

Our Ref: 22032

28 March 2022

Skycorp Construction Group
PO Box 330 Gladesville
NSW 1675

Attention: Jason Khouri

**RE: 45 MOBBS LANE, CARLINGFORD
ASSESSMENT OF DRIVEWAY ISSUES**

As requested, we have undertaken a review of the above site and in particular the Parramatta Local Planning Panel's reasons for refusal which I have repeated below.

REASONS FOR MAJORITY DECISION

1. Whilst the Panel acknowledges that the amended plans provide suitable design for the childcare use on the site in terms of streetscape presentation and meeting the character of the residential area, the majority of the panel do not find the site suitable for the use on traffic safety terms namely:

- the large amount of fast travelling road traffic on Mobbs Lane; the site being situated near to the crest of a hill – with resulting poor visibility.*
- the reliance on basement parking is unsatisfactory and the operators cannot guarantee use of the basement area by parents; the likelihood of queuing of vehicles entering the basement area.*
- the safety concerns relating to parents parking on the opposite (southern) side of Mobbs Lane and attempting to cross the busy road with young children for drop-off at the centre.*
- the uncertainty of the Local Traffic Committee's decision.*

2. The Traffic Management Plan provided by the applicant is considered insufficient to deal with the serious traffic challenges raised by this location.

3. The traffic safety concerns of the Panel and the local residents have not been sufficiently met by the proposed conditions of consent or the applicant's proposal.

I have considered the issues raised and have responded to each below.

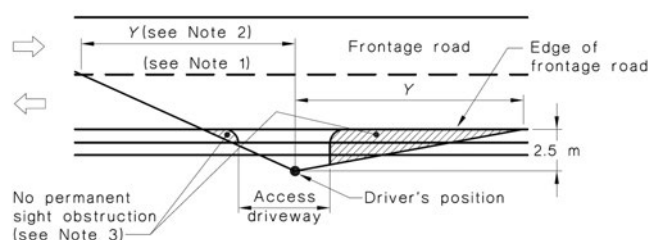
- **The large amount of fast travelling road traffic on Mobbs Lane; the site being situated near to the crest of a hill – with resulting poor visibility.**

I note the speed is posted 50km/h and TTPP has undertaken traffic counts and speed readings of the Mobbs Lane on the approach to the site (See Annexure A). This confirms that the 85ile speed is 53km/h.

TTPP has clarified the sight distance required by the various standards.

AS2890.1 (2004) Sight Distance Requirements

This is the sight distance required for a driveway according to the Australian Standard. As this is a driveway and not a road, the provision of this satisfies the sight distance requirements



Frontage road speed (Note 4) km/h	Distance (Y) along frontage road m		
	Access driveways other than domestic (Note 5)		Domestic property access (Note 6)
	Desirable 5 s gap	Minimum SSD	
40	55	35	30
50	69	45	40
60	83	65	55
70	97	85	70
80	111	105	95
90	125	130	Use values from 2 nd and 3 rd columns
100	139	160	
110	153	190	

Minimum Gap Sight Distance

Minimum gap sight distance (MGSD) is based on distances corresponding to the critical acceptance gap that drivers are prepared to accept when undertaking a crossing or turning manoeuvre into a road.

Table 3.5: Critical acceptance gaps and follow-up headways

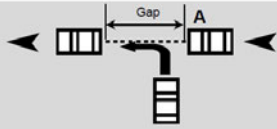
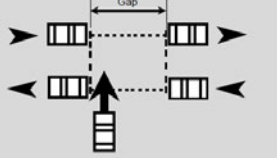
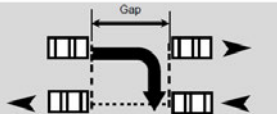
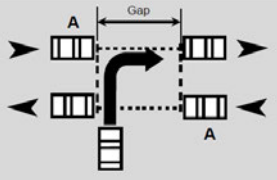
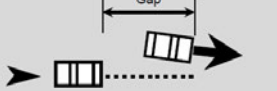
Movement	Diagram	Description	$t_a^{(1)}$ (sec)	$t_f^{(2)}$ (sec)
Left turn		Not interfering with A Requiring A to slow	14–40 5	2–3 2–3
Crossing		Two lane/one way Three lane/one way Four lane/one way Two lane/two way Four lane/two way Six lane/two way	4 6 8 5 8 8	2 3 4 3 5 5
Right turn from major road		Across one lane Across two lanes Across three lanes	4 5 6	2 3 4
Right turn from minor road		Not interfering with A One way Two lane/two way Four lane/two way Six lane/two way	14–40 3 5 8 8	3 3 3 5 5
Merge		Acceleration lane	3	2

Table 3.6: Table of minimum gap sight distances ('D' metres) for various speeds

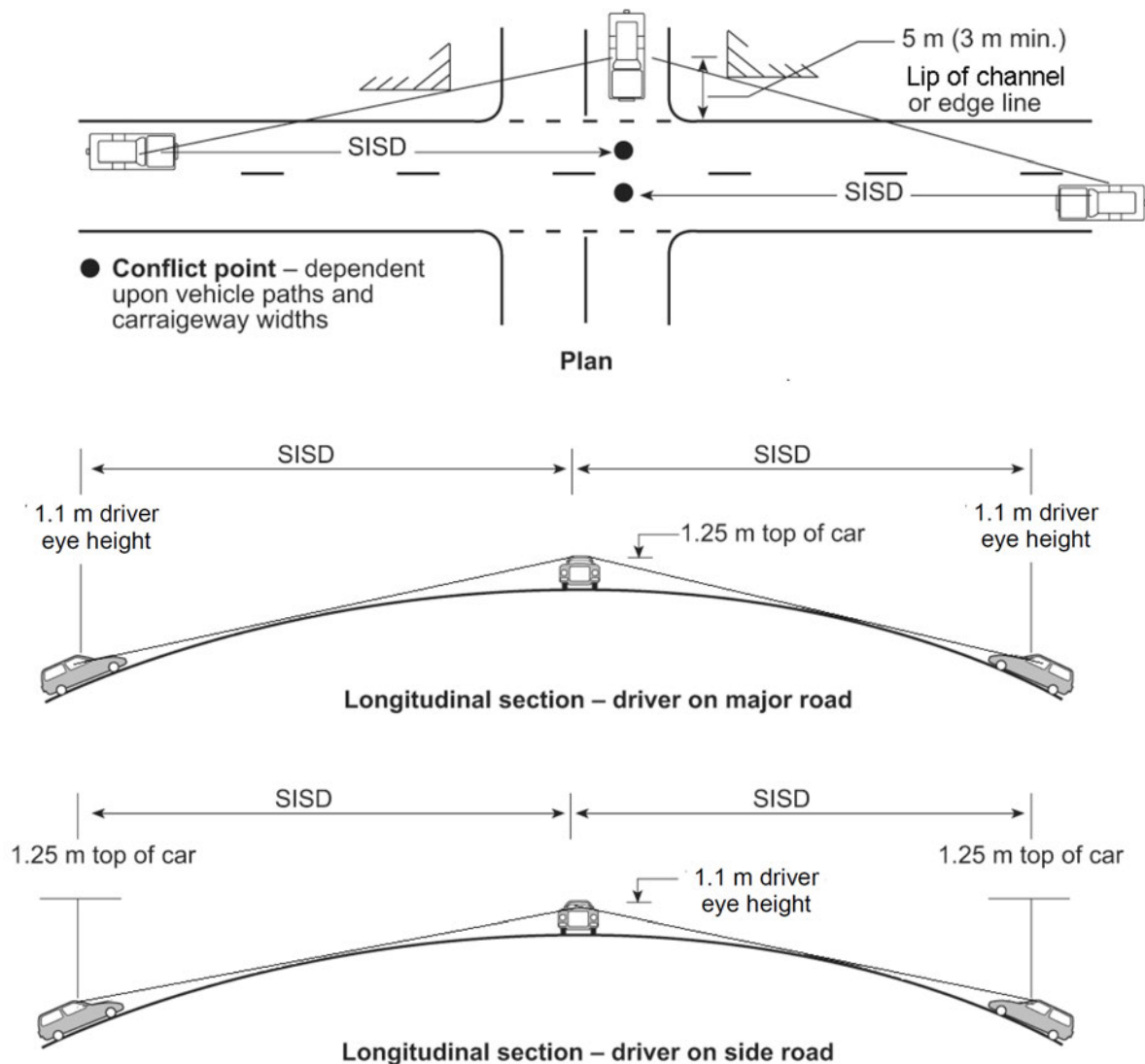
Critical gap acceptance time (t_a) (secs)	85 th percentile speed of approaching vehicle (km/h)										
	10	20	30	40	50	60	70	80	90	100	110
4	11	22	33	44	55	67	78	89	100	111	122
5	14	28	42	55	69	83	97	111	125	139	153
6	17	33	50	67	83	100	117	133	150	167	183
7	19	39	58	78	97	117	136	155	175	194	214
8	22	44	67	89	111	133	155	178	200	222	244
9	25	50	75	100	125	150	175	200	225	250	275
10	28	56	83	111	139	167	194	222	250	278	305

This correlates exactly with the requirement in the Australian Standard.

Safe Intersection Sight Distance (SISD)

SISD is the minimum sight distance which should be provided on the major road at any intersection at a height of 1.25m. It is noteworthy that this requirement is for an intersection rather than a driveway although the Austroads document says that this requirement can be used as the basis of assessments at busy driveways.

Figure 3.2: Safe intersection sight distance (SISD)



An additional “correction” distance is added for downhill gradients which is shown below

Table 3.2: Safe intersection sight distance (SISD) and corresponding minimum crest vertical curve size for sealed roads ($S < L$)

Design speed (km/h)	Based on safe intersection sight distance for cars ⁽¹⁾ $h_1 = 1.1$; $h_2 = 1.25$, $d = 0.36^{(2)}$; Observation time = 3 sec					
	$R_T = 1.5 \text{ sec}^{(3)}$		$R_T = 2.0 \text{ sec}$		$R_T = 2.5 \text{ sec}$	
	SISD (m)	K	SISD (m)	K	SISD (m)	K
40	67	4.9	73	6	–	–
50	90	8.6	97	10	–	–
60	114	14	123	16	–	–
70	141	22	151	25	–	–
80	170	31	181	35	–	–
90	201	43	214	49	226	55
100	234	59	248	66	262	74
110	–	–	285	87	300	97
120	–	–	324	112	341	124
130	–	–	365	143	383	157

- ¹ If the average grade over the braking length is not zero, calculate the safe intersection sight distance (SISD) values using the correction factors in Table 3.4 (or use Equation 2) by applying the average grade over the braking length.
- ² A coefficient of deceleration of greater than 0.36 is not provided in this table. The provision of SISD requires more conservative values than for other sight distance models (e.g. the stopping sight distance model allows values up to 0.46 in constrained situations). This is because there is a much higher likelihood of colliding with hazards at intersections (that is, other vehicles). Comparatively, there is a relatively low risk of hitting a small object on the road (the stopping sight distance model).
- ³ A 1.5 sec reaction time is only to be used in constrained situations where drivers will be alert. Typical situations are given in Table 4.2 of AGRD Part 3 (Austroads 2016b). The general minimum reaction time is 2 sec.

Table 3.4: Grade corrections to ASD and SISD (cars)

Design speed (major road) (km/h)	Correction (m)							
	Upgrade				Downgrade			
	2%	4%	6%	8%	2%	4%	6%	8%
40	–1	–2	–2	–3	1	2	3	5
50	–1	–3	–4	–5	2	3	5	8
60	–2	–4	–6	–7	2	5	8	11
70	–3	–5	–8	–10	3	7	11	15
80	–4	–7	–10	–13	4	9	14	20
90	–5	–9	–13	–16	5	11	18	25
100	–6	–11	–16	–20	6	14	22	31
110	–7	–13	–19	–24	8	17	26	38
120	–8	–16	–22	–29	9	20	31	45
130	–10	–18	–26	–34	11	23	37	53

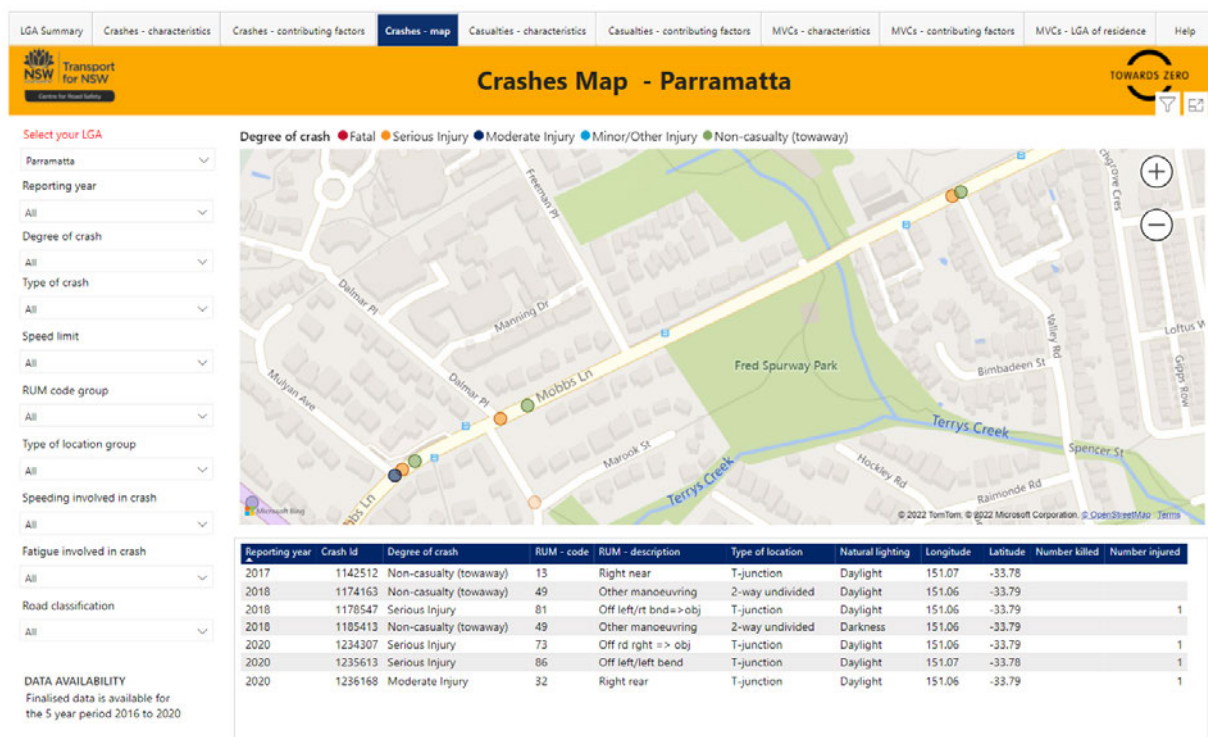
The analysis of these sight distances, contained at **Annexure B** confirms that the available AS2890.1 driveway sight distance and MGSD can be adequately provided but the SISD is marginally compromised by the profile of the road.

In summary, the sight distance for a driveway is met, as is the MGSD but the more onerous Safe Intersection Sight distance cannot be achieved but I would suggest that this driveway is not an intersection and so this standard need not be applied.

It is noted that the presence of parked cars to the west will block the sight distance but this would occur at any site where kerbside parking is present. However, we note that the Condition 32 recommended that "No Stopping" signs are required to be placed on the road to the west of the site" which would resolve this issue. We recognise that this would be subject to traffic committee approval but I would anticipate that the provision of signs to improve road safety should not be too controversial.

Finally, we note that the TEF traffic report included a crash analysis up until the end of 2018 which showed that there were no crashes in the vicinity of the site.

TTPP has updated this data to the end of 2020 (which is the latest available) and this continues to confirm that there are no crashes in the close vicinity of the proposed driveway.



- the reliance on basement parking is unsatisfactory and the operators cannot guarantee use of the basement area by parents; the likelihood of queuing of vehicles entering the basement area.

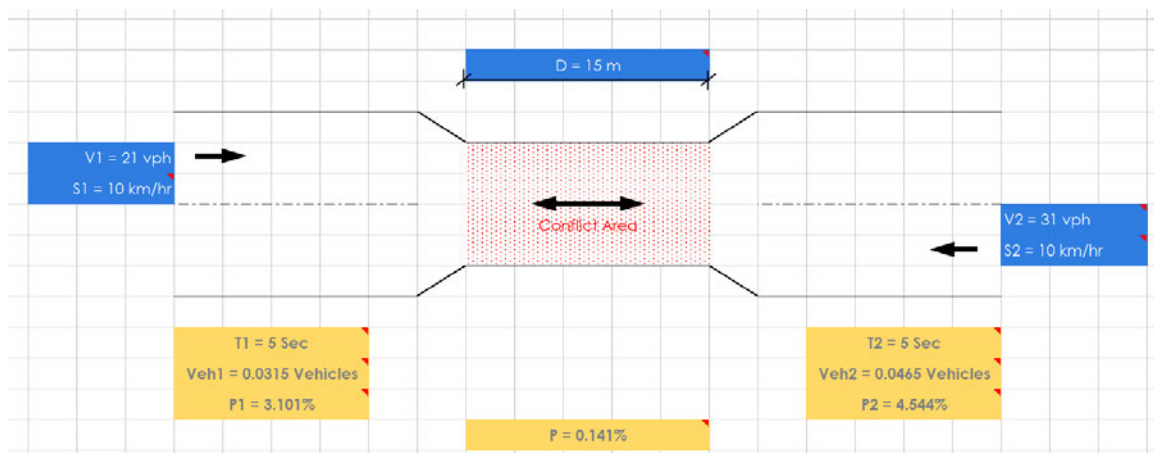
Most Councils DCP's insist on all parking being provided on site so I find it unusual that the panel would suggest that reliance on basement parking is unsatisfactory.

Indeed, Council's DCP says that adequate off-street parking needs to be provided to serve the needs of the development.

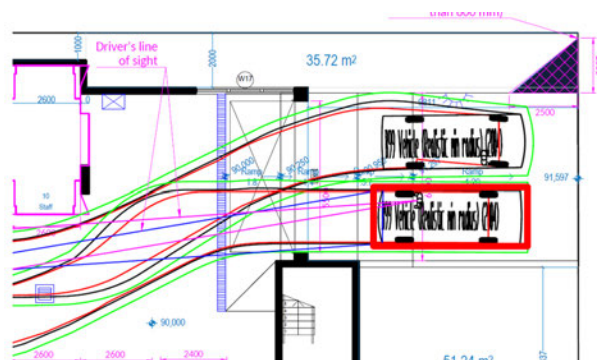
Parking and Vehicular Access

Objectives

- Assuming an inflow of 31 vehicles per hour and an exit flow of 21 per hour (as taken from the traffic report), a speed of 10km/h and a conservative conflict distance of 15m, the chances of any vehicles meeting are about 0.14%



Moreover, there is room for a car to wait within the property boundary if there is a car coming in the opposite direction. So even if there is a conflict, there will not be an operational problem.



- **the safety concerns relating to parents parking on the opposite (southern) side of Mobbs Lane and attempting to cross the busy road with young children for drop-off at the centre.**

As adequate parking is provided on site, there should be no need for parents to park on the far side of the road. The potential issues associated with such parking could be highlighted and managed in the operational plan of management.

Furthermore, whilst Councils DCP requires parking for one space per 4 children, more recent TfNSW traffic and parking studies on childcare centres have revealed that a childcare site of this size would require only 1 space per 5 children.

The scheme currently provides 56 children with 14 parking spaces – more contemporary guidance would suggest only 12 parking spaces are necessary. Furthermore, an accessible space is provided as is an internal turning bay.

Consequently, whilst the Panel might be thinking that if the car park is full, people will park on-street, it is more likely that the car park will not be full, and people will park in the car park. Again, this can be managed through the management plan by asking all parents to come into the basement.

- ***The Traffic Management plan provided by the applicant is considered insufficient to deal with the serious traffic challenges raised by this location.***
- ***The traffic safety concerns of the Panel and the local residents have not been sufficiently met by the proposed conditions of consent or the applicant's proposal.***

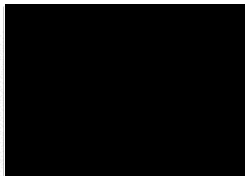
The additional information provided confirms

- that sight distance can be provided in accordance with the Australian Standards,
- there is no crash history in the vicinity of the site
- the proposed condition to introduce no-stopping signs to the west of the driveway is desirable
- more than adequate parking is provided on site so there should be no need for vehicles to park on street

Consequently I believe this letter provided additional information to deal with the issues raised and can give the panel comfort that the key issues have been addressed.

I trust that this is clear but should you have any further queries regarding the above or require further information, please do not hesitate to contact the undersigned on 0422 005405.

Yours sincerely,



Ken Hollyoak
Director

Annexure A – Speed Surveys

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

T. 1300 82 88 82 - F. 1300 83 88 83 - E. traffic@trafficsurvey.com.au - W. www.trafficsurvey.com.au

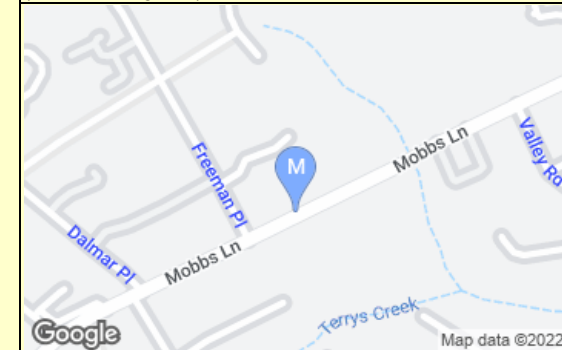
AUTOMATIC COUNT SUMMARY

Street Name :	Mobbs Ln	Location :	Outside Property 37
Suburb :	Carlingford	Start Date :	00:00 Fri 18/February/2022
Machine ID:	MF09QZ37/P	Finish Date :	00:00 Fri 25/February/2022
Site ID:	1980	Speed Zone :	50 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information		Direction of Travel		
Lat 33° 47' 5.73 South Long 151° 3' 55.06 East		Both directions	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average	5,566	2,976	2,590
	7 Day Average	5,287	2,803	2,484
Weekday	AM	08:00	586	354
Peak hour starts	PM	17:00	489	262
Speeds : (Km/Hr)	85th Percentile	53.1	53.7	52.4
	Average	47.0	47.7	46.2
Classification % :	Light Vehicles up to 5.5m	96.1%	95.8%	96.4%

Location

GPS Information [Load Google Map \(internet required\)](#)
(Latitude, Longitude) -33.784924, 151.065294



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

"Traffic behaviour is not the same as pre-pandemic (traditional morning/afternoon peak is much less pronounced and school start/finish times are much more pronounced), the current patterns are close enough to what probably is going to be a 'COVID normal' situation for at least the next year or two. Workplaces are currently not all yet open. These results should be used for indicative assessment only."



Site

[Back to Site Summary Page](#)

Direction

Both directions ▼

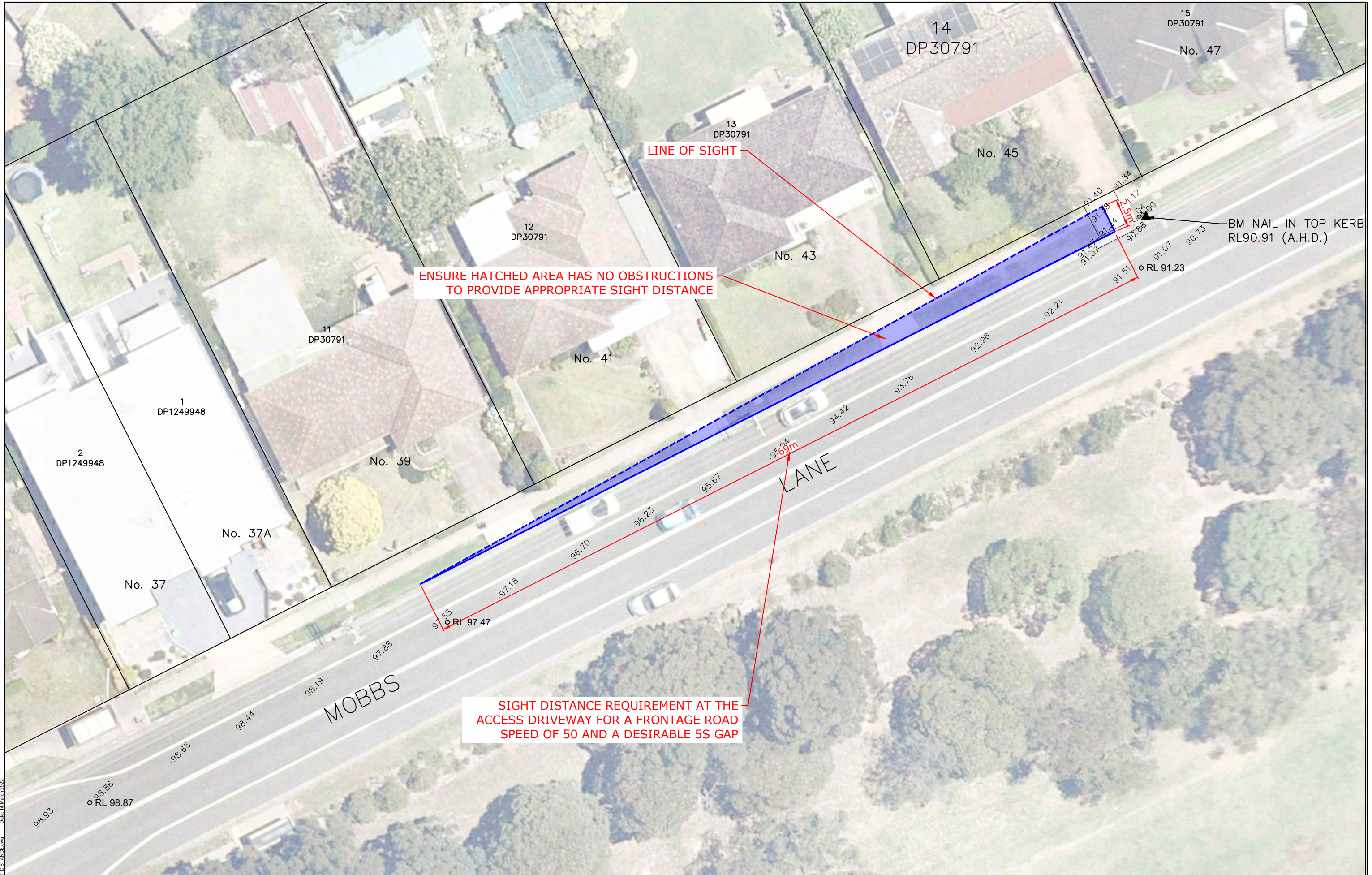
Day

7 Days ▼

Note: #N/A "Modal Speed" means too few data points

Hour Start	Total Vehicles	Average Speed	85th percentile	Modal Speed	Minimum Speed	Maximum Speed	Standard Deviation
00:00	26	45.9	52.1	46	25.8	71.8	6.4
01:00	18	46.3	52.7	45	26.3	68.9	6.3
02:00	12	47.6	53.9	49	31.9	68.0	6.2
03:00	10	47.6	52.8	47	30.2	65.7	5.8
04:00	15	48.0	53.6	47	28.2	67.2	6.2
05:00	55	47.9	54.4	48	21.9	69.8	7.0
06:00	155	47.4	53.5	47	17.4	72.8	6.9
07:00	321	47.3	53.3	47	11.8	71.2	6.7
08:00	474	47.1	53.0	47	12.3	71.5	6.6
09:00	353	47.1	53.2	46	15.6	71.6	6.6
10:00	306	47.0	53.2	46	12.7	72.0	6.5
11:00	295	47.2	53.4	47	17.8	72.8	6.5
12:00	291	47.5	53.8	48	17.7	70.4	6.6
13:00	282	47.3	53.7	47	11.0	70.2	6.9
14:00	324	47.1	53.2	47	13.2	72.6	6.9
15:00	407	47.3	53.2	47	13.7	71.9	6.6
16:00	391	47.2	53.2	47	12.3	73.7	6.6
17:00	450	47.1	53.2	47	9.1	73.7	6.7
18:00	365	46.6	52.6	46	10.5	70.7	6.6
19:00	256	45.5	51.5	46	17.0	71.7	6.6
20:00	183	45.4	51.5	45	23.3	69.6	6.5
21:00	139	46.2	52.6	45	22.1	68.8	6.6
22:00	91	46.9	53.0	46	26.8	70.6	6.5
23:00	47	47.0	52.8	46	14.3	72.7	6.5
Summary	5266	47.0	53.1	47	9.1	73.7	6.5

Annexure B – Sight Distance Drawings



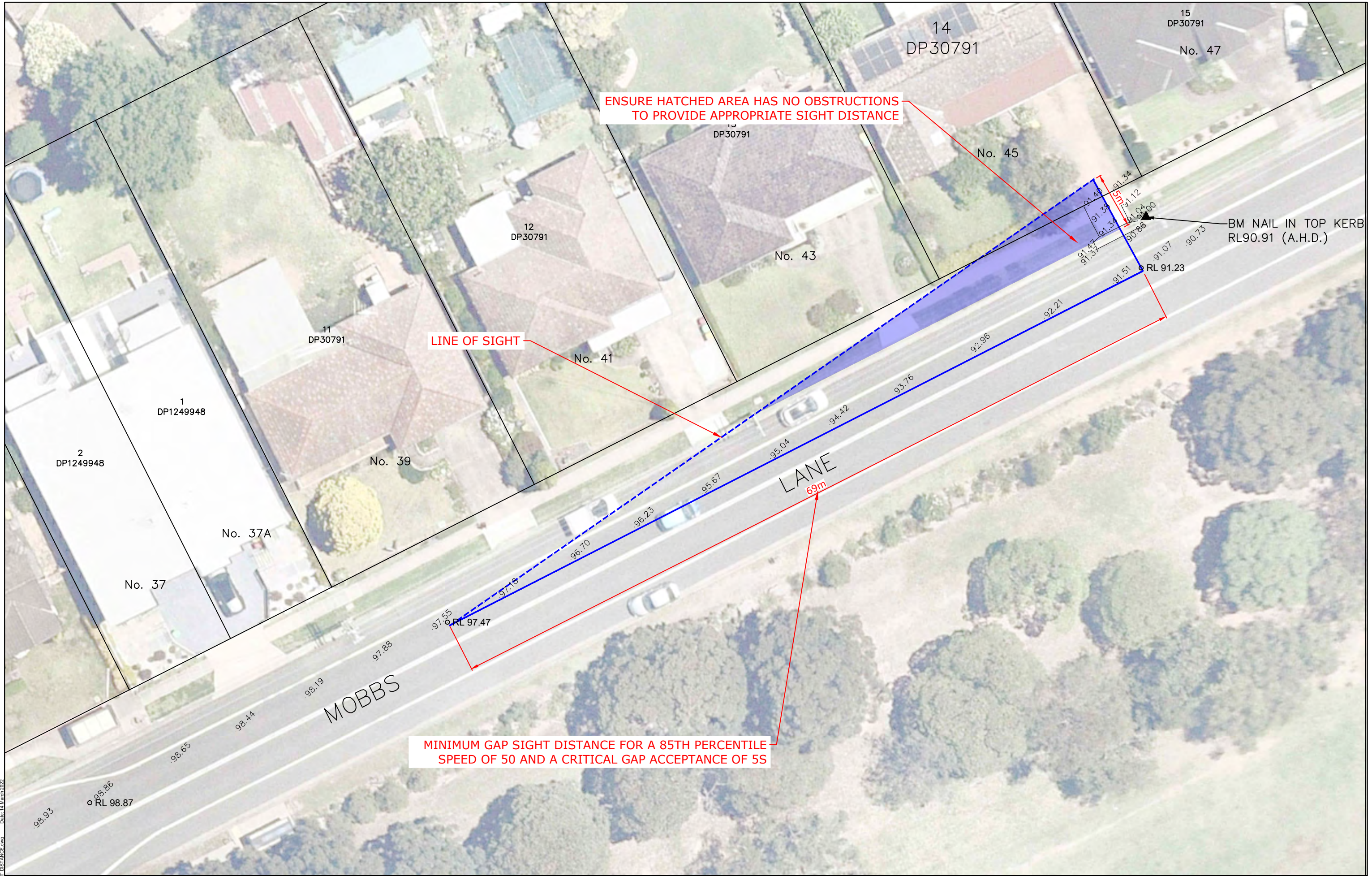
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KH	KH	14/03/22



PROJECT	45 MOBBS LANE, CARLINGFORD		
TITLE	SIGHT DISTANCE REQUIREMENT AT ACCESS DRIVEWAY - HORIZONTAL CHECK		

DWG No.		22032CAD002	
		FIGURE 1	
DATE STAMP		14 MARCH 2022	
PROJECT No.	SCALE	REV.	
22032	1:300 @A3	A	

Filename: 22032CAD002-220314-SIGHT_DISTANCE.dwg Date: 14 March 2022



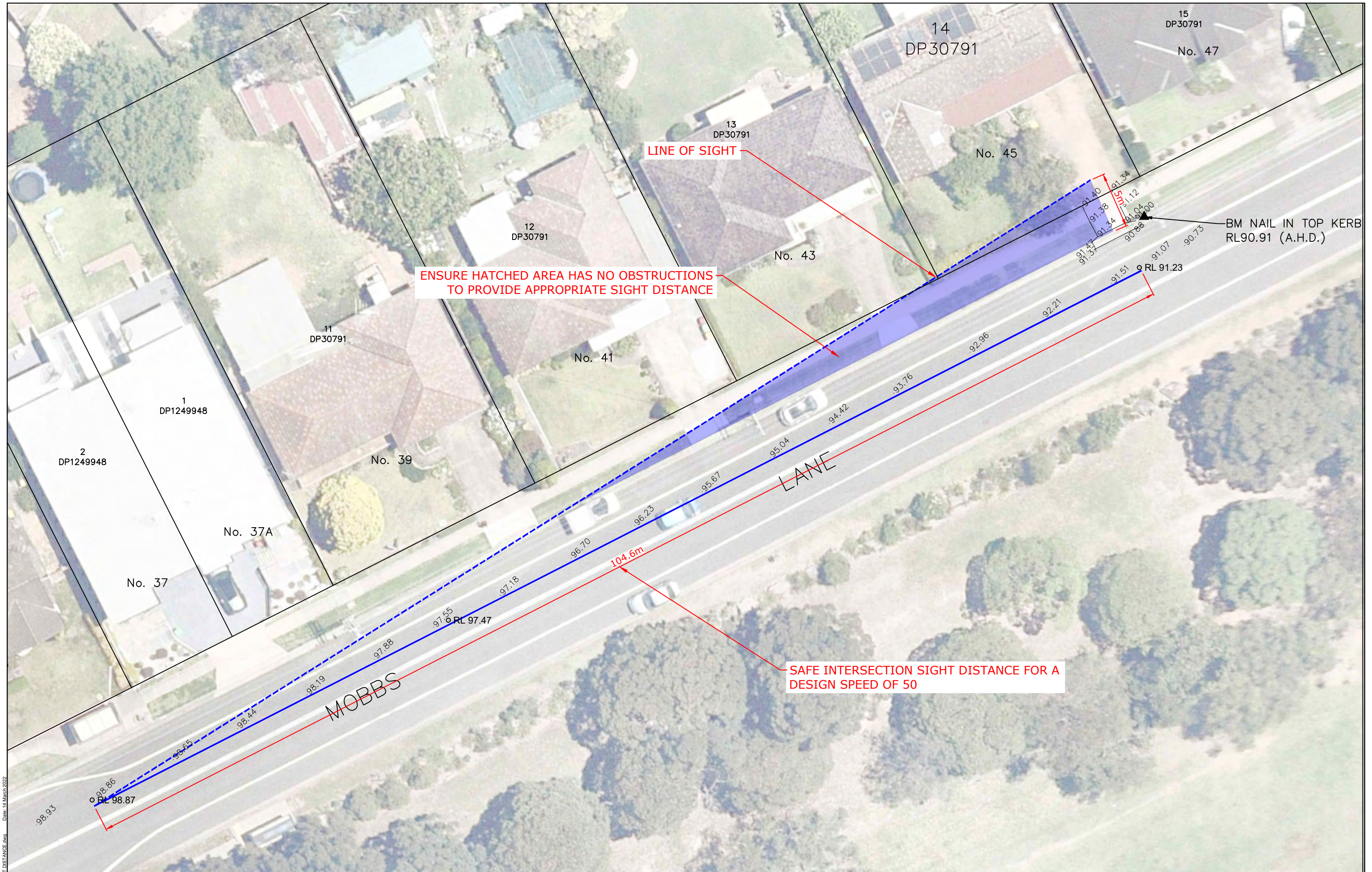
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KH	KH	14/03/22



PROJECT	45 MOBBS LANE, CARLINGFORD		
TITLE	MINIMUM GAP SIGHT DISTANCE - HORIZONTAL CHECK RIGHT TURN FROM MINOR ROAD		

DWG No.		22032CAD002	
		FIGURE 2	
DATE STAMP		14 MARCH 2022	
PROJECT No.	SCALE	REV.	
22032	1:300 @A3	A	

Filename: 22032CAD002-220314-SIGHT_DISTANCE.dwg Date: 14 March 2022



Filename: 22032CAD002-220314-SIGHT_DISTANCE.dwg Date: 14 March 2022

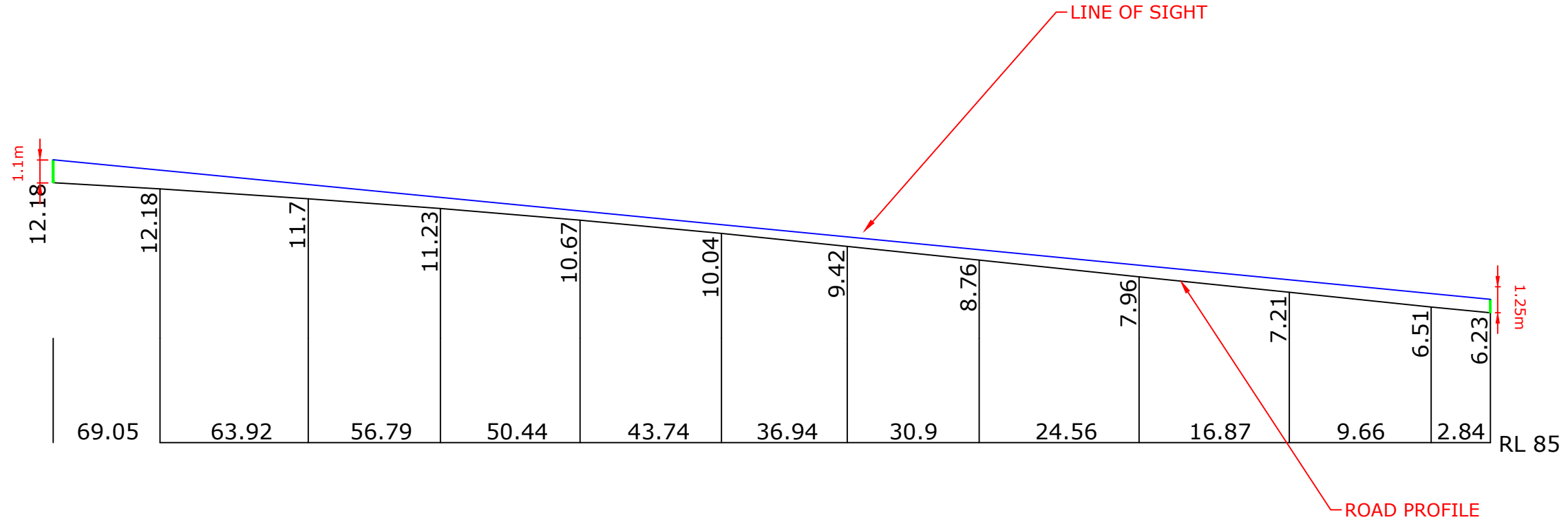
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KH	KH	14/03/22



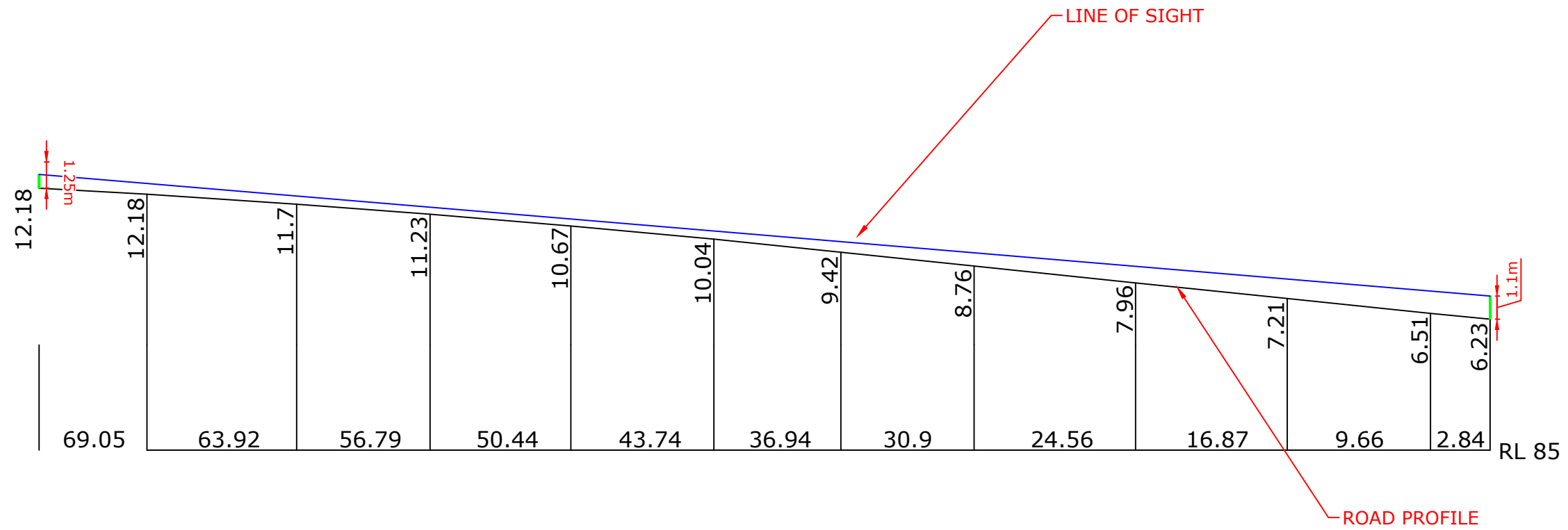
PROJECT	45 MOBBS LANE, CARLINGFORD		
TITLE	SAFE INTERSECTION SIGHT DISTANCE - HORIZONTAL CHECK		


DWG No.		22032CAD002	
		FIGURE 3	
DATE STAMP		14 MARCH 2022	
PROJECT No.	SCALE	REV.	
22032	1:300 @A3	A	

DRIVER ON MAJOR ROAD

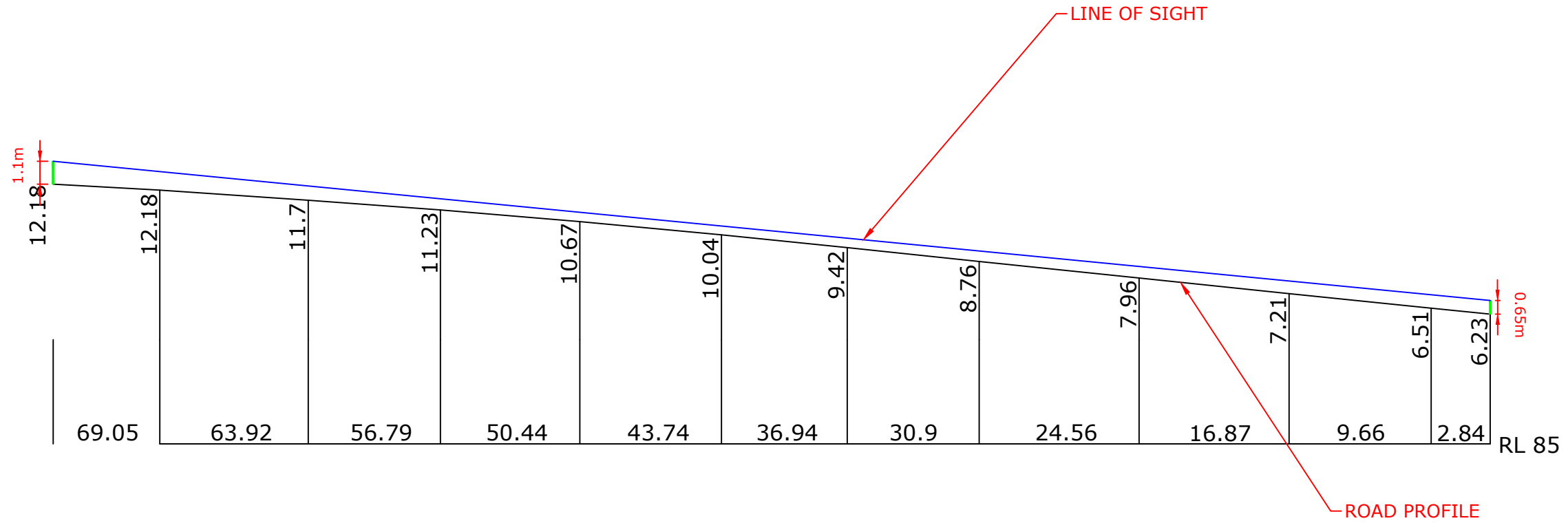


DRIVER ON MINOR ROAD

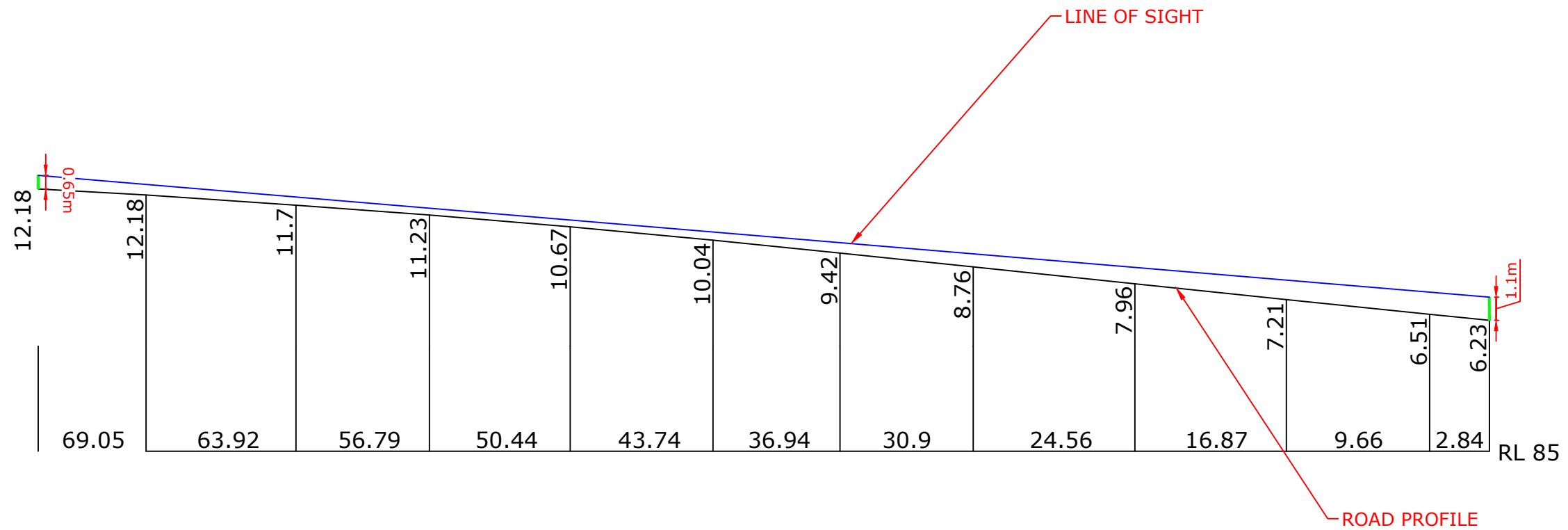


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE		PROJECT	45 MOBBS LANE, CARLINGFORD			DWG No. 22032CAD002 FIGURE 4				
A	ISSUE FOR DISCUSSION	KM	KH	KH	14/03/22		TITLE				SIGHT DISTANCE REQUIREMENT AT ACCESS DRIVEWAY - VERTICAL CHECK			DATE STAMP 14 MARCH 2022	
								PROJECT No. 22032						SCALE 1:250 @A3	REV. A

DRIVER ON MAJOR ROAD



DRIVER ON MINOR ROAD



Filename: 22032CAD002-220314-SIGHT_DISTANCE.dwg Date: 14 March 2022

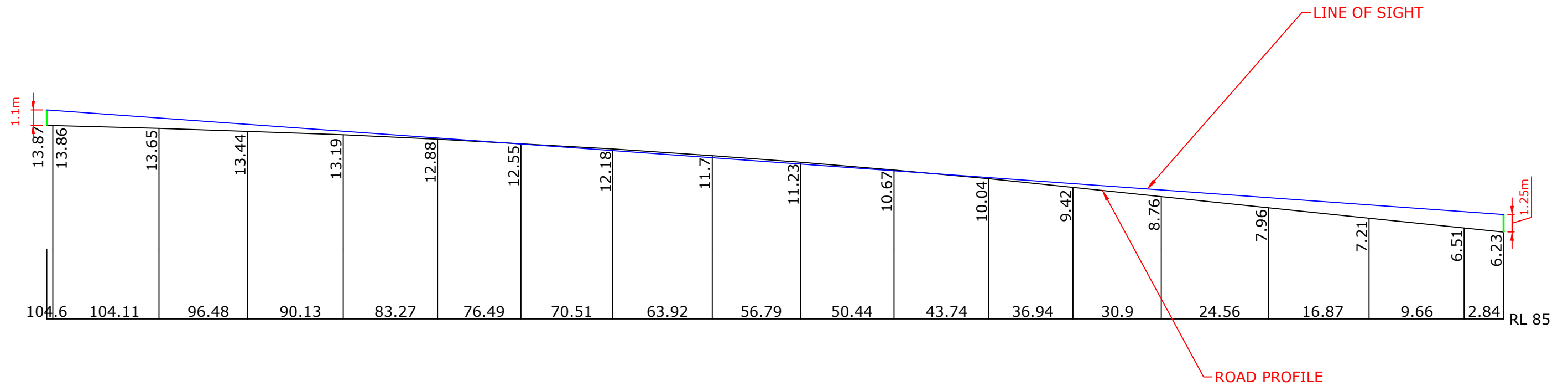
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KH	KH	14/03/22



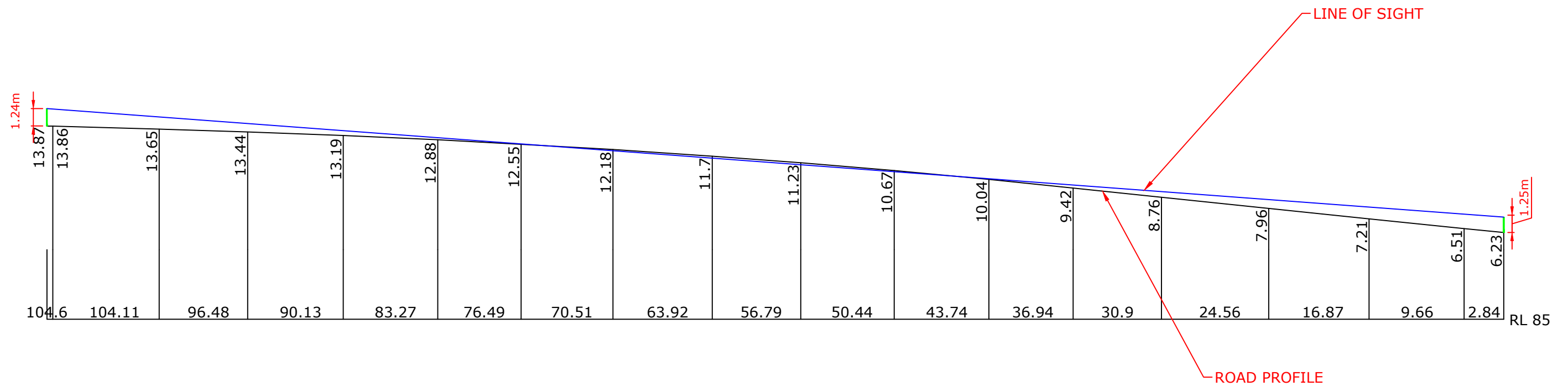
PROJECT	45 MOBBS LANE, CARLINGFORD		
TITLE	MINIMUM GAP SIGHT DISTANCE - VERTICAL CHECK		

DWG No. 22032CAD002	
FIGURE 5	
DATE STAMP 14 MARCH 2022	
PROJECT No. 22032	SCALE 1:250 @A3
REV. A	

DRIVER ON MAJOR ROAD



DRIVER ON MINOR ROAD



Filename: 22032CAD002-220314-SIGHT_DISTANCE.dwg Date: 14 March 2022

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KH	KH	14/03/22



PROJECT	45 MOBBS LANE, CARLINGFORD			
TITLE	SAFE INTERSECTION SIGHT DISTANCE - VERTICAL CHECK			

DWG No.		22032CAD002 FIGURE 6		
DATE STAMP		14 MARCH 2022		
PROJECT No.	SCALE	REV.		
22032	1:300 @A3	A		