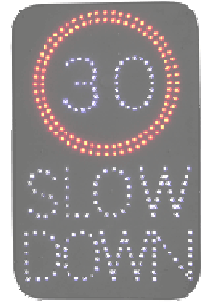


## ANNEX D



### City of York vehicle activated signs speed survey evaluation

#### Background

1. Vehicle Activated Signs (VAS) are a relatively recent addition to the range of signs that are authorised by the Department for Transport (DfT) for use on the Highway.
2. A budget of £25,000 was allocated from the 2005/06 Planning and Transport Capital Programme to enable VAS equipment to be installed on a trial basis at nine locations across the City, in order to evaluate their effectiveness as a speed management measure. These signs were deployed primarily in relation to existing 'village gateways' or on sections of rural road covered by 30mph limits, with the exception of one located on a 'B' class road within a 20mph zone near to a school.
3. Analysis of the associated 'before' and 'after' speed monitoring, at the trial installations around the City, appears to indicate an initial reduction of typically around 2mph in both the mean speeds and the 85% percentile speed (i.e. the speed at or below which 85% of vehicles travel). Although, this only appears to be a small reduction, it is considered to be significant in terms of potential safety benefits. Research published by the DfT suggests that a 1mph reduction in average vehicle speed can typically result in a 5% reduction in accidents. An evaluation of the percentage change in the number of drivers exceeding the speed limit can often be another useful indicator of any influence on driver behaviour the VAS installations may have had. Looking at the trial VAS sites the percentage of vehicles exceeding the limit initially reduced from 53% to 30%.
4. Given these positive early results, an additional £48k was allocated for the installation of further VAS around the City, by the Executive Member for City Strategy and Advisory Panel (EMAP) meeting on 11 December 2006. These additional new VAS were implemented during April - May 2007

#### Long term effectiveness of VAS signs

5. Experience derived from VAS installations elsewhere, in conjunction with a Transport Research Laboratory (TRL) study commissioned by the DfT, indicates that over time the impact of VAS can diminish. There is also evidence that widespread use of VAS can diminish their effectiveness, therefore, DfT recommend limiting the number of VAS in

a particular area to help ensure that this particular type of road safety intervention remains effective.

6. In view of such concerns over the possible diminishing long-term effectiveness of VAS it was reported to EMAP in July 2008 that more vehicle speed surveys would be carried out to assess whether the existing VAS are still having the desired effect on speed. It was agreed that the outcome of this would be reported back to EMAP as part of a subsequent Speed Management review.
7. Accordingly, follow up speed surveys have been carried out during August and September 2008, to assess the longer term effectiveness of these signs within the City of York area.
8. A tabulated summary of the overall average results for each group of VAS is given below :-

**Initial VAS ‘trial’ sites - installed late 2005 – early 2006**

overall average	Before	1 week	6 week	12 week	Aug 2008
<b>Mean Speed</b>	<b>31</b>	<b>29</b>	<b>29</b>	<b>30</b>	<b>30</b>
<b>85<sup>th</sup> percentile Speed</b>	<b>36</b>	<b>34</b>	<b>35</b>	<b>35</b>	<b>36</b>
<b>%age above the speed limit</b>	<b>53</b>	<b>32</b>	<b>34</b>	<b>30</b>	<b>47</b>

9. From the above it can be seen that despite an initial reduction in values following the installation of the ‘trial’ VAS, the more recent results have risen to values approaching the ‘before’ readings.
10. For comparison, analysis of values for traffic travelling in the opposite direction without VAS indicate average readings which remain fairly consistent over the whole period.

**Additional VAS sites - installed during April and May 2007**

overall average	Before	Approx. 12 week after	August 2008
<b>Mean Speed</b>	<b>33</b>	<b>31</b>	<b>30</b>
<b>85<sup>th</sup> percentile Speed</b>	<b>38</b>	<b>36</b>	<b>35</b>
<b>%age above the speed limit</b>	<b>50</b>	<b>40</b>	<b>33</b>

11. From the above it can be seen that following an initial reduction in values after the installation of the more recent VAS the latest results suggest that in the short term some effectiveness is maintained.
12. Again, by comparison, values for traffic travelling in the opposite direction without VAS indicate average readings which remain fairly consistent over the whole period.

## **Conclusion**

13. VAS signs can be effective as a speed reduction tool. At the right location effects can be immediate, and then sustained for between 6 – 12 weeks. However, after this time effectiveness gradually diminishes, but the benefits can last for as long as three years.