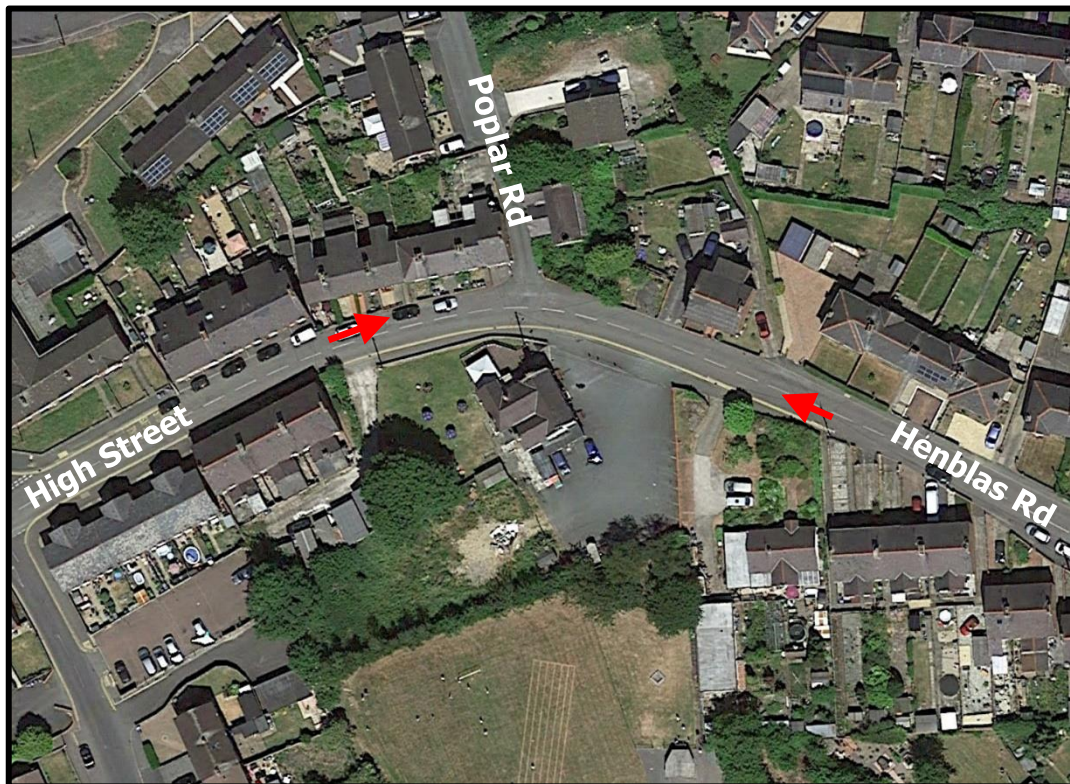

GAROB DEVELOPMENTS LTD
RESIDENTIAL DEVELOPMENT
TECHNICAL NOTE 1 – TRAFFIC SPEED & VOLUME
18TH NOVEMBER 2021

1.0 Introduction and Background

- 1.1 Connect Consultants Limited is a firm of transport planning and highway design consultants that have been instructed by Garob Developments Ltd to produce a Technical Note 1 that examines traffic speed and traffic flow on Henblas Road, Wrexham. Henblas Road can be seen at **Figure 1.1**.

Figure 1.1 – Henblas Road, Wrexham



Source: Google Earth / Arrows denote typical survey points

- 1.2 When considering traffic flows, Transport Planners typically examine a weekday 08:00-09:00 and 17:00-18:00 periods in residential areas as these are the periods of highest, i.e. peak flow.

2.0 2021 Traffic Volume and Traffic Speed

- 2.1 A manual traffic survey was conducted on Henblas Road on Monday 8th November 2021. Traffic volume was recorded over the period 07:30 – 09:30 and 16:30 – 18:30. These two periods cover the periods of peak flow, namely 08:00-09:00 and 17:00-18:00, as identified at **Section 1.0**.
- 2.2 The results of the manual traffic survey can be seen at **Appendix 1**. The peak flow in vehicles is summarised at **Table 2.1**. The flow on Henblas Road was recorded at a point east of Poplar Road.

Table 2.1 – 2021 Traffic Flows on Henblas Road, Vehicles

Peak Hour	Eastbound	Westbound	Total 2-way
(AM) 08:00-09:00	67	70	137
(PM) 17:00-18:00	65	76	141

- 2.3 In respect of traffic speed, this was collected on Monday 8th November 2021 over the period 10:00-16:00. Speeds were collected using a hand-held radar gun between the eastbound and westbound points indicated with red arrows on **Figure 1.1**.
- 2.4 The full results can be seen at **Appendix 1**. The recorded 85thile vehicle speeds are given at **Table 2.2**.

Table 2.2 – 2021 Traffic Speeds on Henblas Road, Miles per Hour

Period	Eastbound 85 th ile speed (mph)	Westbound 85 th ile speed (mph)
10:00-16:00	16.8	27.3

3.0 2016 Traffic Volume and Traffic Speeds

- 3.1 As part of planning application P/2016/0809, the speed and volume of traffic was recorded on Henblas Road/High Street. This data was presented to the local highway authority in *TN02 – Response to Highways Comments* dated 1st December 2016, produced by Connect Consultants.
- 3.2 Traffic speed and volume was recorded by way of a Automatic Traffic Counter (ATC) loops installed on Henblas Road and High Street. The ATC survey was conducted over the 7-day period Wednesday 9th November 2016 to Wednesday 16th November 2016, broadly at the points indicated by the red arrows at **Figure 1.1**. Pertinent ATC results are given at **Appendix 2**.
- 3.3 The recorded peak hour flows for Monday 14th November 2016 are given in **Table 3.1**. The data in **Table 3.1** is taken from the tube installed to the east of Poplar Road, to be consistent with the 2021 manual traffic survey. The day of Monday 13th November was chosen to be comparable to the Monday from the 2021 manual survey.

Table 3.1 – 2016 Traffic Flows on Henblas Road, Vehicles

Peak Hour	Eastbound	Westbound	Total 2-way
(AM) 08:00-09:00	79	83	162
(PM) 17:00-18:00	63	64	127

3.4 In respect of traffic speeds, TN02 describes how:

"The eastbound 85th percentile vehicle speed..was recorded to be 21.9mph and 25.9 mph westbound"

3.5 The above is shown at **Table 3.2**

Table 3.2 – 2016 Recorded Traffic Speeds, Vehicles

Period	Eastbound 85 th ile speed (mph)	Westbound 85 th ile speed (mph)
10:00-16:00	21.9	25.9

4.0 Summary and Conclusion

- 4.1 **Table 3.1** shows that in 2016, there was, in the AM and PM peaks respectively, a 2-way traffic flows of 162 and 127 vehicles. In 2021, as indicated at **Table 2.1**, the same periods see a 2-way vehicle flow of 137 and 141. This indicates that the AM flow has reduced by some 25 vehicles. In the PM, the flow has increased by some 14 vehicles.
- 4.2 With regards vehicle speeds, the 2016 85thile vehicle speeds are shown at **Table 3.2**. The 2016 85thile vehicle speeds were recorded as 21.9mph (eastbound) and 25.9mph (westbound). In 2021, **Table 2.2** shows eastbound and westbound 85thile speeds of 16.8mph and 27.3mph. This indicates that eastbound 85thile vehicles speeds have decreased by 5.1mph and westbound speeds have increased by 1.4mph.

-
- Appendix 1 - 2021 Traffic Survey – Volume & Speed
- Appendix 2 - 2016 ATC Flows – Monday 14th November - Volume

Appendix 1

Wrexham Speed Survey

Speed Limit



Weather



Monday 8th November 2021

All speeds are recorded from free flowing vehicles

Overcast

10:00 - 16:00

Eastbound (High Street)				Westbound (Henblas Road)			
Speeds (mph)		Speeds (mph)		Speeds (mph)		Speeds (mph)	
1	12	51	15	1	18	51	25
2	12	52	15	2	20	52	25
3	13	53	15	3	20	53	25
4	13	54	15	4	21	54	25
5	13	55	15	5	21	55	25
6	13	56	15	6	21	56	25
7	13	57	15	7	21	57	25
8	13	58	15	8	21	58	25
9	13	59	15	9	21	59	26
10	13	60	15	10	21	60	26
11	13	61	15	11	22	61	26
12	13	62	15	12	22	62	26
13	13	63	15	13	22	63	26
14	13	64	15	14	22	64	26
15	14	65	15	15	22	65	26
16	14	66	15	16	22	66	26
17	14	67	15	17	22	67	26
18	14	68	16	18	22	68	26
19	14	69	16	19	22	69	26
20	14	70	16	20	22	70	26
21	14	71	16	21	23	71	26
22	14	72	16	22	23	72	26
23	14	73	16	23	23	73	26
24	14	74	16	24	23	74	26
25	14	75	16	25	23	75	26
26	14	76	16	26	23	76	27
27	14	77	16	27	23	77	27
28	14	78	16	28	23	78	27
29	14	79	16	29	23	79	27
30	14	80	16	30	23	80	27
31	14	81	16	31	23	81	27
32	14	82	16	32	23	82	27
33	14	83	17	33	23	83	27
34	14	84	17	34	24	84	27
35	14	85	17	35	24	85	27
36	14	86	17	36	24	86	27
37	14	87	17	37	24	87	28
38	14	88	17	38	24	88	28
39	14	89	17	39	24	89	28
40	14	90	17	40	24	90	29
41	14	91	17	41	24	91	29
42	14	92	17	42	24	92	29
43	15	93	18	43	24	93	29
44	15	94	18	44	24	94	29
45	15	95	18	45	24	95	29
46	15	96	19	46	24	96	29
47	15	97	19	47	24	97	29
48	15	98	20	48	25	98	29
49	15	99	20	49	25	99	29
50	15	100	21	50	25	100	30

ROAD SURFACE - DRY

Average Eastbound (mph)	15.1	Average Westbound (mph)	24.8
Standard Deviation (mph)	1.7	Standard Deviation (mph)	2.5
85th%ile Eastbound (mph)	16.8	85th%ile Westbound (mph)	27.3
% > Speed Limit Southbound	0%	% > Speed Limit Southbound	0%

Wrexham, Monday 8th November 2021

Junction: 1
Approach: High Street / Henblas Road



TIME	Eastbound (High Street)					Westbound (Henblas Road)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:30 - 07:45	8	0	0	8	8.0	11	0	0	11	11.0
07:45 - 08:00	9	0	0	9	9.0	15	0	0	15	15.0
Hourly Total	17	0	0	17	17.0	26	0	0	26	26.0
08:00 - 08:15	16	0	0	16	16.0	14	0	0	14	14.0
08:15 - 08:30	18	0	1	19	20.0	10	0	0	10	10.0
08:30 - 08:45	16	0	0	16	16.0	24	0	2	26	28.0
08:45 - 09:00	16	0	0	16	16.0	19	0	1	20	21.0
Hourly Total	66	0	1	67	68.0	67	0	3	70	73.0
09:00 - 09:15	9	0	0	9	9.0	21	0	0	21	21.0
09:15 - 09:30	15	0	0	15	15.0	8	0	0	8	8.0
Hourly Total	24	0	0	24	24.0	29	0	0	29	29.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

TOTAL	107	0	1	108	109.0	122	0	3	125	128.0
-------	-----	---	---	-----	-------	-----	---	---	-----	-------

16:30 - 16:45	14	0	0	14	14.0	14	0	0	14	14.0
16:45 - 17:00	9	0	0	9	9.0	19	0	0	19	19.0
Hourly Total	23	0	0	23	23.0	33	0	0	33	33.0
17:00 - 17:15	21	0	0	21	21.0	27	0	0	27	27.0
17:15 - 17:30	16	0	0	16	16.0	16	0	0	16	16.0
17:30 - 17:45	12	0	0	12	12.0	15	0	0	15	15.0
17:45 - 18:00	16	0	0	16	16.0	18	0	0	18	18.0
Hourly Total	65	0	0	65	65.0	76	0	0	76	76.0
18:00 - 18:15	12	0	0	12	12.0	16	0	0	16	16.0
18:15 - 18:30	8	0	0	8	8.0	12	0	0	12	12.0
Hourly Total	20	0	0	20	20.0	28	0	0	28	28.0

TOTAL	108	0	0	108	108.0	137	0	0	137	137.0
-------	-----	---	---	-----	-------	-----	---	---	-----	-------

Appendix 2

Site 1
Location Henblas Road, Att - Signpost, OSGR: SJ 31304 48795
Direction East bound
14 November 2016

6909 / Rhostyllen 1
November 2016
Automatic Traffic Count
14 November 2016

6909 / Rhostyllen
November 2016
Automatic Traffic Count

Time	Total	Classification												>PSL 30	>PSL% 30	>SL1 35 ACPO	>SL1% 35 ACPO	>SL2 45 DfT	>SL2% 45 DfT	Mean	Vpp 85	Speed Bins (mph)																											
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT									0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0100	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24.6	-	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0400	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	19.4	-	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0500	3	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	25.1	-	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0600	13	0	12	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	20.8	21.3	0	0	0	4	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0700	39	1	34	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	19.9	22.8	0	0	2	20	14	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800	79	1	71	0	4	2	0	0	0	0	1	0	0	0	0	0	0	0	18.1	20.4	0	1	9	50	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	42	1	37	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	18.2	21	0	2	6	20	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1000	40	0	34	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	18.6	21.9	0	1	1	24	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100	45	0	41	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	17.8	20.4	1	1	4	31	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200	43	1	38	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	18.9	22.4	0	0	6	20	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300	38	0	34	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	18.5	21	0	1	4	20	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1400	59	2	53	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	17.5	20.4	0	3	11	28	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1500	83	1	78	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	18	20.8	1	6	5	51	19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1600	103	0	95	0	2	5	0	0	0	0	1	0	0	0	0	0	0	0	18.3	21.3	0	1	12	59	30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1700	63	1	56	0	3	3	0	0	0	0	0	0	0	1	1.6	0	0	0	17.9	20.8	0	2	11	30	16	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1800	48	1	43	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	17.9	21.3	0	1	10	22	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1900	39	1	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18.9	21.9	0	0	3	21	13	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2000	27	0	25	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	19.8	23.7	0	1	1	11	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2100	21	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18.9	23.7	0	0	4	8	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2200	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22.6	-	0	0	0	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2300	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19.6	-	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07-19	682	9	614	1	36	20	0	0	0	0	2	0	0	1	0.1	0	0	0	18.2	21.3	2	19	81	375	186	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	782	10	710	1	37	22	0	0	0	0	2	0	0	1	0.1	0	0	0	18.4	21.5	2	20	89	419	225	26	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	791	10	719	1	37	22	0	0	0	0	2	0	0	1	0.1	0	0	0	18.4	21.7	2	20	89	421	231	27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	797	10	723	1	38	23	0	0	0	0	2	0	0	1	0.1	0	0	0	18.5	21.7	2	20	89	422	234	29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6909 / Rhostyllen 2
November 2016 Henblas Road, Att - Telepole, OSGR: SJ 31359 48776
Automatic Traffic Count Westbound

