

Technical Note

Project: Wicks Farm, Ford

Project No: 6352

Subject: Response to West Sussex Highways request for additional Information.

Prepared by: Benjamin Boreham Date: 13/08/19

Checked by: Dave Wiseman Rev: A

Introduction

- 1.1. This Technical Note has been prepared by Stuart Michael Associates (SMA), consulting engineers, on behalf of Agricultural Investments Limited (the 'Applicant'), in support of the proposed access for the construction of six hectares of commercial glasshouse with associated irrigation reservoir, access roads and car parking on land at Wicks Farm, Arundel, West Sussex
- 1.2. This technical note will assess the changes required to the existing access road in order to allow the maximum legal length HGV's to access the site, as well as the visibility from the junction onto Ford Lane and the number of vehicle trips expected by the Applicant for the site.
- 1.3. The site is located on the land north of Wicks Farm, Ford Lane, Arundel, West Sussex. Vehicular and pedestrian access to the site is currently available via the existing farm track entrance from Ford Lane at the southwestern site boundary and internal routes from the existing Wicks Farm. There is no existing use or travel demand other than farming operations.
- 1.4. The proposed layout for the site is presented in **Appendix A**.

Previous Application

- 1.5. A planning application has been submitted to Arun District Council by the Applicant in support of a planning application for the construction of six hectares of commercial glasshouse with associated irrigation reservoir, access roads and car parking. A Transport Statement was prepared by The Civil Engineering Practice in support of this application.
- 1.6. As part of the consultation process, West Sussex Highways Authority (WSHA) raised a number of concerns with the plans and has requested additional information to be forwarded to them.

- 1.7. SMA has been instructed to prepare a Technical Note responding to the concerns of the WSHA. The points raised and clarification needed by WSHA were as follows;

A clear plan demonstrating the current and proposed width of the access and internal access route through the site, including details of the formalisation of the access.

Clarification of ownership of land either side of the existing access.

Swept path tracking demonstrating the largest anticipated vehicle entering the site, travelling through the site, turning and exiting the site.

A seven day speed survey should be undertaken to determine 85th percentile speeds in this location. Visibility splays should be provided in accordance with these speeds.

Vertical visibility at a distance of 4.5m back into the access for the full length of achievable vehicular visibility splays.

Details of the type and number of movements per day at the existing access for the existing use.

- 1.8. This Technical Note sets out a response to each of the above points.
- 1.9. This TN was submitted to West Sussex County Council (WSCC) on 30th August 2019 and has been updated accordingly. The comments from WSCC are attached in **Appendix B**.

Proposed Access

- 1.10. The site will take access from an existing farm track with a junction onto Ford Lane. This access is currently not suitable for HGV's and will need to be improved in order to facilitate HGV movements for the development. SMA has undertaken a review of the existing access and has suggested a redesigned access solution, as shown in **Drawing 6352.001**.
- 1.11. The junction design shown in **Drawing 6352.001 Rev A** shows, the access will be widened to 7.5m for the first 30m before narrowing back down to the existing width for the remainder of the length of the access road.
- 1.12. A hardened surface will be provided over the first 10m of the track and the access regraded over this distance to provide a maximum gradient of 4%, which is suitable of HGV's to access.
- 1.13. The proposed widening of the access can be delivered as the Applicant has confirmed that the land either side of the access is within their ownership.
- 1.14. This allows an HGV to turn into the access road and, should another HGV be leaving the site at the time, be able to wait without any of the vehicle overhanging on to Ford Lane. The

drawing shows that there is suitable space on this access for the HGV's to pass each other without causing an obstruction on Ford Lane.

- 1.15. This access will have a restriction that will prevent all HGV's from turning right. This is explained in more detail in paragraphs 1.29 and 1.30.

Junction Visibility

- 1.16. The access road has a junction with Ford Lane. Ford Lane is subject to a 40mph limit east of the site, however this limit is lifted to a national speed limit some 280m east from the proposed access.
- 1.17. SMA has commissioned a 7 day vehicle speed and volume survey on Ford Lane to establish what the true vehicle speed is past the site access. A summary of the results can be seen in **Table 1**, with the full results attached in **Appendix C**.

Table 1 – Vehicle Speeds on Surrounding Road Network

Location	Average Speed (mph)	85th Percentile Speed (mph)
Eastbound	41	47
Westbound	41	48

- 1.18. As Table 1 shows, average vehicle speeds past the site are 41mph on both the eastbound and westbound carriageways. The 85th percentile speeds are 47mph on the eastbound carriageway and 48mph on the westbound carriageway. As the survey was conducted in dry weather, the Design Manual for roads and Bridges (DMRB) states that 2.5mph can be removed off the 85th percentile speeds in order to establish wet weather speeds. This results in a wet weather speed of 44.5mph on the eastbound carriageway and 45.5mph on the westbound carriageway.
- 1.19. The wet weather speeds are therefore used as the basis of the visibility splays for the proposed site access. The proposed visibility splays are therefore 125m on the westbound carriageway and 120m on the eastbound carriageway. These visibility splays are shown in **Drawing 6352.001 Rev A**.
- 1.20. **Drawing 6352.004** considers the vertical profiles of the visibility splays from the proposed site access, based on the results of the speed survey. The vertical profiles measures 1.05m above ground height, this is the height where a driver's eye is agreed to be, to the height of a car headlight 0.26m from the ground level.
- 1.21. As **Drawing 6352.001** shows, there is no obstruction to the visibility splays in either direction from the access.

Proposed Internal Works

- 1.22. The proposed access road will need additional works in order to safely allow an HGV to access the site. These works consist of widening the existing corners leading to the site, in order to facilitate the turn of the 16.5m HGV as well as the potential passing of two HGV's on the corner.
- 1.23. A portion of land will be required in order to facilitate these works, the applicant has confirmed that the land required is within their ownership. The resulting corner radii is 35m and 22.5m. **Drawing 6352.002** shows the proposed widening of the internal carriageway and Autotrack Vehicle Tracking of and HGV entering and leaving the site.

Internal Vehicle Tracking

- 1.24. As shown in the proposed layout presented in **Appendix A**, the development will incorporate two ancillary buildings. It is from these buildings that the HGV's will be loaded via a forklift truck or other such loading method. This eliminates the need for the HGV to reverse up to the building to be loaded via a loading bay.
- 1.25. As such, internal vehicle tracking has been based on this principle, and is shown in **Drawing 6352.003**. As this shows, the HGV enters the site, turns and enters the loading area, after being loaded it can turn and leave the site in forward gear. This method ensures that minimal reversing is required on site.

Proposed Trips

- 1.26. From the Applicants past experience in operating a site like this, they propose that there will be no more than 3 HGV's on site per day, so a maximum of 6 HGV movements over the day. The site will also have 21 parking spaces provided for staff and visitors, however it is not anticipated that all 21 spaces will be occupied at any one time.
- 1.27. Following consultation with the applicant, they have advised SMA that HGV's will be operating on the site from 12pm to 7pm, and will be controlled to ensure that there will never be more than one HGV on site at any one time, and that HGV's will not have to pass each other at the entrance of the site on Ford Lane.
- 1.28. The applicant also operates a staff minibus service, which reduces the number of vehicle movements to and from the site. The staff minibuses will arrive on site in the morning at around 8am and leave the site around 3pm – 4pm, outside of the traditional network peak times.

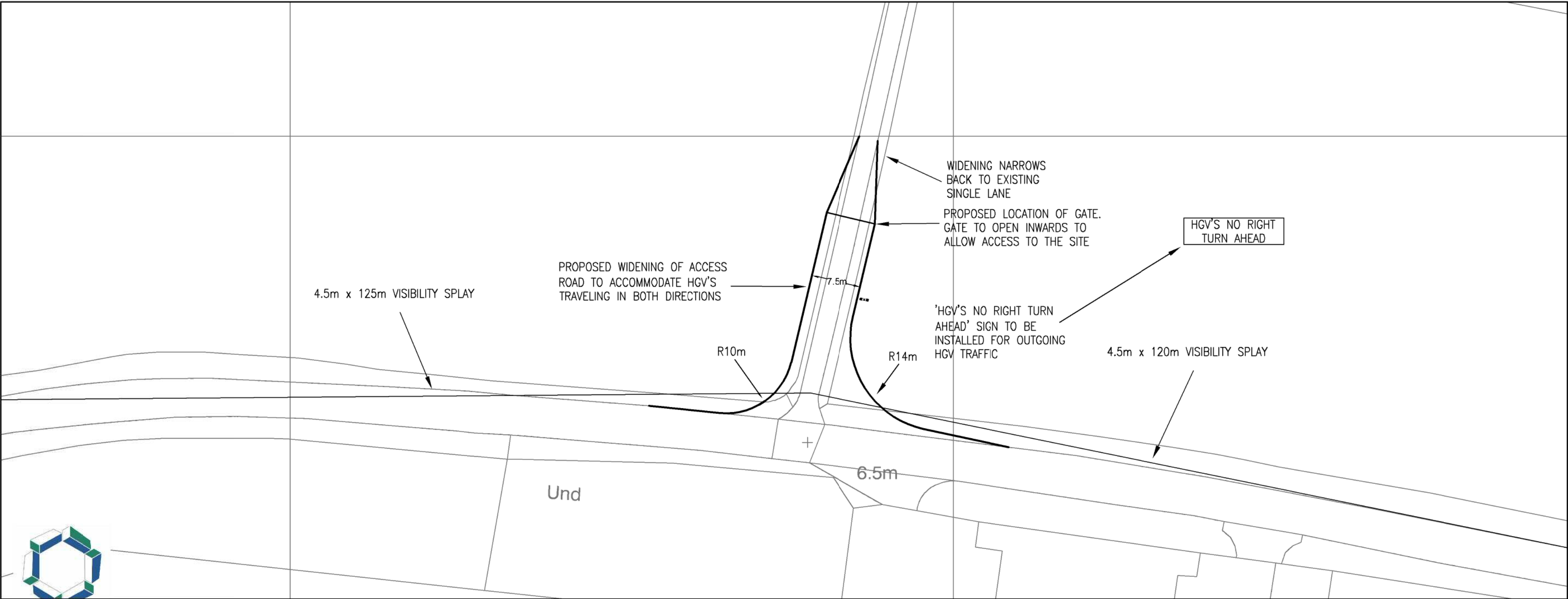
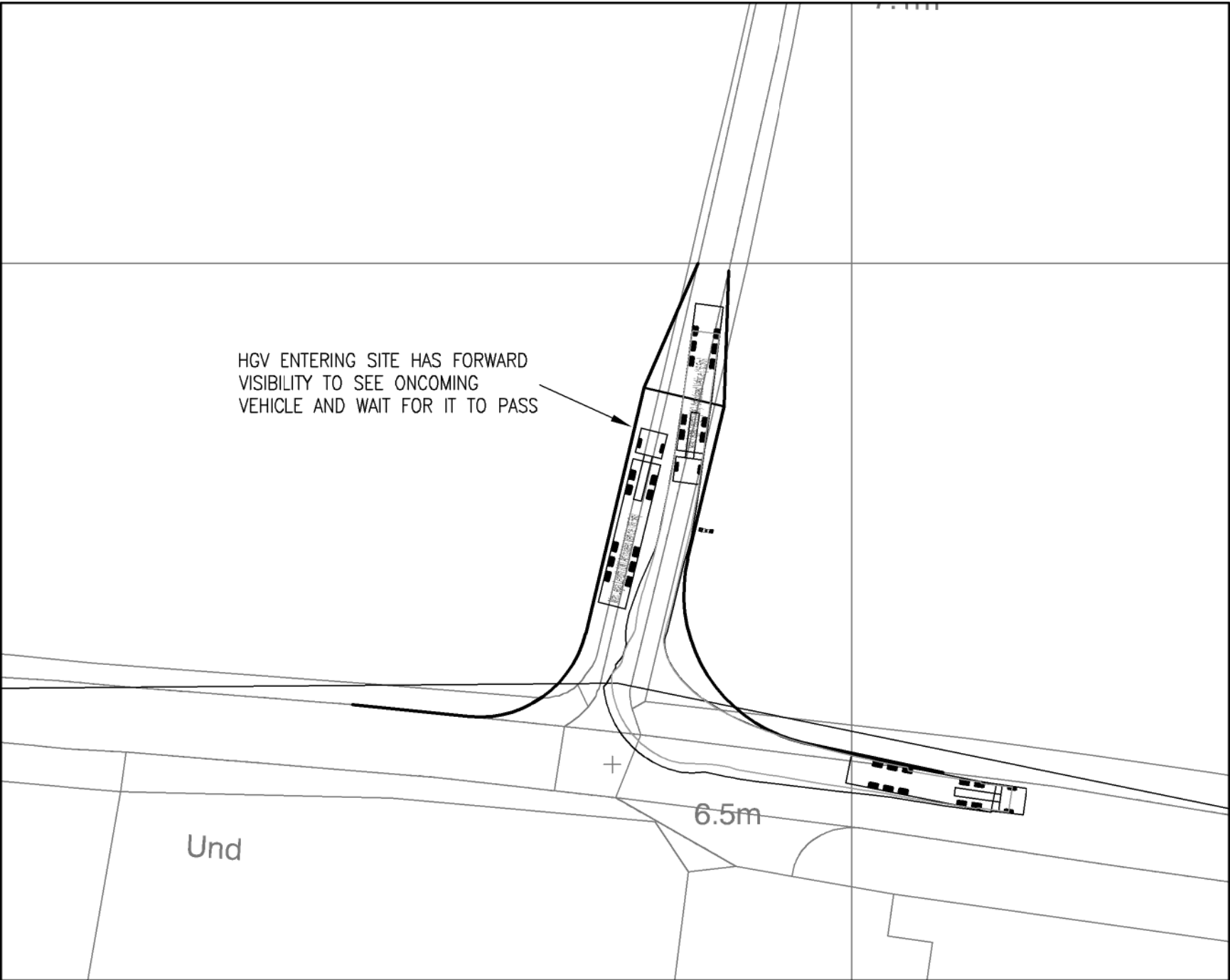
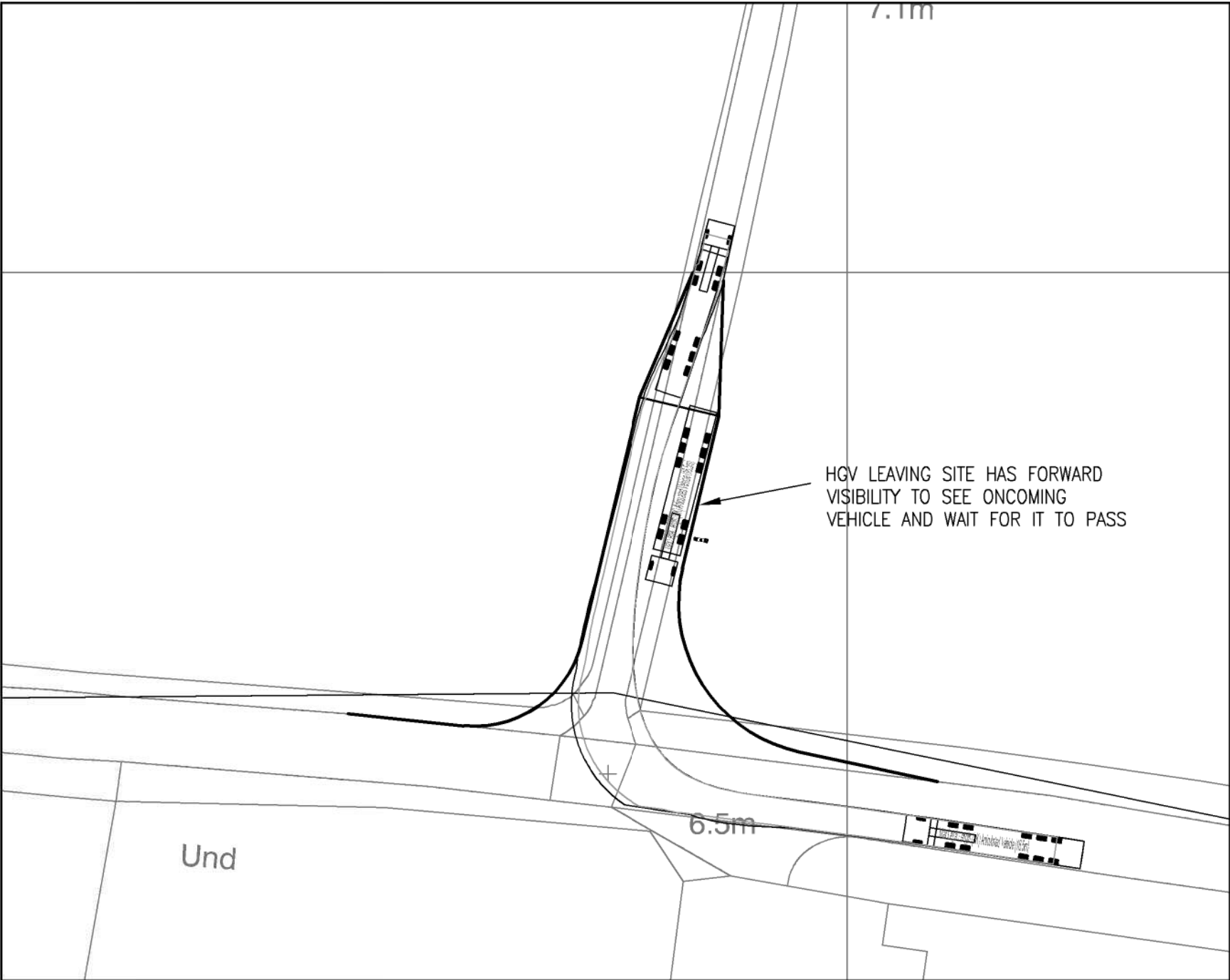
Proposed Vehicle Routing

- 1.29. All HGV's will enter the site on the westbound carriageway on Ford Lane and will leave heading eastbound, towards Ford road and the strategic network (A27 and A259). HGV drivers will be informed of this routing when on the way to the site and when they leave the site. A no right turn sign will also be placed near the junction of the access road and Ford Lane to ensure that HGV's travel on the specified route only.
- 1.30. This ensures that all HGV's do not access the site via the B2132 and Yapton village centre.

Summary and Conclusion

- 1.31. This Technical Note has been prepared by Stuart Michael Associates (SMA), consulting engineers, on behalf of Agricultural Investments Limited (the 'Applicant'), in support of the proposed access for the construction of six hectares of commercial glasshouse with associated irrigation reservoir, access roads and car parking on land at Wicks Farm, Arundel, West Sussex.
- 1.32. It is proposed that the existing farm access be widened to 7.5m in order to safely allow HGV's to clear Ford Lane and pass each other, should two HGV's be required to pass each other.
- 1.33. Based on a speed survey commissioned by SMA, visibility splays of 120m eastbound and 125m westbound have been deemed appropriate for the proposed access. These have been based on wet weather speeds, formulated using DMRB standards. The vertical profile of these visibility splays has been investigated and no obstructions requiring works to rectify were found.
- 1.34. The proposed access road will need additional works in order to safely allow an HGV to access the site. These works consist of widening the existing corners leading to the site, in order to facilitate the turn of the 16.5m HGV as well as allowing the potential passing of two HGV's on the access road.
- 1.35. As the HGV's will not be loaded from a loading bay, and instead be loaded via a forklift truck, HGV's are not required to back up to a specified loading bay. As such, vehicle tracking has been completed to demonstrate how an HGV can enter the site, be loaded and leave the site in a forward gear.
- 1.36. The Applicant proposes that there will be no more than 3 HGV's accessing the site per day, this equates to 6 HGV movements in and out of the site, this level of vehicle movement has been deemed appropriate for the development and the access road.

DRAWINGS



A	REVISED TRACKING AS REQUESTED BY WSCC	BEB	DLW	6//9/19
Rev	Description	Drn	Chk	Date
REVISIONS				
Preliminary Issue		Submitted for S104		
Planning Issue		Issued for Tender		
Submitted for S38		Issued for Construction		
Submitted for S278		As Built		
DRAWING STATUS				



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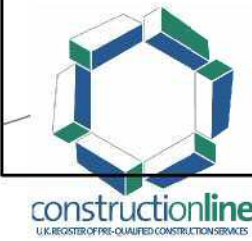
T: 01635 867 711 **e:** mail@stuartmichael.co.uk
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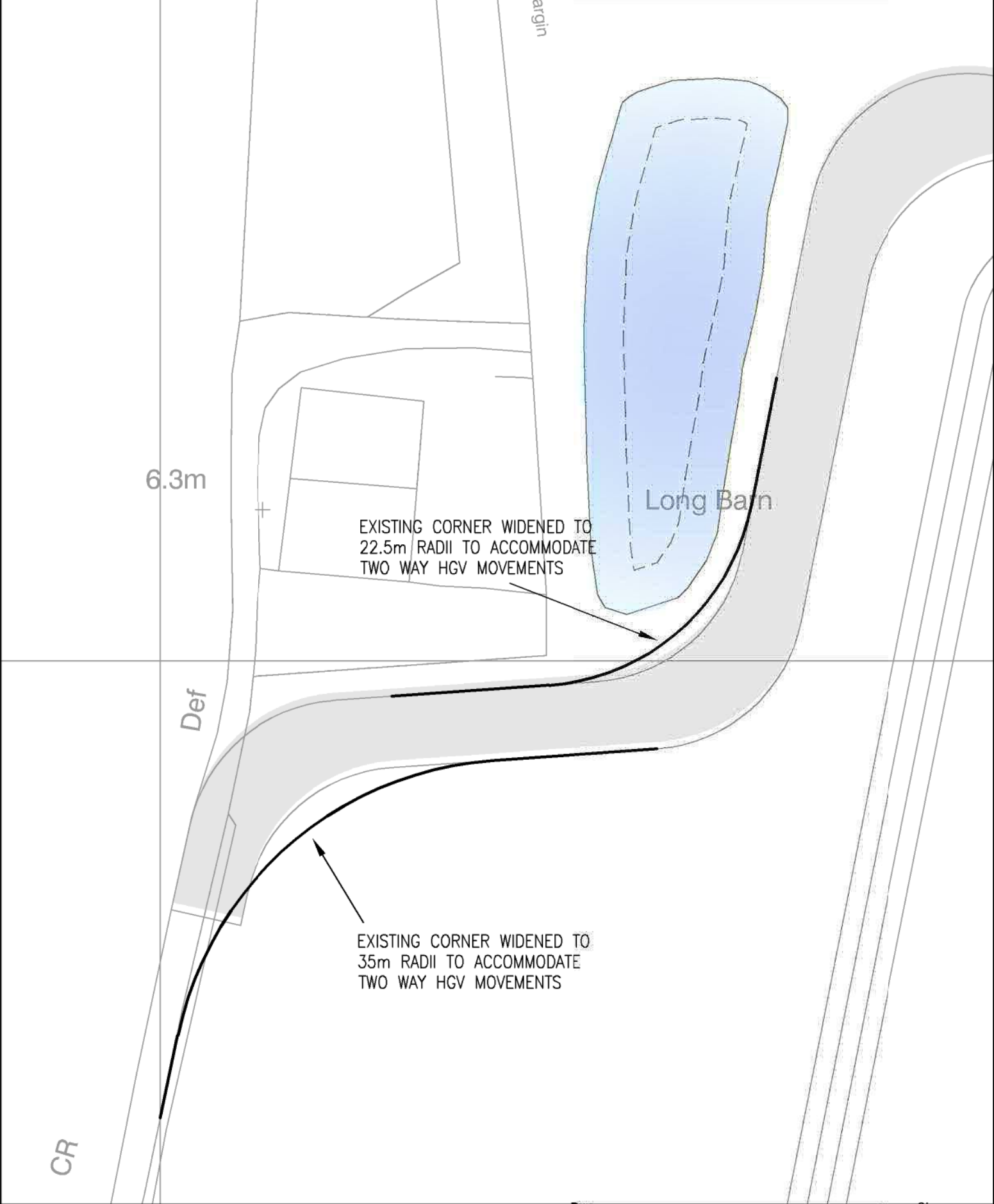
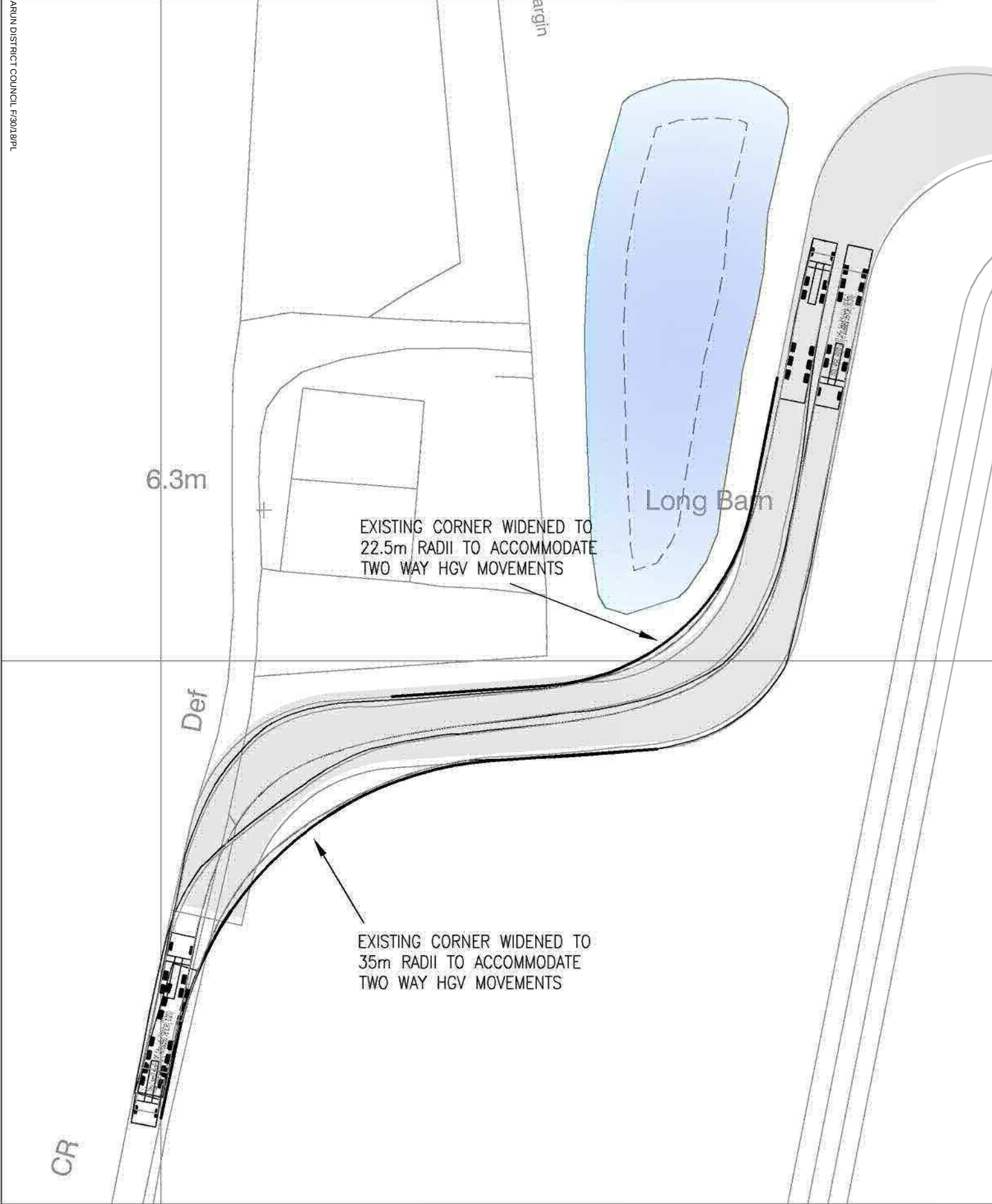
WICKS FARM, FORD, ARUNDEL, WEST SUSSEX

PROPOSED ACCESS ARRANGEMENTS WITH AUTOTRACK VEHICLE TRACKING OF A 16.5m HGV

DATE	AUGUST 2019	DESIGN	BEB	CHECKED	DLW	ISSUE CHECKED	
DRAWING NO.	6352.001	REV	A	SCALE	1:1000		@ A2

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JOB TITLE

WICKS FARM, FORD, ARUNDEL, WEST SUSSEX

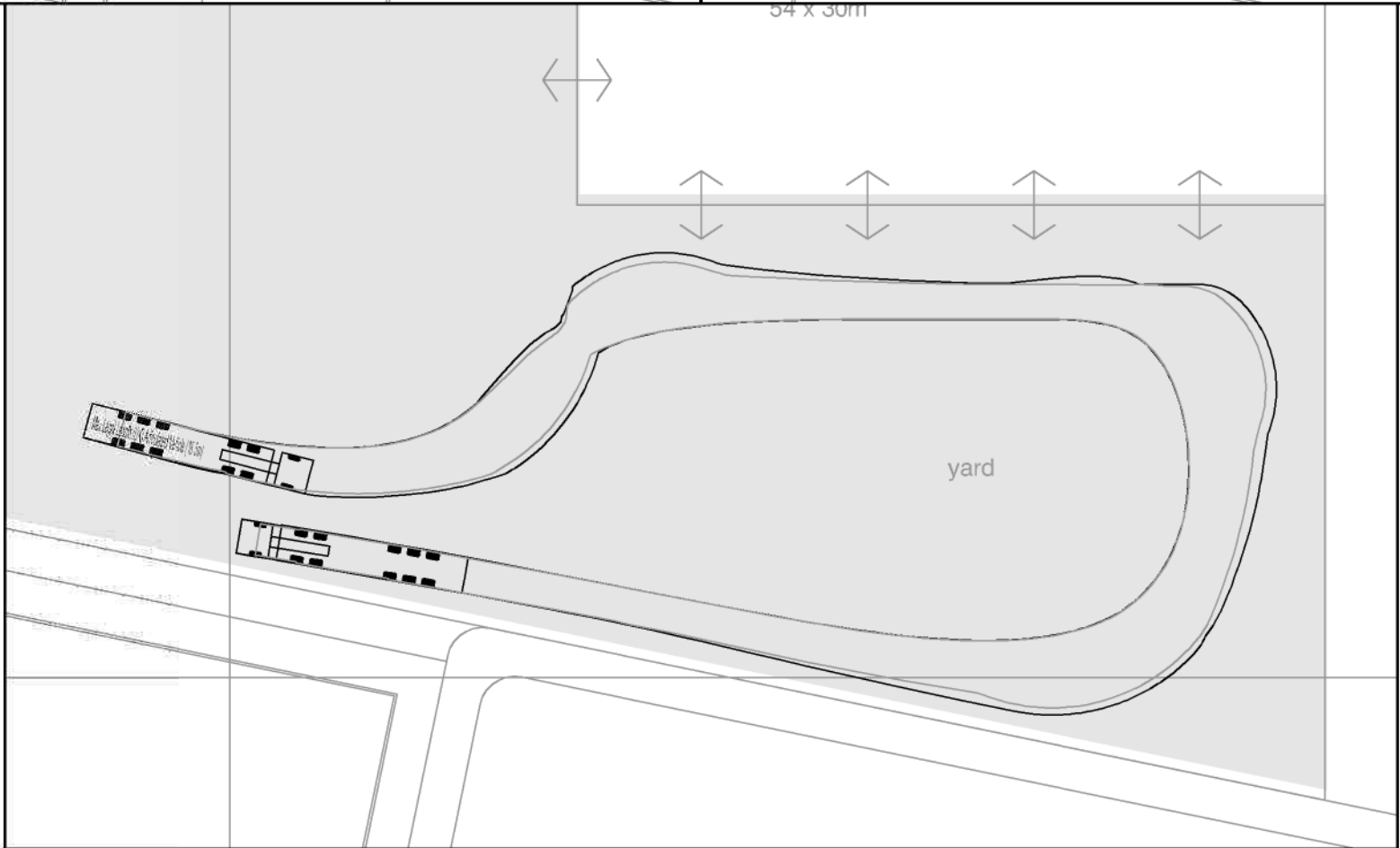
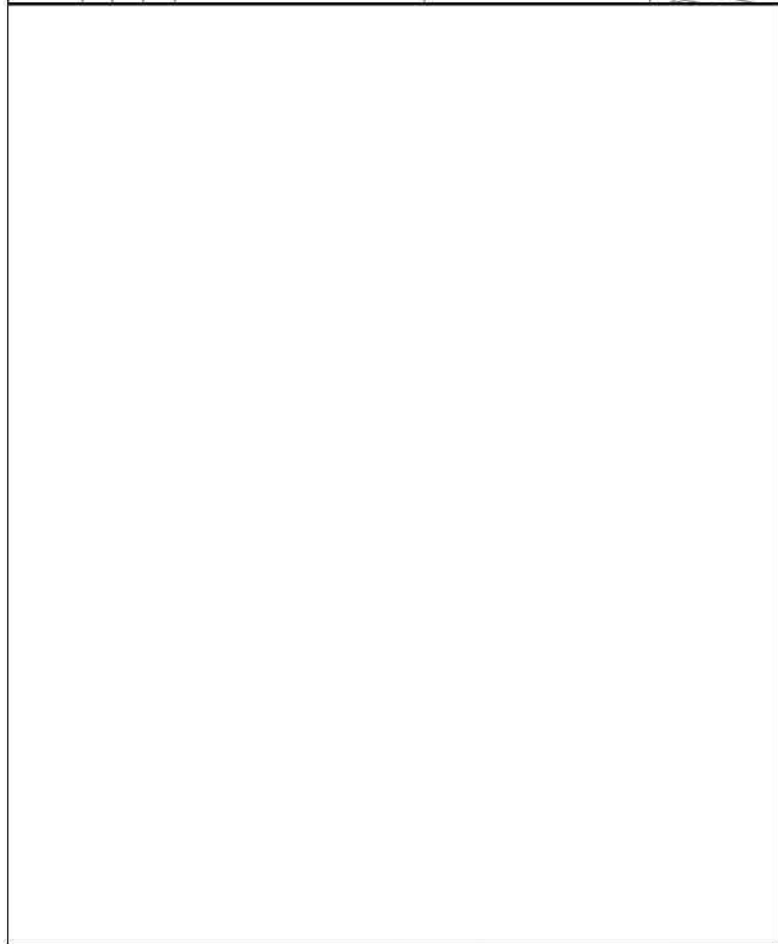
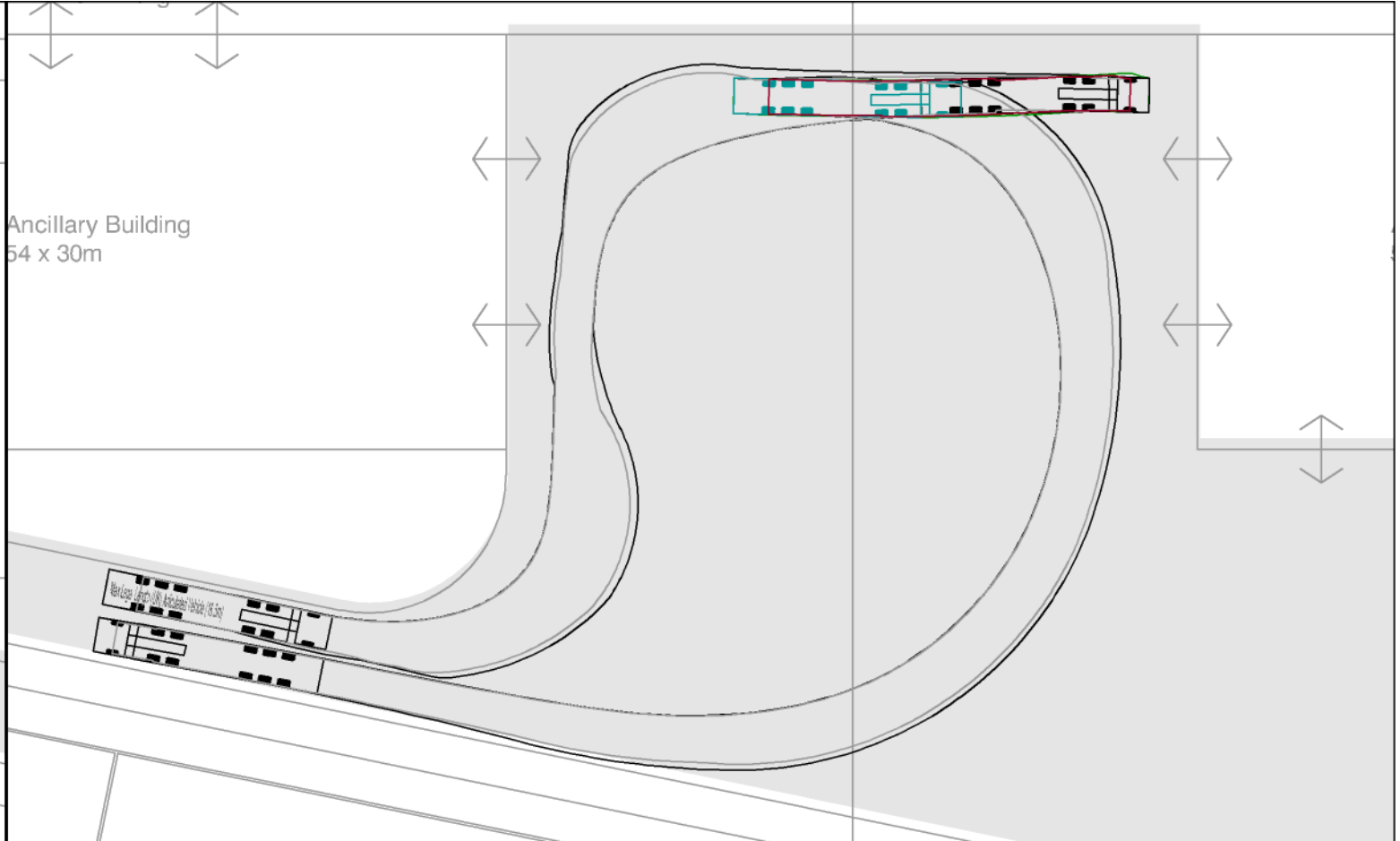
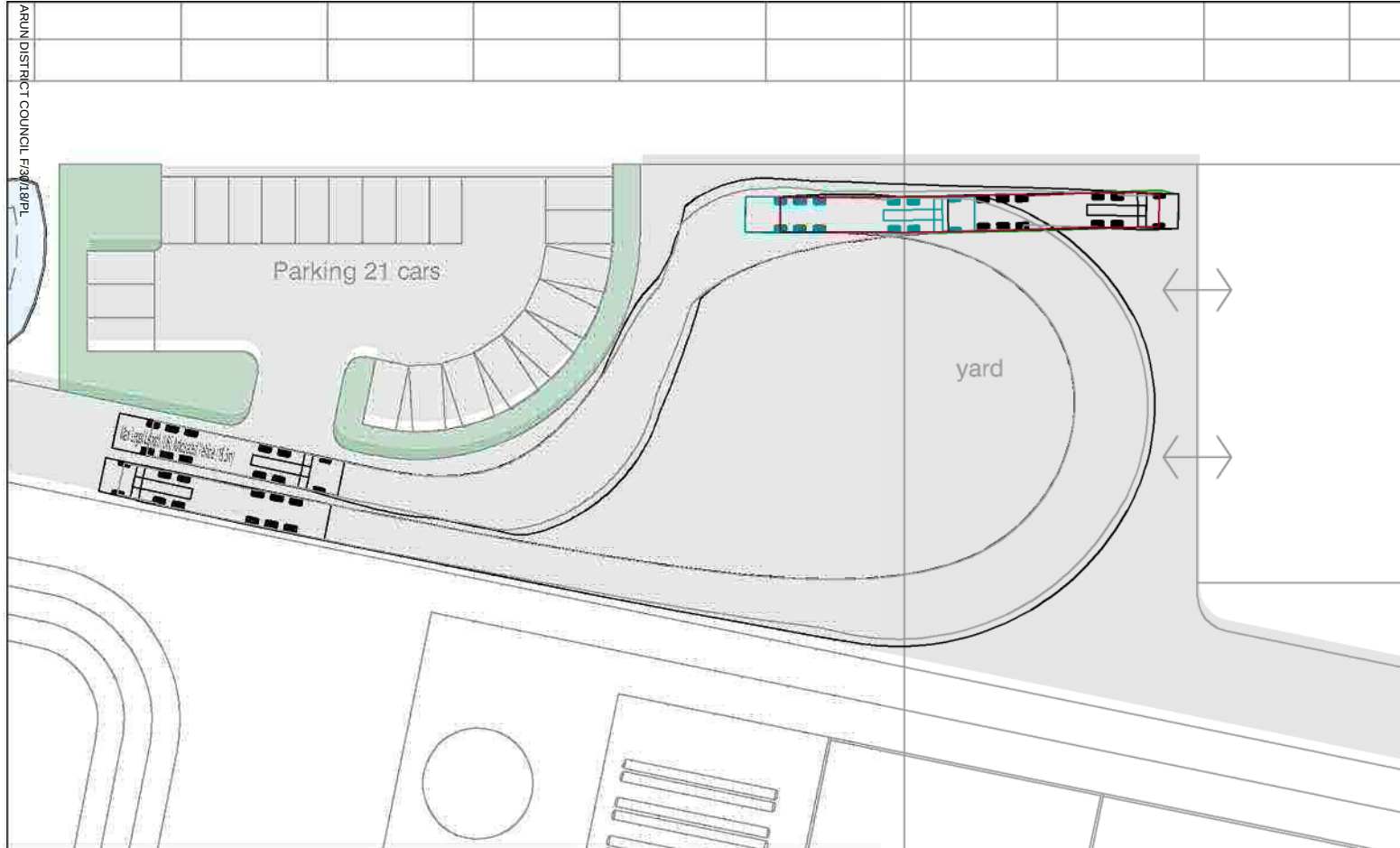
DRAWING TITLE

PROPOSED ALTERATIONS TO SITE ACCESS TO
FACILITATE TWO WAY HGV MOVEMENTS WITH
AUTOTRACK VEHICLE TRACKING OF A 16.5m HGV

Rev	Description	Dm	Ch	Date
REVISIONS				
Preliminary	Approval	Tender	Consent	
DRAWING STATUS				
DATE	DRAWN	CHECKED	ISSUE CHECKBOX	
AUGUST 2019	BEB	DLW		
DRAWING No.	REV	SCALE		
6352.002	.	1:500	@ A3	

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ARUN DISTRICT COUNCIL F38/19PL





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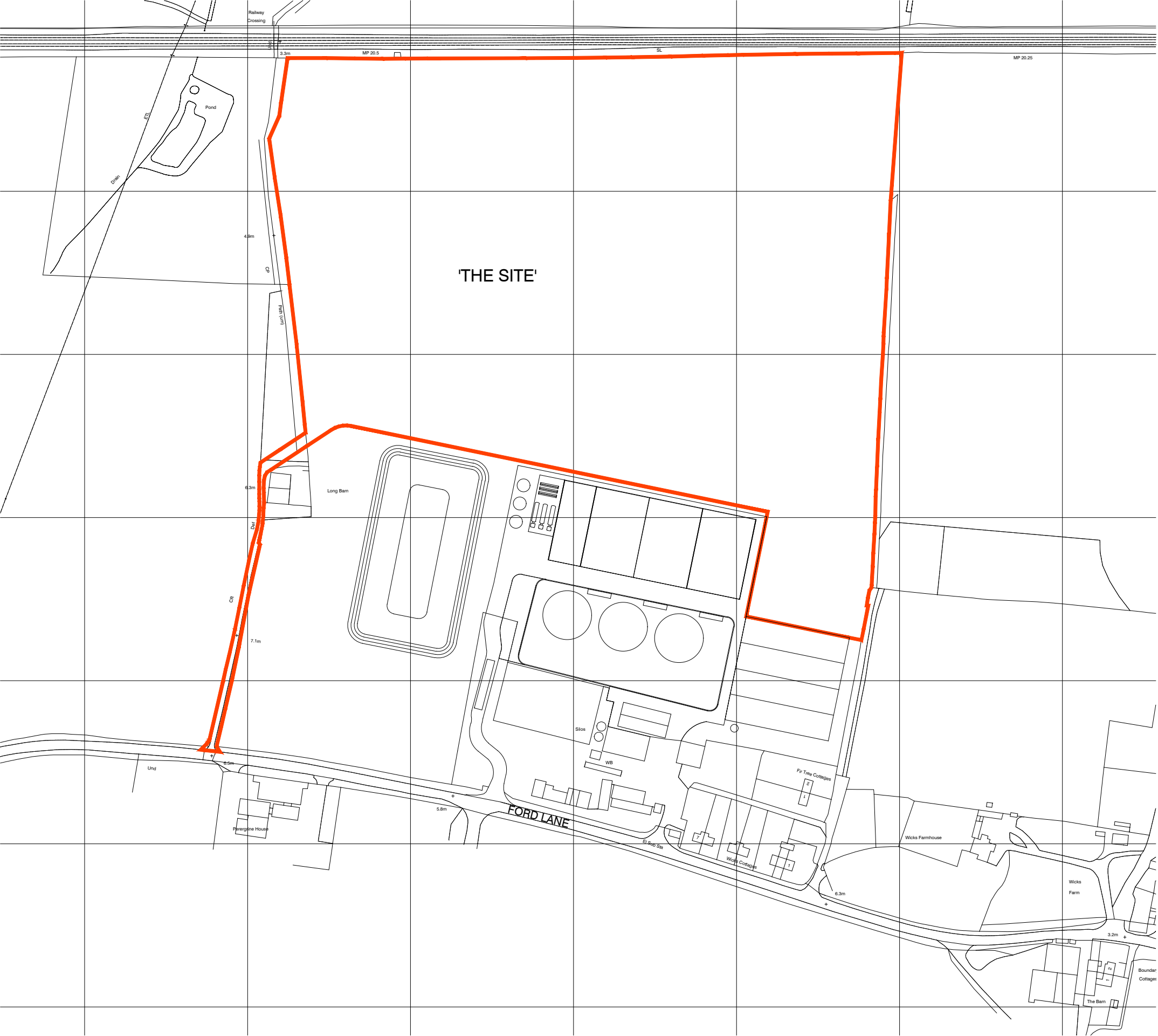
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JOB TITLE
WICKS FARM, FORD, ARUNDEL, WEST SUSSEX

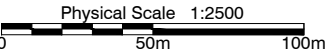
DRAWING TITLE
AUTOTRACK VEHICLE TRACKING OF 16.5m HGV OF PROPOSED HGV MOVEMENTS WITHIN YARD AREA TO LOAD AND UNLOAD HGV

Revised	Description	Dm	Ch	Date
REVISIONS				
Preliminary	Approval	Tender	Consent	
DRAWING STATUS				
DATE	DRAWN	CHECKED	ISSUE CHECKBOX	
AUGUST 2019	BEB	DLW		
DRAWING No.	REV	SCALE	@ A3	
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APPENDIX A

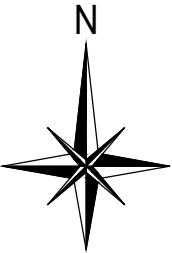


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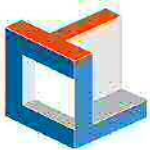
Location Plan 1:2500@A3

NOTES:
Dimensions to be checked on site before commencing work. any discrepancies shall be reported to Curtis Leeves Technical Ltd. immediately.
Do not scale from these drawings except for planning purposes. Use figured dimensions only.
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P01 Issued for comment. 15.11.18

rev	description	date
status		
PLANNING		



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client			
Agricultural Investments Limited			
project			
Wicks Farm Polytunnels			
Wicks Farm			
Ford			
title			
Site Location Plan			
date	scale @ A3	drawn	chkd
07.11.18	1:2500	GBC	GBC
project no.	drawing no.	rev	
1849	PA01	P01	

APPENDIX B

WEST SUSSEX COUNTY COUNCIL CONSULTATION

TO:	Arun District Council FAO: Anita Gardner
FROM:	WSCC - Highways Authority
DATE:	30 August 2019
LOCATION:	Wicks Farm, Ford Lane, Ford, Arundel, BN18 0DF
SUBJECT:	F/30/18/PL 2 multispans tunnels, 2 ancillary outbuildings, drainage pond, associated drainage works, external hardstanding for vehicle parking, access and turning. Additional highway report received.
DATE OF SITE VISIT:	28/01/2019
RECOMMENDATION:	More Information / Modification
S106 CONTRIBUTION TOTAL:	n/a

The LHA has been re-consulted on this proposal following submission of additional information requested by the LHA. This proposal is for 2 multispans tunnels, 2 ancillary outbuildings, drainage pond, associated drainage works, external hardstanding for vehicle parking, access and turning.

This response should be read in conjunction with the LHA's previous responses dated 1st February 2019 and 5th July 2019.

The LHA's response dated 5th July 2019 requested the following additional information from the applicant in order that the application could be adequately assessed:

- A clear plan demonstrating the current and proposed width of the access and internal access route through the site, including details of the formalisation of the access.
- Clarification of ownership of land either side of the existing access.
- Swept path tracking demonstrating the largest anticipated vehicle entering the site, travelling through the site, turning and exiting the site.
- A seven day speed survey should be undertaken to determine 85th percentile speeds in this location. Visibility splays should be provided in accordance with these speeds.
- Vertical visibility at a distance of 4.5m back into the access for the full length of achievable vehicular visibility splays.
- Details of the type and number of movements per day at the existing access for the existing use.
- Draft Travel Plan Statement – this can be secured via condition if the LPA were to approve the application

Swept path tracking has been provided demonstrating that HGVs can enter the site from both directions via the proposed widened access. Whilst it appears that HGVs can exit the site to the west, HGVs turning left out of the access are required to cross both the opposing carriageway and an access on the south of Ford Lane before returning to the correct side of the carriageway and proceeding east. This is not an acceptable arrangement and requires the use of land outside of the control of the applicant.

Removing the possibility of conflict with HGVs at the access may allow a vehicle exiting the site the possibility for an alternative road position to be taken up within the access route. This practise may facilitate an improved manoeuvre onto Ford Lane and may prevent vehicles overrunning the site access opposite.

The LHA note that the transport statement initially provided by the applicant, states that all HGVs will be routed east towards Ford Road, A27 and A259. Therefore this would be the manoeuvre that all HGVs exiting the site would be required to undertake. As such, whilst the access has been designed to accommodate two HGVs passing within the access, the LHA would request that the

applicant provide a detailed routing statement to ensure that two HGVs do not utilise the site access at the same time.

The revised statement should at least confirm that only one HGV will utilise the access at any one time, outline the proposed routing of vehicles entering and exiting the site, and confirm the frequency of HGV trips generated on a daily/weekly basis. The statement should also include details of when staff minibuses will be operational and details of how conflict will also be avoided with the HGV movements. Once this revised routing statement has been provided, the applicant should provide a revised swept path tracking plan for this manoeuvre to demonstrate any improvements.

The applicant may also wish to consider further access widening to facilitate an improved manoeuvre.

Please re-consult once the above additional information has been received.

Nicola Fry
West Sussex County Council – Planning Services

APPENDIX C

Site No. 00000211
FORD LANE YAPTON

Site Ref. 00000211

From 31/07/2019 To 9/08/2019

Channel: EASTBOUND

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5Mph	Bin 2 5-<10	Bin 3 10-<15	Bin 4 15-<20	Bin 5 20-<25	Bin 6 25-<30	Bin 7 30-<35	Bin 8 35-<40	Bin 9 40-<45	Bin 10 45-<50	Bin 11 50-<55	Bin 12 55-<60	Bin 13 >=>60
00:00	6		42	7	0	0	0	0	0	0	0	2	1	1	0	0	0
01:00	3		42	9	0	0	0	0	0	0	0	1	1	0	0	0	0
02:00	3		43	7	0	0	0	0	0	0	0	0	1	1	0	0	0
03:00	4		40	10	0	0	0	0	0	0	1	1	1	0	1	0	0
04:00	9		41	8	0	0	0	0	0	0	1	3	2	1	1	0	0
05:00	18	49	43	8	0	0	0	0	0	1	2	4	5	5	1	1	0
06:00	63	49	43	7	0	0	0	0	0	1	5	13	23	13	6	2	1
07:00	126	47	41	7	0	0	0	2	2	2	11	42	41	19	5	2	0
08:00	127	47	41	6	0	0	1	2	1	1	12	41	44	20	5	1	0
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20:00	40	49	42	9	0	0	1	1	1	0	3	8	13	8	4	1	0
21:00	27	48	41	7	0	0	0	0	0	0	3	9	8	4	2	1	0
22:00	17	48	41	7	0	0	0	0	0	0	3	5	4	3	1	0	0
23:00	11	51	45	8	0	0	0	0	0	0	1	2	3	2	1	1	1
Total																	
12H(7-19)	1595	47	40	7	0	0	7	17	15	33	177	518	504	232	66	18	7
16H(6-22)	1796	47	40	7	0	0	9	19	17	35	193	565	571	270	83	25	9
18H(6-24)	1824	47	41	7	0	0	9	19	17	35	197	572	579	275	85	26	10
24H(0-24)	1866	47	41	7	0	0	9	19	18	37	201	582	590	284	89	27	11
AM Peak	08:00		02:00	03:00	11:00	11:00	09:00	10:00	07:00	10:00	11:00	10:00	08:00	08:00	06:00	07:00	11:00
	127		43	10	0	0	1	2	2	2	15	47	44	20	6	2	1
PM Peak	16:00	23:00	23:00	20:00	23:00	12:00	12:00	12:00	17:00	16:00	15:00	16:00	16:00	17:00	18:00	17:00	17:00
	181	51	45	9	0	0	1	1	2	7	26	61	55	31	9	3	1

VDA Lite 11/08/2019

Site No. 00000211
FORD LANE YAPTON

Site Ref. 00000211

From 31/07/2019 To 9/08/2019

Channel: WESTBOUND

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5Mph	Bin 2 5-<10	Bin 3 10-<15	Bin 4 15-<20	Bin 5 20-<25	Bin 6 25-<30	Bin 7 30-<35	Bin 8 35-<40	Bin 9 40-<45	Bin 10 45-<50	Bin 11 50-<55	Bin 12 55-<60	Bin 13 =>60
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01:00	3		45	10	0	0	0	0	0	0	0	1	0	1	0	1	0
02:00	3		41	7	0	0	0	0	0	0	0	1	1	0	0	0	0
03:00	3		38	10	0	0	0	0	0	1	1	0	0	1	0	0	0
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06:00	68	50	42	10	0	0	2	1	1	3	3	11	20	17	7	2	0
07:00	148	48	42	7	0	0	0	1	1	4	10	30	57	32	9	3	1
08:00	150	48	41	7	0	0	0	2	2	3	11	33	60	29	8	1	1
09:00	135	47	40	8	0	0	1	4	3	3	12	34	49	22	7	1	0
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11:00	131	46	40	6	0	0	1	2	1	1	14	45	46	18	4	1	0
12:00	133	47	41	7	0	0	1	1	1	4	13	39	44	23	6	1	1
13:00	115	48	41	7	0	0	1	1	1	2	8	35	39	18	8	2	0
14:00	112	47	41	7	0	0	1	2	1	2	8	34	38	17	6	2	1
15:00	112	48	41	7	0	0	1	1	2	3	11	31	36	20	6	1	1
16:00	129	48	42	7	0	0	0	1	2	4	8	33	46	23	9	2	1
17:00	137	49	42	8	0	0	1	1	1	3	10	31	45	28	11	4	1
18:00	77	49	43	8	0	0	1	1	1	2	5	15	27	16	7	3	1
19:00	51	49	42	8	0	0	0	0	1	2	4	10	17	11	4	2	1
20:00	39	49	41	9	0	0	1	0	1	1	4	8	12	7	3	1	1
21:00	24	49	42	7	0	0	0	0	0	1	2	6	8	4	2	1	0
22:00	15	50	43	7	0	0	0	0	0	0	1	5	4	2	2	0	0
23:00	9		40	12	0	0	1	0	0	0	1	2	3	1	1	0	0
Total																	
12H(7-19)	1508	48	41	7	0	1	9	17	16	34	122	406	526	262	85	22	8
16H(6-22)	1689	48	41	7	0	1	13	19	19	40	134	440	582	301	101	27	10
18H(6-24)	1713	48	41	7	0	1	14	19	19	40	136	447	590	304	104	28	11
24H(0-24)	1766	48	41	7	0	1	16	21	20	45	142	455	601	314	110	31	11
AM Peak	08:00 150		01:00 45	04:00 13	11:00 0	05:00 0	06:00 2	09:00 4	09:00 3	07:00 4	11:00 14	10:00 46	08:00 60	07:00 32	07:00 9	07:00 3	07:00 1
PM Peak	17:00 137	22:00 50	22:00 43	23:00 12	23:00 0	17:00 0	12:00 1	14:00 2	15:00 2	16:00 4	12:00 13	12:00 39	16:00 46	17:00 28	17:00 11	17:00 4	16:00 1