

Chilton Parish Council Speed Warning Sign Report

**Brill Road site
Nov – Dec 2021**

**Compiled by N Wasey
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Introduction

Since the summer of 2019 Chilton Parish Council have operated a single **Speed Warning Sign** with three mounting points at each of the approaches into the village.

- a) On the Brill Road on the verge outside the Old School House
- b) On the Dorton Road just north of the grit box opposite Town Hill Farm
- c) On the Thame Road located 10m south of the BT cabinet opposite Chilton Meadow

The Warning Sign is manufactured by SWARCO, a UK firm, and is of the basic design that illuminates with a “30” reminder and a “SLOW DOWN” message if a vehicle is travelling in excess on the limit. This is known as a Speed Limit Reminder (SLR) type sign. Other types seen in neighbouring villages are Speed Indication Device (SID) that indicates to the driver the speed at which they are travelling, and Smiley Activated Message (SAM) as used in Chearsley on the approach from Cuddington.

These signs use a radar to detect vehicle speeds and with an energy efficient LED display to show the message to oncoming drivers. The sign was delivered with a pair of 12V rechargeable batteries, each of which lasts around 6 weeks before having to be exchanged for its charged twin. A speed tolerance can also be set within the sign and this currently that is set to zero such that any vehicle exceeding 30mph will activate the sign.

Importantly, the sign also has an inbuilt data logging feature that provides statistical feedback on the number of activations, vehicle speeds, volumes and various other metrics. It doesn't, however, have a camera so there is no recording of vehicle registrations. The sign was a relatively sizeable investment for the PC costing £1,595 (£3,195 less a grant of £1,600) so in order to realize its full value the data logging feature should be fully used to make informed decisions about traffic calming through the village.

What the sign records

The Speed Warning Sign uses a Bluetooth connection to download its recordings to a laptop and an American software (Houston Radar Stats Analyser) to compile and report on the data. The three locations have now been set up within the software and the exact position of the mounting plinths logged. The Houston software come with a suite of on-screen and generated reports that show the following metrics ;

- Vehicle counts by hour, day, week and month
- Mean average speeds by hour, day, week and month
- 85th Percentile speed*
- Speeder counts and average speeder MPH
- Highest speed recorded in a period

The reports display a huge amount of data so interpreting them and presenting an easily digestible summary has been time quite consuming. The reports can be With time a template can be developed so that the Parish Council can easily review the speed data and measure the results of any initiatives to reduce speeding through our village.

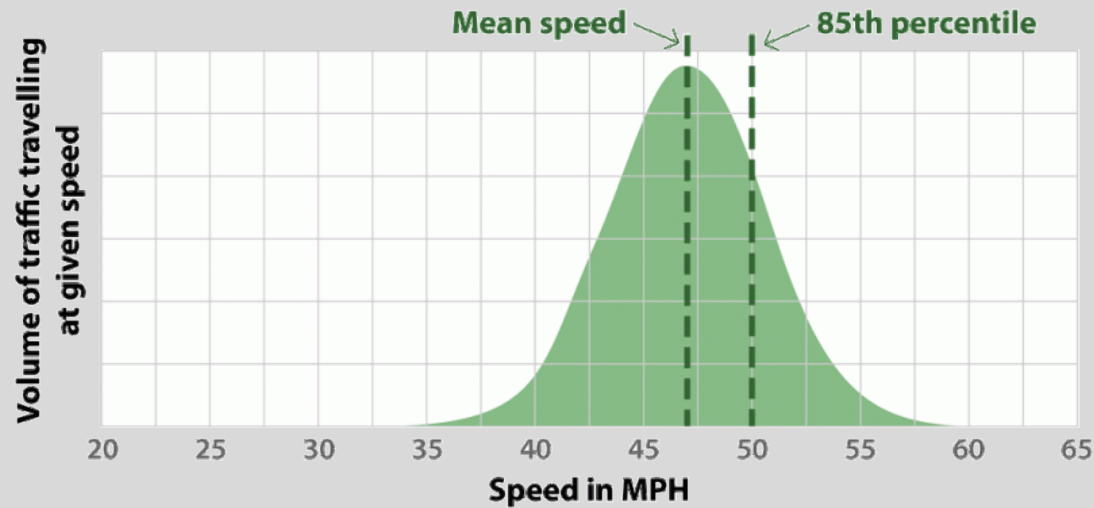
* See following explanation

Mean average vs. 85th Percentile speeds – an explanation

DfT advice is to use the **mean average** and **85th percentile speeds**, when considering speed implications (not limits). The mean (average) provides an overall indication of the speed environment, but it does not give a good indication of how many drivers may be exceeding the legal speed limit by a significant amount.

In statistics, a percentile is a score below which a given percentage of scores in its frequency distribution falls or a score at or below which a given percentage falls. For example, the 50th percentile is the score at or below which 50% of the scores in the distribution may be found.

The 85th percentile speed helps to show this by indicating the speed not exceeded by 85% of the traffic surveyed, **and hence is the level exceeded by the other 15%**.



The mean speed is not the same as the 85th percentile — in fact it can be quite different and is almost certain to be lower.

Based on Association of Chief Police Officers (ACPO) criteria, the thresholds used nationally to bring a consistent approach in speed enforcement across the country, which is a requirement of Camera Safety Technology are worked out by the following formula:-

Threshold speed = speed limit + 10% + 2mph. For example, in a 20 zone, the formula would look like:-

$$\text{Speed limit} + 10\% + 2\text{mph} = 20\text{mph} + 2 + 2\text{mph} = \mathbf{24\text{mph}}$$

Nov-Dec 2021 Brill Road results

Below is the first summary page of the data report for 21/11/2021 to 31/12/2021.

For Project:	Brill Road				
Project Notes:	Outside Old School House				
Location/Name:	Incoming				
Report Generated:	10/06/2022	10:47			
Speed Intervals	5 MPH				
Time Intervals	Instant				
Traffic Report From	21/11/2021	04:00:00	through	31/12/2021	16:59:59
85th Percentile Speed	33.5 MPH				
85th Percentile Vehides	11901				
Max Speed	45 MPH	on	23/11/2021	10:45:00	
Total Vehides	14001				
AADT:	345				

Volumes - weekly counts

Time	5 Day	7 Day
Average Daily	381	338
AM Peak 08:00	58	46
PM Peak 04:00	10	12

Percentage vehicles over the speed limit in Nov-Dec = 35%

Speed

Speed Limit:	30
85th Percentile Speed:	33.5
Average Speed:	27.47

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Count over limit	740	1320	757	581	682	404	460
% over limit	33.8	37.0	36.2	35.0	34.6	35.3	33.4
Avg Speeder	33.4	33.6	33.4	33.4	33.3	33.5	33.4

November – December Summary Brill Road Location

- 85% percentile speed was **33.5 mph** meaning **15%** of traffic was exceeding that value.
- The maximum speed recorded was **45 mph**
- **35 %** of vehicles exceeded the speed limit during the month
- The average speeder was **33.4mph**
- The average speed during the period was **27.47mph**



