

## Cabinet

8 September 2022

### Policy for the Installation and Operation of Vehicle Activated Signs

#### Recommendations

That Cabinet:

- (1) acknowledges the comments and resolutions made at Communities Overview and Scrutiny in June and considers the policy as proposed in this report;
- (2) approves the policy for the installation, maintenance and removal of vehicle activated signs (VAS) proposed in Section 2 of and Appendix A to this report;
- (3) authorises the Strategic Director for Communities to prepare and publish a statement of the approved policy;
- (4) authorises the Strategic Director for Communities, acting in consultation with the Portfolio Holder for Transport and Planning, to install, maintain or replace a vehicle activated sign which does not meet the requirements of the approved policy where he considers that to be justified by very special circumstances in an individual case.

#### 1.0 Key Issues

1.1 VAS are permanent installations of electronic signs that illuminate when triggered by approaching motorists, warning them of a hazard ahead or the correct speed limit for the road. They provide individual feedback and advice to drivers by indicating a message or warning to influence their driving behaviour. In this way community road safety can be improved.

1.2 There are two types of sign being used in Warwickshire.

**Warning Signs:** These are located at sites with a history of personal injury collisions. They are usually triangular signs, and indicate a warning of a bend, junction or other hazard.

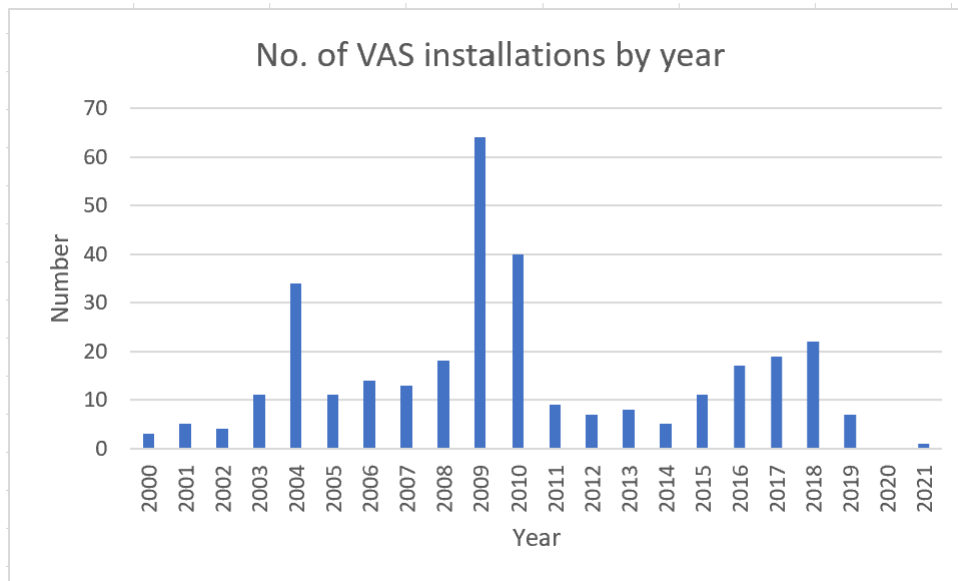
**Speed Enforcing Signs:** These show a pictorial speed roundel, indicating the speed limit on a given route and an accompanying warning (typically SLOW DOWN).

1.3 There are now approximately 400 such signs listed on Warwickshire County

Council's VAS Inventory. This number has increased substantially in the last two decades, rising from just 20 VAS in the year 2000.

- 1.4 There is a concern that without robust safety-based criteria for their installation, there will continue to be an unsustainable increase in VAS, which will place additional strain on the maintenance budget. Use of safety-based criteria will also allow better targeted use of resources at sites with demonstrable road safety concerns.

Fig. 1 Vehicle Activated Sign installations from 2000 to date



- 1.5 There are several reasons for the increase in VAS deployments in the years 2009-10. Improvements in sign technology at the time led to their increasing attractiveness as a road safety tool; Area Committee Member Delegated Budget funding came into operation; and there was a speed limit review of A and B roads in Warwickshire, which led to a number of speed limit VAS being deployed, especially on 50mph roads and in urban environments.
- 1.6 The maintenance budget to date has not been sufficient to allow regular upkeep of existing signs, which has resulted in a significant number becoming non-operational, thereby losing any influence on driver behaviour.
- 1.7 As with any other remedial engineering measures, the installation of VAS should be in accordance with criteria and guidelines to ensure their use is as effective as possible in terms of reducing casualties on the highway. The policy proposed in this report will not anticipate all possible combinations of circumstances and so there will be a residual discretion for officers to depart from the policy where very special circumstances call for the provision or replacement of a VAS in an individual case even though the relevant criteria are not met.

## 2.0 Policy Proposals

### ***Proposal for future installation of VAS***

- 2.1 The installation and use of VAS should be targeted at sites where road safety benefits are most likely. An unchecked proliferation of VAS may place additional strain on the maintenance budget. It is recommended that, in future, the County Council supplied and maintained VAS should only be considered for installation at locations which meet all four of the County Council's proposed VAS Criteria (Appendix A). This will ensure that VAS are only installed where road safety benefits may be expected at sites with a demonstrable road safety risk.
- 2.2 It is possible that a site would not meet all four Criteria despite having a high personal injury collision (PIC) rate, e.g. because it does not satisfy the fourth criterion of Environmental Concern, but those cases are likely to be considered under separate road safety approaches, such as the Casualty Reduction Scheme. A wider range of engineering measures, which might include but are not confined to installation of VAS, may be considered under that Scheme.
- 2.3 Some locations may not have all of the data required to make a full assessment based on the four proposed Criteria. At such locations, where local communities are keen to see one or more VAS installed, it will be necessary to carry out activities such as the provision of speed and traffic flow monitoring equipment and/or a site survey. The local community will be required to fund the activities needed to obtain the missing data. The data collected will allow assessment against all the proposed VAS Criteria.

### ***Potential removal of existing VAS***

- 2.4 An assessment of the justification for retaining a VAS will be applied at the time that the VAS ceases to work. Owing to the absence of speed, traffic flow and site specific data in many VAS locations, this assessment focuses solely on one of the four proposed VAS Criteria, namely personal injury collisions (PIC), using the same weighted scoring system as detailed in Appendix A. A comparison of collision data before and after installation of the sign will be carried out. This will provide a robust assessment of the effectiveness or otherwise of the VAS in reducing such collisions.
- 2.5 The approach will remove signs which have had less road safety benefit than might reasonably be expected according to previous findings. These findings show that VAS may be expected to reduce the number of collisions by between 25% and 35%.
- 2.6 Communities value measures to protect their local environments, especially where road safety is concerned. To address this, only those VAS which have seen zero reduction in collision score over a ten year period before installation compared to a ten year period after installation, or the best comparable before and after periods where the sign has existed for less than ten years, and where the site currently has a low collision record, would be scheduled for removal when they stop working. This is a cautious approach to safety which

acknowledges community concerns and recognises that even minimal road safety benefits are welcome.

- 2.7 For the purposes of this policy, a low collision record is considered to be a weighted PIC score of less than five since installation.
- 2.8 Using current collision data, approximately one in twelve signs would be scheduled for removal using the above approach.
- 2.9 Warwickshire County Council is committed to improving the county through a community powered approach and wants to create conditions for thriving and sustainable community involvement. A local community which wants to retain an existing VAS which is scheduled for removal as a result of the assessment process may do so by entering into a legal agreement with Warwickshire County Council to provide funding for the sign's maintenance and/or replacement.
- 2.10 Removal of VAS which do not fulfil a significant road safety role will reduce street clutter and maintenance costs for the County Council and help to ensure that VAS are retained and functional at sites where they are making a demonstrable contribution to road safety.

## **3.0 Financial Implications**

### ***Maintenance costs***

- 3.1 The cost of running and maintaining VAS, which require regular calibration, as well as replacement when damaged or life expired is significantly higher than for standard fixed signing. Average purchase and installation costs are in the region of £6,000. The current predicted annual maintenance costs across the VAS stock are approximately £120,000 (Appendix B). There is currently a maintenance budget deficit each year and this is likely to increase as signs age and additional VAS are installed.
- 3.2 This budget deficit has led to a backlog of VAS which are not operational, with no available funding for repair or replacement. Currently, approximately 40% of existing VAS require repair or replacement.
- 3.3 The 2022 budget-setting round saw an increase to the maintenance budget to £80,000 per annum. This increase, together with the removal of redundant VAS, will allow better deployment of resources to a smaller number of signs, reducing the likelihood of non-functioning signs across the county.
- 3.4 Allowing local communities to fund the replacement or maintenance of signs which would otherwise be removed will also reduce the financial burden on the County Council whilst giving communities the ability to have a say in their local environments and align with our community powered Warwickshire approach.
- 3.5 The proposed policy will allow better use of the annual budget at fewer sites

overall, providing more effective use of resources, and ensuring that more VAS remain operational at sites where they are needed.

## **4.0 Environmental Implications**

- 4.1 The vast majority of existing VAS are connected to the electricity distribution network and therefore have power and cost impacts for the County Council and environmental impacts.
- 4.2 When a request for a new VAS meets the proposed new criteria, alternative power supplies such as solar and wind turbine will be considered on a location basis and the most suitable power source in terms of cost, hardware, reliability and sustainability will be selected. In general, direct connection to the existing electrical supply creates fewer maintenance and replacement issues.
- 4.3 The County Council is committed to reducing its carbon footprint to net zero by 2030 and the removal of redundant VAS will make a contribution to a reduction in power demand.

## **5.0 Overview and Scrutiny Meeting June 2022**

- 5.1 A brief summary of the proposed policy was discussed at the above meeting. Minutes of the meeting are presented in Appendix C.
- 5.2 The briefing note did not provide the detail as to how the proposed policy would work and how many existing signs might be removed under the proposals. The Committee was informed that 40% of existing VAS (some 160 signs) are currently non-operational. Not all of these would be scheduled for removal since many have had beneficial impact in reducing collisions. Following the meeting it was clarified that only 1 in 12 of the entire existing VAS stock (about 34 signs) would fail to meet the Criteria for replacement.
- 5.3 Communities OSC resolved to ask Cabinet to amend the vehicle activated sign policy to apply for new signs going forward and not apply retrospectively to existing signs. However, in view of the fact that only signs which clearly have no discernible road safety benefits will be removed, and of the proposal to let the local community fund the retention even of such signs, this report recommends that Cabinet adopt the policy notwithstanding that it may prevent the replacement of a small number of signs. OSC also resolved that the budget allocated by Council to the maintenance of signs is used appropriately.

## **6.0 Timescales associated with the decision and next steps**

- 6.1 Subject to approval by Cabinet, the policy will be implemented immediately.

## Background Papers

None

	<b>Name</b>	<b>Contact Information</b>
Report Author	Jon Rollinson	jonrollinson@warwickshire.gov.uk
Strategic Director	Mark Ryder	markryder@warwickshire.gov.uk
Assistant Director	David Ayton-Hill	davidaytonhill@warwickshire.gov.uk
Portfolio Holder	Cllr Wallace Redford	wallaceredford@warwickshire.gov.uk

The report was circulated to the following members prior to publication:

Local Member(s): n/a

Other members: Members of Communities OSC

## Appendix A

### Criteria for the Installation and Operation of Vehicle Activated Signs

#### VAS Criteria

Four criteria have been established: history and nature of personal injury collisions (PIC), speeds, traffic volume and environmental concerns.

All four criteria must be satisfied for a new VAS to be approved.

1. **Personal injury collisions** (reported and taken from Police collision statistics). The site will have a PIC weighted score of at least **five** within **200m** of the proposed VAS location over the preceding **three years**. This timescale aligns with that used for interventions in our Casualty Reduction programme. Only those collisions whose cause may be directly influenced by the installation of a VAS will be included in the PIC count for the site. The weighted score will be applied to collision severity as detailed below:

Severity of PIC	Weighted Score
Slight	1
Serious or Fatal	3

For example, a site with two recorded slight injuries and one serious or fatal collision over the preceding three years would meet this particular criterion, if the causes of all the accidents would be mitigated by a VAS sign, as would a site with one fatal and one serious PIC. A weighted score of five would ensure that the location has a real collision risk associated with it, and not merely a perceived one.

2. **Speeds.** The site will have an 85<sup>th</sup> percentile speed above ACPO (Association of Chief Police Officers) limits, i.e. 15% of drivers would be exceeding ACPO levels (= speed limit + 10% + 2mph), through significant periods of the day. 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).
3. **Traffic Flows.** More than 3000 vehicles per day (24 hour, 2-way flow) will pass through the site. With low traffic flows, associated risk is likely to be reduced.
4. **Environmental Concerns.** The site will have an environmental weighted score of a least **five** within **200m** of the proposed location. The environmental weighting scores are detailed in the table below:

Environmental Concern	Weighted Score
School/College/Nursery/Care Home	3
Community Facilities (Local Shop/Doctors Surgery/Church/Recreation Area/Village hall etc.)	2
Well used formal/informal crossing point(s)	2
Vulnerable users/insufficient footway	2
Busy highway resulting in community severance	1

For example, a village with a school and a well-used crossing point would score 5 and meet this particular criterion (5 points).



## Appendix B

### Maintenance Costs Associated With Repair and Replacement of Signs

#### Of the 390 Existing VAS

- Approx. 87% are more than five years old and are no longer under any manufacturer's warranty.
- Approx. 35% are now obsolete due to the manufacturer no longer supporting the repair of signs of that age.

#### Cost of Replacing VAS

It is assumed that there will be a 5% failure rate for signs which are not covered by guarantees in each year (excluding acts of vandalism). The average cost for a VAS is £6000.

Assuming a 5% failure rate of non-warranty signs, 17 VAS are likely to fail and require repair or replacement per year.

$$17 \times £6,000 = £102,000$$

Additionally, some signs that are less than five years old will require replacement or repair, not covered by manufacturer's warranty.

#### Vandalism or Theft

Solar panels and wind turbines are particularly vulnerable to theft. Based on previous experience it is anticipated that there will be two incidents of theft per year. Estimated cost £12,000.

#### Damage in Road Traffic Collisions

Where signs are damaged as a result of road traffic collisions (and costs cannot be recovered through the driver's insurance) the cost of replacing these signs would be in addition to the above calculations. It is anticipated that there will be at least one such incident per year. Estimated cost £6,000.

Normal maintenance/replacement	£102,000
Damage/vandalism/theft	£18,000
<b>Annual Total</b>	<b>£120,000</b>

## Appendix C

### Minutes of the Overview and Scrutiny Meeting 22 June 2022

#### Vehicle Activated Signs Policy - Briefing Note

Jon Rollinson (Principal Strategy & Policy Officer) summarised that vehicle activated signs (VAS) policy will go to Cabinet in July 2022 and was designed to present a robust set of criteria which will allow WCC to control the installation of VAS in future. It would also help to identify and schedule the removal of those VAS which have had no road safety benefit and present a financial and maintenance burden. VAS are important for local communities so the new policy would provide a mechanism to allow these communities to fund the retention or replacement of existing VAS which would otherwise be removed.

In response to Councillor Fradgley, Jon Rollinson stated that communities could retain VAS through Parish/Town Councils, local community groups or delegated budgets.

Councillor Chilvers expressed concerns with the criteria to keep the VAS being restrictive, especially if trying to promote active travel. Jon Rollinson said that VAS would remain if there were five personal injury collisions over a three-year period. The injury collision criterion used a weighted scoring system rather than just individual collisions and would reflect the consideration of VAS for use at sites with a lower collision history than sites that could qualify for the casualty reduction scheme work. This criterion was there to address this middle ground in terms of road safety concerns.

Councillor Sinclair noted that the note stated that 40% of VAS in Warwickshire were non-operational and ones that did not meet the criteria would be removed too. In response to Councillor Sinclair, Jon Rollinson said the budget was £10,000 annually for 400 VAS cross-county but this had now increased to £80,000. The only signs that would be removed were ones that had not shown a road safety benefit in terms of reducing personal injury collisions but were a financial or maintenance burden on the Council. Signs that were beneficial but broken would be fixed and remain.

Scott Tompkins added that Warwickshire had a lot of signs for its area and the purpose of the maintenance fund is to deal with the maintenance of the ones that are coming at the end of their life and look at reducing the number of VAS not putting more out.

In response to Councillor Andy Crump (Portfolio Holder – Fire & Rescue and Community Safety), Jon Rollinson stated that the current policy as proposed did not allow for parish/town councils or community groups to choose to install a VAS in their area, the new policy would state that they could decide whether to retain a VAS in their area which was otherwise scheduled for removal. Entirely new VAS installations would be where there was a demonstrable road safety risk as defined in the new policy.

Councillor Humphreys said that at a recent road safety event he attended, WCC said they planned to reduce KSIs (killed or seriously injured) by 50% but removing VAS would make them worse. He said he could not support the proposals because Council tax had already been spent on the existing signs, they were maintainable, and his parish councils were requesting more VAS. Councillor Baxter-Payne stated that keeping and maintaining the VAS would be better than a major engineering project in every area where a VAS has been removed.

Councillor Sinclair said that because the VAS were not going to meet the new threshold, this did not mean that they were not useful.

Councillor Fradgley noted that she had requested a VAS for a straight piece of road and queried whether the town/parish councils had been consulted with for this policy as they would need to financially support the sign if they bought it.

Jon Rollinson said that DfT research showed that VAS reduced traffic collisions between 25-35%, but under the proposed policy signs would only be removed if they have not reduced any collisions. David Ayton-Hill added that when VAS were first introduced there was a loose policy around what constituted the requirements for VAS which is why there were so many implemented and may not have had a positive impact. The popularity of VAS led to these policies. Scott Tompkins stated that the whole kit for the VAS would need replacing when it broke.

The Chair concurred with the concerns raised by the committee and added that only some areas would be able to buy their own VAS which could cause a disparity. He agreed that there should be a policy for these signs, but the VAS made residents feel safer.

Councillor Sinclair raised that the paper said that 40% of 400 signs (160 signs overall) which were operational at the time of the meeting would be decommissioned which was more than Gloucestershire had altogether. He said he found this unacceptable, and the signs benefits should also be measured by prevention and not just collisions.

David Ayton-Hill suggested that this wording needed to be amended as 40% of these signs were coming to the end of their life span and would not necessarily be removed<sup>1</sup>.

Councillor Sinclair formally proposed that:

That Communities OSC ask Cabinet to amend the vehicle activated sign policy to apply for new signs going forward and not apply retrospectively to existing signs. The budget allocated by Council to the maintenance of signs is used appropriately.

This was seconded by Councillor Andy Wright.

The committee voted unanimously for this.

Resolved That Communities OSC ask Cabinet to amend the vehicle activated sign policy to apply for new signs going forward and not apply retrospectively to existing signs.

AND

The budget allocated by Council to the maintenance of signs is used appropriately.

1. Post meeting note – 40% of VAS are requiring maintenance or repair. The proposed policy states that, when a sign stops working, it is assessed to see if it has had a positive impact on reducing injury collisions. Those that have not had any benefit would be identified for removal, but only at sites where the collision record is low. Under these proposals approximately one in 12 VAS would be identified for removal, (33-34 signs currently). These signs would be offered to local communities for retention if they wished by taking on the funding of maintenance and repair.