Sumner Consultancy Ltd
Civil Engineering &
Transportation Consultant

ACCESS ASSESSMENT

CHANGE OF USE OF LAND TO A 3 PITCH FAMILY GYPSY & TRAVELLER SITE AND ERECTION OF STABLES AT BRYMBO ROAD BWLCHGWYN WREXHAM



FOR

SAM EVANS

REPORT VERIFICATION

SITE ADDRESS	Brymbo Road Bwlchgwyn Wrexham LL11 5TY
REPORT TITLE	Access Assessment
JOB NUMBER	1046-25
PREPARED BY	JRS

ISSUE NO.	DATE	STATUS	REPORT VERSION	ISSUED BY
1	01-10-25	for Planning	01	JRS

INDEX

DESCRIPTION		PAGE
1.	Brief	3
2.	Site Information	3
3.	Visibility Splays	3
4.	Site Access	5
5.	Conclusion	7

APPENDICES

Appendix 1	Site Location Plan
Appendix 2	Proposed Site Plan & Stable/Amenity Building Details drawing 3 Rev A
Appendix 3	Accident Location Plan
Appendix 4	MfS Speed & Visibility Splay Calculations
Appendix 5	Visibility Splays drawing 1046-25-05
Appendix 6	Photographs
Appendix 7	TRICS Database, sites for Land Use 03 – Residential/A – Houses Privately Owned.
Appendix 8	Trip Rate Calculations
Appendix 9	Car & Caravan Swept Path drawing 1046-25-70
Appendix 10	Horse Box Swept Path drawing 1046-25-71

1. BRIEF

1.1. Sumner Consultancy has been appointed by Sam Evans to carry out an access assessment for a proposed change of use of his land.

2. SITE INFORMATION

2.1. The Site is located along north-western side of Brymbo Road to the east of Bwlchgwyn at grid reference X327507 Y353174 with the nearest post code LL11 5TY. The Site Location Plan is in Appendix 1.

2.2. Adjoining the Site entrance Brymbo Road is 4.9m wide reducing to 3.35m in width 40m to the north-east, with an approximate verge width on the north-western side of the road of 1.4m. On the south-western side of the Site access the verge width is approximately 2.0m, and on the south-eastern side of the road the verge width is approximately 1.4m.

2.3. The Site road frontage is approximately 54m in length with an existing vehicular access at the south-western corner of the Site. The gradient of Brymbo Road is 1in11.5 falling north-west to south-east.

2.4. The Site proposals are for a residential dwelling with an improved access and new garage. The site proposals are shown on Mat Design Limited's Proposed Site Plan & Stable/Amenity Building Details drawing 3 Rev A in Appendix 2.

2.5. Brymbo Road is subject to the national speed limit of 60mph, and the road has no centreline markings but has edge of carriageway white lines. 30m to the south-west of the Site there are "ARAF SLOW" road markings. There are no streetlights along the road.

2.6. The accident data along Brymbo Road has been checked from CrashMap within 1.0km of the Site and over a 5 year period between 2019 and 2023 there were only 2 slight accidents recorded with the nearest one at the junction of the B5102 with Brymbo Road on 10-02-22 400m to the east of the Site.
The second accident at the junction of Brymbo Road and Y Hendy on 13-04-23 700m to the north-west of the Site. The location of the accidents are shown on the Accident Location Plan in Appendix 3.

3. VISIBILITY SPLAYS

3.1. Measurement of visibility splays:

3.1.1. Measurements for visibility splays are generally taken from a point where the centreline of the minor road meets the channel of the major road, Point W. This is normally at the 'give way' line (or an imaginary 'give way' line if no such markings are provided). The distance back along the minor arm to Point X, from which visibility is measured is known as the X distance. This distance is normally measured along the centreline of the minor arm for simplicity, but in some circumstances (for example where there is a wide splitter island on the minor arm) it will be more appropriate to measure it from the actual position of the driver.

3.1.2. The Y distance represents the distance that a driver who is about to exit from the minor arm can see to their left and right along the main alignment. For simplicity it is measured along the nearside kerb line of the main arm to Point Y, although vehicles will normally be travelling a distance from the kerb line. Therefore, a more accurate assessment of visibility splays is made by measuring to the nearside edge of the vehicle track. The measurement is taken from the point where this line intersects the centreline of the minor arm, Point X, (unless, as above, there is a splitter island in the minor arm).

3.2. Currently there are two standards for determining visibility splays, which are defined in Manual for Streets (MfS) and Design Manual for Roads and Bridges (DMRB) CD 123 – Geometric Design of At-Grade Priority and Signal-Controlled Junctions.

3.3. MfS focuses on lightly trafficked residential streets, but many of its key principles may be applicable to other types of street, for example high streets and lightly-trafficked lanes in rural areas. Generally this is limited to locations with traffic speeds less than 40mph. MfS does not apply to the Trunk Road Network.

3.4. CD 123 is generally applicable to trunk roads where traffic speeds are 40mph and above.

3.5. Although the speed limit along Brymbo Road is 60mph, it is considered that as it's a lightly-trafficked road in a rural area the visibility requirements outlined in MfS will apply.

3.6. The speeds along Brymbo Road adjoining the Site were assessed by driving along the road, and it is considered that the 85th Percentile speeds are 23mph travelling in a south-west direction and 32mph in a north-east direction.

3.7. For a vehicle speed of 32mph the visibility splay requirement as outlined in MfS is 47.1m and for 23mph it's 29.8m. A copy of the MfS Speed & Visibility Splay Calculations are in Appendix 4.

3.8. With regard to the appropriate X distance MfS states that:

a) An X distance of 2.4m should normally be used in most built-up situations, as this represents a reasonable maximum distance between the front of a car and the driver's eye.

b) Longer X distances enable drivers to look for gaps as they approach the junction. This increases junction capacity for the minor arm, and so may be justified in some circumstances, but it also increases the possibility that drivers on the minor approach will fail to take account of other road users, particularly pedestrians and cyclists.

c) Longer X distances may also result in more shunt collisions on the minor arm. TRL Report No. 18468 found that collision risk increased with greater minor-road sight distance.

d) A minimum X distance of 2m may be considered in some slow-speed situations when flows on the minor arm are low, but using this value will mean that the front of some vehicles will protrude slightly into the running carriageway of the major arm, and many drivers will tend to cautiously nose out into traffic.

3.9. The achievable visibility splays from the access onto Brymbo Road from 2.4m are 46.0m to the right (south-west) and 46.0m to the left (north-east) measured to the nearside edge of the vehicle track as stated in Manual for Streets, which is taken to be 0.5m from the channel. The splays are shown on the Visibility Splays drawing 1046-25-05 in Appendix 5.

3.10. The achievable visibility splays from the access onto Brymbo Road from 2.0m are 49.0m to the right (south-west). This splay is shown in red on Visibility Splays drawing 1046-25-05 in Appendix 5.

3.11. To achieve the visibility splays to the right (south-west), the existing timber fence will need to be removed as far as the highway boundary fence line.

3.12. To achieve the visibility splays to the left (north-east), approximately 15.0m of the existing stone wall will need to be taken down and set back along the line of the visibility splay together with the leylandii trees, with the verge reduced to a height below 1.0m and free of any obstructions.

3.13. With the visibility improvements outlined above there will be no issues with the vertical visibility from an eye height of 1.05m to a point 0.6m above the road in both directions.

3.14. Photographs 1 & 2 in Appendix 6 show the location of the existing Site access, Photographs 3 & 4 along Brymbo Road channel in both directions.

3.15. Photographs 5 & 6 show the existing visibility at the access in both directions from 2.4m.

3.16. Photograph 7 Shows the visibility sight line from the north-west side of the access at a distance of 45m looking towards the access, and Photograph 8, is zoomed in from 45m to show the field gate post which is the limiting factor for the visibility splay from 2.4m.

4. SITE ACCESS

4.1. The Highway Authority have made the following comments in respect of the Site proposals in a Memorandum dated 19-08-25:

4.1.1. Provision of safe pedestrian access should be made to and from neighbouring villages of Brymbo and Bwlchgwyn. The LHA do not consider pedestrians walking along the Brymbo Rd to be safe, without illumination nor an adequate active travel footpath/cycleway segregated from the road.

4.1.2. The existing stable block use was considered favourably as trip generation was low. Adding what may be the equivalent of 6 no. caravans, plus associated vehicles is a proportionally significant intensification of the existing approved use. This requires significantly greater information on trip generation and existing vehicle speeds on the main road than has been provided.

*4.1.3. A fully scalable plan of the entrance is required demonstrating via swept-path analysis how vehicles towing caravans can enter and leave the site in a forward gear. Demonstration of adequate forward visibility **in both directions** on Brymbo Rd is essential for when vehicles are manoeuvring in and out of the access and potentially encroaching into the oncoming lane.*

4.1.4. Full visibility splays appropriate for the accepted 85th percentile speed on the highway passing the site should be shown on the same scalable plan. Visibility splays must take account of the vertical level differences on Brymbo Road particularly to the East of the access.

4.1.5. Demonstration that the land within the visibility splays is within the control of the applicant, and conformation that it will be maintained in perpetuity to a height below 1.05m and free of any obstructions.

4.1.6. Demonstration that adequate turning space within the plot will be maintained for the worst case vehicles which may be used. This may be long wheel base vans with caravans of up to 7 or 8m in length, or HGV horse boxes.

4.1.7. The gate should be set back so as to ensure a vehicle and/or caravan does not obstruct the public highway whilst opening or closing the gate.

4.2. Replies to the Highway Authority comments:

4.2.1. The Site is 0.6 mile to the Bwlchgwyn Community School in a westerly direction and 1.7 miles to St Marys Brymbo. It is impossible to provide a safe pedestrian access to either of these locations. Sam Evans has said that his grandchildren are taken to the local school by car, and none of his family walk to either Bwlchgwyn or Brymbo.
This would be the same situation for any rural dwellings not in close proximity to the local village or town.

4.2.2. The trip generation from the Site for 6 caravans.

4.2.2.1. To obtain the possible traffic generation for the Site for 6 caravans the TRICS Database was assessed based on the number of bedrooms which for the Site is taken to be 2 bedrooms per caravan giving a total of 12.

4.2.2.2. From the TRICS Database, the 5 most appropriate sites from Land Use 03 – Residential/A – Houses Privately Owned were used. A copy of the TRICS data for these sites is in Appendix 7.

4.2.2.3. The am peak hour is between 08:00 - 09:00, and the pm peak hour is 17:00 - 18:00 therefore the number of vehicles arriving and departing the Site are calculated to be:

VEHICLES	AM 08:00 – 09:00	PM 17:00 – 18:00
Arriving	0.6	1.6
Departing	2.0	0.8
Total	**2.6**	**2.4**

4.2.2.4. The traffic generation for the Site for 6 caravans during the peak hours are shown to be minimal.

4.2.2.5. A copy of the Vehicle Trip Rate Calculations for the peak times are in Appendix 8.

4.2.3. Vehicle swept path & forward visibility

4.2.3.1. A vehicle swept path analysis for an average car and a 4 berth caravan 11.45m in length has been assessed which shows that the vehicle combination can enter the Site and park in front of the gates, which are set back 13.5m and be clear of the adjoining highway. It also shows that it can manoeuvre within the Site and exit in forward gear. The Car & Caravan Swept Path drawing 1046-25-70 is in Appendix 9.

4.2.3.2. A vehicle swept path analysis for an Iveco 7.5t horse box 7.6m in length has been assessed which shows that the vehicle can enter the Site and manoeuvre within the Site and exit in forward gear.
The Horse Box Swept Path drawing 1046-25-71 is in Appendix 10.

4.2.3.3. The forward visibility splays to vehicles emerging from the access are to the north-east direction 71m and to the south-west direction 45m and these are shown on the Visibility Splays drawing 1046-25-05 in Appendix 5.

4.2.4. Visibility splays from the Site access based on the assessed 85th percentile vehicle speeds are shown on the Visibility Splays drawing 1046-25-05 in Appendix 5. There are no issues with the vertical level differences along Brymbo Road, which is evident from Photograph 4.

4.2.5. With the visibility improvements outlined in Paragraphs 3.11 & 3.12 there will be no issues with the vertical visibility from an eye height of 1.05m to a point 0.6m above the road in both directions.

4.2.6. The Car & Caravan Swept Path drawing 1046-25-70 in Appendix 9 and the Horse Box Swept Path drawing 1046-25-71 in Appendix 10 show that there is adequate turning space within the Site.

4.2.7. The Car & Caravan Swept Path drawing 1046-25-70 in Appendix 9 shows that the vehicle combination can enter the Site and park in front of the gates, which are set back 13.5m and be clear of the adjoining highway.

5. CONCLUSION

5.1. Adjoining the Site entrance Brymbo Road is 4.9m wide reducing to 3.35m in width 40m to the north-east, with an approximate verge width on the north-western side of the road of 1.4m. On the south-western side of the Site access the verge width is approximately 2.0m, and on the south-eastern side of the road the verge width is approximately 1.4m.

5.2. The Site road frontage is approximately 54m in length with an existing vehicular access at the south-western corner of the Site. The gradient of Brymbo Road is 1in11.5 falling north-west to south-east.

5.3. Although the speed limit along Brymbo Road is 60mph, it is considered that as it's a lightly-trafficked road in a rural area the visibility requirements outlined in MfS will apply.

5.4. The speeds along Brymbo Road adjoining the Site were assessed by driving along the road, and it is considered that the 85th Percentile speeds are 23mph travelling in a south-west direction and 32mph in a north-east direction.

5.5. For a vehicle speed of 32mph the visibility splay requirement as outlined in MfS is 47.1m and for 23mph it's 29.8m.

5.6. The achievable visibility splays from the access onto Brymbo Road from 2.4m are 46.0m to the right (south-west) and 46.0m to the left (north-east) measured to the nearside edge of the vehicle track as stated in Manual for Streets, which is taken to be 0.5m from the channel.

5.7. The achievable visibility splays from the access onto Brymbo Road from 2.0m are 49.0m to the right (south-west).

5.8. To achieve the visibility splays to the right (south-west), the existing timber fence will need to be removed as far as the highway boundary fence line.

5.9. To achieve the visibility splays to the left (north-east), approximately 15.0m of the existing stone wall will need to be taken down and set back along the line of the visibility splay together with the leylandii trees with the verge reduced to a height below 1.0m and free of any obstructions.

5.10. With the visibility improvements outlined above there will be no issues with the vertical visibility from an eye height of 1.05m to a point 0.6m above the road in both directions.

5.11. The Highway Authority have made comments in respect of the Site proposals in a Memorandum dated 19-08-25. It is considered as outlined in Paragraphs 4.2.1 to 4.2.7 that their concerns have been addressed.

5.12. The traffic generation for the Site for 6 caravans during the peak hours in Paragraph 4.2.2 are shown to be minimal with 2.0 vehicles departing the Site between 08:00 & 09:00 and 0.8 vehicles between 17:00 & 18:00.

5.13. The accident data along Brymbo Road has been checked from CrashMap within 1.0km of the Site and works are considered necessary to reduce accidents in the area of the Site.

5.14. It is considered that the Site proposals will not be detrimental to the safety and free flow of traffic along Brymbo Road.

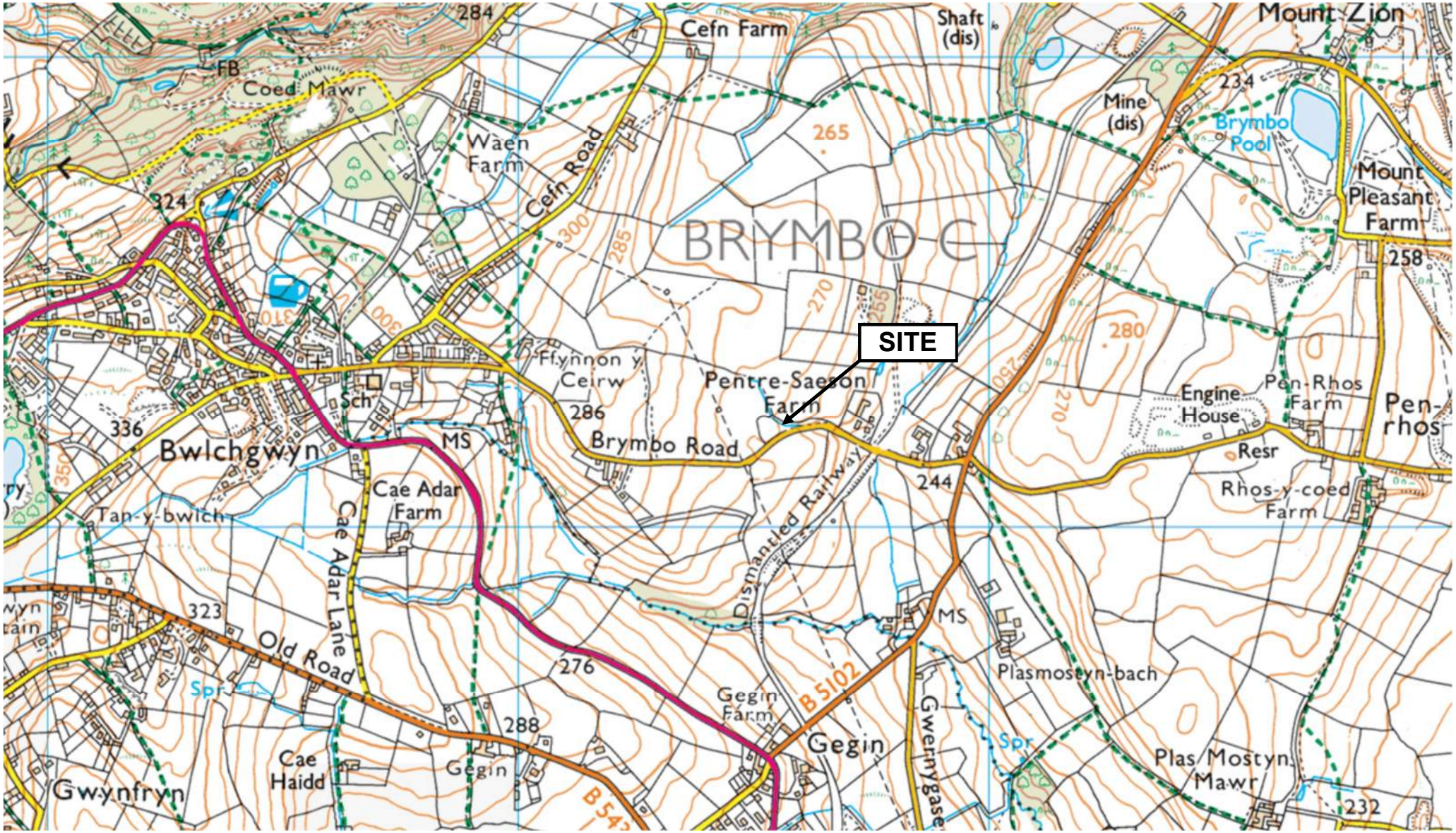
John Sumner IEng MICE
Director
Sumner Consultancy Ltd
October 2025

APPENDIX 1

SITE LOCATION PLAN

SITE LOCATION PLAN

Nearest Post Code LL11 5TY
Grid Reference X327507 Y353174



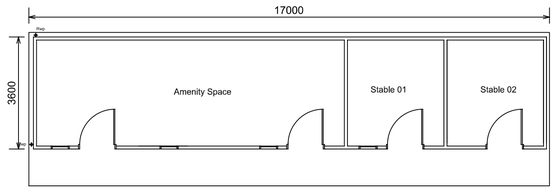
Sumner Consultancy Ltd
info@sumnerconsultancy.co.uk www.sumnerconsultancy.co.uk

Ordnance Survey Paper Mapping Licence Number 100059047

APPENDIX 2

PROPOSED SITE PLAN & STABLE/AMENITY BUILDING DETAILS DRAWING 3 REV A



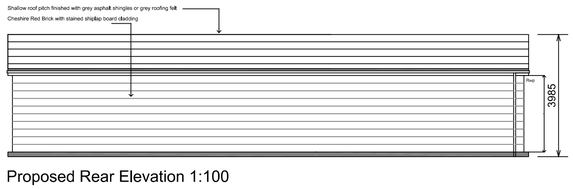


Proposed Plan 1:100

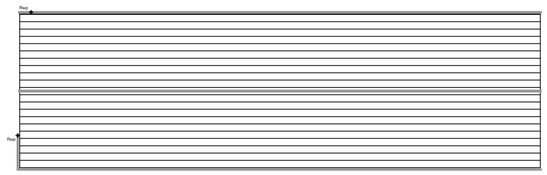


Proposed Front Elevation 1:100

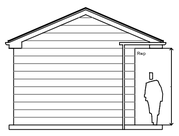
No external lighting is proposed as part of this application



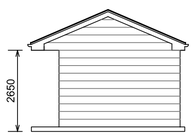
Proposed Rear Elevation 1:100



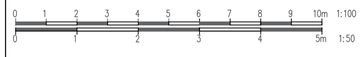
Proposed Roof Plan 1:100



Proposed Side Elevation 1:100



Proposed Side Elevation 1:100



Rev		
A	Revised entrance gate access	Sept 25

Project
CHANGE OF USE OF LAND TO A 3 PITCH FAMILY GYPSY & TRAVELLER SITE, ALONG WITH THE STABLING OF HORSES ON LAND TO THE NORTH OF BRYMBO ROAD, BWLCHGWYN, WREXHAM. LL11 5TY

Client
MR S EVANS

Contract. No.	Drg. No.	Revision	Scale 1:100 & 1:200 @ A1	
	3	A	By MCC Chkd	Date MARCH 2025

Drawing Title
PROPOSED SITE PLAN AND STABLE /AMENITY BUILDING DETAILS - REV A

MAT DESIGN LIMITED
Town Planning & Building Control Consultants
17 BROOKSIDE AVE
ECCLESTON
ST. HELENS
WA10 4RN
Telephone:07850203448
E-mail:miketa@blueyonder.co.uk

APPENDIX 3

ACCIDENT LOCATION PLAN

ACCIDENT LOCATION PLAN

Nearest Post Code LL11 5TY

Accident Details Have Been Obtained From The National CrashMap Database



ACCIDENTS 2019 – 2023
Within 1km Radius of the Site

Accidents	1
Fatal	0
Serious	0
Slight	2

Incident Severity

Slight Serious Fatal

Sumner Consultancy Ltd
info@sumnerconsultancy.co.uk **www.sumnerconsultancy.co.uk**

APPENDIX 4

MfS SPEED & VISIBILITY SPLAY CALCULATIONS

SPEED & VISIBILITY SPLAY CALCULATIONS

Manual for Streets (MfS)

Sumner Consultancy Ltd
Civil Engineering & Transportation Consultant

Site Location **BRYMBO ROAD BWLCHGWYN WREXHAM**

Grid Reference **X327507 Y353174**

Nearest Post Code **LL11 5TY**

Speed Limit **60 mph**

Speed assessment was done on 16/09/2025 by driving along the road

Traffic Direction	NE Bound	mph
	85th Percentile	32.0
Traffic Direction	SW Bound	mph
	85th Percentile	23.0

Speed in wet weather

CA 185 Vehicle Speed Measurement
Speed increase for wet weather 0 mph (4 kph for AP Single Carriageways)

Traffic Direction	NE Bound	mph
	85th Percentile	32.0
Traffic Direction	SW Bound	mph
	85th Percentile	23.0

Visibility Distances From Manual for Streets

SPEED	Km/h	16	20	24	25	30	32	40	45	48	50	60
	mph	10	12	15	16	19	20	25	28	30	31	37
SSD (metres)		9	12	15	16	20	22	31	36	40	43	56
SSD adjusted for bonnet length		11	14	17	18	23	25	33	39	43	45	59

Traffic Direction **NE Bound**

85th Percentile Visibility Splay 47.1 m

Traffic Direction **SW Bound**

85th Percentile Visibility Splay 29.8 m

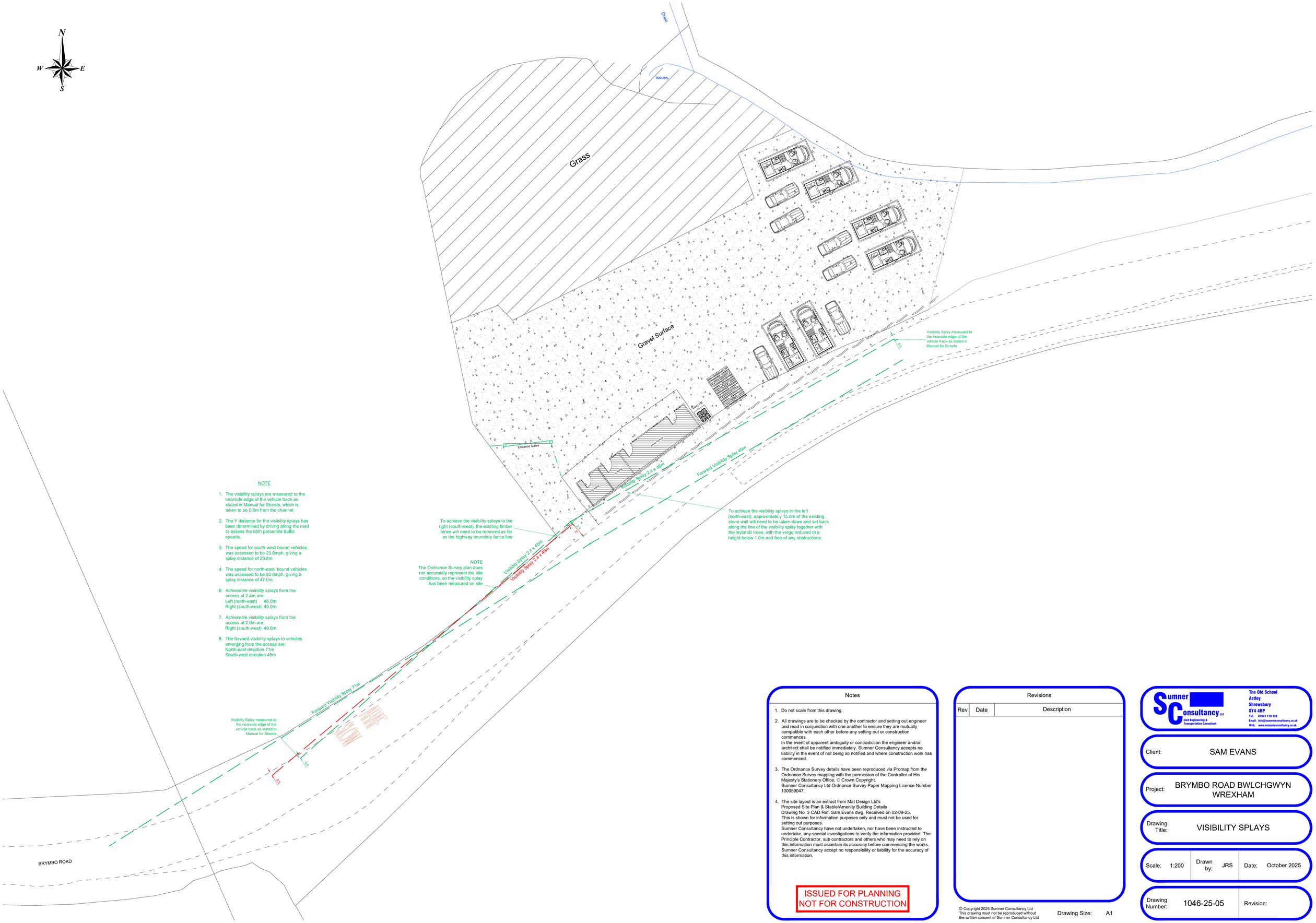
Where:		NE Bound	SW Bound
Stopping Sight Distance = $vt + v^2/2(d+0.1a)$			
v = Speed (m/s)			
t = Reaction Time (s) =		1.5	1.5
d = Deceleration Time (g) =		0.450	0.450
g = Gravity (m/s^2) =		9.81	9.81
Bonnet Length (m) =		2.4	2.4
a = Longitudinal Gradient (%)			
NE Bound	Gradient (%) =	-9.0%	
SW Bound	Gradient (%) =		9.0%

Note: The calculations above are based on the formula in Manual for Streets 2 for determining the Stopping Sight Distance

Sumner Consultancy Ltd
info@sumnerconsultancy.co.uk www.sumnerconsultancy.co.uk

APPENDIX 5

VISIBILITY SPLAYS DRAWING 1046-25-05



NOTE

1. The visibility splays are measured to the nearside edge of the vehicle track as stated in Manual for Streets, which is taken to be 0.5m from the channel.
2. The Y distance for the visibility splays has been determined by driving along the road to assess the 85th percentile traffic speeds.
3. The speed for south-west bound vehicles was assessed to be 23.0mph, giving a splay distance of 29.8m
4. The speed for north-east bound vehicles was assessed to be 32.0mph, giving a splay distance of 47.0m.
6. Achievable visibility splays from the access at 2.4m are:
   Left (north-east) 46.0m
   Right (south-west) 45.0m
7. Achievable visibility splays from the access at 2.0m are:
   Right (south-west) 49.0m
8. The forward visibility splays to vehicles emerging from the access are:
   North-east direction 71m
   South-west direction 45m

Notes

1. Do not scale from this drawing.
2. All drawings are to be checked by the contractor and setting out engineer and read in conjunction with one another to ensure they are mutually compatible with each other before any setting out or construction commences.
   In the event of apparent ambiguity or contradiction the engineer and/or architect shall be notified immediately. Sumner Consultancy accepts no liability in the event of not being so notified and where construction work has commenced.
3. The Ordnance Survey details have been reproduced via Promap from the Ordnance Survey mapping with the permission of the Controller of His Majesty's Stationery Office, © Crown Copyright.
   Sumner Consultancy Ltd Ordnance Survey Paper Mapping Licence Number 100059047.
4. The site layout is an extract from Mat Design Ltd's Proposed Site Plan & Stable/Amenity Building Details Drawing No. 3 CAD Ref: Sam Evans dwg. Received on 02-09-25.
   This is shown for information purposes only and must not be used for setting out purposes.
   Sumner Consultancy have not undertaken, nor have been instructed to undertake, any special investigations to verify the information provided. The Principle Contractor, sub contractors and others who may need to rely on this information must ascertain its accuracy before commencing the works. Sumner Consultancy accept no responsibility or liability for the accuracy of this information.

ISSUED FOR PLANNING
NOT FOR CONSTRUCTION

Revisions

Rev	Date	Description

© Copyright 2025 Sumner Consultancy Ltd
This drawing must not be reproduced without the written consent of Sumner Consultancy Ltd

Drawing Size: A1

Sumner Consultancy Ltd
Civil Engineering & Transportation Consultant
The Old School
Astley
Shrewsbury
SY4 4BP
Tel: 07941 179 133
Email: info@sumnerconsultancy.co.uk
Web: www.sumnerconsultancy.co.uk

Client: SAM EVANS

Project: BRYMBO ROAD BWLCHGWYN WREXHAM

Drawing Title: VISIBILITY SPLAYS

Scale: 1:200 | Drawn by: JRS | Date: October 2025

Drawing Number: 1046-25-05 | Revision:

APPENDIX 6

PHOTOGRAPHS



PHOTOGRAPH 1
Site access looking north-west



PHOTOGRAPH 2
Site access looking west



PHOTOGRAPH 3
Road channel at the access looking south-west



PHOTOGRAPH 4
Road channel at the access looking north-east



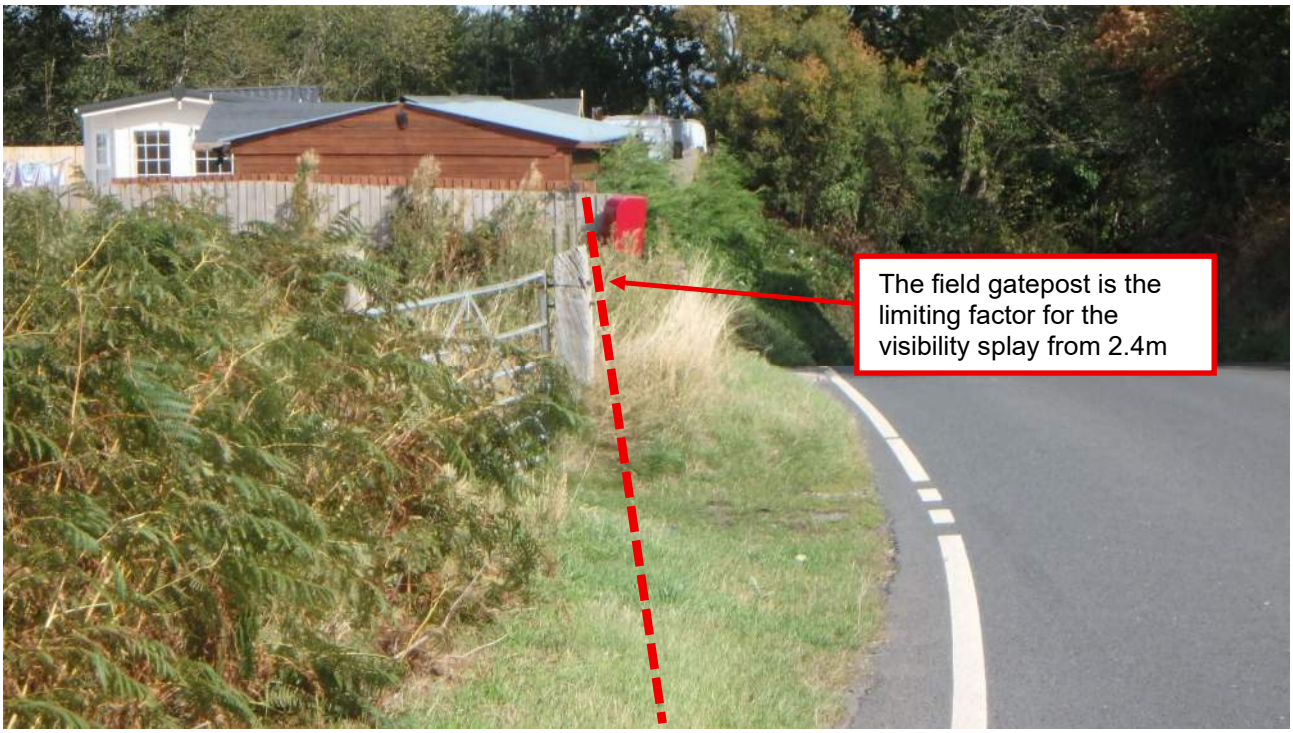
PHOTOGRAPH 5
Access from 2.4m looking to the right (south-west)



PHOTOGRAPH 6
Access from 2.4m looking to the left (north-east)



PHOTOGRAPH 7
Visibility at 45m from the access looking towards the access



PHOTOGRAPH 8
Visibility at 45m looking to the access with the field gatepost limiting the visibility at 2.4m to 45m

APPENDIX 7

TRICS DATABASE, SITES FOR LAND USE 03 – RESIDENTIAL/A – HOUSES PRIVATELY OWNED

BUREAU SERVICE TRICS CONSORTIUM BUREAU SERVICE Licence No: 700101

Calculation Reference: AUDIT-700101-250812-0812

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST		
	SM	SOMERSET	2 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
08	NORTH WEST		
	AC	CHESHIRE WEST & CHESTER	1 days
12	CONNAUGHT		
	CS	SLIGO	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: Total Bedrooms
Actual Range: 102 to 213 (units:)
Range Selected by User: 100 to 300 (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: 01/01/16 to 18/09/24

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:

Tuesday	2 days
Thursday	1 days
Friday	2 days

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

Selected survey types:

Manual count	5 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 undertaking using machines.

Selected Locations:

Neighbourhood Centre (PPS6 Local Centre)	5

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:

Village	5

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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	4 days - Selected
Servicing vehicles Excluded	12 days - Selected

Secondary Filtering selection:

Use Class:

C3	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	2 days
1,001 to 5,000	2 days
5,001 to 10,000	1 days

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

Population within 5 miles:

5,000 or Less	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	3 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	1 days
No	4 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	5 days

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 AC-03-A-05 SEMI-DETACHED & TERRACED CHESHIRE WEST & CHESTER
MEADOW DRIVE
NORTHWICH
BARNTON
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Total Bedrooms: 102
Survey date: FRIDAY *30/04/21* *Survey Type: MANUAL*

2 CS-03-A-04 DETACHED & SEMI-DETACHED SLIGO
R292
STRANDHILL

Neighbourhood Centre (PPS6 Local Centre)
Village
Total Total Bedrooms: 213
Survey date: THURSDAY *27/10/16* *Survey Type: MANUAL*

3 SF-03-A-06 DETACHED & SEMI-DETACHED SUFFOLK
BURY ROAD
KENTFORD

Neighbourhood Centre (PPS6 Local Centre)
Village
Total Total Bedrooms: 129
Survey date: FRIDAY *22/09/17* *Survey Type: MANUAL*

4 SM-03-A-02 MIXED HOUSES SOMERSET
HYDE LANE
NEAR TAUNTON
CREECH SAINT MICHAEL
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Total Bedrooms: 160
Survey date: TUESDAY *25/09/18* *Survey Type: MANUAL*

5 SM-03-A-03 MIXED HOUSES SOMERSET
HYDE LANE
NEAR TAUNTON
CREECH ST MICHAEL
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Total Bedrooms: 137
Survey date: TUESDAY *25/09/18* *Survey Type: MANUAL*

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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
ES-03-A-11	Site has flats
HC-03-A-32	Site has flats
IM-03-A-01	Removal requested
IM-03-A-02	Removal requested
NF-03-A-27	Site has flats
WM-03-A-04	Removal requested
WS-03-A-07	Removal requested
WS-03-A-16	Removal requested
WS-03-A-25	Site has flats

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 TOTBED
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.74

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	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	5	148	0.028	5	148	0.082	5	148	0.110
08:00 - 09:00	5	148	0.047	5	148	0.163	5	148	0.210
09:00 - 10:00	5	148	0.053	5	148	0.070	5	148	0.123
10:00 - 11:00	5	148	0.054	5	148	0.050	5	148	0.104
11:00 - 12:00	5	148	0.057	5	148	0.057	5	148	0.114
12:00 - 13:00	5	148	0.055	5	148	0.077	5	148	0.132
13:00 - 14:00	5	148	0.063	5	148	0.043	5	148	0.106
14:00 - 15:00	5	148	0.085	5	148	0.078	5	148	0.163
15:00 - 16:00	5	148	0.077	5	148	0.077	5	148	0.154
16:00 - 17:00	5	148	0.080	5	148	0.063	5	148	0.143
17:00 - 18:00	5	148	0.136	5	148	0.065	5	148	0.201
18:00 - 19:00	5	148	0.112	5	148	0.058	5	148	0.170
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.847			0.883			1.730

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.*

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

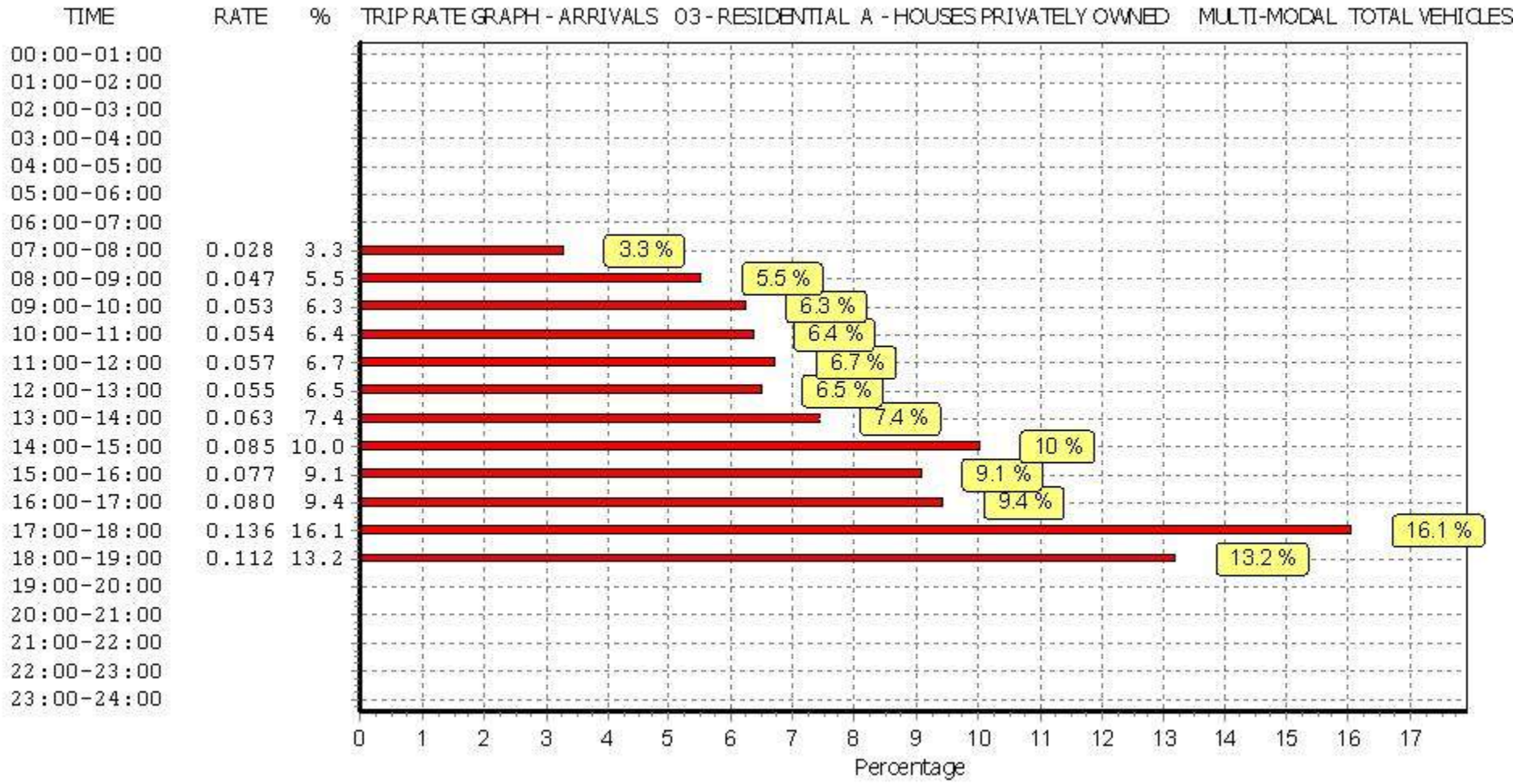
The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	102 - 213 (units:)
Survey date date range:	01/01/16 - 18/09/24
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	9

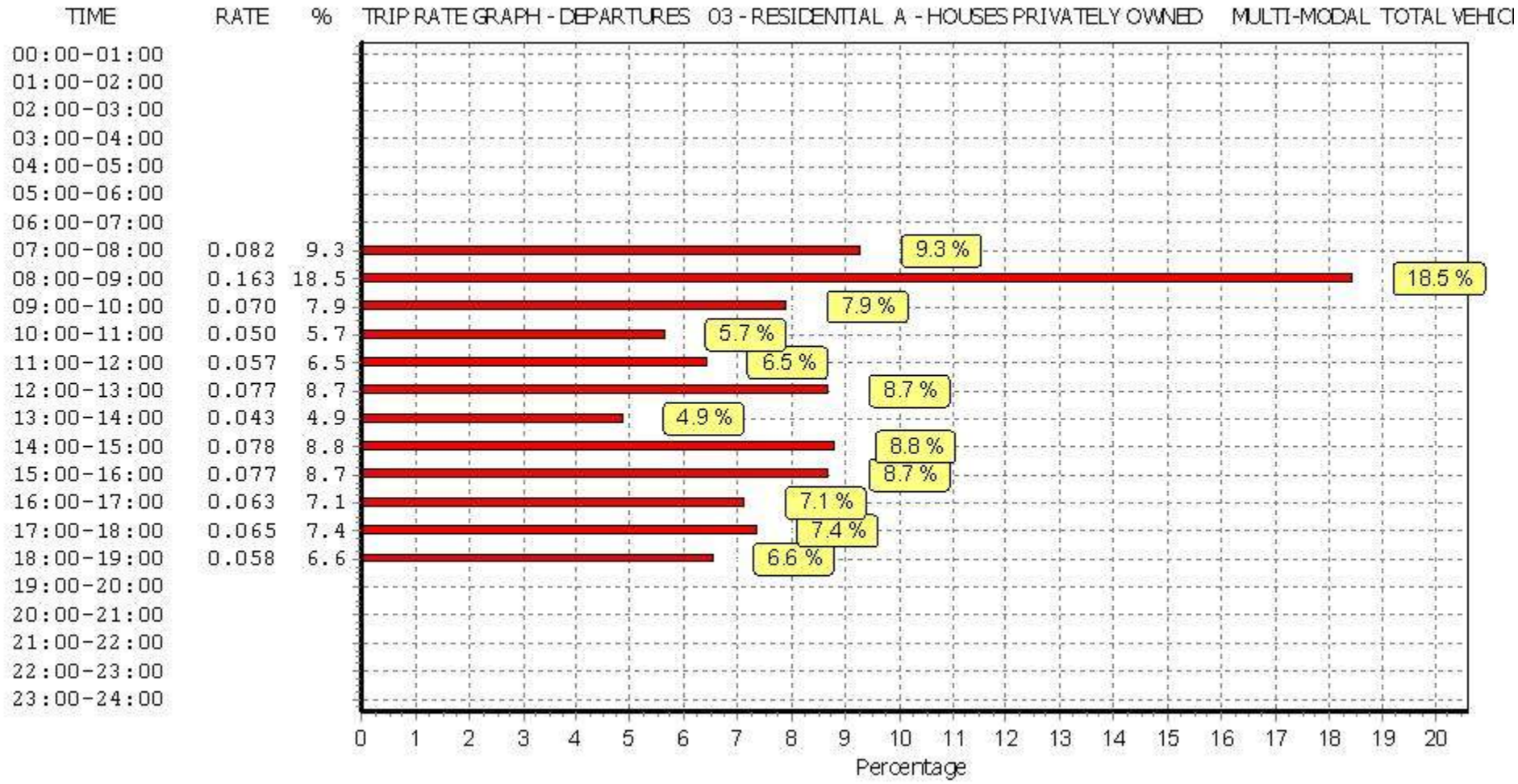
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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

BUREAU SERVICE TRICS CONSORTIUM BUREAU SERVICE Licence No: 700101



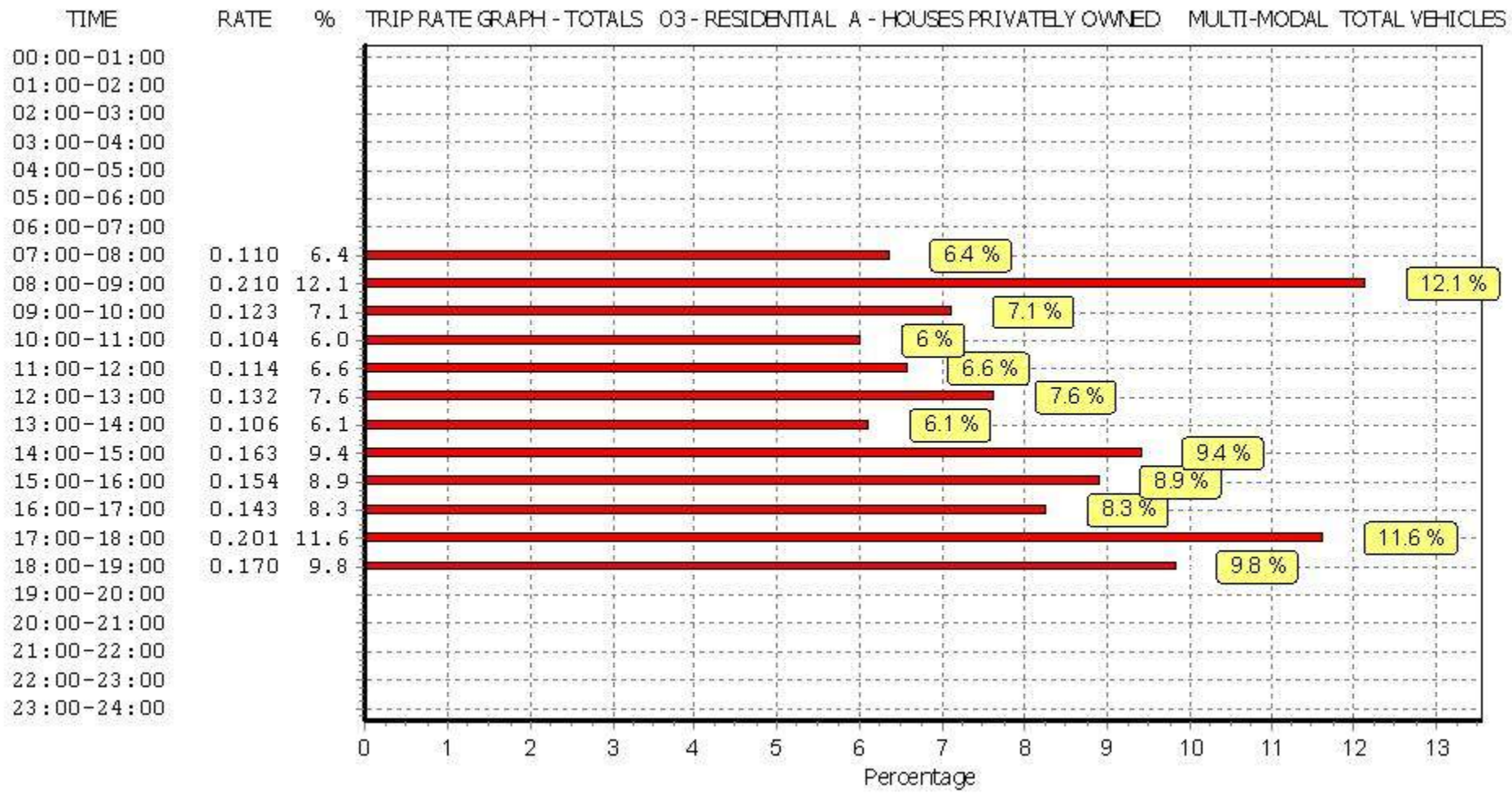
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

BUREAU SERVICE TRICS CONSORTIUM BUREAU SERVICE Licence No: 700101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

BUREAU SERVICE TRICS CONSORTIUM BUREAU SERVICE Licence No: 700101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

APPENDIX 8

TRIP RATE CALCULATIONS

TRIP RATE CALCULATIONS

PROJECT **BRYMBO ROAD BWLCHGWYN WREXHAM**

PROJECT No. **1046-25**

DATABASE SITES

a) Parameter – Residential/A - Houses Privately Owned
b) Calculated on average of the sites
c) Multi-Modal

TRIP RATE FOR LAND USE

03 Parameter – Residential/A - Houses Privately Owned

PARAMETER SUMMARY

Trip rate parameter range selected: 102 - 213 Bedrooms
Survey date range: 2016 - 2021
Weekdays (Monday - Friday):

VEHICLE TRIP RATE

Number of Bedrooms 12

Calculation Factor 1

Morning Peak 08:00 - 09:00

Evening Peak 17:00 - 18:00

MORNING PEAK HOUR

	Peak Hour	Trip Rate
Arrivals	08:00 - 09:00	0.047
Departures	08:00 - 09:00	0.163
Total	08:00 - 09:00	0.210

EVENING PEAK HOUR

	Peak Hour	Trip Rate
Arrivals	17:00 - 18:00	0.136
Departures	17:00 - 18:00	0.065
Total	17:00 - 18:00	0.201

TRIP RATE

	Peak Hour	Vehicles
Arrivals	08:00 - 09:00	0.6
Departures	08:00 - 09:00	2.0
Total	08:00 - 09:00	2.5

TRIP RATE

	Peak Hour	Vehicles
Arrivals	17:00 - 18:00	1.6
Departures	17:00 - 18:00	0.8
Total	17:00 - 18:00	2.4

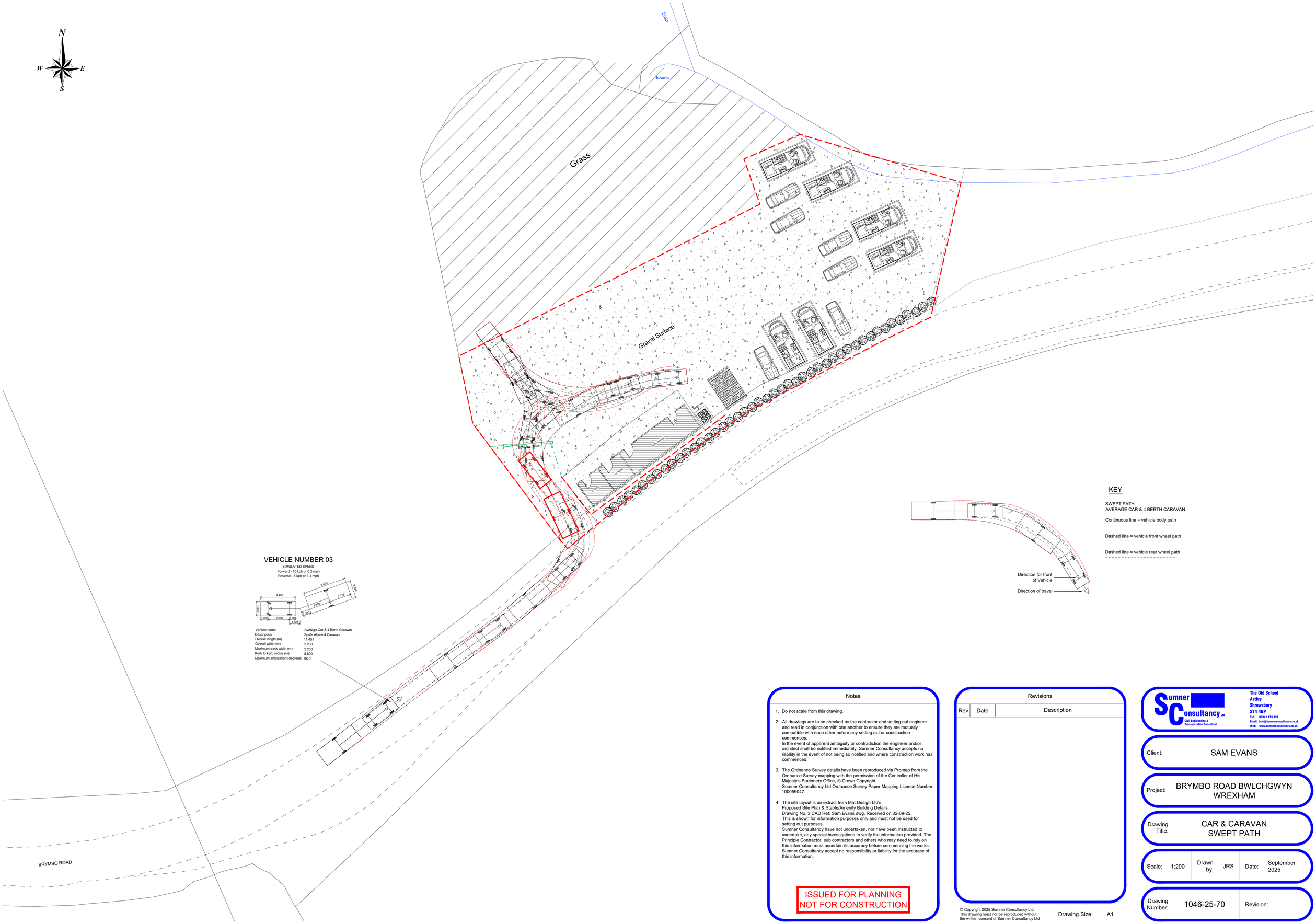
PERCENTAGE OF VEHICLES DEPARTING THE ARM

Morning Peak 77.6%

Evening Peak 32.3%

APPENDIX 9

CAR & CARAVAN SWEPT PATH
DRAWING 1046-25-70



Notes

1. Do not scale from this drawing.
2. All drawings are to be checked by the contractor and setting out engineer and read in conjunction with one another to ensure they are mutually compatible with each other before any setting out or construction commences.
   In the event of apparent ambiguity or contradiction the engineer and/or architect shall be notified immediately. Sumner Consultancy accepts no liability in the event of not being so notified and where construction work has commenced.
3. The Ordnance Survey details have been reproduced via Promap from the Ordnance Survey mapping with the permission of the Controller of His Majesty's Stationery Office, © Crown Copyright.
   Sumner Consultancy Ltd Ordnance Survey Paper Mapping Licence Number 100059047.
4. The site layout is an extract from Mat Design Ltd's
   Proposed Site Plan & Stable/Amenity Building Details
   Drawing No. 3 CAD Ref: Sam Evans dwg. Received on 02-09-25.
   This is shown for information purposes only and must not be used for setting out purposes.
   Sumner Consultancy have not undertaken, nor have been instructed to undertake, any special investigations to verify the information provided. The Principle Contractor, sub contractors and others who may need to rely on this information must ascertain its accuracy before commencing the works. Sumner Consultancy accept no responsibility or liability for the accuracy of this information.

ISSUED FOR PLANNING
NOT FOR CONSTRUCTION

Revisions

Rev	Date	Description

© Copyright 2025 Sumner Consultancy Ltd
This drawing must not be reproduced without the written consent of Sumner Consultancy Ltd

Drawing Size: A1

Sumner Consultancy Ltd
Civil Engineering & Transportation Consultant
The Old School
Astley
Shrewsbury
SY4 4BP
Tel: 07941 178 133
Email: info@sumnerconsultancy.co.uk
Web: www.sumnerconsultancy.co.uk

Client: SAM EVANS

Project: BRYMBO ROAD BWLCHGWYN WREXHAM

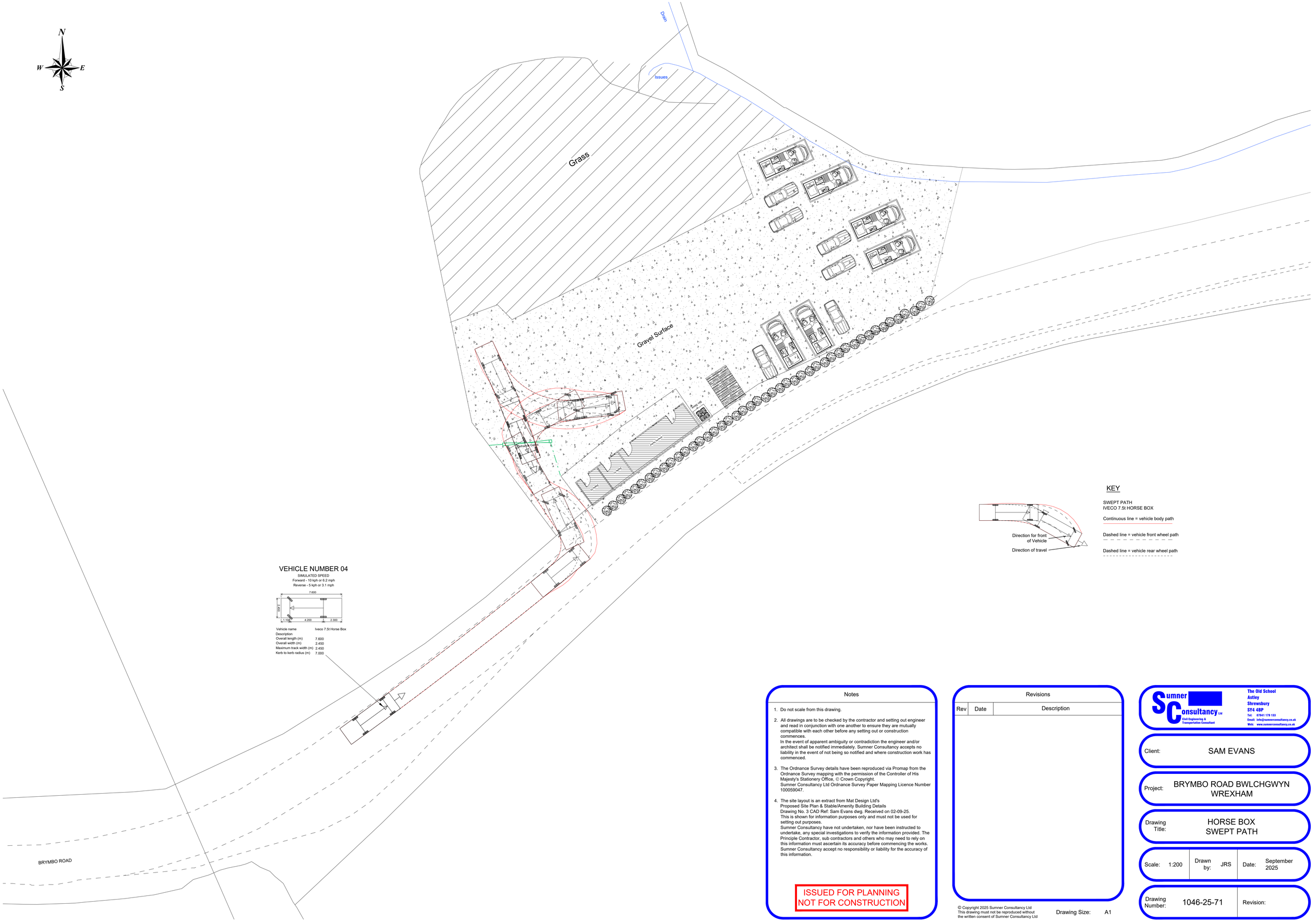
Drawing Title: CAR & CARAVAN SWEPT PATH

Scale: 1:200 | Drawn by: JRS | Date: September 2025

Drawing Number: 1046-25-70 | Revision:

APPENDIX 10

HORSE BOX SWEPT PATH
DRAWING 1046-25-71



Notes

1. Do not scale from this drawing.
2. All drawings are to be checked by the contractor and setting out engineer and read in conjunction with one another to ensure they are mutually compatible with each other before any setting out or construction commences.
   In the event of apparent ambiguity or contradiction the engineer and/or architect shall be notified immediately. Sumner Consultancy accepts no liability in the event of not being so notified and where construction work has commenced.
3. The Ordnance Survey details have been reproduced via Promap from the Ordnance Survey mapping with the permission of the Controller of His Majesty's Stationery Office, © Crown Copyright.
   Sumner Consultancy Ltd Ordnance Survey Paper Mapping Licence Number 100059047.
4. The site layout is an extract from Mat Design Ltd's
   Proposed Site Plan & Stable/Amenity Building Details
   Drawing No. 3 CAD Ref: Sam Evans dwg. Received on 02-09-25.
   This is shown for information purposes only and must not be used for setting out purposes.
   Sumner Consultancy have not undertaken, nor have been instructed to undertake, any special investigations to verify the information provided. The Principle Contractor, sub contractors and others who may need to rely on this information must ascertain its accuracy before commencing the works. Sumner Consultancy accept no responsibility or liability for the accuracy of this information.

ISSUED FOR PLANNING
NOT FOR CONSTRUCTION

Revisions

Rev	Date	Description

© Copyright 2025 Sumner Consultancy Ltd
This drawing must not be reproduced without the written consent of Sumner Consultancy Ltd

Drawing Size: A1

Sumner Consultancy Ltd
Civil Engineering & Transportation Consultant
The Old School
Astley
Shrewsbury
SY4 4BP
Tel: 07941 178 133
Email: info@sumnerconsultancy.co.uk
Web: www.sumnerconsultancy.co.uk

Client: SAM EVANS

Project: BRYMBO ROAD BWLCHGWYN WREXHAM

Drawing Title: HORSE BOX SWEPT PATH

Scale: 1:200 | Drawn by: JRS | Date: September 2025

Drawing Number: 1046-25-71 | Revision: