

Our Ref: 784-B028221 Revision

Date: 29 June 2022

Mr G Beattie

Alpha Design

By email

Dear Glen

**HARRAS ROAD, WHITEHAVEN - PROPOSED RESIDENTIAL DEVELOPMENT (JOHN SWIFT HOMES)
ACCESS APPRAISAL**

As requested, we have undertaken the necessary work to provide advice on access to the parcel of land located to the north of Harras Road, Whitehaven. The proposed development is a small-scale residential development of 23 homes, arranged in 3 cul-de-sacs off Harras Road. The site location is shown in Images 1 and 2 below.



Image 1: Google Maps – Site Location & ATC Locations



Image 2: Google Streetview – Harras Road Looking West from Casa Mia

The site was the subject of a previous planning application (ref 4/18/2347/001) for a development of 9 self-build plots. Tetra Tech (then WYG) undertook work at the time to advise on access (Access Appraisal, Aug 2018, attached). The application was granted Outline consent in March 2019. Plot 1, on the western boundary, has since been granted a reserved matters consent in Aug 2021; this application is for the remainder of the site.

Access arrangements for the approved application consisted of 5 residential accesses from Harras Road in shared and single drive arrangements, a field access was also provided, along with accompanying speed tables/cushions at 4 locations, as detailed in WYG's Access Appraisal dated Aug 2018. This application reduces the access points to 3 accesses in the form of cul-de-sacs with

4.8m carriageways, 1.8m footways and 6m kerb radii in accordance with CDDG. As previously, an agricultural access to serve the field behind is proposed. The proposed development includes the traffic calming features from the previously approved development, in the form of speed tables/cushions, similar to those previously approved.

For the approved development, a 7-day ATC speed survey was carried out in September 2017. This section of Harras Road has a more residential feel to the east (where there are residential frontages) and a more rural feel to the west, where there are no frontages, before it meets York Terrace near the A595. There are also decreasing gradients east-west. For these reasons, two ATC counters were used to detect differing speed profiles, the locations are shown in Image 1 above. A repeat survey for this application was carried out by Traffic Sense Ltd in April 2021. The table below summarises the results.

Table 1: ATC Results

	85th Percentile Speeds	
	2017	2021
ATC 1 (Western Section)	39mph downhill, 39mph uphill	38mph downhill, 41mph uphill
ATC 2 (Eastern Section)	32mph downhill, 33mph uphill	36mph downhill, 33mph uphill

The entirety of Harras Road is subject to a 30mph speed limit. The existing speeds on the western section are well above the legal speed limit (as they were in 2017). For the consented development, traffic calming measures to reduce speeds and improve compliance with the speed limit were included, in the form of speed tables or speed cushions at 4 locations along the relevant section of Harras Road, located at 70m to 80m spacing. The use of speed tables/cushions, along with new residential accesses, promotes a residential feel to Harras Road and will significantly reduce speeds in the vicinity of the site. As stated in the documentation supporting the previously approved application, this is likely to reduce 85th percentile speeds around the western section to less than 35mph; indeed, vehicle speeds at the feature are likely to be substantially less.

Western Section

There is one residential access proposed in this section. Using MfS guidance and an 85th percentile speed of 35mph (after installation of speed reduction measures), taking account of the 9.5% gradient, the visibility requirements are 2.4m x 58.3m to the left (looking uphill) and 2.4m x 45.9m to the right (looking downhill). The calculations are attached. The splays are achievable and in keeping with the forthcoming residential characteristic on Harras Road. These visibility splays are the same as previously approved.

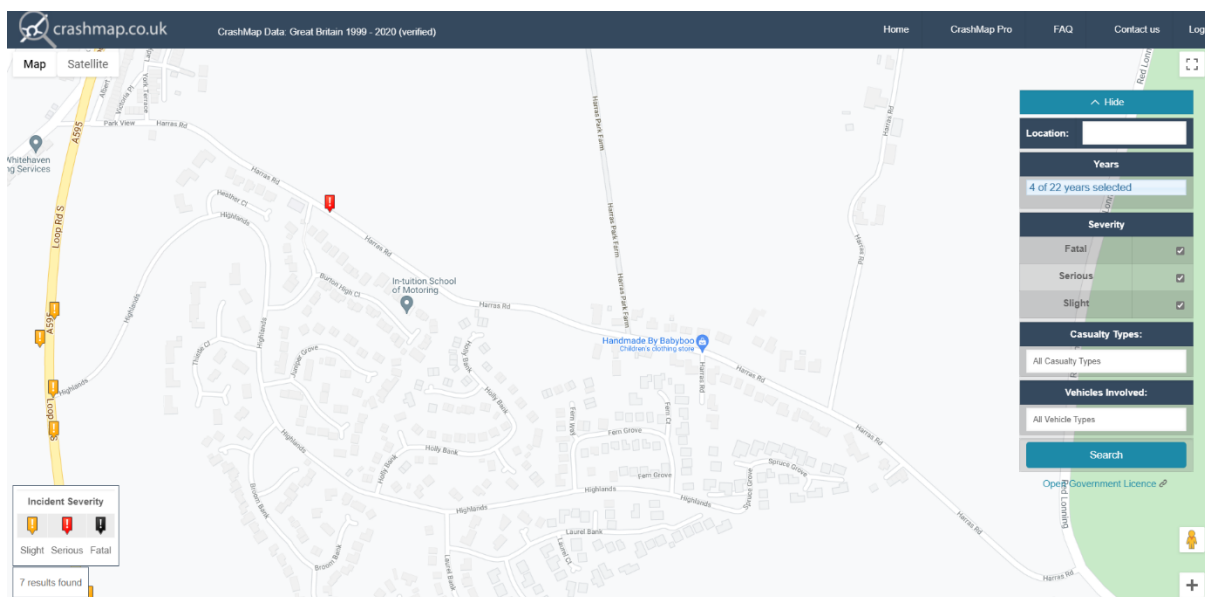
Eastern Section

There are 2 residential accesses plus the field access proposed in this section. The recorded speeds for the eastern section, which are lower but still in excess of the speed limit, would also be reduced by

the addition of the development and the use of speed tables/cushions. The visibility splay to the left, adjusted for gradient of 11% and using 35mph (after speed reduction measures) as the 85th percentile, is 2.4m x 59.9m (looking uphill). Visibility to the right, using 33mph and adjusted for a gradient of 11%, would be 2.4m x 41.5m (looking downhill). The calculations are attached. These splays are achievable for the accesses in the eastern section. The visibility splays are shown on Tetra Tech Drawing 784-B028221-C001-P03, attached. The drawing also shows the locations of the speed tables/cushions.

The proposed layout shows each house has parking for at least 2 cars in line with CDDG. Servicing and refuse collection is adequately provided for as a turning head is supplied in each access. The turning heads have been tracked using a 10.2m Phoenix 2 Duo refuse lorry. Each access will have dropped kerbs crossing points with tactile paving to allow pedestrians to cross Harras Road and use the existing footway on the south side of Harras Road which provides access into Whitehaven. Footway connections will be provided through the grass verge, as shown on the attached drawing.

A review of personal injury accidents was undertaken to assess the safety record of Harras Road local to the site for the 3-year pre-Covid period of March 2017 to March 2020. Detailed records obtained from Cumbria Road Safety Partnership show that there has been one personal injury accident reported in the study period. Extract 3 below from Crashmap shows the location. The incident occurred in July 2017 and resulted in serious injury to one casualty. A car travelling east on Harras Road undertook a cyclist also travelling east which caused the cyclist to collide with the offside of the car and sustain serious injuries. With only one incident occurring in the area in the 3-year period, Harras Road has a good safety record.



Extract 3: Crashmap – Reported Personal Injury Accidents, 2017-2020

In conclusion, the access arrangements are an improvement on the consented layout, there are fewer access points and the speed reduction measures remain. Suitable visibility splays can be provided from the access points. Harras Road has a very good safety record. The development, as per the consented application, is not likely to result in an unacceptable impact in highway safety terms, and the residual cumulative impacts on the road network are not likely to be severe.

Yours sincerely

Eleanor Bunn
Senior Transport Planner
For and on behalf of TetraTech Europe

Enc Tetra Tech Drawing 784-B028221-C001-P03
 2021 ATC Results
 Visibility Splay Calculations
 WYG Access Appraisal, Harras Road, August 2018

LEGEND

TYPE A - 5 no. dormer bungalow.
TYPE B - 4 no. bungalow.
TYPE C - 4 no. bungalow.
TYPE D - 4 no. house.
TYPE E - 4 no. house.

TOTAL 21 no. dwellings.

PROPOSED



Hardworks

Main Entrance Drive and Communal Drive Areas
Bitmac apron to lie in with existing road surface. Exposed aggregate drive surface e.g. SuperColour® Exposed in 'Gravel' or similar to be approved. Reclaimed gritstone sett kerbs, 70mm upstand; joints to be as narrow as possible - no mortar visible.

Private Driveways and Parking Areas
Proposed Tegula by Tolamore in 'Oxide' or 'Slale' sett infill with matching tins/banding, or similar to be approved. Kerbs to match.

Sett Threshold
Bands of reclaimed gritstone sett, laid flush with adjacent surfacing. Mortar joints to be as narrow as possible.

Proposed Paths, Patios and Steps
All to be surfaced with buff, natural stone flags and edged with matching natural stone setts where appropriate. Inset panels of square flags (in same material) within patios laid to acid interest. Stepping stones if used in same material.

Proposed Garden Walls
Brick walls and piers with stone copings. Brick to be specified by the architect. Stone cope 75mm depth to match building sills. Piers to be 2 brick courses above wall height. Retaining walls to be 150mm above upper soil level, walls to be fortified with hedging or shrub planting where possible.

Proposed Walls and Piers along Roadside
Red sandstone wall of local vernacular with piers to match, max 2m high, retaining walls to be 150mm above upper soil level.

High Timber Fence
1.8m high timber fence to form property divides. Vertical feather edge, close boarded with capping rail. Fence to slope with natural ground gradients - no stepping. Fence to be stained very dark brown. Timber gates to match. Fences to steps down to 1.1m high where possible, e.g. when on top of retaining wall and towards the rear of rear gardens.

Timber Post and Stock Proof Fence
1.1m high round tanalised timber posts with stock proof wire netting.

Softworks

Proposed Trees
Trees selected for seasonal variety, interest and form and tolerant of local conditions. Trees to be selected from the palette below. Nearby trees have been viewed to assess which species and varieties are most likely to tolerate the hillside location. All trees to be double stated and of local provenance.

AC - Acer campestre 'Elegans', 16-18cm girth, RB
AP - Acer platanoides, 16-18cm girth, RB
AL - Anelanchier Larnaki (multi-stem), 2.5m high, CG
BP - Betula 'Tascanator', 16-18cm girth, RB
BP - Betula pendula, 16-18cm girth, RB
CP - Cotoneaster punctulata, 16-18cm girth, RB
GS - Gordiaa 'Sunburst', 16-18cm girth, RB
MF - Malus 'Floribunda', 16-18cm girth, RB
PP - Pinus 'Parvula', 16-18cm girth, RB
PS - Pinus sylvestris, 2-2.25m high, RB
QP - Quercus 'palustris', 20-25cm girth, RB
QR - Quercus robur, 16-18cm girth, RB
SE - Sorbus aria, 16-18cm girth, RB
SA - Sorbus aucuparia, 16-18cm girth, RB

Proposed Hedges
All hedges to be Giseltria litorea (unless annotated at Native Species Hedge) due to the exposed, coastal location.
1m high, 3 per linear metre planted in a single line, CG

Proposed Low Hedging
Ilex crenata 'Green Glory', 30-40cm high, planted at a rate of 5 per lin metre in a single row, clipped after planting to form an instant hedge.

Proposed Shrub Planting
Range of plants selected for seasonal variety, colour and form. See schedule for typical species, sizes and densities.

Proposed Lawn

Proposed Levels
P120.00
E121.00
Existing Levels

FOR INFORMATION ONLY

KEY

- MfS Visibility Splays
- Proposed Traffic Calming
- Proposed Drop Kerbs
- Proposed Footway Connections

Rev	Description	Date	Rev	Rev	Rev
P03	UPDATED FOLLOWING LAYOUT AMENDMENT	29.06.2022	EB	NB	NB
P02	UPDATED FOLLOWING LAYOUT AMENDMENT	02.02.2022	EB	NB	NB
P01	FIRST ISSUE	10.01.2021	EB	NB	NB

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TETRA TECH

Client

JOHN SWIFT HOMES

Project Name

LAND ADJ CASA MIA, HARRAS ROAD, WHITEHAVEN

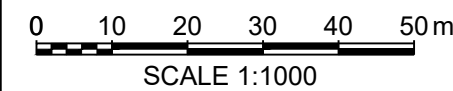
Sheet Title

VISIBILITY SPLAYS & PROPOSED TRAFFIC CALMING MEASURES

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale @ A3	Subsidiary
784-B028221	EB	Jan '22	NB	Jan '22	NB	Jan '22	As Shown	S2
Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Role	Number	Revision	
784-B028221	TTE	- 00	- XX	- DR	- O	- C001	P02	

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TTE_MT_v1



Drawing based on Barnes Walker Drawing
M3450-PA-01-V07 Landscape Layout Drawing

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 1)

Direction : WESTBOUND

Monday 26/04/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	5	1	0	0	0	0	0	0	0	0	0	0	0	1
6	6	3	0	0	0	0	0	0	0	0	0	0	0	3
7	7	5	0	0	0	0	0	0	0	0	0	0	0	5
8	8	30	3	0	0	0	0	0	0	0	0	0	0	33
9	9	172	8	0	0	0	0	0	0	0	0	0	0	180
10	10	48	1	0	0	0	0	0	0	0	0	0	0	49
11	11	39	4	0	0	0	0	0	0	0	0	0	0	43
12	12	48	5	0	0	0	0	0	0	0	0	0	0	53
13	13	46	3	0	0	0	0	0	0	0	0	0	0	49
14	14	50	3	0	0	0	0	1	0	0	0	0	0	54
15	15	56	6	0	0	0	0	0	0	0	0	1	0	63
16	16	125	3	0	0	0	0	0	0	0	0	0	0	128
17	17	89	5	0	0	0	0	0	0	0	0	0	0	94
18	18	64	4	0	0	0	0	0	0	0	0	0	0	68
19	19	34	2	0	0	0	0	0	0	0	0	0	0	36
20	20	23	0	0	0	0	0	0	0	0	0	0	0	23
21	21	11	1	0	0	0	0	0	0	0	0	0	0	12
22	22	9	1	0	0	0	0	0	0	0	0	0	0	10
23	23	2	0	0	0	0	0	0	0	0	0	0	0	2
24	24	2	0	0	0	0	0	0	0	0	0	0	0	2
7-19	801	47	0	0	0	0	1	0	0	0	0	1	0	850
6-22	855	49	0	0	0	0	1	0	0	0	0	1	0	906
6-24	859	49	0	0	0	0	0	1	0	0	0	0	1	910
0-24	864	49	0	0	0	0	0	0	0	0	0	1	0	915

Direction : EASTBOUND

Monday 26/04/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	1	1	0	0	0	0	0	0	0	0	0	0	0	2
7	8	2	0	0	0	0	0	0	0	0	0	0	0	10
8	28	2	0	0	0	0	0	0	0	0	0	0	0	30
9	89	5	0	0	0	0	0	0	0	0	0	0	0	94
10	40	3	0	0	0	0	0	0	0	0	0	0	0	43
11	36	8	0	0	0	0	0	0	0	0	0	0	0	44
12	51	4	0	0	0	0	0	0	0	0	0	2	0	57
13	67	13	0	0	0	0	0	0	0	0	0	0	0	80
14	60	6	0	0	0	0	0	0	0	0	0	0	0	66
15	51	7	0	0	0	0	0	0	0	0	0	0	0	58
16	118	7	0	0	0	0	0	0	0	0	0	0	0	125
17	83	5	0	0	0	0	0	0	0	0	0	0	0	88
18	71	5	0	0	0	0	0	0	0	0	0	0	0	76
19	42	4	0	0	0	0	0	0	0	0	0	0	0	46
20	27	2	0	0	0	0	0	0	0	0	0	0	0	29
21	17	1	0	0	0	0	0	0	0	0	0	0	0	18
22	4	0	0	0	0	0	0	0	0	0	0	0	0	4
23	6	0	0	0	0	0	0	0	0	0	0	0	0	6
24	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7-19	766	69	0	0	0	0	0	0	0	0	0	2	0	837
6-22	822	74	0	0	0	0	0	0	0	0	0	2	0	898
6-24	823	75	0	0	0	0	0	0	0	0	0	2	0	900
0-24	831	75	0	0	0	0	0	0	0	0	0	2	0	908

Direction : WESTBOUND

Monday 26/04/2021	VEHICLE SPEED (MPH)													TOTAL
	Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	1	0	0	0	0	1	0	0	0	0	0	0	0	1
2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	5	0	0	0	0	1	0	0	0	0	0	0	0	1
6	6	0	0	1	1	1	0	0	0	0	0	0	0	3
7	7	0	0	1	2	1	1	0	0	0	0	0	0	5
8	8	0	0	12	11	8	2	0	0	0	0	0	0	33
9	9	0	0	109	62	9	0	0	0	0	0	0	0	180
10	10	0	0	26	19	4	0	0	0	0	0	0	0	45
11	11	0	0	19	16	6	2	2	0	0	0	0	0	43
12	12	0	1	31	16	5	0	0	0	0	0	0	0	49
13	13	0	0	25	20	4	0	0	0	0	0	0	0	49
14	14	0	2	22	23	6	1	0	0	0	0	0	0	54
15	15	0	1	31	22	7	1	1	0	0	0	0	0	63
16	16	0	3	80	38	7	0	0	0	0	0	0	0	128
17	17	0	0	33	42	17	2	0	0	0	0	0	0	94
18	18	0	3	25	27	11	1	0	0	0	0	0	0	66
19	19	0	0	12	18	4	2	0	0	0	0	0	0	36
20	20	0	0	8	9	3	2	1	0	0	0	0	0	23
21	21	0	0	1	8	5	3	0	1	0	0	0	0	18
22	22	0	0	2	3	4	0	0	1	0	0	0	0	10
23	23	0	0	1	1	0	0	0	0	0	0	0	0	3
24	24	0	0	1	0	0	1	0	0	0	0	0	0	2
7-19	7-19	1	10	425	314	88	11	0	1	0	0	0	0	850
6-22	6-22	1	11	444	333	99	14	2	2	0	0	0	0	906
6-24	6-24	1	11	445	334	99	15	2	2	0	0	0	0	910
0-24	0-24	1	11	447	335	102	15	2	2	0	0	0	0	915

Direction : EASTBOUND

6-23	1	11	148	334	89	15	2	2	0	0	0	0	0	910
6-24	1	11	447	335	102	15	2	2	0	0	0	0	0	915

Direction : EASTBOUND

Monday 26/04/2021	VEHICLE SPEED (MPH)													TOTAL
	Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	1	0	0	0	1	0	0	0	2
7	0	0	1	3	2	3	1	0	0	0	0	0	0	10
8	0	4	4	15	5	2	0	0	0	0	0	0	0	20
9	0	1	28	40	23	2	0	0	0	0	0	0	0	94
10	0	0	9	14	14	4	1	0	0	1	0	0	0	43
11	0	0	16	13	11	4	0	0	0	0	0	0	0	44
12	0	2	12	24	14	5	0	0	0	0	0	0	0	57
13	0	0	13	39	19	8	1	0	0	0	0	0	0	80
14	0	1	21	26	13	4	1	0	0	0	0	0	0	66
15	0	1	26	39	17	3	2	0	0	0	0	0	0	88
16	1	0	54	45	18	6	0	0	0	0	0	0	0	125
17	0	1	28	34	18	7	0	0	0	0	0	0	0	89
18	0	0	22	28	17	9	0	0	0	0	0	0	0	76
19	0	0	9	16	15	6	0	0	0	0	0	0	0	46
20	0	0	8	9	7	4	1	0	0	0	0	0	0	29
21	0	0	3	7	3	4	0	1	0	0	0	0	0	18
22	0	0	0	3	0	1	0	0	0	0	0	0	0	4
23	0	0	1	3	1	1	0	0	0	0	0	0	0	6
24	0	0	0	0	0	0	0	0	0	0	0	0	0	1

7-19	1	7	242	333	188	60	5	0	0	0	1	0	0	837
6-22	1	7	257	351	201	71	7	1	0	0	2	0	0	898
6-23	1	7	258	354	203	72	7	2	0	0	2	0	0	905
6-24	1	7	258	354	203	73	7	2	1	2	0	0	0	908

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 1)

Direction : WESTBOUND

Friday 30/04/2021	VEHICLE CLASSIFICATION													TOTAL
	Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5	2	0	0	0	0	0	0	0	0	0	0	0	0	2
6	4	1	0	0	0	0	0	0	0	0	0	0	0	5
7	13	0	0	0	0	0	0	0	0	0	0	0	0	13
8	34	0	0	0	0	0	0	0	0	0	0	0	0	34
9	158	12	0	0	0	0	0	0	0	0	0	0	0	170
10	69	6	0	0	0	0	0	0	0	0	0	0	0	75
11	61	10	0	0	0	0	0	0	0	0	0	0	0	71
12	65	8	0	0	0	0	0	0	0	0	0	2	0	75
13	70	15	0	0	0	0	0	0	0	0	0	0	0	85
14	59	4	0	0	0	0	0	0	0	0	0	0	0	63
15	116	8	0	0	0	0	0	0	0	0	0	0	0	124
16	96	2	0	0	0	0	0	0	0	0	0	0	0	98
17	67	5	0	0	0	0	0	0	0	0	0	0	0	72
18	69	5	1	0	0	0	0	0	0	0	0	0	0	74
19	52	1	0	0	0	0	0	0	0	0	0	0	0	53
20	35	0	0	0	0	0	0	0	0	0	0	0	0	35
21	25	1	0	0	0	0	0	0	0	0	0	0	0	26
22	22	0	0	0	0	0	0	0	0	0	0	0	0	22
23	12	2	0	0	0	0	0	0	0	0	0	0	0	14
24	6	0	0	0	0	0	0	0	0	0	0	0	0	6
7-19	916	66	0	0	0	0	0	0	0	0	0	0	2	984
6-22	1011	67	0	0	0	0	0	0	0	0	0	0	2	1080
6-24	1029	69	0	0	0	0	0	0	0	0	0	0	2	1100
0-24	1038	70	0	0	0	0	0	0	0	0	0	0	2	1110

Direction : EASTBOUND

Friday 30/04/2021	VEHICLE CLASSIFICATION													TOTAL
	Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6	1	0	0	0	0	0	0	0	0	0	0	0	0	2
7	7	1	0	0	0	0	0	0	0	0	0	0	0	8
8	24	2	0	0	0	0	0	0	0	0	0	0	0	26
9	74	6	0	0	0	0	1	0	0	0	0	0	0	81
10	43	10	0	0	0	0	0	0	0	0	0	0	0	53
11	52	9	0	0	0	0	0	0	0	0	1	0	0	62
12	55	6	0	0	0	0	0	0	0	0	0	0	0	61
13	78	10	0	0	0	0	0	0	0	0	0	1	0	89
14	55	0	0	0	0	0	0	0	0	0	0	0	0	55
15	108	12	0	0	0	0	0	0	0	0	0	0	0	120
16	97	12	0	0	0	0	0	0	0	0	0	0	0	109
17	86	10	0	0	0	0	0	0	0	0	0	0	0	96
18	95	8	0	0	0	0	0	0	0	0	0	0	0	103
19	61	10	0	0	0	0	0	0	0	0	0	0	0	71
20	34	3	0	0	0	0	0	0	0	0	0	0	0	37
21	25	1	0	0	0	0	0	0	0	0	0	0	0	26
22	24	4	0	0	0	0	0	0	0	0	0	0	0	28
23	9	1	0	0	0	0	0	0	0	0	0	0	0	10
24	17	2	0	0	0	0	0	0	0	0	0	0	0	19
7-19	829	96	0	0	0	0	1	0	0	0	0	0	2	928
6-22	945	97	0	0	0	0	1	0	0	0	0	0	2	1024
6-24	949	108	0	0	0	0	1	0	0	0	0	0	2	1053
0-24	945	108	0	0	0	0	1	0	0	0	0	0	2	1058

survey and presentation by **trafficsense** Ltd.

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 1)

Direction : WESTBOUND

Friday 30/04/2021	VEHICLE SPEED (MPH)													TOTAL
	Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	1	0	0	0	0	0	0	0	1
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5	0	0	0	1	1	0	0	0	0	0	0	0	0	2
6	0	0	4	0	1	0	0	0	0	0	0	0	0	5
7	0	0	5	5	5	0	0	0	0	0	0	0	0	15
8	0	0	3	14	9	7	1	0	0	0	0	0	0	34
9	0	3	76	76	15	0	0	0	0	0	0	0	0	170
10	0	0	39	25	11	0	0	0	0	0	0	0	0	75
11	0	2	31	28	8	2	0	0	0	0	0	0	0	71
12	0	1	43	21	9	0	1	0	0	0	0	0	0	75
13	0	0	32	29	14	0	0	0	0	0	0	0	0	75
14	0	0	17	31	14	1	0	0	0	0	0	0	0	63
15	0	1	59	47	16	1	0	0	0	0	0	0	0	124
16	0	0	34	41	18	4	1	0	0	0	0	0	0	98
17	0	0	25	33	12	2	0	0	0	0	0	0	0	72
18	0	0	25	27	14	7	1	0	0	0	0	0	0	74
19	0	0	11	26	9	4	1	0	0	0	0	0	0	53
20	0	1	8	17	5	4	0	0	0	0	0	0	0	35
21	0	1	10	11	2	2	0	0	0	0	0	0	0	26
22	0	1	7	9	5	0	0	0	0	0	0	0	0	22
23	0	0	0	2	3	3	0	0	0	0	0	0	0	14
24	0	0	0	1	2	2	1	0	0	0	0	0	0	6
7-19	0	7	395	398	149	28	5	0	2	0	0	0	0	984
6-22	0	10	422	440	167	34	5	0	2	0	0	0	0	1080
6-24	0	10	425	443	175	39	6	0	2	0	0	0	0	1100
0-24	0	10	430	444	178	40	6	0	2	0	0	0	0	1110

Direction : EASTBOUND

Friday 30/04/2021	VEHICLE SPEED (MPH)													TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120		
1	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	0	0	1	0	0	0	0	0	0	0	0	0	1	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	0	0	0	0	1	0	0	0	0	0	0	0	1	
6	0	0	1	0	0	0	0	0	0	0	0	0	1	
7	0	0	2	3	2	1	0	0	0	0	0	0	8	
8	0	0	3	11	9	2	1	0	0	0	0	0	29	
9	0	2	18	33	24	3	1	0	0	0	0	0	81	
10	0	0	21	13	15	1	3	0	0	0	0	0	53	
11	1	1	13	21	24	1	1	0	0	0	0	0	61	
12	0	0	18	26	13	4	0	0	0	0	0	0	54	
13	0	0	19	35	22	11	1	1	0	0	0	0	89	
14	0	1	13	25	12	4	1	0	0	0	0	0	56	
15	0	0	39	43	30	4	1	1	0	0	0	0	118	
16	0	1	30	46	23	6	3	0	0	0	0	0	109	
17	0	0	24	36	27	8	1	0	0	0	0	0	95	
18	0	0	26	37	29	13	0	1	0	0	0	0	106	
19	0	2	8	15	26	10	3	3	0	0	0	0	71	
20	0	0	5	19	9	4	0	0	0	0	0	0	37	
21	0	0	3	15	4	3	0	1	0	0	0	0	26	
22	0	0	5	6	8	5	0	1	0	0	0	0	25	
23	0	1	0	2	4	1	1	1	0	0	0	0	10	
24	0	0	1	5	8	2	0	3	0	0	0	0	19	
7-19	1	7	232	345	254	67	16	6	0	0	0	0	928	
6-22	1	7	247	358	277	80	16	8	0	0	0	0	1024	
6-24	1	8	250	355	290	83	17	9	0	0	0	0	1056	
0-24	1	8	250	395	250	83	17	12	0	0	0	0	1056	

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 1)

Direction : WESTBOUND

Hr Ending	AVERAGE SPEEDS						
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21
1	38.0	38.0	-	33.0	40.5	35.5	33.0
2	-	-	38.0	-	-	-	44.7
3	-	-	-	-	25.5	-	-
4	38.0	33.0	33.0	28.0	35.5	33.0	25.5
5	32.2	33.8	35.5	-	28.0	26.5	29.3
6	34.5	34.8	33.7	33.4	34.2	33.0	25.5
7	32.4	32.4	33.2	32.9	36.2	34.6	34.0
8	28.7	30.6	30.3	31.1	29.6	34.7	34.3
9	29.4	29.4	30.5	30.2	29.8	31.5	32.4
10	30.8	29.4	30.2	31.1	30.1	30.2	31.7
11	29.8	30.4	31.2	30.5	29.3	30.6	30.6
12	29.6	31.7	29.6	30.8	30.7	30.7	31.0
13	30.0	30.5	28.6	30.5	32.2	30.1	31.8
14	30.1	28.5	30.7	29.0	30.0	31.9	31.9
15	28.2	30.2	28.3	30.5	31.9	31.1	29.5
16	31.5	30.2	28.9	31.5	31.5	31.6	33.9
17	30.0	31.4	28.8	32.0	32.6	31.5	34.0
18	31.6	31.9	33.6	35.0	34.3	33.3	33.3
19	32.6	32.0	33.7	34.4	32.6	31.6	33.2
20	30.4	31.1	31.8	34.5	30.6	33.2	32.8
21	35.5	31.5	34.1	31.4	31.0	32.4	35.2
22	29.3	40.5	36.1	33.9	35.7	36.9	32.2
23	34.3	36.8	38.0	37.2	40.5	32.2	36.9
10-12	29.8	29.9	30.7	30.8	29.7	30.4	31.1
14-16	29.1	29.4	29.5	29.8	30.9	31.5	30.7
0-24	31.7	32.3	32.2	32.1	32.4	32.2	32.6

Hr Ending	85TH PERCENTILE						
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21
1	-	-	-	-	-	39.0	-
2	-	-	-	-	44.0	-	-
3	-	-	-	-	-	-	55.1
4	-	33.0	-	-	-	-	-
5	-	-	-	32.3	39.0	33.0	-
6	38.5	41.1	39.0	-	33.6	33.7	34.6
7	41.0	38.8	38.6	39.2	38.7	33.0	-
8	37.8	37.8	39.0	41.6	39.1	39.1	42.0
9	32.8	35.1	35.2	35.4	34.5	40.3	40.1
10	33.8	34.2	35.1	35.4	34.6	35.9	37.6
11	36.2	34.2	35.7	36.2	35.6	34.8	38.1
12	33.6	34.5	36.6	34.6	35.5	35.5	-
13	34.0	36.5	33.8	35.6	35.6	35.3	36.5
14	35.6	35.1	34.3	35.8	36.9	35.1	37.3
15	36.0	33.3	35.3	34.3	35.0	36.9	36.8
16	32.7	35.4	33.5	37.3	35.7	35.4	-
17	36.4	34.6	31.9	36.7	36.5	38.1	39.1
18	36.5	36.9	33.7	37.3	38.6	37.0	39.7
19	36.7	37.3	39.6	39.7	41.4	38.5	39.0
20	39.1	38.1	39.5	38.8	39.7	37.8	39.5
21	37.8	37.4	37.8	40.7	36.8	38.5	39.9
22	43.3	35.6	38.5	40.6	36.9	38.8	42.1
23	34.6	49.2	39.8	42.7	42.0	42.1	38.4
24	46.6	39.3	43.0	48.4	45.7	37.8	41.7
10-12	34.9	34.4	36.2	36.0	35.1	35.2	36.7
14-16	34.4	34.3	34.4	35.3	36.1	36.3	36.1
0-24	37.0	36.9	36.9	37.0	38.0	37.0	39.4
7 DAY AVERAGE SPEED	32.2						
7 DAY AVERAGE 85th PERCENTILE	37.6						

survey and presentation by **trafficsense** Ltd.

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 1)

Direction : EASTBOUND

Hr Ending	AVERAGE SPEEDS						
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21
1	43.0	-	25.5	-	-	37.6	38.0
2	-	-	-	-	25.5	43.0	-
3	-	-	-	-	-	-	38.0
4	-	-	25.5	-	-	-	38.0
5	48.0	38.0	33.0	33.0	38.0	40.5	-
6	37.8	32.4	33.0	34.8	33.6	35.5	40.5
7	34.2	34.5	32.9	33.9	35.2	33.0	37.3
8	32.0	33.2	32.6	33.2	32.9	34.6	38.4
9	35.1	31.8	32.6	34.3	32.5	36.0	33.0
10	32.4	31.6	33.5	33.3	33.0	34.5	36.3
11	32.9	31.8	30.1	33.0	32.5	32.3	32.9
12	34.2	34.6	33.2	33.7	34.3	34.6	33.1
13	32.2	33.0	33.9	32.4	33.0	32.0	34.2
14	32.2	33.6	33.0	32.4	32.4	33.5	34.6
15	30.6	30.6	29.5	32.4	32.8	34.2	32.8
16	32.2	32.2	26.1	32.8	33.5	33.7	34.3
17	33.1	33.4	33.9	33.9	33.9	35.6	37.3
18	34.5	33.5	35.3	33.3	36.4	36.9	34.8
19	35.2	35.1	33.7	35.2	34.3	36.3	34.0
20	35.9	36.6	34.2	36.8	34.8	38.7	36.0
21	28.6	33.8	35.1	37.1	35.9	34.6	34.9
22	34.3	40.0	33.0	35.3	37.8	39.2	32.5
23	53.0	33.0	25.5	28.6	38.9	35.5	38.4
10-12	32.7	31.7	31.8	33.2	32.8	33.4	34.8
14-16	31.4	32.1	31.3	32.4	32.6	33.9	33.7
0-24	35.6	33.9	31.8	33.7	33.7	35.8	35.9

Hr Ending	85TH PERCENTILE						
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21
1	-	-	-	-	-	46.6	-
2	-	-	-	-	-	-	44.0
3	-	-	-	-	-	-	38.0
4	-	-	-	-	-	-	45.1
5	-	38.0	-	33.0	-	44.0	-
6	62.1	39.0	39.0	-	-	-	-
7	44.5	40.9	39.3	40.3	39.7	39.0	44.0
8	38.7	39.9	39.2	38.9	40.5	39.3	43.7
9	37.3	38.9	38.5	38.7	38.8	41.5	45.8
10	42.6	38.5	38.9	39.6	39.2	41.6	38.2
11	38.5	37.6	39.5	40.5	39.7	41.3	42.9
12	39.1	37.7	36.7	38.6	37.9	39.2	38.7
13	39.3	40.7	40.6	39.7	40.3	41.5	40.0
14	38.2	39.6	40.9	38.3	39.0	37.9	39.6
15	38.0	40.6	38.7	38.7	38.2	40.9	40.3
16	36.6	37.4	35.5	38.7	38.8	41.0	38.8
17	38.1	38.2	34.5	39.2	39.6	39.6	40.9
18	39.0	40.0	39.6	39.7	40.0	44.6	45.3
19	40.0	40.2	42.6	38.8	43.7	43.0	40.6
20	44.0	41.6	39.3	42.7	39.1	44.0	40.7
21	43.2	48.0	40.2	44.1	40.8	46.2	41.8
22	34.9	41.0	41.2	45.6	42.9	40.5	41.5
23	40.1	45.9	33.0	42.5	47.8	46.6	40.4
24	-	-	-	34.9	46.3	47.2	45.2
10-12	38.8	37.7	38.1	38.6	38.8	40.2	40.8
14-16	37.3	39.0	37.1	38.7	38.5	40.9	39.5
0-24	40.8	40.2	38.7	39.7	40.7	42.3	41.5
7 DAY AVERAGE SPEED	34.3						
7 DAY AVERAGE 85th PERCENTILE	40.6						

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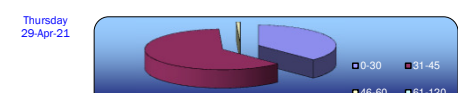
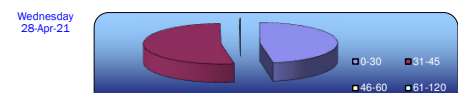
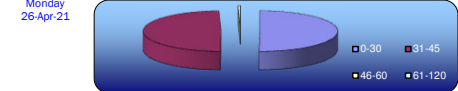
Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 1)

Direction : WESTBOUND

SPEED (MPH)	SPEED SUMMARY							
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21	
0-30	459	397	467	390	440	268	163	
31-45	452	550	519	641	662	476	325	
46-60	4	1	2	8	8	5	9	
61-120	0	0	0	0	0	0	0	

TOTAL	915	948	988	1039	1110	749	497	
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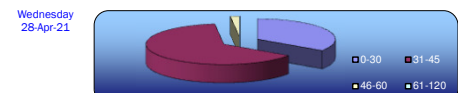
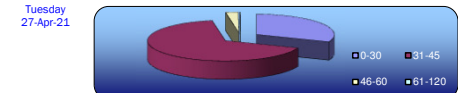
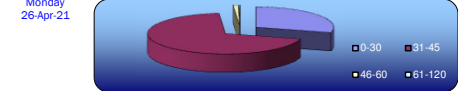
Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 1)

Direction : EASTBOUND

SPEED (MPH)	SPEED SUMMARY							
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21	
0-30	266	263	315	256	269	172	123	
31-45	630	566	582	680	768	566	424	
46-60	10	22	17	24	29	40	21	
61-120	2	1	0	1	0	3	0	

TOTAL	908	852	914	970	1056	781	568	
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Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 1)

Direction : WESTBOUND

[illegible]

Direction : WESTBOUND

Direction : EASTBOUND													
Monday 26/04/2021	VEHICLE SPEED (MPH)												TOTAL
Wt Endline	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-90	
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	1	0	0	0	0	0	0	0	0	1
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	1	0	1	0	0	0	0	0	0	3
7	5	0	5	5	2	2	0	0	0	0	3	10	10
8	0	0	21	6	2	0	0	0	0	0	0	0	29
9	0	2	77	11	2	0	0	0	0	0	0	0	92
10	0	0	33	7	2	0	0	0	0	0	0	0	42
11	0	4	25	13	2	0	0	0	0	0	0	0	44
12	0	2	44	17	0	0	0	0	0	0	0	0	63
13	0	4	52	26	1	0	0	0	0	0	0	0	82
14	0	6	53	8	1	0	0	0	0	0	0	0	68
15	1	3	24	13	2	0	0	0	0	0	0	0	33
16	0	7	113	9	1	0	0	0	0	0	0	0	130
17	0	5	62	18	1	0	0	0	0	0	0	0	86
18	0	3	47	22	3	0	0	0	0	0	0	0	75
19	0	2	30	11	3	0	0	0	0	0	0	0	36
20	0	1	15	8	4	1	0	0	0	0	0	0	25
21	0	0	10	5	2	1	0	0	0	0	0	0	19
22	0	0	4	0	0	0	0	0	0	0	0	0	4
23	0	0	3	3	0	0	0	0	0	0	0	0	6
24	0	0	0	0	0	1	0	0	0	0	0	0	1
T-19	1	38	821	160	20	0	0	0	0	0	0	0	840
T-22	1	39	853	176	28	2	0	0	0	0	0	0	904
T-25	1	39	858	179	33	0	0	0	0	0	0	0	908
T-24	1	39	858	181	28	4	0	0	0	0	0	0	911

Direction : WESTBOUND

[illegible]

Direction : WESTBOUND

Direction : EASTBOUND													
Tuesday 27/04/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Endpoint	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	2	0	0	0	0	0	0	0	0	2
6	0	0	1	1	0	0	0	0	0	0	0	0	2
7	0	0	5	0	1	0	0	0	0	0	0	0	6
8	0	1	26	3	1	0	0	0	0	0	0	0	31
9	0	2	51	13	4	0	0	0	0	0	0	0	70
10	2	5	32	11	1	0	0	0	0	0	0	0	49
11	5	4	40	8	0	0	0	0	0	0	0	0	50
12	0	2	47	8	2	0	0	0	0	0	0	0	59
13	0	4	40	19	3	0	0	0	0	0	0	0	66
14	1	0	47	6	3	0	0	0	0	0	0	0	57
15	0	2	17	13	2	0	0	0	0	0	0	0	34
16	3	6	95	9	1	0	0	0	0	0	0	0	114
17	0	5	62	25	2	0	0	0	0	0	0	0	94
18	0	3	45	17	1	0	0	0	0	0	0	0	66
19	0	0	30	17	3	0	0	0	0	0	0	0	50
20	0	0	28	12	1	0	0	0	0	0	0	0	41
21	0	1	8	4	1	2	0	0	0	0	0	0	16
22	0	1	6	3	0	0	0	0	0	0	0	0	10
23	0	0	5	3	3	0	0	0	0	0	0	0	11
24	0	0	1	0	0	0	0	0	0	0	0	0	1
7:19	5	34	561	147	23	0	0	0	0	0	0	0	770
8:22	5	36	592	156	26	2	0	0	0	0	0	0	843
9:24	5	36	614	169	28	2	0	0	0	0	0	0	850
10:24	5	36	615	172	29	2	0	0	0	0	0	0	855

Direction : WESTBOUND

Direction : EASTBOUND														
Wednesday 28/04/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6	2	0	0	0	0	0	0	0	0	0	0	0	0	2
7	7	0	0	0	0	0	0	0	0	0	0	0	0	7
8	28	1	0	0	0	0	0	0	0	0	0	0	0	29
9	76	8	0	0	0	0	0	0	0	0	0	0	0	84
10	51	6	0	0	0	0	0	0	0	0	0	0	0	57
11	40	1	0	0	0	0	0	0	0	0	0	0	0	41
12	59	7	0	0	0	0	0	0	1	1	0	0	0	62
13	60	8	0	0	0	0	0	0	0	0	0	0	0	68
14	52	7	0	0	0	0	0	0	0	0	0	0	0	59
15	58	7	0	0	0	0	0	0	0	0	0	0	0	65
16	108	11	0	0	0	0	0	0	0	0	0	0	0	119
17	83	6	1	0	0	0	0	0	0	0	0	0	0	90
18	93	1	0	0	0	0	0	0	0	0	0	0	0	94
19	43	4	0	0	0	0	0	0	0	0	0	0	0	47
20	41	0	0	0	0	0	0	0	0	0	0	0	0	41
21	24	2	0	0	0	0	0	0	0	0	0	0	0	26
22	13	0	0	0	0	0	0	0	0	0	0	0	0	13
23	1	0	0	0	0	0	0	0	0	0	0	0	0	2
24	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7-19	751	68	1	0	0	0	0	0	1	0	0	0	0	821
6-22	836	70	1	0	0	0	0	0	1	0	0	0	0	908
5-24	838	71	1	0	0	0	0	0	2	0	0	0	0	912
0-24	844	70	1	0	0	0	0	0	1	0	0	0	0	916

Direction : WESTBOUND

Direction : EASTBOUND													
Wednesday 28/04/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0:10	11:20	21:30	31:35	39:40	41:45	46:50	51:55	56:50	61:70	11:30	81:320	
1	0	0	1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	1	0	0	0	0	0	0	0	0	0	0
4	0	0	0	1	0	0	0	0	0	0	0	0	1
5	0	0	0	1	0	0	0	0	0	0	0	0	0
6	0	0	1	1	0	0	0	0	0	0	0	0	2
7	0	0	0	0	3	0	0	0	0	0	0	0	0
8	0	3	21	5	0	0	0	0	0	0	0	0	29
9	1	1	67	13	2	0	0	0	0	0	0	0	87
10	2	0	43	9	3	0	0	0	0	0	0	0	54
11	4	2	29	11	1	0	0	0	0	0	0	0	41
12	0	4	53	5	0	0	0	0	0	0	0	0	62
13	0	4	45	19	0	0	0	0	0	0	0	0	68
14	0	3	38	15	1	2	0	0	0	0	0	0	59
15	2	4	14	4	0	0	0	0	0	0	0	0	15
16	0	10	84	23	2	0	0	0	0	0	0	0	119
17	2	11	63	14	0	0	0	0	0	0	0	0	90
18	1	1	63	26	3	0	0	0	0	0	0	0	94
19	0	0	26	10	7	1	1	0	0	0	0	0	31
20	0	0	26	12	1	0	0	0	0	0	0	0	41
21	1	1	17	6	1	0	0	0	0	0	0	0	26
22	0	0	8	3	2	0	0	0	0	0	0	0	13
23	0	0	1	1	0	0	0	0	0	0	0	0	2
24	0	0	1	0	0	0	0	0	0	0	0	0	1
7:49	11	41	579	164	23	2	1	0	0	0	0	0	821
8:22	12	42	636	188	27	2	1	0	0	0	0	0	908
8:54	12	42	638	188	27	2	1	0	0	0	0	0	911
9:24	12	42	641	191	27	2	1	0	0	0	0	0	916

Direction : WESTBOUND

Direction : EASTBOUND														
Thursday 29/04/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2	0	0	0	0	0	0	0	0	0	0	0	0	2
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	6	0	0	0	0	0	0	0	0	0	0	0	0	7
8	29	6	0	0	0	0	0	0	0	0	0	0	0	35
9	82	1	0	0	0	0	0	0	0	0	0	0	0	83
10	48	6	0	0	0	0	0	0	0	0	0	0	0	54
11	41	10	0	0	0	0	0	0	0	0	0	1	0	52
12	70	6	0	1	1	0	0	0	0	0	0	0	1	78
13	57	8	0	0	0	0	0	0	0	0	0	0	0	65
14	67	5	1	0	0	0	0	0	0	0	0	0	0	73
15	93	8	0	0	0	0	0	0	0	0	0	0	0	101
16	78	8	0	0	0	0	0	0	0	0	0	0	0	86
17	79	10	0	0	0	0	0	0	0	0	0	0	0	89
18	86	8	0	0	0	0	0	0	0	0	0	0	0	94
19	53	1	0	0	0	0	0	0	0	0	0	0	0	54
20	47	1	0	0	0	0	0	0	0	0	0	0	0	48
21	24	1	0	0	0	0	0	0	0	0	0	0	0	25
22	11	0	0	0	0	0	0	0	0	0	0	0	0	11
23	11	1	0	0	0	0	0	0	0	0	0	0	0	12
24	4	0	0	0	0	0	0	0	0	0	0	0	0	4
7-19	783	77	1	0	1	0	0	0	0	0	0	2	0	864
8-22	871	80	1	0	1	0	0	0	0	0	2	2	0	955
9-23	886	81	1	0	1	0	0	0	0	0	2	2	0	972
0-24	888	81	1	0	1	0	0	0	0	0	2	2	0	973

Direction : WESTBOUND

Direction : EASTBOUND													
Thursday 28/04/2024	VEHICLE SPEED (MPH)												TOTAL
HR Endpt	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	2	0	0	0	0	0	0	0	0	0	2
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	2	2	2	0	0	0	0	0	0	0	7
8	0	1	20	13	1	0	0	0	0	0	0	0	35
9	0	1	68	12	1	1	0	0	0	0	0	0	83
10	0	1	35	17	1	0	0	0	0	0	0	0	54
11	0	3	39	8	2	0	0	0	0	0	0	0	52
12	1	2	62	12	1	0	0	0	0	0	0	0	75
13	0	5	45	12	2	1	0	0	0	0	0	0	65
14	1	6	54	10	2	0	0	0	0	0	0	0	73
15	0	5	16	3	2	0	0	0	0	0	0	0	103
16	0	5	63	16	2	0	0	0	0	0	0	0	85
17	1	3	67	17	0	1	0	0	0	0	0	0	89
18	0	2	73	17	2	0	0	0	0	0	0	0	94
19	0	1	37	10	1	0	0	0	0	0	0	0	50
20	0	0	33	12	3	0	0	0	0	0	0	0	45
21	0	0	12	9	3	1	0	0	0	0	0	0	25
22	0	0	5	3	1	2	0	0	0	0	0	0	11
23	0	0	6	4	1	1	0	0	0	0	0	0	12
24	0	0	3	1	0	0	0	0	0	0	0	0	4
7-19	3	35	647	159	17	3	0	0	0	0	0	0	864
8-22	3	35	700	185	26	6	0	0	0	0	0	0	955
9-23	3	35	735	190	27	7	0	0	0	0	0	0	971
0-24	3	35	711	190	27	7	0	0	0	0	0	0	973

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 2)

Direction : WESTBOUND

Friday 30/04/2021														TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5	2	0	0	0	0	0	0	0	0	0	0	0	0	2
6	4	1	0	0	0	0	0	0	0	0	0	0	0	5
7	12	1	0	0	0	0	0	0	0	0	0	0	0	13
8	34	0	0	0	0	0	0	0	0	0	0	0	0	34
9	161	9	0	0	0	0	0	0	0	0	0	0	0	170
10	188	7	0	0	0	0	0	0	0	0	0	0	0	195
11	63	10	0	0	0	0	0	0	0	0	0	0	0	73
12	63	9	0	0	0	0	0	0	0	0	0	2	0	74
13	71	5	0	0	0	0	0	0	0	0	0	0	0	76
14	56	8	0	0	0	0	0	0	0	0	0	0	0	64
15	117	8	0	0	0	0	0	0	0	0	0	0	0	125
16	99	2	0	0	0	0	0	0	0	0	0	0	0	101
17	69	4	0	0	0	0	0	0	0	0	0	0	0	73
18	70	5	0	0	0	0	0	0	0	0	0	0	0	75
19	54	1	0	0	0	0	0	0	0	0	0	0	0	55
20	33	1	0	0	0	0	0	0	0	0	0	0	0	34
21	24	1	0	0	0	0	0	0	0	0	0	0	0	25
22	22	0	0	0	0	0	0	0	0	0	0	0	0	22
23	12	1	0	0	0	0	0	0	0	0	0	0	0	13
24	6	0	0	0	0	0	0	0	0	0	0	0	0	6
7-19	926	68	0	0	0	0	0	0	0	0	0	2	0	995
6-22	1016	71	0	0	0	0	0	0	0	0	0	2	0	1089
6-24	1034	72	0	0	0	0	0	0	0	0	0	2	0	1108
0-24	1043	73	0	0	0	0	0	0	0	0	0	2	0	1118

Direction : EASTBOUND

Friday 30/04/2021														TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7	7	0	0	0	0	0	0	0	0	0	0	0	0	7
8	26	1	0	0	0	0	0	0	0	0	0	0	0	27
9	75	4	0	0	0	0	1	0	0	0	0	0	0	80
10	43	11	0	0	0	0	0	0	0	0	0	0	0	54
11	53	15	0	0	0	0	0	0	0	0	1	0	0	69
12	56	5	0	0	0	0	0	0	0	0	0	0	0	61
13	82	7	0	0	0	0	0	0	0	0	0	0	0	89
14	53	2	0	0	0	0	0	0	0	0	0	0	0	55
15	110	8	0	0	0	0	0	0	0	0	0	0	0	118
16	94	12	0	0	0	0	0	0	0	0	0	0	0	106
17	86	9	0	0	0	0	0	0	0	0	0	0	0	95
18	95	5	0	0	0	0	0	0	0	0	0	0	0	100
19	65	6	0	0	0	0	0	0	0	0	0	0	0	71
20	35	2	0	0	0	0	0	0	0	0	0	0	0	37
21	25	1	0	0	0	0	0	0	0	0	0	0	0	26
22	23	2	0	0	0	0	0	0	0	0	0	0	0	25
23	11	0	0	0	0	0	0	0	0	0	0	0	0	11
24	19	0	0	0	0	0	0	0	0	0	0	0	0	19
7-19	842	75	0	0	0	0	1	0	0	0	0	1	0	919
6-22	932	80	0	0	0	0	1	0	0	0	0	1	0	1014
6-24	959	80	0	0	0	0	1	0	0	0	0	1	0	1044
0-24	965	80	0	0	0	0	1	0	0	0	0	1	0	1047

survey and presentation by [trafficsense Ltd.](#)

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 2)

Direction : WESTBOUND

Friday 30/04/2021														TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120		
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	1	0	0	0	0	0	0	0	0	2
3	0	0	0	0	1	0	0	0	0	0	0	0	0	2
4	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5	0	0	1	1	0	0	0	0	0	0	0	0	0	2
6	0	1	3	1	0	0	0	0	0	0	0	0	0	5
7	0	1	9	3	0	0	0	0	0	0	0	0	0	13
8	0	0	16	15	3	0	0	0	0	0	0	0	0	34
9	0	6	155	9	0	0	0	0	0	0	0	0	0	170
10	0	6	64	5	0	0	0	0	0	0	0	0	0	75
11	1	4	59	9	0	0	0	0	0	0	0	0	0	73
12	0	11	50	13	0	0	0	0	0	0	0	0	0	74
13	0	9	57	10	0	0	0	0	0	0	0	0	0	76
14	0	2	52	9	1	0	0	0	0	0	0	0	0	64
15	0	7	103	13	2	0	0	0	0	0	0	0	0	125
16	0	5	78	15	3	0	0	0	0	0	0	0	0	101
17	0	5	52	16	0	0	0	0	0	0	0	0	0	73
18	0	7	49	15	3	1	0	0	0	0	0	0	0	75
19	0	0	42	8	3	2	0	0	0	0	0	0	0	55
20	0	3	27	4	0	0	0	0	0	0	0	0	0	34
21	0	2	19	3	1	0	0	0	0	0	0	0	0	25
22	0	1	19	2	0	0	0	0	0	0	0	0	0	22
23	0	0	7	4	0	0	0	0	0	0	0	0	0	11
24	0	0	2	0	3	1	0	0	0	0	0	0	0	6
7-19	1	62	777	137	15	3	0	0	0	0	0	0	0	955
6-22	1	69	851	149	16	3	0	0	0	0	0	0	0	1059
6-24	1	69	860	153	20	5	0	0	0	0	0	0	0	1108
0-24	1	70	865	156	21	5	0	0	0	0	0	0	0	1118

Direction : EASTBOUND

Friday 30/04/2021														TOTAL
Hr Ending	VEHICLE SPEED (MPH)													
	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120		
1	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	0	0	1	0	0	0	0	0	0	0	0	0	1	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	0	0	0	1	0	0	0	0	0	0	0	0	1	
6	0	0	1	0	0	0	0	0	0	0	0	0	1	
7	0	0	4	3	0	0	0	0	0	0	0	0	7	
8	0	1	11	8	1	0	0	0	0	0	0	0	21	
9	0	2	68	10	0	0	0	0	0	0	0	0	80	
10	1	3	39	6	5	0	0	0	0	0	0	0	54	
11	0	2	45	10	2	0	0	0	0	0	0	0	59	
12	0	3	45	11	2	0	0	0	0	0	0	0	61	
13	0	0	51	26	6	0	0	0	0	0	0	0	89	
14	0	0	44	9	2	0	0	0	0	0	0	0	55	
15	0	3	91	23	0	1	0	0	0	0	0	0	118	
16	0	3	87	14	2	0	0	0	0	0	0	0	106	
17	1	2	67	22	3	0	0	0	0	0	0	0	95	
18	0	1	70	27	6	0	0	0	0	0	0	0	104	
19	0	2	41	23	4	1	0	0	0	0	0	0	71	
20	0	0	33	8	0	0	0	0	0	0	0	0	37	
21	0	0	15	7	4	0	0	0	0	0	0	0	26	
22	0	1	13	8	2	1	0	0	0	0	0	0	25	
23	0	0	7	2	1	1	0	0	0	0	0	0	11	
24	0	0	7	7	4	1	0	0	0	0	0	0	19	
7-19	2	22	671	189	33	2	0	0	0	0	0	0	919	
6-22	2	23	736	211	39	3	0	0	0	0	0	0	1014	
6-24	2	23	752	221	44	5	0	0	0	0	0	0	1044	
0-24	2	23	752	221	44	5	0	0	0	0	0	0	1044	

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 2)

Direction : WESTBOUND

Hr Ending	AVERAGE SPEEDS						
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21
1	33.0	33.0	-	25.5	35.5	29.3	25.5
2	-	-	33.0	-	-	-	35.5
3	-	-	-	-	25.5	-	-
4	-	25.5	-	-	-	-	-
5	38.0	25.5	33.0	25.5	29.3	29.3	25.5
6	28.0	30.5	29.3	-	25.0	27.0	24.3
7	26.8	28.5	28.1	26.2	26.5	30.5	25.5
8	27.3	29.5	29.1	27.2	29.9	28.2	31.0
9	25.5	25.9	25.3	26.2	25.5	27.4	26.3
10	25.3	25.1	27.4	25.9	25.2	26.8	27.2
11	25.7	25.3	26.1	25.0	25.6	26.5	26.8
12	25.1	25.8	26.4	25.3	26.1	25.3	25.3
13	25.1	25.7	25.6	25.9	25.3	25.0	25.3
14	24.4	25.4	25.4	26.5	26.4	26.1	26.8
15	25.1	24.8	26.3	24.5	25.9	25.7	26.9
16	24.4	25.4	25.2	24.5	28.5	25.5	25.7
17	25.5	26.0	25.2	25.5	25.5	25.4	27.5
18	25.5	26.3	25.6	26.3	26.8	26.0	27.0
19	26.5	27.2	27.7	26.8	27.9	27.2	25.8
20	26.6	28.0	26.1	29.1	25.5	25.8	26.3
21	25.1	25.8	27.7	28.0	26.1	26.5	27.5
22	30.3	26.1	26.0	24.4	25.7	25.5	28.9
23	25.5	32.4	29.3	28.7	30.1	30.9	28.6
24	29.3	30.5	36.3	33.8	34.7	28.0	31.1
10-12	25.4	25.6	26.2	25.2	25.5	26.3	26.1
14-16	24.8	25.1	25.7	24.5	26.2	25.6	26.3
0-24	27.1	27.1	27.9	26.6	27.3	27.1	27.3

Hr Ending	85TH PERCENTILE						
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21
1	-	-	-	-	39.0	34.6	-
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	44.5
4	-	25.5	-	-	-	-	-
5	-	-	-	25.5	34.6	34.6	-
6	32.3	34.8	34.6	-	31.2	30.4	36.6
7	29.8	32.4	33.8	31.9	31.1	34.8	-
8	30.8	34.4	34.4	32.6	31.2	32.6	36.4
9	27.6	29.5	29.5	29.0	28.1	32.9	32.8
10	29.2	29.8	35.2	30.1	28.6	30.6	31.1
11	29.5	29.6	30.0	30.4	25.9	30.2	31.3
12	29.1	29.6	30.2	30.3	30.2	30.2	31.3
13	30.3	29.9	28.7	29.4	29.7	28.8	30.1
14	28.9	29.2	30.0	30.2	30.0	30.3	31.1
15	28.9	28.3	30.0	29.0	29.6	30.4	29.8
16	29.0	28.9	28.2	28.6	29.6	29.6	30.0
17	29.4	29.7	28.9	29.0	30.8	30.5	31.7
18	30.2	30.1	28.5	30.1	32.2	31.4	31.7
19	30.5	31.3	31.9	30.6	32.6	31.7	30.8
20	31.0	32.0	32.5	29.5	30.2	30.2	31.7
21	34.2	32.3	31.7	33.1	30.7	31.1	33.8
22	36.1	31.2	30.5	32.1	28.9	30.4	35.8
23	25.5	37.5	33.3	35.8	36.0	36.4	32.5
24	34.6	36.6	42.1	42.6	42.0	31.9	35.5
10-12	29.3	29.6	30.1	29.8	30.1	30.2	30.9
14-16	28.4	28.6	29.1	29.2	30.1	30.0	29.9
0-24	30.3	31.0	31.8	31.2	31.9	31.6	33.0
7 DAY AVERAGE SPEED	27.2						
7 DAY AVERAGE 85th PERCENTILE	31.5						

survey and presentation by [trafficsense Ltd.](#)

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 2)

Direction : EASTBOUND

Hr Ending	AVERAGE SPEEDS						
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21
1	33.0	-	25.5	-	25.5	33.0	34.7
2	-	-	-	-	-	-	35.5
3	-	-	-	-	-	-	34.3
4	-	-	25.5	-	-	-	-
5	-	33.0	33.0	25.5	33.0	33.0	-
6	38.0	29.3	29.3	25.5	28.7	25.5	31.8
7	30.3	27.6	28.7	31.2	28.7	25.5	31.8
8	27.9	26.3	25.8	28.4	27.8	27.6	32.8
9	26.5	27.3	26.6	26.8	26.2	26.2	31.6
10	27.3	26.0	26.6	27.9	26.6	29.2	28.1
11	27.4	25.6	25.4	26.6	26.9	27.9	28.4
12	27.2	26.6	25.5	26.3	26.8	27.2	26.5
13	27.5	27.6	27.0	26.8	28.5	27.1	27.2
14	25.5	28.5	27.2	27.2	27.2	27.2	27.9
15	26.4	27.1	27.3	26.4	26.9	27.6	28.3
16	25.6	25.1	26.3	26.6	26.4	27.0	28.5
17	26.6	27.2	25.0	26.6	27.2	29.5	28.3
18	27.6	27.2	27.7	28.1	28.3	28.3	30.5
19	27.7	28.8	29.4	26.9	28.6	28.4	28.9
20	29.6	28.0	28.0	26.3	27.4	29.0	29.0
21	29.9	29.7	26.6	30.4	29.4	30.2	31.0
22	25.5	26.8	29.2	31.9	29.2	29.3	29.0
23	29.3	31.0	29.3	30.5	29.6	33.3	28.5
24	43.0	25.5	25.5	27.4	31.8	32.7	32.3
10-12	27.3	26.1	25.4	26.4	26.8	27.6	27.4
14-16	26.0	26.1	26.8	26.5	26.6	27.3	28.4
0-24	29.1	27.6	27.3	27.7	27.9	26.9	30.6

Hr Ending	85TH PERCENTILE						
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21
1	-	-	-	-	-	35.4	37.8
2	-	-	-	-	-	-	44.0
3	-	-	-	-	-	-	39.0
4	-	-	-	-	-	-	46.6
5	-	33.0	-	25.5	-	33.0	-
6	45.1	34.6	34.6	-	-	-	-
7	35.6	32.7	32.7	36.9	32.7	25.5	40.6
8	32.1	30.0	30.3	32.9	32.5	31.3	38.2
9	29.8	31.7	30.8	30.5	29.2	33.2	36.1
10	31.1	31.9	32.2	32.0	32.3	33.8	33.4
11	32.9	29.5	32.9	31.0	30.9	32.5	34.8
12	31.2	30.5	28.8	30.5	31.1	31.7	31.9
13	32.0	32.6	31.4	32.8	30.7	32.0	31.7
14	29.9	31.1	33.0	30.9	30.7	31.7	31.7
15	30.9	31.2	32.6	30.3	30.6	33.1	33.1
16	28.8	29.8	30.9	31.0	30.0	32.6	32.7
17	30.9	31.8	30.5	31.2	31.9	34.4	34.6
18	32.5	31.5	32.3	30.6	32.3	33.1	34.9
19	32.6	33.0	35.0	30.6	33.6	32.6	33.5
20	35.5	31.8	31.8	32.3	28.7	33.4	33.5
21	35.6	37.1	32.8	34.4	35.7	36.8	35.7
22	25.5	32.1	34.2	38.9	35.1	33.8	34.0
23	33.4	36.5	34.6	36.4	35.8	40.3	34.5
24	-	-	-	31.1	37.4	41.9	37.4
10-12	32.0	30.0	30.8	30.8	31.0	32.1	33.3
14-16	29.9	30.5	31.8	30.6	30.3	32.8	32.9
0-24	32.5	32.2	32.3	32.1	32.3	33.6	35.9
7 DAY AVERAGE SPEED	28.5						
7 DAY AVERAGE 85th PERCENTILE	33.1						

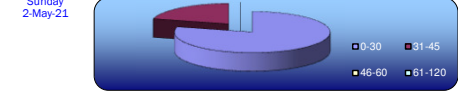
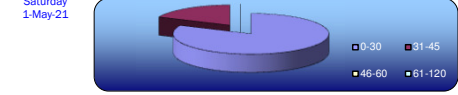
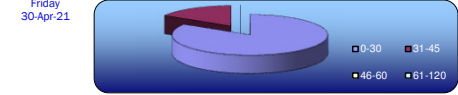
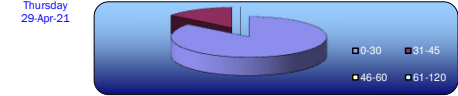
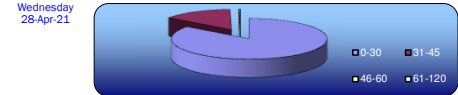
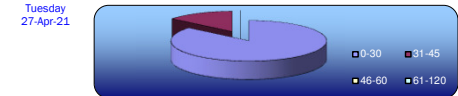
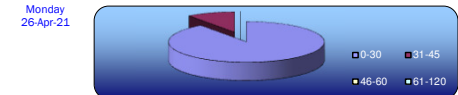
survey and presentation by [trafficsense Ltd.](#)

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 2)

Direction : WESTBOUND

SPEED (MPH)	SPEED SUMMARY							
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21	
0-30	824	826	844	888	936	612	393	
31-45	91	135	145	149	182	137	104	
46-60	0	0	2	0	0	0	0	
61-120	0	0	1	0	0	0	0	
TOTAL	915	961	992	1037	1118	749	497	

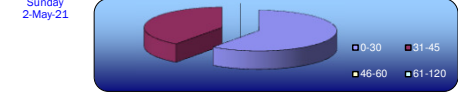
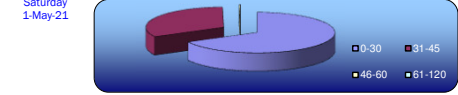
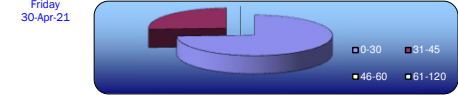
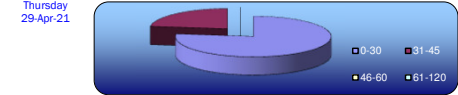
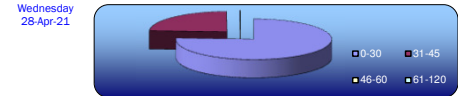
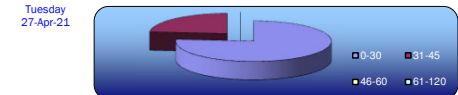
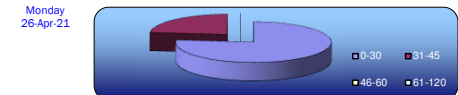
survey and presentation by [trafficsense Ltd.](#)

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (ATC 2)

Direction : EASTBOUND

SPEED (MPH)	SPEED SUMMARY							
	Monday 26-Apr-21	Tuesday 27-Apr-21	Wednesday 28-Apr-21	Thursday 29-Apr-21	Friday 30-Apr-21	Saturday 1-May-21	Sunday 2-May-21	
0-30	698	656	695	749	777	530	345	
31-45	213	203	220	224	270	256	230	
46-60	0	0	1	0	0	2	0	
61-120	0	0	0	0	0	0	0	
TOTAL	911	859	916	973	1047	788	575	

survey and presentation by [trafficsense Ltd.](#)

Automatic Classified Counts, Whitehaven

LOCATION: HARRAS ROAD (

Manual For Streets SSD Calculator

Speed 35 mph Put speed in red box

Speed 15.55556 m/s

t 1.5 s MfS 75.7 & MfS2 Table 10 for Light Veh
d 4.41 m/ss MfS 75.7 & MfS2 Table 10 for Light Veh
a 9.5 % Put gradient in the Yellow Box + for uphill and - for downhill

SSD = vt + v2/ 2(d+0.1a)
= 23.33333 241.9753 10.72

SSD = 45.90566 m

Manual For Streets SSD Calculator

Speed 35 mph Put speed in red box

Speed 15.55556 m/s

t 1.5 s MfS 75.7 & MfS2 Table 10 for Light Veh
d 4.41 m/ss MfS 75.7 & MfS2 Table 10 for Light Veh
a -9.5 % Put gradient in the Yellow Box + for uphill and - for downhill

SSD = vt + v2/ 2(d+0.1a)
= 23.33333 241.9753 6.92

SSD = 58.30086 m

Manual For Streets SSD Calculator

Speed 35 mph Put speed in red box

Speed 15.55556 m/s

t 1.5 s MfS 75.7 & MfS2 Table 10 for Light Veh
d 4.41 m/ss MfS 75.7 & MfS2 Table 10 for Light Veh
a -11 % Put gradient in the Yellow Box + for uphill and - for downhill

SSD = vt + v2/ 2(d+0.1a)
= 23.33333 241.9753 6.62

SSD = 59.88549 m

Manual For Streets SSD Calculator

Speed 33 mph Put speed in red box

Speed 14.66667 m/s

t 1.5 s MfS 75.7 & MfS2 Table 10 for Light Veh
d 4.41 m/ss MfS 75.7 & MfS2 Table 10 for Light Veh
a 11 % Put gradient in the Yellow Box + for uphill and - for downhill

SSD = vt + v2/ 2(d+0.1a)
= 22 215.1111 11.02

SSD = 41.52006 m

Ref: A105041-7

Date: 9th August 2018

Mr S. Macaulay

Manning Elliot

Manelli House

4 Cowper Road

Penrith

CA11 9BN

Dear Stephen,

LAND AT HARRAS ROAD, WHITEHAVEN – ACCESS ADVICE

As requested, we have considered the potential access to land off Harras Road, Whitehaven for a residential development of some 9 homes. The proposed site has 7 private driveway accesses and 1 shared private driveway access. An illustrative layout is shown on Manning Elliot Drawing 1635-PL003, attached.

There is a reserved area for field access incorporated into the layout. It has a suggested carriageway width of 4.8m with 6m kerb radii and space for a footway on each side - a secondary street standard. The 2018 Cumbria Development Design Guide identifies that a single access secondary street (with no emergency vehicle access) can serve up to 50 homes. If a greater number of dwellings is sought, a separate pedestrian/cycle link, to serve as a contingent emergency access, is recommended, and/ or a secondary vehicular access.

The site is located on agricultural land to the north of Harras Road, some 400m east of the A595. Harras Road runs in a general east-west alignment from Red Lonning to Park View and slopes down from east to west. The site has a 240m frontage onto Harras Road.

In the vicinity of the site, Harras Road is some 5m wide with a 1.2m footway on the south side, set behind a 2m verge. The road is lit and subject to a 30mph speed limit.

To determine the visibility splays for the accesses, two speed surveys were carried out by Northern Link Traffic Data Consultancy (NLTDC) from 11th September 2017 to 17th September 2017, one at the eastern

end of the site, and one at the western. The survey data is attached. The speed survey recorded average weekday 85th percentile speeds.

From the speed survey, this portion of Harras Road has 2 distinct speed profiles: the western section and the eastern section, addressed separately below.

Eastern Section

The eastern section has speeds of 32.4mph westbound and 32.8mph eastbound, with an uphill gradient of 11% to the east. There is one private driveway access and two shared private driveway accesses proposed in this section.

As the 85th percentile speeds here are below 37mph, MfS has been used to calculate the required visibility splays. The MfS calculations are attached. All accesses in the eastern section require MfS visibility splays of 2.4m x 54.0m uphill and 2.4m x 40.4m downhill. These visibility splays are shown on WYG Drawing A105041-7/C003 and can be delivered for all.

Western Section

The western section has 85th percentile speeds of 38.6mph westbound and 39.0mph eastbound, with an uphill gradient of 9.5% to the east. There are 2 proposed shared private driveway accesses in this section. The access arrangements are shown on WYG Drawing A105041-7/C003, attached.

Because this section of Harras Road is within a 30mph speed limit and the 85th percentile speeds are greater than 37mph, DMRB provides the appropriate guidance for visibility. For these speeds a splay of 120m would be required. This will significantly intrude on the housing scheme, especially to the east.

The existing speeds on the western section are well above the legal speed limit and traffic calming measures could be used to reduce speeds and improve compliance with the speed limit. Appropriate speed reducing features would be speed tables or speed cushions along the relevant section of Harras Road and they could be located at 70m to 80m spacing as shown illustratively at WYG Drawing A105041-7/C003. The speed tables/cushions would encourage a residential feel to Harras Road and significantly reduce speeds in the vicinity of the whole site. This is likely to reduce 85th percentile vehicle speeds around the western section to less than 35mph. Assuming an 85th percentile speed of 35mph then the MfS guidance would be appropriate

and the visibility requirements are 2.4m x 58.3m uphill and 2.4m x 45.9m downhill for both accesses in the western section. These splays are achievable and are more in keeping with the residential characteristic on Harras Road.

Due to the small size of the proposed development, the traffic impacts are considered negligible and it is expected that the development will have no negative impact on road safety. The traffic survey shows an average of 219 vehicles movements in the AM peak hour and 247 in the PM peak hour. The site is expected to generate 5 vehicle movements in both the AM peak hour and the PM peak hour, 1 vehicle every 12 mins. The local road network is easily capable of accommodating this negligible increase.

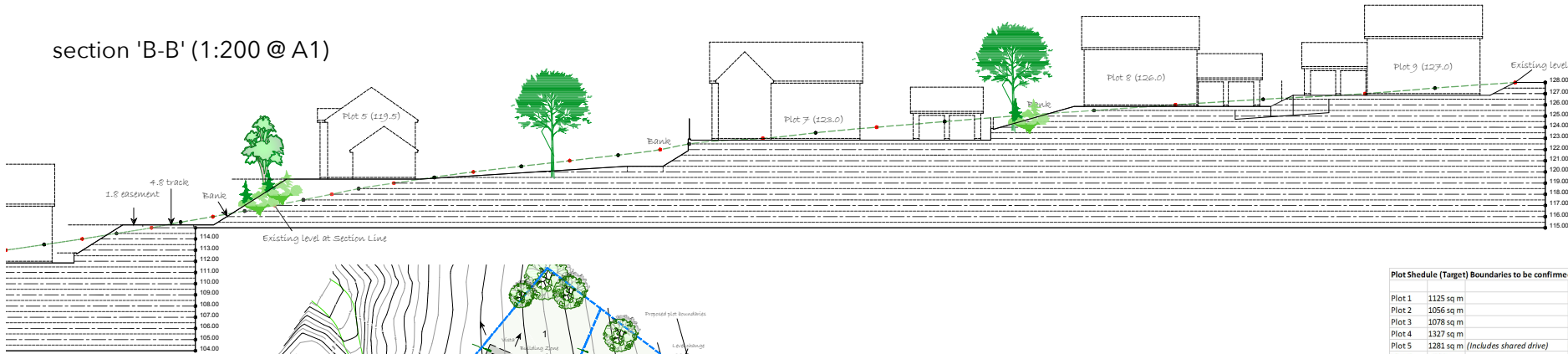
In conclusion, satisfactory access with appropriate visibility splays can be achieved, in conjunction with speed reducing measures, for the proposed development at Harras Road, Whitehaven. Further discussions with Cumbria CC are recommended.

Yours sincerely

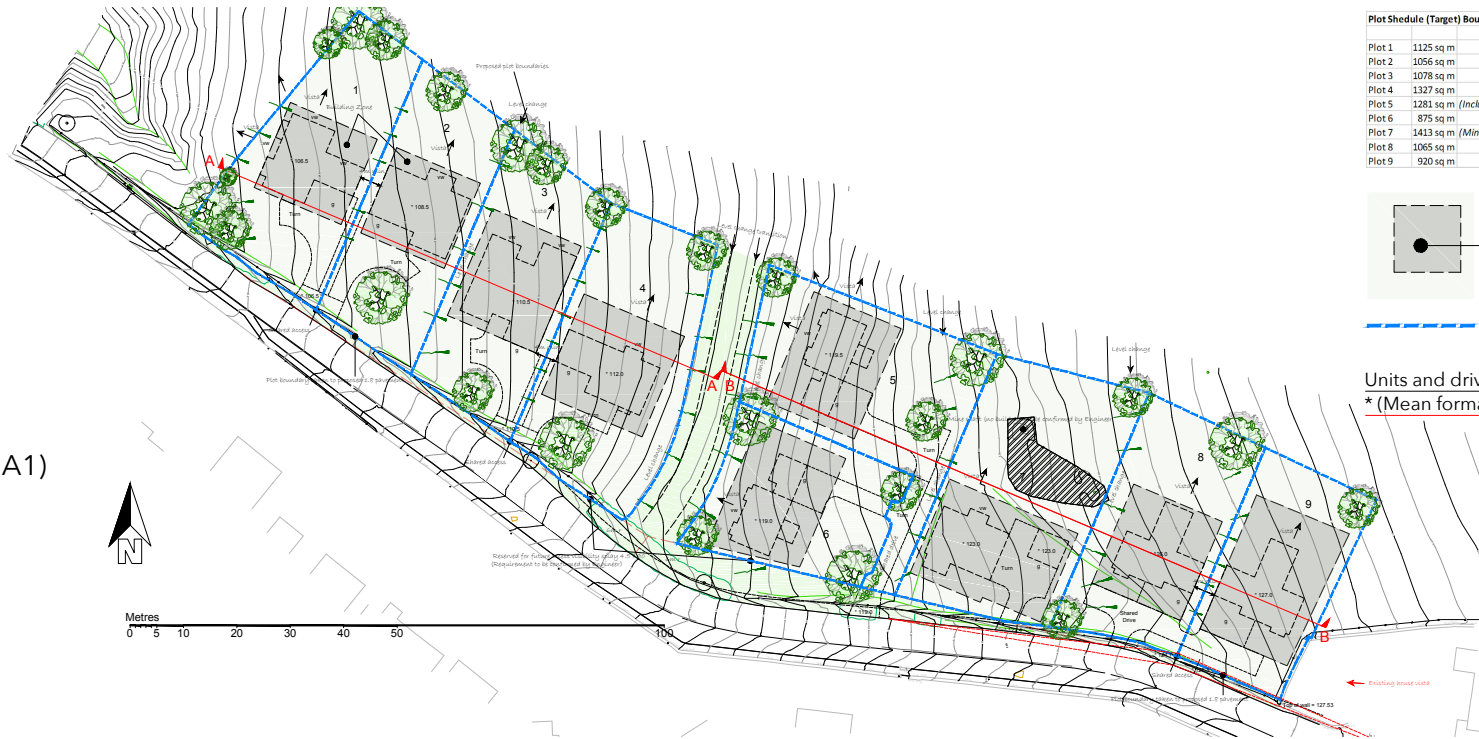
Eleanor Bunn
Transport Planner
For and on behalf of WYG

Enc Manning Elliot Drawing 1635-PL003
Speed Surveys
MfS Visibility Calculations
WYG Drawing A105041-7/C003

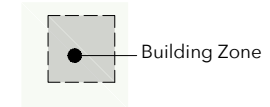
section 'B-B' (1:200 @ A1)



site plan (1:500 @ A1)



Plot Shedule (Target) Boundaries to be confirmed	
Plot 1 1125 sq m	4 no Bed Detached House, up to 2.5 storey
Plot 2 1056 sq m	Bungalow with integral garage
Plot 3 1078 sq m	4 no Bed Detached House with integral garage
Plot 4 1327 sq m	4 no Bed Detached House with attached garage
Plot 5 1281 sq m (Includes shared drive)	4 no Bed Detached House with attached garage
Plot 6 875 sq m	4 no Bed Detached House with attached garage
Plot 7 1413 sq m (Mine issue in garden)	4 no Bed Detached House with attached garage
Plot 8 1065 sq m	4 no Bed Detached House with attached garage
Plot 9 920 sq m	4 no Bed Detached House with attached garage



Plot Boundary (to be confirmed)

Units and drives are indicative
* (Mean formation level) Preliminary

section 'A-A' (1:200 @ A1)



MANNINGELLIOTT
PARTNERSHIP

Chartered Architects & Designers
Mannell House, Suite 1
Copper Road, Porth
Cornwall PL21 9BN
t: 01752 888 888
e: paul@manningelliott.co.uk
w: manningelliott.co.uk

project title:
Proposed Residential Development
Harras Moor
Whitehaven

drawing title:
Site Plan & Sections

issue stage:
PLANNING ISSUE

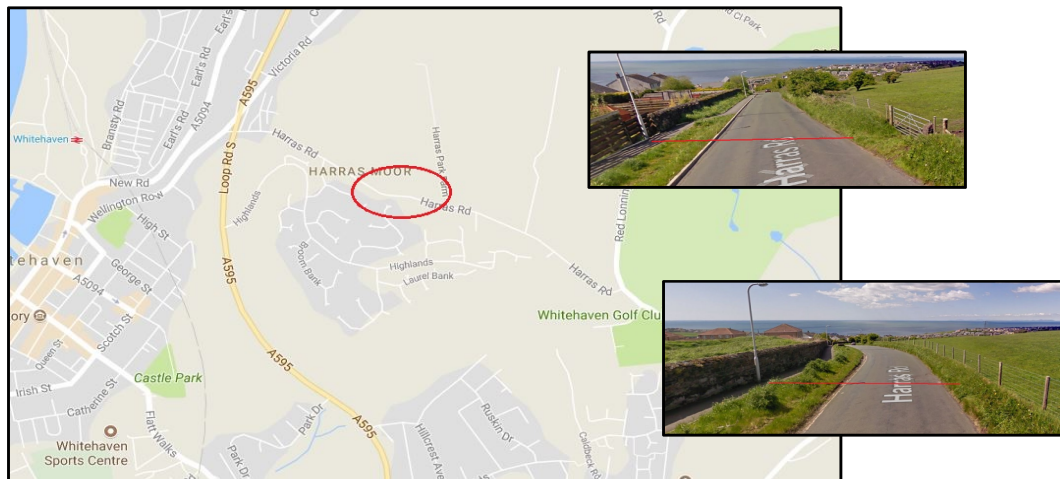
date:
AUG 18

drawn:
SM

scale @ A1/A3:
AS SHOWN

drawing number:
1635 PL003

revision:
-



Survey Dates 12 to 18 September 2017

Report Type 14 Bin Speed + Summary

Notes:

Unit D Baron Way
Kingmoor Business Park
Carlisle
CA6 4SJ

NORTHERN LINK
TRAFFIC DATA CONSULTANCY LTD

A.T.C. Site Visit & Check Schedule

Road Name/No	West Approach Harras Rd Harras Moor
Site ID	14517003
Nat. Grid Ref	NX 98236 18557
Counter Type	EVV
Counter No	1205-80996
Date Installed	11 Sept 2017
Date Removed	19 Sept 2017

VISITS

Date	Data Removed	Battery Changed	Check Count	Tube Failed	Tube Replaced	Remarks
11/9/17			Yes			Tubes Installed
19/9/17	003:0136					Tubes Removed

Channel #1 = West Speed Limit 30
Channel #2 = East

The site has been assessed as per the method statement and is deemed safe for installation.
Technicians Name: P Cocker

Northern Link Traffic Data Consultancy Revision 1.2 March 2015

Unit D Baron Way
Kingmoor Business Park
Carlisle
CA6 4SJ

NORTHERN LINK
TRAFFIC DATA CONSULTANCY LTD

A.T.C. Site Visit & Check Schedule

Road Name/No	East Approach Harras Rd Harras Moor
Site ID	14517001
Nat. Grid Ref	NX 98400 18483
Counter Type	EVV
Counter No	1506-97444
Date Installed	11 Sept 2017
Date Removed	19 Sept 2017

VISITS

Date	Data Removed	Battery Changed	Check Count	Tube Failed	Tube Replaced	Remarks
11/9/17			Yes			Tubes Installed
19/9/17	003:0136					Tubes Removed

Channel #1 = West Speed Limit 30
Channel #2 = East

The site has been assessed as per the method statement and is deemed safe for installation.
Technicians Name: P Cocker

Northern Link Traffic Data Consultancy Revision 1.2 March 2015

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

12 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	2		33	0	0	0	0	0	0	0	2	0	0	0	0	0	0
01:00	1		33	0	0	0	0	0	0	0	1	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	28	30	0	0	0	0	0	0	1	0	0	0	0	0	0	0
04:00	2	30	30	3	0	0	0	0	0	1	1	0	0	0	0	0	0
05:00	6	30	30	6	0	0	0	0	2	1	1	2	0	0	0	0	0
06:00	18	35	30	5	0	0	0	0	4	4	7	3	0	0	0	0	0
07:00	77	34	29	4	0	0	0	0	8	37	28	4	0	0	0	0	0
08:00	185	30	27	3	0	0	0	0	47	113	24	1	0	0	0	0	0
09:00	85	33	28	4	0	0	0	4	12	44	22	3	0	0	0	0	0
10:00	57	33	27	5	0	0	0	3	14	22	17	1	0	0	0	0	0
11:00	74	32	27	4	0	0	0	2	24	32	14	2	0	0	0	0	0
12:00	72	33	29	4	0	0	0	0	6	41	21	4	0	0	0	0	0
13:00	64	33	28	5	0	0	0	1	15	26	19	2	1	0	0	0	0
14:00	69	31	27	4	0	0	0	4	17	33	14	1	0	0	0	0	0
15:00	147	31	27	4	0	0	1	4	38	74	28	2	0	0	0	0	0
16:00	138	34	28	5	0	0	1	3	33	55	35	10	1	0	0	0	0
17:00	115	32	28	4	0	0	0	2	20	64	26	3	0	0	0	0	0
18:00	67	31	28	4	0	0	0	1	13	40	9	4	0	0	0	0	0
19:00	48	32	27	5	0	0	0	3	12	20	12	1	0	0	0	0	0
20:00	26	31	26	5	0	0	0	3	5	11	6	0	0	0	0	0	0
21:00	18	30	26	5	0	0	0	2	5	8	2	1	0	0	0	0	0
22:00	12	29	27	4	0	0	0	0	3	8	0	1	0	0	0	0	0
23:00	3		29	2	0	0	0	0	0	2	1	0	0	0	0	0	0
Total																	
12H(7-19)	1150	32	28	4	0	0	2	24	247	581	257	37	2	0	0	0	0
16H(6-22)	1260	32	28	4	0	0	2	32	274	624	284	42	2	0	0	0	0
18H(6-24)	1275	32	28	4	0	0	2	32	277	634	285	43	2	0	0	0	0
24H(0-24)	1287	32	28	4	0	0	2	32	279	637	290	45	2	0	0	0	0
AM Peak	08:00		01:00	05:00	11:00	11:00	09:00	08:00	08:00	07:00	07:00	11:00	11:00	11:00	11:00	11:00	11:00
	185		33	6	0	0	0	4	47	113	28	4	0	0	0	0	0
PM Peak	15:00	16:00	23:00	16:00	23:00	23:00	15:00	15:00	15:00	16:00	16:00	23:00	23:00	23:00	23:00	23:00	23:00
	147	34	29	5	0	0	1	4	38	74	35	10	1	0	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

12 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	1		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
01:00	1		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	28	30	0	0	0	0	0	0	1	0	0	0	0	0	0	0
04:00	4	31	29	2	0	0	0	0	0	1	3	0	0	0	0	0	0
05:00	3	29	29	2	0	0	0	0	0	2	1	0	0	0	0	0	0
06:00	17	34	30	4	0	0	0	0	1	9	5	2	0	0	0	0	0
07:00	38	33	28	5	0	0	0	2	9	14	12	1	0	0	0	0	0
08:00	92	31	28	3	0	0	0	0	20	52	20	0	0	0	0	0	0
09:00	35	32	28	3	0	0	0	0	4	22	9	0	0	0	0	0	0
10:00	57	33	28	5	0	0	0	1	12	25	16	2	1	0	0	0	0
11:00	76	31	27	4	0	0	0	0	19	42	12	3	0	0	0	0	0
12:00	72	33	29	4	0	0	0	1	13	33	24	2	0	0	0	0	0
13:00	83	33	28	4	0	0	0	1	11	48	20	3	0	0	0	0	0
14:00	97	32	28	4	0	0	0	2	10	61	20	4	0	0	0	0	0
15:00	125	33	28	5	0	0	1	2	31	57	26	8	0	0	0	0	0
16:00	189	31	27	4	0	0	0	3	42	108	32	4	0	0	0	0	0
17:00	154	33	28	4	0	0	0	5	25	76	45	5	0	0	0	0	0
18:00	68	33	28	4	0	0	0	1	9	40	13	4	1	0	0	0	0
19:00	40	33	28	5	0	0	0	2	6	20	9	3	0	0	0	0	0
20:00	41	33	28	5	0	0	0	2	6	17	14	2	0	0	0	0	0
21:00	30	33	27	5	0	0	0	2	6	14	8	1	0	0	0	0	0
22:00	9	29	25	5	0	0	0	0	2	4	2	1	0	0	0	0	0
23:00	7		29	5	0	0	0	1	0	2	4	0	0	0	0	0	0
Total																	
12H(7-19)	1088	32	28	4	0	0	1	17	205	578	249	36	2	0	0	0	0
16H(6-22)	1216	33	28	4	0	0	3	21	223	638	285	44	2	0	0	0	0
18H(6-24)	1232	33	28	4	0	0	3	22	225	644	291	45	2	0	0	0	0
24H(0-24)	1242	33	28	4	0	0	3	22	225	648	295	47	2	0	0	0	0
AM Peak	08:00		01:00	07:00	11:00	11:00	11:00	07:00	08:00	08:00	08:00	11:00	10:00	11:00	11:00	11:00	11:00
	92		38	5	0	0	0	2	20	52	20	3	1	0	0	0	0
PM Peak	16:00	20:00	23:00	21:00	23:00	23:00	21:00	17:00	16:00	16:00	17:00	15:00	18:00	23:00	23:00	23:00	23:00
	189	33	29	5	0	0	2	5	42	108	45	8	1	0	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

12 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	3	34	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0
01:00	2	35	3	0	0	0	0	0	0	0	1	1	0	0	0	0	0
02:00	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	2	28	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
04:00	6	31	2	0	0	0	0	0	0	2	4	0	0	0	0	0	0
05:00	9	30	5	0	0	0	0	0	2	3	2	2	0	0	0	0	0
06:00	35	35	30	5	0	0	0	0	5	13	12	5	0	0	0	0	0
07:00	115	33	29	4	0	0	0	2	17	51	40	5	0	0	0	0	0
08:00	277	30	27	3	0	0	0	0	67	165	44	1	0	0	0	0	0
09:00	120	33	28	4	0	0	0	4	16	66	31	3	0	0	0	0	0
10:00	114	33	28	5	0	0	0	4	26	47	33	3	1	0	0	0	0
11:00	150	32	27	4	0	0	0	2	43	74	26	5	0	0	0	0	0
12:00	144	33	29	4	0	0	0	0	19	74	45	6	0	0	0	0	0
13:00	147	33	28	4	0	0	0	2	26	74	39	5	1	0	0	0	0
14:00	168	32	28	4	0	0	0	6	27	94	34	5	0	0	0	0	0
15:00	272	32	27	4	0	0	2	6	69	131	54	10	0	0	0	0	0
16:00	327	32	28	4	0	0	1	6	75	163	67	14	1	0	0	0	0
17:00	271	33	28	4	0	0	0	7	45	140	71	8	0	0	0	0	0
18:00	135	32	28	4	0	0	0	2	22	80	22	8	1	0	0	0	0
19:00	88	33	28	5	0	0	0	5	18	40	21	4	0	0	0	0	0
20:00	67	33	28	5	0	0	0	5	12	28	20	2	0	0	0	0	0
21:00	48	32	27	5	0	0	2	2	10	22	10	2	0	0	0	0	0
22:00	21	31	28	4	0	0	0	0	5	12	2	2	0	0	0	0	0
23:00	10	33	29	5	0	0	0	1	0	4	5	0	0	0	0	0	0
Total																	
19H(7-19)	2238	32	28	4	0	0	3	41	452	1159	506	73	4	0	0	0	0
16H(6-22)	2476	33	28	4	0	0	5	53	497	1262	569	86	4	0	0	0	0
18H(6-24)	2507	33	28	4	0	0	5	54	502	1278	576	88	4	0	0	0	0
24H(0-24)	2529	33	28	4	0	0	5	54	504	1285	585	92	4	0	0	0	0
AM Peak	08:00 277	01:00 35	05:00 50		11:00 0	11:00 0	11:00 0	10:00 4	08:00 67	08:00 165	08:00 44	11:00 5	11:00 1	11:00 0	11:00 0	11:00 0	11:00 0
PM Peak	16:00 327	12:00 33	23:00 29	21:00 21	23:00 0	23:00 0	21:00 2	17:00 7	16:00 75	16:00 163	17:00 71	16:00 14	18:00 1	23:00 0	23:00 1	23:00 0	23:00 0

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

13 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	4		30	8	0	0	0	0	1	2	0	0	1	0	0	0	0
05:00	4		29	2	0	0	0	0	0	3	1	0	0	0	0	0	0
06:00	8		33	3	0	0	0	0	0	2	5	2	0	0	0	0	0
07:00	68	32	28	4	0	0	0	1	8	40	15	2	0	0	0	0	0
08:00	209	31	27	4	0	0	1	3	41	124	36	4	0	0	0	0	0
09:00	95	32	28	4	0	0	0	0	15	56	19	5	0	0	0	0	0
10:00	69	32	27	5	0	0	1	4	19	27	17	1	0	0	0	0	0
11:00	77	31	27	4	0	0	0	5	20	37	14	1	0	0	0	0	0
12:00	63	32	28	4	0	0	0	0	13	31	19	0	0	0	0	0	0
13:00	66	33	28	4	0	0	0	3	10	31	20	2	0	0	0	0	0
14:00	73	31	27	3	0	0	0	0	18	42	13	0	0	0	0	0	0
15:00	122	31	27	3	0	0	0	1	30	69	21	1	0	0	0	0	0
16:00	136	32	28	4	0	0	0	1	20	79	32	4	0	0	0	0	0
17:00	112	30	27	4	0	0	1	1	28	63	18	1	0	0	0	0	0
18:00	51	31	28	4	0	0	1	0	6	33	10	1	0	0	0	0	0
19:00	55	33	28	4	0	0	0	2	12	21	19	1	0	0	0	0	0
20:00	35	31	28	3	0	0	0	0	9	19	5	1	1	0	0	0	0
21:00	24	33	28	5	0	0	1	0	3	12	6	2	0	0	0	0	0
22:00	10	33	29	4	0	0	0	0	2	3	5	0	0	0	0	0	0
23:00	3		28	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Total																	
12H(7-19)	1139	32	28	4	0	0	4	19	228	632	234	22	0	0	0	0	0
16H(6-22)	1262	32	28	4	0	0	5	21	252	686	269	28	1	0	0	0	0
18H(6-24)	1275	32	28	4	0	0	5	21	254	692	274	28	1	0	0	0	0
24H(0-24)	1283	32	28	4	0	0	5	21	255	697	275	28	2	0	0	0	0
AM Peak	08:00 209				11:00 0	11:00 0	10:00 1	10:00 5	08:00 41	08:00 124	08:00 36	09:00 5	04:00 1	11:00 0	11:00 0	11:00 0	11:00 0
PM Peak	16:00 136	21:00 33	22:00 29	21:00 5	23:00 0	23:00 0	21:00 1	13:00 3	15:00 30	16:00 79	16:00 32	16:00 4	16:00 20	23:00 1	23:00 0	23:00 0	23:00 0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

13 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	2		33	0	0	0	0	0	0	2	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1		28	0	0	0	0	0	0	1	0	0	0	0	0	0	0
04:00	1		23	0	0	0	0	0	1	0	0	0	0	0	0	0	0
05:00	3		29	6	0	0	0	0	1	1	0	1	0	0	0	0	0
06:00	13	37	33	4	0	0	0	0	0	4	5	4	0	0	0	0	0
07:00	44	34	29	5	0	0	1	9	17	12	4	1	0	0	0	0	0
08:00	99	30	27	3	0	0	0	2	22	59	16	0	0	0	0	0	0
09:00	56	34	29	4	0	0	0	10	27	14	4	1	0	0	0	0	0
10:00	59	33	28	4	0	0	0	2	8	32	15	2	0	0	0	0	0
11:00	72	32	28	4	0	0	0	0	15	37	19	0	1	0	0	0	0
12:00	64	32	28	3	0	0	0	0	12	35	17	0	0	0	0	0	0
13:00	76	31	28	3	0	0	0	1	14	45	15	1	0	0	0	0	0
14:00	107	34	29	4	0	0	0	1	15	51	33	7	0	0	0	0	0
15:00	123	33	28	5	0	0	1	4	21	64	25	6	1	1	0	0	0
16:00	154	33	28	4	0	0	0	4	30	73	42	5	0	0	0	0	0
17:00	115	34	29	4	0	0	0	0	13	60	34	8	0	0	0	0	0
18:00	78	33	28	4	0	0	0	2	12	42	19	2	1	0	0	0	0
19:00	57	34	30	5	0	0	0	0	9	23	21	3	0	0	0	1	0
20:00	44	33	28	5	0	0	0	2	9	18	13	2	0	0	0	0	0
21:00	26	31	28	3	0	0	0	0	6	14	6	0	0	0	0	0	0
22:00	12	34	31	6	0	0	0	0	2	3	6	0	0	1	0	0	0
23:00	14	36	30	6	0	0	0	0	2	6	3	2	1	0	0	0	0
Total																	
12H(7-19)	1047	33	28	4	0	0	1	17	181	542	261	39	5	1	0	0	0
16H(6-22)	1187	33	28	4	0	0	1	19	205	601	306	48	5	1	0	1	0
18H(6-24)	1213	33	28	4	0	0	1	19	209	610	315	50	6	2	0	1	0
24H(0-24)	1220	33	28	4	0	0	1	19	211	612	317	51	6	2	0	1	0
AM Peak	08:00 99				11:00 0	11:00 0	10:00 2	10:00 22	08:00 59	08:00 19	11:00 4	09:00 1	11:00 0	11:00 0	11:00 0	11:00 0	11:00 0
PM Peak	16:00 154	23:00 36	22:00 31	22:00 6	23:00 0	23:00 0	15:00 1	16:00 4	16:00 30	16:00 73	16:00 42	17:00 8	23:00 1	22:00 1	23:00 0	19:00 1	23:00 0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

13 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	2		33	0	0	0	0	0	0	2	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1		28	0	0	0	0	0	0	1	0	0	0	0	0	0	0
04:00	5		29	7	0	0	0	0	2	2	0	0	1	0	0	0	0
05:00	7		29	4	0	0	0	0	1	4	1	1	0	0	0	0	0
06:00	22	37	33	4	0	0	0	0	0	6	10	6	0	0	0	0	0
07:00	110	33	28	4	0	0	0	2	17	57	27	6	1	0	0	0	0
08:00	308	31	27	4	0	0	1	5	63	183	52	4	0	0	0	0	0
09:00	151	33	28	4	0	0	0	0	25	83	33	9	1	0	0	0	0
10:00	128	32	27	5	0	0	1	6	27	59	32	3	0	0	0	0	0
11:00	149	32	27	4	0	0	0	5	35	74	33	1	1	0	0	0	0
12:00	127	32	28	3	0	0	0	0	25	66	36	0	0	0	0	0	0
13:00	142	32	28	4	0	0	0	4	24	76	35	3	0	0	0	0	0
14:00	180	33	28	4	0	0	0	1	33	93	46	7	0	0	0	0	0
15:00	245	32	28	4	0	0	1	5	51	133	46	7	1	1	0	0	0
16:00	290	33	28	4	0	0	0	5	50	152	74	9	0	0	0	0	0
17:00	227	33	28	4	0	0	1	1	41	123	52	9	0	0	0	0	0
18:00	129	32	28	4	0	0	1	2	18	75	29	3	1	0	0	0	0
19:00	112	33	29	5	0	0	0	2	21	44	40	4	0	0	0	1	0
20:00	79	33	28	5	0	0	0	2	18	37	18	3	1	0	0	0	0
21:00	50	33	28	4	0	0	1	0	9	26	12	2	0	0	0	0	0
22:00	23	34	30	5	0	0	0	0	4	6	11	0	0	0	1	0	0
23:00	17	35	30	5	0	0	0	0	2	9	3	2	1	0	0	0	0
Total																	
12H(7-19)	2186	32	28	4	0	0	5	36	409	1174	495	61	5	1	0	0	0
16H(6-22)	2449	33	28	4	0	0	6	40	457	1287	575	76	6	1	0	1	0
18H(6-24)	2488	33	28	4	0	0	6	40	463	1302	589	78	7	2	0	1	0
24H(6-24)	2503	33	28	4	0	0	6	40	466	1309	592	79	8	2	0	1	0
AM Peak	08:00				11:00	11:00	10:00	10:00	08:00	08:00	08:00	09:00	11:00	11:00	11:00	11:00	11:00
	3008				0	0	1	6	63	183	52	9	1	0	0	0	0
PM Peak	16:00	23:00	22:00	22:00	23:00	23:00	21:00	16:00	15:00	16:00	16:00	17:00	23:00	22:00	23:00	19:00	23:00
	2900	35	30	5	0	0	1	5	51	152	74	9	1	1	0	1	0

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

14 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	5		29	2	0	0	0	0	4	1	0	0	0	0	0	0	0
05:00	5		29	2	0	0	0	0	0	4	1	0	0	0	0	0	0
06:00	18	34	30	4	0	0	0	0	1	8	7	2	0	0	0	0	0
07:00	74	34	29	4	0	0	0	0	11	35	23	5	0	0	0	0	0
08:00	184	30	26	4	0	0	6	62	90	26	0	0	0	0	0	0	0
09:00	93	32	28	4	0	0	0	4	17	51	16	5	0	0	0	0	0
10:00	96	32	27	4	0	0	0	7	20	45	23	1	0	0	0	0	0
11:00	88	30	26	4	0	0	0	3	30	42	13	0	0	0	0	0	0
12:00	104	32	27	4	0	0	0	5	29	47	23	0	0	0	0	0	0
13:00	87	32	27	4	0	0	0	4	25	39	17	1	1	0	0	0	0
14:00	89	32	28	4	0	0	0	0	20	49	17	3	0	0	0	0	0
15:00	127	31	27	5	0	0	0	10	34	58	21	4	0	0	0	0	0
16:00	182	31	27	4	0	0	2	6	38	102	28	6	0	0	0	0	0
17:00	112	32	28	4	0	0	0	1	17	66	22	4	2	0	0	0	0
18:00	93	31	28	4	0	0	0	2	13	58	19	0	1	0	0	0	0
19:00	63	33	28	4	0	0	0	2	14	26	20	1	0	0	0	0	0
20:00	29	33	28	5	0	0	0	1	5	15	5	0	0	0	0	0	0
21:00	17	31	28	3	0	0	0	0	3	10	4	0	0	0	0	0	0
22:00	12	37	31	5	0	0	0	0	1	5	3	2	1	0	0	0	0
23:00	7		30	6	0	0	0	0	1	4	1	0	1	0	0	0	0
Total																	
12H(7-19)	1329	32	27	4	0	0	2	48	316	682	248	29	4	0	0	0	0
16H(6-22)	1456	32	27	4	0	0	3	50	339	741	284	35	4	0	0	0	0
18H(6-24)	1475	32	27	4	0	0	3	50	341	750	288	37	6	0	0	0	0
24H(0-24)	1485	32	27	4	0	0	3	50	341	758	290	37	6	0	0	0	0
AM Peak	08:00				11:00	11:00	10:00	08:00	08:00	08:00	09:00	11:00	11:00	11:00	11:00	11:00	11:00
	184				0	0	0	7	62	90	26	5	0	0	0	0	0
PM Peak	16:00	22:00	22:00	23:00	23:00	23:00	16:00	15:00	16:00	16:00	16:00	17:00	23:00	23:00	23:00	23:00	23:00
	182	37	31	6	0	0	2	10	38	102	28	6	2	0	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

14 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	1		38	0	0	0	0	0	0	0	1	0	0	0	0	0	0
01:00	1		28	0	0	0	0	0	1	0	0	0	0	0	0	0	0
02:00	1		33	0	0	0	0	0	0	1	0	0	0	0	0	0	0
03:00	2		33	5	0	0	0	0	0	1	0	1	0	0	0	0	0
04:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	4		33	4	0	0	0	0	0	1	2	1	0	0	0	0	0
06:00	14		33	29	4	0	0	0	2	6	5	1	0	0	0	0	0
07:00	94	33	29	3	0	0	0	1	21	10	2	0	0	0	0	0	0
08:00	108	31	27	4	0	0	0	3	26	56	21	0	0	0	0	0	0
09:00	54	33	28	4	0	0	0	1	8	27	17	1	0	0	0	0	0
10:00	55	33	27	5	0	0	1	3	11	24	14	2	0	0	0	0	0
11:00	74	32	26	5	0	0	0	7	23	27	14	3	0	0	0	0	0
12:00	74	31	27	4	0	0	1	20	38	12	2	1	0	0	0	0	0
13:00	71	32	27	4	0	0	0	2	17	35	16	1	0	0	0	0	0
14:00	103	33	28	4	0	0	0	0	18	55	25	5	0	0	0	0	0
15:00	134	33	27	5	0	0	2	10	31	50	34	6	1	0	0	0	0
16:00	154	32	28	4	0	0	0	2	25	85	38	2	2	0	0	0	0
17:00	158	34	28	4	0	0	0	0	15	84	49	9	1	0	0	0	0
18:00	93	33	29	4	0	0	0	1	13	52	20	6	1	0	0	0	0
19:00	74	33	29	4	0	0	0	0	8	40	23	3	0	0	0	0	0
20:00	49	34	30	5	0	0	0	0	6	24	13	5	1	0	0	0	0
21:00	34	30	28	3	0	0	1	3	25	4	1	0	0	0	0	0	0
22:00	21	33	29	4	0	0	0	0	3	10	7	1	0	0	0	0	0
23:00	9		30	3	0	0	0	0	1	2	6	0	0	0	0	0	0
Total																	
12H(7-19)	1110	33	28	4	0	0	3	30	208	554	270	39	6	0	0	0	0
16H(6-22)	1281	33	28	4	0	0	3	31	227	649	315	49	7	0	0	0	0
18H(6-24)	1311	33	28	4	0	0	3	31	231	661	328	50	7	0	0	0	0
24H(0-24)	1320	33	28	4	0	0	3	31	231	664	331	53	7	0	0	0	0
AM Peak	08:00		00:00	03:00	11:00	11:00	10:00	11:00	08:00	08:00	08:00	11:00	11:00	11:00	11:00	11:00	11:00
	106		38	5	0	0	1	7	26	56	21	3	0	0	0	0	0
PM Peak	17:00	20:00	23:00	15:00	23:00	23:00	15:00	15:00	15:00	16:00	17:00	17:00	16:00	23:00	23:00	23:00	23:00
	158	34	30	5	0	0	2	10	31	85	49	9	2	0	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

14 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10	Bin 2 10-13	Bin 3 13-15	Bin 4 15-20	Bin 5 20-23	Bin 6 23-26	Bin 7 26-33	Bin 8 33-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	1		38	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	1		28	0	0	0	0	0	0	1	0	0	0	0	0	0	0
02:00	1		33	0	0	0	0	0	0	0	1	0	0	0	0	0	0
03:00	2		33	5	0	0	0	0	0	1	0	1	0	0	0	0	0
04:00	5		29	2	0	0	0	0	0	4	1	0	0	0	0	0	0
05:00	9		30	3	0	0	0	0	0	5	3	1	0	0	0	0	0
06:00	32	34	30	4	0	0	0	0	3	14	12	3	0	0	0	0	0
07:00	108	34	29	4	0	0	0	0	12	56	33	7	0	0	0	0	0
08:00	290	30	26	4	0	0	0	9	88	146	47	0	0	0	0	0	0
09:00	147	32	28	4	0	0	0	5	25	78	33	6	0	0	0	0	0
10:00	151	32	27	5	0	0	1	10	31	69	37	3	0	0	0	0	0
11:00	162	31	26	4	0	0	0	10	53	69	27	3	0	0	0	0	0
12:00	178	32	27	4	0	0	0	6	49	85	35	2	1	0	0	0	0
13:00	158	32	27	4	0	0	0	6	42	74	33	2	1	0	0	0	0
14:00	192	32	28	4	0	0	0	0	38	104	42	8	0	0	0	0	0
15:00	261	32	27	5	0	0	2	20	65	108	55	10	1	0	0	0	0
16:00	336	32	28	4	0	0	2	8	63	187	66	8	2	0	0	0	0
17:00	270	33	29	4	0	0	0	32	150	71	13	3	0	0	0	0	0
18:00	184	32	28	4	0	0	0	3	26	110	39	6	2	0	0	0	0
19:00	137	33	28	4	0	0	0	2	22	66	43	4	0	0	0	0	0
20:00	78	34	29	5	0	0	1	0	11	39	18	8	1	0	0	0	0
21:00	51	31	28	3	0	0	0	1	6	35	8	1	0	0	0	0	0
22:00	33	34	30	5	0	0	0	0	4	15	10	3	1	0	0	0	0
23:00	16	34	30	5	0	0	0	0	2	6	7	0	1	0	0	0	0
Total																	
12M(6-22)	2439	32	27	4	0	0	5	78	524	1236	518	68	10	0	0	0	0
16M(6-22)	2737	32	28	4	0	0	6	81	566	1390	599	84	11	0	0	0	0
18M(6-24)	2786	32	28	4	0	0	6	81	572	1411	616	87	13	0	0	0	0
24M(6-24)	2805	32	28	4	0	0	6	81	572	1422	621	90	13	0	0	0	0
AM Peak	08:00 2900 38	5	00:00 38	03:00 5	11:00 0	11:00 0	10:00 0	11:00 0	08:00 18	08:00 46	07:00 7	09:00 0	11:00 0	11:00 0	11:00 0	11:00 0	11:00 0
PM Peak	16:00 336	22:00 34	23:00 30	15:00 5	23:00 0	23:00 0	16:00 2	15:00 20	15:00 6	16:00 187	17:00 71	17:00 13	17:00 3	23:00 0	23:00 0	23:00 0	23:00 0

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

15 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	5		37	2	2	0	0	0	0	0	1	4	0	0	0	0	0
01:00	1		33	0	0	0	0	0	0	0	1	0	0	0	0	0	0
02:00	1		33	0	0	0	0	0	0	0	1	0	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	5		33	3	0	0	0	0	0	1	3	1	0	0	0	0	0
05:00	8		24	3	0	0	0	1	3	4	0	0	0	0	0	0	0
06:00	13	34	31	3	0	0	0	0	0	6	6	1	0	0	0	0	0
07:00	73	34	30	4	0	0	0	0	5	35	26	7	0	0	0	0	0
08:00	197	32	28	4	0	0	0	2	33	113	46	3	0	0	0	0	0
09:00	94	34	29	4	0	0	0	2	12	46	26	8	0	0	0	0	0
10:00	83	33	28	4	0	0	0	3	16	40	21	3	0	0	0	0	0
11:00	83	31	26	4	0	0	0	5	28	34	14	2	0	0	0	0	0
12:00	95	33	28	5	0	0	1	2	19	42	26	5	0	0	0	0	0
13:00	79	33	28	4	0	0	0	2	9	45	19	3	1	0	0	0	0
14:00	88	31	27	3	0	0	0	0	20	51	16	1	0	0	0	0	0
15:00	159	32	28	4	0	0	1	4	18	100	34	2	0	0	0	0	0
16:00	126	31	27	4	0	0	1	2	27	73	21	2	0	0	0	0	0
17:00	104	33	28	4	0	0	0	3	23	50	23	5	0	0	0	0	0
18:00	57	33	29	4	0	0	0	1	8	28	17	3	0	0	0	0	0
19:00	69	32	27	4	0	0	1	0	24	28	14	2	0	0	0	0	0
20:00	38	31	28	5	0	0	0	0	7	24	14	1	2	0	0	0	0
21:00	18	35	30	4	0	0	0	0	2	8	5	3	0	0	0	0	0
22:00	22	31	27	4	0	0	0	1	5	11	5	0	0	0	0	0	0
23:00	18	35	29	7	0	0	0	3	2	4	6	3	0	0	0	0	0
Total																	
12H(7-19)	1238	33	28	4	0	0	3	26	218	657	289	44	1	0	0	0	0
16H(6-22)	1376	33	28	4	0	0	4	26	251	723	318	51	3	0	0	0	0
18H(6-24)	1416	33	28	4	0	0	4	30	258	738	329	54	3	0	0	0	0
24H(0-24)	1436	33	28	4	0	0	4	31	261	743	335	59	3	0	0	0	0
AM Peak	08:00	00:00	11:00	11:00	11:00	11:00	11:00	08:00	08:00	08:00	09:00	11:00	11:00	11:00	11:00	11:00	11:00
	197		37	4	0	0	0	5	33	113	46	8	0	0	0	0	0
PM Peak	15:00	21:00	21:00	23:00	23:00	19:00	15:00	16:00	15:00	15:00	17:00	20:00	23:00	23:00	23:00	23:00	23:00
	159	35	30	7	0	0	1	4	27	100	34	5	2	0	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

15 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	5		36	5	0	0	0	0	0	1	1	2	1	0	0	0	0
01:00	5		33	3	0	0	0	0	1	3	1	0	0	0	0	0	0
02:00	3		39	2	0	0	0	0	0	0	2	1	0	0	0	0	0
03:00	1		48	0	0	0	0	0	0	1	0	0	0	0	0	0	0
04:00	1		48	0	0	0	0	0	0	0	0	0	1	0	0	0	0
05:00	6		29	4	0	0	0	0	1	2	3	0	0	0	0	0	0
06:00	18	31	28	4	0	0	0	1	2	11	3	1	0	0	0	0	0
07:00	29	33	29	4	0	0	0	3	14	11	1	0	0	0	0	0	0
08:00	91	32	27	4	0	0	1	2	16	52	18	2	0	0	0	0	0
09:00	57	33	29	4	0	0	0	0	11	26	16	4	0	0	0	0	0
10:00	78	33	28	5	0	0	1	0	17	37	16	7	0	0	0	0	0
11:00	84	31	27	4	0	0	0	1	20	46	16	1	0	0	0	0	0
12:00	70	34	29	4	0	0	1	9	38	14	8	0	0	0	0	0	0
13:00	86	33	28	4	0	0	0	0	21	38	26	1	0	0	0	0	0
14:00	135	33	28	4	0	0	1	0	24	71	36	2	1	0	0	0	0
15:00	154	32	28	4	0	0	0	1	28	87	35	3	0	0	0	0	0
16:00	153	32	28	4	0	0	0	2	22	88	38	3	0	0	0	0	0
17:00	157	33	29	4	0	0	0	4	16	85	43	8	1	0	0	0	0
18:00	99	34	30	4	0	0	0	0	10	49	29	10	1	0	0	0	0
19:00	66	33	28	4	0	0	0	0	20	27	15	4	0	0	0	0	0
20:00	61	33	29	5	0	0	0	0	15	26	15	2	3	0	0	0	0
21:00	38	34	29	5	0	0	0	1	7	13	10	1	1	0	0	0	0
22:00	31	32	28	5	0	0	0	1	8	14	6	1	1	0	0	0	0
23:00	34	34	29	5	0	0	0	1	7	14	8	4	0	0	0	0	0
Total																	
12H(7-19)	1193	33	28	4	0	0	3	11	197	631	298	50	3	0	0	0	0
16H(6-22)	1366	33	28	4	0	0	3	13	236	708	341	58	7	0	0	0	0
18H(6-24)	1431	33	28	4	0	0	3	15	251	736	355	63	8	0	0	0	0
24H(0-24)	1452	33	28	4	0	0	3	15	252	741	362	68	10	1	0	0	0
AM Peak	08:00	04:00	00:00	11:00	11:00	10:00	08:00	11:00	08:00	08:00	10:00	02:00	04:00	11:00	11:00	11:00	11:00
	91	48	5	0	0	1	2	20	52	18	7	1	1	0	0	0	0
PM Peak	17:00	18:00	18:00	20:00	23:00	23:00	14:00	17:00	15:00	16:00	17:00	18:00	20:00	23:00	23:00	23:00	23:00
	157	34	30	5	0	0	1	4	28	88	43	10	3	0	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

15 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	10	39	36	4	0	0	0	0	0	1	2	5	1	0	0	0	0
01:00	6		33	3	0	0	0	0	0	1	4	1	0	0	0	0	0
02:00	4		38	4	0	0	0	0	0	1	2	1	0	0	0	0	0
03:00	1		28	0	0	0	0	0	0	1	0	0	0	0	0	0	0
04:00	6		35	6	0	0	0	0	0	1	3	1	0	1	0	0	0
05:00	14	31	26	4	0	0	0	1	4	6	3	0	0	0	0	0	0
06:00	31	33	29	4	0	0	0	1	2	17	9	2	0	0	0	0	0
07:00	102	34	30	4	0	0	0	0	8	49	37	8	0	0	0	0	0
08:00	288	32	28	4	0	0	1	4	49	165	64	5	0	0	0	0	0
09:00	151	34	29	4	0	0	0	2	23	72	42	12	0	0	0	0	0
10:00	161	33	28	4	0	0	1	3	33	77	37	10	0	0	0	0	0
11:00	167	31	27	4	0	0	0	6	48	80	30	3	0	0	0	0	0
12:00	165	33	28	5	0	0	1	3	28	80	40	13	0	0	0	0	0
13:00	165	33	28	4	0	0	0	2	30	83	45	4	1	0	0	0	0
14:00	223	32	28	4	0	0	1	0	44	122	52	3	1	0	0	0	0
15:00	313	32	28	4	0	0	1	5	46	187	69	5	0	0	0	0	0
16:00	279	32	28	4	0	0	1	4	49	161	59	5	0	0	0	0	0
17:00	261	33	28	4	0	0	0	7	39	135	66	13	1	0	0	0	0
18:00	154	34	29	4	0	0	0	1	18	77	46	13	1	0	0	0	0
19:00	135	32	27	4	0	0	1	0	44	55	29	6	0	0	0	0	0
20:00	99	33	28	5	0	0	0	0	22	50	19	3	5	0	0	0	0
21:00	46	34	30	5	0	0	0	0	1	4	21	15	4	1	0	0	0
22:00	53	32	27	5	0	0	0	2	13	25	15	7	0	0	0	0	0
23:00	52	35	29	6	0	0	0	0	4	9	18	14	7	0	0	0	0
Total																	
12M(7-19)	2431	33	28	4	0	0	6	37	415	1288	587	94	4	0	0	0	0
16M(6-22)	2742	33	28	4	0	0	7	39	487	1431	659	109	10	0	0	0	0
18M(6-24)	2847	33	28	4	0	0	7	45	509	1474	684	117	11	0	0	0	0
24M(0-24)	2888	33	28	4	0	0	7	46	513	1484	697	127	13	1	0	0	0
AM Peak	08:00 - 08:59	00:00 - 01:00	02:00 - 04:00	04:00 - 04:59	11:00 - 11:59	10:00 - 10:59	11:00 - 11:59	08:00 - 08:59	08:00 - 08:59	09:00 - 09:59	09:00 - 09:59	02:00 - 02:59	04:00 - 04:59	11:00 - 11:59	11:00 - 11:59	11:00 - 11:59	11:00 - 11:59
	288	39	38	6	0	0	1	6	49	165	64	12	1	1	0	0	0
PM Peak	15:00 - 15:59	23:00 - 23:59	21:00 - 23:00	23:00 - 23:59	23:00 - 23:59	19:00 - 19:59	17:00 - 17:59	16:00 - 16:59	15:00 - 15:59	18:00 - 18:59	18:00 - 18:59	20:00 - 20:59	23:00 - 23:59	23:00 - 23:59	23:00 - 23:59	23:00 - 23:59	23:00 - 23:59
	313	35	30	6	0	0	1	7	49	187	69	13	5	0	0	0	0

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

16 September 2017

Channel: West

	Total Volume	5th Per Cent	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	17	33	29	4	0	0	0	0	3	8	5	1	0	0	0	0	0
01:00	2	33	33	5	0	0	0	0	0	0	1	2	0	0	0	0	0
02:00	5	34	34	4	0	0	0	0	0	1	2	2	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	2		28	0	0	0	0	0	0	2	0	0	0	0	0	0	0
05:00	4		33	0	0	0	0	0	0	0	4	0	0	0	0	0	0
06:00	8		30	6	0	0	0	0	2	2	2	2	0	0	0	0	0
07:00	21	34	30	4	0	0	0	0	1	11	7	2	0	0	0	0	0
08:00	59	34	29	5	0	0	0	3	7	22	23	4	0	0	0	0	0
09:00	80	34	29	4	0	0	0	1	8	40	23	8	0	0	0	0	0
10:00	88	32	28	4	0	0	0	3	15	48	17	5	0	0	0	0	0
11:00	93	33	28	4	0	0	0	0	22	46	20	5	0	0	0	0	0
12:00	105	33	28	4	0	0	0	2	12	60	27	4	0	0	0	0	0
13:00	78	32	28	4	0	0	1	0	15	43	17	2	0	0	0	0	0
14:00	68	34	29	5	0	0	0	1	12	26	22	4	3	0	0	0	0
15:00	66	34	29	4	0	0	0	0	5	37	18	6	0	0	0	0	0
16:00	74	32	28	4	0	0	0	0	14	43	14	3	0	0	0	0	0
17:00	63	34	29	4	0	0	0	1	7	30	20	4	1	0	0	0	0
18:00	59	32	28	5	0	0	0	1	8	37	11	2	0	0	0	0	0
19:00	45	34	29	5	0	0	0	1	10	15	16	3	0	0	0	0	0
20:00	34	33	28	4	0	0	0	0	8	15	8	3	0	0	0	0	0
21:00	19	34	29	5	0	0	0	1	2	6	9	1	0	0	0	0	0
22:00	25	34	30	5	0	0	1	2	7	12	3	0	0	0	0	0	0
23:00	12	34	32	3	0	0	0	0	0	3	8	1	0	0	0	0	0
Total																	
12H(7-19)	854	33	29	4	0	0	1	12	126	443	219	49	4	0	0	0	0
16H(6-22)	960	33	29	4	0	0	1	14	148	481	254	58	4	0	0	0	0
18H(6-24)	997	33	29	4	0	0	1	15	150	491	274	62	4	0	0	0	0
24H(0-24)	1027	34	29	4	0	0	1	15	153	503	285	66	4	0	0	0	0
AM Peak	11:00	09:00	02:00	06:00	11:00	11:00	11:00	10:00	11:00	10:00	09:00	09:00	11:00	11:00	11:00	11:00	11:00
	93	34	34	6	0	0	0	3	22	48	23	8	0	0	0	0	0
PM Peak	12:00	22:00	23:00	14:00	23:00	23:00	13:00	12:00	13:00	12:00	12:00	15:00	14:00	23:00	23:00	23:00	23:00
	105	34	32	5	0	0	1	2	15	60	27	6	3	0	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

16 September 2017

Channel: East

	Total Volume	5th Per Cent	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	16	34	29	5	0	0	0	0	3	8	3	2	0	0	0	0	0
01:00	11	39	33	6	0	0	0	0	0	3	6	0	1	1	0	0	0
02:00	9				0	0	0	0	0	0	0	2	1	0	0	0	0
03:00	2	33	33	5	0	0	0	0	0	1	0	1	0	0	0	0	0
04:00	1		23	0	0	0	0	0	0	0	1	0	0	0	0	0	0
05:00	3		24	2	0	0	0	0	2	1	0	0	0	0	0	0	0
06:00	8		30	4	0	0	0	0	1	3	3	1	0	0	0	0	0
07:00	14	31	28	3	0	0	0	0	1	10	3	0	0	0	0	0	0
08:00	24	34	30	4	0	0	0	0	3	10	9	2	0	0	0	0	0
09:00	48	34	29	5	0	0	0	3	5	22	13	5	0	0	0	0	0
10:00	54	34	29	4	0	0	0	0	12	21	17	4	0	0	0	0	0
11:00	82	33	29	4	0	0	0	7	46	25	3	1	0	0	0	0	0
12:00	91	33	28	4	0	0	0	1	14	49	21	5	1	0	0	0	0
13:00	89	33	29	4	0	0	0	15	37	34	3	0	0	0	0	0	0
14:00	90	34	29	4	0	0	0	1	10	44	28	6	1	0	0	0	0
15:00	63	34	30	5	0	0	0	1	7	23	29	1	1	0	0	0	0
16:00	87	33	29	4	0	0	0	0	9	53	20	4	1	0	0	0	0
17:00	91	34	30	4	0	0	0	0	6	40	40	5	0	0	0	0	0
18:00	61	33	28	4	0	0	0	1	11	31	13	5	0	0	0	0	0
19:00	60	34	29	5	0	0	0	10	27	19	2	2	0	0	0	0	0
20:00	30	35	31	5	0	0	0	1	2	11	11	4	1	0	0	0	0
21:00	27	35	31	5	0	0	0	0	3	8	12	3	1	0	0	0	0
22:00	29	36	31	5	0	0	0	0	3	11	9	5	1	0	0	0	0
23:00	13	33	29	4	0	0	0	0	2	7	3	1	0	0	0	0	0
Total																	
12H(7-19)	794	34	29	4	0	0	0	7	100	386	252	43	5	1	0	0	0
16H(6-22)	919	34	29	4	0	0	0	8	116	435	297	53	9	1	0	0	0
18H(6-24)	961	34	29	4	0	0	0	8	121	453	309	59	10	1	0	0	0
24H(0-24)	1003	34	29	4	0	0	0	8	126	469	322	64	12	2	0	0	0
AM Peak	11:00	01:00	01:00	01:00	11:00	11:00	11:00	09:00	10:00	11:00	11:00	09:00	11:00	01:00	11:00	11:00	11:00
	82	39	33	6	0	0	0	3	12	46	25	5	1	1	0	0	0
PM Peak	17:00	22:00	21:00	20:00	23:00	23:00	23:00	20:00	13:00	16:00	17:00	14:00	19:00	15:00	23:00	23:00	23:00
	91	36	31	5	0	0	0	1	15	53	40	6	2	1	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

16 September 2017

Channel: Total Flow

	Total Volume	5th Per Cent	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	33	33	29	4	0	0	0	0	6	16	8	3	0	0	0	0	0
01:00	13	38	33	6	0	0	0	0	0	4	6	1	1	1	0	0	0
02:00	14	38	33	5	0	0	0	0	0	4	5	4	1	0	0	0	0
03:00	2		33	5	0	0	0	0	0	1	0	1	0	0	0	0	0
04:00	3		29	2	0	0	0	0	0	2	1	0	0	0	0	0	0
05:00	7		29	4	0	0	0	0	2	1	4	0	0	0	0	0	0
06:00	16	35	30	5	0	0	0	0	3	5	5	3	0	0	0	0	0
07:00	35	33	29	3	0	0	0	0	2	21	10	2	0	0	0	0	0
08:00	83	34	29	5	0	0	0	3	10	32	32	6	0	0	0	0	0
09:00	128	34	29	5	0	0	0	4	13	62	36	13	0	0	0	0	0
10:00	142	33	28	4	0	0	0	3	27	69	34	9	0	0	0	0	0
11:00	175	33	29	4	0	0	0	0	29	92	45	8	1	0	0	0	0
12:00	196	33	28	4	0	0	0	3	26	109	48	9	1	0	0	0	0
13:00	167	33	28	4	0	0	1	0	30	80	51	5	0	0	0	0	0
14:00	158	34	29	5	0	0	0	2	22	70	50	10	4	0	0	0	0
15:00	129	34	30	4	0	0	0	1	12	60	47	7	1	1	0	0	0
16:00	161	33	28	4	0	0	0	0	23	96	34	7	1	0	0	0	0
17:00	154	34	30	4	0	0	0	1	13	70	60	9	1	0	0	0	0
18:00	120	33	28	4	0	0	0	2	19	68	24	7	0	0	0	0	0
19:00	105	34	29	5	0	0	0	1	20	42	35	5	2	0	0	0	0
20:00	64	34	29	5	0	0	0	1	10	26	19	7	1	0	0	0	0
21:00	46	34	30	5	0	0	0	1	5	14	21	4	1	0	0	0	0
22:00	54	35	31	5	0	0	0	1	5	18	18	8	1	1	0	0	0
23:00	25	34	30	4	0	0	0	0	2	10	11	2	0	0	0	0	0
Total	1347	33	29	4	0	0	1	19	226	829	471	92	9	1	0	0	0
1347(19)	1648	33	29	4	0	0	1	19	226	829	471	92	9	1	0	0	0
104(6-22)	1879	34	29	4	0	0	1	22	264	916	551	111	13	1	0	0	0
184(6-24)	1958	34	29	4	0	0	1	23	271	944	583	121	14	1	0	0	0
240(0-24)	2030	34	29	4	0	0	1	23	279	972	607	130	16	2	0	0	0
AM Peak	11:00	02:00	01:00	01:00	11:00	11:00	09:00	11:00	11:00	09:00	11:00	09:00	11:00	01:00	11:00	11:00	11:00
	175	38	33	6	0	0	4	29	92	45	13	1	1	0	0	0	0
PM Peak	12:00	22:00	22:00	20:00	23:00	23:00	13:00	12:00	13:00	12:00	17:00	14:00	14:00	15:00	23:00	23:00	23:00
	196	35	31	5	0	0	3	30	109	109	60	10	10	1	0	0	0

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

17 September 2017

Channel: West

	Total Volume	5th Per Centile	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	10	39	34	8	0	0	1	0	0	0	3	5	1	0	0	0	0
01:00	6	33	33	6	0	0	0	0	0	3	0	2	1	0	0	0	0
02:00	9	35	35	5	0	0	0	0	0	2	2	3	2	0	0	0	0
03:00	1	43	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
04:00	1	33	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
05:00	5	33	33	5	0	0	0	0	1	0	2	2	0	0	0	0	0
06:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	10	33	28	4	0	0	0	0	3	3	4	0	0	0	0	0	0
08:00	12	34	31	2	0	0	0	0	0	4	8	0	0	0	0	0	0
09:00	42	33	29	4	0	0	0	1	6	21	12	1	1	0	0	0	0
10:00	54	31	27	4	0	0	0	1	15	26	12	0	0	0	0	0	0
11:00	63	33	28	4	0	0	0	1	13	32	14	3	0	0	0	0	0
12:00	78	33	29	4	0	0	0	1	8	45	20	4	0	0	0	0	0
13:00	83	33	28	4	0	0	0	4	15	39	23	2	0	0	0	0	0
14:00	74	34	29	4	0	0	0	1	13	29	26	5	0	0	0	0	0
15:00	68	31	27	3	0	0	0	1	13	41	12	1	0	0	0	0	0
16:00	42	33	29	4	0	0	0	0	9	16	15	2	0	0	0	0	0
17:00	42	33	29	4	0	0	0	1	6	20	13	2	0	0	0	0	0
18:00	45	32	27	4	0	0	0	2	11	19	12	1	0	0	0	0	0
19:00	28	34	30	4	0	0	0	0	4	8	14	2	0	0	0	0	0
20:00	22	33	29	4	0	0	0	0	3	10	8	1	0	0	0	0	0
21:00	6	30	30	5	0	0	0	0	1	2	2	1	0	0	0	0	0
22:00	8	31	31	5	0	0	0	0	1	2	3	2	0	0	0	0	0
23:00	6	30	30	4	0	0	0	0	0	4	1	1	0	0	0	0	0
Total																	
12H(7-19)	613	33	28	4	0	0	0	13	112	295	171	21	1	0	0	0	0
16H(6-22)	669	33	28	4	0	0	0	13	120	315	195	25	1	0	0	0	0
18H(6-24)	683	33	28	4	0	0	0	13	121	321	199	28	1	0	0	0	0
24H(0-24)	715	34	29	4	0	0	1	13	122	326	207	40	6	0	0	0	0
AM Peak	11:00	00:00	03:00	00:00	11:00	11:00	00:00	11:00	10:00	11:00	11:00	00:00	02:00	11:00	11:00	11:00	11:00
	63	39	43	8	0	0	1	1	15	32	14	5	2	0	0	0	0
PM Peak	13:00	19:00	22:00	22:00	23:00	23:00	23:00	13:00	13:00	12:00	14:00	14:00	23:00	23:00	23:00	23:00	23:00
	83	34	31	5	0	0	0	4	15	45	26	5	0	0	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

17 September 2017

Channel: East

	Total Volume	5th Per Centile	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	19	34	30	5	0	0	0	0	2	8	7	1	1	0	0	0	0
01:00	8	34	34	3	0	0	0	0	0	1	4	3	0	0	0	0	0
02:00	12	38	33	4	0	0	0	0	1	1	5	5	0	0	0	0	0
03:00	3	31	6	0	0	0	0	0	0	1	1	0	0	0	0	0	0
04:00	1	38	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
05:00	1	23	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
06:00	3	28	4	0	0	0	0	1	1	1	0	0	0	0	0	0	0
07:00	7	31	4	0	0	0	0	0	1	1	4	1	0	0	0	0	0
08:00	15	32	28	4	0	0	0	0	3	7	5	0	0	0	0	0	0
09:00	25	33	29	5	0	0	0	0	5	11	7	1	0	1	0	0	0
10:00	41	32	28	4	0	0	0	0	9	24	4	4	0	0	0	0	0
11:00	59	32	28	4	0	0	0	1	11	30	17	0	0	0	0	0	0
12:00	67	33	29	5	0	0	0	1	11	34	17	2	2	0	0	0	0
13:00	77	33	29	4	0	0	0	1	7	43	24	2	0	0	0	0	0
14:00	65	34	30	4	0	0	0	0	8	29	21	7	0	0	0	0	0
15:00	85	33	29	4	0	0	0	1	9	52	18	5	0	0	0	0	0
16:00	59	34	29	5	0	0	0	0	8	30	14	5	2	0	0	0	0
17:00	45	34	29	4	0	0	0	0	4	23	15	3	0	0	0	0	0
18:00	55	33	29	4	0	0	0	0	11	23	18	3	0	0	0	0	0
19:00	34	35	31	4	0	0	0	0	1	14	13	6	0	0	0	0	0
20:00	25	34	29	5	0	0	0	0	6	9	8	2	0	0	0	0	0
21:00	17	35	29	4	0	0	0	0	2	11	1	3	0	0	0	0	0
22:00	10	35	31	4	0	0	0	0	0	5	3	2	0	0	0	0	0
23:00	3	31	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0
Total																	
12H(7-19)	600	33	29	4	0	0	0	4	87	307	164	33	4	1	0	0	0
16H(6-22)	679	34	29	4	0	0	0	4	97	342	187	44	4	1	0	0	0
18H(6-24)	692	34	29	4	0	0	0	4	97	348	192	46	4	1	0	0	0
24H(0-24)	736	34	29	4	0	0	0	4	102	358	209	57	5	1	0	0	0
AM Peak	11:00	02:00	04:00	03:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	02:00	00:00	09:00	11:00	11:00	11:00
	59	38	38	6	0	0	0	1	11	30	17	5	1	1	0	0	0
PM Peak	15:00	19:00	19:00	16:00	23:00	23:00	23:00	15:00	18:00	15:00	13:00	14:00	16:00	23:00	23:00	23:00	23:00
	85	35	31	5	0	0	0	1	11	52	24	7	2	0	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

17 September 2017

Channel: Total Flow

	Total Volume	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	25	38	31	5	0	0	2	8	10	5	2	0	0	0
01:00	14	38	34	5	0	0	0	4	5	1	0	0	0	0
02:00	21	39	34	5	0	0	0	1	3	7	8	2	0	0
03:00	4	34	7	0	0	0	0	1	0	1	1	0	0	0
04:00	2	35	3	0	0	0	0	0	1	1	0	0	0	0
05:00	6	31	6	0	0	0	2	0	2	2	0	0	0	0
06:00	3	28	4	0	0	0	1	1	1	0	0	0	0	0
07:00	17	34	29	5	0	0	0	4	4	8	1	0	0	0
08:00	27	33	29	5	0	0	0	3	11	13	0	0	0	0
09:00	67	33	29	5	0	0	1	11	32	19	2	1	1	0
10:00	95	32	27	4	0	0	1	24	50	16	4	0	0	0
11:00	122	32	28	4	0	0	0	22	62	31	3	0	0	0
12:00	145	33	29	4	0	0	0	2	19	79	37	6	2	0
13:00	160	33	28	4	0	0	0	5	22	82	47	4	0	0
14:00	139	34	29	4	0	0	0	1	21	58	47	12	0	0
15:00	153	32	28	4	0	0	0	2	22	93	30	6	0	0
16:00	101	34	29	5	0	0	0	17	46	29	7	2	0	0
17:00	87	33	29	4	0	0	0	1	10	43	28	5	0	0
18:00	100	33	28	4	0	0	0	2	22	42	30	4	0	0
19:00	62	35	31	4	0	0	0	5	22	27	8	0	0	0
20:00	47	34	29	4	0	0	0	9	19	16	3	0	0	0
21:00	23	35	29	5	0	0	0	3	13	3	4	0	0	0
22:00	18	36	31	4	0	0	0	1	7	6	4	0	0	0
23:00	9	30	3	0	0	0	0	0	5	3	1	0	0	0
Total	1213	33	28	4	0	0	0	17	199	602	335	54	5	1
1347(1-22)	1348	33	29	4	0	0	0	17	217	657	382	69	5	1
1816(6-24)	1375	33	29	4	0	0	0	17	218	669	391	74	5	1
2410(0-24)	1451	34	29	4	0	0	1	17	224	684	416	97	11	1
AM Peak	11:00	02:00	04:00	03:00	11:00	11:00	00:00	11:00	11:00	11:00	02:00	02:00	09:00	11:00
	12:00	39	35	7	0	0	1	2	24	62	31	8	2	1
PM Peak	13:00	22:00	22:00	21:00	23:00	23:00	23:00	13:00	18:00	15:00	14:00	14:00	16:00	23:00
	16:00	36	31	21	0	0	0	5	22	93	47	12	0	0

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

18 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	2		33	0	0	0	0	0	0	0	2	0	0	0	0	0	0
01:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	2			3	0	0	0	0	0	1	1	0	0	0	0	0	0
05:00	4		29	4	0	0	0	0	1	1	2	0	0	0	0	0	0
06:00	22	37	31	5	0	0	0	0	2	7	8	4	1	0	0	0	0
07:00	76	34	29	4	0	0	0	0	2	7	33	29	5	0	0	0	0
08:00	170	31	27	4	0	0	1	4	38	95	30	2	0	0	0	0	0
09:00	86	33	28	5	0	1	0	2	8	48	22	5	0	0	0	0	0
10:00	55	33	28	5	0	0	0	3	12	20	19	1	0	0	0	0	0
11:00	77	32	27	5	0	0	1	5	23	30	14	3	1	0	0	0	0
12:00	80	31	27	4	0	0	1	3	21	40	14	1	0	0	0	0	0
13:00	67	34	29	4	0	0	0	0	11	32	19	5	0	0	0	0	0
14:00	67	31	27	4	0	0	0	2	21	32	10	2	0	0	0	0	0
15:00	124	30	27	4	0	1	1	3	19	81	18	1	0	0	0	0	0
16:00	105	33	28	4	0	0	0	1	20	48	33	3	0	0	0	0	0
17:00	82	32	28	5	0	0	0	3	18	42	14	4	1	0	0	0	0
18:00	78	33	28	4	0	0	0	1	21	35	16	5	0	0	0	0	0
19:00	47	32	28	4	0	0	0	0	10	23	14	0	0	0	0	0	0
20:00	26	30	27	4	0	0	0	0	1	7	14	0	0	0	0	0	0
21:00	10	34	30	4	0	0	0	0	1	4	4	1	0	0	0	0	0
22:00	11	34	29	4	0	0	0	0	2	4	4	1	0	0	0	0	0
23:00	2		30	3	0	0	0	0	0	1	1	0	0	0	0	0	0
Total																	
12H(7-19)	1067	32	28	4	0	2	4	29	219	536	238	37	2	0	0	0	0
16H(6-22)	1172	33	28	4	0	2	4	30	239	584	268	42	3	0	0	0	0
18H(6-24)	1185	33	28	4	0	2	4	30	241	589	273	43	3	0	0	0	0
24H(0-24)	1193	33	28	4	0	2	4	30	242	591	278	43	3	0	0	0	0
AM Peak	08:00	03:00	03:00	11:00	11:00	09:00	11:00	11:00	08:00	08:00	08:00	09:00	11:00	11:00	11:00	11:00	11:00
	170		33	5	0	1	1	5	38	95	30	5	1	0	0	0	0
PM Peak	15:00	21:00	23:00	17:00	23:00	15:00	15:00	17:00	18:00	15:00	16:00	18:00	17:00	23:00	23:00	23:00	23:00
	124		34	30	5	0	1	1	3	21	81	33	5	1	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

18 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	3		33	4	0	0	0	0	0	1	1	1	0	0	0	0	0
01:00	1		23	0	0	0	0	0	1	0	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	35	8		0	0	0	0	0	1	0	0	1	0	0	0	0
04:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	4		29	4	0	0	0	0	1	1	2	0	0	0	0	0	0
06:00	12	32	28	4	0	0	0	1	0	7	4	0	0	0	0	0	0
07:00	35	33	29	4	0	0	0	1	6	15	11	2	0	0	0	0	0
08:00	89	32	28	4	0	0	0	1	16	49	20	3	0	0	0	0	0
09:00	61	34	29	6	1	0	0	1	6	33	14	5	0	0	0	0	1
10:00	60	33	28	4	0	0	0	0	14	29	14	3	0	0	0	0	0
11:00	63	31	27	4	0	0	1	1	18	31	11	1	0	0	0	0	0
12:00	75	32	28	4	0	0	0	0	19	38	18	1	0	0	0	0	0
13:00	87	32	28	4	0	0	0	0	17	46	22	2	0	0	0	0	0
14:00	89	32	28	4	0	0	0	1	14	51	20	3	0	0	0	0	0
15:00	118	31	27	4	1	0	0	2	23	72	14	6	0	0	0	0	0
16:00	129	33	28	5	0	0	0	0	35	52	33	8	1	0	0	0	0
17:00	114	33	28	4	0	0	0	4	15	63	30	4	0	0	0	0	0
18:00	64	32	28	4	0	0	1	4	7	33	19	0	0	0	0	0	0
19:00	55	33	28	4	0	0	0	2	8	28	14	3	0	0	0	0	0
20:00	39	34	29	5	0	0	0	2	6	17	10	3	1	0	0	0	0
21:00	16	32	29	3	0	0	0	0	0	12	3	0	0	0	0	0	0
22:00	17	34	29	4	0	0	0	0	3	8	4	2	0	0	0	0	0
23:00	5		35	4	0	0	0	0	0	0	4	0	1	0	0	0	0
Total																	
12H(7-19)	984	33	28	4	2	0	2	15	189	512	226	38	1	0	0	0	1
16H(6-22)	1108	33	28	4	2	0	2	20	203	576	257	45	2	0	0	0	1
18H(6-24)	1130	33	28	4	2	0	2	20	206	584	265	47	3	0	0	0	1
24H(0-24)	1140	33	28	4	2	0	2	20	208	587	268	48	4	0	0	0	1
AM Peak	08:00	03:00	03:00	09:00	11:00	11:00	11:00	11:00	08:00	08:00	09:00	03:00	11:00	11:00	11:00	09:00	09:00
	89		35	8	1	0	1	1	18	49	20	5	1	0	0	0	1
PM Peak	16:00	20:00	23:00	20:00	15:00	23:00	18:00	18:00	16:00	15:00	16:00	16:00	23:00	23:00	23:00	23:00	23:00
	129		34	35	5	1	0	1	4	35	72	33	8	1	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001
East Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

18 September 2017

Channel: Total Flow

	Total Volume	85th Pct Ave.	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	5		33	3	0	0	0	0	0	1	3	1	0	0	0	0
01:00	1		23	0	0	0	0	0	1	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0
03:00	2		35	8	0	0	0	0	0	0	0	0	1	0	0	0
04:00	2		30	3	0	0	0	0	0	1	1	0	0	0	0	0
05:00	8		29	4	0	0	0	0	2	2	4	0	0	0	0	0
06:00	34	35	30	5	0	0	0	1	2	14	12	4	1	0	0	0
07:00	111	34	29	4	0	0	0	3	13	48	40	7	0	0	0	0
08:00	259	32	27	4	0	0	1	5	54	144	50	5	0	0	0	0
09:00	147	33	29	5	1	1	0	3	14	81	36	10	0	0	0	0
10:00	115	33	28	4	0	0	0	3	26	49	33	4	0	0	0	0
11:00	140	32	27	5	0	0	2	6	41	61	25	4	1	0	0	0
12:00	155	32	27	4	0	0	1	3	39	78	32	2	0	0	0	0
13:00	154	33	28	4	0	0	0	0	28	78	41	7	0	0	0	0
14:00	156	32	27	4	0	0	0	3	35	83	30	5	0	0	0	0
15:00	242	30	27	4	1	1	1	5	42	153	32	7	0	0	0	0
16:00	234	33	28	4	0	0	0	1	55	100	66	11	1	0	0	0
17:00	198	33	28	4	0	0	0	7	33	105	44	8	1	0	0	0
18:00	142	33	28	4	0	0	1	5	28	68	35	5	0	0	0	0
19:00	102	33	28	4	0	0	0	2	18	51	28	3	0	0	0	0
20:00	65	33	28	5	0	0	0	3	13	31	14	3	1	0	0	0
21:00	26	33	29	3	0	0	0	0	1	16	7	2	0	0	0	0
22:00	28	34	29	4	0	0	0	0	5	12	8	3	0	0	0	0
23:00	7		33	4	0	0	0	0	0	1	5	0	1	0	0	0
Total	127H(7-19)	2053	33	28	4	2	2	6	44	408	1048	464	75	3	0	0
	160H(6-22)	2280	33	28	4	2	2	6	50	442	1160	525	87	5	0	0
	180H(6-24)	2315	33	28	4	2	2	6	50	447	1173	538	90	5	0	0
	240H(2-24)	2333	33	28	4	2	2	6	50	450	1178	546	91	7	0	0
AM Peak	08:00	259	32	27	4	09:00	09:00	11:00	11:00	08:00	08:00	08:00	09:00	11:00	11:00	09:00
	08:00	259	35	8	1	1	2	6	54	144	50	10	1	0	0	0
PM Peak	15:00	2200	23:00	20:00	15:00	15:00	18:00	17:00	16:00	15:00	16:00	16:00	23:00	23:00	23:00	23:00
	242	34	33	5	1	1	1	7	55	153	66	11	1	0	0	0

Site No. 14517001 Site Ref. 14517001

East Approach Harras Rd Harras Moor

Speed Summary (Mon-Sun) Speed Limit 30 Mph

From 12/09/2017 To 19/09/2017

Channel: West

	Total Volume	80th Perc	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	5	32	6	0	0	0	0	0	0	1	2	1	0	0	0	0	0
01:00	1	33	5	0	0	0	0	0	0	1	0	0	0	0	0	0	0
02:00	2	35	5	0	0	0	0	0	0	1	1	0	0	0	0	0	0
03:00	0	35	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	3	30	4	0	0	0	0	0	0	2	1	0	0	0	0	0	0
05:00	5	29	5	0	0	0	0	1	2	2	1	0	0	0	0	0	0
06:00	13	34	31	5	0	0	0	1	4	5	2	0	0	0	0	0	0
07:00	57	34	29	4	0	0	0	6	28	19	4	0	0	0	0	0	0
08:00	145	31	27	4	0	0	0	3	33	80	28	2	0	0	0	0	0
09:00	82	33	28	4	0	0	0	2	11	44	20	5	0	0	0	0	0
10:00	72	32	27	4	0	0	0	3	16	33	18	2	0	0	0	0	0
11:00	79	32	27	4	0	0	0	3	23	36	15	2	0	0	0	0	0
12:00	85	32	28	4	0	0	0	2	15	44	21	3	0	0	0	0	0
13:00	75	33	28	4	0	0	0	2	14	36	19	2	0	0	0	0	0
14:00	75	32	28	4	0	0	0	1	17	37	17	2	0	0	0	0	0
15:00	116	31	27	4	0	0	0	3	22	66	22	2	0	0	0	0	0
16:00	115	32	28	4	0	0	1	2	23	59	25	4	0	0	0	0	0
17:00	90	32	28	4	0	0	0	2	17	48	19	3	1	0	0	0	0
18:00	64	32	28	4	0	0	0	1	11	36	13	2	0	0	0	0	0
19:00	51	33	28	4	0	0	0	1	12	20	16	1	0	0	0	0	0
20:00	30	33	28	5	0	0	0	1	6	15	6	1	0	0	0	0	0
21:00	16	33	29	5	0	0	0	0	2	7	5	1	0	0	0	0	0
22:00	14	34	29	5	0	0	0	0	2	6	5	1	0	0	0	0	0
23:00	7	30	5	0	0	0	0	0	3	3	1	0	0	0	0	0	0
Total																	
12H(7-19)	1056	32	28	4	0	0	2	24	209	547	237	34	2	0	0	0	0
16H(6-22)	1165	33	28	4	0	0	3	27	232	593	267	40	3	0	0	0	0
18H(6-24)	1187	33	28	4	0	0	3	27	235	602	275	42	3	0	0	0	0
24H(0-24)	1204	33	28	4	0	0	3	27	236	608	280	45	4	0	0	0	0
AM Peak	08:00	03:00	03:00	03:00	11:00	09:00	08:00	10:00	08:00	08:00	08:00	09:00	02:00	11:00	11:00	11:00	11:00
	145		35	8	0	0	0	3	33	80	28	5	0	0	0	0	0
PM Peak	15:00	22:00	23:00	23:00	23:00	15:00	16:00	15:00	16:00	15:00	16:00	16:00	17:00	23:00	23:00	23:00	23:00
	118	34	30	5	0	0	1	3	23	66	25	4	1	0	0	0	0

VOA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001

East Approach Harras Rd Harras Moor

Speed Summary (Mon-Sun) Speed Limit 30 Mph

From 12/09/2017 To 19/09/2017

Channel: East

	Total Volume	80th Perc	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	5	31	5	0	0	0	0	0	1	3	2	1	0	0	0	0	0
01:00	4	33	5	0	0	0	0	0	1	2	1	0	0	0	0	0	0
02:00	1	34	5	0	0	0	0	0	0	1	1	0	0	0	0	0	0
03:00	2	31	6	0	0	0	0	0	0	1	0	0	0	0	0	0	0
04:00	1	33	7	0	0	0	0	0	0	1	0	0	0	0	0	0	0
05:00	3	29	5	0	0	0	0	0	1	1	1	0	0	0	0	0	0
06:00	12	34	29	4	0	0	0	0	1	6	4	1	0	0	0	0	0
07:00	29	33	29	4	0	0	0	1	4	13	9	2	0	0	0	0	0
08:00	74	32	27	4	0	0	0	1	15	41	16	1	0	0	0	0	0
09:00	48	33	29	5	0	0	0	1	7	24	13	3	0	0	0	0	0
10:00	58	33	28	4	0	0	0	1	12	27	14	3	0	0	0	0	0
11:00	73	32	28	4	0	0	0	1	16	37	16	2	0	0	0	0	0
12:00	73	33	28	4	0	0	0	1	14	38	18	3	1	0	0	0	0
13:00	81	33	28	4	0	0	0	1	15	42	22	2	0	0	0	0	0
14:00	98	33	29	4	0	0	0	1	14	52	26	5	0	0	0	0	0
15:00	115	33	28	5	0	0	1	3	21	58	26	5	0	0	0	0	0
16:00	132	33	28	4	0	0	0	2	24	70	31	4	1	0	0	0	0
17:00	120	33	29	4	0	0	0	2	13	62	37	6	0	0	0	0	0
18:00	74	33	29	4	0	0	0	1	10	39	19	4	1	0	0	0	0
19:00	55	33	29	5	0	0	0	1	9	26	16	3	0	0	0	0	0
20:00	41	34	29	5	0	0	0	1	7	17	12	3	1	0	0	0	0
21:00	25	33	29	4	0	0	0	0	3	14	6	1	0	0	0	0	0
22:00	18	34	29	5	0	0	0	0	3	8	5	2	0	0	0	0	0
23:00	12	34	30	5	0	0	0	0	2	5	4	1	0	0	0	0	0
Total																	
12H(7-19)	974	33	28	4	0	0	1	14	167	501	246	40	4	0	0	0	0
16H(6-22)	1108	33	28	4	0	0	2	17	187	564	284	49	5	0	0	0	0
18H(6-24)	1139	33	28	4	0	0	2	17	191	577	294	51	6	1	0	0	0
24H(0-24)	1159	33	28	4	0	0	2	17	194	583	301	55	7	1	0	0	0
AM Peak	08:00	02:00	04:00	04:00	09:00	11:00	10:00	11:00	11:00	08:00	11:00	10:00	11:00	09:00	11:00	11:00	09:00
	74	34	7	0	0	0	1	16	41	16	3	0	0	0	0	0	0
PM Peak	16:00	22:00	23:00	22:00	15:00	23:00	15:00	15:00	16:00	16:00	17:00	17:00	20:00	15:00	23:00	19:00	23:00
	132	34	30	5	0	0	1	3	24	70	37	6	1	0	0	0	0

VOA-pro R2 20/09/2017

Site No. 14517001 Site Ref. 14517001

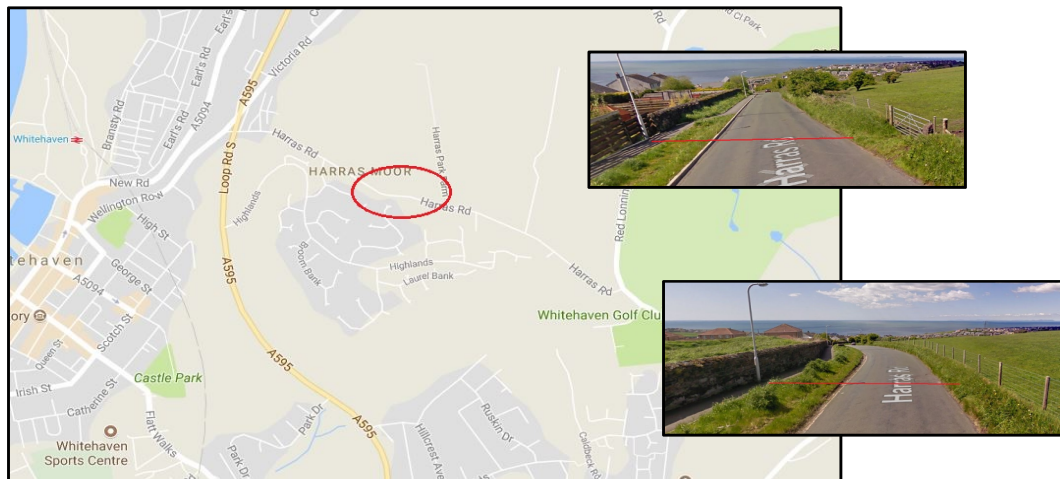
East Approach Harras Rd Harras Moor

Speed Summary (Mon-Sun) Speed Limit 30 Mph

From 12/09/2017 To 19/09/2017

Channel: Total Flow

	Total Volume	Bin 1-5	Bin 6-10	Bin 11-15	Bin 16-20	Bin 21-25	Bin 26-30	Bin 31-35	Bin 36-40	Bin 41-45	Bin 46-50	Bin 51-55	Bin 56-60	Bin 61-65	Bin 66-70	
00:00	12	36	31	5	0	0	0	0	0	0	0	0	0	0	0	
01:00	6	33	5	0	0	0	0	0	0	1	2	1	0	0	0	
02:00	6	34	5	0	0	0	0	0	1	2	2	1	0	0	0	
03:00	2	32	6	0	0	0	0	0	1	0	0	0	0	0	0	
04:00	4	31	5	0	0	0	0	0	2	2	2	0	0	0	0	
05:00	9	29	5	0	0	0	0	2	3	3	1	0	0	0	0	
06:00	25	35	30	4	0	0	0	2	10	9	3	0	0	0	0	
07:00	85	34	29	4	0	0	0	1	10	41	28	5	0	0	0	
08:00	219	31	27	4	0	0	4	48	121	43	3	0	0	0	0	
09:00	130	33	29	4	0	0	0	3	18	68	33	8	0	0	0	
10:00	129	33	28	4	0	0	0	4	28	60	32	5	0	0	0	
11:00	152	32	27	4	0	0	0	4	39	73	31	4	0	0	0	
12:00	159	33	28	4	0	0	0	2	29	82	39	5	1	0	0	
13:00	154	33	28	4	0	0	0	3	29	78	42	4	0	0	0	
14:00	173	33	28	4	0	0	0	2	31	89	43	7	1	0	0	
15:00	231	32	28	4	0	0	1	6	44	124	48	7	0	0	0	
16:00	247	33	28	4	0	0	1	3	47	129	56	9	1	0	0	
17:00	210	33	28	4	0	0	0	4	30	109	56	9	1	0	0	
18:00	138	33	28	4	0	0	0	2	22	74	32	7	1	0	0	
19:00	106	33	28	4	0	0	0	2	21	46	32	5	0	0	0	
20:00	71	33	28	5	0	0	0	2	14	33	18	4	1	0	0	
21:00	41	33	29	5	0	0	0	1	5	21	11	2	0	0	0	
22:00	31	34	29	5	0	0	0	0	5	14	10	3	0	0	0	
23:00	19	34	30	5	0	0	0	1	2	8	7	2	0	0	0	
Total	2030	33	28	4	0	0	4	39	376	1048	482	74	8	0	0	
12M(6-22)	2273	33	28	4	0	0	4	43	419	1158	551	89	6	0	0	
18M(6-24)	2365	33	28	4	0	0	4	44	426	1179	568	94	9	1	0	
24M(6-24)	2323	33	28	4	0	0	5	44	430	1191	581	101	10	1	0	
AM Peak	08:00	00:00	02:00	03:00	09:00	09:00	10:00	11:00	08:00	08:00	08:00	09:00	02:00	09:00	11:00	09:00
	219	36	34	0	0	0	0	4	48	121	43	8	1	0	0	0
PM Peak	16:00	23:00	23:00	23:00	15:00	15:00	15:00	15:00	16:00	16:00	16:00	17:00	20:00	15:00	23:00	23:00
	247	34	30	5	0	0	1	6	47	129	56	9	1	0	0	0



Survey Dates 12 to 18 September 2017

Report Type 14 Bin Speed + Summary

Notes:

Unit D Baron Way
Kingmoor Business Park
Carlisle
CA6 4SJ

NORTHERN LINK
TRAFFIC DATA CONSULTANCY LTD

A.T.C. Site Visit & Check Schedule.

Road Name/ No	
Site Description	West Approach Harras Rd Harras Moor
Site ID	14517001
Nat. Grid. Ref.	NX 98236 18557
Counter Type	EVR
Counter No.	1203-80996
Date Installed	11 Sept 2017
Date Removed	19 Sept 2017

VISITS

Date	Data Removed	Battery Changed	Check Count	Tube Failed	Tube Replaced	Remarks
11/9/17			Yes			Tubes Installed
19/9/17	002c0356					Tubes Removed

Channel #1 = West Speed Limit 30
Channel #2 = East

The site has been assessed as per the method statement and is deemed safe for installation.
Technicians Name: P Cocker

Northern Link Traffic Data Consultancy Revision 1.2 March 2015

Unit D Baron Way
Kingmoor Business Park
Carlisle
CA6 4SJ

NORTHERN LINK
TRAFFIC DATA CONSULTANCY LTD

A.T.C. Site Visit & Check Schedule.

Road Name/ No	
Site Description	East Approach Harras Rd Harras Moor
Site ID	14517001
Nat. Grid. Ref.	NX 98400 18483
Counter Type	EVR
Counter No.	1506-97444
Date Installed	11 Sept 2017
Date Removed	19 Sept 2017

VISITS

Date	Data Removed	Battery Changed	Check Count	Tube Failed	Tube Replaced	Remarks
11/9/17			Yes			Tubes Installed
19/9/17	002c0356					Tubes Removed

Channel #1 = West Speed Limit 30
Channel #2 = East

The site has been assessed as per the method statement and is deemed safe for installation.
Technicians Name: P Cocker

Northern Link Traffic Data Consultancy Revision 1.2 March 2015

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

12 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	2	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	1	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	38	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
04:00	2	35	3	0	0	0	0	0	0	0	1	1	0	0	0	0	0
05:00	6	36	0	0	0	0	0	0	0	1	2	1	2	0	0	0	0
06:00	38	39	34	6	0	0	0	0	1	4	4	7	1	1	0	0	0
07:00	77	39	35	4	0	0	0	0	0	10	28	30	8	1	0	0	0
08:00	186	37	32	4	0	0	0	0	7	44	92	39	3	1	0	0	0
09:00	84	39	34	5	0	0	0	3	1	9	36	29	6	0	0	0	0
10:00	57	38	33	5	0	0	0	0	4	11	22	16	4	0	0	0	0
11:00	73	38	33	5	0	0	0	1	2	16	35	12	6	1	0	0	0
12:00	72	39	35	5	0	0	0	0	0	14	26	24	5	2	1	0	0
13:00	65	39	34	5	0	0	0	0	0	13	27	18	5	2	0	0	0
14:00	68	38	33	5	0	0	0	0	1	18	29	16	3	1	0	0	0
15:00	146	37	32	4	0	0	0	1	3	39	67	31	4	1	0	0	0
16:00	139	39	34	5	0	0	0	0	2	33	50	41	11	2	0	0	0
17:00	115	39	33	5	0	0	1	0	2	26	43	33	8	1	1	0	0
18:00	67	38	34	4	0	0	0	0	1	14	23	17	2	0	0	0	0
19:00	48	39	34	5	0	0	0	0	1	12	17	14	2	2	0	0	0
20:00	26	39	33	6	0	0	0	0	2	6	8	8	0	2	0	0	0
21:00	17	39	33	6	0	0	0	0	2	3	5	5	1	1	0	0	0
22:00	13	36	33	4	0	0	0	0	4	6	2	1	0	0	0	0	0
23:00	3	34	6	0	0	0	0	0	0	1	1	0	1	0	0	0	0
Total																	
12H(7-19)	1149	39	33	5	0	0	1	5	23	247	478	316	65	12	2	0	0
16H(6-22)	1258	39	33	5	0	0	1	5	29	272	512	350	69	18	2	0	0
18H(6-24)	1274	39	33	5	0	0	1	5	29	277	519	352	71	18	2	0	0
24H(0-24)	1286	39	33	5	0	0	1	5	29	278	522	357	74	18	2	0	0
AM Peak	08:00		01:00	06:00	11:00	11:00	11:00	09:00	08:00	08:00	08:00	08:00	07:00	11:00	11:00	11:00	11:00
	186	43	6	0	0	0	3	7	44	92	39	8	1	0	0	0	0
PM Peak	15:00	12:00	12:00	21:00	23:00	23:00	17:00	15:00	15:00	15:00	15:00	16:00	16:00	20:00	17:00	23:00	23:00
	146	39	35	6	0	0	1	1	3	39	67	41	11	2	1	0	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

12 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	1	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	1	38	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	38	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
04:00	4	36	2	0	0	0	0	0	0	0	1	3	0	0	0	0	0
05:00	3	34	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0
06:00	17	43	35	7	0	0	0	0	0	4	7	1	3	2	0	0	0
07:00	38	39	33	6	0	0	0	0	4	6	15	9	3	1	0	0	0
08:00	91	38	33	5	0	0	0	0	4	20	37	24	5	1	0	0	0
09:00	36	40	34	5	0	0	0	0	1	8	13	9	4	1	0	0	0
10:00	57	39	34	5	0	0	0	0	1	13	22	16	3	2	0	0	0
11:00	77	38	33	5	0	0	0	1	3	22	29	16	5	1	0	0	0
12:00	71	39	34	5	0	0	0	0	3	15	24	22	5	2	0	0	0
13:00	82	39	34	6	0	0	0	0	1	21	31	21	5	2	0	1	0
14:00	100	39	34	5	0	0	0	0	3	18	44	24	7	4	0	0	0
15:00	123	39	33	6	0	0	0	0	5	30	51	23	7	6	0	0	0
16:00	191	39	33	5	0	0	0	0	10	42	76	44	19	0	0	0	0
17:00	157	40	34	6	0	0	0	0	8	31	48	48	15	4	3	0	0
18:00	66	38	33	6	0	0	0	0	2	18	26	15	2	1	2	0	0
19:00	40	38	34	6	0	0	0	0	1	17	6	2	2	2	0	0	0
20:00	42	39	33	6	0	0	0	2	1	6	16	12	5	0	0	0	0
21:00	30	39	33	6	0	0	0	0	2	8	7	11	2	0	0	0	0
22:00	9	34	6	0	0	0	0	0	0	3	2	2	2	0	0	0	0
23:00	7	33	3	0	0	0	0	0	0	1	5	1	0	0	0	0	0
Total																	
12H(7-19)	1089	39	33	6	0	1	0	1	45	244	416	271	80	25	5	1	0
16H(6-22)	1218	39	33	6	0	1	0	3	50	273	463	301	92	28	5	1	0
18H(6-24)	1234	39	33	6	0	1	0	3	50	277	470	304	94	29	5	1	0
24H(0-24)	1244	39	33	6	0	1	0	3	50	277	473	310	95	29	5	1	0
AM Peak	08:00		00:00	06:00	11:00	11:00	11:00	11:00	08:00	11:00	08:00	08:00	11:00	10:00	11:00	11:00	11:00
	91	43	7	0	0	0	0	1	4	22	37	24	5	2	0	0	0
PM Peak	16:00	17:00	17:00	17:00	23:00	15:00	23:00	20:00	16:00	16:00	16:00	16:00	16:00	15:00	17:00	13:00	23:00
	191	40	34	6	0	1	0	2	10	42	76	48	19	6	3	1	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

12 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	1	39	2	0	0	0	0	0	0	0	0	2	1	0	0	0	0
01:00	2	40	3	0	0	0	0	0	0	0	0	1	1	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	2	38	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
04:00	6	36	2	0	0	0	0	0	0	0	2	4	0	0	0	0	0
05:00	9	35	5	0	0	0	0	0	0	1	4	2	2	0	0	0	0
06:00	35	42	35	6	0	0	0	0	1	8	11	8	4	3	0	0	0
07:00	115	39	34	5	0	0	0	0	4	16	43	39	11	2	0	0	0
08:00	277	37	32	4	0	0	0	0	11	64	129	63	8	2	0	0	0
09:00	120	39	34	5	0	0	0	2	7	49	49	38	10	1	0	0	0
10:00	114	39	33	5	0	0	0	0	5	24	44	32	7	2	0	0	0
11:00	150	38	33	5	0	0	0	2	17	58	64	28	11	2	0	0	0
12:00	143	39	34	5	0	0	0	0	3	29	50	46	10	4	1	0	0
13:00	147	39	34	5	0	0	0	0	1	34	58	39	10	4	0	1	0
14:00	168	39	33	5	0	0	0	0	4	36	73	40	10	5	0	0	0
15:00	269	38	33	5	0	1	0	1	8	69	118	54	11	7	0	0	0
16:00	330	39	33	5	0	0	0	0	12	75	126	85	30	2	0	0	0
17:00	272	39	34	6	0	0	1	0	10	57	91	81	23	5	4	0	0
18:00	133	38	33	5	0	0	0	0	3	32	49	42	4	1	2	0	0
19:00	88	39	33	5	0	0	0	0	3	23	34	20	4	4	0	0	0
20:00	68	39	33	6	0	0	0	0	2	3	12	24	20	5	2	0	0
21:00	47	39	33	6	0	0	0	0	4	11	12	16	3	1	0	0	0
22:00	22	39	33	5	0	0	0	0	0	7	8	4	4	3	0	0	0
23:00	10	35	33	4	0	0	0	0	0	2	6	1	1	0	0	0	0
Total	1247	39	33	5	0	1	1	6	68	491	894	587	145	37	7	1	0
10H(6-22)	2476	39	33	5	0	1	1	8	79	545	975	651	161	47	7	1	0
18H(6-24)	2508	39	33	5	0	1	1	8	79	554	989	656	165	47	7	1	0
24H(6-24)	2530	39	33	5	0	1	1	8	79	555	995	667	169	47	7	1	0
AM Peak	08:00-09:00	01:00-06:00	06:00-07:00	11:00-11:00	11:00-11:00	09:00-08:00	08:00-08:00	08:00-08:00	08:00-08:00	08:00-08:00	08:00-08:00	08:00-08:00	08:00-08:00	11:00-11:00	11:00-11:00	11:00-11:00	11:00-11:00
	277	40	6	0	0	3	11	64	129	63	11	3	0	0	0	0	0
PM Peak	16:00-17:00	17:00-12:00	20:00-20:00	23:00-15:00	17:00-20:00	16:00-20:00	16:00-16:00	16:00-16:00	16:00-16:00	16:00-16:00	16:00-16:00	16:00-16:00	16:00-16:00	15:00-17:00	13:00-13:00	23:00-23:00	23:00-23:00
	330	34	20	0	0	7	12	75	126	85	30	2	0	0	0	0	0

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

13 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	4		39	8	0	0	0	0	0	2	1	0	0	1	0	0	0
05:00	4		33	6	0	0	0	0	0	2	1	0	0	0	0	0	0
06:00	8		36	7	0	0	0	0	0	2	2	4	0	0	1	0	0
07:00	66	39	34	4	0	0	0	0	0	7	35	19	5	0	0	0	0
08:00	209	37	32	4	0	0	2	7	43	111	43	3	0	0	0	0	0
09:00	96	38	34	5	0	0	0	0	2	16	46	25	5	2	0	0	0
10:00	70	38	32	5	0	0	0	0	4	19	29	14	3	1	0	0	0
11:00	77	36	32	4	0	0	0	0	1	23	37	14	2	0	0	0	0
12:00	63	37	33	3	0	0	0	0	0	12	34	17	0	0	0	0	0
13:00	66	39	34	5	0	0	0	0	1	15	23	22	5	0	0	0	0
14:00	72	37	32	4	0	0	0	0	3	19	31	18	0	1	0	0	0
15:00	123	38	34	4	0	0	0	0	2	18	65	31	6	2	1	0	0
16:00	136	40	35	4	0	0	0	0	14	59	46	17	0	0	0	0	0
17:00	112	37	33	4	0	0	1	0	2	18	60	28	2	1	0	0	0
18:00	51	39	34	4	0	0	0	0	0	9	25	12	5	0	0	0	0
19:00	55	39	33	5	0	0	0	1	2	13	12	26	0	1	0	0	0
20:00	35	39	34	5	0	0	0	0	2	6	14	10	2	1	0	0	0
21:00	24	38	34	4	0	0	0	0	1	3	9	10	1	0	0	0	0
22:00	10	38	35	4	0	0	0	0	0	1	5	3	1	0	0	0	0
23:00	3		36	2	0	0	0	0	0	0	1	2	0	0	0	0	0
Total																	
12H(7-19)	1141	38	33	4	0	0	1	2	22	213	555	289	53	5	1	0	0
16H(6-22)	1264	38	33	4	0	0	1	3	27	237	592	339	56	7	2	0	0
18H(6-24)	1277	38	33	4	0	0	1	3	27	238	598	344	57	7	2	0	0
24H(0-24)	1285	38	33	5	0	0	1	3	27	240	601	345	58	7	3	0	0
AM Peak	08:00 209				11:00 0	11:00 0	08:00 0	08:00 2	08:00 7	08:00 43	08:00 111	09:00 43	09:00 5	06:00 2	11:00 1	11:00 0	
PM Peak	16:00 136	16:00 40	23:00 36	19:00 5	23:00 0	23:00 0	17:00 1	19:00 1	14:00 3	14:00 19	15:00 65	16:00 46	16:00 17	20:00 1	15:00 1	23:00 0	23:00 0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

13 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	2		38	0	0	0	0	0	0	0	2	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	33	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
04:00	1	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	3	44	9	0	0	0	0	0	0	0	0	2	0	0	0	1	0
06:00	13	44	38	5	0	0	0	0	0	1	3	3	5	1	0	0	0
07:00	44	42	35	6	0	0	0	0	2	6	19	7	2	1	0	0	0
08:00	99	38	33	5	0	0	0	0	3	27	41	24	3	1	0	0	0
09:00	58	39	34	6	0	0	0	0	1	12	22	17	4	0	1	1	0
10:00	58	39	33	5	0	0	0	0	0	17	22	12	5	2	0	0	0
11:00	72	39	34	5	0	0	0	0	0	14	33	17	7	0	1	0	0
12:00	64	38	33	5	0	0	0	0	3	14	27	17	2	1	0	0	0
13:00	75	40	33	6	0	0	0	0	3	22	28	11	9	2	0	0	0
14:00	107	41	35	6	0	0	0	0	3	19	37	29	16	2	1	0	0
15:00	125	39	33	5	0	0	0	0	4	27	55	28	9	1	0	1	0
16:00	153	39	33	6	0	0	0	1	12	27	59	39	11	3	1	0	0
17:00	114	40	35	5	0	0	0	0	0	20	45	33	14	1	1	0	0
18:00	78	39	34	5	0	0	0	0	2	15	30	24	5	1	0	1	0
19:00	58	39	34	5	0	0	0	0	1	12	24	14	6	1	0	0	0
20:00	42	40	33	6	0	0	0	0	2	10	15	9	5	1	0	0	0
21:00	26	37	32	5	0	0	0	0	6	11	4	2	0	0	0	0	0
22:00	12	44	34	7	0	0	0	0	0	4	5	1	0	2	0	0	0
23:00	14	42	36	8	0	0	0	0	0	3	5	3	1	1	0	1	0
Total																	
12H(7-19)	1047	39	34	5	0	0	0	1	33	220	418	258	92	16	6	3	0
16H(6-22)	1186	39	34	5	0	0	0	1	39	249	471	288	110	19	6	3	0
18H(6-24)	1212	39	34	6	0	0	0	1	39	256	481	292	111	22	6	4	0
24H(0-24)	1219	39	34	6	0	0	0	1	39	257	482	296	111	22	6	5	0
AM Peak	08:00 99				11:00 0	11:00 0	11:00 0	11:00 3	08:00 27	08:00 41	08:00 24	08:00 7	11:00 2	10:00 1	11:00 1	09:00 1	11:00 0
PM Peak	16:00 153	22:00 44	23:00 36	23:00 8	23:00 0	23:00 0	23:00 0	16:00 1	16:00 12	16:00 27	16:00 59	16:00 39	16:00 16	14:00 3	16:00 3	17:00 1	23:00 23:00

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

13 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-10MPH	Bin 2 10-15	Bin 3 15-20	Bin 4 20-25	Bin 5 25-30	Bin 6 30-35	Bin 7 35-40	Bin 8 40-45	Bin 9 45-50	Bin 10 50-55	Bin 11 55-60	Bin 12 60-65	Bin 13 65-70
00:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	2		38	0	0	0	0	0	0	0	0	2	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	33	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
04:00	5	37	9	0	0	0	0	0	0	1	2	1	0	0	1	0	0
05:00	7	38	10	0	0	0	0	0	0	2	1	2	1	0	0	1	0
06:00	22	43	37	6	0	0	0	0	0	3	5	7	5	1	1	0	0
07:00	110	40	34	5	0	0	0	0	2	13	54	26	12	2	1	0	0
08:00	308	37	32	4	0	0	0	2	10	70	152	67	6	1	0	0	0
09:00	154	39	34	5	0	0	0	0	3	28	68	42	9	2	1	1	0
10:00	128	38	33	5	0	0	0	0	4	36	51	26	8	3	0	0	0
11:00	149	38	33	5	0	0	0	0	1	37	70	31	9	0	1	0	0
12:00	127	38	33	4	0	0	0	0	3	26	61	34	2	1	0	0	0
13:00	141	39	33	5	0	0	0	0	4	37	51	33	14	2	0	0	0
14:00	179	39	34	5	0	0	0	0	6	38	68	47	16	3	1	0	0
15:00	248	38	33	5	0	0	0	0	6	45	120	59	15	1	1	1	0
16:00	289	39	34	5	0	0	0	1	12	41	118	85	28	3	1	0	0
17:00	226	39	34	5	0	0	0	1	0	2	38	105	61	16	2	1	0
18:00	129	39	34	5	0	0	0	0	2	24	55	36	10	1	0	1	0
19:00	113	39	34	5	0	0	0	1	3	25	36	40	6	2	0	0	0
20:00	77	39	33	6	0	0	0	0	4	16	29	19	7	2	0	0	0
21:00	50	38	33	5	0	0	0	0	4	9	20	14	3	0	0	0	0
22:00	22	39	34	6	0	0	0	0	5	10	4	1	1	2	0	0	0
23:00	17	40	36	7	0	0	0	0	0	3	6	5	1	1	0	1	0
Total																	
12H(7-19)	2188	39	33	5	0	0	1	3	55	433	973	547	145	21	7	3	
16H(6-22)	2450	39	33	5	0	0	1	4	66	486	1063	627	166	26	8	3	
18H(6-24)	2489	39	33	5	0	0	1	4	66	494	1079	636	168	29	8	4	
24H(0-24)	2504	39	33	5	0	0	1	4	66	497	1083	641	169	29	9	5	
AM Peak	08:00				11:00	11:00	11:00	08:00	08:00	08:00	08:00	07:00	10:00	11:00	09:00	11:00	
	3008				0	0	0	2	10	70	152	67	12	3	1	1	
PM Peak	16:00	23:00	23:00	23:00	23:00	23:00	17:00	19:00	16:00	15:00	15:00	16:00	16:00	17:00	23:00	23:00	
	289	40	36	7	0	0	1	1	12	45	120	85	28	3	1	1	

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

14 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	5		35	2	0	0	0	0	0	0	3	2	0	0	0	0	0
05:00	18	42	36	6	0	0	0	0	0	0	2	2	1	0	0	0	0
06:00	74	39	34	4	0	0	0	0	0	13	29	25	7	0	0	0	0
07:00	185	35	31	4	0	0	0	1	11	54	93	26	0	0	0	0	0
08:00	93	38	32	3	0	0	0	0	2	39	16	7	0	0	0	0	0
09:00	95	37	32	5	0	0	0	0	2	43	21	3	1	0	0	0	0
10:00	87	36	32	4	0	0	0	0	5	25	38	19	0	0	0	0	0
11:00	105	37	33	4	0	0	0	0	2	16	61	21	5	0	0	0	0
12:00	87	38	33	5	0	0	0	0	8	14	41	18	5	1	0	0	0
13:00	89	38	33	4	0	0	0	0	2	17	40	29	1	0	0	0	0
14:00	128	37	32	4	0	0	0	0	3	36	61	23	4	1	0	0	0
15:00	182	38	33	4	0	0	0	1	2	41	84	45	8	1	0	0	0
16:00	1111	38	33	6	0	0	3	1	3	20	56	17	10	0	1	0	0
17:00	92	38	34	4	0	0	0	0	0	14	45	31	1	1	0	0	0
18:00	65	39	34	4	0	0	0	0	1	8	30	21	5	0	0	0	0
19:00	31	39	34	5	0	0	0	0	1	6	9	11	4	0	0	0	0
20:00	17	39	35	4	0	0	0	0	0	2	6	8	1	0	0	0	0
21:00	11	44	38	8	0	0	0	0	0	3	1	3	2	1	0	0	0
22:00	8		35	7	0	0	0	0	1	0	4	1	1	1	0	0	0
23:00	8		35	7	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1328	38	33	5	0	0	3	5	41	301	630	291	51	4	1	1	0
12H(7-19)	1459	38	33	5	0	0	3	5	43	321	679	336	66	4	1	1	0
16H(6-22)	1478	38	33	5	0	0	3	5	44	324	684	340	69	6	2	1	0
18H(6-24)	1488	38	33	5	0	0	3	5	44	324	689	344	70	6	2	1	0
AM Peak	08:00				11:00	11:00	11:00	10:00	08:00	08:00	08:00	08:00	09:00	10:00	11:00	11:00	11:00
	185				0	0	2	11	54	93	26	7	1	0	0	0	0
PM Peak	16:00	22:00	22:00	22:00	23:00	23:00	17:00	17:00	13:00	16:00	16:00	16:00	17:00	23:00	22:00	18:00	23:00
	182	44	38	8	0	0	3	1	8	41	84	45	10	1	1	1	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

14 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	1		53	0	0	0	0	0	0	0	0	0	0	0	1	0	0
01:00	1		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
02:00	1		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
03:00	2		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
04:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	4		39	7	0	0	0	0	0	1	0	1	1	0	0	0	0
06:00	14	41	35	6	0	0	0	0	1	2	5	3	2	1	0	0	0
07:00	34	41	34	6	0	0	0	0	2	4	17	5	4	2	0	0	0
08:00	105	38	32	5	0	0	0	0	7	28	39	27	4	0	0	0	0
09:00	54	39	35	4	0	0	0	0	1	6	22	19	6	0	0	0	0
10:00	55	40	34	6	0	0	0	0	2	14	18	13	6	2	0	0	0
11:00	75	39	33	6	0	0	0	0	1	8	14	27	19	5	1	0	0
12:00	75	39	33	6	0	0	0	0	2	22	25	16	8	1	0	1	0
13:00	70	39	33	5	0	0	0	0	3	19	27	13	8	0	0	0	0
14:00	104	39	33	5	0	0	0	0	0	29	38	29	7	1	0	0	0
15:00	134	39	34	5	0	0	0	0	1	28	52	39	12	1	1	0	0
16:00	154	39	34	5	0	0	0	0	2	31	68	41	10	0	2	0	0
17:00	159	39	34	5	0	0	1	4	0	20	76	42	13	3	0	0	0
18:00	93	39	34	5	0	0	0	0	1	18	44	21	7	1	1	0	0
19:00	75	41	34	6	0	0	0	0	1	15	31	14	11	2	0	0	0
20:00	49	42	36	6	0	0	0	0	0	7	17	13	9	2	1	0	0
21:00	34	37	33	4	0	0	0	0	0	10	16	5	3	0	0	0	0
22:00	21	41	34	6	0	0	0	0	0	6	8	2	5	0	0	0	0
23:00	9		34	7	0	0	0	0	1	0	0	5	1	2	0	0	0
Total	1112	39	33	5	0	0	1	4	29	233	453	284	90	12	5	1	0
12H(7-19)	1284	39	34	5	0	0	1	5	31	267	522	319	115	17	6	1	0
16H(6-22)	1314	39	34	5	0	0	1	6	31	273	535	322	122	17	6	1	0
18H(6-24)	1323	39	34	5	0	0	1	6	31	274	536	325	124	18	7	1	0
AM Peak	08:00		00:00	05:00	11:00	11:00	11:00	11:00	11:00	08:00	08:00	08:00	10:00	10:00	11:00	11:00	11:00
	105		53	7	0	0	0	0	8	28	39	27	6	2	1	0	0
PM Peak	17:00	20:00	20:00	23:00	23:00	23:00	17:00	17:00	13:00	16:00	17:00	17:00	17:00	16:00	12:00	23:00	
	159	42	36	7	0	0	1	4	3	31	76	42	13	3	2	1	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

14 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	1		53	0	0	0	0	0	0	0	0	0	0	0	1	0	0
01:00	1		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
02:00	1		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
03:00	2		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
04:00	5		35	2	0	0	0	0	0	0	3	2	0	0	0	0	0
05:00	9		38	6	0	0	0	0	0	1	2	3	2	2	1	0	0
06:00	32	42	35	6	0	0	0	0	1	6	9	8	7	1	0	0	0
07:00	108	39	34	5	0	0	0	0	2	17	46	30	11	2	0	0	0
08:00	290	36	31	4	0	0	0	1	18	82	132	53	4	0	0	0	0
09:00	147	39	33	5	0	0	0	0	3	35	61	35	13	0	0	0	0
10:00	150	38	33	5	0	0	0	2	5	36	61	34	9	3	0	0	0
11:00	162	38	32	5	0	0	0	0	13	39	65	38	5	1	1	0	0
12:00	180	38	33	5	0	0	0	0	4	38	86	37	13	1	0	1	0
13:00	157	38	33	5	0	0	0	0	11	33	68	31	13	1	0	0	0
14:00	193	38	33	4	0	0	0	0	2	46	78	58	8	1	0	0	0
15:00	262	38	33	5	0	0	0	0	4	64	113	62	16	2	1	0	0
16:00	336	38	33	5	0	0	0	1	4	72	152	86	18	1	2	0	0
17:00	270	39	33	6	0	0	4	5	3	40	132	59	23	3	1	0	0
18:00	185	38	34	5	0	0	0	0	1	32	89	52	8	1	1	1	0
19:00	140	40	34	5	0	0	0	1	2	23	61	35	16	2	0	0	0
20:00	80	41	35	6	0	0	0	0	1	13	26	24	13	2	1	0	0
21:00	51	38	33	4	0	0	0	0	0	12	22	13	4	0	0	0	0
22:00	32	43	35	7	0	0	0	0	0	9	9	5	7	1	1	0	0
23:00	17	42	34	7	0	0	0	1	1	0	0	2	3	1	0	0	0
Total	2440	38	33	5	0	0	4	9	70	534	1083	575	141	16	6	2	0
10M(6-22)	2743	38	33	5	0	0	4	10	74	588	1201	655	181	21	7	2	0
18M(6-24)	2792	39	33	5	0	0	4	11	75	597	1219	662	191	23	8	2	0
24M(6-24)	2811	39	33	5	0	0	4	11	75	598	1225	669	194	24	9	2	0
AM Peak	08:00	00:00	06:00		11:00	11:00	11:00	10:00	08:00	08:00	08:00	09:00	10:00	11:00	11:00	11:00	11:00
	290		53	6	0	0	0	2	18	82	132	53	13	1	1	0	0
PM Peak	16:00	22:00	20:00	23:00		23:00	23:00	17:00	17:00	13:00	16:00	16:00	16:00	17:00	16:00	18:00	23:00
	336	33	35		0	0	0	5	11	12	152	86	17	23	3	2	1

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

15 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	5		44	2	2	0	0	0	0	0	0	0	4	1	0	0	0
01:00	1		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
02:00	1		38	0	0	0	0	0	0	0	0	1	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	5		38	3	0	0	0	0	0	0	1	3	1	0	0	0	0
05:00	8		31	3	0	0	0	0	1	0	7	0	0	0	0	0	0
06:00	13	39	36	4	0	0	0	0	0	1	3	8	1	0	0	0	0
07:00	73	40	36	4	0	0	0	0	0	6	28	30	8	0	0	1	0
08:00	196	37	33	4	0	0	0	0	6	44	97	43	4	2	0	0	0
09:00	95	39	34	5	0	0	0	0	1	21	41	23	7	2	0	0	0
10:00	81	38	34	4	0	0	0	0	0	14	40	21	6	0	0	0	0
11:00	85	37	32	5	0	0	0	1	4	19	40	17	2	2	0	0	0
12:00	94	39	34	5	0	0	0	1	2	14	35	35	6	1	0	0	0
13:00	78	39	34	5	0	0	0	0	3	15	24	30	5	1	0	0	0
14:00	89	38	34	4	0	0	0	0	0	10	51	24	3	1	0	0	0
15:00	159	38	32	5	0	0	1	2	5	32	77	34	8	0	0	0	0
16:00	126	38	34	4	0	0	0	0	0	13	77	30	3	2	1	0	0
17:00	102	39	33	5	0	0	0	0	3	24	38	30	6	1	0	0	0
18:00	58	40	35	5	0	0	0	0	2	8	23	17	5	3	0	0	0
19:00	70	39	33	5	0	0	0	0	0	19	29	14	7	1	0	0	0
20:00	38	39	34	6	0	0	0	0	1	6	15	12	7	0	0	0	0
21:00	19	41	37	5	0	0	0	0	0	2	4	9	3	1	0	0	0
22:00	22	38	34	3	0	0	0	0	0	3	10	9	0	0	0	0	0
23:00	18	43	35	8	0	0	0	0	0	3	2	3	4	5	1	0	0
Total																	
12H(7-19)	1236	38	33	5	0	0	1	4	26	220	571	334	63	15	2	0	0
16H(6-22)	1376	39	34	5	0	0	1	4	27	248	623	377	75	17	4	0	0
18H(6-24)	1416	39	34	5	0	0	1	4	30	253	636	390	80	18	4	0	0
24H(0-24)	1436	39	34	5	0	0	1	4	31	253	644	395	85	19	4	0	0
AM Peak	08:00		04:00	11:00	11:00	11:00	11:00	11:00	08:00	08:00	08:00	08:00	07:00	11:00	07:00	11:00	11:00
	196		44	5	0	0	0	1	6	44	97	43	8	2	1	0	0
PM Peak	15:00	23:00	21:00	23:00	23:00	23:00	15:00	15:00	15:00	15:00	16:00	12:00	15:00	18:00	20:00	23:00	23:00
	159	43	37	8	0	0	1	2	5	32	77	35	8	3	2	0	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

15 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	5		43	5	7	0	0	0	0	1	0	1	1	0	2	0	0
01:00	5		40	7	0	0	0	0	0	1	0	1	2	1	0	0	0
02:00	3		44	6	0	0	0	0	0	0	0	1	1	0	1	0	0
03:00	1		33	0	0	0	0	0	0	0	0	1	0	0	0	0	0
04:00	1		53	0	0	0	0	0	0	0	0	0	0	0	1	0	0
05:00	6		35	5	0	0	0	0	0	1	2	2	1	0	0	0	0
06:00	18	40	34	6	0	0	0	0	0	3	10	2	2	0	1	0	0
07:00	29	39	34	5	0	0	0	0	2	3	12	10	2	0	0	0	0
08:00	91	38	33	5	0	0	0	0	4	16	42	22	4	3	0	0	0
09:00	57	39	33	5	0	0	0	0	0	17	21	12	7	0	0	0	0
10:00	79	40	35	6	0	0	0	1	3	8	31	25	5	6	0	0	0
11:00	83	37	32	4	0	0	0	0	3	25	36	18	1	0	0	0	0
12:00	70	40	34	6	0	0	0	0	1	16	25	17	7	2	1	0	0
13:00	84	40	34	5	0	0	0	0	1	25	23	24	11	0	0	0	0
14:00	137	40	34	5	0	0	0	0	2	19	62	33	19	2	0	0	0
15:00	157	38	33	4	0	0	0	0	2	31	71	46	5	1	1	0	0
16:00	152	39	34	5	0	0	0	0	0	36	60	39	16	0	1	0	0
17:00	156	39	34	5	0	0	0	0	0	36	52	54	12	1	0	0	0
18:00	99	40	35	5	0	0	0	0	1	14	36	34	10	4	0	0	0
19:00	65	39	34	6	0	0	0	0	4	13	22	19	4	1	2	0	0
20:00	61	42	36	7	0	0	0	0	2	9	21	16	8	1	4	0	0
21:00	38	40	35	6	0	0	0	0	1	6	7	10	3	0	1	0	0
22:00	31	39	33	6	0	0	0	2	0	5	13	8	1	2	0	0	0
23:00	34	41	35	7	0	0	0	0	3	5	9	10	5	1	1	0	0
Total																	
12H(7-19)	1194	39	34	5	0	0	0	1	21	246	471	334	99	19	2	1	0
16H(6-22)	1366	39	34	5	0	0	0	1	28	277	531	381	116	21	10	1	0
18H(6-24)	1431	39	34	5	0	0	0	3	31	287	553	399	122	24	11	1	0
24H(0-24)	1452	39	34	5	0	0	0	3	31	290	556	404	127	25	15	1	0
AM Peak	08:00		04:00	00:00	11:00	11:00	11:00	10:00	08:00	11:00	08:00	10:00	09:00	10:00	00:00	11:00	11:00
	91		53	9	0	0	0	1	4	25	42	25	7	6	2	0	0
PM Peak	15:00	20:00	20:00	23:00	23:00	23:00	23:00	22:00	19:00	17:00	15:00	17:00	14:00	18:00	20:00	12:00	23:00
	157	42	36	7	0	0	0	2	4	36	71	54	19	4	1	0	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

15 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	10	50	43	7	0	0	0	0	0	1	0	1	5	1	2	0	0
01:00	6		39	6	0	0	0	0	0	1	0	2	2	1	0	0	0
02:00	4		43	6	0	0	0	0	0	0	0	2	1	0	1	0	0
03:00	1		33	0	0	0	0	0	0	0	1	0	0	0	0	0	0
04:00	6		40	6	0	0	0	0	0	0	1	3	1	0	1	0	0
05:00	14	36	33	4	0	0	0	0	1	9	2	1	0	0	0	0	0
06:00	31	39	35	5	0	0	0	0	0	4	13	10	3	0	1	0	0
07:00	102	39	35	5	0	0	0	0	2	9	40	40	10	0	1	0	0
08:00	287	38	33	5	0	0	0	0	10	60	139	65	8	5	0	0	0
09:00	152	39	33	5	0	0	0	0	1	38	62	35	14	2	0	0	0
10:00	160	39	34	5	0	0	0	1	3	22	71	46	11	6	0	0	0
11:00	168	37	32	5	0	0	0	1	7	44	76	35	3	2	0	0	0
12:00	164	39	34	5	0	0	0	1	4	30	60	52	13	3	0	1	0
13:00	162	39	34	5	0	0	0	0	4	40	47	54	16	1	0	0	0
14:00	226	39	34	4	0	0	0	0	2	29	113	57	22	3	0	0	0
15:00	316	38	33	5	0	0	1	2	7	63	148	80	13	1	1	0	0
16:00	278	39	34	5	0	0	0	0	0	49	137	69	19	2	2	0	0
17:00	258	39	34	5	0	0	0	0	4	60	90	84	18	2	0	0	0
18:00	157	40	35	5	0	0	0	0	3	22	59	51	15	7	0	0	0
19:00	135	39	34	6	0	0	0	0	4	32	51	33	11	2	2	0	0
20:00	99	40	35	7	0	0	0	0	3	15	37	28	9	1	6	0	0
21:00	47	40	35	6	0	0	0	0	1	8	11	19	6	1	1	0	0
22:00	53	38	34	5	0	0	0	2	0	8	23	17	1	2	0	0	0
23:00	52	42	35	7	0	0	0	0	6	7	12	14	10	2	1	0	0
Total																	
12PM-1	2430	39	34	5	0	0	1	5	47	466	1042	658	162	34	4	1	
16M(6-22)	2742	39	34	5	0	0	1	5	55	525	1154	758	191	38	14	1	
18M(6-24)	2847	39	34	5	0	0	1	7	61	540	1189	789	202	42	15	1	
24M(6-24)	2888	39	34	5	0	0	1	7	62	543	1200	799	212	44	19	1	
AM Peak	08:00-287	00:00-50	00:00-43	07:00-35	11:00-11	11:00-10	11:00-11	11:00-08	08:00-1	08:00-10	08:00-139	08:00-65	09:00-14	10:00-6	10:00-2	11:00-0	11:00-0
PM Peak	15:00-316	23:00-21	21:00-35	23:00-42	23:00-0	23:00-0	15:00-2	15:00-1	15:00-13	15:00-163	17:00-148	17:00-80	18:00-22	18:00-14	20:00-7	12:00-6	23:00-1

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

16 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-9	Bin 2 10-14	Bin 3 15-19	Bin 4 20-24	Bin 5 25-29	Bin 6 30-34	Bin 7 35-39	Bin 8 40-44	Bin 9 45-49	Bin 10 50-54	Bin 11 55-59	Bin 12 60-64	Bin 13 65-69
00:00	17	40	35	5	5	0	0	0	0	2	6	6	3	0	0	0	0
01:00	2	40	4	3	0	0	0	0	0	0	0	1	1	0	0	0	0
02:00	5	41	7	7	0	0	0	0	0	0	1	2	1	0	1	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	2	30	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0
05:00	4	39	2	0	0	0	0	0	0	0	0	3	1	0	0	0	0
06:00	8	34	5	3	0	0	0	0	0	2	2	3	1	0	0	0	0
07:00	21	38	33	5	0	0	0	0	0	1	12	4	2	0	0	0	0
08:00	59	39	35	6	0	0	0	0	3	7	20	24	2	1	2	0	0
09:00	80	39	34	4	0	0	0	0	0	12	43	17	8	0	0	0	0
10:00	85	39	34	5	0	0	0	0	2	19	33	23	6	2	0	0	0
11:00	69	38	35	5	0	0	0	0	0	8	51	28	2	2	1	1	0
12:00	105	39	34	5	0	0	1	0	0	16	43	35	8	0	2	0	0
13:00	79	38	33	5	0	0	0	0	3	17	34	19	6	0	0	0	0
14:00	68	40	35	7	0	0	1	0	3	9	20	24	5	4	2	0	0
15:00	66	42	36	5	0	0	0	0	1	5	20	25	14	1	0	0	0
16:00	72	39	34	4	0	0	0	0	1	11	25	29	6	0	0	0	0
17:00	64	40	36	5	0	0	0	0	0	8	18	28	8	2	0	0	0
18:00	59	38	34	4	0	0	0	0	0	11	25	21	1	1	0	0	0
19:00	45	40	35	5	0	0	0	0	1	9	12	17	5	1	0	0	0
20:00	34	40	34	5	0	0	0	0	1	7	10	4	1	1	0	0	0
21:00	19	39	33	6	0	0	0	0	4	1	5	8	1	0	0	0	0
22:00	25	40	35	4	0	0	0	0	1	0	12	8	4	0	0	0	0
23:00	12	39	37	4	0	0	0	0	0	0	3	8	0	1	0	0	0
Total																	
12H(7-19)	851	39	34	5	0	0	2	0	15	124	344	277	68	13	7	1	0
16H(6-22)	957	39	34	5	0	0	2	0	21	143	374	315	79	15	7	1	0
18H(6-24)	994	39	34	5	0	0	2	0	22	143	389	331	83	16	7	1	0
24H(0-24)	1024	39	34	5	0	0	2	0	22	146	397	343	89	16	8	1	0
AM Peak	11:00	00:00	02:00	02:00	11:00	11:00	11:00	11:00	08:00	10:00	11:00	11:00	09:00	11:00	08:00	11:00	11:00
	93	40	41	7	0	0	0	0	3	19	51	28	8	2	2	1	0
PM Peak	12:00	15:00	23:00	14:00	23:00	23:00	14:00	23:00	21:00	13:00	12:00	12:00	15:00	14:00	14:00	23:00	23:00
	105	42	37	7	0	0	1	0	4	17	43	35	14	4	2	0	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

16 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-9	Bin 2 10-14	Bin 3 15-19	Bin 4 20-24	Bin 5 25-29	Bin 6 30-34	Bin 7 35-39	Bin 8 40-44	Bin 9 45-49	Bin 10 50-54	Bin 11 55-59	Bin 12 60-64	Bin 13 65-69
00:00	16	38	34	6	0	0	0	0	1	3	5	6	0	1	0	0	0
01:00	11	50	39	8	0	0	0	0	0	1	3	4	0	1	2	0	0
02:00	9	37	5	0	0	0	0	0	0	1	2	4	1	1	0	0	0
03:00	2	35	3	0	0	0	0	0	0	0	1	1	0	0	0	0	0
04:00	1	38	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
05:00	3	28	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
06:00	8	34	5	0	0	0	0	0	0	2	2	3	1	0	0	0	0
07:00	15	35	32	4	0	0	0	0	0	4	9	1	1	0	0	0	0
08:00	24	39	36	6	0	0	0	0	0	2	9	10	1	0	2	0	0
09:00	48	41	34	8	0	0	0	3	1	10	12	13	6	2	0	1	0
10:00	54	40	35	5	0	0	0	0	1	12	22	7	0	0	0	0	0
11:00	82	40	34	5	0	0	0	0	1	15	32	23	10	0	0	1	0
12:00	90	39	34	5	0	0	0	0	1	15	41	22	7	3	1	0	0
13:00	89	40	35	6	0	0	0	0	1	17	29	28	7	4	3	0	0
14:00	90	40	34	6	0	0	0	0	1	25	35	15	9	3	1	1	0
15:00	65	41	37	5	0	0	0	0	0	4	22	27	8	3	0	1	0
16:00	86	41	35	6	0	0	0	0	1	18	24	26	13	3	1	0	0
17:00	91	40	35	5	0	0	0	0	1	13	29	34	10	4	0	0	0
18:00	62	39	34	5	0	0	0	0	0	15	27	13	6	0	1	0	0
19:00	59	42	34	7	0	0	0	1	3	10	22	11	7	4	0	1	0
20:00	30	44	36	6	0	0	0	0	0	6	9	7	4	4	0	0	0
21:00	27	43	35	6	0	0	0	0	2	15	1	5	3	3	0	0	0
22:00	30	44	36	8	0	0	0	0	2	6	6	8	4	2	2	0	0
23:00	13	39	35	5	0	0	0	0	0	2	5	4	2	0	0	0	0
Total																	
12H(7-19)	796	40	35	6	0	0	0	3	8	150	281	234	85	22	9	4	0
16H(6-22)	920	41	35	6	0	0	0	4	12	170	329	256	102	33	9	5	0
18H(6-24)	963	41	35	6	0	0	0	4	14	178	340	268	108	35	11	5	0
24H(0-24)	1005	41	35	6	0	0	0	4	15	186	351	284	109	38	13	5	0
AM Peak	11:00	01:00	01:00	01:00	11:00	11:00	11:00	09:00	11:00	11:00	11:00	11:00	11:00	09:00	08:00	11:00	11:00
	82	50	39	8	0	0	0	3	1	15	32	23	10	2	2	1	0
PM Peak	17:00	22:00	15:00	22:00	23:00	23:00	23:00	19:00	19:00	14:00	12:00	17:00	16:00	20:00	13:00	19:00	23:00
	91	44	37	8	0	0	0	1	3	25	41	34	13	4	3	1	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

16 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-9	Bin 2 10-14	Bin 3 15-19	Bin 4 20-24	Bin 5 25-29	Bin 6 30-34	Bin 7 35-39	Bin 8 40-44	Bin 9 45-49	Bin 10 50-54	Bin 11 55-59	Bin 12 60-64	Bin 13 65-69
00:00	33	39	35	5	0	0	0	0	1	5	11	12	3	1	0	0	0
01:00	13	49	39	7	0	0	0	0	0	1	3	5	1	1	2	0	0
02:00	14	44	38	6	0	0	0	0	0	1	3	6	2	1	1	0	0
03:00	2	35	3	0	0	0	0	0	0	0	1	1	0	0	0	0	0
04:00	3	33	4	0	0	0	0	0	0	1	1	1	0	0	0	0	0
05:00	7	34	6	0	0	0	0	0	0	3	0	3	1	0	0	0	0
06:00	16	39	34	5	0	0	0	0	0	4	4	6	2	0	0	0	0
07:00	36	37	33	5	0	0	0	0	2	5	21	5	3	0	0	0	0
08:00	83	39	35	6	0	0	0	0	3	9	29	34	3	1	4	0	0
09:00	128	40	34	6	0	0	0	3	1	22	55	30	14	2	0	1	0
10:00	139	39	34	5	0	0	0	0	3	31	45	45	13	2	0	0	0
11:00	175	39	35	5	0	0	0	0	1	23	83	51	12	2	1	2	0
12:00	195	39	34	5	0	0	1	0	1	31	84	57	15	3	3	0	0
13:00	168	39	34	6	0	0	0	0	4	34	63	47	13	4	3	0	0
14:00	158	40	34	7	0	0	1	0	4	34	55	39	14	7	3	1	0
15:00	131	42	36	5	0	0	0	0	1	9	42	52	22	4	0	1	0
16:00	158	40	35	5	0	0	0	0	2	29	49	55	19	3	1	0	0
17:00	155	40	36	5	0	0	0	0	1	21	47	62	18	6	0	0	0
18:00	121	39	34	5	0	0	0	0	0	26	52	34	7	1	1	0	0
19:00	104	41	35	6	0	0	0	1	4	19	34	28	12	5	0	1	0
20:00	64	42	35	6	0	0	0	0	1	13	20	17	8	5	0	0	0
21:00	46	41	34	6	0	0	0	0	5	3	20	9	6	3	0	0	0
22:00	55	42	36	7	0	0	0	0	3	16	18	8	2	2	0	0	0
23:00	25	39	36	4	0	0	0	0	0	2	8	12	2	1	0	0	0
Total																	
12M(7-22)	1647	40	35	5	0	0	2	3	23	274	625	511	153	35	16	6	5
18M(6-22)	1877	40	35	6	0	0	2	4	33	313	703	571	181	48	16	5	
18M(6-24)	1957	40	35	6	0	0	2	4	36	321	729	599	191	51	18	6	
24M(6-24)	2029	40	35	6	0	0	2	4	37	332	748	627	198	54	21	6	
AM Peak	11:00-1:00	01:00-03:00	01:00-03:00	01:00-03:00	11:00-11:00	11:00-11:00	09:00-10:00	10:00-10:00	11:00-11:00	11:00-11:00	11:00-11:00	11:00-11:00	08:00-11:00	08:00-11:00	08:00-11:00	11:00-11:00	11:00-11:00
	175	49	39	7	0	0	3	3	31	83	51	14	2	4	2	0	
PM Peak	12:00-1:00	12:00-15:00	15:00-16:00	14:00-15:00	23:00-23:00	14:00-19:00	19:00-21:00	21:00-14:00	14:00-12:00	17:00-15:00	15:00-12:00	14:00-14:00	19:00-14:00	19:00-14:00	19:00-14:00	23:00-14:00	23:00-14:00
	195	42	36	7	0	0	1	5	34	84	62	22	7	3	1	0	

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

17 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	10	47	42	5	5	0	0	0	0	0	1	2	4	3	0	0	0
01:00	6	38	38	5	0	0	0	0	0	1	0	2	3	0	0	0	0
02:00	9	34	34	8	0	0	0	1	1	0	1	4	2	0	0	0	0
03:00	1	53	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
04:00	1	38	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
05:00	5	38	4	0	0	0	0	0	0	0	2	1	2	0	0	0	0
06:00	0																
07:00	10	38	35	3	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	12	39	35	4	0	0	0	0	0	1	5	5	1	0	0	0	0
09:00	42	39	34	5	0	0	0	0	0	7	18	13	3	1	0	0	0
10:00	55	38	32	5	0	0	0	0	4	15	17	16	3	0	0	0	0
11:00	63	38	33	4	0	0	0	1	14	26	18	4	0	0	0	0	0
12:00	77	39	34	4	0	0	0	0	0	10	32	30	5	0	0	0	0
13:00	84	39	35	4	0	0	0	0	1	10	28	41	4	0	0	0	0
14:00	74	39	35	4	0	0	0	0	1	5	38	21	8	1	0	0	0
15:00	67	38	33	4	0	0	0	0	0	15	30	20	2	0	0	0	0
16:00	42	40	35	5	0	0	0	0	9	14	13	5	1	0	0	0	0
17:00	43	39	34	5	0	0	0	0	2	3	23	10	5	0	0	0	0
18:00	45	38	33	4	0	0	0	0	0	11	18	15	1	0	0	0	0
19:00	28	42	36	6	0	0	0	0	2	2	6	10	8	0	0	0	0
20:00	22	39	34	5	0	0	0	0	1	10	8	2	0	0	0	0	0
21:00	6	39	39	5	0	0	0	0	0	1	3	1	1	0	0	0	0
22:00	8	39	39	5	0	0	0	0	0	1	0	4	2	1	0	0	0
23:00	6	36	5	0	0	0	0	0	0	0	4	0	2	0	0	0	0
Total																	
12H(7-19)	614	39	34	4	0	0	0	0	9	101	253	207	41	3	0	0	0
16H(6-22)	670	39	34	5	0	0	0	1	11	104	270	228	52	4	0	0	0
18H(6-24)	684	39	34	5	0	0	0	1	11	105	274	232	56	5	0	0	0
24H(0-24)	716	39	34	5	0	0	0	2	12	106	278	242	67	8	1	0	0
AM Peak	11:00	00:00	03:00	02:00	11:00	11:00	11:00	02:00	10:00	10:00	11:00	11:00	11:00	00:00	03:00	11:00	11:00
	63	47	53	8	0	0	0	1	4	15	26	18	4	3	1	0	0
PM Peak	13:00	19:00	23:00	19:00	23:00	23:00	20:00	19:00	15:00	14:00	13:00	19:00	22:00	21:00	23:00	23:00	23:00
	84	42	39	6	0	0	0	1	2	15	38	41	8	1	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

17 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	18	41	37	6	0	0	0	0	1	1	2	10	3	0	1	0	0
01:00	8	39	3	0	0	0	0	0	0	1	3	4	0	0	0	0	0
02:00	12	44	38	6	0	0	0	0	0	1	3	4	2	2	0	0	0
03:00	3	43	4	0	0	0	0	0	0	0	0	1	1	1	0	0	0
04:00	1	43	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
05:00	1	33	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
06:00	3	33	4	0	0	0	0	0	0	1	1	1	0	0	0	0	0
07:00	7	36	4	0	0	0	0	0	1	1	4	1	0	0	0	0	0
08:00	15	41	34	7	0	0	0	0	2	2	4	2	1	0	0	0	0
09:00	26	43	36	7	0	0	0	0	0	5	8	7	3	2	1	0	0
10:00	40	39	33	5	0	0	0	0	1	9	20	5	3	2	0	0	0
11:00	60	38	33	5	0	0	0	0	2	15	22	19	2	0	0	0	0
12:00	65	39	34	5	0	0	0	1	3	11	27	16	6	2	0	0	0
13:00	77	42	36	5	0	0	0	0	0	9	32	20	13	2	1	0	0
14:00	66	40	35	5	0	0	0	0	0	7	32	17	7	3	0	0	0
15:00	85	40	35	6	0	0	0	0	2	12	28	32	8	2	0	1	0
16:00	59	40	35	5	0	0	0	0	0	7	32	11	4	0	0	0	0
17:00	46	40	35	5	0	0	0	0	0	7	16	16	6	0	1	0	0
18:00	55	41	35	5	0	0	0	0	1	7	21	16	7	3	0	0	0
19:00	34	44	36	7	0	0	0	0	1	2	16	6	4	4	1	0	0
20:00	25	38	34	4	0	0	0	0	0	6	9	9	1	0	0	0	0
21:00	17	40	34	6	0	0	0	0	2	8	3	2	1	1	0	0	0
22:00	10	40	37	4	0	0	0	0	0	1	6	2	0	0	0	0	0
23:00	3	39	6	0	0	0	0	0	0	0	1	1	0	1	0	0	0
Total																	
12H(7-19)	601	40	35	5	0	0	0	0	11	92	243	167	62	22	3	1	0
16H(6-22)	680	40	35	5	0	0	0	0	13	103	277	186	69	27	4	1	0
18H(6-24)	693	40	35	5	0	0	0	0	13	104	279	193	71	28	4	1	0
24H(0-24)	736	40	35	6	0	0	0	0	14	106	286	211	82	31	5	1	0
AM Peak	11:00	02:00	04:00	08:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	01:00	10:00	09:00	11:00	11:00
	60	44	43	7	0	0	0	0	2	15	22	19	4	2	1	0	0
PM Peak	15:00	19:00	23:00	19:00	23:00	23:00	23:00	12:00	15:00	16:00	15:00	13:00	16:00	19:00	15:00	23:00	23:00
	85	44	39	7	0	0	0	0	3	12	32	32	13	5	1	1	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

17 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-65
00:00	28	45	39	5	0	0	0	0	1	1	3	12	7	3	1	0	0
01:00	14	43	39	4	0	0	0	0	0	1	1	5	7	0	0	0	0
02:00	21	43	36	7	0	0	0	1	1	1	4	8	4	2	0	0	0
03:00	4	45	6	0	0	0	0	0	0	0	1	1	1	1	0	0	0
04:00	2	40	3	0	0	0	0	0	0	0	0	1	1	0	0	0	0
05:00	6	37	4	0	0	0	0	0	0	3	1	2	0	0	0	0	0
06:00	3	33	4	0	0	0	0	0	0	1	1	1	0	0	0	0	0
07:00	17	39	35	4	0	0	0	0	0	2	5	9	1	0	0	0	0
08:00	27	40	35	6	0	0	0	0	2	3	9	9	3	1	0	0	0
09:00	68	40	35	5	0	0	0	0	0	12	26	20	6	3	1	0	0
10:00	95	38	33	5	0	0	0	0	5	24	37	21	6	2	0	0	0
11:00	123	38	33	5	0	0	0	0	3	29	48	37	6	0	0	0	0
12:00	142	39	34	5	0	0	0	0	3	21	59	46	11	2	0	0	0
13:00	161	40	35	5	0	0	0	0	1	19	60	61	17	2	1	0	0
14:00	140	40	35	5	0	0	0	0	1	12	70	38	15	4	0	0	0
15:00	152	39	34	5	0	0	0	0	2	27	58	52	10	2	0	1	0
16:00	101	40	35	5	0	0	0	0	0	16	46	24	9	6	0	0	0
17:00	89	40	35	5	0	0	0	0	2	10	39	26	11	0	1	0	0
18:00	100	39	34	5	0	0	0	0	1	18	39	31	8	3	0	0	0
19:00	62	43	36	6	0	0	0	0	3	4	22	16	12	4	1	0	0
20:00	47	39	34	5	0	0	0	1	0	7	19	17	3	0	0	0	0
21:00	23	42	36	6	0	0	0	0	1	2	9	6	3	2	0	0	0
22:00	18	42	38	5	0	0	0	0	2	1	10	4	1	1	0	0	0</

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

18 September 2017

Channel: West

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-9MPH	Bin 2 10-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-69
00:00	2		38	0	0	0	0	0	0	0	0	2	0	0	0	0	0
01:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	2		38	5	0	0	0	0	0	0	1	0	1	0	0	0	0
05:00	4		35	4	0	0	0	0	0	0	3	0	1	0	0	0	0
06:00	22	43	37	6	0	0	0	0	0	4	3	8	6	1	0	0	0
07:00	76	40	35	5	0	0	0	0	0	1	24	31	10	0	0	0	0
08:00	169	38	33	4	0	0	0	0	6	36	78	42	7	0	0	0	0
09:00	86	39	34	5	0	0	0	0	1	12	35	30	6	2	0	0	0
10:00	56	39	34	5	0	0	0	0	1	12	18	20	5	0	0	0	0
11:00	76	39	34	5	0	0	0	0	1	18	28	21	7	1	0	0	0
12:00	79	38	33	4	0	0	0	0	2	10	42	21	4	0	0	0	0
13:00	67	40	35	6	0	0	0	0	4	6	24	22	9	2	0	0	0
14:00	66	38	33	6	0	0	0	1	3	14	27	16	3	1	0	0	1
15:00	122	38	33	4	0	0	0	1	2	19	59	37	4	0	0	0	0
16:00	108	39	34	5	0	0	0	0	1	23	39	33	8	2	0	0	0
17:00	83	39	33	5	0	0	0	0	6	13	37	18	8	1	0	0	0
18:00	78	39	34	5	0	0	0	0	0	15	30	28	3	1	1	0	0
19:00	47	39	35	4	0	0	0	0	0	5	19	19	4	0	0	0	0
20:00	28	38	32	5	0	0	0	0	1	10	18	17	3	0	0	0	0
21:00	10	40	36	5	0	0	0	0	0	1	3	4	2	0	0	0	0
22:00	11	40	35	5	0	0	0	0	0	2	4	3	2	0	0	0	0
23:00	2		38	5	0	0	0	0	0	0	1	0	1	0	0	0	0
Total																	
12H(7-19)	1064	39	34	5	0	0	0	2	28	188	441	319	74	10	1	0	1
16H(6-22)	1171	39	34	5	0	0	0	2	29	208	476	354	89	11	1	0	1
18H(6-24)	1184	39	34	5	0	0	0	2	29	210	481	357	92	11	1	0	1
24H(0-24)	1192	39	34	5	0	0	0	2	29	210	485	359	94	11	1	0	1
AM Peak	08:00	04:00	06:00		11:00	11:00	11:00	11:00	08:00	08:00	08:00	08:00	07:00	09:00	11:00	11:00	11:00
	169		38	6	0	0	0	0	6	36	78	42	10	2	0	0	0
PM Peak	15:00	13:00	23:00	14:00	23:00	23:00	23:00	15:00	17:00	16:00	15:00	15:00	13:00	16:00	18:00	23:00	14:00
	122	40	38	6	0	0	0	1	6	23	59	37	9	2	1	0	1

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

18 September 2017

Channel: East

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-9MPH	Bin 2 10-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-69
00:00	3		39	6	0	0	0	0	0	0	1	1	0	1	0	0	0
01:00	1		28	0	0	0	0	0	0	1	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	2	43	5		0	0	0	0	0	0	0	1	0	1	0	0	0
04:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	4		35	3	0	0	0	0	0	2	2	0	0	0	0	0	0
06:00	12	38	34	4	0	0	0	0	0	2	4	6	0	0	0	0	0
07:00	35	41	34	6	0	0	0	0	3	3	16	6	5	2	0	0	0
08:00	88	39	34	5	0	0	0	0	1	18	40	21	5	3	0	0	0
09:00	63	39	34	5	0	0	0	0	2	10	28	15	6	1	1	0	0
10:00	60	40	34	5	0	0	0	0	1	11	25	14	7	2	0	0	0
11:00	64	39	33	5	0	0	0	0	2	21	23	10	8	0	0	0	0
12:00	75	38	33	5	0	0	0	0	1	22	28	17	6	0	0	0	0
13:00	87	38	33	4	0	0	0	0	2	17	41	21	6	0	0	0	0
14:00	90	39	34	6	0	0	0	0	2	22	34	21	8	2	0	0	1
15:00	119	37	33	5	0	0	0	0	4	25	66	17	4	1	2	0	0
16:00	132	39	34	5	0	0	0	0	2	24	59	33	11	2	0	1	0
17:00	114	40	35	5	0	0	0	0	0	19	40	36	18	1	0	0	0
18:00	65	38	33	4	0	0	0	0	2	15	26	20	2	0	0	0	0
19:00	55	38	33	5	0	0	0	0	1	12	25	12	5	0	0	0	0
20:00	39	39	33	6	0	0	0	0	2	11	13	8	4	1	0	0	0
21:00	16	38	33	4	0	0	0	0	0	3	9	2	0	0	0	0	0
22:00	17	38	33	6	0	0	0	0	0	6	3	0	2	0	0	0	0
23:00	5		38	6	0	0	0	0	0	1	1	0	3	0	0	0	0
Total																	
12H(7-19)	992	39	34	5	0	0	0	0	23	207	426	231	86	14	3	1	1
16H(6-22)	1114	39	34	5	0	0	0	0	26	235	477	259	97	15	3	1	1
18H(6-24)	1136	39	34	5	0	0	0	0	26	242	484	262	100	17	3	1	1
24H(0-24)	1146	39	34	5	0	0	0	0	26	243	487	266	100	19	3	1	1
AM Peak	08:00	03:00	00:00		11:00	11:00	11:00	11:00	07:00	11:00	08:00	08:00	11:00	08:00	09:00	11:00	11:00
	88	43	6	0	0	0	0	0	3	21	40	21	8	3	1	0	0
PM Peak	16:00	17:00	23:00	23:00	23:00	23:00	23:00	23:00	15:00	15:00	15:00	17:00	17:00	22:00	15:00	16:00	14:00
	113	40	38	6	0	0	0	0	4	25	66	36	18	2	1	0	1

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002
West Approach Harras Rd Harras Moor
Speed Report (Speed Limit 30 Mph)

18 September 2017

Channel: Total Flow

	Total Volume	85th Pct	Mean Ave.	Std. Dev.	Bin 1 5-9MPH	Bin 2 10-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-69
00:00	5		39	5	0	0	0	0	0	0	1	3	0	1	0	0	0
01:00	1		28	0	0	0	0	0	0	1	0	0	0	0	0	0	0
02:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	2	43	5		0	0	0	0	0	0	0	1	0	1	0	0	0
04:00	2		38	5	0	0	0	0	0	0	1	0	1	0	0	0	0
05:00	8		35	4	0	0	0	0	0	0	5	2	1	0	0	0	0
06:00	34	41	36	5	0	0	0	0	0	6	7	14	6	1	0	0	0
07:00	111	40	35	5	0	0	0	0	4	13	40	37	15	2	0	0	0
08:00	257	38	33	5	0	0	0	0	7	54	118	63	12	3	0	0	0
09:00	148	39	34	5	0	0	0	0	3	22	63	45	12	3	1	0	0
10:00	116	39	34	5	0	0	0	0	2	23	43	34	12	2	0	0	0
11:00	140	39	33	5	0	0	0	0	3	39	51	31	15	1	0	0	0
12:00	154	38	33	4	0	0	0	0	4	32	70	38	10	0	0	0	0
13:00	154	39	34	5	0	0	0	0	6	23	65	43	15	2	0	0	0
14:00	158	39	33	6	0	0	0	1	5	36	61	37	11	3	0	0	2
15:00	241	38	33	5	0	0	0	1	6	44	125	54	8	1	2	0	0
16:00	238	39	34	5	0	0	0	0	3	47	98	66	19	4	0	1	0
17:00	197	40	34	5	0	0	0	0	6	32	77	54	26	2	0	0	0
18:00	143	38	34	5	0	0	0	0	2	30	56	48	5	1	1	0	0
19:00	102	39	34	4	0	0	0	0	1	17	44	31	9	0	0	0	0
20:00	67	39	33	6	0	0	0	0	3	21	23	12	7	1	0	0	0
21:00	26	40	34	5	0	0	0	0	0	4	12	6	4	0	0	0	0
22:00	28	39	34	6	0	0	0	0	0	8	10	6	2	2	0	0	0

Site No. 14517002 Site Ref. 14517002

West Approach Harras Rd Harras Moor

Speed Summary (Mon-Sun) Speed Limit 30 Mph

From 12/09/2017 To 19/09/2017

Channel: West

	Total Volume	80th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-69
00:00	5	39	5		0	0	0	0	0	0	1	2	2	1	0	0	0
01:00	1	39	5		0	0	0	0	0	0	0	1	1	0	0	0	0
02:00	2	37	8		0	0	0	0	0	0	0	1	0	0	0	0	0
03:00	0	45	8		0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	3	36	5		0	0	0	0	0	0	1	1	0	0	0	0	0
05:00	5	35	5		0	0	0	0	0	0	2	1	1	0	0	0	0
06:00	13	40	36	6	0	0	0	0	0	2	3	5	2	0	0	0	0
07:00	57	39	35	4	0	0	0	0	0	7	23	21	6	0	0	0	0
08:00	145	37	32	4	0	0	0	0	6	33	71	32	3	1	0	0	0
09:00	82	39	34	5	0	0	0	0	1	15	37	22	6	1	0	0	0
10:00	71	38	33	5	0	0	0	0	3	16	29	19	4	1	0	0	0
11:00	79	38	33	5	0	0	0	0	2	18	36	18	3	1	0	0	0
12:00	85	39	34	5	0	0	0	0	1	13	39	26	5	0	0	0	0
13:00	75	39	34	5	0	0	0	0	3	13	29	24	6	1	0	0	0
14:00	75	38	34	5	0	0	0	0	2	13	34	21	3	1	0	0	0
15:00	116	38	33	5	0	0	0	1	2	23	54	29	6	0	0	0	0
16:00	115	39	34	5	0	0	0	1	21	50	34	8	1	0	0	0	0
17:00	90	39	33	5	0	0	1	0	3	16	39	23	7	1	0	0	0
18:00	64	38	34	5	0	0	0	0	0	12	27	22	3	1	0	0	0
19:00	51	39	34	5	0	0	0	0	1	10	18	17	4	1	0	0	0
20:00	31	39	34	6	0	0	0	0	1	6	11	9	2	1	0	0	0
21:00	16	39	35	5	0	0	0	0	1	2	5	7	1	0	0	0	0
22:00	14	39	35	5	0	0	0	0	0	2	5	5	2	0	0	0	0
23:00	7	39	36	6	0	0	0	0	1	0	2	2	1	0	0	0	0
Total																	
12H(7-19)	1055	38	33	5	0	0	1	3	23	199	467	290	59	9	2	0	0
16H(6-22)	1165	39	33	5	0	0	1	3	27	219	504	328	69	11	2	0	0
18H(6-24)	1187	39	34	5	0	0	1	3	27	221	512	335	73	12	3	0	0
24H(0-24)	1204	39	34	5	0	0	1	3	28	222	517	341	77	12	3	0	0
AM Peak	08:00		03:00	02:00	11:00	11:00	11:00	09:00	08:00	08:00	08:00	08:00	09:00	09:00	08:00	11:00	11:00
	145		45	8	0	0	0	0	6	33	71	32	6	1	0	0	0
PM Peak	15:00	21:00	23:00	23:00	23:00	23:00	17:00	15:00	13:00	15:00	15:00	16:00	16:00	14:00	12:00	18:00	14:00
	116	39	36	6	0	0	1	1	3	23	54	34	8	1	0	0	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002

West Approach Harras Rd Harras Moor

Speed Summary (Mon-Sun) Speed Limit 30 Mph

From 12/09/2017 To 19/09/2017

Channel: East

	Total Volume	80th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-69
00:00	5	37	5		0	0	0	0	0	0	1	2	1	0	1	0	0
01:00	4	39	6		0	0	0	0	0	0	1	2	1	0	0	0	0
02:00	4	38	6		0	0	0	0	0	0	1	1	1	0	0	0	0
03:00	2	38	5		0	0	0	0	0	0	1	1	0	0	0	0	0
04:00	1	38	7		0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	3	36	7		0	0	0	0	0	1	1	1	0	0	0	0	0
06:00	12	41	35	6	0	0	0	0	0	2	5	3	2	1	0	0	0
07:00	29	39	34	6	0	0	0	0	2	4	13	6	3	1	0	0	0
08:00	73	38	33	5	0	0	0	0	1	16	30	19	3	1	0	0	0
09:00	48	40	34	6	0	0	0	0	1	10	18	13	5	1	0	0	0
10:00	58	39	34	5	0	0	0	0	1	12	21	15	5	2	0	0	0
11:00	73	38	33	5	0	0	0	0	3	18	29	17	5	0	0	0	0
12:00	73	39	34	5	0	0	0	0	2	16	28	18	6	2	0	0	0
13:00	81	39	34	6	0	0	0	0	2	19	30	20	8	1	1	0	0
14:00	99	40	34	5	0	0	0	0	2	20	40	24	10	2	0	0	0
15:00	115	39	34	5	0	0	0	0	3	22	49	30	8	2	1	0	0
16:00	132	39	34	5	0	0	0	0	4	26	54	33	12	2	1	0	0
17:00	120	40	34	5	0	0	1	1	21	44	38	13	2	1	0	0	0
18:00	74	39	34	5	0	0	0	0	1	15	30	20	6	1	1	0	0
19:00	55	40	34	6	0	0	0	0	2	11	22	12	6	2	0	0	0
20:00	41	40	35	6	0	0	0	0	1	8	14	11	5	1	1	0	0
21:00	25	39	34	6	0	0	0	0	1	5	10	5	3	1	0	0	0
22:00	19	40	34	7	0	0	0	0	0	4	6	4	2	1	0	0	0
23:00	12	41	35	7	0	0	0	0	0	2	4	3	2	0	0	0	0
Total																	
12H(7-19)	976	39	34	5	0	0	0	1	24	199	387	254	85	19	5	2	0
16H(6-22)	1110	39	34	5	0	0	0	2	28	225	439	284	100	23	6	2	0
18H(6-24)	1140	39	34	5	0	0	0	2	29	231	449	291	104	25	7	2	0
24H(0-24)	1161	39	34	6	0	0	0	2	29	233	453	299	107	26	8	2	0
AM Peak	11:00		01:00	00:00	11:00	11:00	11:00	09:00	08:00	11:00	08:00	08:00	11:00	10:00	00:00	09:00	11:00
	73		39	7	0	0	0	0	3	18	30	19	5	2	1	0	0
PM Peak	16:00	23:00	23:00	23:00	23:00	15:00	17:00	17:00	16:00	16:00	16:00	17:00	17:00	14:00	20:00	15:00	14:00
	132	41	35	7	0	0	0	1	4	26	54	38	13	2	1	0	0

VDA-pro R2 20/09/2017

Site No. 14517002 Site Ref. 14517002

West Approach Harras Rd Harras Moor

Speed Summary (Mon-Sun) Speed Limit 30 Mph

From 12/09/2017 To 19/09/2017

Channel: Total Flow

	Total Volume	80th Pct	Mean Ave.	Std. Dev.	Bin 1 0-5MPH	Bin 2 5-10	Bin 3 10-15	Bin 4 15-20	Bin 5 20-25	Bin 6 25-30	Bin 7 30-35	Bin 8 35-40	Bin 9 40-45	Bin 10 45-50	Bin 11 50-55	Bin 12 55-60	Bin 13 60-69
00:00	11	43	38	7	0	0	0	0	0	1	2	4	2	1	0	0	0
01:00	6	39	6		0	0	0	0	0	1	1	2	2	0	0	0	0
02:00	6	38	7		0	0	0	0	0	0	1	2	1	0	0	0	0
03:00	2	39	6		0	0	0	0	0	0	1	1	0	0	0	0	0
04:00	4	37	6		0	0	0	0	0	0	1	2	0	0	0	0	0
05:00	9	35	6		0	0	0	0	0	1	3	2	1	0	0	0	0
06:00	25	41	35	6	0	0	0	0	0	5	7	8	4	1	0	0	0
07:00	86	39	34	5	0	0	0	0	2	11	36	27	9	1	0	0	0
08:00	218	38	33	5	0	0	0	0	9	49	101	51	6	2	1	0	0
09:00	131	39	34	5	0	0	0	1	4	25	55	35	11	2	0	0	0
10:00	129	39	33	5	0	0	0	0	0	4	28	50	34	9	3	0	0
11:00	152	38	33	5	0	0	0	0	5	36	65	36	9	1	0	0	0
12:00	158	39	34	5	0	0	0	0	3	30	67	44	11	2	1	0	0
13:00	156	39	34	5	0	0	0	0	4	31	59	44	14	2	1	0	0
14:00	174	39	34	5	0	0	0	0	3	33	74	45	14	4	1	0	0
15:00	231	38	33	5	0	0	0	0	1	5	46	103	59	14	3	1	0
16:00	247	39	34	5	0	0	0	0	5	47	104	67	20	3	1	0	0
17:00	210	39	34	5	0	0	1	1	4	37	83	61	19	3	1	0	0
18:00	198	39	34	5	0	0	0	0	2	26	57	42	8	2	1	0	0
19:00	104	39	34	6	0	0	0	0	3	20	40	29	10	3	0	0	0
20:00	72	40	34	6	0	0	0	0	2	14	25	20	7	2	1	0	0
21:00	41	39	34	6	0	0	0	0	2	7	15	12	4	1	0	0	0
22:00	33	40	35	6	0	0	0	0	0	6	11	9	4	1	0	0	0
23:00	20	42	35	7	0	0	0	0	1	2	7	5	3	1	0	0	0
Total	1397				0	0	1	4	48	398	854	545	144	27	7	2	0
16H(6-22)	2275	39	34	5	0	0	1	5	55	444	942	613	170	34	9	2	0
18H(6-24)	2327	39	34	5	0	0	1	5	57	452	960	627	177	36	9	2	0
24H(0-24)	2365	39	34	5	0	0	1	5	57	456	970	640	184	38	11	2	0
AM Peak	08:00-21:00	00:00-03:00	03:00-02:00		11:00-11:00	11:00-08:00	09:00-08:00	08:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-11:00					
	218	43	39	7	0	0	1	9	49	101	51	11	3	1	0	0	0
PM Peak	16:00-21:00	23:00-23:00	23:00-23:00		23:00-15:00	17:00-15:00	17:00-16:00	16:00-16:00	16:00-16:00	16:00-20:00	14:00-20:00	15:00-14:00					
	247	42	35	6	0	0	1	5	47	104	67	20	4	1	0	0	0

Manual For Streets SSD Calculator

Speed 32.8 mph **Put speed in red box**

Speed 14.57778 m/s

t 1.5 s MfS 75.7 & MfS2 Table 10 for Light Veh

d 4.41 m/ss MfS 75.7 & MfS2 Table 10 for Light Veh

a -11 % **Put gradient in the Yellow Box + for uphill and - for downhill**

$$\begin{aligned} \text{SSD} &= vt + \frac{v^2}{2(d+0.1a)} \\ &= 21.86667 + 212.5116 \end{aligned}$$

$$\text{SSD} = 53.96812 \text{ m}$$

Manual For Streets SSD Calculator

Speed 32.4 mph **Put speed in red box**

Speed 14.4 m/s

t 1.5 s MfS 75.7 & MfS2 Table 10 for Light Veh

d 4.41 m/ss MfS 75.7 & MfS2 Table 10 for Light Veh

a 11 % **Put gradient in the Yellow Box + for uphill and - for downhill**

$$\begin{aligned} \text{SSD} &= vt + \frac{v^2}{2(d+0.1a)} \\ &= 21.6 + 207.36 / 11.02 \end{aligned}$$

$$\text{SSD} = 40.4167 \text{ m}$$

Manual For Streets SSD Calculator

Speed 35 mph **Put speed in red box**

Speed 15.55556 m/s

t 1.5 s MfS 75.7 & MfS2 Table 10 for Light Veh

d 4.41 m/ss MfS 75.7 & MfS2 Table 10 for Light Veh

a -9.5 % **Put gradient in the Yellow Box + for uphill and - for downhill**

$$\begin{aligned} \text{SSD} &= vt + \frac{v^2}{2a} \\ &= 23.33333 + \frac{241.9753}{6.92} \end{aligned}$$

$$\text{SSD} = 58.30086 \text{ m}$$

Manual For Streets SSD Calculator

Speed 35 mph **Put speed in red box**

Speed 15.55556 m/s

t 1.5 s MfS 75.7 & MfS2 Table 10 for Light Veh

d 4.41 m/ss MfS 75.7 & MfS2 Table 10 for Light Veh

a 9.5 % **Put gradient in the Yellow Box + for uphill and - for downhill**

$$\begin{aligned} \text{SSD} &= vt + \frac{v^2}{2(d+0.1a)} \\ &= 23.33333 + \frac{241.9753}{10.72} \end{aligned}$$

$$\text{SSD} = 45.90566 \text{ m}$$



REV	DESCRIPTION	BY	CHK	APP	DATE
-----	-------------	----	-----	-----	------

Client:
TERATUS LTD

2 ST. JAMES GATE
NEWCASTLE UPON TYNE
TYNE & WEAR
NE1 4AD

TEL: +44 (0)191 255 7300
FAX: +44 (0)191 255 7301
e-mail: newcastle@wyg.com

Project:
LAND AT HARRAS ROAD

Drawing Title:
ACCESS ARRANGEMENTS AND VISIBILITY SPLAYS

Scale @	A1	Drawn	Date	Checked	Date	Approved	Date
NTS		EB	29.06.18	NB	29.06.18	AA	29.06.18
Project No.	Office	Type	Drawing No.	Revision			
A105041-7	91	18	C003	-			