

Evolis VAS (Vehicle Activated Sign) Update

November 2021

Our VAS was put back in position in the 40mph zone on the A386 at the north end of the Mary Tavy on the 25th October. The unit was remounted on the same lamppost as in June/July (when it sustained damage by a passing vehicle) but this time on an offset bracket to move it further from the road.

When the VAS was in place between June 21st and July 22nd 2021 we ran the unit in “spy mode”. This means that the unit gathered data but the speed display was turned off.

Since 25th October we have run the unit with the display switched on. The display shows the speed of vehicles coming off the Moor and heading south into the village (inbound traffic) but the display isn't visible to vehicles heading north up the A386 and exiting the village towards Sourton (outbound traffic). Although the speed display is only visible to inbound traffic, data is recorded for both inbound and outbound vehicles. The unit records the time at which a vehicle passes the VAS, direction of travel and vehicle speed. From this we can see the number of vehicles in each direction by time of day, the average speed of vehicles and the maximum speed of vehicles. We also get a breakdown of the percentage of vehicles in each 5mph speed segment from less than 25mph to greater than 46mph.

Daily traffic volumes were similar for the June / July and October / November periods.

Results to date are interesting:

- When we ran the VAS in spy mode (display off) there were only small differences in the speed of inbound and outbound traffic. This makes sense since the VAS wasn't very visible, irrespective of the direction of traffic. In number terms, the V50 value for both inbound and outbound traffic was 34mph (V50 means that 50% of vehicles were travelling at this speed or less). The V85 value was 39mph inbound and 41mph outbound (V85 means that 85% of vehicles were travelling at this speed or below).
- When we turned the display on, the outgoing traffic speed changed very little with a V50 of 34mph and a V85 of 40mph. This isn't really surprising as outgoing traffic can't see the visual display and so doesn't know it's switched on.
- However, with the display switched on, the speed of incoming traffic (that can see the speed display) is reduced significantly with a V50 of 31mph and a V85 of 36mph. So, when drivers can see their speed displayed, they tend to slow down by about 8-10%.

A 10% reduction in speed is important because, should an accident occur, the seriousness of the accident ought to be reduced. Also, if drivers are alerted to their speed in the 40mph zone and, by and large, have slowed down, they are more likely to see and respond to the 30mph limit signs further down the hill.

We still see a small percentage of drivers who speed, irrespective of whether the VAS is switched on or off. It is unlikely that a VAS will change the behaviour of this minority of road users.

The results are summarised in the following 4 charts.

Chart 1 compares the speed to incoming (southbound) and outgoing (northbound) traffic with the VAS display switched on. Significantly fewer vehicles are speeding (red and black bars) when they are heading south and can see their speed displayed on the sign.

Chart 1

Evolis VAS

Display On; 26th October to 16th November 2021

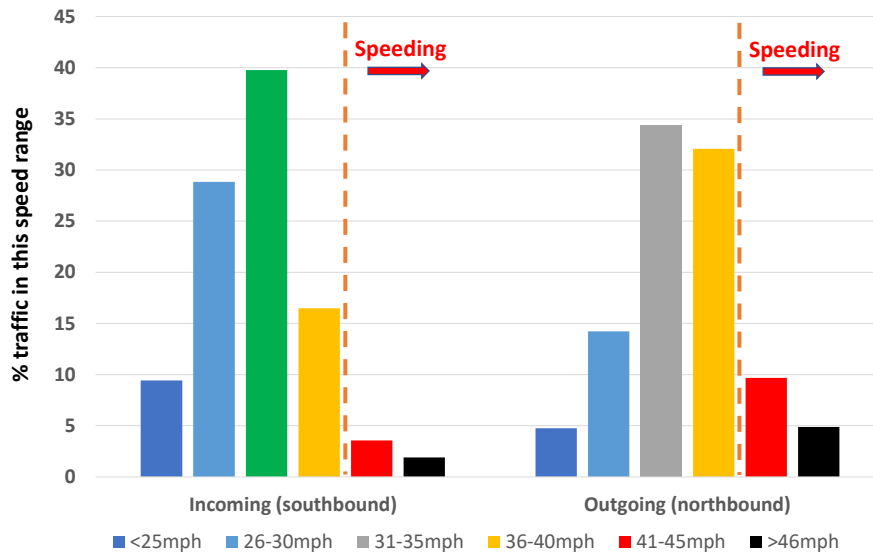


Chart 2 compares the speed to incoming (southbound) and outgoing (northbound) traffic with the VAS display switched off. While slightly fewer incoming vehicles are speeding compared with outgoing traffic, the difference is much less than when the sign is switched on.

Chart 2

Evolis VAS

Display Off; 21st June to 22nd July 2021

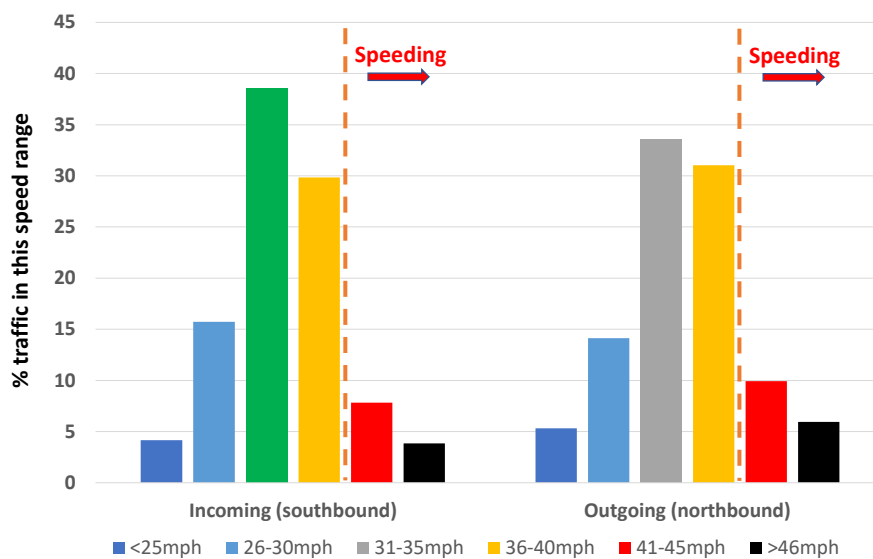


Chart 3 compares the speed of traffic approaching the sign (inbound) with the display switched off and switched on. The red and black bars showing the percentage of traffic above the 40mph limit are clearly smaller when the display is on. The proportion of vehicles travelling at 35mph or less also increases when the display is on: traffic is travelling more slowly when the speed is visible.

Chart 3

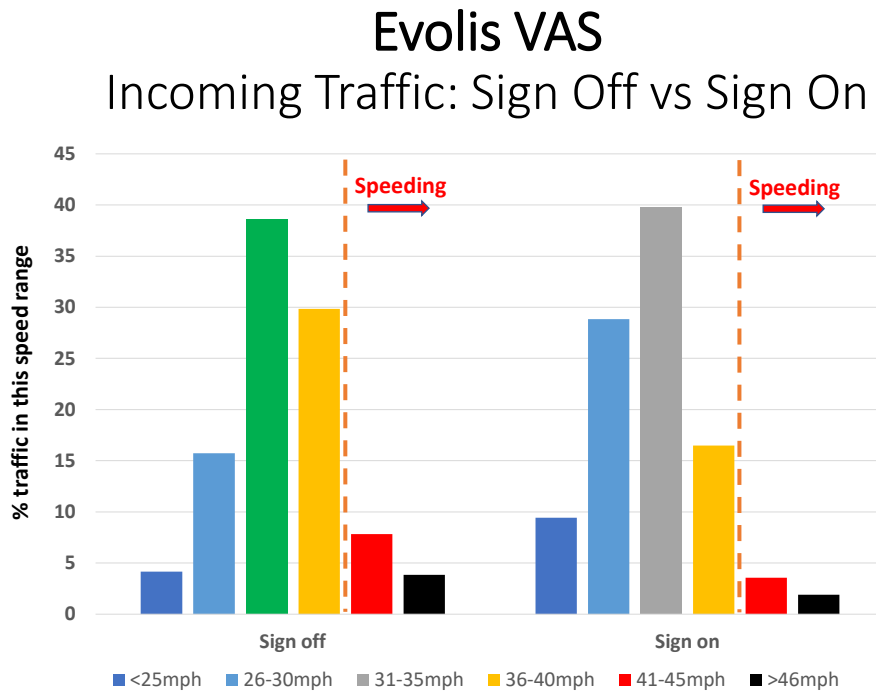


Chart 4 compares the speed of traffic travelling away from the sign (outbound) with the display switched off and switched on. There is very little difference which makes sense since all the driver sees is the back of the sign and has no idea if the display is on or off.

Chart 4

