



## **Vehicle Activated Sign (VAS) Guidance**

**4<sup>th</sup> Version**

**Updated October 2016**



**Gloucestershire County Council guidance for the prioritisation,  
implementation and maintenance of all types of Vehicle  
Activated Signs**

## Purpose of guidance

This guidance and its subsequent updates have been established to guide officers in the selection of sites for appropriate use of Vehicle Activated Signs (VASs) within Gloucestershire. National guidance covering the installation of VAS is given in Department for Transport (DfT) Traffic Advisory Leaflet 1/03 (March 2003). The 2016 update of this guidance provides additional guidance on the use of mobile VASs to promote a consistent approach to VAS provision throughout the county.

## Background

VASs have been developed to address the problem of inappropriate speeds in locations where conventional signing and/or enforcement has not been effective. The signs are one of a range of measures that should be considered but are in addition to, and not an alternative to conventional signing. The signs appear to be effective in reducing vehicles speeds particularly those of the faster drivers who contribute disproportionately to the collision risk, without the need for enforcement such as safety cameras, or where a camera would not be cost effective or appropriate. Gloucestershire County Council has developed this guidance to ensure that VASs do not become overused and that they remain an effective tool where there are speed management issues.

Whilst VAS use has been recognised as beneficial both nationally and within the County, no national policy currently exists in order to guide officers on how to manage the considerable number of requests for new VASs. Officers are under pressure to consider many sites, particularly where Parish or Town Councils are willing to part fund or even fully fund their installation. There is a concern that without robust guidance on their installation, the signs will become over used and therefore have a reduced impact on drivers. This would have an effect across all sign locations and particularly in those areas where VASs are most justified.

DfT guidance indicates that VAS should be considered only

- where there is a collision problem at the site
- and the collisions are associated with inappropriate speeds

In addition, within Gloucestershire it is also appropriate to consider

- The number of vehicles using the road – as there is a likelihood that the risk may well increase with higher number of users
- Any environmental concerns related to the site – schools, community facilities, community severance, vulnerable users etc.
- When road layout (bends/crossroads) and seasonal issues (ice/deer etc) need addressing

Local communities are increasingly taking on more responsibility for their surrounding environment and want to take a more pro-active role in tackling issues such as inappropriate speed. The revised guidance ensures that where practicable and appropriate, communities can make use of the equipment available on the market to help themselves. Where communities do want to become involved in localised schemes the first point of contact should be their local County Councillor who may be able to advise on the support available to take the proposals further.

### **Types of VAS**

The signs generally fall into 3 categories,

- 1) Speed enforcing signs that flash up an appropriate speed roundel and may include an accompanying warning (typically SLOW DOWN)



The VAS should be located inside the limit to which the flashing roundel is associated. It is noted that particular success may be achieved by locating such signs as a reminder shortly after the terminals. However, they should not be used to effectively repeat the speed limit throughout a long section of route. This type of VAS should not be relied upon solely in the absence of other measures

- 2) Signs warning of a hazard eg 'sharp bend', 'road narrows', 'junctions' etc.



These are by their nature highlighting an issue that engineers have already deemed as a risk on the public highway, either through engineering judgement or through collision records associated with the specific location. They should not replace existing conventional signage but should supplement it. They should not be used until conventional signage has been tried. There should be evidence of the misjudgement of speed and should be used at higher risk sites where the consequence may be significant (e.g. exiting the carriageway)

### 3) SIDS (Speed Indicating Devices) i.e. signs displaying actual vehicle speeds.



These are not presently authorised road traffic signs on the Public Highway and their use is limited to highway information only. This limits their use to non-permanent signage (mobile) and to limited time periods in varied locations, generally to support a specific area based road safety campaign. SIDS do not by themselves inform motorists if they are complying with the law and do not relate to a specific hazard. The Road Safety Partnership manage requests for these signs and will continue to work with Parishes on these types of campaigns. It should be noted that this type of sign is not always effective in reducing vehicle speeds and in some locations it can have the opposite effect of causing some vehicles to speed up (e.g. drivers who want to see how high the number will go).

### **Other Sign Information**

The trigger speed for activating any of these types of VAS will need to be predetermined according to the nature of the site and the proposed VAS. For example, where speed roundel VASs are installed, the threshold speed should normally be set at 10% above the designated speed limit. This will need to be assessed on a case by case basis depending on the individual site circumstances.

Where possible, the VAS sign should also have data collection capability to allow ongoing monitoring of vehicle flows and speeds. This would help in assessing whether introduction of the sign has been successful and could support any continuing requests for the site to remain in effect. Other data would still need to be considered such as impact upon collisions. Depending upon how the sign has been funded (see section on VAS Funding), there may also be a requirement to evaluate the success of the sign.

### **Types of VAS site**

#### 1) Permanent

A permanent VAS site would be where the sign is permanently fixed to a lamp column or other suitable post on the highway network. The siting of permanent VASs should be led by collision data and only installed as part of a road safety improvement scheme. The site should meet with the criteria set out in this guidance for permanent signs (Appendix 1). These signs are likely to be speed enforcing signs or hazard warning signs.

## 2) Mobile

Mobile VAS sites may include the following;

- Signs mounted temporarily on existing street furniture (e.g. lamp column or post)
- Signs mounted temporarily on temporary fixtures (e.g. tripod)

Mobile VAS sites can be useful, particularly where there is local community desire to address actual or perceived speeding issues and where sites do not always meet the criteria for a permanent VAS site.

However, in order to avoid a proliferation of VAS signs on the network, which could reduce overall effectiveness, the sites should still meet the criteria set out in this guidance for the use of mobile VASs (Appendix 2). In the majority of cases, these signs should only be the type of speed enforcing signs.

As well as meeting either the permanent or mobile assessment criteria, there are also further considerations that need to take place such as how long the speed limit has been in force and how the sign might be powered. Further information on this can be found in Appendix 3. This could mean that the location could meet with the assent criteria but there may be other constraints that make the site unsuitable for a VAS sign.

## **Ongoing Maintenance**

The ongoing maintenance of VASs provides a significant burden on revenue budgets. The installation of permanent signage should recognise this in the initial set up with a commuted sum to be included in the set up costs to provide for some of the ongoing maintenance costs. Where mobile VASs are purchased by local communities, the ongoing costs of maintenance will remain with the local community.

## **End of Life**

Financial pressures on local authorities have meant that highways maintenance budgets have been reduced to covering only the basic level of highway services. There is currently no budget for maintaining the existing VASs and the Council has taken the view that when a VAS breaks down or is damaged an assessment will be made as to the need of the sign with the aim of reducing the overall stock of VAS on the County's road network.

For example, if a sign has only recently been installed and is damaged in a collision, there may be a case for us to consider replacing it. However, if the sign has reached the end of its life but there is still a collision/speeding problem then it may suggest the sign is not the most suitable option for the location and it may be taken away. Whilst this may not be a popular decision for the local community, we must reiterate the need to ensure the most

appropriate use of VASs in order to maintain their effectiveness. It is not the intention to review existing locations against the updated guidance.

## **Funding for VASs**

Since their emergence on the County's highways, Parish and Town Councils have become increasingly keen to either part or fully fund a VAS in a location of their choosing. There have also been cases of individuals wishing to personally fund a VAS at certain sites. Whilst it is recognised that in many instances such contributions are key to securing funding for a VAS, it should be made known to the contributor at the earliest stage that all proposed sites, regardless of contribution will need to meet the County's VAS assessment criteria.

As permanent signage will only be implemented at sites with a proven collision history and as part of a road safety improvement scheme, funding is most likely to come from the priority assessment process for capital funding. However, funding from sources outside the County Council capital budget (e.g. Highways Local, Community Offer, Parish/Town Council, developer) could improve the likelihood of a scheme progressing.

The County Council does not have a budget to fund mobile VAS sites and it is expected that this type of VAS will be funded by the local community (this could include Highways Local, Community Offer, Parish/Town councils). It is not just the cost of the sign that needs to be considered but also the costs of installing suitable posts if there is not already something suitable on site and any associated design work that goes with this such as collection of utility company STATS information. It should be noted that just because a community is able to fund a VAS it does not mean they will automatically get one – it must still pass the appropriate VAS criteria.

## **VASs and new developments**

Prior to this 2016 update, it had become popular for developers to suggest the implementation of VASs as part of s106 agreements or as part of planning gain with any proposed sites needing to meet the criteria as best as possible. However, given that any permanent signs must now have a proven collision history this will not be possible. All developments should now be designed so that the need for a VAS is reduced. Should it become apparent during the development of a site that there are problems relating to collisions or speeds, this should be addressed through the planning process. It is anticipated that developers should seek to engineer out any potential speed or collision issues and therefore it is important that road safety reviews are undertaken at key points and any recommendations followed.

Once a development has been adopted, the processes set out in this guidance should be followed should there be a request for a VAS.

## **VASs and local communities**

It is recognised that local communities can play a vital role in raising awareness in their area regarding speeding concerns. As such this guidance recognises that a community may wish to have more than one site for their mobile VAS so that it can be moved around to maximise effectiveness. In this case each site should meet with the assessment criteria. It may also be that the 'community' comprises more than one Parish and we recognise the benefits of this in terms of sharing costs and being able to move a sign around between several sites.

It is also recognised that communities may want to take control over the use of their mobile sign and this will usually be acceptable to the County Council providing that the community have an understanding of the implications of this. As the local Highway Authority we have a duty to maintain a safe network and this includes making sure signs are suitably located so as not to pose a risk to road users (e.g. mounting height of a sign). In addition, we need to be sure that anyone working on our network is suitably trained and has an understanding of health and safety requirements associated with installation/removal of a VAS.

As such we would require that any local community (normally a Parish/Town Council but consideration would be given to other groups in the more urbanised areas) who takes on full responsibility for all aspects of their mobile VAS signs up to the agreement in Appendix 4. Alternatively, there may be an option available whereby a community can buy in the resource of the local highway contractor to carry out some of the work such as the putting up and taking down of the signs. The local community will still retain all ownership and maintenance liabilities for the sign.

Local communities may wish to approach their local County Councillor for support for their scheme as they may be able to help with promotion to the wider surrounding community.

## Appendices

Appendix 1	Assessment criteria for permanent VAS sites
Appendix 2	Assessment criteria for mobile VAS sites
Appendix 3	General considerations for VAS sites
Appendix 4	Local Community Mobile VAS Agreement

## Appendix 1

### **Assessment Criteria for permanent VAS sites**

Site Location:

Easting: Northing:

Posted Speed Limit:

Date of assessment:

Assessor:

Four criteria have been established (below): Collisions, speeds, traffic volume and environmental concerns. The site must meet the criteria for collisions and traffic speeds and should also meet at least one of the other two criteria

- 1) **Collisions (reported and taken from Police database)** - the site should have a **collision score of at least 5 within 500m (250m in either direction along the road)** of the proposed location, over the preceding **3 years**. The weighted score should be applied to collision injury severity as detailed below:

<b>Injury type:</b>	<b>Weighted Score</b>	<b>Number of collisions</b>	<b>Score</b>
Slight	1		
Serious & Fatal	3		
<b>Total Score:</b>			

For example, a site with two recorded collisions resulting in slight injuries and one serious or fatal over the preceding 3 years would meet this particular criteria, as would a site with one fatal and one serious. A weighted score of 5 would ensure that the location has a real collision risk associated with it and not a perceived one. It should be noted that when it comes to assessing collision type, officer discretion should be used in relation to the specifics of the why the collision happened (i.e. was it speeding / drunk driver etc) and what impact this has on the assessment.

*Outcome: Criteria met / not met*

2) **Speeds** – the site should have an **85<sup>th</sup> percentile speed above ACPO limits**; (Association of Chief Policy Officers), i.e. 15% of drivers would be exceeding ACPO levels (= speed limit +10% +2mph). Without a recognised speed problem there is little benefit in reinforcing the speed limit. Thresholds are 35mph (in a 30mph limit), 46 (40mph limit), 57 (50mph limit) or 68 (60mph limit).

85<sup>th</sup> percentile speed:

Date data collected:

How was data collected:

*Outcome: Criteria met / not met*

3) **Traffic Flows** – more than 4000 vehicles per day (24hr 2-way) should use the site. With low traffic flows, associated risk is likely to be reduced.

	Site:		
	N/B	S/B	Total
<b>Total volume</b>			

*Outcome: Criteria met / not met*

4) **Environmental Concerns** – the site should have **an environmental weighted score of at least 5 within 1km (500m in either direction along the road)** of the proposed location. The weighting policy is detailed below:

<b>Environmental concern:</b>	<b>Weighting</b>	<b>Present at site</b>
School/College/Nursery(s)	3	
Nursing Home	2	
Community facility(s) (local shop/church/village hall etc)	2	
Well used formal / informal crossing point(s)	2	
Vulnerable users / insufficient footway	2	
Significant number of 'damage only' accidents	2	
Isolated / community severance	1	
<b>Total score:</b>		

For example, a village with a school and a well-used crossing point would score 5 and meet this particular criteria (4 points). With no concerns recognised by officers there is a reduced need for VAS installation.

*Outcome: Criteria met / not met*

**Final Score: Assessment criteria met / not met**

## Appendix 2

### **Assessment Criteria for Mobile VAS sites**

Site Location:

Easting: Northing:

Posted Speed Limit:

Date of assessment:

GCC Assessor:

There are 5 criteria for a mobile VAS site and the site must pass on speed and community support and should meet 2 of the 3 other criteria. The local community should provide the information in each section and then a GCC officer (Highway Improvement Team) will decide if the criteria have been met, using their discretion where necessary.

#### **1) Speed**

A speed survey should have been undertaken which shows there is non-compliance with the posted speed limit (e.g. this might be a high mean speed compared with the posted limit or a significant difference between the mean and 85<sup>th</sup> percentile speeds)

Mean speed:

85<sup>th</sup> percentile speed:

Date data collected:

How was data collected:

*Outcome: Criteria met / not met*

#### **2) Community Support**

Evidence must be provided that there is community support for the VAS (*please attach*)

- Consultation results (letter drop, open meeting etc.)
- Letters of support from residents/businesses/local schools
- Parish / Town Council support
- County Councillor support
- Previous engagement with the Road Safety Partnership Community Speedwatch scheme and/ or the road safety speed toolkit
- Action already taken to mitigate speeding concerns
- Engagement with local policing units

*Outcome: Criteria met / not met*

### **3) Collision Record**

There should be a proven record of collisions within approximately 500m in each direction of the site. Collision data resulting in personal injury can be found on the Road Safety Partnership website ([www.roadsafety-gloucestershire.org.uk/data/incident-map](http://www.roadsafety-gloucestershire.org.uk/data/incident-map)). It is also acceptable to provide data collected locally of collisions resulting in damage only providing there is evidence of how this data was collected.

Provide information here:

*Outcome: Criteria met / not met*

**4) Traffic Flows** – more than 4000 vehicles per day (24hr 2-way) should use the site. With low traffic flows, associated risk is likely to be reduced.

	Site:		
	N/B	S/B	Total
<b>Total volume</b>			

*Outcome: Criteria met / not met*

**5) Environmental Concerns** – the site should have **an environmental weighted score of at least 5 within 1km (500m in either direction along the road)** of the proposed location. The weighting policy is detailed below:

<b>Environmental concern:</b>	<b>Weighting</b>	<b>Present at site</b>
School/College/Nursery(s)	3	
Nursing Home	2	
Community facility(s) (local shop/church/village hall etc)	2	
Well used formal / informal crossing point(s)	2	
Vulnerable users / insufficient footway	2	
Significant number of 'damage only' accidents	2	
Isolated / community severance	1	
<b>Total score:</b>		

For example, a village with a school and a well-used crossing point would score 5 and meet this particular criteria (4 points). With no concerns recognised by officers there is a reduced need for VAS installation.

*Outcome: Criteria met / not met*

**Final Score: Assessment criteria met / not met**

## Appendix 3

### General Considerations for a VAS site

➤ Has the posted speed limit been altered in the last 12 months?

No - move to next question	Yes – A VAS should not be considered at this time as the speed limit must be given sufficient time to have an effect
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➤ Have there been any other highway traffic management / speed reducing measures introduced in the area in the last 12 months?

No - move to next question	Yes – A VAS should not be considered at this time as the traffic scheme must be given sufficient time to have an effect
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➤ Is there a suitable post / lamp column for the sign to be placed on? *It should be noted that any sign with a greater area than 0.62m sq is not normally permitted on a lamp column. Street Lighting approval will be required for all signs placed upon a lamp column*

Yes - move to next question	No – A suitable post may need to be installed and any associated costs for this will need to be covered as part of the VAS installation. The cost will depend upon whether a simple post is required or an electrical connection is needed. GCC will be able to advise of current costs at time of request
N/A if sign will be placed upon a tripod – move to next question	

➤ How will the VAS be powered?

Solar/Wind	This is usually only suitable if a south facing aspect can be achieved. Can be unreliable
Mains	There are ongoing costs associated with a mains powered VAS and a commuted sum will usually be required for this and should be taken into consideration when assessing costs.
Battery	These are usually used with mobile sites and it is likely that more than one battery pack will be required in order that one can be charged up whilst another is on site. Costs of additional and replacement batteries should be taken in to consideration

➤ The site/s must meet the following criteria and if this is not possible the site may not be suitable for a VAS.

- The distance between the edge of the carriageway and the edge of the sign face nearest the carriageway to be not less than 0.75m
- The height of the lowest edge of the sign above the ground to be not less than 2.15m in the verge/footway or 2.4m in a cycleway

- The sign must not obstruct visibility from side roads / accesses / bridleways
- There must be good forward visibility of the sign as per the table below

<b>85<sup>th</sup> percentile speed of cars (mph)</b>	<b>Minimum clear visibility distances (metres)</b>
Up to 20	45
21-40	60
41-50	75
51-60	90
Over 60	105

- The sign should not be visually intrusive from windows of adjoining properties
- There must be no conflict with other signs within the immediate vicinity. In other words, existing signs should not be obscured.
- The sign should not be sited under vegetation which could overhang and obstruct visibility of the sign
- The sign should not overhang the existing highway boundary without the adjoining owners consent
- Signs should be located where risk of vandalism is minimal
- On a road with a 50mph speed limit, a risk assessment will be required to identify if passively safe posts need to be used

Where the site is not considered suitable for a VAS using the above criteria, it may be possible to use a sign on a temporary tripod e.g. on a narrow verge not used as a footway

It should be noted that the County Council as the Highway Authority has final say on the suitability of a VAS site and that decision is final once made.

## Appendix 4

### **Local Community Mobile VAS Agreement**

*(see separate document)*