

Project	Land off Bentley Lane, Bury	Document No	151890-001-01
Subject	Technical Note – Access and Parking Appraisal		

Sanderson Associates Consulting Engineers have been appointed by Rebeca Wild to provide consultancy services in relation to the proposed dwellings at the above site. The proposed development consists of three dwellings.

The site currently has planning permission approved (reference: 64525, Bury Council), but is subject to the following condition, which states:

There shall be no direct means of vehicle access between the site and Bentley Lane.

Reason. To ensure good highway design in the interests of road safety pursuant to the following Policies of the Bury Unitary Development Plan.

The comments have likely been made by Bury Council due to the width of Bentley lane and in the interest of highway safety. This technical note will provide a highway assessment to address the Council's concerns and show that there are no road safety issues.

A revised layout has been prepared which sets the properties further back from Bentley Lane and provides driveways to accommodate off street parking. James Campbell Associates drawing 21.2513.2E shows the proposed layout and Sanderson Associates drawing 151890-001 demonstrates vehicle swept paths of private cars accessing the driveways, both drawings are contained within **Appendix A**. As can be seen from the plans a car can park within the site without obstructing the highway or the proposed footway connection.

Bentley Lane is a local route which provides access to agricultural and residential properties. To determine the level of traffic and vehicle speeds within the vicinity of the site an automatic traffic count (ATC) has been commissioned and the result are summarised on the table below, a copy of the ATC data is attached at **Appendix B**.

Table 1 – ATC survey results and Stopping Sight Distances (SSDs)

Direction of Travel	24 hr Weekday Ave Traffic flow	Average Speed (mph)	85th Percentile Speed (mph)	Recommend SSD (m)
Eastbound	171	18.9	23.6	30.5
Westbound	181	19.2	24.1	31.3

As can be seen form the above table the vehicle flow on Bentley Lane is relative low and the recorded 85th percentiles speeds are both below 25mph.

It acknowledge that visibility from the proposed driveway positions do not meet the recommended SSD values. However, Manual for Street 2 provides the following evidence;

10.4.2. It has often been assumed that a failure to provide visibility at priority junctions in accordance with the values recommended in MfS1 or DMRB (as appropriate) will result in an increased risk of injury collisions. Research carried out by TMS Consultancy for MfS266 has found no evidence of this (see research summary below). Research into cycle safety at T-junctions found that higher cycle collision rates are associated with greater visibility.

10.5.9 The Y distance should be based on the recommended SSD values. However, based on the research referred to above, unless there is local evidence to the contrary, a reduction in visibility below recommended levels will not necessarily lead to a significant problem.

From a review of the local highway, it can be seen that there are various other accesses in close proximity to the site that can only achieve a low level of visibility. These include; (A) a vehicle access immediately to the west of the site serving the neighbouring property, (B) a vehicle access serving a detached dwelling, and (C) a shared private drive serving residential properties.

Figure 1 – Local vehicle access points



The Crashmap Pro Analysis System has been reviewed in order to understand if there is any local evidence to suggest that there are any existing accidents within the vicinity of the site and the areas indicated in Figure 1.

The following extract from the Crashmap database identifies that since 1999 (when Crashmap records began), there have been zero personal injury incidents upon the local highway network

Figure 2 – Crashmap Extract

[Crashmap]



In summary, whilst the visibility provisions available from the proposed driveways are below the recommended SSD values, they are similar to those available from other existing accesses in proximity to the site, and there is no evidence to suggest that the minimal intensification of the site is likely to result in any significant adverse impacts on highway safety.

The TRICS v7.9.3 database has been utilised to determine the vehicular trip generation expected from the proposed development. The selection criteria is shown in **Table 2**, and the full TRICS output is included in **Appendix C**.

Table 2 – TRICS Selection Criteria

Land Use	Trip Rate Selection Criteria
Residential	→ Land Use Category: 'Residential - Houses Privately Owned'; → Vehicular trip rate surveys; → Number of units: 5 to 20 → Greater London, Ireland and Northern Ireland excluded → Saturday and Sunday surveys were excluded; and, → Edge of Town Centre and Neighbourhood Centres were excluded.

Table 3 shows the resulting trip rates and generations for the three proposed dwellings.

Table 3 – Proposed Trip Generations

Time Period	Trip Rates		Generations		
	Arrivals	Departures	Arrivals	Departures	Total
AM Peak 08:00-09:00	0.232	0.389	1	1	2
PM Peak 17:00-18:00	0.305	0.158	1	0	1
Daily 07:00-19:00	2.427	2.620	7	8	15

As can be seen from the above generations the proposed traffic generated is minimal and equates to an additional vehicle every 30 minutes in the AM peak and 1 vehicle every 60 minutes in the PM peak.

Furthermore the provision of the proposed driveways would reduce the need for residents to park on Bentley Lane which would result in obstructing the free flow of two way traffic and potential conflicts / disputes with neighbouring properties.

Acknowledgements

The Crashmap Pro Collision Analysis System v1.27 has been utilised to carry out a road traffic incident review.

The TRICS database v7.9.3 has been used in this report to calculate traffic generations

Traffic count data has been provided by Road Data Services

Issue Record

Issue Status	Prepared by	Checked by	Approved by	Date
01	L Young	A Armitage		February 2023

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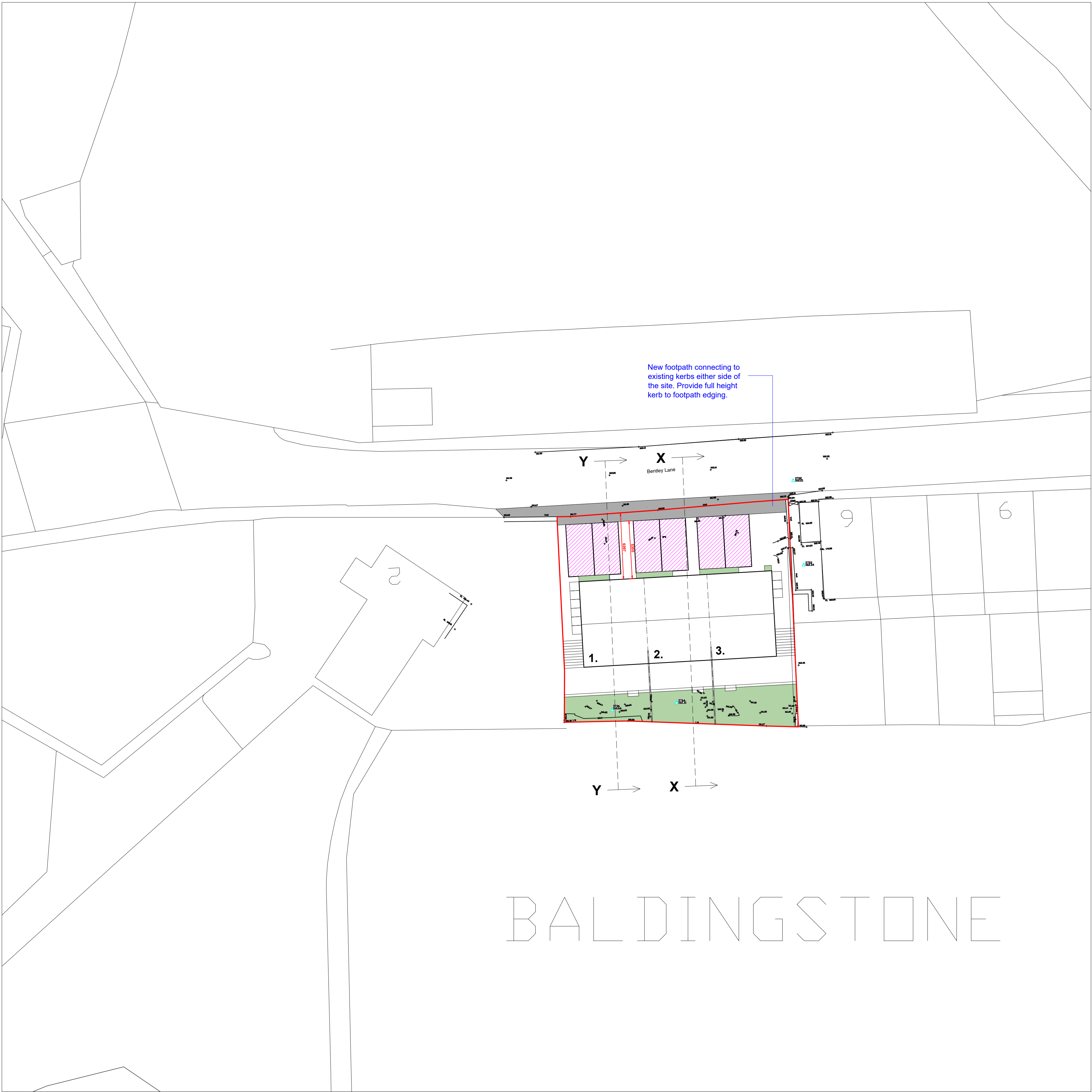
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Appendix A

Proposed Site layout 21.2513.2E

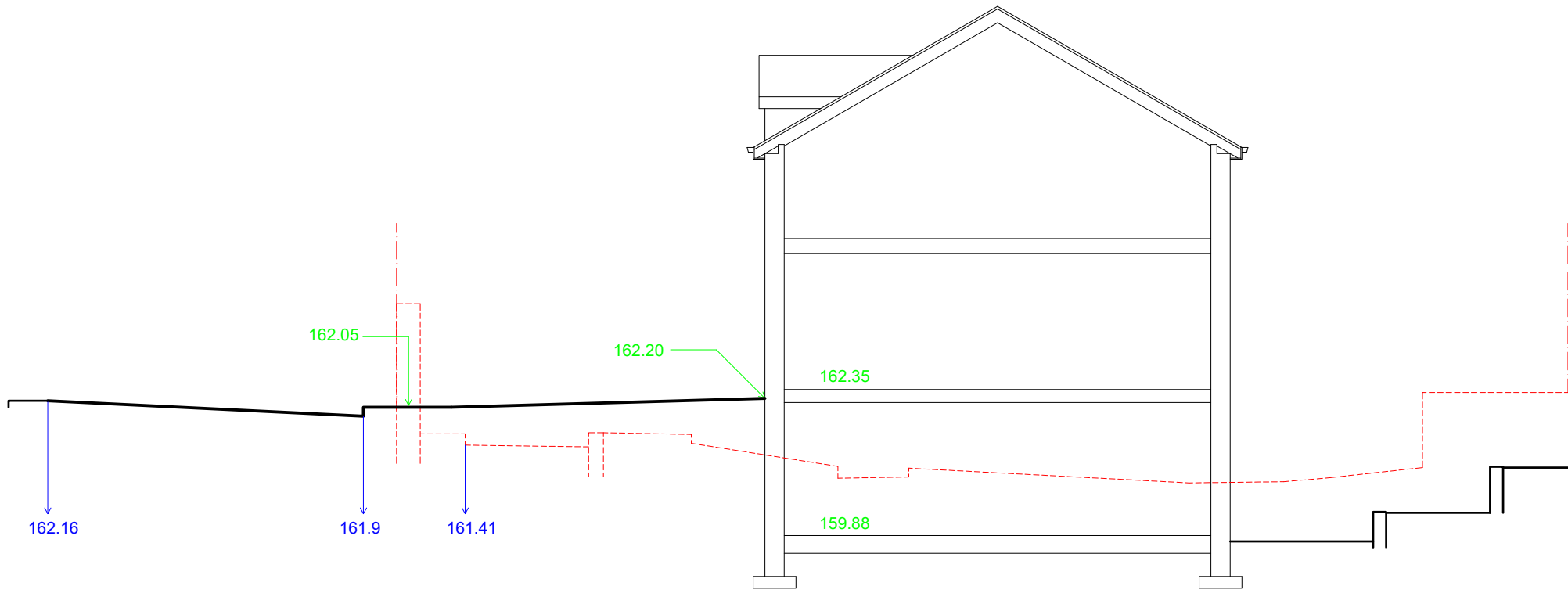
Drawing 151890-001



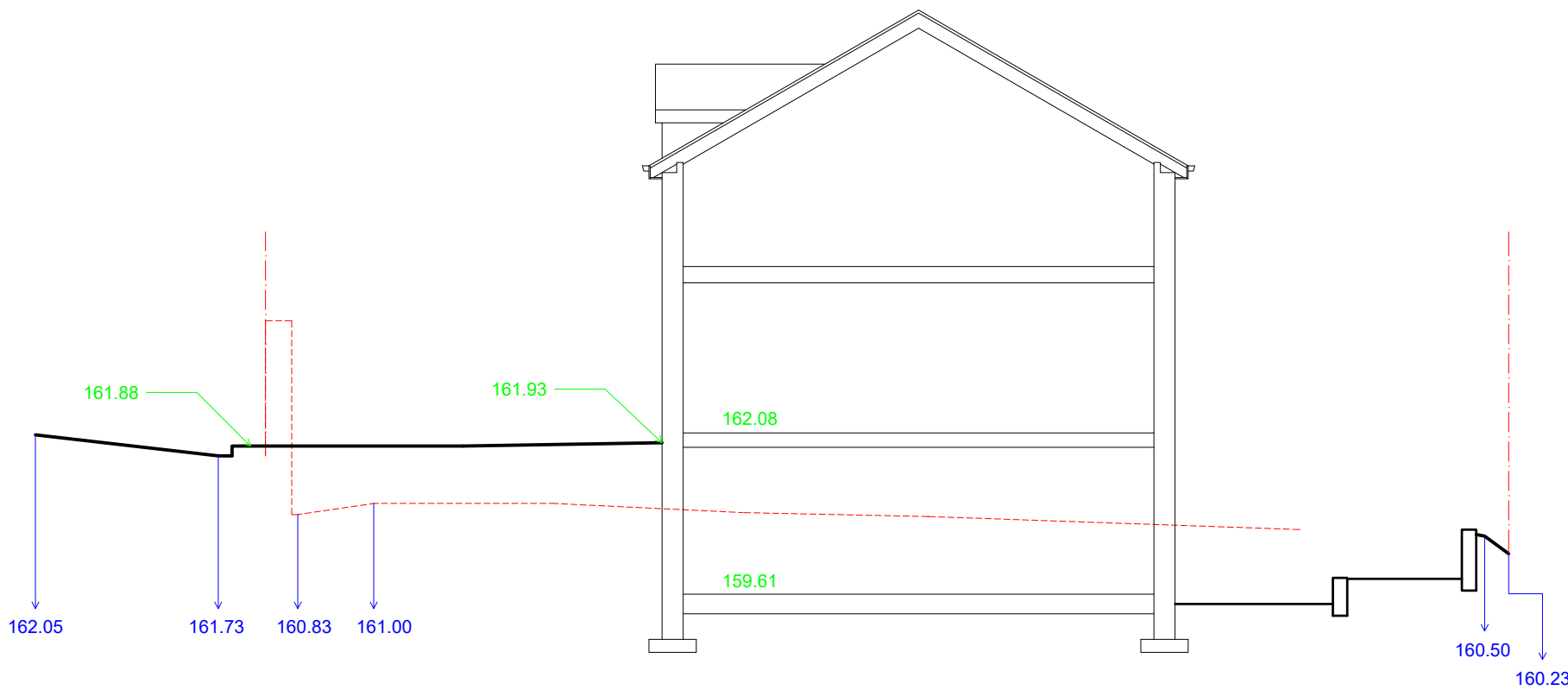
PROPOSED SITE PLAN

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Any discrepancies discovered or items found that where not visible at the time of the initial survey should be reported to James Campbell Associates Ltd for consultation with our client.

CONSTRUCTION NOTES:-

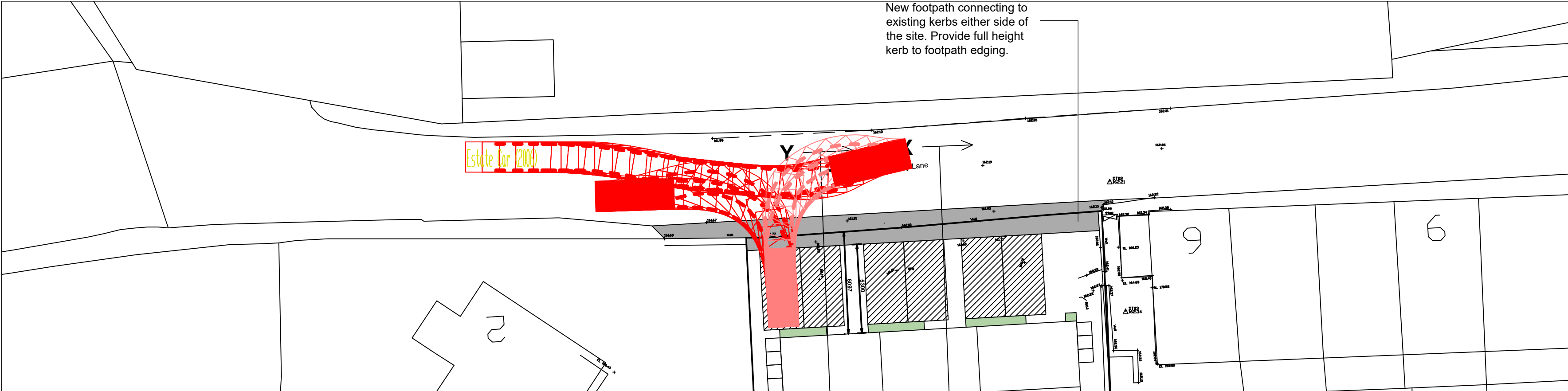


PROPOSED SITE SECTION X - X
1:100

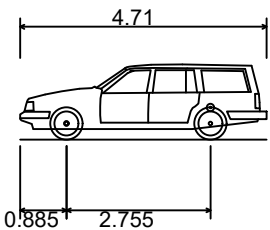
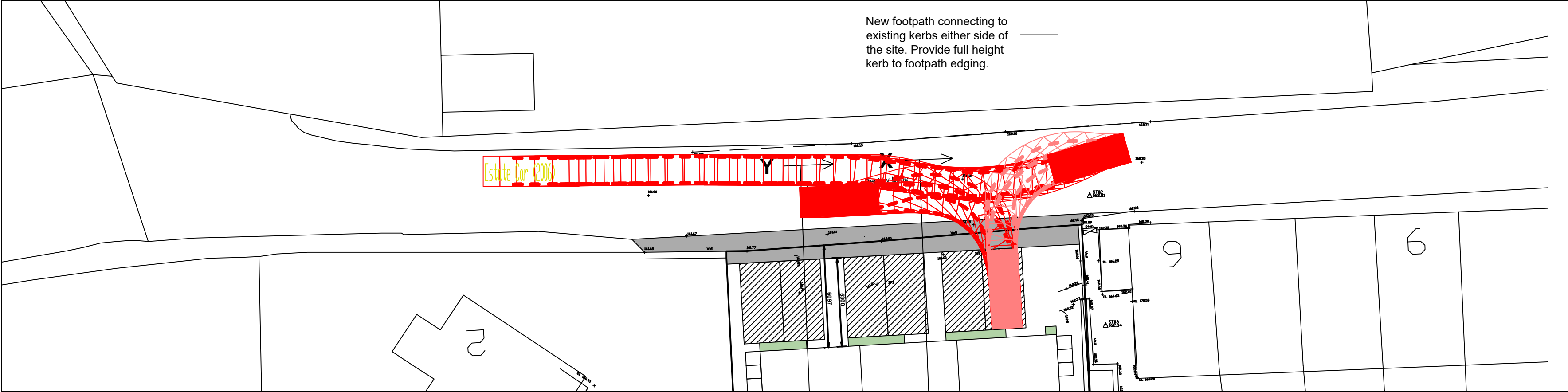
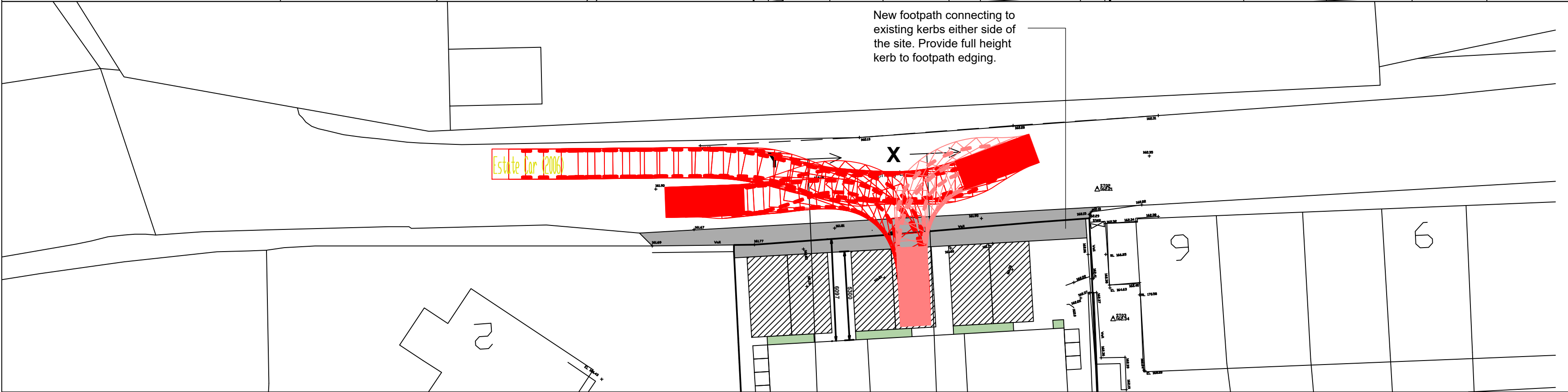


PROPOSED SITE SECTION Y - Y
1:100

DRAWING TITLE		
PROPOSED SITE PLAN		
JCA JAMES CAMPBELL ASSOCIATES LTD CHARTERED ARCHITECTURAL SERVICES CIOB CIAT Campbell House 173 Rochdale Road Firgrove Rochdale OL16 3BN Tel: 01706 354888 Mob: 07817 623183 Email: admin@jamescampbellassociates.co.uk Web: www.jamescampbellassociates.co.uk		
PROJECT		
RESIDENTIAL DEVELOPMENT		
LOCATION		
Land Adjacent to 6 Bentley Lane Bury		
DRAWN:-	Aiden Phillips-Whalley	DRAWING NUMBER:-
DATE:-	March 2021	21.2513.2E
SCALE:-	1:200 at A1	
ISSUE:-	E	



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Estate Car (2006)	
Overall Length	4.710m
Overall Width	1.804m
Overall Body Height	1.442m
Min Body Ground Clearance	0.207m
Max Track Width	1.756m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.950m

Sa

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Highways | Traffic | Transportation | Water

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Client

Rebecca Wild

Project Title

Bentley Lane, Bury

Drawing Title

Swept Path Analysis

Rev	Amendment	Drawn	Date	Checked

Scale 1:200	Drawn By LY
Drawing Size A2	Checked By AA
Date January 2023	Approved By AA
Drawing Number 151890-001	Rev



Appendix B

ATC Data

Bury ATC, Bentley Lane

Produced by Road Data Services Ltd.

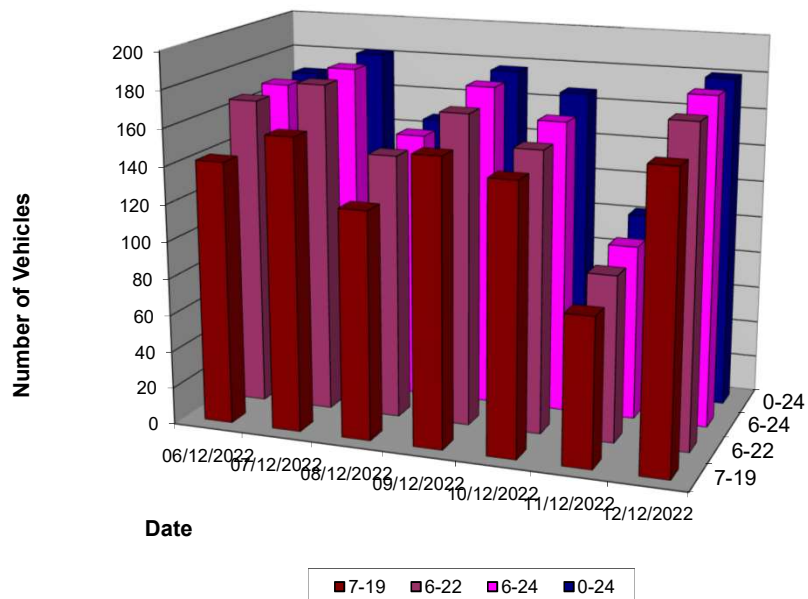
Channel 1 - Eastbound

Vehicle Flow

Week 1

Hr Ending	06/12/2022 Tuesday	07/12/2022 Wednesday	08/12/2022 Thursday	09/12/2022 Friday	10/12/2022 Saturday	11/12/2022 Sunday	12/12/2022 Monday	Weekday Average	Average
1	0	1	0	2	4	3	0	1	1
2	0	0	1	0	0	3	0	0	1
3	0	0	0	0	4	1	0	0	1
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	1	0	0	0	0	2	1	0
7	2	2	2	0	2	2	0	1	1
8	6	6	8	10	5	1	3	7	6
9	17	13	16	10	3	3	14	14	11
10	22	20	11	11	9	3	12	15	13
11	10	12	10	13	8	7	7	10	10
12	16	17	6	17	11	11	7	13	12
13	13	14	9	18	9	12	53	21	18
14	12	19	12	14	16	6	4	12	12
15	9	10	8	13	26	5	14	11	12
16	13	14	9	10	24	13	10	11	13
17	12	13	11	11	16	10	9	11	12
18	9	11	9	15	14	7	13	11	11
19	3	9	14	12	4	2	12	10	8
20	12	6	9	7	3	8	4	8	7
21	8	5	6	4	0	0	7	6	4
22	3	7	3	3	2	0	3	4	3
23	2	1	2	3	3	4	3	2	3
24	0	1	1	4	4	1	3	2	2
7-19	142	158	123	154	145	80	158	147	137
6-22	167	178	143	168	152	90	172	166	153
6-24	169	180	146	175	159	95	178	170	157
0-24	169	182	147	177	167	102	180	171	161

Vehicle Flow (Channel 1)



Bury ATC, Bentley Lane

Produced by Road Data Services Ltd.

Channel 1 - Eastbound

Average Speed

Week 1

Hr Ending	06/12/2022 Tuesday	07/12/2022 Wednesday	08/12/2022 Thursday	09/12/2022 Friday	10/12/2022 Saturday	11/12/2022 Sunday	12/12/2022 Monday
1	-	15.4	-	22.5	25.0	16.3	-
2	-	-	19.0	-	-	18.4	-
3	-	-	-	-	22.4	20.7	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	11.8	-	-	-	-	20.7
7	19.4	15.2	17.1	-	16.2	16.3	-
8	23.9	26.1	23.4	19.7	18.2	18.1	20.3
9	19.9	19.2	16.9	17.5	11.8	22.5	16.0
10	20.3	21.5	20.2	10.5	13.4	21.2	17.9
11	21.1	17.9	18.2	17.0	17.6	14.4	17.5
12	20.2	20.1	17.4	19.1	16.3	19.0	17.4
13	21.0	22.4	18.0	20.0	18.2	20.0	18.0
14	21.7	19.4	17.7	19.9	17.7	15.2	17.4
15	19.4	22.7	18.6	19.6	15.9	17.9	17.1
16	21.3	15.6	16.8	19.8	17.2	20.1	19.6
17	19.0	22.1	19.9	20.0	19.7	19.7	19.1
18	20.0	19.3	18.9	17.8	16.9	19.0	18.2
19	18.9	22.0	19.9	20.1	19.6	19.8	15.8
20	17.6	22.4	19.8	19.1	19.8	16.3	17.5
21	20.0	17.3	18.8	19.8	-	-	20.3
22	20.4	18.1	21.1	18.0	14.7	-	20.8
23	15.4	16.9	23.3	19.9	14.5	24.6	17.5
24	-	14.8	21.9	25.1	15.2	23.4	17.4

10-12	20.5	19.2	17.9	18.2	16.8	17.2	17.5
14-16	20.5	18.6	17.6	19.7	16.5	19.5	18.2
0-24	20.2	20.1	18.9	18.8	17.3	18.8	17.9

Average (ALL)	18.9
Weekday Inter-Peak	18.9

Channel 1 - Eastbound

85th Percentile

Hr Ending	06/12/2022 Tuesday	07/12/2022 Wednesday	08/12/2022 Thursday	09/12/2022 Friday	10/12/2022 Saturday	11/12/2022 Sunday	12/12/2022 Monday
1	-	-	-	23.0	26.8	18.0	-
2	-	-	-	-	-	19.4	-
3	-	-	-	-	23.8	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	-	-	-	-	-	21.2
7	25.2	15.6	17.7	-	18.3	17.2	-
8	27.3	30.3	27.9	24.9	22.3	-	24.7
9	24.0	23.0	21.5	21.3	14.6	22.9	21.1
10	23.8	25.5	23.7	13.7	19.7	25.7	20.6
11	25.6	21.8	23.4	20.4	21.2	17.9	21.5
12	26.6	25.2	21.0	23.9	18.7	20.7	20.6
13	24.9	27.3	24.7	25.0	21.7	22.4	22.3
14	24.3	25.0	23.1	24.6	20.6	18.1	20.8
15	24.9	25.4	22.7	23.0	19.4	21.5	23.5
16	26.3	21.2	21.4	26.0	20.6	23.5	21.6
17	21.7	25.9	24.1	24.4	23.4	24.3	23.0
18	23.7	22.8	23.6	20.8	19.8	23.3	21.5
19	22.2	25.4	23.2	24.7	21.6	22.5	20.9
20	20.1	27.5	22.7	21.1	22.5	20.9	21.5
21	24.9	22.2	23.4	22.8	-	-	22.6
22	23.9	19.9	21.4	21.3	17.6	-	24.7
23	15.5	-	26.1	21.3	14.8	28.5	18.7
24	-	-	-	27.7	20.2	-	18.4

10-12	26.2	24.0	22.6	22.6	19.8	20.6	21.1
14-16	25.8	24.5	22.1	24.5	20.0	23.1	23.4
0-24	24.6	25.2	23.6	23.7	21.5	22.9	22.2

85th %ile (ALL)	23.6
Weekday Inter-Peak	24.0

Bury ATC, Bentley Lane

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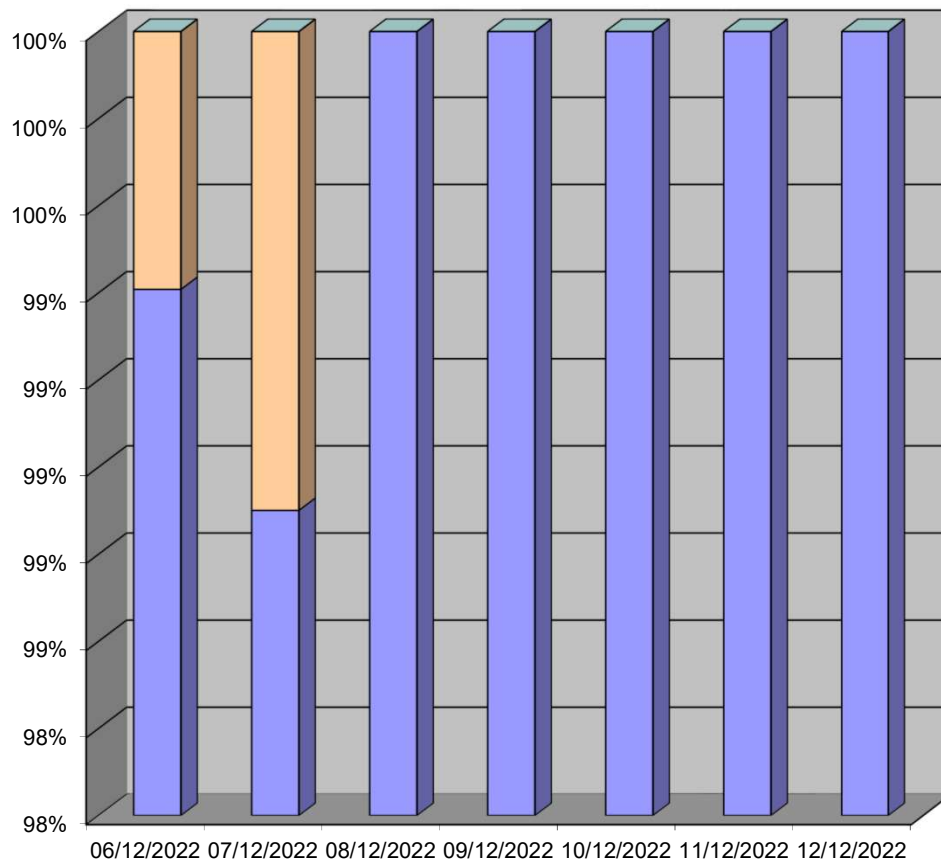
Channel 1 - Eastbound

Speed Summary

Week 1

Speed (MPH)	06/12/2022 Tuesday	07/12/2022 Wednesday	08/12/2022 Thursday	09/12/2022 Friday	10/12/2022 Saturday	11/12/2022 Sunday	12/12/2022 Monday
0-30	168	180	147	177	167	102	180
30-40	1	2	0	0	0	0	0
40-50	0	0	0	0	0	0	0
50+	0	0	0	0	0	0	0
TOTAL	169	182	147	177	167	102	180

Speed Summary (MPH)



Date

0-30 30-40 40-50 50+

Bury ATC, Bentley Lane

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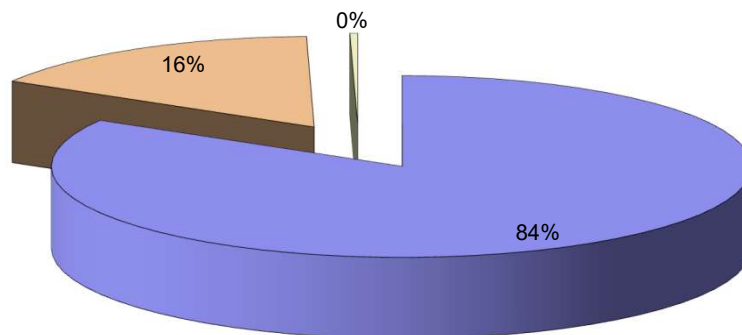
Channel 1 - Eastbound

Vehicle Class

Week 1

Classes Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
06/12/2022				
7-19	121	20	1	142
6-22	141	24	2	167
6-24	143	24	2	169
0-24	143	24	2	169
07/12/2022				
7-19	133	24	1	158
6-22	150	27	1	178
6-24	152	27	1	180
0-24	152	29	1	182
08/12/2022				
7-19	105	17	1	123
6-22	120	22	1	143
6-24	123	22	1	146
0-24	124	22	1	147
09/12/2022				
7-19	119	35	0	154
6-22	131	37	0	168
6-24	138	37	0	175
0-24	140	37	0	177
10/12/2022				
7-19	127	18	0	145
6-22	134	18	0	152
6-24	141	18	0	159
0-24	149	18	0	167
11/12/2022				
7-19	69	11	0	80
6-22	76	14	0	90
6-24	80	15	0	95
0-24	86	16	0	102
12/12/2022				
7-19	125	33	0	158
6-22	137	35	0	172
6-24	142	36	0	178
0-24	144	36	0	180
Average				
7-19	114	23	0	137
6-22	127	25	1	153
6-24	131	26	1	157
0-24	134	26	1	161

Total Vehicle Class Distribution



Bury ATC, Bentley Lane

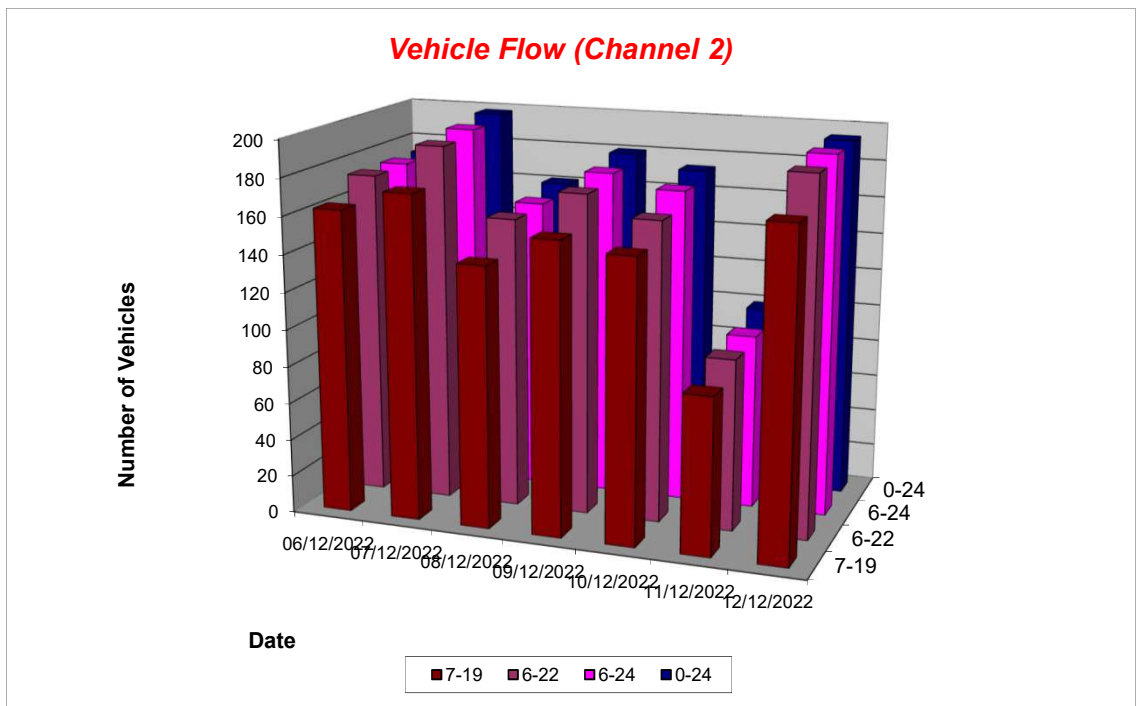
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Channel 2 - Westbound

Vehicle Flow

Week 1

Hr Ending	06/12/2022 Tuesday	07/12/2022 Wednesday	08/12/2022 Thursday	09/12/2022 Friday	10/12/2022 Saturday	11/12/2022 Sunday	12/12/2022 Monday	Weekday Average	Average
1	0	2	0	3	1	1	0	1	1
2	0	0	1	0	1	4	0	0	1
3	0	0	0	0	1	0	0	0	0
4	0	0	0	0	1	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	1	3	1	0	0	1	1	1
7	3	8	8	4	5	2	4	5	5
8	15	8	15	10	7	4	10	12	10
9	14	13	17	17	5	1	21	16	13
10	13	3	3	9	10	4	15	9	8
11	11	5	5	18	10	2	11	10	9
12	9	20	16	12	15	2	12	14	12
13	20	23	16	15	8	24	7	16	16
14	20	12	13	12	9	12	14	14	13
15	17	24	18	15	20	10	26	20	19
16	19	24	8	28	16	10	27	21	19
17	9	24	14	6	12	4	10	13	11
18	10	11	8	6	33	9	10	9	12
19	6	7	7	8	6	2	10	8	7
20	7	2	1	4	2	4	10	5	4
21	1	3	6	7	1	0	0	3	3
22	0	5	1	1	2	2	3	2	2
23	0	3	1	2	4	1	1	1	2
24	0	0	0	2	4	1	2	1	1
7-19	163	174	140	156	151	84	173	161	149
6-22	174	192	156	172	161	92	190	177	162
6-24	174	195	157	176	169	94	193	179	165
0-24	174	198	161	180	173	99	194	181	168



Bury ATC, Bentley Lane

Produced by Road Data Services Ltd.

Channel 2 - Westbound

Average Speed

Week 1

Hr Ending	06/12/2022 Tuesday	07/12/2022 Wednesday	08/12/2022 Thursday	09/12/2022 Friday	10/12/2022 Saturday	11/12/2022 Sunday	12/12/2022 Monday
1	-	18.9	-	19.7	14.2	23.8	-
2	-	-	18.2	-	13.9	15.3	-
3	-	-	-	-	9.5	-	-
4	-	-	-	-	14.5	-	-
5	-	-	-	-	-	-	-
6	-	21.1	21.5	18.5	-	-	18.4
7	20.7	21.2	23.4	19.0	11.8	20.8	15.3
8	19.7	17.7	21.8	19.0	18.3	16.8	18.3
9	24.7	23.3	18.5	19.5	14.1	15.4	17.9
10	20.0	19.6	19.1	16.6	12.5	16.6	16.5
11	23.1	19.8	21.5	18.5	15.1	20.2	19.9
12	20.7	21.7	19.0	19.5	18.3	26.1	18.2
13	22.1	22.4	18.6	17.0	15.1	17.9	19.3
14	19.1	19.1	18.9	21.0	17.1	18.9	20.9
15	20.5	20.5	20.0	21.0	18.4	20.6	19.0
16	18.2	18.5	19.4	20.1	14.7	16.9	18.3
17	23.6	20.1	19.3	15.0	17.0	15.8	20.8
18	18.4	20.1	18.9	24.1	17.5	17.1	22.0
19	23.2	27.7	18.1	18.8	15.3	16.8	22.4
20	20.4	18.2	16.9	23.4	11.7	16.9	18.9
21	14.2	21.6	19.4	21.4	29.4	-	-
22	-	18.6	15.6	19.4	23.2	14.0	16.4
23	-	20.8	15.9	18.5	16.8	19.4	14.9
24	-	-	-	16.3	18.3	22.2	19.0

10-12	22.0	21.3	19.6	18.9	17.0	23.2	19.0
14-16	19.3	19.5	19.8	20.4	16.7	18.7	18.6
0-24	20.8	20.7	19.6	19.4	16.5	18.0	19.0

Average (ALL)	19.2
Weekday Inter-Peak	19.7

Channel 2 - Westbound

85th Percentile

Hr Ending	06/12/2022 Tuesday	07/12/2022 Wednesday	08/12/2022 Thursday	09/12/2022 Friday	10/12/2022 Saturday	11/12/2022 Sunday	12/12/2022 Monday
1	-	19.5	-	23.3	-	-	-
2	-	-	-	-	-	18.7	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	-	26.1	-	-	-	-
7	28.2	26.0	24.8	22.5	16.7	24.2	17.1
8	23.8	23.7	26.0	24.8	23.0	17.8	20.9
9	30.8	28.2	23.0	24.4	16.9	-	21.3
10	23.7	22.6	21.4	18.4	16.8	17.1	19.9
11	28.0	22.2	25.9	21.8	19.2	22.9	24.5
12	25.5	28.3	22.8	23.9	22.8	29.5	22.2
13	24.2	26.9	22.6	22.2	18.6	21.8	21.6
14	22.9	26.4	22.8	26.5	23.3	25.4	25.0
15	26.4	25.4	24.5	25.2	22.5	24.3	23.4
16	21.4	24.4	22.7	24.2	18.0	22.4	21.4
17	27.3	25.7	26.5	20.6	19.7	18.3	24.4
18	21.4	23.2	24.9	26.7	21.6	20.7	24.6
19	24.9	31.3	23.8	21.3	18.0	16.9	25.3
20	21.8	18.6	-	29.3	12.4	19.8	23.7
21	-	24.5	22.4	24.5	-	-	-
22	-	24.2	-	-	25.3	14.1	20.5
23	-	22.0	-	22.2	19.2	-	-
24	-	-	-	16.5	19.8	-	19.3

10-12	27.0	27.3	23.7	22.7	21.6	27.5	23.4
14-16	24.1	25.0	24.0	24.6	20.9	23.7	22.4
0-24	25.5	26.3	24.3	24.1	21.1	22.5	23.0

85th %ile (ALL)	24.1
Weekday Inter-Peak	24.4

Bury ATC, Bentley Lane

Produced by Road Data Services Ltd.

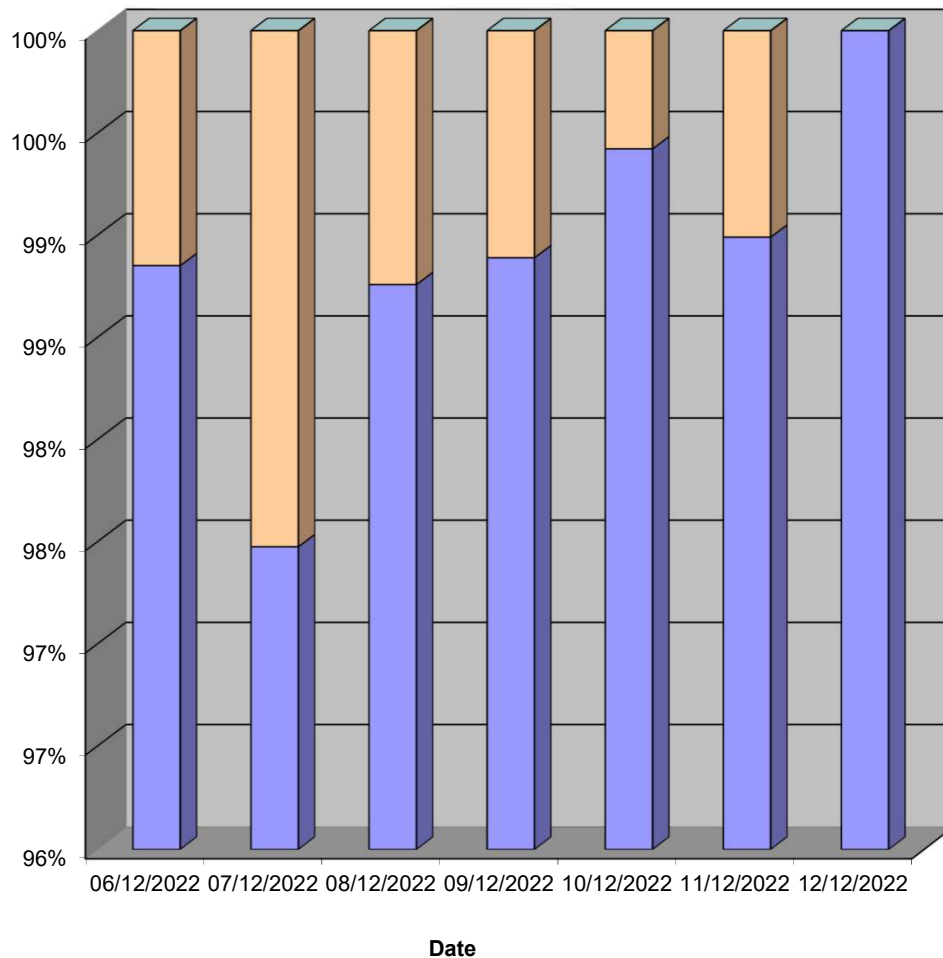
Channel 2 - Westbound

Speed Summary

Week 1

Speed (MPH)	06/12/2022 Tuesday	07/12/2022 Wednesday	08/12/2022 Thursday	09/12/2022 Friday	10/12/2022 Saturday	11/12/2022 Sunday	12/12/2022 Monday
0-30	172	193	159	178	172	98	194
30-40	2	5	2	2	1	1	0
40-50	0	0	0	0	0	0	0
50+	0	0	0	0	0	0	0
TOTAL	174	198	161	180	173	99	194

Speed Summary (MPH)



0-30 30-40 40-50 50+

Bury ATC, Bentley Lane

Produced by Road Data Services Ltd.

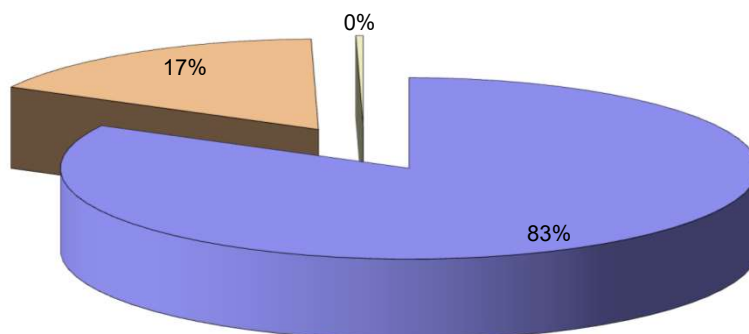
Channel 2 - Westbound

Vehicle Class

Week 1

Classes Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
06/12/2022				
7-19	132	30	1	163
6-22	142	31	1	174
6-24	142	31	1	174
0-24	142	31	1	174
07/12/2022				
7-19	143	29	2	174
6-22	161	29	2	192
6-24	164	29	2	195
0-24	167	29	2	198
08/12/2022				
7-19	116	24	0	140
6-22	131	25	0	156
6-24	132	25	0	157
0-24	135	26	0	161
09/12/2022				
7-19	122	33	1	156
6-22	133	38	1	172
6-24	137	38	1	176
0-24	140	39	1	180
10/12/2022				
7-19	130	21	0	151
6-22	138	23	0	161
6-24	146	23	0	169
0-24	149	24	0	173
11/12/2022				
7-19	80	4	0	84
6-22	85	7	0	92
6-24	86	8	0	94
0-24	90	9	0	99
12/12/2022				
7-19	134	39	0	173
6-22	150	40	0	190
6-24	153	40	0	193
0-24	153	41	0	194
Average				
7-19	122	26	1	149
6-22	134	28	1	162
6-24	137	28	1	165
0-24	139	28	1	168

Total Vehicle Class Distribution





Appendix A

TRICS Output

Calculation Reference: AUDIT-109307-221122-1158

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	MW MEDWAY	1 days
04	EAST ANGLIA	
	NF NORFOLK	2 days
	PB PETERBOROUGH	1 days
	SF SUFFOLK	2 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	WK WARWICKSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	AC CHESHIRE WEST & CHESTER	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	VG VALE OF GLAMORGAN	1 days
11	SCOTLAND	
	AG ANGUS	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: 6 to 19 (units:)
 Range Selected by User: 5 to 20 (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: 01/01/10 to 06/06/22

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	3 days
Tuesday	4 days
Wednesday	4 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	14 days
Directional ATC Count	1 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:

Suburban Area (PPS6 Out of Centre)	8
Edge of Town	7

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 15

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 15 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:

1,001 to 5,000	2 days
5,001 to 10,000	2 days
10,001 to 15,000	4 days
15,001 to 20,000	4 days
20,001 to 25,000	1 days
25,001 to 50,000	2 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	2 days
50,001 to 75,000	2 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	3 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	8 days
1.1 to 1.5	7 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	14 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 15 days

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

LIST OF SITES relevant to selection parameters

1	AC-03-A-02 WHITCHURCH ROAD CHESTER BOUGHTON HEATH Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 11 Survey date: TUESDAY 22/05/12	DETACHED	CHESHIRE WEST & CHESTER	Survey Type: MANUAL
2	AG-03-A-01 KEPTIE ROAD ARBROATH Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 7 Survey date: TUESDAY 22/05/12	BUNGALOWS / DET.	ANGUS	Survey Type: MANUAL
3	MS-03-A-03 BEMPTON ROAD LIVERPOOL OTTERSPOOL Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 15 Survey date: FRIDAY 21/06/13	DETACHED	MERSEYSIDE	Survey Type: MANUAL
4	MW-03-A-02 OTTERHAM QUAY LANE RAINHAM Edge of Town Residential Zone Total No of Dwellings: 19 Survey date: MONDAY 06/06/22	MIXED HOUSES	MEDWAY	Survey Type: MANUAL
5	NF-03-A-03 HALING WAY THETFORD Edge of Town Residential Zone Total No of Dwellings: 10 Survey date: WEDNESDAY 16/09/15	DETACHED HOUSES	NORFOLK	Survey Type: MANUAL
6	NF-03-A-10 HUNSTANTON ROAD HUNSTANTON Edge of Town Residential Zone Total No of Dwellings: 17 Survey date: WEDNESDAY 12/09/18	MIXED HOUSES & FLATS	NORFOLK	Survey Type: DIRECTIONAL ATC COUNT
7	NY-03-A-13 CATTERICK ROAD CATTERICK GARRISON OLD HOSPITAL COMPOUND Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 10 Survey date: WEDNESDAY 10/05/17	TERRACED HOUSES	NORTH YORKSHIRE	Survey Type: MANUAL
8	PB-03-A-03 PETERBOROUGH THORPE PARK ROAD Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 9 Survey date: TUESDAY 18/10/11	DETACHED	PETERBOROUGH	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	SF-03-A-04 NORMANSTON DRIVE LOWESTOFT	DETACHED & BUNGALOWS	SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 7 Survey date: TUESDAY 23/10/12 Survey Type: MANUAL		
10	SF-03-A-05 VALE LANE BURY ST EDMUNDS	DETACHED HOUSES	SUFFOLK
	Edge of Town Residential Zone Total No of Dwellings: 18 Survey date: WEDNESDAY 09/09/15 Survey Type: MANUAL		
11	SH-03-A-06 ELLESMERE ROAD SHREWSBURY	BUNGALOWS	SHROPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 16 Survey date: THURSDAY 22/05/14 Survey Type: MANUAL		
12	TW-03-A-02 WEST PARK ROAD GATESHEAD	SEMI-DETACHED	TYNE & WEAR
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 16 Survey date: MONDAY 07/10/13 Survey Type: MANUAL		
13	VG-03-A-01 ARTHUR STREET BARRY	SEMI-DETACHED & TERRACED	VALE OF GLAMORGAN
	Edge of Town Residential Zone Total No of Dwellings: 12 Survey date: MONDAY 08/05/17 Survey Type: MANUAL		
14	WK-03-A-01 ARLINGTON AVENUE LEAMINGTON SPA	TERRACED / SEMI / DET.	WARWICKSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 6 Survey date: FRIDAY 21/10/11 Survey Type: MANUAL		
15	WK-03-A-02 NARBERTH WAY COVENTRY POTTERS GREEN	BUNGALOWS	WARWICKSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 17 Survey date: THURSDAY 17/10/13 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
HF-03-A-04	COVID-19
KC-03-A-09	COVID-19

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

TOTAL VEHICLES

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 3 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated 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	15	13	0.074	0.221	15	13	0.258	0.774	15	13	0.332	0.995
08:00 - 09:00	15	13	0.232	0.695	15	13	0.389	1.168	15	13	0.621	1.863
09:00 - 10:00	15	13	0.100	0.300	15	13	0.200	0.600	15	13	0.300	0.900
10:00 - 11:00	15	13	0.211	0.632	15	13	0.168	0.505	15	13	0.379	1.137
11:00 - 12:00	15	13	0.168	0.505	15	13	0.211	0.632	15	13	0.379	1.137
12:00 - 13:00	15	13	0.221	0.663	15	13	0.258	0.774	15	13	0.479	1.437
13:00 - 14:00	15	13	0.216	0.647	15	13	0.211	0.632	15	13	0.427	1.279
14:00 - 15:00	15	13	0.179	0.537	15	13	0.168	0.505	15	13	0.347	1.042
15:00 - 16:00	15	13	0.253	0.758	15	13	0.247	0.742	15	13	0.500	1.500
16:00 - 17:00	15	13	0.221	0.663	15	13	0.163	0.489	15	13	0.384	1.152
17:00 - 18:00	15	13	0.305	0.916	15	13	0.158	0.474	15	13	0.463	1.390
18:00 - 19:00	15	13	0.247	0.742	15	13	0.189	0.568	15	13	0.436	1.310
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			2.427	7.279			2.620	7.863			5.047	15.142

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:	6 - 19 (units:)
Survey date range:	01/01/10 - 06/06/22
Number of weekdays (Monday-Friday):	15
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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.