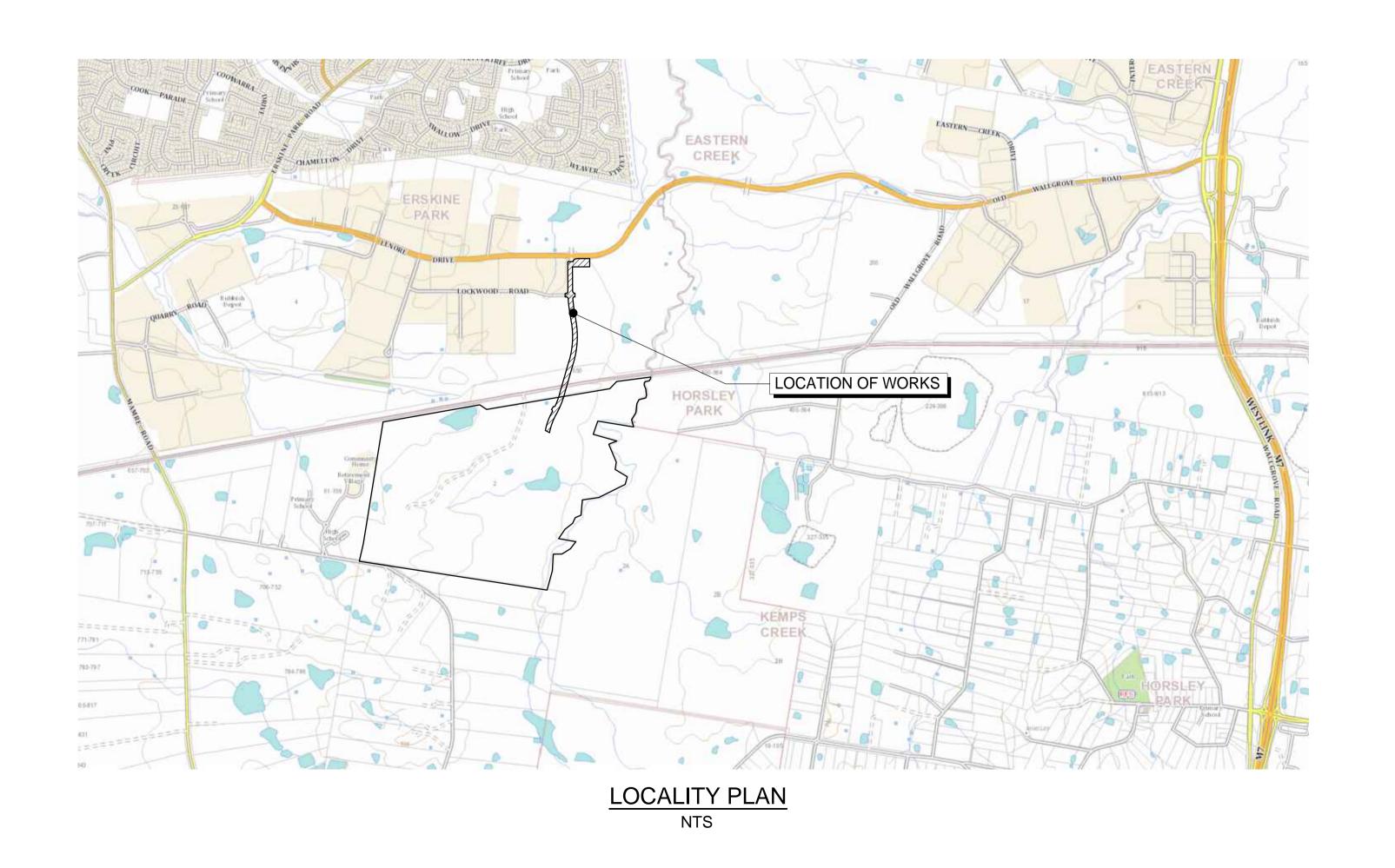
OAKDALE WEST 3000-SERIES WESTERN NORTH-SOUTH LINK ROAD CIVIL WORKS PACKAGE STATE SIGNIFICANT DEVELOPMENT APPLICATION



A2 ISSUED FOR SSD APPROVAL 04-05-18 A1 ISSUED FOR SSD APPROVAL 14-03-1 ssue Description 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 FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION 15-272-C3000.dwg Approved MGA Goodmar

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PROPOSED INDUSTRIAL DEVELOPMENT **OAKDALE WEST**

COVER SHEET

15-272-C3000

Project No. 15-272

Date Plotted: 5 Oct 2018 - 04:41PM File Name: F:\15-272 Oakdale West\Drgs\Civil\Final\SSDA\3000_WNSLR Package\15-272-C3000.dwg

DRAWING LIST				
DRAWING No.	DRAWING TITLE			
15-272-C3000	COVER SHEET			
15-272-C3001	DRAWING LIST			
15-272-C3002	GENERAL NOTES			
15-272-C3003	GENERAL ARRANGEMENT PLAN			
15-272-C3010	TYPICAL ROAD SECTIONS			
15-272-C3020	ROADWORKS PLAN AND LONGITUDINAL SECTION SHEET 1 OF 5			
15-272-C3021	ROADWORKS PLAN AND LONGITUDINAL SECTION SHEET 2 OF 5			
15-272-C3022	ROADWORKS PLAN AND LONGITUDINAL SECTION SHEET 3 OF 5			
15-272-C3023	ROADWORKS PLAN AND LONGITUDINAL SECTION SHEET 4 OF 5			
15-272-C3024	ROADWORKS PLAN AND LONGITUDINAL SECTION SHEET 5 OF 5			
15-272-C3030	ROAD LONGITUDINAL SECTIONS			
15-272-C3040	BRIDGE ELEVATION AND TYPICAL SECTION			
15-272-C3050	STORMWATER DRAINAGE PLAN SHEET 1 OF 5			
15-272-C3051	STORMWATER DRAINAGE PLAN SHEET 2 OF 5			
15-272-C3052	STORMWATER DRAINAGE PLAN SHEET 3 OF 5			
15-272-C3053	STORMWATER DRAINAGE PLAN SHEET 4 OF 5			
15-272-C3054	STORMWATER DRAINAGE PLAN SHEET 5 OF 5			
15-272-C3057	STORMWATER DRAINAGE CATCHMENT PLAN (PRE-DEVELOPED)			
15-272-C3058	STORMWATER DRAINAGE CATCHMENT PLAN (POST-DEVELOPED)			
15-272-C3060	BIO-RETENTION BASIN No.1 DETAIL PLAN			
15-272-C3070	PAVEMENT PLAN SHEET 1 OF 5			
15-272-C3071	PAVEMENT PLAN SHEET 2 OF 5			
15-272-C3072	PAVEMENT PLAN SHEET 3 OF 5			
15-272-C3073	PAVEMENT PLAN SHEET 4 OF 5			
15-272-C3074	PAVEMENT PLAN SHEET 5 OF 5			
15-272-C3075	LEAD IN POTABLE WATERMAIN PLAN			
15-272-C3080	RETAINING WALL PLAN AND ELEVATION			
15-272-C3081	RETAINING WALL SECTIONS SHEET 1 OF 4			
15-272-C3082	RETAINING WALL SECTIONS SHEET 2 OF 4			
15-272-C3083	RETAINING WALL SECTIONS SHEET 3 OF 4			
15-272-C3084	RETAINING WALL SECTIONS SHEET 4 OF 4			
15-272-C3090	WNSLR AND LOCKWOOD RD INTERSECTION VEHICLE TURNING PATH PLAN SHEET 1			
15-272-C3091	WNSLR AND LOCKWOOD RD INTERSECTION VEHICLE TURNING PATH PLAN SHEET 2			
15-272-C3092	WNSLR AND LOCKWOOD RD INTERSECTION VEHICLE TURNING PATH PLAN SHEET 3			
15-272-C3093	WNSLR AND ROAD No.1 INTERSECTION VEHICLE TURNING PATH PLAN SHEET 1			
15-272-C3094	WNSLR AND ROAD No.1 INTERSECTION VEHICLE TURNING PATH PLAN SHEET 2			

Bar Scales

Α3	ISSUED FOR SSD APPROVAL	21-09-18
A2	ISSUED FOR SSD APPROVAL	04-05-18
Α1	ISSUED FOR SSD APPROVAL	14-03-17
Issue	Description	Date

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FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION				
Scales 15-272-C3				
		Drawn	GB	
		Designed	GB	
Height Datum	AHD	Checked	AM	
Grid	MGA	Approved	AM	
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Issue

PROPOSED INDUSTRIAL DEVELOPMENT OAKDALE WEST

DRAWING LIST

Drawing No. Project No. 15-272-C3001 15-272

A3 Date Plotted: 5 Oct 2018 – 04:41PM File Name: F:\15–272 Oakdale West\Drgs\Civil\Final\SSDA\3000_WNSLR Package\15–272–C3001.dwg 100mm on Original

SITEWORKS NOTES

- 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 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)
- 6. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
- 7. ASPHALTIC CONCRETE SHALL CONFORM TO R.M.S SPECIFICATION R116.
- 8. 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 50m³ OF BASECOURSE MATERIAL PLACED.
- 9. 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 5.2 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³0F SUB-BASE COURSE MATERIAL PLACED.
- 10. 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.
- 11. 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.
- 12. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED BY OTHERS, (eq. ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.

SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY CARDNO HARD & FORESTER 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.

SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT AT & L.

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

IMPORTANT NOTE:

THIS PLAN IS PREPARED FROM A COMBINATION OF FIELD SURVEY AND EXISTING RECORDS FOR THE PURPOSE OF DESIGNING NEW CONSTRUCTIONS ON THE LAND AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE. THE TITLE BOUNDARIES SHOWN HEREON WERE NOT MARKED BY THE AUTHOR AT THE TIME OF SURVEY AND HAVE BEEN DETERMINED BY PLAN DIMENSIONS ONLY AND NOT BY FIELD MEASUREMENT.

A SERVICES SEARCH OF THE AREA SURVEYED ABOVE HAS NOT BEEN UNDERTAKEN. VISIBLE SERVICES SHOWN HEREON HAVE BEEN LOCATED WHERE POSSIBLE BY FIELD SURVEY. 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. THIS NOTE IS AN INTEGRAL PART OF THIS PLAN.

EXISTING UNDERGROUND SERVICES NOTES

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.

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.

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.



CONTRACTOR SHALL CALL; DIAL BEFORE YOU DIG 1100 PRIOR TO COMMENCEMENT OF WORK TO OBTAIN ALL CURRENT SERVICE AUTHORITY PLANS

CONCRETE NOTES

- 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	SPECIFIED	NOMINAL
	AT 28 DAYS	SLUMP	AGG. SIZE
VEHICULAR BASE KERBS, PATHS, AND PITS	32 25	60 80	20 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 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 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 REFERANCE NUMBER FOR FABRIC TO AS 1304.

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



KERBING NOTES

- 1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH 0F25 MP3 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 5.2.1).
- 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 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.
- 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. BROOMED 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 :-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 U.N.O.

EXISTING ALLOTMENT DRAINAGE PIPES ARE TO BE BUILT INTO THE NEW KERB AND GUTTER WITH 100mm DIA HOLE.

EXISTING KERB AND GUTTER IS TO BE COMPLETELY REMOVED WHERE NEW KERB AND GUTTER IS SHOWN.

DEWATERING

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

DECOMMISSIONING / DEMOLITION

EXISTING FENCING, UTILITIES AND OTHER REDUNDANT STRUCTURES TO BE DEMOLISHED AND REMOVED TO AN APPROVED WASTE MANAGEMENT FACILITY.

STORMWATER DRAINAGE NOTES

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

2. PIPES 300 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS '2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.

- B. 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.
- 5. 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
- 5. PIPES TO BE INSTALLED TO TYPE HS1 SUPPORT IN ACCORDANCE WITH AS 3725 (1989) 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
- 8. PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO
- APPROVAL BY AT & L. 9. ENLARGERS. CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED
- FITTINGS WHERE PIPES ARE LESS THAN 300 DIA. 0. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR
- PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED. 11. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL
- 12. GRATES AND COVERS SHALL CONFORM TO AS 3996.
- 13. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
- 4. 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 REPORTED TO THE SUPERINTENDENT/ENGINEER

EMBANKMENT CONSTRUCTION

SEQUENCE

FOR FURTHER DIRECTIONS.

- 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 SLUSH, GROUTING AND DENTAL CONCRETE MAY BE REQUIRED, AS DIRECTED BY A QUALIFIED AND EXPERIENCED GEOTECHNICAL ENGINEER.
- 4. COMPACT CLAY STABILIZED 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 STABILIZED 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, STABILIZE 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 FERTILIZE LANDSCAPE AS REQUIRED BY CLIMACTIC CONDITIONS TO ENSURE THE LANDSCAPE IS SUCCESSFUL.
- 12. AT THE COMPLETION OF WORK WRITTEN CONFIRMATION & CERTIFICATION IS TO BE PROVIDED FROM A QUALIFIED & EXPERIENCED GEOTECHNICAL ENGINEER THAT THE EMBANKMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THESE DRAWINGS.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

- 1. THE SITE SUPERINTENDENT/ENGINEER WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED.
- 2. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH a. LOCAL AUTHORITY REQUIREMENTS b. EPA REQUIREMENTS C. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH
- OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY. 4. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS.

3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION

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

- 6. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END. WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
- (A) INSTALL A WIND FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
- (B) INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
- (C) CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
- (D) INSTALL SEDIMENT BASIN AS SHOWN ON PLAN
- (E) INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.
- (F) UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

EROSION CONTROL

- 7. 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.

SEDIMENT CONTROL

- 9. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT
- 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
- 11. 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.
- 12. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

OTHER MATTERS

- 13. 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 DESIGNED, PROVIDED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT ALL STAGES OF WORKS, INCLUDING AT COMPLETION OF THE BULK EARTHWORKS WHERE SHOWN ON AT&L DRAWINGS OR WHERE DIRECTED BY THE SUPERINTENDENT OR PENRITH CITY COUNCIL'S

SEDIMENT AND EROSION CONTROLS ARE TO BE DESIGNED AND DOCUMENTED BY A SUITABLY QUALIFIED EXPERT ENGAGED BY THE CONTRACTOR AND APPROVED AS PART OF THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH CONTROLS SHALL BE IN ACCORDANCE WITH THE RELEVANT REQUIREMENTS IN THE LATEST VERSION OF THE MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION GUIDELINE (LANDCOM).

BIO-RETENTION FILTER MEDIA SPECIFICATION

MATERIALS:

BIO-RETENTION FILTER MEDIA, TRANSITION LAYER AND DRAINAGE LAYERS TO BE IN ACCORDANCE WITH CURRENT VERSION OF FAWB DOCUMENT "STORMWATER BIO-FILTRATION SYSTEMS ADOPTION GUIDELINES" AND THE FOLLOWING,:

A) BIO-RETENTION FILTER MEDIA

1. BIO-RETENTION MEDIA IS TO BE FREE OF RUBBISH AND DELETERIOUS MATERIAL. 2. BIO-RETENTION FILTER MEDIA SATURATED HYDRAULIC CONDUCTIVITY TO BE 180mm/hr USING TEST METHOD ASTM F1815-06.

3. BIO-RETENTION FILTER MEDIA PARTICLE SIZE DISTRIBUTION IS TO BE AS FOLLOWS: (<0.05mm) CLAY & SILT

CLAT & SILT	- J/0	(//////////////////////////////////////
VERY FINE SAND	5-30%	(0.05-0.15mn
FINE SAND	10-30%	(0.15-0.25mm
MEDIUM TO COARSE SAND	40-60%	(0.25-1.0mm)
COARSE SAND	7-10%	(1.0-2.0mm)
FIN GRAVEL	<3%	(2.0-3.4mm)

- THE COMBINED PERCENTAGE OF CLAY AND SILT MUST NOT EXCEED 3% (W/W) UNDER ANY CIRCUMSTANCES.
- BIO-RETENTION FILTER MEDIA IS TO BE TESTED AND COMPLY WITH THE FOLLOWING
- REQUIREMENTS: a) ORGANIC MATTER CONTENT IN ACCORDANCE WITH AS 4419 AT LEAST 3% (W/W)
 - b) TOTAL NITROGEN (TN) CONTENT <900mg/kg c) ORTHOPHOSPHATE (PO43) CONTENT - <30mg/kg WHERE PLANTS WITH MODERATE
- PHOSPHOROUS SENSITIVITY ARE TO BE USED, TOTAL PHOSPHOROUS CONCENTRATION
- SHOULD BE <20mg/kg. d) AS SPECIFIED FOR "NATURAL SOILS AND SOIL BLENDS" AS4419 - ph 5.5-7.5
- (pH 1.5 IN WATER) e) ELECTRICAL CONDUCTIVITY (EC) AS SPECIFIED FOR "NATURAL SOILS AND SOILS BLENDS" AS4419 <1.2ds/m
- f) DISPENSABILITY AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' AS4419 CATEGORY 1 OR 2
- q) TEXTURE LOAMY SAND AS PER AS4419 5. PRIOR TO PLACEMENT OF THE FILTER MEDIA A STATEMENT IS TO BE

SUBMITTED FROM A QUALIFIED HORTICULTURIST CONFIRMING THAT THE SOIL

IS CAPABLE OF SUPPORTING A HEALTHY VEGETABLE COMMUNITY. 6. TESTS CONFIRMING THE REQUIREMENTS OF ITEMS 1 TO 4 ARE TO BE

SUBMITTED FOR APPROVAL PRIOR TO PLACEMENT OF FILTER MEDIA.

B) DRAINAGE LAYER A

DRAINAGE LAYER MATERIAL IS TO BE CLEAN, FINE GRAVEL, SUCH AS A 2 - 5mm WASHED SCREENING. THE PARTICLE SIZE DISTRIBUTION TO BE: D15 (DRAINAGE LAYER) < 5 x D85 (TRANSITION LAYER) WHERE: D15 (DRAINAGE LAYER) IS THE 15TH PERCENTILE PARTICLE SIZE IN THE TRANSITION LAYER MATERIAL (i.e., 15% OF THE SAND IS SMALLER THAN D15 mm), AND D85 (TRANSITION LAYER) IS THE 85th PERCENTILE PARTICLE SIZE IN THE FILTER MEDIA

C) DRAINAGE LAYER B

10-20mm CLEAN GRAVEL WITH 2% VOLUME FINE STRAW AND 4-6% VOLUME HARDWOOD CHIPS.

FILTER MATERIAL IS TO BE LIGHTLY COMPACTED EG. A SINGLE PASS WITH A DRUM LAWN ROLLER. UNDER NO CIRCUMSTANCES SHOULD HEAVY EQUIPMENT OR MULTIPLE PASSES BE MADE. FILTER MEDIA SHOULD BE INSTALLED IN TWO LIFTS UNLESS THE DEPTH IS LESS THAN 500mm.

BULK EARTHWORKS NOTES

1. ORIGIN OF LEVELS: REFER SURVEY NOTES

- 2. REFER PELLS SULLIVAN MEYNINK REPORT PSM1541-020S REV 0 (DATED 16-03-12) FOR BULK EARTHWORKS SPECIFICATIONS OF THE BIO-RETENTION BASIN AND ESTATE ROAD.
- B. REFER PELLS SULLIVAN MEYNINK REPORT PSM1541-003S REV 2 (DATED 06/05/13) FOR BULK EARTHWORKS SPECIFICATIONS OF ALL AREAS EXCEPT THE BIO-RETENTION BASIN AND ESTATE ROAD.

FINISHED SURFACE LEVELS

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

ssue Description

Bar Scales

A3 | ISSUED FOR SSD APPROVAL 21-09-18 A2 | ISSUED FOR SSD APPROVAL 04-05-18 A1 | ISSUED FOR SSD APPROVAL 14-03-17

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FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION 15-272-C3002.dwg GB Designed GB Checked AHD

> Approved MGA Goodmar

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Client

PROPOSED INDUSTRIAL **DEVELOPMENT OAKDALE WEST**

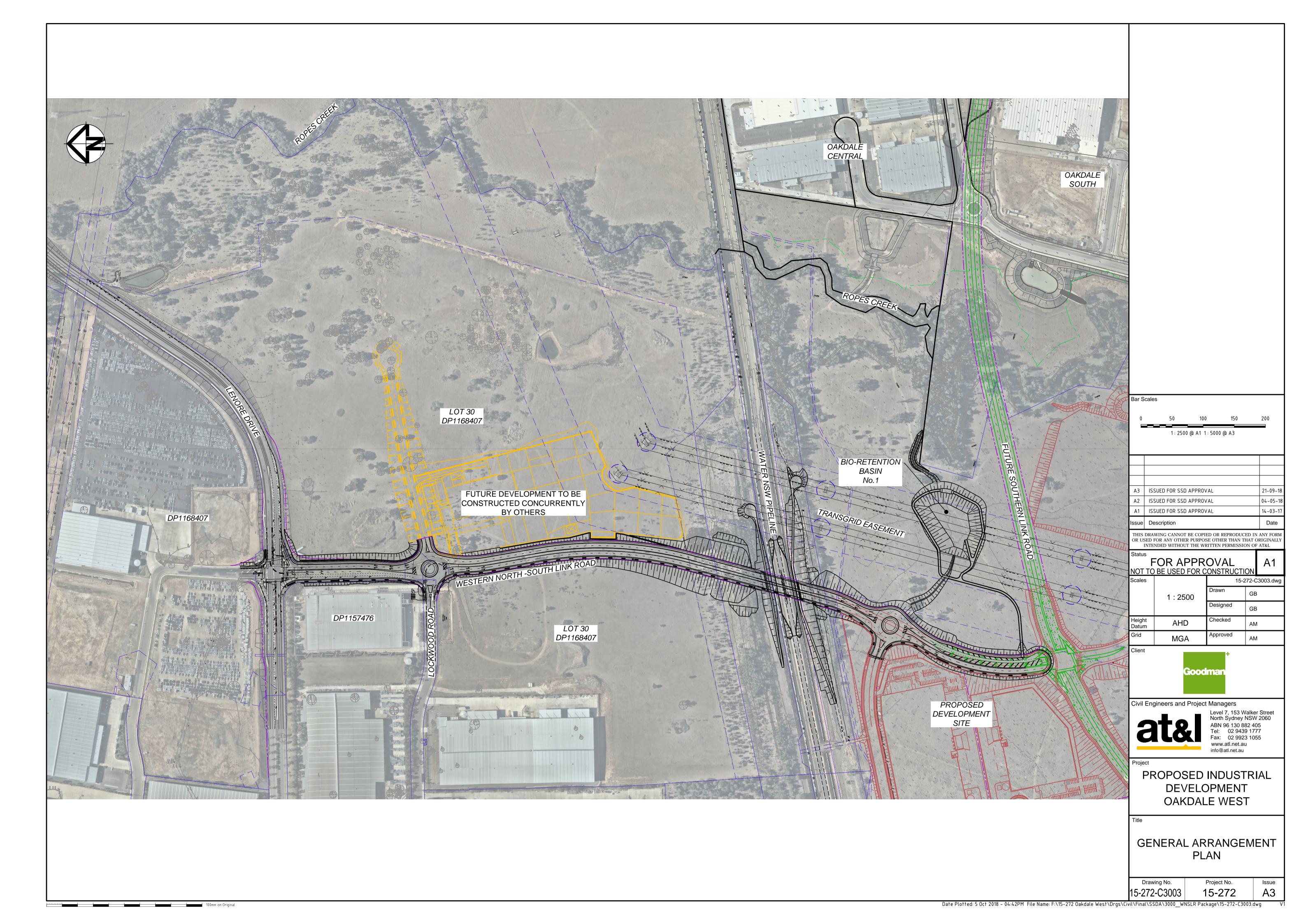
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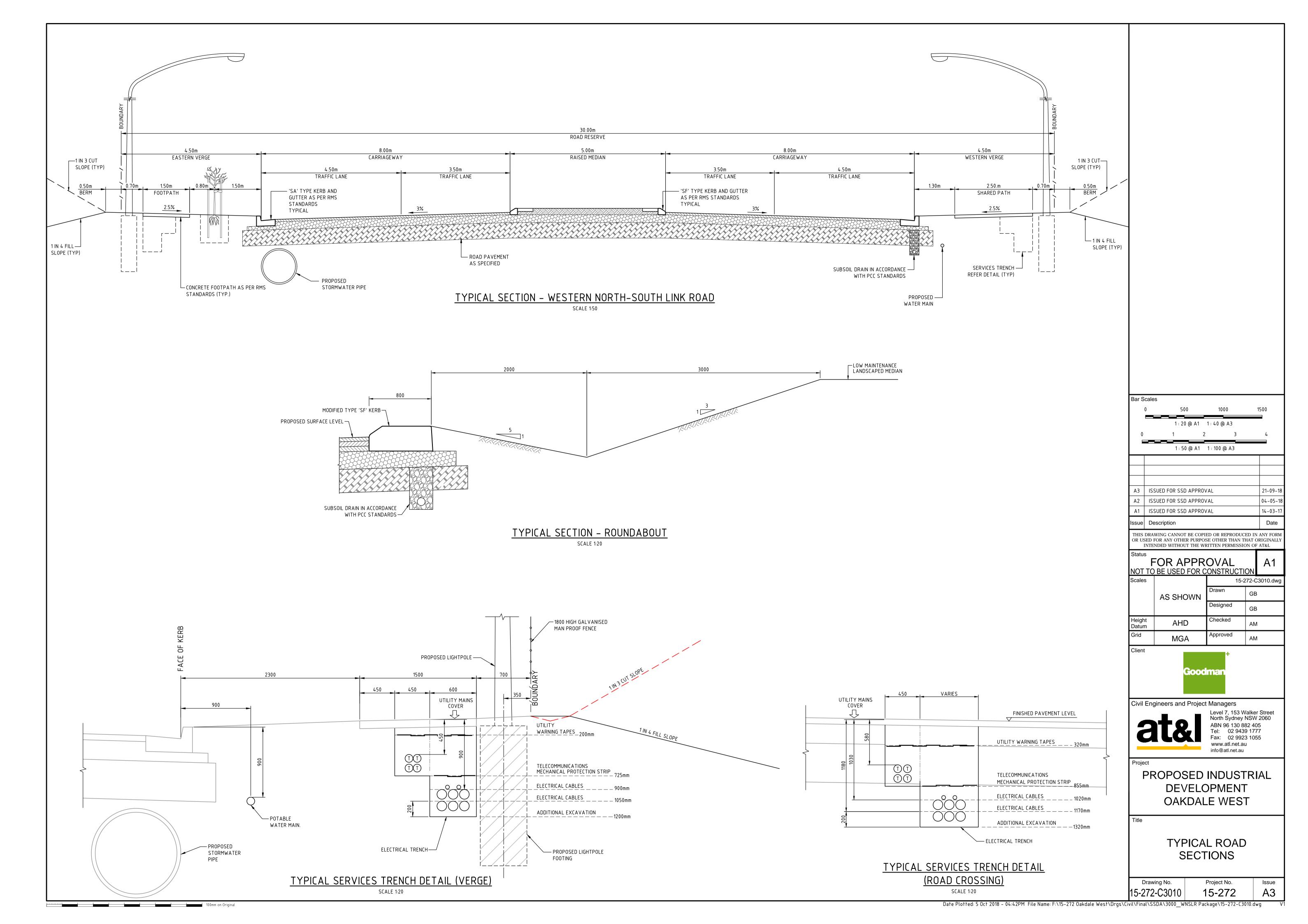
GENERAL NOTES

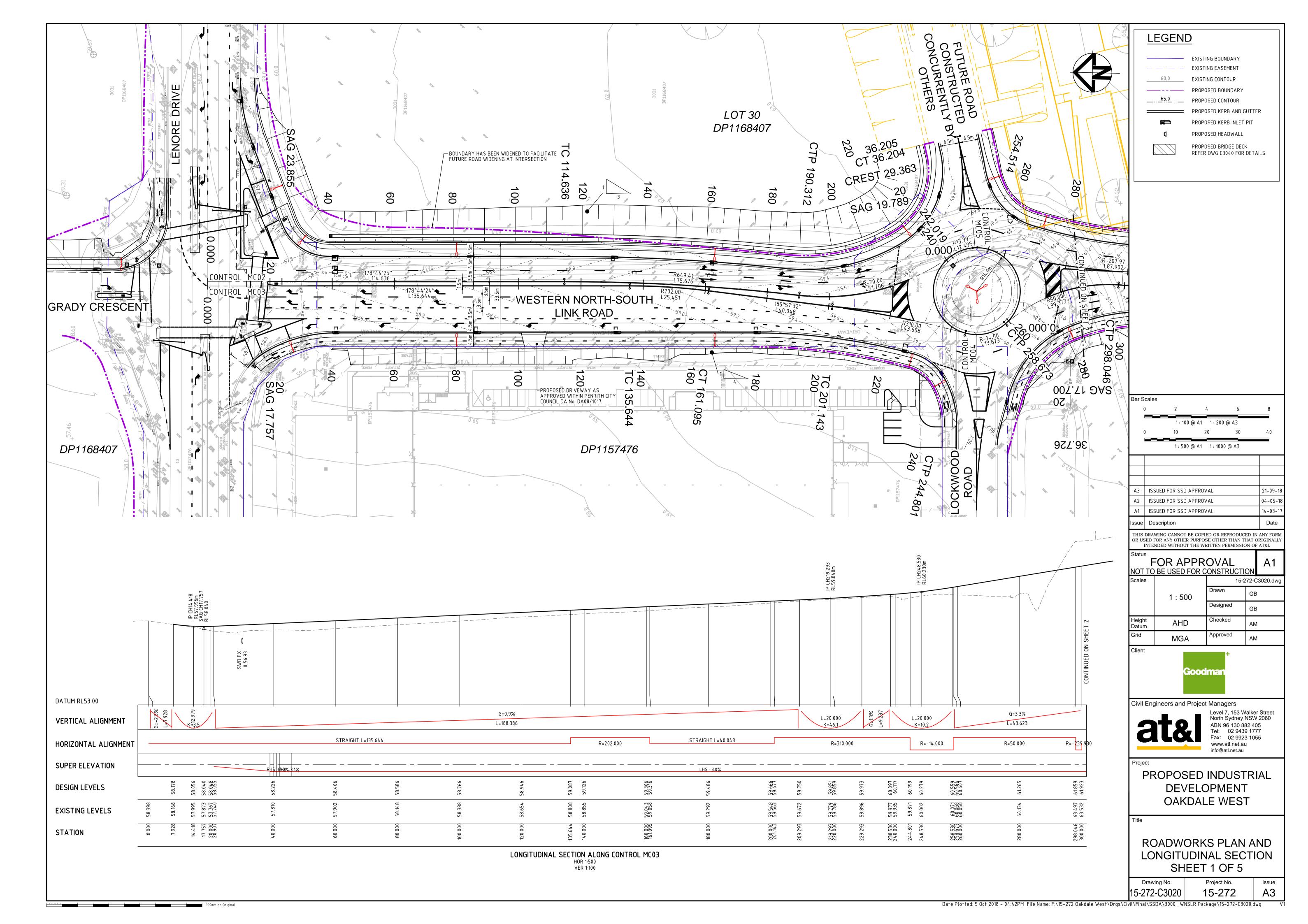
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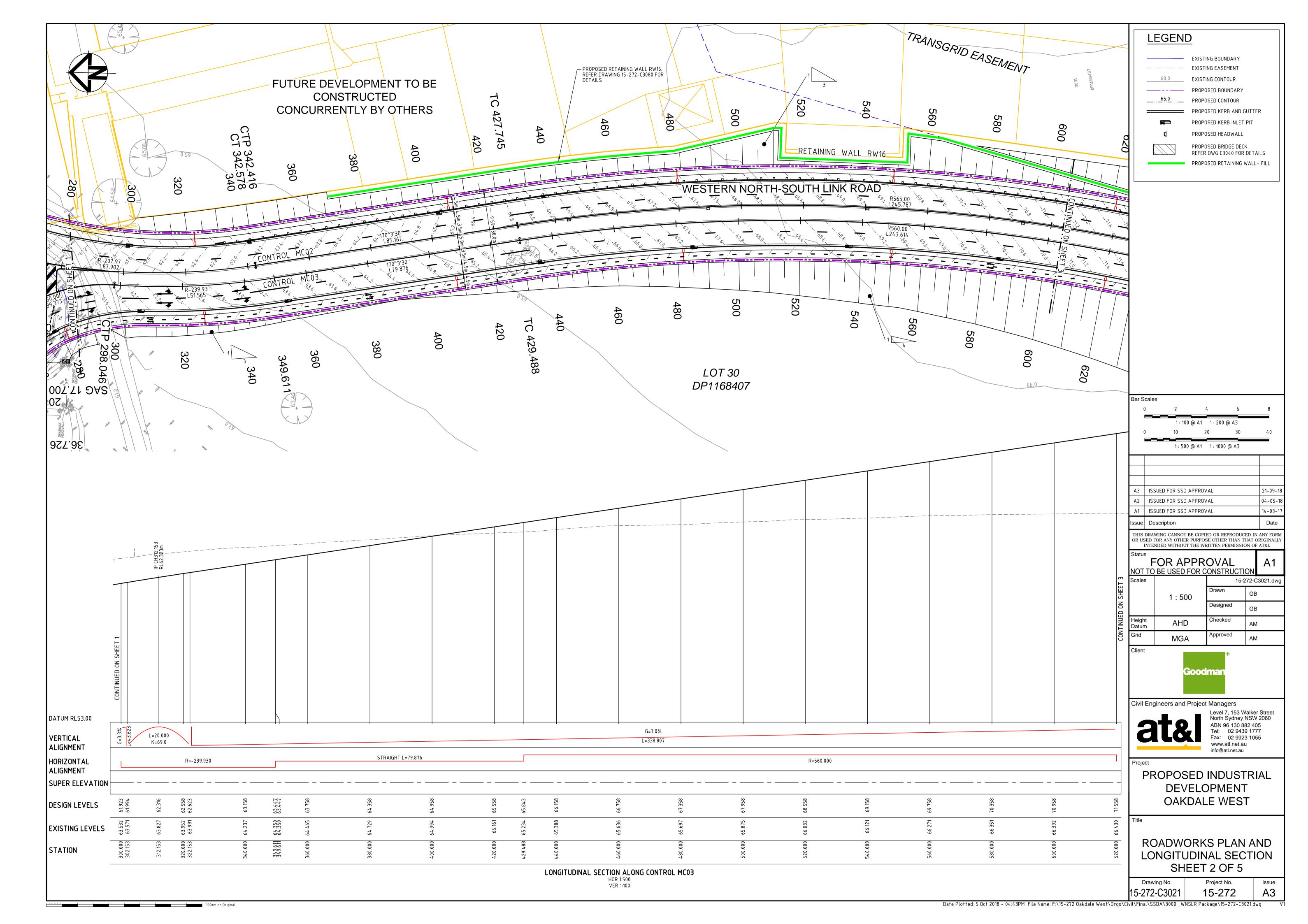
15-272 **A3**

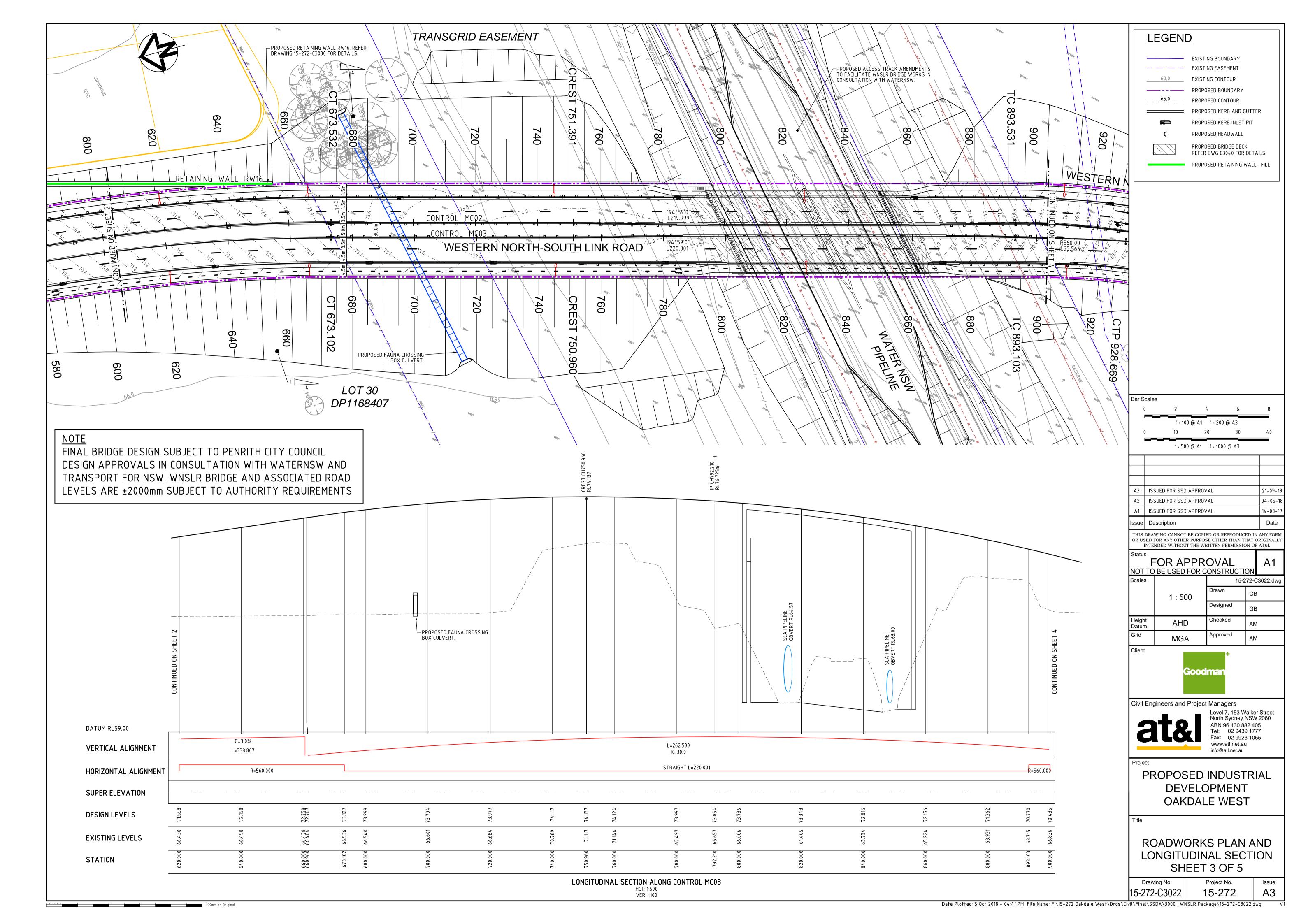
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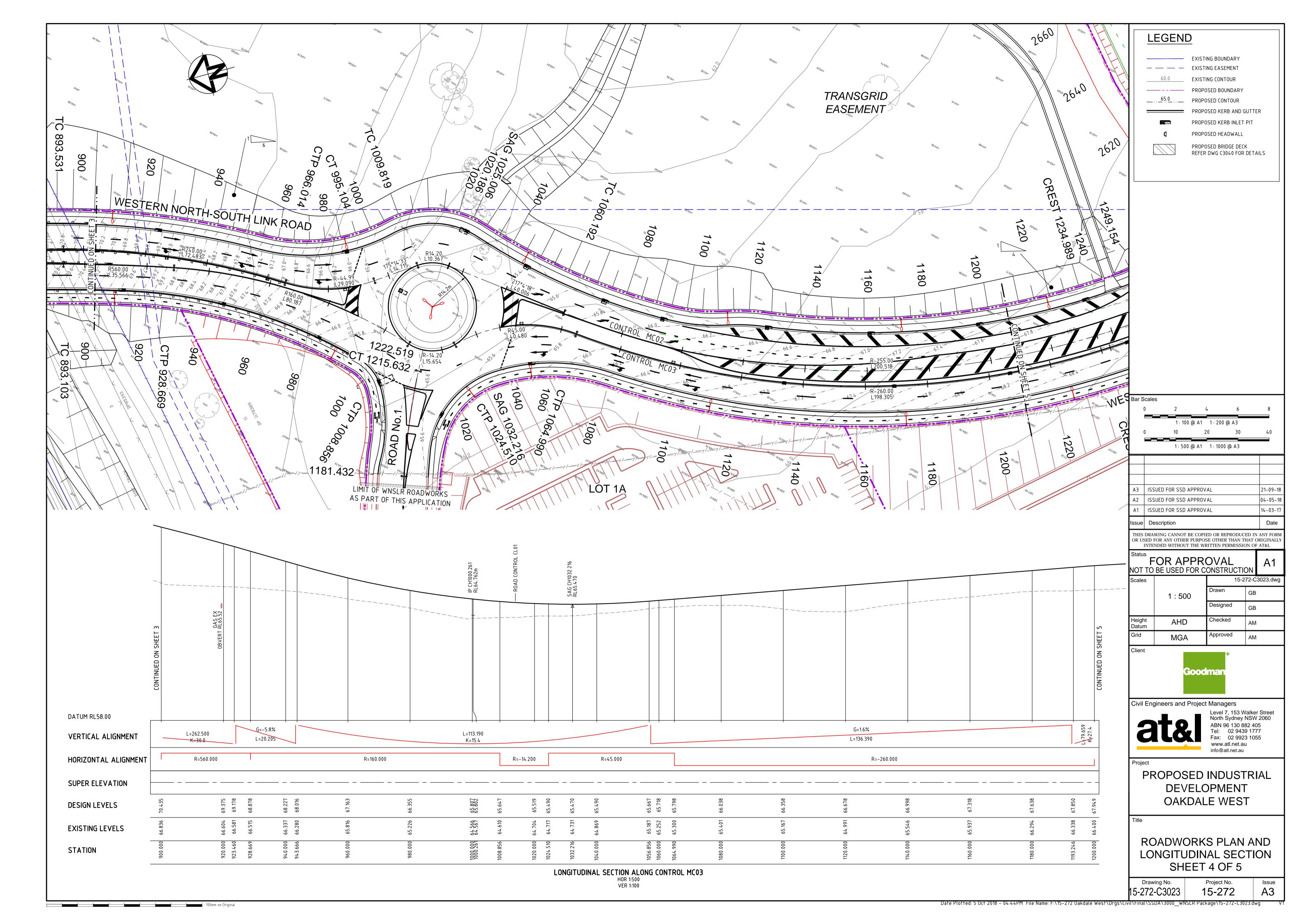


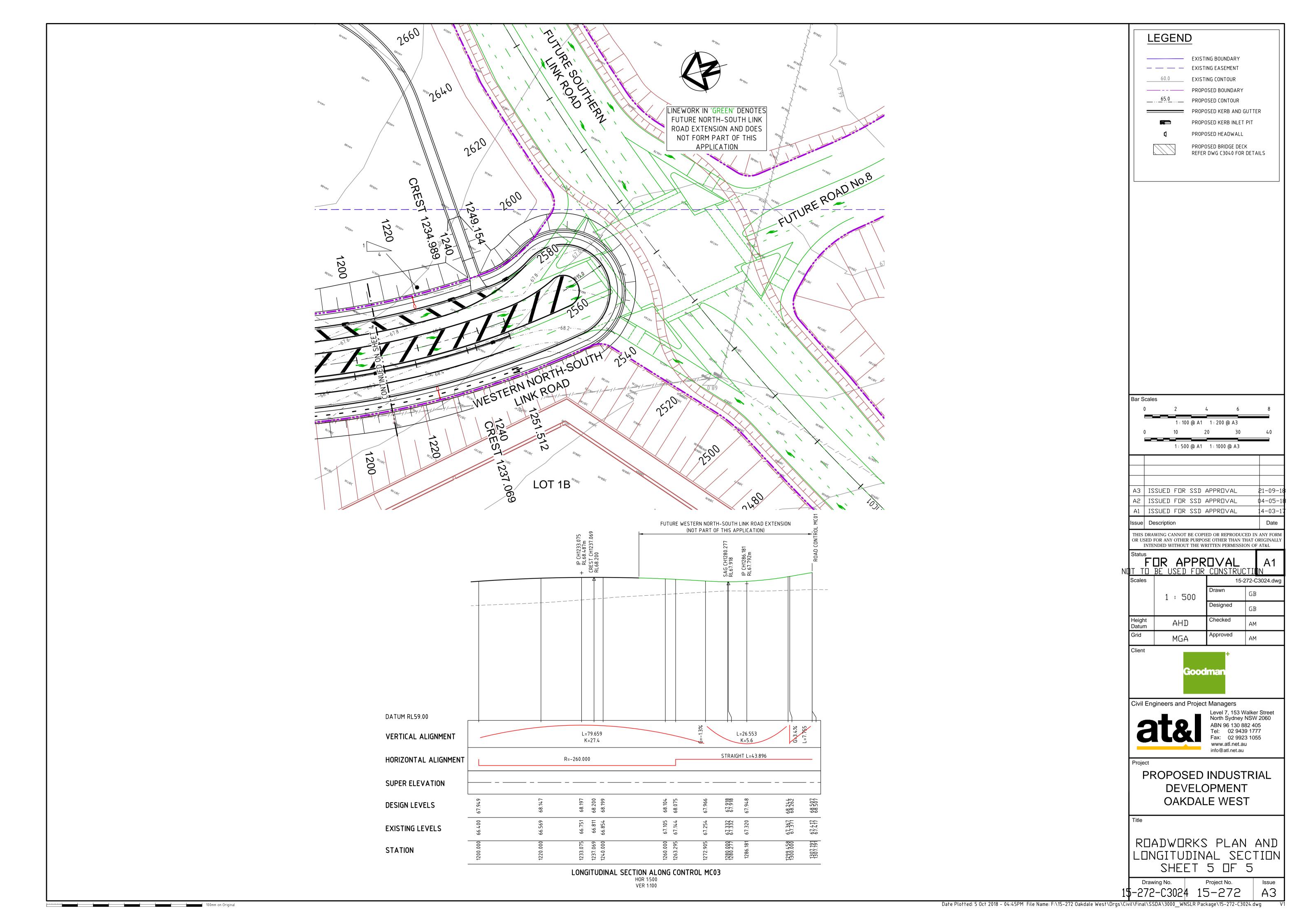


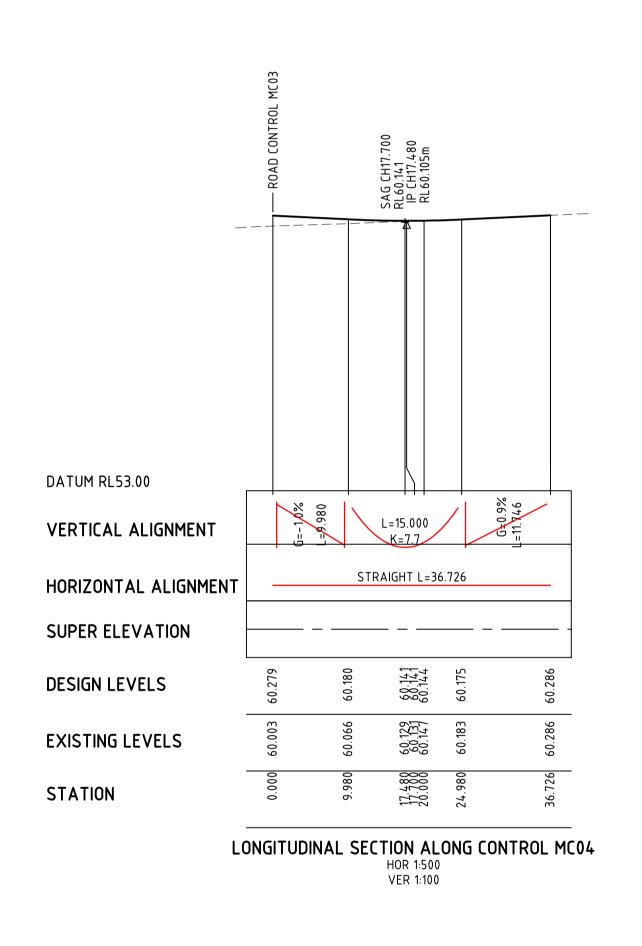




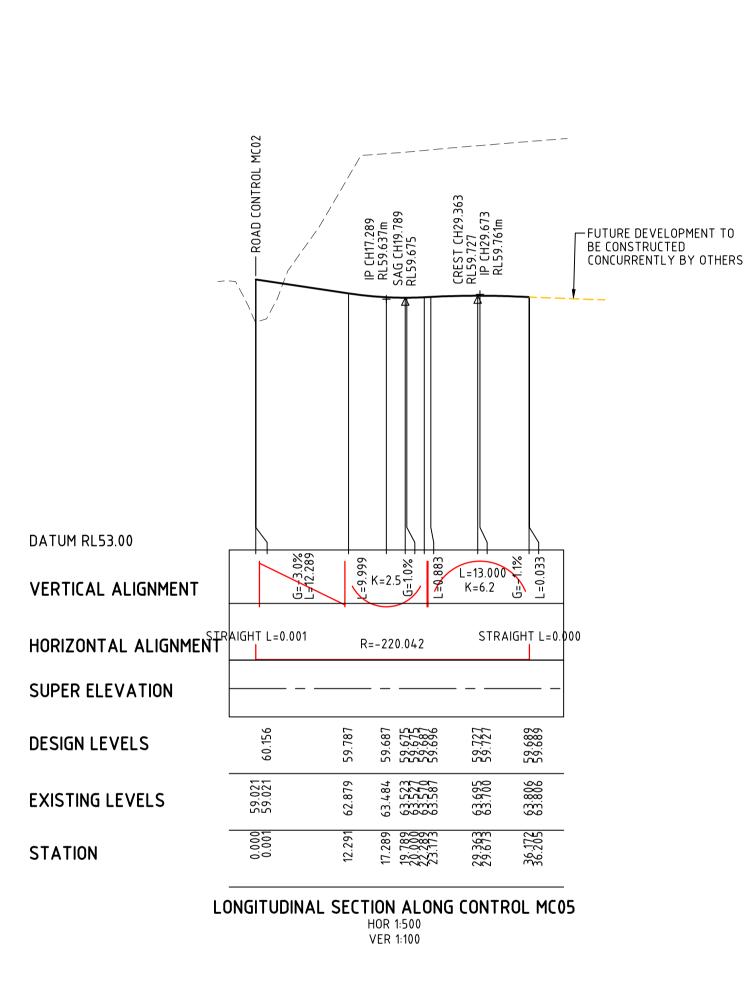


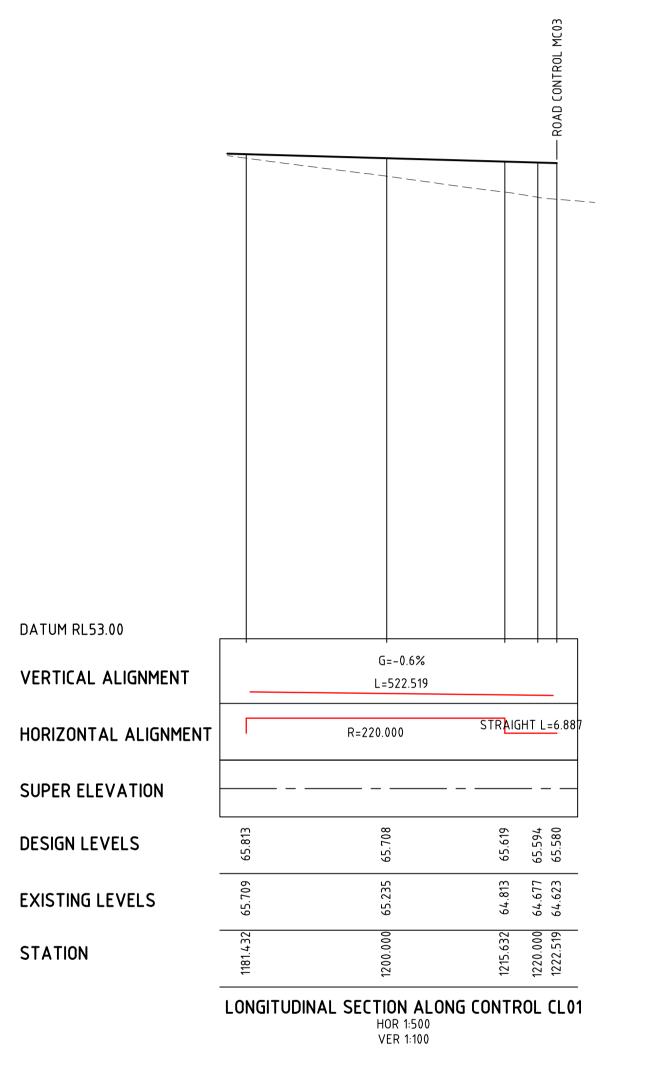


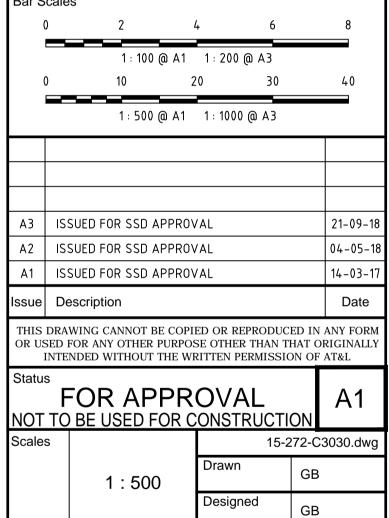




100mm on Original







Checked AHD Approved MGA



Civil Engineers and Project Managers



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Issue

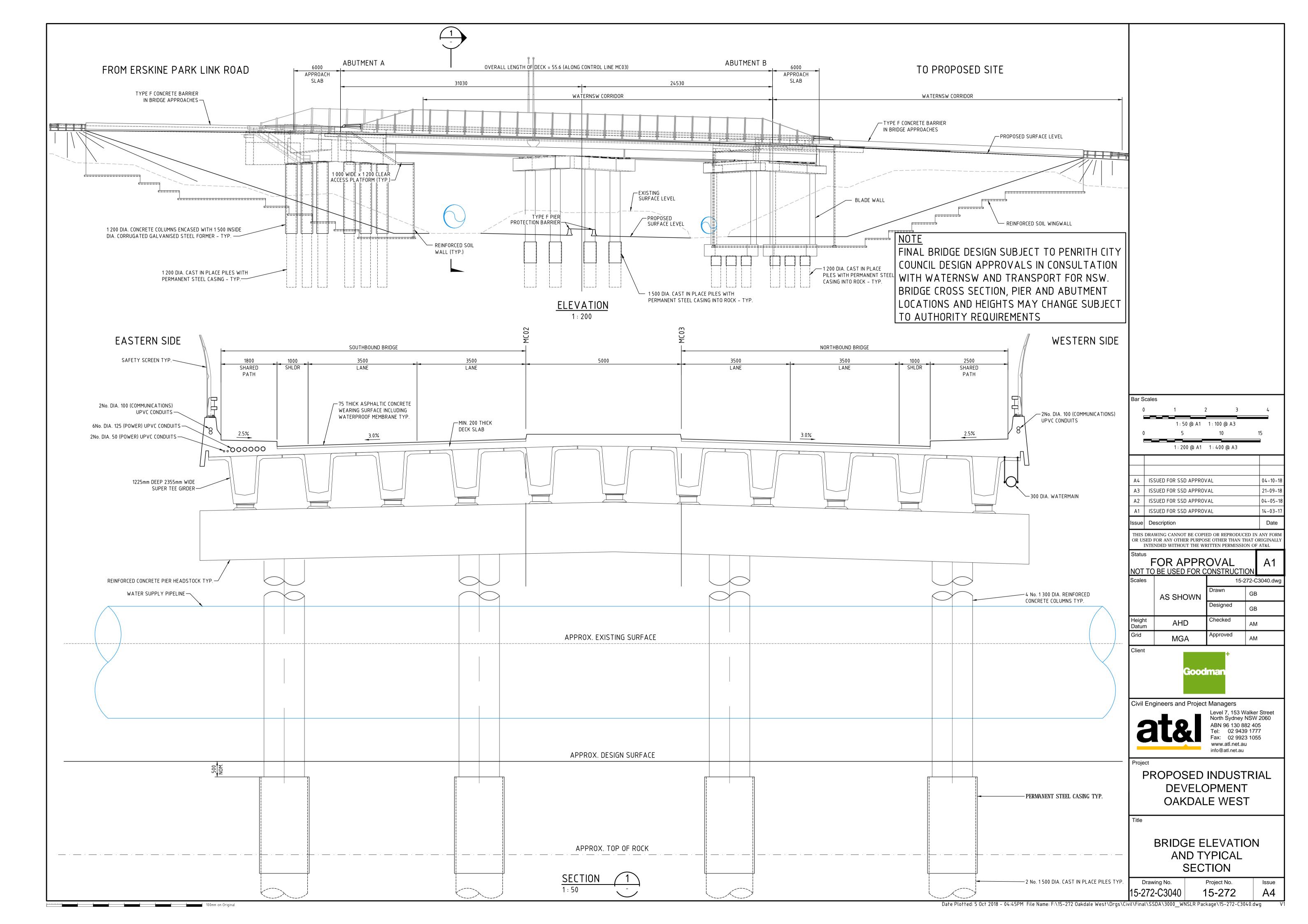
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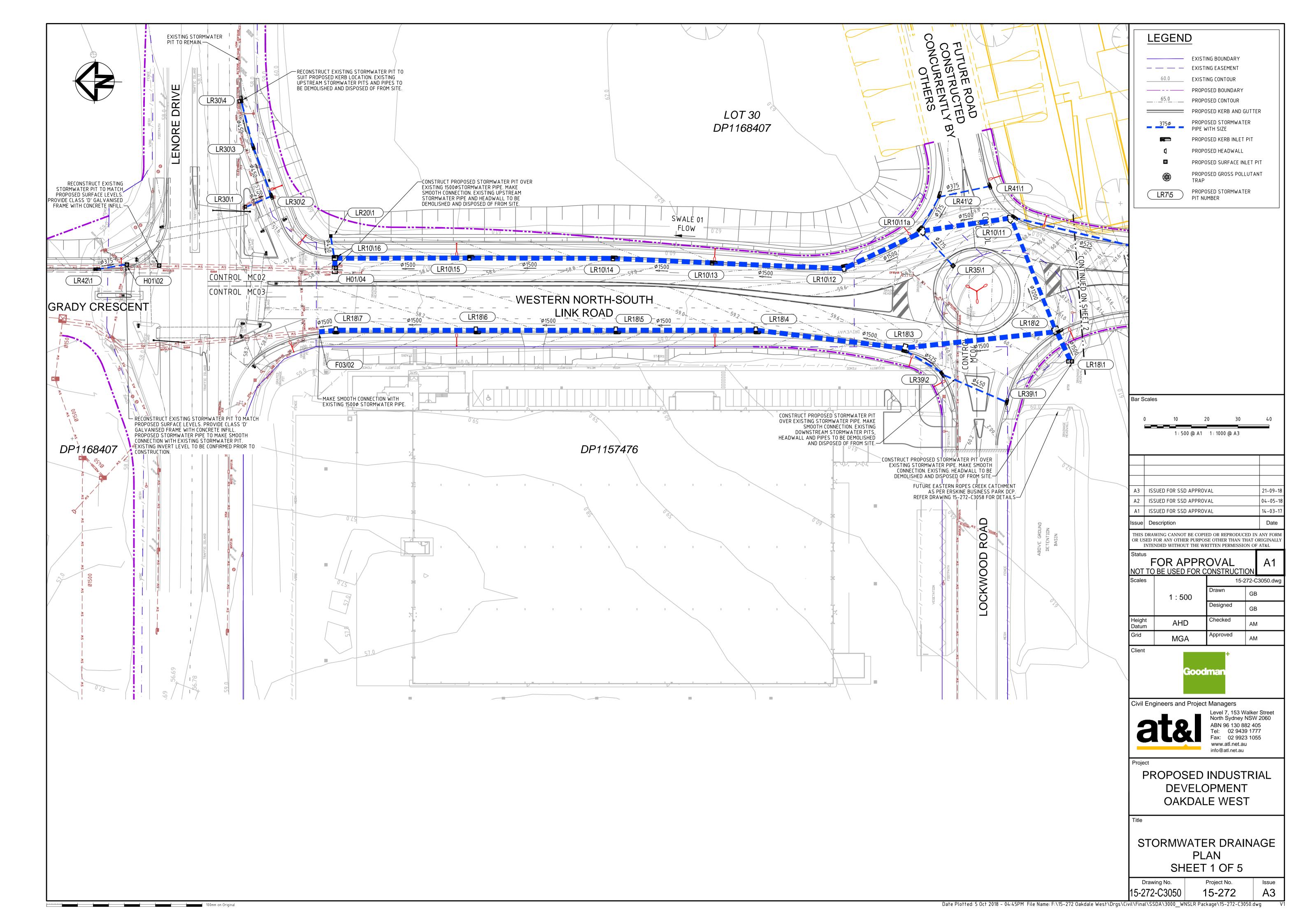
PROPOSED INDUSTRIAL DEVELOPMENT OAKDALE WEST

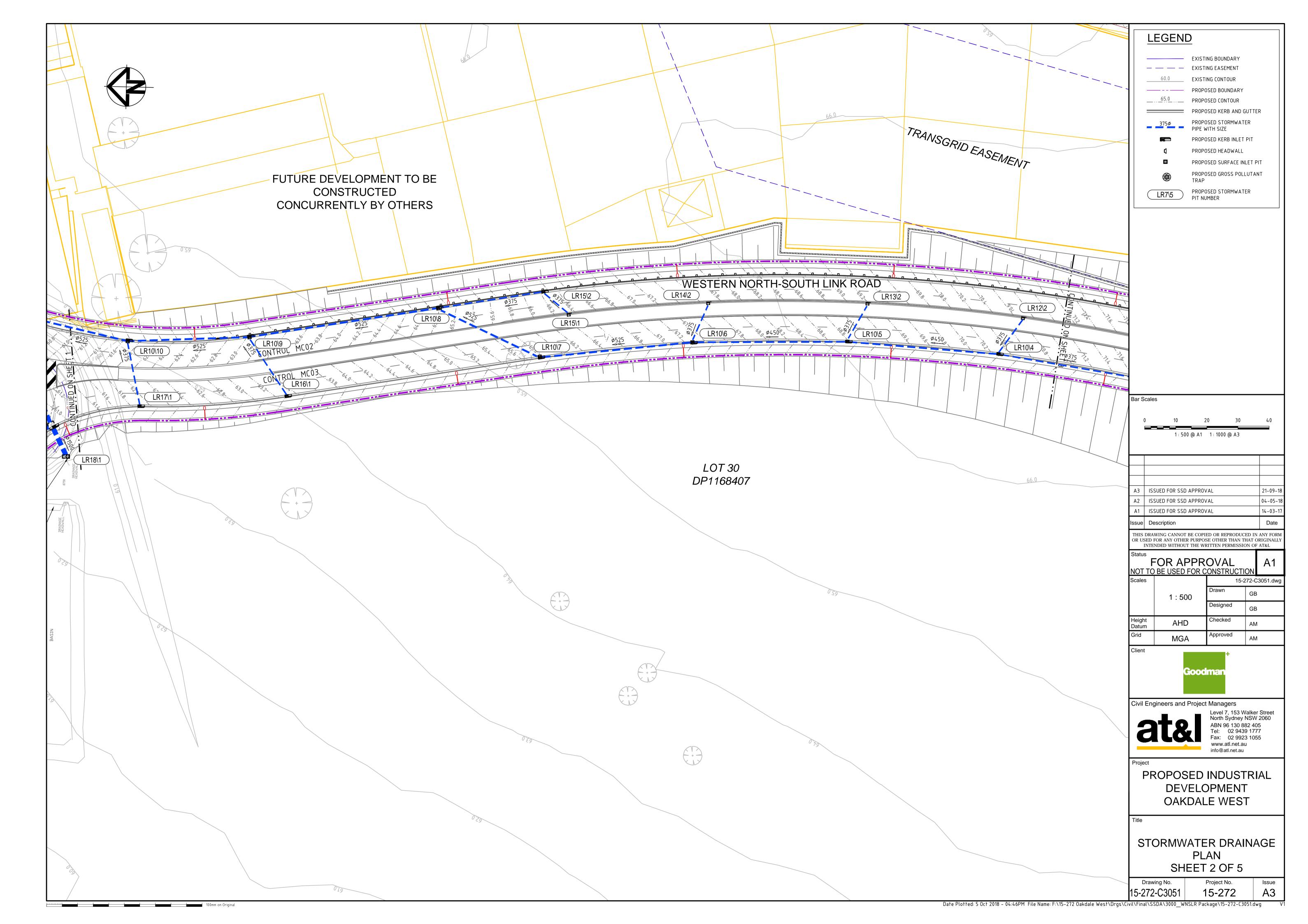
ROAD LONGITUDINAL SECTIONS

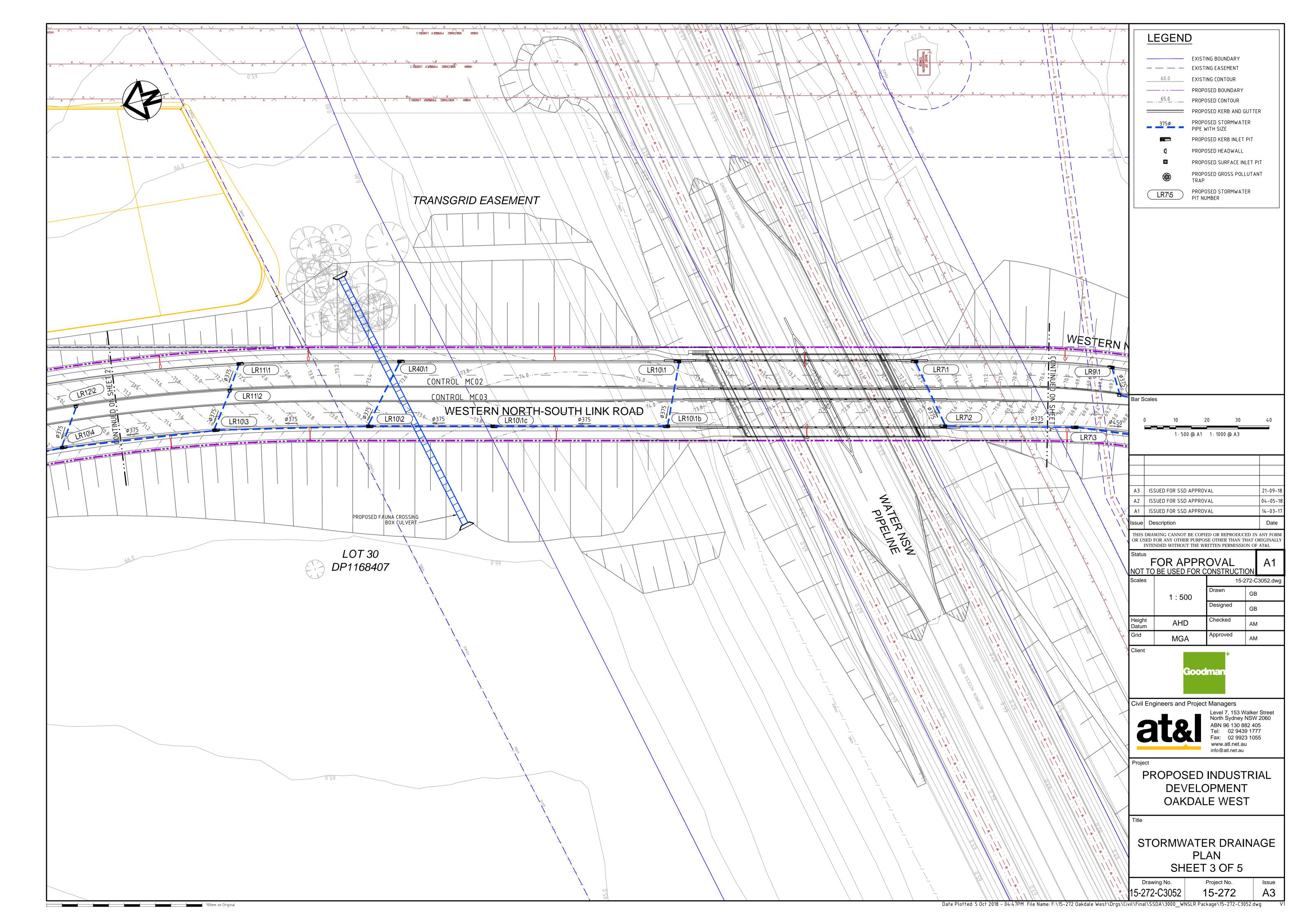
Drawing No. Project No. 15-272-C3030 15-272

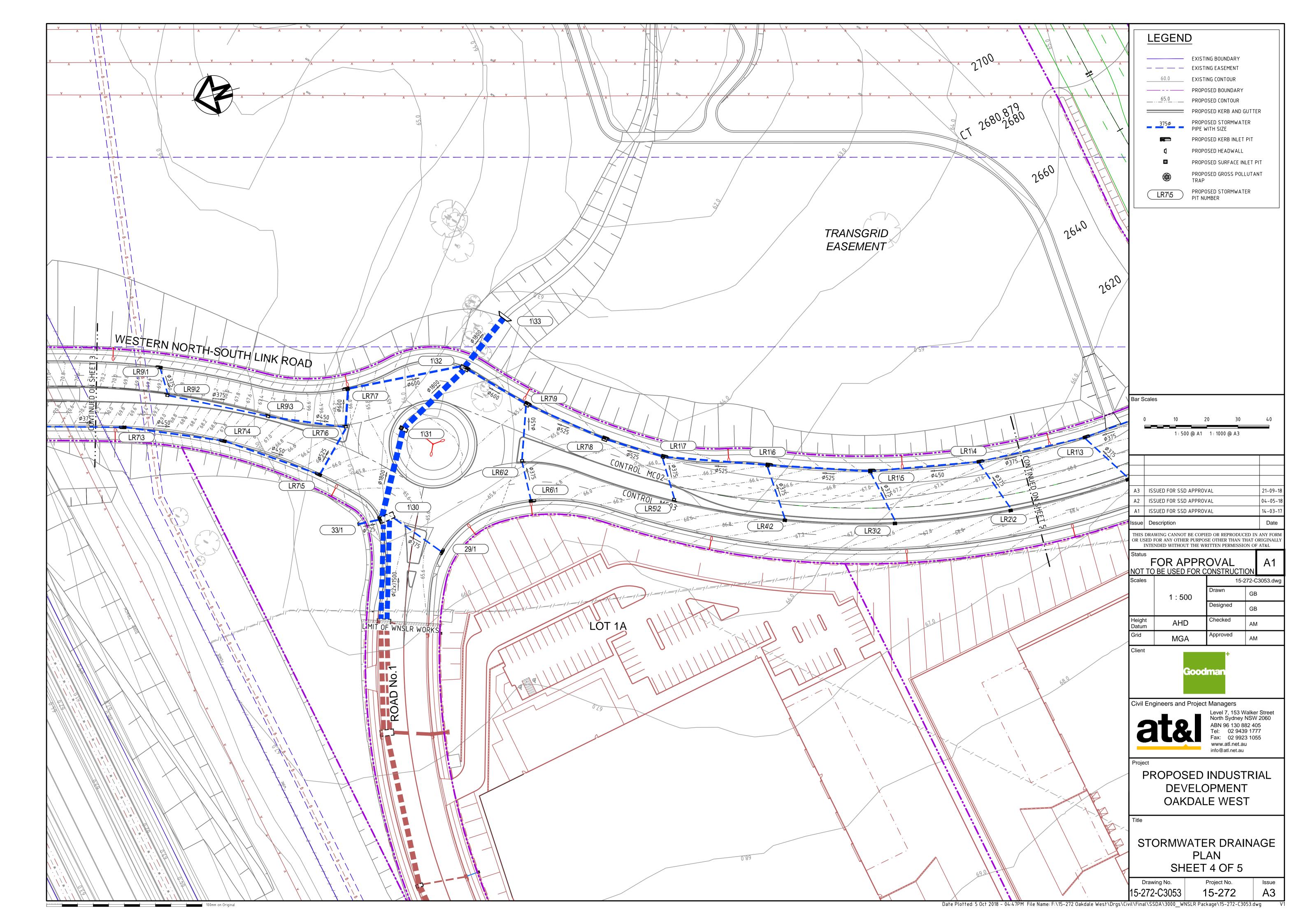
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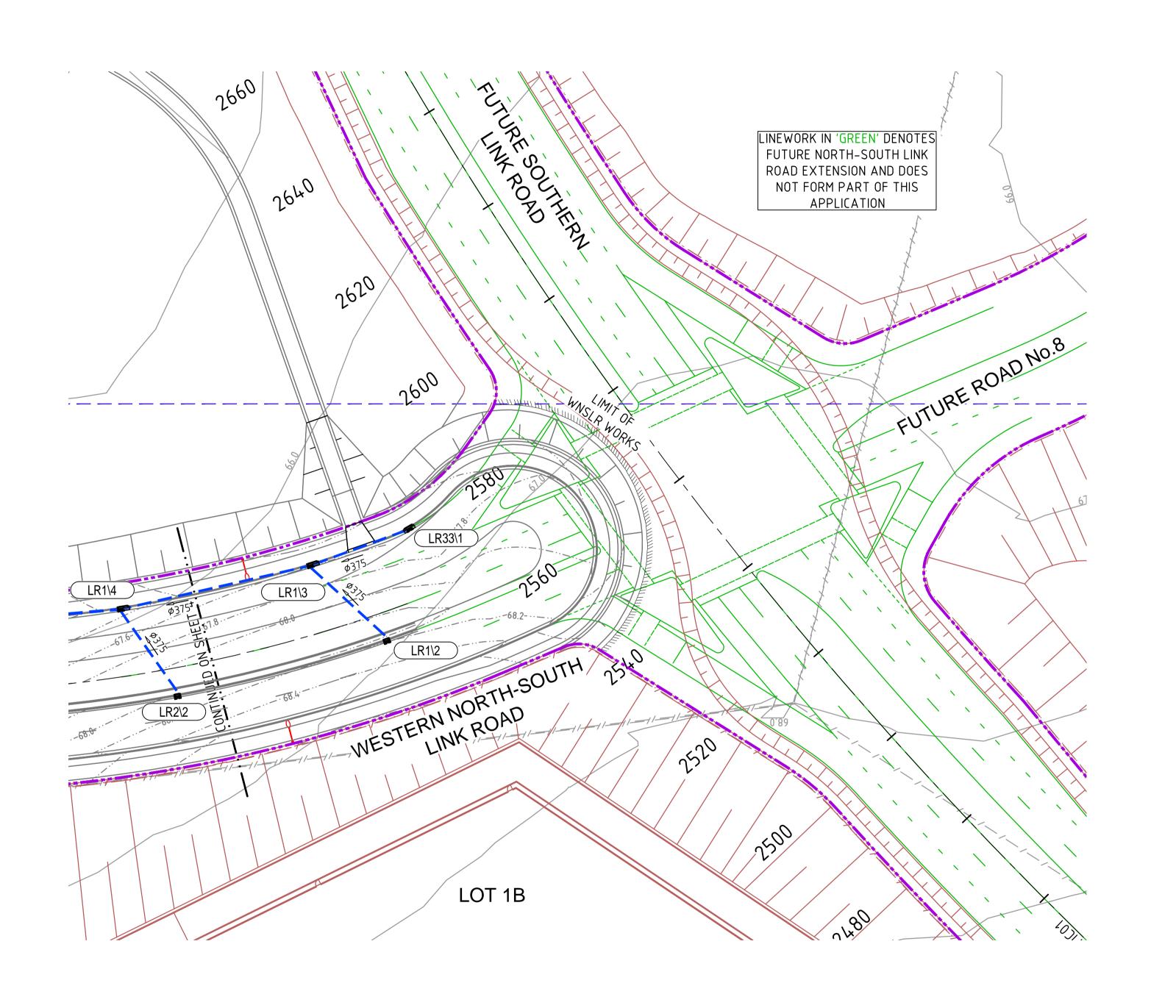


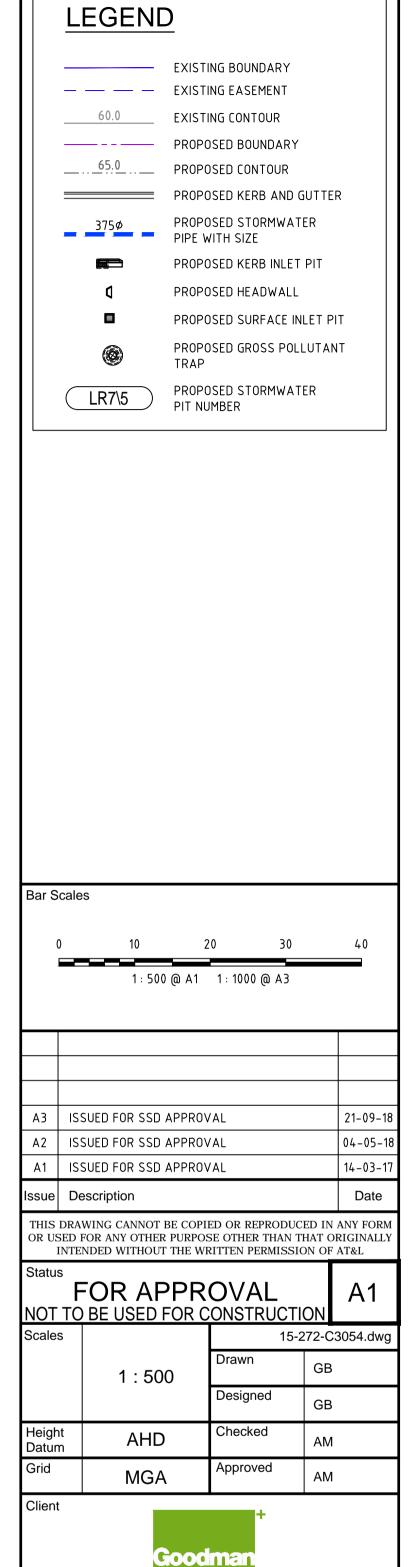












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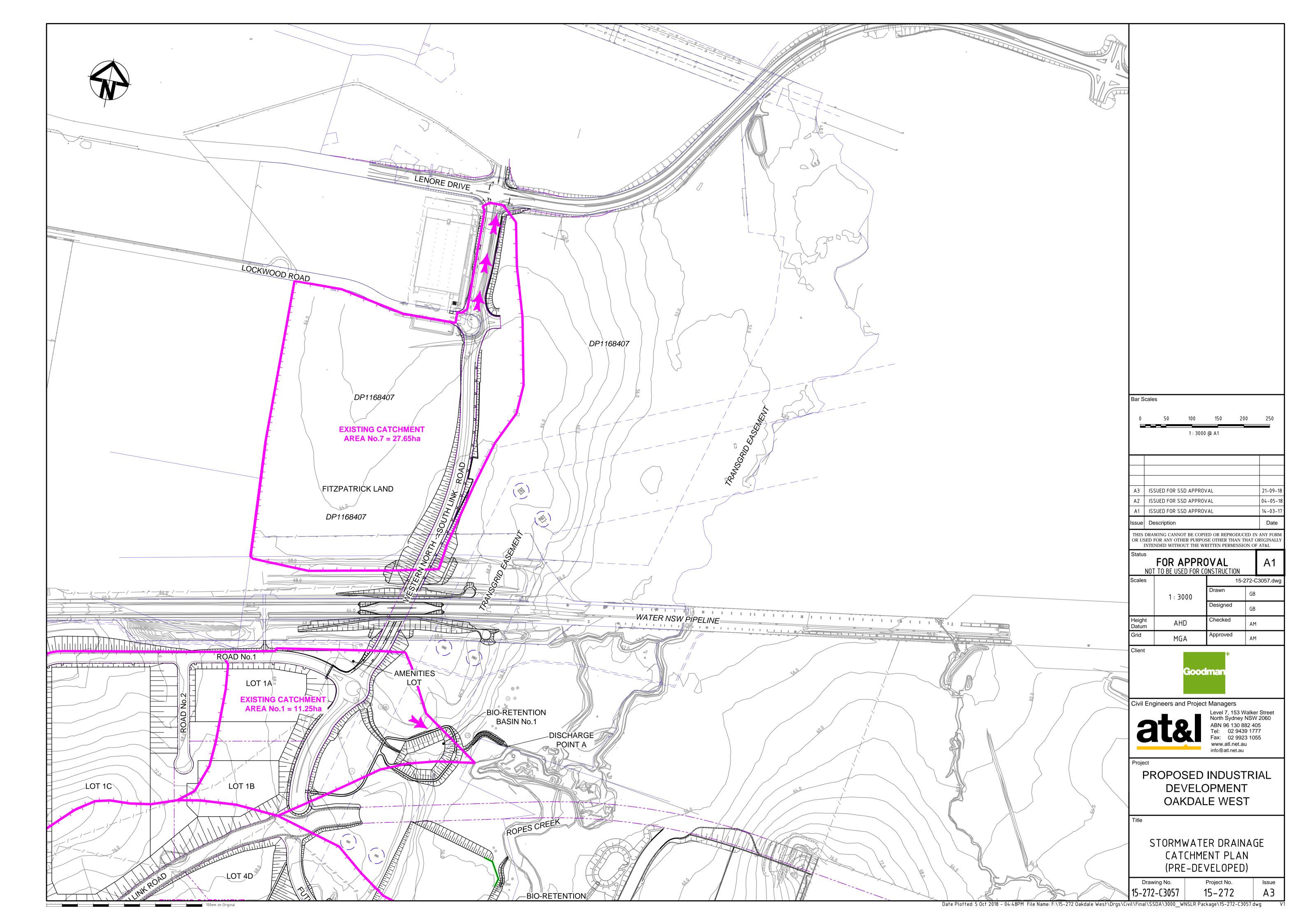
Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au

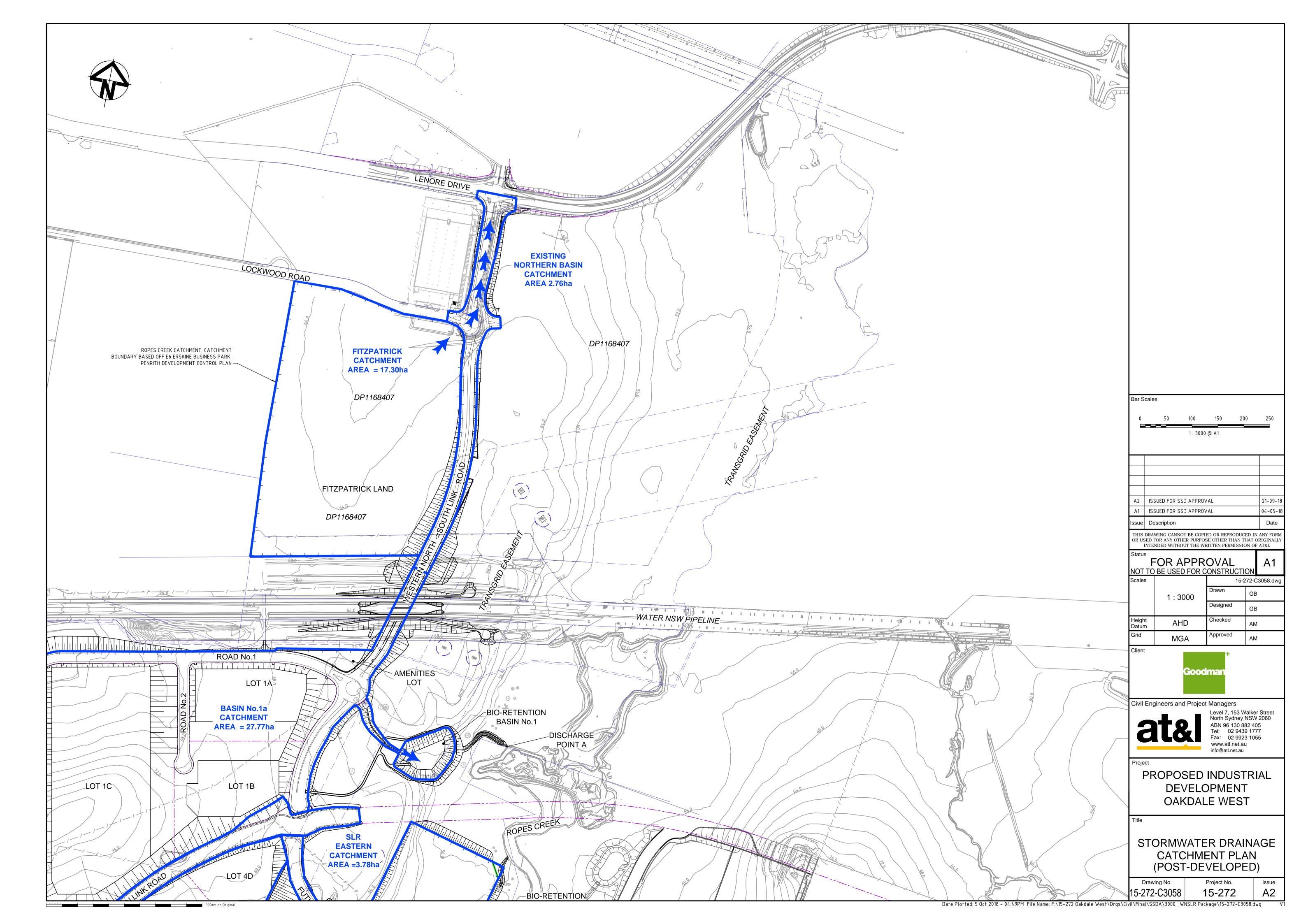
PROPOSED INDUSTRIAL DEVELOPMENT OAKDALE WEST

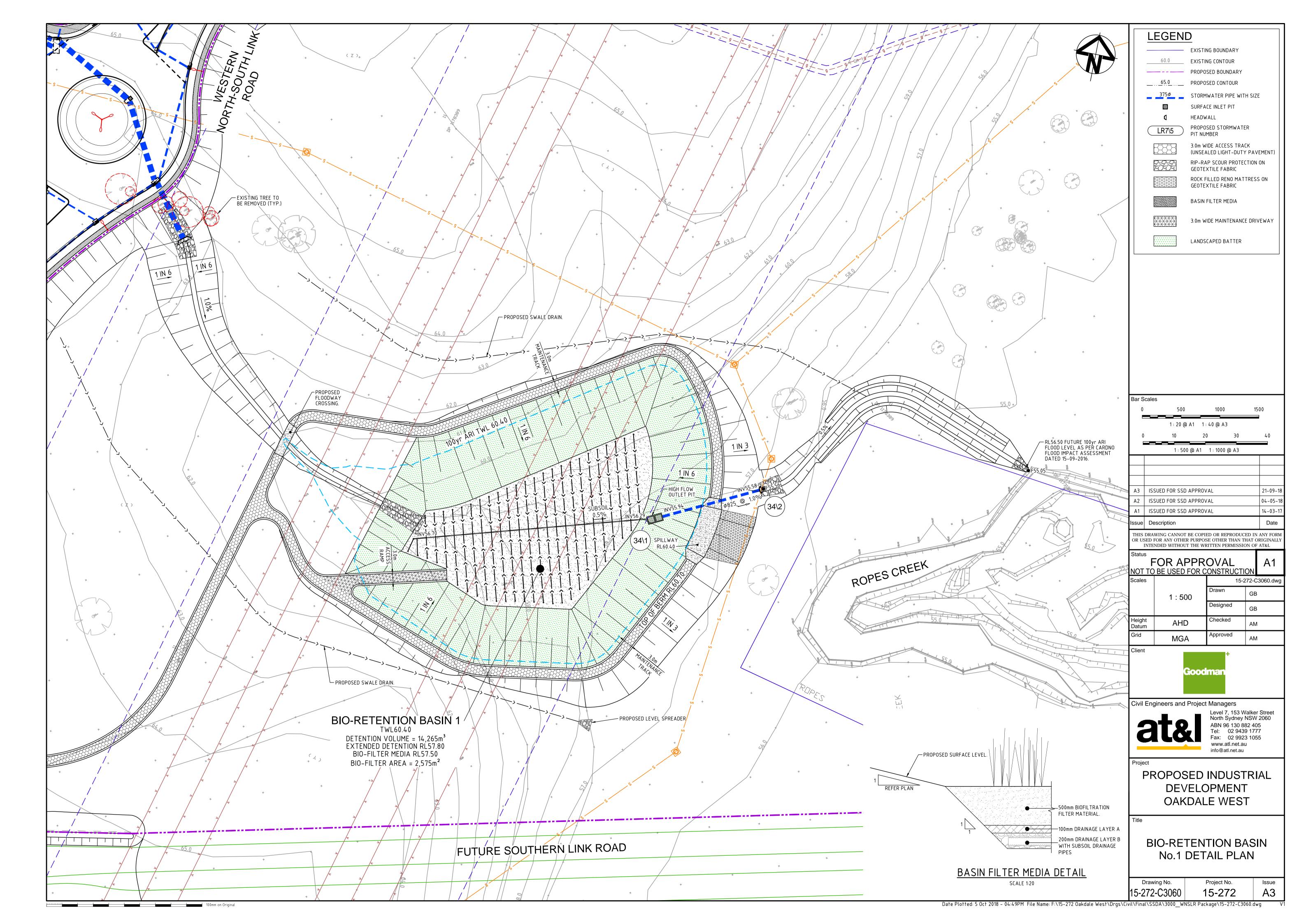
STORMWATER DRAINAGE PLAN SHEET 5 OF 5

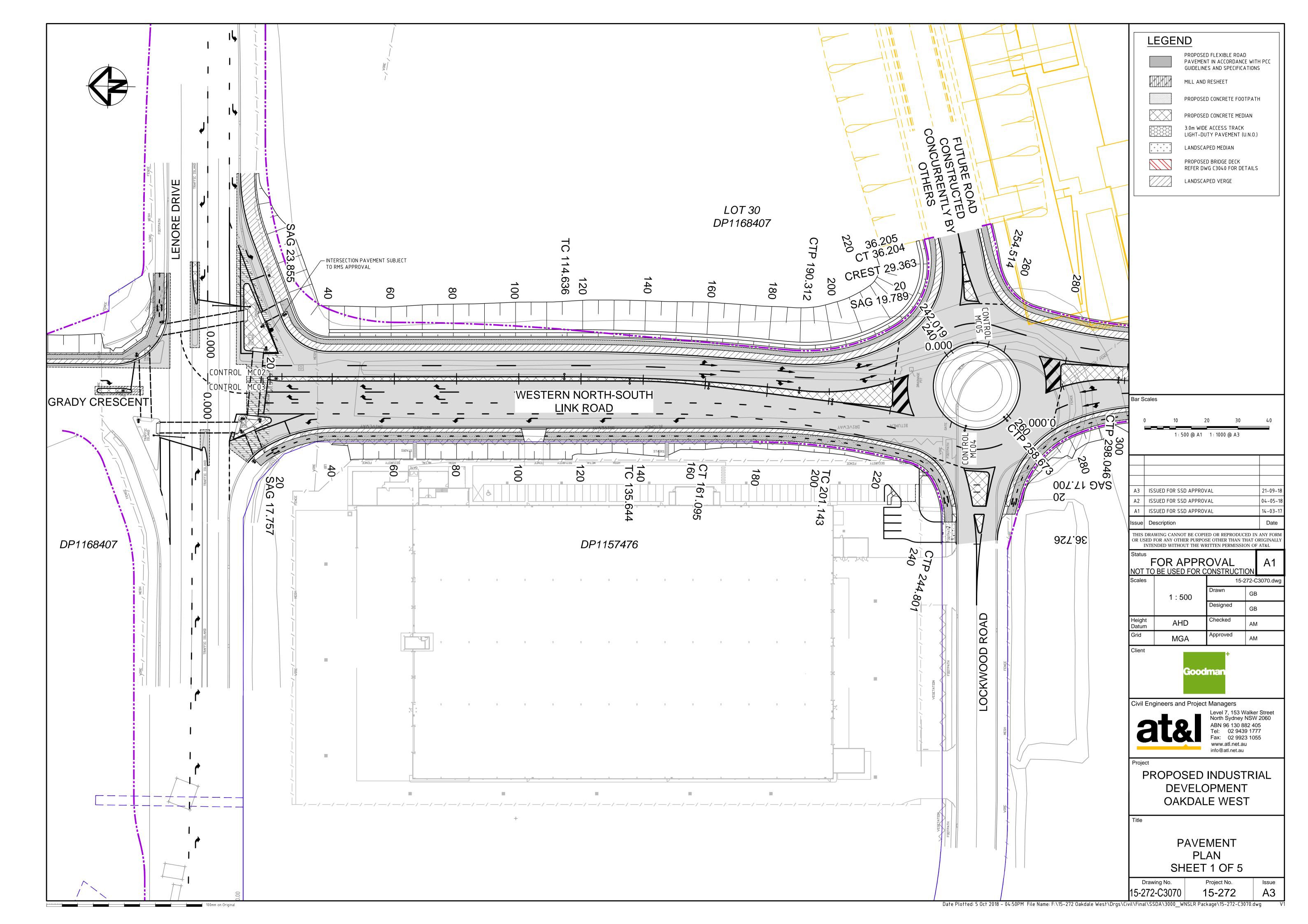
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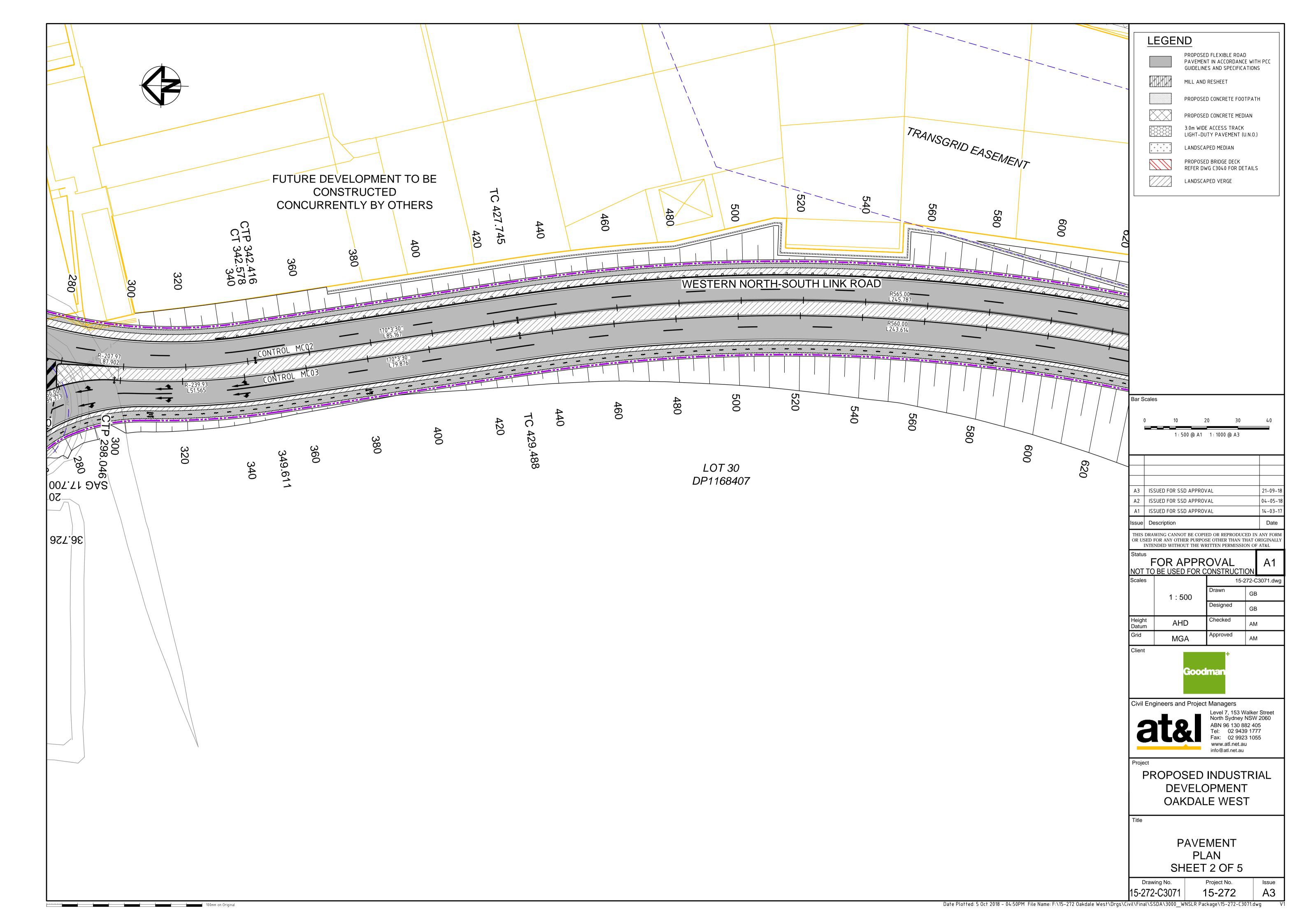
Project No. 15-272 **A3**

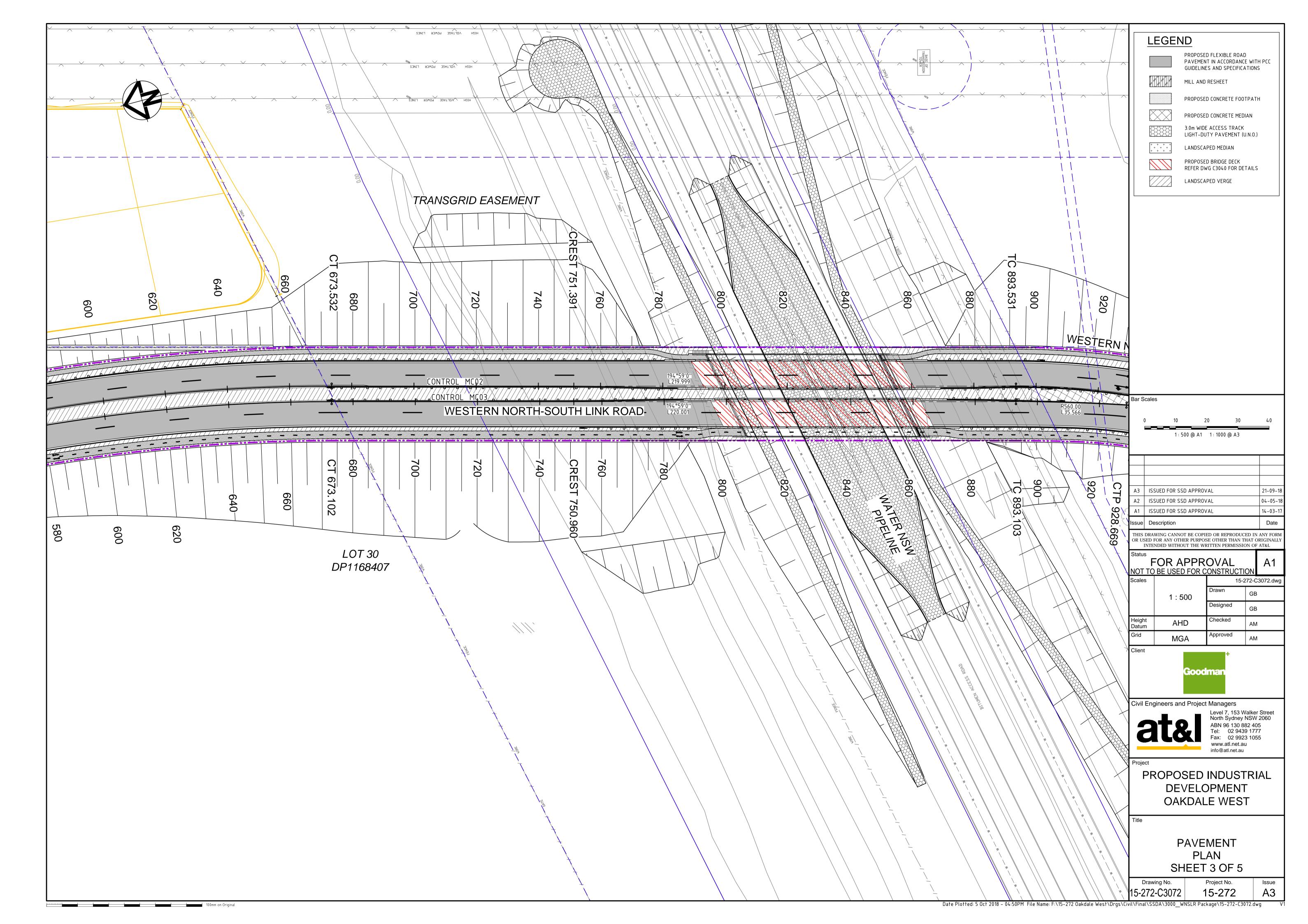


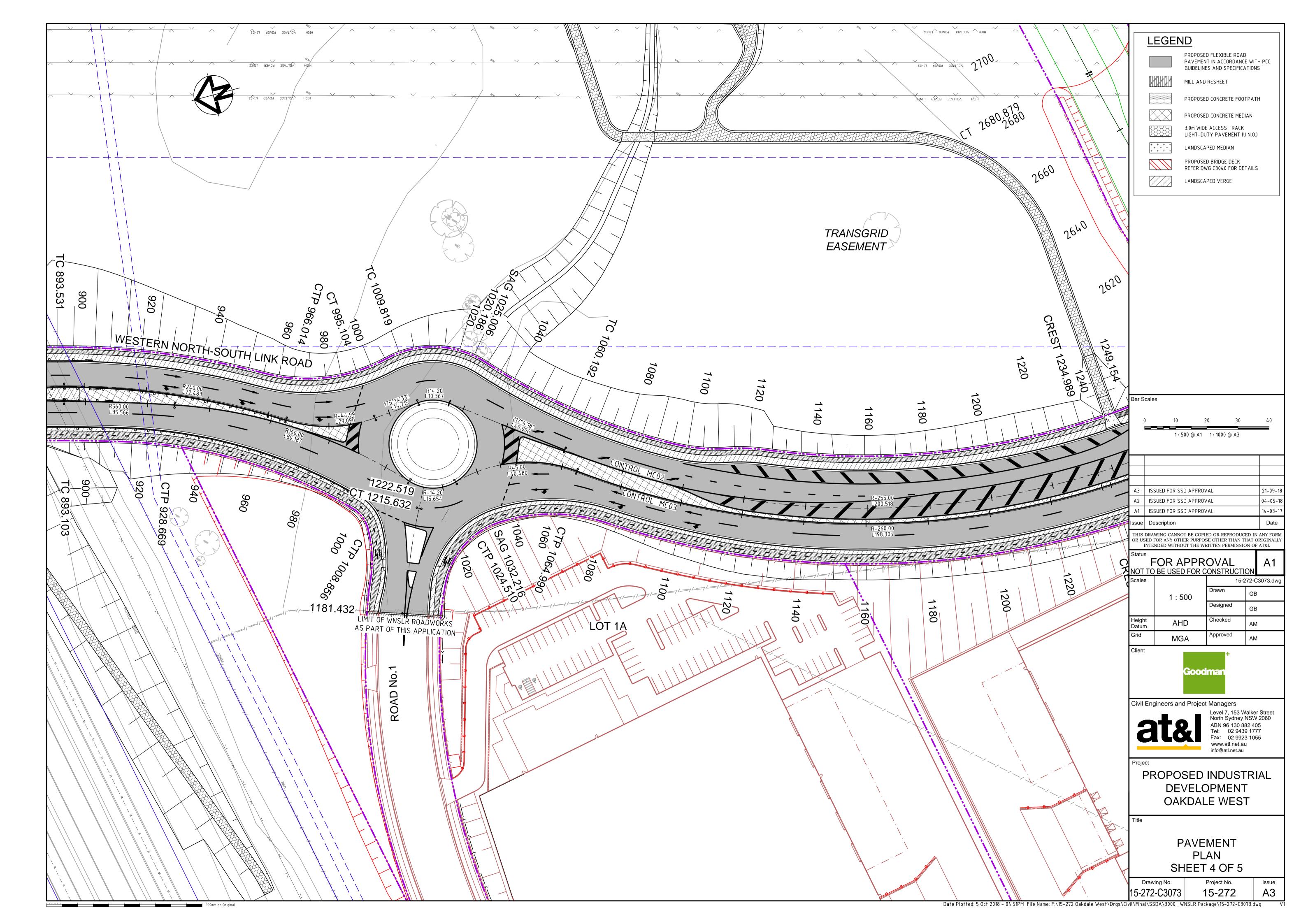


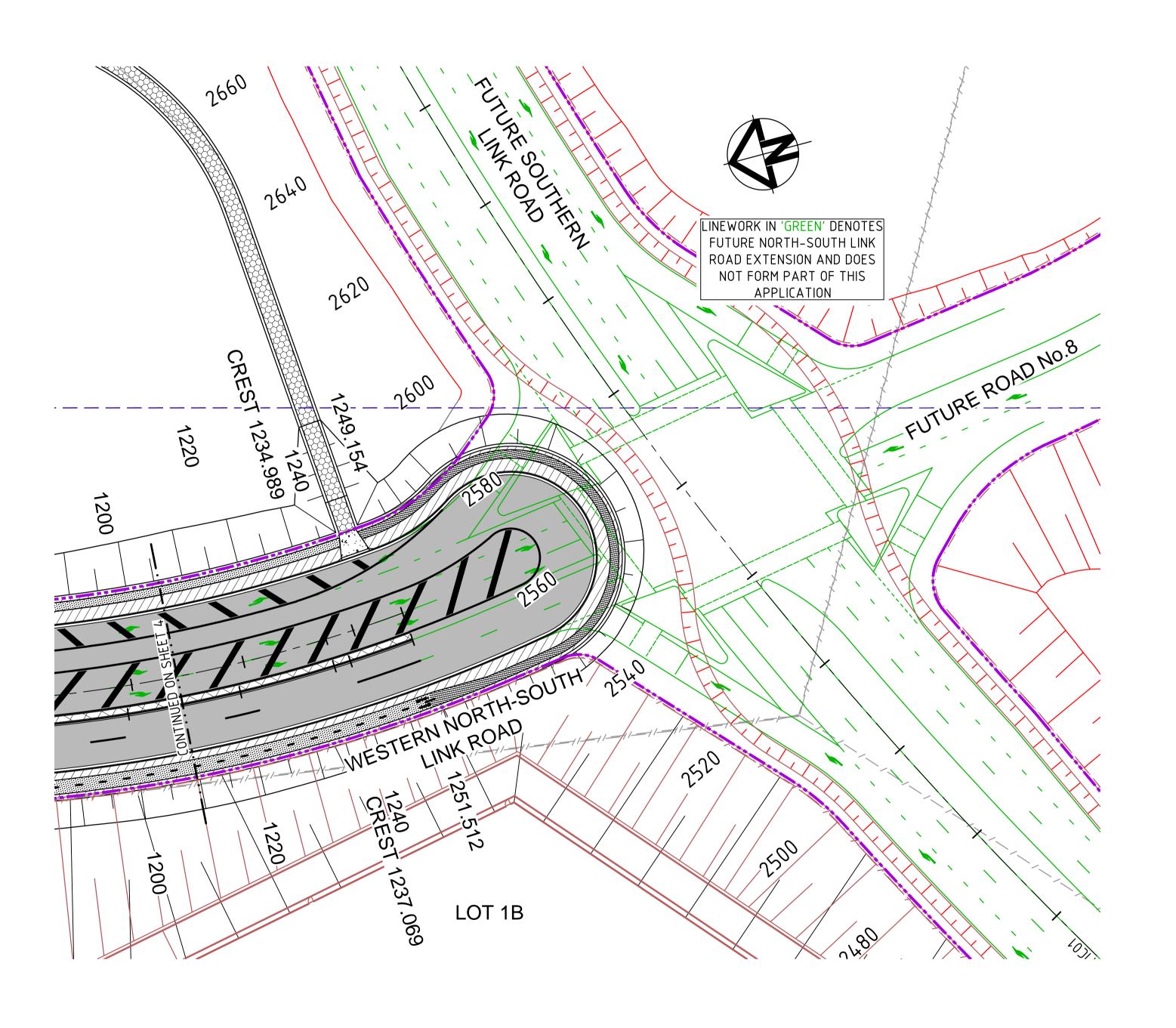












LEGEND

PROPOSED FLEXIBLE ROAD
PAVEMENT IN ACCORDANCE WITH PCC
GUIDELINES AND SPECIFICATIONS

MILL AND RESHEET

PROPOSED CONCRETE FOOTPATH

PROPOSED CONCRETE MEDIAN

3.0m WIDE ACCESS TRACK
LIGHT-DUTY PAVEMENT (U.N.O.

LIGHT-DUTY PAVEMENT (U.N.O.)

+ + + + | LANDSCAPED MEDIAN

PROPOSED BRIDGE DECK
REFER DWG C3040 FOR DETAILS

LANDSCAPED VERGE

Bar Scales

0 10 20 30 40 1:500 @ A1 1:1000 @ A3

A2 ISSUED FOR SSD APPROVAL 21-09-18
A1 ISSUED FOR SSD APPROVAL 04-05-18

Issue Description Date

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Status
FOR APPROVAL

 NOT TO BE USED FOR CONSTRUCTION

 Scales
 15-272-C3074.dwg

 Drawn
 GB

 Designed
 GB

 Height Datum
 AHD

 Checked
 AM

Clier



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MGA



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Approved

Project

PROPOSED INDUSTRIAL
DEVELOPMENT
OAKDALE WEST

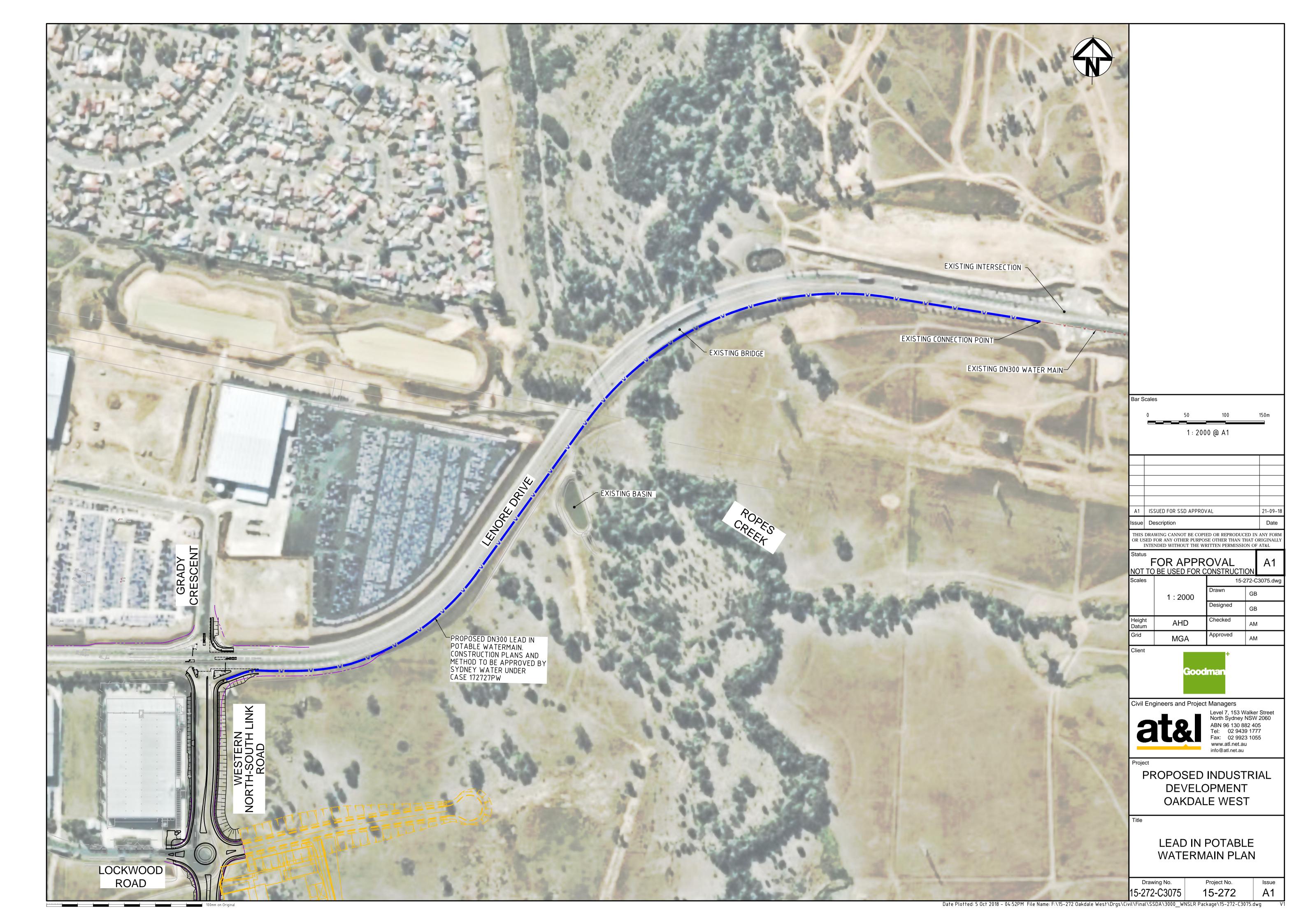
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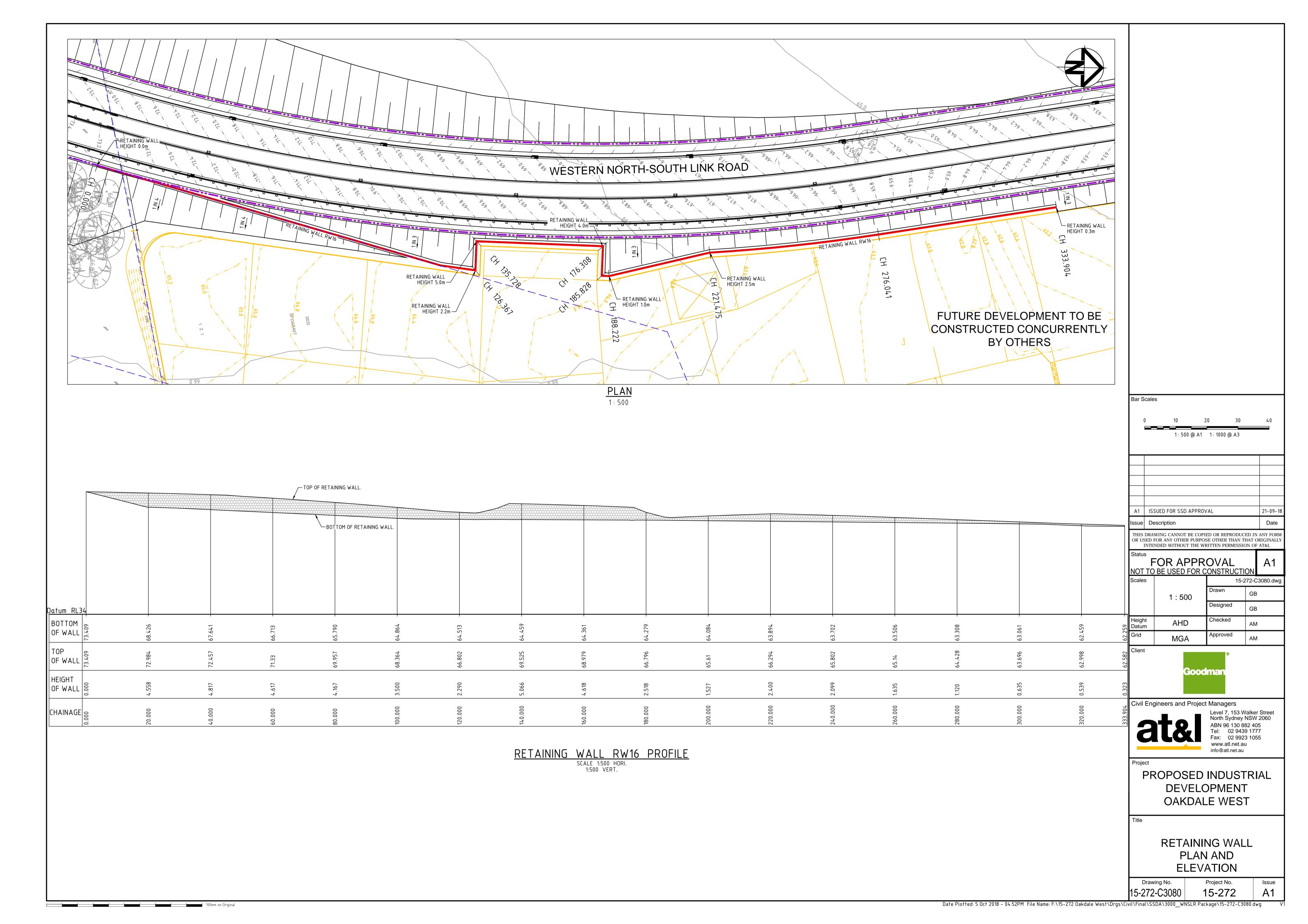
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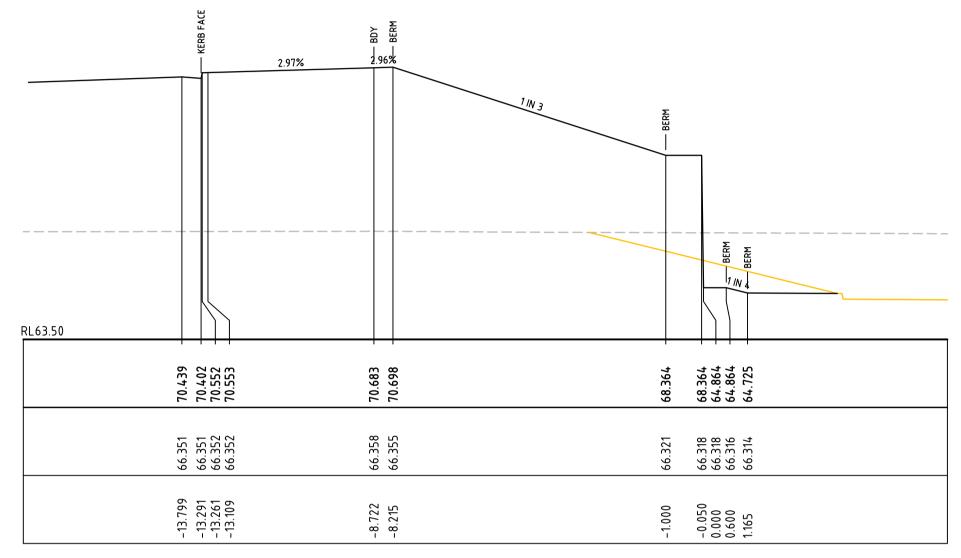
PAVEMENT PLAN SHEET 5 OF 5

Drawing No. 15-272-C3074

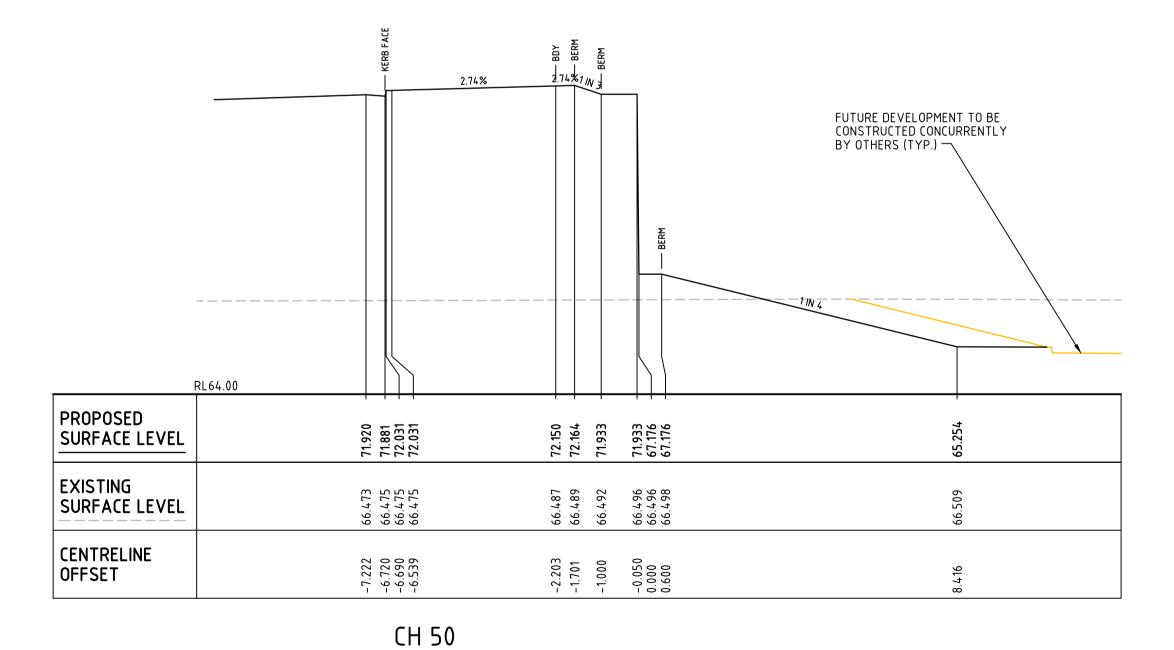
Project No. Issu 15-272 A2



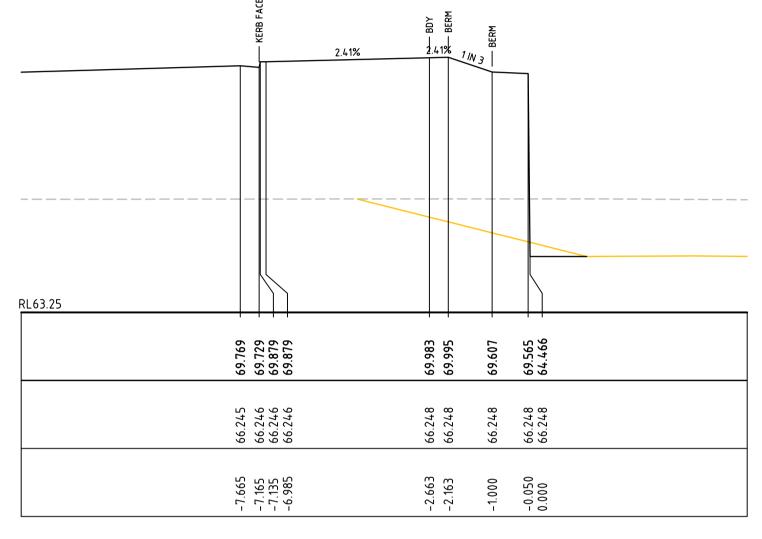




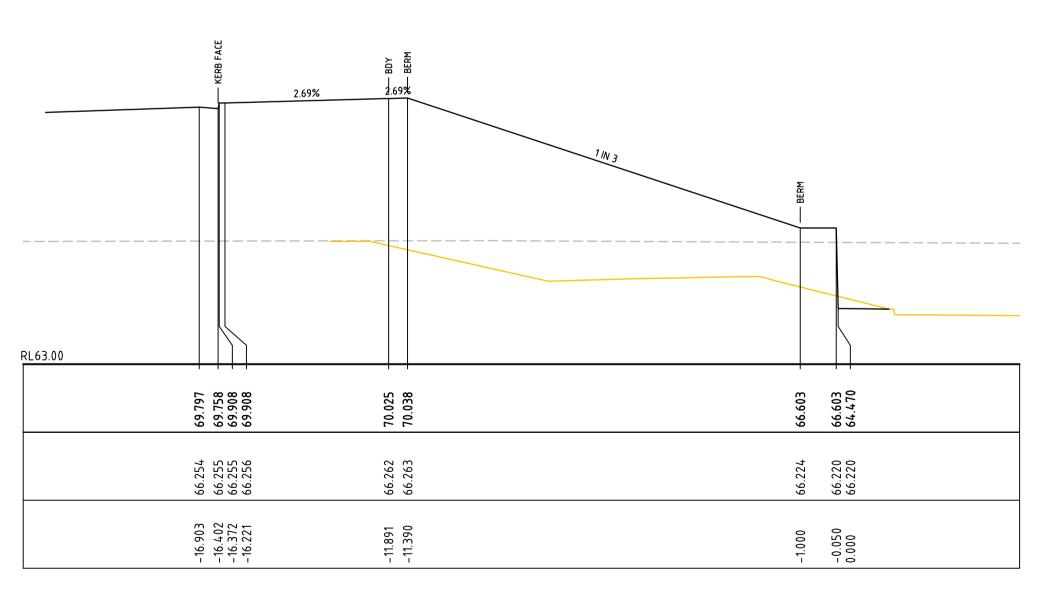




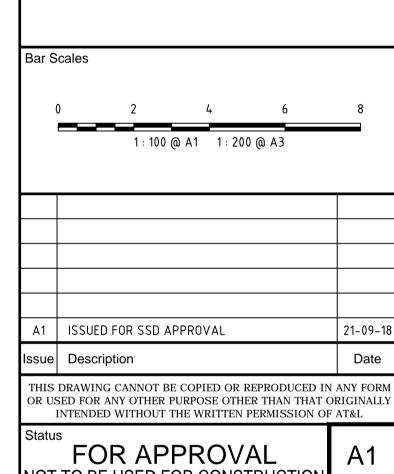
100mm on Original



CH 136



CH 124



	FOR APPR BE USED FOR C		ON	A1
Scales		15-2	72-C	3081.dwg
	1 : 100	Drawn	GB	}
		Designed	GB	}
Height Datum	AHD	Checked	AM	1
Grid	MGA	Approved	AM	1
Ollinsid		-		

Goodman



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Project

PROPOSED INDUSTRIAL
DEVELOPMENT
OAKDALE WEST

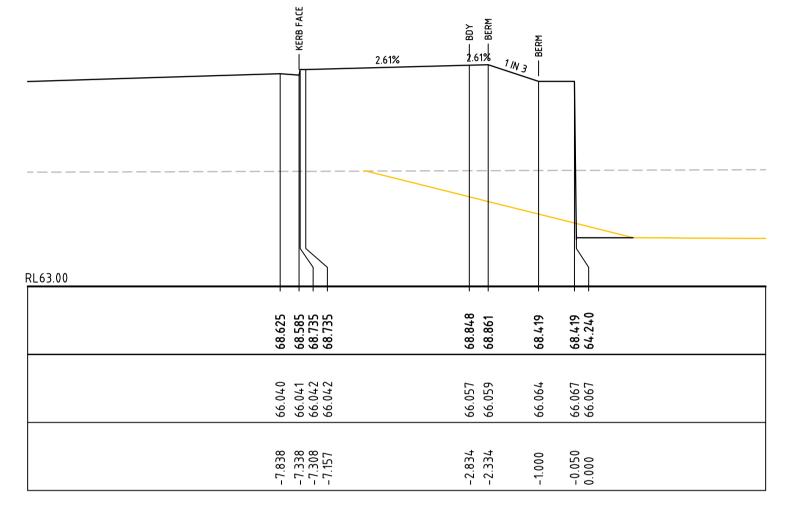
Title

RETAINING WALL SECTIONS SHEET 1 OF 4

Drawing No. Project No. 5-272-C3081 15-272

15-272-C3081 15-272 A1

Date Plotted: 5 Oct 2018 – 04:52PM File Name: F:\15-272 Oakdale West\Drgs\Civil\Final\SSDA\3000_WNSLR Package\15-272-C3081.dwg

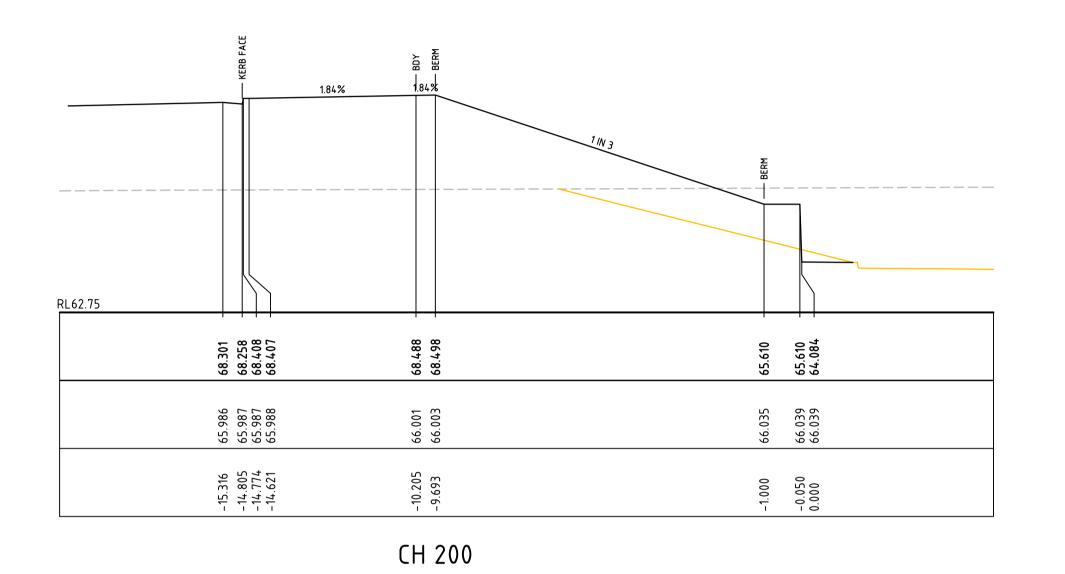


CH 175

			FUTURE DEV CONSTRUCTE BY OTHERS (ELOPMENT TO BE TO CONCURRENTLY TYP.)
	KERB FACE	2.54% 2.5	7 // 8 FEW	
	RL63.00			
PROPOSED SURFACE LEVEL		69.175 + 69.285 +	69.297	64.361
EXISTING SURFACE LEVEL	66.126	66.130	66.139	66.142
CENTRELINE OFFSET	724.7- 724.7-	-6.777	-1.957	0.000

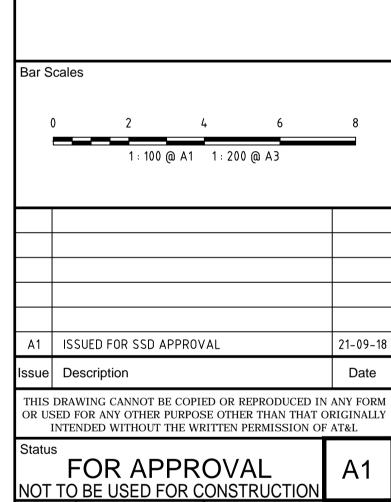
CH 160

100mm on Original



1.78% 68.602 68.559 68.708 68.707 68.786 68.795 65.184 65.184 64.182 66.042 66.044 66.076 66.078 66.079 66.034 66.035 66.035 66.035 -17.543 -17.030 -16.999 -16.845 -12.412 -1.000 -0.050 0.000

CH 190



FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION				A
Scales		15-2	72-0	3082.
	1 : 100	Drawn	GE	3
		Designed	GE	3
Height Datum	AHD	Checked	ΑM	1
Grid	MGA	Approved	ΑN	1



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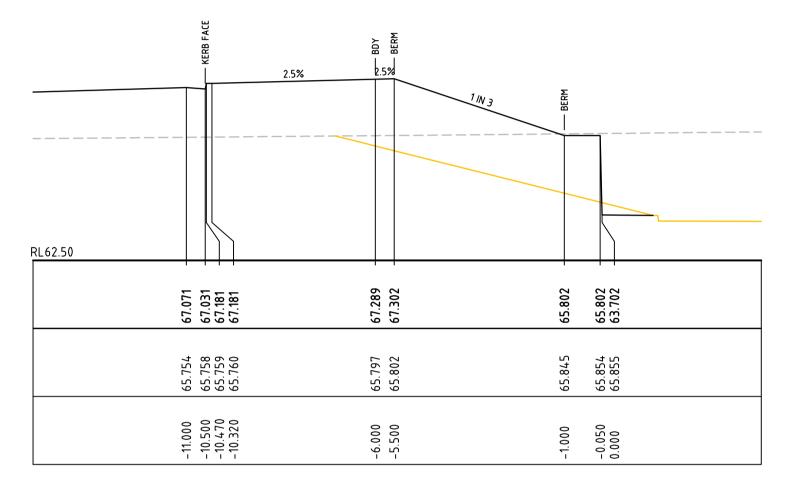
PROPOSED INDUSTRIAL DEVELOPMENT OAKDALE WEST

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RETAINING WALL SECTIONS SHEET 2 OF 4

Drawing No. Project No. 15-272-C3082

15-272 **A1**



CH 240

RL62.50

PROPOSED

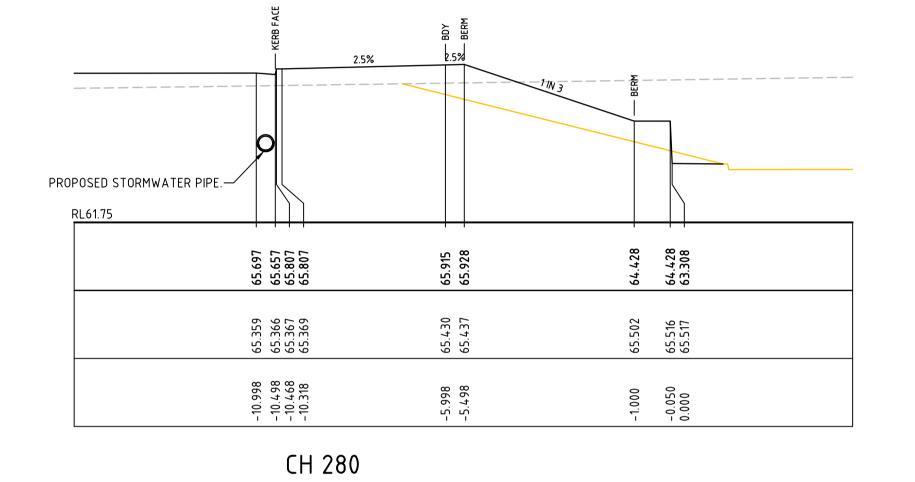
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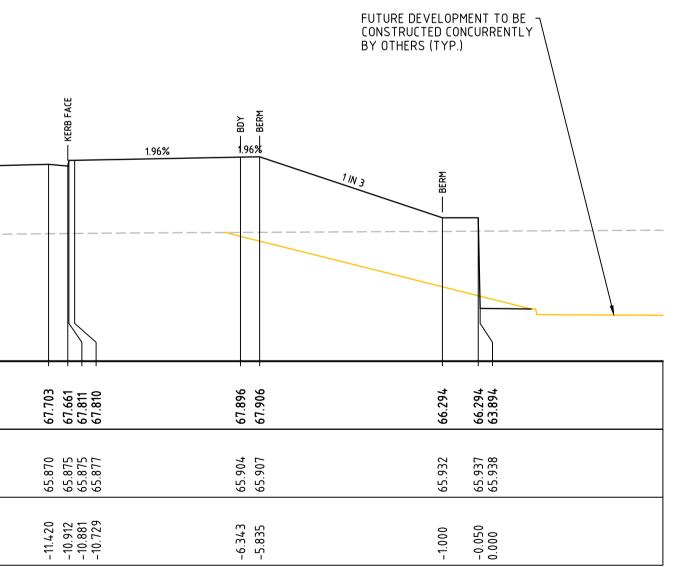
CENTRELINE OFFSET

100mm on Original

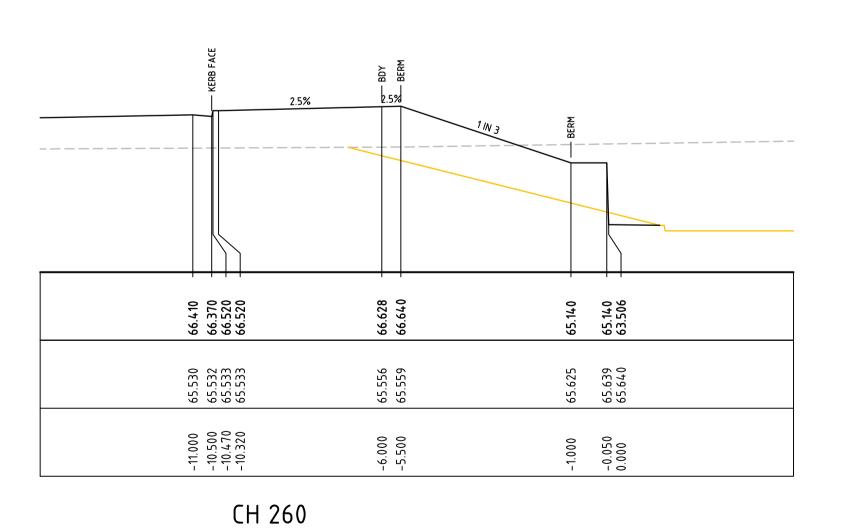
SURFACE LEVEL

SURFACE LEVEL





CH 220



NOT TO BE USED FOR CONSTRUCTION 1:100 AHD MGA Goodman

A1 ISSUED FOR SSD APPROVAL

ssue Description

Bar Scales

1:100 @ A1 1:200 @ A3

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Designed

Checked

Approved

FOR APPROVAL

Civil Engineers and Project Managers

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21-09-18

15-272-C3083.dwg

GB

GB

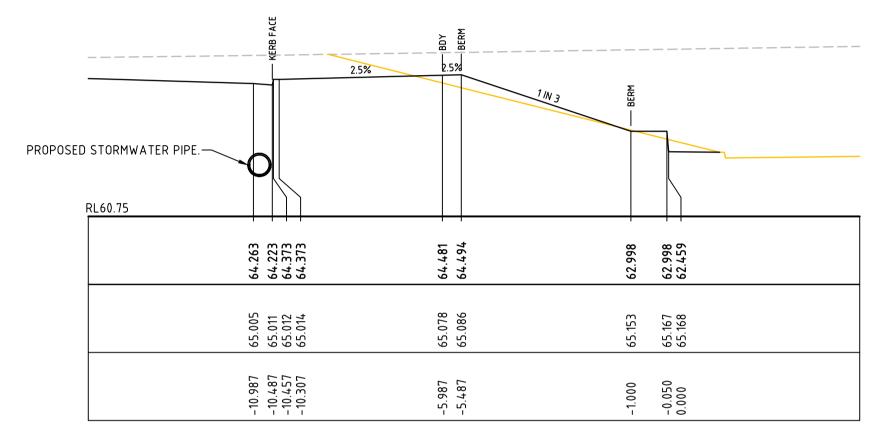
PROPOSED INDUSTRIAL DEVELOPMENT OAKDALE WEST

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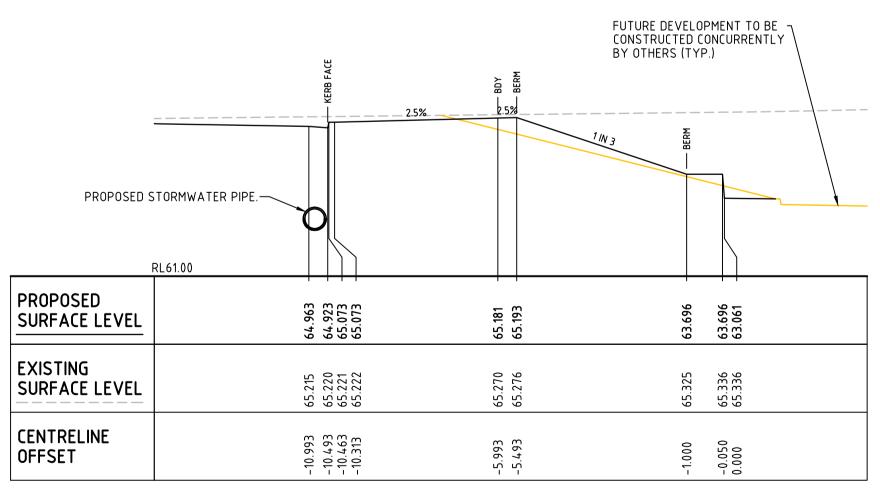
RETAINING WALL SECTIONS SHEET 3 OF 4

Drawing No. Project No. 15-272-C3083

Issue 15-272 **A1**

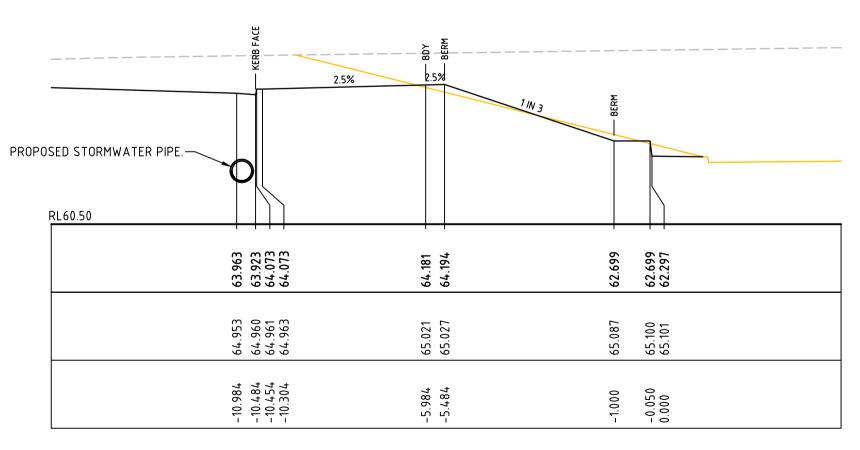


CH 320

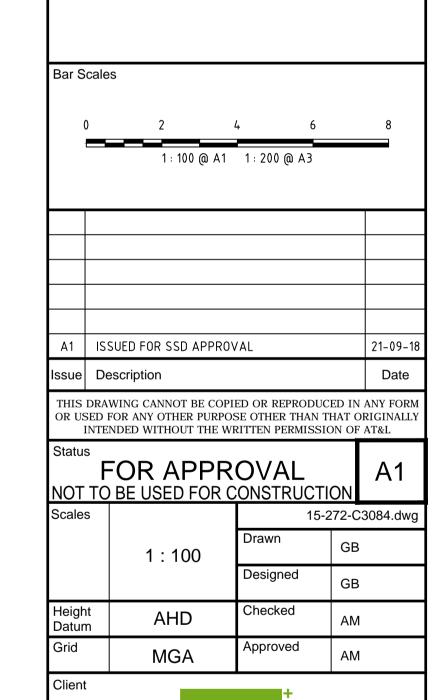


CH 300

100mm on Original



CH 330



PROPOSED INDUSTRIAL DEVELOPMENT OAKDALE WEST

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RETAINING WALL SECTIONS SHEET 4 OF 4

Drawing No. Project No.

Issue

15-272-C3084 15-272 **A1**

Date Plotted: 5 Oct 2018 - 04:53PM File Name: F:\15-272 Oakdale West\Drgs\Civil\Final\SSDA\3000_WNSLR Package\15-272-C3084.dwg

