

NEPEAN BUSINESS PARK PENRITH

DEVELOPMENT APPLICATION

DRAWING SCHEDULE

DRAWING NUMBER	DESCRIPTION
200044-09-DA-C01.01	COVER SHEET AND DRAWING SCHEDULE
200044-09-DA-C01.21	GENERAL NOTES AND LEGENDS SHEET 1
200044-09-DA-C01.22	GENERAL NOTES AND LEGENDS SHEET 2
200044-09-DA-C01.31	STAGING PLAN
200044-09-DA-C01.41	GENERAL ARRANGEMENT PLAN
200044-09-DA-C01.81	SUBDIVISION PLAN
200044-09-DA-C01.91	COMMUNITY TITLE SUBDIVISION PLAN
200044-09-DA-C03.01	EROSION AND SEDIMENTATION CONTROL PLAN
200044-09-DA-C03.21	EROSION AND SEDIMENTATION CONTROL DETAILS
200044-09-DA-C04.01	BULK EARTHWORKS CUT AND FILL PLAN
200044-09-DA-C04.21	BULK EARTHWORKS CUT AND FILL SECTIONS
200044-09-DA-C05.01	SITWORKS AND STORMWATER MANAGEMENT PLAN SHEET 1
200044-09-DA-C05.02	SITWORKS AND STORMWATER MANAGEMENT PLAN SHEET 2
200044-09-DA-C05.03	SITWORKS AND STORMWATER MANAGEMENT PLAN SHEET 3
200044-09-DA-C05.04	SITWORKS AND STORMWATER MANAGEMENT PLAN SHEET 4
200044-09-DA-C07.01	ROAD LONGITUDINAL SECTIONS
200044-09-DA-C11.01	PAVEMENT, SIGNAGE AND LINEMARKING PLAN
200044-09-DA-C13.01	STORMWATER LONGSECTIONS SHEET 1
200044-09-DA-C13.02	STORMWATER LONGSECTIONS SHEET 2
200044-09-DA-C14.01	SITWORK DETAILS
200044-09-DA-C14.11	COUNCIL DETAILS SHEET 1
200044-09-DA-C14.12	COUNCIL DETAILS SHEET 2
200044-09-DA-C14.13	COUNCIL DETAILS SHEET 3
200044-09-DA-C14.14	COUNCIL DETAILS SHEET 4
200044-09-DA-C18.01	STORMWATER DETAILS SHEET 1
200044-09-DA-C18.02	STORMWATER DETAILS SHEET 2
200044-09-DA-C22.01	CATCHMENT PLAN
200044-09-DA-C25.01	TURNING PATH PLAN

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client

NEPEAN BUSINESS PARK

Scale

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Scale 1:4000	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
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Size A1	Revision 3
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SURVEY

- THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN SUPPLIED BY REGISTERED SURVEYORS TO PROVIDE A BASIS FOR DESIGN. THE USE OF THIS SURVEY BASE 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 THE DESIGN ENGINEER.
- THE RELATIONSHIP OF IMPROVEMENTS TO BOUNDARIES ARE DIAGRAMMATIC ONLY. WHERE DISTANCES TO BOUNDARIES ARE CRITICAL THEY SHOULD BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION BY FURTHER SURVEY.

LEGEND

BH	BENCHMARK
CL	CENTRELINE OF ROAD
EB	EDGE OF BITUMEN
HYD	HYDRANT
HW	HEADWALL
IK	INVERT OF KERB
IL	INVERT LEVEL
LK	LIP OF KERB
PP	POWER POLE
SMH	SEWER MANHOLE
SV	STOP VALVE
TEL	TELSTRA PIT
TK	TOP OF KERB
TOW	TOP OF WALL
VC	VEHICLE CROSSING
WELL	MONITORING WELL

GENERAL

- ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH PENRITH CITY COUNCIL STANDARDS.
- PENRITH CITY COUNCIL STANDARD DETAILS TO BE USED WHERE POSSIBLE.
- UTILITY ADJUSTMENTS AT DEVELOPERS EXPENSE.
- CONDUITS TO BE PLACED WHERE REQUIRED BY THE RELEVANT AUTHORITIES.
- SUBSOIL DRAINAGE LINES AND FLUSHING POINTS AT MAXIMUM 60m CENTRES SHALL BE INSTALLED BEHIND ALL KERBS.
- A MINIMUM OF 3m OF SUBSOIL LINE SHALL BE LAID INTO UPSTREAM SIDE OF ALL DRAINAGE PITS.

EXISTING SERVICES LEGEND

EXISTING

OVERHEAD ELECTRICAL	
COMMUNICATIONS	
SEWER	
POTABLE WATER	

PROPOSED

WATER RISING MAIN (DESIGN BY OTHERS)	
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EXISTING SERVICES

- ALL UTILITY SERVICES INDICATED ON THE DRAWINGS ORIGINATE FROM SUPPLIED DATA. THEREFORE THEIR ACCURACY AND COMPLETENESS IS NOT GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND CONFIRM THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
- CARE TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER ALL LIVE SERVICES. HAND EXCAVATION ONLY IN THESE AREAS.
- THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING SERVICES THAT ARE TO BE RETAINED IN THE VICINITY OF THE PROPOSED WORKS. ANY AND ALL DAMAGE TO THESE SERVICES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR UNDER THE DIRECTION OF THE SUPERINTENDENT, AND AT NO EXTRA COST.
- THE CONTRACTOR SHALL ALLOW IN THE PROGRAM FOR ADJUSTMENT (IF REQUIRED) OF EXISTING SERVICES IN AREAS AFFECTED BY WORKS.
- THE CONTRACTOR SHALL ALLOW IN THE PROGRAM FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIRED) OF EXISTING SERVICES IN AREA AFFECTED BY WORKS UNLESS DIRECTED OTHERWISE ON THE DRAWINGS OR BY THE SUPERINTENDENT.
- THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
- PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN APPROVAL OF THE PROGRAM FOR THE RELOCATION AND/OR CONSTRUCTION OF TEMPORARY SERVICES AND FOR ANY ASSOCIATED INTERRUPTION OF SUPPLY.
- THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
- PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION A THOROUGH SEARCH OF ALL SERVICE AUTHORITIES SHOULD BE MADE TO DETERMINE THE POSSIBLE LOCATION OF ANY FURTHER UNDERGROUND SERVICES.
- AUTHORITY PLANS GENERALLY SHOW ONLY THE PRESENCE OF CABLES AND PLANT AND DO NOT WARRANT OR GUARANTEE THAT SUCH PLANS ARE ACCURATE. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR EXISTING SERVICES AND PLANT. BEFORE USING MACHINE EXCAVATORS SERVICES MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY ITS LOCATION.
- THE CONTRACTOR IS TO UNDERTAKE A DIAL-BEFORE-YOU-DIG SEARCH PRIOR TO ANY EXCAVATION AND MAINTAIN A CURRENT SET ON-SITE DURING EXCAVATION WORKS.
- 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 ENSPIRE SOLUTIONS 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.
- THE WORKS WILL BE UNDERTAKEN IN A STAGED MANNER AS OUTLINED IN THE STAGING PLAN. HOWEVER, THE SEQUENCE OF STAGING MAY VARY AND WILL NOT NECESSARILY FOLLOW A SEQUENTIAL ORDER.
- THE WORKS WILL INCLUDE ALL SERVICES, INCLUDING BUT NOT LIMITED TO SEWER, WATER, POWER, NBN, FIRE MAINS, SPRINKLER MAINS AND ASSOCIATED INFRASTRUCTURE TO SERVICE THE LOTS.

EARTHWORKS

- AT THE COMMENCEMENT OF THE CUT AND FILLING OPERATIONS FOR BULK EARTHWORKS A GEOTECHNICAL ENGINEER IS TO VISIT THE SITE & CONFIRM THE SUITABILITY OF THE METHODOLOGY OF ACHIEVING THE REQUIRED BUILDING PLATFORMS AND COMPACTION REQUIREMENTS. SUBSEQUENTLY THE HEAD CONTRACTOR IS TO CONFIRM, IN WRITING TO THE DESIGNING CIVIL & STRUCTURAL ENGINEERS, THAT THE METHODOLOGY APPROVED AT THE TIME OF THE GEOTECHNICAL ENGINEERS VISIT WAS MAINTAINED DURING ALL THE BULK EARTHWORKS PROCESS.
- WHERE FILLING, STRUCTURAL SLABS OR PAVEMENTS ARE REQUIRED, PROOF ROLL THE EXPOSED NATURAL SURFACE WITH A MINIMUM OF TEN PASSES OF A SMOOTH DRUM VIBRATING ROLLER (MINIMUM STATIC WEIGHT OF 10 TONNES) TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 2mm MOVEMENT UNDER ROLLER) IN THE PRESENCE OF THE SUPERINTENDENT. THE CONTRACTOR IS TO ALLOW TO REMOVE AND REPLACE A PROVISIONAL QUANTITY OF UNSUITABLE SUBGRADE MATTER. THE UNDERLYING GEOTECHNICAL GROUND CONDITIONS WILL BE REHABILITATED AS NECESSARY TO SUPPORT FUTURE BUILDING USE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERS REQUIREMENTS.
- ALL SOFT, WET OR UNSUITABLE MATERIAL IS TO BE REMOVED AS DIRECTED BY THE SUPERINTENDENT AND REPLACED WITH APPROVED MATERIAL SATISFYING THE REQUIREMENTS LISTED BELOW.
- EXCAVATED MATERIAL IS NOT TO BE USED AS STRUCTURAL FILL UNLESS APPROVED BY THE GEOTECHNICAL ENGINEER.

THE CONTRACTOR IS TO PROVIDE CERTIFICATES VERIFYING THE QUALITY OF IMPORTED MATERIAL FOR THE SUPERINTENDENTS APPROVAL.
- ALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM 200mm THICK LAYERS AND COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR - 2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1289 E3.1 OF NOT LESS THAN THE FOLLOWING STANDARD MINIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 E5.1.1.1:

LOCATION	COMPACTION REQUIREMENT
UNDER BUILDING SLABS	98% SMDD
LANDSCAPED AREAS	95% SMDD
ROADS & PAVED AREAS	98% SMDD
- FOR NON COHESIVE MATERIAL, COMPACT TO NOT LESS THAN UNDER ROAD 80% DENSITY OTHER AREA 75% DENSITY
- THE CONTRACTOR IS TO ALLOW FOR COMPACTION TESTING BY NATA REGISTERED LABORATORY FOR PLATFORMS AND FILL LAYERS IN ACCORDANCE WITH THE LATEST VERSION OF AS3798 - FOR TYPE 1 OPERATIONS (MINIMUM 3 TESTS PER LAYER).
- FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN:
A. 1 TEST PER 200m³ OF FILL PLACED PER 300mm LAYER OF FILL
B. 3 TESTS PER VISIT
C. 1 TEST PER 1000m² OF EXPOSED SUBGRADE
D. TESTING SHALL BE "LEVEL 1" UNDERTAKEN IN ACCORDANCE WITH AS1398.
- WHERE TEST RESULTS ARE BELOW THE SPECIFIED COMPACTION, RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION STANDARD IS ACHIEVED.
- ALLOW FOR EXCAVATION IN ALL MATERIALS AS FOUND U.N.O. NO ADDITIONAL PAYMENTS WILL BE MADE FOR EXCAVATION IN WET OR HARD GROUND.
- WHERE THERE IS INSUFFICIENT EXCAVATED MATERIAL SUITABLE FOR FILLING OR SUBGRADE REPLACEMENT, THE CONTRACTOR IS TO ALLOW TO IMPORT FILL. IMPORTED FILL SHALL COMPLY WITH THE FOLLOWING:
A. MAXIMUM SIZE 50mm. PASSING 75 MICRON SIEVE (<25%).
B. PLASTICITY INDEX BETWEEN 2-15% AND CBR<8.
C. FREE FROM ORGANIC AND PERISHABLE MATTER.
- REFER TO THE SITE SPECIFIC GEOTECHNICAL REPORT FOR GENERAL REQUIREMENTS ON SITE PREPARATION AND RE-USE OF EXISTING SITE MATERIAL AS ENGINEERED FILL.
- THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS, ROLLER MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED AT THEIR COST.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE AND MAINTAIN THE INTEGRITY OF ALL SERVICES, CONDUITS AND PIPES DURING CONSTRUCTION, SPECIFICALLY DURING THE BACKFILLING AND COMPACTION PROCEDURE. ANY AND ALL DAMAGE TO NEW OR EXISTING SERVICES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST.

STORMWATER DRAINAGE NOTES

- STORMWATER DESIGN CRITERIA:
(A) ANNUAL EXCEEDANCE PROBABILITIES (AEP):
5% MINOR (PIPED) NETWORK
1% MAJOR (OVERLAND FLOW) SYSTEM
(B) RAINFALL INTENSITIES:
ARR 1987 RAINFALL FROM BUREAU OF METEOROLOGY WEBSITE
(C) HYDROLOGY METHOD:
DRAINS / 120 WITH ILSAX METHOD
- PIPES 375 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS 2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.
- PIPES 300 DIA AND LESS SHALL BE DWV GRADE (CLASS SN8) uPVC WITH SOLVENT WELDED JOINTS.
- EQUIVALENT STRENGTH FRC PIPES MAY BE USED.
- ALL PIPES ARE TO BE UNIFORMLY SUPPORTED ALONG THE LENGTH OF THE BARREL BY SUITABLE FILL MATERIAL.
- PIPES WITH SOCKETS SHALL BE LAID IN BEDDING WHERE SUITABLE RECESSES HAVE BEEN PROVIDED TO ENSURE PIPES DO NOT BEAR ON THEIR SOCKETS.
- ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE PN6. ENSURE ALL VERTICALS AND DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT.
- PIPES TO BE INSTALLED TO TYPE HS2 SUPPORT IN ACCORDANCE WITH AS 3725 (2007) 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).
- REFER TO AS/NZS 3725:2007 TABLE B1 FOR REQUIRED FILL DEPTHS ABOVE PIPE BARREL PRIOR TO USE OF COMPACTION MACHINERY OR TRAVERSING OF PIPES BY GENERAL SITE EQUIPMENT.
- WHERE WORKING METHODS REQUIRE HIGHER CLASS PIPE, THE CONTRACTOR SHALL REFER TO AS 3725 (2007) TO DETERMINE THE APPROPRIATE PIPE CLASS. PROPOSED PIPE CLASS SHALL BE REVIEWED BY ENSPIRE SOLUTIONS PRIOR TO INSTALLATION.
- ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS/NZS 3500.3:2015.
- PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO APPROVAL BY ENSPIRE SOLUTIONS.
- 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.
- CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
- GRATES AND COVERS SHALL CONFORM TO AS 3996.
- ALL BOX CULVERTS SHALL BE STRUCTURALLY DESIGNED BY THE MANUFACTURER AND DELIVERED TO SITE AS FIT FOR PURPOSE.
- 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 REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.

KERBS

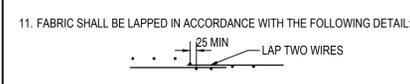
- ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON 175mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 95% MODIFIED DRY DENSITY (AS 1289 5.2.1).
- EXPANSION JOINTS (E.J) TO BE FORMED FROM 10mm COMPRESSIBLE FOAM FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION 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.
- EXISTING ALLOTMENT DRAINAGE PIPES ARE TO BE BUILT INTO THE NEW KERB AND GUTTER WITH 100mm DIA HOLE OR IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS.
- IN THE REPLACEMENT OF KERB AND GUTTER - EXISTING ROAD PAVEMENT IS TO BE SAWCUT 600mm U.N.O FROM THE LIP OF GUTTER. UPON COMPLETION OF THE NEW KERB AND GUTTER NEW BASECOURSE AND SURFACE TO BE LAID 600mm WIDE U.N.O.

CONCRETE

- THIS SECTION REFERS TO CIVIL CONCRETE WORKS AND DOES NOT INCLUDE BUILDINGS OR BRIDGE STRUCTURES.
- 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.

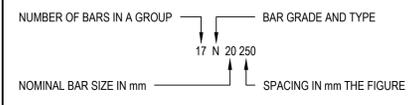
ELEMENT	AS 3600 Fc MPa AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE	MAX 56 DAY DRYING SHRINKAGE
KERBS AND PATHS	25	60	20	650um
PITS AND VEHICULAR PAVEMENTS	32	80	20	650um

- CONCRETE PROPERTIES FOR SLABS AND BEAMS SHALL BE VARIED FROM NORMAL CLASS AS FOLLOWS:
A. MINIMUM CEMENT CONTENT 250kg/m³
B. MAXIMUM 56 DAY SHRINKAGE STRAIN = AS NOMINATED ABOVE
C. PRIOR TO COMMENCEMENT CONCRETE SUPPLIER TO PROVIDE DRYING SHRINKAGE TEST RESULTS FROM PRODUCTION ASSESSMENT AS EVIDENCE THAT SPECIFIED DRYING SHRINKAGE LIMITS CAN BE ACHIEVED USING NORMAL MIX DESIGN.
- 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 THE DESIGN ENGINEER.
- CLEAR CONCRETE COVERS SHALL BE (UNO):
ENVIRONMENT COVER
A. SURFACES OF MEMBERS CAST AGAINST, AND IN CONTACT WITH THE GROUND 50mm
B. SURFACES OF MEMBERS CAST AGAINST, AND IN CONTACT WITH THE GROUND SEPARATED BY MEMBRANE 40mm
C. SURFACES OF MEMBERS IN ABOVE GROUND EXTERIOR ENVIRONMENTS 40mm
D. SURFACES OF MEMBERS IN INTERIOR ENVIRONMENTS 20mm
- 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, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS.
- FABRIC SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING DETAIL:



FOLLOWING THE FABRIC SYMBOL SL IS THE REFERENCE NUMBER FOR FABRIC TO AS 1304.

- ALL PENETRATIONS TO HAVE 2N12 TRIMMER BARS TOP AND BOTTOM TO EACH FACE U.N.O. EXTEND TRIMMERS 700 BEYOND PENETRATION.
- FORMWORK CLASS SHALL BE IN ACCORDANCE WITH AS380.
- SURFACE FINISHES:
ELEMENT FORMWORK CLASS
STORMWATER PIT OFF FORM
PAVEMENTS MACHINE FLOAT/BROOM FINISHED
KERBS STEEL FLOAT/TROWEL
- 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



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Client

Scale

North

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Project

NEPEAN BUSINESS PARK
PENRITH

Title

GENERAL NOTES AND LEGENDS
SHEET 1

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Scale

Status

FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number

200044-09-DA-C01.21

Revision

2

SITWORKS

- ALL WORKS TO BE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS, SPECIFICATIONS AND AUSTRALIAN STANDARDS. CONFLICTS SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION.
- CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO THE DESIGN ENGINEER.
- THE CONTRACTOR IS TO DESIGN, OBTAIN APPROVALS AND CARRY OUT REQUIRED TEMPORARY TRAFFIC CONTROL PROCEDURES DURING CONSTRUCTION IN ACCORDANCE WITH RMS AND LOCAL AUTHORITY REGULATIONS AND REQUIREMENTS.
- THE CONTRACTOR IS TO OBTAIN ALL AUTHORITY APPROVALS AS REQUIRED.
- RESTORE ALL PAVED, COVERED, GRASSED AND LANDSCAPED AREAS TO THEIR ORIGINAL CONDITION ON COMPLETION OF WORKS.
- ON COMPLETION OF ANY TRENCHING WORKS, ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL, GRASSED AREAS AND ROAD PAVEMENTS.
- THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO LODGMENT OF TENDER AND ON SITE WORKS. THE PRICE AS TENDERED SHALL BE INCLUSIVE OF ALL WORKS SHOWN ON THE TENDER PROJECT DRAWINGS. ADDITIONAL PAYMENTS FOR WORKS SHOWN ON THE TENDER PROJECT DRAWINGS WILL NOT BE APPROVED.
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS AND SPECIFICATIONS, AND ANY OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED RELATING TO DEVELOPMENT OF THE SUBJECT SITE.
- THESE PLANS SHALL BE READ IN CONJUNCTION WITH ALL APPROVED DRAWINGS AND SPECIFICATIONS PREPARED BY OTHER PROJECT CONSULTANTS.
- DO NOT OBTAIN DIMENSIONS BY SCALING THE DRAWINGS. ALL DIMENSIONS ARE IN MILLIMETERS (mm) AND ALL LEVELS ARE IN METERS (m). UNO. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
- IN CASE OF DOUBT OR DISCREPANCY REFER TO THE DESIGN ENGINEER AND SUPERINTENDENT FOR CLARIFICATION OR CONFIRMATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. OTHERWISE THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REMEDIATION WORKS.
- WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
- THE CONTRACTOR SHALL COMPLY WITH ALL STATUTORY AND INDUSTRIAL REQUIREMENTS FOR PROVISION OF A SAFE WORKING ENVIRONMENT INCLUDING TRAFFIC CONTROL.
- THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES ACCESS TO ALL BUILDINGS ADJACENT THE WORKS IS NOT DISRUPTED.
- WHERE NECESSARY THE CONTRACTOR SHALL PROVIDE SAFE PASSAGE OF VEHICLES AND/OR PEDESTRIANS THROUGH OR BY THE SITE.
- 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.
- ALL VARIATIONS TO SPECIFIED PRODUCTS OR DESIGNS SHALL BE REFERRED TO THE DESIGN ENGINEER IN WRITING FOR APPROVAL.
- ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
 - PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE ENSURING THAT NOTHING IS NAILED TO THEM
 - PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS:
 - 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, WHICHEVER IS THE GREATER
 - 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
 - CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.
- EPA AND COUNCIL REQUIREMENTS MUST BE ADHERED TO REGARDING THE LEVEL OF NOISE AND WORKING HOURS. TO ENSURE THAT RESIDENTS AND OTHER APPLICABLE NEIGHBOURS TO THE SITE ARE NOT DISTURBED UNREASONABLY. THE GENERATION OF NOISE MUST BE MINIMISED.

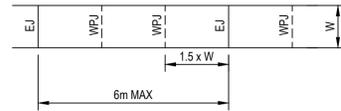
PAVEMENTS

- ALL PAVEMENT MATERIALS SHALL COMPLY WITH CURRENT RTA SPECIFICATIONS. PROVIDE MECHANICAL ANALYSIS FOR EACH BATCH OF PAVEMENT MATERIAL TO ENSURE CONFORMITY.
- COMPACTION STANDARDS:
 - BASE: 98% MODIFIED MAXIMUM DRY DENSITY
 - SUBBASE: 95% MODIFIED MAXIMUM DRY DENSITY
- THE CONTRACTOR SHALL CONFIRM THE DESIGN CBR WITH A MINIMUM OF 3 TESTS TAKEN AT SUBGRADE LEVEL. WHERE DISCREPANCY IS FOUND, CONTACT THE DESIGNING ENGINEER.
- ALLOW FOR COMPACTION TESTING BY NATA REGISTERED LABORATORY FOR: BASE LAYER, SUBBASE LAYER, SUBGRADE IN ACCORDANCE WITH THE LATEST VERSION OF AS3798 FOR PAVEMENTS. ALLOW FOR AT LEAST TWO SUCCESSFUL COMPACTION TESTS IN EACH LAYER.
- MATCH NEW PAVEMENT LAYERS NEATLY AND FLUSH WITH EXISTING WHERE REQUIRED.
- KEY NEW BASE AND SUBBASE LAYERS INTO EXISTING WITH 150mm WIDE STEPS. ASPHALTIC CONCRETE WAERING COURSE IS TO EXTEND 150mm (MIN) PAST BASECOURSE INTERFACE.
- TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A MIN 50mm IN BITUMINOUS PAVING.
- ALL ASPHALTIC CONCRETE (AC) WORK TO BE PREPARED AND CARRIED OUT IN ACCORDANCE WITH GOOD ASPHALTIC PAVING PRACTICE AS DESCRIBED IN AS2734-1994 "ASPHALT (HOT-MIXED) PAVING - GUIDE TO GOOD PRACTICE" AND CURRENT RMS SPECIFICATIONS (R116).
- WHERE NOMINATED, THE CONTRACTOR SHALL ALLOW FOR ALL COMPONENTS OF PROPRIETARY JOINTING SYSTEMS INCLUDING FIXING, TEMPLATES & PEGGING TO ENSURE THAT ALL DOWEL BARS REMAIN IN THE CORRECT ALIGNMENT AND POSITION.
- ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S. FORM 3051, 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.
- ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S. FORM 3051, AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH A.S 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³ 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 WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF THE DESIGN ENGINEER.
- SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THIS SHALL BE CLEARLY INDICATED IN THEIR TENDER AND THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.

PAVEMENT JOINTS

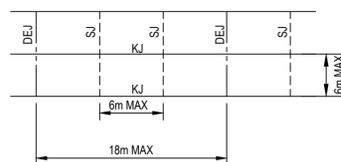
PEDESTRIAN PAVEMENTS

- ALL PEDESTRIAN PAVEMENTS ARE TO BE JOINTED AS FOLLOWS U.N.O ON THE DESIGN DRAWINGS.
- EXPANSION JOINTS ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX. 6.0m CENTRES.
- WEAKENED PLANE JOINTS ARE TO BE LOCATED AT A MAX. SPACING OF 1.5 x WIDTH OF THE PAVEMENT.
- WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND OR ADJACENT PAVEMENT JOINTS.
- TYPICAL PEDESTRIAN PAVEMENT JOINT DETAIL.



VEHICULAR PAVEMENTS

- ALL VEHICULAR PAVEMENTS TO BE JOINTED AS FOLLOWS U.N.O ON THE DESIGN DRAWINGS.
- TIED KEYED CONSTRUCTION JOINTS SHOULD GENERALLY BE LOCATED LONGITUDINALLY AT A MAX OF 6.0m CENTRES
- SAWN JOINTS SHOULD GENERALLY BE LOCATED LATERALLY AT A MAX OF 6.0m CENTRES WITH DOWELED EXPANSION JOINTS AT MAX 30.0m CENTRES
- TYPICAL VEHICULAR PAVEMENT JOINT DETAIL.



- PROVIDE 10mm EXPANSION FOAM BETWEEN NEW CONCRETE WORKS AND EXISTING STRUCTURES.
- LOCAL AUTHORITY REQUIREMENTS SHALL TAKE PRECEDENCE WITHIN THE PUBLIC ROAD RESERVE.
- DOWELS TO BE PLACED ON PROPRIETARY CRADLES TO ENSURE CORRECT SPACING AND ALIGNMENT.

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client

NEPEAN BUSINESS PARK

Scale

North

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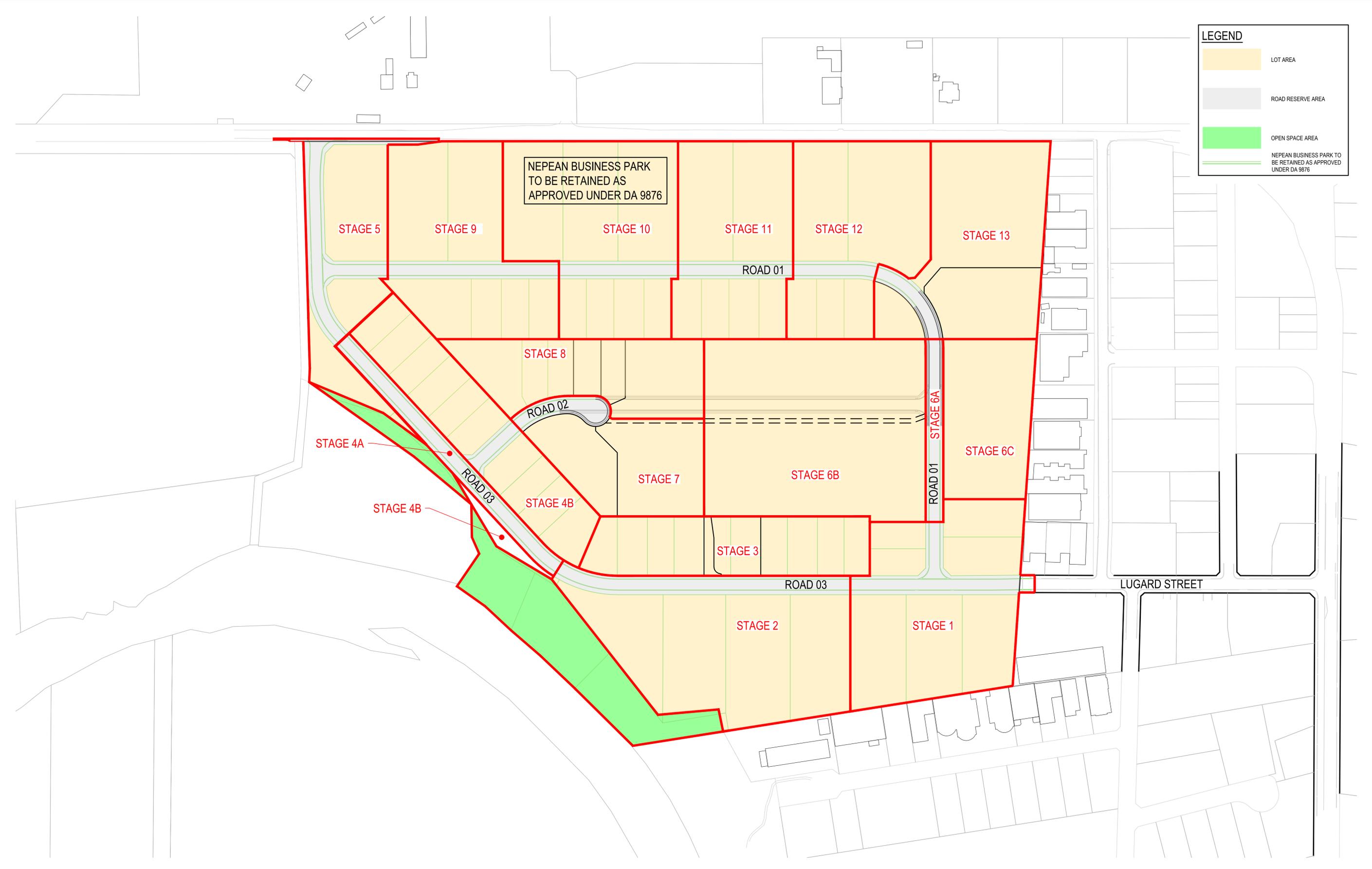
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Project	NEPEAN BUSINESS PARK PENRITH
Title	GENERAL NOTES AND LEGENDS SHEET 2

Scale	A1	Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date	04/12/2024	Project Number/Drawing Number	200044-09-DA-C01.22
Datum	AHD	Revision	2

LEGEND

- LOT AREA
- ROAD RESERVE AREA
- OPEN SPACE AREA
- NEPEAN BUSINESS PARK TO BE RETAINED AS APPROVED UNDER DA 9876



NEPEAN BUSINESS PARK
TO BE RETAINED AS
APPROVED UNDER DA 9876

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client

NEPEAN BUSINESS PARK

Scale

SCALE 1:2000 @A1

North

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
STAGING PLAN

Scale
1:2000

First Issue Date
04/12/2024

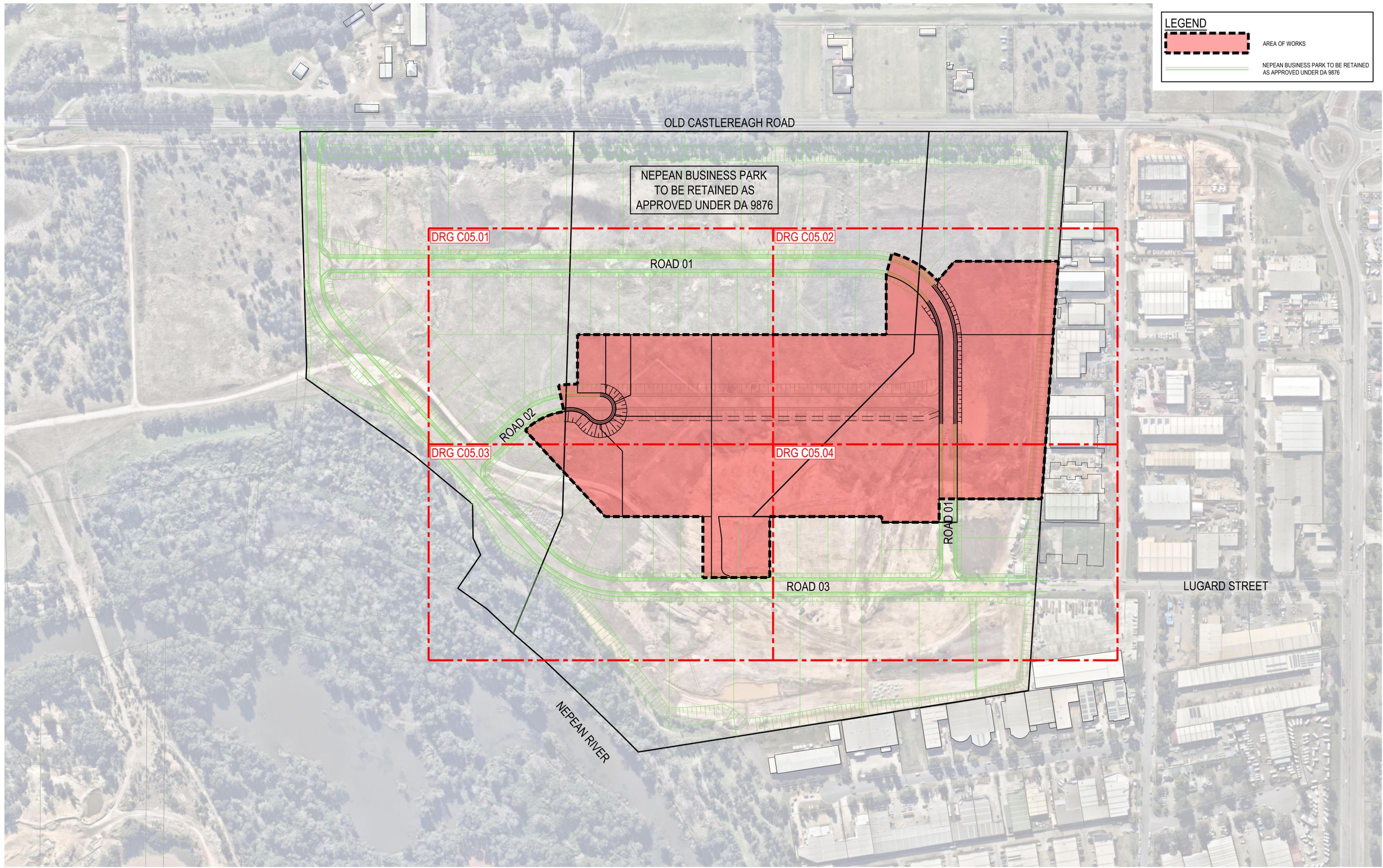
Size
A1

Datum
AHD

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
200044-09-DA-C01.31

Revision
3



LEGEND

 AREA OF WORKS

 NEPEAN BUSINESS PARK TO BE RETAINED AS APPROVED UNDER DA 9876

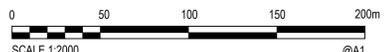
REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client



NEPEAN BUSINESS PARK

Scale



SCALE 1:2000 @A1

North



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Project
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PENRITH

Title
GENERAL ARRANGEMENT PLAN

Scale
1:2000

First Issue Date
04/12/2024

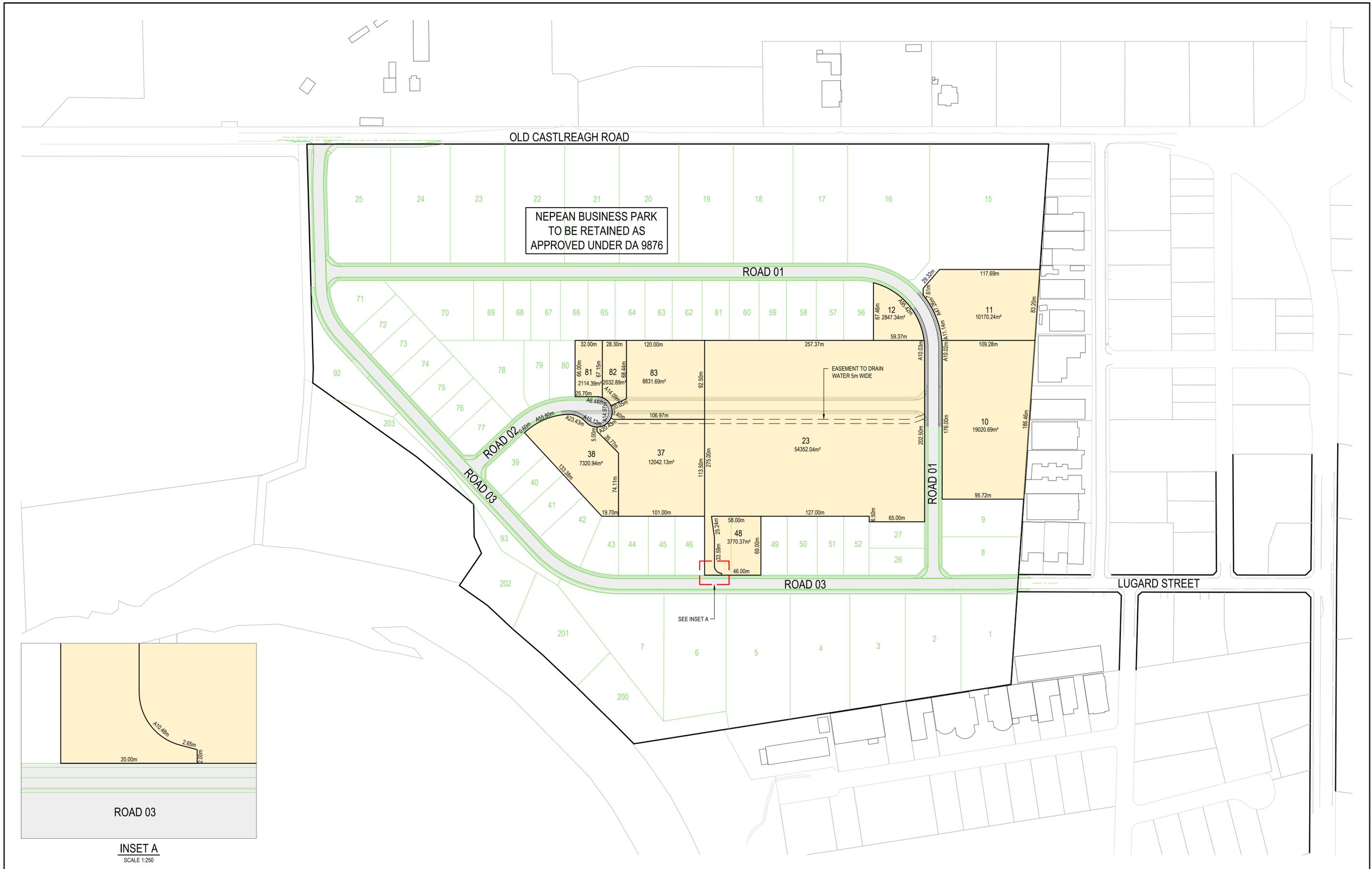
Size
A1

Datum
AHD

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
200044-09-DA-C01.41

Revision
3

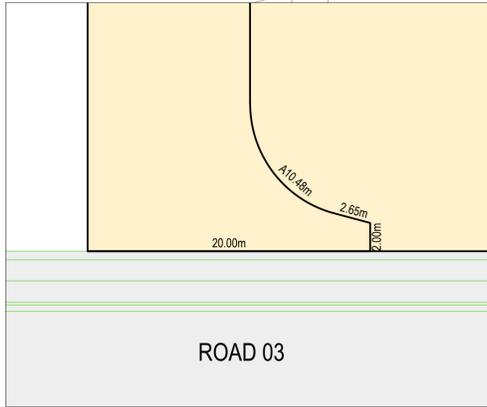


NEPEAN BUSINESS PARK
TO BE RETAINED AS
APPROVED UNDER DA 9876

81 2114.39m²
82 2032.89m²
83 8831.69m²

EASEMENT TO DRAIN
WATER 5m WIDE

SEE INSET A



INSET A
SCALE 1:250

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client



NEPEAN BUSINESS PARK

Scale 0 5 10 15 20 25m
SCALE 1:250 @A1
0 50 100 150 200m
SCALE 1:2000 @A1

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
SUBDIVISION PLAN

Scale AS SHOWN	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date 04/12/2024	Project Number/Drawing Number 200044-09-DA-C01.81
Size A1	Revision 3
Datum AHD	

LEGEND

- COMMUNITY TITLE EXTENT
- EP - EMPLOYMENT ZONING
- ROADS (PRIVATE)
- NEPEAN BUSINESS PARK TO BE RETAINED AS APPROVED UNDER DA 9876



REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client

Scale

North

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
COMMUNITY TITLE SUBDIVISION PLAN

Scale
1:2000

First Issue Date
04/12/2024

Size
A1

Datum
AHD

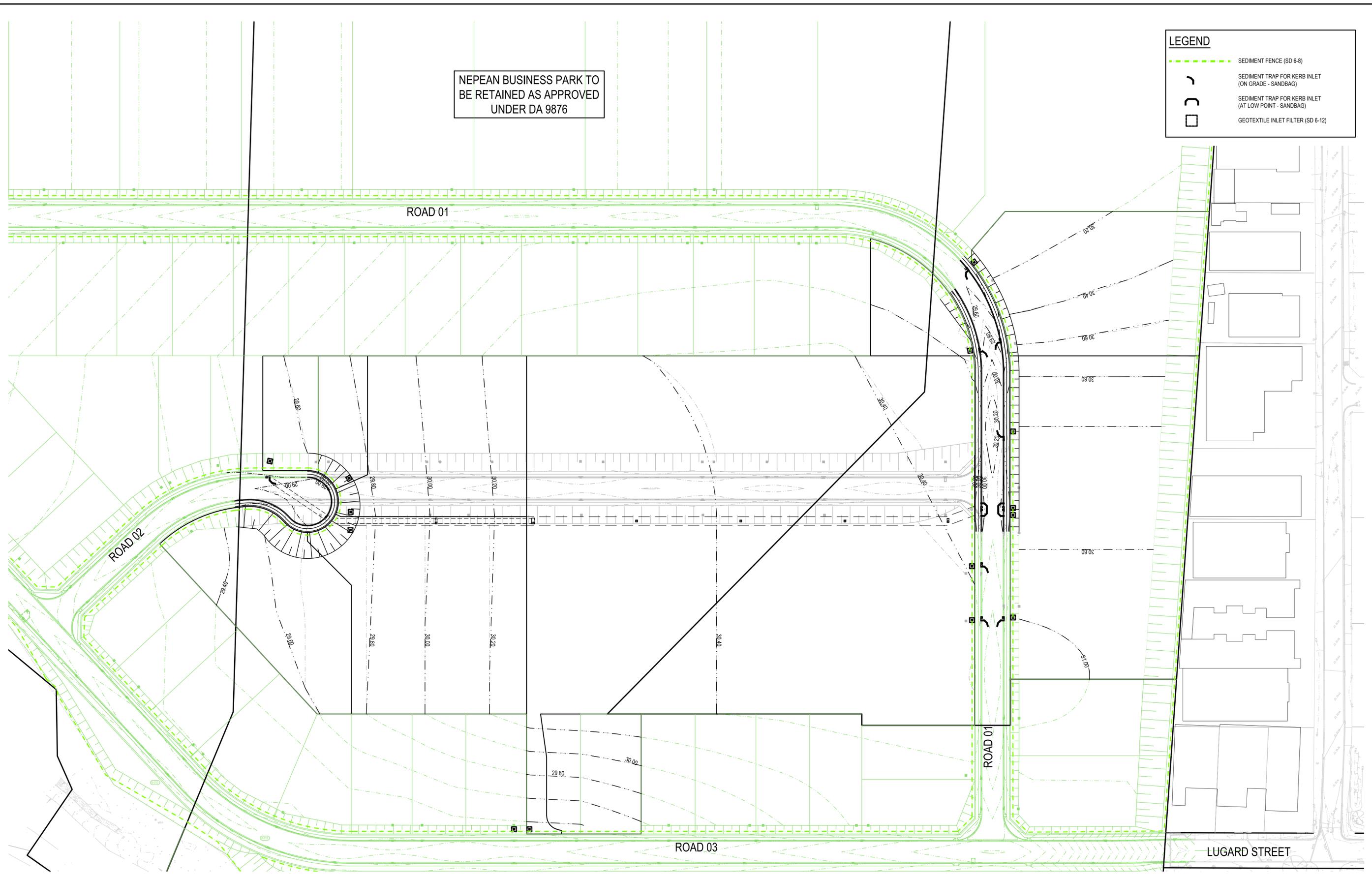
Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
200044-09-DA-C01.91

Revision
3

NEPEAN BUSINESS PARK TO
BE RETAINED AS APPROVED
UNDER DA 9876

LEGEND	
	SEDIMENT FENCE (SD 6-8)
	SEDIMENT TRAP FOR KERB INLET (ON GRADE - SANDBAG)
	SEDIMENT TRAP FOR KERB INLET (AT LOW POINT - SANDBAG)
	GEOTEXTILE INLET FILTER (SD 6-12)



REV	DATE	DESCRIPTION	DRN	DES.	VERIF.	APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client



**NEPEAN
BUSINESS
PARK**

Scale



SCALE 1:1000 @A1

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
EROSION AND SEDIMENTATION CONTROL PLAN

Scale
1:1000

First Issue Date
04/12/2024

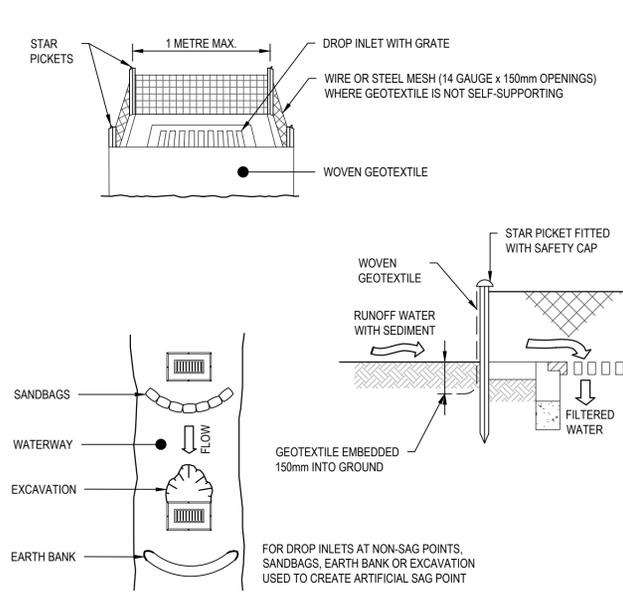
Size
A1

Datum
AHD

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

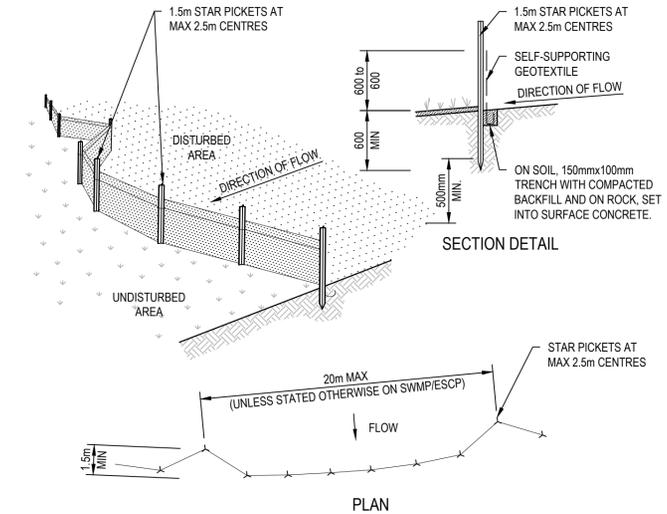
Project Number/Drawing Number
200044-09-DA-C03.01

Revision
3



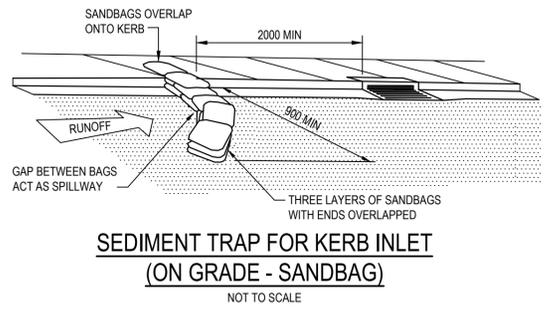
- CONSTRUCTION NOTES**
- FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
 - FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
 - IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
 - DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER (SD 6-12)

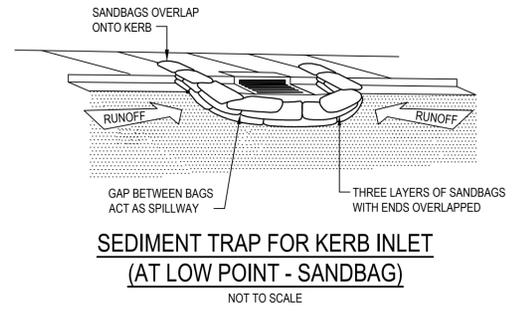


- CONSTRUCTION NOTES**
- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
 - CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
 - DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
 - FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
 - JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
 - BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE (SD 6-8)



SEDIMENT TRAP FOR KERB INLET (ON GRADE - SANDBAG)
NOT TO SCALE



SEDIMENT TRAP FOR KERB INLET (AT LOW POINT - SANDBAG)
NOT TO SCALE

NOTE
REFER TO APPROVED DA 9876 FOR OVERALL SEDIMENT CONTROL AND SEDIMENT BASINS DETAILS.

REV	DATE	DESCRIPTION	DRN	DES	VERIF	APPD
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client

NEPEAN BUSINESS PARK

Scale

North

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
EROSION AND SEDIMENTATION CONTROL DETAILS

Scale	Status
Date 04/12/2024	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
Size A1	Project Number/Drawing Number 200044-09-DA-C03.21
Datum AHD	Revision 2



LEGEND	
[Pink]	GREATER THAN 3.5m CUT
[Red]	3.0m TO 3.5m CUT
[Orange]	2.5m TO 3.0m CUT
[Yellow-Orange]	2.0m TO 2.5m CUT
[Orange]	1.5m TO 2.0m CUT
[Brown]	1.0m TO 1.5m CUT
[Red-Orange]	0.5m TO 1.0m CUT
[Light Orange]	0.0m TO 0.5m CUT
[Light Green]	0.0m TO 0.5m FILL
[Green]	0.5m TO 1.0m FILL
[Dark Green]	1.0m TO 1.5m FILL
[Dark Green]	1.5m TO 2.0m FILL
[Blue]	2.0m TO 2.5m FILL
[Dark Blue]	GREATER THAN 2.5m FILL

CUT AND FILL VOLUMES	
1.	REFER SPECIFICATION NOTES FOR GENERAL EARTHWORKS REQUIREMENTS.
2.	ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL/RELEVANT AUTHORITY SPECIFICATIONS AND DETAILS.
3.	NO ALLOWANCE HAS BEEN MADE FOR BULKING FACTORS. NOTE ALL VOLUMES DEPICTED ARE SOLID VOLUMES ONLY AND MAY NOT REFLECT DETAILED EARTHWORKS.
4.	NO ALLOWANCE HAS BEEN MADE FOR DETAILED EARTHWORKS, ie SERVICE TRENCHING, DETAILED EXCAVATION AND THE LIKE.
5.	ESTIMATED EARTHWORKS VOLUMES REPRESENT ANALYSIS BETWEEN APPROVED BULK SURFACE UNDER DA 9876 AND BULK EARTHWORKS DESIGN LEVEL. BULK EARTHWORKS LEVELS INCLUDE ROAD BOXING AND ALLOWS FOR NO TOP SOIL.
6.	EARTHWORKS VALUES AS FOLLOWS:
6.1.	CUT: 2,116m ³
6.2.	FILL: 10,355m ³
6.3.	BALANCE: 8,239m ³ (APPROX.)

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
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Client

NEPEAN BUSINESS PARK

Scale

SCALE 1:2000 @A1

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
BULK EARTHWORKS CUT AND FILL PLAN

Scale
1:2000

First Issue Date
04/12/2024

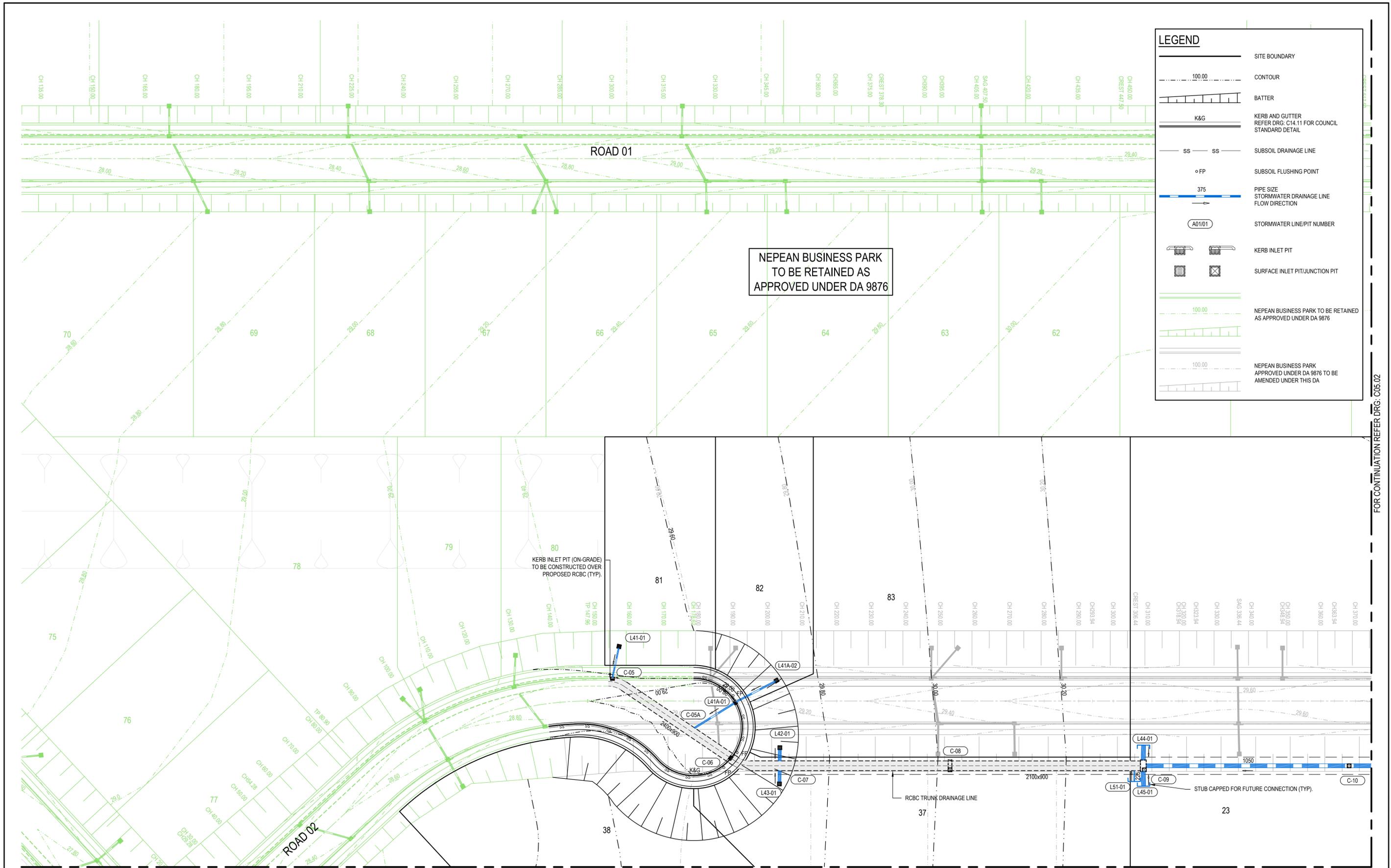
Size
A1

Datum
AHD

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
200044-09-DA-C04.01

Revision
3



LEGEND

- SITE BOUNDARY
- CONTOUR
- BATTER
- KERB AND GUTTER REFER DRG. C14.11 FOR COUNCIL STANDARD DETAIL
- SUBSOIL DRAINAGE LINE
- SUBSOIL FLUSHING POINT
- PIPE SIZE STORMWATER DRAINAGE LINE FLOW DIRECTION
- STORMWATER LINE/PIT NUMBER
- KERB INLET PIT
- SURFACE INLET PIT/JUNCTION PIT
- NEPEAN BUSINESS PARK TO BE RETAINED AS APPROVED UNDER DA 9876
- NEPEAN BUSINESS PARK APPROVED UNDER DA 9876 TO BE AMENDED UNDER THIS DA

NEPEAN BUSINESS PARK
TO BE RETAINED AS
APPROVED UNDER DA 9876

KERB INLET PIT (ON-GRADE)
TO BE CONSTRUCTED OVER
PROPOSED RCBC (TYP).

FOR CONTINUATION REFER DRG: C05.03

FOR CONTINUATION REFER DRG: C05.02

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client

NEPEAN BUSINESS PARK

Scale

SCALE 1:500 @A1

North

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
SITEWORKS AND STORMWATER MANAGEMENT PLAN
SHEET 1

Scale
1:500

First Issue Date
04/12/2024

Size
A1

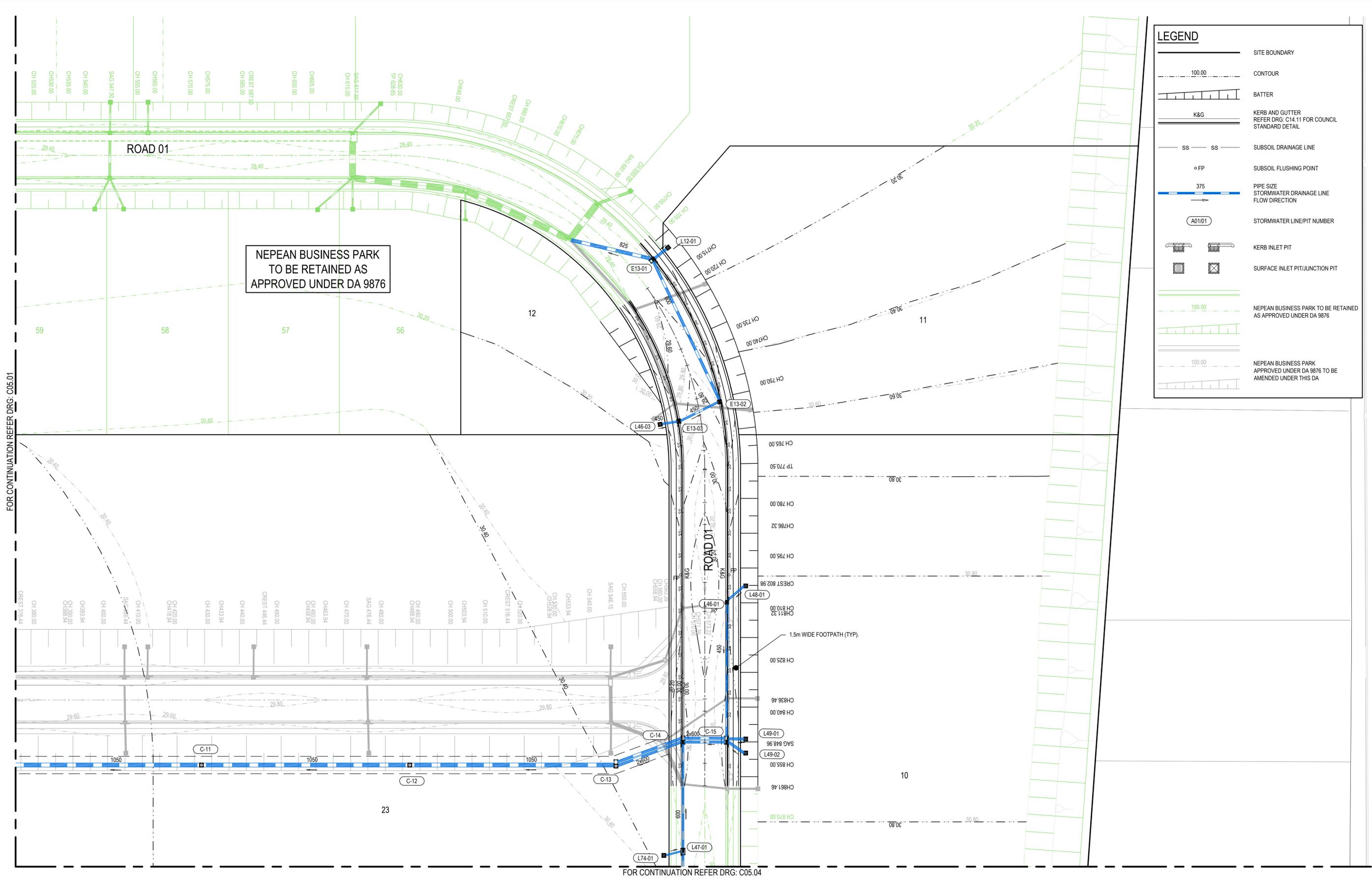
Datum
AHD

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
200044-09-DA-C05.01

Revision
3

FOR CONTINUATION REFER DRG: C05.01



LEGEND

- SITE BOUNDARY
- 100.00 CONTOUR
- BATTER
- KERB AND GUTTER REFER DRG: C14.11 FOR COUNCIL STANDARD DETAIL
- SUBSOIL DRAINAGE LINE
- SUBSOIL FLUSHING POINT
- PIPE SIZE STORMWATER DRAINAGE LINE FLOW DIRECTION
- STORMWATER LINE/PIT NUMBER
- KERB INLET PIT
- SURFACE INLET PIT/JUNCTION PIT
- NEPEAN BUSINESS PARK TO BE RETAINED AS APPROVED UNDER DA 9876
- NEPEAN BUSINESS PARK APPROVED UNDER DA 9876 TO BE AMENDED UNDER THIS DA

NEPEAN BUSINESS PARK
TO BE RETAINED AS
APPROVED UNDER DA 9876

FOR CONTINUATION REFER DRG: C05.04

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client

NEPEAN BUSINESS PARK

Scale

SCALE 1:500 @A1

North

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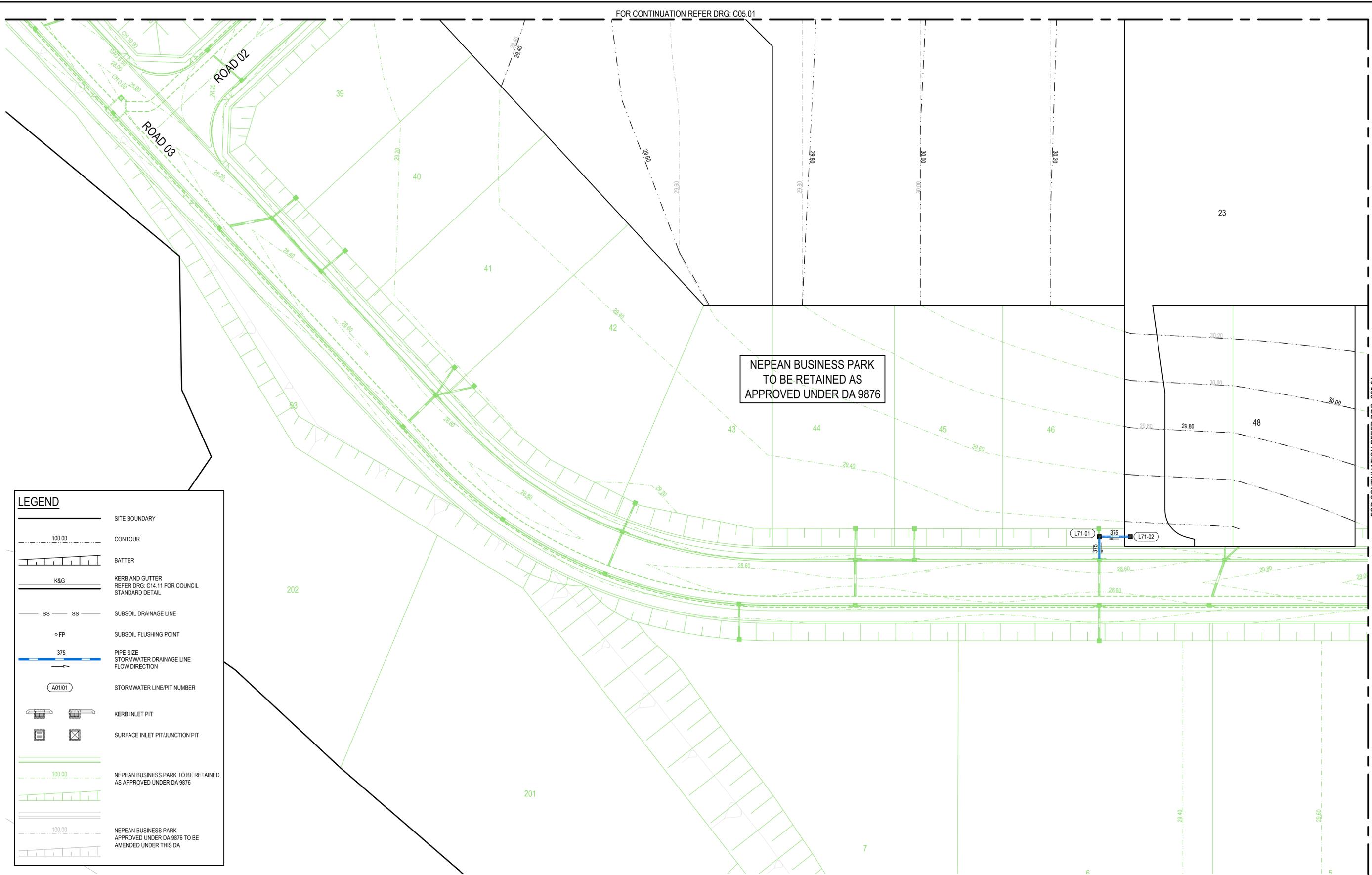
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ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
NEPEAN BUSINESS PARK
PENRITH

Title
SITWORKS AND STORMWATER MANAGEMENT PLAN
SHEET 2

Scale 1:500	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date 04/12/2024	Project Number/Drawing Number 200044-09-DA-C05.02
Size A1	Revision 2
Datum AHD	

FOR CONTINUATION REFER DRG: C05.01



LEGEND

- SITE BOUNDARY
- CONTOUR
- BATTER
- KERB AND GUTTER
REFER DRG: C14.11 FOR COUNCIL STANDARD DETAIL
- SUBSOIL DRAINAGE LINE
- SUBSOIL FLUSHING POINT
- PIPE SIZE
STORMWATER DRAINAGE LINE
FLOW DIRECTION
- STORMWATER LINE/PIT NUMBER
- KERB INLET PIT
- SURFACE INLET PIT/JUNCTION PIT
- NEPEAN BUSINESS PARK TO BE RETAINED AS APPROVED UNDER DA 9876
- NEPEAN BUSINESS PARK APPROVED UNDER DA 9876 TO BE AMENDED UNDER THIS DA

NEPEAN BUSINESS PARK
TO BE RETAINED AS
APPROVED UNDER DA 9876

FOR CONTINUATION REFER DRG: C05.04

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client

NEPEAN BUSINESS PARK

Scale

SCALE 1:500 @A1

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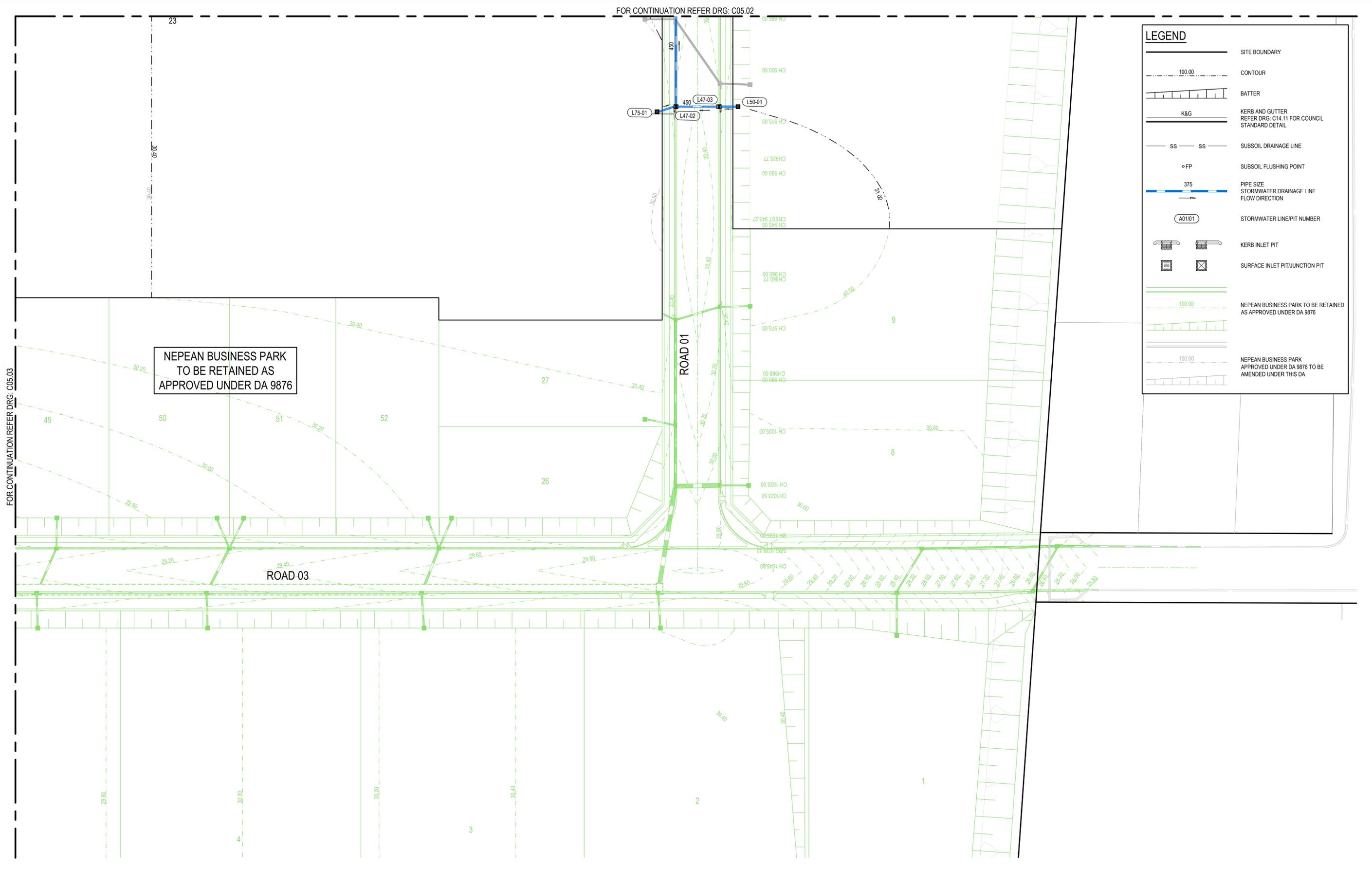
North

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
SITEWORKS AND STORMWATER MANAGEMENT PLAN
SHEET 3

Scale 1:500	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date 04/12/2024	Project Number/Drawing Number 200044-09-DA-C05.03
Size A1	Revision 2
Datum AHD	



LEGEND	
	SITE BOUNDARY
	CONTOUR
	BATTER
	KERB AND GUTTER REFER DRG. C14.11 FOR COUNCIL STANDARD DETAIL
	SUBSOIL DRAINAGE LINE
	SUBSOIL FLUSHING POINT
	PIPE SIZE STORMWATER DRAINAGE LINE FLOW DIRECTION
	STORMWATER LINE/PIT NUMBER
	KERB INLET PIT
	SURFACE INLET PIT/JUNCTION PIT
	NEPEAN BUSINESS PARK TO BE RETAINED AS APPROVED UNDER DA 9876
	NEPEAN BUSINESS PARK APPROVED UNDER DA 9876 TO BE AMENDED UNDER THIS DA

FOR CONTINUATION REFER DRG: C05.03

FOR CONTINUATION REFER DRG: C05.02

NEPEAN BUSINESS PARK
TO BE RETAINED AS
APPROVED UNDER DA 9876

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client

**NEPEAN
BUSINESS
PARK**

Scale

SCALE 1:500 @A1

North

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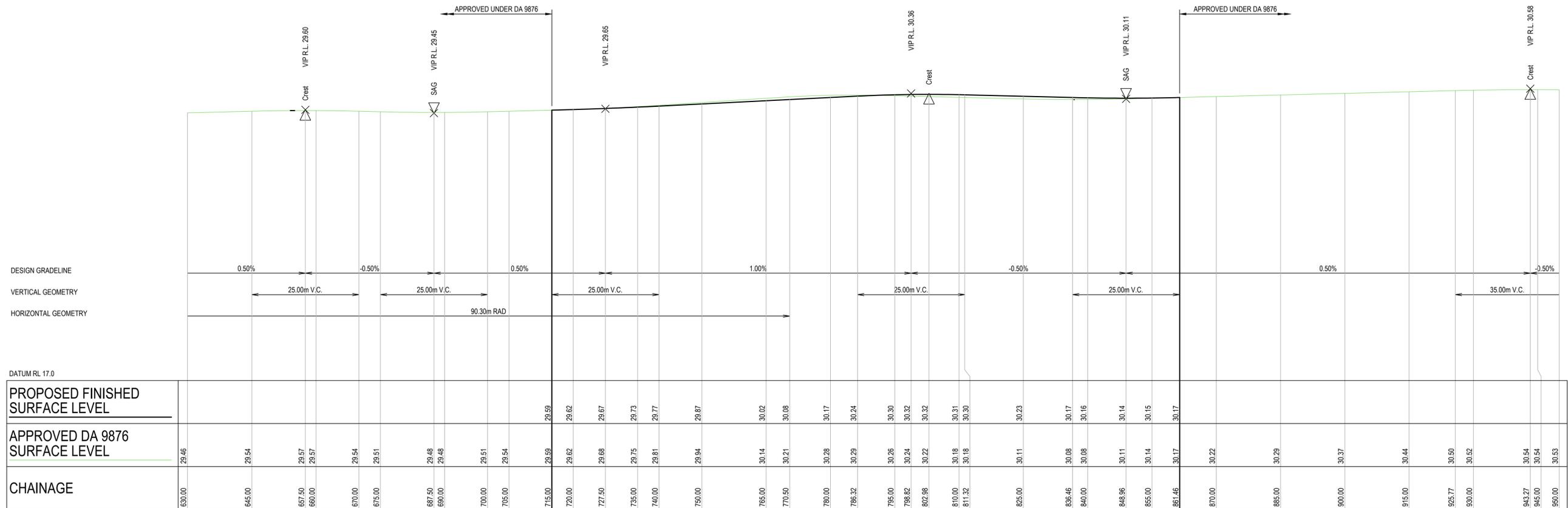
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Project
NEPEAN BUSINESS PARK
PENRITH

Title
SITWORKS AND STORMWATER MANAGEMENT PLAN
SHEET 4

Scale 1:500	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date 04/12/2024	Project Number/Drawing Number 200044-09-DA-C05.04
Size A1	Revision 2
Datum AHD	

LEGEND	
	NEPEAN BUSINESS PARK TO BE RETAINED AS APPROVED UNDER DA 9876
	PROPOSED DESIGN



ROAD 01 LONGITUDINAL SECTION
 SCALE 1:500 HORI
 SCALE 1:100 VERT

2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	
REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.

Client

Scale

North

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Project	NEPEAN BUSINESS PARK PENRITH
Title	ROAD LONGITUDINAL SECTIONS

Scale	AS SHOWN	Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date	04/12/2024	Project Number/Drawing Number	200044-09-DA-C07.01
Size	A1	Revision	2
Datum	AHD		

NEPEAN BUSINESS PARK
TO BE RETAINED AS
APPROVED UNDER DA 9876

LEGEND

LOCAL ROAD

FOOTPATH

PAVEMENT MARKING LEGEND

BARRIER LINES

BB

CONTINUITY LINES

C1

GIVEWAY LINES

TB

TB1

STOP LINE

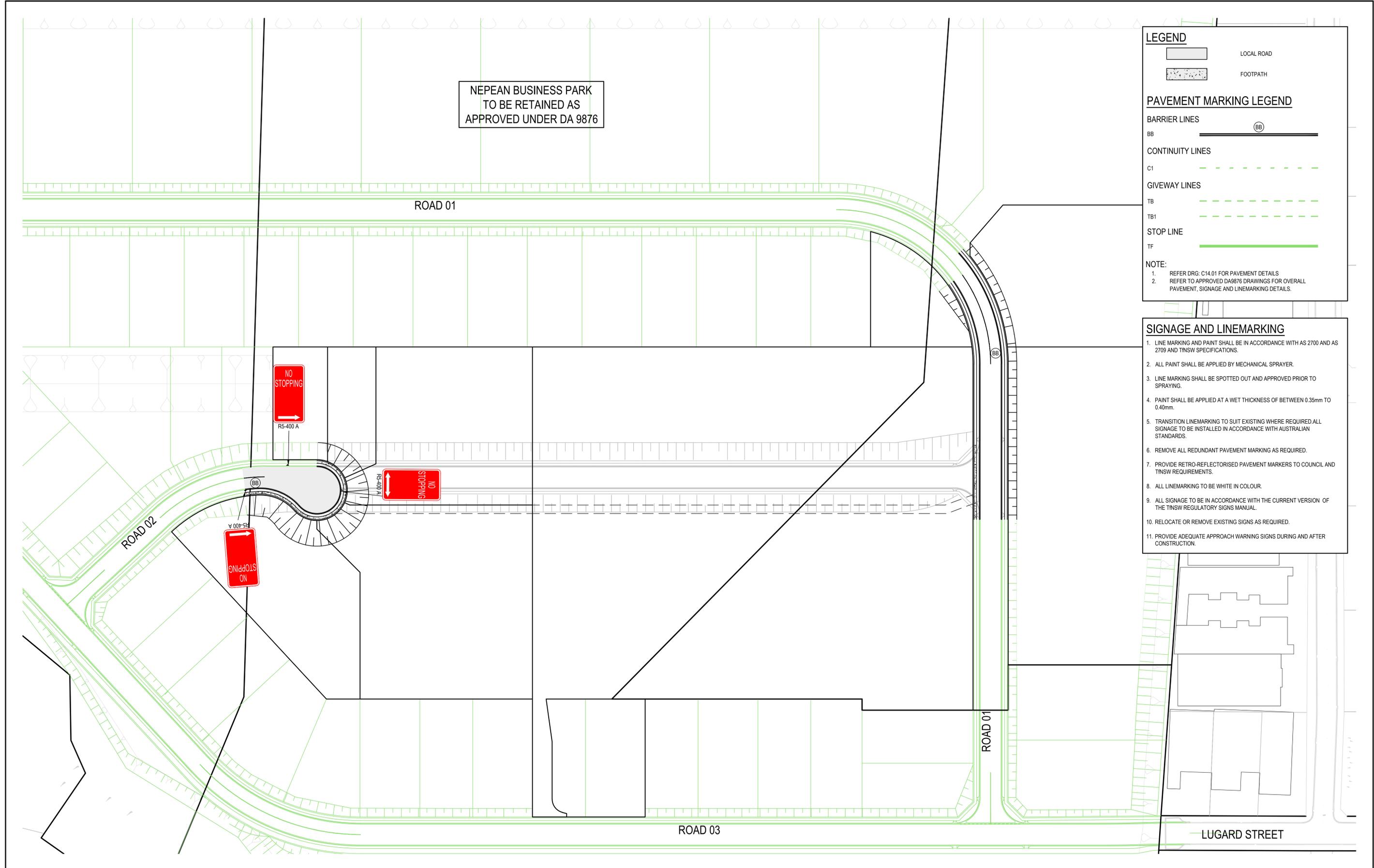
TF

NOTE:

- REFER DRG: C14.01 FOR PAVEMENT DETAILS
- REFER TO APPROVED DA9876 DRAWINGS FOR OVERALL PAVEMENT, SIGNAGE AND LINEMARKING DETAILS.

SIGNAGE AND LINEMARKING

- LINE MARKING AND PAINT SHALL BE IN ACCORDANCE WITH AS 2700 AND AS 2709 AND TNSW SPECIFICATIONS.
- ALL PAINT SHALL BE APPLIED BY MECHANICAL SPRAYER.
- LINE MARKING SHALL BE SPOTTED OUT AND APPROVED PRIOR TO SPRAYING.
- PAINT SHALL BE APPLIED AT A WET THICKNESS OF BETWEEN 0.35mm TO 0.40mm.
- TRANSITION LINEMARKING TO SUIT EXISTING WHERE REQUIRED ALL SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AUSTRALIAN STANDARDS.
- REMOVE ALL REDUNDANT PAVEMENT MARKING AS REQUIRED.
- PROVIDE RETRO-REFLECTORISED PAVEMENT MARKERS TO COUNCIL AND TNSW REQUIREMENTS.
- ALL LINEMARKING TO BE WHITE IN COLOUR.
- ALL SIGNAGE TO BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE TNSW REGULATORY SIGNS MANUAL.
- RELOCATE OR REMOVE EXISTING SIGNS AS REQUIRED.
- PROVIDE ADEQUATE APPROACH WARNING SIGNS DURING AND AFTER CONSTRUCTION.



REV	DATE	DESCRIPTION	DRN	DES	VERIF	APPD
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client

Scale

SCALE 1:1000

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
PAVEMENT, SIGNAGE AND LINEMARKING PLAN

Scale
1:1000

First Issue Date
04/12/2024

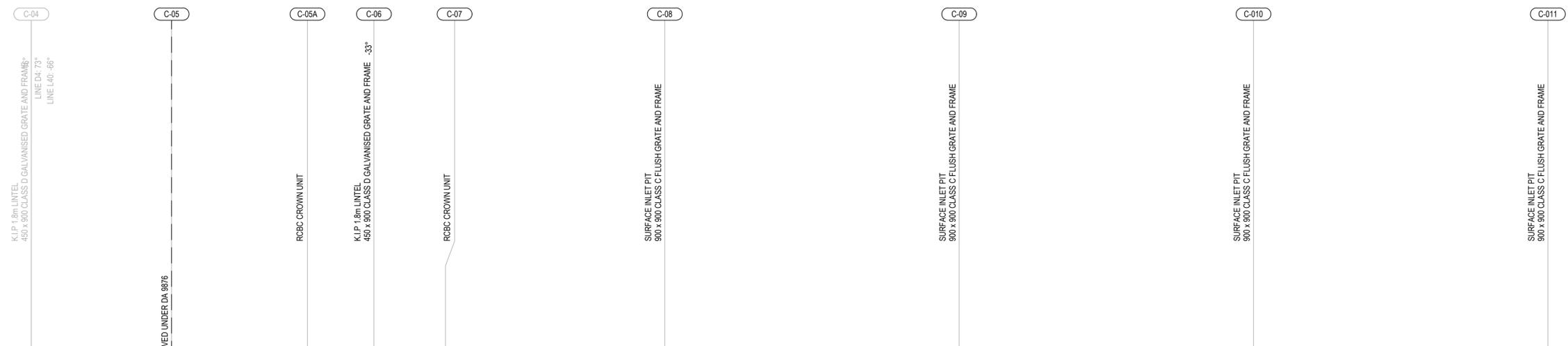
Size
A1

Datum
AHD

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
200044-09-DA-C11.01

Revision
3



PIPE GRADE (%)		G = 0.35%	G = 0.35%	G = 0.35%	G = 0.35%	G = 0.35%	G = 0.5%	G = 0.50%	
PIPE SIZE (mm)	2400x900 - RCBC	2400x900 - RCBC	2400x900 - RCBC	2400x900 - RCBC	2100x900 - RCBC	2100x900 - RCBC	1050 - RCP CLASS 2	1050 - RCP CLASS 2	
PIPE VELOCITY (m/s)	Vf = 1.82	Vf = 2.22	Vf = 2.22	Vf = 2.33	Vf = 2.35	Vf = 2.49	Vf = 2.11	Vf = 2.16	
Q - PIPE FLOW (L/s)	Q = 3926	Q = 3957	Q = 3957	Q = 4017	Q = 3074	Q = 3124	Q = 986	Q = 942	
DATUM RL	13.0	13.0							
5% AEP H.G.L.	26.81	26.85 26.86 26.86	26.88	26.88 26.89 26.89	26.92 26.93 26.93	27.05 27.06 27.06	27.38 27.40 27.40	27.65 27.65 27.65	27.95 27.95
FINISHED SURFACE LEVEL	28.70	28.81	29.10	29.06	29.49	29.99	30.23	30.33	30.41
NATURAL SURFACE LEVEL	27.69	27.63	27.93	28.07	28.03	27.79	27.77	27.64	27.35
PIPE INVERT LEVEL	25.78	25.92 25.92	26.03 26.03	26.08 26.11	26.16 26.16	26.32 26.35	26.56 26.59	26.89 26.92	27.22
DEPTH TO INVERT	2.92	2.89 2.89	3.07	2.98 2.95	3.33 3.33	3.67 3.64	3.67 3.64	3.44 3.41	3.19
CO-ORDINATED SETOUT									
CHAINAGE	138.00	166.60 L = 28.60	194.28 L = 27.68	207.84 L = 13.56	222.41 L = 14.57	267.13 L = 44.72	327.13 L = 60.00	387.13 L = 60.00	447.13 L = 60.00

LINE C

Client	NEPEAN BUSINESS PARK			
REV	DATE	DESCRIPTION	DRN	DES. VERIF. APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL MKH
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL MKH

NEPEAN BUSINESS PARK

Scale

North

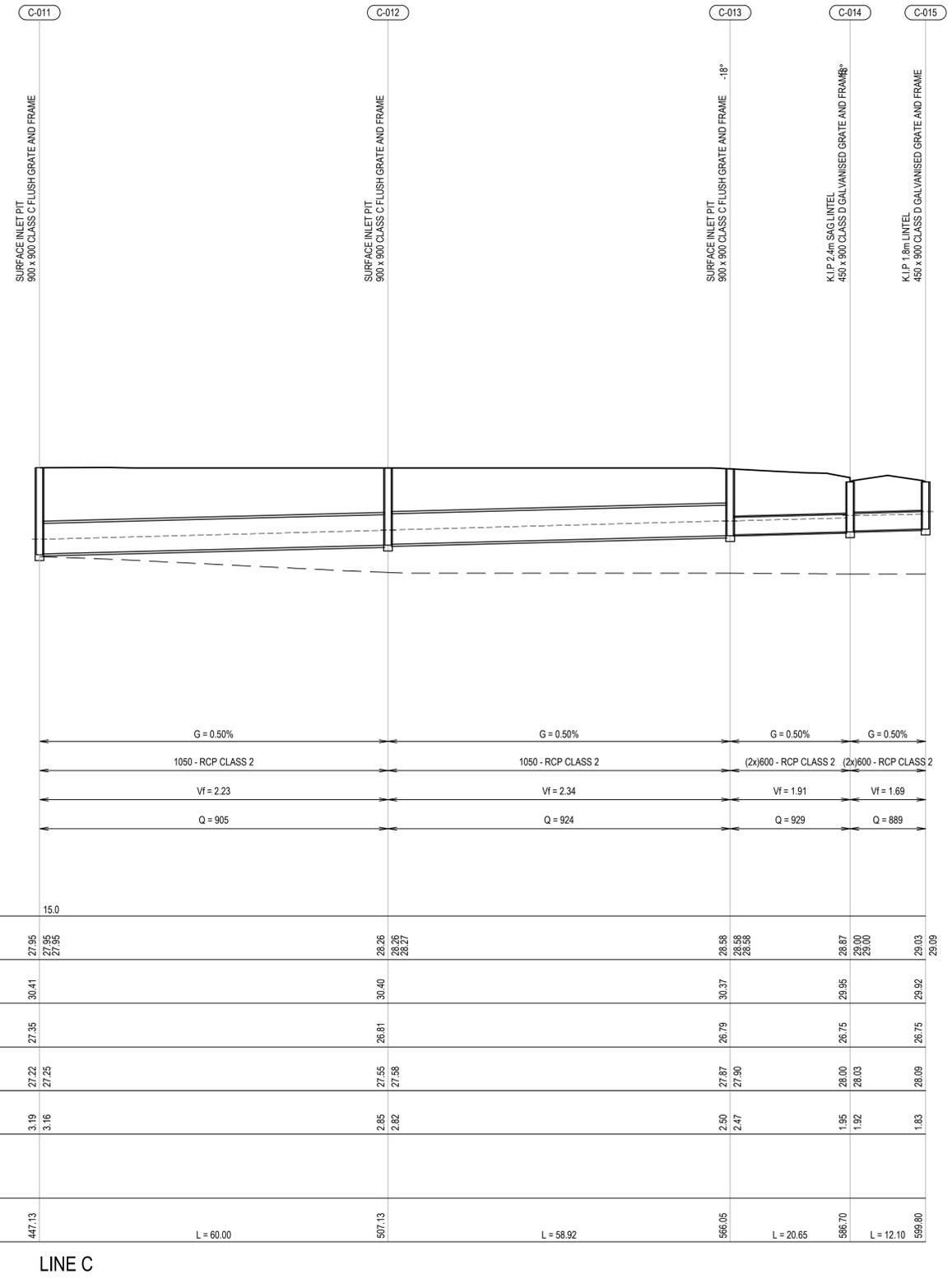
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Project
NEPEAN BUSINESS PARK
PENRITH

Title
STORMWATER LONGSECTIONS
SHEET 1

Scale AS SHOWN	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date 04/12/2024	Project Number/Drawing Number 200044-09-DA-C13.01
Size A1	Revision 3
Datum AHD	



LINE C

REV	DATE	DESCRIPTION	DRN	DES	VERIF	APPD
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client

NEPEAN BUSINESS PARK

Scale

North

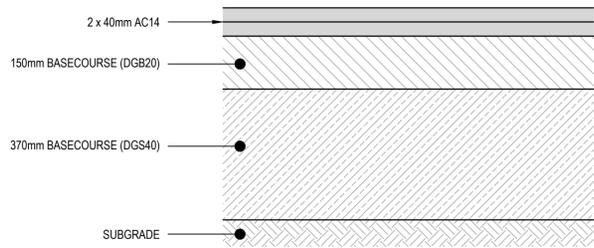
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Project
NEPEAN BUSINESS PARK
PENRITH

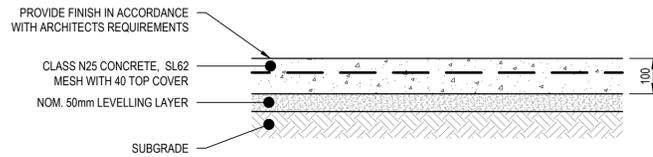
Title
STORMWATER LONGSECTIONS
SHEET 2

Scale AS SHOWN	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date 04/12/2024	Project Number/Drawing Number 200044-09-DA-C13.02
Size A1	Revision 2
Datum AHD	

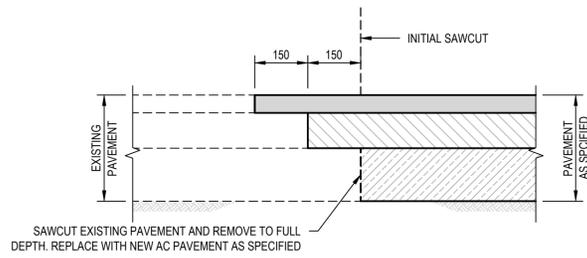


PRIVATE LOCAL ROAD
SCALE 1:10

- NOTES:
1. MIN CBR 4.0% (CONTRACTOR TO CONFIRM ONSITE).
 2. DESIGN LOADING = 5x10⁶ ESA's
 3. PRIME AND TACK COAT BASECOURSE SURFACE PRIOR TO PLACEMENT OF AC WEARING COURSE.

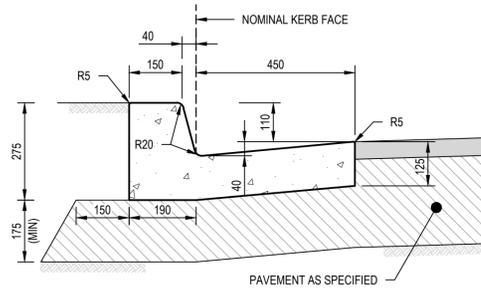


FOOTPATH
SCALE 1:10



FLEXIBLE PAVEMENT INTERFACE DETAIL
NEW TO EXISTING
SCALE 1:10

- NOTE:
- TACK COAT EXISTING PAVEMENT BASE AND AC INTERFACE PRIOR TO PLACEMENT OF NEW AC WEARING COURSE.



KERB AND GUTTER (K&G)
SCALE 1:10

- NOTE:
- PROVIDE TOOL JOINTS AT MAX. 3.0m CTRS.

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client

NEPEAN BUSINESS PARK

Scale

SCALE 1:10 @A1

North

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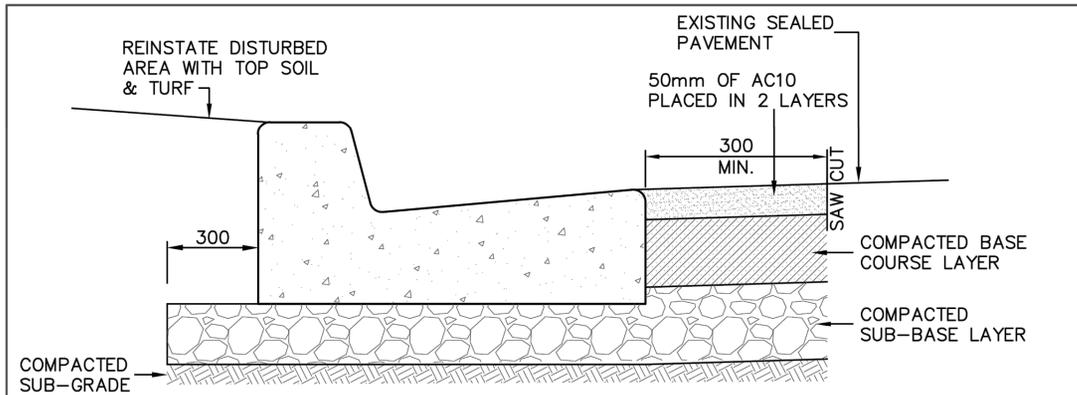
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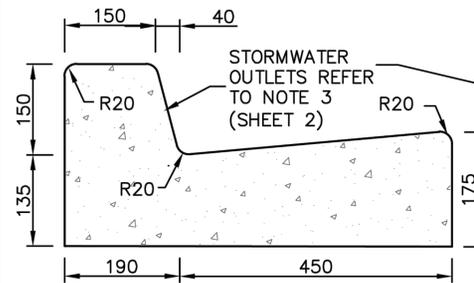
Project
**NEPEAN BUSINESS PARK
PENRITH**

Title
SITWORK DETAILS

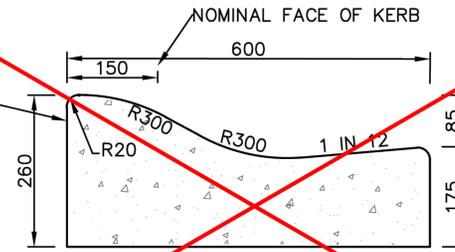
Scale 1:10	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date 04/12/2024	Project Number/Drawing Number 200044-09-DA-C14.01
Size A1	Revision 2
Datum AHD	



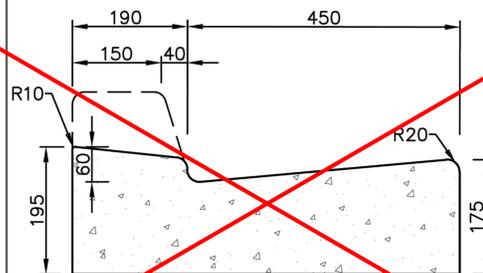
TYPICAL KERB & GUTTER RECONSTRUCTION
REFER NOTE 6 (SHEET 2)



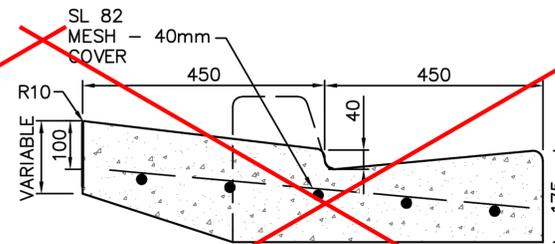
KERB & GUTTER



LOW PROFILE ROLL KERB



DRIVEWAY LAYBACK - RESIDENTIAL



DRIVEWAY LAYBACK - COMMERCIAL & INDUSTRIAL AND LOW LEVEL RESIDENTIAL

DRAWN:

PENRITH CITY COUNCIL

**STANDARD KERB & GUTTER,
LAYBACKS & DISH CROSSING
SHEET 1 OF 2**

APPROVED:

PLAN No:
SD1003/1

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client

NEPEAN BUSINESS PARK

Scale

North

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Project
**NEPEAN BUSINESS PARK
PENRITH**

Title
**COUNCIL DETAILS
SHEET 1**

Scale

Status
**FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION**

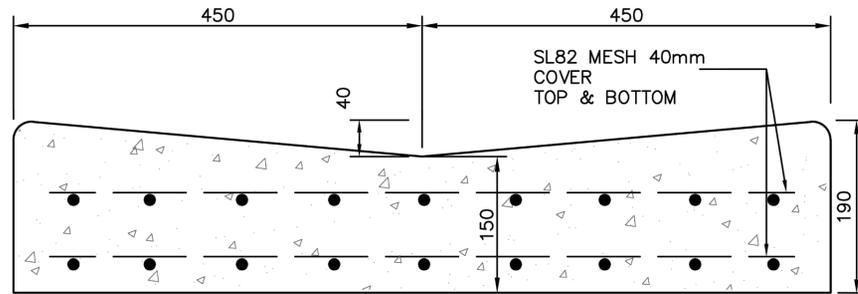
First Issue Date
04/12/2024

Size
A1

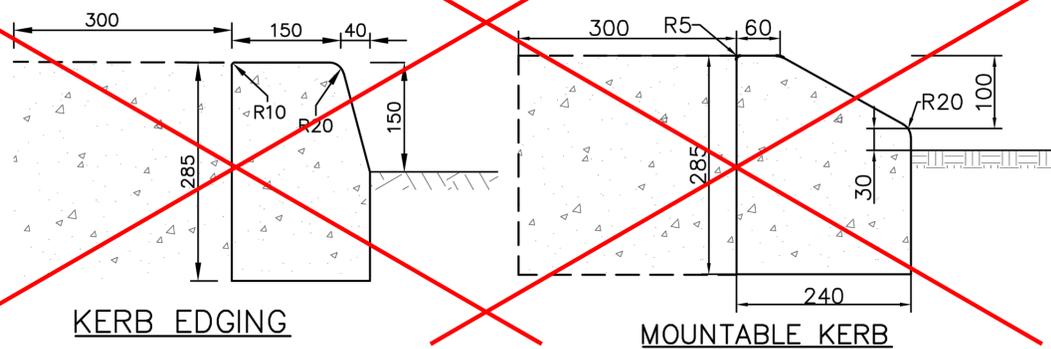
Datum
AHD

Project Number/Drawing Number
200044-09-DA-C14.11

Revision
2



REINFORCED DISH CROSSING



KERB EDGING

MOUNTABLE KERB

NOTES

1. CONCRETE COMPRESSIVE STRENGTH (F'c) AT 28 DAYS, TO BE 25MPa FOR KERB & GUTTER AND DISH CROSSINGS.
2. ROAD SUB-BASE SHALL BE EXTENDED 300mm BEHIND BACK OF KERB WITH THE THICKNESS TO BE NOT LESS THAN THE ROAD PAVEMENT SUB-BASE THICKNESS.
3. GALVANIZED STEEL OR SIMILAR APPROVED STORMWATER KERB ADAPTORS THE FULL HEIGHT OF THE KERB SHALL BE USED. THE KERB OUTLETS ARE TO MATCH THE PROFILE OF THE KERB. SEE SPECIFICATION
4. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE STATED.
5. ALL EXPOSED EDGES TO BE ROUNDED TO 20mm RADIUS UNLESS SHOWN OTHERWISE
6. SPECIFICATIONS FOR RECONSTRUCTION WORKS TO BE DETERMINED BY COUNCIL'S ENGINEER.
7. SERVICE CONDUIT LOCATIONS SHALL BE MARKED ON KERB FACE WITH AN APPROVED TOOL OR AS OTHERWISE DIRECTED.

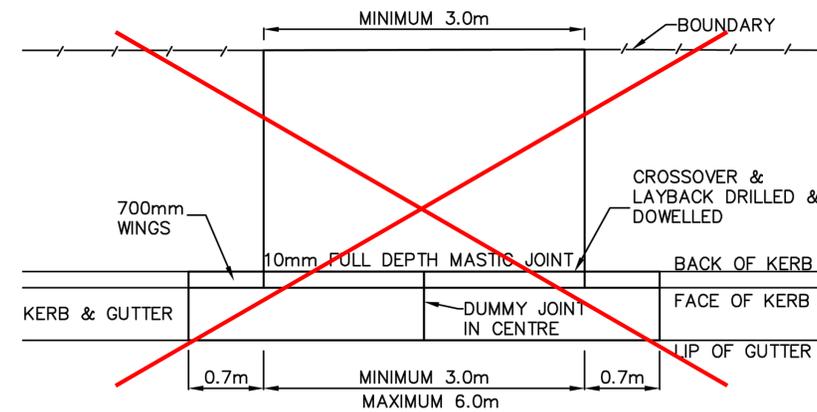
DRAWN:

PENRITH
CITY COUNCIL

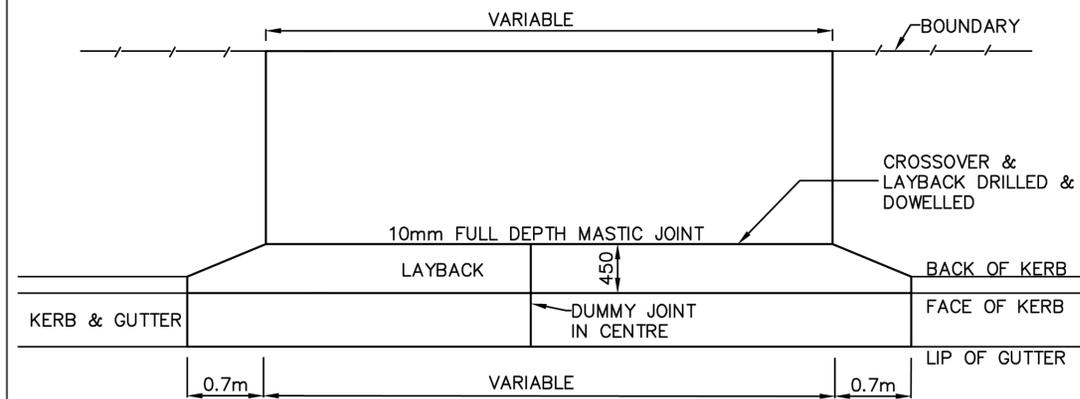
**STANDARD KERB & GUTTER,
LAYBACKS & DISH CROSSING**
SHEET 2 OF 2

APPROVED:

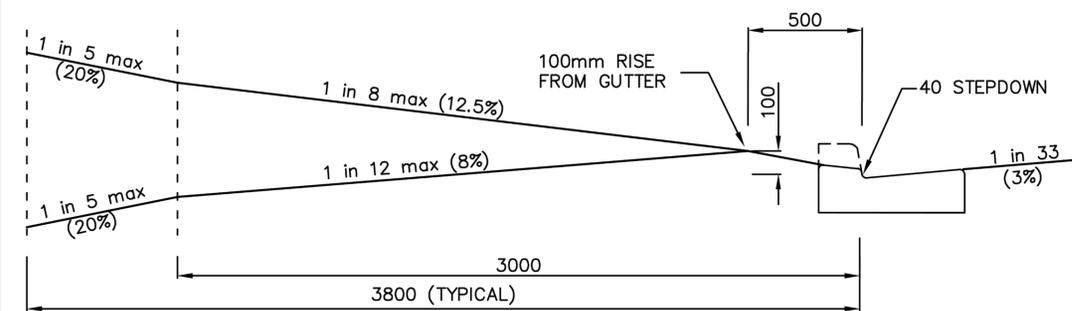
PLAN No:
SD1003/2



RESIDENTIAL



INDUSTRIAL/COMMERCIAL



VEHICULAR CROSSING PROFILE – HIGH & LOW LEVEL

DRAWN:

PENRITH
CITY COUNCIL

**TYPICAL VEHICULAR
CROSSOVER**

APPROVED:

PLAN No:
SD1004

REV	DATE	DESCRIPTION	DRN	DES	VERIF	APPD
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
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Client

**NEPEAN
BUSINESS
PARK**

Scale

North

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Project

NEPEAN BUSINESS PARK
PENRITH

Title

COUNCIL DETAILS
SHEET 2

Scale

Status

First Issue Date

04/12/2024

Size

A1

Datum

AHD

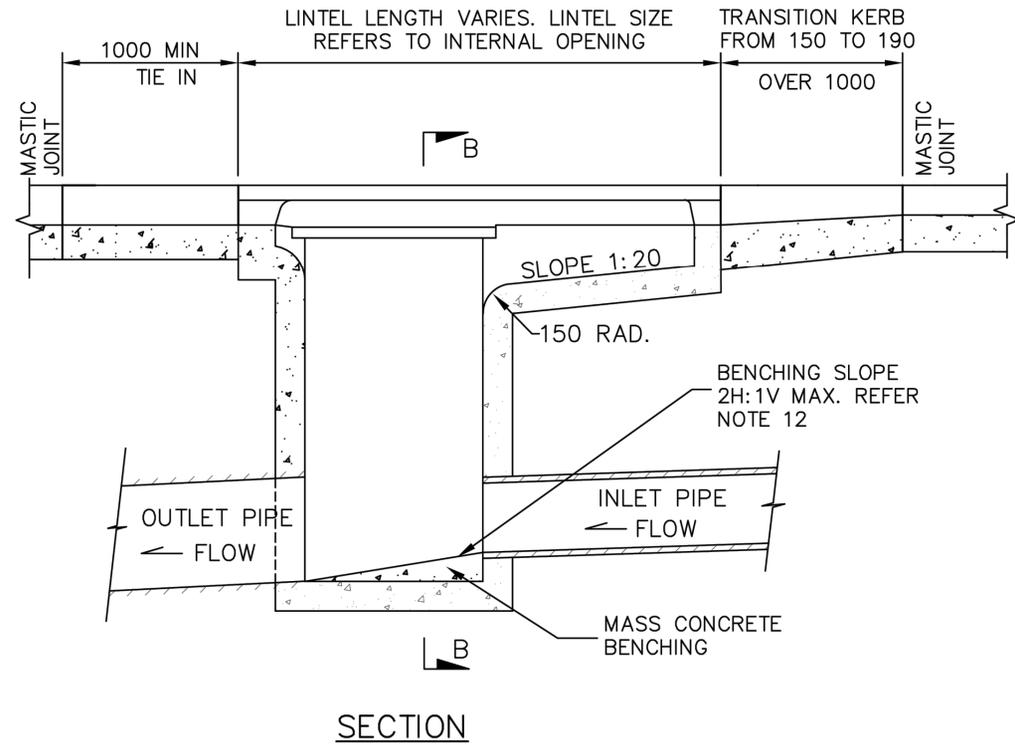
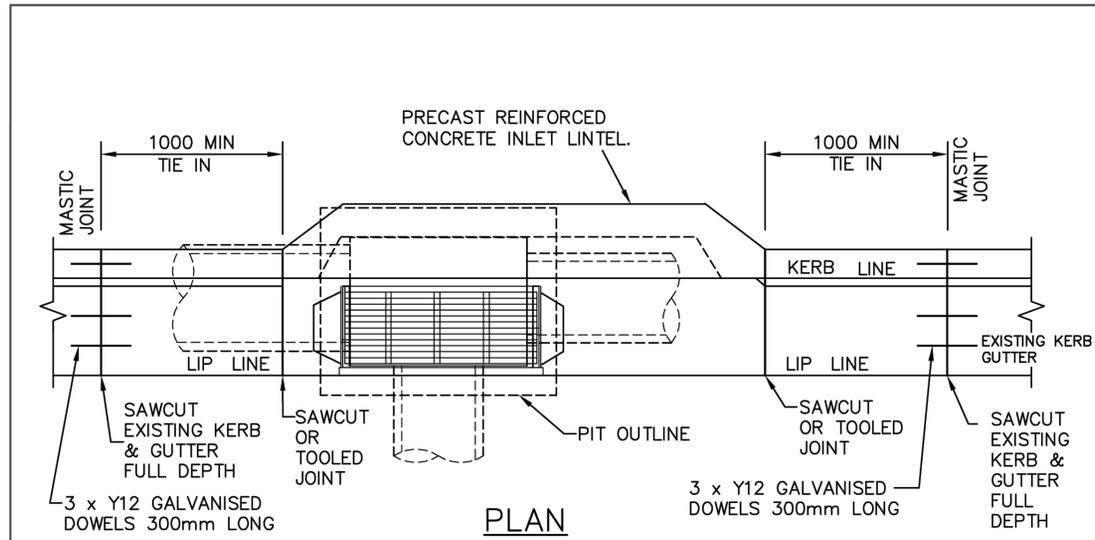
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Project Number/Drawing Number

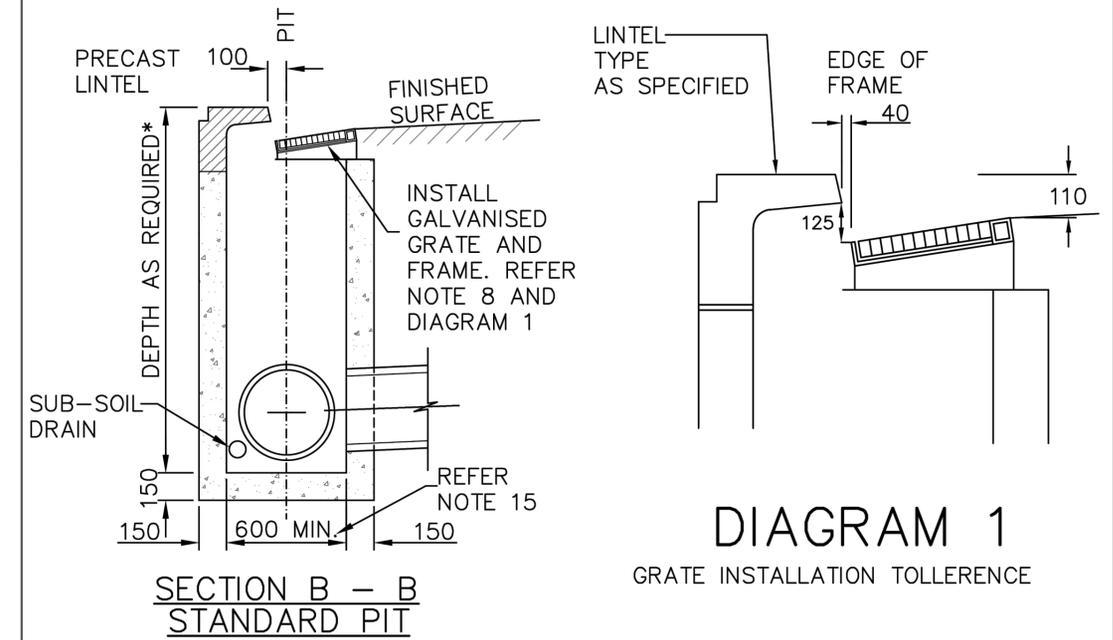
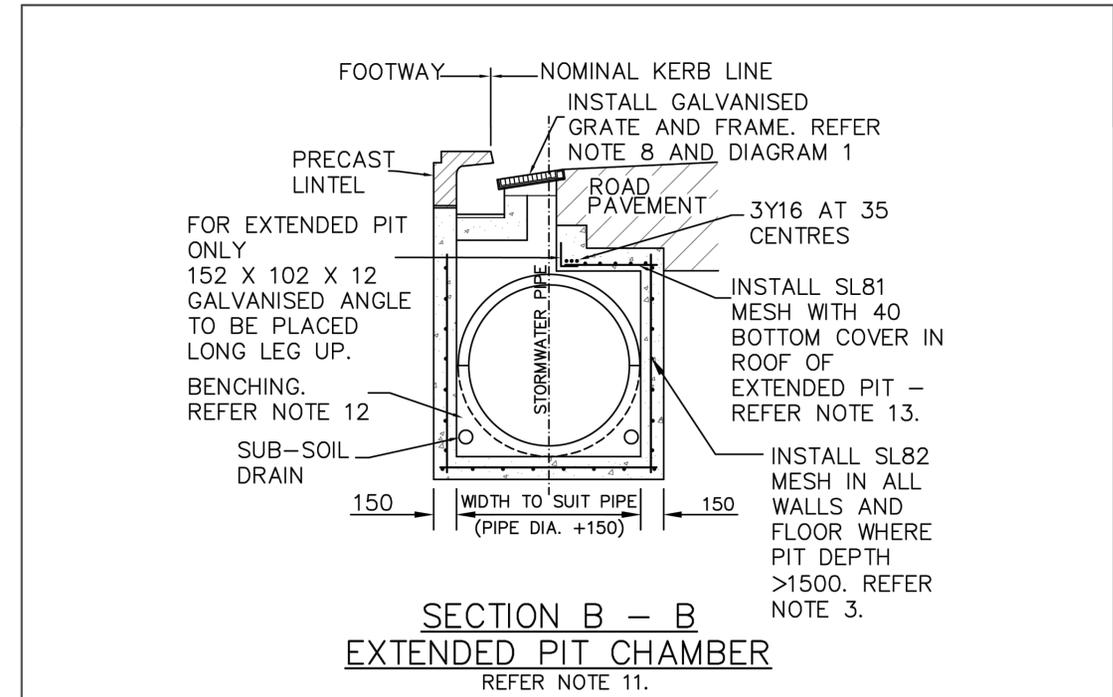
200044-09-DA-C14.12

Revision

2



DRAWN: M. WARD	KERB INLET PIT SHEET 1 OF 3	APPROVED:
PENRITH CITY COUNCIL		PLAN No: SD2001/1



DRAWN: M. WARD	KERB INLET PIT SHEET 2 OF 3	APPROVED:
PENRITH CITY COUNCIL		PLAN No: SD2001/2

REV	DATE	DESCRIPTION	DRN	DES	VERIF	APPD
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client

NEPEAN BUSINESS PARK

Scale

North

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
COUNCIL DETAILS
SHEET 3

Scale

Status

First Issue Date
04/12/2024

Size
A1

Datum
AHD

Project Number/Drawing Number
200044-09-DA-C14.13

Revision
2

FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

NOTES

1. CONCRETE TO BE 25MPa AT 28 DAYS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE
3. WHERE DEPTH OF PIT EXCEEDS 1500, WALLS AND BOTTOM TO BE REINFORCED IN ALL DIRECTIONS WITH SL82 MESH AT 40 COVER TO INSIDE FACE WITH N12 CORNER BARS 300 LEGS AT 400 CENTRES. PITS DEEPER THAN 2000 SHALL BE DESIGNED AND THE CONSTRUCTION CERTIFIED BY A PROFESSIONAL STRUCTURAL ENGINEER.
4. TRIMMER BARS TO BE PROVIDED AROUND PIPES GREATER THAN 750 DIAMETER (SEE SD2003).
5. SAG PITS TO HAVE LINTEL LOCATED CENTRALLY OVER PIT.
6. BACKFILL ADJACENT TO PITS TO BE APPROVED GRANULAR MATERIAL.
7. A 3000 LENGTH OF APPROVED "FILTER FABRIC" WRAPPED 100 DIA SUB-SOIL DRAIN IS TO BE PROVIDED AND CONNECTED THROUGH THE UPSTREAM PIT WALL AT THE INVERT LEVEL OF THE UPSTREAM PIPE.
8. PIT GRATE AND FRAME TO BE "WELDLOK" GG51-D GULLY GRATE WITH SKIRTED BASE OR EQUIVALENT FOR ALL ROADS, FITTED WITH A LOCKABLE "J" BOLT OR EQUIVALENT. FOR SAG PITS, USE WELDLOK GG SB 94 SD GULLY GRATE OR EQUIVALENT.
9. APPROVED STEP IRONS SHALL BE PROVIDED WHERE THE PIT EXCEEDS 1000 IN DEPTH. THEY SHALL BE LOCATED AS DIRECTED AND STAGGERED TO GIVE 300 SPACING VERTICALLY AND 300 SPACING HORIZONTALLY.
10. THE CENTRE LINES OF INTERSECTING PIPES ARE TO MEET AT THE DOWNSTREAM FACE OF THE PIT WHERE POSSIBLE.
11. WHERE ENTERING PIPE EXCEEDS 450 IN DIAMETER, PIT CHAMBER TO BE EXTENDED AS PER SECTION B-B 'EXTENDED PIT CHAMBER'.
12. FLOOR OF PIT TO BE BENCHED TO MID POINT OF OUTLET PIPE WHERE OUTLET PIPE GREATER THAN 600 DIAMETER.
13. WHERE EXTENDED CHAMBER WIDTH EXCEEDS 1200, ROOF REINFORCEMENT TO BE DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER.
14. CONTRACTOR TO ENSURE CLEARANCE BETWEEN LINTEL AND OPENED GRATE. REFER DIAGRAM 1.
15. WHERE DEPTH OF PIT IS GREATER THAN 1200, INTERNAL WIDTH OF PIT TO BE INCREASED TO 900x900 FOR FULL DEPTH BELOW PAVEMENT.
16. LIFTING LUGS TO BE FILLED AFTER INSTALLATION.

DRAWN:
M. WARDA

**PENRITH
CITY COUNCIL**

**KERB INLET PIT
SHEET 3 OF 3**

APPROVED:

PLAN No:
SD2001/3

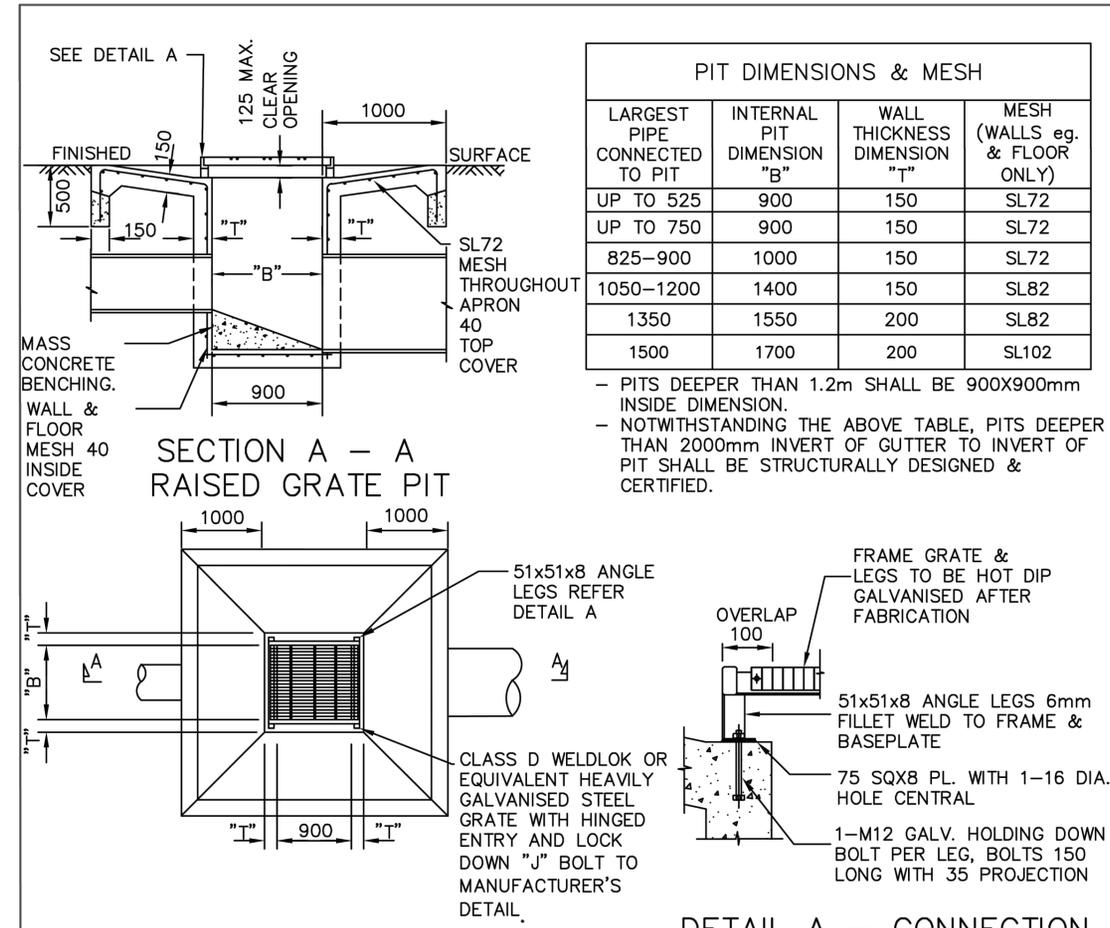
DRAWN:
W.KONG

**PENRITH
CITY COUNCIL**

**STANDARD GRATED
SURFACE INLET PITS**

APPROVED:

PLAN No:
SD2002



TYPICAL DETAIL SURFACE INLET PIT TO SUIT PIPES UP TO 1500mm DIA.

NOTES.

1. ALL CONCRETE TO BE MINIMUM 25MPa UNLESS OTHERWISE NOTED.
2. APPROVED STEP IRONS SHALL BE PROVIDED WHERE THE PIT EXCEEDS 900mm IN DEPTH. THEY SHALL BE LOCATED AS DIRECTED AND STAGGERED TO GIVE 300mm SPACING VERTICALLY AND 300mm SPACING HORIZONTALLY. LOCATE HINGES OF GRATES TO SUIT STEP IRONS.
3. GRATES MUST BE CLASS D.
4. ALL CONCRETE WORK TO BE A MINIMUM OF 150mm THICK.
5. MASS CONCRETE BENCHING TO PIPE CENTRELINE MUST BE PROVIDED AS INDICATED.
6. WHERE SITE CONDITIONS DICTATE, THE SUPERVISING ENGINEER MAY INCLINE THE PIT TOPS TO AN UPPER LIMIT OF 1 VERT. IN 4 HORIZ. NO ALTERATION TO REINFORCEMENT IS REQUIRED, HOWEVER, THE ENTIRE PIT ROOF (AND ACCOMPANYING APRONS) ARE TO REMAIN PLANAR. eg.
7. ALL DIMENSION ARE IN mm UNLESS OTHERWISE NOTED.



REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client

NEPEAN BUSINESS PARK

Scale

North

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
COUNCIL DETAILS
SHEET 4

Scale

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

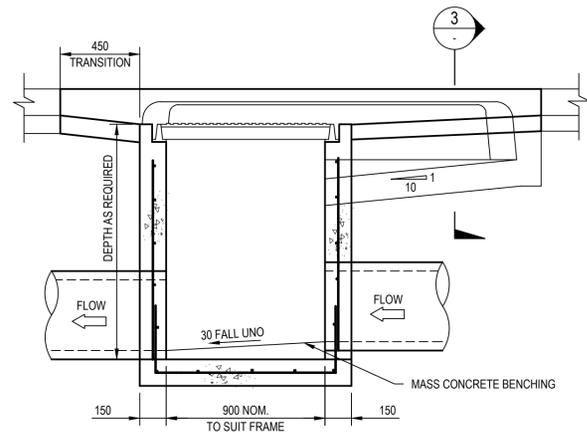
First Issue Date
04/12/2024

Size
A1

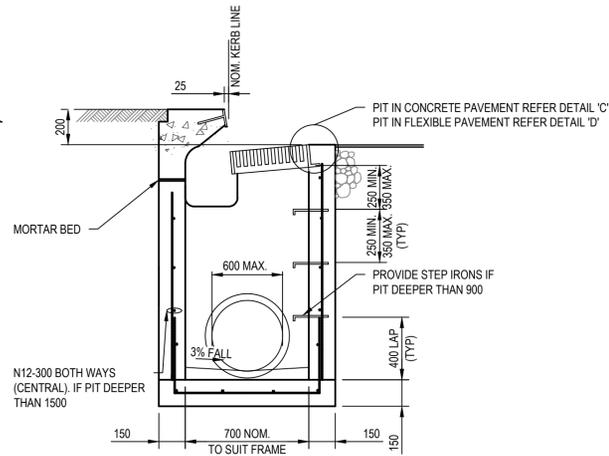
Datum
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Project Number/Drawing Number
200044-09-DA-C14.14

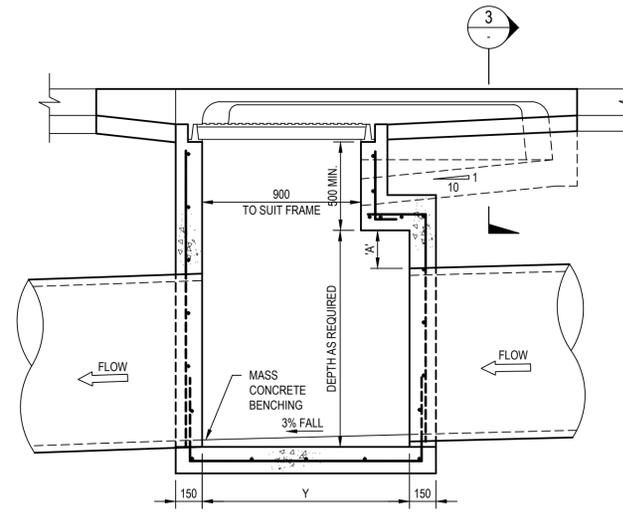
Revision
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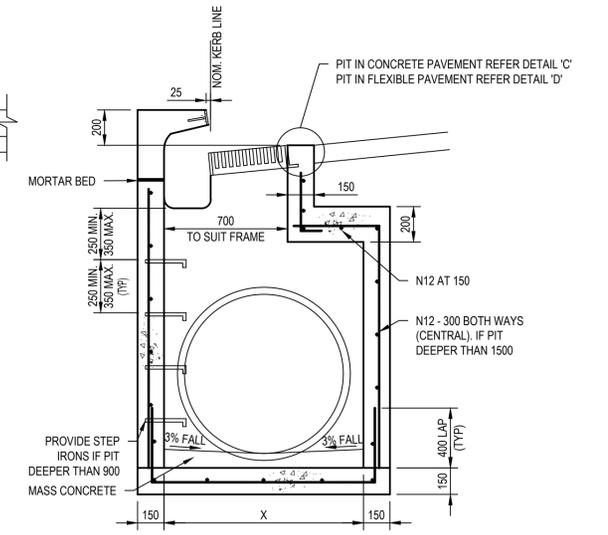
SECTION 1
SCALE 1:20



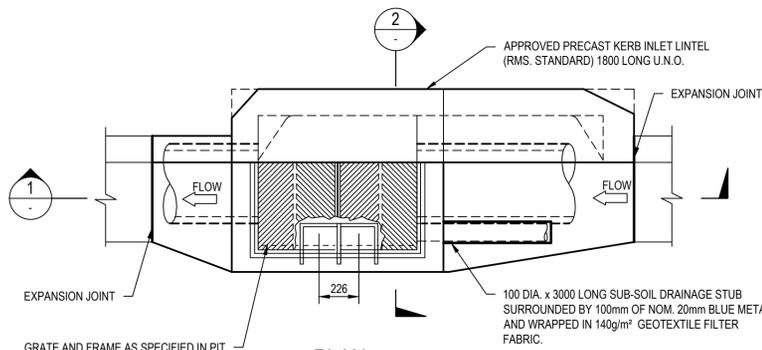
SECTION 2
SCALE 1:20



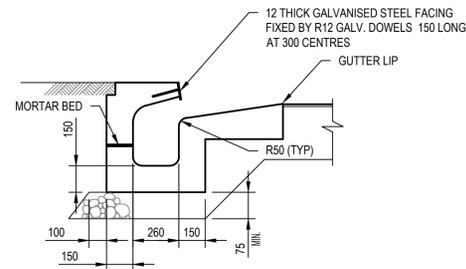
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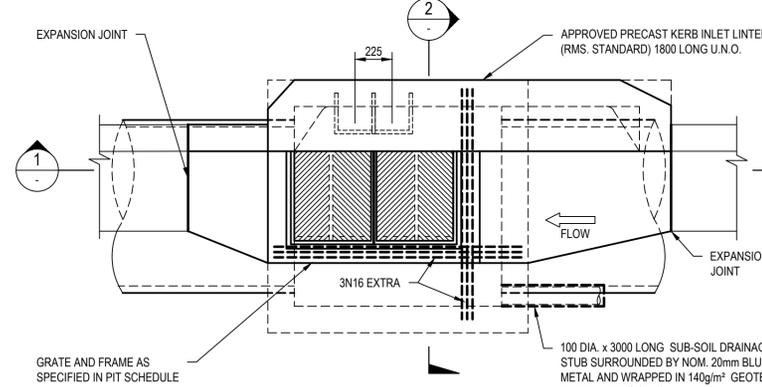
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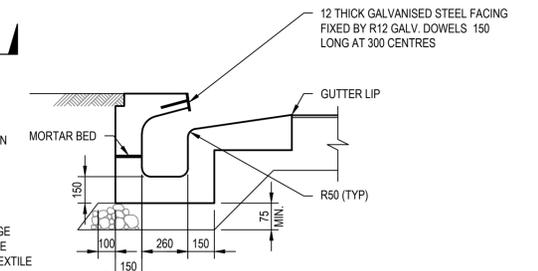
PLAN
SCALE 1:20



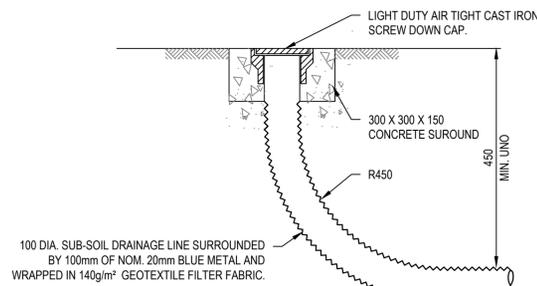
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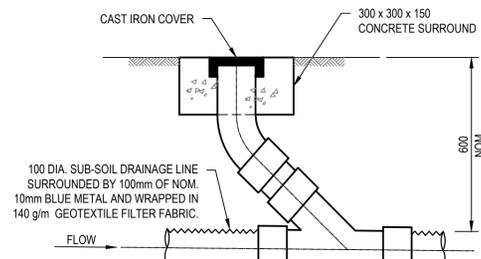
PLAN
SCALE 1:20



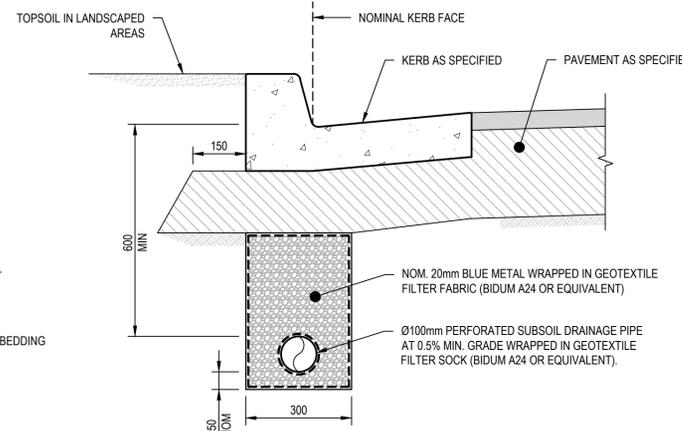
SECTION 3
SCALE 1:20



FLUSHING POINT
SCALE 1:10

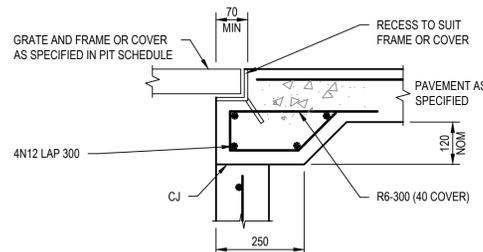


INTERMEDIATE RISER AG PIPE
SCALE 1:10
NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED

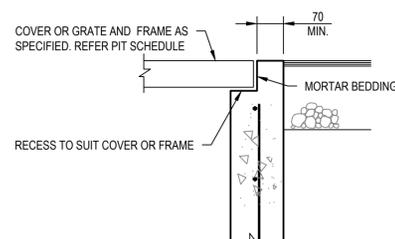


SUBSOIL DRAINAGE BEHIND KERBS
SCALE 1:10

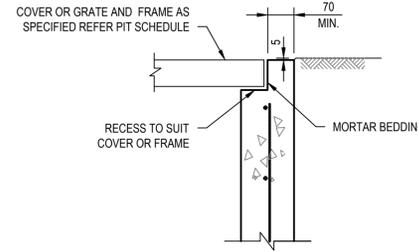
NOTE:
BRING RISER TO SURFACE BEHIND KERB.



DETAIL 'C'
SCALE 1:10



DETAIL 'D'
SCALE 1:10



DETAIL 'E'
SCALE 1:10

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client

Scale 0 0.2 0.4 0.6 0.8 1m
SCALE 1:10 @A1
0 0.5 1 1.5 2m
SCALE 1:20 @A1

North

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Project
NEPEAN BUSINESS PARK
PENRITH

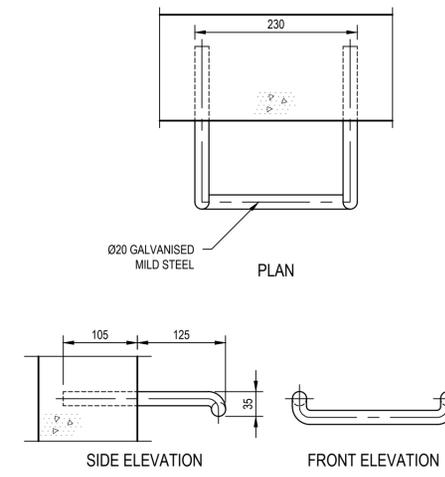
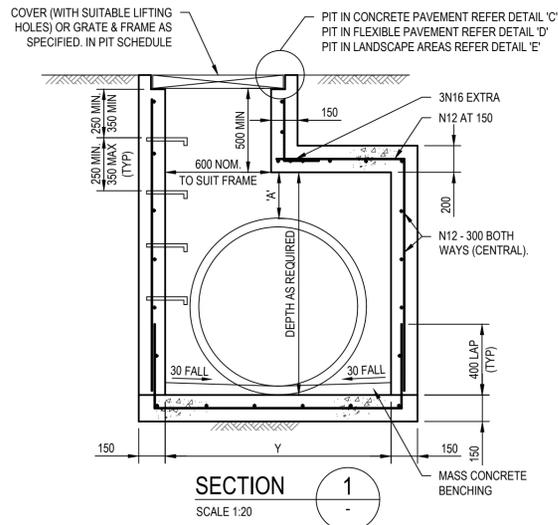
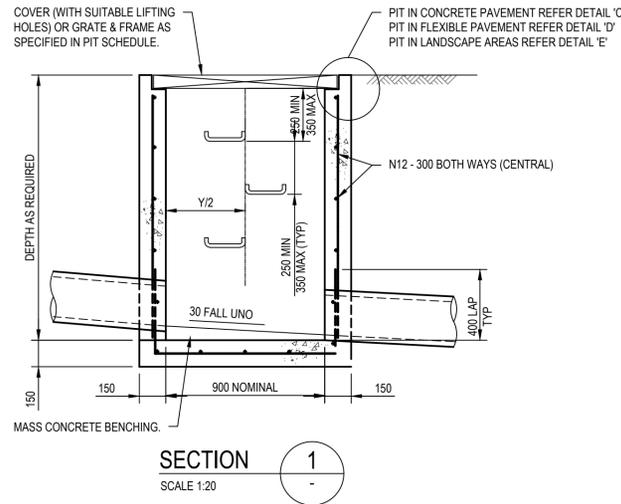
Title
STORMWATER DETAILS
SHEET 1

Scale
AS SHOWN

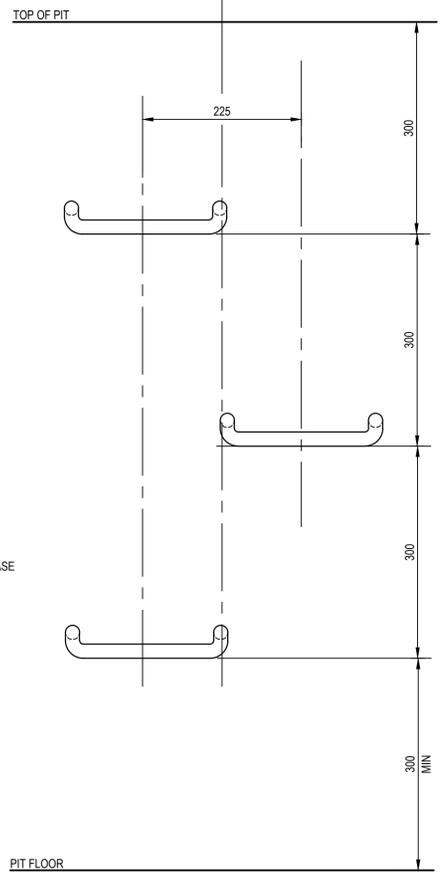
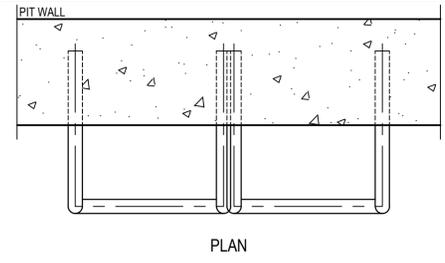
Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
200044-09-DA-C18.01

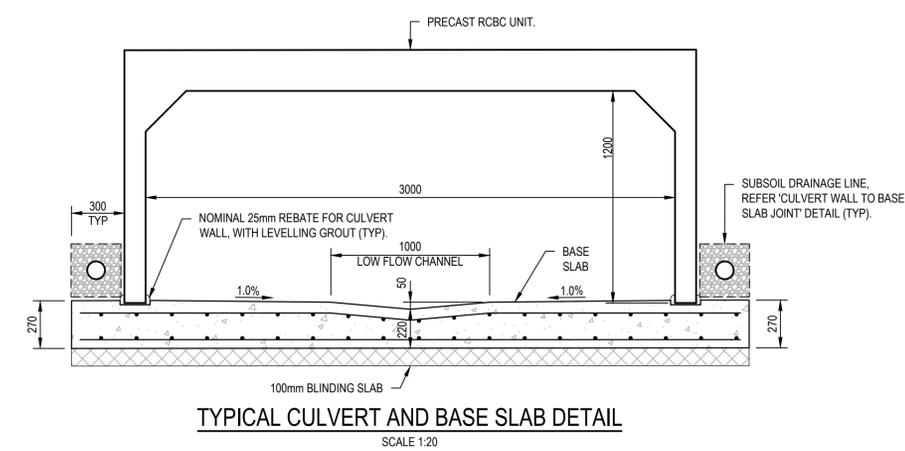
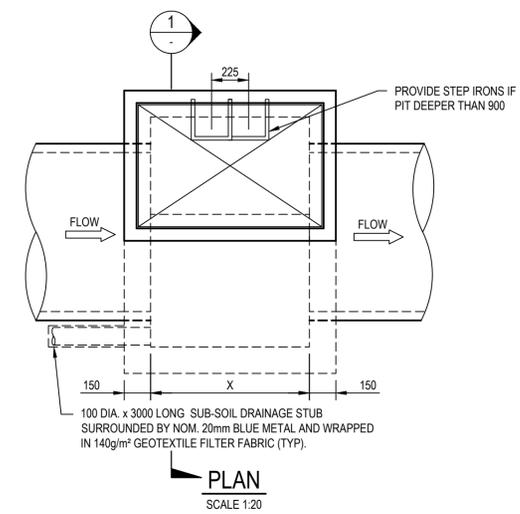
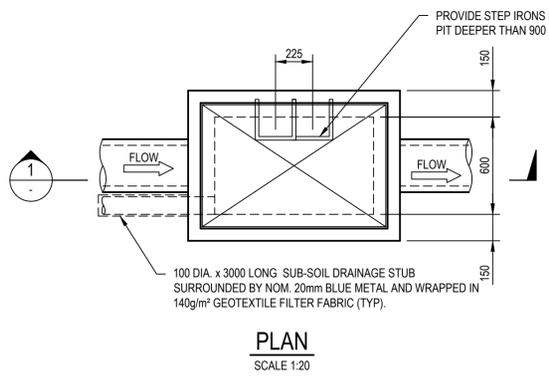
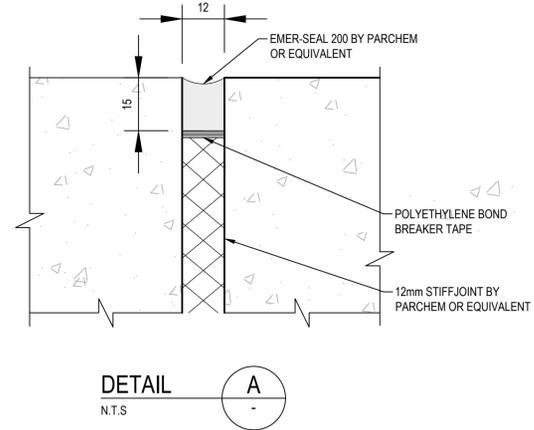
Revision
2



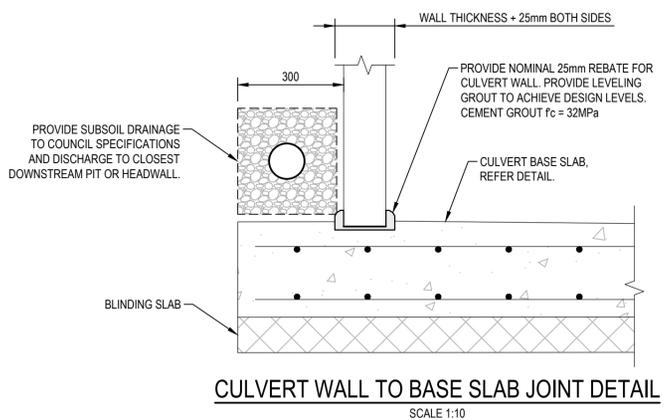
STEP IRON DETAIL
SCALE 1:5



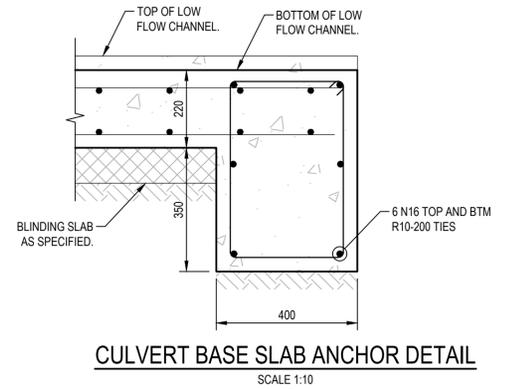
ELEVATION
STEP IRON
PLACEMENT TO PIT WALL
SCALE N.T.S



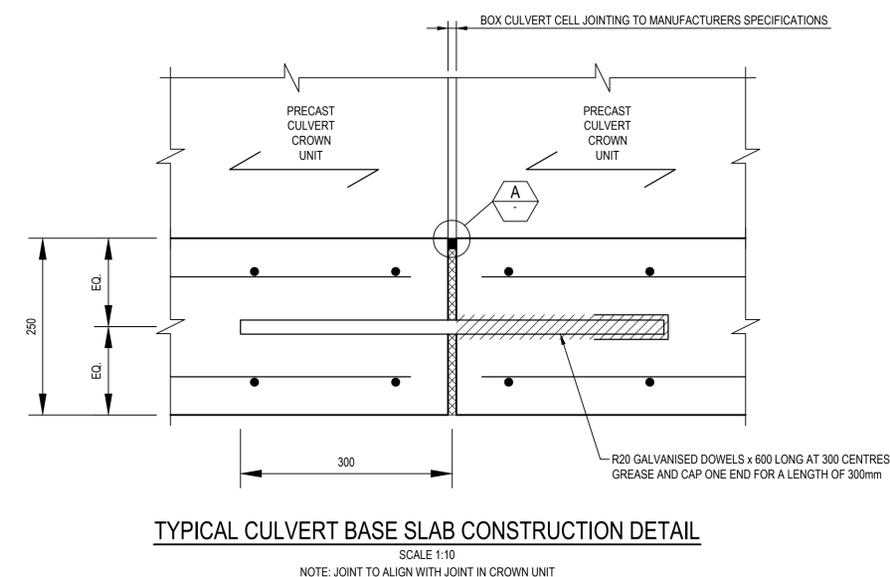
TYPICAL CULVERT AND BASE SLAB DETAIL
SCALE 1:20



CULVERT WALL TO BASE SLAB JOINT DETAIL
SCALE 1:10



CULVERT BASE SLAB ANCHOR DETAIL
SCALE 1:10



TYPICAL CULVERT BASE SLAB CONSTRUCTION DETAIL
SCALE 1:10

NOTE: JOINT TO ALIGN WITH JOINT IN CROWN UNIT

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
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Client

NEPEAN BUSINESS PARK

Scale 0 0.2 0.4 0.6 0.8 1m North

SCALE 1:10 @A1

0 0.5 1 1.5 2m

SCALE 1:20 @A1

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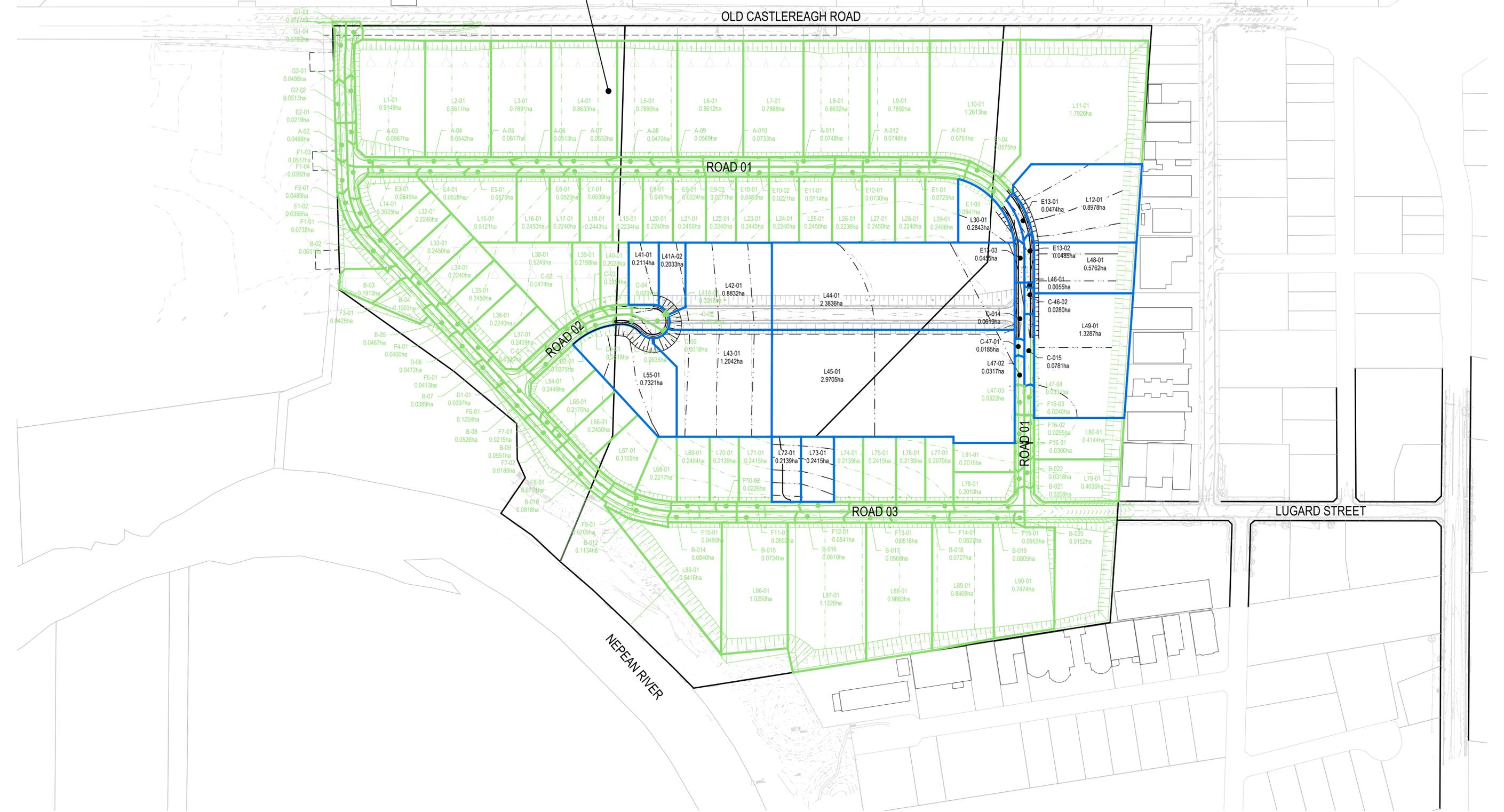
Project
NEPEAN BUSINESS PARK
PENRITH

Title
STORMWATER DETAILS
SHEET 2

Scale AS SHOWN	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date 04/12/2024	Project Number/Drawing Number 200044-09-DA-C18.02
Size A1	Revision 2
Datum AHD	

LEGEND	
	CATCHMENT BOUNDARY
	APPROVED UNDER DA 9876 CATCHMENT BOUNDARY
	CATCHMENT AREA
GC-01 0.0388ha	

NEPEAN BUSINESS PARK TO BE RETAINED AS APPROVED UNDER DA 9876



REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL		MKH
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client

NEPEAN BUSINESS PARK

Scale

SCALE 1:2000 @A1

North

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enspire

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Project
NEPEAN BUSINESS PARK
PENRITH

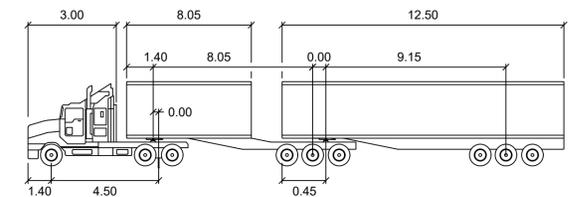
Title
CATCHMENT PLAN

Scale 1:2000	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
First Issue Date 04/12/2024	Project Number/Drawing Number 200044-09-DA-C22.01
Size A1	Revision 3
Datum AHD	

NEPEAN BUSINESS PARK
TO BE RETAINED AS
APPROVED UNDER DA 9876

ROAD 02

VEHICLE PROFILE:



B-DOUBLE 26M

meters	
Tractor Width	: 2.50
Trailer Width	: 2.50
Tractor Track	: 2.50
Trailer Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 23.4
Articulating Angle	: 70.0

REV	DATE	DESCRIPTION	DRN	DES	VERIF	APPD
3	26/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
2	24/02/2025	ISSUED FOR DEVELOPMENT APPLICATION	JSH	AL	MKH	
1	04/12/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	

Client

Scale

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Project
NEPEAN BUSINESS PARK
PENRITH

Title
TURNING PATH PLAN

Scale
1:250

First Issue Date
04/12/2024

Size
A1

Datum
AHD

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
200044-09-DA-C25.01

Revision
3