

Our Ref: 20516

11 August 2021

Mike & Shan Pty Ltd
C/- Avenues Early Learning Centres

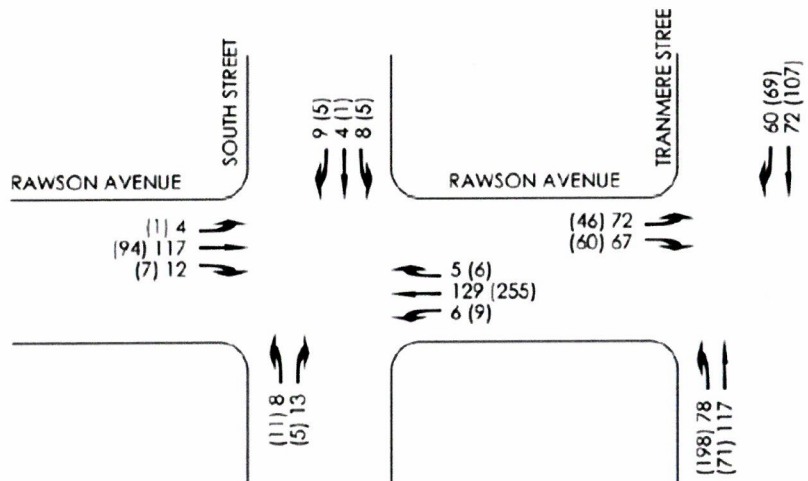
By email mike@avchildcare.com.au

Attention: Mr Mike Wu

Dear Mike,

**RE: DRUMMOYNE RESERVOIR LEARNING CENTRE – (LEC CASE NO. 2020/00306306)
REVIEW OF ALTERNATIVE ACCESS OPTIONS**

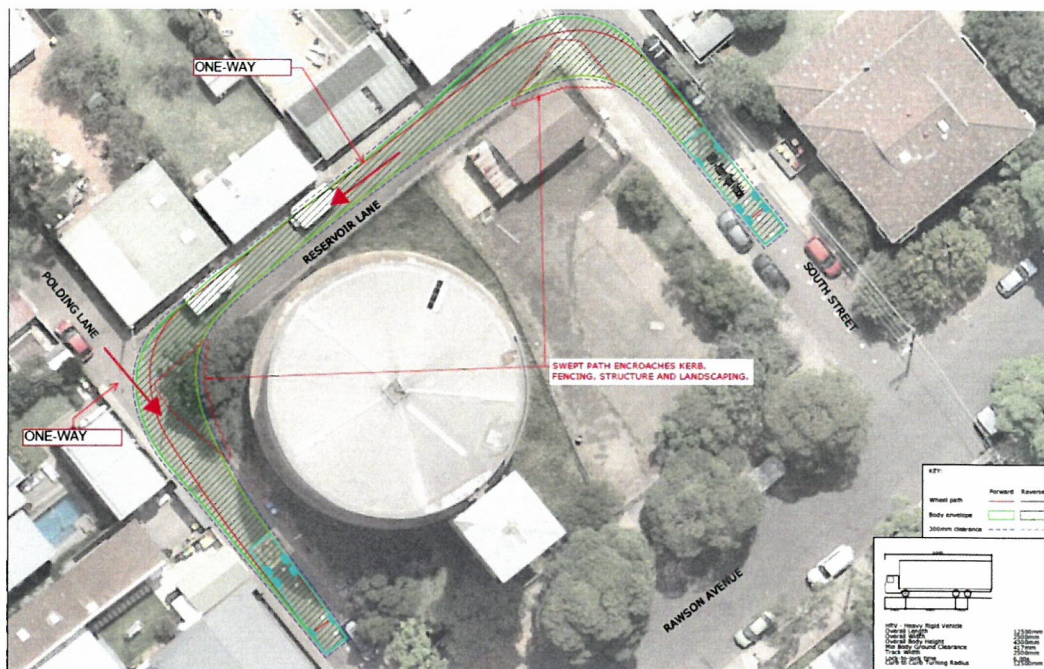
1. I have, as requested, looked into how access might or not be gained into the above site using an access other than on Rawson Avenue in order to mitigate a perceived heritage impact.
2. I would, first of all, point out that as far as I am aware, there is no traffic objection to the use of the continued use of existing driveway (albeit widened slightly) on Rawson Avenue, the ramps into the basement and the basement parking layout itself. My review of the layout is contained at **Attachment 1** to this letter. In my view, it is acceptable.
3. As far as I am aware, the heritage issue relates to the visual impact of the ramp "opening" into the basement car park adjacent to the heritage structure. Consequently, we have been requested to look at alternative access from the other site frontages namely Reservoir Lane and South Street.
4. Prior to undertaking this exercise, we have noted that the traffic report indicates that the two way traffic flows on South Street are currently 27 trips in the AM peak and 17 trips in the PM peak. The two way flow on Rawson Avenue is around 270 in the AM peak) and around 382 in the PM peak. We do not have any traffic flows on Reservoir Lane but I would expect that they would be much lower than South Street (probably no more than a handful of vehicle trips per hour). Similarly, we do not have any traffic flows on Polding Lane but I would expect that they would be comparable to, but probably lower than, South Street.



Access from Reservoir Lane

5. In order to consider access from Reservoir Lane, we need to consider what vehicles would need to use the lane. Clearly cars already use the lane (albeit generally as a single lane operation with vehicles parked along it) and swept paths confirm that this single file traffic can still physically pass along it.
6. The proposed site may however be visited by larger vehicles for garbage collection etc. We have done swept paths for both 8.8m medium rigid vehicles (MRV) and 12.5m Heavy rigid vehicles (HRV). The swept paths show that the turns from South Street into Reservoir Lane and from Reservoir Lane into Polding Lane would require the corner radii be significantly amended.



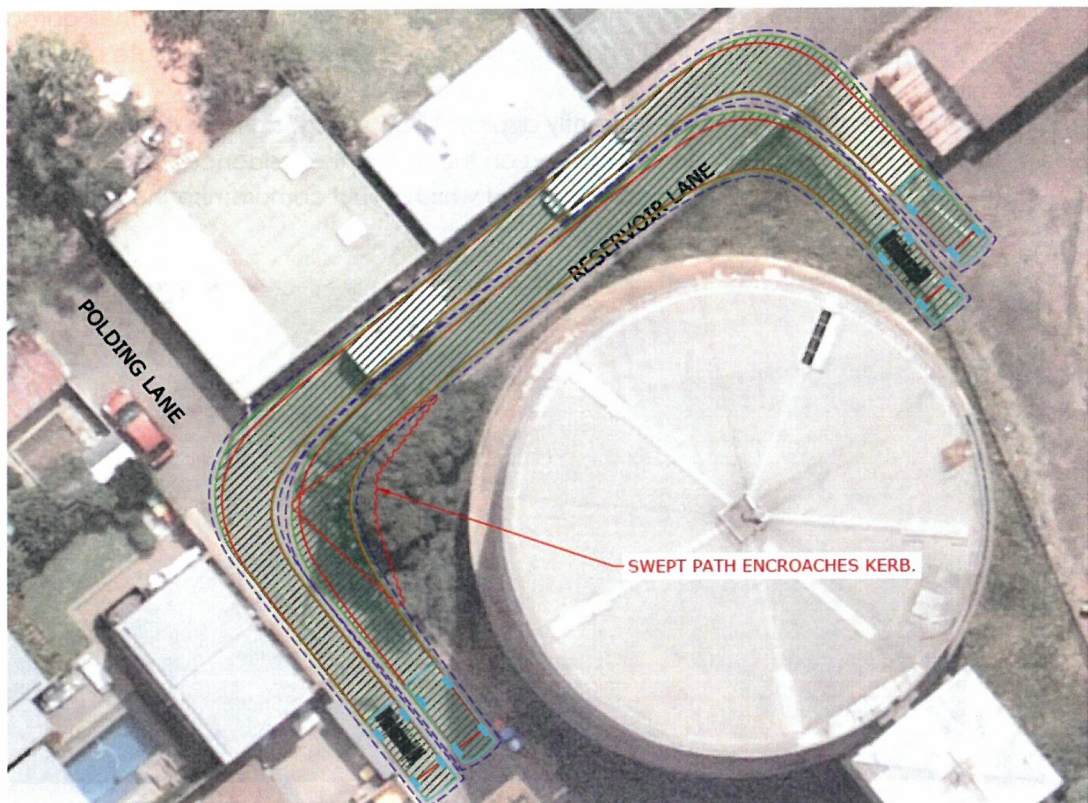
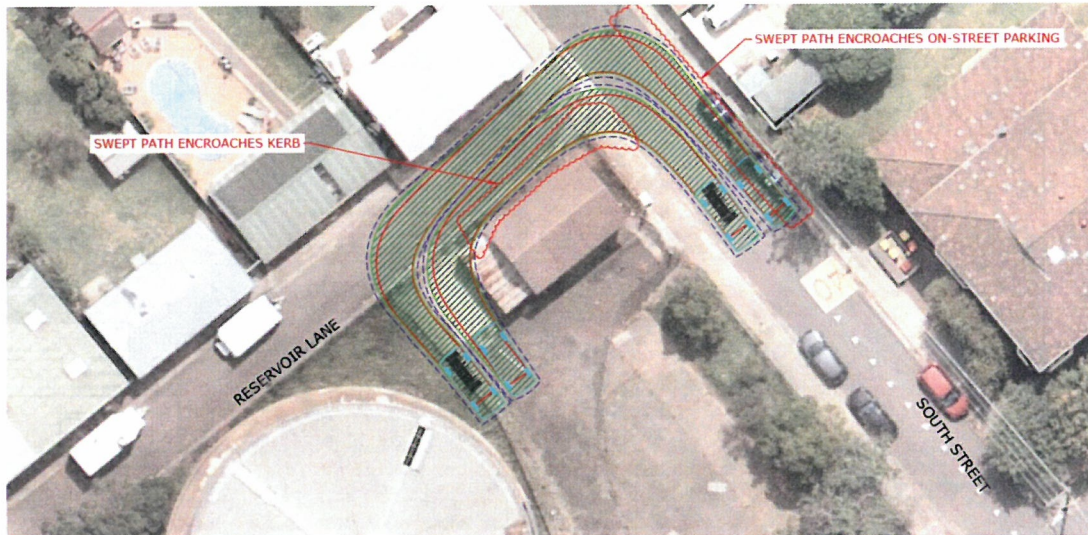


7. Having said this, we are aware that residents along Reservoir Lane leave their garbage bins along the lane so Council's garbage trucks can presumably negotiate along it.
8. We further note that the lane currently displays "No Parking" signage on the site side of the lane but there is unrestricted parking on the side of the residences. As such, the laneway can have vehicles parked along it which could compromise the movement of vehicles.



9. I would have concerns about letting childcare vehicles enter and leave the basement car park in both directions on Reservoir Lane.

10. The swept paths indicate that cars would not be able to leave at the same time as vehicles are entering either at Reservoir Lane / South Street or Reservoir Lane / Polding Street.



11. The effect of introducing such an arrangement would be that, not only would the corners of the intersections need to be widened but parking restrictions would need to be imposed along South Street.
12. At present, parking is permitted on both sides of South Street which allow a single lane to operate accommodating two way traffic with opposing vehicles having to give way to each other. Bearing in mind the low traffic flows that currently prevail (i.e., about 1 vehicles every 2 to 4 minutes) this operates satisfactorily. Should the subject proposal allow all vehicles to access the site from either South Street or Polding Lane rather than Rawson Avenue, two way traffic flow would be necessary due to the increase in traffic.
13. Operationally the better alternative would be to have a left in / left out on Reservoir Lane which would permit vehicles to turn left into the lane from South Street and turn left from Reservoir Road onto Polding Lane. This would allow much better traffic control to occur.
14. The traffic impact assessment reports that the development would generate up to 127 peak hour vehicle trips (i.e., about 64 in and 63 out) in the AM peak and up to 111 in the PM peak hour.
15. Consequently, with a one way system, both South Street and Polding Lane could experience an increase in traffic of up to 64 vehicles in the AM peak hour which is an additional one vehicle per minute. This represents a 237% increase on existing traffic flows. This is likely to result in a significant amenity impact on the residents of both streets.
16. In addition, the increased volumes of traffic may require the removal of parking from Reservoir Lane and possibly South Street / Polding Lane.

Access from South Street

17. The advantage of achieving access from Rawson Avenue (and Reservoir Lane) is that it is possible to use the 45m length of the site (which is greater than the 17m width) to achieve the necessary gradients to reach the basement levels of the car park.
18. A driveway from South Street would need to provide a flat level platform of 6m within the site before it could commence a two way ramp. Because of the tightness of the radii which would be necessary to allow vehicles to pass each other, the car park ramps would extend beneath the existing heritage structure which is clearly not acceptable (as shown below).



- ## Summary

- Page 6 of 7

We trust the above is clear but should you have any queries regarding the above or require further information, please do not hesitate to contact the undersigned on 8437 7800.

Yours sincerely,



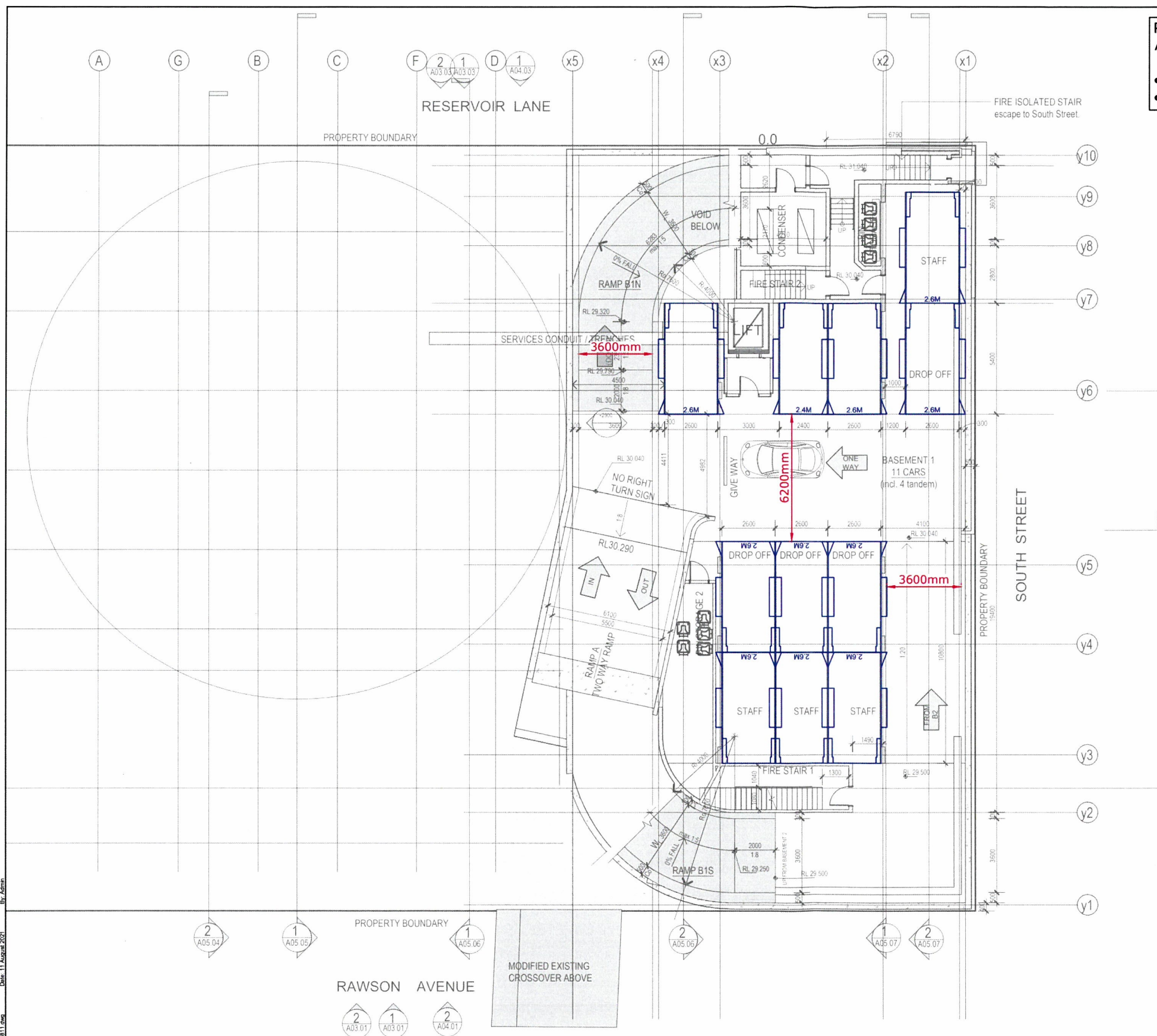
Ken Hollyoak
Director

Attachment One – Review of car park layout

Attachment One – Larger Size Swept Path Drawings

Attachment One

Review of car park layout



PROVIDE THE FOLLOWING MINIMUM HEADROOM CLEARANCES IN ACCORDANCE TO AS2890.1 AND AS2890.6:

- ABOVE DISABLED CAR SPACES AND SHARED AREAS - 2.5m
- ABOVE CAR SPACES, RAMPS AND AISLES - 2.2m

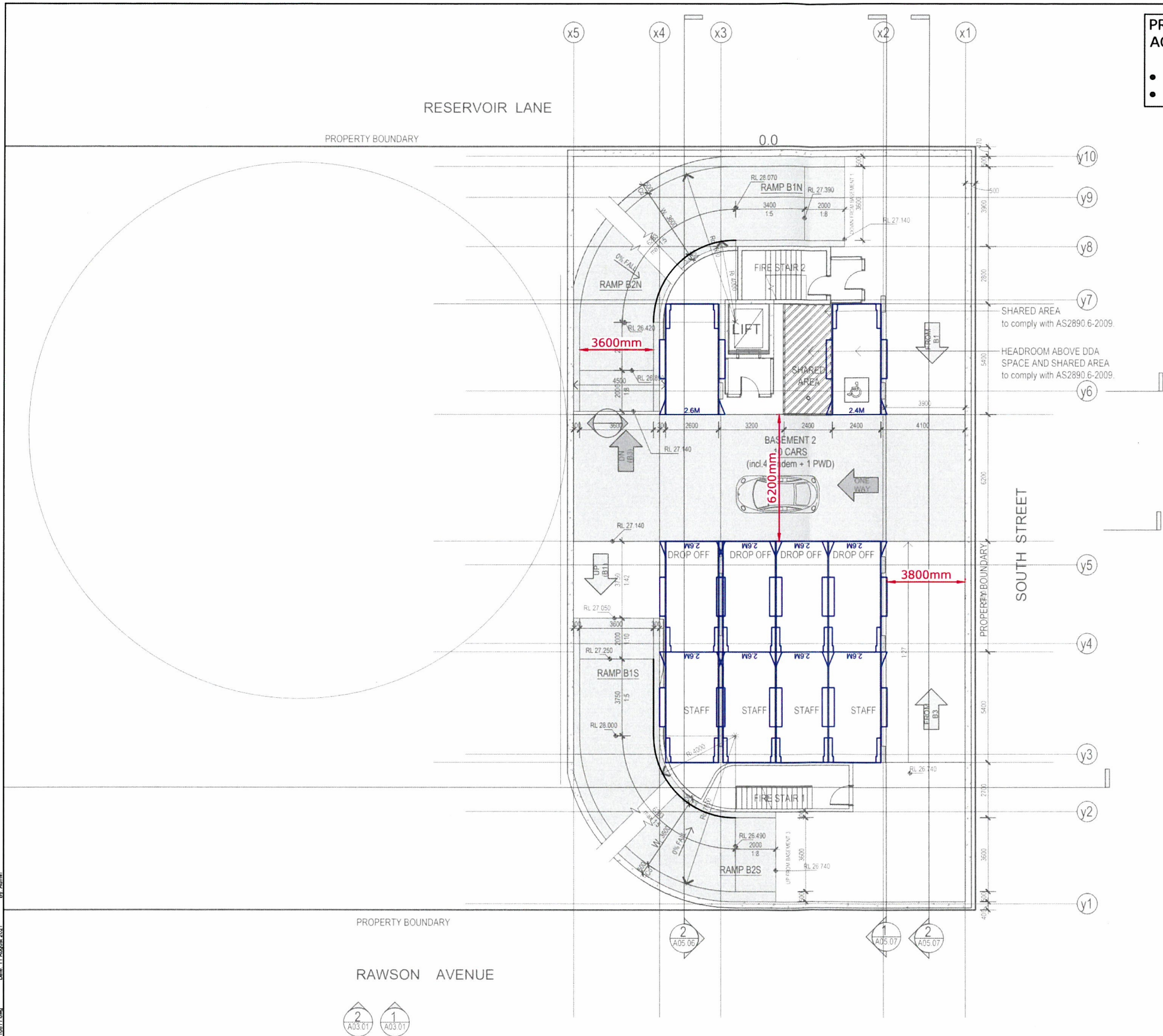
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A	ISSUE FOR DISCUSSION	KM	JN	KH	11/08/21



PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE		DWG No.	20516CAD009 FIGURE 2	
TITLE	CAR PARK COMPLIANCE REVIEW BASEMENT LEVEL 1		DATE STAMP	11 AUGUST 2021	
	PROJECT No.	SCALE	REV.		
	20516	1:200 @A3	A		

PROVIDE THE FOLLOWING MINIMUM HEADROOM CLEARANCES IN ACCORDANCE TO AS2890.1 AND AS2890.6:

- ABOVE DISABLED CAR SPACES AND SHARED AREAS - 2.5m
- ABOVE CAR SPACES, RAMPS AND AISLES - 2.2m



By Admin Date: 11 August 2021 Filetime: 205162A009-CAR PARK REVIEW-210811.dwg

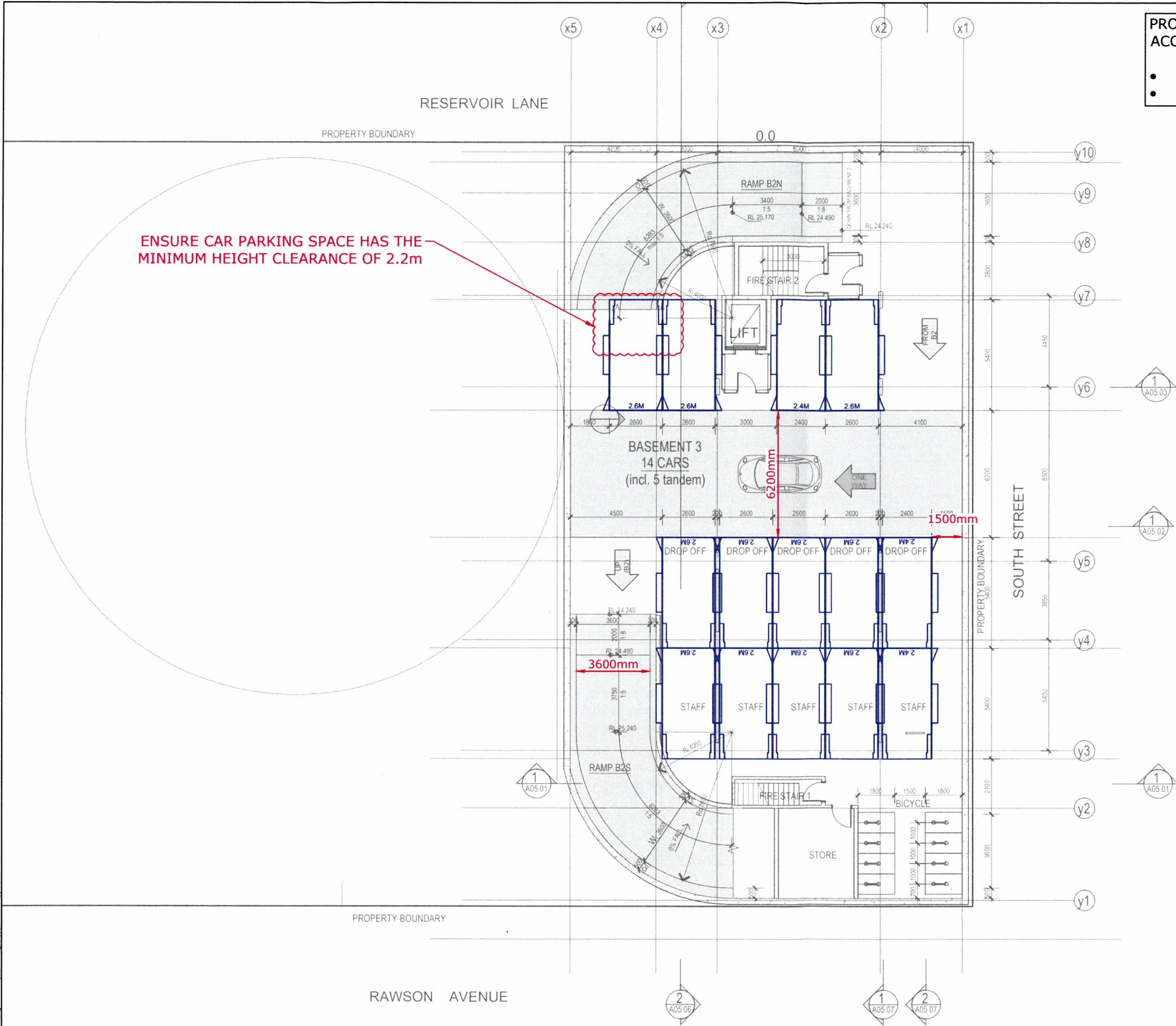
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	JN	KH	11/08/21



PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE		
TITLE	CAR PARK COMPLIANCE REVIEW BASEMENT LEVEL 2		

DWG No.	20516CAD009 FIGURE 3		
DATE STAMP	11 AUGUST 2021		
PROJECT No.	SCALE	REV.	
20516	1:200 @A3	A	

- PROVIDE THE FOLLOWING MINIMUM HEADROOM CLEARANCES IN ACCORDANCE TO AS2890.1 AND AS2890.6:
- ABOVE DISABLED CAR SPACES AND SHARED AREAS - 2.5m
 - ABOVE CAR SPACES, RAMPS AND AISLES - 2.2m

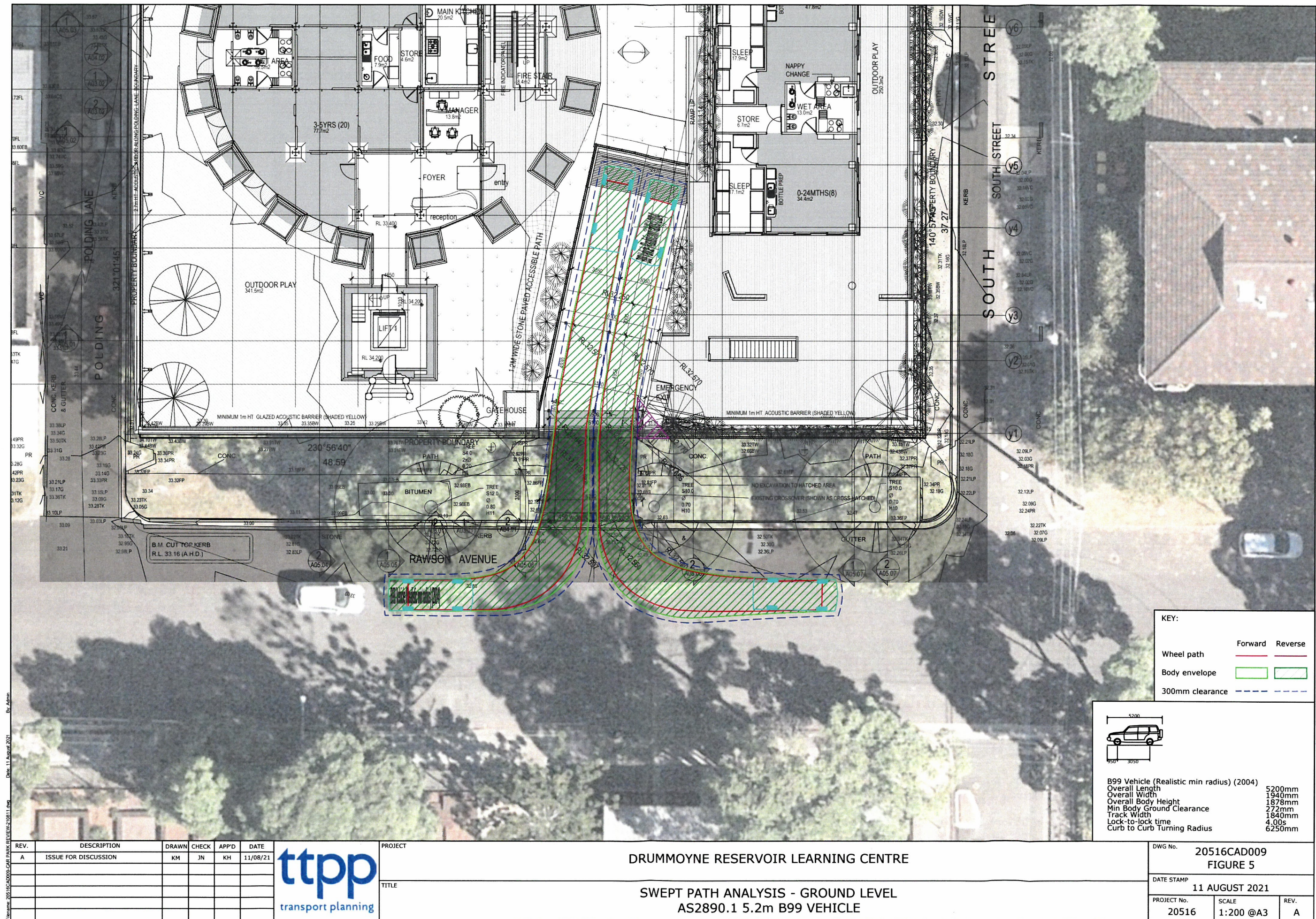


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	JN	KH	11/08/21



PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	CAR PARK COMPLIANCE REVIEW BASEMENT LEVEL 3

DWG No.	20516CAD009
FIGURE 4	
DATE STAMP	11 AUGUST 2021
PROJECT No.	20516
SCALE	1:200 @A3
REV.	A



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By: Admin
Date: 11 August 2021

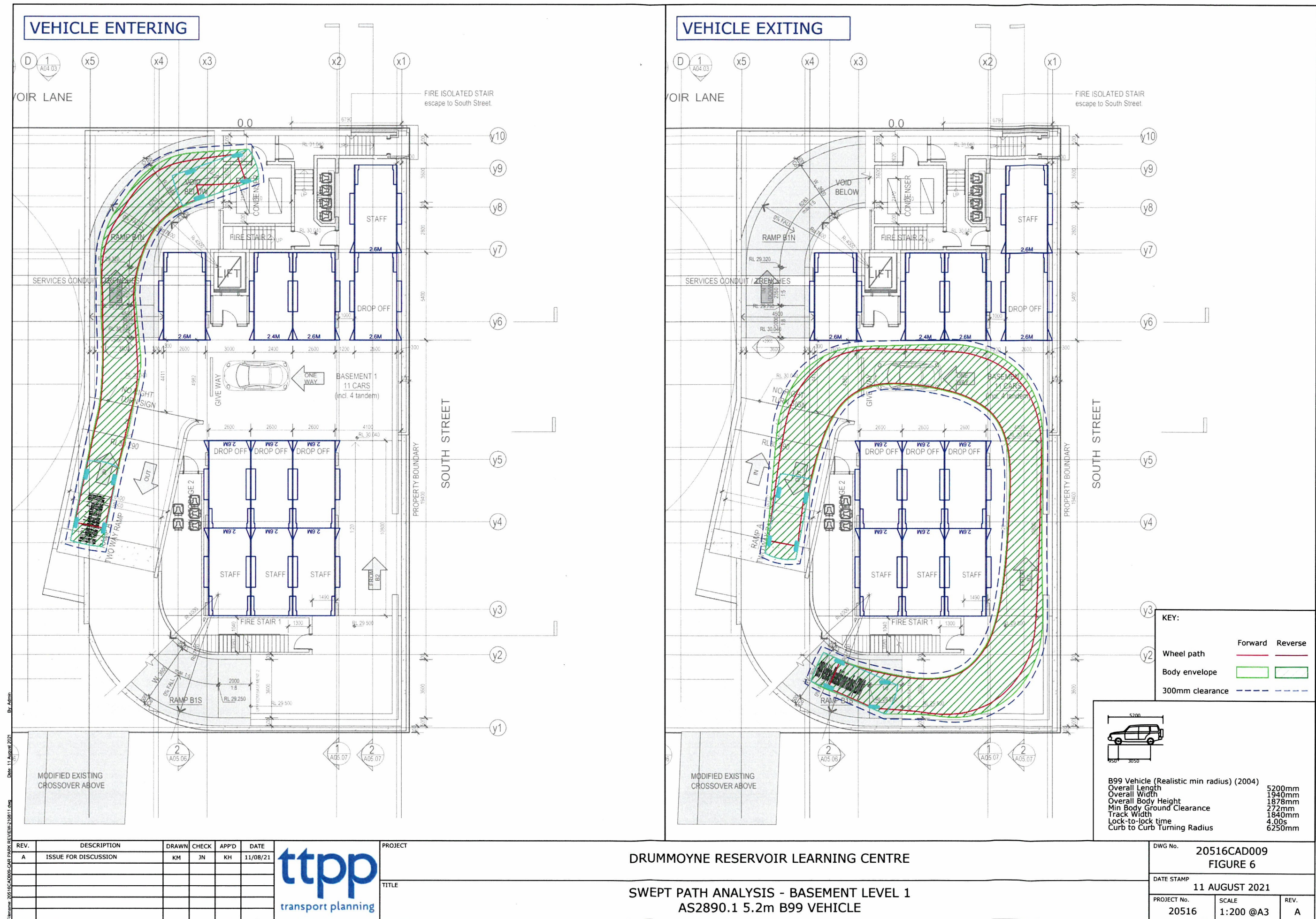
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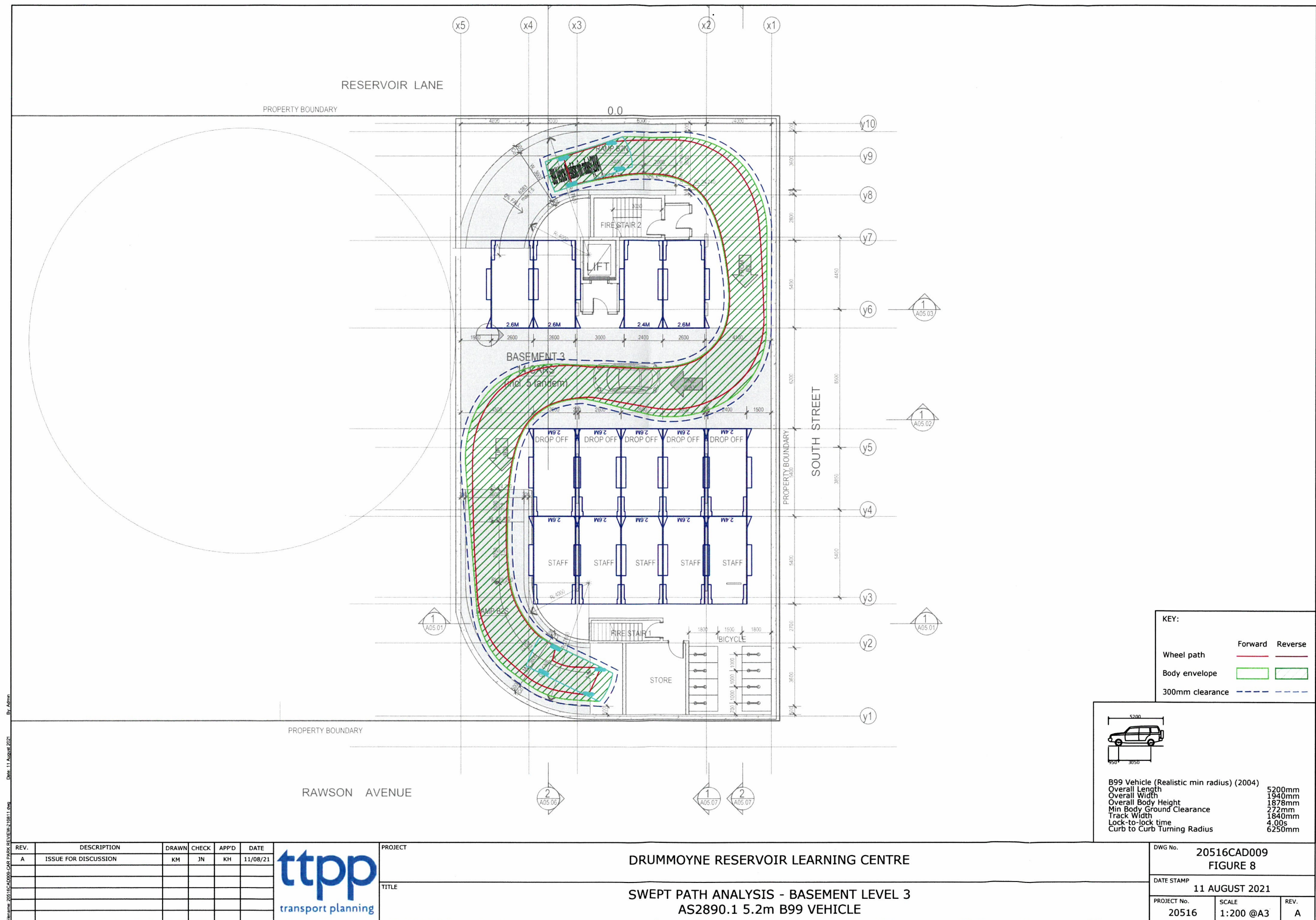


PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	SWEPT PATH ANALYSIS - GROUND LEVEL AS2890.1 5.2m B99 VEHICLE

DWG No.	20516CAD009
FIGURE	FIGURE 5
DATE STAMP	11 AUGUST 2021
PROJECT No.	20516
SCALE	1:200 @A3
REV.	A

B99 Vehicle (Realistic min radius) (2004)	
Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm





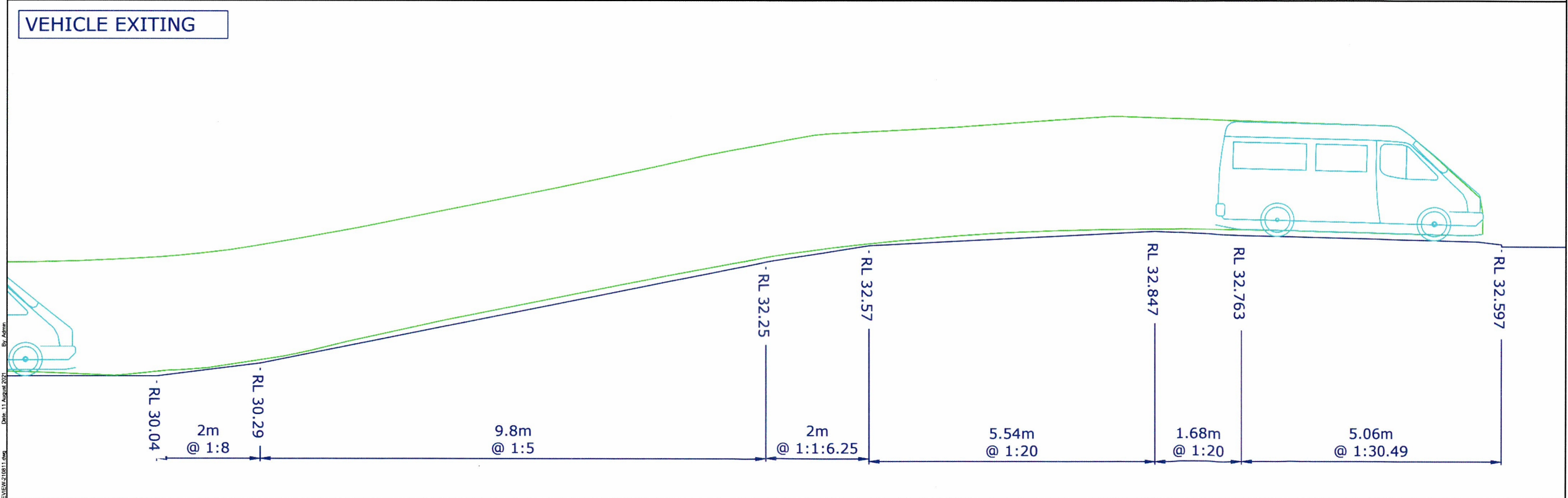
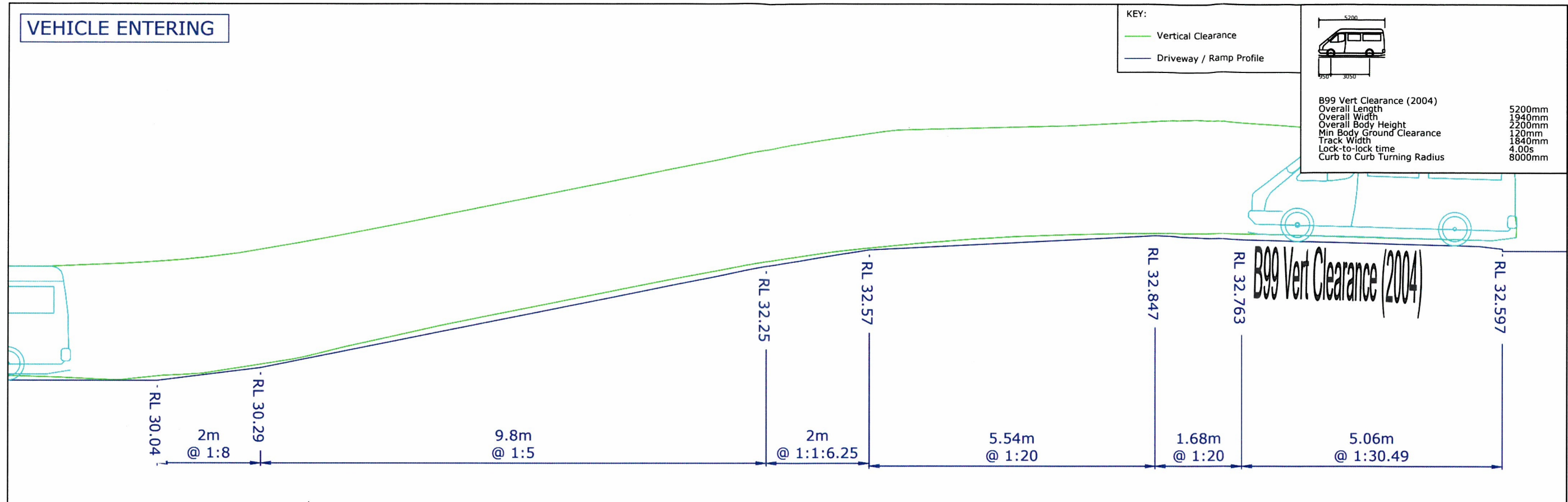
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A	ISSUE FOR DISCUSSION	KM	JN	KH	11/08/21

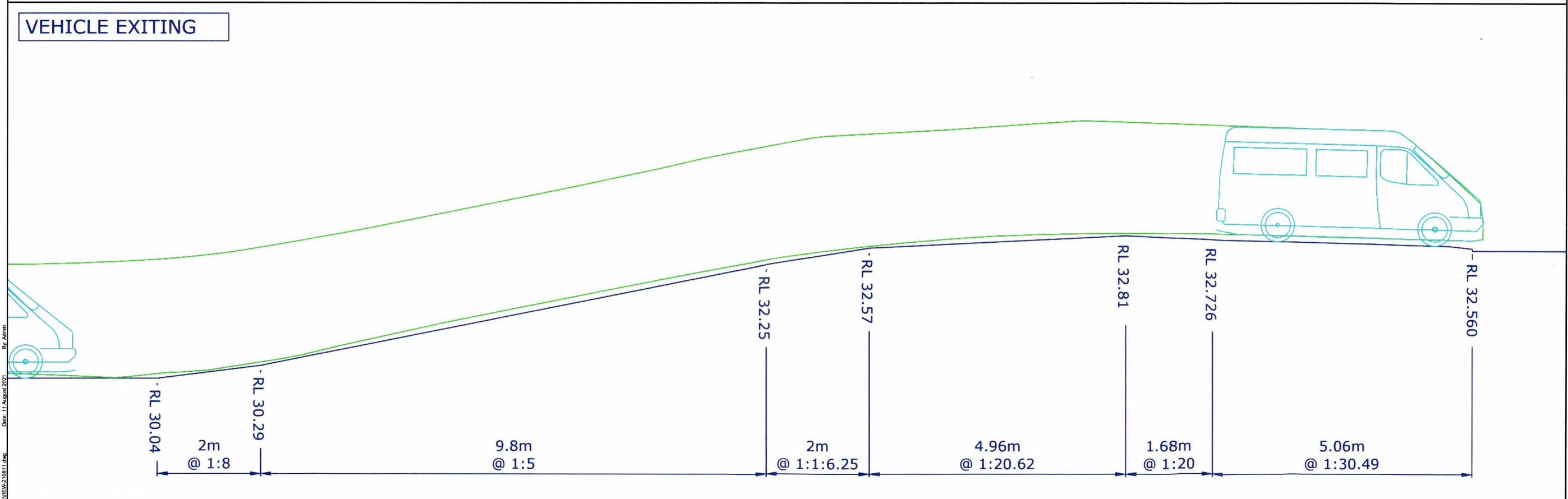
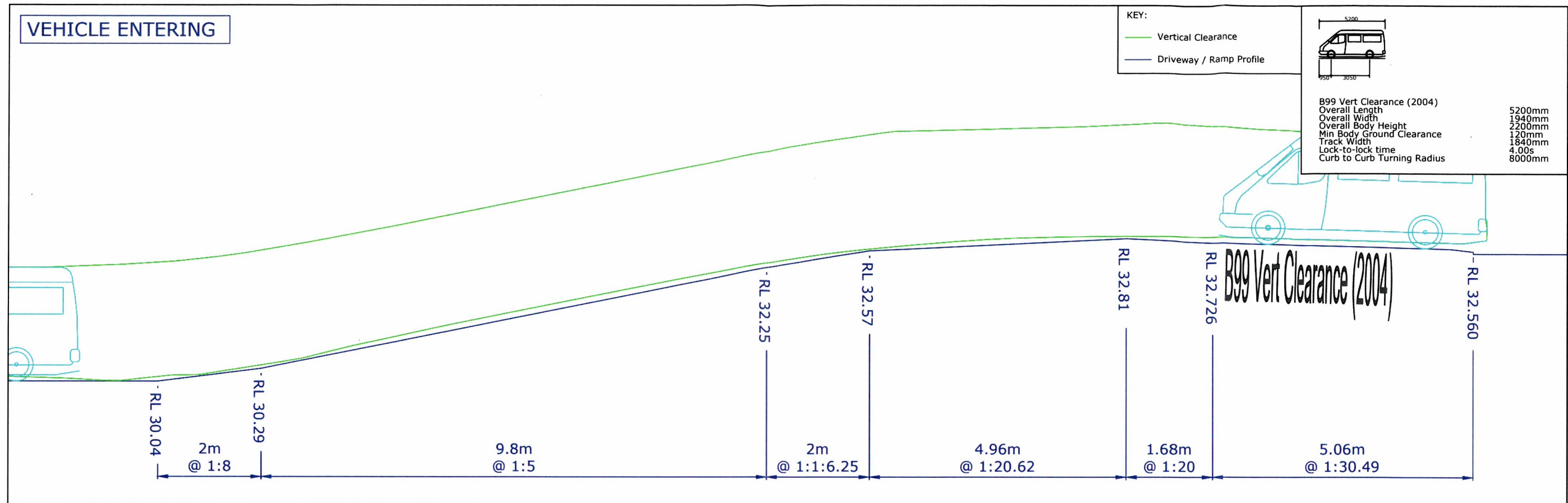


PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	SWEPT PATH ANALYSIS - BASEMENT LEVEL 3 AS2890.1 5.2m B99 VEHICLE

DWG No.	20516CAD009
FIGURE 8	
DATE STAMP	11 AUGUST 2021
PROJECT No.	20516
SCALE	1:200 @A3
REV.	A

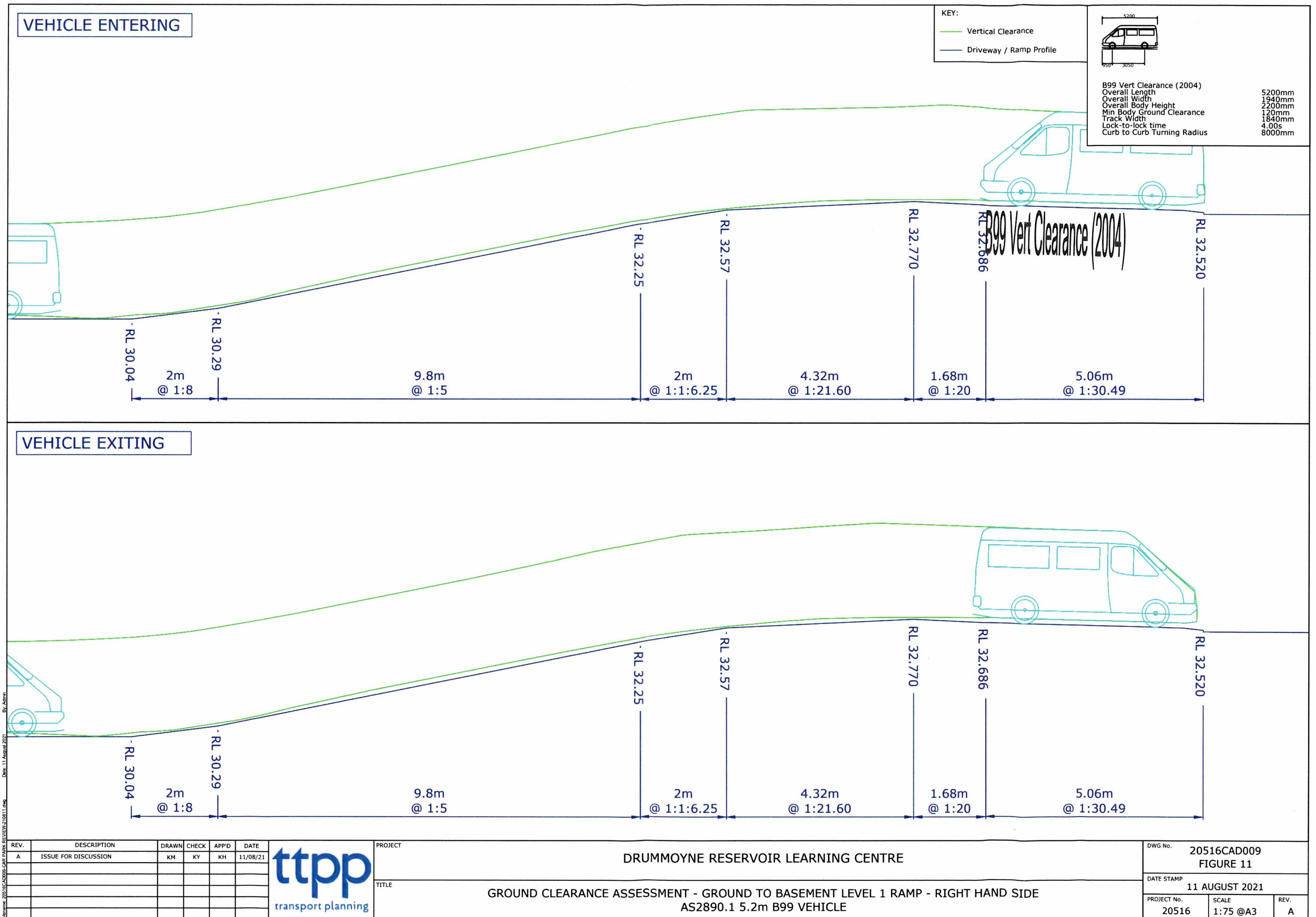


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A	ISSUE FOR DISCUSSION	KM	KY	KH	11/08/21						FIGURE 9	
							DATE STAMP 11 AUGUST 2021					
							PROJECT No. 20516					
							SCALE 1:75 @A3	REV. A				
							TITLE GROUND CLEARANCE ASSESSMENT - GROUND TO BASEMENT LEVEL 1 RAMP - LEFT HAND SIDE AS2890.1 5.2m B99 VEHICLE					



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE	<div style="display: flex; align-items: center;"> <div style="font-size: 2em; font-weight: bold; margin-right: 10px;">t</div> <div style="font-weight: bold;">transport planning</div> </div>	PROJECT	DWG No.
A	ISSUE FOR DISCUSSION	KM	KY	KH	11/08/21		DRUMMOYNE RESERVOIR LEARNING CENTRE	20516CAD009
								FIGURE 10
								DATE STAMP
								11 AUGUST 2021
								PROJECT No.
								20516
								SCALE
								1:75 @A3
								REV.
								A

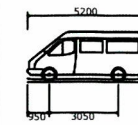
GROUND CLEARANCE ASSESSMENT - GROUND TO BASEMENT LEVEL 1 RAMP - CENTRE
AS2890.1 5.2m B99 VEHICLE



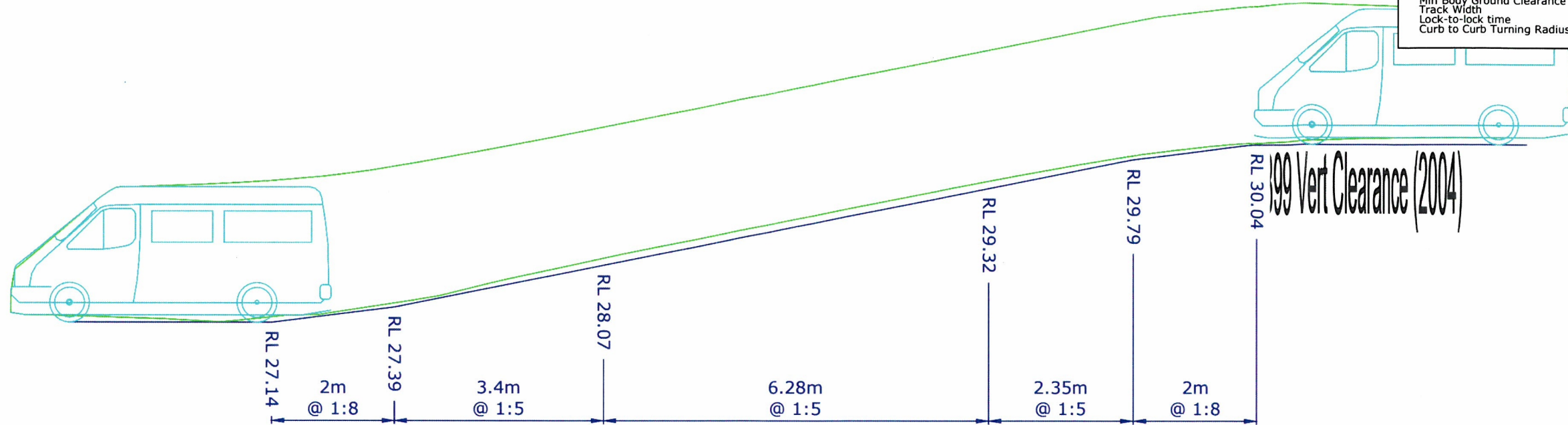
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE	<div><div>tpp</div><div>transport planning</div></div>	PROJECT			DRUMMOYNE RESERVOIR LEARNING CENTRE			DWG No. 20516CAD009 FIGURE 11		
A	ISSUE FOR DISCUSSION	KM	KY	KH	11/08/21		TITLE			GROUND CLEARANCE ASSESSMENT - GROUND TO BASEMENT LEVEL 1 RAMP - RIGHT HAND SIDE AS2890.1 5.2m B99 VEHICLE			DATE STAMP 11 AUGUST 2021		
													PROJECT No. 20516		
													SCALE 1:75 @A3		
													REV. A		

VEHICLE ENTERING

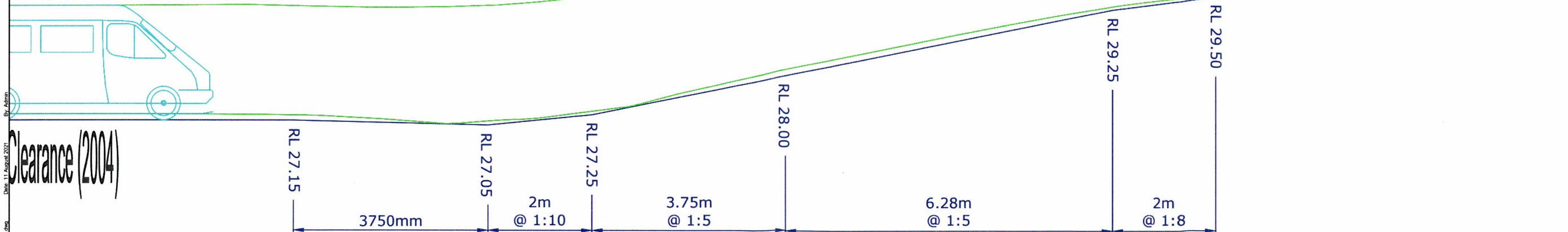
KEY:
 — Vertical Clearance
 — Driveway / Ramp Profile



B99 Vert Clearance (2004)
 Overall Length 5200mm
 Overall Width 1940mm
 Overall Body Height 2200mm
 Min Body Ground Clearance 1200mm
 Track Width 1840mm
 Lock-to-lock time 4.00s
 Curb to Curb Turning Radius 8000mm



VEHICLE EXITING



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KY	KH	11/08/21

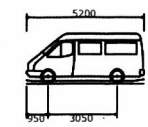


PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	GROUND CLEARANCE ASSESSMENT- BASEMENT 1 TO BASEMENT 2 AS2890.1 5.2m B99 VEHICLE

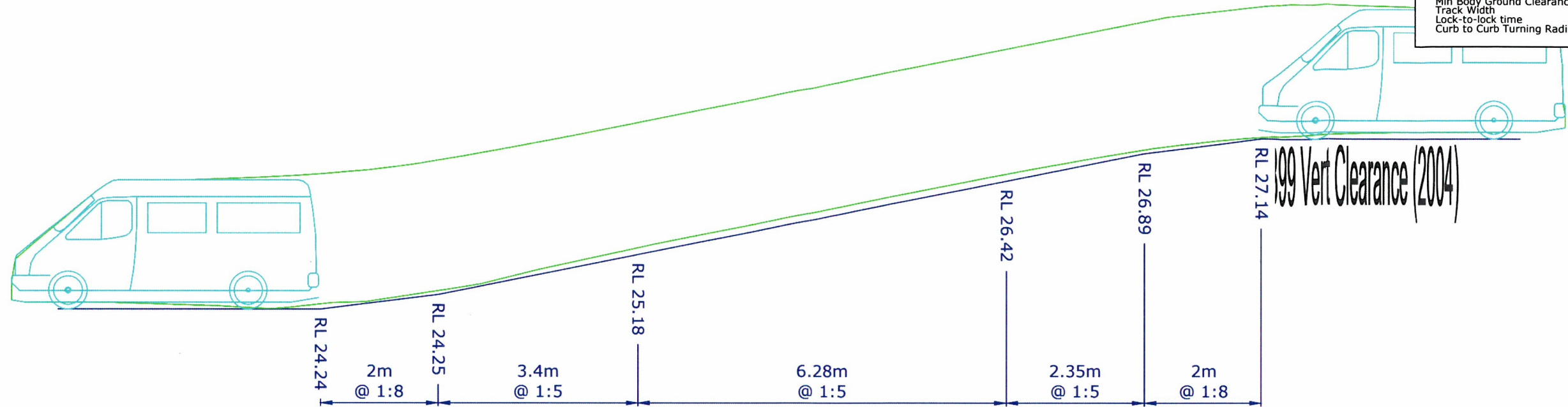
DWG No.	20516CAD009
FIGURE 12	
DATE STAMP	11 AUGUST 2021
PROJECT No.	20516
SCALE	1:75 @A3
REV.	A

VEHICLE ENTERING

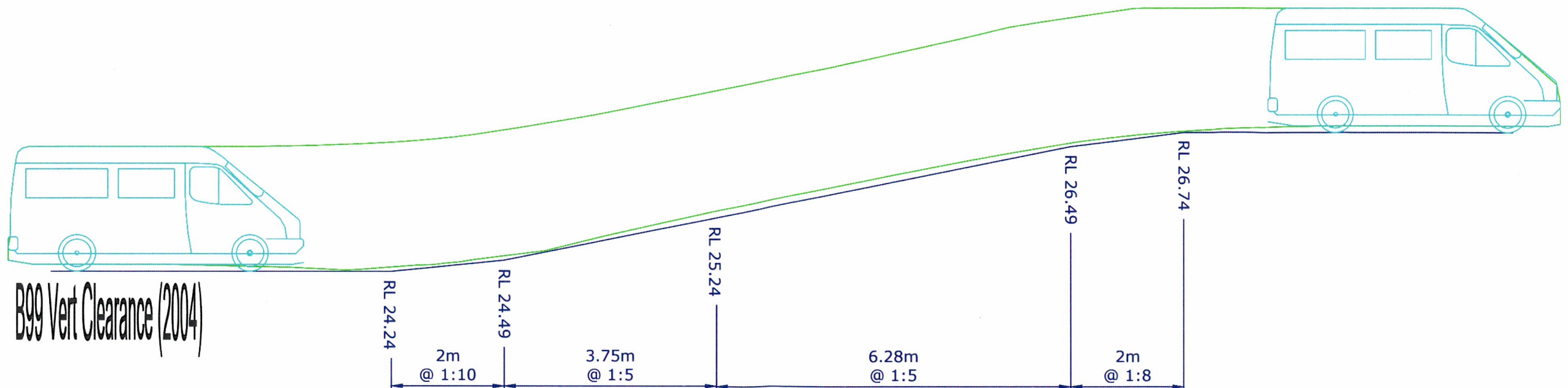
KEY:
 — Vertical Clearance
 — Driveway / Ramp Profile



B99 Vert Clearance (2004)
 Overall Length 5200mm
 Overall Width 1940mm
 Overall Body Height 2200mm
 Min Body Ground Clearance 120mm
 Track Width 1840mm
 Lock-to-lock time 4.00s
 Curb to Curb Turning Radius 8000mm



VEHICLE EXITING



Filename: 20516-CAD009-CAR PARK REVIEW-210811.dwg Date: 11 August 2021 By: Admin

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KY	KH	11/08/21

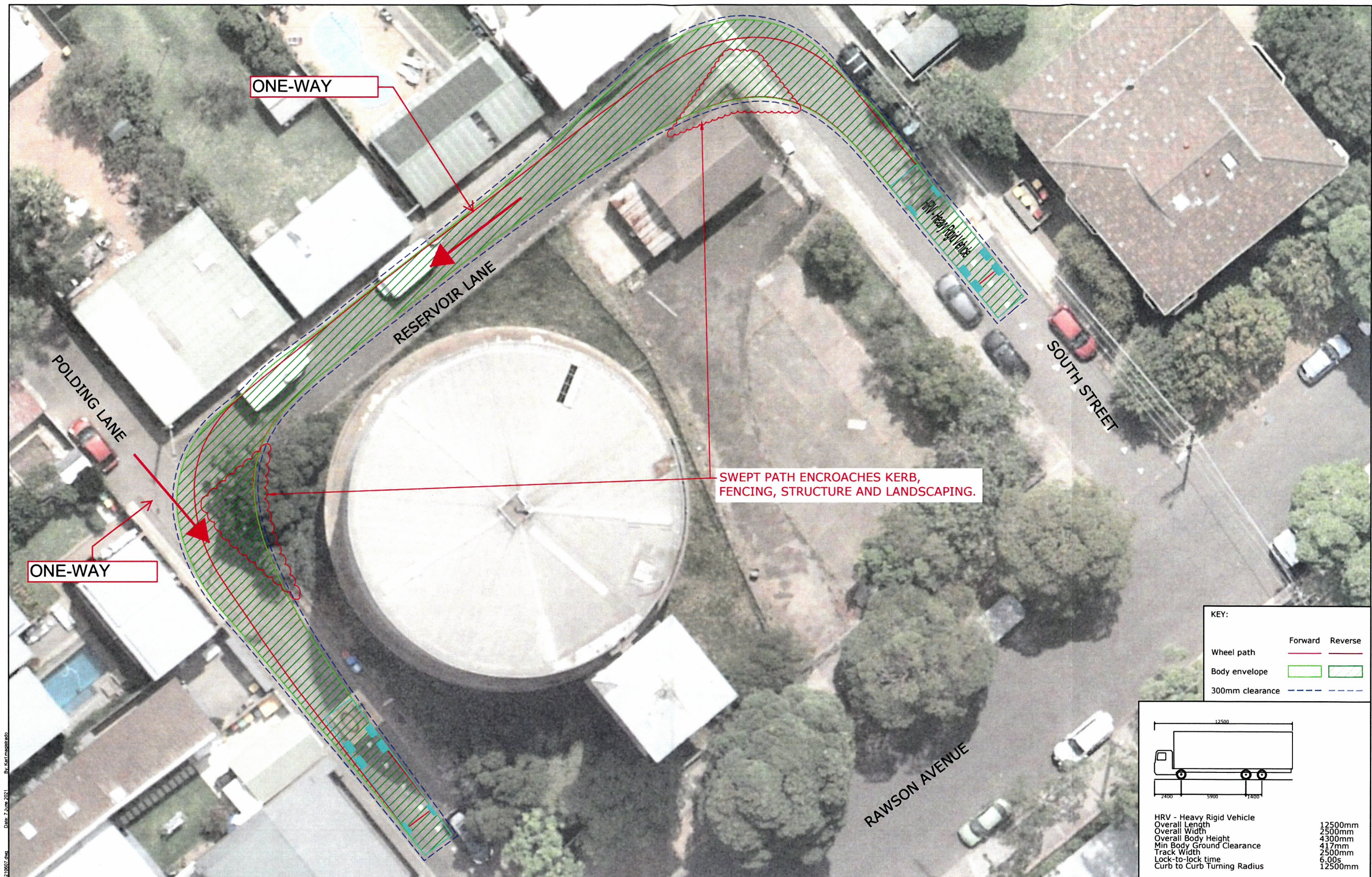


PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	GROUND CLEARANCE ASSESSMENT- BASEMENT 2 TO BASEMENT 3 AS2890.1 5.2m B99 VEHICLE

DWG No.	20516CAD009
FIGURE 13	
DATE STAMP	11 AUGUST 2021
PROJECT No.	20516
SCALE	1:75 @A3
REV.	A

Attachment Two

Larger Scale Swept Path Drawings

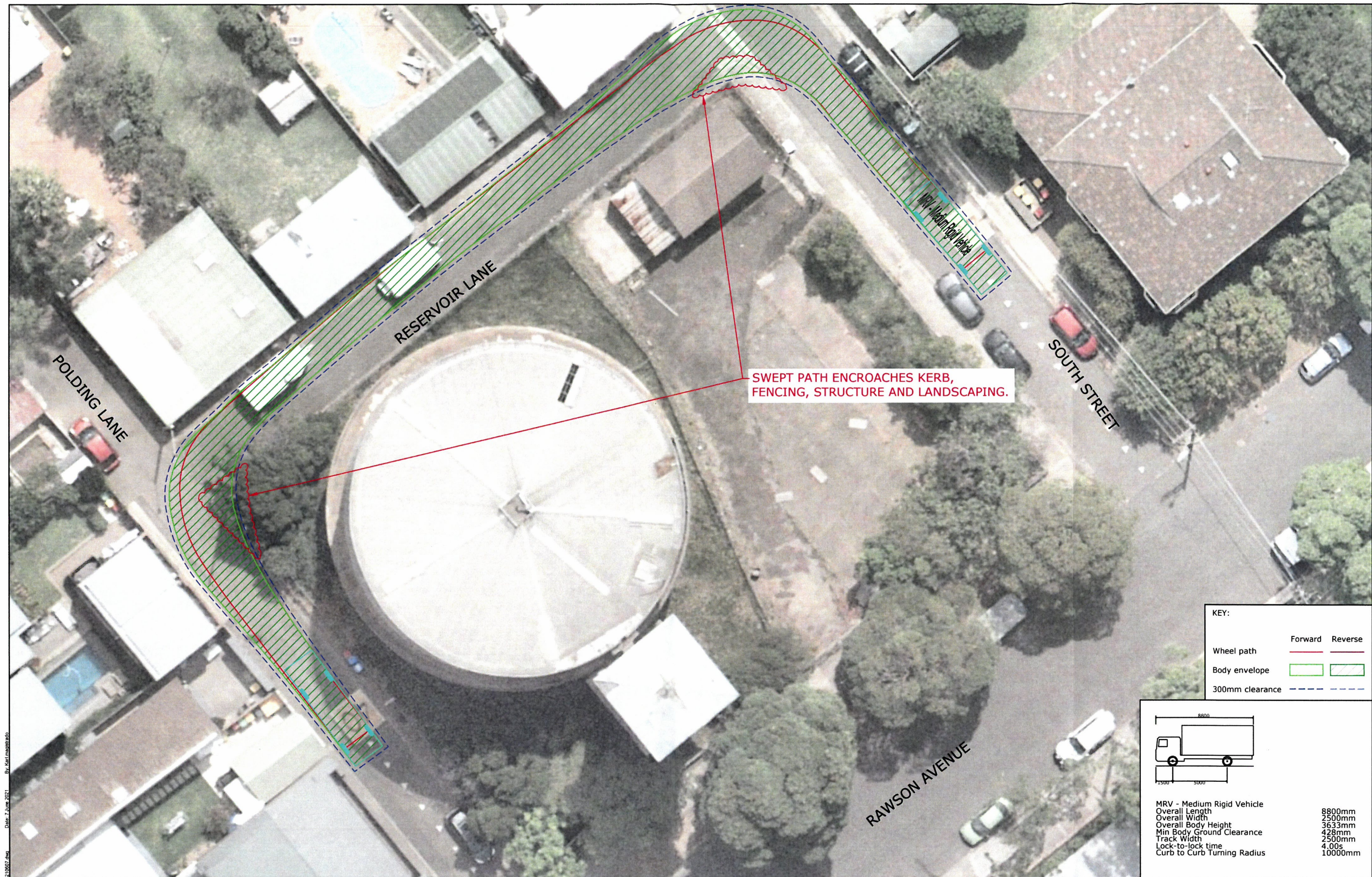


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KY	KH	07/06/21



PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	SWEPT PATH ANALYSIS AS2890.2 12.5m HEAVY RIGID VEHICLE

DWG No.	20516CAD006
FIGURE 1	
DATE STAMP	07 JUNE 2021
PROJECT No.	20516
SCALE	1:250 @A3
REV.	A

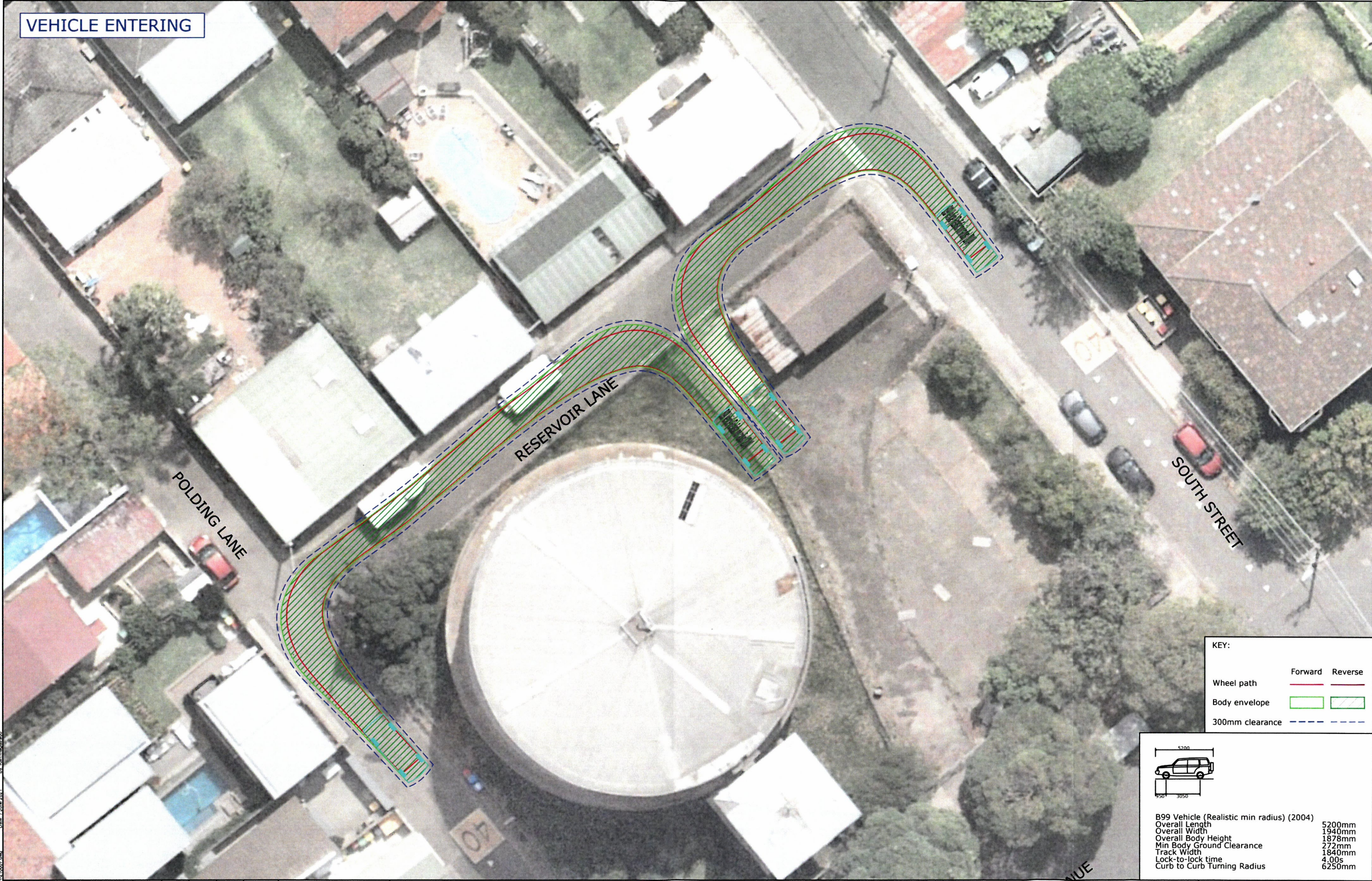


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KY	KH	07/06/21



PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	SWEPT PATH ANALYSIS AS2890.2 8.8m MEDIUM RIGID VEHICLE

DWG No.	20516CAD006
FIGURE 2	
DATE STAMP	07 JUNE 2021
PROJECT No.	20516
SCALE	1:250 @A3
REV.	A

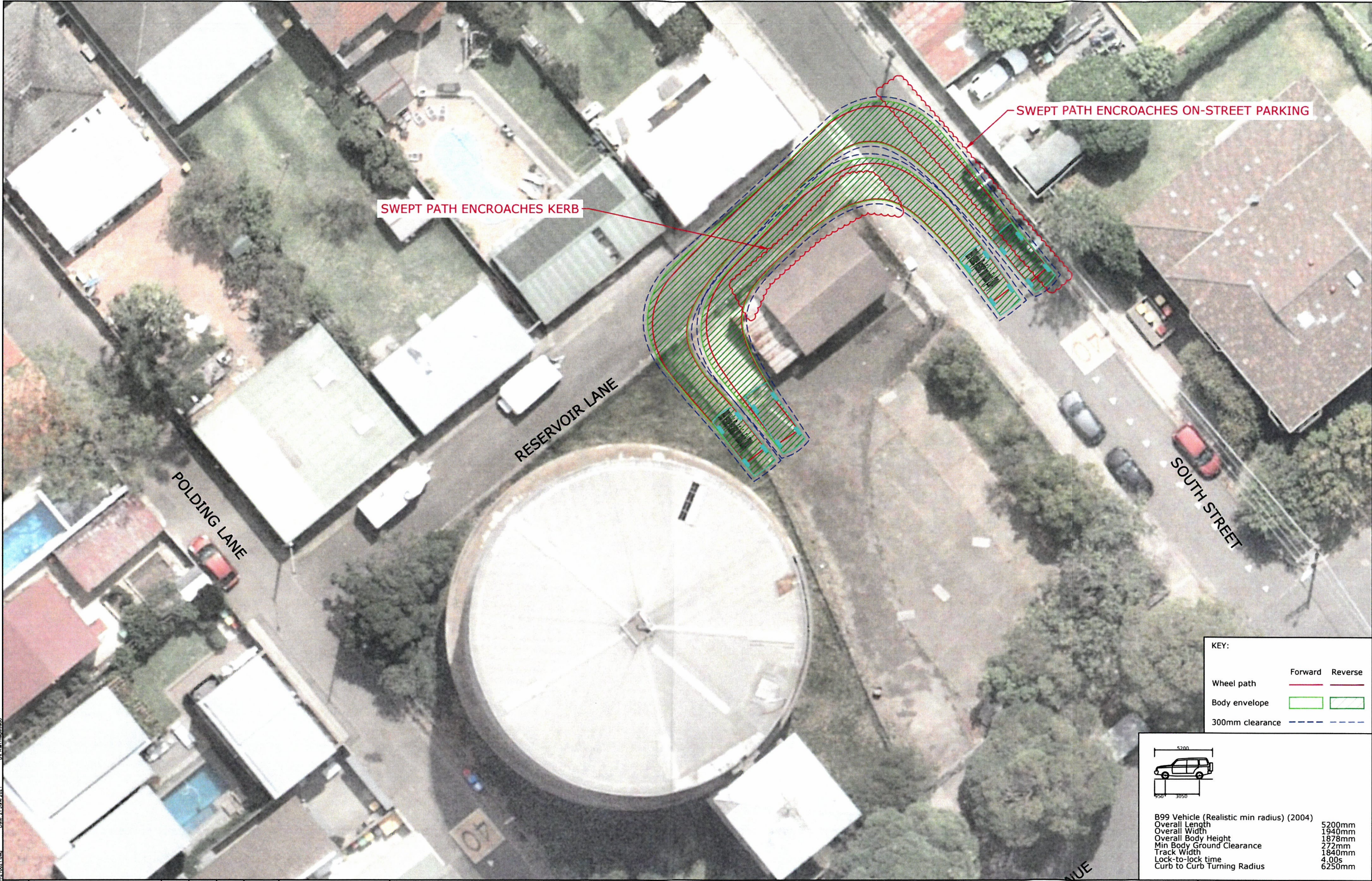


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KY	KH	07/06/21



PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	SWEPT PATH ANALYSIS AS2890.1 5.2m B99 VEHICLE

DWG No.	20516CAD006
FIGURE 3	
DATE STAMP	07 JUNE 2021
PROJECT No.	20516
SCALE	1:250 @A3
REV.	A



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KY	KH	21/06/21



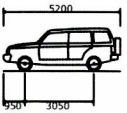
PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	SWEPT PATH ANALYSIS AS2890.1 5.2m B99 VEHICLE

DWG No.	20516CAD007
FIGURE 1	
DATE STAMP	21 JUNE 2021
PROJECT No.	20516
SCALE	1:250 @A3
REV.	A



KEY:

	Forward	Reverse
Wheel path	---	---
Body envelope	---	---
300mm clearance	---	---



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	KY	KH	21/06/21



PROJECT	DRUMMOYNE RESERVOIR LEARNING CENTRE
TITLE	SWEPT PATH ANALYSIS AS2890.1 5.2m B99 VEHICLE

DWG No.	20516CAD007
	FIGURE 2
DATE STAMP	21 JUNE 2021
PROJECT No.	20516
SCALE	1:250 @A3
REV.	A