANY ADDITIONAL PENETRATIONS SHALL BE CORE DRILLED. DEMOLITION SAWS ARE NOT TO BE USED IN ANY CIRCUMSTANCES. SINGLE UNITS PREFERRED BUT IF REQUIRED MINIMUM RISER DEPTH 600MM PIT INSTALLATION AND JOINTING PIPES TO PITS SHALL BE
- UNDERTAKEN IN ACCORDANCE WITH MANUFACTURERS **RECOMMENDATIONS.**

- CONTINUED FROM BELOW
- 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. ALL PRE-CAST PIT PENETRATIONS SHALL BE CUT SO THAT IT IS FLUSH
- WITH THE INTERNAL WALL. PIPE JOINTING/SEALING OF PIPE PENETRATION TO BE WITH A NON-SHRINK MORTAR MIX, E.G. LANKO 702 DURABED OR SIMILAR APPROVED.

# EMBANKMENT CONSTRUCTION

### **SEQUENCE**

- STRIP VEGETATION AND TOPSOIL FROM EMBANKMENT AREA AND STOCKPILE TOPSOIL FOR LATER USE. CUT BACK AREA TO FIRM GROUND.
- CONSTRUCT EMBANKMENT IN PRESENCE OF QUALIFIED AND EXPERIENCED GEOTECHNICAL ENGINEER IF NOT ROCK.
- 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
- 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.
- 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.
- 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.
- OVERFILL THE EMBANKMENT AND TRIM OFF, SO THAT THE ENTIRE BODY OF THE EMBANKMENT IS COMPACTED.
- 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.
- PLACE ROCK RIP-RAP AS SHOWN.
- RECOVER TOPSOIL FROM STOCKPILE AND SPREAD OVER EMBANKMENT 10 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.
- WATER AND FERTILISE LANDSCAPE AS REQUIRED BY CLIMACTIC CONDITIONS TO ENSURE THE LANDSCAPE IS SUCCESSFUL.
- 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

# **EROSION AND SEDIMENT CONTROL** NOTES

#### GENERAL INSTRUCTIONS

- 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 SEDIMENT 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.

#### LAND DISTURBANCE

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.

#### **EROSION CONTROL**

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

#### Client

CONTINUED ABOVE

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# **EROSION AND SEDIMENT CONTROL** NOTES

#### SEDIMENT CONTROL

- ). 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 POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
- 10. 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
- 1. 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.
- 2. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

#### **OTHER MATTERS**

- 3. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
- 14. 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.

#### **STAGING**

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 AT&L DRAWINGS OR WHERE DIRECTED BY THE SUPERINTENDENT OR PENRITH CITY COUNCIL'S ENGINEERS. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING, DOCUMENTING, INSTALLING AND MAINTAINING THE SEDIMENT AND EROSION CONTROLS REQUIRED TO SUIT THE SELECTED CONSTRUCTION STAGING. THIS IS TO BE DOCUMENTED IN THE FORM OF A SOIL AND WATER MANAGEMENT PLAN TO BE DEVELOPED BY THE CONTRACTOR AND THEIR EROSION ND SEDIMENT CONSULTANT AND PROVIDED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION COMMENCEMENT.

SUCH CONTROLS SHALL BE IN ACCORDANCE WITH THE **REQUIREMENTS OF THE PROTECTION OF THE ENVIRONMENT** OPERATIONS ACT. PENRITH CITY COUNCIL'S SPECIFICATIONS AND THE OFFICE OF ENVIRONMENT AND HERITAGE'S 'MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION. LANDCOM, (4TH EDITION) MARCH 2004 (REPRINTED 2006) (THE "BLUE BOOK"). VOLUME 1 AND VOLUME 2.

## FINISHED SURFACE LEVELS

1. ALL FINISHED SURFACE LEVELS ARE ±1000mm U.N.O.

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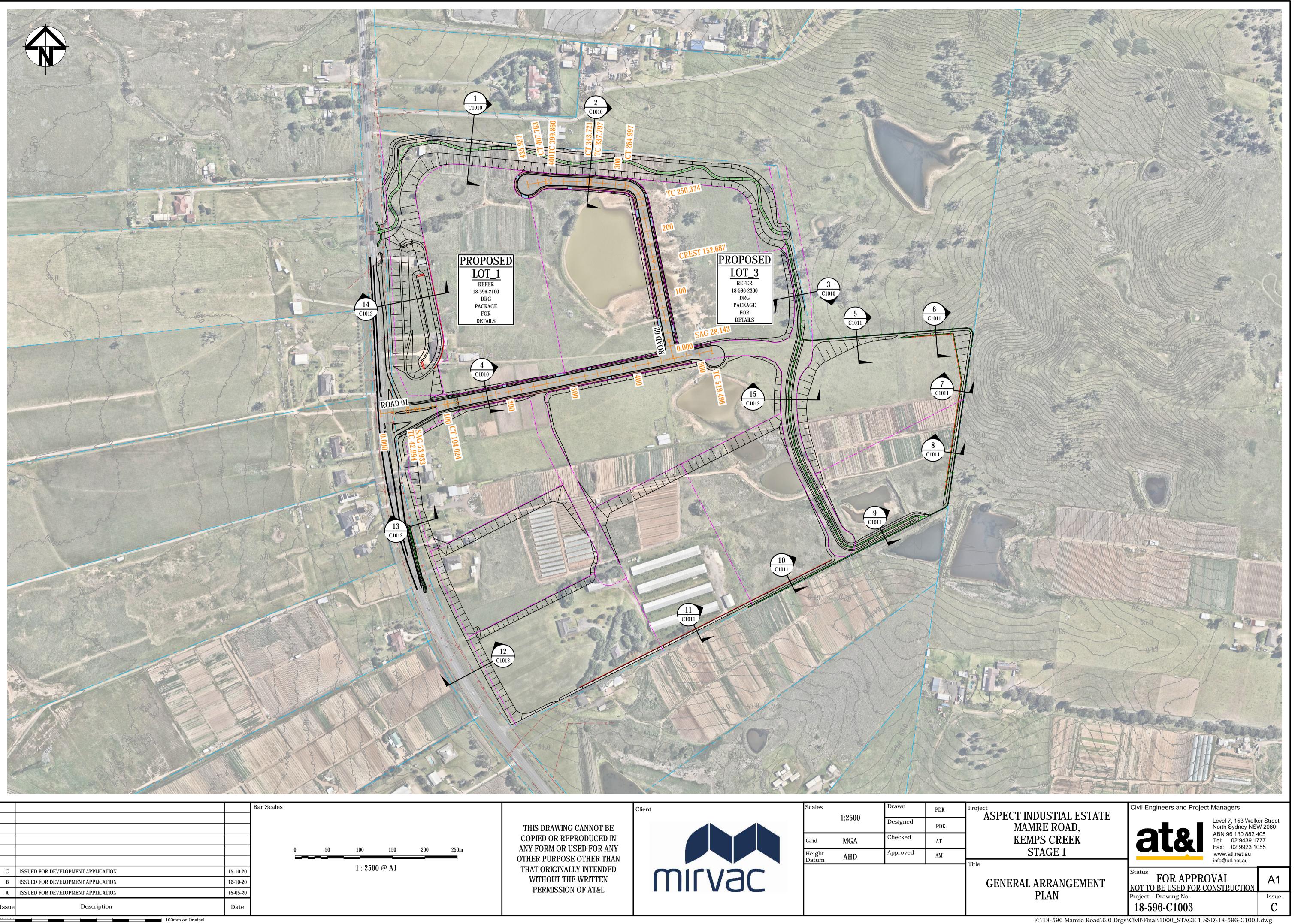
# SITEWORKS LEGEND:

	EXISTING BOUNDARY
— e — e —	EXISTING ELECTRICITY
	PROPOSED BOUNDARY
	PROPOSED EASEMENT
	PROPOSED RETAINING WALL
<u> </u>	PROPOSED MAJOR CONTOUR
<u> </u>	PROPOSED MINOR CONTOUR
	PROPOSED BATTER TEMPORARY BATTER 1(V):4(H) PERMANENT BATTER 1(V):5(H) U.N.O
 K&G	PROPOSED KERB AND GUTTER
	PROPOSED DRIVEWAY LAYBACK
$\frown$	PROPOSED KERB RAMP
	LIMIT OF WORKS
<	PROPOSED CATCH DRAIN
$\square$	PROPOSED STORMWATER JUNCTION PIT
	PROPOSED STORMWATER SURFACE INLET PIT
	PROPOSED STORMWATER KERB INLET PIT WITH LINTEL
	PROPOSED STORMWATER PIPE WITH HEADWALL
Ţ	PROPOSED CAPPED STORMWATER PIPE
	PROPOSED STORMWATER LINE

DIAL 1100 BEFORE YOU DIG	CONTRACTOR SHALL CALL; DIAL BEFORE YOU DIG 1100 PRIOR TO COMMENCEMENT OF WORK TO OBTA ALL CURRENT SERVICE AUTHORITY PLANS	AIN
NDUSTIAL ESTATE MRE ROAD, MPS CREEK STAGE 1	Civil Engineers and Project Managers Level 7, 153 Walk North Sydney NSV ABN 96 130 882 4 Tel: 02 9439 17 Fax: 02 9923 10 www.atl.net.au info@atl.net.au	N 2060 105 777
AND LEGENDS	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION	A1
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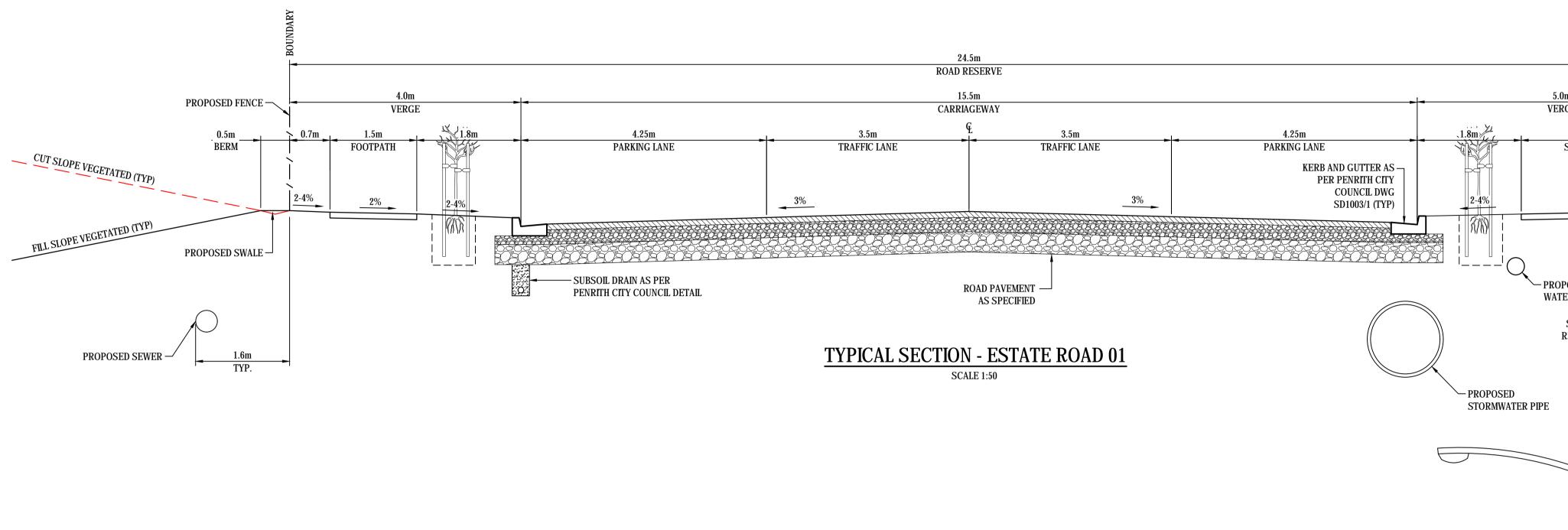
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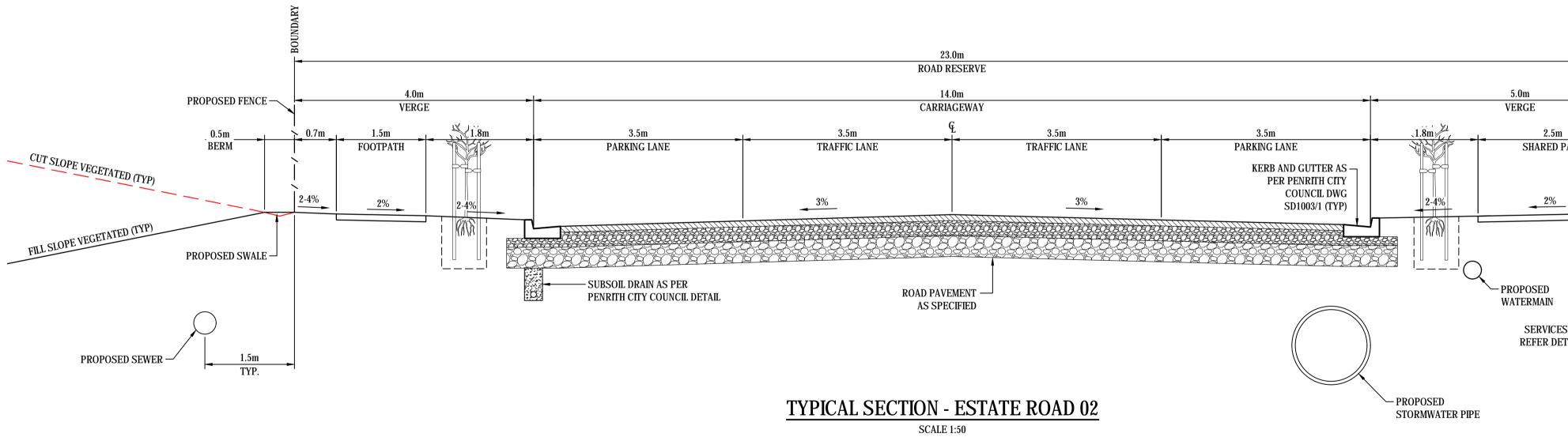


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Issue	Description	Date							

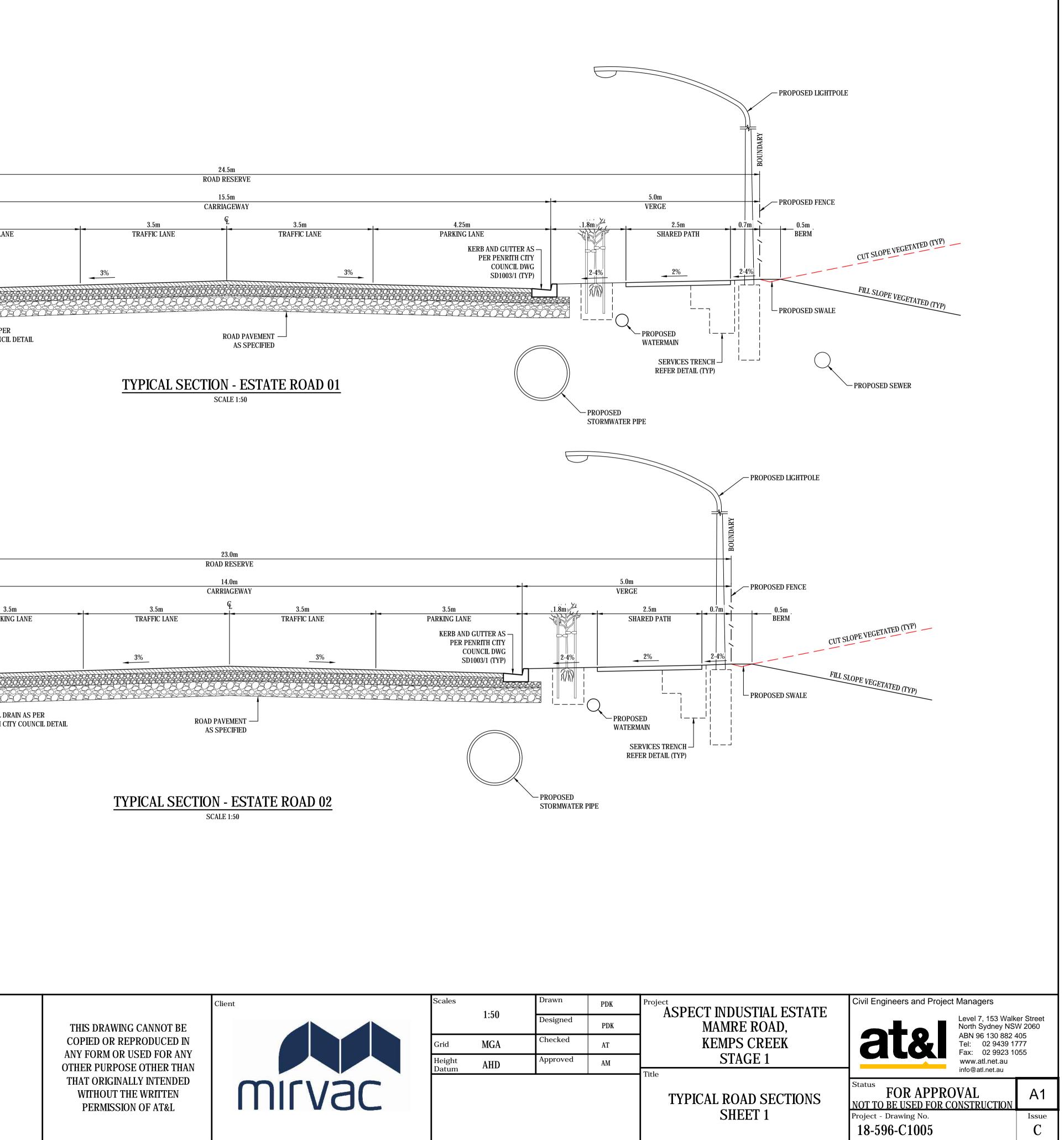


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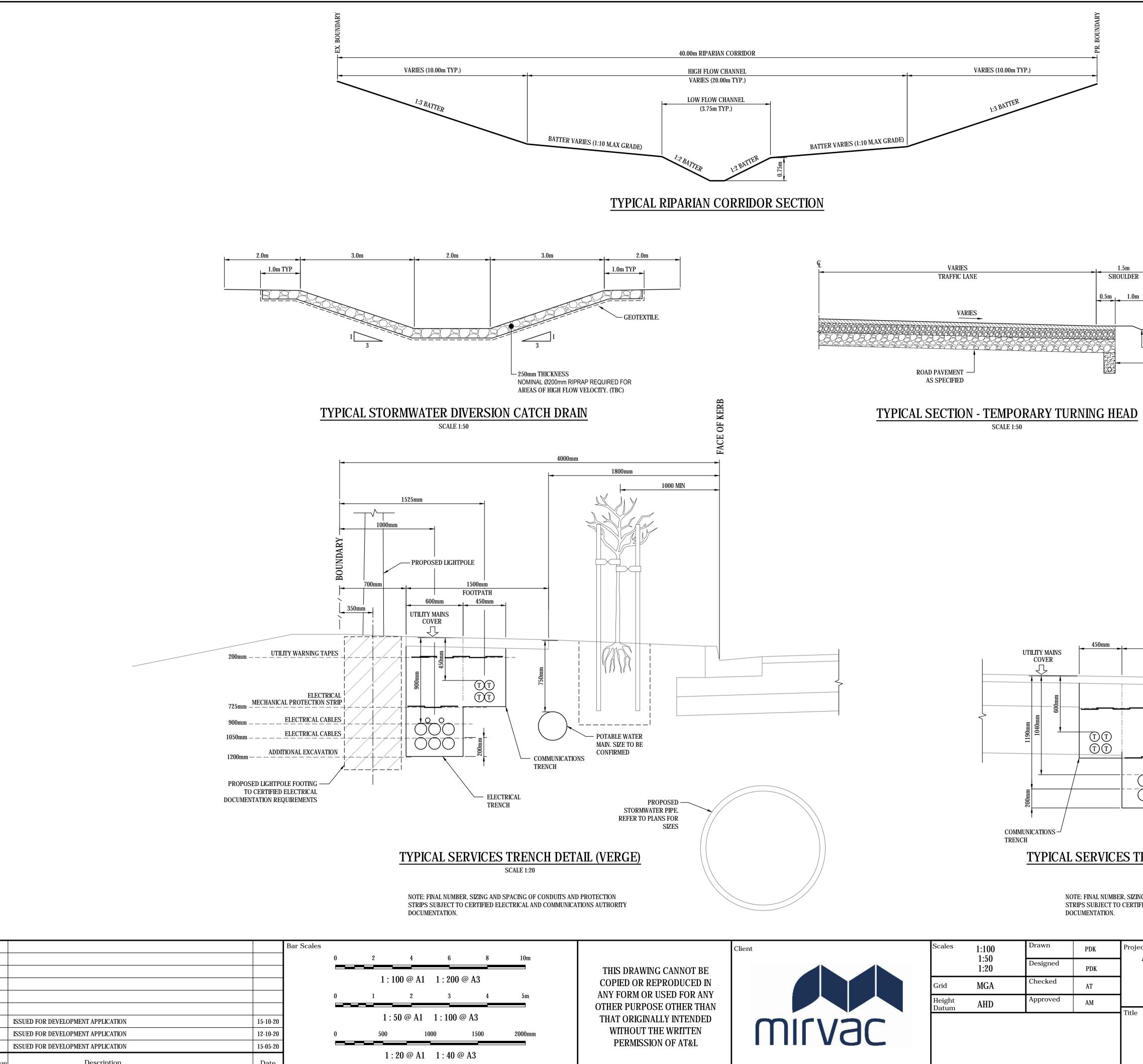




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Issue	Description	Date							



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Issue	Description	Date							

**TYPICAL ROAD SECTIONS** SHEET 2

Project
<sup>°</sup> ASPECT INDUSTIAL ESTATE
MAMRE ROAD,
<b>KEMPS CREEK</b>
STAGE 1



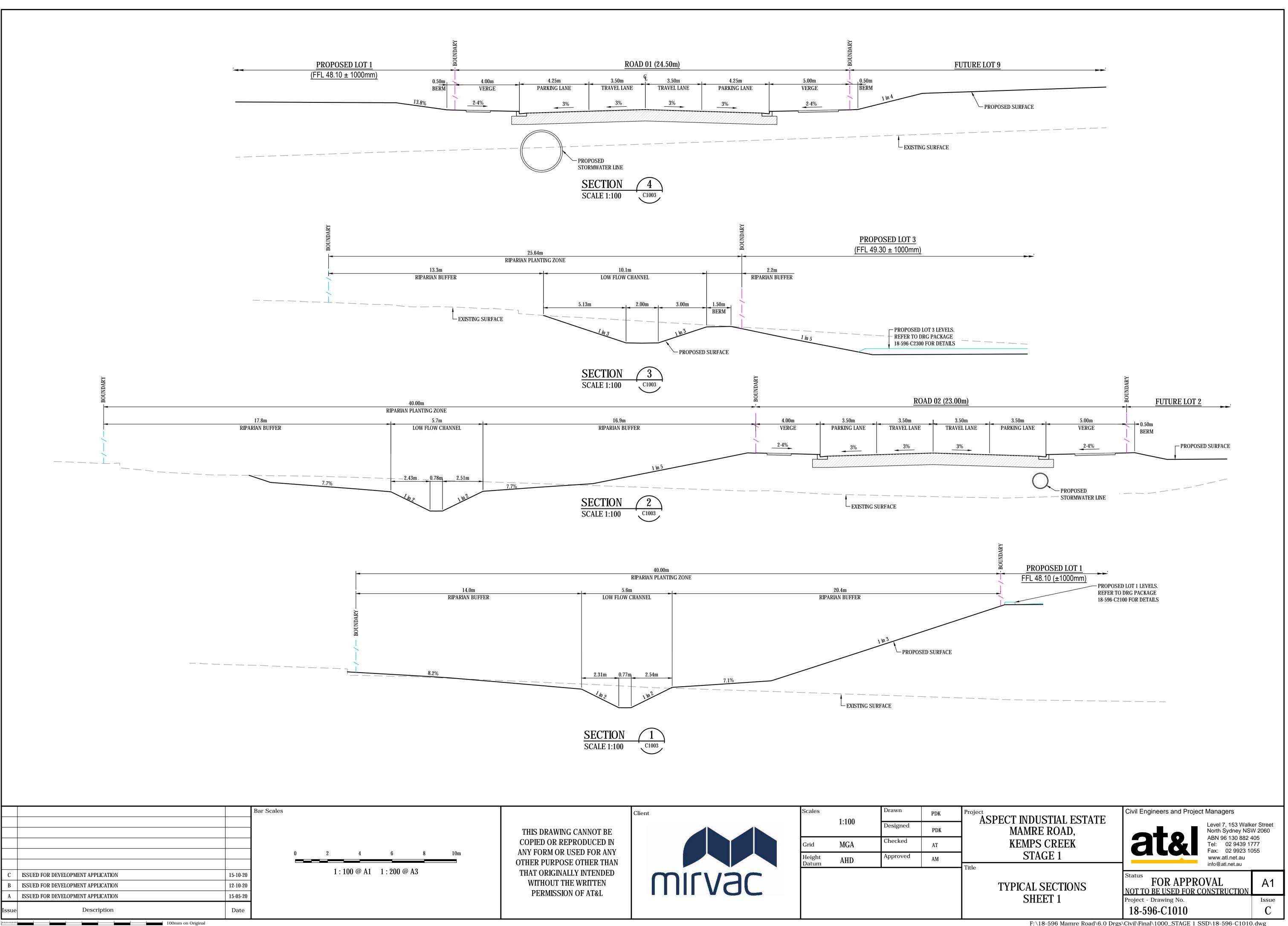
Civil Engineers and Project Managers

NOTE: FINAL NUMBER, SIZING AND SPACING OF CONDUITS AND PROTECTION STRIPS SUBJECT TO CERTIFIED ELECTRICAL AND COMMUNICATIONS AUTHORITY

#### TYPICAL SERVICES TRENCH DETAIL (ROAD CROSSING) **SCALE 1:20**

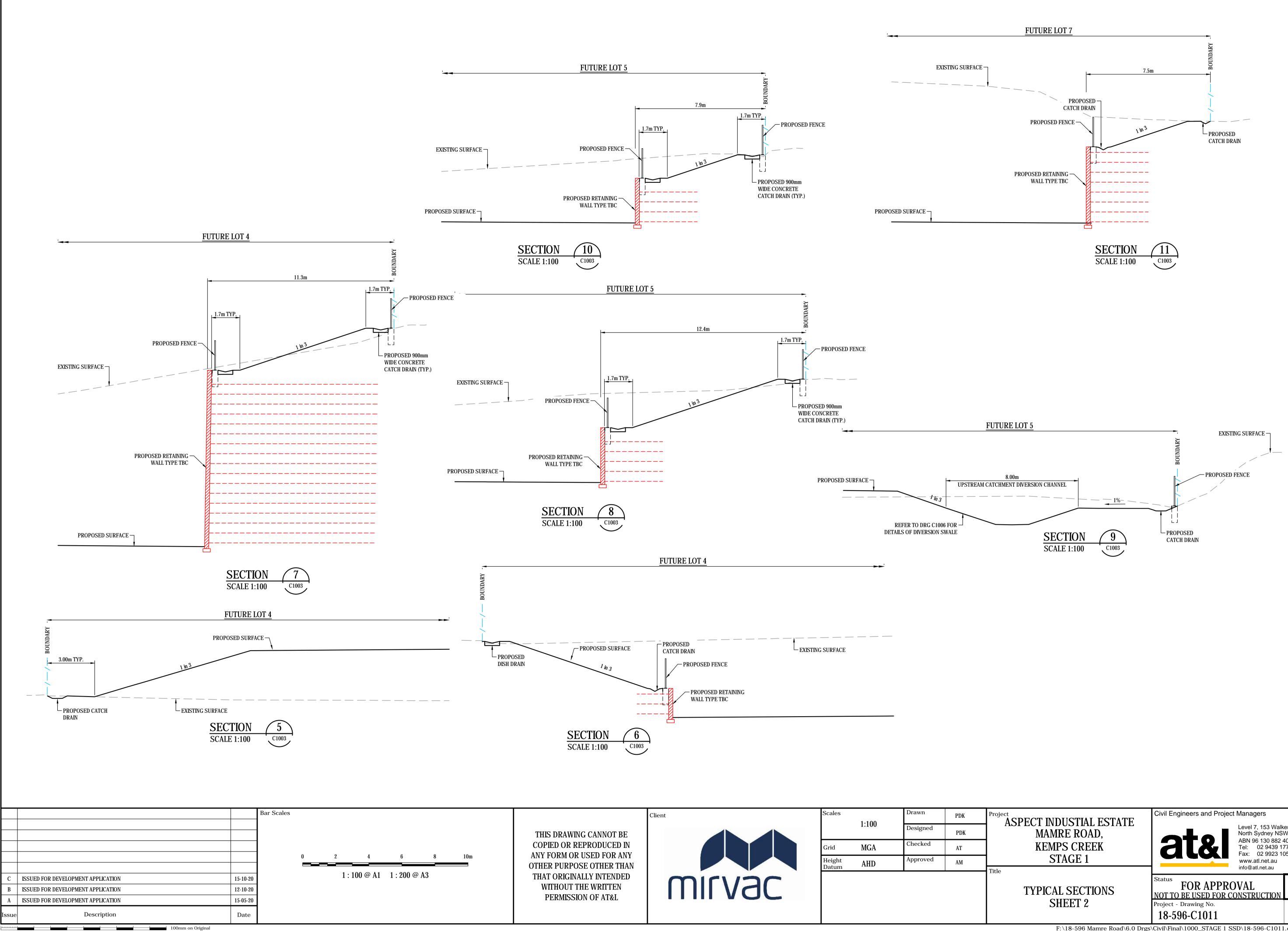
VARIES	ł
	FINISHED PAVEMENT LEVEL
	UTILITY WARNING TAPES 320mm
	ELECTRICAL MECHANICAL PROTECTION STRIP 855mm
	ELECTRICAL CABLES 1020mm ELECTRICAL CABLES 1170mm
	ADDITIONAL EXCAVATION 1320mm ELECTRICAL TRENCH
	- ELECTRICAL TRENCH

CUT SLOPE (1:3 MAX) - PROPOSED CATCH DRAIN – SUBSOIL DRAIN AS PER PENRITH CITY COUNCIL DETAIL



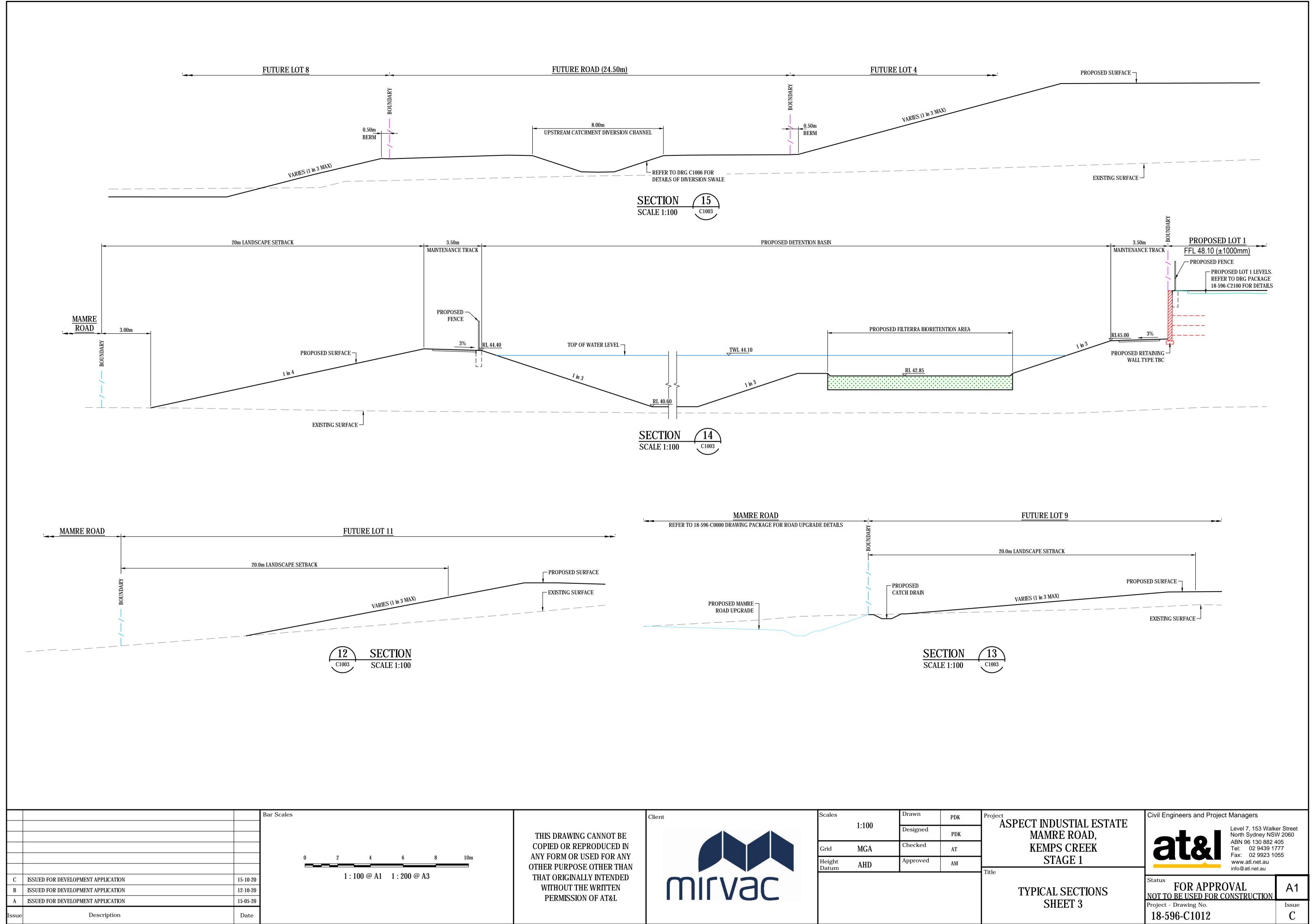
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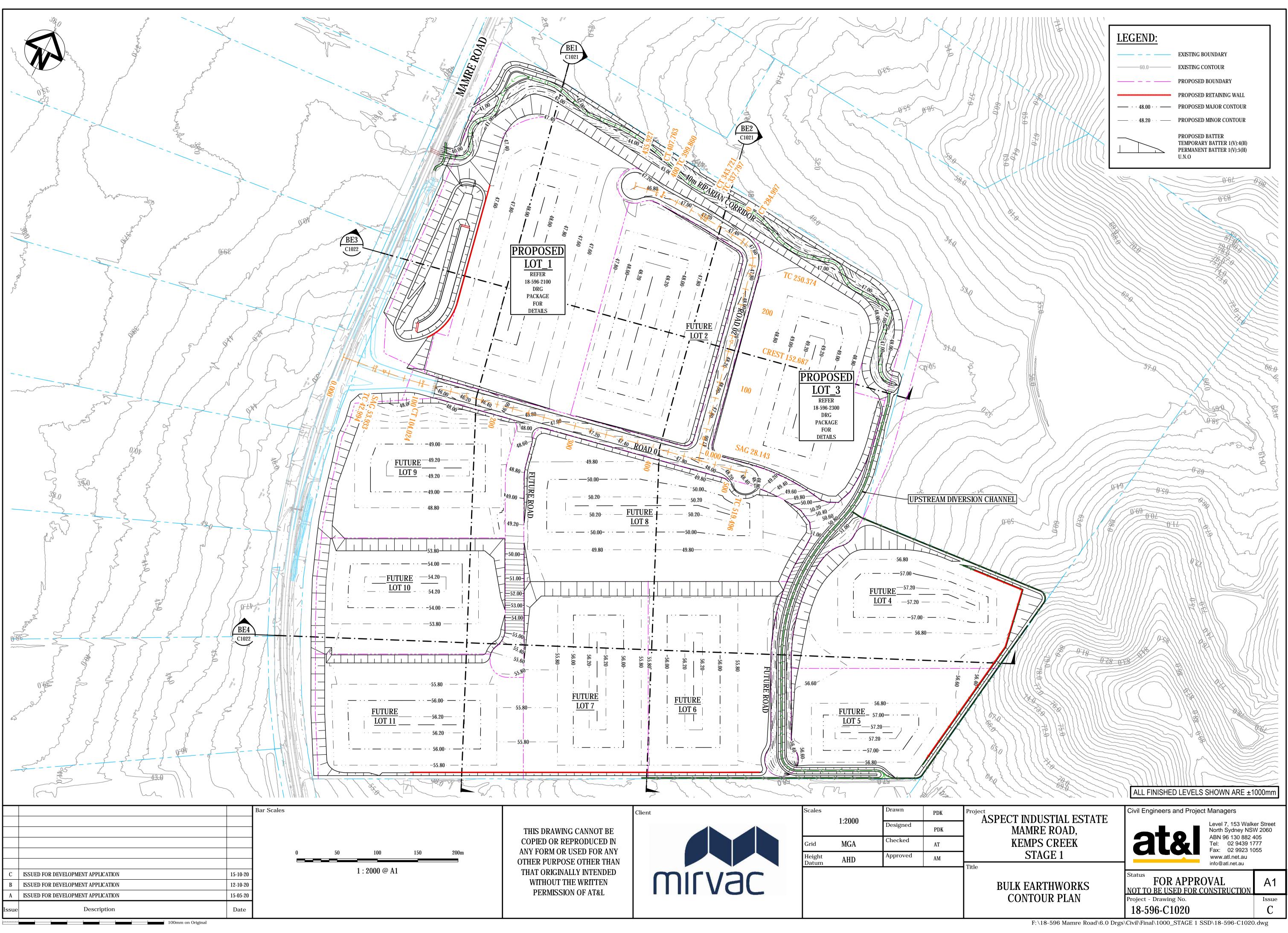
	Civil Engineers and Project Managers					
ASPECT INDUSTIAL ESTATE MAMRE ROAD, KEMPS CREEK STAGE 1	ABN 96 130 882 4 Tel: 02 9439 17 Fax: 02 9923 10 www.atl.net.au	N 2060 105 777				
TYPICAL SECTIONS	Status FOR APPROVAL	A1				
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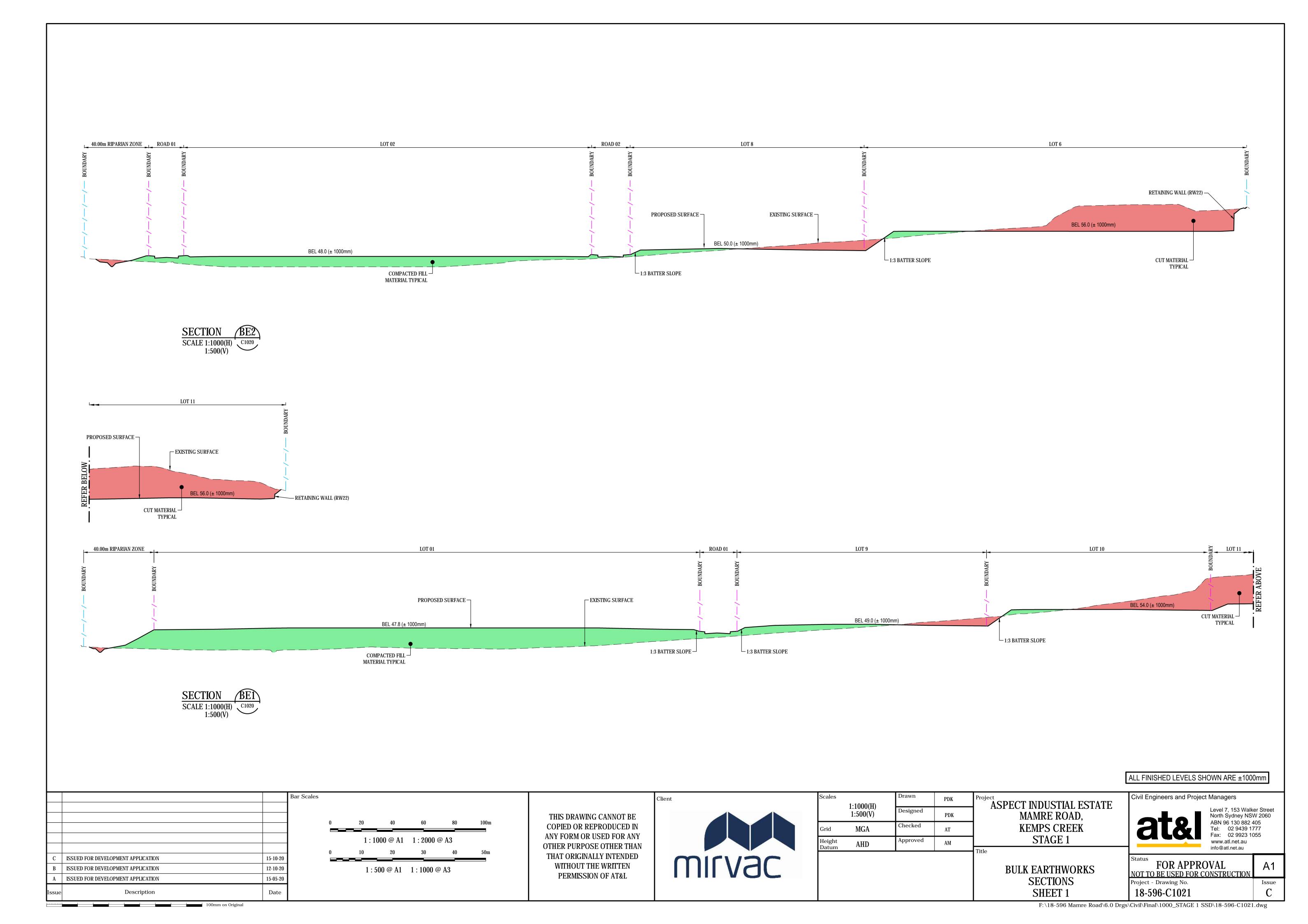
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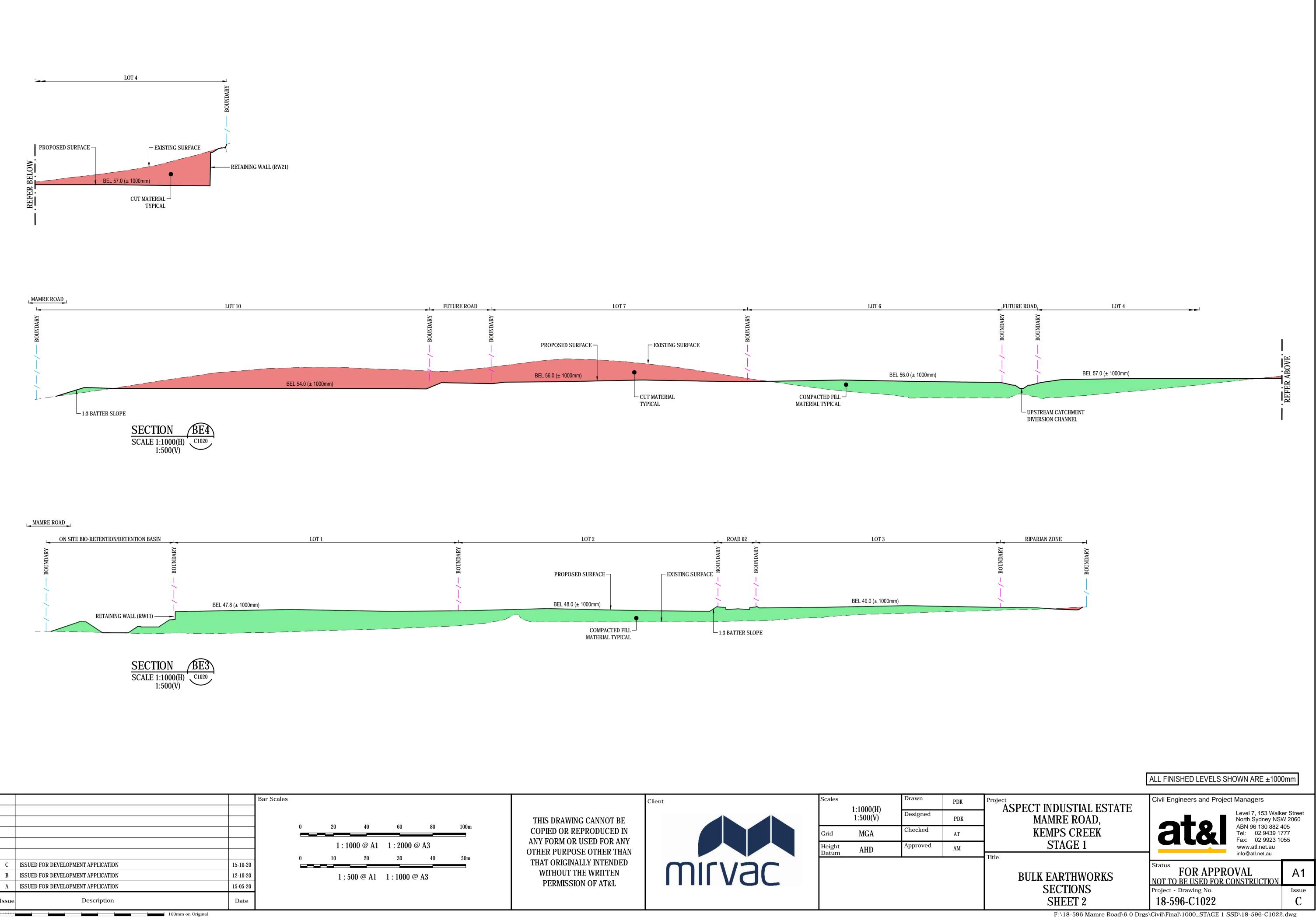


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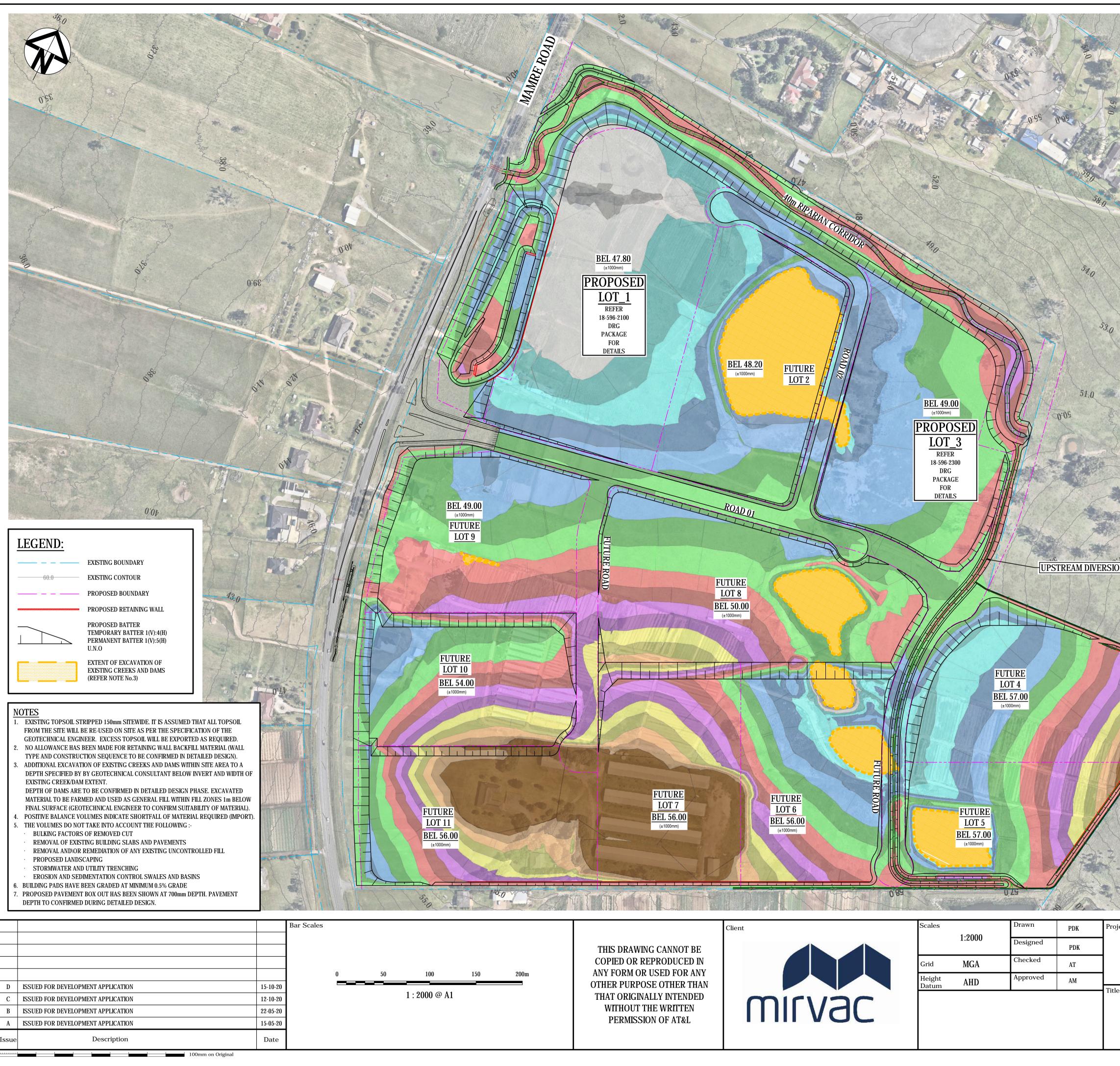
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	-8.0 to -7.0 m
	-7.0 to -6.0 m
	-6.0 to -5.0 m
600	-5.0 to -4.0 m
J.a 65.0	-4.0 to -3.0 m
	-3.0 to -2.0 m
0.70	-2.0 to -1.0 m
	-1.0 to 0.0 m
A W W W W W W	0.0 to 1.0 m
BI-Q	1.0 to 2.0 m
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63.00 mg.0	3.0 to 4.0 m
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4.0 to 5.0 m
HI CONTRACT	5.0 to 6.0 m
	6.0 to 7.0 m
55.0	7.0 to 8.0 m
11/11/	8.0 to 10.0 m
	EARTHWORKS VOLUMES
and the second s	CUT MATERIAL (m <sup>3</sup> ) -711,670
	57.0         FILL MATERIAL (m <sup>3</sup> )         982,152           270,482         270,482
56.0	BALANCE (m <sup>3</sup> ) 270,482 (IMPORT)
	EARTHWORKS AREAS
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	FARM DAMS (ha) 3.0
	TOTAL (ha) 58.8
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BULK EARTHWORKS CUT/FILL PLAN

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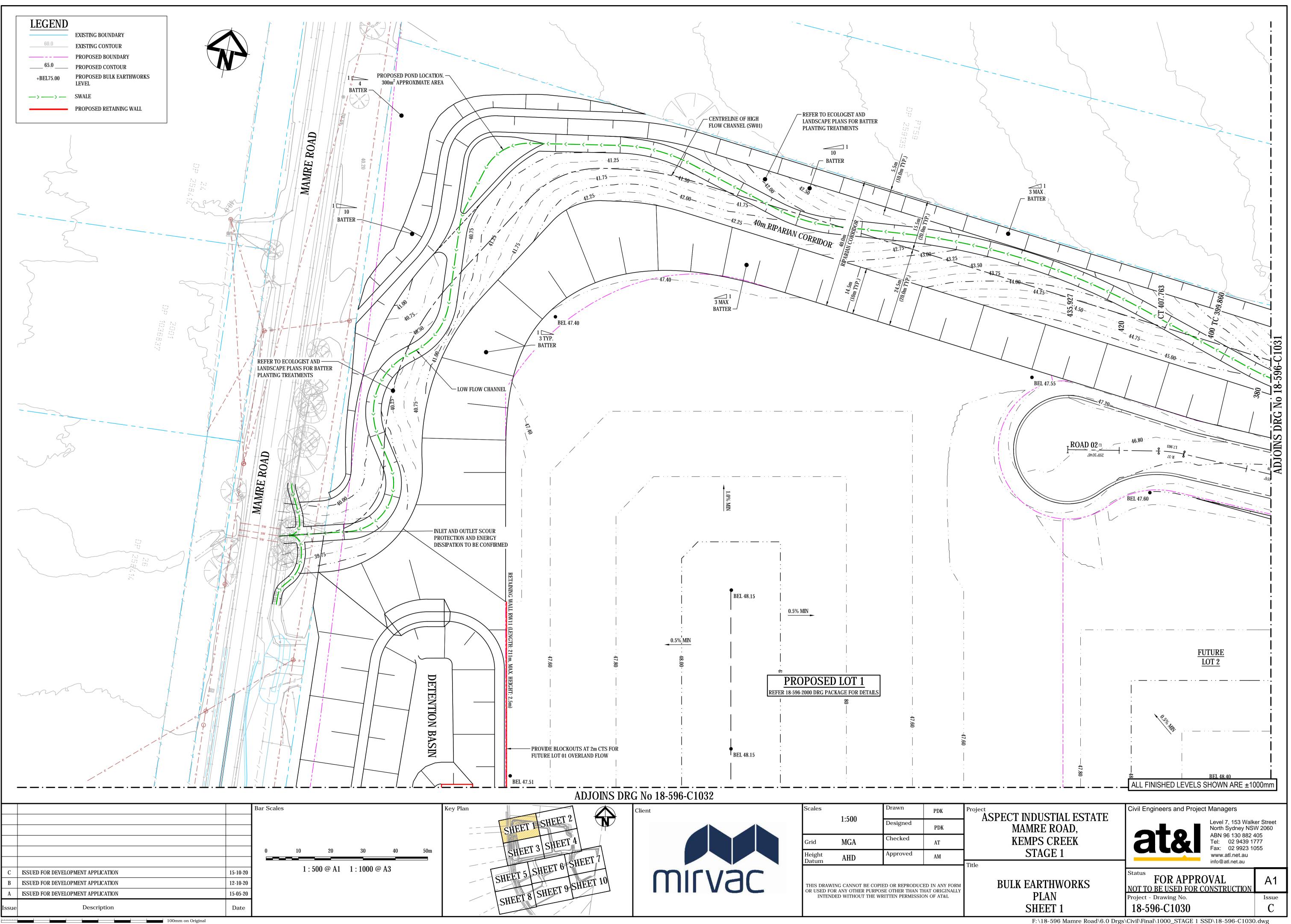
Project - Drawing No.

FOR APPROVAL

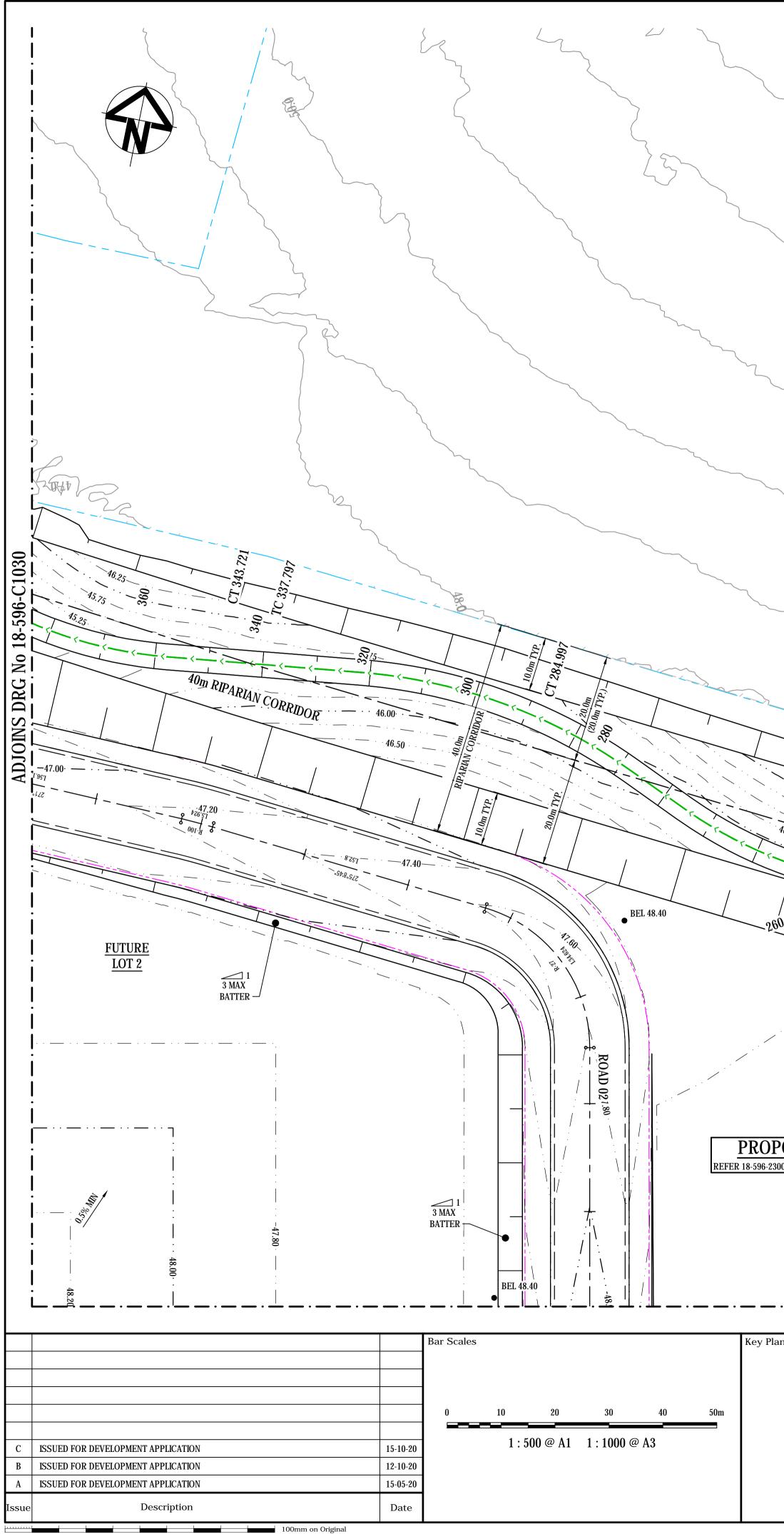
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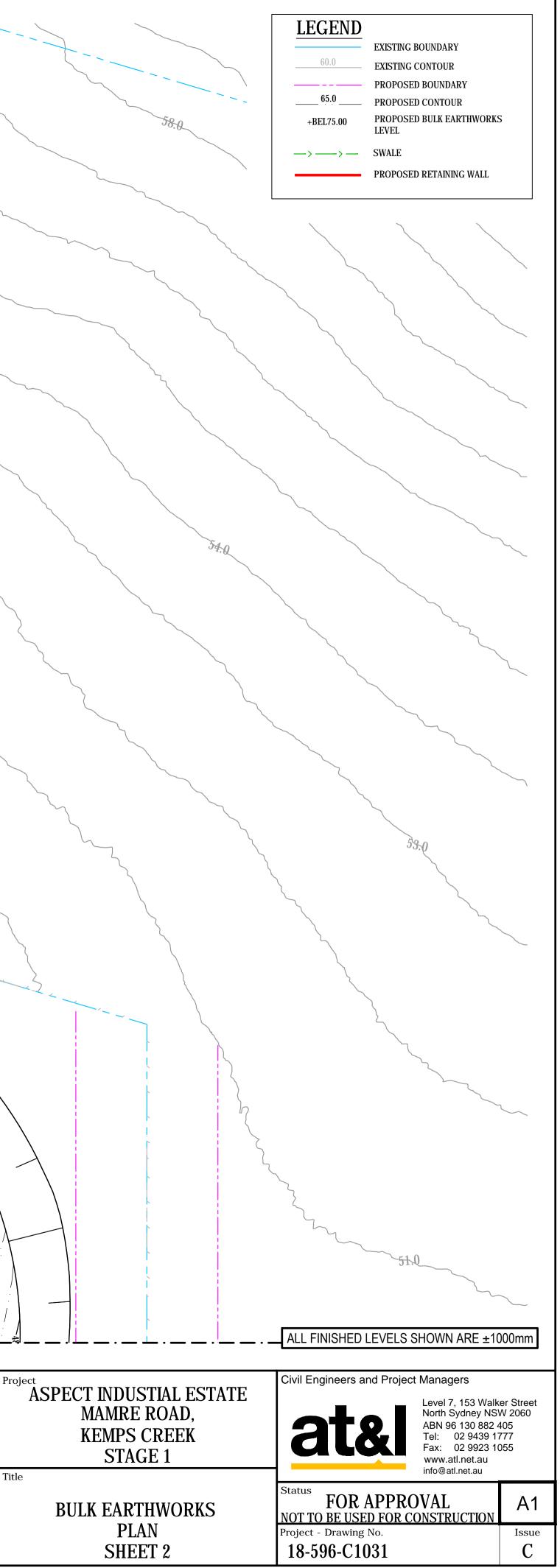
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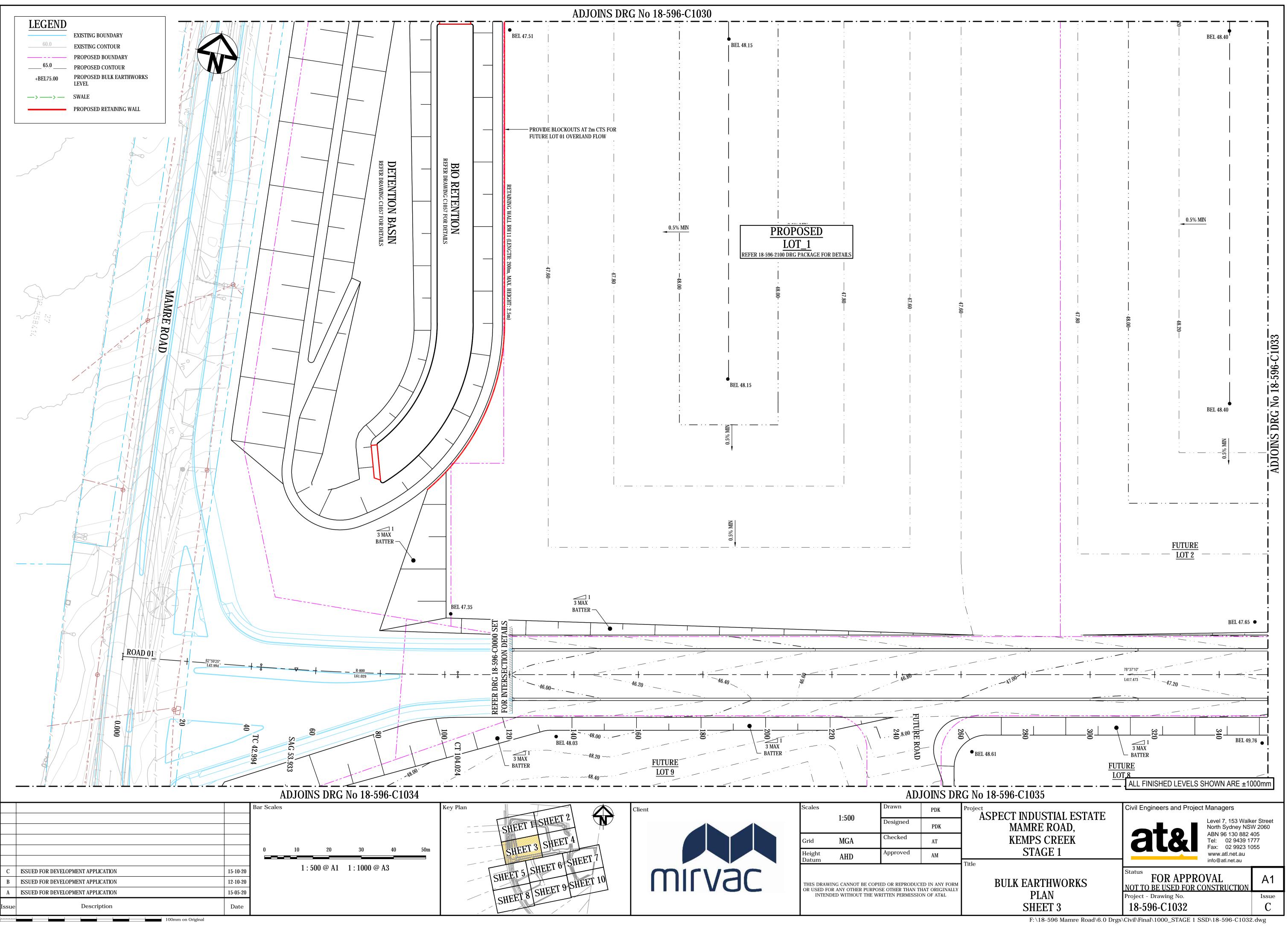
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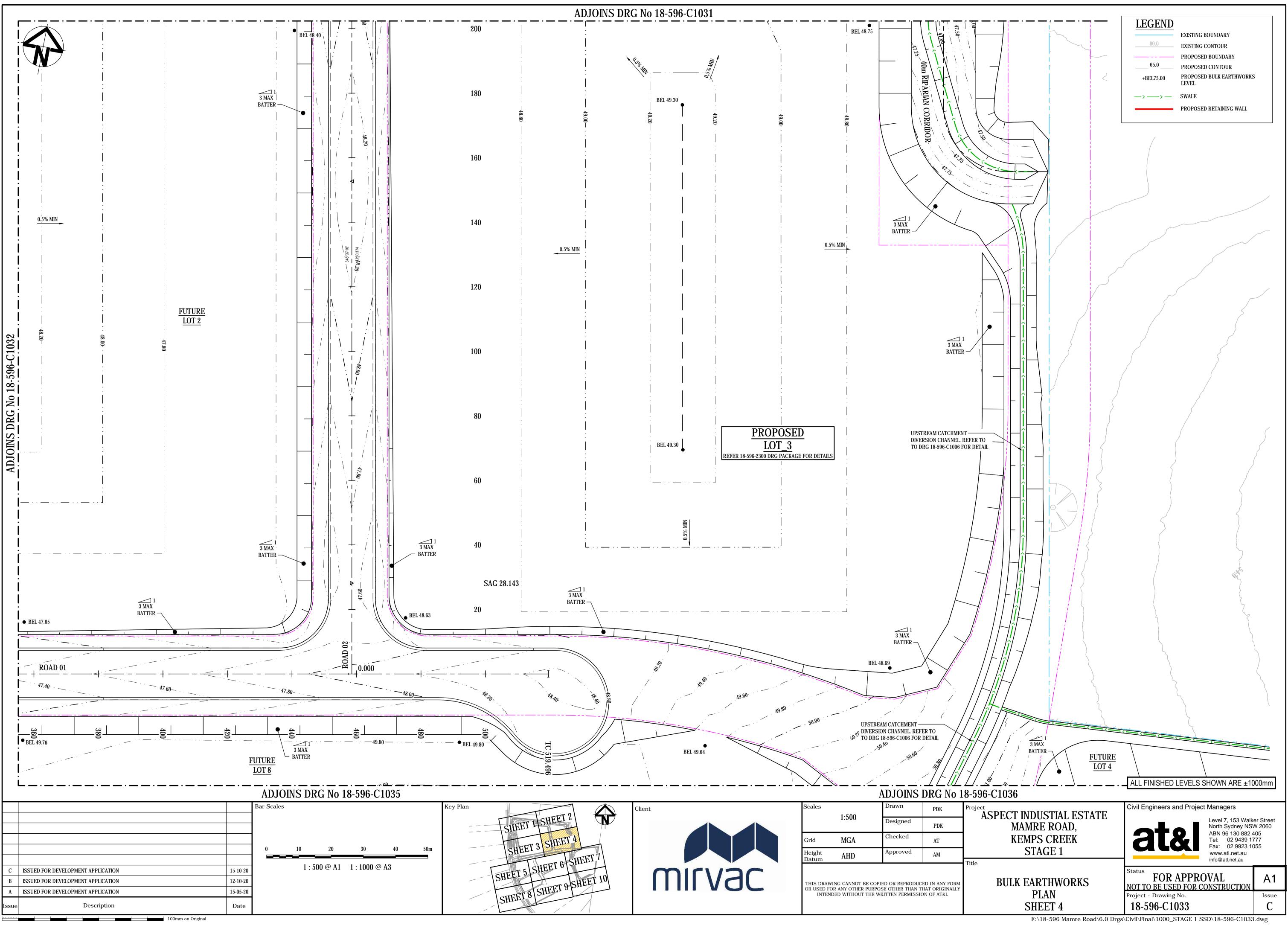


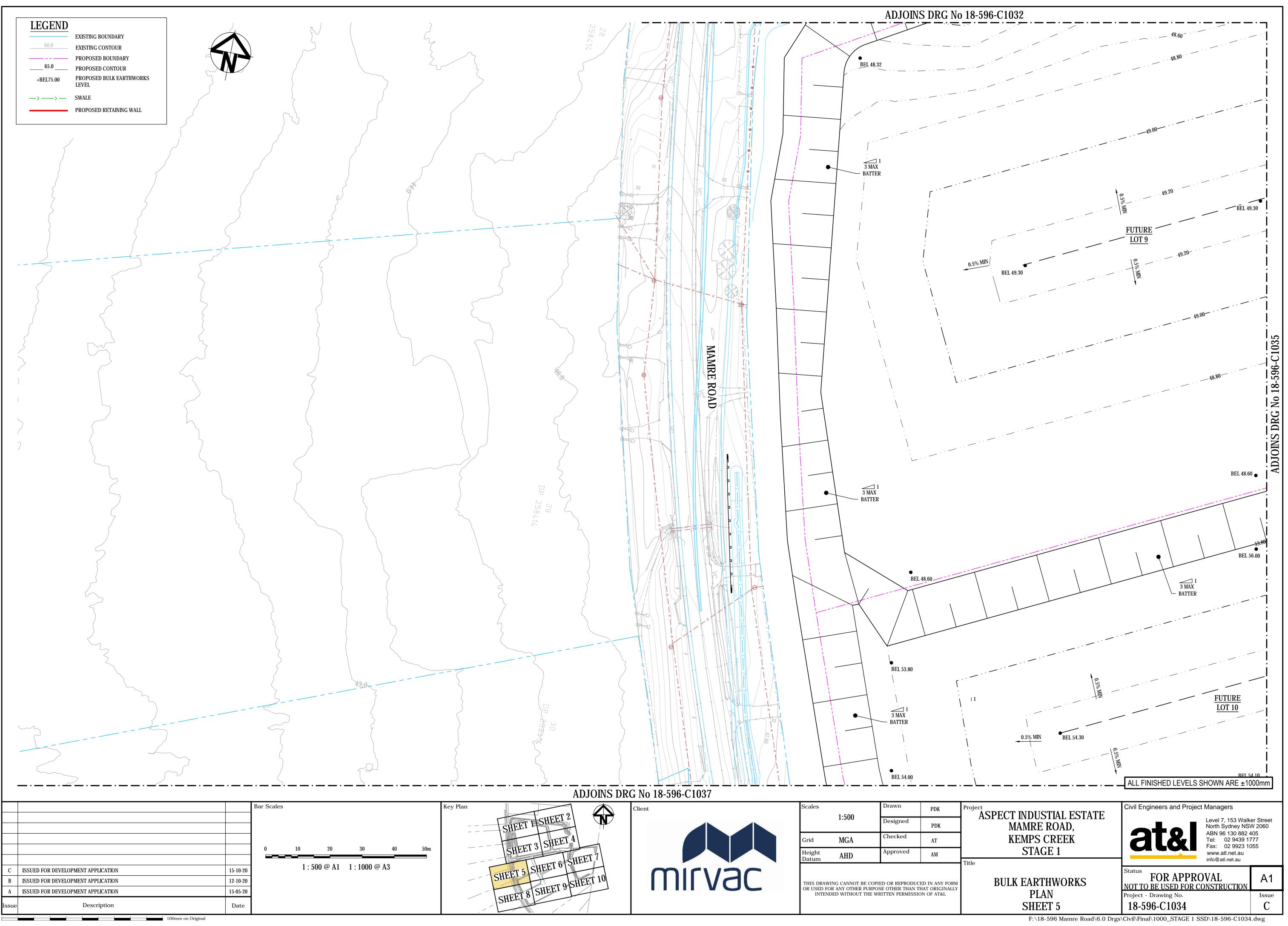
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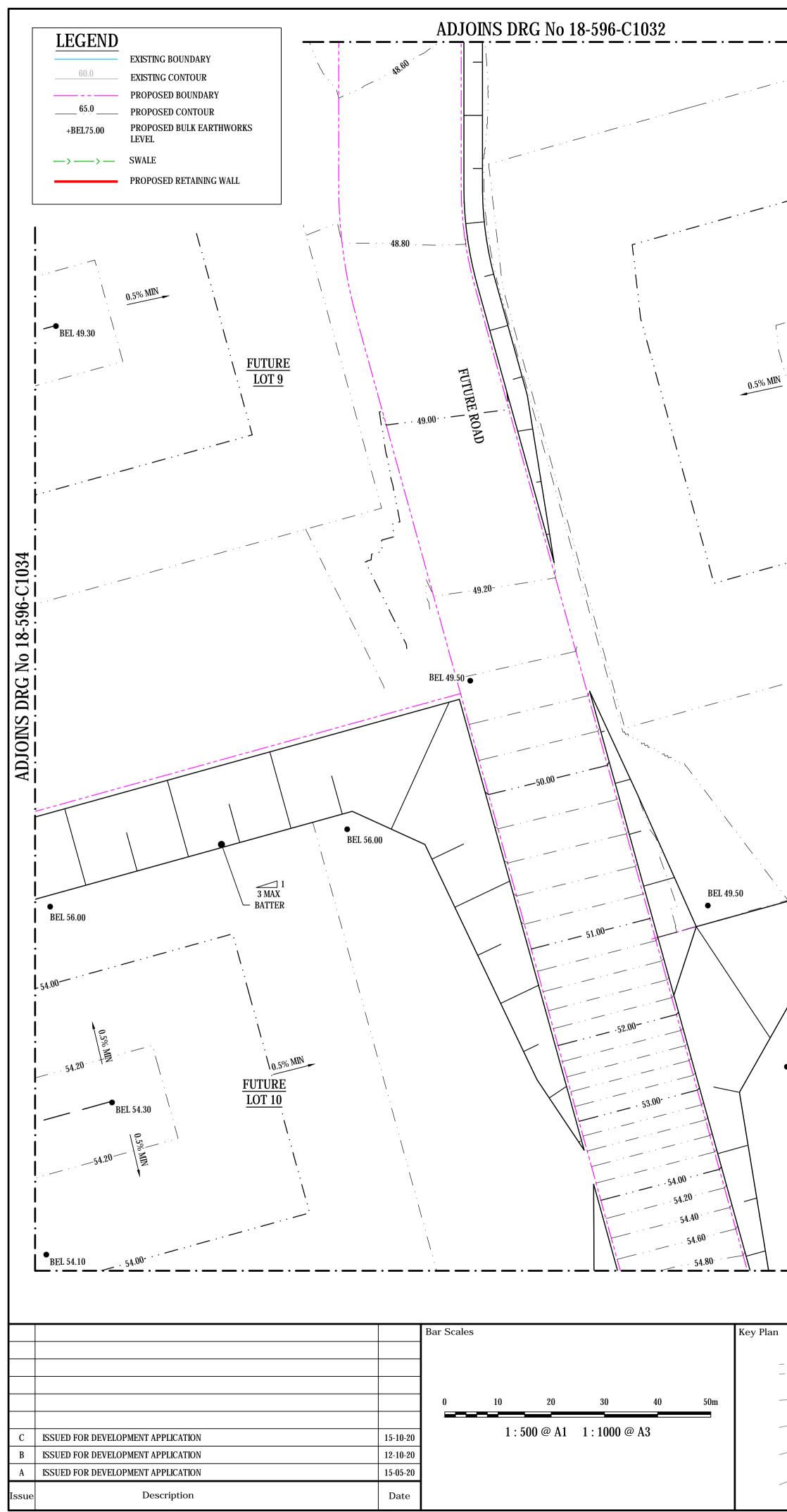


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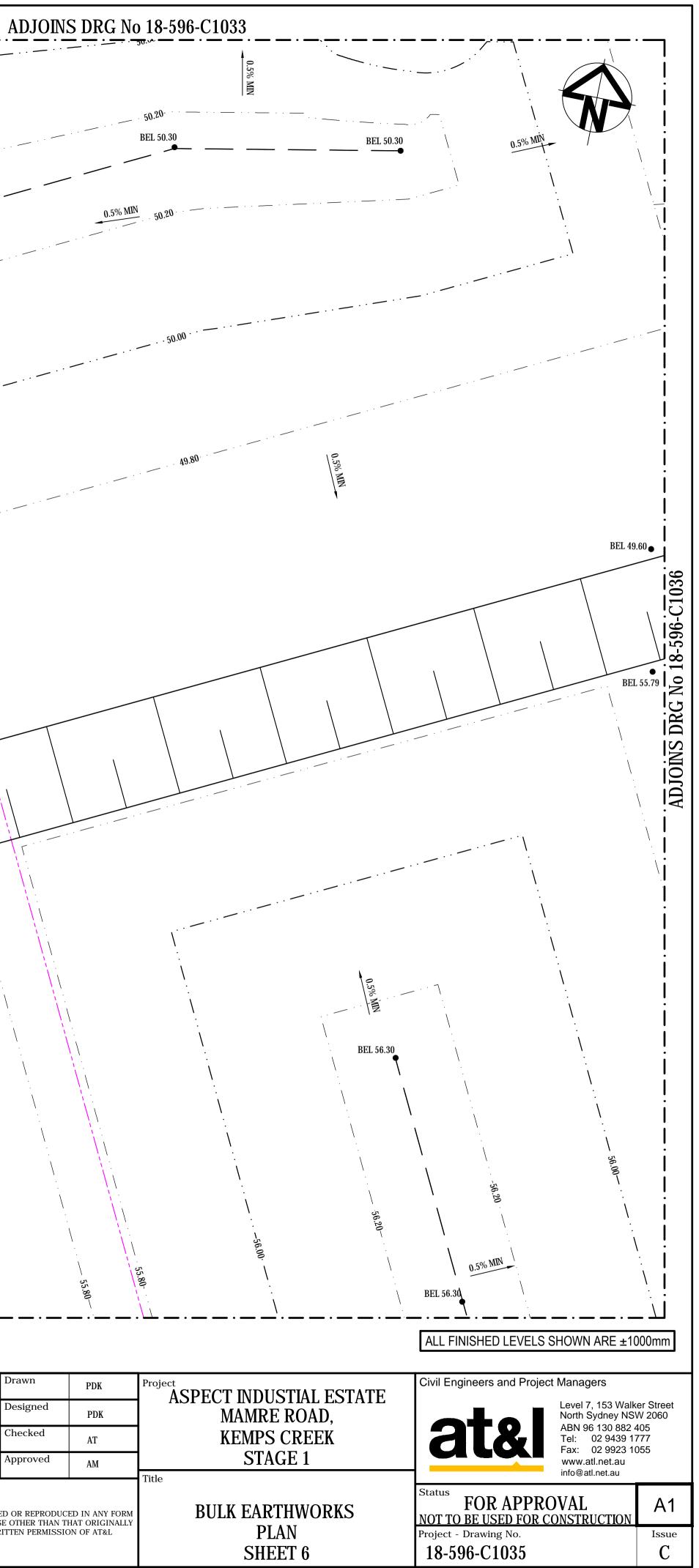
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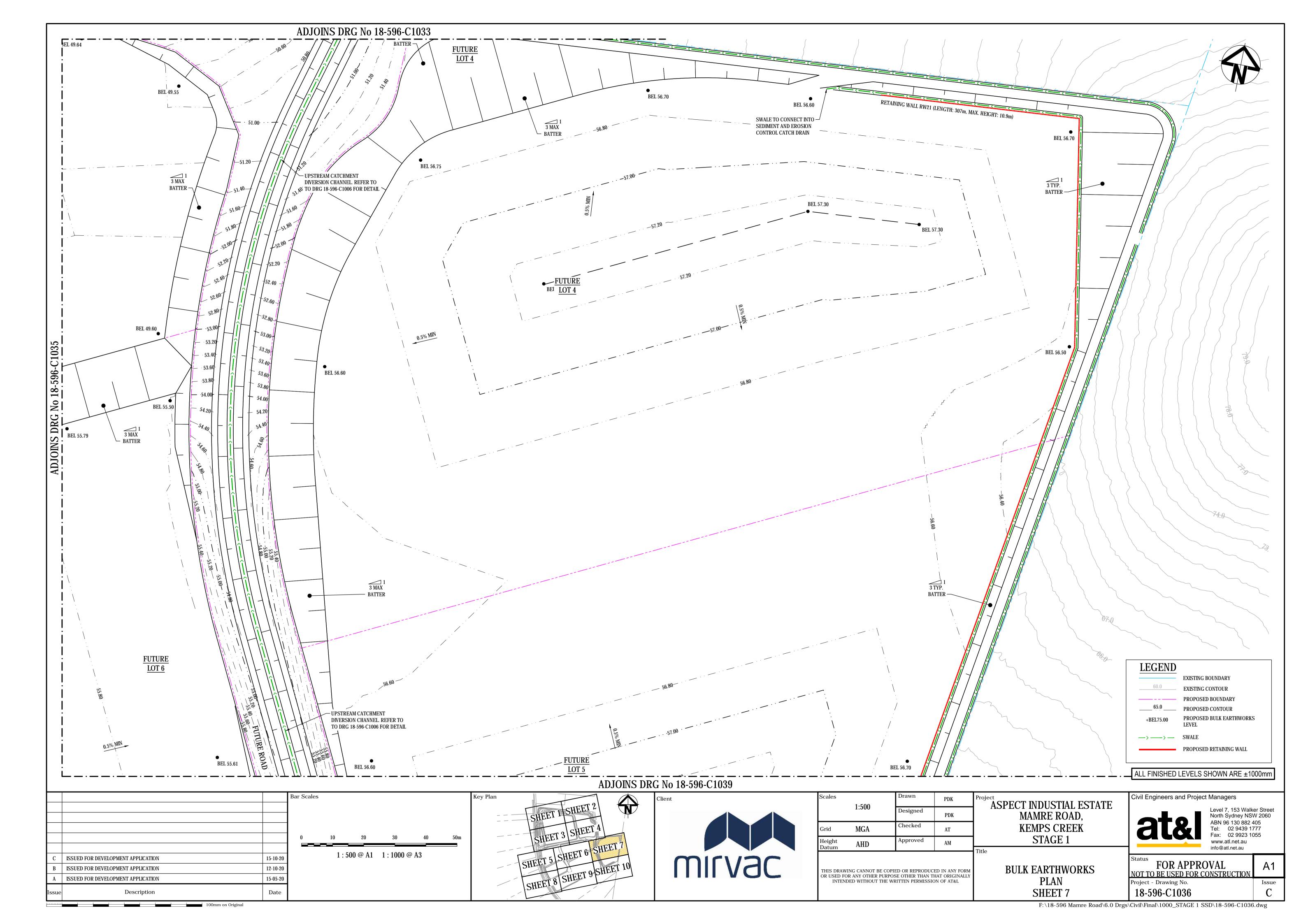
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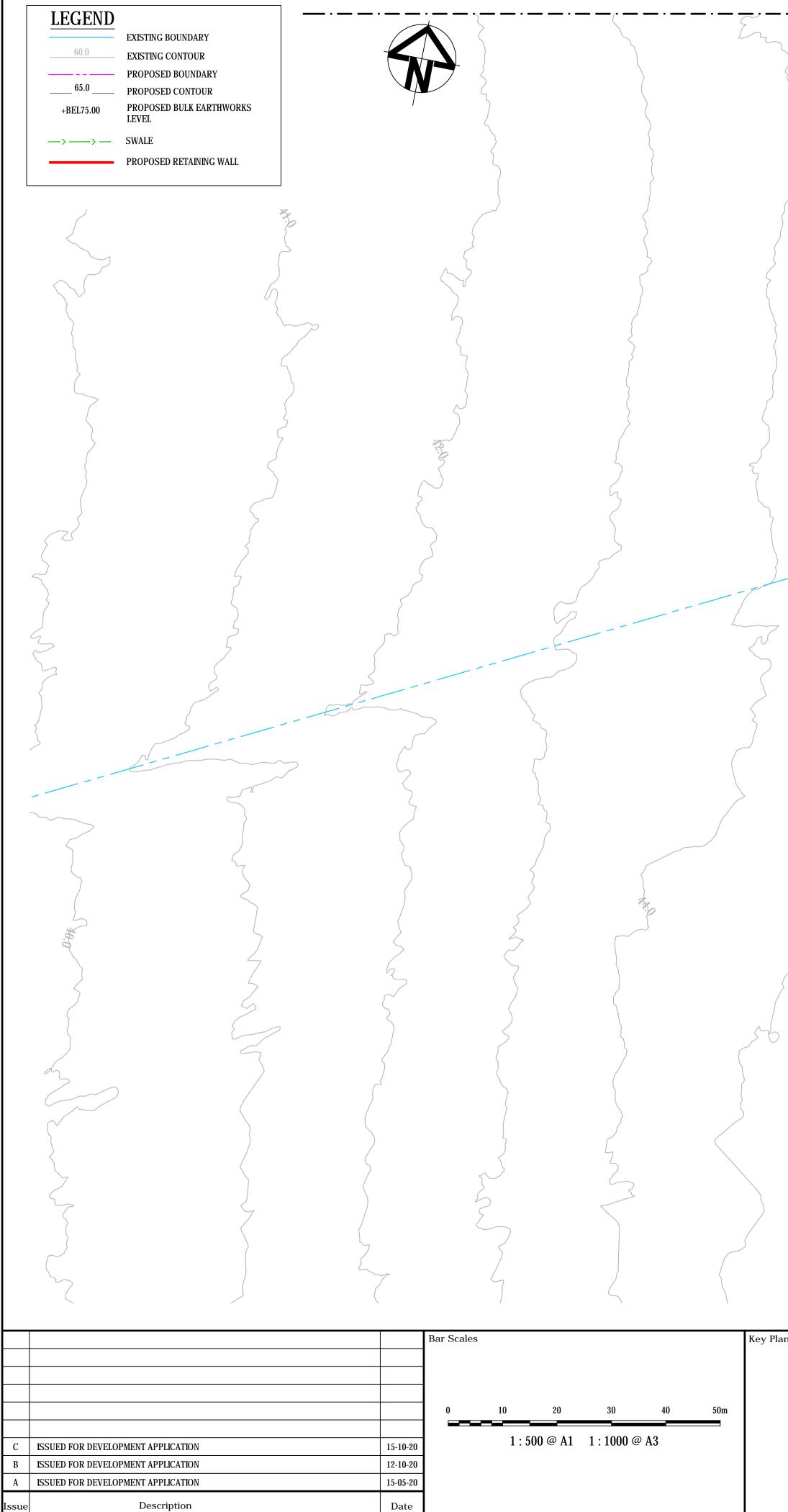
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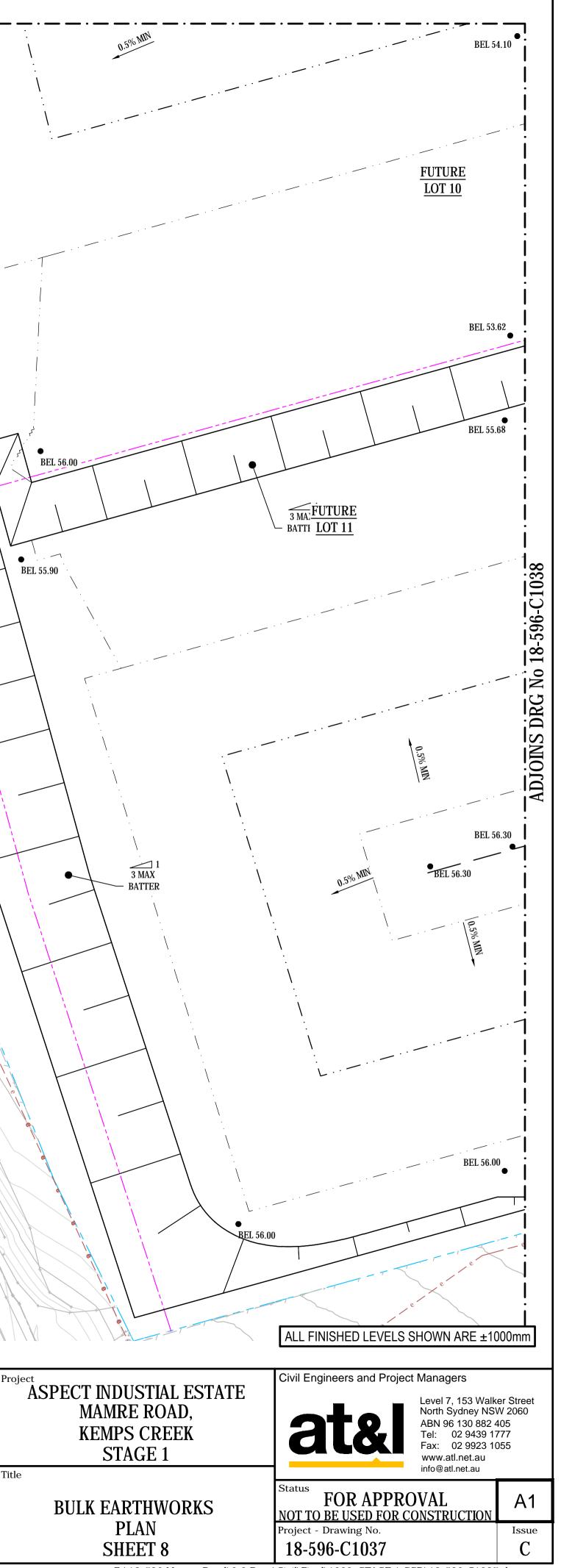




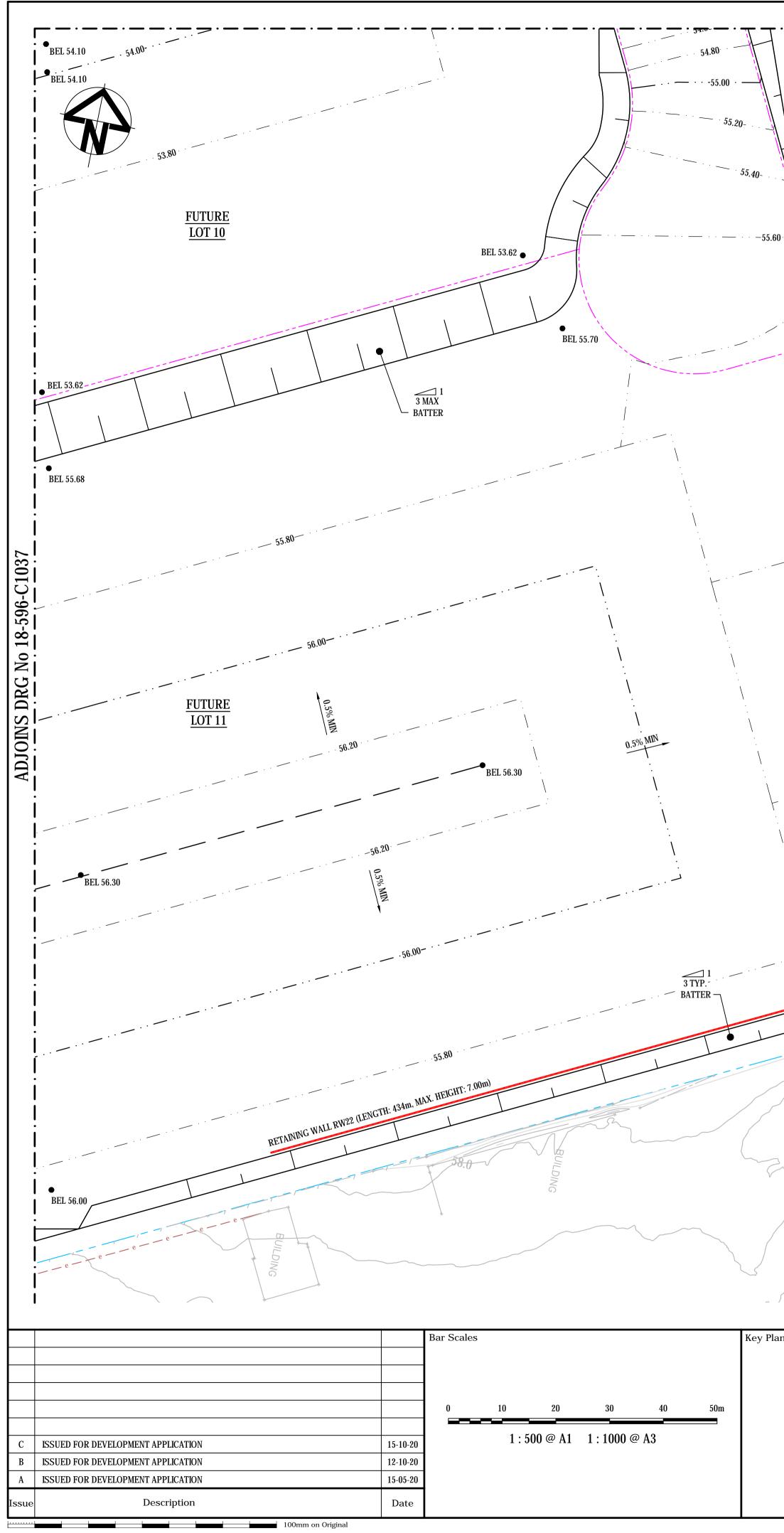
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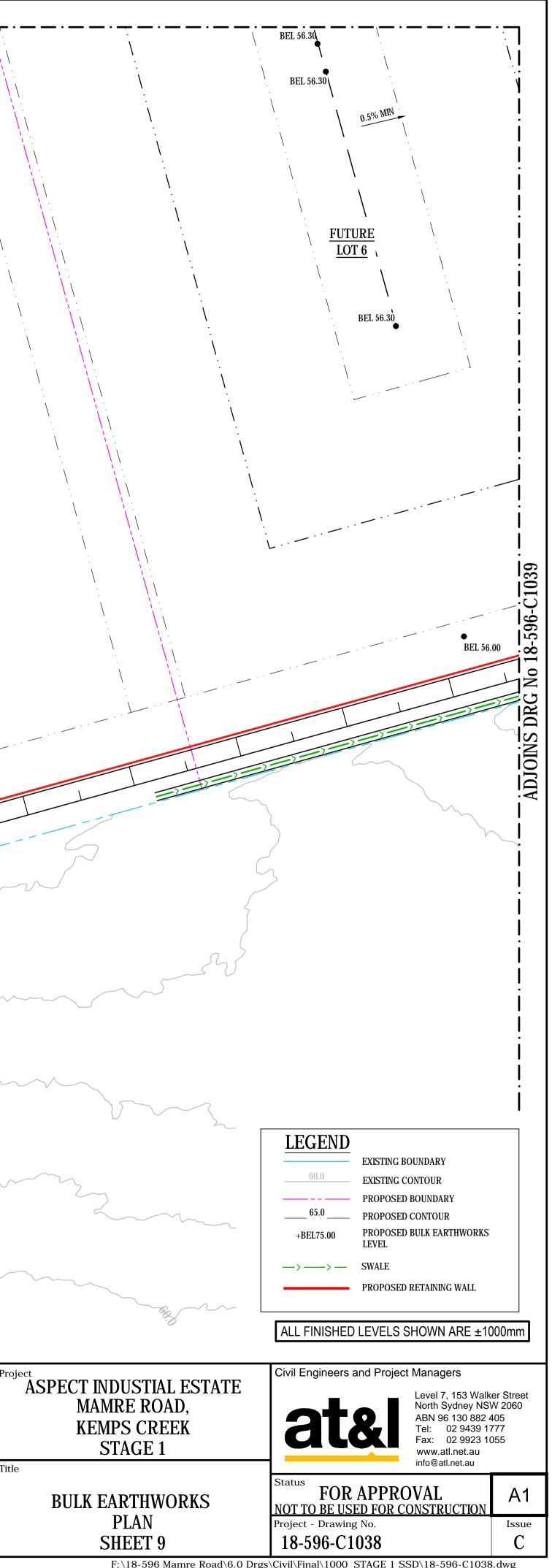
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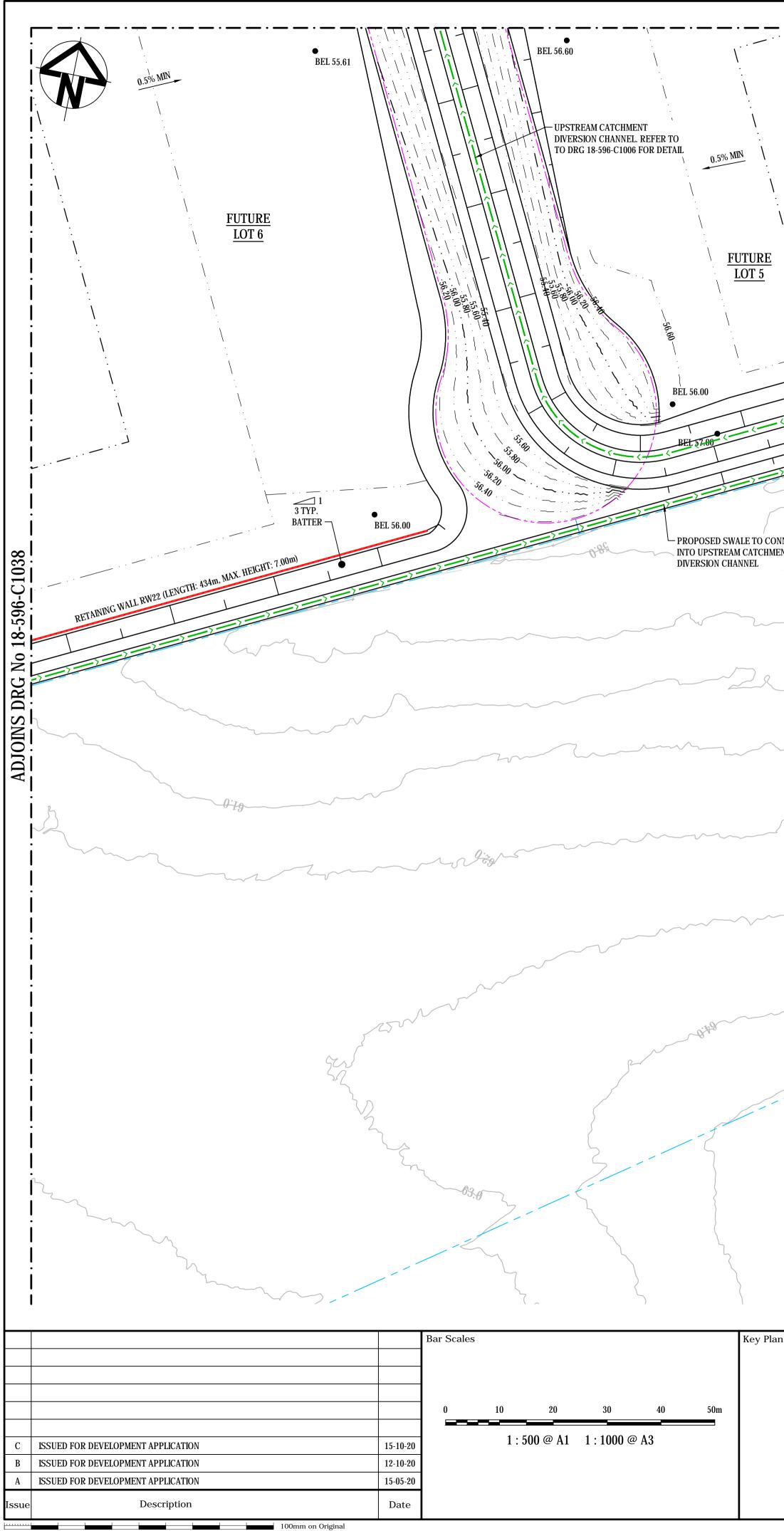
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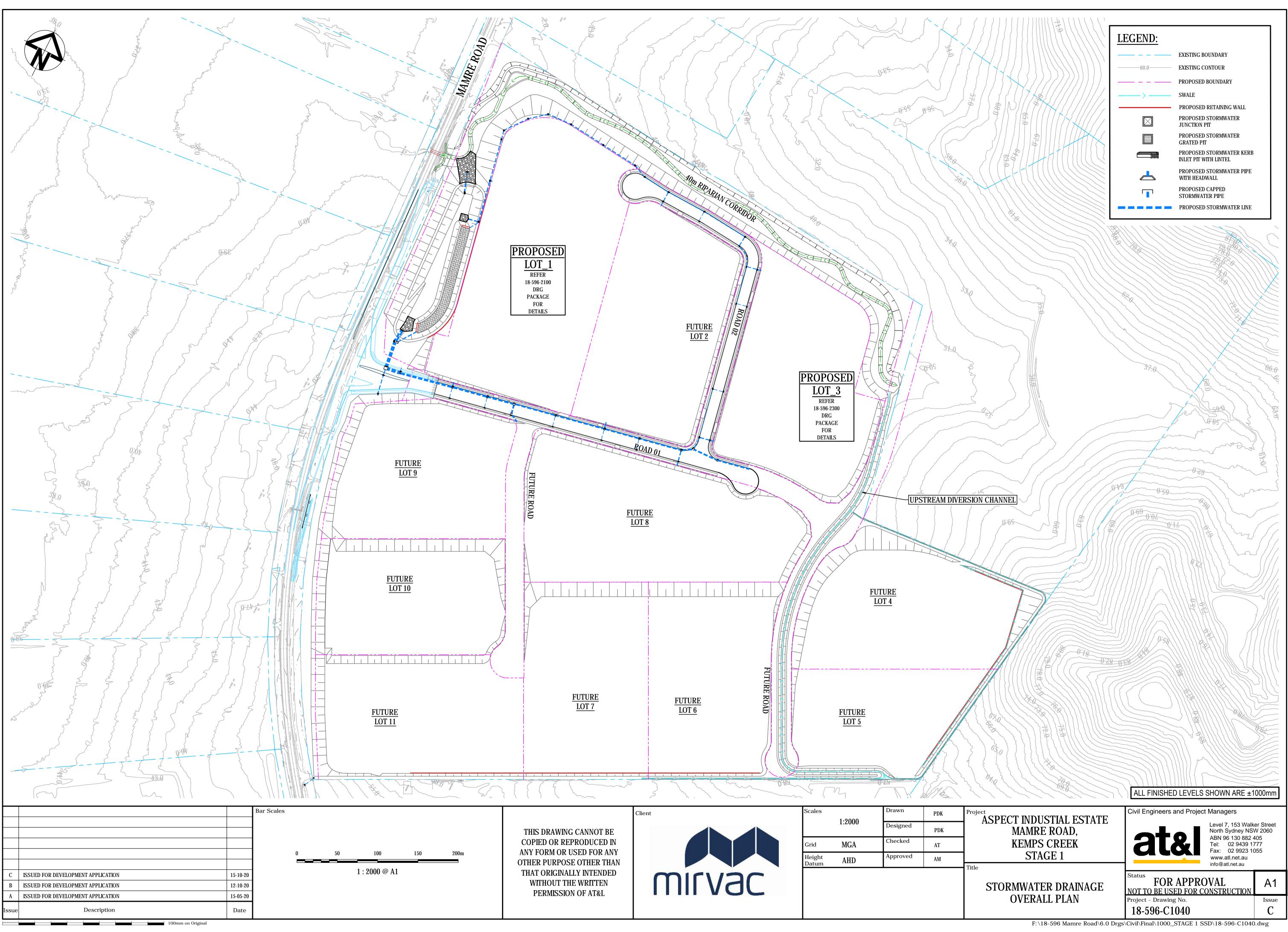
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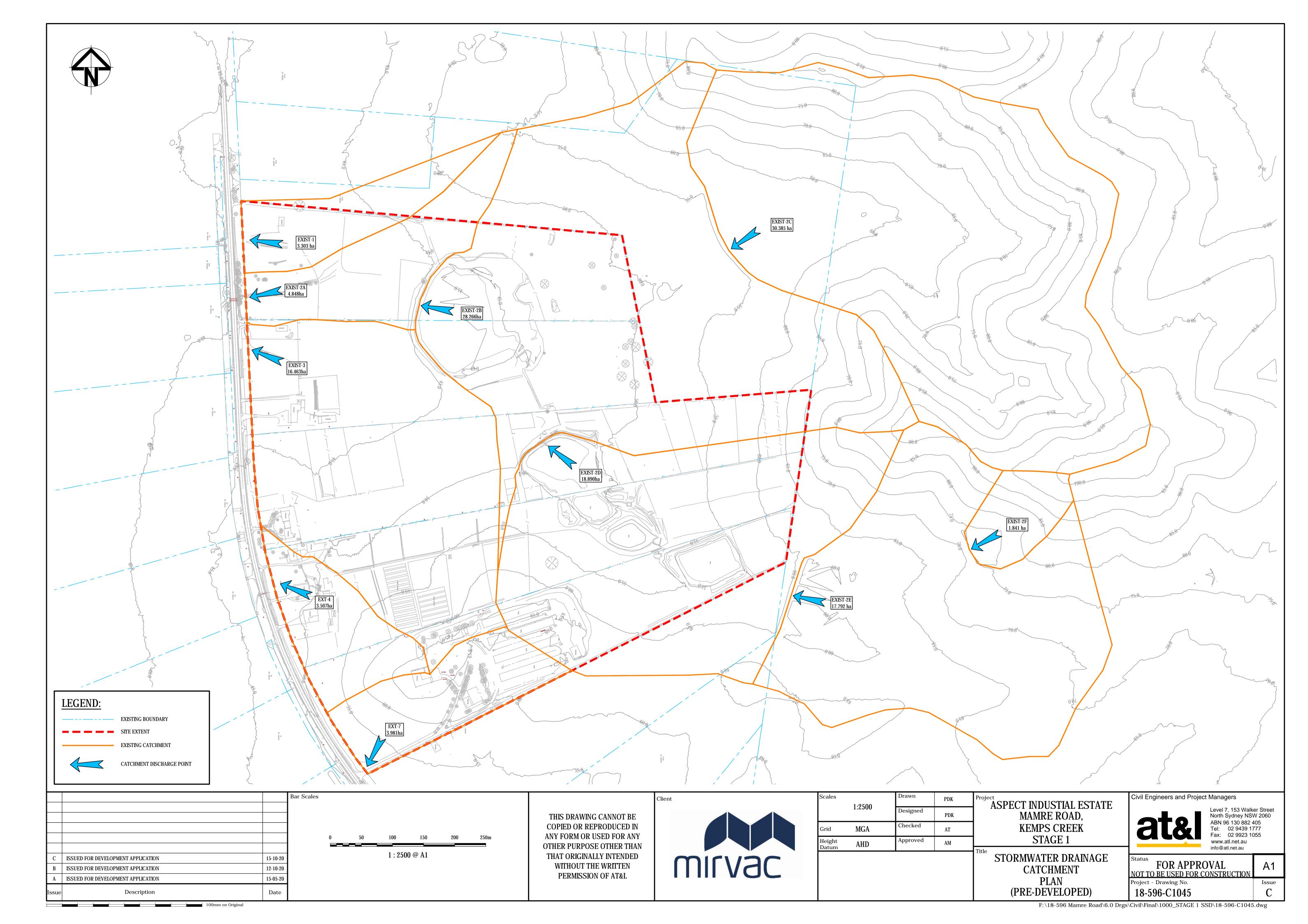


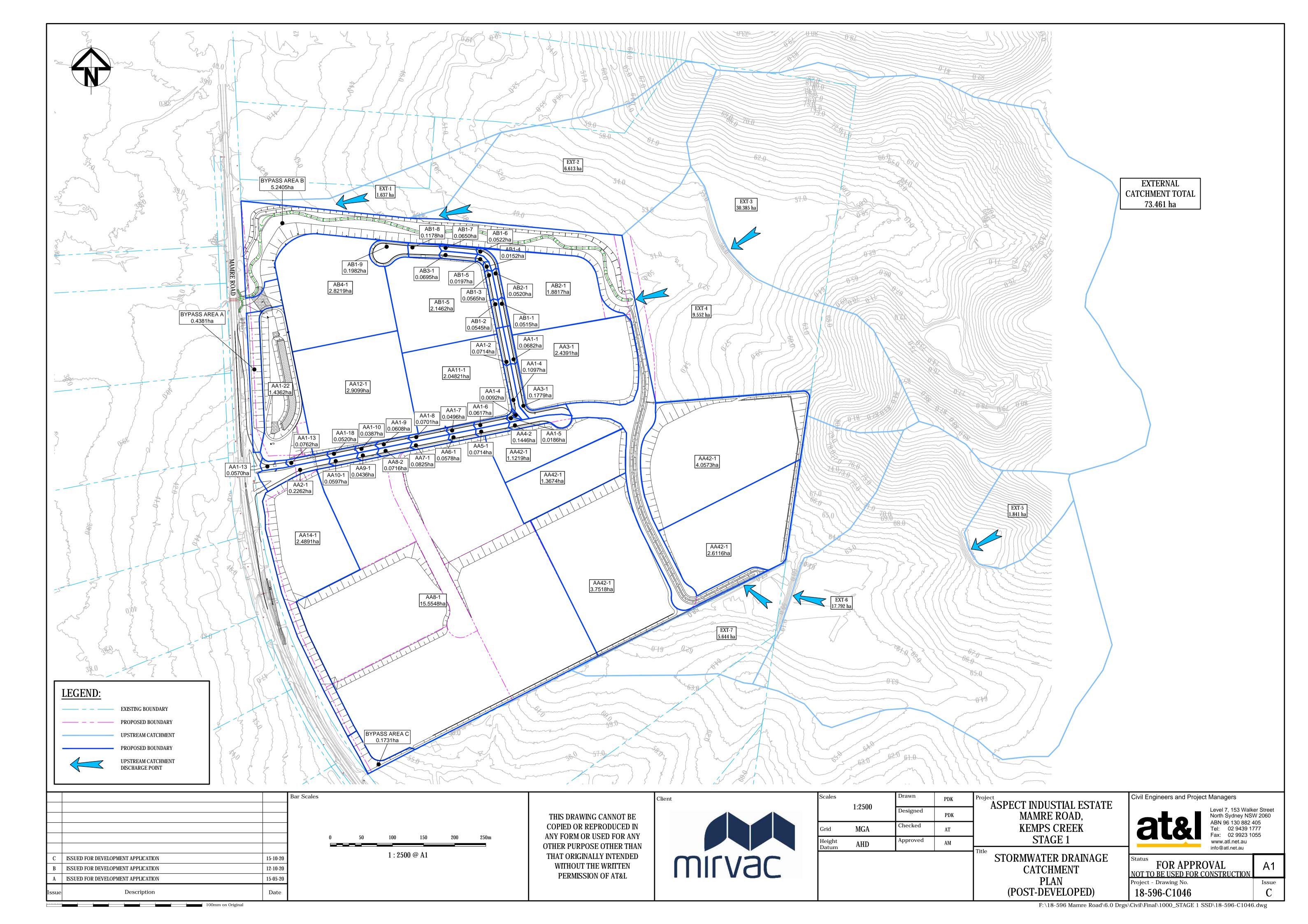
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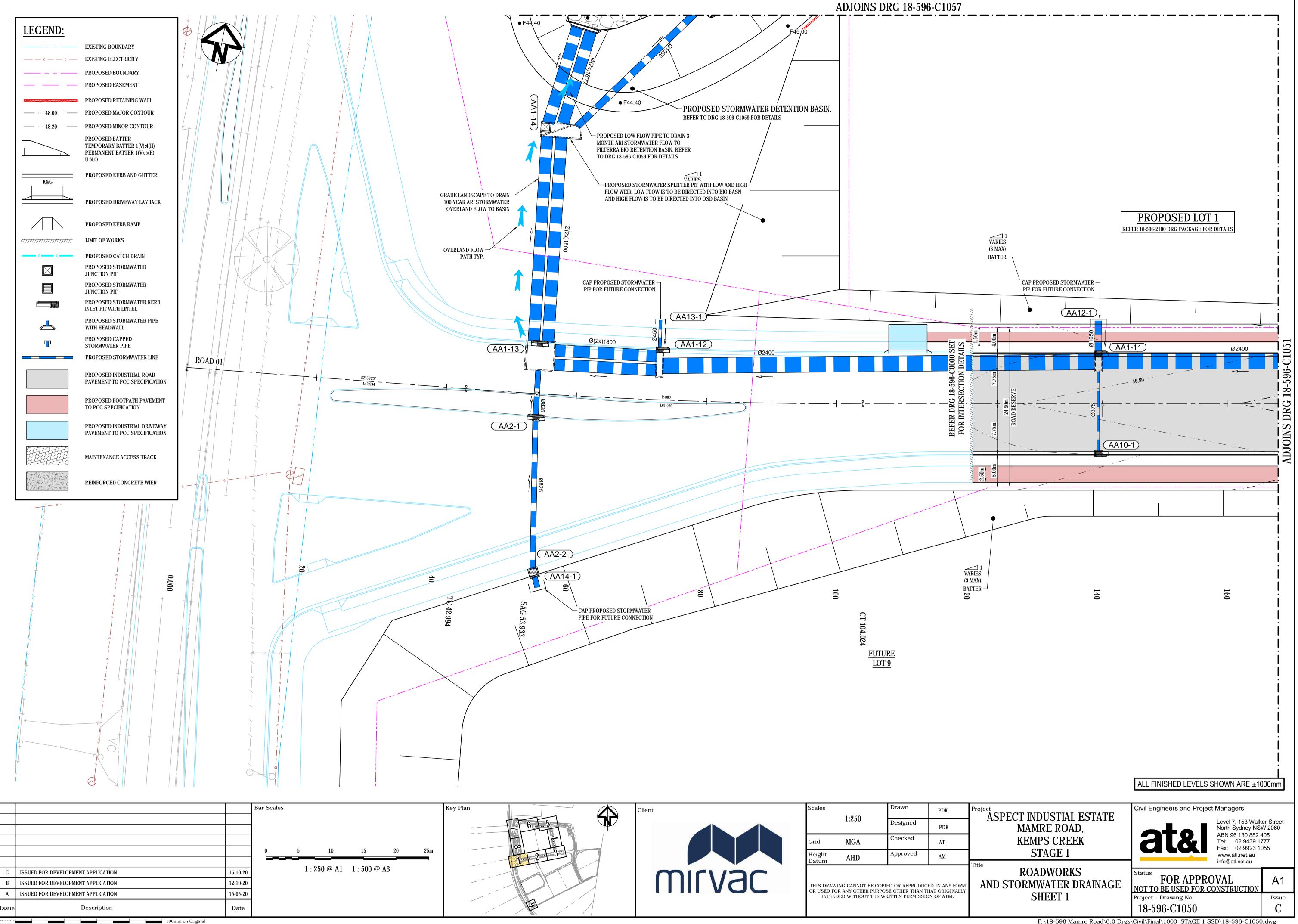


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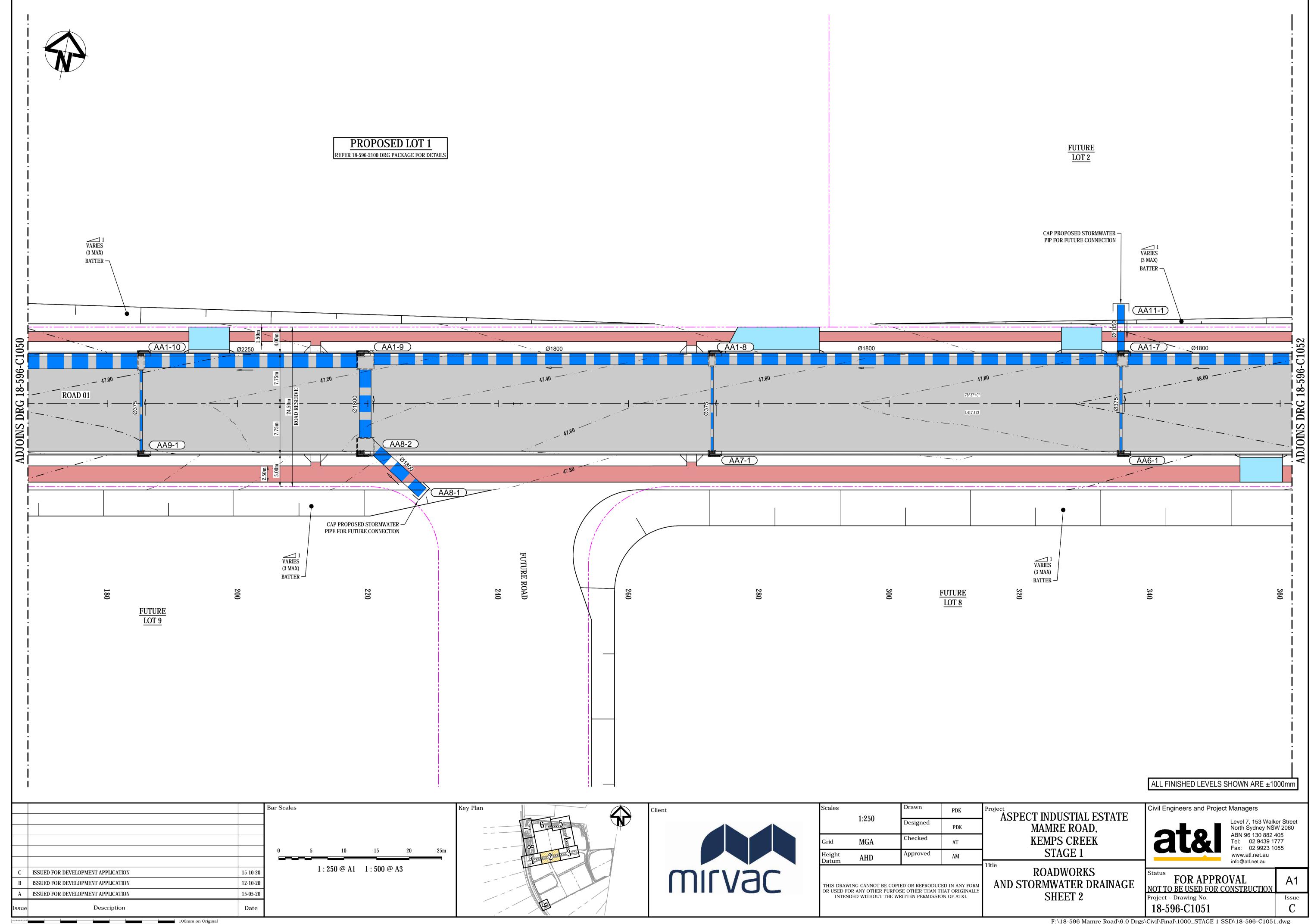






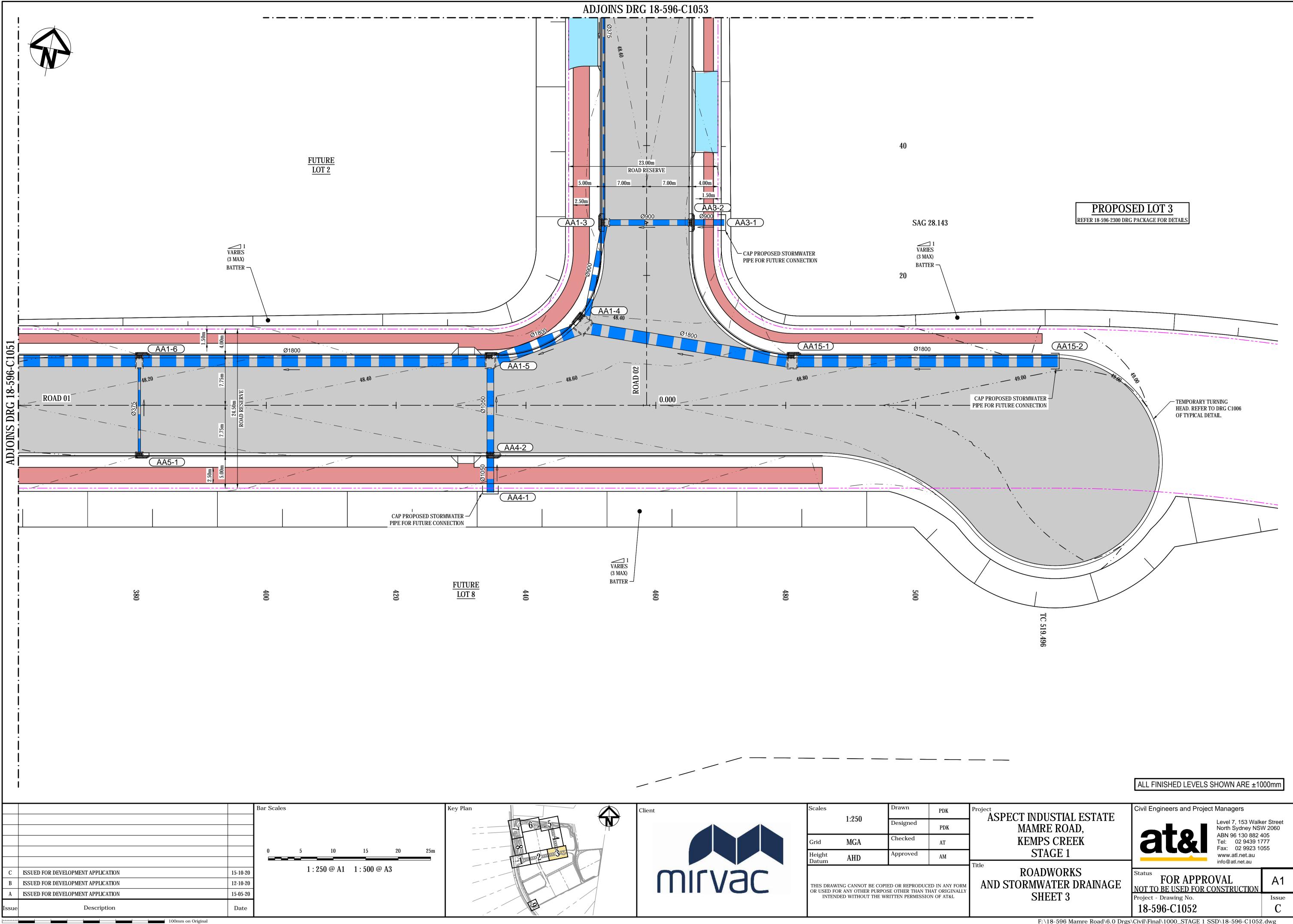
Ŋ			Client				Scales	1.950	Diawii	PDK	Project
	6	5						1:250	Designed	PDK	
							Grid	MGA	Checked	AT	]
	1.1.2	3-3-					Height Datum	AHD	Approved	AM	Title
	12		ſ	n	<b>rVa</b>	3C	OR USED F	WING CANNOT BE CO OR ANY OTHER PURF NDED WITHOUT THE	OSE OTHER THAN T	HAT ORIGINALLY	

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n	Client	Scales	1.050	Drawn	PDK	Projec
			1:250	Designed	PDK	1 '
		Grid	MGA	Checked	AT	]
		Height Datum	AHD	Approved	AM	Title
	mírvăc	OR USED FO	ING CANNOT BE COPI R ANY OTHER PURPO DED WITHOUT THE W	SE OTHER THAN TH	HAT ORIGINALLY	A

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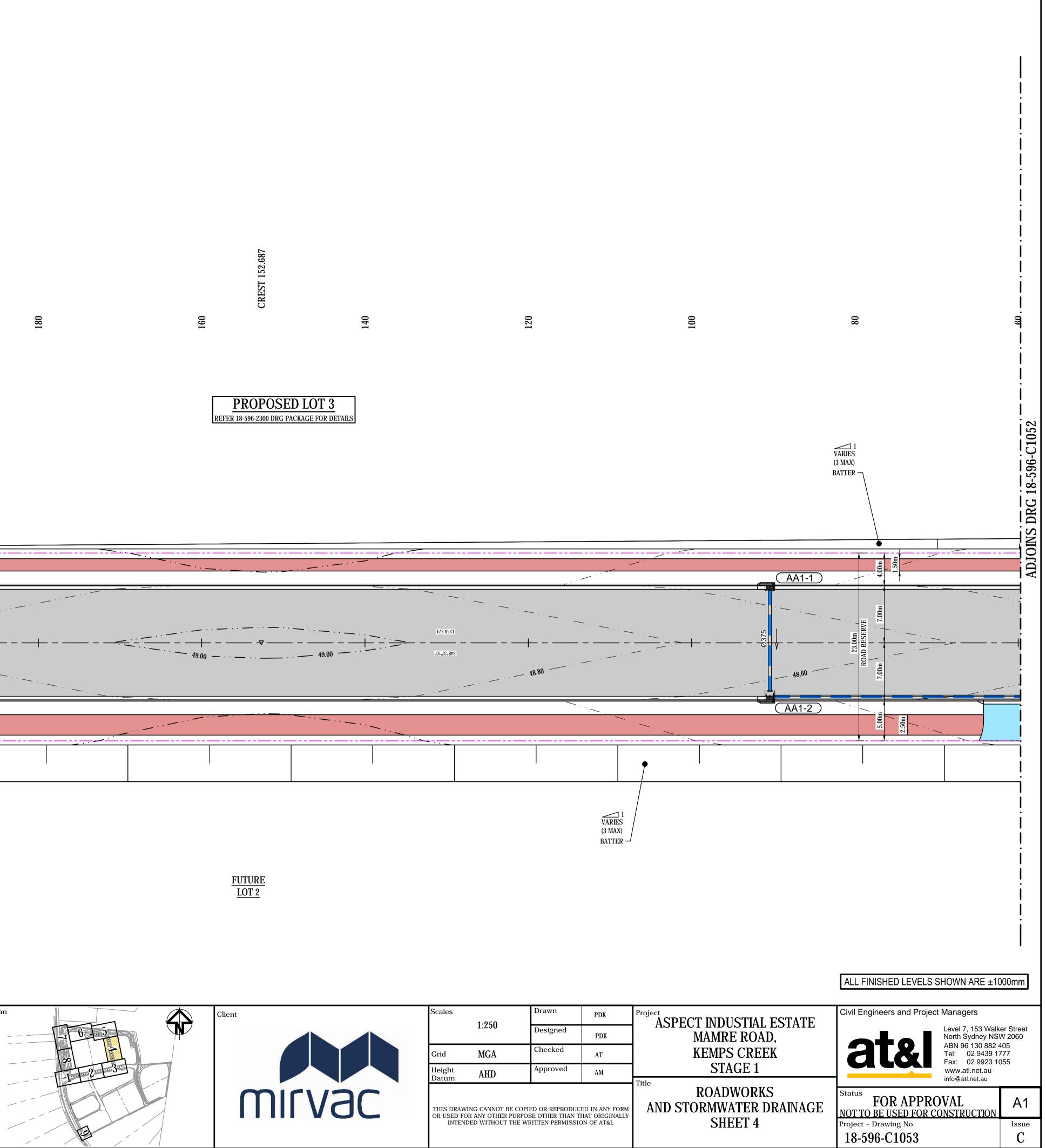




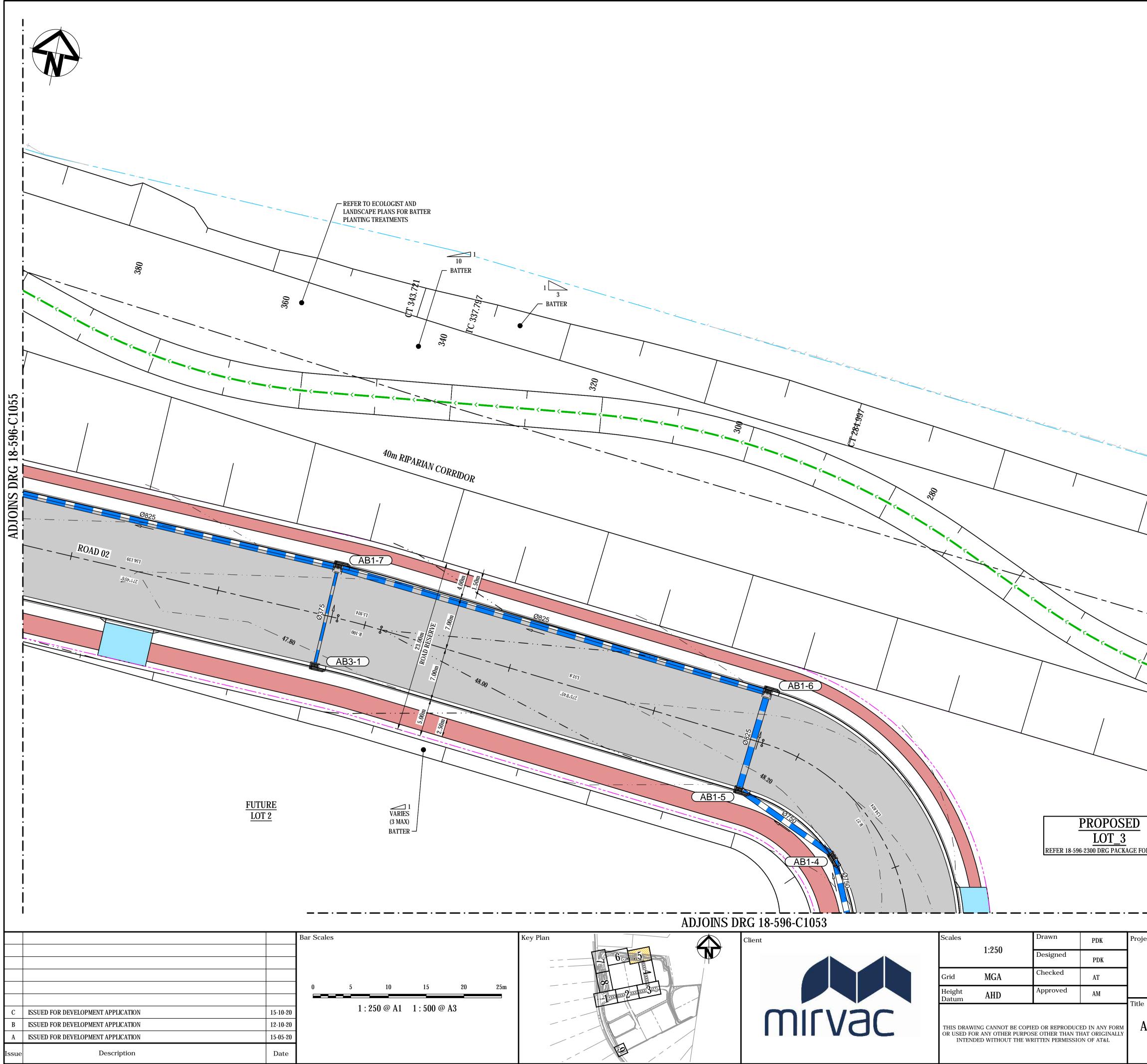
F:\18-596 Mamre Road\6.0 Drgs\Civil\Final\1000\_STAGE 1 SSD\18-596-C1052.dwg

ADJOINS DRG 18-596-C1054	TC 250.374	240	PROPOSED LOT 3 Refer 18-596-2300 DRG PACKAGE FOR DETAILS	220			200		
NDJOIN		32-1)							
1	Ø150	32-2)	· · · · · · · · · · · · · · · · · · ·					<u>B1-1)</u>	
	© ↓ 	· <del> </del>			·		0375		48.80
	Ø750 AB	1-3		Ø600				31-2	
			F :				<u> </u>		
	:          								
					Bar Scales				Kev Pla
					Bar Scales				Key Pla
					Bar Scales	10	15	20 25n	
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С В А	I SSUED FOR DEVELOPME ISSUED FOR DEVELOPME ISSUED FOR DEVELOPME	NT APPLICATION			0 5				

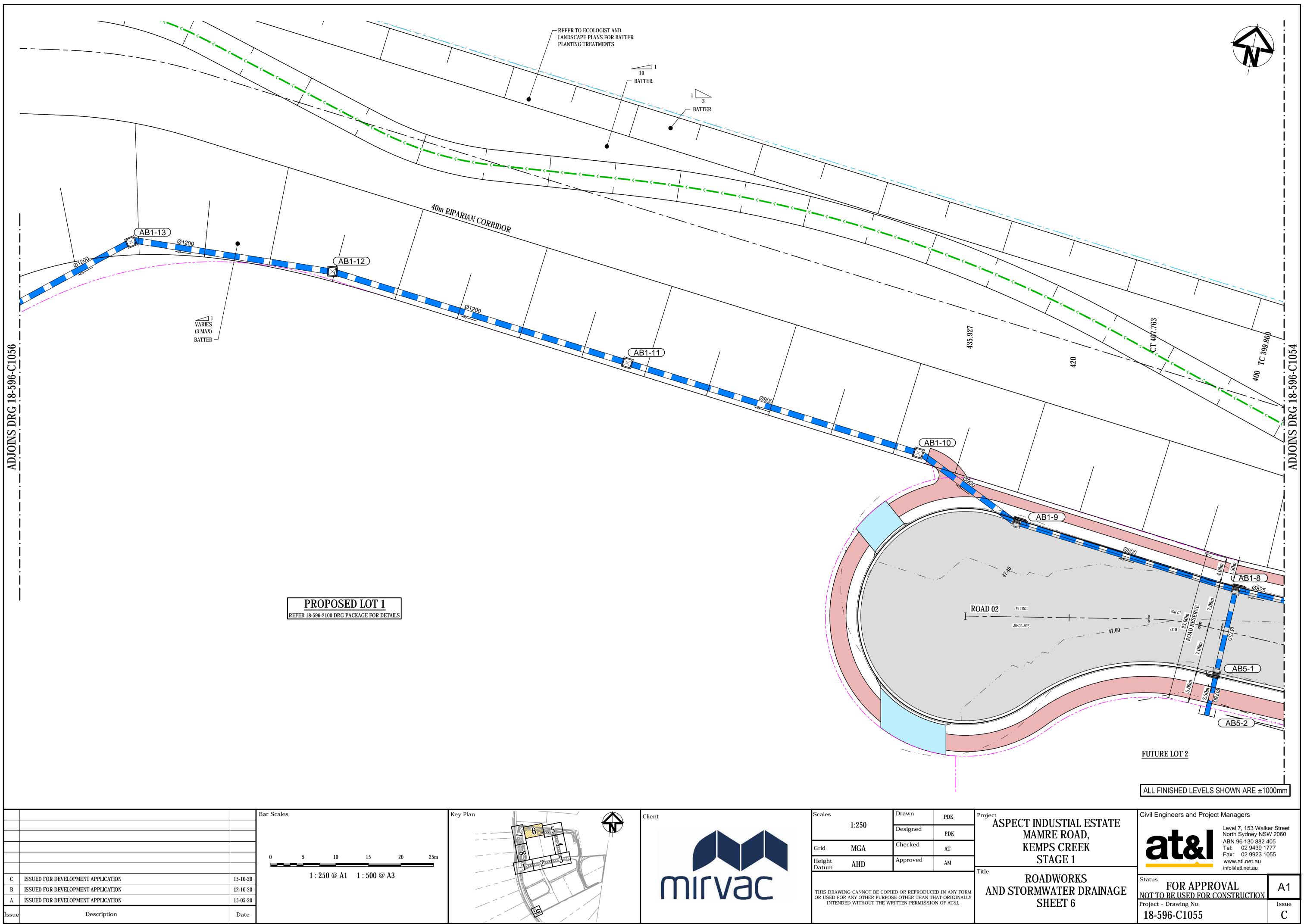
Client	Scales		Drawn	PDK	Projec
		1:250	Designed	PDK	
	Grid	MGA	Checked	AT	
	Height Datum	AHD	Approved	AM	Title
MILASC	OR USED FO	NG CANNOT BE COPI R ANY OTHER PURPO DED WITHOUT THE W	SE OTHER THAN TH	IAT ORIGINALLY	



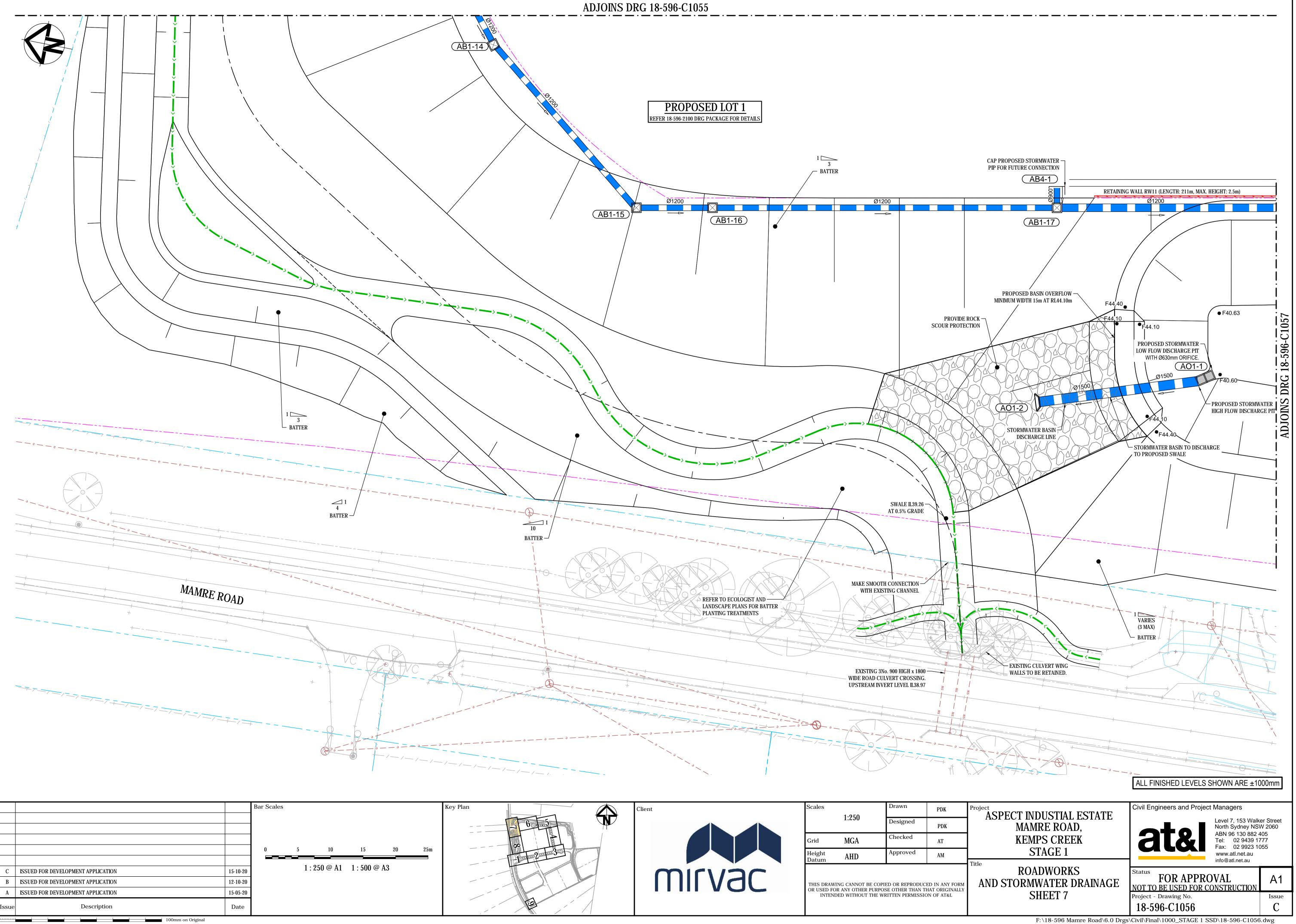
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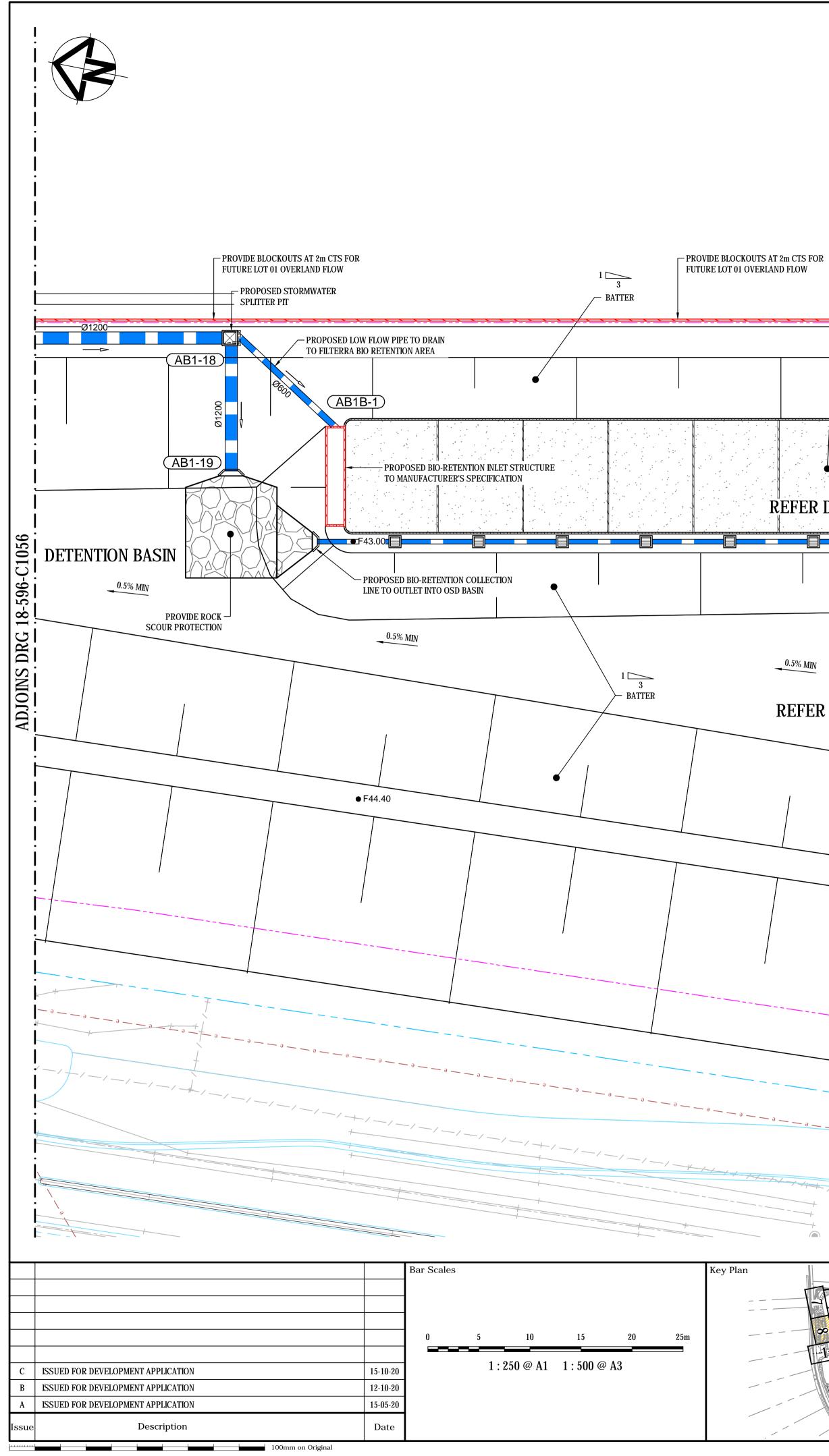
		_
		~
260		7
R DETAILS		/
		<u> </u>
<b>_</b> · <b></b> · <b>_</b>	ALL FINISHED LEVELS SHOWN ARE ±10	00mm
ASPECT INDUSTIAL ESTATE MAMRE ROAD, KEMPS CREEK	Civil Engineers and Project Managers Level 7, 153 Walke North Sydney NSV ABN 96 130 882 4 Tel: 02 9439 17 Fax: 02 9923 10 Warry at pot au	V 2060 05 77
STAGE 1 ROADWORKS	info@atl.net.au	500
AND STORMWATER DRAINAGE SHEET 5	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION Project - Drawing No.	A1 Issue
	18-596-C1054	C



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			1.950		I DK	5
6			1:250	Designed	PDK	
		Grid	MGA	Checked	АТ	
		Height Datum	AHD	Approved	AM	Title
	MILASC	OR USED FO	NG CANNOT BE COPI R ANY OTHER PURPO DED WITHOUT THE W	SE OTHER THAN T	HAT ORIGINALLY	A



					● F45.00			
REFER D	BIO RETENTION RAWING C1057 I		● F43.00	1,600m <sup>2</sup>				
		PROPOSE	D BIORETENTION UNDERDRAIN - ON LINES	_/				
0.5% MIN REFER	DETENTION BA		VO	MWATER DETENTION OLUME: 14,900m <sup>3</sup> MUM DEPTH: 3.5m		6 MIN	PROPOSED BIO- LINE TO	PR P-RETENTI O OUTLET
			• F44.4	0				
	6 5	Client		Scal	es 1:250	Drawn Designed	PDK	Proje
				Grid	1.	Checked Approved	PDK AT AM	
		n	nirva		ant AHD AHD S DRAWING CANNOT BE CO USED FOR ANY OTHER PURI INTENDED WITHOUT THE	PIED OR REPRODUC POSE OTHER THAN T	ED IN ANY FORM	Title

PROPOSED LOT 1 REFER 18-596-2100 DRG PACKAGE FOR DETAILS

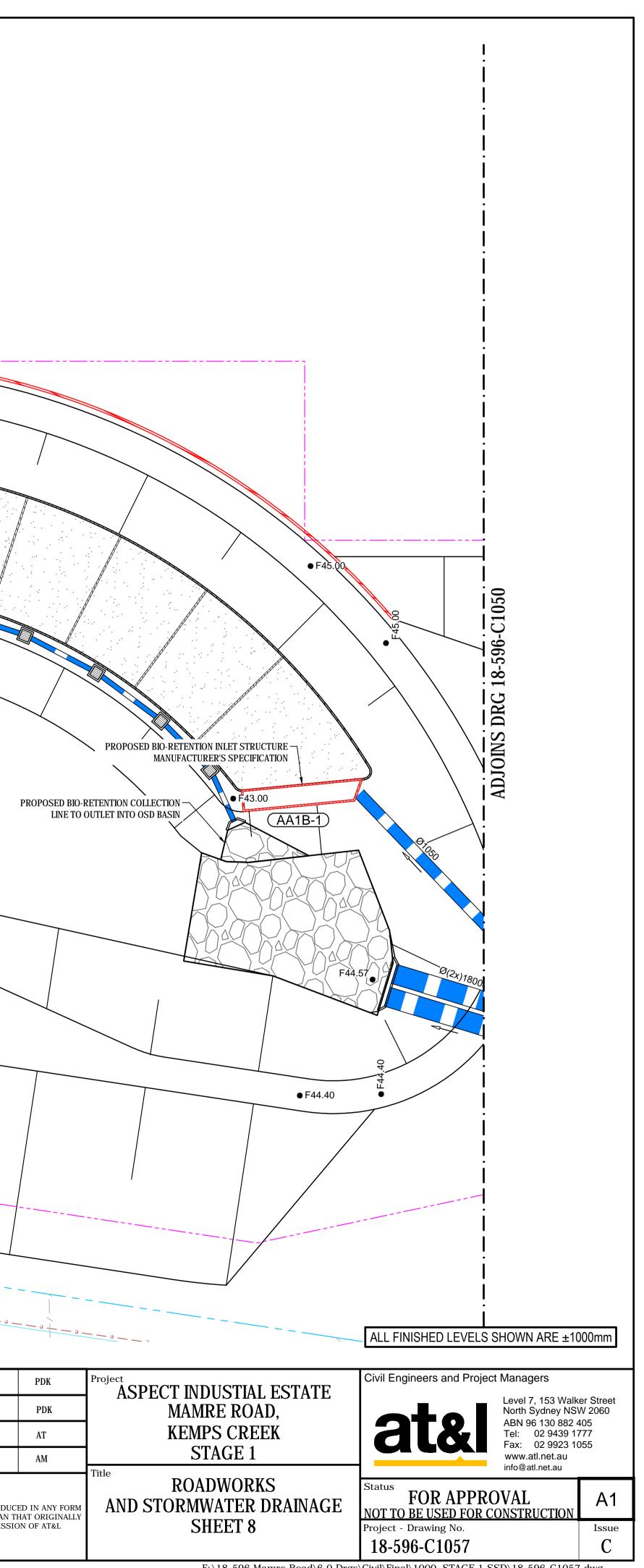
PROPOSED STORMWATER BIORETENTION.

RETAINING WALL RW11 (LENGTH: 200m, MAX. HEIGHT: 2.5m)

\_\_\_\_\_

PROPOSED FILTERRA BIO-RENTION SYSTEM TO BE

INSTALLED TO MANUFACTURER'S SPECIFICATION

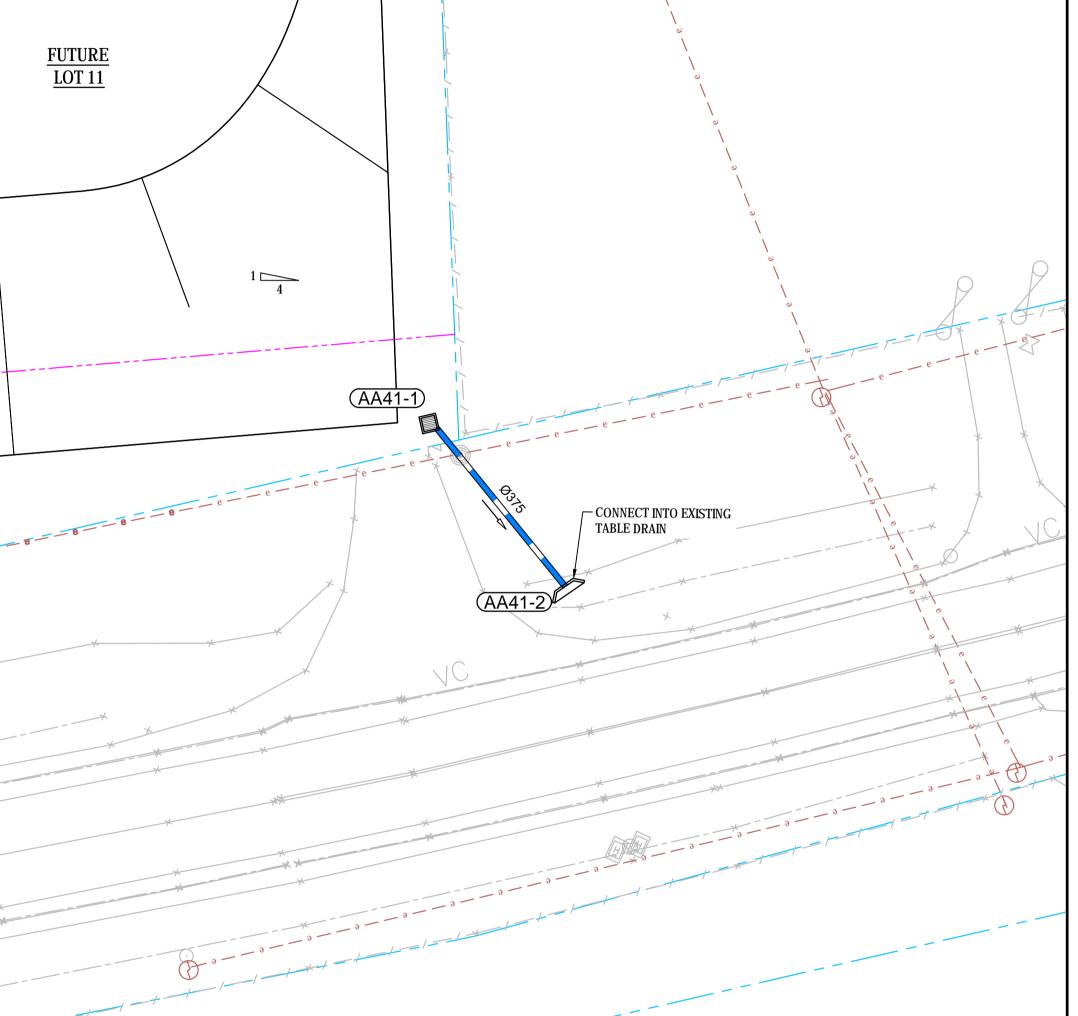


 $F: 18-596 \ Mamre \ Road \\ 6.0 \ Drgs \\ Civil \\ Final \\ 1000 \\ STAGE \ 1 \ SSD \\ 18-596-C1057. \\ dwg \\ Namre \ Road \\ Namre$ 

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	*

			Bar Scales						Key Plan
									-
			0	5	10	15	20	25m	-
					: 250 @ A1	1 · 500 @	٨.2		-
С	ISSUED FOR DEVELOPMENT APPLICATION	15-10-20		1.	. 2JU @ AI	1.300 @	AJ		
В	ISSUED FOR DEVELOPMENT APPLICATION	12-10-20							-
А	ISSUED FOR DEVELOPMENT APPLICATION	15-05-20							
Issue	Description	Date							_
	100mm on Original								

×						
an	Client	Scales		Drawn	PDK	Pro
			1:250	Designed	PDK	1
		Grid Height	MGA	Checked Approved	AT	4
	mirvac	OR USED FO	R ANY OTHER PUF	COPIED OR REPRODUC RPOSE OTHER THAN T E WRITTEN PERMISSIO	HAT ORIGINALLY	- Title



Civil Engineers and Project Managers ASPECT INDUSTIAL ESTATE MAMRE ROAD, 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 **KEMPS CREEK** STAGE 1 Title ROADWORKS Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION A1 AND STORMWATER DRAINAGE SHEET 9 Project - Drawing No. Issue 18-596-C1058 С

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ALL FINISHED LEVELS SHOWN ARE ±1000mm

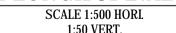
HORIZONTAL									
VC LENGTH									
GRADE							0.6%		
Datum RL43									
PROPOSED SURFACE LEVEL	48.130	48.190	48.310	48.550	48 670	48.790	48.910	49.030	49.150
EXISTING SURFACE LEVEL	46.701	46.752	46.897	47.272	47 950 47 950	46.950	46.732	46.478	47.112
CHAINAGE	350.000	360.000	380.000	420.000	440 000 000	460.000	480.000	500.000	519.496

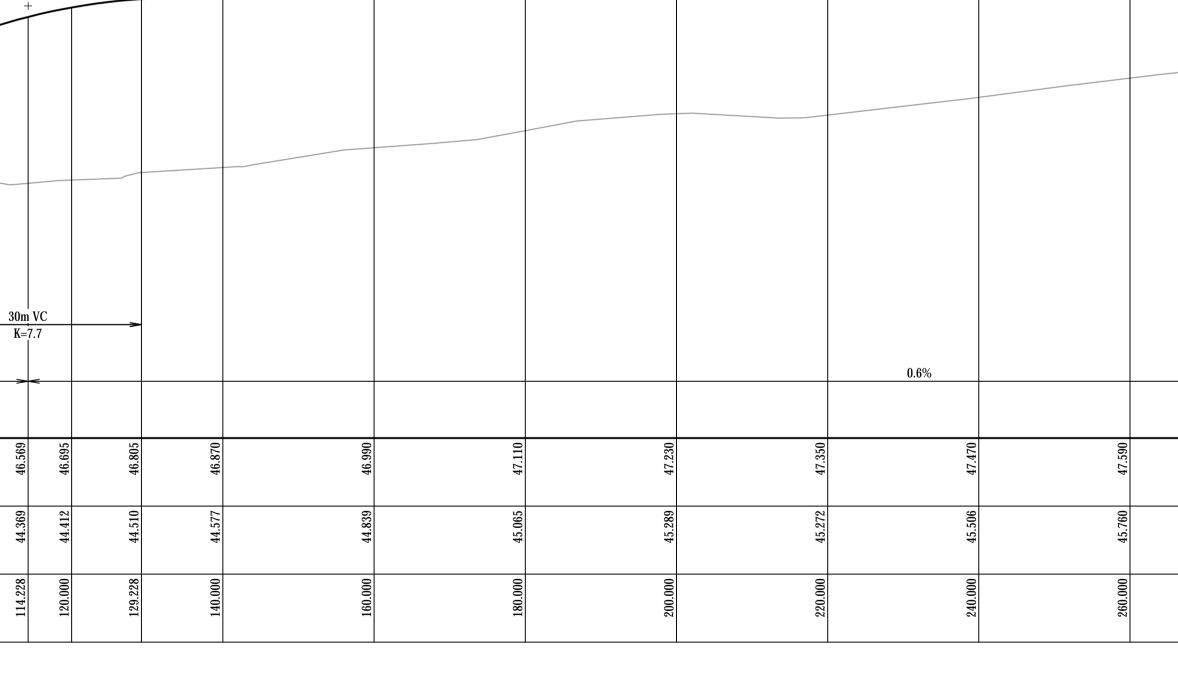
/ I.P.= 45.02 M.O.= 0.063											P.= 44.69	I.P.= 44.69 M.O.= 0.255							
									UV D	DAG									
HORIZONTAL								<				R-800				>			
VC LENGTH				1 VC 7.9	<b>^</b>				<b></b>		40m K=		>		<b>e</b>				
GRADE		<	-3.1%	V			-0.69	%			~~~>	<		4.5%		_			
Datum RL41 PROPOSED SURFACE LEVEL	45.466	45.334	45.084	44.997	44.960	44.866	44.848	44.810	44.796	44.820	44.945	45.229	45.590	46.040	46.075	46.241			
EXISTING SURFACE LEVEL	45.333	45.203	45.285	45.313	45.333	45.359	45.344	45.312	45.288	45.243	45.112	44.956	44.774	44.569	44.554	44.473			
CHAINAGE	0.000	4.228	14.228	20.000	24.228	40.000	42.994	49.228	53.933	60.000	69.228	80.000	89.228	99.228	100.000	104.024			
	đ	:					Ē	1 1								TP			

			Bar Scales								
				0	1	2	3	4	5m		
					1:	50 @ A1	1:100@	1:100 @ A3			
				0	10	20	30	40	50m		
С	ISSUED FOR DEVELOPMENT APPLICATION	15-10-20									
В	ISSUED FOR DEVELOPMENT APPLICATION	12-10-20	1 : 500 @ A1 1 : 1000 @ A3								
A	ISSUED FOR DEVELOPMENT APPLICATION	15-05-20									
Issue	Description	Date									

LP.= 46.715 M.O.= -0.146														
+														
30m VC K=7.7		>					0.6%							
46.569	46.695	46.870	000 000	47.110	47.230	47.350	027 27	017.17	47.590	47.830	47.950		48.070	
44.369	44.412	44.510	14 830 14 830	45.065	45.289	45.272	ר את ער שני שני		45.760	46.278	46.513		46.644	
114.228	120.000	129.228 140.000		180.000	200.000	220.000		000.042	260.000	300.000	320.000		340.000	
			<u>ROAD (</u>	D1 LONGITUDIN SCALE 1:500 HORL 1:50 VERT.										
	COF ANY OTHE	S DRAWING CAN PIED OR REPROD FORM OR USED I ER PURPOSE OTH	NOT BE UCED IN FOR ANY IER THAN	Client		Scales Grid Height Datum	MGA Che	awn PDK signed PDK ecked AT proved AM	MA KE	NDUSTIAL EST. MRE ROAD, MPS CREEK STAGE 1	ATE		anagers evel 7, 153 Walker S lorth Sydney NSW 20 BN 96 130 882 405 el: 02 9439 1777 ax: 02 9923 1055 www.atl.net.au nfo@atl.net.au	,
	W	T ORIGINALLY IN /ITHOUT THE WRI PERMISSION OF /	ITTEN	MIC	vac				LONGIT	ROAD 01 UDINAL SECTIO SHEET 1	)N Project - I 18-59	FOR APPROV BE USED FOR CON Drawing No. 6-C1070	STRUCTION	A1 Issue C







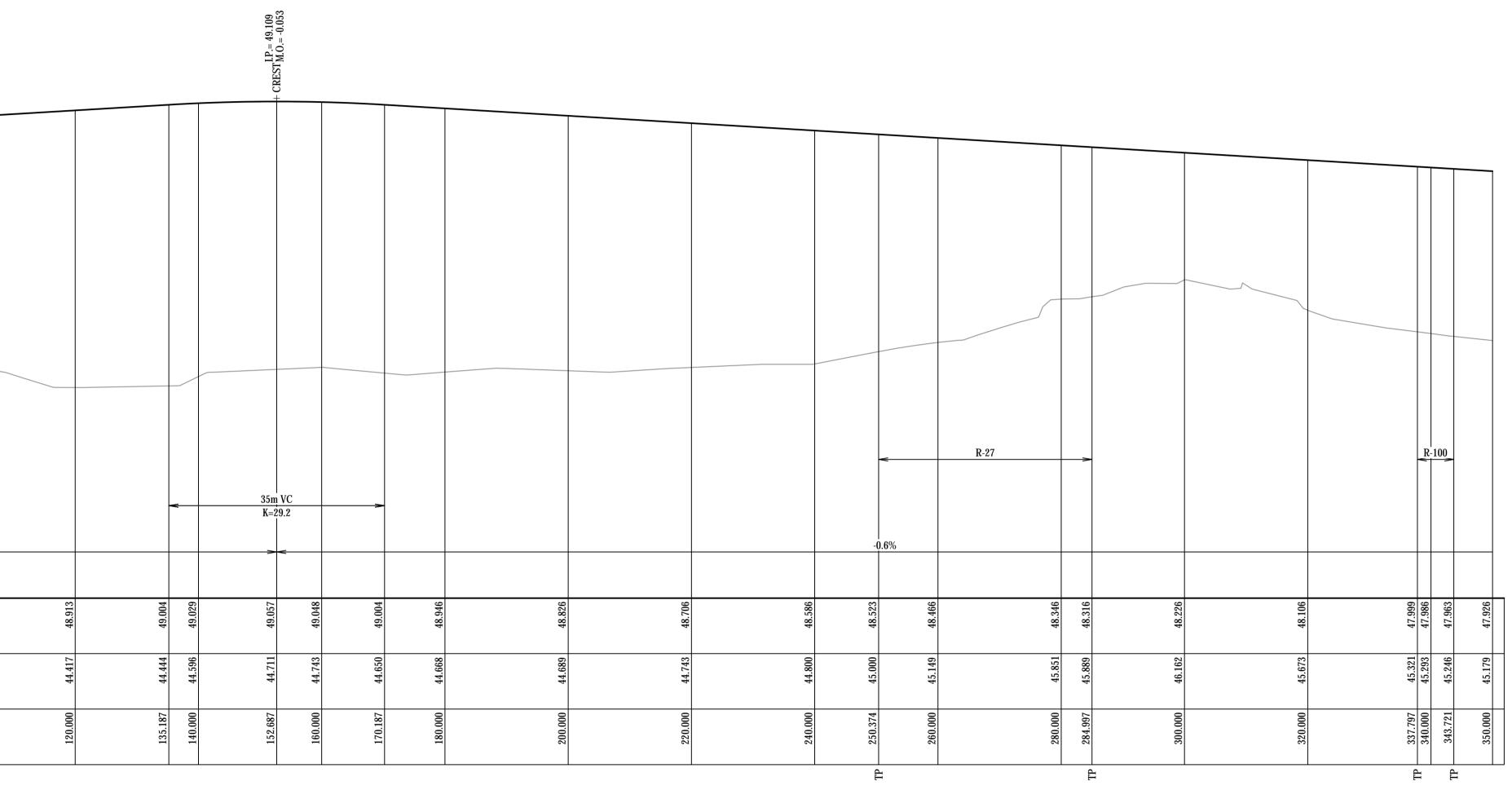


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			I.P.= 48.319 M.O.= 0.088	<del>ن</del>						
				SAG						
HORIZONTAL										
VC LENGTH		~	25m V K=8.9	/ <u>C</u> 9	>					
GRADE Patum RL41		-2.29	<u>%</u>						0.6%	
PROPOSED SURFACE LEVEL	48.781	48.594	48.415 48.407	48.378	48.394	48.433	48.553	48.673	48.793	
XISTING SURFACE LEVEL	46.963	46.953	46.734 46.721	46.612	46.536	46.480	46.120	45.337	44.837	
CHAINAGE	0.000	8.500	20.000 21.000	28.143	33.500	40.000	00009	80.000	100.000	

			Bar Scales						
				0	1	2	3	4	5m
							1 100 0		
					1:5	0 @ A1	1:100@	A3	
				0	10	20	30	40	50m
С	ISSUED FOR DEVELOPMENT APPLICATION	15-10-20							
В	ISSUED FOR DEVELOPMENT APPLICATION	12-10-20			1:50	0 @ A1	1:1000 @	₽ A3	
А	ISSUED FOR DEVELOPMENT APPLICATION	15-05-20							
Issue	Description	Date							

100mm on Original



# ROAD 02 LONGITUDINAL SECTION SCALE 1:500 HORL 1:50 VERT.



ASPECT INDUSTIAL ESTATE MAMRE ROAD, KEMPS CREEK STAGE 1	Civil Engineers and Project Managers Level 7, 153 Walk North Sydney NSV ABN 96 130 882 4 Tel: 02 9439 17 Fax: 02 9923 10 www.atl.net.au	N 2060 105 777
ROAD 02	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION	A1
LONGITUDINAL SECTION SHEET 1	Project - Drawing No. 18-596-C1071	Issue C

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GRADE

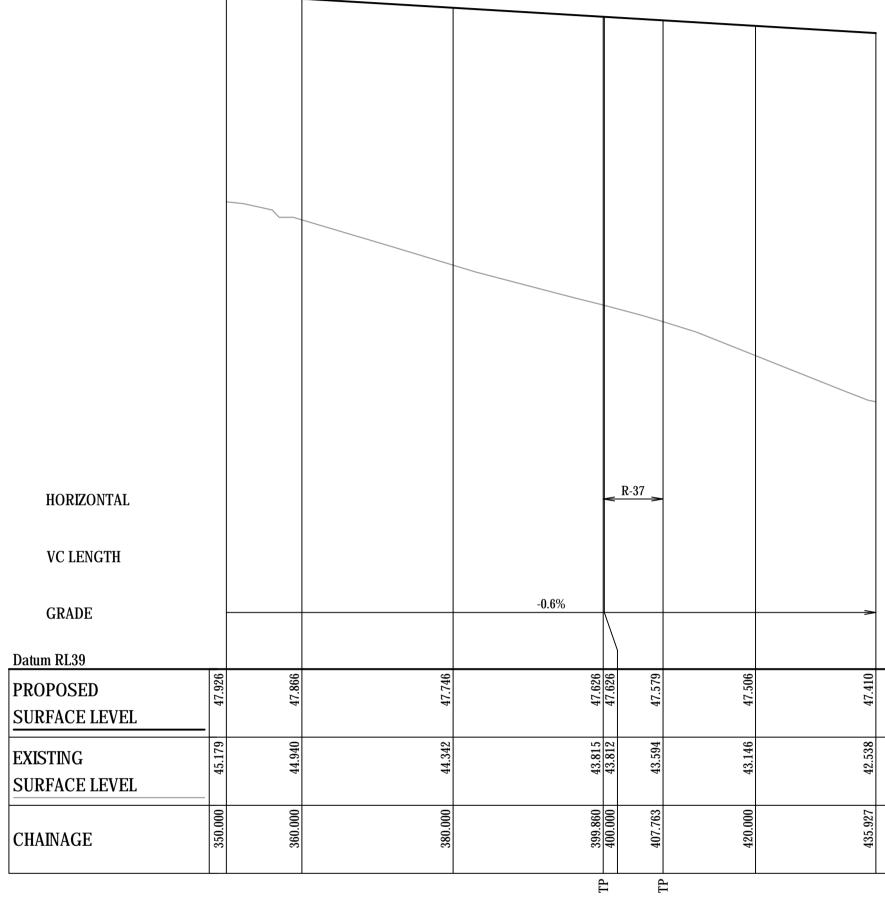
Datum RL39 PROPOSED SURFACE LEVEL

EXISTING

CHAINAGE

<u> </u>	1								
			Bar Scales						
				0	1	2	3	4	5m
					1:	50 @ A1	1:100@	A3	
				0	10	20	30	40	50m
С	ISSUED FOR DEVELOPMENT APPLICATION	15-10-20				-			
В	ISSUED FOR DEVELOPMENT APPLICATION	12-10-20			1:5	00 @ A1	1 : 1000 @	₽ A3	
Α	ISSUED FOR DEVELOPMENT APPLICATION	15-05-20							
Issue	Description	Date	]						

100mm on Original

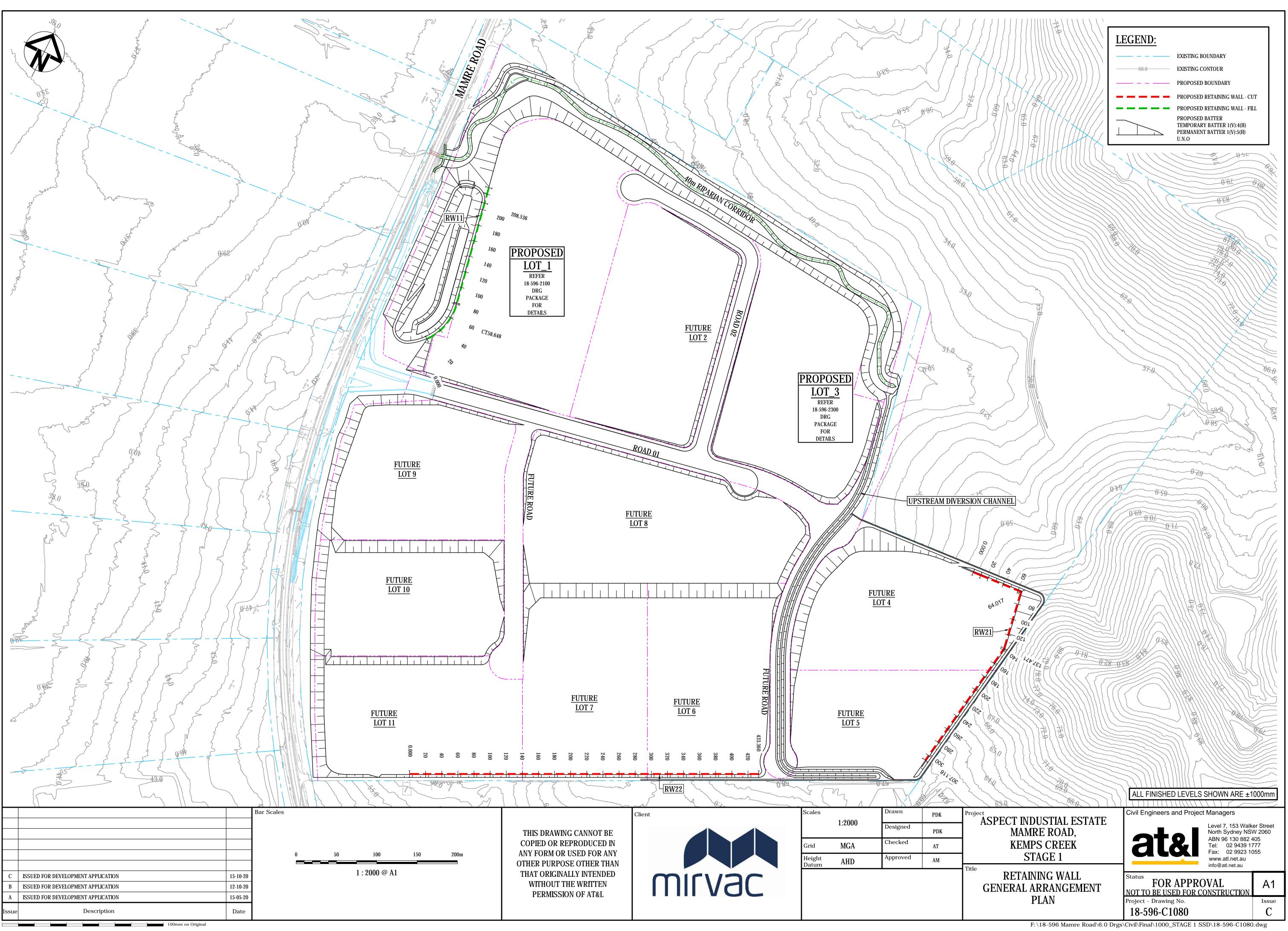




SCALE 1:500 HORI. 1:50 VERT.

	Civil Engineers and Project Managers	
ASPECT INDUSTIAL ESTATE MAMRE ROAD, KEMPS CREEK STAGE 1	ABN 96 130 882 4 Tel: 02 9439 17 Fax: 02 9923 10 www.atl.net.au	N 2060 105 777
	info@atl.net.au	
ROAD 02	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION	A1
LONGITUDINAL SECTION	Project - Drawing No.	Issue
SHEET 2	18-596-C1072	С

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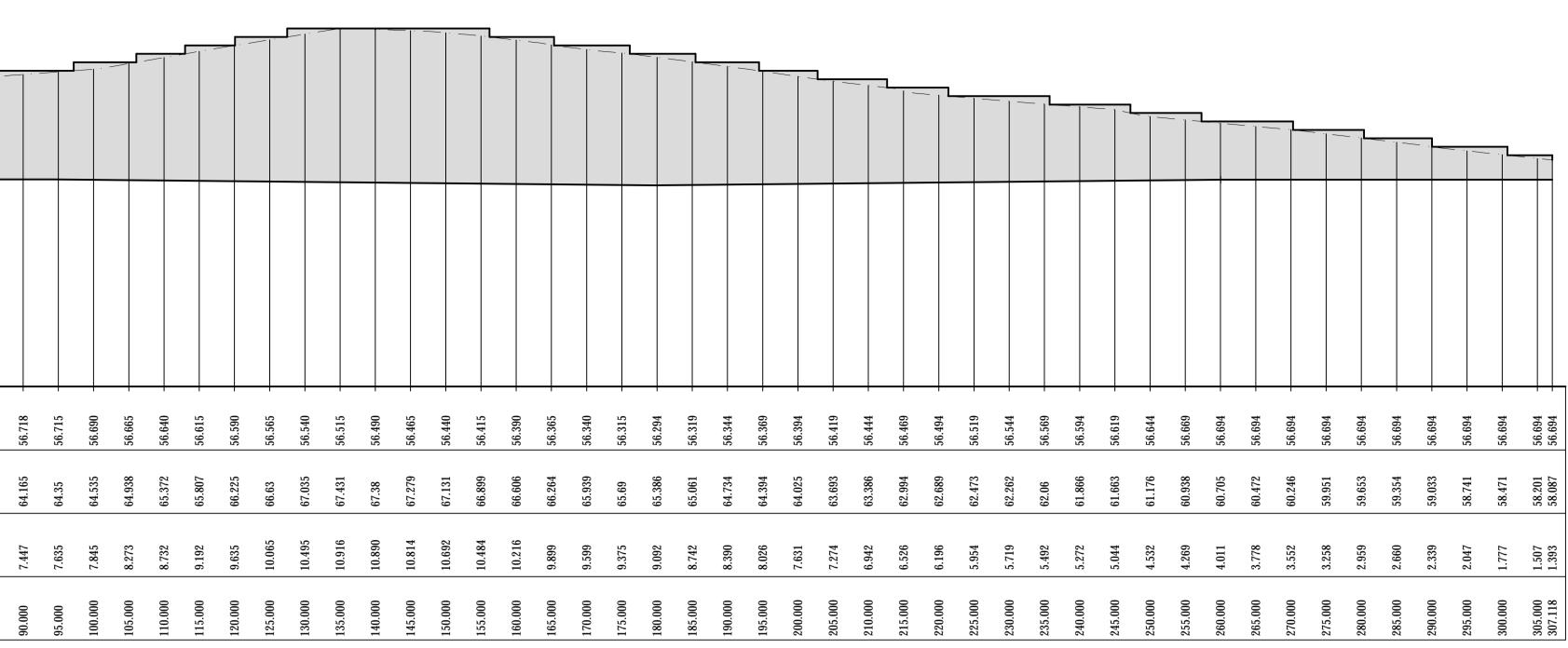


			T		ſ.	T													
Datum RL42																			
BOTTOM OF RETAINING WALL	56.695 -		56.712 -	56.720 -	56.729 -	56.737	56.745 -	56.743 -	56.726	56.710 -	56.711 -	56.712 -	56.713 -	56.714	56 715 -	- CT/.0C	56.716 -	56.717 -	56.718 -
TOP OF RETAINING WALL	56.695	57.225	57.603	57.989	58.307	58.705	59.103	59.502	60	60.597	61.255	61.913	62.574	63.239	63 191	00.464	63.609	63.795	63.98
HEIGHT OF RETAINING WALL	0.000	0.521	0.890	1.268	1.578	1.968	2.358	2.759	3.274	3.887	4.544	5.201	5.861	6.525	ß 710	017.0	6.894	7.078	7.262
CHAINAGE	0.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	000 02	000.07	75.000	80.000	85.000

			_								
		$\land$									
Datum RL31											
BOTTOM OF		'				-		1			
RETAINING WALL	45.089	45.089	15 000	40.009	45.089	45.089	45.089	15 080	000.04	40.089	45.089
TOP OF		~				•					
RETAINING WALL	45.137	46.388	11 71	47.41	47.415	47.419	47.423	26V 2V	191.11	47.431	47.435
HEIGHT OF											
RETAINING WALL	0.048	1.299	666 6	776.7	2.326	2.330	2.334	9 228	000.2	2.342	2.347
CHABIACE				_	_	_		_		_	
CHAINAGE	0.000	5.000	10,000	000.01	15.000	20.000	25.000	30.000	JUU.UU	30.000	40.000

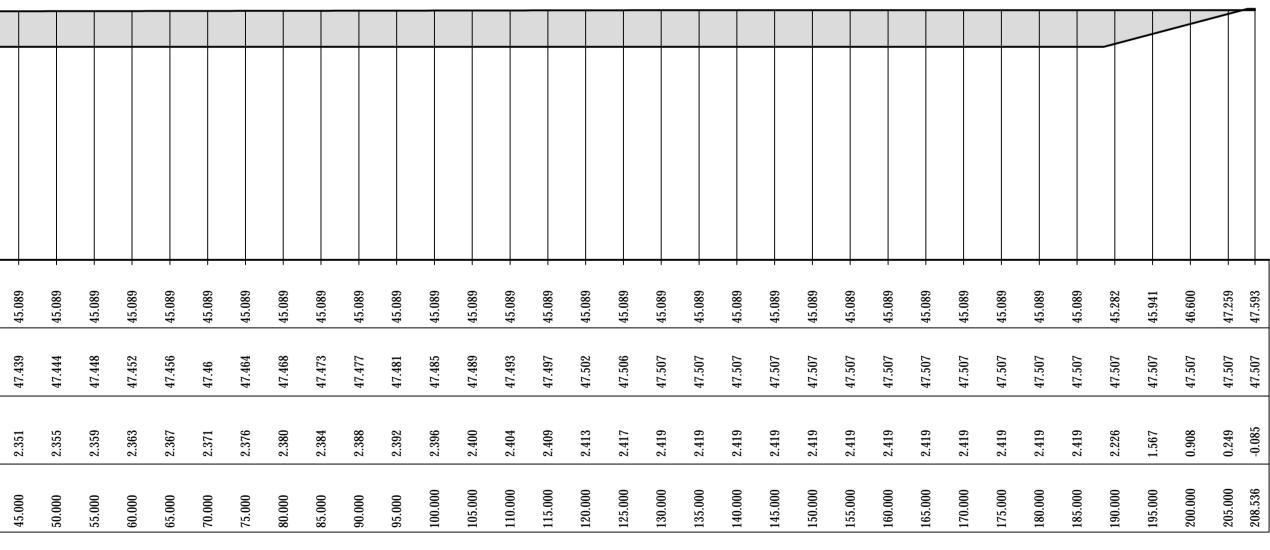
			Bar Scales					
			0	10	20	30	40	50m
			ĥ	1:5	00 @ A1	1 : 1000 @	₽ A3	
С	ISSUED FOR DEVELOPMENT APPLICATION	15-10-20	0	5	10	15	20	25m
В	ISSUED FOR DEVELOPMENT APPLICATION	12-10-20				1 500 0		
Α	ISSUED FOR DEVELOPMENT APPLICATION	15-05-20		1:2	250 @ AI	1:500@	' A3	
Issue	Description	Date						

100mm on Original



**RETAINING WALL RW21 PROFILE** 

SCALE 1:500 HORI 1:250 VERT.



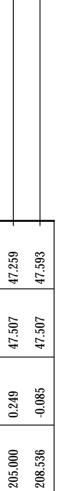
## **RETAINING WALL RW11 PROFILE** SCALE 1:500 HORI. 1:250 VERT.

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Scales		Drawn	PDK	Proje
	1:500 (H) 1:250 (V)	Designed	PDK	
Grid	MGA	Checked	AT	
Height Datum	AHD	Approved	AM	
				Title

NOTE: RETAINING WALL DESIGN AND DETAIL TO BE CONFIRMED AT DETAILED DESIGN STAGES.



Civil Engineers and Project Managers **ASPECT INDUSTIAL ESTATE** Level 7, 153 Walker Street North Sydney NSW 2060 MAMRE ROAD, ABN 96 130 882 405 **KEMPS CREEK** Tel: 02 9439 1777 Fax: 02 9923 1055 STAGE 1 www.atl.net.au info@atl.net.au Status FOR APPROVAL A1 **RETAINING WALL** NOT TO BE USED FOR CONSTRUCTION PROFILES Project - Drawing No. Issue 18-596-C1081 SHEET 1 С

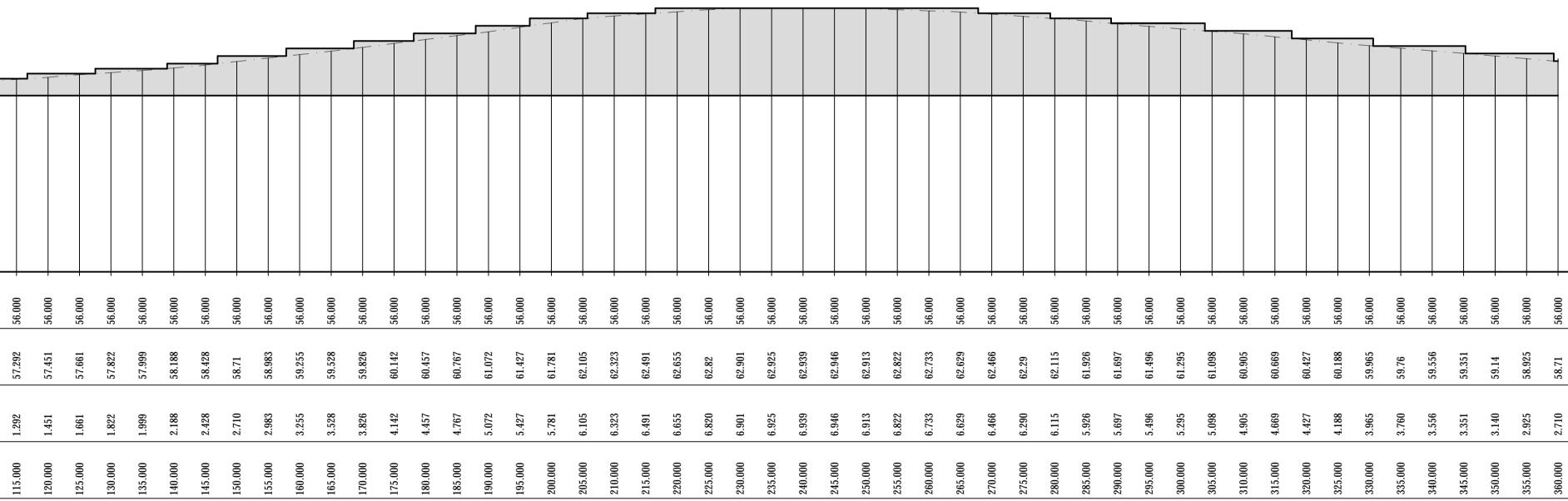
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	SUED FOR DEVELOPMEN SUED FOR DEVELOPMEN										-10-20	Bar S	Scales	0		10 1 5	: 500 (	20 @ A1 10	1:	30 : <b>100</b> 0 15	) @ A	40 3 20		50
												Bar S	Scales				: 500 (	@ A1	1:		) @ A	.3		5(
												Bar S	Scales			10		20		30		40		5(
+												Bar S	Scales	5										
												Bar S	Scales	5										
		0.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000	75.000	80.000	85.000	90.000	95.000	100.000	105.000	
	AINING WALL	0.000	0.423	0.847	0.997	) 1.125	) 1.244	) 1.342	) 1.359	0 1.363	0 1.412	) 1.430	) 1.429	) 1.429	) 1.429	) 1.409	) 1.382	) 1.353	) 1.322	) 1.298	) 1.260	0 1.230	00 1.180	
	GHT OF	00	23	47	97	25	44	42	59	63	12	30	29	29	29	60	82	53	22	86	60	30	80	
TOP RET	° OF AINING WALL	56	56.423	56.847	56.997	57.125	57.244	57.342	57.359	57.363	57.412	57.43	57.429	57.429	57.429	57.409	57.382	57.353	57.322	57.298	57.26	57.23	57.18	
	TOM OF AINING WALL	56.000 -	56.000 -	56.000 -	- 26.000	56.000 -	56.000 -	56.000 -	- 26.000	56.000 -	56.000 -	56.000 -	56.000 -	- 26.000	56.000 -	- 26.000	56.000 -	56.000 -	56.000 -	56.000 -	56.000 -	56.000 -	56.000 -	

													_			
			-			_	-		-						<b></b>	
Datum RL42																
<b>BOTTOM OF</b>		•	•	•	•	•		•	·	·	·		·		•	•
<b>RETAINING WALL</b>	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000
	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
TOP OF			2	6	4	8	1	5	9	6	7	5	×	×	5	5
<b>RETAINING WALL</b>	58.71	58.49	58.242	57.949	57.654	57.358	57.111	56.925	56.746	56.579	56.467	56.385	56.288	56.188	56.085	56.015
HEIGHT OF	0	0	[3	6	4	×	1	22	9	6,	2	55	<u>∞</u>	œ	22	5
RETAINING WALL	2.710	2.490	2.242	1.949	1.654	1.358	1.111	0.925	0.746	0.579	0.467	0.385	0.288	0.188	0.085	0.015
CHAINAGE	360.000	365.000	370.000	375.000	380.000	385.000	390.000	395.000	400.000	405.000	410.000	415.000	420.000	425.000	430.000	433.360
	36(	36	37(	37:	38(	38	39(	39	40(	40;	41(	41:	42(	42.	43(	43;

**RETAINING WALL RW22 PROFILE** 

SCALE 1:500 HORI. 1:250 VERT.



**RETAINING WALL RW22 PROFILE** SCALE 1:500 HORL 1:250 VERT.

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Scales		Drawn	PDK	Proje
	1:500 (H) 1:250 (V)	Designed	PDK	
Grid	MGA	Checked	AT	
Height Datum	AHD	Approved	AM	
			•	Title

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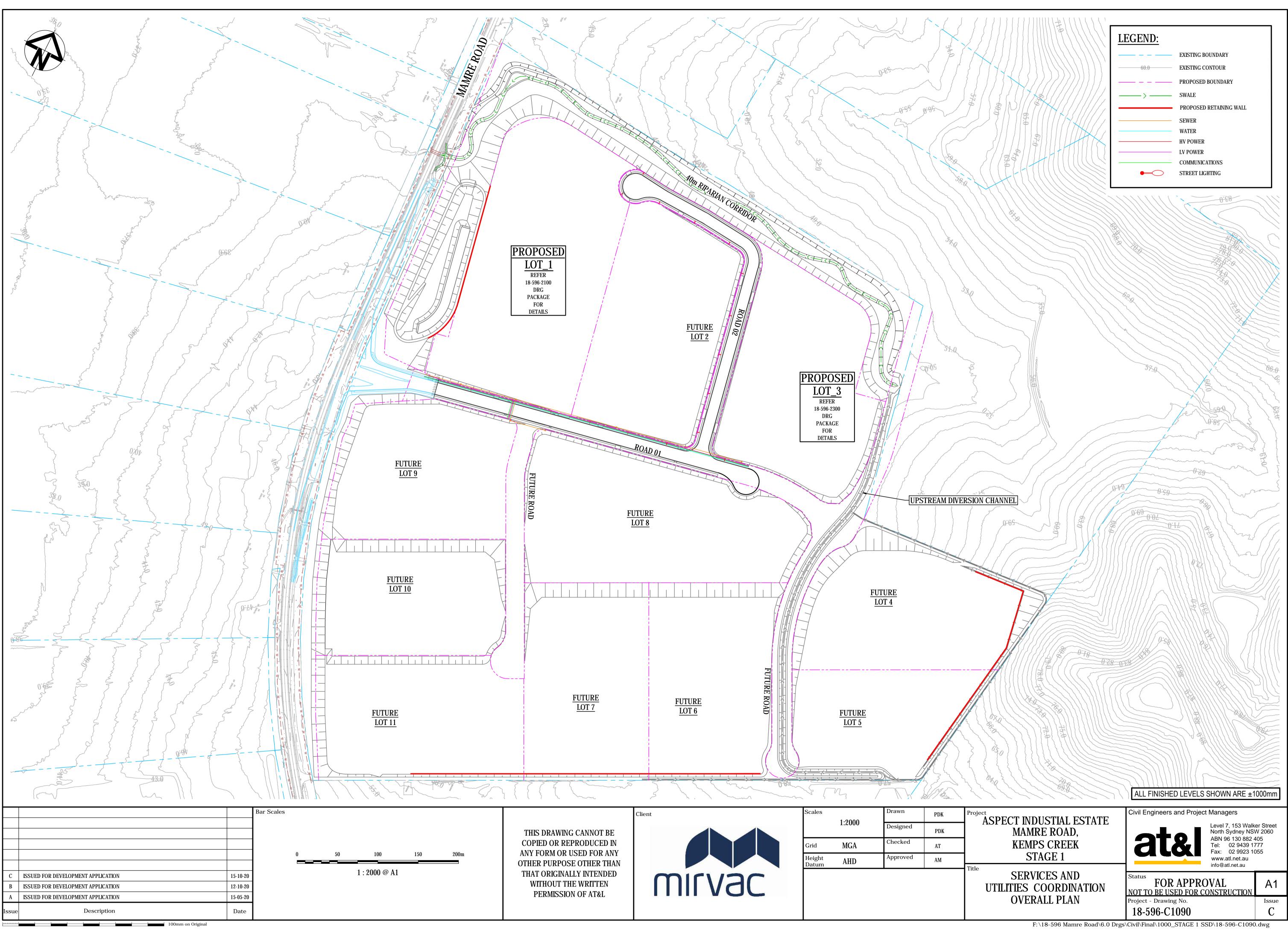
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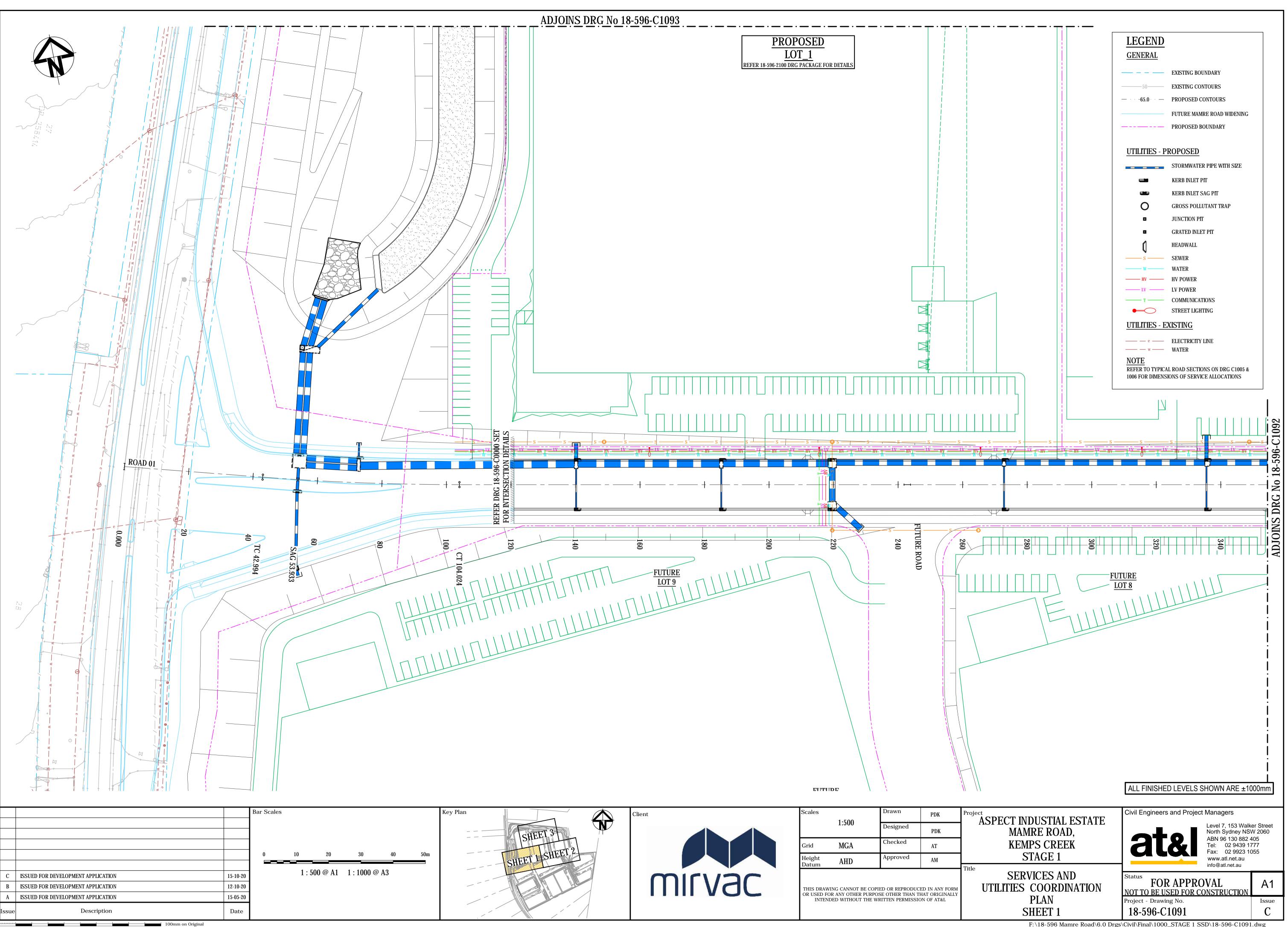
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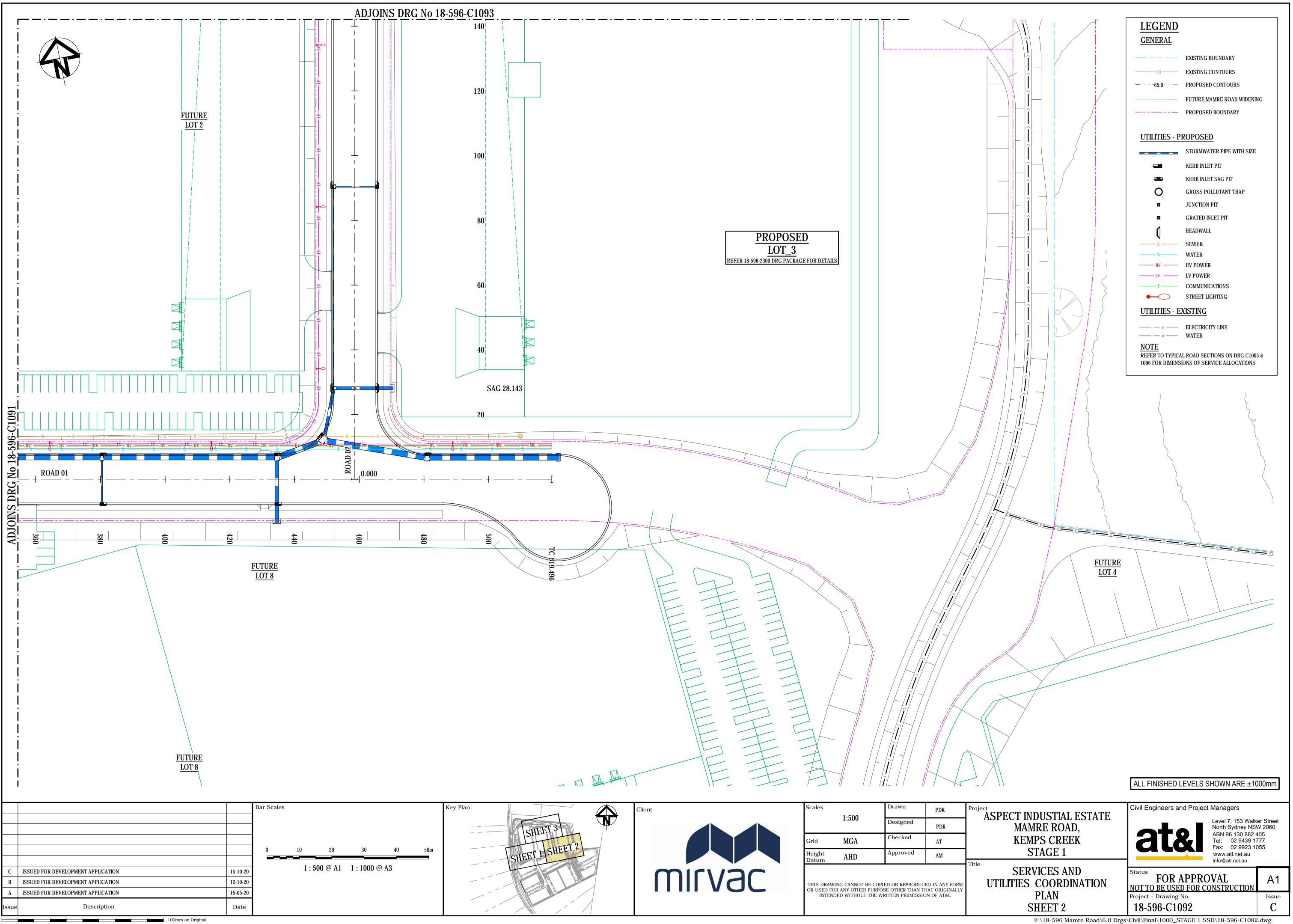
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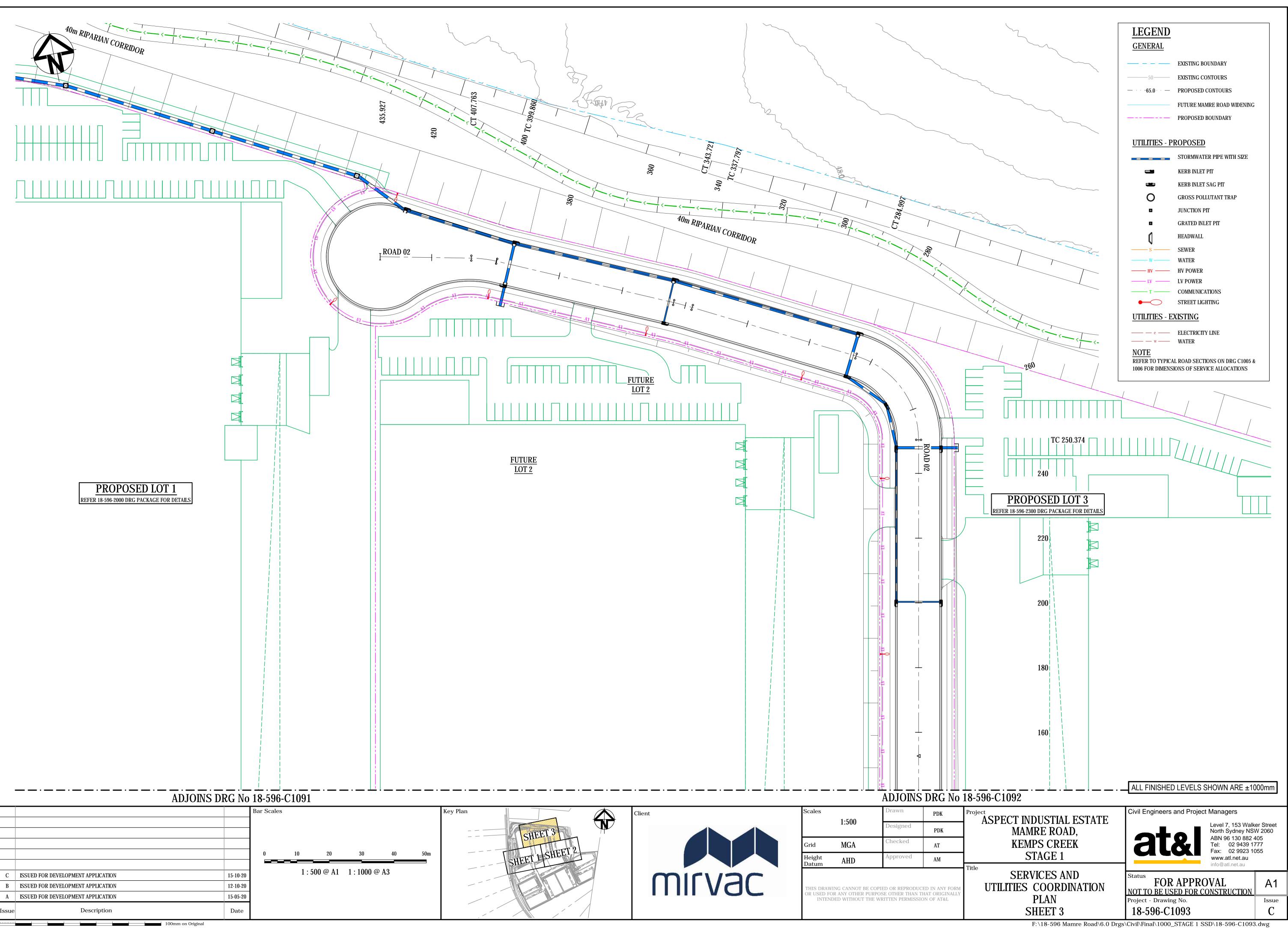
### NOTE: RETAINING WALL DESIGN AND DETAIL TO BE CONFIRMED AT DETAILED DESIGN STAGES.

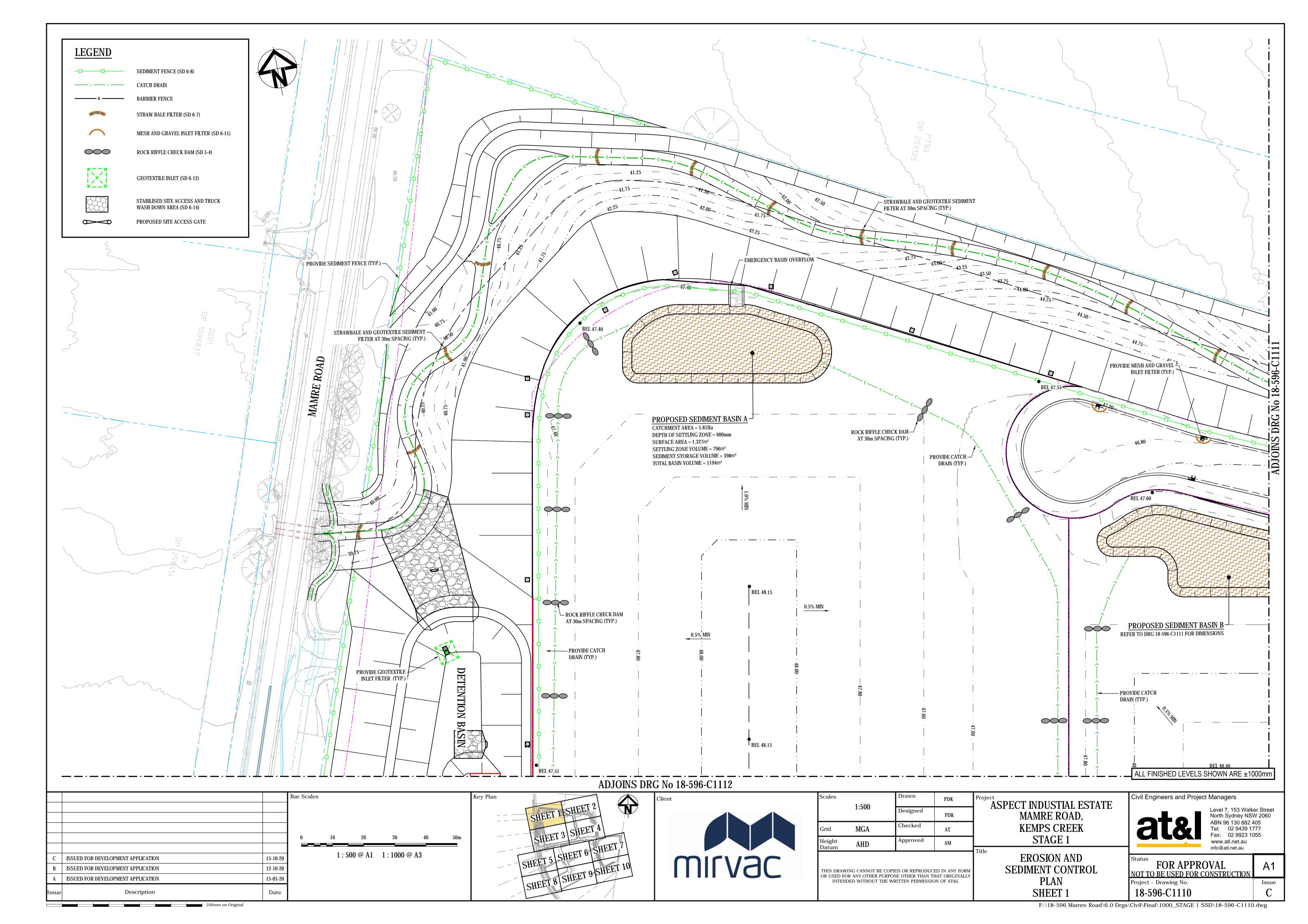


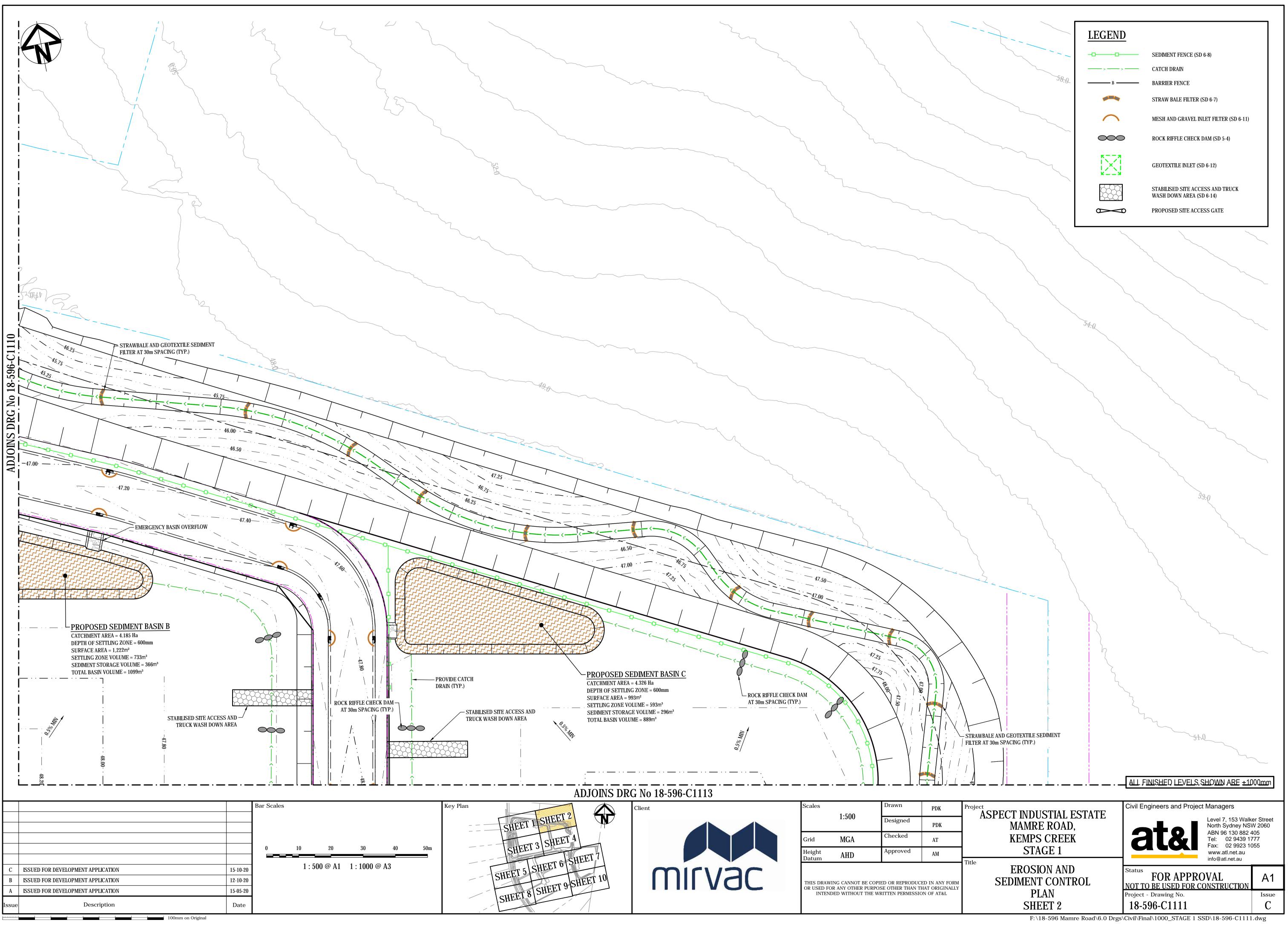


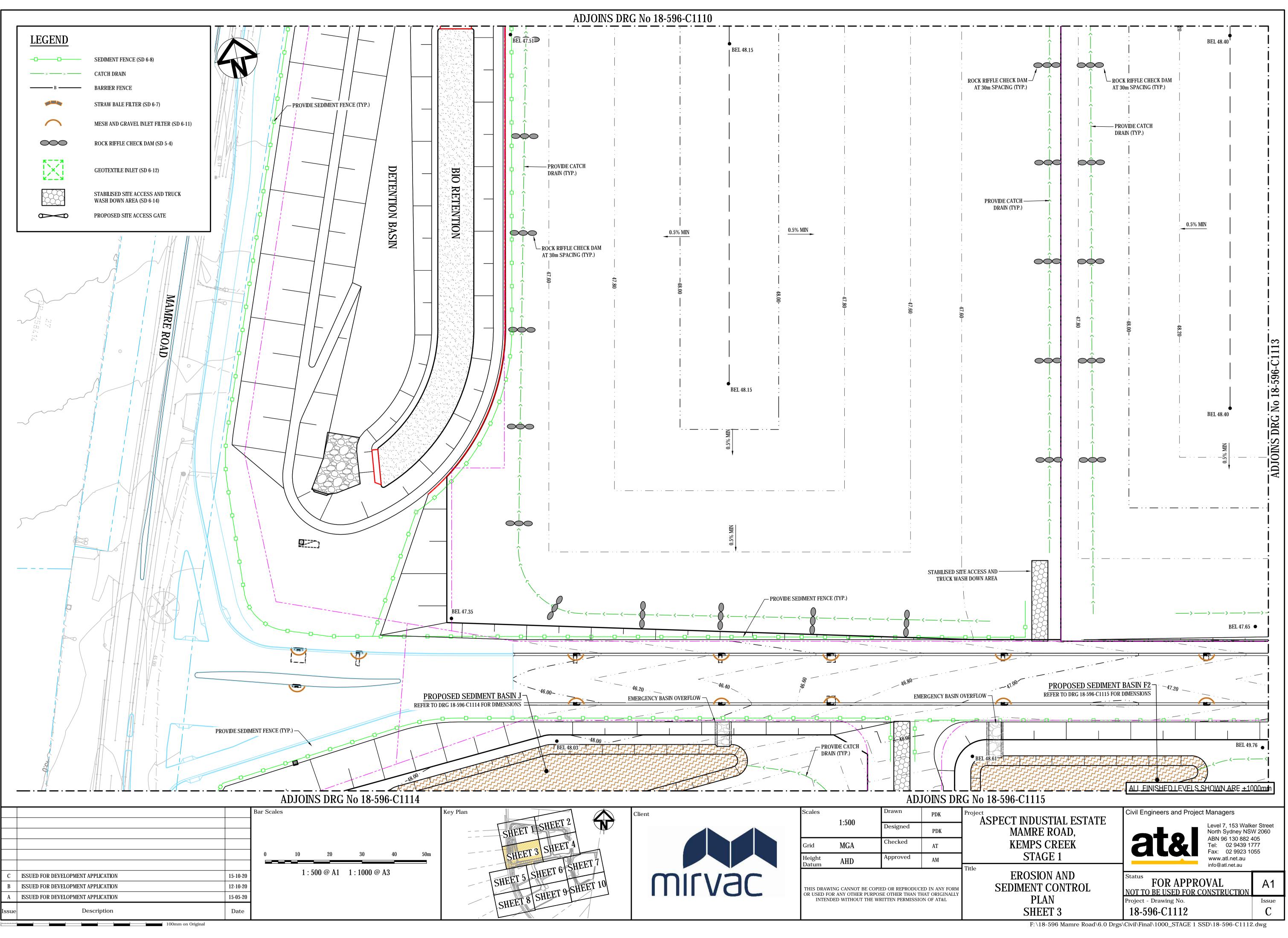
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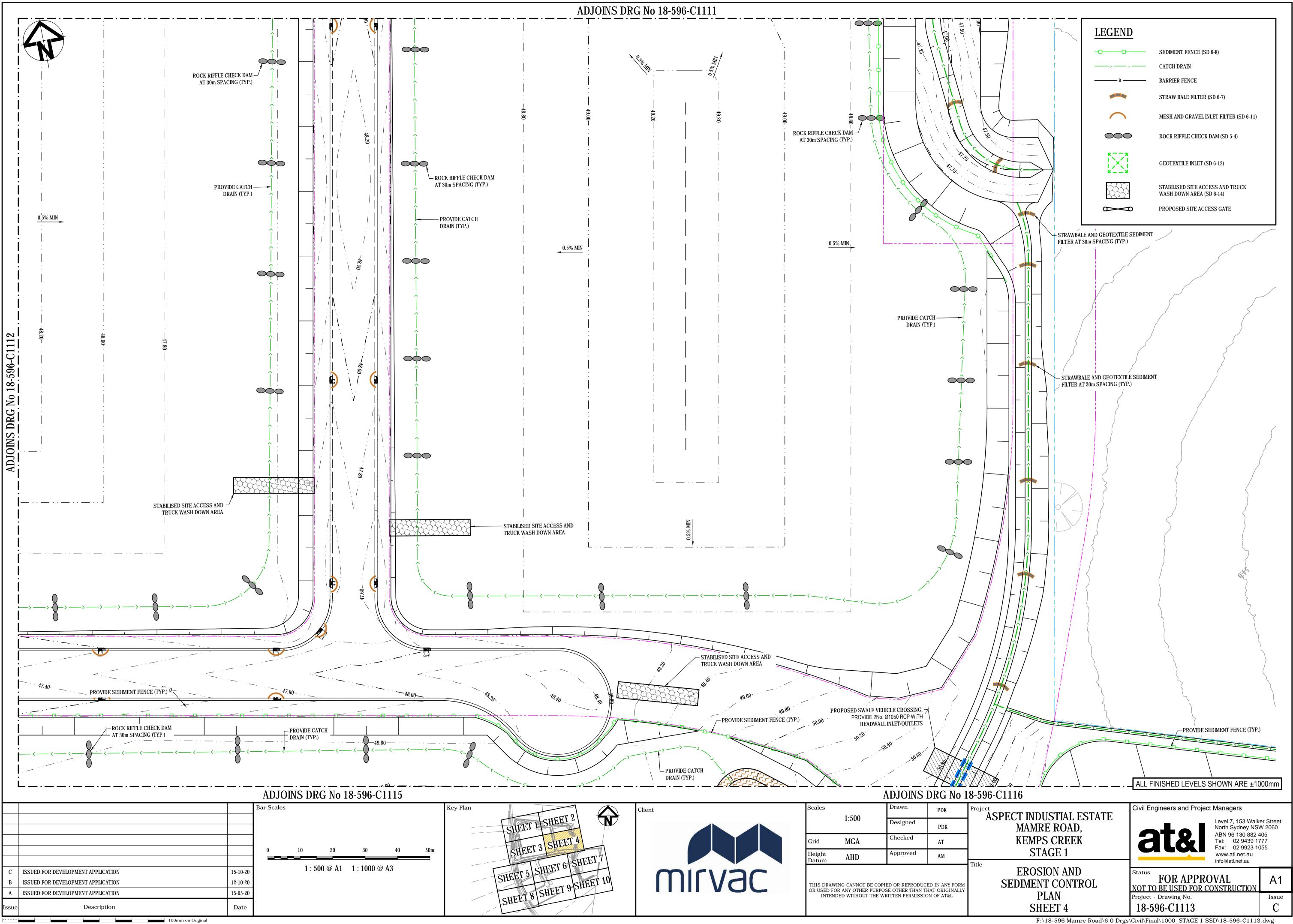


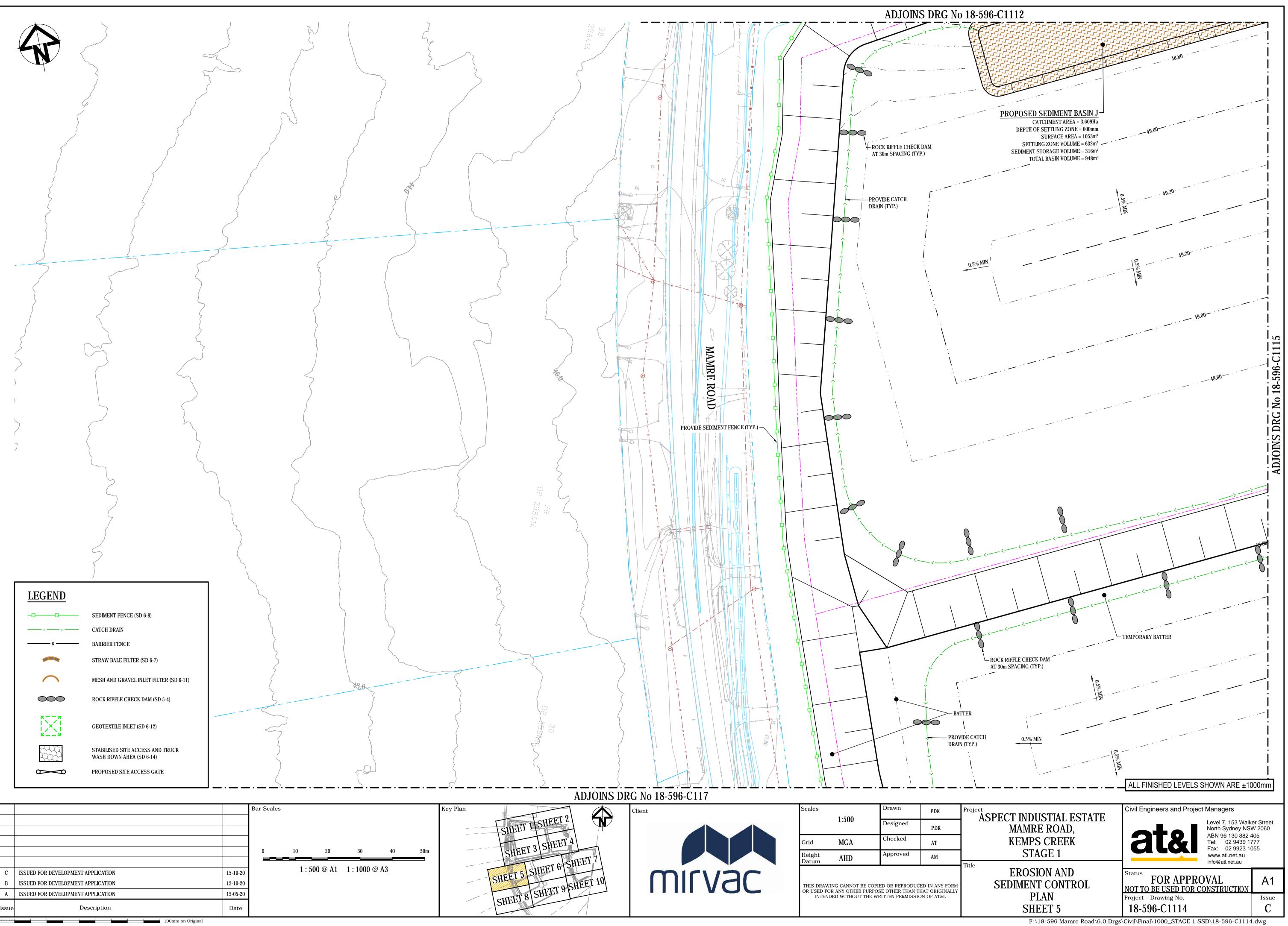


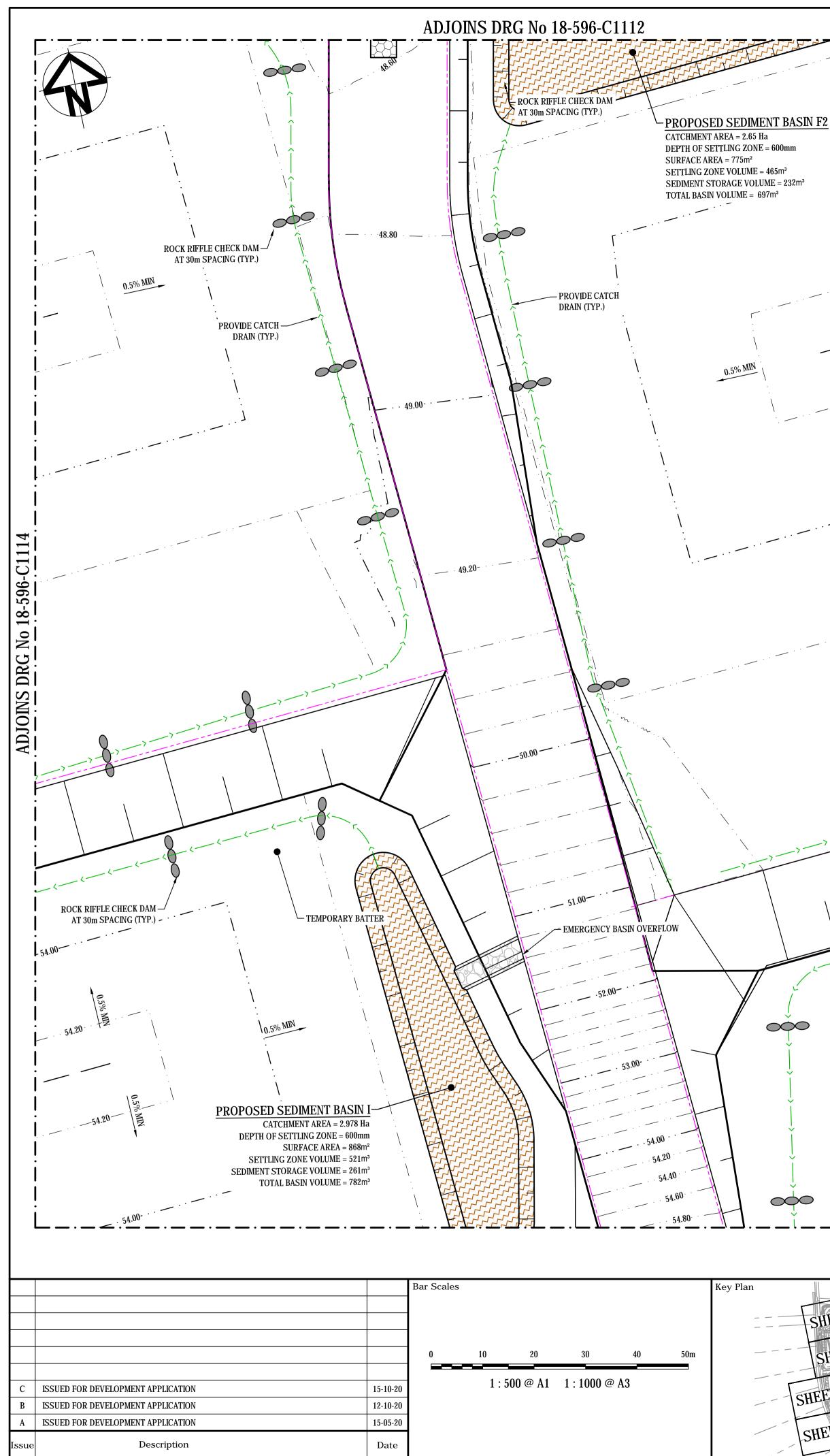












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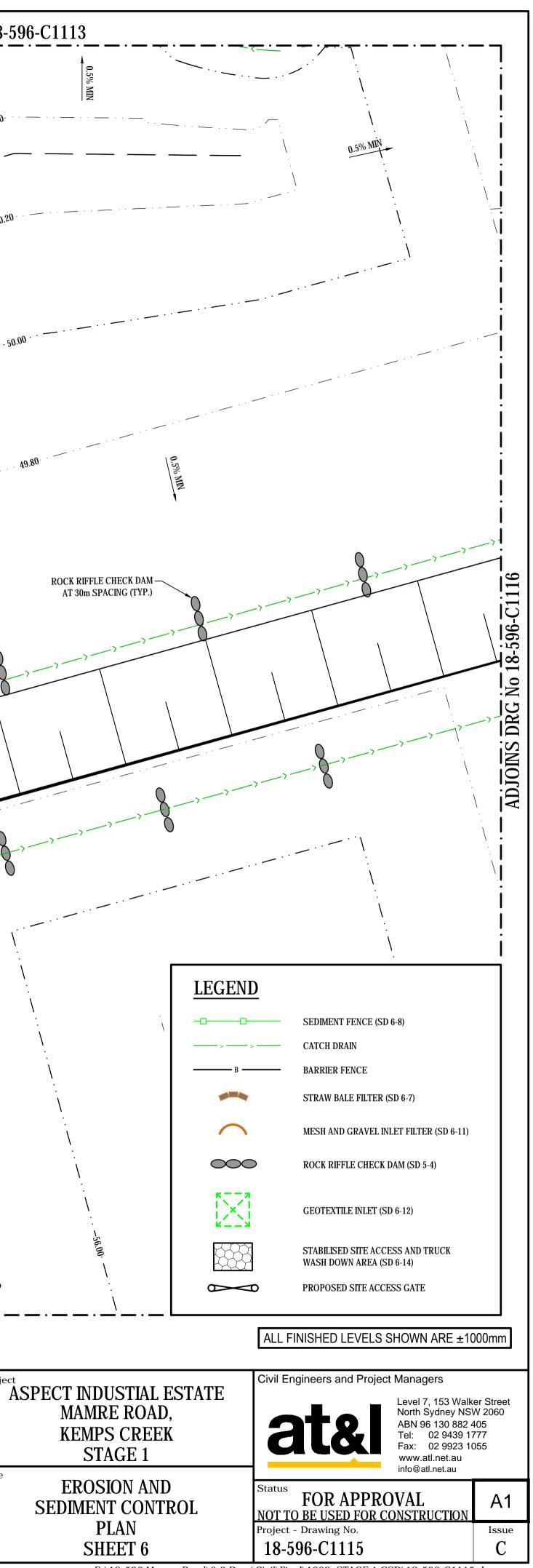
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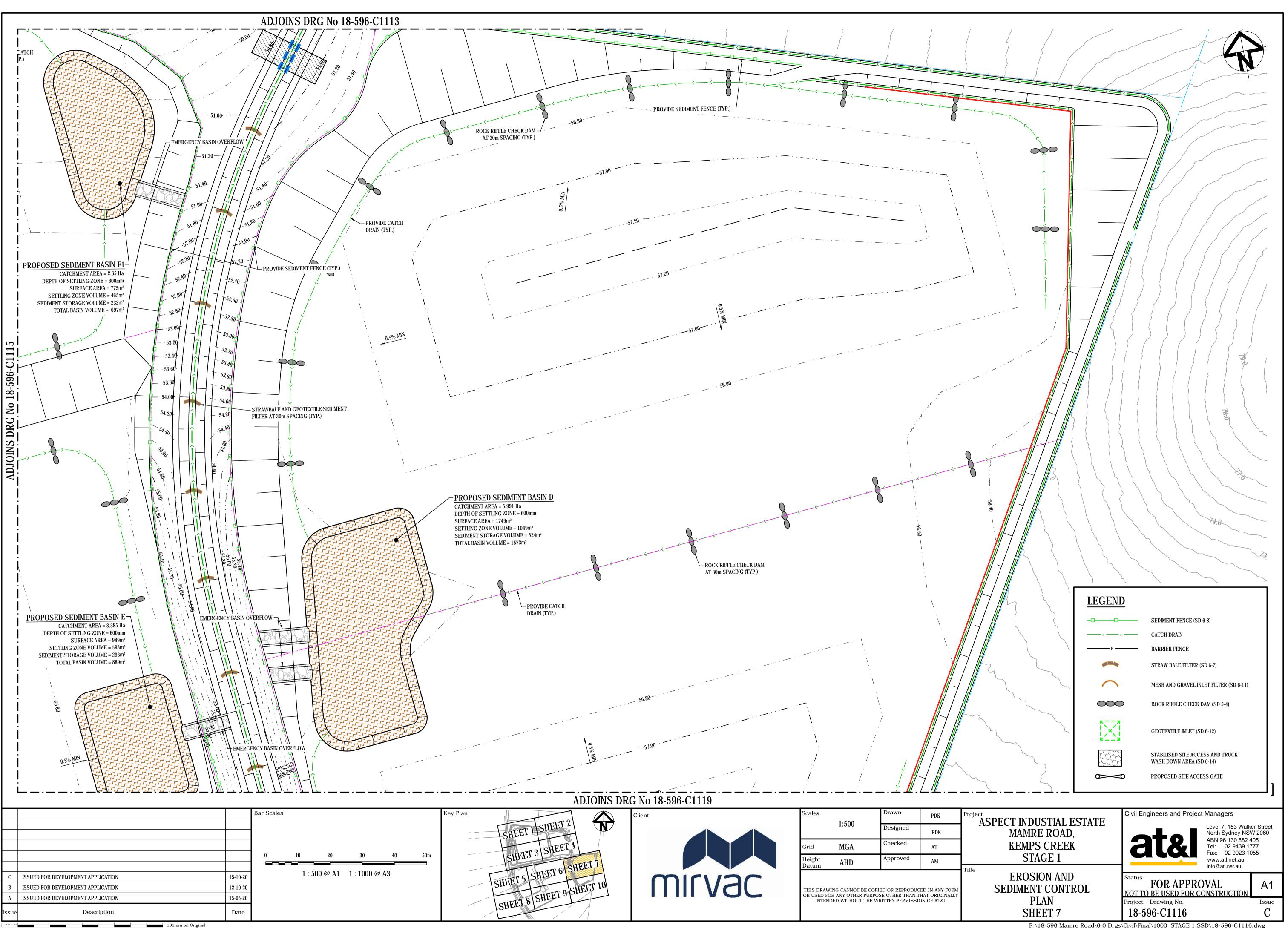
THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM

OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY

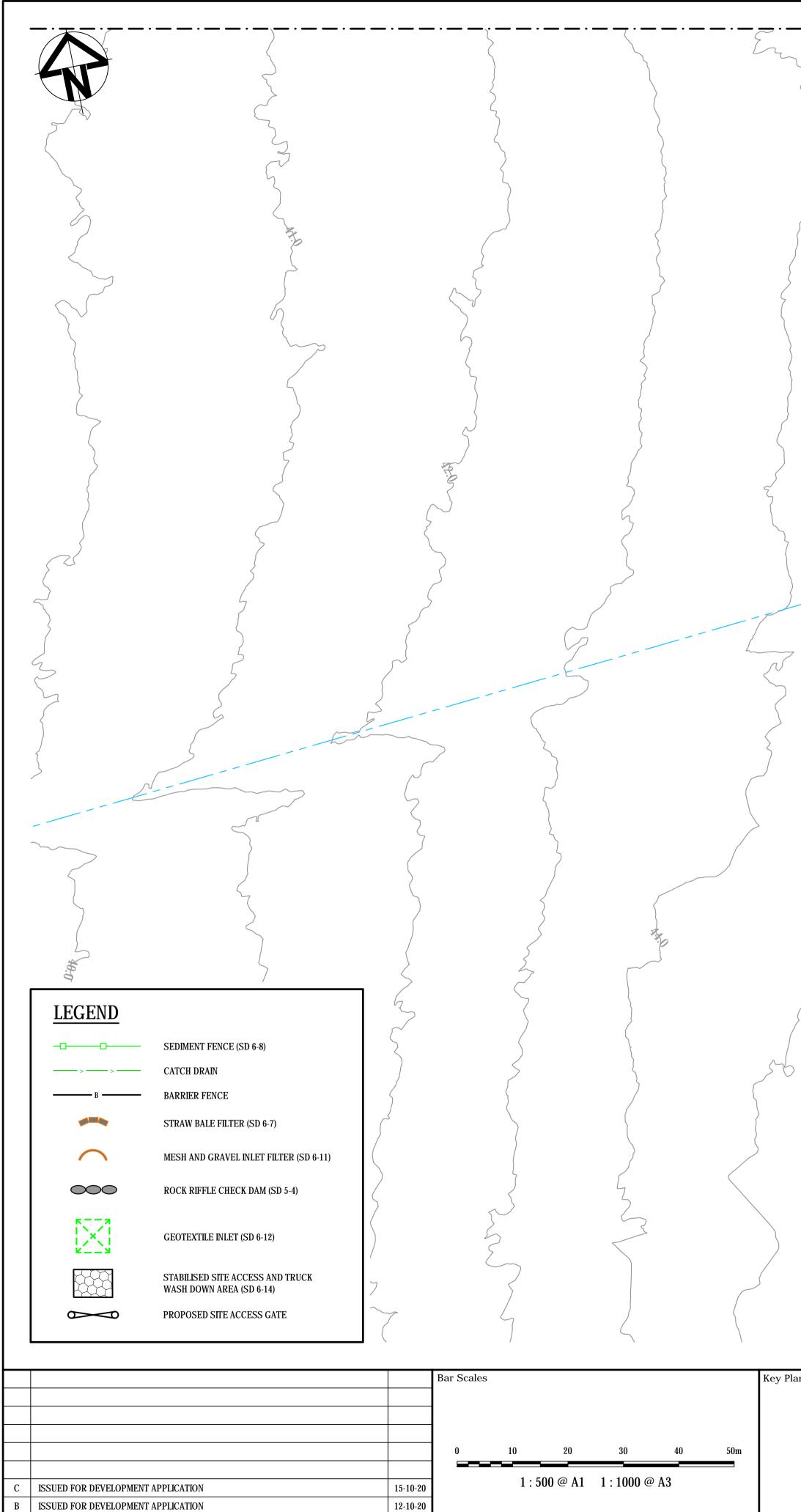
INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L



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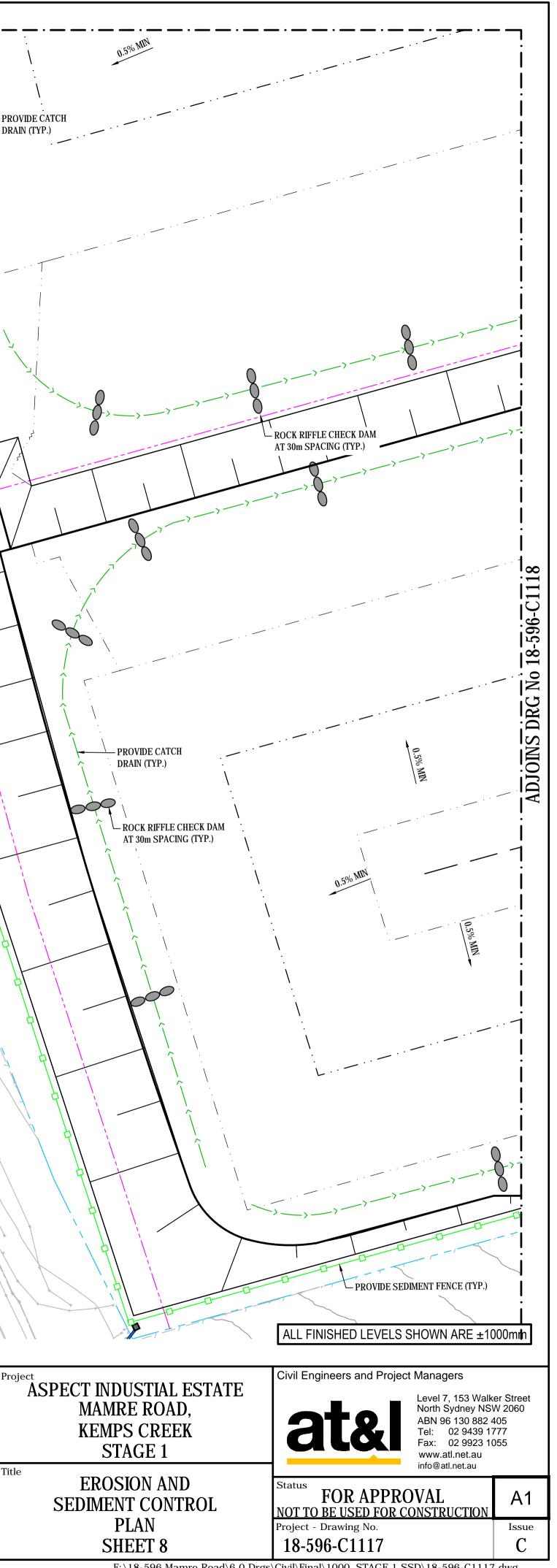
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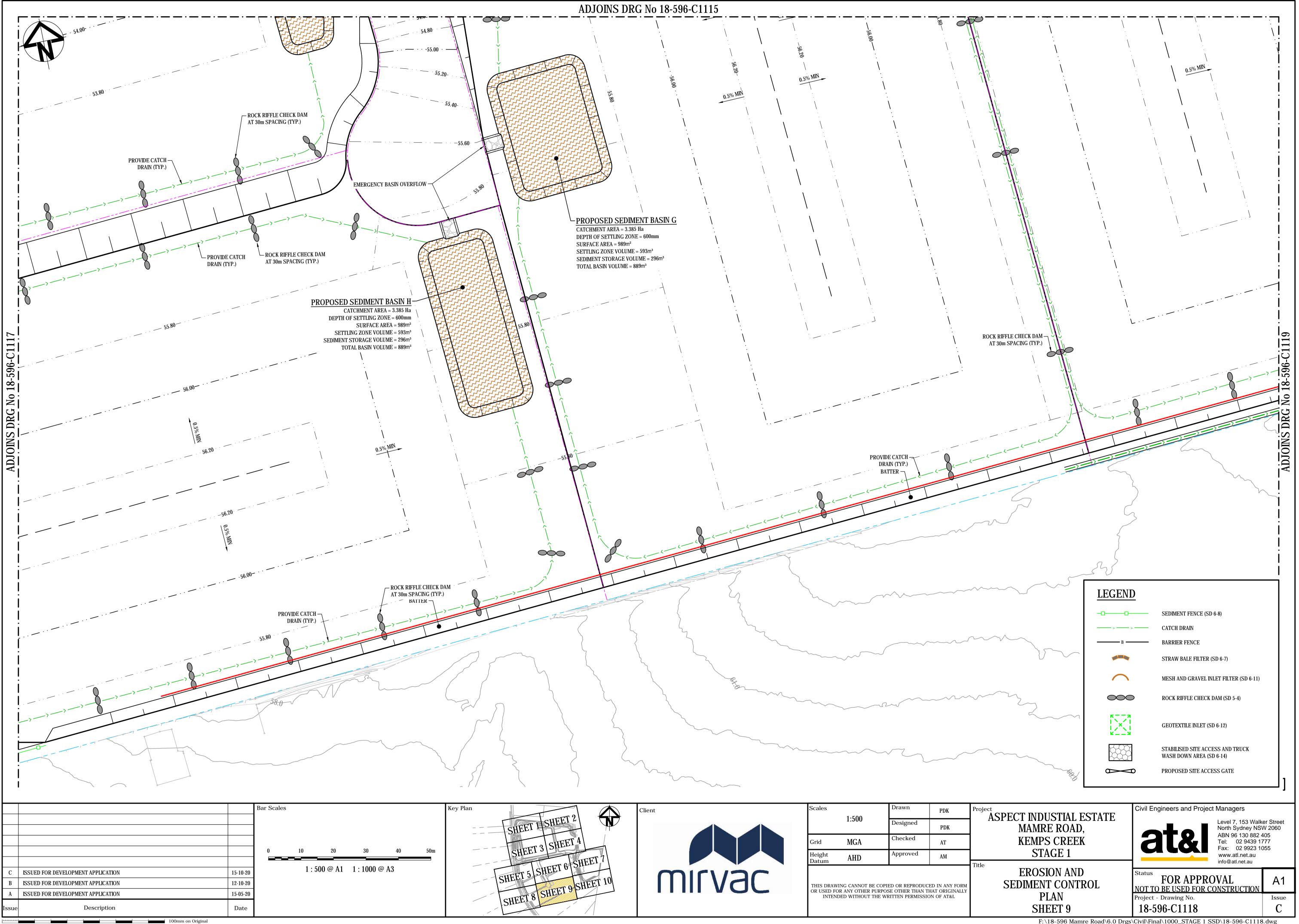
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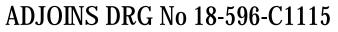
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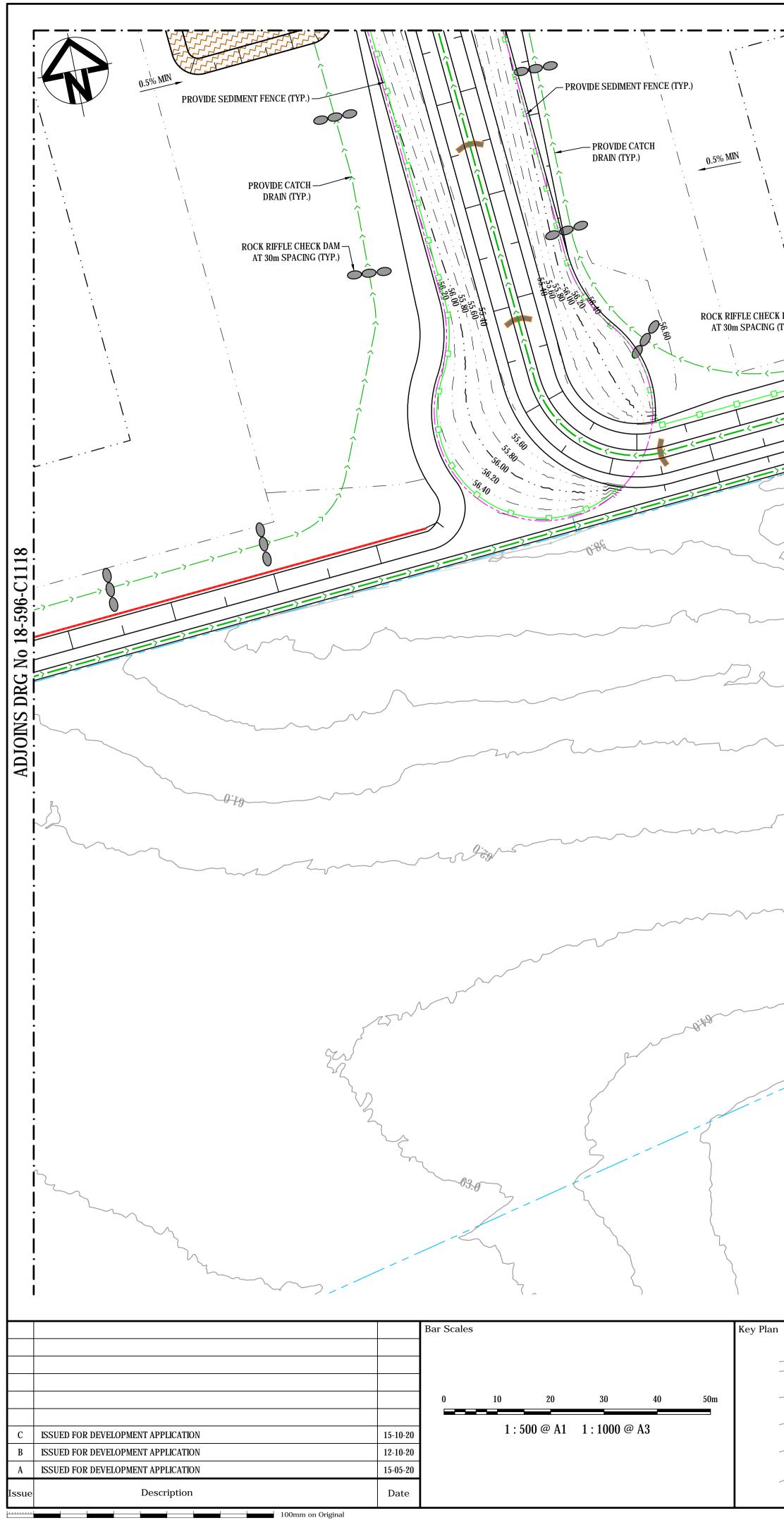
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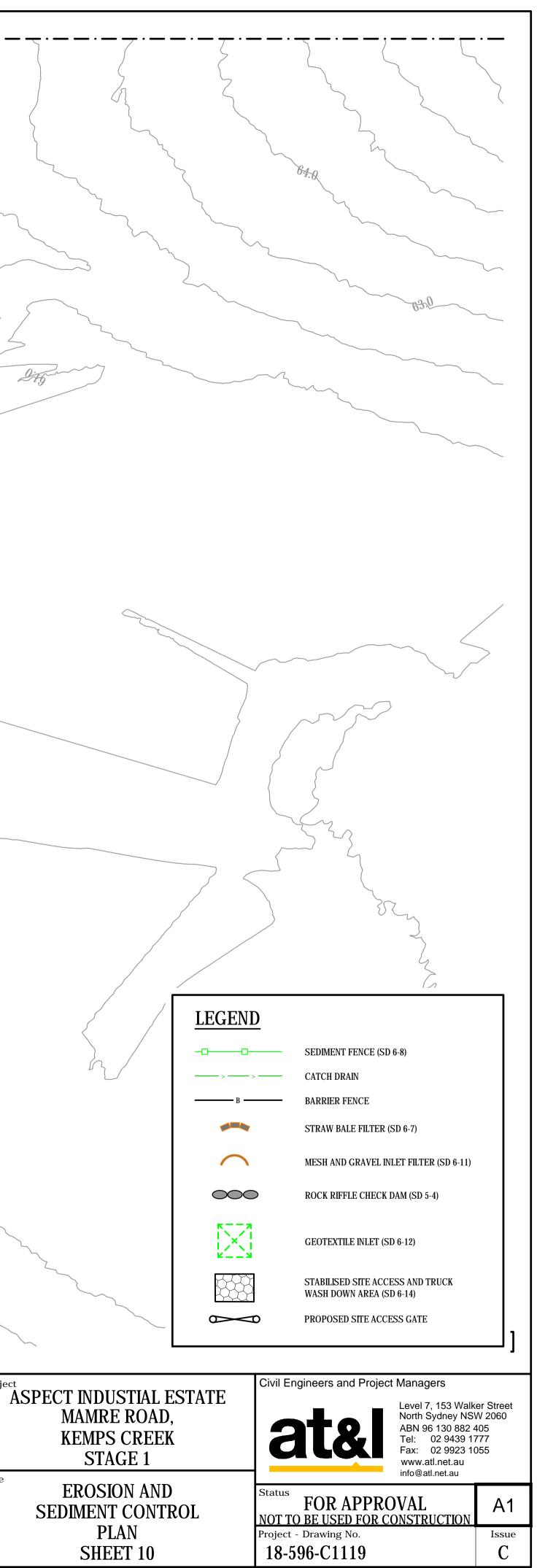


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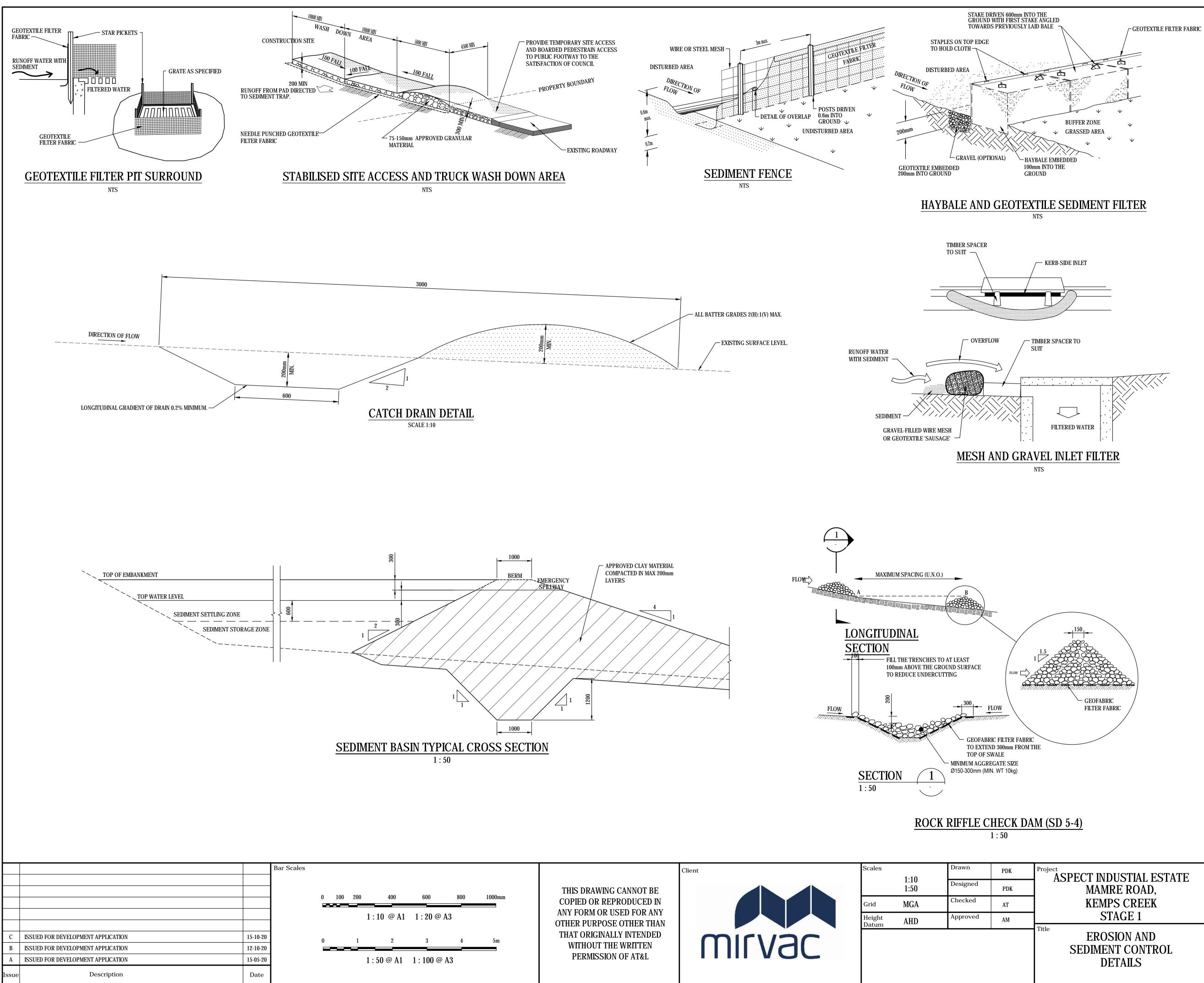
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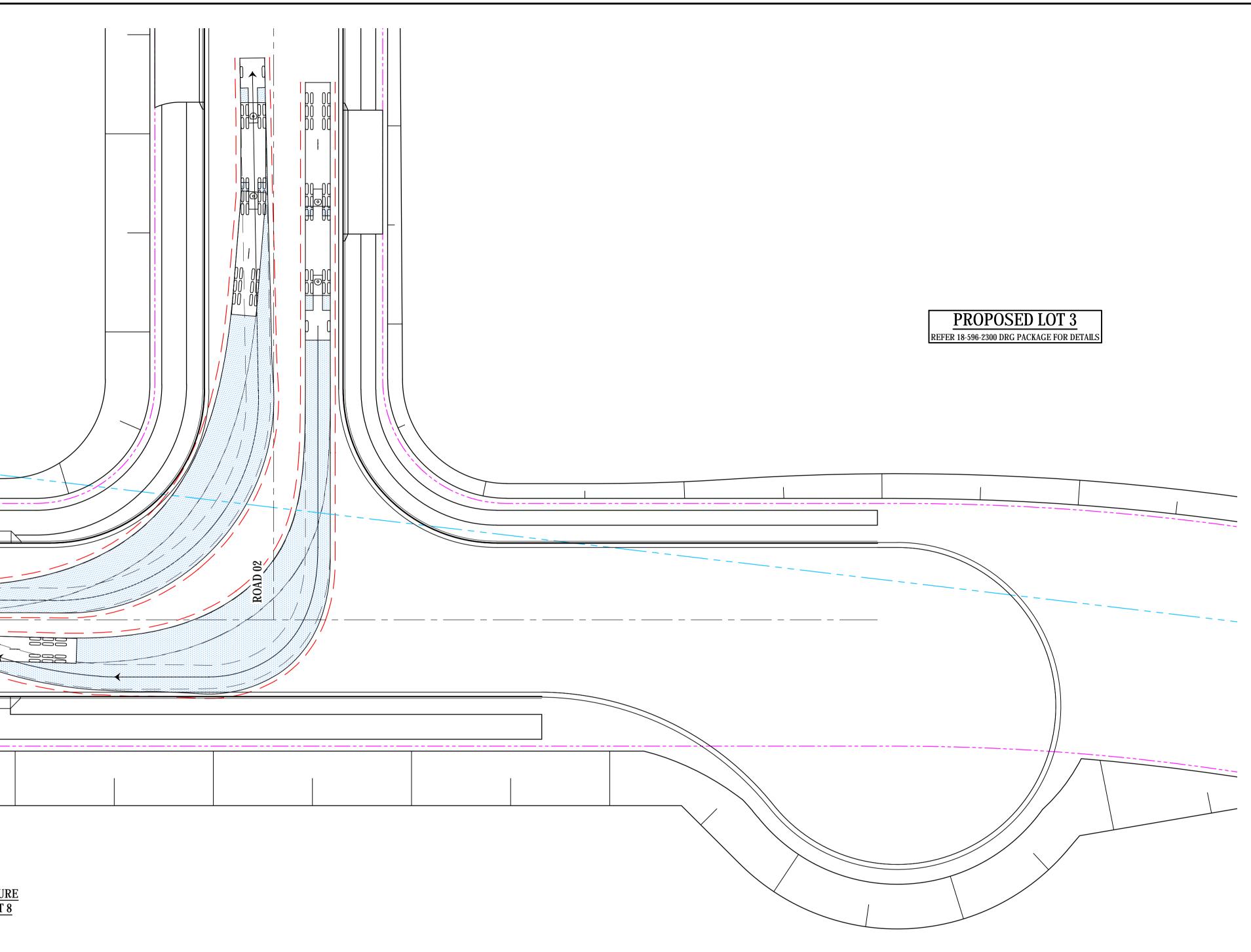


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	Civil Engineers and Project Managers	
ASPECT INDUSTIAL ESTATE MAMRE ROAD, KEMPS CREEK STAGE 1	ABN 96 130 882 4 Tel: 02 9439 17 Fax: 02 9923 10 www.atl.net.au	V 2060 05 77
e EROSION AND SEDIMENT CONTROL	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION	A1
DETAILS	Project - Drawing No. 18-596-C1120	Issue C

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	<u>FUTURE</u> LOT 2
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B       ISSUED FOR DEVELOPMENT APPLICATION         A       ISSUED FOR DEVELOPMENT APPLICATION         ssue       Description	15-10-20 12-10-20 Date



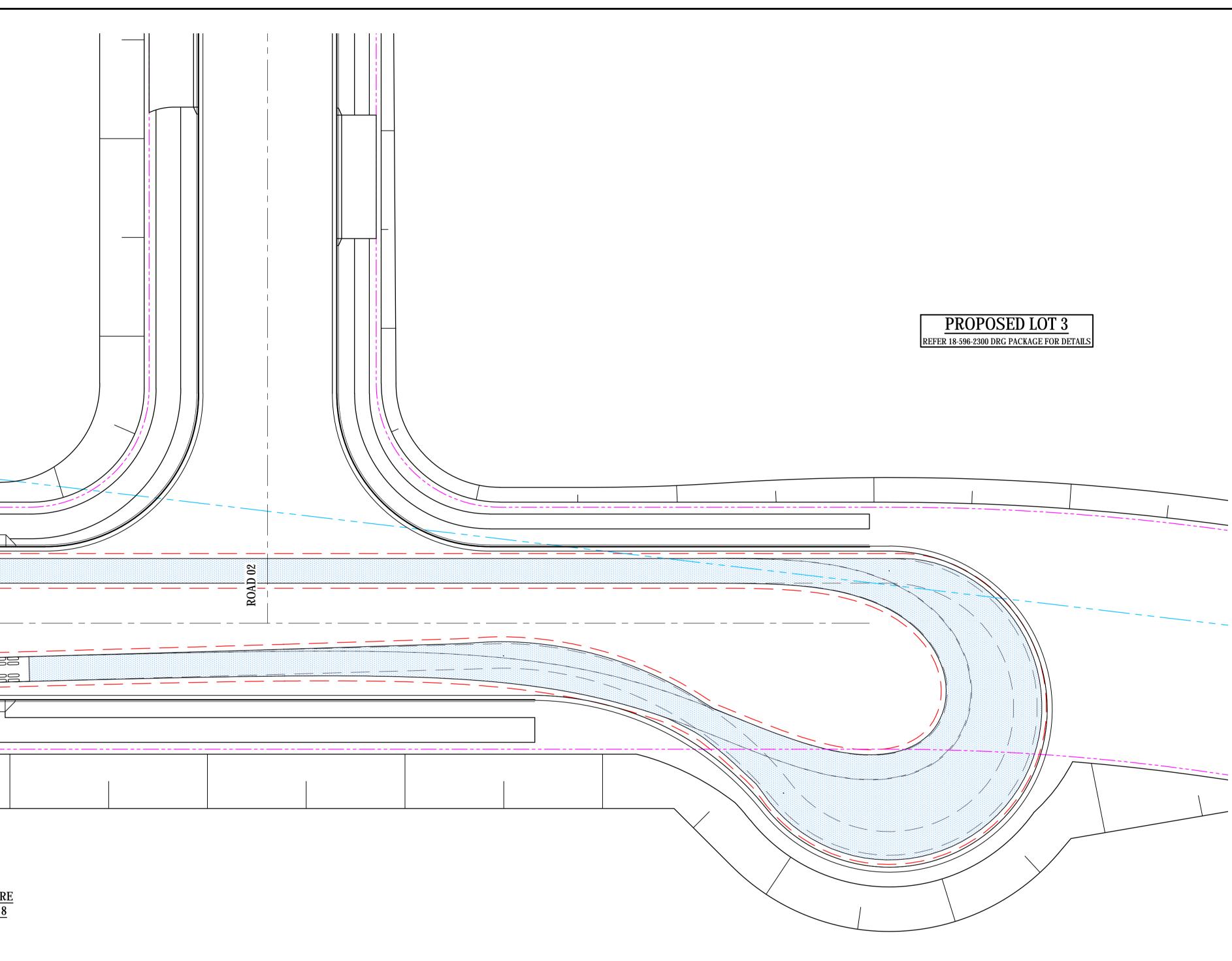




	ALL FINISHED LEVELS SHOWN ARE ±10	00mm
ASPECT INDUSTIAL ESTATE MAMRE ROAD, KEMPS CREEK STAGE 1	Civil Engineers and Project Managers Level 7, 153 Walke North Sydney NSV ABN 96 130 882 4 Tel: 02 9439 17 Fax: 02 9923 10 www.atl.net.au info@atl.net.au	V 2060 05 77
VEHICLE TURN PATHS	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION	A1
PLAN SHEET 1	Project - Drawing No. 18-596-C1150	Issue B

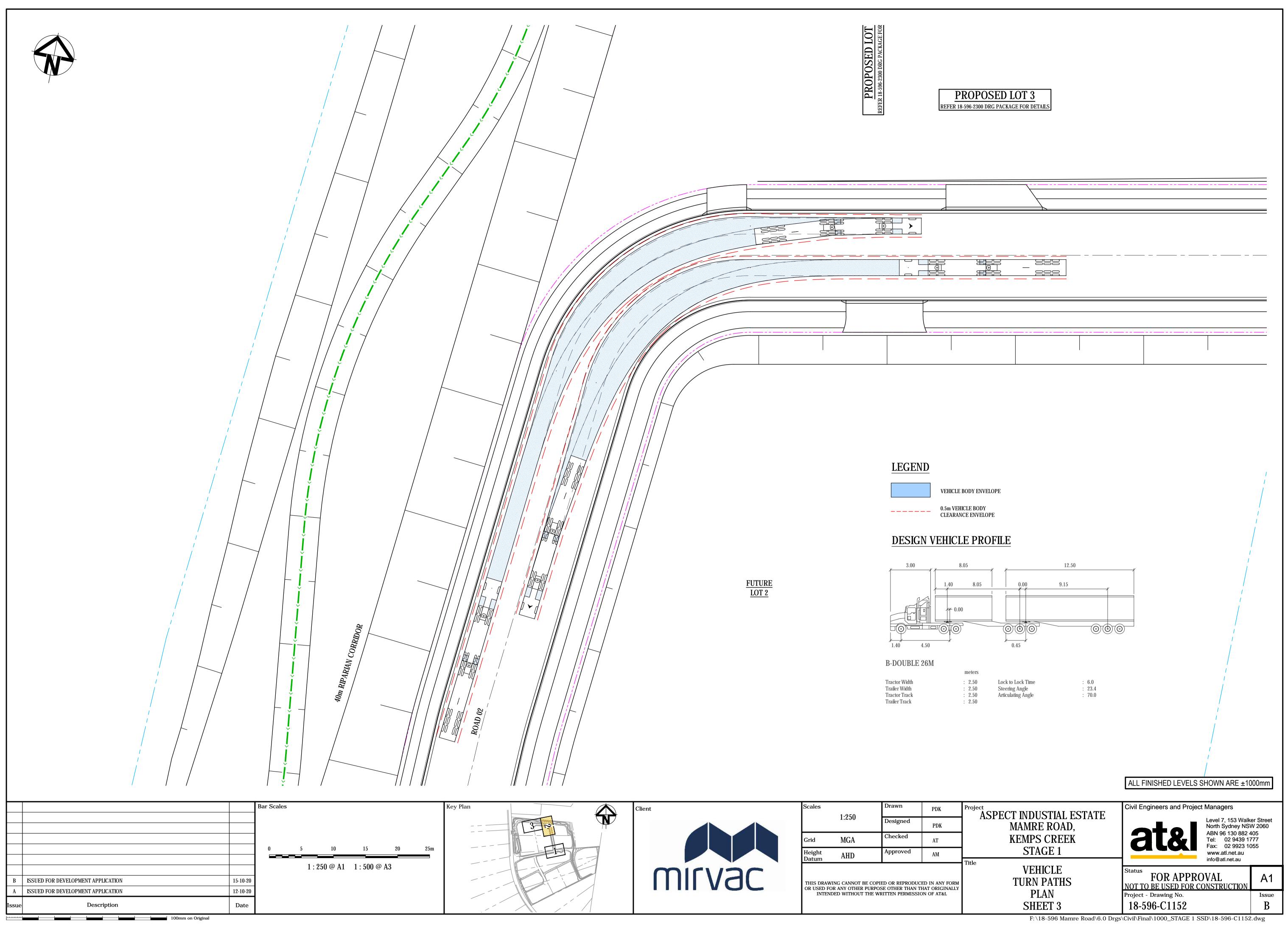
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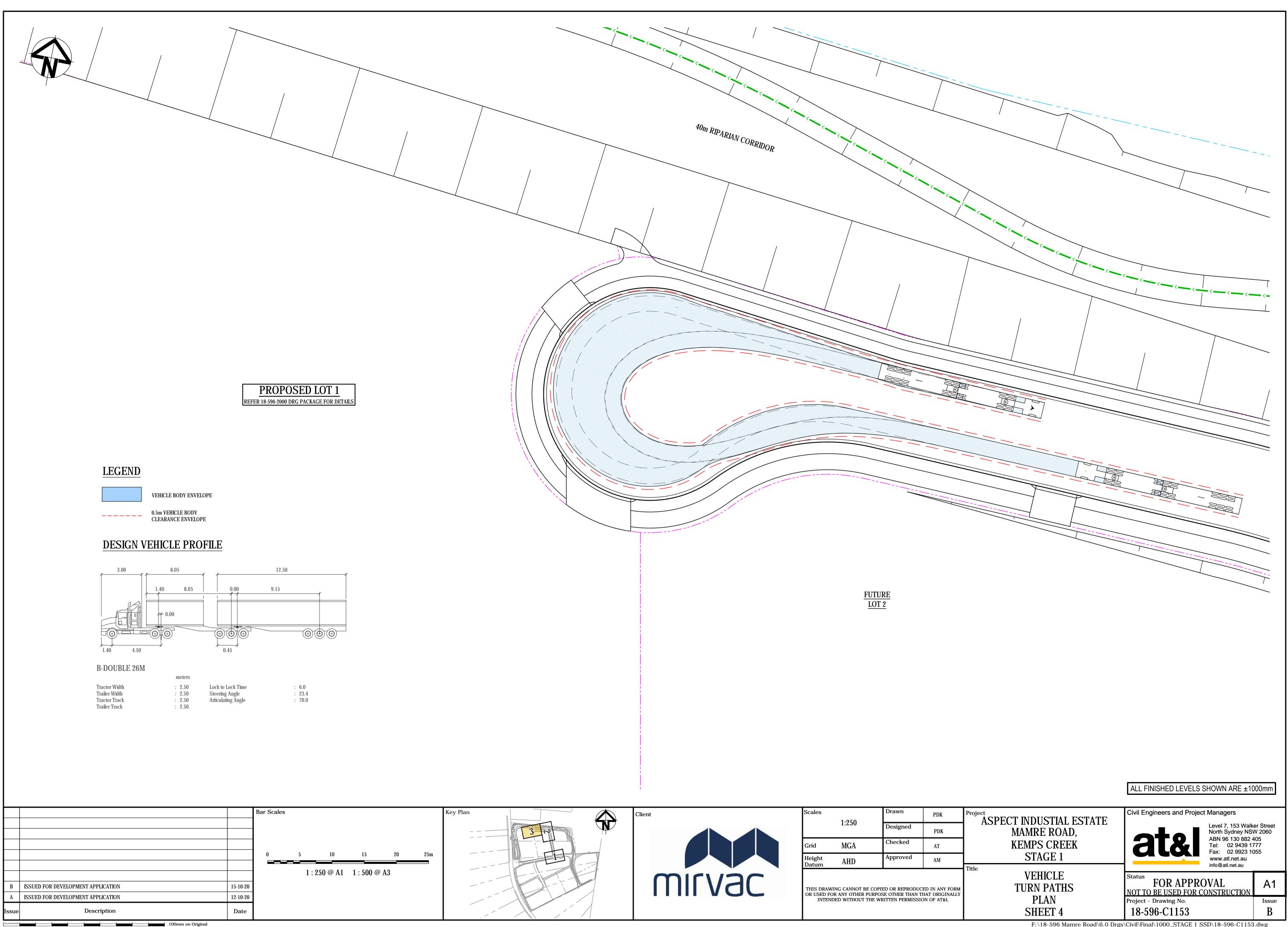
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ALL FINISHED LEVELS SHOWN ARE ±1000mm Civil Engineers and Project Managers ASPECT INDUSTIAL ESTATE MAMRE ROAD, Level 7, 153 Walker Street North Sydney NSW 2060 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au **KEMPS CREEK** STAGE 1 VEHICLE Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION A1 TURN PATHS PLAN SHEET 2 Project - Drawing No. Issue 18-596-C1151 B

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