

**Decision Session – Executive Member for
Transport and Planning**

14 March 2019

Report of the Corporate Director of Economy and Place

Vehicle Activated Speed Indicator Device Trial

Summary

1. Following a number of requests for vehicle activated signs that indicate speeds to drivers the report sets out the national and local policy context. It offers a number of options and seeks decisions with regard to undertaking a trial of a vehicle activated sign speed indicator device on the authority's highway network. It sets out criteria for that trial and the potential next steps once the trial is complete.

Recommendations

2. The Executive Member is asked to make three decisions. The following options are recommended:
 - Decision 1: Option A - Approve the trial for a minimum of three months, to allow consideration of speed indicator devices in future vehicle activated sign policy.
 - Decision 2: Option C - Use trial sites at York Rd, Strensall and Stockton Lane, Heworth.
 - Decision 3: Option C – Indicator to show actual speed + Thank You up to and including the speed limit. It will display speed roundel and Slow Down for speeds over the speed limit.

This combination of options approves the following:

A trial of two Speed Indicator Devices, one in the village of Strensall and the other on Stockton Lane in Heworth Without at the locations shown in **Annexes A & B**, using sign type C. Once the trial period is complete and the outcome reviewed the results will be reported back to a future Executive Member Decision Session.

Reason: To provide a structured trial of speed indicator devices to allow this type of equipment to be considered for inclusion as an option in the council's future vehicle activated sign policy.

Background

3. Vehicle activated signs are roadside signs that have a fixed display showing the speed limit using an LED array in the form of a standard speed sign as per Traffic Signs Regulations and General Directions 2016 (TSRGD 2016). They display a message when they are approached by a vehicle exceeding the speed limit or going too fast for the type of road.
4. Speed indicator devices have a dynamic display showing the actual speed of the approaching vehicle using an LED array. These signs are not prescribed in the TSRGD 2016. Consequently they are not currently supported by City of York Council unlike vehicle activated signs. They can be installed without Department for Transport authorisation as long as speed limit or road traffic signs are not attached to the speed indicator device and they are not used for enforcement.
5. Vehicle activated signs were developed to address the problem of inappropriate speed where conventional signing had not been effective. They are relatively inexpensive and can often be used on roads where physical traffic calming would not be appropriate.
6. There are two types of vehicle activated sign approved for use on UK roads, both are triggered by a vehicle exceeding a set speed and have an option to also show the text 'SLOW DOWN' and / or have flashing amber lights. They are:
 - a. Hazard warning signs.
 - b. Speed limit roundels / camera symbols (where appropriate).
7. The original council vehicle activated sign policy was approved on 20th October 2009 by the Executive Member for City Strategy in response to concerns over the proliferation of this type of sign. This included recommendations for the criteria that new Local Transport Plan or Ward Committee funded vehicle activated sign sites should meet, and the monitoring and review of sites following implementation.
8. To ensure a consistent approach the council have strict criteria which are applied to requests for vehicle activated signs funded from the Local Transport Plan. Some flexibility is given to permit Ward Committee and

Parish Council funding to be used where there are real concerns about the speed of traffic but where the stricter criteria for Local Transport Plan funding are not met. The criteria are as follows:

- i) That Local Transport Plan funding will only be used where the 85th percentile speed (the speed that 85 percent of vehicles do not exceed) equals or exceeds the signed limit by 10%+2mph (i.e. 35mph in a 30mph limit, and 46mph in a 40mph limit). This would be consistent with the speed enforcement thresholds employed by the police (ACPO guidelines).
- ii) Where this funding criteria is not quite met, a Ward Committee or Parish Council may still wish to fund the installation of a vehicle activated sign. In this situation, a threshold of 85th percentile speeds being 10% above the speed limit should be adopted (i.e. 33mph in a 30mph limit and 44mph in a 40mph limit).

9. Following a review of the existing vehicle activated sign assets and policy a further report was considered by the Executive Member for Transport and Planning in 2015. This added the following additional criteria to the vehicle activated sign policy:
 - Criteria for the provision of hazard warning vehicle activated signs based on at least one recorded injury accident in the previous three years, with reports of inappropriate speed (which may be within the posted speed limit).
 - Vehicle activated signs to be reviewed as and when they develop faults applying the criteria above. If the site meets the criteria, it is recommended that the sign is repaired or replaced. If they do not, the sign and post should be removed and the site disbanded.
10. Furthermore to address the maintenance funding shortfall and ensure the vehicle activated sign stock is maintained at sites where the signs are warranted, the decision was taken to allocate future Local Transport Plan budgets to the review and aftercare of signs funded from this source. Ward Committees or Parish Councils are expected to fund any maintenance (if they so wish) if they originally purchased the signs.
11. These additions and amendments to the vehicle activated sign policy were implemented immediately. The review system is up and running and a contract to supply and install any new speed limit vehicle activated signs is in place.

12. For comparison a summary of the North Yorkshire County Council vehicle Activated Sign Policy is included with **Annex C**.

Request for Speed Indicator Devices

13. A number of sites with faulty signs have been reviewed and some of these were found to meet the criteria for Parish or Ward funded signs. In line with the policy the Parish Council and Ward Members have been contacted to see if they have funding to repair or replace the sign. Due to the age of most of the vehicle activated signs they are beyond repair, or once repaired have a very short working life. Therefore the parties are offered the option to purchase a new sign with a 6 year warranty at a cost of £3500 excluding VAT.
14. During these reviews some of the Parish Councils and Ward Members requested a speed indicator device as an alternative sign for installation at the existing site.
15. Speed indicator devices are used by some highway authorities as temporary signs to help control speed where other more expensive measures cannot be justified or police enforcement is not suitable. The signs have been found to be most effective if they are relocated every few weeks as the most significant speed reductions happen in the first three weeks. After this period motorists who regularly use the road become used to the presence of the sign and start to ignore it.
16. A temporary vehicle activated sign / speed indicator device service could be implemented as a change to the existing policy as part of the Speed Management Protocol along with the development of new protocols. In doing so consideration would need to be given to:
 - Funding which could be along the current lines either via City of York Council or directly by the wards or parishes. Both funding models require an ongoing charge to allow the regular relocation of the signs.
 - Offering a temporary solution through the Speed Management Protocol is likely to increase the number of speed complaints and requests for new signs and may mean additional resource is required to consider this demand.
17. The above implications are greatly reduced if permanent signs are used in line with the existing policy. However, published evidence suggests

that temporary signs have a greater impact and requests for speed indicator devices have increased as the review process has rolled out. It is suggested that a trial be conducted to establish whether a permanent sign can maintain a speed reduction over a longer period. Operating costs for temporary or permanent solutions could then be compared against effectiveness.

Trial

18. To gather evidence of the effectiveness of a permanent SID it is proposed to establish a trial location and monitor vehicle speeds over a set period. The results would then be compared along with costings for the future operation of speed indicator devices as part of the vehicle activated sign policy and wider speed management work undertaken by the Council.
19. A trial would need to achieve set criteria to be considered a success. Officers from across the transport team agreed that a reduction in 85th percentile vehicle speeds of 2mph after 3 months is considered suitable and if a trial is approved then this should be the success criteria.
20. To allow this evaluation of speed over the whole trial period it is recommended that the trial sign includes a data logger as this negates the need for separate speed data collection. The sign would need to be in place for at least three months to allow for suitable data collection and comparison.

Location

21. To keep the cost of undertaking the trial down it is suggested that the trial location should be a vehicle activated sign site which has already been reviewed and identified as suitable for a Ward or Parish funded sign. This means we already have “before” speed data which was collected as part of the review. Two sites meet this criteria:
 - i) York Road in Strensall, location plan shown in **Annex A**.
 - ii) Stockton Lane, location plan shown in **Annex B**.

Sign types

22. Officers from the transport team have reviewed various sign types available on the market and have suggested three for consideration. These are proposed due to their simplicity and ability to quickly convey whether a driver is exceeding the posted limit and provide a positive or negative message dependent on the speed of the vehicle. Images of the three options are shown below. All signs have an upper threshold at which they do not activate or do not indicate a speed to ensure drivers don't attempt to get higher speed readings. These sign variations are available from different suppliers and a short procurement exercise may be required to ensure the sign provides value for money. The signs with the data logging equipment cost between £3000 – £4000 excluding VAT each including installation and commissioning.

Option A



Display 1
Below Threshold

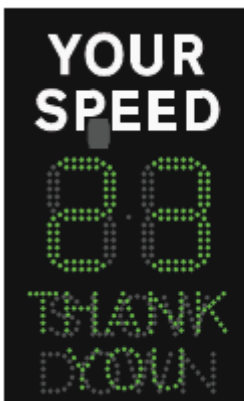
Green Vehicle
Speed



Display 2
Above Threshold

Red Vehicle
Speed

Option B



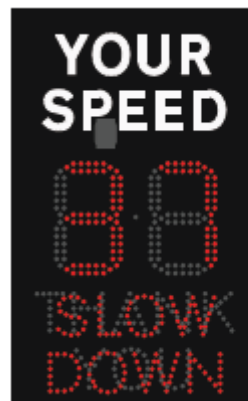
Display 1
Below Lower
Threshold

Green Vehicle
Speed + Thank
You



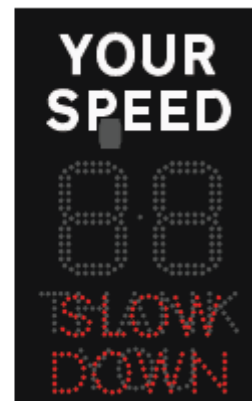
Display 2
Within 10%
above Lower
Threshold

Red Vehicle
Speed



Display 3
Over 10% above
Lower Threshold
but below Upper
Threshold

Red Vehicle
Speed + Slow
Down



Display 4
Slow Down
Above Upper
Threshold

Red Slow Down

Option C



Display 1 (5-30mph)

White Vehicle Speed
Green Thank You



Display 2 (31-99mph)

White/Red Speed Limit
Roundel
Amber Slow Down

Post Trial

23. Following a trial the speed data results would be reviewed and consultation carried out with the members of the 95 Alive Road Safety Partnership which includes representatives from North Yorkshire Police, the Fire Service and the council's road safety team. A report detailing the trial and recommending how to proceed will then be brought back to a future Executive Member Decision Session.

Options

24. There are three decisions required as part of the proposal:

Decision 1: Whether to undertake a Trial

- Option A: Approve trial, to allow consideration of SID in VAS policy.
- Option B: Do nothing, retain existing VAS policy – decisions 2 and 3 not required.

Decision 2: Trial site location

- Option A: Use a trial site at York Rd, Strensall.
- Option B: Use a trial site at Stockton Lane.

- Option C: Use both trial sites to allow a comparison.

Decision 3: Sign Type

- Option A: Your Speed with red / green numerals
- Option B: Your Speed with red / green numerals and SLOW DOWN / THANK YOU text.
- Option C: Vehicle speed in white with THANK YOU text or speed limit roundel and SLOW DOWN text.

Analysis

25. Decision 1: Undertaking a trial allows the council to evaluate the use of speed indicator devices as part of the vehicle activated sign policy. The suggested success criteria would allow the Council to make decisions based on a data led approach which is in line with the current policy. Doing nothing, will not address the repeated requests for the use of this type of device on the highway network in York.
Recommendation: Option A
26. Decision 2: Both of the proposed locations are suitable for a trial. If there is sufficient funding then signs could be installed at both locations to allow a comparison of results. This would help prove whether the results can be repeated at other sites and it is not just a one off result.
Recommendation: Option C
27. Decision 3: The three types of sign for consideration all relay the speed of the vehicle back to the driver if they are below the speed limit. The differences relate to how messages are communicated to approaching motorists when they are travelling above the speed limit.
28. Sign A is the most basic and cheapest type of SID. It provides a negative or positive message through the use of colour for the speed reading.
29. Sign B adds a THANK YOU / SLOW DOWN message to the design of Sign A to provide further confirmation of the positive or negative message.

30. Sign C is significantly different from A and B in that it provides no speed information to vehicles travelling above the speed limit, so would deter drivers from trying to get a high speed reading. Instead it flashes up a reminder of the speed limit in the form of a speed limit roundel. This display is very similar to the existing VAS which CYC use with the addition of a positive message to motorists driving below the limit. Due to the different displays possible this is the most expensive of the three signs being considered for the trial.
31. The signs cost between £3000 – £4000 excluding VAT each with the data logging equipment including installation and commissioning. Prices vary dependent on the supplier and a small procurement exercise may be required to ensure the signs provide value for money.
32. All the signs provide a similar function and the decision as to which sign CYC take forward to trial could be based on cost alone with Option A providing a significant saving over Signs B and C. However, the positive and negative messages are more strongly communicated to drivers in these signs and sign C removes the speed indication for any drivers above the speed limit and matches the existing VAS that drivers are used to seeing in the area.

Recommendation: Option C

Council Plan

33. The options proposed all demonstrate that CYC is a council that listens to residents and is willing to trial a non-standard solution to investigate its impact and consider its use in the future.

Implications

34.
 - **Financial** - the cost of a trial is estimated at £7.5k for a single site or £12.5k for two sites. This would need to be allocated from the capital budget for 19/20.
 - **Human Resources** There are no Human Resources implications as a direct result of the recommendation in this report, but the trial may result in future recommendations which do, see paragraph 18.
 - **One Planet Council / Equalities** There are no One Planet Council / Equalities implications.
 - **Legal** There are no legal implications.

- **Crime and Disorder** There are no crime and disorder implications.
- **Information Technology** There are no Information Technology implications.
- **Property** There are no property implications.

Risk Management

35. In compliance with the Council’s risk management strategy, the following risks associated with the recommendations in this report have been identified and described in the following points:
36. Financial risk – The recommendation to purchase two signs when a trial could be conducted with one is considered a minor risk. The allocation of the extra funding would allow for a more robust trial with comparative data, which will feed into later decisions regarding the use of SIDs within the CYC area.

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Report Date 05.03.19
 Approved

Wards Affected: Strensall / Heworth Without

For further information please contact the author of the report

Background Papers:

[12 November 2015 - Decision Session – Executive Member Planning and Transport. Part 3: Vehicle Activated Signs Review](#)

Annexes

Annex A – Location Plan, York Road Strensall

Annex B – Location Plan, Stockton Lane

Annex C – Summary of North Yorkshire County Council Vehicle Activated sign Policy

List of Abbreviations Used in this Report

CYC – City of York Council

DfT – Department for Transport

EMDS – Executive Member Decision Session

LED – Light Emitting Diode

LTP – Local Transport Plan

NYCC – North Yorkshire County Council

SID – Speed Indicator Device

SMP – Speed Management Protocol

TSRGD – Traffic Signs Regulations and General Directions

VAS – Vehicle Activated Sign

VAT – Value Added Tax