

Access Appraisal



Ref	AA 838
Site Name	Deadman's Hill, Sandon
Date	March 2024

Quality Assurance

Site name:	Deadman's Hill, Sandon
Client name:	Victoria Carter
Type of report:	Access Appraisal
Prepared and Reviewed by:	Steve Amann BSc (Hons) MSc (Eng)
Signed	
Date	March 2024

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Appendix 1	Site Location
Appendix 2	Existing Access Visibility
Appendix 3	Speed Survey
Appendix 4	Proposed Access and Visibility

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1 Introduction

Brief

- 1.1 Journey Transport Planning Ltd has been instructed by Victoria Carter to undertake an Access Appraisal in support of a Prior Approval residential development on land and buildings at Deadman's Hill, Sandon. The location of the site is illustrated in **Appendix 1**.

Background

- 1.2 This Access Appraisal provides a summary of investigations at the site and its access pursuant to demonstrating the proposal will not have a detrimental impact on highway safety or capacity in the vicinity of the site.
- 1.3 The following matters are considered in this appraisal:
- Site Assessment
 - Speed survey access design
 - Summary

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2 Site Assessment

Existing Information

- 2.1 The proposal site is located to the west of Deadman's Hill northwest of the village of Sandon. The site location is shown in **Appendix 1**.
- 2.2 Access to the site is currently provided by way of an existing agricultural access onto Deadman's Hill.
- 2.3 Deadman's Hill as it passes the access is a single carriageway road subject to a 60mph speed limit and is around 4.5m wide at the access.
- 2.4 The achievable visibility at the access has been assessed and is achievable at 2.4m by 215m to the south and 2.4m by 187m to the north.
- 2.5 The existing access achievable visibility illustrated in **Appendix 2**.

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3 Proposals

Description of Proposal

- 3.1 The proposal considers the development of the existing building on the site to form a single dwelling, with access from a modified arrangement onto Deadman's Hill

Access Proposal

- 3.2 In view of the fact that Deadman's Hill is subject to a 60mph speed limit, the achievable visibility from the access location is considered to be sub-standard to the south and as such the speed of traffic along Deadman's Hill has been surveyed to consider the appropriate level of visibility for the access.
- 3.3 In order to confirm the appropriateness and acceptability of the use of the proposed access point, a speed survey has been undertaken on Deadman's Hill to the north of the access to demonstrate that an access in this location would conform to the appropriate standard for the speed of the road in terms of visibility and geometry.
- 3.4 An independent speed survey on Deadman's Hill was commissioned and undertaken by Advanced Transport Research during the following period:
- Survey Start 27th February-2024
 - Survey End 4th March -2024
- 3.5 The speed survey results provided 85thile speeds at the access location to inform the visibility requirement at the access.
- 3.6 The following 12hr weekday 85thile speeds were recorded at the access junction.
- Northbound 85thile speed 50.9 mph
 - Southbound 85thile speed 51.0 mph
- 3.7 Given the recorded speeds set out above and the location of the access, visibility based on the standards set out in the Design Manual for Roads and Bridges (DMRB) provides an appropriate and suitable basis for calculating the visibility splay requirement at the access.
- 3.8 The speed survey results are held in **Appendix 3**.
- 3.9 The DMRB indicates that for a recorded 85thile speed of 50.9mph, visibility at 2.4m by 154.0m to the south from the access would be required and for an 85thile speed of 51.0mph, the DMRB recommends visibility at 2.4m by 154m would be required to the north from the access.
- 3.10 As set out in Section 2 of this report, the achievable visibility at the access has been assessed and is achievable at 2.4m by 187m to the north and 2.4m by 215m to the south.
- 3.11 In view of the fact that the current level of visibility achievable within the highway boundary or client controlled land exceeds the level required in accordance with the recorded 85thile speeds, the use of an

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access in this location for the level of development proposed is considered to be acceptable and would not compromise highway safety in the location.

- 3.12 The proposed access arrangement which illustrates a 4m wide access into the property and demonstrates visibility in accordance with the observed traffic speed on Deadman's Hill is held in **Appendix 4**
- 3.13 The access would be designed in accordance with Hertfordshire design guidance and would be made up of a bound surface for the initial 6m into the access. Parking for the dwelling would be provided in accordance with current standards with a suitable area for turning being provided within the site to enable vehicles to enter and exit the site in forward gear. Any gates would be sited at least 6m into the access from the carriageway edge and would be inward opening only.
- 3.14 Delivery and refuse servicing for the development would be achieved from Deadman's Hill via the ongoing arrangements for existing properties along Deadman's Hill.

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4 Summary

- 4.1 This Access Appraisal is provided in support of proposals for the development of the existing building on the site to form a single dwelling , with access from a modified arrangement onto Deadman's Hill.
- 4.2 A speed survey was undertaken demonstrating that observed 85%ile speeds were sufficiently below the posted speed limit to justify a relaxation to the required visibility splay.
- 4.3 The appraisal demonstrates that a dwelling on the site could be accommodated via a modified access arrangement onto Deadman's Hill and the access can be provided with an appropriate level of visibility in accordance with the speed of traffic on Deadman's Hill and as such the use of the access for a residential purposes would not compromise highway safety in the vicinity of the access.



Appendix 1

Site Location



A603

Lee's rock

Wilson's Of Wallington

Ofcom Baldock Radio Monitoring Station

Grave Lodge Farm

Tresillian

Site Location

Utility Line

R J Pinnock & Sons

Google

Sandon Manor

Cat Ditch Rd

Cat Ditch Rd

Cat Ditch Rd

Cat Ditch Rd

Cat Ditch Rd

Deadman's Hill

Deadman's Hill

Deadman's Hill

Deadman's Hill

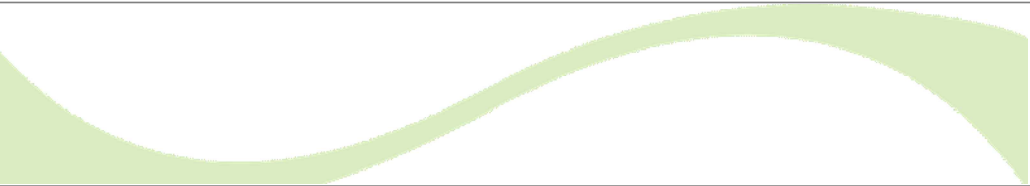
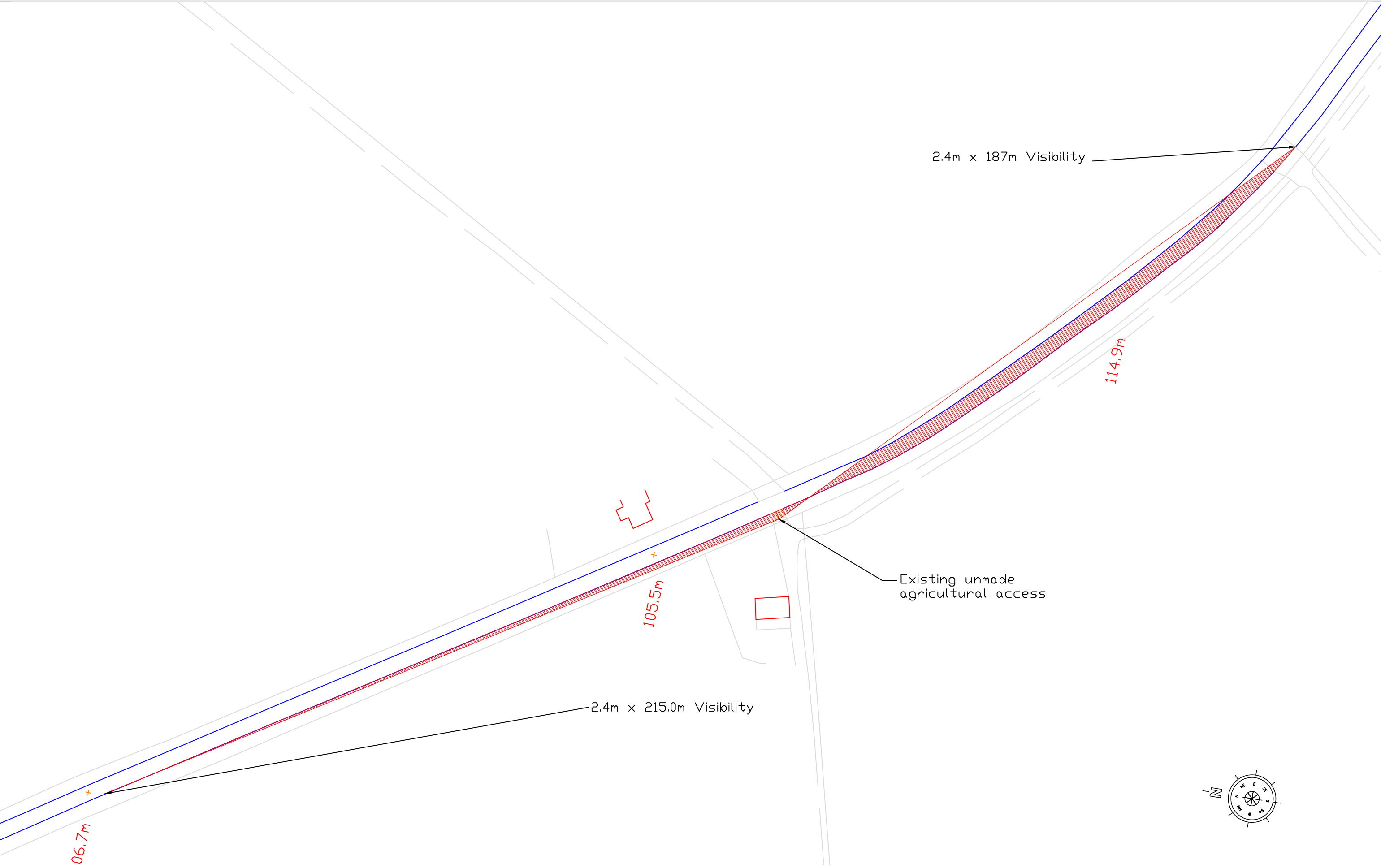
Deadman's Hill

den Rd



Appendix 2

Existing Access and Visibility



client: Victoria Carter	title: Existing Access Visibility	date: 05/03/24	scale @ A3 1:1000
project: Deadman's Hill, Sandon	status: Planning	drawn	Revision
discipline: Transport Planning	project no. JTP 838	chk'd: SAA	dwg no. DR1





Appendix 3

Speed survey



ATC SUMMARY REPORT

PROJECT	38590 Sandon, Buntingford
LOCATION	38590-001 - Deadman's Hill
LOC. DESC.	Deadman's Hill
START DATE	Tue 27 Feb, 2024
END DATE	Mon 04 Mar, 2024
SPEED LIMIT	60mph
SURVEY TYPE	7-day ATC, 15min periods, 6 veh. classes

OVERVIEW
A 7-day automatic traffic count on Deadman's Hill, commencing Tue 27 Feb 2024, recorded a total of 3,366 vehicles. The posted speed limit of 60mph was exceeded by 1.9% of vehicles, and the seasonally adjusted, combined AADT value is 524 (see Equipment & Methodology below).

COMBINED

Total recorded volume	3,366
Avg daily volume (based on 7 days)	480.9
Average daily speed (7 days)	43.6mph
Average daily 85%ile (7 days)	51.0mph
AADT (annual average daily traffic)	524

Avg weekday volume (Mon-Fri, 24hrs)	540.6
Avg weekday speed (Mon-Fri, 24hrs)	43.5mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	486.4
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	43.3mph

The combined summary on the left shows the total volumes, average speeds, AADT and 85%iles recorded in both directions from all the recorded data. Speeding vehicles are defined as those travelling 61mph and above.

The summaries below provide directionalised details including speeding percentages and weekday daytime details.

NORTHBOUND ↑

Total recorded volume	1,612
Avg daily volume (based on 7 days)	230.3
Average daily speed (7 days)	44.2mph
Average daily 85%ile (7 days)	50.9mph
% of vehicles exceeding 60mph	1.7%

Avg weekday volume (Mon-Fri, 24hrs)	258.4
Avg weekday speed (Mon-Fri, 24hrs)	44.2mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	232.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	44.0mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	50.9mph

SOUTHBOUND ↓

Total recorded volume	1,754
Avg daily volume (based on 7 days)	250.6
Average daily speed (7 days)	42.9mph
Average daily 85%ile (7 days)	51.1mph
% of vehicles exceeding 60mph	2.1%

Avg weekday volume (Mon-Fri, 24hrs)	282.2
Avg weekday speed (Mon-Fri, 24hrs)	42.7mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	254.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	42.5mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	51.0mph

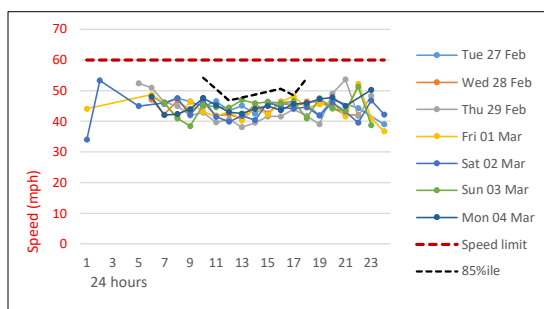
SITE LOCATION



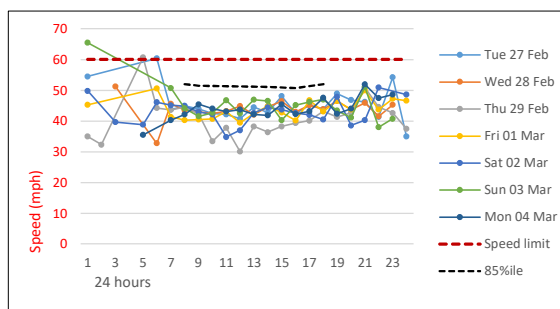
Location	Deadman's Hill
Lat, lng.	52° 0'10.55"N, 0° 6'2.98"W
Project & site	38590-001
PSL	60mph
Bus route	No
Direction 1	Northbound↑
Direction 2	Southbound↓

DAILY SPEEDS

NORTHBOUND ↑



SOUTHBOUND ↓

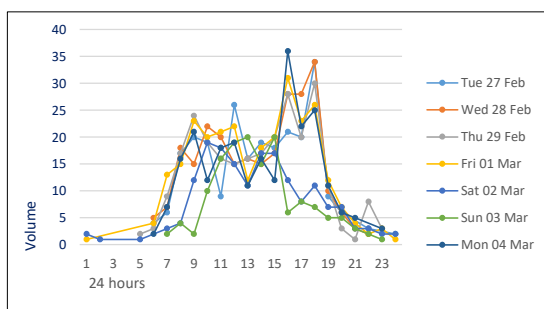


Average daily speeds (solid thin colours) and 85%ile (dashed black) compared against 60mph posted speed limit (dashed red). The 85%ile is the speed at which 85% of all vehicles are observed to travel under free flowing conditions. A minimum of ten vehicles per speed bin is required for this calculation, hence the overnight low-volume 85%ile values may be zero.

The peak average northbound daytime speed was 55.4mph at 16:45 on Sat 02 Mar, whilst the peak average southbound speed was 63mph at 14:45 on Tue 27 Feb (based on 15min averages between 0700 & 1900).

HOURLY VOLUMES

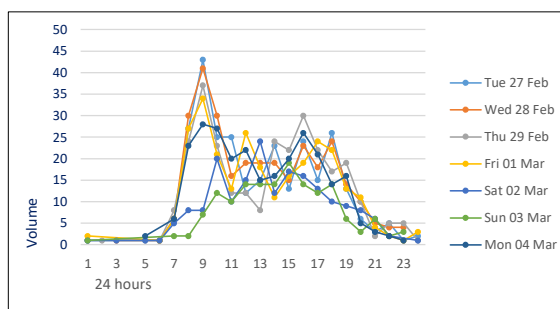
NORTHBOUND ↑



↑

Hourly northbound traffic volumes over each 24hr period for 7 days from all available data.

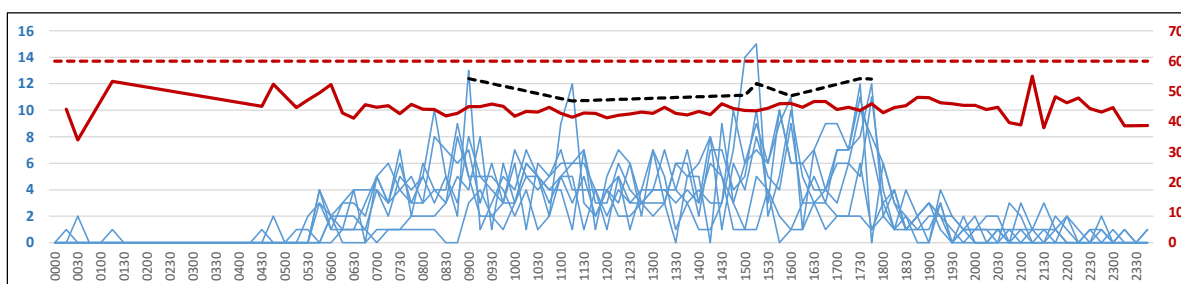
SOUTHBOUND ↓



Hourly southbound traffic volumes over each 24hr period for 7 days from all available data.

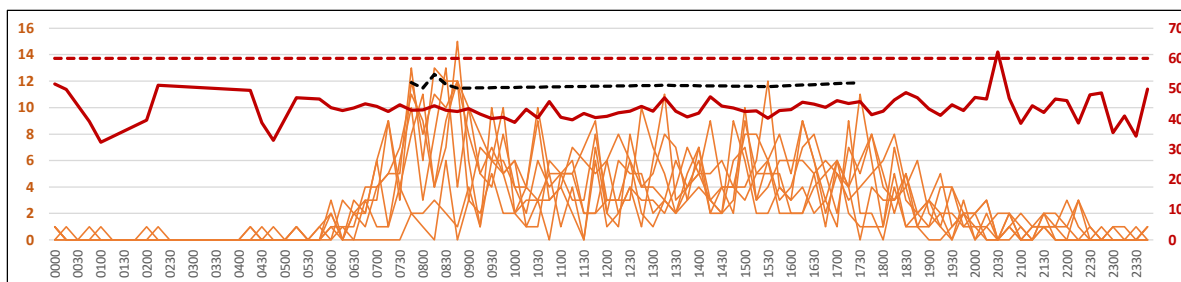
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15min VOL & SPEED



↑

15min daily northbound flows (blue), against the average speed (red) and 85%ile (dotted black) for each 15min period over the 7-day period.

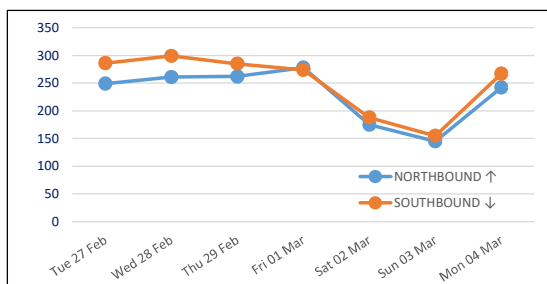


15min daily southbound flows (orange), against the average weekly speed (red) and 85%ile (dotted black) for each 15min period over the 7-day period.

↓

DAILY VOLUMES

NORTH & SOUTHBOUND



Total 24hr northbound (blue) and southbound (orange) traffic volumes over 7 consecutive days from all available data.

As can be expected, the lowest volumes were recorded on the Sunday, whilst the highest was on the Wednesday.

7-DAY AVERAGE CLASSES

NORTHBOUND 7-DAY AVG ↑

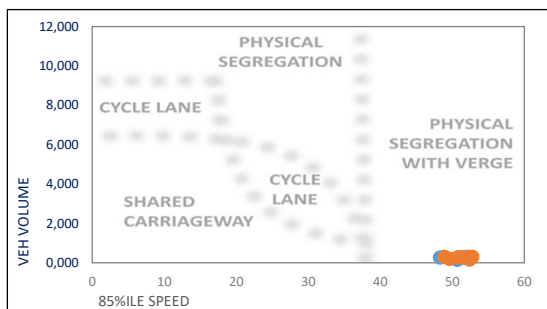
TIME	MOTOR CYCLES	CARS / LGV	OGV1	OGV2	PSV	TOTAL
0000	0.0	0.4	0.0	0.0	0.0	0.4
0100	0.0	0.1	0.0	0.0	0.0	0.1
0200	0.0	0.0	0.0	0.0	0.0	0.0
0300	0.0	0.0	0.0	0.0	0.0	0.0
0400	0.0	0.4	0.0	0.0	0.0	0.4
0500	0.0	2.6	0.0	0.0	0.0	2.6
0600	0.0	6.6	0.1	0.0	0.0	6.7
0700	0.0	12.3	0.3	0.4	0.0	13.0
0800	0.0	16.3	0.3	0.1	0.0	16.7
0900	0.1	16.6	0.4	0.1	0.0	17.3
1000	0.0	16.4	0.4	0.0	0.0	16.9
1100	0.0	17.1	1.1	0.4	0.0	18.7
1200	0.0	13.4	0.7	0.3	0.1	14.6
1300	0.3	15.3	1.0	0.1	0.0	16.7
1400	0.3	16.6	0.7	0.1	0.0	17.7
1500	0.0	22.0	0.4	0.7	0.0	23.1
1600	0.0	17.7	0.6	0.1	0.0	18.4
1700	0.0	23.9	0.0	0.0	0.0	23.9
1800	0.0	9.3	0.0	0.0	0.0	9.3
1900	0.0	5.7	0.0	0.0	0.0	5.7
2000	0.0	2.7	0.0	0.0	0.0	2.7
2100	0.0	2.9	0.0	0.0	0.0	2.9
2200	0.0	1.6	0.1	0.0	0.0	1.7
2300	0.0	0.7	0.0	0.0	0.0	0.7
12hr TTL	0.7	196.9	6.0	2.6	0.1	206.3
24hr TTL	0.7	220.6	6.3	2.6	0.1	230.3
	0%	96%	3%	1%	0%	

SOUTHBOUND 7-DAY AVG ↓

TIME	MOTOR CYCLES	CARS / LGV	OGV1	OGV2	PSV	TOTAL
0000	0.0	0.9	0.0	0.0	0.0	0.9
0100	0.0	0.0	0.1	0.0	0.0	0.1
0200	0.0	0.3	0.0	0.0	0.0	0.3
0300	0.0	0.0	0.0	0.0	0.0	0.0
0400	0.0	0.6	0.0	0.0	0.0	0.6
0500	0.0	0.6	0.1	0.0	0.0	0.7
0600	0.0	5.0	0.6	0.0	0.0	5.6
0700	0.0	18.9	1.3	0.0	0.0	20.1
0800	0.0	26.7	1.3	0.1	0.1	28.3
0900	0.0	21.0	1.4	0.1	0.0	22.6
1000	0.0	13.6	1.1	0.4	0.0	15.1
1100	0.0	15.0	1.6	0.1	0.4	17.1
1200	0.0	15.4	0.6	0.1	0.0	16.1
1300	0.1	16.0	0.9	0.0	0.0	17.0
1400	0.1	15.9	1.0	0.4	0.0	17.4
1500	0.0	20.9	0.7	0.1	0.0	21.7
1600	0.1	17.4	0.3	0.0	0.0	17.9
1700	0.1	18.0	0.0	0.0	0.0	18.1
1800	0.1	12.7	0.0	0.0	0.0	12.9
1900	0.0	7.6	0.0	0.0	0.0	7.6
2000	0.0	4.1	0.0	0.0	0.0	4.1
2100	0.0	3.1	0.0	0.0	0.0	3.1
2200	0.0	2.1	0.0	0.0	0.0	2.1
2300	0.0	1.0	0.0	0.0	0.0	1.0
12hr TTL	0.7	211.4	10.1	1.6	0.6	224.4
24hr TTL	0.7	236.7	11.0	1.6	0.6	250.6
	0%	94%	4%	1%	0%	

Average daily northbound and southbound volumes by class (condensed to the AQMA scheme), including 12hr totals for 0700-1900 and overall average percentages. Calculated from all available data over 7 days.

CYCLE PROVISION



The diagram compares total daily traffic flow (vertical axis) against the average daily 85th percentile speed (horizontal axis) to demonstrate cyclist and vulnerable user considerations.

The guidelines are based on the Sustrans Design Manual (Apr 2014); Understanding User Needs, part 2.

Valid 85th percentiles are required to plot the graph.

METHODOLOGY

Equipment & methodology

Automatic traffic counts are undertaken using a pair of pneumatic tubes installed securely across the carriageway, one metre apart, recording air pulses to determine vehicle speed, class and volume. The ATC equipment generally remains in place for a consecutive seven day period, and the data analysed post-survey.

In queuing conditions, the accuracy of ATC recording equipment will reduce as follows;

- 20 – 30mph: potential reduction of 9% accuracy in volume values
- 10 – 20mph: potential reduction of 26% accuracy in volume values
- 00 – 10mph: potential reduction of 39% accuracy in volume values

These figures are based on multiple ATC results compared against accepted reference values from resilient manual counts.

AADTs are calculated using the seasonal COBA methodology; DMRB Vol. 13, Pt 4:

Weather & environmental

Inclement conditions during winter months or outbreaks of unseasonable weather may affect survey data collection. This can result in distorted traffic flows or unusable data and should be considered prior to survey approval. Although forecast checks are made prior to the survey commencing, A-T-R cannot be held responsible for the forecast accuracy.

CLASS	ABBREV.	DESCRIPTION	LENGTH	COBA	
1	MC	Motorcycle	SHORT Up to 5.5m	N/A	
2	SV	Cars, taxis, 4WD, vans		MEDIUM 5.5m to 14.5m	CAR & LGV
3	SVT	Class 2 plus trailer	OGV1 & PSV		
4	TB2	2 axle truck / bus	OGV1		
5	TB3	3 axle truck / bus	LONG 11.5m to 19.0m		OGV2
6	T4	4 axle truck			
7	ART3	3 axle articulated			
8	ART4	4 axle articulated			
9	ART5	5 axle articulated			
10	ART6	6+ axle articulated			

Equipment damage & failure

Although checked intermittently the equipment remains unmanned for much of the duration of the survey, and can potentially be interfered with, vandalised, damaged or stolen and A-T-R cannot be held responsible for any periods where data has not been captured.

The equipment is located in accordance with the details provided by the client and A-T-R cannot be held responsible for the accuracy of the data or loss of equipment due to theft and vandalism.

Roadworks & events

Where possible, roadworks checks are made 7 days before the survey commences. Additionally, influencing major local events are also monitored, covering the immediate vicinity of the surveys and any routes likely to affect the outcome of the survey.

Vehicle classifications

Vehicles recorded by the ATC are placed into one of ten classes based on axle spacing and pattern. This scheme is based on the AustRoad 94 algorithm and modified for UK traffic, referred to as ARX. The table on the left aligns the ARX classifications with the COBA Chapter 8 (Vol 13, Sec 1) classifications.

Under adverse conditions the accuracy of ATC classifications will deteriorate and an appropriate link count should be used for validation.

Disclaimer

Although every attempt is made to achieve accuracy, A-T-R may not be held liable for errors of fact or interpretation.

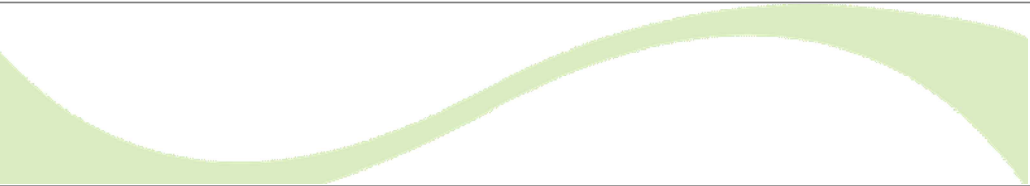
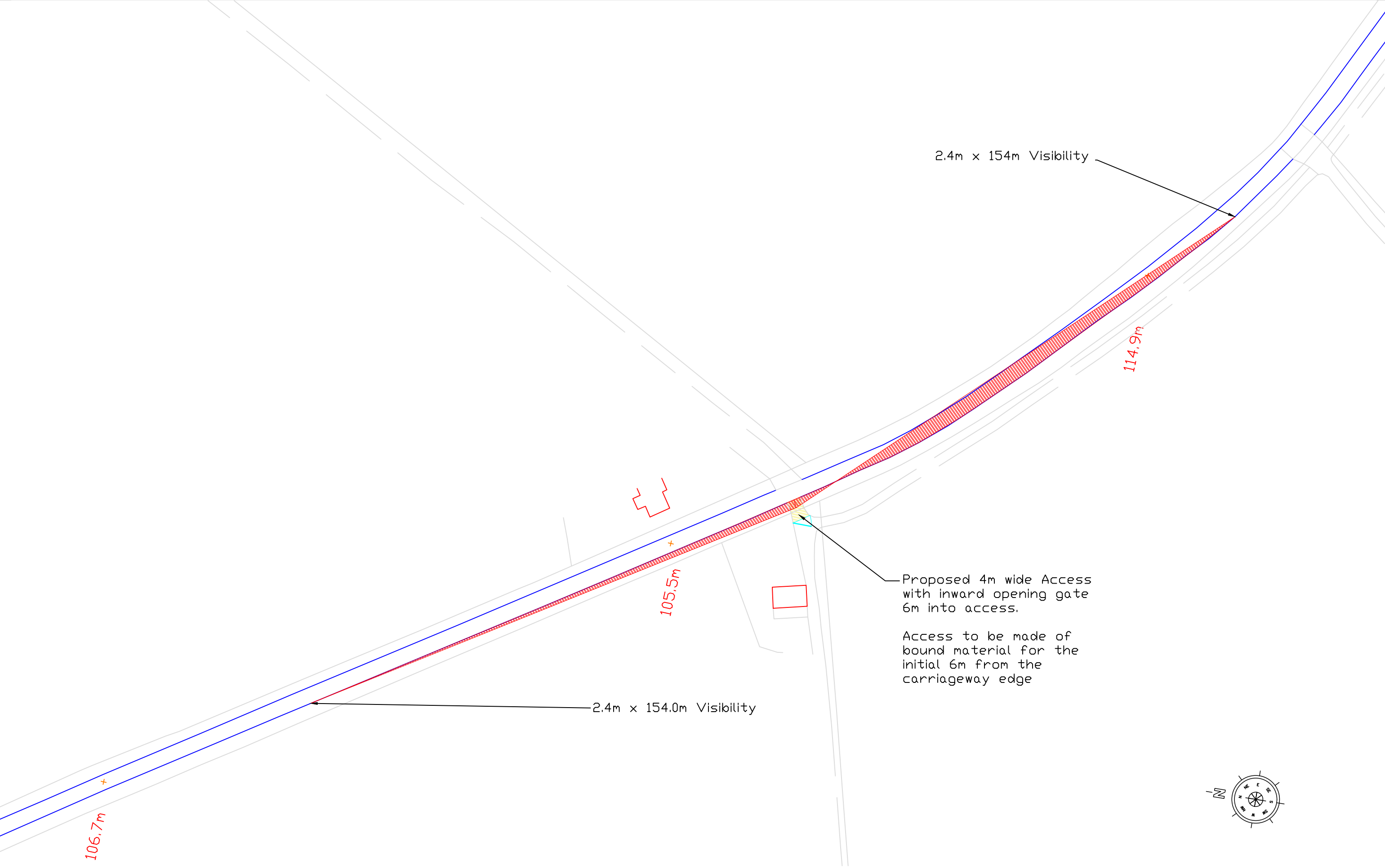
Generated 12 Mar 2024 v6.0

38590-001 Sandon^J Buntingford. Deadman's Hill. Summary Rep



Appendix 4

Proposed Access and Visibility



client: Victoria Carter	title: Existing Access Visibility	date: 05/03/24	scale @ A3 1:1000
project: Deadman's Hill, Sandon	status: Planning	drawn	Revision
discipline Transport Planning	project no. JTP 838	chk'd SAA	dwg no. DR2

