

Traffic Speed data Statistical Analysis 30th

November 2017 to 6th December 2017

and

14th December 2017 to 21st December

2017 Monk Fryston Parish Council

December 2017

# Speed Data Analysis

Monk Fryston Parish Council

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## 1. Rationale

During the 3<sup>rd</sup> quarter 2017 Monk Fryston Parish Council engaged Sanderson Associates (Consulting Engineers) to undertake certain works in relation to the highways and road traffic along the A63 corridor in Monk Fryston. In turn Sanderson Associates engaged Road data services limited to undertake a speed survey within the village.

The speed survey was undertaken from the 30<sup>th</sup> Nov to the 7<sup>th</sup> (Week 1) December and the 14<sup>th</sup> December to the 21<sup>st</sup> of December (Week 3). There were 2 monitoring points installed during this time. One point was adjacent to the Cemetery and the other to the East of the railway bridge on the A63. The Parish Council hire a VAS sign on a part time basis and for week1 of the speed survey one was located at the west end of the village for the incoming traffic. This was to provide some level of effectiveness of the Parish Councils strategy for VAS sign deployment.

The purpose of this report is to provide a detailed assessment of the speed data using the empirical data collected by Road Data Services Ltd

## 2. Headline Statistics

### a. Speeds and speeding

During the speed survey a total of 140,838 vehicles entered the village along the A63 of these 55% were traveling above 30 mph and 17% above 35 mph. The 85<sup>th</sup> percentile has been calculated to be 38mph.

The speeding at the West side is significantly Lower than the East side this is attributed to the effect of the VAS sign during week 1. If authorities placed a speed camera the resultant fines for vehicles above 35mph would be in the order of £2,352,500 for the 2 week period or £61,165,000 for the year.

Sensor Location	total vehicles	.above 30	.above 35	% above 30	% above 35
East side	79779	54593	17408	68%	22%
West Side	61059	23029	6117	38%	10%
<b>Grand Total</b>	<b>140838</b>	<b>77622</b>	<b>23525</b>	<b>55%</b>	<b>17%</b>

### b. Types of vehicle

Throughout the speed survey there were 127,605 cars/Light goods vehicles and 13,233 HGVs or Artics. The HGVS equate to 9% of the total traffic entering the village.

	Sensor position		
Values	East side	West Side	Grand Total
Total Car LGV.	72101	55504	127605
Total HGV/Artic.	7678	5555	13233

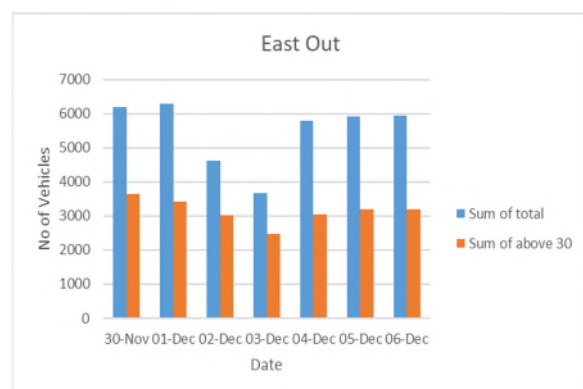
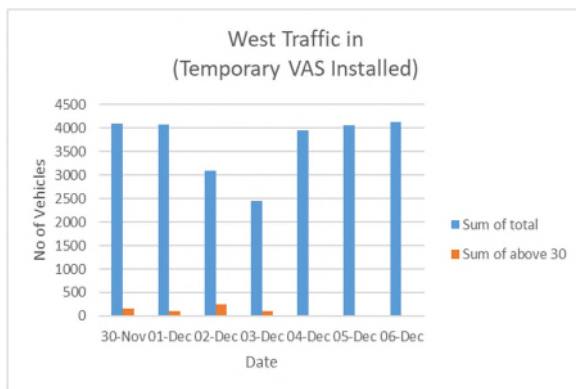
### 3. Two Week Overview

#### a. Temporary VAS Sign

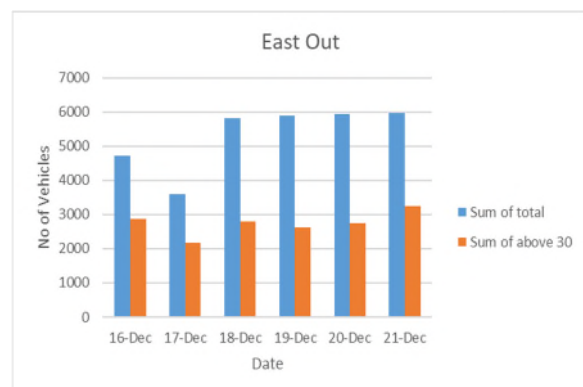
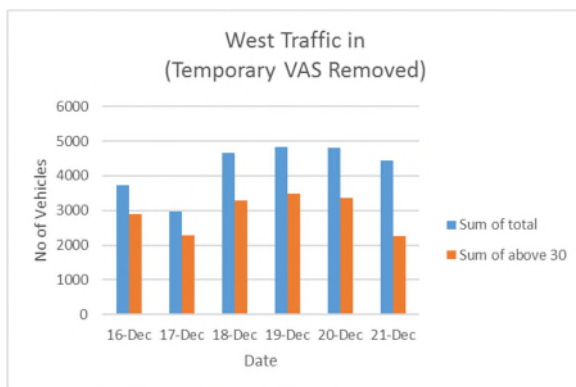
The charts below show the data for a traffic flow through the village from West to East. For the first set (Week 1) it can be seen that the impact of the temporary VAS is significant if it is compared to the data for second set of data (Week 3). However, from the data it can be seen that the behaviour for the data going out has not changed therefore there can be a number of conclusions and assumptions from this.

- i) That the reduction in speed is the initial reaction to the VAS as there is no change of behaviour on the East set of readings.
- ii) The speed has changed though the village to the point of where the East data readings are taken

#### i. Week 1



#### ii. Week 3



## 4. Detailed Traffic Flows

### a. Overall Traffic Volume

The table below shows the total number of vehicles Entering and leaving the village along the A63 only. It may be expected that the number of vehicles entering and leaving should be reasonably similar however this is not the case. Due to the geography of the village vehicles can enter and exit by additional routes such as Lumby Lane and Water Lane. Also, there will be an imbalance due to resident's movements in and out of the village.

#### Total Vehicles coming into village

Direction	in
Sensor Location	Total In
East side	79782
West Side	61059
<b>Grand Total</b>	<b>140841</b>

Direction	out
Sensor Location	Total In
East side	83123
West Side	68067
<b>Grand Total</b>	<b>151190</b>

## b. Volume of Speeding Traffic

The tables below give a detailed breakdown of the vehicles that are speeding. The volume of speeding vehicles is consistently high for both incoming and exiting traffic.

Vehicles entering above 30			Vehicles exiting above 30		
Direction	in		Direction	out	
<b>Sensor Location</b>	<b>total above 30</b>		<b>Sensor Location</b>	<b>total above 30</b>	
East side	54593		East side	44900	
West Side	23029		West Side	39204	
<b>Grand Total</b>	<b>77622</b>	<b>55%</b>	<b>Grand Total</b>	<b>84104</b>	<b>56%</b>

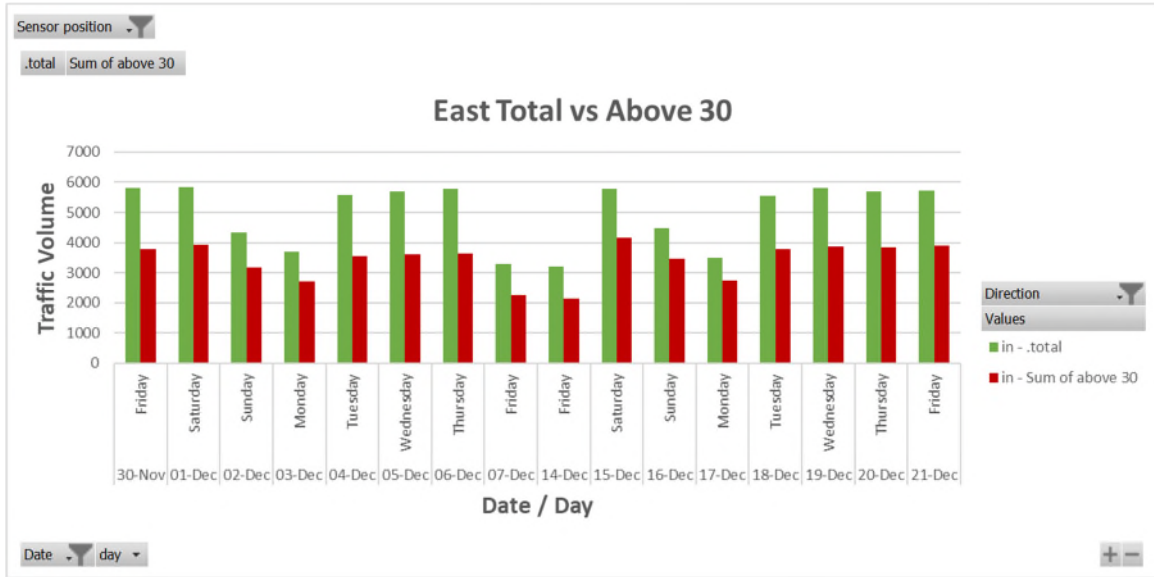
Vehicles entering above 35			Vehicles Exiting above 35		
Direction	in		Direction	out	
<b>Sensor Location</b>	<b>Total above 35</b>		<b>Sensor Location</b>	<b>total above 35</b>	
East side	17408		East side	10155	
West Side	6117		West Side	9014	
<b>Grand Total</b>	<b>23525</b>	<b>17%</b>	<b>Grand Total</b>	<b>19169</b>	<b>13%</b>

### c. Daily Traffic Flow

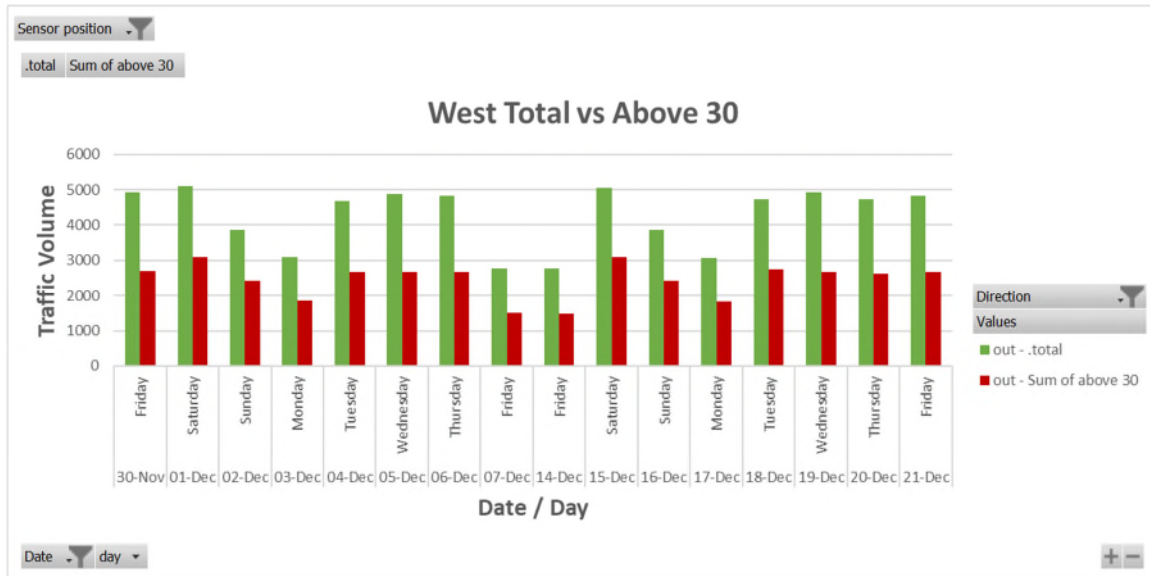
The daily traffic flow indicated on the graphs is showing the volume of traffic for each day during the survey. The total volume of traffic is shown by the green columns. The red columns are showing the volume of traffic that is speeding daily.

The two graphs below show the comparison between East in and West Out

#### East in

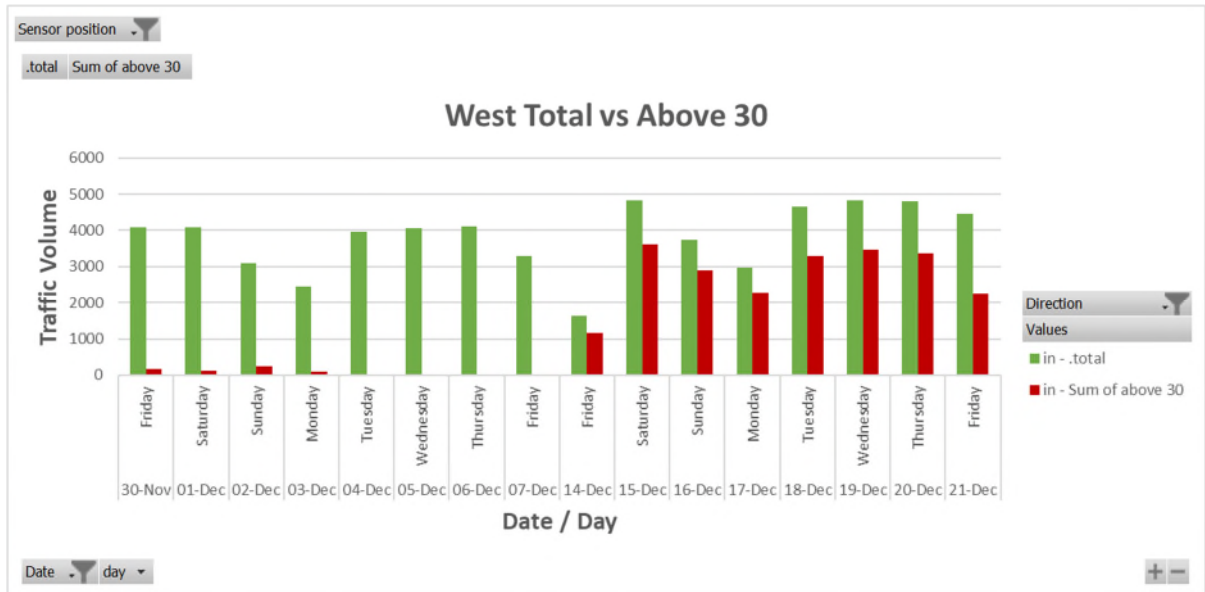


#### West Out

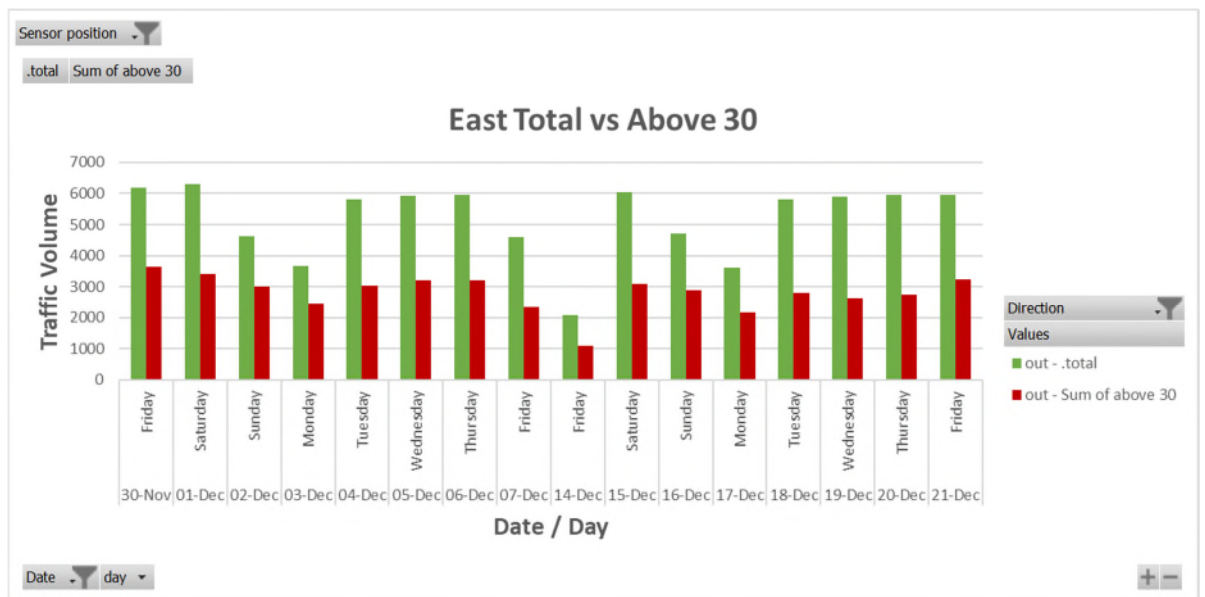


The two graphs below show the comparison between West in and East Out

West in



East Out





#### d. 85<sup>th</sup> Percentile analysis

The 85<sup>th</sup> percentile is the figure that highways agencies and consultants use to work out the appropriate speed for a road in order to maintain a good flow of traffic. The 85<sup>th</sup> percentile for villages and built up areas has been determined at 30mph. It is the speed at which 85% of the traffic will travel at as reasonable and responsible drivers. It is generally accepted that 15% of drivers will drive above the limit set. The calculation below shows the value of the 85<sup>th</sup> percentile of the driver's speed through Monk Fryston. This has been calculated to be 39mph. The calculation is based on design manual for roads and bridges November 1981 volume 5 assessment and preparation of road schemes section 1 assessment of road schemes

Count of all vehicles	292023
sum of all speeds	9687460
Mean speed	33mph
Standard deviation	5mph
85th Percentile	38mph

Speed	percentile
0-10	0%
11-20	1%
21-25	3%
26-30	32%
31-35	78%
36-38	85%
39-40	95%
41-45	99%
46-50	100%
51-55	100%
56-60	100%
61-70	100%
71+	100%
100	100%

