

M^CLAREN TRAFFIC ENGINEERING

Address: Shop 7, 720 Old Princes Highway Sutherland NSW 2232
Postal: P.O Box 66 Sutherland NSW 1499

Telephone: (02) 9521 7199
Web: www.mclarenttraffic.com.au
Email: admin@mclarenttraffic.com.au

Division of RAMTRANS Australia ABN: 45067491678 RPEQ: 19457

Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

3 November 2023

Reference: 230936.01FA

Luxitecture
9 Harris Street,
Pyrmont, NSW 2009
Attention: Jay Francis

DRIVEWAY DESIGN ADVICE OF RESIDENCE AT 30 ABERNETHY STREET, SEAFORTH

Dear Jay,

Reference is made to your request to provide driveway design advice for the proposed residence at 30 Abernethy Street, Seaforth, as depicted on the reduced plans reproduced in **Annexure A** for reference.

This letter addresses the comments provided by Northern Beaches Council regarding the gradients of the driveway proposed, which will be used to gain vehicular access to the site. The design of the driveway has been amended to generally meet the requirements of the Northern Beaches Council *Standard Drawing – Driveway Profile – Maximum Low (ML)* (Council Profile), which has been reproduced in **Annexure B** for reference. Sections of the proposed driveway profile along both sides of the ramp are provided in **Annexure C**.

The proposed design matches the Council Profile other than the steepness and length of the transition at the base of the ramp, where a two-metre long transition at 12.5% is proposed where the Council Profile allows for a 1.5-metre long transition at 10%. The 2m long, 12.5% transition accords to the requirements of Australian Standard 2890.1:2004 and will facilitate vehicle access to and from the parking area without scraping the underside of a vehicle.

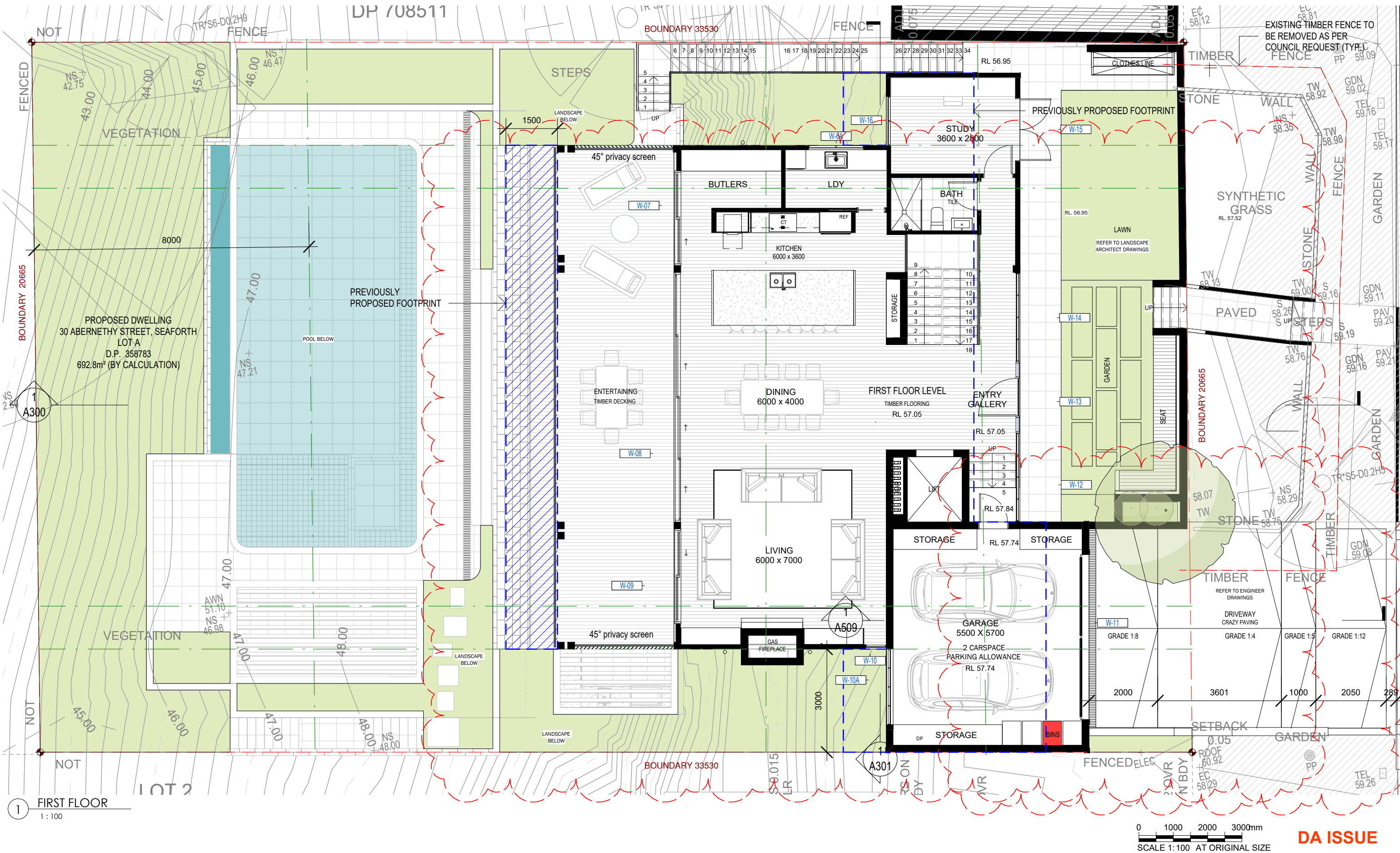
Yours faithfully,
M^CLaren Traffic Engineering



Tom Steal
Associate Traffic Engineer
BE Civil MIEAust
TfNSW Accredited Level 2 Road Safety Auditor



**ANNEXURE A: REDUCED AMENDED PLANS
(3 SHEETS)**



Notes

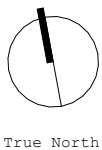
- 1) Do not scale from drawing, use marked dimensions and levels. To be read in conjunction with all consultants' documentation. Luxitecture. is to be immediately notified of any discrepancies.
- 2) Contractor to verify all dimensions, coordinate services and components prior to commencement of site work or off-site fabrication and installation.
- 3) All construction must be built to minimum requirement set outs by the Building Code of Australia and relevant Australian Standards. Luxitecture. is to be notified immediately of any discrepancies to the above, and confirmation sought.
- 4) Copyright on this drawing and design retained by Luxitecture.

Issue	Description	Date
1	DA ISSUE	13.12.22
2	DA RFI 01	15.08.23
3	DA RFI 02	16.10.23

LUXITECTURE

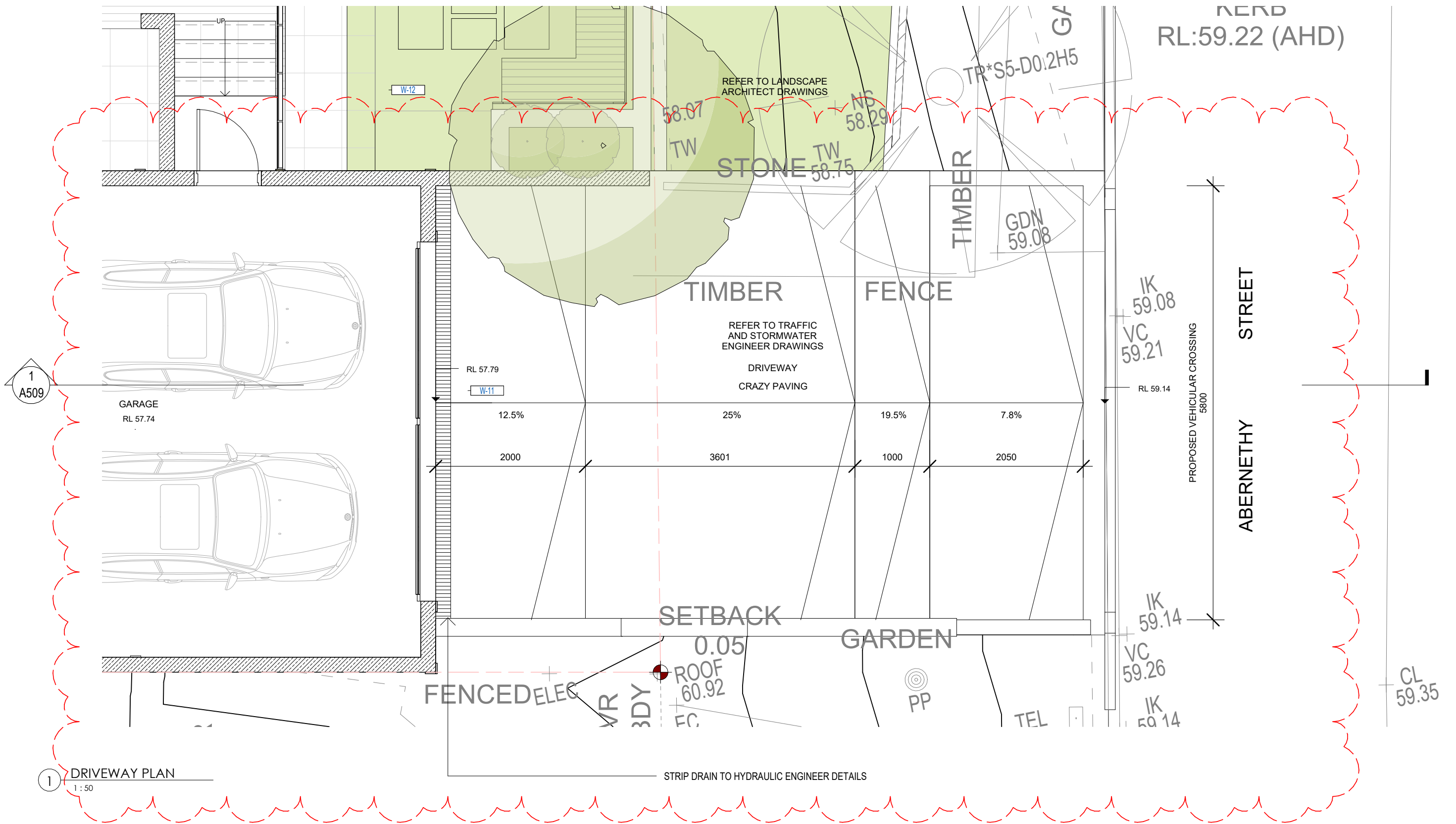
Drawn: JF

Checked: AM



Project
**2129
SEAFORTH**
Client
ADAM MCDOUGALL
Address
**30 ABERNETHY STREET
SEAFORTH**

Drawing Title			
FIRST FLOOR PLAN			
FOR DEVELOPMENT APPLICATION			
Scale 1 : 100 @A3	Date:16.10.23		
2011	DA	A103	3
Project no.	Drawing Phase.	Drawing No.	Rev



DA ISSUE

Notes

- 1) Do not scale from drawing, use marked dimensions and levels. To be read in conjunction with all consultants' documentation. Luxitecture. is to be immediately notified of any discrepancies.
- 2) Contractor to verify all dimensions, coordinate services and components prior to commencement of site work or off-site fabrication and installation.
- 3) All construction must be built to minimum requirement set outs by the Building Code of Australia and relevant Australian Standards. Luxitecture. is to be notified immediately of any discrepancies to the above, and confirmation sought.
- 4) Copyright on this drawing and design retained by Luxitecture.

Issue	Description	Date
1	DA ISSUE	13.12.22
2	DA RFI 01	15.08.23
3	DA RFI 02	16.10.23
4	DA RFI 04	02.11.23

www.luxitecture.com.au
anthony@luxitecture.com.au

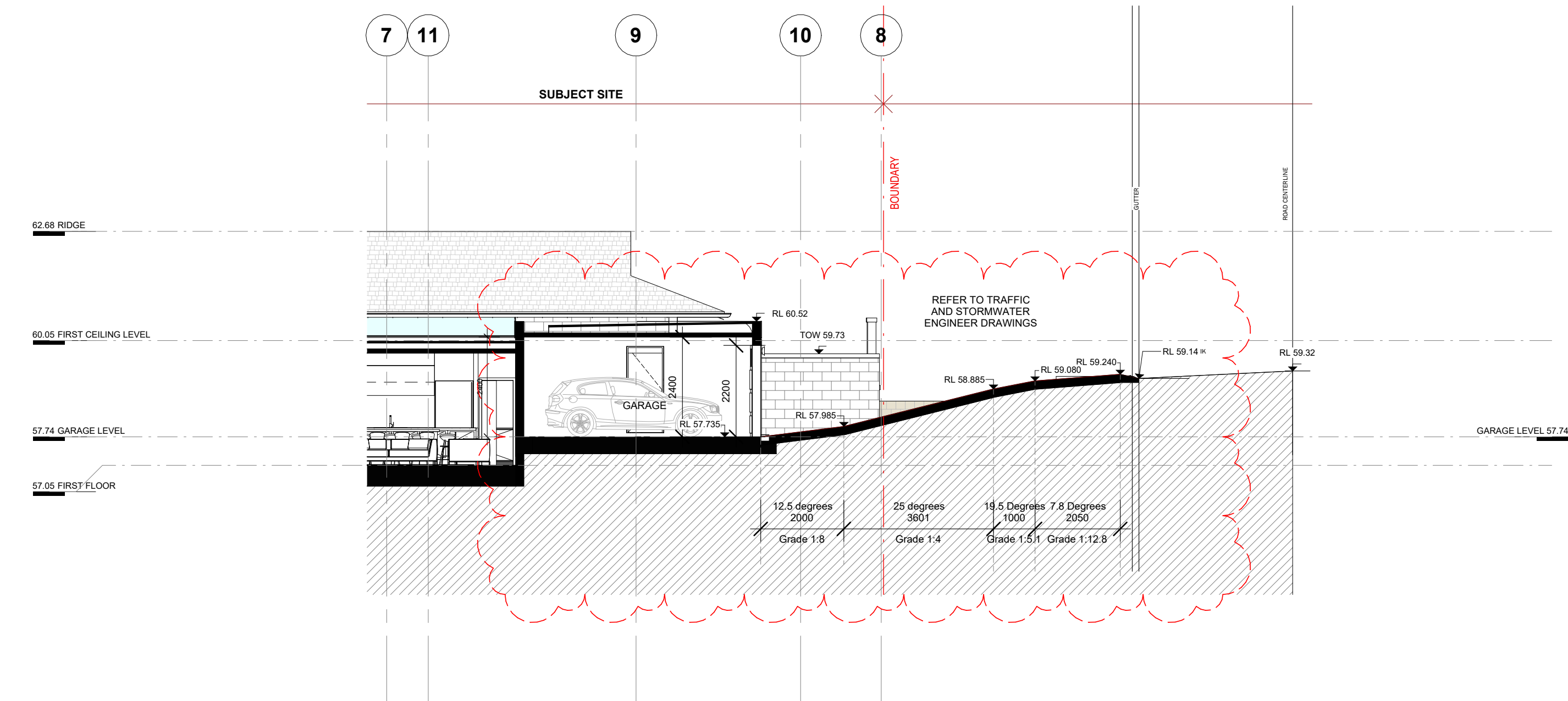
LUXITECTURE

Drawn: JF Checked: AM

True North

Project
2129 SEAFORTH
Client
ADAM MCDOUGALL
Address
30 ABERNETHY STREET SEAFORTH

Drawing Title DRIVEWAY PLAN			
FOR DEVELOPMENT APPLICATION			
Scale 1:50	@A3	Date: 02.11.23	
2011 Project no.	DA Drawing Phase.	A508 Drawing No.	4 Rev



1 DRIVEWAY SECTION
1 : 100

DA ISSUE

Notes

- 1) Do not scale from drawing, use marked dimensions and levels. To be read in conjunction with all consultants' documentation. Luxitecture. is to be immediately notified of any discrepancies.
- 2) Contractor to verify all dimensions, coordinate services and components prior to commencement of site work or off-site fabrication and installation.
- 3) All construction must be built to minimum requirement set outs by the Building Code of Australia and relevant Australian Standards. Luxitecture. is to be notified immediately of any discrepancies to the above, and confirmation sought.
- 4) Copyright on this drawing and design retained by Luxitecture.

Issue	Description	Date
1	DA ISSUE	13.12.22
2	DA RFI 01	15.08.23
3	DA RFI 02	16.10.23
4	DA RFI 04	02.11.23

www.luxitecture.com.au
anthony@luxitecture.com.au

LUXITECTURE

True North

Drawn: JF

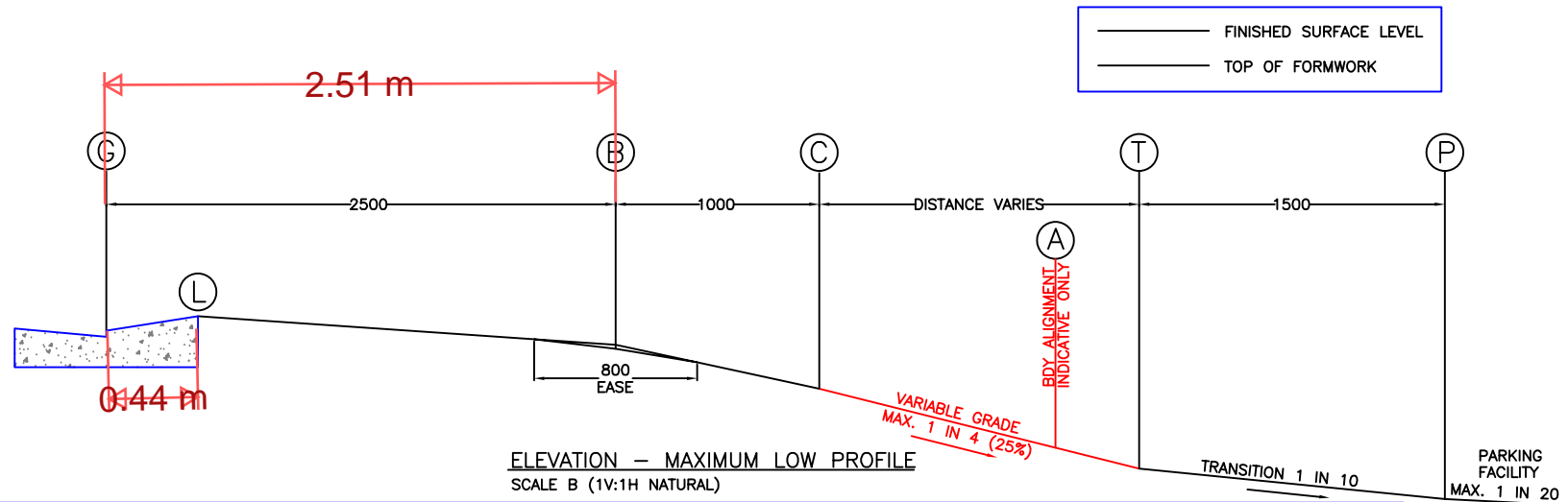
Checked: AM

Project
**2129
SEAFORTH**
Client
ADAM MCDOUGALL
Address
**30 ABERNETHY STREET
SEAFORTH**

Drawing Title DRIVEWAY SECTION			
FOR DEVELOPMENT APPLICATION			
Scale 1: 100 @A3	Date: 02.11.23		
2011	DA	A509	4
Project no.	Drawing Phase.	Drawing No.	Rev



**ANNEXURE B: COUNCIL STANDARD DRAWING
(1 SHEET)**



DRIVEWAY SET-OUT SCHEDULE

POINT	REMARK	LEVELS
G	GUTTER INVERT	DRIVEWAY CROSSING SET-OUT POINT
L	REAR OF LAYBACK	100mm ABOVE GUTTER INVERT (MAY BE ALTERED AT COUNCIL'S DISCRETION)
B	2500mm FROM GUTTER INVERT	60mm BELOW GUTTER INVERT TO TOP OF FORMWORK.
		FINISHED LEVEL TO BE 20mm BELOW FORMWORK BY USE OF AN 800mm EASE CENTRALISED ABOUT POINT B
C	3500mm FROM GUTTER INVERT	255mm BELOW GUTTER INVERT
A	BOUNDARY ALIGNMENT	PLACE 10mm EXPANSION JOINT. CONTINUE CROSSING GRADIENT BETWEEN POINTS C AND T
T	1500mm BEFORE PARKING FACILITY	PROVIDE TRANSITIONAL SLOPE 1V:10H OVER 1500mm WHICH MAY BE PARTIALLY OR WHOLLY ON ROAD RESERVE
P	PARKING FACILITY	MAXIMUM GRADE PARALLEL TO ANGLE OF PARKING 1V:20H. FOR ANY OTHER DIRECTION 1V:16H

CONCRETE DRIVEWAY NOTES

- LAYBACK AND GUTTER SHALL BE CONSTRUCTED IN PLAIN CONCRETE AND FINISHED WITH A STEEL TROWEL.
- THE MINIMUM COMPRESSIVE STRENGTH FOR DRIVEWAYS SHALL BE 25MPa AT 28 DAYS. FOR COMMERCIAL OR INDUSTRIAL DRIVEWAYS THE SLAB DEPTH SHALL BE INCREASED TO MINIMUM OF 180mm WITH SL82 STEEL MESH AND TOP COVER OF 30mm.
- THE SUBGRADE SHALL BE EVENLY COMPACTED USING A VIBRATORY COMPACTION EQUIPMENT UNTIL IT SHOWS NO SIGNS OF MOVEMENT, OR AS DIRECTED BY COUNCIL.
- ALL VEHICLE CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LEVELS AND SPECIFICATION ISSUED BY COUNCIL AND MUST COMPLY WITH AS/NZS 2890.1:2004 "OFF STREET CAR PARKING" CODE.
- ALL KERBING SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWINGS AND SPECIFICATION ISSUED BY COUNCIL.
- WHERE COUNCIL OR ITS REPRESENTATIVE DIRECTS THAT THE GUTTER IS TO BE RETAINED, THE CONTRACTOR IS TO PLACE A 75mm DEEP SAW CUT IN THE GUTTER INVERT AND REMOVE THE KERB AND/OR LAYBACK.
- WHERE COUNCIL OR ITS REPRESENTATIVE DIRECTS THAT THE GUTTER IS TO BE REMOVED, A ROAD OPENING PERMIT OR APPLICATION IS TO BE OBTAINED PRIOR TO COMMENCEMENT OF WORKS.
- THE CONSTRUCTION OF ALL VEHICLE CROSSINGS AND ASSOCIATED WORKS MUST BE PERFORMED BY A COUNCIL APPROVED CONTRACTOR.
- SAWCUT 500mm ASPHALT STRIP AND MATCH IN LAYBACK WITH ROAD SURFACE TO SMOOTH TRANSITION.

VEHICLE CROSSING CONSTRUCTION NOTES

- AT LEAST 48 HOURS' NOTICE OF INTENTION SHALL BE GIVEN TO COUNCIL ENGINEER TO POUR CONCRETE WITHIN THE ROAD RESERVE AND NO CONCRETE SHALL BE PLACED UNTIL THE FORMWORK HAS BEEN APPROVED AND AN INSPECTION NOTICE ISSUED.
- ALL DISTURBED AREAS OF THE FOOTPATH ADJACENT TO THE VEHICLE CROSSING SHALL BE TURFED AND FINISHED LEVEL WITH THE CONCRETE SURFACE. RAISED EDGES ARE UNACCEPTABLE.
- THE ROAD ADJOINING THE VEHICLE CROSSING SHALL BE BATTERED AND TURFED AT A MAXIMUM GRADIENT OF 1V:6H OR AS DIRECTED BY COUNCIL.
- CONCRETE FOOTPATH ADJUSTMENTS SHALL BE IN ACCORDANCE WITH COUNCIL'S SPECIFICATION AND SATISFACTION.
- THE SUBGRADE MUST BE THOROUGHLY COMPACTED BY THE USE OF VIBRATORY COMPACTION EQUIPMENT UNTIL IT SHOWS NO SIGNS OF MOVEMENT, OR AS DIRECTED BY COUNCIL.
- VEHICLE CROSSING SLABS MUST BE POURED IN PLAIN CONCRETE. SLAB SURFACE MUST BE COVE FINISHED (OR EQUIVALENT) AND EDGES TO BE FINISHED WITH A 50mm MARGIN.
- ALL CHANGES IN GRADE SHALL BE SCREEDED TO ENSURE NO RIGID/SHARP TRANSITIONS.
- THE MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 25MPa AT 28 DAYS.
- THE MINIMUM THICKNESS OF CONCRETE SHALL BE AS FOLLOWS:
 - SINGLE RESIDENTIAL DWELLING: 130mm THICK REINFORCED WITH SL72 MESH PLACED 30mm BELOW TOP OF CONCRETE SLAB
 - MULTI-UNIT RESIDENTIAL: 150mm THICK REINFORCED WITH SL82 MESH PLACED 30mm BELOW TOP OF CONCRETE SLAB
 - COMMERCIAL OR INDUSTRIAL: 180mm THICK REINFORCED WITH SL82 MESH PLACED 30mm BELOW TOP OF CONCRETE SLAB
- THE VEHICLE CROSSING UP TO 2400mm FROM THE GUTTER INVERT SHALL BE GRADED PARALLEL WITH THE ROAD CENTRELINE.
- THE VEHICLE CROSSING SHALL BE CONSTRUCTED PERPENDICULAR TO THE ROAD PAVEMENT UNLESS OTHERWISE INSTRUCTED BY COUNCIL.
- THE CONSTRUCTION OF ALL VEHICLE CROSSINGS AND ASSOCIATED WORKS ON THE ROAD RESERVE MUST BE COMPLETED BY A COUNCIL APPROVED CONCRETE CONTRACTOR.
- NO TREE ROOTS GREATER THAN 50mm IN DIAMETER ARE TO BE REMOVED UNLESS AUTHORISED BY A QUALIFIED ARBORIST.
- ANY ROOTS APPROVED FOR REMOVAL SHALL BE CLEAN CUT WITH SHARP TOOLS SUCH AS SECATEURS, PRUNERS, HANDSAWS, CHAINSAWS OR SPECIALISED ROOT PRUNING EQUIPMENT.

IMPORTANT DRIVEWAY DESIGN NOTES:

- THE STANDARD DRIVEWAY PROFILES SHOWN MAY NOT SUIT ALL TERRAIN CONDITIONS.
- THESE STANDARD DRIVEWAY PROFILES MAY NEED TO BE MODIFIED TO SUIT.
- THE STANDARD DRIVEWAY PROFILES SHOWN MAY NOT TAKE INTO CONSIDERATION CONNECTING FOOTPATHS WHERE THE FOOTPATH MEETS THE DRIVEWAY. FOR DISABLED ACCESSIBILITY, A SECTION OF THE DRIVEWAY MAY NEED TO BE DESIGNED WITH A MAXIMUM 2.5% CROSS-FALL GRADED TOWARDS THE KERB OR ROAD SIDE. ALSO THE STANDARD DRIVEWAY PROFILES SHOWN HAS NOT BEEN DESIGNED TO ACCOMMODATE ANY SPECIAL NEEDS, FOR EXAMPLE, IN A FLOOD PLANNING AREA WHERE A MINIMUM FREE BOARD CREST IS REQUIRED TO PROTECT THE PARKING FACILITY.
- WHERE MODIFICATION OF THE DRIVEWAY IS REQUIRED TO MEET EXISTING OR PROPOSED CROSS FALLS OR LEVELS, THE FINAL DESIGN PROFILE MUST BE CHECKED AGAINST THE AUSTRALIAN STANDARD AS/NZS 2890.1:2004 "OFF STREET CAR PARKING" CODE FOR SCRAPING AND BOTTOMING USING THE 85TH PERCENTILE PASSENGER VEHICLE.
- THE DESIGNER WILL NEED TO LIAISE WITH COUNCIL TO DEVELOP A SUITABLE DESIGN SOLUTION.

1	16/06/22	INITIATE DRAWINGS	JM	DATE: 16/06/2022	INITIALS
No	DATE	AMENDMENTS			

LEVEL DATUM: AHD	PLOT DATE: 07/07/2022	DESIGN APPROVED	APPROVED FOR CONSTRUCTION
CO-ORD SYSTEM: N.A.	PRELIMINARY	DRAWN BY: THOMAS LAU	PROJ. MGR: N.A.
SURVEYED: N.A.	DATED: 20/04/18	DATED: 20/04/18	DATE: (*/*/****)
WORK-AS-EXECUTED	BY: N.A.	INITIATED BY: STEVE WATSON	APPROVED BY: THOMAS LAU
		(ASSET MANAGER)	PRINCIPAL ENGINEER

A	0 0.10 0.20 0.30 0.40 0.50	METRES 1:20 ● A3
B	0 0.2 0.4 0.6 0.8 1	METRES 1:40 ● A3
C	0 0.5 1.0 1.5 2.0 2.5	METRES 1:100 ● A3

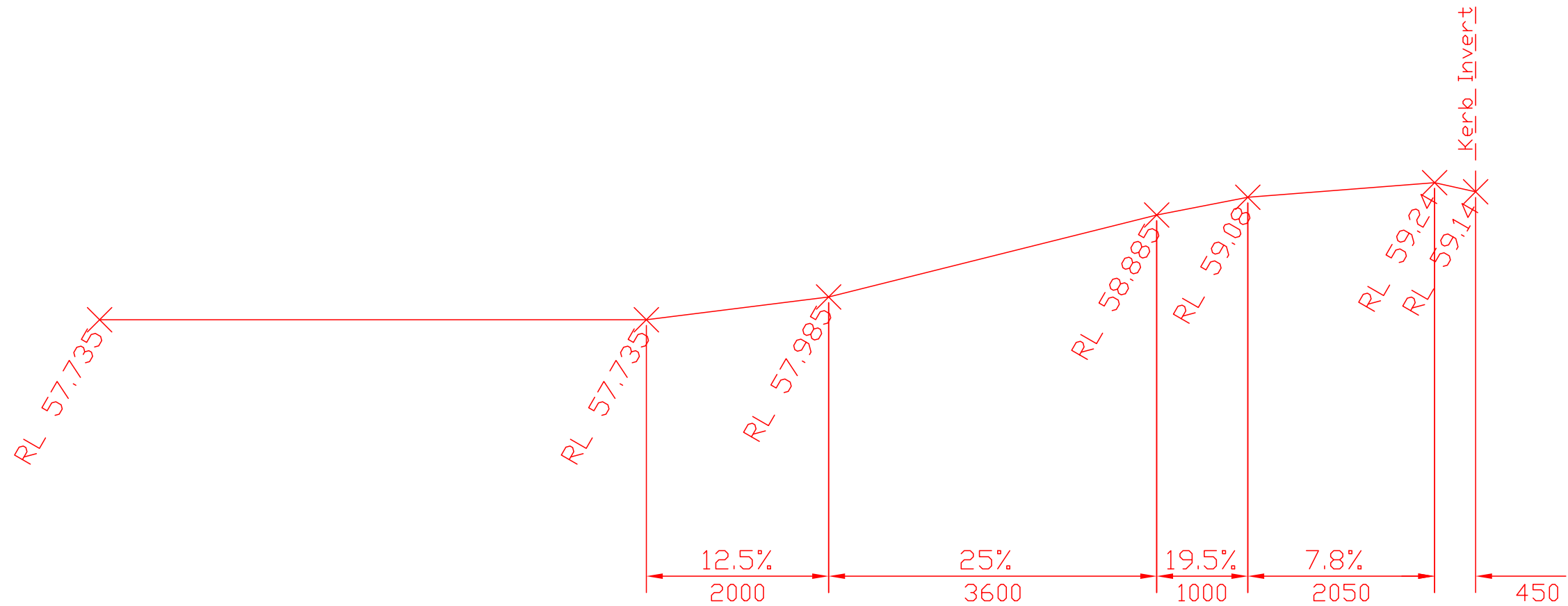


STANDARD DRAWINGS
DRIVEWAY PROFILE - MAXIMUM LOW (ML)

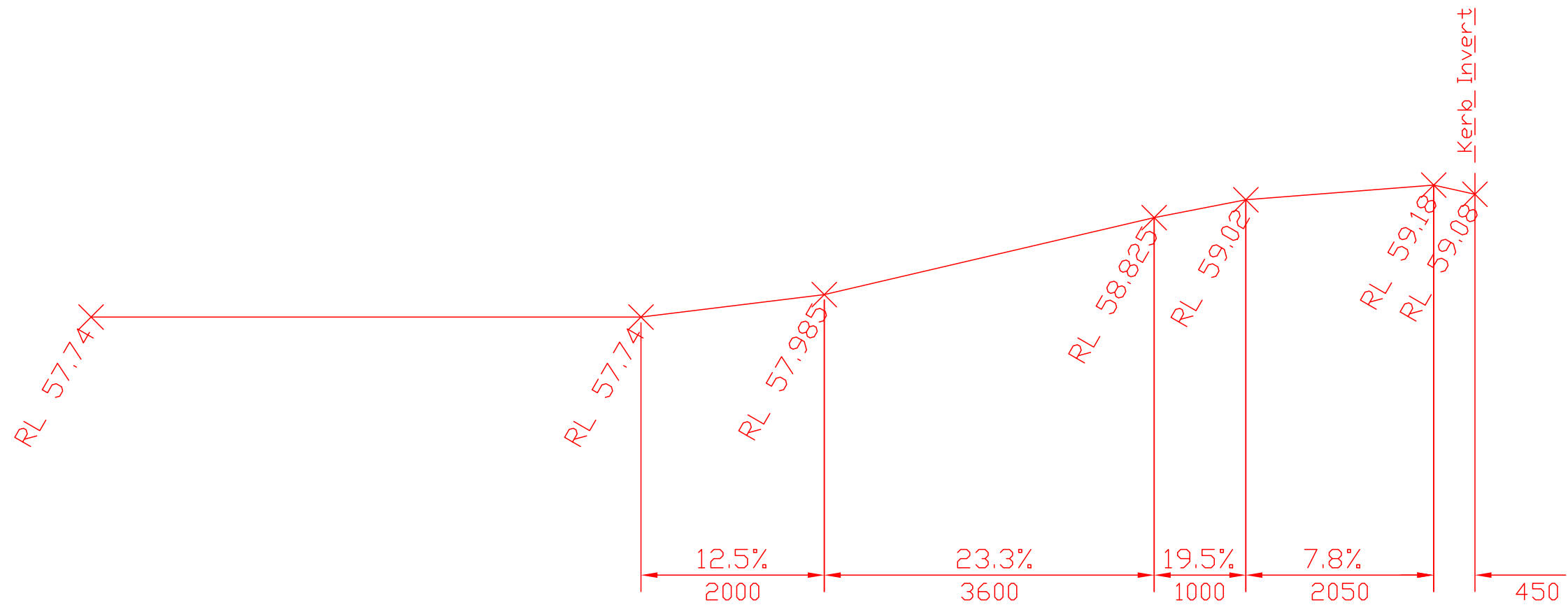
DRAWING NO. 1



**ANNEXURE C: DRIVEWAY SECTION PLANS
(1 SHEET)**



Driveway Section - Southern Edge



Driveway Section - Northern Edge



MCLAREN TRAFFIC ENGINEERING
A division of RAMTRANS Australia Pty. Ltd.
Shop 7, 716-720 Old Princes Hwy, Sutherland NSW 2232
P : (02) 9521 - 7199
E : admin@mclarentraffic.com.au
www.mclarentraffic.com.au

CLIENT / Project:
Luxitecture / Seaforth Home

Project Address:
30 Abernathy St, Seaforth

Notes:
CONCEPT PLAN ONLY.
NOT FOR CONSTRUCTION.
Scale 1:60 @ A3

Tested Using:
*AutoTURN 10
*ZWCAD 2019

Drawing Title:
Driveway Ramp Profile

Project No: 2023/936
Drawing No: 2023-936-01-02A

Revision	Date	Details
A	3/11/23	

