

14 March 2025

Northern Beaches Council
PO Box 82
Manly NSW 1655

For the Attention of the Development Assessment Manager

Address: 271 Warringah Road, Beacon Hill

Property Description: Lot 7 on DP654934

Description of Proposal: Alterations and Additions to Existing Dwelling

Subject: Traffic Statement to accompany Development Application

Introduction

InRoads Group was engaged to provide traffic advice in relation to a proposal for alterations and additions to the existing residential dwelling on the site at 271 Warringah Road, Beacon Hill.

The site is located in the Northern Beaches Council Local Government Area (within the former Warringah LGA), and the proposal has been assessed considering the relevant Council controls.

This Traffic Statement provides relevant background information regarding the proposal, and documents the results of our investigations addressing the following key traffic design elements and issues:

- Vehicular site access arrangements;
- On-site car parking provision;
- Design of the car parking (garage) area; and
- The expected traffic impact of the proposal.

Subject Site and Existing Development

The subject site is located at 271 Warringah Road, Beacon Hill, on the southern side of the road between Government Road and O'Connors Road as shown in **Figure 1** over page.

The site currently accommodates a 4-bedroom residential dwelling, which is accessed via a driveway onto Warringah Road adjacent to the western site boundary.

Given the topography of the site and as shown in **Figure 2** over page, the driveway is at a considerable gradient from Warringah Road to the dwelling, which has a single enclosed garage on the lower level. Stairs are provided within the driveway between the vehicle wheelpath strips, for pedestrian access to the dwelling from the frontage road.



Figure 1: Subject Site

Source: <https://portal.spatial.nsw.gov.au/explorer/index.html>



Figure 2: Existing Dwelling and Driveway

Source: Google Maps

Existing Traffic Conditions

The subject site has road frontage to Warringah Road only. Warringah Road is a classified Main Road, forming part of State Road 328. In proximity to the subject site, Warringah Road has a two-way, six-lane divided cross-section, as shown in **Figure 3** below.

The kerbside lane past the subject site is designated as a Clearway between the hours of 6am – 7pm Monday to Friday and 9am – 6pm on weekends and public holidays. Kerbside parking is permitted outside these periods.

Warringah Road is posted at 60km/hr in the vicinity of the subject site.

As a result of the centre-median on Warringah Road, the driveway to the subject site is limited to left-in and left-out movements only.



Figure 3: Warringah Road (looking west from subject site)

Source: Google Maps

Proposal

The application seeks approval for alterations and additions to the existing dwelling on the subject site. Civil engineering plans of the proposal are included for reference as **Attachment 1**.

Of significance from a traffic perspective is the proposal to demolish the raised terrace area at the front of the site, replacing this with an enclosed garage / car parking area catering for two (2) cars on the lower ground level, sitting approximately 850mm above the road level. Associated modifications to the crossover and internal driveway are proposed.

The following sections discuss the key traffic elements of the proposal in further detail.

Vehicular Site Access Arrangements

The proposal retains vehicular site access in approximately the same location as the existing access (towards the western site boundary), but provides a high-standard crossover with approximately 2m separation from the western site boundary.

The proposed access driveway is 3.8m wide which is adequate to accommodate the entry and exit manoeuvres of a large (B85) passenger vehicle, as shown in the vehicle tracking diagrams included as **Attachment 2**.

As shown in Drawing C24130-E10 included in **Attachment 1**, the profile of the existing crossover is retained from the kerbline to the far side of the pedestrian footpath. From this point, the gradient of the crossover and driveway is reduced (compared with the existing) to provide access to the proposed enclosed garage on the lower level.

In summary, the proposed vehicular site access arrangements are generally consistent with the existing arrangements, albeit with improvements to the geometry and gradient of the crossover and driveway.

Importantly, as discussed in the following sections, the proposal will accommodate forward site entry and egress (as opposed to reverse egress as currently occurs), which represents a substantial improvement from a safety and an operational perspective.

Car Parking Provision

Reference has been made to the applicable Council Development Control Plan (DCP) which is the Warringah DCP 2011, which stipulates a requirement for two (2) spaces per dwelling for dwelling houses (refer Part H, Appendix 1 of DCP).

As shown in the plans included as **Attachment 1**, the proposed development provides two (2) car parking spaces within the new enclosed parking area to be constructed on the lower level. The proposal therefore meets Council's requirements in this regard.

Design of Car Parking (Garage) Area

The proposed car parking area includes two (2) car parking spaces which are 5.5m long x 2.8m wide, exceeding the minimum dimensional requirements in AS2890.1 (i.e. 5.4m x 2.4m).

The parking aisle is approximately 6m wide (plus 300mm clearance to the wall), which exceeds the minimum dimensional requirement in AS2890.1 (i.e. 5.8m).

The vehicle tracking diagrams included as **Attachment 2** demonstrate satisfactory manoeuvring to/from both parking spaces by a B85 design vehicle, consistent with standard practice.

As previously noted, the proposed development will accommodate on-site vehicle manoeuvring, and will therefore facilitate forward site entry and egress (as opposed to reverse egress as currently occurs).

Traffic Impact of Development

The proposal retains a residential dwelling on the subject site, therefore the impact of the proposal in terms of overall site traffic generation will be negligible, particularly noting that the site access arrangements are limited to left-in and left-out movements only to/from Warringah Road.

Importantly, and as previously noted, the proposed development will accommodate on-site vehicle manoeuvring, and will therefore facilitate forward site entry and egress (as opposed to reverse egress as currently occurs). This represents a substantial improvement from a safety and an operational perspective over the existing situation.

Summary and Recommendations

In light of the information contained within this Traffic Statement, it is considered that the proposal is satisfactory from a traffic engineering perspective (subject to design refinement at detailed design stage), and it is recommended that the development application be approved from a traffic engineering perspective.

Should you have any queries regarding the information contained herein, please do not hesitate to contact the undersigned.

Regards,



Anne Coutts

Director, InRoads Group

BECivil | CPEng | RPEQ | NER | FIEAust | MAITPM

Attachment 1

Proposed Development Plans (Civil Engineering Plans)

CONSTRUCTION NOTES
UNLESS NOTED OTHERWISE ON PLAN, FOLLOWING NOTES TO BE USED

GENERAL
G1 THESE DRAWING SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT DRAWING AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTION AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT FOR DECISION BEFORE PROCEEDING WITH THE WORK
G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWING
G3 SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE BUILDER
G4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED
G5 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF THE SAA AND CODES AND THE LOWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY ALL CODES SHALL BE CURRENT EDITIONS
G6 ANY CONFLICT BETWEEN THESE NOTES. THE SPECIFICATION OR THE DRAWINGS SHALL BE RESOLVED BY THE ENGINEER
G7 WEBCON PTY LTD DOES NOT HOLD ANY LIABILITY OR IMPLIED LIABILITY FOR ANY OTHER PART OF THE STRUCTURE THAT IS NOT INCLUDED IN THESE DRAWINGS OR ANY OTHER WRITTEN SITE INSTRUCTIONS.

FOUNDATIONS
F1 FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF ..300.....KPa ON UNIFORM VIRGIN MATERIAL
F2 FOUNDATION MATERIAL SHALL BE APPROVED BY THE ENGINEER FOR THIS PRESSURE BEFORE PLACING REINFORCEMENT OR CONCRETE
F3 ALL EXCAVATIONS SHALL BE FINISHED CLEAN AND HORIZONTAL

REINFORCEMENT
R1 ALL UNSUPPORTED BARS SHALL BE TIED IN TRANSVERSE DIRECTION TO N12 AT 400 CRS
R2 MINIMUM LAP TO FABRIC TO CONSIST OF TWO CROSSWIRES PLUS 25mm AND EXTEND 90mm WITH CROSSWIRE ONTO WALLS UNLESS NOTED OTHERWISE.
R3 TRENCH MESH 600mm MINIMUM LAP UNLESS NOTED OTHERWISE.

Table with 4 columns: REINFORCEMENT, TYPE, GRADE, MINIMUM YIELD STRENGTH(fsy) Mpa. Rows include (a) PLAIN BARS, (b) DEFORMED BARS TO AS 1302, STEEL WIRE PLAIN AND DEFORMED TO AS 1303, and WELDED WIRE FABRIC TOAS 1304.

Table with 4 columns: TOTAL REINFORCEMENT REQUIREMENTS WITHIN BEAMS, STEM WIDTH (mm), TOP STEEL, BEAM BASE WIDTH (mm), BTM STEEL. Rows show width ranges from 110 to 150 up to 331 to 440.

Table with 4 columns: BEARING STRATA, DESIGN BEARING CAPACITY, SINGLE STOREY, DOUBLE STOREY. Rows include SAND, CONTROLLED CLAY FILL, STIFF NATURAL CLAY, and SHALE/ROCK.

Table with 5 columns: STANDARD TO AS 3600 CURRENT EDITION WITH AMENDMENTS, ELEMENT, FC 28 DAYS, SLUMP, MAX. SIZE AGG, ADMIXTURE. Rows include FOOTINGS + SLABS (U.N.O), PIERS (U.N.O), and POOL (U.N.O).

CONCRETE
C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS
C2 CONCRETE QUALITY
C3 CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE
C4 ALL CONCRETE PLACED SHALL BE WELL VIBRATED AND COMPACTED USING AN APPROVED VIBRATOR AND TECHNIQUE
C5 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
C6 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER
C7 NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWING SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER
C8 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY. IT IS NOT NECESSARY SHOWN IN TRUE PROJECTION.
C9 SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITION SHOWN. THE WRITTEN APPROVEL OF THE ENGINEER SHALL BE OBTAINED FOR ANY OTHER SPLICE IN ACCORDANCE WITH THE REQUIREMENTS OF AS 3600.

Table with 4 columns: ELEMENT, CAST AGAINST FORMS COMPLYING WITH AS 1509 (IN SHELTERED LOCATIONS, EXPOSED TO GROUND WEATHER OR WATER), CAST AGAINST FORM WORK OR THE GROUND. Rows include AS3600 EXPOSURE CONDITION, COLUMNS & PEDESTALS, BEAMS, FOOTINGS, SLABS, and WALLS.

C10 WELDING OF REINFORCEMENT WILL BE PERMTTIED ONLY AFTER THE WRITTEN APPROVAL OF THE ENGINEER.
C11 REINFORCEMENT SYMBOLS.
C12 FABRIC TO BE IN ACCORDANCE WITH AS 1304.
C13 THE CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS BEFORE REINFORCEMENT IS COMPLETED. THE CONTRACTOR SHALL ALLOW, AFTER THE COMPLETION OF THE REINFORCEMENT, TWO HOURS FOR THE ENGINEERS INSPECTION.
C14 CONCRETE SHALL NOT BE ORDERED UNTIL REINFORCEMENT IS APPROVED BY THE ENGINEER
C15 THE CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS BEFORE POURING OF CONCRETE
C16 CONCRETE CURING AND STRIPPING TO BE IN ACCORDANCE WITH THE RELEVANT ASS CODS. CONCRETE TO BE CURED A MINIMUM OF 7 DAYS AFTER POURING.
C17 BRICKWORK TO BEAMS AND SLABS SPANNING GREATER THEN 5m SHALL BE PRECAMBERED UPWARDS BY 1/500 OF CLEAR SPAN IN EACH SPAN UNLESS NOTED DIFFERENTLY ON THE DRAWINGS.

BRICKWORK(OR BLOCKWORK)

B1 SLIP JOINTS TO BE USED ON ALL LOAD-BEARING MASONRY WALLS USING 2 LAYERS OF GALVANIZED FLAT STEEL WITH GRAPHITE GREASE SANDWISHED BETWEEN, U.N.O ON PLAN.
B2 WALLS SHOWN ON STRUCTURAL DRAWINGS ARE BEARING WALLS. NON LOAD BEARING WALLS SHALL BE SEPARATED FROM THE SLABS IN AN APPROVED MANNER.
B3 NO BRICKWORK WHICH IS SUPPORTED BY THE SLAB SHALL BE ERECTED UNTIL FORMWORK HAS BEEN REMOVED.
B4 BRICK MORTER TO BE 1:1/4:3 PROPORTIONS BY VALUME CEMENT, LIME & SAND.
B5 BRICK STRENGTH FOR LOAD BEARING BRICKWORK TO BE A MINIMUM OF C= 20 Mpa
B6 BLOCKWORK QUALITY; BLOCKWORK STRENGTH 20Mpa
BLOCKWORK GROUT; F'C (28 DAYS) 20
SLUMP 230
MAX. SIZE AGG 10
PROVIDE 10mm POLYSTYRENE EXPANSION JOINT BETWEEN ALL BRICK & CONCRETE
B7 BUTTING FACES ON ALL LEVELS.
B8 PROVIDE VERTICAL JOINTS IN BRICKWORK AT 6M MAXIMUM CENTRES

STEEL NOTES

S 1 MATERIALS FABRICATIONS AND ERECTION TO BE STRICTLY IN ACCORDANCE WITH AS 4100 THE COMPANIION AUSTRALIAN STANDARDS CITED IN AS 4100 AND WITH THE SPECIFICATIONS.
S 2 UNLESS NOTED OTHERWISE ALL STEEL SHALL BE IN ACCORDANCE WITH BHP 300 PLUS TO ASNZ3679.1 (1996)- HOT ROLLED SECTIONS
GRADE 300 TO AS3679.2 (1991)- WELDED SECTIONS
GRADE 250 TO AS3678 (1996)- HOT ROLLED PLATES & SLABS.
GRADE 350 TO AS1163 (1993)- HOLLOW SECTIONS
S 3 WELDING SHALL COMPLY WITH AS 1554.
S 4 WELDS SHALL BE 6mm CONTINUOUS FILLET UNLESS NOTED OTHERWISE. WELDS TO PURLIN CLEATS SHALL BE 4mm cfw.
S 5 ELECTRODES SHALL BE E41XX OR E48XX.
S 6 BOLTS DENOTED 46/S - ARE COMMERCOAL BOLTS OF STRENGTH GRADE 46 TO AS1111 - SNUG TIGHT.
S 7 BOLTS DENOTED 8.8/S,8.8/TB AND 8.8/TF ARE HIGH STRENGTH STRUCTURAL BOLTS OF STRENGTH GRADE 8.8 TO AS 1252; 8.8/S DENOTED BOLTS SNUG TIGHT; 8.8/TB AND 8.8/TF DENOTES BOLTS FULLY TENSIONED TO AS1511; 8.8/TB DENOTES BEARING JOINT; 8.8/TF DENOTES FRICTION JOINT
S 8 LOAD INDICATOR WASHERS SHALL BE USED UNDER THE THE BOLT HEAD FOR ALL 8.8/TF 8.8/TB BOLTS.
S 9 BOLTS SHALL BE M20 UNLESS NOTED NOTED OTHERWISE. BOLTS SHALL BE 4.6/S UNLESS NOTED OTHERWISE.
S10 BOLT HOLES SHALL BE BOLT DIAMETER.
+2mm FOR STEEL TO STEEL CONNECTIONS.
+4mm FOR STEEL TO CONCRETE CONNECTIONS.
+6mm FOR BASE PLATES.
S11 ALL PLATES AND STIFFENERS SHALL BE 10mm THICK UNLESS NOTED OTHERWISE.
S12 CORROSION PROTECTION.

MEMBER SURFACE PRIMER R.O.Z.C. PREPARATION
ALL U.N.O. TO AS 1627:2 CLASS 3.
POWER WIRE BRUSH
HOT DIPPED GALVANISED TO AS1650
EMBEDDED ITEMS, SHELF ANGLES & EXPOSED STEELWORK

S13 CONCRETE ENCASED STEELWORK TO BE WRAPPED IN ACCORDANCE WITH AS 4100 AND TO HAVE 50mm MINIMUM COVER TO CONCRETE.
S14 LOCATION OF PURLINS AND GIRTS TO BE OBTAINED FROM ARCHITECTS DRAWINGS OR ROOFING CONTRACTORS.
S15 PROVIDE SEAL PLATES TO ENDS OF HOLLOW SECTIONS.
S16 ALL STRUCTURAL STEELWORK WHICH IS EXPOSED OR IN CONTACT WITH EXPOSED BRICKWORK OR BLOCKWORK AND ALL LINTELS, SHALL BE HOT DIP GALVANIZED UNLESS NOTED OTHERWISE.
S17 ALL STEELWORK TO BE TEMPORARILY BUT SECURELY BRACED UNTIL ALL FINAL BRACING, CLADDING,AND STABILISING BRICKWORK OR BLOCKWORK HAVE BEEN COMPLETED.
S18 THREE COPIES OF ALL SHOP DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL OF STRUCTURAL SUFFICIENCY BEFORE FABRICATION.

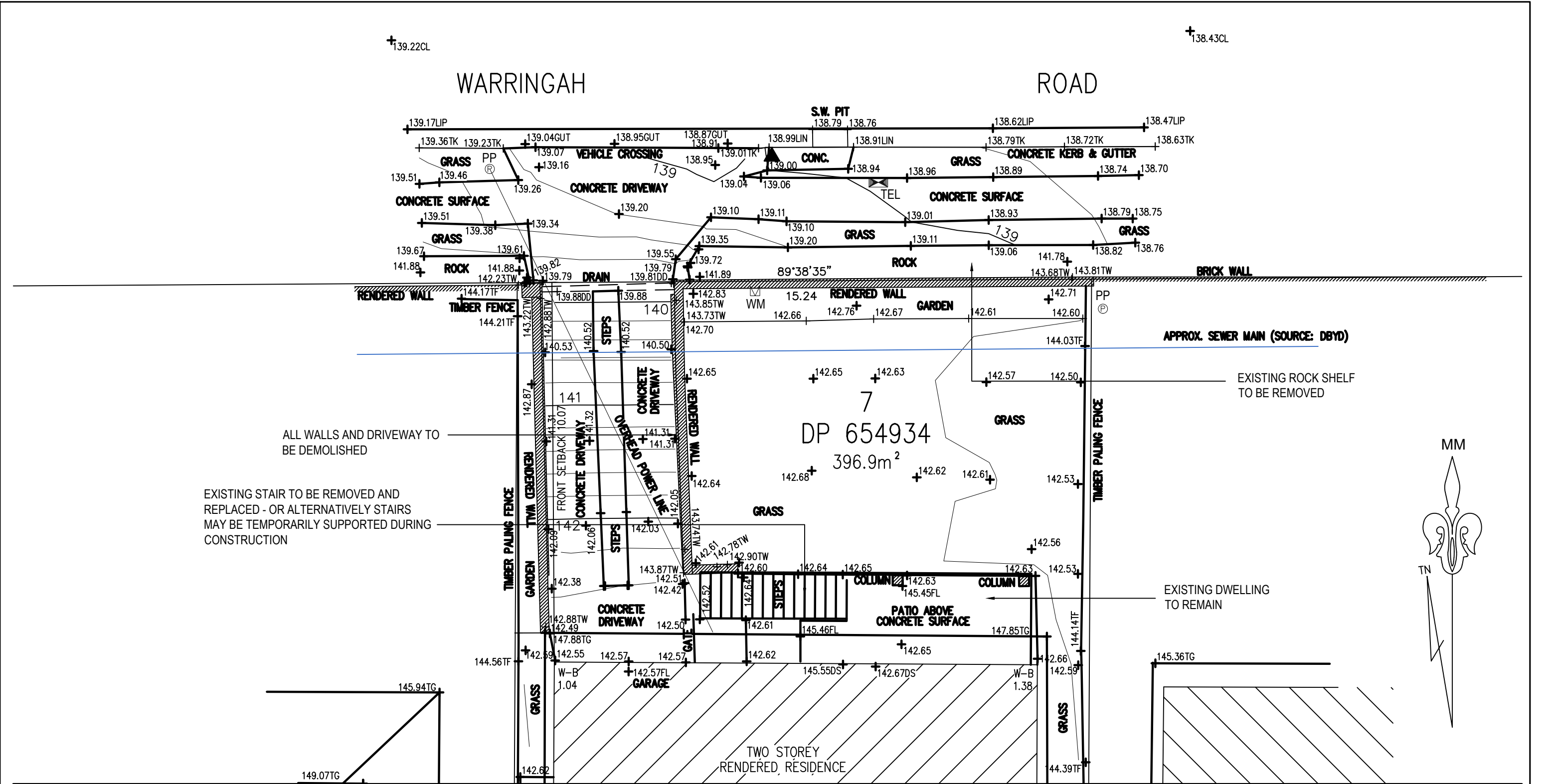


SUITE 303/29-31 LEXINGTON DRIVE
NORWEST BUSINESS PARK, BELLA VISTA

•PH. 02 8814 6191 •FAX. 02 8814 5301
•EMAIL. andrew@camconsulting.com.au

Table with 2 columns: JOB NUMBER: C24130, PROJECT: PROPOSED PARKING AND PODIUM 271 WARRINGAH ROAD, BEACON HILL, NSW, CLIENT :

Table with 6 columns: F, E, D, C, B, A, REVISION, AMENDMENT, ISSUE DATE, REV, AMENDMENT, ISSUE DATE. Includes CAM CONSULTING logo and contact information.



E EXISTING SITE PLAN
SCALE 1:100

F	ISSUED FOR DA SUBMISSION	01/03/2025			
E	ISSUED FOR DA SUBMISSION	13/02/2025			
D	ISSUED FOR DA SUBMISSION	24/01/2025			
C	ISSUED FOR APPROVAL	15/10/2024			
B	ISSUED FOR REVIEW	30/09/2024			
A	ISSUED FOR PRELIMINARY REVIEW	23/08/2024			
REVISION	AMENDMENT	ISSUE DATE	REV	AMENDMENT	ISSUE DATE

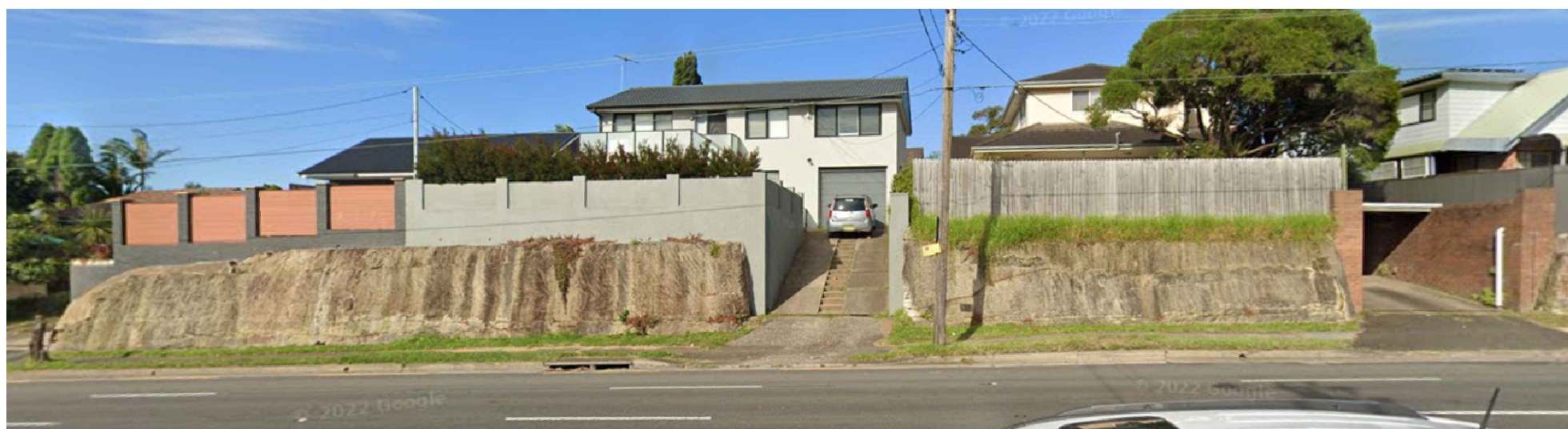


SUITE 303 / 29-31 LEXINGTON DRIVE
NORWEST BUSINESS PARK,
BELLA VISTA N.S.W. 2153
ALL CORRESPONDENCE TO:
P.O. BOX 6080 BAULKHAM HILLS BC
BAULKHAM HILLS NSW 2153
PH: 8814 6191 FAX: 8814 5301
EMAIL: andrew@camconsulting.com.au

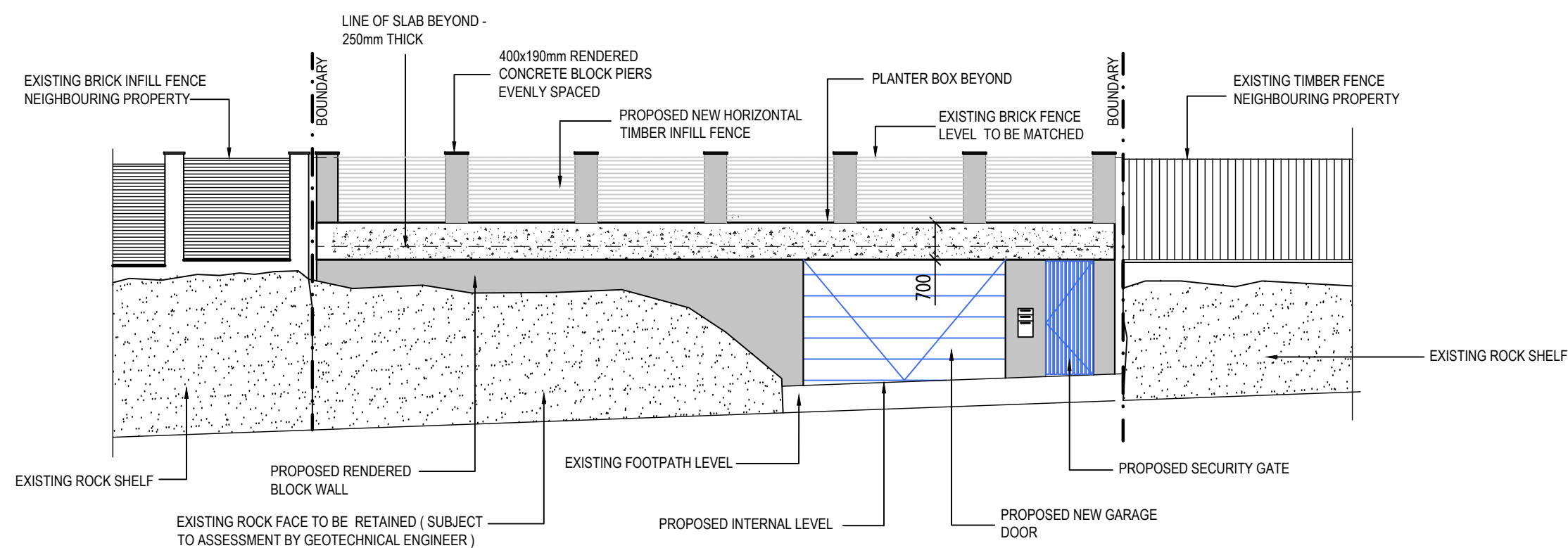
COPYRIGHT
THIS DRAWING REMAINS
THE PROPERTY OF CAM
CONSULTING AND MAY NOT
BE ALTERED IN ANY WAY
WITHOUT CAM CONSULTING
WRITTEN CONSENT

PROJECT	PROPOSED ADDITIONS AT 271 WARRINGAH ROAD, BEACON HILL, NSW
CLIENT	

DRAWING TITLE	EXISTING SITE PLAN		
SCALES	A3 - 1:100	DESIGNED A.C.	DRAFTED A.C.
DRAWING NO.	C24130 - E01	APPROVED A.C.	REVISION F



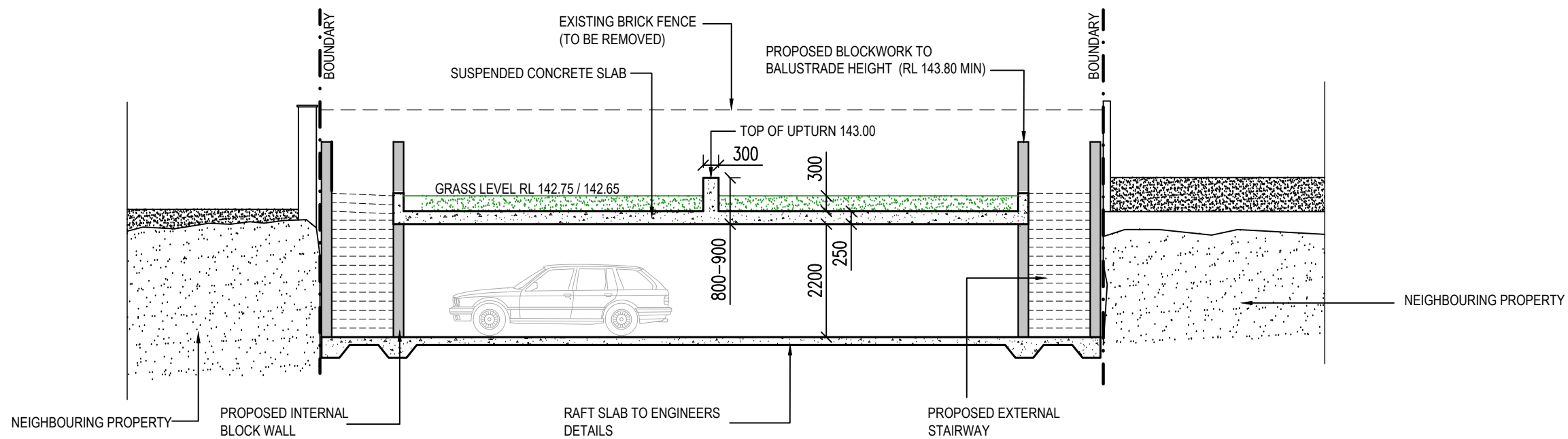
EXISTING ELEVATION OF PROPERTY



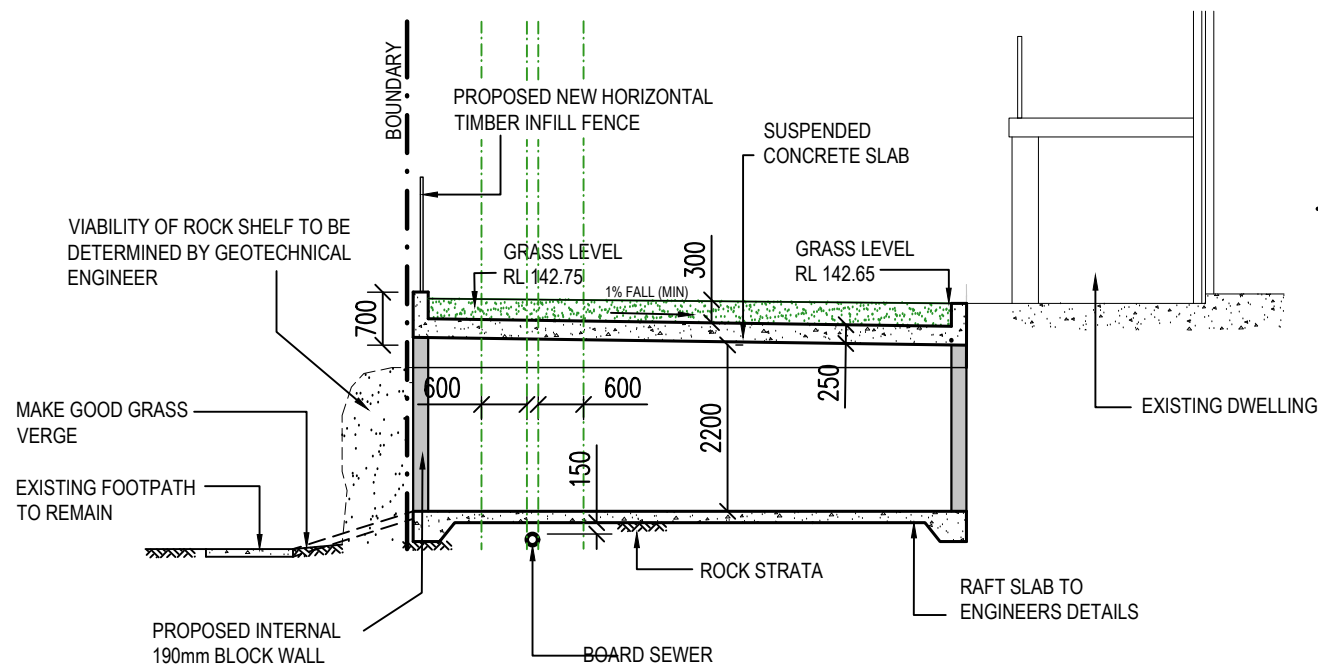
FRONT ELEVATION

SCALE 1:100

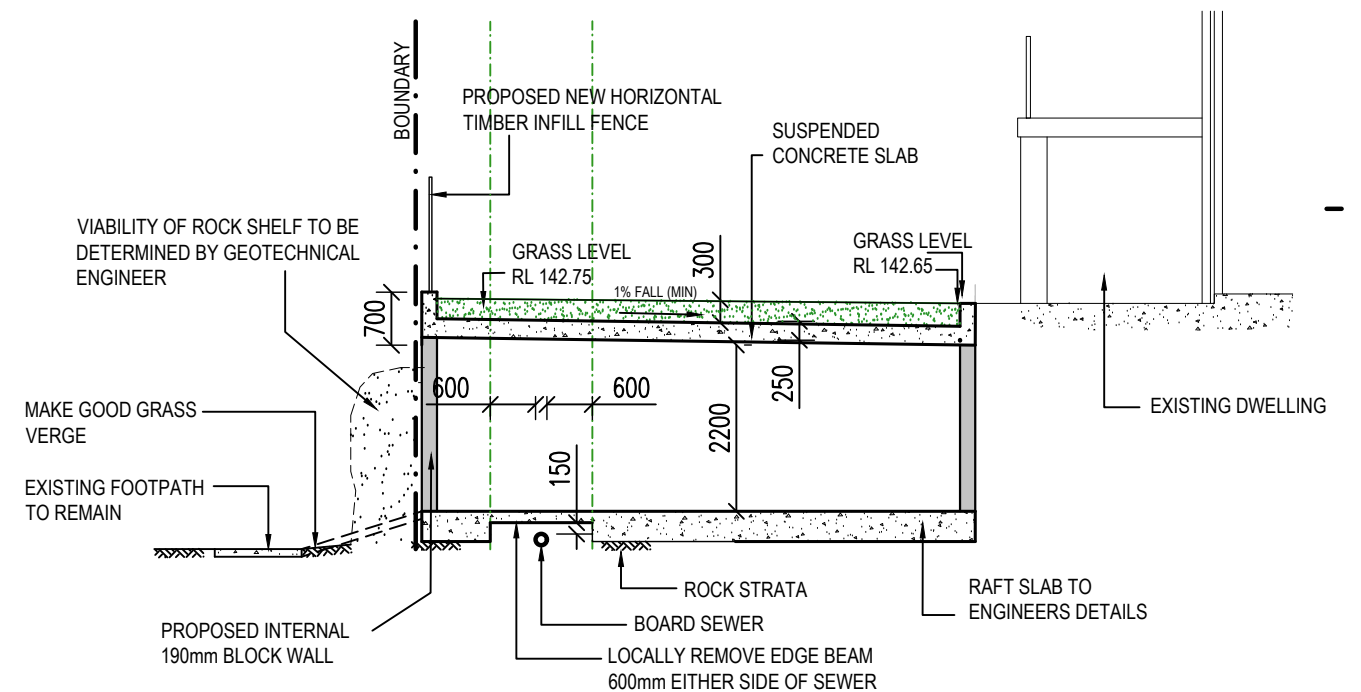
						 SUITE 303 / 29-31 LEXINGTON DRIVE NORWEST BUSINESS PARK, BELLA VISTA N.S.W. 2153 ALL CORRESPONDENCE TO: P.O. BOX 6080 BAULKHAM HILLS BC BAULKHAM HILLS NSW 2153 PH: 8814 6191 FAX: 8814 5301 EMAIL: andrew@camconsulting.com.au	COPYRIGHT THIS DRAWING REMAINS THE PROPERTY OF CAM CONSULTING AND MAY NOT BE ALTERED IN ANY WAY WITHOUT CAM CONSULTING WRITTEN CONSENT	PROJECT	DRAWING TITLE		
F	ISSUED FOR DA SUBMISSION	01/03/2025						PROPOSED ADDITIONS AT 271 WARRINGAH ROAD, BEACON HILL, NSW	ELEVATIONS		
E	ISSUED FOR DA SUBMISSION	13/02/2025									
D	ISSUED FOR DA SUBMISSION	24/01/2025									
C	ISSUED FOR APPROVAL	15/10/2024									
B	ISSUED FOR REVIEW	30/09/2024									
A	ISSUED FOR PRELIMINARY REVIEW	23/08/2024									
REVISION	AMENDMENT	ISSUE DATE	REV	AMENDMENT	ISSUE DATE			CLIENT	SCALES	DESIGNED	DRAFTED
									A3 - 1:100	A.C.	A.C.
									DRAWING NO.	APPROVED	REVISION
									C24130 - E04	A.C.	F



SECTION 1
SCALE 1:20



SECTION 2
SCALE 1:100



SECTION 3
SCALE 1:100

F	ISSUED FOR DA SUBMISSION	01/03/2025			
E	ISSUED FOR DA SUBMISSION	13/02/2025			
D	ISSUED FOR DA SUBMISSION	24/01/2025			
C	ISSUED FOR APPROVAL	15/10/2024			
B	ISSUED FOR REVIEW	30/09/2024			
A	ISSUED FOR PRELIMINARY REVIEW	23/08/2024			
REVISION	AMENDMENT	ISSUE DATE	REV	AMENDMENT	ISSUE DATE



SUITE 303 / 29-31 LEXINGTON DRIVE
NORWEST BUSINESS PARK,
BELLA VISTA N.S.W. 2153
ALL CORRESPONDENCE TO:
P.O. BOX 6080 BAULKHAM HILLS BC
BAULKHAM HILLS NSW 2153
PH: 8814 6191 FAX: 8814 5301
EMAIL: andrew@camconsulting.com.au

COPYRIGHT
THIS DRAWING REMAINS
THE PROPERTY OF CAM
CONSULTING AND MAY NOT
BE ALTERED IN ANY WAY
WITHOUT CAM CONSULTING
WRITTEN CONSENT

PROJECT	PROPOSED ADDITIONS AT 271 WARRINGAH ROAD, BEACON HILL, NSW
CLIENT	

DRAWING TITLE	SECTIONS AND DETAILS		
SCALES	A3 - 1:100	DESIGNED	DRAFTED
DRAWING NO.	C24130 - E05	APPROVED	REVISION
		A.C.	F

PROPOSED DEVELOPMENT

271 WARRINGAH ROAD, BEACON HILL

STORMWATER PLANS

GENERAL NOTES

- G1. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
- G2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM THE DRAWINGS. REFER ARCHITECTS DRAWINGS FOR ALL DIMENSIONS.
- G3. REFER ANY DISCREPANCY TO THE ENGINEER/ARCHITECT.
- G4. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE APPROPRIATE SAA SPECIFICATIONS OR CODE AND WITH THE REQUIREMENTS OF THE RELEVANT LOCAL AUTHORITY.
- G5. THE ALIGNMENT AND LEVEL OF ALL SERVICES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL CONFIRM THE POSITION AND LEVEL OF ALL SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
- G6. NO WORKS ARE TO COMMENCE UNTIL THE REQUIRED TREE REMOVAL PERMITS HAVE BEEN GRANTED BY RELEVANT LOCAL AUTHORITY, AND THE APPROPRIATE NOTICE OF INTENTION TO COMMENCE GIVEN.
- G7. ALL SERVICES, OR CONDUITS FOR SERVICING SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF PAVEMENT CONSTRUCTION.
- G8. SUBSOIL DRAINAGE, COMPRISING 100 AGRICULTURE PIPE IN GEO-STOCKING TO BE PLACED AS SHOWN AND AS MAY BE DIRECTED BY THE SUPERINTENDENT. SUBSOIL DRAINAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.
- G9. NO WORK IS PERMITTED WITHIN ADJOINING PROPERTIES WITHOUT WRITTEN PERMISSION FROM THE OWNERS OR RESPONSIBLE AUTHORITY.

DRAINAGE NOTES

- D1. ALL DRAINAGE OUTLET LEVELS SHALL BE CONFIRMED ON SITE, PRIOR TO CONSTRUCTION COMMENCING.
- D2. ALL PIPES WITHIN THE PROPERTY TO BE MIN. 100 DIA UPVC @ 1% MIN. GRADE, UNO.
- D3. ALL PITS WITHIN THE PROPERTY ARE TO BE FITTED WITH "WELDLOK" OR APPROVED EQUIVALENT GRATES:
- LIGHT DUTY FOR LANDSCAPED AREAS
- HEAVY DUTY WHERE SUBJECTED TO VEHICULAR TRAFFIC
- D4. PITS WITHIN THE PROPERTY MAY BE CONSTRUCTED AS:
1) PRECAST STORMWATER PITS
2) CAST INSITU MASS CONCRETE
3) CEMENT RENDERED 230mm BRICKWORK
SUBJECT TO THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.
- D5. ENSURE ALL GRATES TO PITS ARE SET BELOW FINISHED SURFACE LEVEL WITHIN THE PROPERTY. TOP OF PIT RL'S ARE APPROXIMATE ONLY AND MAY BE VARIED SUBJECT TO APPROVAL OF THE ENGINEER. ALL INVERT LEVELS ARE TO BE ACHIEVED.
- D6. ANY PIPES BENEATH RELEVANT LOCAL AUTHORITY ROAD TO BE RUBBER RING JOINTED RCP, UNO.
- D7. ALL PITS IN ROADWAYS ARE TO BE FITTED WITH HEAVY DUTY GRATES WITH LOCKING BOLTS AND CONTINUOUS HINGE.
- D8. PROVIDE STEP IRONS TO STORMWATER PITS GREATER THAN 1200 IN DEPTH.
- D9. TRENCH BACK FILL IN ROADWAYS SHALL COMPRISE SHARP, CLEAN GRANULAR BACK FILL IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY SPECIFICATION TO NON-TRAFFICABLE AREAS TO BE COMPACTED BY RODDING AND TAMPING USING A FLAT PLATE VIBRATOR.
- D10. WHERE A HIGH EARLY DISCHARGE (HED) PIT IS PROVIDED ALL PIPES ARE TO BE CONNECTED TO THE HED PIT, UNO.
- D11. DOWN PIPES SHALL BE A MINIMUM OF DN100 SW GRADE UPVC OR 100X100 COLORBOND/ZINCALUME STEEL, UNO.
- D12. COLORBOND OR ZINCALUME STEEL BOX GUTTERS SHALL BE A MINIMUM OF 450 WIDE X 150 DEEP.
- D13. EAVES GUTTERS SHALL BE A MINIMUM OF 125 WIDE X 100 DEEP (OR OF EQUIVALENT AREA) COLORBOND OR ZINCALUME STEEL, UNO.
- D14. SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM, UNO.

EARTHWORKS NOTES

- E1. THE EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
- E2. THE SITE OF THE WORKS SHALL BE PREPARED BY STRIPPING ALL EXISTING TOPSOIL, FILL AND VEGETATION.
- E3. SUBGRADE SHALL BE COMPACTED UNTIL A DRY DENSITY HAS BEEN ACHIEVED OF NOT LESS THAN 100% OF THE STANDARD MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH AS 1289 TESTS E.1.1. OR E.1.2.
- E4. THE EXPOSED SUBGRADE SHOULD BE PROOF ROLLED TO DETECT ANY SOFT OR WET AREAS WHICH SHOULD BE LOCALLY EXCAVATED AND BACK FILLED WITH SELECTED MATERIAL.
- E5. THE BACK FILLING MATERIAL SHALL BE IMPORTED GRANULAR FILL OF LOW PLASTICITY, PREFERABLY CRUSHED SANDSTONE, AND TO BE PLACED IN LAYERS NOT EXCEEDING 150 LOOSE THICKNESS AND COMPACTED TO 98% OF STANDARD DRY DENSITY AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM.
- E6. SITE WORKS ARE TO BE BATTERED TO ADJACENT PROPERTY LEVELS.
- E7. STORMWATER MUST NOT BE CONCENTRATED ON TO AN ADJACENT PROPERTY.
- E8. AT NO TIME DURING OR AFTER CONSTRUCTION IS STORMWATER TO BE PONDED ON ADJOINING PROPERTIES.
- E9. THE SITE SHALL BE GRADED AND DRAINED SO THAT STORMWATER WILL BE DIRECTED AWAY FROM THE BUILDING PLATFORM.
- E10. STORMWATER DRAINAGE SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION. ALL STORMWATER RUNOFF SHALL BE GRADED AWAY FROM THE SITE WORKS AND DISPOSED OF VIA SURFACE CATCHDRAINS AND STORMWATER COLLECTION PITS.
- E11. ALL SURFACE CATCH DRAINS SHALL BE GRADED AT 1% (1 IN 100) MINIMUM. THE GROUND SHALL GRADE AWAY FROM ANY DWELLING AT 5% (1 IN 20) FOR THE FIRST METRE THEN AT 2.5% (1 IN 40).
- E12. WHERE A CUT FILL PLATFORM IS USED THERE SHALL BE A MINIMUM BERM 1000 WIDE TO THE PERIMETER OF THE SITE WORKS WHICH SHALL BE SUPPORTED BY BATTERS OF 3:1 IN FILL.
- E13. ANY VERTICAL OR NEAR VERTICAL PERMANENT EXCAVATION (CUT) DEEPER THAN 600 IN MATERIAL OTHER THAN ROCK SHALL BE ADEQUATELY RETAINED OR BATTERED AT A MINIMUM OF 3:1.
- E14. WHERE BATTERS CANNOT BE PROVIDED TO SUPPORT THE CUT OR FILL, THEY SHALL BE ADEQUATELY RETAINED.
- E15. RETAINING WALLS ARE TO BE CONSTRUCTED WITH ADEQUATE SUBSOIL DRAINAGE.

MINIMUM PIPE COVER SHALL BE AS FOLLOWS

LOCATION	MINIMUM COVER
NO SUBJECT TO VEHICLE LOADING	100mm SINGLE RESIDENTAL
SUBJECT TO VEHICLE LOADING	450mm WHERE NOT IN A ROAD
UNDER A SEALED ROAD	600mm
UNSEALED ROAD	750mm
PAVED DRIVEWAY	100mm PLUS DEPTH OF CONCRETE

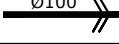
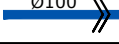
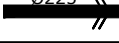
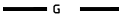
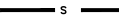
SEE AS2032 INSTALLATION OF UPVC PIPES FOR FURTHER INFORMATION.

CONCRETE PIPE COVER SHALL BE IN ACCORDANCE WITH AS3725-1989 LOADS ON BURIED CONCRETE PIPES, HOWEVER A MINIMUM COVER OF 450mm WILL APPLY.

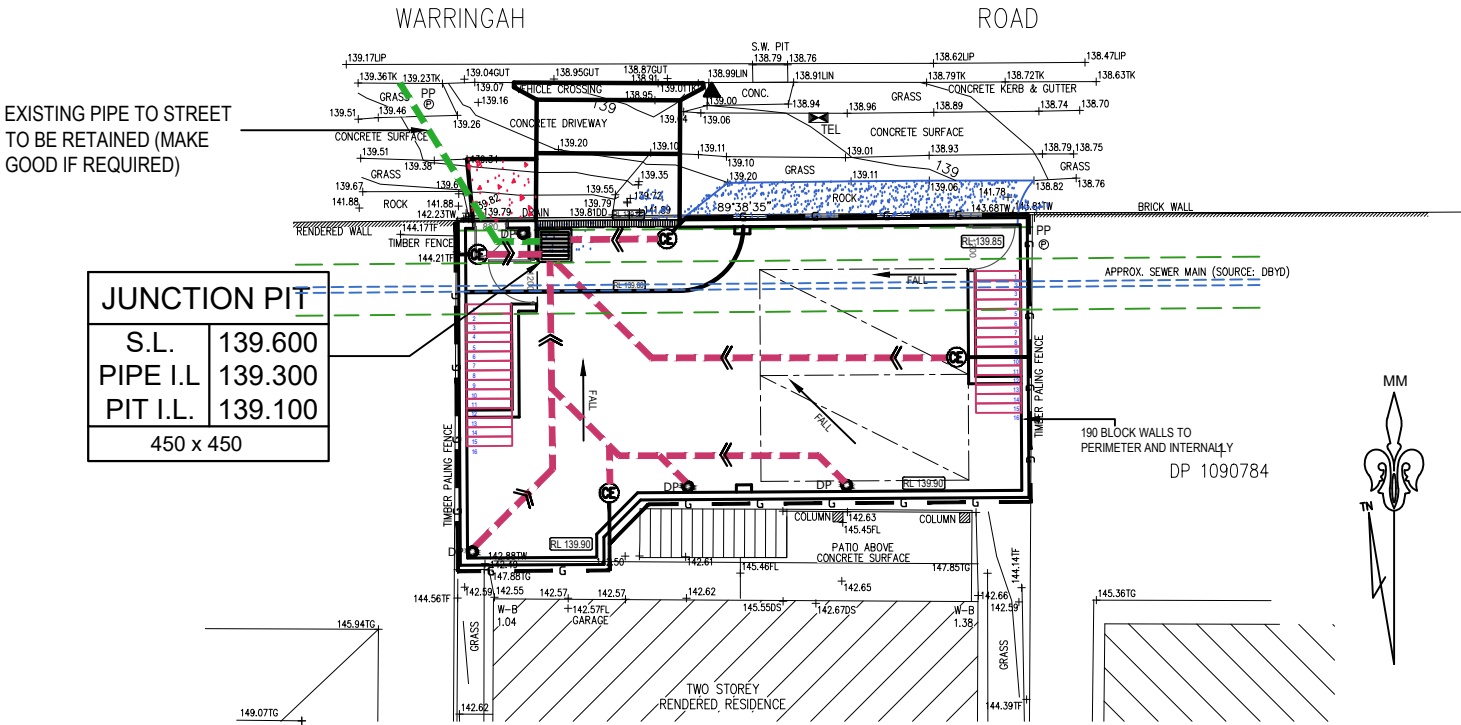
WHERE INSUFFICIENT COVER IS PROVIDED, THE PIPE SHALL BE COVERED AT LEAST 50mm THICK OVERLAY AND SHALL BE PAVED WITH AT LEAST:

- 150mm REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICLE TRAFFIC
- 75mm THICKNESS OF BRICK OR 100mm OF CONCRETE PAVING WHERE SUBJECT TO LIGHT VEHICLE TRAFFIC; OR
- 50mm THICK BRICK OR CONCRETE PAVING WHERE NOT SUBJECT TO VEHICLE TRAFFIC.

SYMBOLS

DESCRIPTION	
	DENOTE ON-SITE DETENTION TANK OR PUMP OUT TANK
	DENOTE ON-SITE DETENTION BASIN
	DENOTE ABSORPTION TRENCH
	DENOTES DOWNPIPE
	DENOTES 100mm DIA PVC (SEWER GRADE) AT 1% MIN. GRADE U.N.O
	DENOTES 100mm DIA PVC TO BE CONNECTED DIRECTLY TO RAINWATER TANK
	DENOTES 225mm DIA PVC (SEWER GRADE) AT 0.5% MIN. GRADE U.N.O
	DENOTES AGG LINE
	DENOTES SEDIMENT FENCE
	DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISH SURFACE LEVEL
	DENOTES CLEANING EYE
	STORMWATER PIT - GRATED INLET
	STORMWATER PIT - SOLID COVER
	MAINTENANCE PIT
	NON RETURN VALVE
	DENOTE ROUND FLOOR DRAINS
	DENOTE SQUARE FLOOR DRAINS
	DENOTE PLANTER BOX DRAINS
	DENOTE GRATED DRAIN
	PROPOSED FINISH FLOOR LEVEL

F	ISSUED FOR DA SUBMISSION	01/03/2025				 CAM CONSULTING STRUCTURAL & CIVIL ENGINEERS	SUITE 303 / 29-31 LEXINGTON DRIVE NORWEST BUSINESS PARK, BELLA VISTA N.S.W. 2153 ALL CORRESPONDENCE TO: P.O. BOX 6080 BAULKHAM HILLS BC BAULKHAM HILLS NSW 2153 PH: 8814 6191 FAX: 8814 5301 EMAIL: andrew@camconsulting.com.au	COPYRIGHT THIS DRAWING REMAINS THE PROPERTY OF CAM CONSULTING AND MAY NOT BE ALTERED IN ANY WAY WITHOUT CAM CONSULTING WRITTEN CONSENT	PROJECT PROPOSED ADDITIONS AT 271 WARRINGAH ROAD, BEACON HILL, NSW	DRAWING TITLE STORMWATER NOTES & DETAILS		
E	ISSUED FOR DA SUBMISSION	13/02/2025								CLIENT	SCALES A3 - 1:100	DESIGNED A.C.
D	ISSUED FOR DA SUBMISSION	24/01/2025							DRAWING NO. C24130 - E06		APPROVED A.C.	REVISION F
C	ISSUED FOR APPROVAL	15/10/2024										
B	ISSUED FOR REVIEW	30/09/2024										
A	ISSUED FOR PRELIMINARY REVIEW	23/08/2024										
REVISION	AMENDMENT	ISSUE DATE	REV	AMENDMENT	ISSUE DATE							



LOWER GROUND FLOOR DRAINAGE PLAN

1:200 @ A3

ALL DRAINAGE LINES SHALL BE UPVC (CLASS SH)
STORMWATER DRAINAGE PIPE, UNO.

ALL DRAINAGE LINES SHALL BE LAID @ 1% FALL MIN, UNO.

THE FOLLOWING SYMBOLS & ABBREVIATIONS HAVE BEEN USED:

- DP = Ø100, UNO.
- FD = FLOOR OUTLET , REFER TO DETAIL
- SIP = SURFACE INLET PIT (NO LINTEL)
- 100Ø = Ø100 CHARGED LINE
- IP = Ø150 INSPECTION POINT
- RWH = RAIN WATER HEAD
- RWO = RAIN WATER OUTLET (300 x 300)
- FG = FLOOR GULLY Ø150
- [FRL 142.65] = PROPOSED FINISHED SURFACE LEVEL

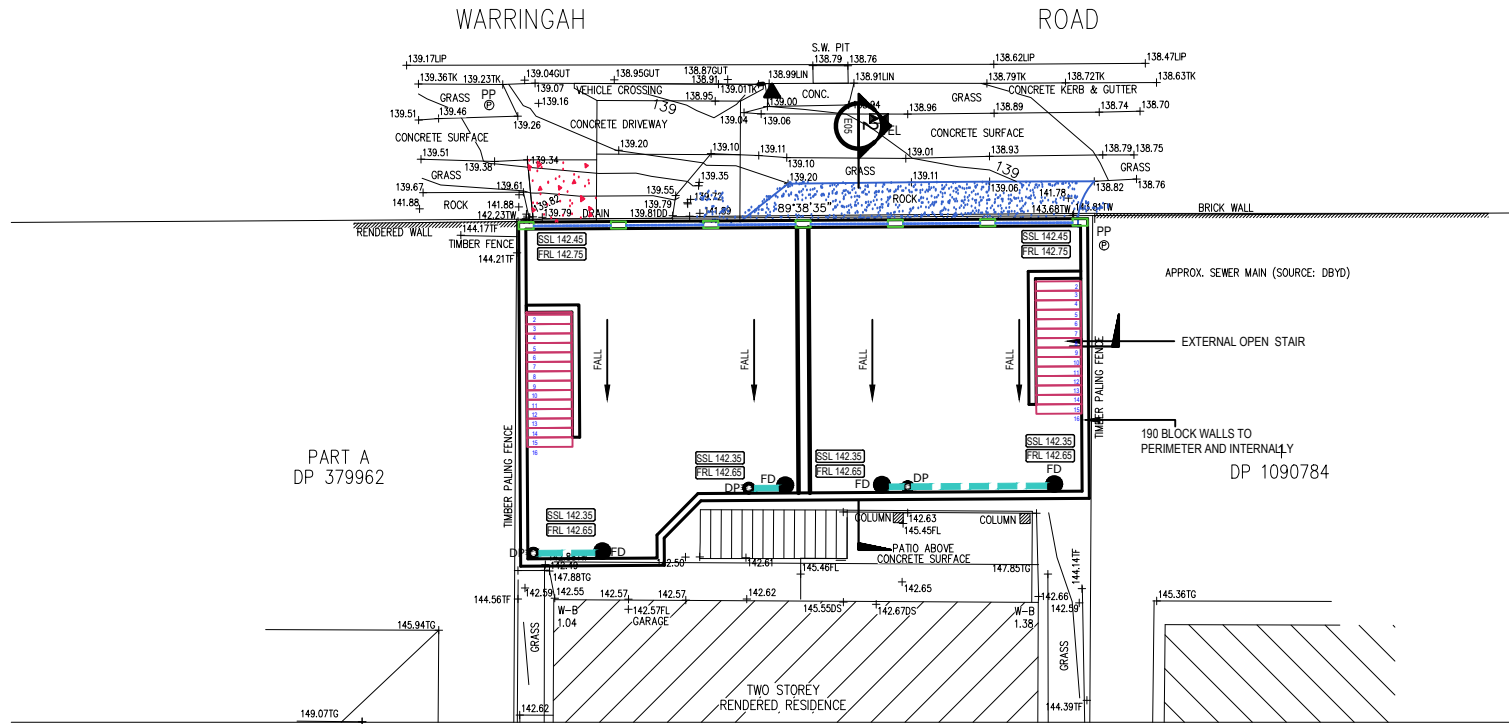
LEGEND

	EXISTING PIPE TO KERB	1% FALL
	100Ø UPVC IN GROUND PIPE	1% FALL
	100Ø UPVC AERIAL PIPE UNDER SLAB	1% FALL
	90Ø AG-LINE IN SOCK	1% FALL

HOLD POINTS FOR STORMWATER INSPECTIONS

THE FOLLOWING HOLD POINTS MUST BE INSPECTED BY A PROFESSIONAL CIVIL ENGINEER OR COUNCIL ENGINEER AT THE NOMINATED STAGES:

- INITIAL INSPECTION TO DISCUSS CONCEPT AND SITE CONDITIONS/CONSTRAINTS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION.
- AFTER PLACEMENT OF PIPES & PRIOR TO COVERING OF PIPES .
- AFTER COMPLETION COVERING OF PIPES, BUT PRIOR TO INSTALLATION OF SLABS
- FINAL INSPECTION ON COMPLETION OF STORMWATER COMPONENTS



GROUND FLOOR DRAINAGE PLAN

1:200 @ A3

ALL DRAINAGE LINES SHALL BE UPVC (CLASS SH)
STORMWATER DRAINAGE PIPE, UNO.

ALL DRAINAGE LINES SHALL BE LAID @ 1% FALL MIN, UNO.

THE FOLLOWING SYMBOLS & ABBREVIATIONS HAVE BEEN USED:

- DP = Ø100, UNO.
- FD = FLOOR OUTLET , REFER TO DETAIL
- SIP = SURFACE INLET PIT (NO LINTEL)
- 100Ø = Ø100 CHARGED LINE
- IP = Ø150 INSPECTION POINT
- RWH = RAIN WATER HEAD
- RWO = RAIN WATER OUTLET (300 x 300)
- FG = FLOOR GULLY Ø150
- [FRL 142.65] = PROPOSED FINISHED SURFACE LEVEL

REVISION	AMENDMENT	ISSUE DATE	REV	AMENDMENT	ISSUE DATE
F	ISSUED FOR DA SUBMISSION	01/03/2025			
E	ISSUED FOR DA SUBMISSION	13/02/2025			
D	ISSUED FOR DA SUBMISSION	24/01/2025			
C	ISSUED FOR APPROVAL	15/10/2024			
B	ISSUED FOR REVIEW	30/09/2024			
A	ISSUED FOR PRELIMINARY REVIEW	23/08/2024			



SUITE 303 / 29-31 LEXINGTON DRIVE
NORWEST BUSINESS PARK,
BELLA VISTA N.S.W. 2153
ALL CORRESPONDENCE TO:
P.O. BOX 6080 BAULKHAM HILLS BC
BAULKHAM HILLS NSW 2153
PH: 8814 6191 FAX: 8814 5301
EMAIL: andrew@camconsulting.com.au

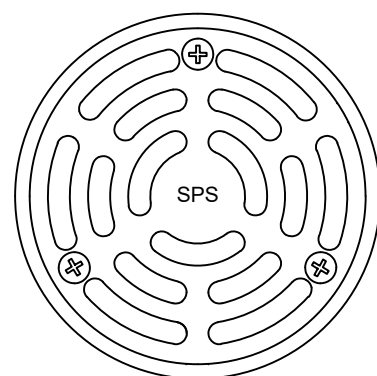
COPYRIGHT
THIS DRAWING REMAINS
THE PROPERTY OF CAM
CONSULTING AND MAY NOT
BE ALTERED IN ANY WAY
WITHOUT CAM CONSULTING
WRITTEN CONSENT

PROJECT	PROPOSED ADDITIONS AT 271 WARRINGAH ROAD, BEACON HILL, NSW
CLIENT	

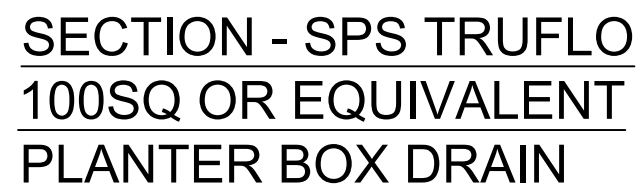
DRAWING TITLE	STORMWATER PLANS & DETAILS
SCALES	A3 - 1:100
DESIGNED	A.C.
DRAFTED	A.C.
DRAWING NO.	C24130 - E07
APPROVED	A.C.
REVISION	F



R150 S/C (316 STAINLESS STEEL GRATE, CI LOWER BODY)



N.B.	A	B	C	D
75	123	48	220	100
100	148	49	220	100

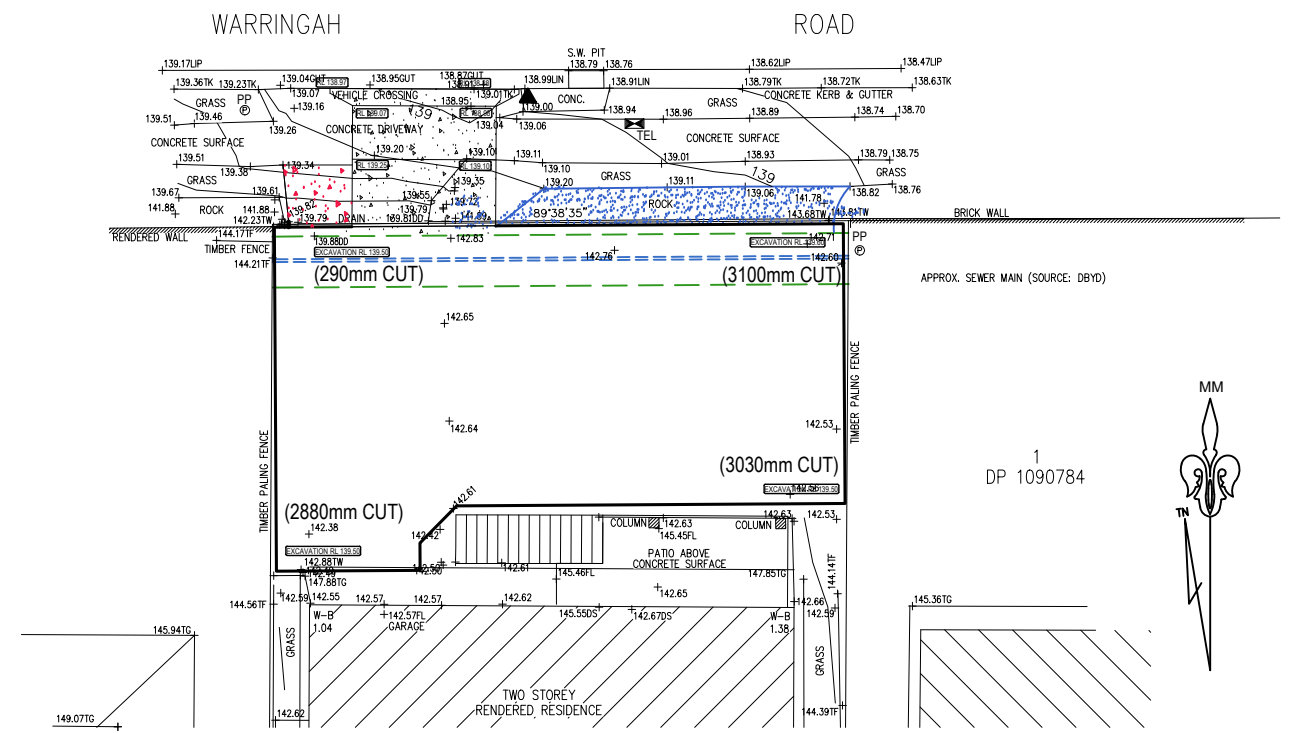
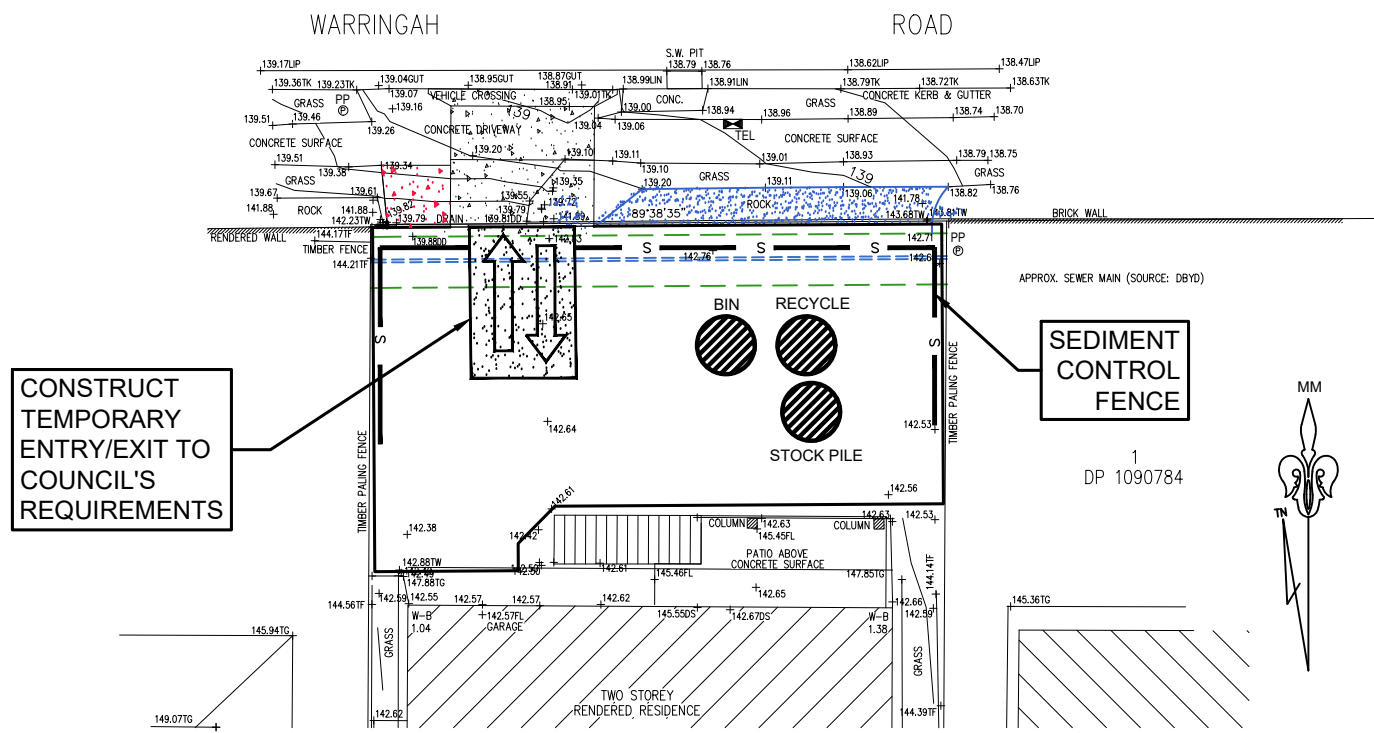


C100/90 A 100mm SIDE OUTLET



NTS

DRAWING TITLE		
STORMWATER SECTIONS & DETAILS		
SCALES A3 - 1:100	DESIGNED A.C.	DRAFTED A.C.
DRAWING NO. C24130 - E08	APPROVED A.C.	REVISION F



SE SEDIMENT & EROSION CONTROL PLAN

SCALE 1:100

E EXCAVATION PLAN

SCALE 1:200

SEDIMENT AND EROSION CONTROL NOTES

SEDIMENT AND EROSION CONTROL SHALL BE EFFECTIVELY MAINTAINED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL THE SITE HAS BEEN STABILISED OR LANDSCAPED TO THE SUPERINTENDENT'S SATISFACTION. A SINGLE ALL WEATHER ACCESS WAY WILL BE PROVIDED AT THE FRONT OF THE PROPERTY CONSISTING OF 50-75 AGGREGATE OR SIMILAR MATERIAL AT A MINIMUM THICKNESS OF 150 LAID OVER NEEDLE-PUNCHED GEOTEXTILE FABRIC AND CONSTRUCTED PRIOR TO COMMENCEMENT OF WORKS. THE CONTRACTOR SHALL ENSURE THAT NO SPOIL OR FILL ENCROACHES UPON ADJACENT AREAS FOR THE DURATION OF WORKS. THE CONTRACTOR SHALL ENSURE THAT KERB INLETS AND DRAINS RECEIVING STORMWATER SHALL BE PROTECTED AT ALL TIMES DURING DEVELOPMENT. KERB INLET SEDIMENT TRAPS SHALL BE INSTALLED ALONG THE IMMEDIATE VICINITY ALONG THE STREET FRONTAGE. SEDIMENT FENCING SHALL BE SECURED BY POST (WHERE METAL STAR PICKETS ARE USED PLASTIC SAFETY CAPS SHALL BE USED) AT 2000 INTERVALS WITH GEOTEXTILE FABRIC EMBEDDED 200 IN SOIL. ALL TOPSOIL STRIPPED FROM THE SITE AND STOCKPILED DOES NOT INTERFERE WITH DRAINAGE LINES AND STORMWATER INLETS AND WILL BE SUITABLY COVERED WITH AN IMPERVIOUS MEMBRANE MATERIAL AND SCREENED BY SEDIMENT FENCING.

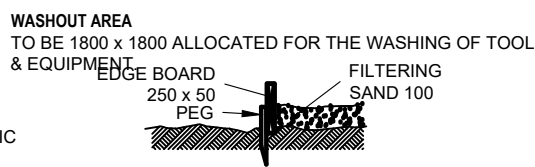
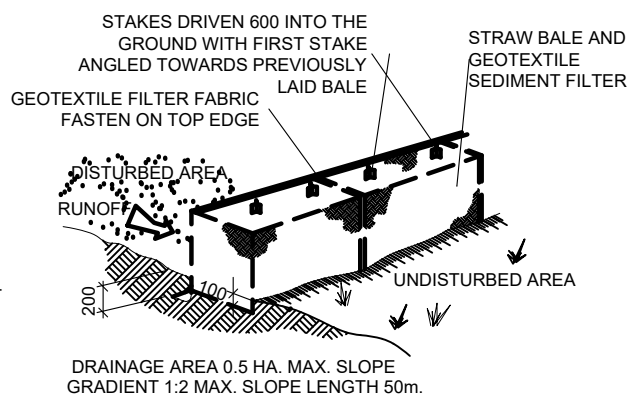
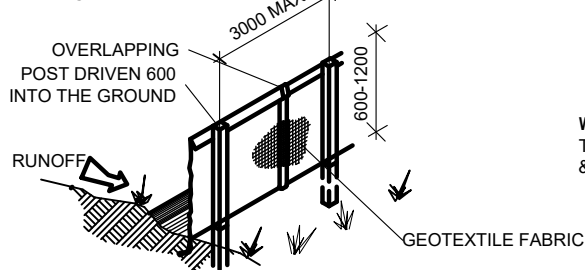
SOIL CONSERVATION NOTE:

PRIOR TO COMMENCEMENT OF CONSTRUCTION PROVIDE 'SEDIMENT FENCE', 'SEDIMENT TRAP' AND WASHOUT AREA TO ENSURE THE CAPTURE OF WATER BORNE MATERIAL GENERATED FROM THE SITE. MAINTAIN THE ABOVE DURING THE COURSE OF CONSTRUCTION, AND CLEAR THE 'SEDIMENT TRAP' AFTER EACH STORM.

SEDIMENT TRAP
1000 x 1000 WIDE 500 DEEP PIT, LOCATED AT THE LOWEST POINT TO THE TRAP SEDIMENT.

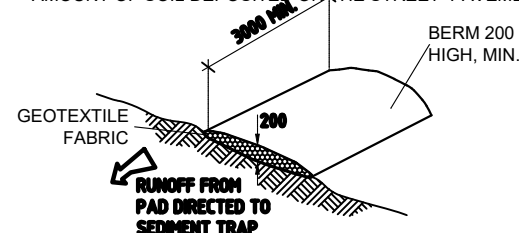
SEDIMENT FENCE

PROVIDE 'SEDIMENT FENCE' ON DOWN SLOPE BOUNDARY AS SHOWN ON PLAN. FABRIC TO BE BURIED BELOW GROUND AT LOWER EDGE.



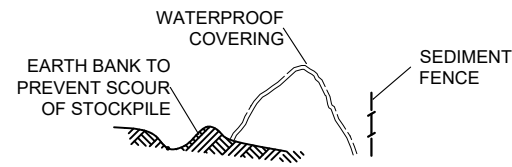
VEHICLE ACCESS TO SITE

VEHICLE ACCESS TO THE BUILDING SITE SHOULD BE RESTRICTED TO A SINGLE POINT SO AS TO REDUCE THE AMOUNT OF SOIL DEPOSITED ON THE STREET PAVEMENT.



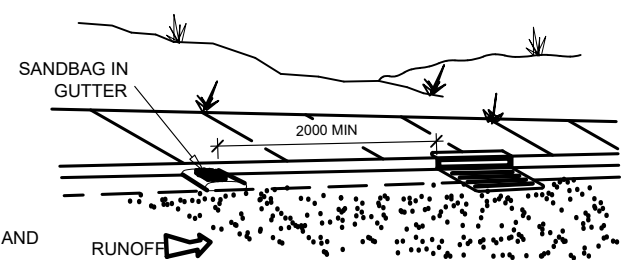
BUILDING MATERIAL STOCKPILES

ALL STOCKPILES OF BUILDING MATERIAL SUCH AS SAND AND SOIL MUST BE PROTECTED TO PREVENT SCOUR AND THEY SHOULD NEVER BE PLACED IN THE STREET GUTTER WHERE THEY WILL WASH AWAY WITH THE FIRST RAINSTORM.



SANDBAG KERB SEDIMENT TRAP

IN CERTAIN CIRCUMSTANCES EXTRA SEDIMENT TRAPPING MAY BE NEEDED IN THE STREET GUTTER.



REVISION	AMENDMENT	ISSUE DATE	REV	AMENDMENT	ISSUE DATE
F	ISSUED FOR DA SUBMISSION	01/03/2025			
E	ISSUED FOR DA SUBMISSION	13/02/2025			
D	ISSUED FOR DA SUBMISSION	24/01/2025			
C	ISSUED FOR APPROVAL	15/10/2024			
B	ISSUED FOR REVIEW	30/09/2024			
A	ISSUED FOR PRELIMINARY REVIEW	23/08/2024			



SUITE 303 / 29-31 LEXINGTON DRIVE
NORWEST BUSINESS PARK,
BELLA VISTA N.S.W. 2153
ALL CORRESPONDENCE TO:
P.O. BOX 6080 BAULKHAM HILLS BC
BAULKHAM HILLS NSW 2153
PH: 8814 6191 FAX: 8814 5301
EMAIL: andrew@camconsulting.com.au

COPYRIGHT
THIS DRAWING REMAINS
THE PROPERTY OF CAM
CONSULTING AND MAY NOT
BE ALTERED IN ANY WAY
WITHOUT CAM CONSULTING
WRITTEN CONSENT

PROJECT
PROPOSED ADDITIONS AT
271 WARRINGAH ROAD, BEACON
HILL, NSW
CLIENT

DRAWING TITLE		
SEDIMENT & EROSION CONTROL PLAN + EXCAVATION PLAN		
SCALES	DESIGNED	DRAFTED
A3 - 1:100	A.C.	A.C.
DRAWING NO.	APPROVED	REVISION
C24130 - E09	A.C.	F



SCALE 1:100

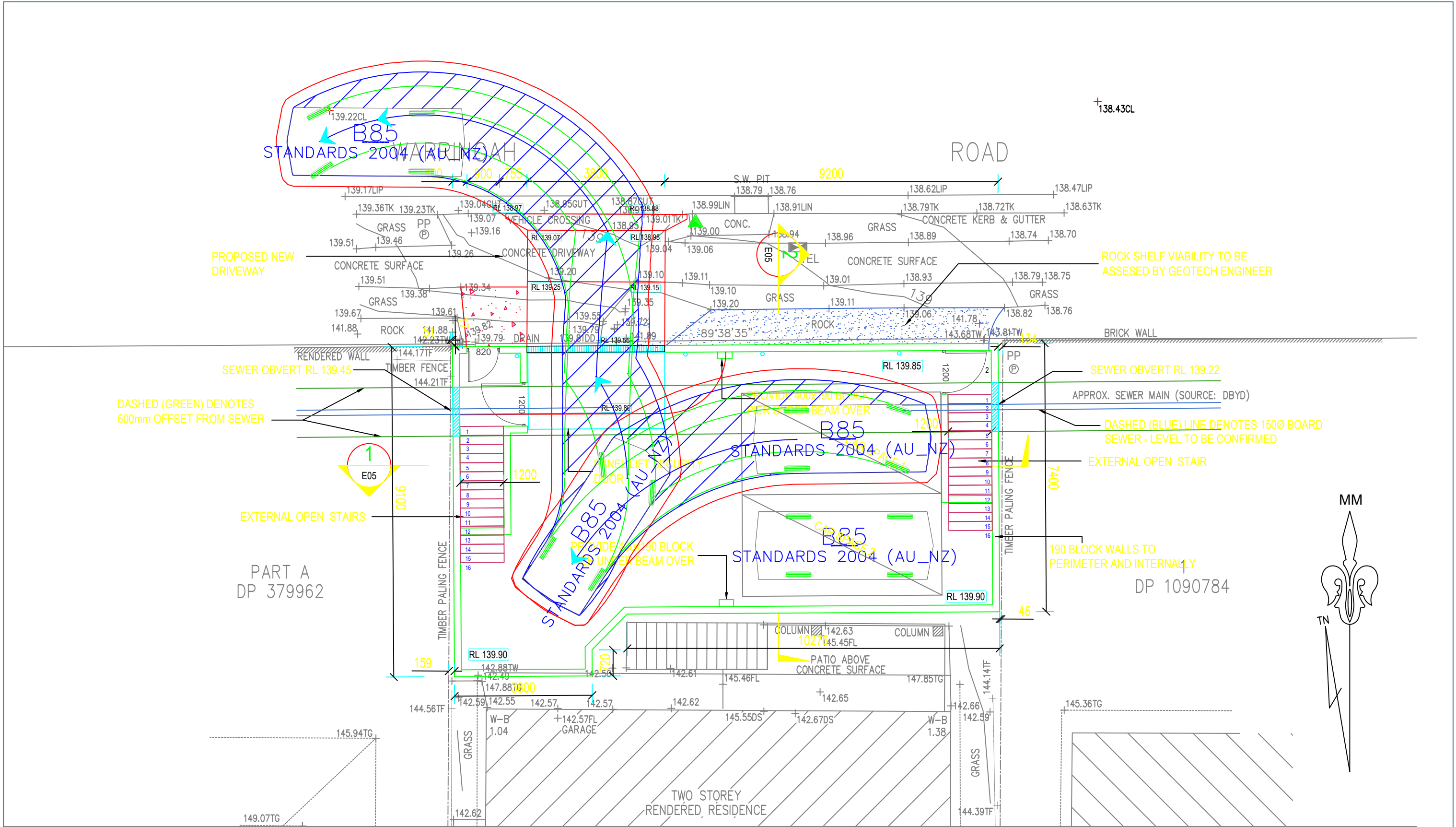
DESIGN LEVEL (RL)	138.665	138.925	138.955	139.025	139.200	139.570	139.800
EXISTING LEVEL (EL)	138.665	138.925	138.965	139.000	139.190	139.810	140.580
GRADE (%)				12.5% (1:8)	23.7% max (1:4.2)	12.5% (1:8)	
CHAINAGE (mm)	0	500	950	2365	4050	6050	
CHAINAGE 0.00	500	450	1415	1685	2000		

SCALE 1:50

						 CAM CONSULTING STRUCTURAL & CIVIL ENGINEERS	SUITE 303 / 29-31 LEXINGTON DRIVE NORWEST BUSINESS PARK, BELLA VISTA N.S.W. 2153 ALL CORRESPONDENCE TO: P.O. BOX 6080 BAULKHAM HILLS BC BAULKHAM HILLS NSW 2153 PH: 8814 6191 FAX: 8814 5301 EMAIL: andrew@camconsulting.com.au	COPYRIGHT THIS DRAWING REMAINS THE PROPERTY OF CAM CONSULTING AND MAY NOT BE ALTERED IN ANY WAY WITHOUT CAM CONSULTING WRITTEN CONSENT	PROJECT	DRAWING TITLE		
F	ISSUED FOR DA SUBMISSION	01/03/2025							PROPOSED ADDITIONS AT 271 WARRINGAH ROAD, BEACON HILL, NSW	DRIVEWAY PROFILE & LONG SECTION		
E	ISSUED FOR DA SUBMISSION	13/02/2025							CLIENT	SCALES	DESIGNED	DRAFTED
D	ISSUED FOR DA SUBMISSION	24/01/2025								A3 - 1:100	A.C.	A.C.
C	ISSUED FOR APPROVAL	15/10/2024								DRAWING NO.	APPROVED	REVISION
B	ISSUED FOR REVIEW	30/09/2024								C24130 - E10	A.C.	F
A	ISSUED FOR PRELIMINARY REVIEW	23/08/2024										
REVISION	AMENDMENT	ISSUE DATE	REV	AMENDMENT	ISSUE DATE							

Attachment 2

Vehicle Tracking Diagrams (B85 Passenger Vehicle)



INROADS:GROUP

drawing prepared by

InRoads Group

PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project 271 Warringah Road, Beacon Hill

drawing title Vehicle Tracking Analyses

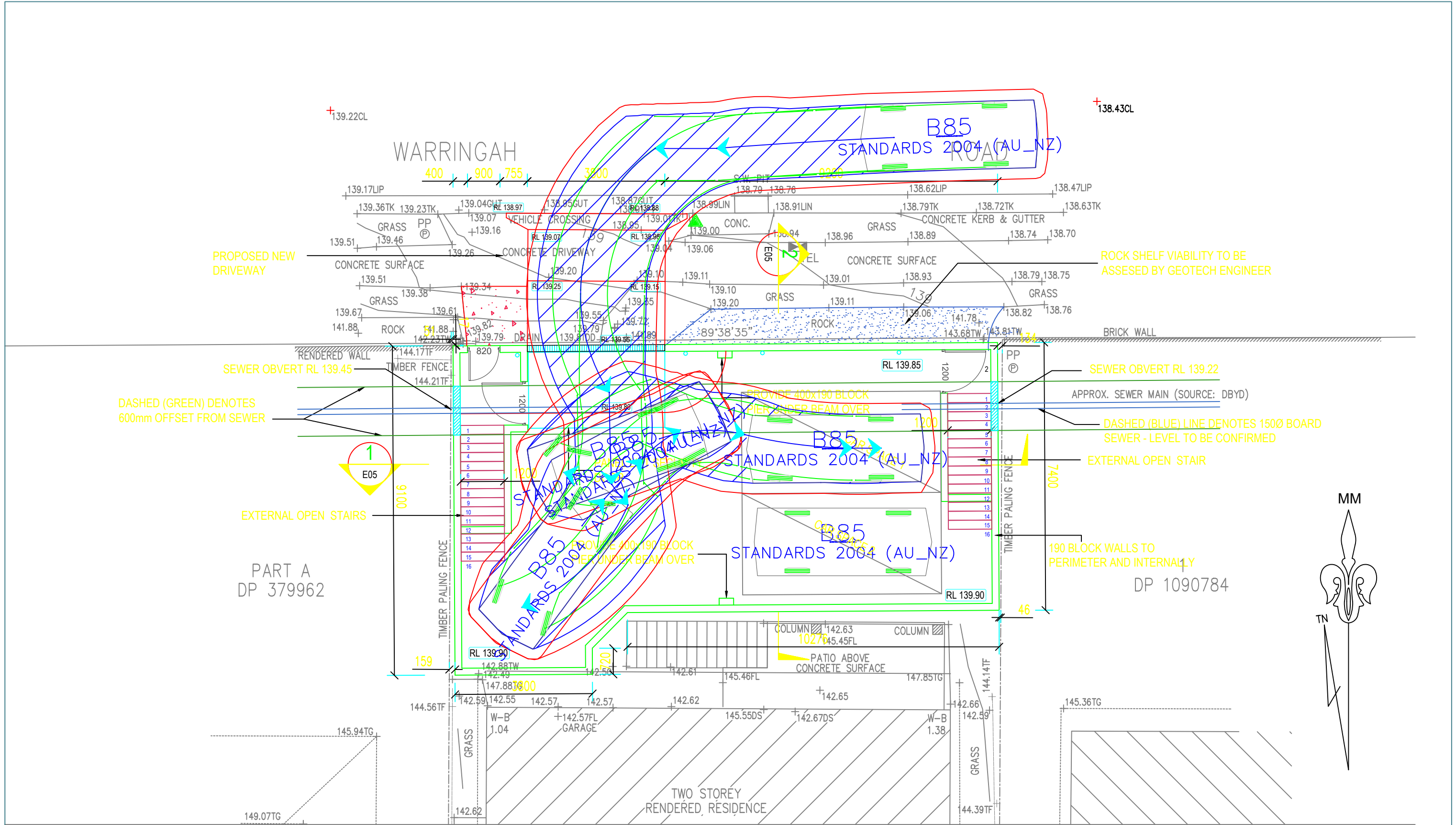
project no.	drawing no.	revision	date	scale
24-004	DWG02	C	12/03/2025	1:100 @ A3

BAY 1 - Reverse Exit

FOR INFORMATION ONLY - NOT FOR CONSTRUCTION

InRoads Group is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1 Parking facilities - Off-street car parking, and/or AS 2890.2 Parking facilities - Off-street commercial vehicle facilities). These standards make allowance for a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.



INROADS:GROUP

drawing prepared by

InRoads Group

PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project 271 Warringah Road, Beacon Hill

drawing title Vehicle Tracking Analyses

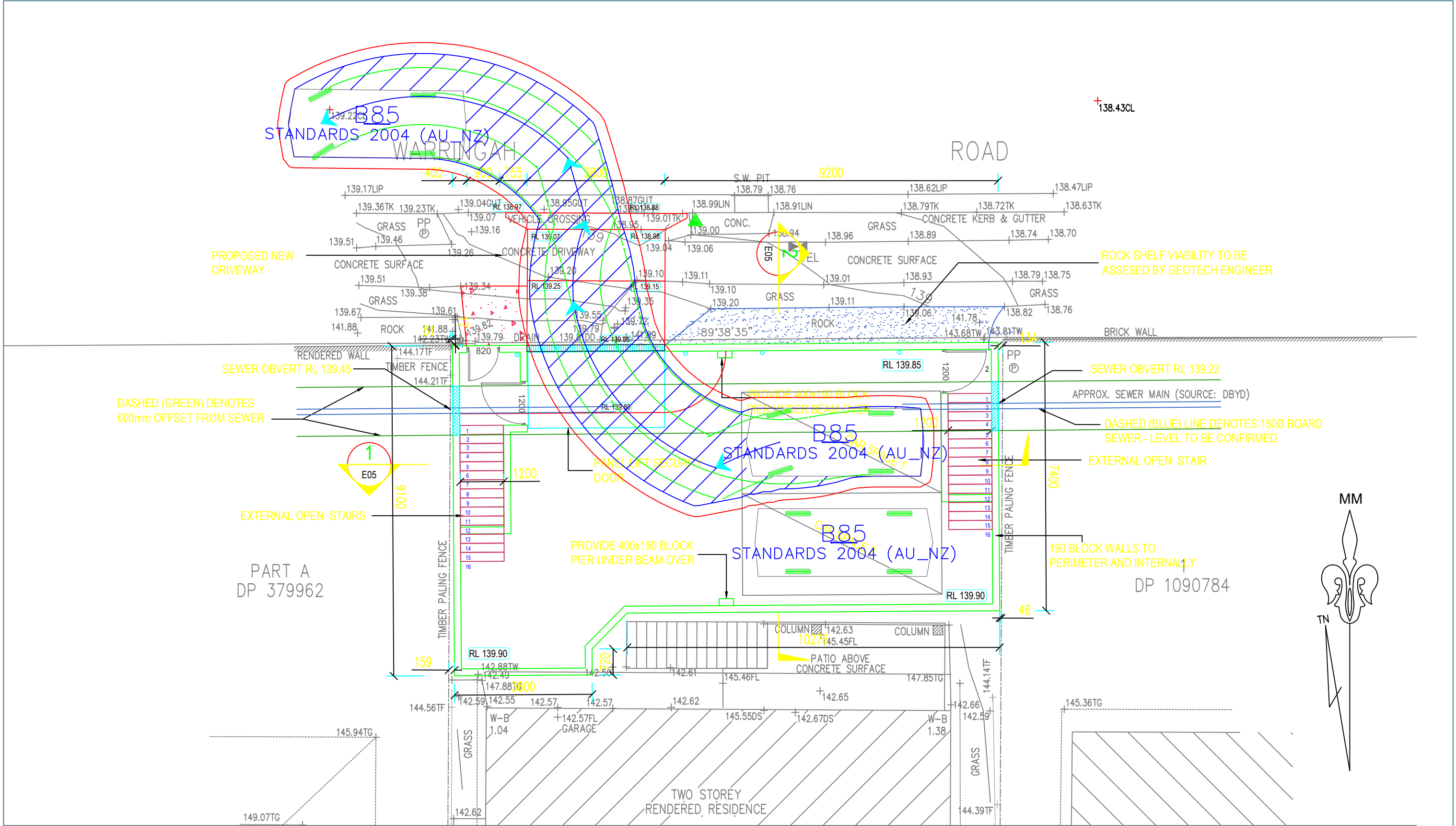
project no.	drawing no.	revision	date	scale
24-004	DWG03	C	12/03/2025	1:100 @ A3

BAY 1 - Reverse Entry

FOR INFORMATION ONLY - NOT FOR CONSTRUCTION

InRoads Group is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1 Parking facilities - Off-street car parking, and/or AS 2890.2 Parking facilities - Off-street commercial vehicle facilities). These standards make allowance for a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.



INROADS:GROUP

drawing prepared by

InRoads Group

PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project 271 Warringah Road, Beacon Hill

drawing title Vehicle Tracking Analyses

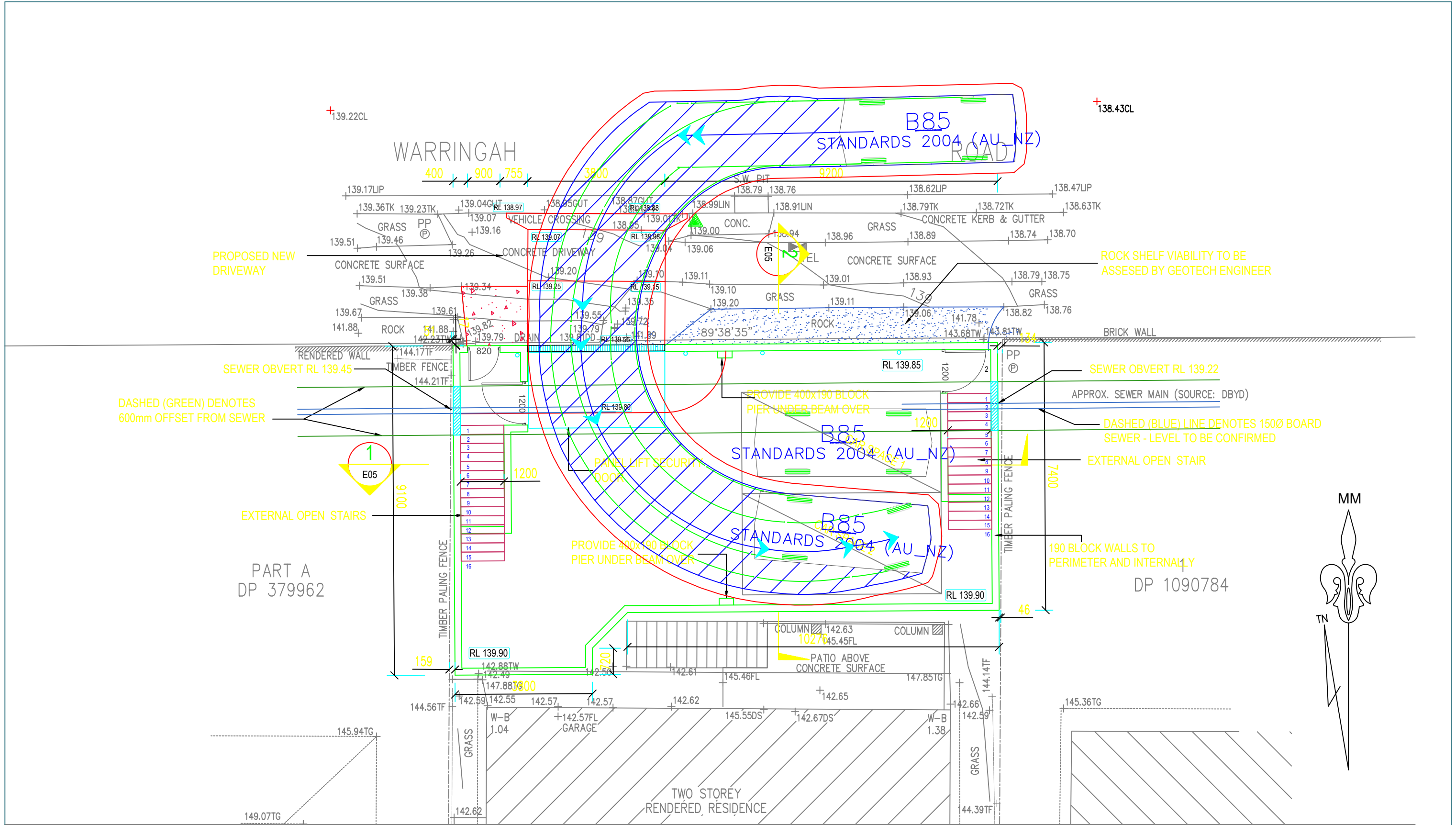
project no.	drawing no.	revision	date	scale
24-004	DWG04	C	12/03/2025	1:100 @ A3

BAY 1 - Forwards Exit

FOR INFORMATION ONLY - NOT FOR CONSTRUCTION

InRoads Group is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1 Parking facilities - Off-street car parking, and/or AS 2890.2 Parking facilities - Off-street commercial vehicle facilities). These standards make allowance for a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.



INROADS:GROUP

drawing prepared by

InRoads Group

PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project 271 Warringah Road, Beacon Hill

drawing title Vehicle Tracking Analyses

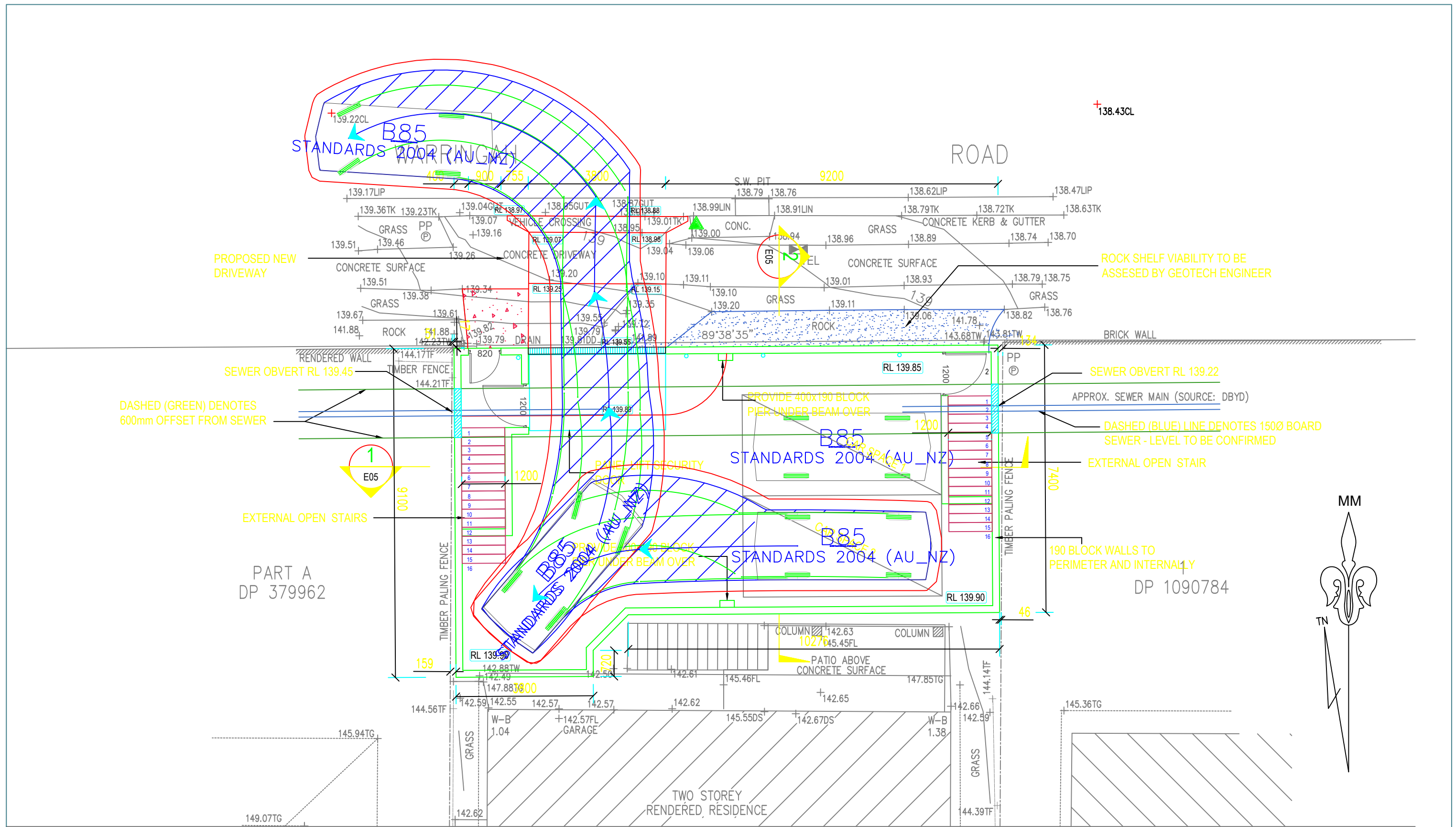
project no.	drawing no.	revision	date	scale
24-004	DWG05	C	12/03/2025	1:100 @ A3

BAY 2 - Forwards Entry

FOR INFORMATION ONLY - NOT FOR CONSTRUCTION

InRoads Group is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1 Parking facilities - Off-street car parking, and/or AS 2890.2 Parking facilities - Off-street commercial vehicle facilities). These standards make allowance for a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.



INROADS:GROUP

drawing prepared by

InRoads Group

PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project 271 Warringah Road, Beacon Hill

drawing title Vehicle Tracking Analyses

project no.	drawing no.	revision	date	scale
24-004	DWG06	C	12/03/2025	1:100 @ A3

BAY 2 - Reverse Exit

FOR INFORMATION ONLY - NOT FOR CONSTRUCTION

InRoads Group is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1 Parking facilities - Off-street car parking, and/or AS 2890.2 Parking facilities - Off-street commercial vehicle facilities). These standards make allowance for a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.