

# PUBLIC DOMAIN WORKS CIVIL ENGINEERING PLANS FOR DEVELOPMENT APPLICATION 51 KALANG ROAD, ELANORA

## GENERAL NOTES.

- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL'S DEVELOPMENT ENGINEERING STANDARD UNLESS OTHERWISE NOTED.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S CODE OF PRACTICE FOR EROSION AND SEDIMENTATION, AND MUST BE IMPLEMENTED PRIOR TO THE COMMENCEMENT OF ANY BUILDING OF CIVIL WORKS. THE DEVELOPER IS RESPONSIBLE FOR ONGOING MAINTENANCE OF EROSION AND SILTATION CONTROL MEASURES.
- ALL PUBLIC UTILITIES ARE TO BE CLEARLY IDENTIFIED IN THE FIELD PRIOR TO ANY CIVIL WORKS. COUNCIL ACCEPTS NO RESPONSIBILITY FOR DAMAGE OR RELOCATION COSTS TO UTILITIES DURING CONSTRUCTION.
- SUPERVISING ENGINEER IS TO BE NOTIFIED PRIOR TO THE COMMENCEMENT OF ANY WORKS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL WORKS ARE CARRIED OUT IN ACCORDANCE WITH WORK HEALTH AND SAFETY ACT 2011.
- PERMISSION TO ENTER, CONSTRUCT WORKS AND DISCHARGE STORMWATER ONTO ADJOINING PROPERTIES IS TO BE OBTAINED AND SUBMITTED TO COUNCIL PRIOR TO COMMENCEMENT OF ANY WORKS.
- ALL WORKS AS A RESULT OF THE SUBMITTED PLANS IS TO BE CARRIED OUT TO THE SUPERVISING ENGINEER'S SATISFACTION.
- ANY DISTURBED LANDSCAPING AREA IS TO BE SHAPED AND TURFED. APPROVED TOP SOIL & TURF IS TO BE REINSTATED TO THE SUPERVISING ENGINEER'S SATISFACTION.
- ALL DRAINAGE GRATES TO BE BIKE SAFE TO LOAD TYPE CLASS'D' AS PER AS3996-2006 (LOAD CLASSIFICATION). GRATES TO BE "DURHAM-MEDIUM TRAFFICABLE" OR SIMILAR.
- RETAINED TREES TO BE FENCED WITH A 1.8m HIGH CHAINWIRE LINK FENCE FULLY SUPPORTED AT GRADE TO MINIMISE THE DISTURBANCE TO EXIST. GROUND CONDITIONS WITHIN THE CANOPY DRIP LINE. "TREE PROTECTION ZONE" SIGNAGE TO BE ATTACHED TO PROTECTIVE FENCING.
- A ROAD-OPENING PERMIT SHALL BE OBTAINED FOR WORKS IN THE ROAD RESERVE PRIOR TO COMMENCEMENT OF WORK IN THE ROAD RESERVE.
- ALL REDUNDANT LINE MARKING SHALL BE GRENDED OFF THE PAVEMENT AND APPROVED LINE MARKING FROM COUNCIL AND/OR RMS SHALL BE REFLECTIVE WHITE THERMOPLASTIC OR SIMILAR.
- SERVICES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM INFORMATION SUPPLIED FROM THE RELEVANT AUTHORITIES VIA A "DIAL BEFORE YOU DIG" ENQUIRY DURING DESIGN. THE LOCATION OF SERVICES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED AS ACCURATELY AS POSSIBLE FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES. A NEW "DIAL BEFORE YOU DIG" ENQUIRY MUST BE CARRIED OUT TO VERIFY SERVICE LOCATIONS JUST PRIOR TO CONSTRUCTION. NEW ENQUIRIES MAY BE DONE ONLINE AT WWW.1100.COM.AU OR TEL 1100.
- NO CONCRETE SHALL BE POURED PRIOR THE EXCAVATION AND FORMWORK HAVE BEEN INSPECTED FROM A QUALIFIED AND PRACTICING CIVIL ENGINEER.
- CERTIFICATION FROM PRACTICING ENG TO BE SUBMITTED TO COUNCIL.



LOCALITY PLAN  
N.T.S.

DRAWING INDEX		
Drawing No.	DESCRIPTION	Rev
C000	GENERAL NOTES, LOCALITY PLAN & DRAWING SCHEDULE	A
C101	CIVIL WORKS LAYOUT PLAN	A
C201	DRIVEWAY PROFILE - LONGITUDINAL SECTIONS	A
C301	CONSTRUCTION NOTES AND DETAILS SHEET	A

### DANGER :

LOCATION OF ALL EXISTING UNDERGROUND SERVICES SHOWN ARE APPROXIMATE AS TAKEN OFF DBYD INFO. EXTREME CAUTION TO BE EXERCISED WHEN WORKING IN THE VICINITY OF AND AROUND THESE SERVICES. PLEASE CALL THE RELEVANT AUTHORITIES TWO DAYS PRIOR TO CONSTRUCTION FOR A MORE EXACT LOCATION OF THE EXISTING SERVICES.

IT IS THE CONTRACTOR RESPONSIBILITY TO CONTACT "DIAL BEFORE YOU DIG" FOR THE LOCATION OF EXISTING PUBLIC UTILITIES, PRIOR TO EXCAVATION.

### DISCLAIMER

ALL INFRASTRUCTURE INFORMATION (MAINS, SEWER, PIPES ETC.) IS DERIVED FROM DIAL BEFORE YOU DIG RECORDS.

EVERY EFFORT WAS MADE TO ENSURE ACCURACY OF THESE RECORDS WHEN COMPILED.

NO WARRANTY IS GIVEN TO CURRENCY OF DEPTHS AND LEVELS DUE TO THE POSSIBILITY OF SUBSEQUENT ALTERATION OF LEVELS THROUGH FILLING OR EXCAVATION. USERS OF THE INFORMATION IN THIS DRAWING/DESIGN SHOULD TAKE ALL REASONABLE STEPS TO VERIFY THE RELEVANT INFORMATION BEFORE COMMENCING EXCAVATING OR CONSTRUCTION WORK.

ENGINEERING SERVICES GROUP (ESG) CONSULTING PTY LTD TAKE NO RESPONSIBILITY FOR APPARENT ERRORS OR INACCURACIES IN THE INFORMATION PROVIDED.







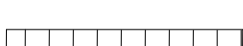


NOT FOR CONSTRUCTION


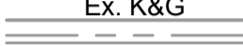





<table border="1"> <tr> <td>Issue</td> <td>Description</td> <td>Date</td> <td>Design</td> <td>Checked</td> </tr> <tr> <td>A</td> <td>ISSUE FOR DEVELOPMENT APPLICATION</td> <td>31/03/2022</td> <td>I.S.N.</td> <td>M.C.O.</td> </tr> </table>				Issue	Description	Date	Design	Checked	A	ISSUE FOR DEVELOPMENT APPLICATION	31/03/2022	I.S.N.	M.C.O.	Architect <b>Fortey + Grant</b> Architecture Suite 3/Level 1, 1141 Botany Lane Mascot NSW 2020 Mob: 0401 822 223 Email: james@frgarch.com.au Nominated Architect James Grant 6540	Council <b>NORTHERN BEACHES COUNCIL</b>	Scale CIVIL & STORMWATER ENGINEERING SERVICES PTY LTD ABN: 27 644 422 506 Shop 1, 143-147 Parramatta Road, Concord, NSW 2137 P:(02) 8397 6500 E:info@esgconsult.com.au	Project <b>51 KALANG ROAD, ELANORA PUBLIC DOMAIN WORKS CIVIL ENGINEERING PLANS DEVELOPMENT APPLICATION</b>	Drawing Title <b>GENERAL NOTES, LOCALITY PLAN AND DRAWING SCHEDULE</b>
Issue	Description	Date	Design	Checked														
A	ISSUE FOR DEVELOPMENT APPLICATION	31/03/2022	I.S.N.	M.C.O.														
Scale N.T.S.		Project No. 200870	Dwg. No. C000	Issue A														

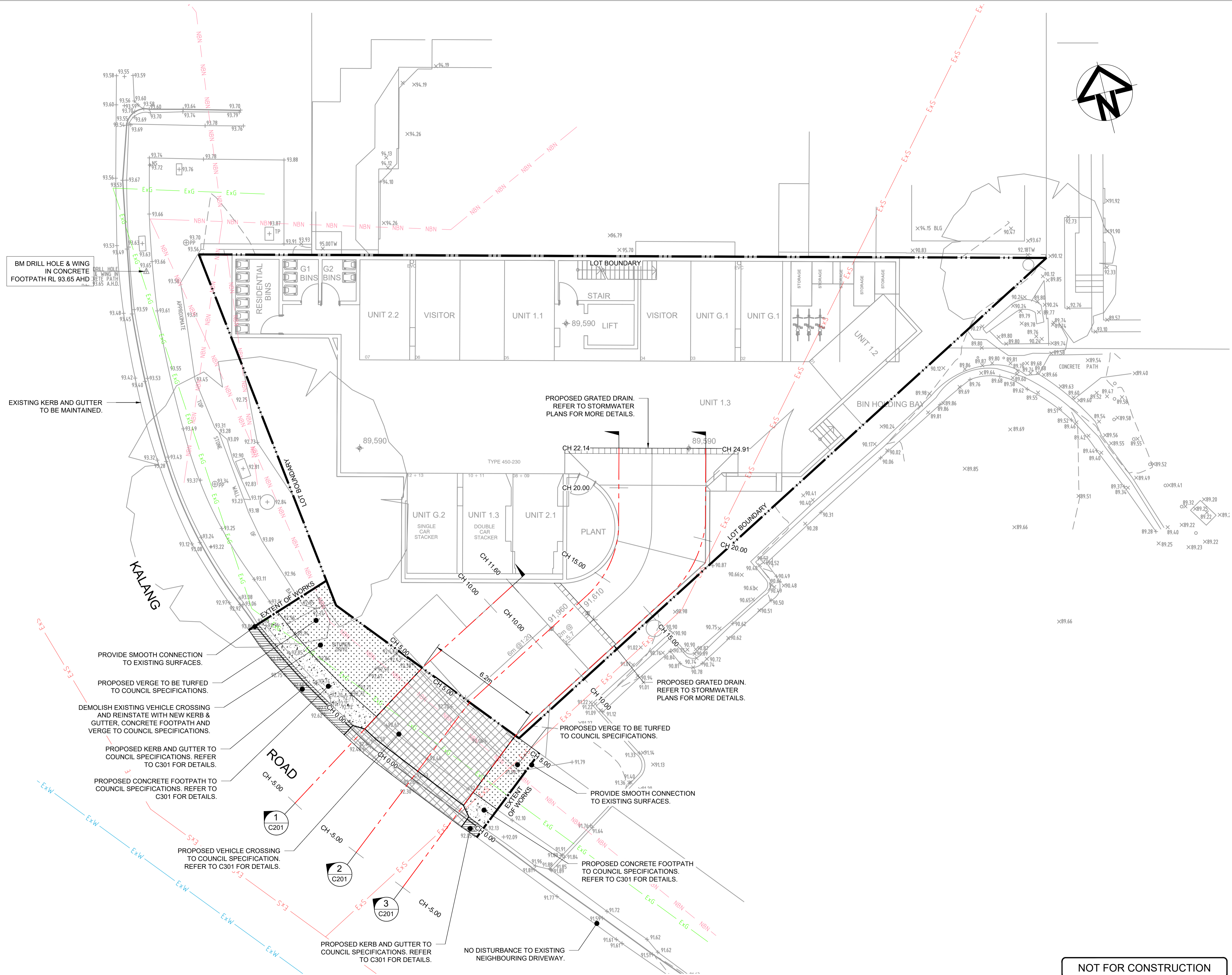


**LEGEND**

-  LOT BOUNDARY
-  PROPOSED KERB & GUTTER
-  PROPOSED CONTROL LINE
-  PROPOSED VERGE
-  PROPOSED DRIVEWAY
-  PROPOSED CONCRETE FOOTPATH
-  PROPOSED GRATED DRAIN

**EXISTING SERVICES**

-  30.00 EXISTING CONTOUR
-  Ex. K&G EXISTING KERB & GUTTER
-  ExW EXISTING WATER MAIN
-  ExS EXISTING SEWER MAIN
-  ExG EXISTING GAS MAIN
-  NBN EXISTING NATIONAL BROADBAND NETWORK
-  EXISTING TREES TO BE RETAINED



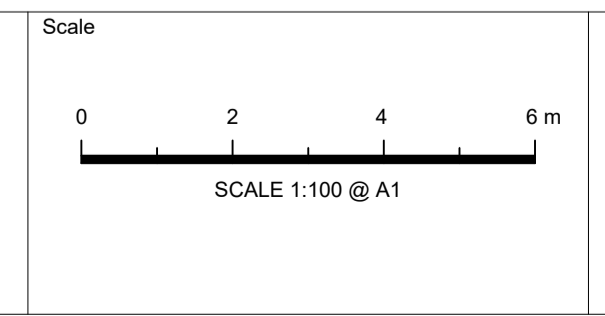
**NOTE:**  
ALL EXISTING SERVICES TO BE ADJUSTED TO MATCH PROPOSED SURFACE LEVELS.



A		ISSUE FOR DEVELOPMENT APPLICATION		31/03/2022	I.S.N.	M.C.O.
Issue	Description	Date	Design	Checked		
From full size						

Architect  
**Fortey + Grant Architecture**  
Suite 3/Level 1, 1141 Botany Lane  
Mascot NSW 2020  
Mob: 0401 822 223  
Email: james@frgarch.com.au  
Nominated Architect James Grant 6540

Council  
**NORTHERN BEACHES COUNCIL**



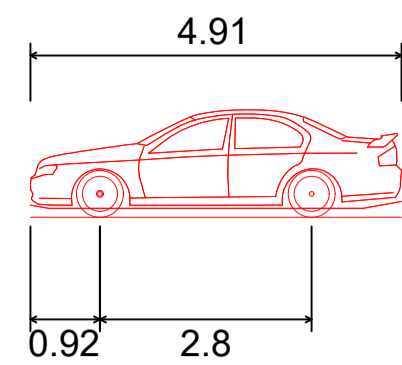
CIVIL & STORMWATER ENGINEERING SERVICES PTY LTD  
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Shop 1, 143-147 Parramatta Road, Concord, NSW 2137  
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E:info@esgconsult.com.au

Project  
**51 KALANG ROAD, ELANORA PUBLIC DOMAIN WORKS CIVIL ENGINEERING PLANS DEVELOPMENT APPLICATION**

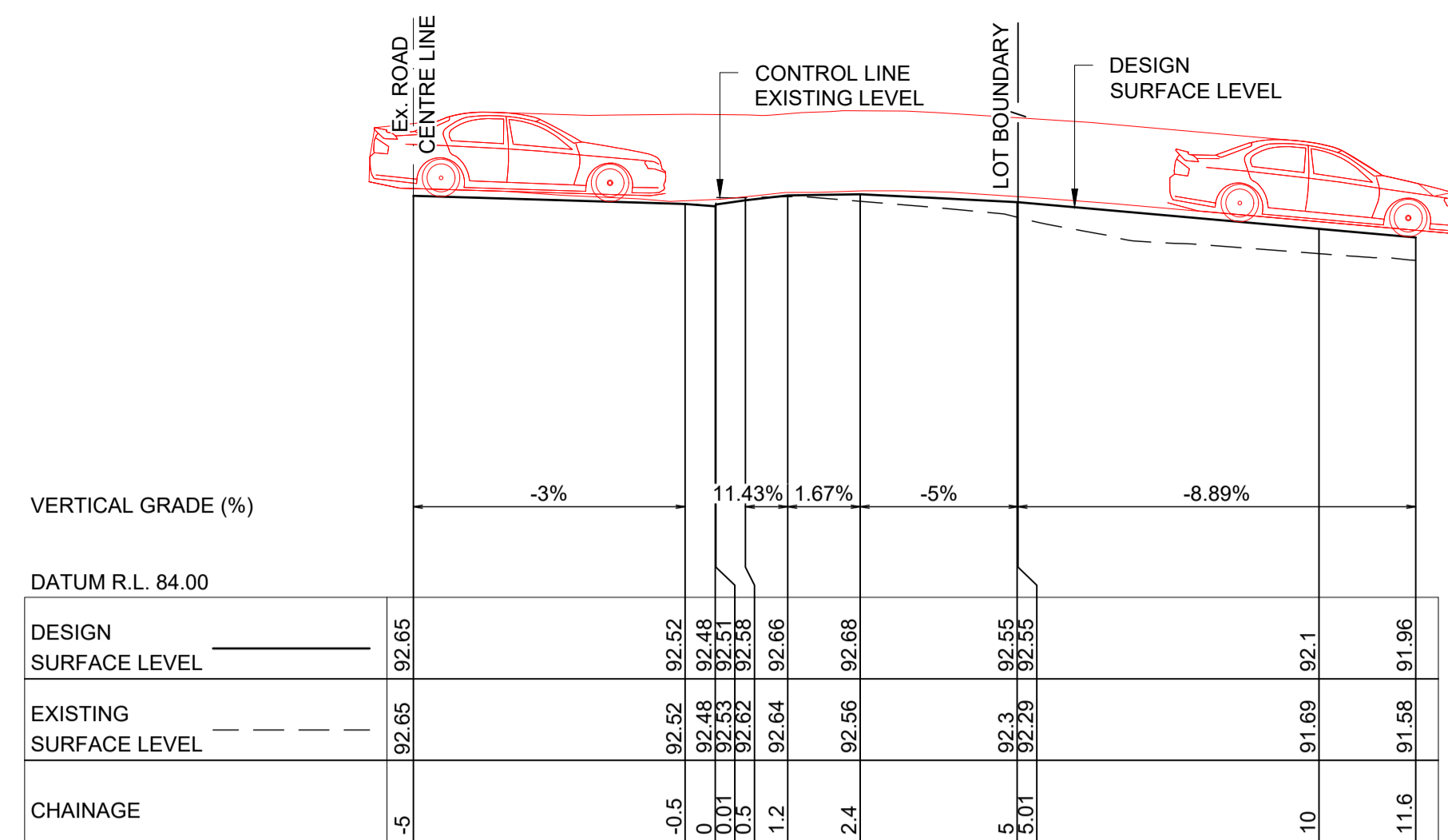
Drawing Title <b>CIVIL WORKS LAYOUT PLAN</b>			
Scale 1:100	Project No. 200870	Dwg. No. C101	Issue A

**NOT FOR CONSTRUCTION**





B85 Ground Clearance (2004)  
 Overall Length 4.910m  
 Overall Width 1.870m  
 Overall Body Height 1.421m  
 Min Body Ground Clearance 0.120m  
 Track Width 1.770m  
 Lock-to-lock time 4.00s  
 Curb to Curb Turning Radius 8.000m

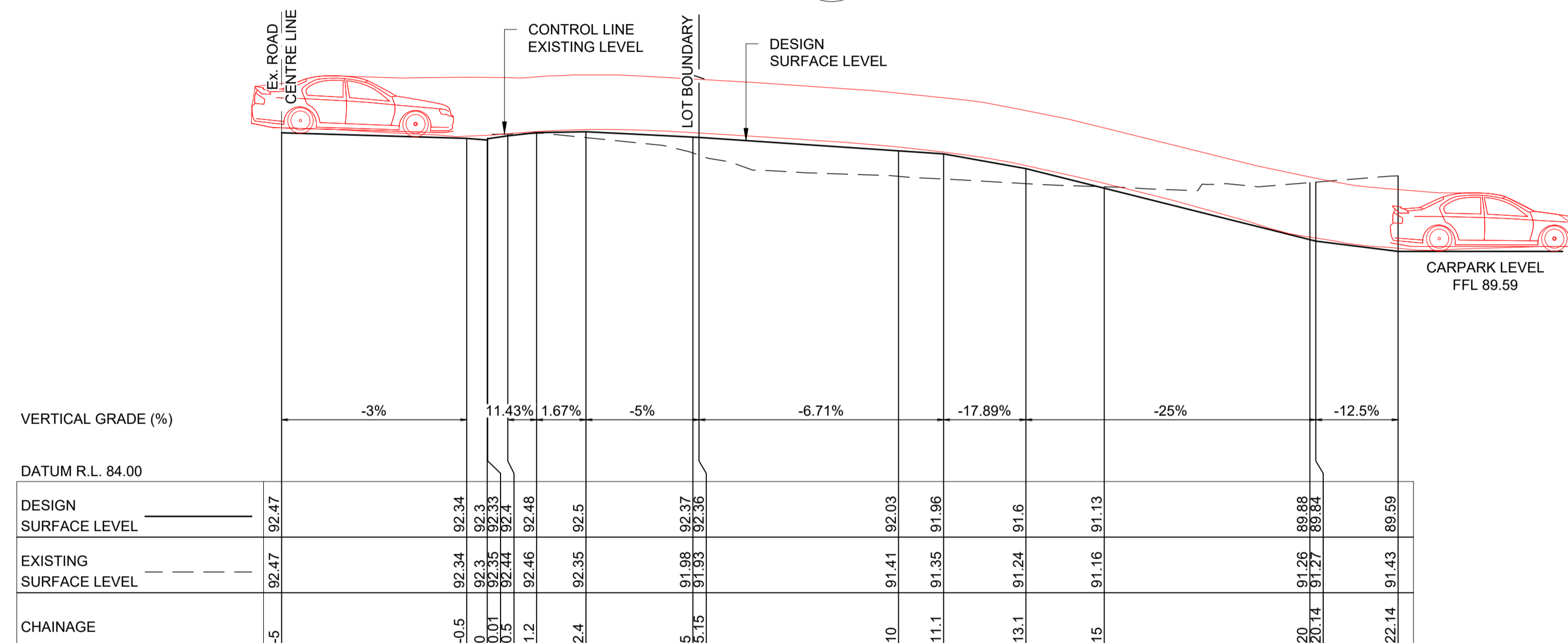


DRIVEWAY PROFILE - LONGITUDINAL SECTION 1

SCALE 1:100 (NATURAL)

1

C101

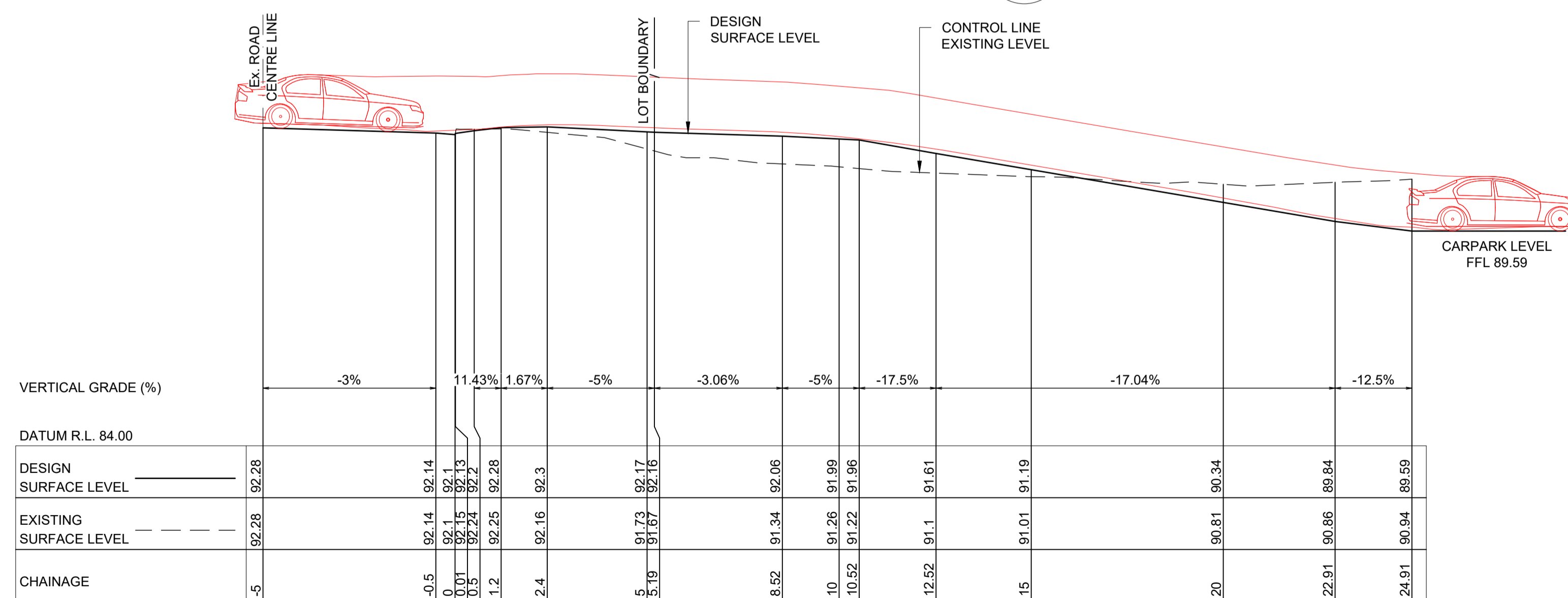


DRIVEWAY PROFILE - LONGITUDINAL SECTION 2

SCALE 1:100 (NATURAL)

2

C101



DRIVEWAY PROFILE - LONGITUDINAL SECTION 3

SCALE 1:100 (NATURAL)

3

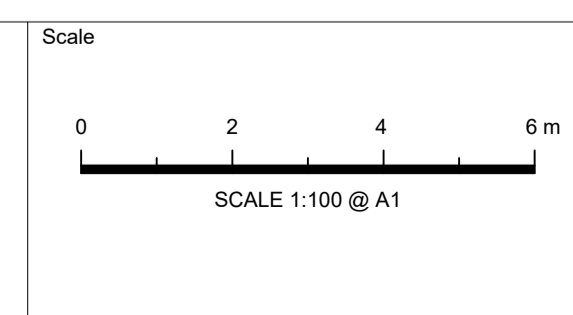
C101

NOT FOR CONSTRUCTION

Issue	Description	Date	Design	Checked
A	ISSUE FOR DEVELOPMENT APPLICATION	31/03/2022	I.S.N.	M.C.O.

Architect  
**Fortey + Grant Architecture**  
 Suite 3/Level 1, 1141 Botany Lane  
 Mascot NSW 2020  
 Mob: 0401 822 223  
 Email: james@frgarch.com.au  
 Nominated Architect James Grant 6540

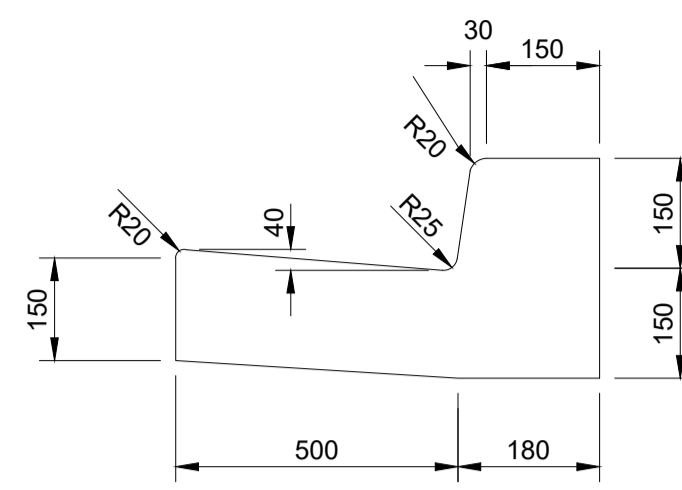
Council  
**NORTHERN BEACHES COUNCIL**



ENGINEERING THE FUTURE  
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 E:info@esgconsult.com.au

Project  
**51 KALANG ROAD, ELANORA PUBLIC DOMAIN WORKS CIVIL ENGINEERING PLANS DEVELOPMENT APPLICATION**

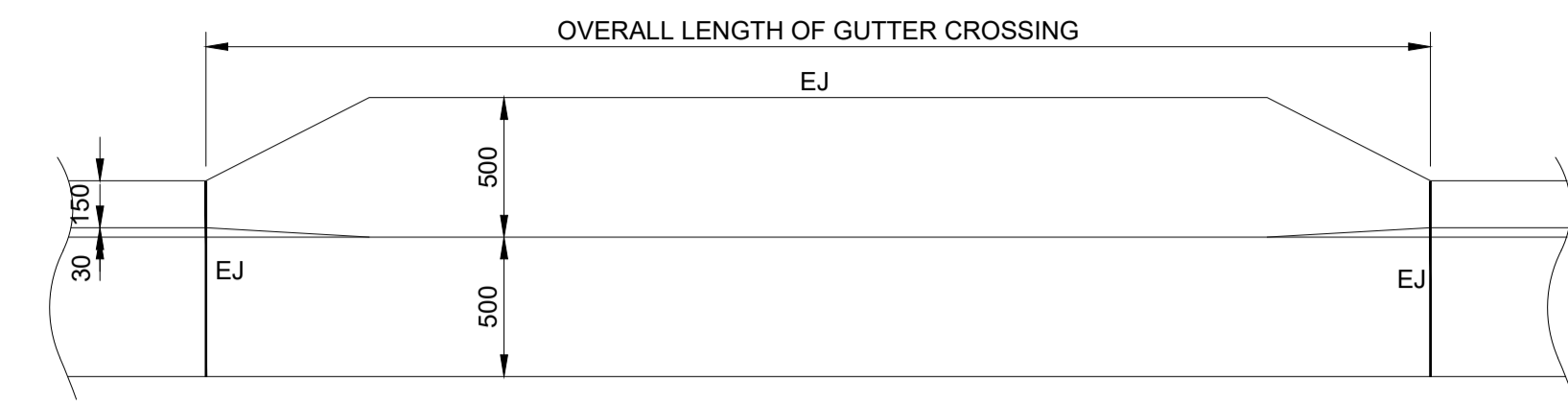
Drawing Title	<b>DRIVEWAY PROFILE LONGITUDINAL SECTIONS</b>			
Scale	A1	Project No.	Dwg. No.	Issue
1:100		200870	C201	A



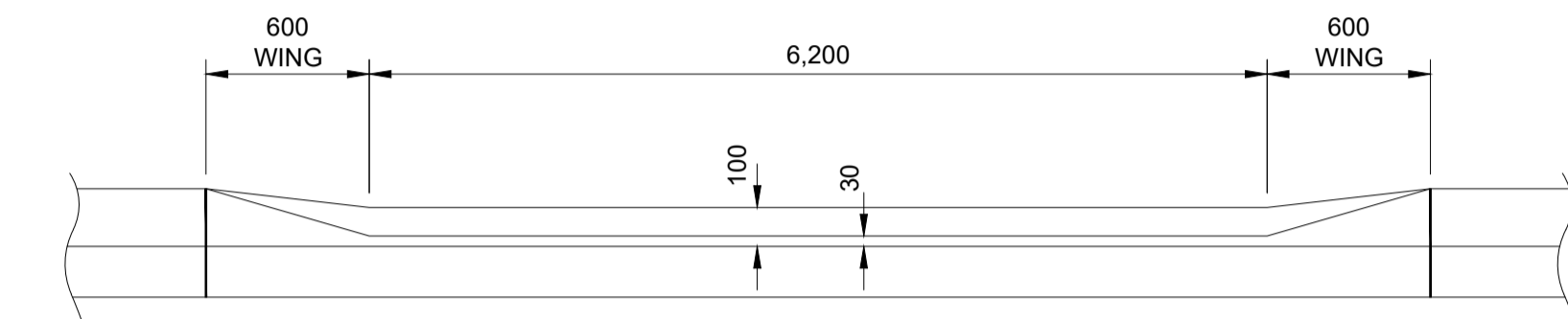
**150mm KERB & GUTTER**  
N.T.S.

**NOTES:**

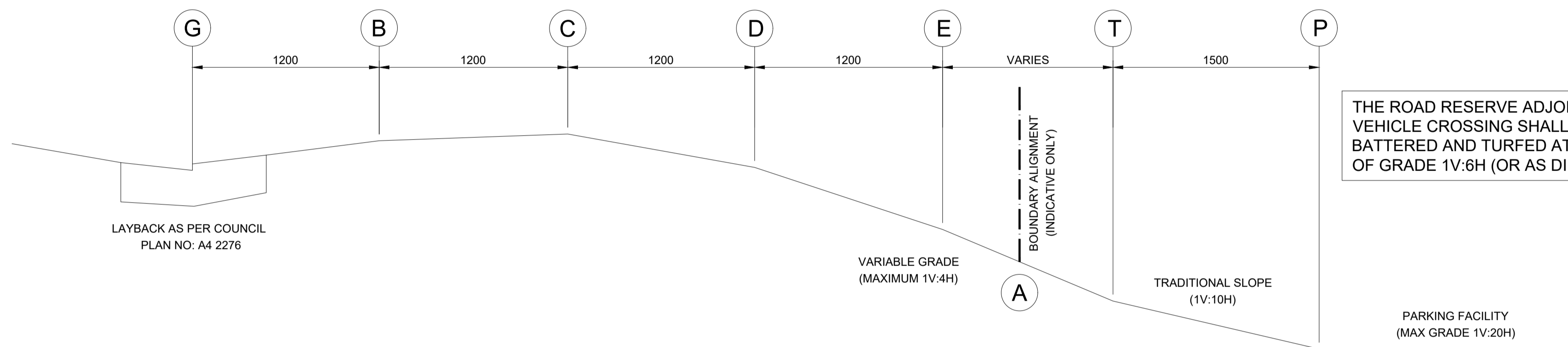
- KERB AND GUTTER SHALL BE POURED IN PLAIN CONCRETE AND FINISHED WITH A STEEL TROWEL. MINIMUM COMPRESSIVE STRENGTH OR CONCRETE SHALL BE 25MPa AT 28 DAYS.
- THE SUBGRADE SHALL BE THOROUGHLY COMPACTED BY THE USE OF VIBRATORY COMPACTION EQUIPMENT UNTIL IT SHOWS NO SIGNS OF MOVEMENT, OR AS DIRECTED BY COUNCIL.
- WHERE COUNCIL OR AN ACCREDITED CERTIFIER (CIVIL WORKS) DIRECTS THAT THE GUTTER BE RETAINED, THE CONTRACTOR SHALL PLACE A 75MM DEEP SAW CUT IN THE GUTTER INVERT AND REMOVE KERB AND/OR LAYBACK.
- WHERE COUNCIL OR AN ACCREDITED CERTIFIER (CIVIL WORKS) DIRECTS THAT THE GUTTER TO BE REMOVED, A ROAD OPENING PERMIT MUST BE OBTAINED FROM COUNCIL'S CUSTOMER SERVICE CENTRE PRIOR TO COMMENCING WORK. ONCE THE PERMIT IS ESTABLISHED THE CONTRACTOR MAY COMMENCE VEHICLE CROSSING WORKS. UPON COMPLETION OF THE WORKS, TEMPORARY RESTORATION SHALL BE PROVIDED AS SET OUT IN THE 'SPECIFICATION FOR TRENCH CONSTRUCTION WITHIN COUNCIL ROADS'.
- THE CONSTRUCTION OF ALL VEHICLE CROSSINGS AND ASSOCIATED WORKS ON THE ROAD RESERVE MUST BE COMPLETED BY A COUNCIL APPROVED CONCRETE CONTRACTOR.
- EJ - EXPANSION JOINT- 10mm MASTIC.  
R - RADIUS  
DJ - DUMMY JOINT



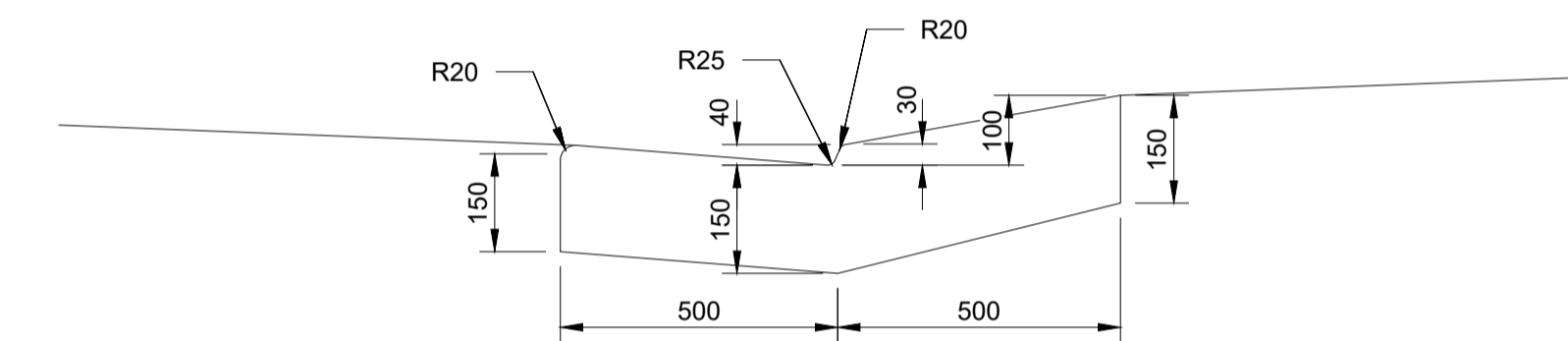
**PLAN**  
N.T.S.



**FRONT ELEVATION**  
N.T.S.



THE ROAD RESERVE ADJOINING THE VEHICLE CROSSING SHALL BE BATTERED AND TURFED AT A MAXIMUM OF GRADE 1V:6H (OR AS DIRECTED)



**TYPICAL CROSS SECTION**  
N.T.S.

POINT	REMARK	LEVELS
G	GUTTER INVERT	ROAMING DATUM FOR VEHICLE CROSSING SETOUT.
L	REAR OF LAYBACK	100mm ABOVE GUTTER INVERT AND MAY BE ALTERED AT THE DIRECTION OF COUNCIL 'S DEVELOPMENT ENGINEER. PLACE 10MM EXPANSION JOINT.
B	1200mm BEHIND GUTTER INVERT	180mm ABOVE GUTTER INVERT.
C	2400mm BEHIND GUTTER INVERT	200mm ABOVE GUTTER INVERT.
D	3600mm BEHIND GUTTER INVERT	70mm ABOVE GUTTER INVERT.
E	4800mm BEHIND GUTTER INVERT	180mm ABOVE GUTTER INVERT.
A	BOUNDARY ALIGNMENT	PLACE 10mm EXPANSION JOINT AND CONTINUE VEHICLE CROSSING GRADING BETWEEN POINTS C & T.
T	1500mm BEFORE PARKING FACILITY	PROVIDE A TRANSITIONAL SLOPE OF 1V:10H OVER 1500mm. THE TRANSITIONAL SLOPE MAY BE PARTIALLY OR WHOLLY ON THE ROAD RESERVE.
P	PARKING FACILITY	MAXIMUM GRADE PARALLEL TO THE ANGLE OF PARKING 1V:20H OTHERWISE, 1V:16H IN ANY DIRECTION.

**NOTES:**

- AT LEAST 48 HOURS NOTICE OF INTENTION TO PLACE CONCRETE ON THE ROAD RESERVE SHALL BE GIVEN TO THE DEVELOPMENT ENGINEER AND NO CONCRETE SHALL BE PLACED UNTIL THE FORMWORK HAS BEEN APPROVED AND INSPECTION NOTICE ISSUED (PHONE 9942 2111 8:30am - 5:00pm, MONDAY - FRIDAY).
- ALL DISTURBED AREAS OF THE FOOTPATH ADJACENT THE VEHICLE CROSSING SHALL BE TURFED AND FINISHED LEVEL WITH THE CONCRETE SURFACE. RAISED EDGINGS ARE PROHIBITED.
- CONCRETE FOOTPATH ADJUSTMENTS SHALL BE IN ACCORDANCE WITH COUNCIL'S FOOTPATH SPECIFICATION AND TO COUNCIL'S SATISFACTION.
- THE SUBGRADE SHALL BE THROUGHLY COMPACTED BY THE USE OF VIBRATORY COMPACTION EQUIPMENT UNTIL IT SHOWS NO SIGNS OF MOVEMENT, OR AS DIRECTED BY COUNCIL.
- VEHICLE CROSSING SLABS SHALL BE POURED IN PLAIN CONCRETE. SLAB SURFACE TO BE BROOM FINISHED (OR EQUIVALENT) AND EDGES TO BE FINISHED WITH A 50mm MARGIN. ALL CHANGES IN GRADE SHALL BE SCREEDDED TO ENSURE NO RIGID TRANSITIONS.
- THE VEHICLE CROSSING TO 2400mm BEHIND THE GUTTER INVERT SHALL BE GRADED PARALLEL WITH THE ROAD CENTRELINE GRADING.
- MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 25MPa AT 28 DAYS. MINIMUM CONCRETE DEPTH SHALL BE:
  - SINGLE RESIDENTIAL DWELLING - 130mm REINFORCED WITH SL72 MESH PLACED 30mm BELOW TOP OF CONCRETE
  - MULTI-UNIT RESIDENTIAL - 150mm REINFORCED WITH SL82 MESH PLACED 30mm BELOW TOP OF CONCRETE
  - COMMERCIAL/INDUSTRIAL - 180mm REINFORCED WITH SL82 MESH PLACED 30mm BELOW TOP OF CONCRETE.
- THE VEHICLE CROSSING SHALL BE CONSTRUCTED PERPENDICULAR TO THE ROAD PAVEMENT UNLESS DIRECTED BY COUNCIL.
- THE CONSTRUCTION OF ALL VEHICULAR CROSSINGS AND ASSOCIATED WORKS ON THE ROAD RESERVE MUST BE COMPLETED BY A COUNCIL APPROVED CONCRETE CONTRACTOR.

**NOTES:**

- LAYBACK AND GUTTER SHALL BE POURED IN PLAIN CONCRETE AND FINISHED WITH A STEEL TROWEL. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 25MPa AT 28 DAYS. INDUSTRIAL/COMMERCIAL PROPERTIES SHALL INCREASE THE DEPTH OF THE CONCRETE TO 180mm AND PROVIDE SL82 MESH WITH 30mm TOP COVER.
- THE SUBGRADE SHALL BE THOROUGHLY COMPACTED BY THE USE OF VIBRATORY COMPACTION EQUIPMENT UNTIL IT SHOWS NO SIGNS OF MOVEMENT, OR AS DIRECTED BY COUNCIL.
- VEHICLE CROSSING TO BE CONSTRUCTED IN ACCORDANCE WITH LEVELS AND SPECIFICATIONS ISSUED BY COUNCIL.
- KERBING TO BE CONSTRUCTED IN ACCORDANCE WITH COUNCIL PLAN A4 2276/A AND SPECIFICATIONS.
- WHERE COUNCIL OR AN ACCREDITED CERTIFIER (CIVIL WORKS) DIRECTS THAT THE GUTTER BE RETAINED, THE CONTRACTOR SHALL PLACE A 75mm DEEP SAW CUT IN THE GUTTER INVERT AND REMOVE KERB AND/OR LAYBACK.
- WHERE COUNCIL OR AND ACCREDITED CERTIFIER (CIVIL WORKS) DIRECTS THAT THE GUTTER BE REMOVED, A ROAD OPENING PERMIT MUST BE OBTAINED FROM COUNCIL'S CUSTOMER SERVICE CENTRE PRIOR TO COMMENCING WORK. ONCE THE PERMIT IS ESTABLISHED THE CONTRACTOR MAY COMMENCE VEHICLE CROSSING WORKS. UPON COMPLETION OF THE WORKS, TEMPORARY RESTORATION SHALL BE PROVIDED AS SET OUT IN THE 'SPECIFICATION FOR TRENCH CONSTRUCTION WITHIN COUNCIL ROADS'.
- THE CONSTRUCTION OF ALL VEHICLE CROSSINGS AND ASSOCIATED WORKS ON THE ROAD RESERVE MUST BE COMPLETED BY A COUNCIL APPROVED CONCRETE CONTRACTOR.
- EJ - EXPANSION JOINT - 10mm MASTIC  
R - RADIUS

**NOT FOR CONSTRUCTION**

Architect <b>Fortey + Grant</b> Architecture Suite 3/Level 1, 1141 Botany Lane Mascot NSW 2020 Mob: 0401 822 223 Email: james@frgarch.com.au Nominated Architect James Grant 6540				Council <b>NORTHERN BEACHES COUNCIL</b>		Scale		Project <b>51 KALANG ROAD, ELANORA PUBLIC DOMAIN WORKS CIVIL ENGINEERING PLANS DEVELOPMENT APPLICATION</b>		Drawing Title <b>CONSTRUCTION NOTES AND DETAILS SHEET</b>	
A ISSUE FOR DEVELOPMENT APPLICATION Date: 31/03/2022 Design: I.S.N. Checked: M.C.O.				Scale N.T.S.		Project No. 200870		Dwg. No. C301		Issue A	