



# STROUD DISTRICT ROAD SAFETY GROUP

Working towards safer roads in the Stroud District

[www.strouddistrictroadsafety.com](http://www.strouddistrictroadsafety.com)

## AutoSpeedWatch Community Speed Camera trial.

### 1. Introduction

Following a deployment of the SDRSG VAS device in Frocester, this site was identified as having a persistent speeding problem, and was chosen as the site to trial an AutoSpeedWatch device. The site of the ASW is in a 30mph speed limit near the 4-way crossroads in the centre of the village. There have been a number of minor accidents at these crossroads in recent years.

### 2. AutoSpeedWatch

AutoSpeedWatch (ASW) has been developed by a small start-up company in Bath. It was trialled with a small number of local Parish Councils in the Bath area and by Avon and Somerset Police, and is now available to purchase online. It is intended as a cost-effective, automated replacement for roadside speed watch groups, and is not intended as a direct competitor for the sophisticated Community Speed Cameras such as are currently in use in Rodborough, Whiteshill and Kingswood.

The unit is compact (measuring 20 x 17.5 x 6.3 cm) and easily installed using a metal circlip to any suitable post, ideally above head height so that it is out of reach. It is powered by a solar panel, and thus operates only in daylight. The unit's location is entered on the ASW website and the unit cannot be moved once that location has been confirmed. A threshold speed is chosen for the unit above which any vehicles exceeding that speed will be recorded. Data is automatically uploaded from the unit by GPRS signal to a central database and data for a specific camera or group of cameras is accessed by a designated administrator via secure log-in.



It is priced at £549, including one year's subscription, with following year's 4G subscription being £85 per annum. There are no other ongoing costs for ASW.

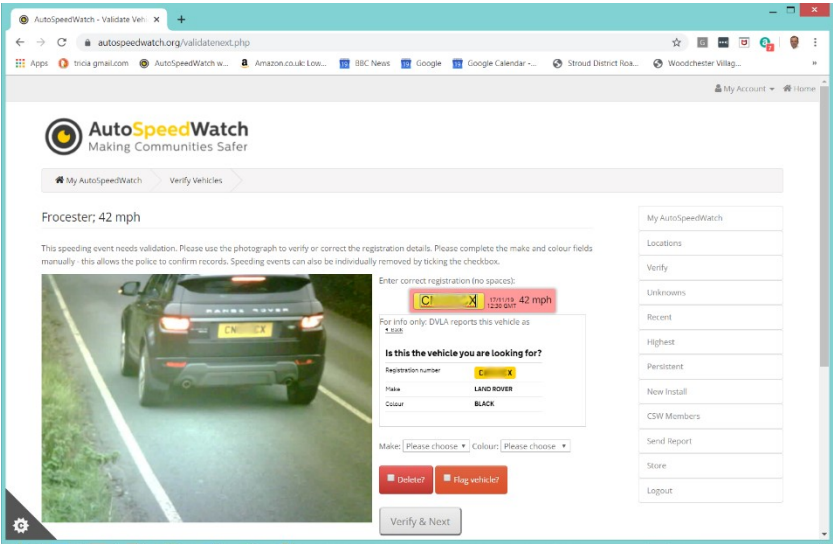
### 3. Frocester Trial

The unit was easily installed, on Frocester Hill about 150m south-east of the crossroads in the centre of Frocester, on an existing metal roadside post. The exact coordinates for the location of the unit were determined using Google maps, and easily uploaded to the AutoSpeedWatch site. A threshold reporting speed of 38mph was selected.

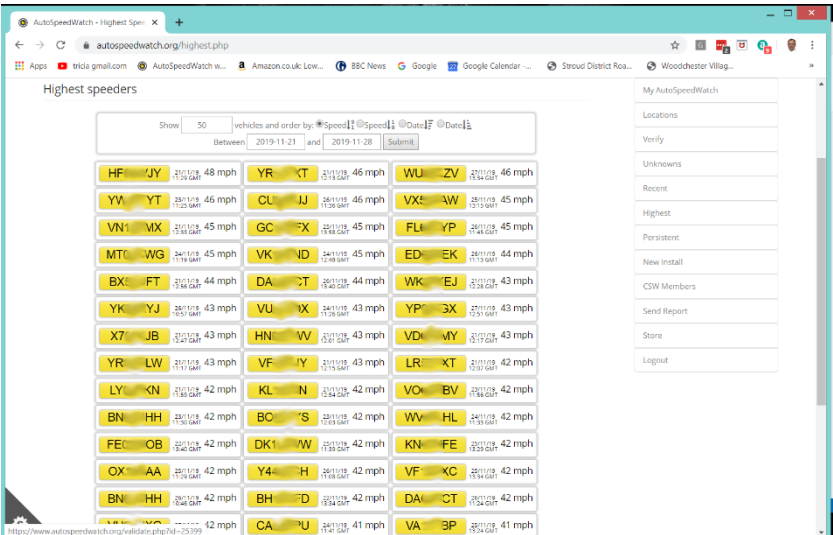


The unit was allowed to ‘bed in’ for a couple of weeks to confirm that it was operating correctly, prior to the trial commencing, and for the administrators to familiarise themselves with using the ASW website.

The ASW website is easy to use, requiring secure login for designated, registered administrators. Each speeding event has to be verified by manually entering the VRM (Vehicle Registration Mark) as seen on the recorded image. An automatic look-up using the DVLC database confirms the make and colour of the vehicle. Each verification takes around 15 seconds, so for this unit a few minutes verification is required for each day of data.



Simple, clear pages display the recent speeding events by speed and VRM, or repeat offenders.



The trial was conducted in two Phases: after an initial one month period of speed monitoring, four warning signs were erected (two in each direction) to find out if this would have any impact on the number and level of speeding.

**3.1 Phase one:** In the 28 days starting on Monday 11 November, a total of 801 verified vehicles were recorded exceeding the chosen 38mph threshold, an average of 28.6 vehicles per day. An average of 8 vehicles a day exceeded 41mph, and an average of 2 vehicles a day exceeded 45 mph. The maximum speed recorded was 51mph. The highest number of vehicles exceeding the chosen 38mph threshold in one day was 53. There was no discernible pattern in terms of the frequency of speeding on particular days or times. 28 vehicles were recorded exceeding the 38mph threshold on more than one occasion during the four week period.

We did have a problem on certain days with number plates ‘flaring out’ and being unreadable, leading to a number of speeding events being unverified. It seems that this is primarily due to bright sunlight reflecting off the number plates for two reasons:

1. The device in Frocester is orientated such that vehicles passing the device can be subject to low-angle winter sunlight at some times of day, which reflects off number plates, making them unreadable.
2. The device is located on a pole only 2.2m above ground level. If the device was situated higher off the ground the amount of number plate reflection would be reduced. We would strongly recommend that these devices are located higher than this to reduce the flaring problem.

Auto Speed Watch have advised that they are about to introduce a software modification which will help reduce glare, and an optional solar panel to improve performance during winter months.

It was also noted that a number of the speeding vehicles were verified against the DVLA website as having no tax or MOT and a couple of vehicles were SORN - Statutory Off Road Notification which indicates the vehicle is untaxed because it has been scrapped or is not being used on public roads!

**3.2 Phase two:** In the four weeks following erection of the warning signs:

A total of 401 verified speeding events (exceeding the chosen 38mph threshold) were recorded, an average of 14.3 per day compared to Phase 1, **representing a reduction of almost exactly 50% in the number of vehicles exceeding the chosen 38mph threshold.**

221 vehicles were recorded at between 38mph and 40 mph a **reduction of 54.7% compared to Phase 1.**

143 vehicles were recorded exceeding 41mph a reduction of 36%.

37 vehicles were recorded exceeding 46mph, a reduction of 37%.



Phase one – number of verified vehicles during covert operation with no signs				
	38-40mph	41-45 mph	+ 46mph	total
total	518	224	59	801
daily average	18.5	8.0	2.1	28.6
Phase Two – number of verified vehicles with warning signs				
total	221	143	37	401
daily average	7.9	5.1	1.3	14.3

**This clearly demonstrates the deterrent effect if appropriate signage is used in conjunction with Community Speed Cameras.**

#### 4. GDPR and SCC Compliance

GDPR has been cited as a cause of concern regarding the use of Community Speed Cameras.

AutoSpeedWatch uses optional Optical Character Recognition on still images of known offending vehicles as a means to aid manual verification of VRNs. It does not record every vehicle as some Community Speed Camera systems do, and is thus not considered a 'continual surveillance' system. It records only the rear of the vehicle so it is not possible to identify any individuals within the vehicle from the ASW images. At this time its use is thus not considered to be covered by GDPR. However, in a situation where the ASW data is referred to the Police, who then use this data to identify the owners of offending vehicles, there may be GDPR implications, and this is currently being reviewed.

Although primarily concerned with video and CCTV cameras and general surveillance of the law-abiding public, UK law restricts the proliferation of public facing cameras primarily through the Protection of Freedoms Act. Any public facing camera (even one only taking stills of offences), falls within the definition of a Surveillance Camera. AutoSpeedWatch concerns itself with vehicles (not identifiable people) but nonetheless the guidelines apply. As a parish council/local council/local authority installer and operator of a roadside unit you therefore need to be familiar and compliant with the act and the corresponding Surveillance Camera Commissioner's Codes of Practice.

**The key issue here is that ASW provides the same raw information as traditional a Speedwatch group standing by the side of the road with a 'radar gun', but the data is automatically recorded and organised to be more useful.**

#### 5. Engaging with the Police

If you want to optimise the impact of your AW device, you need to engage with the local Police and get agreement for enforcement action to add to the deterrent effect of the Community Speed Camera.

A RoSPA factsheet (Inappropriate Speed Factsheet, June 2018) reports 217 deaths in 2015 due to exceeding the speed limit, and refers to a study of 4000 safety cameras that concluded a **42% drop in fatalities** near safety cameras. The factsheet states that if average speeds are reduced by 1 mph, the accident rate would fall by approximately 5%. This varies slightly according to road type, so that a 1 mph reduction in average speed would reduce accident frequency by about:

- 6% on urban main roads and residential roads with low average speeds
- 4% on medium speed urban roads and lower speed rural main roads
- 3% on the higher speed urban roads and rural single carriageway main roads.

This should be sufficient reason for your local police to be enthusiastic about working with you to improve road safety.

The benefits to the Police of having access to ASW data are many:

- It provides prevalidated records of speeding offenders
- Identifies highest priority offenders for police action
- Highlights vehicles without Road Tax or valid MoT

For example in Rodborough and Whiteshill, where Community Speed Camera have been in use for some time, the Parish Council works with the local PCSO by providing details of the top ten offenders each month. These are then contacted directly by the PCSO and warned as to their future driving behaviour. In this way, we can work with Police to target the worst offenders, in other words those who are most likely to cause a serious accident.

## 6. Conclusions

1. The AutoSpeedWatch device was easy to install and use.
2. Within certain limitations it provided excellent, useable data. (These limitations relate to the solar-panel operated technology – it is operational only during daylight hours – and the loss of some speeding events due to image quality and number plate flair. However, the company is about to introduce a software modification which will help reduce glare, and an optional solar panel to improve performance during winter months. )
3. The data provided is suitable for councils to work with local Police in targeting persistent and excessive speeding offenders. Within the daylight-only limitations of the device, there is no reason this could not be as effective as more expensive Community Speed Cameras
4. The dramatic reduction in the number of speeding events following deployment of warning signs confirms the potential deterrent effect of these devices.
5. As an alternative to roadside community speed watch groups, this device seems to offer an excellent, cost-effective solution, offering a full-time, automated speed monitoring service.

## 7. Recommendation

**Stroud District Road Safety Group recommends that AutoSpeedWatch should be considered as part of an integrated approach to modifying driver behaviour and reducing speeding in the Stroud District.**

*31 January 2020*