

THE SPARTAN GROUP HOLDINGS LTD

OLD COTTAGE, START HILL, BISHOP'S STORTFORD

TRANSPORT STATEMENT

**REPORT REF.
2304450-R01**

July 2023

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REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Draft Issue	SR	PR	DRAFT	24.07.23
-	Final Issue	SR	PR	SAF	27.07.23

PR

SAF

Distribution

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1. INTRODUCTION AND BACKGROUND INFORMATION

- 1.1. Ardent Consulting Engineers (ACE) has been appointed by Spartan Holdings Ltd to prepare a Transport Statement (TS) in support of the proposed residential development at Old Cottage, Start Hill, Bishop's Stortford, CM22 7TA (hereafter known as 'the site').
- 1.2. This TS supports a full planning application to be submitted to Uttlesford District Council (UDC) as the local planning authority. Essex County Council (ECC) is the local highway authority responsible for roads in the surrounding area.
- 1.3. The site has an extant consent dated June 2022 (application ref: UTT/21/3339/FUL) for the proposed erection of 7 no. dwellings including the closure of existing access, creation of new access and associated infrastructure.
- 1.4. This TS has been prepared in accordance with guidance on the preparation of such documents published by the Department for Transport (DfT) in 2007. Although this guidance was withdrawn in October 2014, the document along with gov.uk guidance on Travel Plans, Transport Assessments and Statements (Published March 2014) has been used to formulate this TS.
- 1.5. In addition, the guidance set out in the National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG) documents has influenced the preparation of this document.
- 1.6. Following this introduction, the remainder of this report is structured as follows:
 - **Section 2.0** describes the existing situation, including proximity of the site to pedestrian and cycle facilities and accessibility by public transport;
 - **Section 3.0** outlines the proposed scheme;
 - **Section 4.0** considers the transport and land use planning policy context;
 - **Section 5.0** sets out the predicted trip generation of the proposed scheme; and
 - **Section 6.0** provides a summary and sets out the conclusions.

2. EXISTING SITUATION

The Site

2.1. The application site is located on the western end of the B1256 Dunmow Road, on the eastern edge of Bishop's Stortford. The site lies east of the M11 motorway and southwest of London Stansted Airport.

2.2. The site location is as shown at **Figure 2.1**, below.

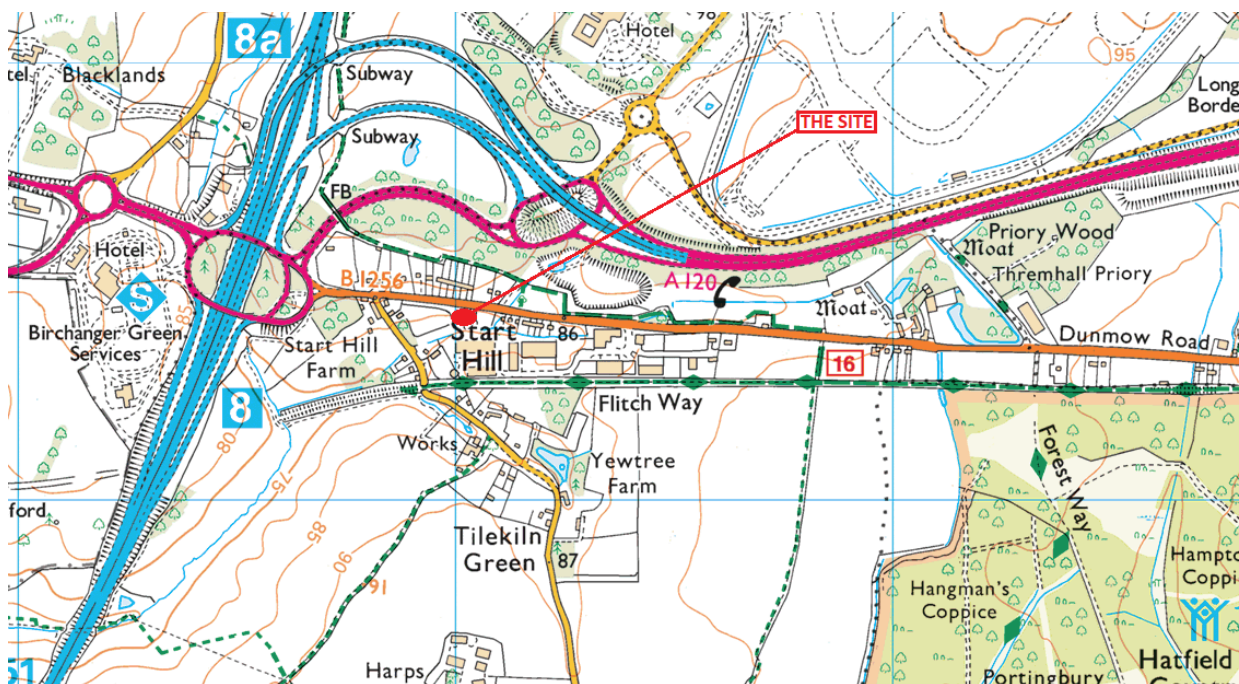


Figure 2.1: Site Location (Source: Street Map)

2.3. The site boundary is formed by:

- The B1256 Dunmow Road carriageway to the north;
- Residential properties to the east;
- Stansted Distribution Centre to the south; and
- Open land to the west.

- 2.4. The local land use environment is mixed, this being principally formed of residential properties with retail, education, employment and leisure facilities found within the local area.
- 2.5. The application site comprises an area of circa 0.34 hectares and is formed of the existing residential property. An aerial view of the site is shown at **Figure 2.2**.



Figure 2.2: Aerial View of Site (Source: Google Maps)

- 2.6. Vehicular access to the site is available from the vehicle crossover on the B1256 Dunmow Road, located at the site's northern boundary, see **Figure 2.3** below.



Figure 2.3: Existing access (Source: Google Maps)

2.7. The existing access point is 3.5m wide and has achievable visibility splays of 2.4m x 40m to the east and 2.4m x 120m to the west. Allowing for the existing vegetation the visibility splay to the east is 2.4m x 6m and to the west is 2.4m x 8m.

2.8. The existing access point is therefore sub-standard and not fit for intensified use.

Local Highway Network

B1256 Dunmow Road

2.9. The B1256 Dunmow Road forms part of the "County Road" network, being designated as a Priority Route 2 (PR2) road within ECC's road hierarchy classification.

2.10. Dunmow Road runs along the northern boundary of the site as a single carriageway road, approximately 7m wide and subject to a 40mph speed limit.

2.11. The carriageway is principally formed of two running lanes and is used as a bus route.

2.12. Direct residential and commercial accesses are provided from both sides of the carriageway with residential properties benefiting from off-road parking provision.

2.13. The B1256 Dunmow Road provides two good quality footways along its length (see **Figure 2.4**).



Figure 2.4: B1256 Dunmow Road (Source: Google Maps)

2.14. The B1256 Dunmow Road is designated as a 'Clearway', restricting vehicles from stopping on the carriageway.

2.15. Approximately 360m to the west of the site, the B1256 meets the M11 (Junction 8, Birchanger Green Roundabout), the A120 and Bishop's Stortford Welcome Break Services at a grade-separated signalised 6-arm roundabout arrangement.

2.16. To the east of the site, the B1256 provides a direct connection into Takeley, Great Dunmow and Braintree.

Tilekiln Green

2.17. Tilekiln Green forms part of the "County Road" network, being designated as a Priority Route 2 (PR2) road within ECC's road hierarchy classification.

- 2.18. Tilekiln Green runs on a north-south alignment, west of the site, as a single carriageway road formed of two running lanes, approximately 5.5m wide and subject to a 40mph speed limit.
- 2.19. The carriageway is signed as having a vehicle restriction for vehicles over 7.5 tonnes, except for loading.
- 2.20. Direct residential accesses are provided from both sides of the carriageway with properties benefiting from off-road parking provision.
- 2.21. Tilekiln Green is designated as a 'Clearway', restricting vehicles from stopping on the carriageway.
- 2.22. At the northern end of Tilekiln Green, the road meets the B1256 Dunmow Road as a priority T-junction arrangement where Tilekiln Green is the minor arm.
- 2.23. At the southern end of Tilekiln Green, the road provides a direct connection into Bedlar's Green where it becomes The Street.

Wider Highway Network

- 2.24. The A120 is located just north of the site, accessed from the B1256 Dunmow Road and the 6-arm signalised roundabout to the west of the site. It provides connections east towards Great Dunmow, Braintree and the A12 (Junction 25), and west towards Bishop's Stortford and the A10.
- 2.25. The A120 is a key route linking Stansted airport with Braintree and Colchester in the east, as well as Hertford in the west.
- 2.26. The M11 (Junction 8) is located just west of the site, again accessed from the B1256 Dunmow Road and the grade separated signalised roundabout arrangement. It provides connections in a north-south direction leading to Cambridge and the A14 to the north, and the M25 (Junction 27) and London to the south.

Walking and Cycling

- 2.27. Footways are present along both sides of the B1256 Dunmow Road adjacent to the site, which provide a direct and convenient pedestrian route along key desire lines between the A120 and Takeley.

2.28. These footways provide a good environment for pedestrians and connects the site to the surrounding public transport infrastructure and local facilities.

2.29. A review of the Sustrans website confirms that National Cycle Network Route (NCNR) 16 is located just north of the site (see **Figure 2.5**).

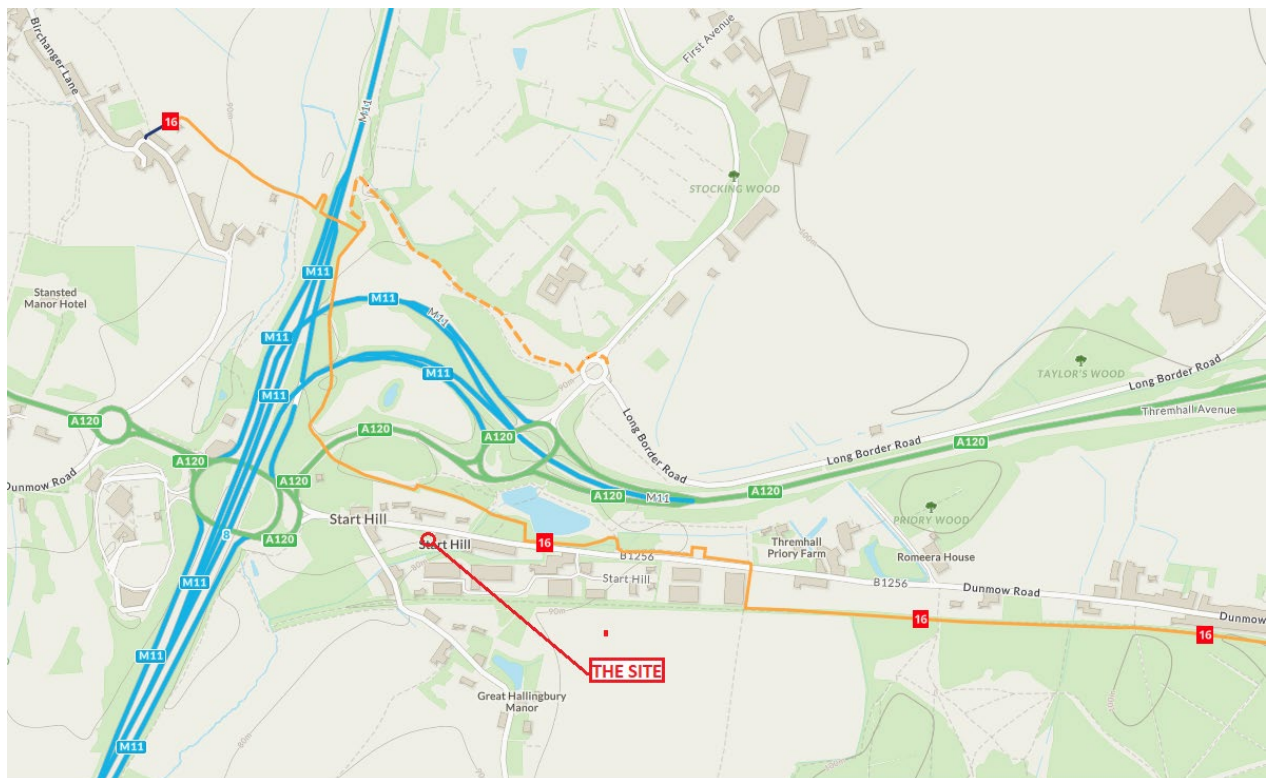


Figure 2.5: NCNR 16 (Source: Sustrans)

2.30. The traffic-free route starts to the north-west of the site in Duck End and continues in an eastbound direction to provide connections to Takeley, Great Dunmow, Rayne, Great Notley, Braintree, Witham and Little Braxted.

2.31. The route also provides further connections to NCNR 1 and 50.

Bus Services

2.32. The nearest bus stops are situated approximately 160m walking distance to the north of the site on Dunmow Road.

2.33. A summary of available bus services and frequencies are set out in **Table 2.1**.

Route No.	Service	Typical Frequency		
		Weekdays	Saturday	Sunday
441	Takeley - Stansted Mountfitchet - Ugley - Newport - Saffron Walden	School Service Only	-	-
508	Stansted Airport - Bishop's Stortford - Sawbridgeworth - Harlow	30 mins	Hourly	-

Table 2.1: Local Bus Services

2.34. **Table 2.1** shows that service no. 508 provides a frequent connection to other settlements across the immediate area, making this mode of travel a realistic choice for residents to access facilities/services and employment opportunities in local towns and villages, and also at Stansted Airport.

Rail

2.35. The nearest rail service is Bishop's Stortford which is approximately 3.4km west of the site.

2.36. Bishop's Stortford railway station has secure and sheltered cycle parking spaces located on the station forecourt.

2.37. Bus service no. 508 provides a direct connection from the application site to Bishop's Stortford Interchange. The Interchange point is located approximately 160m north of the station. The bus journey takes around 10 minutes.

2.38. London Liverpool Street and Stratford (London) provide further connections for the DLR, London Overground and London Underground (Central, Circle, Hammersmith & City, Elizabeth and Metropolitan lines).

2.39. A route map of the Greater Anglia network is provided in **Figure 2.6** below.

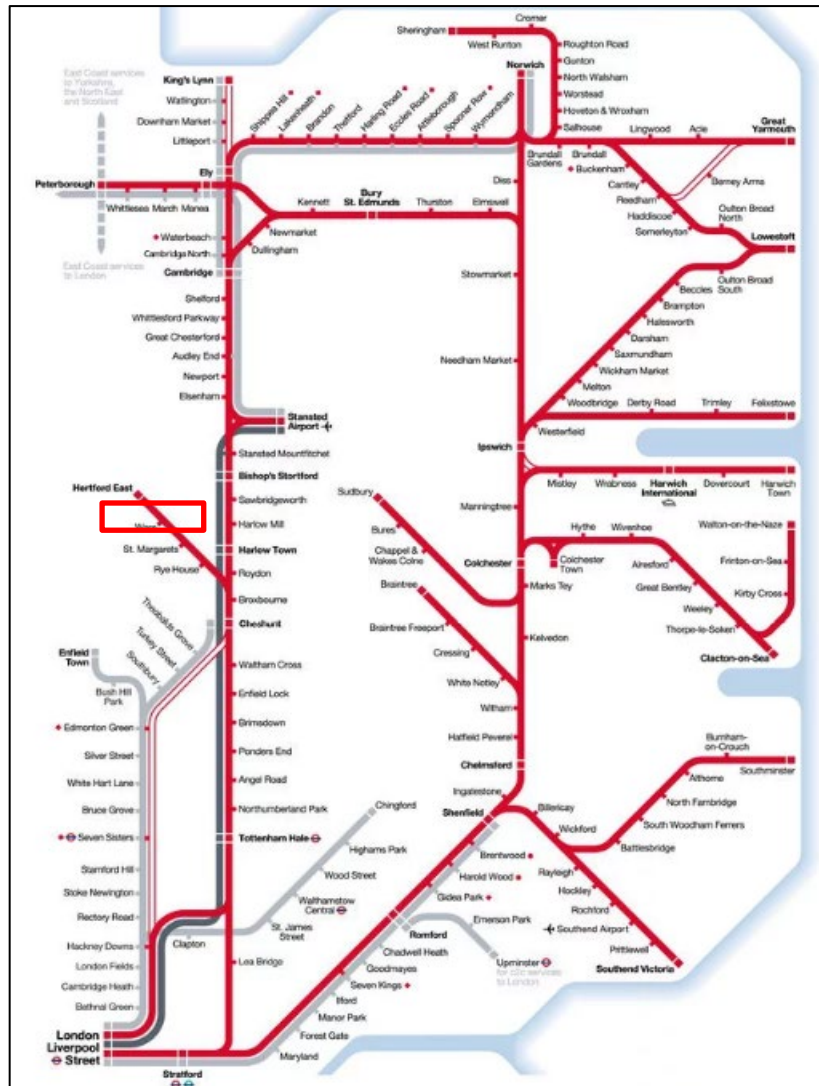


Figure 2.6: Greater Anglia Rail Network (Source: Greater Anglia)

2.40. Services operate every 30-60 minutes. The station has car parking as well as secure cycle parking, therefore future residents could cycle to the station.

Accident Data

2.41. The crashmap.co.uk website has been reviewed for the immediate area adjacent to the site to understand the general accident traits of the immediate highway network.

2.42. There were no Personal Injury Accidents (PIA) recorded in close proximity to the development site in the period spanning 2017 – 2021 (inclusive). An extract from the website is provided below (see **Figure 2.7**).

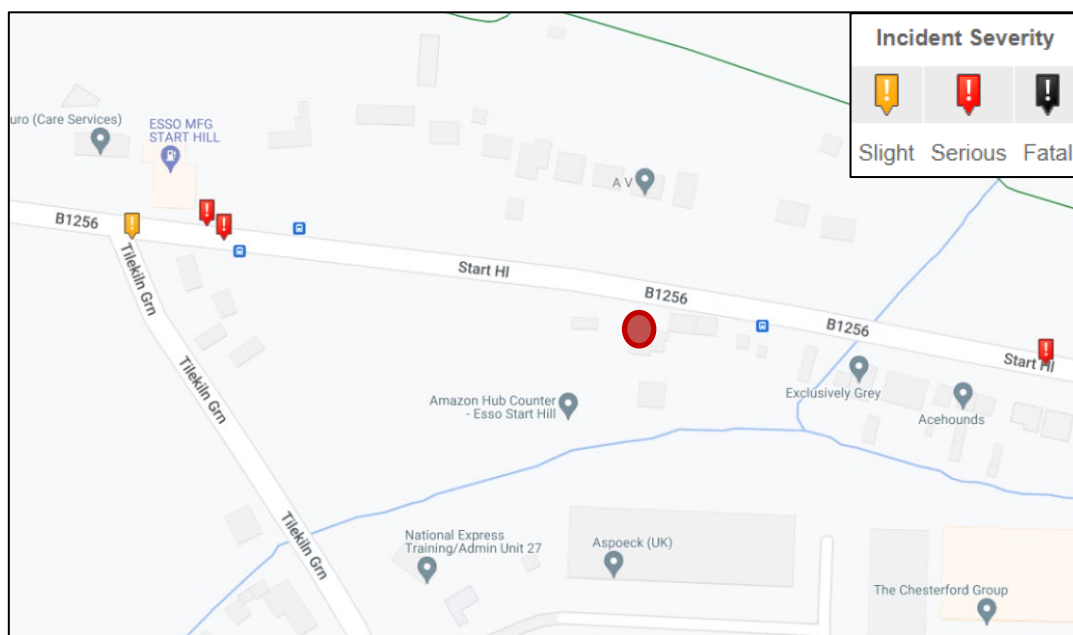


Figure 2.7: Accident Data (Source: Crashmap.co.uk)

2.43. There were 3 serious incidents recorded within the study area. However, given the distance away from the existing site (160m or more) it is considered that these were not related to traffic movements associated with the existing site.

2.44. A location is generally considered by ECC as being worthy of further consideration of its accident record, to identify any patterns of causation factors, if six or more PIAs are reported at a junction or along a 200m long section of a link over a 5-year period.

2.45. The data clearly indicates that there are no existing highway safety issues locally and that the local area adjacent to the site does not suffer an accident problem.

2011 Census Data

2.46. Travel to work data has been derived from the 2011 Census for the residential population to consider the current travel behaviour of those who work in the vicinity of the site (E00112078). Whilst 2021 Census data is available, 2011 Census data and the subsequent modal split has been adopted for consistency with the previous submission for this site (ref. UTT/21/3339/FUL).

2.47. The data shows the following proportions of multi-modal trips based upon the journey to work travel data:

Mode of Travel	Residential Population (excluding working at home, other, unemployed)
<i>Train (incl. Underground)</i>	9.1%
<i>Bus</i>	0.6%
<i>Taxi</i>	0.0%
<i>Motorcycle</i>	0.6%
<i>Car Driver</i>	78.2%
<i>Car Passenger</i>	3.6%
<i>Bicycle</i>	1.2%
<i>Pedestrian</i>	6.7%
<i>Other method of travel to work</i>	8.5%
<i>Total</i>	100%

Table 2.2: Travel to Work Proportions (Source: 2011 Census Data)

2.48. The above table indicates that the most popular method of travel by the residential population is by car at 78.2%, followed by train at 9.1%.

Local Planning History

2.49. To the west of the site was a planning application (reference UTT/20/1098/FULL) for the construction of 15 new dwellings. ECC, as the highway authority, provided their

recommendation for approval on 27th November 2020. The consented access arrangement for that scheme provided visibility splays of 2.4m x 120m in both directions.

3. THE PROPOSED DEVELOPMENT

3.1. The proposed scheme seeks to redevelop the site and construct 9 new dwellings, the existing Old Cottage is to remain. The Architect's layout plan is provided at **Appendix A**. The existing access to the site from the Highway (B1256) is to be closed off, with the new access proposed immediately adjacent.

3.2. The Applicant is not seeking for the internal road layout to be adopted.

Access

3.3. As mentioned previously, the site has an existing consent which includes an agreed access strategy with ECC. The proposals seek to provide the same access arrangement that was proposed, and the below details seek to summarise the consented situation (planning application reference: UTT/21/3339/FUL).

Geometry

3.4. A new access is proposed with a width of 6m and kerb radii of 6m.

3.5. The existing dropped kerb access which has sub-standard visibility is to be removed and reinstated as footway. It is proposed to provide footways on both sides of the access into the site. The proposed access arrangement accords with the Essex Design Guide.

3.6. The site access point has been subject to swept path analysis for the largest expected vehicle (refuse lorry), as demonstrated on **ACE Drawing Number 2304500-D003**.

Visibility

3.7. **ACE Drawing Number 2304450-D003** provides the proposed access arrangements with visibility splays.

3.8. The proposed visibility splays are the same as the previous application scheme for 7 dwellings as recommended for approval by ECC (planning application reference: UTT/21/3339/FUL). The splays were based on recorded speeds and Manual for

Streets (MfS) calculations, and as such the proposed visibility splays are therefore considered appropriate and consistent.

Summary

- 3.9. The proposed access works are all contained within land either in the client's control or within public maintainable highway.
- 3.10. The previously consented site access was subject to an independent Stage 1 Road Safety Audit (RSA). The RSA has not raised any significant issues on safety with the proposals. The Designer's Response to the RSA1 is provided at **Appendix B**. As the proposed arrangement has not changed from the previously consented arrangement, with the exception that visibility was recalculated based on measured speeds, then it is considered that the audit is still valid.
- 3.11. In light of the above, it is considered that a safe and suitable access can be provided in accordance with local and national guidance.

Parking Requirements

- 3.12. Parking is to be provided in accordance with the ECC/Essex Parking Officers Association (EPOA) Parking Standards Design and Good Practice document (September 2009) and additional Uttlesford Local Residential Parking Standards.
- 3.13. The standards require a minimum of 2 spaces per two or three-bed dwellings and 3 spaces per 4+ bedroom dwelling, together with 0.25 spaces for visitors.
- 3.14. Based on the above standards, a minimum of 21 allocated car parking spaces and 2 visitor spaces is required (including the Old Cottage property). The proposals provide for a total of 22 allocated spaces, and 2 visitor spaces, and therefore accord with the minimum stipulated car parking standards.
- 3.15. Parking spaces are provided in accordance as per the standard size of 2.9m x 5.5m.
- 3.16. All units have secure gardens and garages to meet cycle parking requirements.

Servicing and Emergency Vehicles

3.17. The internal arrangement enables a refuse vehicle to enter and exit the site in forward gear (as shown on **Drawing Number 2304550-D003**). Internal turning is shown on **Figure 3.1** below.

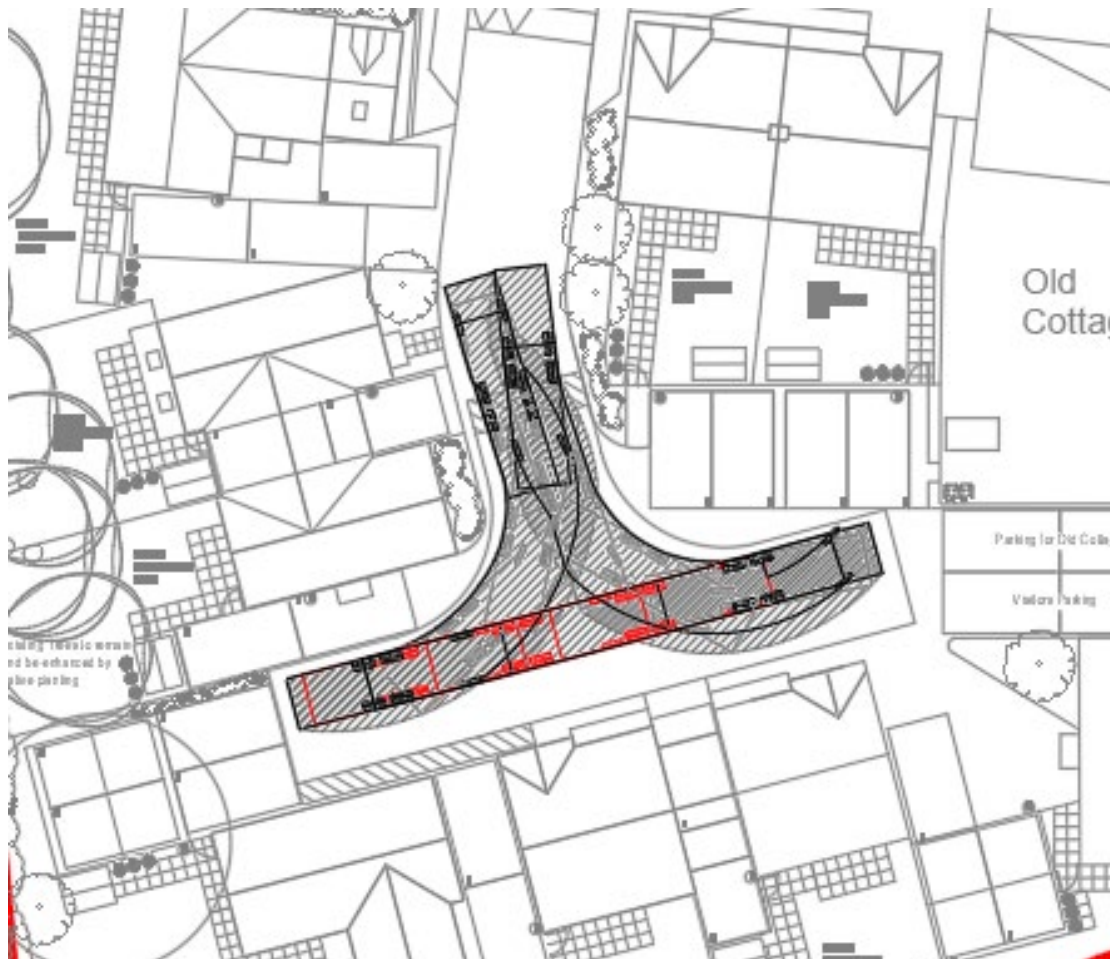


Figure 3.1: Turning Head Refuse Vehicle Tracking

3.18. A fire tender is able to get within 45m of the dwellings as is the requirement in the MfS and the Essex Design Guide.

3.19. Delivery vehicles are able to enter and exit the site in forward gear, utilising the turning head within the site.

Residential Travel Information Packs

3.20. A Travel Information Pack will be provided to each household on first occupation (purchased from ECC). These will contain details of bus stops within walking distance of the site together with timetables for routes serving them, and of trains from Bishop's Stortford.

4. POLICY CONTEXT

Framework

4.1. Relevant policy guidance on transport and land use planning relating to new development is set out in the following documents: -

- National Planning Policy Framework (NPPF – July 2021);
- Essex County Council Development Management Policies Document;
- Uttlesford District Local Plan (2005); and
- Emerging Uttlesford Local Plan (October 2025)

National Planning Policy Framework (2021)

4.2. Para 104 states that: *Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*

- a) the potential impacts of development on transport networks can be addressed;*
- b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;*
- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for mitigation and for net gains in environmental quality; and*
- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.*

- 4.3. Para 105 states that: *...opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.*
- 4.4. Para 110 states that: *In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*
- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
 - b) safe and suitable access to the site can be achieved for all users;*
 - c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree; and*
 - d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.*
- 4.5. Para 111 confirms that: *Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.*

Essex County Council

- 4.6. ECC's Development Management Policies document (February 2011) sets out the policies applicable within the County.
- 4.7. **Policy DM3** related to Secondary Distributor routes, such as Steeple Road. The policy identifies that: *The Highway Authority will protect the function of Secondary Distributors within defined settlement areas by... vi. requiring improvements to existing substandard accesses.*
- 4.8. **Policy DM8** requires that developments adhere to the *Parking Standards: Design and Good Practice* document (September 2009). The same document identifies minimum cycle parking standards.

4.9. **Policy DM9** requires developments to be sited in order to reduce and minimise the number of trips by private vehicle.

Uttlesford District Local Plan (2005)

4.10. The Uttlesford District Local Plan (2005) is still current while the new Local Plan continues to go through the adoption process.

4.11. Local Plan **Policy GEN1 – Access** states that: *Development will only be permitted if it meets all of the following criteria:*

a) *Access to the main road network must be capable of carrying the traffic generated by the development safely.*

b) *The traffic generated by the development must be capable of being accommodated on the surrounding transport network.*

c) *The design of the site must not compromise road safety and must take account of the needs of cyclists, pedestrians, public transport users, horse riders and people whose mobility is impaired.*

d) *It must be designed to meet the needs of people with disabilities if it is development to which the general public expect to have access.*

e) *The development encourages movement by means other than driving a car.*

Uttlesford District Emerging Local Plan (2025)

4.12. This Plan is currently under consultation and is expected to be adopted in October 2025. The new Local Plan for Uttlesford will bring together all major planning policy for the District into a single document.

Compliance

4.13. The site is located within a short walk of bus stops serving routes that connect to Bishop's Stortford and Harlow, which have local amenities and services to cater for the day-to-day needs of residents. Bishop's Stortford rail station is also accessible by bus and cycle, and therefore residents will not be reliant on the private car as a means to travel.

4.14. The proposed level of parking for cars and cycles is to be provided in accordance with adopted standards.

4.15. In view of the above, it is clear that the principle of the proposed residential development on this site is compliant with current policy guidance on transport and land use planning at national and local levels.

5. TRIP GENERATION

5.1. The proposals are for 9 new dwellings with the existing Old Cottage to remain. This is an uplift of 2 dwellings compared to the site's extant consent for 7 dwellings (ref. UTT/21/3339/FUL)

5.2. The previous consented application ascertained the trip generation of the proposed dwellings. Suitable trip rates were established using the TRICS database version 7.8.2 with person trip rates extracted based on sites of a similar scale, as follows.

- Regions; South East, East Anglia and East Midlands.
- Number of units 8-40

5.3. These agreed trip rates have been utilised to deliver the predicted total trips for the proposed development site.

5.4. A summary of trip rates and resultant 'total people' trips associated with the proposals is provided in the table below. The existing Old Cottage has been excluded from this analysis as movements are already present from that property.

Mode	Weekday AM peak hour (08:00-09:00)			Weekday PM peak hour (17:00-18:00)			Daily (12 Hr)
	In	Out	Two-way	In	Out	Two-way	Two-way
Total people Trip Rates per house							
Total people trip rates	0.171	0.659	0.803	0.523	0.338	0.861	7.259
Number of Total People Trips (9 houses)							
Total people trips	2	6	7	5	3	8	65

Table 5.1: Predicted Weekday Total People Trips – Proposed Residential Houses
 (Source: TRICS)

5.5. The above table indicates that on a weekday, the proposed additional dwellings could be expected to generate a total of 7 two-way total people trips during the AM peak hour, 8 two-way total people trips during PM peak hour and 65 two-way trips during the 12-hour period. The TRICS data is provided at **Appendix C**.

5.6. The Travel to Work modal split for the existing residential population obtained from the 2011 Census (**Table 2.2**) has been used to derive the multi-modal trip generation of the proposed houses.

5.7. A breakdown of the adopted mode share, with those working from home excluded, is set out in **Table 5.2**.

Mode of Travel	Census (Table 2.2)	Modal Split (Two-way)		
		AM Peak Hour	PM Peak Hour	Daily (12 Hr)
<i>Train (incl. Underground)</i>	9.1%	1	1	6
<i>Bus</i>	0.6%	0	0	0
<i>Taxi</i>	0%	0	0	0
<i>Motorcycle</i>	0.6%	0	0	0
<i>Car Driver</i>	78.2%	6	6	51
<i>Car Passenger</i>	3.6%	0	0	2
<i>Bicycle</i>	1.2%	1	1	8
<i>Pedestrian</i>	6.7%	5	5	44
<i>Other method of travel to work</i>	0%	0	0	0
Total	100%	7	8	65

Table 5.2: Residential Dwellings Multimodal Trips (Source: 2011 Census)

5.8. **Table 5.2** provides a summary of predicted weekday trip generation by mode for the residential population associated with the proposed use.

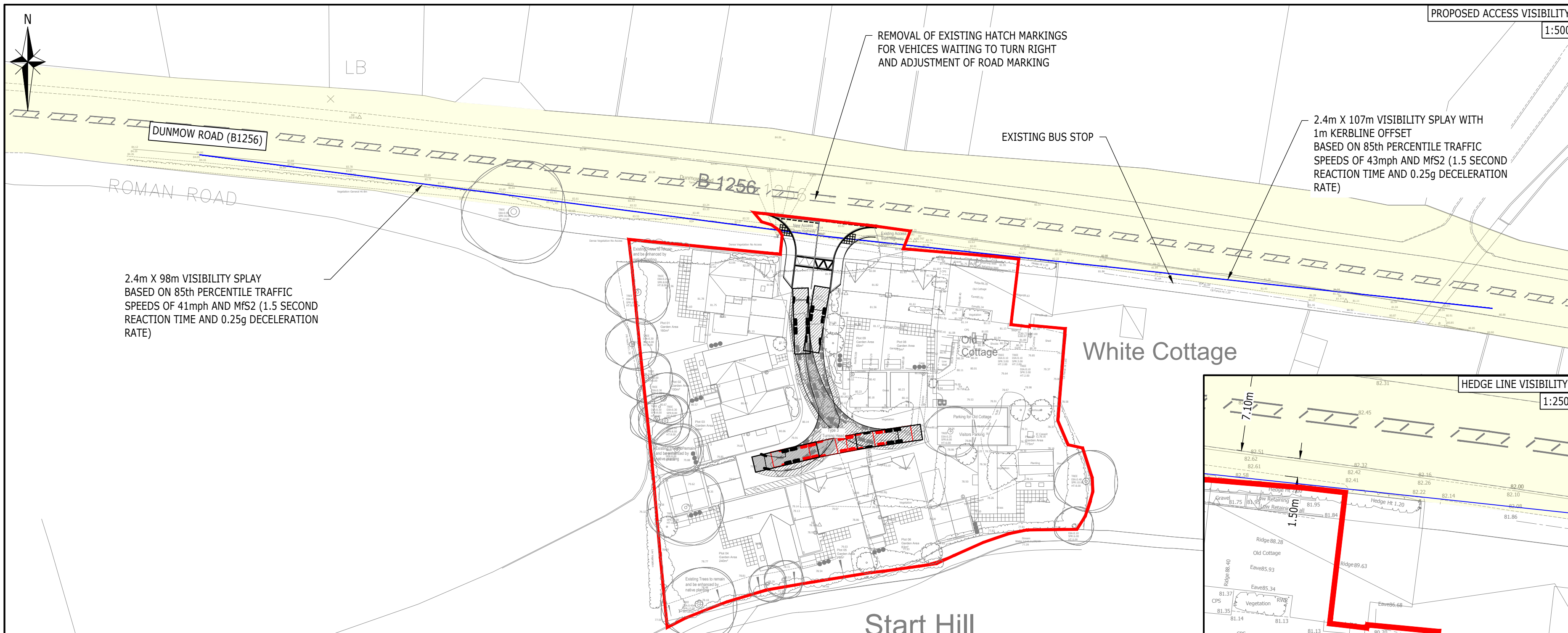
5.9. The above table demonstrates the number of vehicle trips that the 9 no. dwellings are likely to generate are expected to up to 6 two-way vehicle trips during the AM peak hour and PM peak hour with 51 two-way vehicle trips over the 12-hour period. This level of trip generation is unlikely to result in traffic congestion or highways safety problems when considered in the context of the wider network, particularly in

the context that the scheme is an uplift of 2 dwellings compared with the site's extant consent.

6. SUMMARY AND CONCLUSIONS

- 6.1. Ardent Consulting Engineers (ACE) has been appointed by Spartan Holdings Limited to prepare a Transport Statement (TS) to support the proposed residential development at Old Cottage, Bishop's Stortford.
- 6.2. The proposed scheme seeks to redevelop the site and construct 9 new houses with The Old Cottage property to remain. This represents an uplift of 2 dwellings compared to the site's extant consent for 7 dwellings under ref. UTT/21/3339/FUL.
- 6.3. Access is to be taken from a proposed new access point on Dunmow Road, with geometry and visibility in accordance with the previously consented scheme.
- 6.4. The proposed development scheme is predicted to result in no more than 6 two-way vehicle movements during the weekday AM and PM peak hours. This is considered unlikely to result in traffic congestion or highways safety problems.
- 6.5. The proposals accord with ECC's car and cycle parking standards.
- 6.6. Refuse vehicles are able to enter and exit the site in forward gear and fully serve the site. Fire access can also be achieved to required standards.
- 6.7. Having fully considered highways/transport matters, we consider that the scheme should be recommended for approval.

Drawings



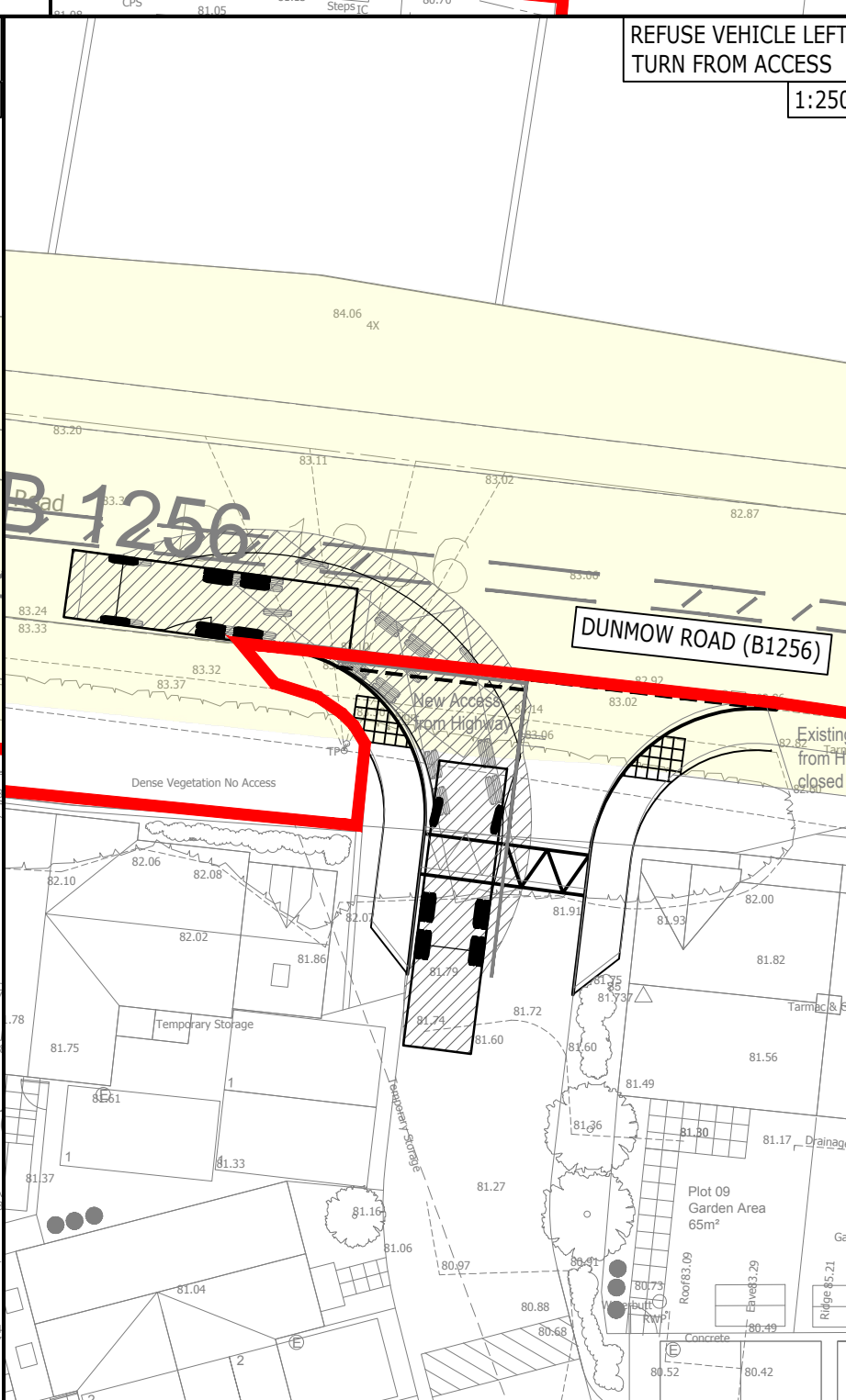
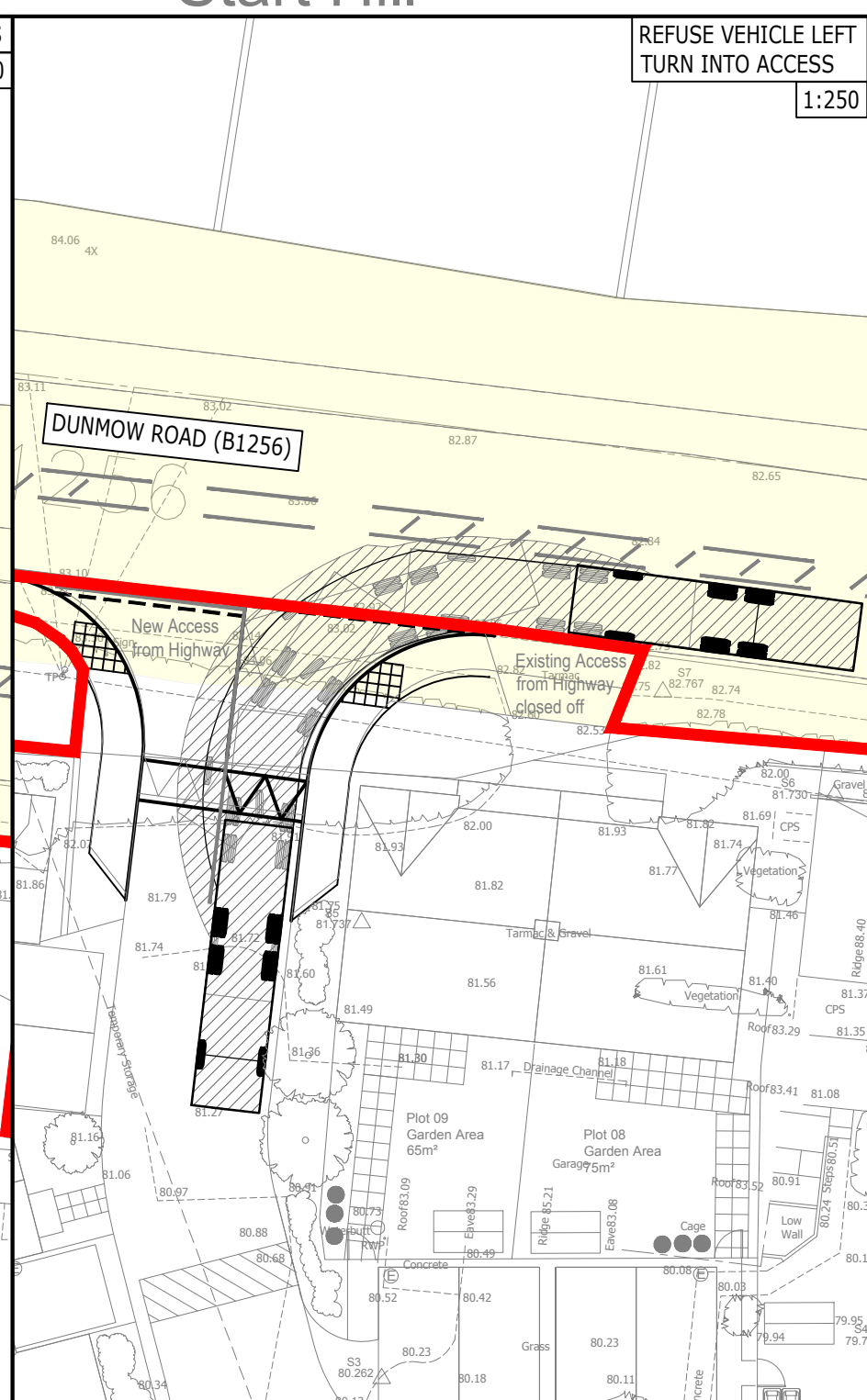
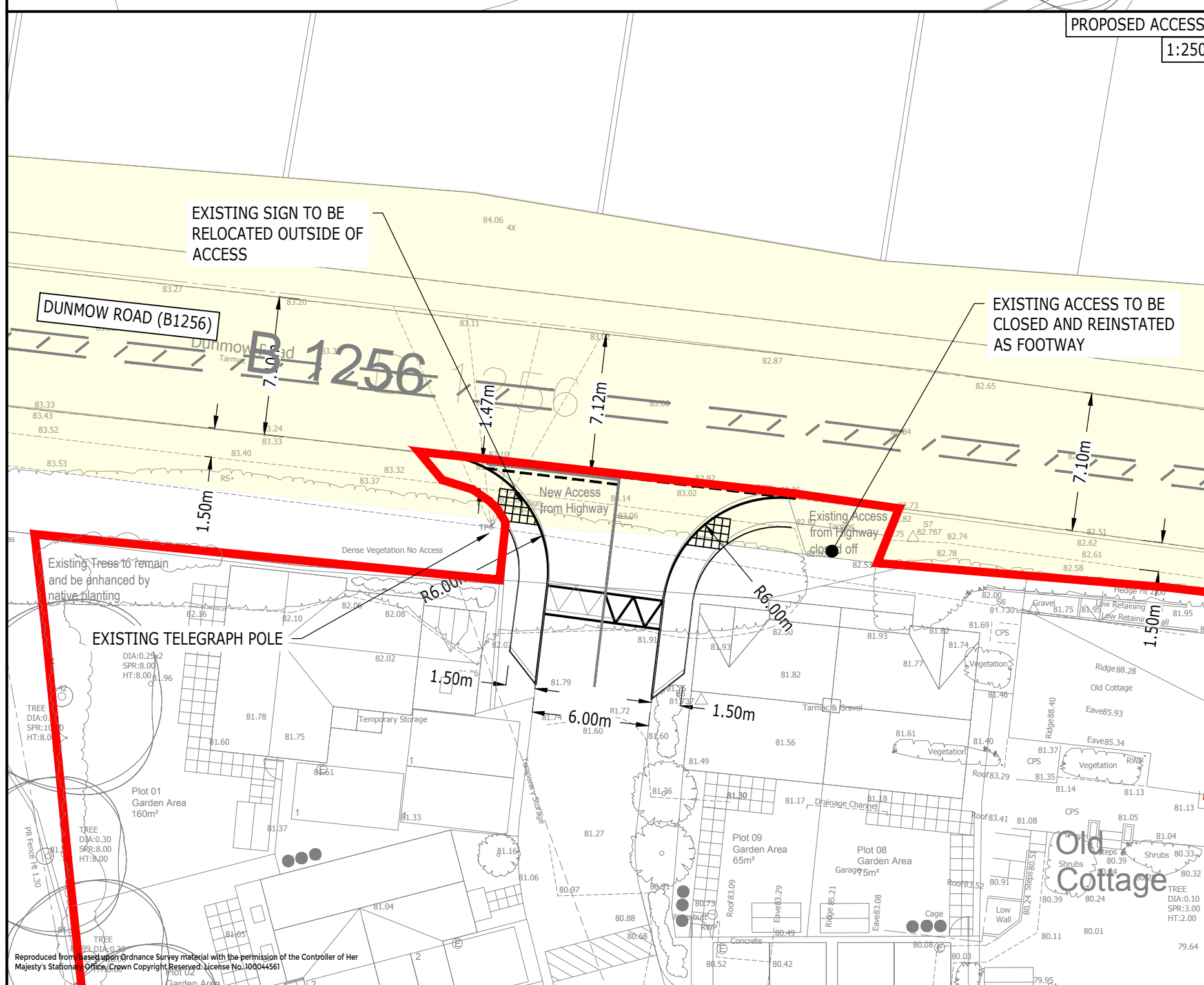
NOTES:
DRAWING IS SUBJECT TO LAND BOUNDARIES AND DETAILED DESIGN.

KEY:
 HIGHWAY BOUNDARY TRANSCRIBED FROM ESSEX COUNTY COUNCIL RECORDS
 TRANSCRIBED REDLINE BOUNDARY FROM DRAWING BRD/20/032/001 PRODUCED BY BRD ARCHITECTS

VEHICLE SPECIFICATION:

Essex Large Refuse Vehicle (3 axle)

Overall Length	10.342m
Overall Width	2.450m
Overall Body Height	3.814m
Min Body Ground Clearance	0.366m
Track Width	2.450m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m



DRAFT

Rev Description Dn Chk App Date

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THE SPARTAN GROUP HOLDINGS LTD

Project Title:
OLD COTTAGE, START HILL, STANE STREET

Drawing Title:
PROPOSED ACCESS & VISIBILITY PLAN

A2 Scale	Date	Designed by
SEE DRAWING	11.08.21	BT
Drawn by	Checked by	Approved by
BT	PR	SAF
Drawing Number	2304450-D003	
Rev	-	

Appendix A
Architect's Layout

NOTE: All drawings to be read in conjunction with consultant structural engineers, mechanical and electrical consultants, acoustic engineers, energy consultants, specifications, and detailed drawings. Drawing to be issued for the purposes shown within the drawing title box.

NOTE: Drawing to not be scale and written dimensions to be used only. Refer to drawing scale, sheet size and scale bar.



LOCATION PLAN
0 25 50 1:1250

- KEY**
- PROPOSED HEDGES
 - PROPOSED TREES
 - EXISTING TREES
 - PATHS
 - PARKING SPACES
 - REFUSE
 - SHED (CYCLE SPACES)
 - ELECTRIC CHARGING POINTS
 - TIMBER 1.8M GATE
 - 1.8M CB FENCE
 - GRASSCRETE

0 2 4 6 8 10 1:200

<p>jbell design and conservation ltd Suite 02, Holly House Business Centre 220-224 New London Road, Chelmsford, CM2 9AE T: 07484 791794 E: jbell@jbelldesignandconservation.co.uk www.jbelldesignandconservation.co.uk</p>	Client:	Scale: 1:200 @ A1
	Project:	Status: Planning
	Start Hill Takeley, CM22 7TG	Sheet: A
<p>Proposed Site Plan</p> <p>© J.B.D.C. IS THE COPYRIGHT OF J.B.D.C. ALL DIMENSIONS ARE TO BE CHECKED ON SITE OR IN THE WORKSHOP PRIOR TO COMMENCING ANY WORK. WORK ONLY TO BE PERFORMED AS SHOWN. ANY DISCREPANCY ARE TO BE REPORTED TO THE ARCHITECT.</p> <p>© Chelmsford Council - designandconservation.co.uk/000/Projects/2023-740-Start Hill 188 Takeley Farming Houses V3 Revised</p>	Drawing No: 2023-740-002	

Appendix B
RSA1 Designer's Response

W & J PROPERTY DEVELOPMENT LIMITED

OLD COTTAGE, START HILL, BISHOPS STORTFORD

**DESIGNER'S RESPONSE TO THE STAGE 1 ROAD
SAFETY AUDIT**

**REPORT REF.
2005260-02**

November 2021

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MIDLANDS: Office 3, The Garage Studios, 41-43 St Mary's Gate, Nottingham, NG1 1PU **T** | 0115 697 0940

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SUFFOLK: Suite 110, Suffolk Enterprise Centre, 44 Felaw Street, Ipswich, IP2 8SJ **T** | 01473 407 321

Appendices

Appendix A – MS Stage 1 Road Safety Audit

DRAWING

2005260-001A – Tracking and Visibility Plan

Document Control Sheet

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Planning Submission	AJT	DV	AJT	22.10.2021

Distribution

This report has been prepared for the exclusive use of W & J PROPERTY DEVELOPMENT LIMITED. It should not be reproduced in whole or in part, or relied upon by third parties, without the express written authority of Ardent Consulting Engineers.

1. Introduction

- 1.1 Ardent Consulting Engineers (ACE) has been appointed by W & J PROPERTY DEVELOPMENT LIMITED. to commission a Stage 1 Road Safety Audit and prepare the Designer's Response in support of the proposed residential development.
- 1.2 The proposals under consideration are shown on ACE **drawing nos:**
- **2005260-001A** – Tracking and Visibility Plan
- 1.3 This report addresses matters raised in the Stage 1 Road Safety Audit (RSA) undertaken by M&S Traffic Ltd dated 18th October 2021.

2. Road Safety Audit

Problem	Agree / Disagree	Reason / Proposals	Auditor’s Post Audit Comments
<p>3.1.1 PROBLEM</p> <p>Location: At the proposed access to the development.</p> <p>Summary: Ponding of surface water and ramp profile could lead to loss of control collisions.</p> <p>A ramp is proposed on the development access, and kerblines are being amended. This could lead to alterations in the surface water drainage provision and ponding on the carriageway, in addition ramp profiles outside of normal ranges could lead to loss of control collisions.</p> <p>RECOMMENDATION</p> <p>It is recommended that drainage and ramp details should be provided at Safety Audit Stage 2.</p>	<p>Agree</p>	<p>A detailed design of the access arrangement will be undertaken which will review the levels and provide appropriate drainage requirements</p> <p>Drainage and ramp details will be provided at Stage 2 RSA.</p>	<p>Noted and accepted.</p>

Problem	Agree / Disagree	Reason / Proposals	Auditor's Post Audit Comments
<p>3.1.2 PROBLEM</p> <p>Location: The scheme.</p> <p>Summary: Insufficient construction details could lead to loss of control or overshoot collisions.</p> <p>No construction details were provided for assessment, in particular, details of tie-ins, carriageway construction or Polished Stone Values (PSV). This could lead to loss of control or overshoot collisions.</p> <p>RECOMMENDATION</p> <p>It is recommended that details should be supplied at Stage 2 Safety Audit.</p>	<p>Agreed</p>	<p>Due to the nature of the proposed access works is it unlikely that significant/major tie ins into the existing carriageway will be needed.</p> <p>However, if these do become a require full details of these will be provided including any required PSV values at the detailed design stage.</p> <p>Construction details will be provided at Stage 2 RSA.</p>	<p>Noted and accepted.</p>

Problem	Agree / Disagree	Reason / Proposals	Auditor's Post Audit Comments
<p>3.3.1 PROBLEM</p> <p>Location: Proposed access with Dunmow Road.</p> <p>Summary: Lack of visibility could lead to side impact collisions or rear end shunts.</p> <p>The existing ground level slopes away from Dunmow Road – see figure 1 below, no details of the vertical profiles of the accessway have been provided for assessment. There is concern that visibility may be affected for vehicles on the access road. Reduced visibility could lead to side impact collisions or rear end shunts.</p> <p>RECOMMENDATION</p> <p>It is recommended the vertical profiles should be supplied for assessment at Stage 2 Safety Audit and that a dwell area should be provided.</p>	<p>Agreed</p>	<p>The vertical alignment will form part of the detailed design and provided at Stage 2 RSA.</p>	<p>Noted and accepted.</p>

Problem	Agree / Disagree	Reason / Proposals	Auditor's Post Audit Comments
<p>3.4.1 PROBLEM</p> <p>Location: Proposed access.</p> <p>Summary: Lack of pedestrian facilities could compromise pedestrian safety.</p> <p>There are footways on both sides of the access road; however, no crossing point is provided for pedestrians. A lack of suitable pedestrian facilities may lead to pedestrians crossing at less safe places, leading to possible vehicle to pedestrian collisions. Further, full kerb heights may lead to pedestrian trips, particularly for visually or mobility impaired pedestrians.</p> <p>RECOMMENDATION</p> <p>It is recommended that a pedestrian crossing should be provided across the access road.</p>	<p>Agreed</p>	<p>An uncontrolled crossing point (tactile paving and dropped kerbs) has been provided across the access bellmouth as shown on ACE Drawing 2005260-001B.</p>	<p>Noted and accepted.</p>

Problem	Agree / Disagree	Reason / Proposals	Auditor's Post Audit Comments
<p>3.5.1 PROBLEM</p> <p>Location: At the proposed access to the development.</p> <p>Summary: Lack of warning of the ramp, high approach speeds and lack of illumination could lead to loss of control collisions.</p> <p>A ramp is proposed on the development access; however, no speed limit change is proposed, and Dunmow Road is subject to a 40mph speed limit. Without any change to the speed limit the ramp could be sited on a 40mph section of carriageway, further, Dunmow Road in this vicinity is unlit without any approach warning signs. This could lead to loss of control collisions.</p> <p>RECOMMENDATIONS</p> <p>It is recommended that signage details should be provided at Stage 2 Audit, where it is recommended that terminal 30/40mph signs and warning signs are installed at the junction with Dunmow Road, and that the hump should be lit.</p>	<p>Agreed</p>	<p>Signage and Street Lighting details will be provided at Stage 2 RSA.</p>	<p>Noted and accepted.</p>

Problem	Agree / Disagree	Reason / Proposals	Auditor's Post Audit Comments
<p>3.5.2 PROBLEM</p> <p>Location: Dunmow Road at the proposed access to the development.</p> <p>Summary: Lack of provision for right turn movements could lead to rear end shunt or sideswipe collisions.</p> <p>Dunmow Road has a narrow hatch marking that covers the proposed access, no proposals have been shown to modify this hatch marking. Where vehicles intending to turn right will have to wait in the hatching. This could lead to rear end shunt or sideswipe collisions.</p> <p>RECOMMENDATIONS</p> <p>It is recommended that a break in the hatching should be provided.</p>	<p>Agreed</p>	<p>A break in the existing central hatch markings on Dunmow Road has been provided as shown on ACE Drawing 2005260-001B.</p>	<p>Noted and partially accepted, the two warning lines on the eastbound carriageway at the hatch removal point should also be removed.</p>

Signed:  Design Team Leader

Date: 28th October 2021

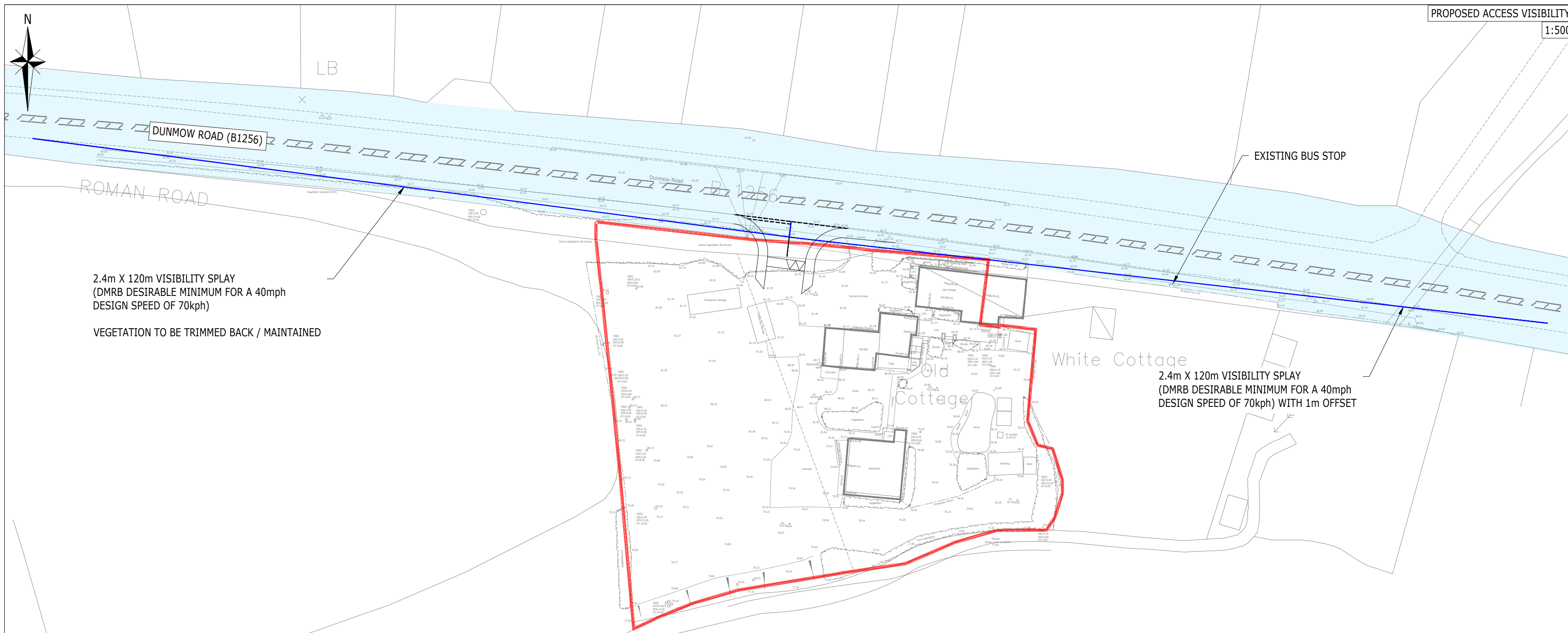
Signed:  Audit Team Leader

Date: 4th November 2021

PLEASE COMPLETE AND RETURN TO SAFETY AUDIT TEAM

Drawing 2005260-001A

Proposed Access & Visibility Layout



2.4m X 120m VISIBILITY SPLAY
(DMRB DESIRABLE MINIMUM FOR A 40mph
DESIGN SPEED OF 70kph)

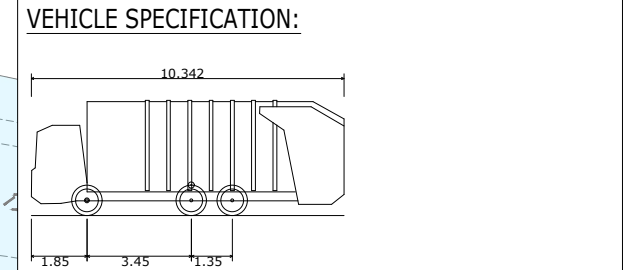
VEGETATION TO BE TRIMMED BACK / MAINTAINED

2.4m X 120m VISIBILITY SPLAY
(DMRB DESIRABLE MINIMUM FOR A 40mph
DESIGN SPEED OF 70kph) WITH 1m OFFSET

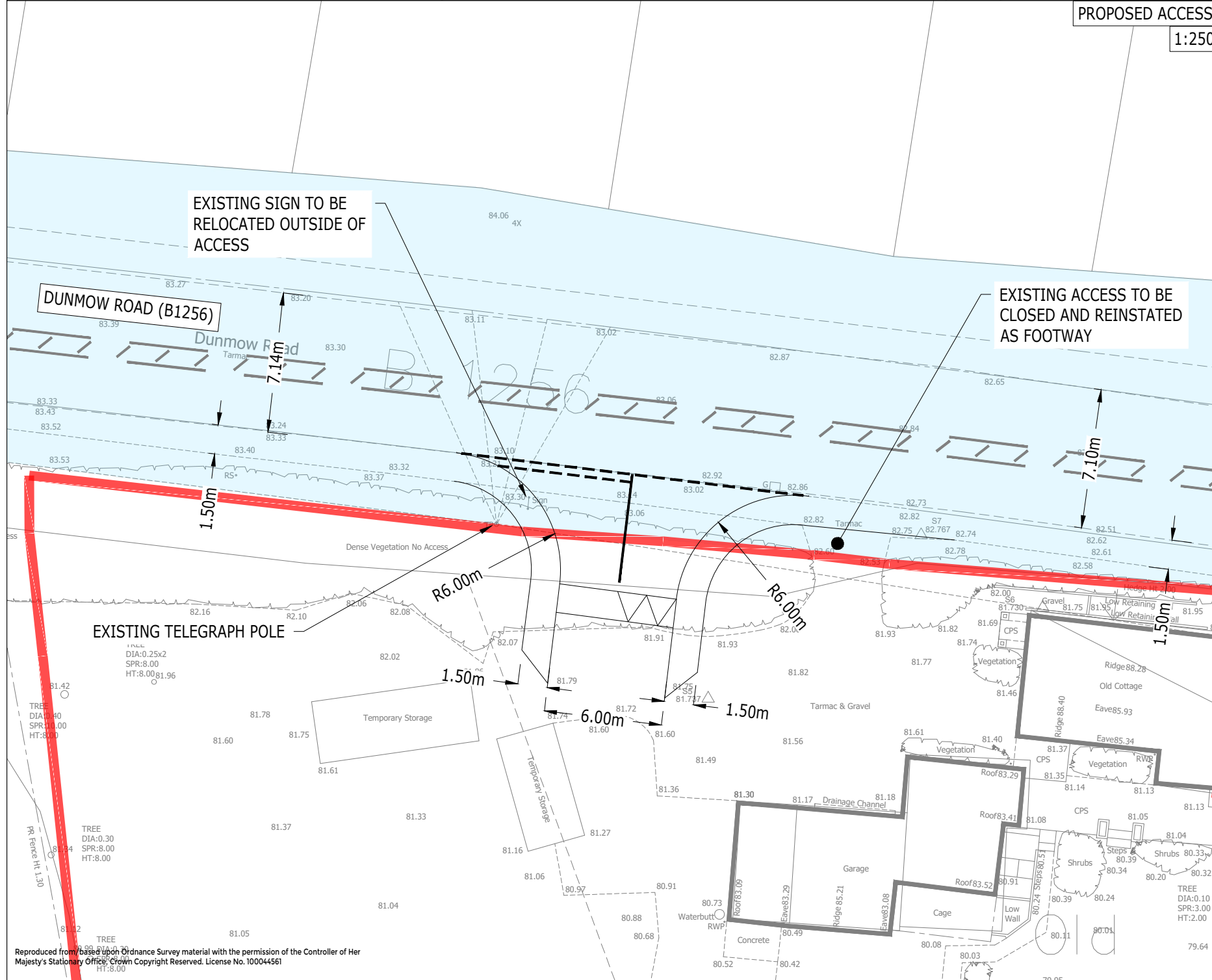
PROPOSED ACCESS VISIBILITY
1:500

NOTES:
DRAWING IS SUBJECT TO LAND BOUNDARIES,
HIGHWAY BOUNDARY, STAGE 1 ROAD SAFETY
AUDIT AND DETAILED DESIGN.

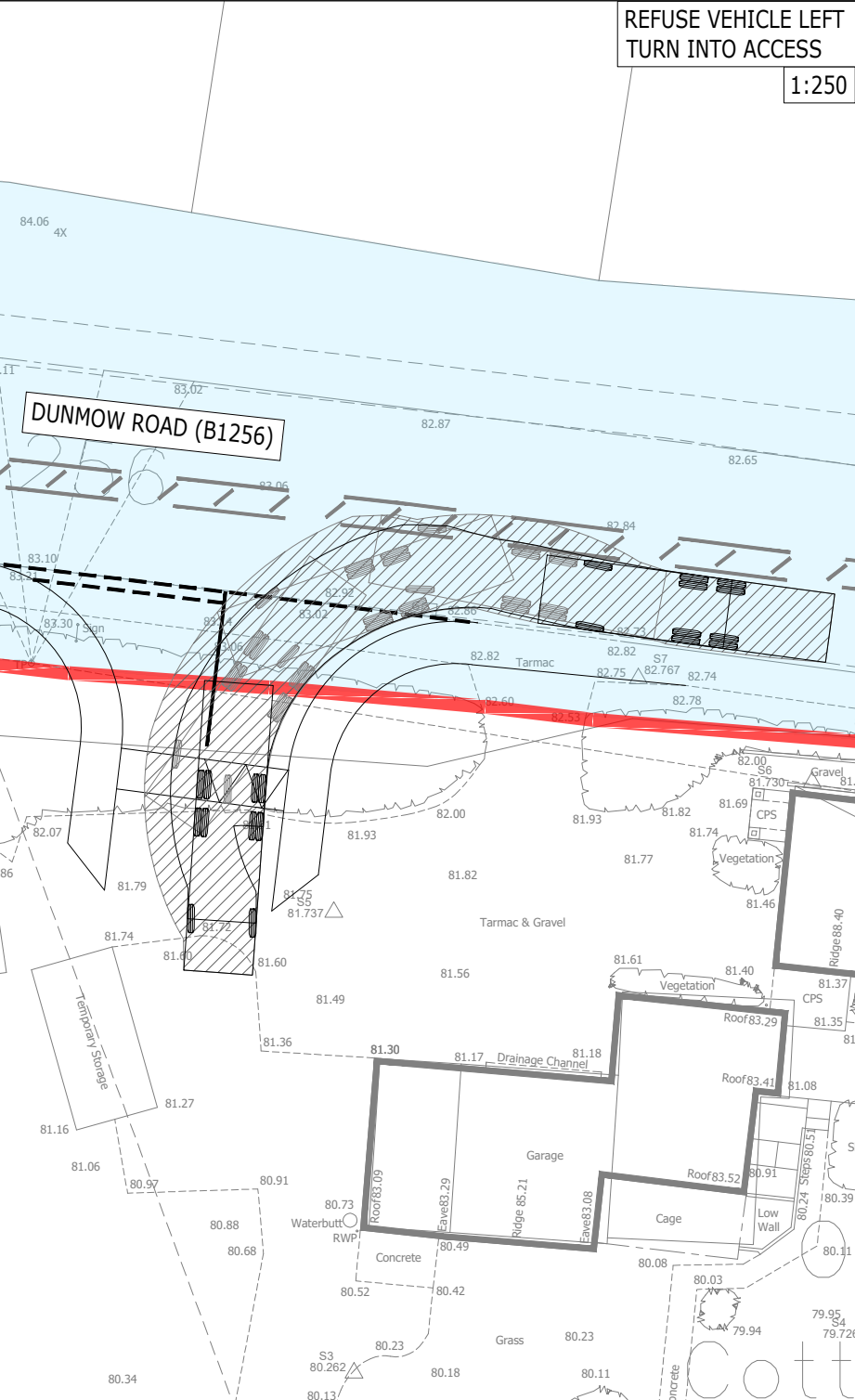
KEY:
 ASSUMED HIGHWAY BOUNDARY
 TRANSCRIBED REDLINE BOUNDARY FROM
DRAWING BRD/20/032/001 PRODUCED BY BRD
ARCHITECTS



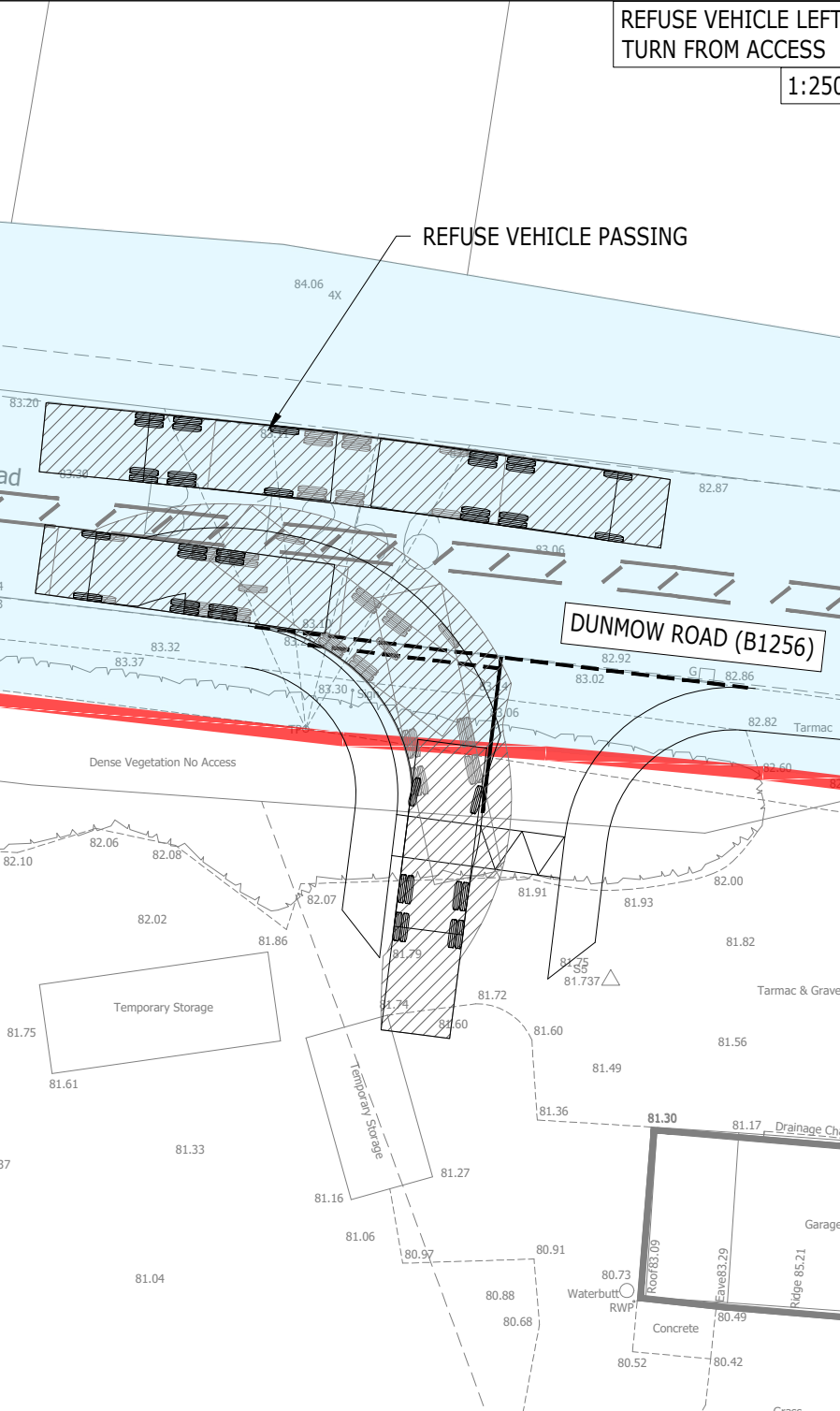
Essex Large Refuse Vehicle (3 axle)
 Overall Length 10.342m
 Overall Width 2.450m
 Overall Body Height 3.814m
 Min Body Ground Clearance 0.366m
 Track Width 2.450m
 Lock to lock time 4.00s
 Kerb to Kerb Turning Radius 9.500m



PROPOSED ACCESS
1:250



REFUSE VEHICLE LEFT
TURN INTO ACCESS
1:250



REFUSE VEHICLE LEFT
TURN FROM ACCESS
1:250

DRAFT

A	UPDATED VISIBILITY SPLAY	BT	IW	AT	14.10.21
Rev	Description	Drn	Chk	App	Date

ARDENT CONSULTING ENGINEERS

Third Floor
The Hallmark Building
52-56 Leadenhall Street
London
EC3M 5JE

Tel: 020 7680 4088
Web: www.ardent-ce.co.uk
E-mail: enquiries@ardent-ce.co.uk

Client
W & J PROPERTY DEVELOPMENTS LIMITED

Project Title:
OLD COTTAGE, START HILL, BISHOPS STORTFORD

Drawing Title:
PROPOSED ACCESS & VISIBILITY PLAN

A2 Scale	Date	Designed by
SEE DRAWING	11.08.21	BT
Drawn by	Checked by	Approved by
BT	DV	AT
Drawing Number	2005260-001	
		Rev A

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Appendix A

M&S Stage 1 Road Safety Audit



M & S Traffic

Road Safety Audit Stage 1

Start Hill

Bishops Stortford

Essex

Date: 18th October 2021

Report produced for: **Ardent Consulting Engineers**

Report produced by: M & S Traffic

DOCUMENT CONTROL SHEET

M&S Traffic has prepared this report in accordance with the instructions from Ardent Consulting Engineers. M&S Traffic shall not be liable for the use of any information contained herein for any purpose other than the sole and specific use for which it was prepared.

Report Title:	Start Hill, Bishops Stortford. Road Safety Audit Stage 1
Date:	18 th October 2021
Document reference and revision:A	ARD/21/2005260/1/MM
Prepared by:	M & S Traffic
On behalf of:	Essex County Council

Distribution

Organisation	Contact	Copies
Ardent Consulting Engineers	Andy Trowbridge	-

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1 Introduction	4
2 Safety issues raised at previous Audits	5
3 Items raised at the Stage 1 Audit	6
4 Issues identified during the road safety audit that are outside the terms of reference	9
5 Auditors Statement	10

Appendix A..... List of drawings

Appendix B..... Comment location drawing

1 INTRODUCTION

1.1 This report describes a Stage 1 Road Safety Audit carried out on proposed Section 278 works associated with a 7-unit residential development on land to the south of Dunmow Road, Bishops Stortford including:

- The provision of a new priority junction access to serve the development.

The Audit was requested by the design organisation, Ardent Consulting Engineers, 1-2 Crescent Court, High Street, Billericay CM12 9AQ, on behalf of Essex County Council as the Overseeing Organisation.

1.2 The Audit Team membership was as follows:

Martin Morris, PGD, MCIHT, MSoRSA – Audit Team Leader
Highways England Approved RSA Certificate of Competency

Haydn Vernals, FCIHT, FIHE, CMILT, MSoRSA - Audit Team Member
Highways England Approved RSA Certificate of Competency

1.3 The audit was undertaken following the principles of GG119, The Design Manual for Roads and Bridges. The documents available at the time of the report are detailed in Appendix A.

1.4 The Audit took place at the Gillingham offices of M&S Traffic during October 2021 and comprised an examination of the documents provided as listed in Appendix A. A joint site visit and inspection was undertaken during the morning of the 11th October 2021 between 10:30 and 11:00 hours. Weather conditions at the time were fine and the road surface was dry. Traffic flows were moderate and free flow speeds were moderate. No pedestrian flows and no cycle movements were observed.

1.5 The report has been compiled, only with regards to the safety implications for road users of the layout presented in the supplied drawings. It has not been examined or verified for compliance with any other standards or criteria. This safety audit does not perform any “Technical Check function on these proposals. It is assumed that the Project Sponsor is satisfied that such a Technical Check” has been successfully completed prior to requesting this safety audit.

1.6 The auditors have not been informed of any Departures from Standards in this scheme construction.

1.7 All comments and recommendations are referenced to the detailed drawings and the locations have been detailed relating to the plans supplied with the audit brief, Appendix B.

2 ITEMS RAISED BY PREVIOUS AUDITS

2.1 No previous safety audits were supplied for assessment.

3 ITEMS RAISED AT THE STAGE 1 AUDIT

3.1 General

3.1.1 PROBLEM

Location: At the proposed access to the development.

Summary: Ponding of surface water and ramp profile could lead to loss of control collisions.

A ramp is proposed on the development access, and kerblines are being amended. This could lead to alterations in the surface water drainage provision and ponding on the carriageway, in addition ramp profiles outside of normal ranges could lead to loss of control collisions.

RECOMMENDATION

It is recommended that drainage and ramp details should be provided at Safety Audit Stage 2.

3.1.2 PROBLEM

Location: The scheme.

Summary: Insufficient construction details could lead to loss of control or overshoot collisions.

No construction details were provided for assessment, in particular, details of tie-ins, carriageway construction or Polished Stone Values (PSV). This could lead to loss of control or overshoot collisions.

RECOMMENDATION

It is recommended that details should be supplied at Stage 2 Safety Audit.

3.2 Local Alignment

3.2.1 No comment.

3.3 Junctions

3.3.1 PROBLEM

Location: Proposed access with Dunmow Road.

Summary: Lack of visibility could lead to side impact collisions or rear end shunts.

The existing ground level slopes away from Dunmow Road – see figure 1 below, no details of the vertical profiles of the accessway have been provided for assessment. There is concern that visibility may be affected for vehicles on the access road. Reduced visibility could lead to side impact collisions or rear end shunts.



Figure 1: Ground slopes away from Dunmow Road.

RECOMMENDATION

It is recommended the vertical profiles should be supplied for assessment at Stage 2 Safety Audit and that a dwell area should be provided.

3.4 Non-Motorised User (NMU) Provision

3.4.1 PROBLEM

Location: Proposed access.

Summary: Lack of pedestrian facilities could compromise pedestrian safety.

There are footways on both sides of the access road; however, no crossing point is provided for pedestrians. A lack of suitable pedestrian facilities may lead to pedestrians crossing at less safe places, leading to possible vehicle to pedestrian collisions. Further, full kerb heights may lead to pedestrian trips, particularly for visually or mobility impaired pedestrians.

RECOMMENDATION

It is recommended that a pedestrian crossing should be provided across the access road.

3.5 Road Signs, Carriageway Markings and Lighting

3.5.1 PROBLEM

Location: At the proposed access to the development.

Summary: Lack of warning of the ramp, high approach speeds and lack of illumination could lead to loss of control collisions.

A ramp is proposed on the development access; however, no speed limit change is proposed, and Dunmow Road is subject to a 40mph speed limit. Without any change to the speed limit the ramp could be sited on a 40mph section of carriageway, further, Dunmow Road in this vicinity is unlit without any approach warning signs. This could lead to loss of control collisions.

RECOMMENDATIONS

It is recommended that signage details should be provided at Stage 2 Audit, where it is recommended that terminal 30/40mph signs and warning signs are installed at the junction with Dunmow Road, and that the hump should be lit.

3.5.2 PROBLEM

Location: Dunmow Road at the proposed access to the development.

Summary: Lack of provision for right turn movements could lead to rear end shunt or sideswipe collisions.

Dunmow Road has a narrow hatch marking that covers the proposed access, no proposals have been shown to modify this hatch marking. Where vehicles intending to turn right will have to wait in the hatching. This could lead to rear end shunt or sideswipe collisions.

RECOMMENDATIONS

It is recommended that a break in the hatching should be provided.

4 ISSUES IDENTIFIED DURING THE ROAD SAFETY AUDIT THAT ARE OUTSIDE THE TERMS OF REFERENCE]

4.1 Safety issues identified during the audit and site inspection that are outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in this section. It is to be understood that, in raising these issues, the Audit Team in no way warrant that a full review of the highway environment has been undertaken beyond that necessary to undertake the Audit as commissioned.

4.2 The Audit Team had no issues to raise within this section.

5.1 We certify that this audit has been undertaken in accordance with GG 119.

Audit Team Leader

Martin Morris
PGD, MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency
M & S Traffic Ltd
Aeolus House
32 Hamelin Road
Gillingham
Kent ME7 3EX

Signed:



Date: 5/11/2021

Audit Team Member

Haydn Vernals
FCIHT, FIHE, CMILT, MSoRSA,
Highways England Approved RSA Certificate of Competency
M & S Traffic Ltd
Aeolus House
32 Hamelin Road
Gillingham
Kent ME7 3EX

Signed:



Date: 5/11/2021

APPENDIX A

List of Drawings and other information submitted for auditing:

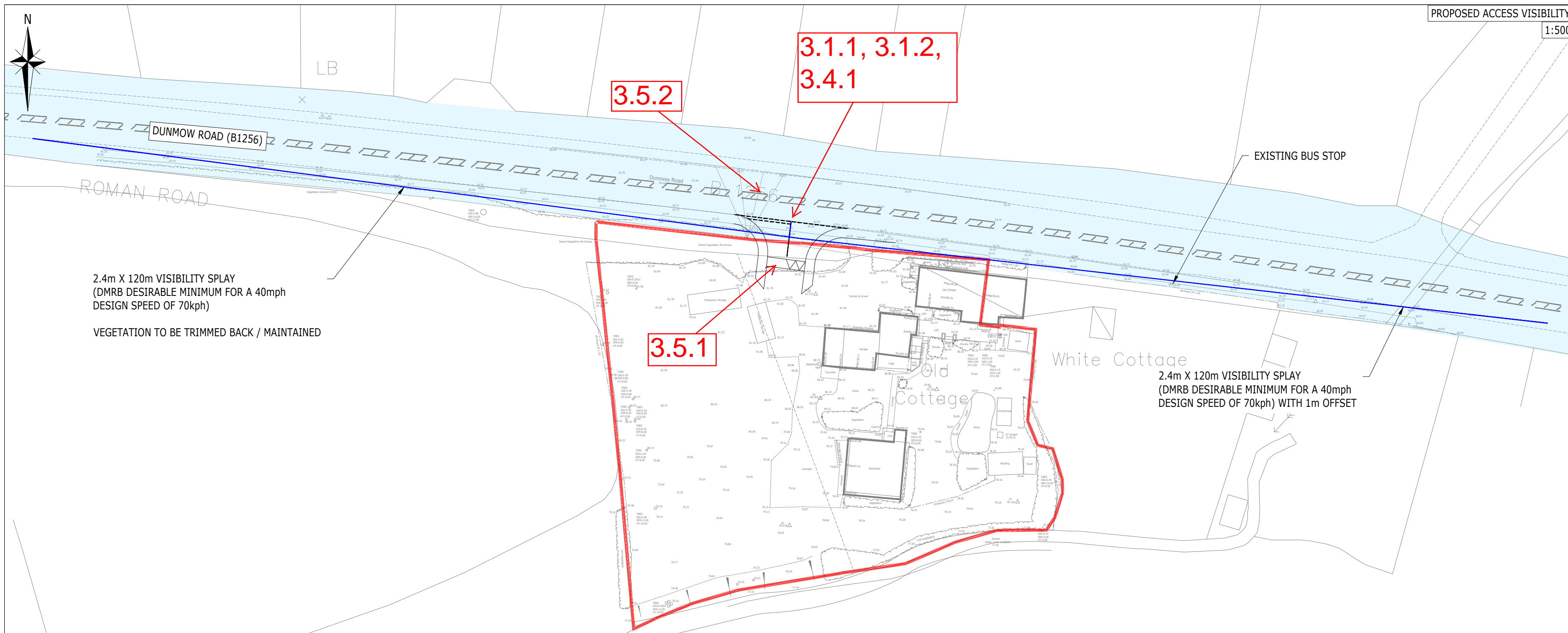
Drawing Number	Title
2106460-001A	Proposed Access & Visibility Plan.

Supporting documentation:

- None supplied.

APPENDIX B

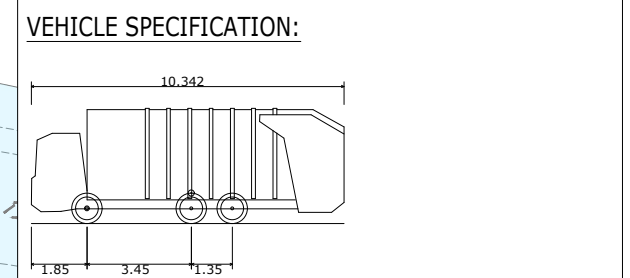
Plan attached showing the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).



PROPOSED ACCESS VISIBILITY
1:500

NOTES:
DRAWING IS SUBJECT TO LAND BOUNDARIES,
HIGHWAY BOUNDARY, STAGE 1 ROAD SAFETY
AUDIT AND DETAILED DESIGN.

KEY:
 ASSUMED HIGHWAY BOUNDARY
 TRANSCRIBED REDLINE BOUNDARY FROM
DRAWING BRD/20/032/001 PRODUCED BY BRD
ARCHITECTS

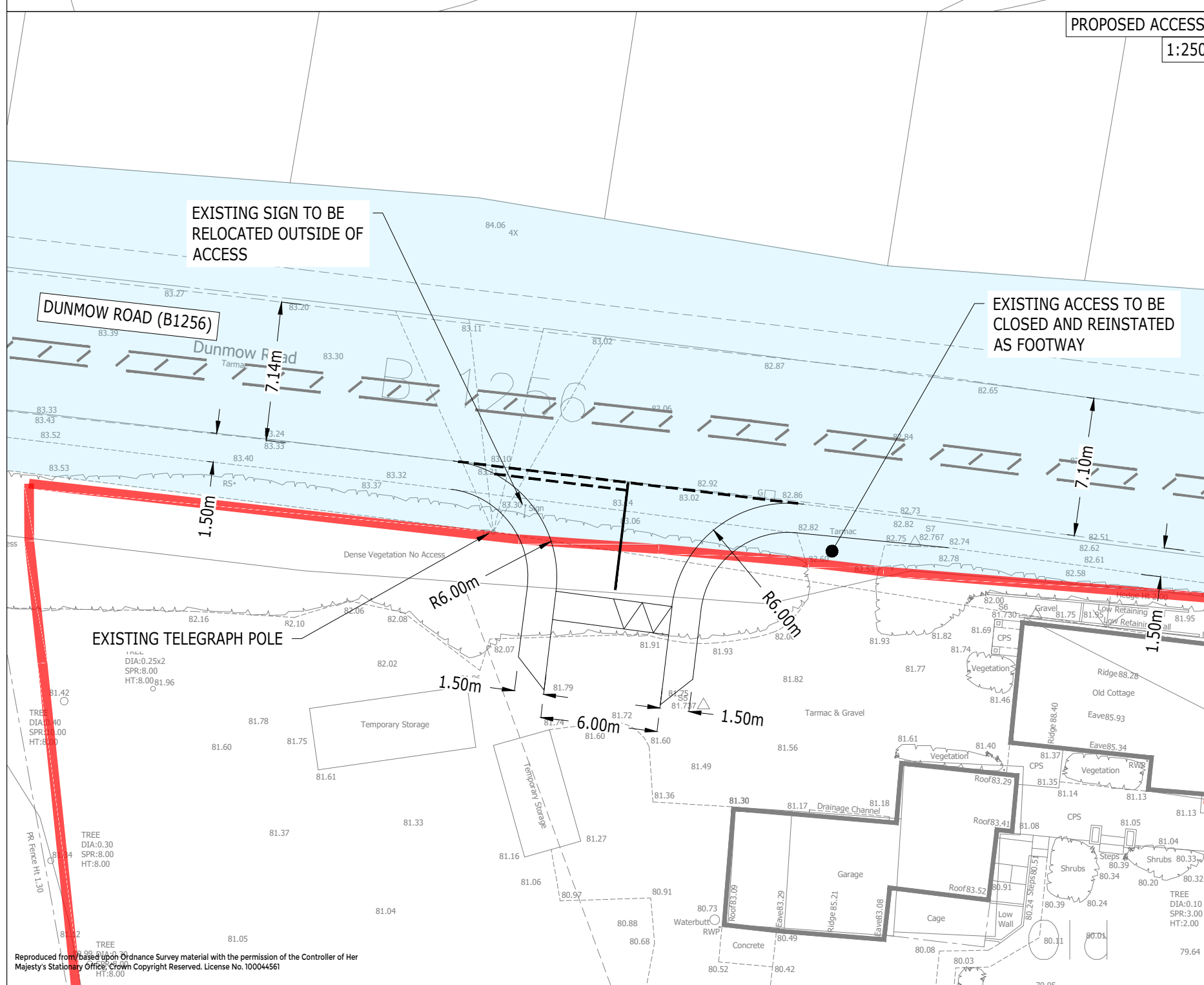


Essex Large Refuse Vehicle (3 axle)
 Overall Length 10.342m
 Overall Width 1.85m
 Overall Body Height 3.45m
 Min Body Ground Clearance 1.35m
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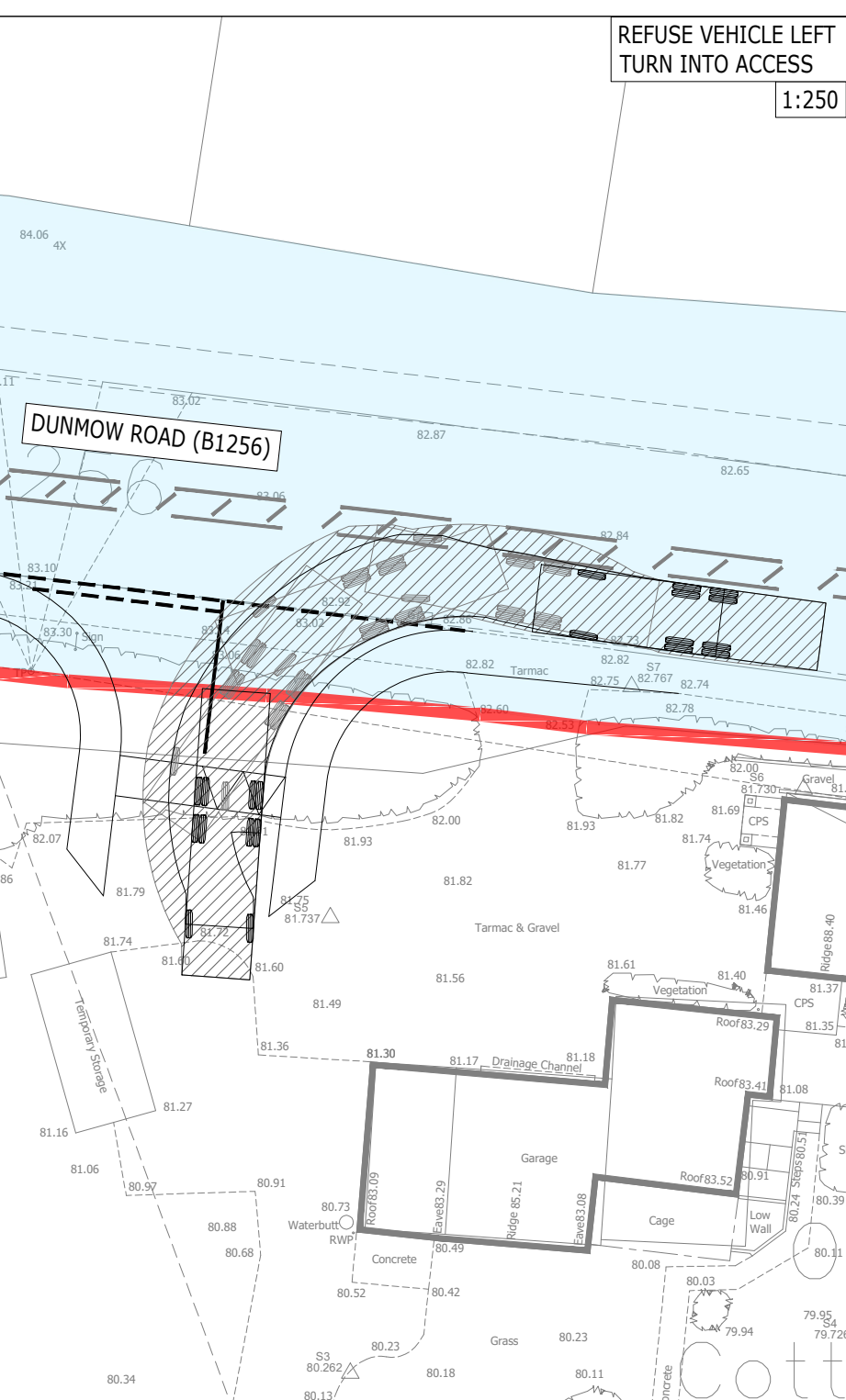
2.4m X 120m VISIBILITY SPLAY
(DMRB DESIRABLE MINIMUM FOR A 40mph
DESIGN SPEED OF 70kph)

VEGETATION TO BE TRIMMED BACK / MAINTAINED

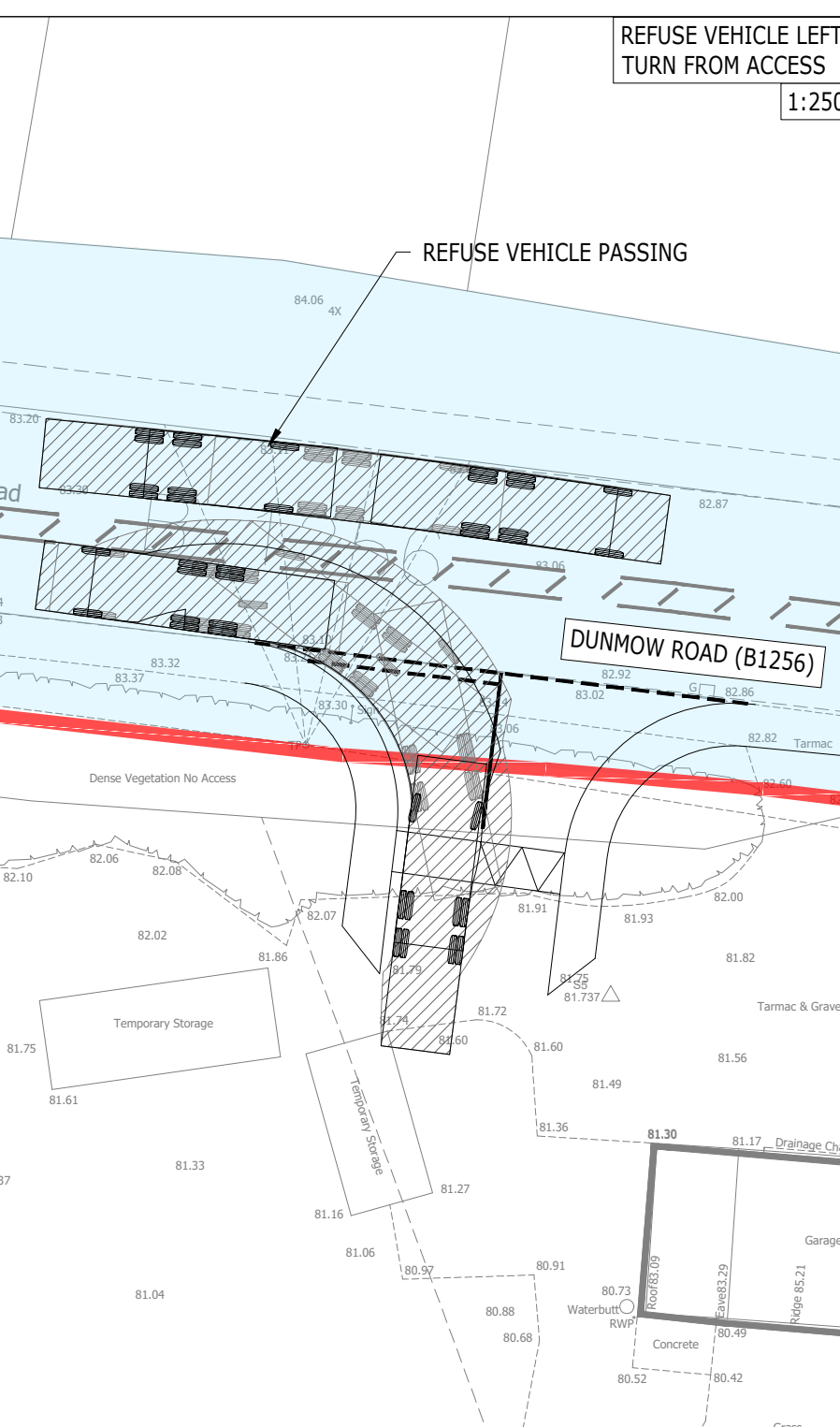
2.4m X 120m VISIBILITY SPLAY
(DMRB DESIRABLE MINIMUM FOR A 40mph
DESIGN SPEED OF 70kph) WITH 1m OFFSET



PROPOSED ACCESS
1:250



REFUSE VEHICLE LEFT
TURN INTO ACCESS
1:250



REFUSE VEHICLE LEFT
TURN FROM ACCESS
1:250

DRAFT

A	UPDATED VISIBILITY SPLAY	BT	IW	AT	14.10.21
Rev	Description	Drn	Chk	App	Date

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EC3M 5JE

Tel: 020 7680 4088
Web: www.ardent-ce.co.uk
E-mail: enquiries@ardent-ce.co.uk

Client
W & J PROPERTY DEVELOPMENTS LIMITED

Project Title:
OLD COTTAGE, START HILL, BISHOPS STORTFORD

Drawing Title:
PROPOSED ACCESS & VISIBILITY PLAN

A2 Scale	Date	Designed by
SEE DRAWING	11.08.21	BT
Drawn by	Checked by	Approved by
BT	DV	AT
Drawing Number	2005260-001	
		Rev A

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Appendix C
TRICS Data – Residential Houses

Calculation Reference: AUDIT-437201-210826-0811

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED
 MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	HC HAMPSHIRE	3 days
	KC KENT	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	2 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
 Actual Range: 8 to 40 (units:)
 Range Selected by User: 7 to 50 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 19/09/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Tuesday	1 days
Wednesday	3 days
Thursday	2 days
Friday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	10 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	5
Neighbourhood Centre (PPS6 Local Centre)	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	8
Village	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3 10 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS@.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	2 days
5,001 to 10,000	1 days
10,001 to 15,000	2 days
15,001 to 20,000	2 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	3 days
50,001 to 75,000	1 days
125,001 to 250,000	5 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	2 days
1.1 to 1.5	6 days
1.6 to 2.0	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	4 days
No	6 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	10 days
-----------------	---------

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-03-A-05 EASTFIELD ROAD PETERBOROUGH	DETACHED HOUSES		CAMBRI DGESHI RE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 28 <i>Survey date: MONDAY 17/10/16</i>			
2	HC-03-A-17 CANADA WAY LIPHOOK	HOUSES & FLATS		HAMPSHI RE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 36 <i>Survey date: THURSDAY 12/11/15</i>			
3	HC-03-A-21 PRIESTLEY ROAD BASINGSTOKE HOUNDMILLS	TERRACED & SEMI -DETACHED		HAMPSHI RE
	Edge of Town Residential Zone Total No of Dwellings: 39 <i>Survey date: TUESDAY 13/11/18</i>			
4	HC-03-A-22 BOW LAKE GARDENS NEAR EASTLEIGH BISHOPSTOKE	MIXED HOUSES		HAMPSHI RE
	Edge of Town Residential Zone Total No of Dwellings: 40 <i>Survey date: WEDNESDAY 31/10/18</i>			
5	KC-03-A-05 ROCHESTER ROAD NEAR CHATHAM BURHAM	DETACHED & SEMI -DETACHED		KENT
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 8 <i>Survey date: FRIDAY 22/09/17</i>			
6	LN-03-A-04 EGERTON ROAD LINCOLN	DETACHED & SEMI -DETACHED		LINCOLNSHI RE
	Edge of Town Centre Residential Zone Total No of Dwellings: 30 <i>Survey date: MONDAY 29/06/15</i>			
7	NF-03-A-03 HALING WAY THETFORD	DETACHED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings: 10 <i>Survey date: WEDNESDAY 16/09/15</i>			
8	NF-03-A-05 HEATH DRIVE HOLT	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings: 40 <i>Survey date: THURSDAY 19/09/19</i>			

LIST OF SITES relevant to selection parameters (Cont.)

9	SF-03-A-05 VALE LANE BURY ST EDMUNDS	DETACHED HOUSES	SUFFOLK
	Edge of Town Residential Zone Total No of Dwellings: 18 <i>Survey date: WEDNESDAY 09/09/15</i>		<i>Survey Type: MANUAL</i>
10	SF-03-A-06 BURY ROAD KENTFORD	DETACHED & SEMI -DETACHED	SUFFOLK
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 38 <i>Survey date: FRIDAY 22/09/17</i>		<i>Survey Type: MANUAL</i>

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	29	0.073	10	29	0.296	10	29	0.369
08:00 - 09:00	10	29	0.115	10	29	0.307	10	29	0.422
09:00 - 10:00	10	29	0.157	10	29	0.139	10	29	0.296
10:00 - 11:00	10	29	0.171	10	29	0.178	10	29	0.349
11:00 - 12:00	10	29	0.122	10	29	0.167	10	29	0.289
12:00 - 13:00	10	29	0.115	10	29	0.153	10	29	0.268
13:00 - 14:00	10	29	0.153	10	29	0.160	10	29	0.313
14:00 - 15:00	10	29	0.111	10	29	0.143	10	29	0.254
15:00 - 16:00	10	29	0.244	10	29	0.202	10	29	0.446
16:00 - 17:00	10	29	0.233	10	29	0.153	10	29	0.386
17:00 - 18:00	10	29	0.328	10	29	0.199	10	29	0.527
18:00 - 19:00	10	29	0.261	10	29	0.108	10	29	0.369
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.083			2.205			4.288

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	8 - 40 (units:)
Survey date range:	01/01/13 - 19/09/19
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	29	0.105	10	29	0.491	10	29	0.596
08:00 - 09:00	10	29	0.171	10	29	0.659	10	29	0.830
09:00 - 10:00	10	29	0.213	10	29	0.247	10	29	0.460
10:00 - 11:00	10	29	0.268	10	29	0.324	10	29	0.592
11:00 - 12:00	10	29	0.185	10	29	0.237	10	29	0.422
12:00 - 13:00	10	29	0.199	10	29	0.254	10	29	0.453
13:00 - 14:00	10	29	0.223	10	29	0.213	10	29	0.436
14:00 - 15:00	10	29	0.230	10	29	0.268	10	29	0.498
15:00 - 16:00	10	29	0.463	10	29	0.334	10	29	0.797
16:00 - 17:00	10	29	0.446	10	29	0.230	10	29	0.676
17:00 - 18:00	10	29	0.523	10	29	0.338	10	29	0.861
18:00 - 19:00	10	29	0.436	10	29	0.202	10	29	0.638
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.462			3.797			7.259

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*