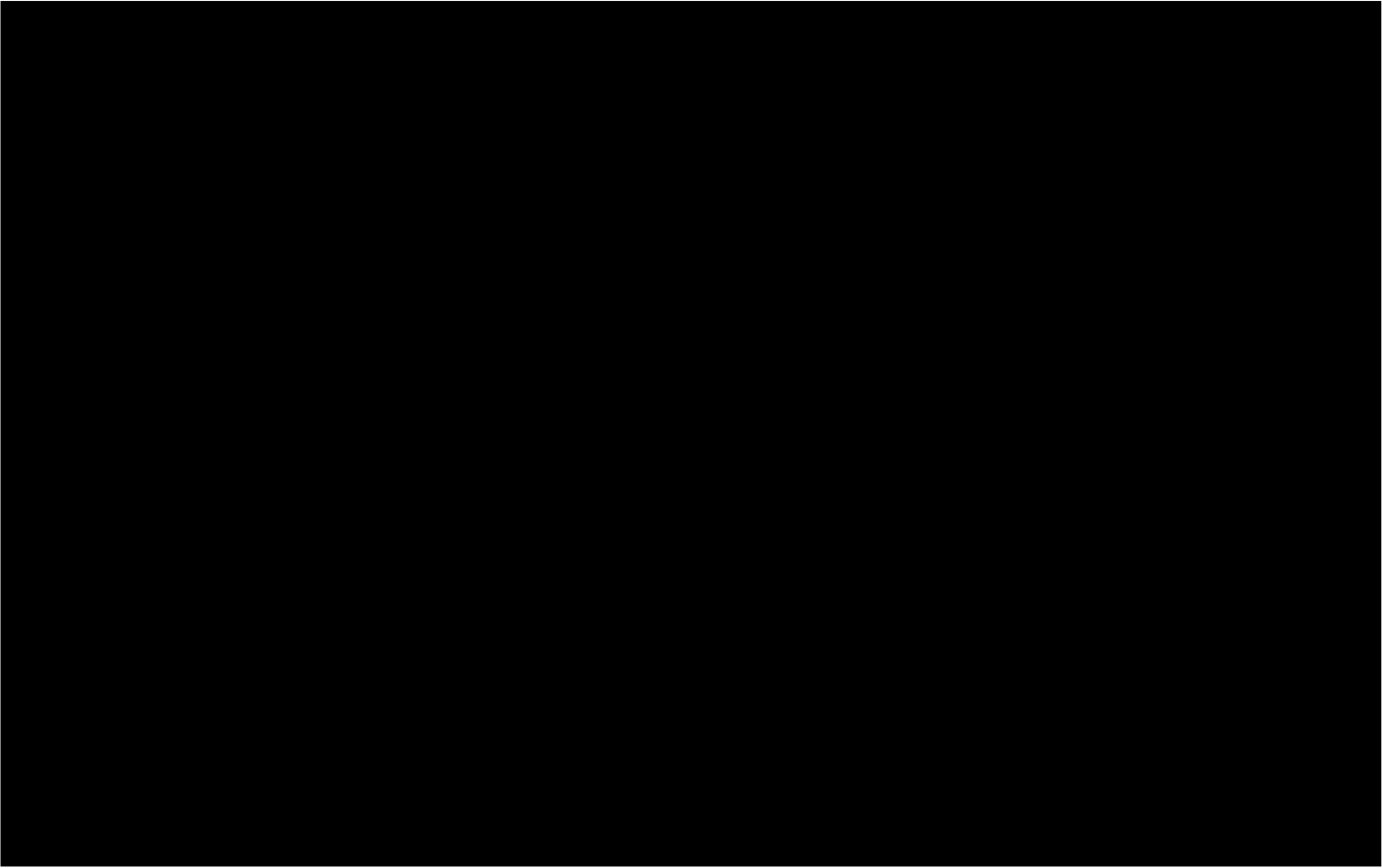




From: John Hall [REDACTED]
Sent: 14 August 2019 14:57
To: Anita Gardner <Anita.Gardner@arun.gov.uk>; Juan Baeza <Juan.Baeza@arun.gov.uk>
Cc: David Moore - Consulting [REDACTED]
Subject: Report for WS Highways

Hello Anita & Juan,

Please find attached the report from Stuart Michael Assoc. ref. WS Highways – Wicks Farm Entrance, Ford Lane, Ford, Arundel – Planning ref. F/30/19/PL.

Many thanks, John.

John Hall MBA MCIHort
John Hall Consulting Ltd.
113 Limmer Lane
Felpham
West Sussex
PO22 7LR



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

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.

Proposed Access

- 1.9. 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**.
- 1.10. The junction design shown in **Drawing 6352.001** 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.
- 1.11. 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.
- 1.12. 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.
- 1.13. 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.

Junction Visibility

- 1.14. 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.
- 1.15. 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 B**.

Table 1 – Vehicle Speeds on Surrounding Road Network

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

- 1.16. 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.
- 1.17. 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**.
- 1.18. **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.
- 1.19. As **Drawing 6352.001** shows, there is no obstruction to the visibility splays in either direction from the access.

Proposed Internal Works

- 1.20. 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.

- 1.21. 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

- 1.22. 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.
- 1.23. 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

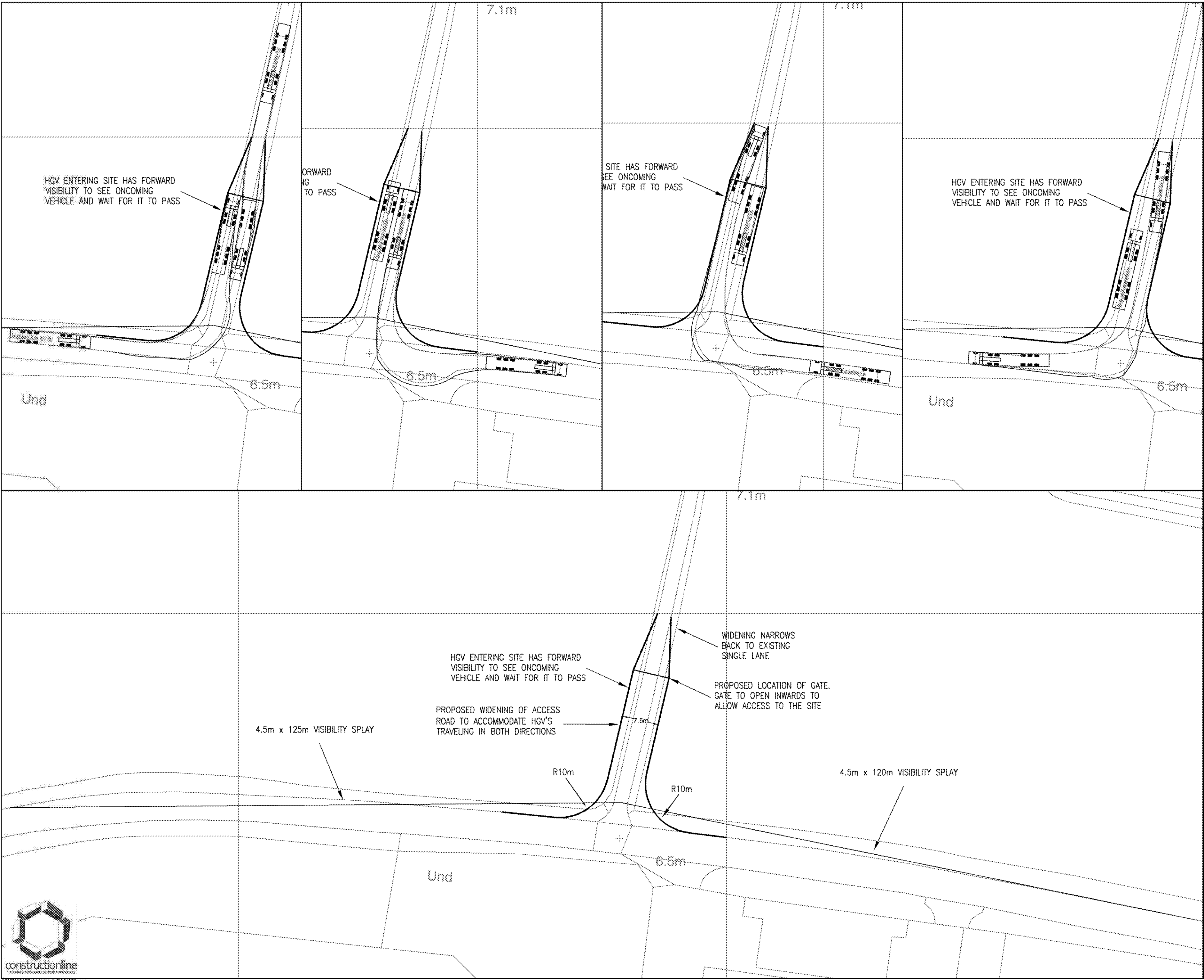
- 1.24. From the Applicants past experience in operating a site like this, they propose that there will be no more than 3 HGV's on site per day, so a maximum of 6 HGV movements over the day. The site will also have 21 parking spaces provided for staff and visitors, however it is not anticipated that all 21 spaces will be occupied at any one time.

Summary and Conclusion

- 1.25. 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.
- 1.26. 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.
- 1.27. 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.

- 1.28. 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.
- 1.29. 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.
- 1.30. 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



Re	Description	Drn	Ch	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				

STUART MICHAEL ASSOCIATES
CONSULTING ENGINEERS

Stuart Michael Associates Ltd
Coombe House, Coombe Square, Thatcham, Berkshire RG19 4JF

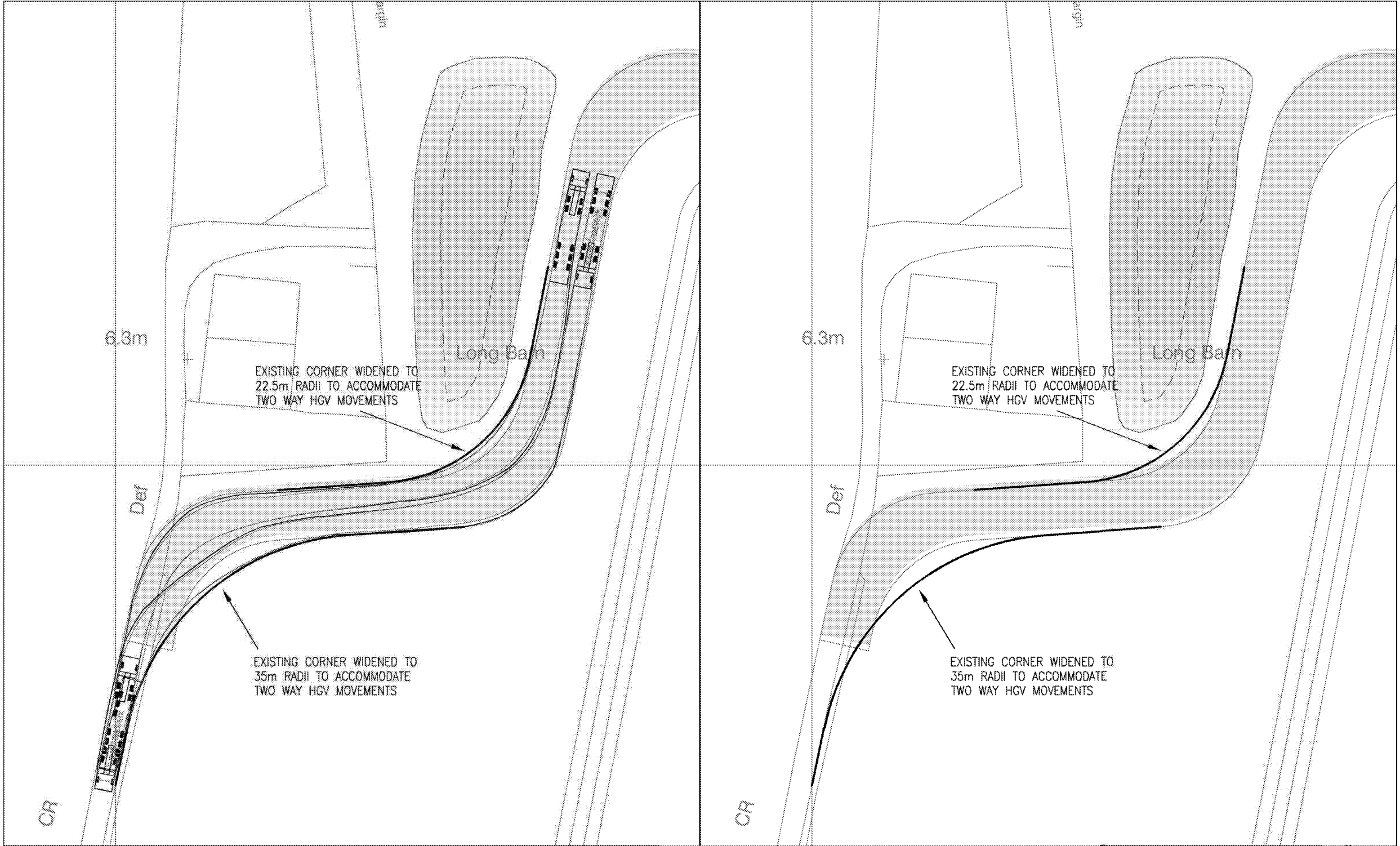
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F: [REDACTED]

WICKS FARM, FORD, ARUNDEL, WEST SUSSEX

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

DATE	AUGUST 2019	DESIGN	BEB	DRAWN	DLW
DRAWING NO.	6352.001	SCALE	1:1000	SHEET	@ A2

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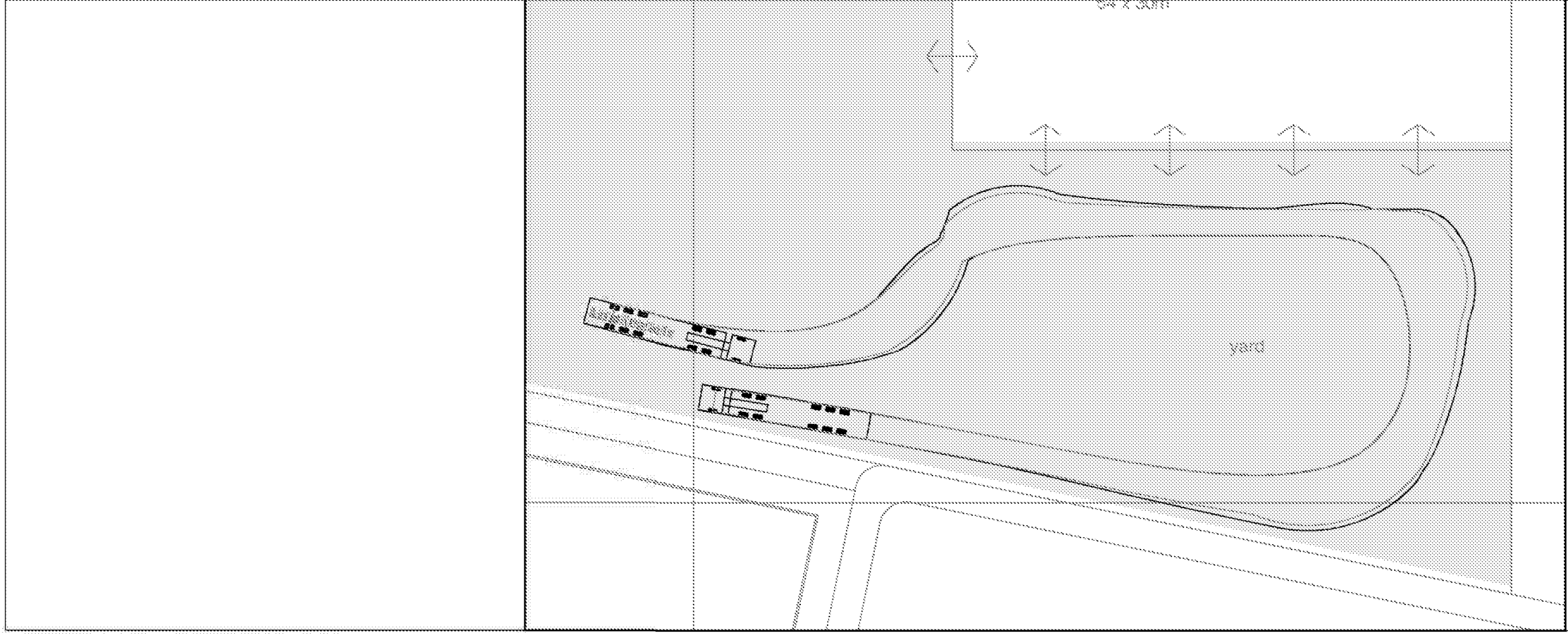
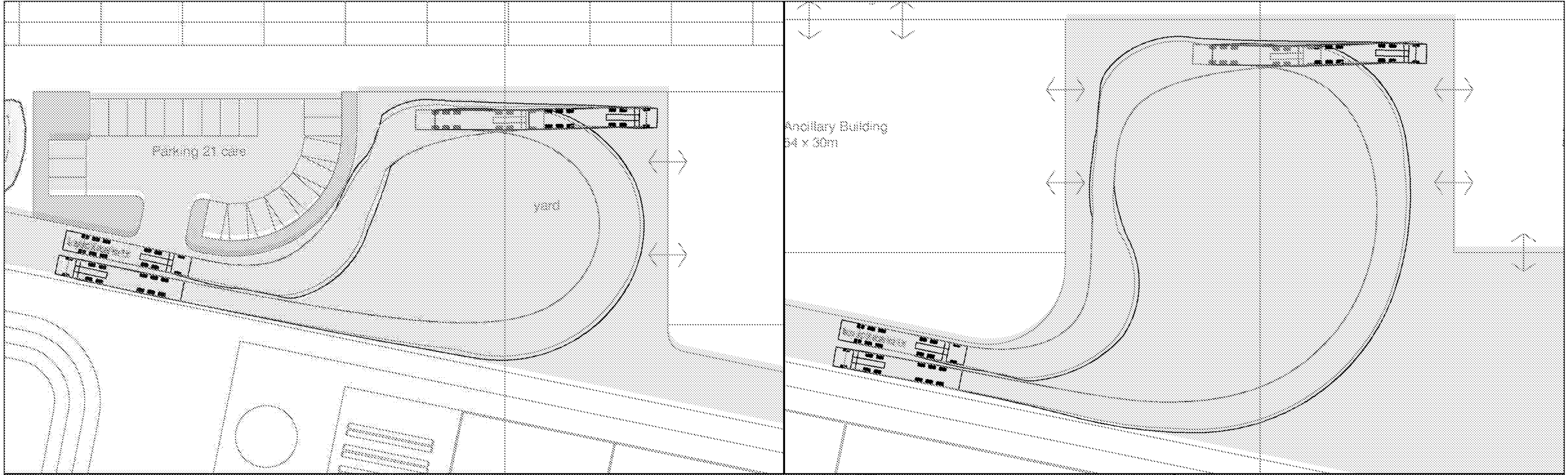


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WICKS FARM, FORD, ARUNDEL, WEST SUSSEX

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

Re v	Description	Dm	Ch k	Date
REVISIONS				
Prelimin y	Approv al	Tende r	Cons t	
DRAWING STATUS				
DATE	DESIGNED	BY	CHECKED	DATE
AUGUST 2019	BEB	DLW		
6352.002		1:500	@ A3	
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CONSULTING ENGINEERS

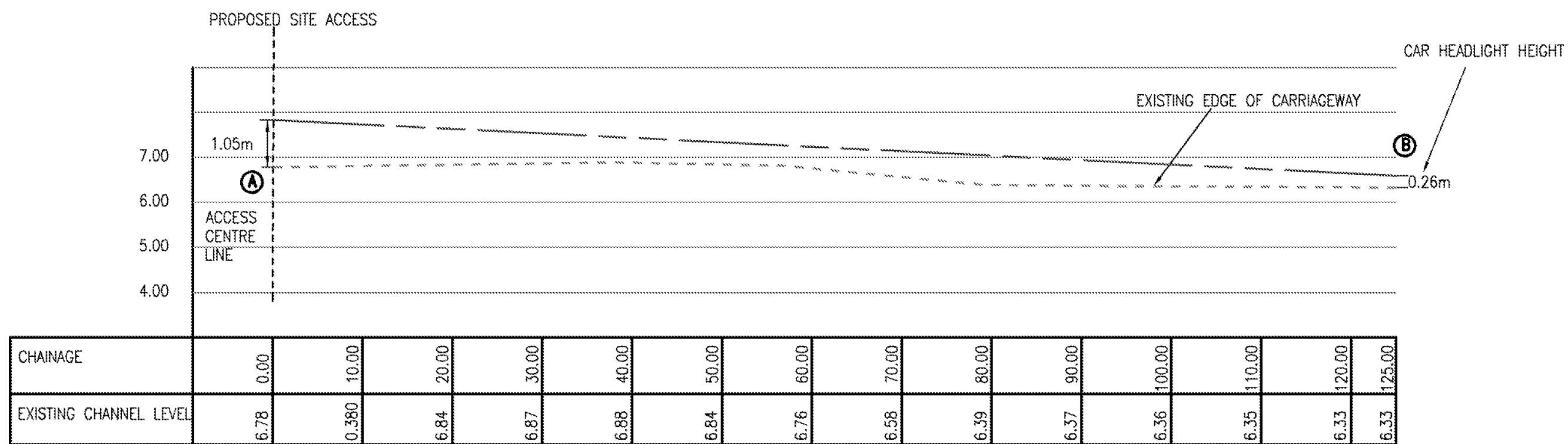
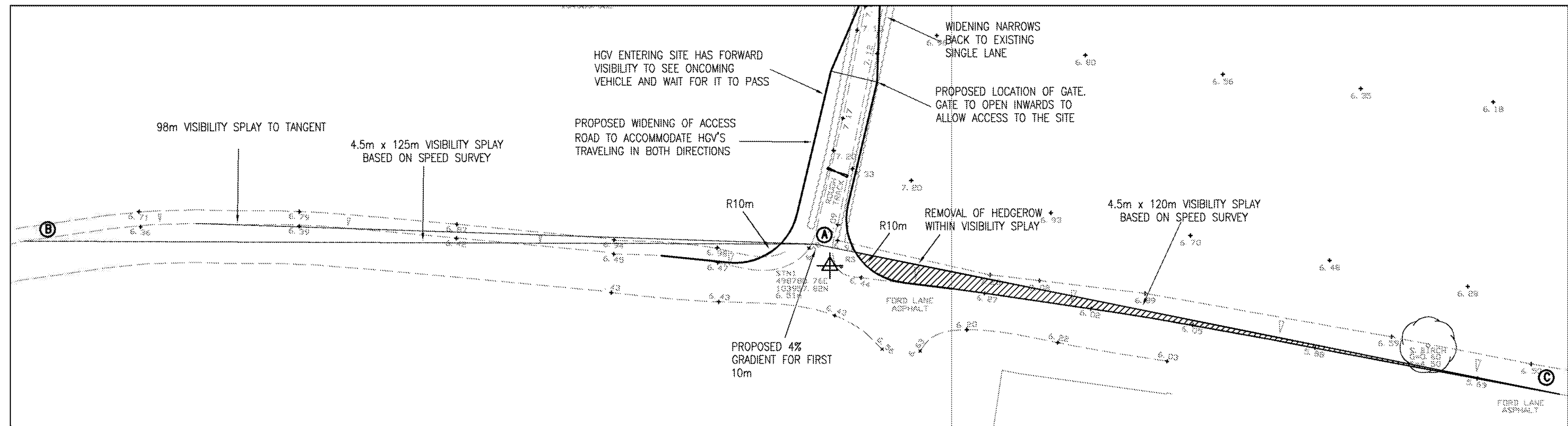
Stuart Michael Associates Ltd
Coombe House, Coombe Square, Thatcham, Berkshire RG19 4JF

ARUNDEL

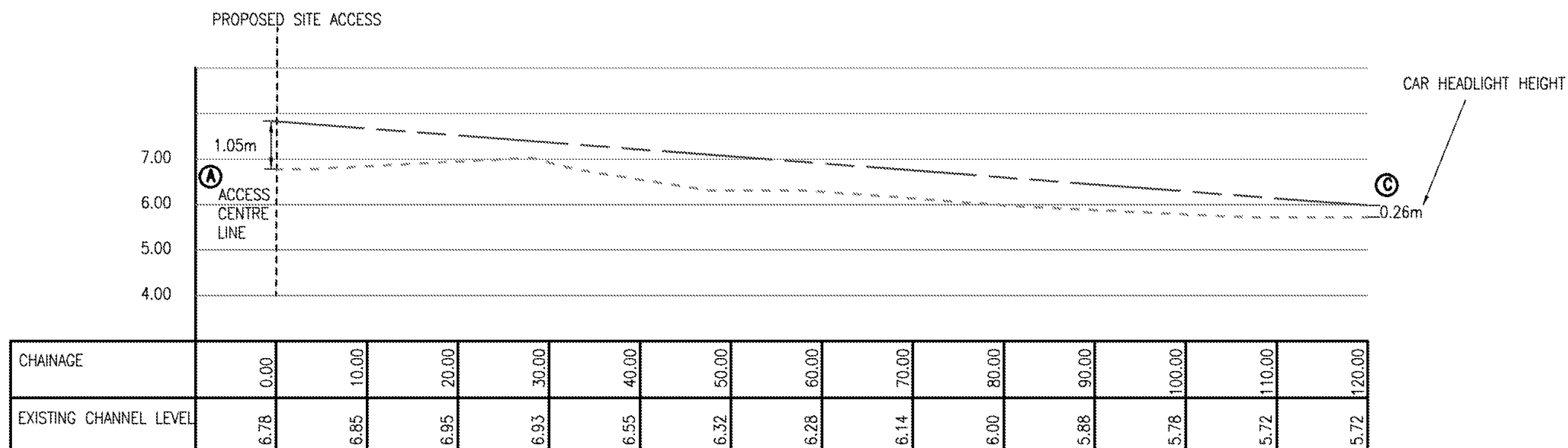
WICKS FARM, FORD, ARUNDEL, WEST SUSSEX

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

Re v	Description	Dm	Ch k	Date
REVISIONS				
Preliminary	Approval	Tender	Cons	
DRAWING STATUS				
DATE	AUGUST 2019	BY	BEB	DLW
PROJECT NO.	6352.003	SCALE	1:500	@ A3
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LONGITUDINAL PROFILE BETWEEN DRIVER EXITING PROPOSED SITE ACCESS AND ONCOMING DRIVER TO THE WEST OF THE SITE ACCESS
(FROM A TO B, REFERENCE PLAN ABOVE) ALONG THE 125m INTERVISIBILITY ENVELOPE



LONGITUDINAL PROFILE BETWEEN DRIVER EXITING PROPOSED SITE ACCESS AND ONCOMING DRIVER TO THE EAST OF THE SITE ACCESS
(FROM A TO C, REFERENCE PLAN ABOVE) ALONG THE 120m INTERVISIBILITY ENVELOPE

Rev	Description	Drm	Chk	Date
REVISIONS				
Preliminary Issue				Submitted for S104
Planning Issue				Issued for Tender
Submitted for S38				Issued for Construction
Submitted for S27B				As Built
DRAWING STATUS				

STUART MICHAEL ASSOCIATES
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WICKS FARM, FORD, ARUNDEL,
WEST SUSSEX

VISIBILITY SPLAYS AND VERTICAL
PROFILES

AUGUST 2019 BEB DLW
6352.004 1:500 @ A2

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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.
Where applicable this drawing is to be read in conjunction with other consultants' drawings.
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P01 Issued for comment. 15.11.18

rev	description	date
status		
PLANNING		



CURTIS LEEVES TECHNICAL LTD

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

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 5-9	Bin 2 10-14	Bin 3 15-19	Bin 4 20-24	Bin 5 25-29	Bin 6 30-34	Bin 7 35-39	Bin 8 40-44	Bin 9 45-49	Bin 10 50-54	Bin 11 55-59	Bin 12 60-64	Bin 13 65-69
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
09:00	113	45	40	6	0	0	1	1	1	2	14	42	34	14	3	1	0
10:00	122	45	39	7	0	0	1	2	1	2	13	47	38	14	3	1	0
11:00	112	45	39	7	0	0	1	2	1	1	15	39	37	12	3	1	1
12:00	120	47	41	7	0	0	1	1	2	1	10	41	36	19	7	1	1
13:00	121	47	40	7	0	0	1	1	1	1	14	38	38	20	5	1	1
14:00	133	47	40	7	0	0	0	1	2	4	16	42	40	20	6	1	1
15:00	156	45	39	7	0	0	0	1	2	5	26	53	45	17	5	2	1
16:00	181	46	40	7	0	0	1	1	1	7	25	61	55	21	7	1	1
17:00	163	48	41	7	0	0	1	1	2	5	15	42	54	31	8	3	1
18:00	123	49	42	6	0	0	0	1	1	2	8	31	42	27	9	2	1
19:00	71	49	42	8	0	0	0	1	1	1	5	17	23	13	6	2	1
20:00	40	49	42	9	0	0	1	1	1	0	3	8	13	8	4	1	0
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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	BSH Percentile	Mean Average	Standard Deviation	Bin 1 0-5	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 60-65
00:00	5		43	8	0	0	0	0	0	0	0	2	1	1	1	0	0
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
04:00	10	49	37	13	0	0	1	1	0	1	1	1	2	1	1	0	0
05:00	29	50	41	10	0	0	1	1	0	3	3	4	7	6	4	1	0
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
10:00	129	46	40	7	0	0	1	2	1	3	12	46	39	17	5	2	0
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
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23:00	9		40	12	0	0	1	0	0	0	1	2	3	1	1	0	0
Total																	
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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		01:00	04:00	11:00	05:00	06:00	09:00	09:00	07:00	11:00	10:00	08:00	07:00	07:00	07:00	07:00
	150		45	13	0	0	2	4	3	4	14	46	60	32	9	3	1
PM Peak	17:00	22:00	22:00	23:00	23:00	17:00	12:00	14:00	15:00	16:00	12:00	12:00	16:00	17:00	17:00	17:00	16:00
	137	50	43	12	0	0	1	2	2	4	13	39	46	28	11	4	1