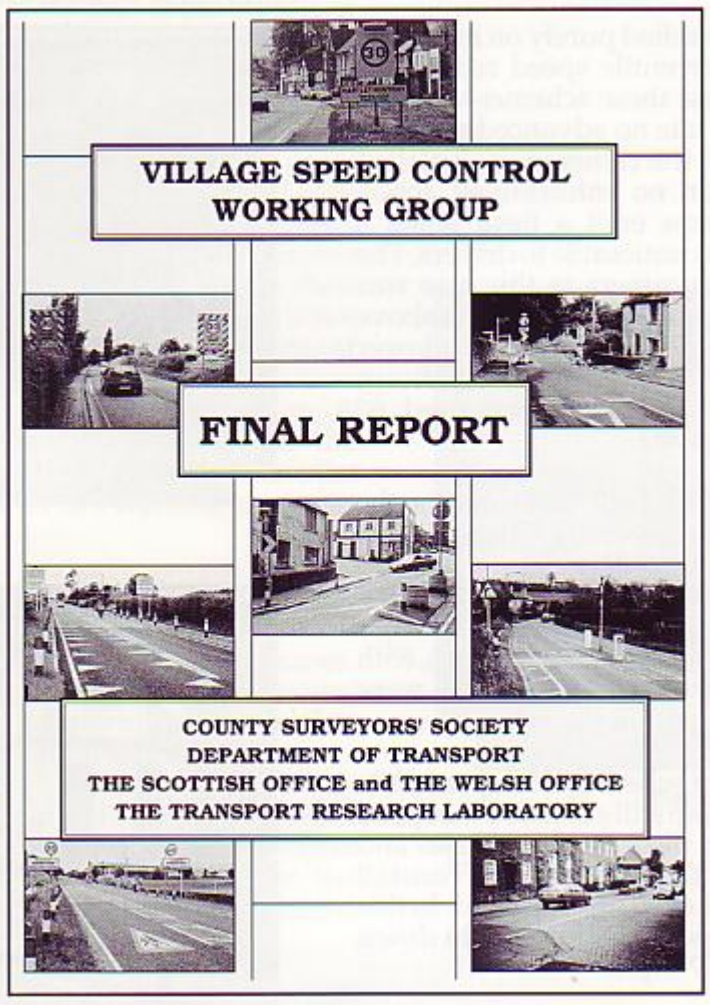
Department for Transport

Traffic Advisory Leaflet 1/94
June 1994

VISP - a summary

Purpose

This leaflet summarises the findings of the VISP (Village Speed Control Work Group) Report. It provides information on the features investigated in the study, including their effectiveness, and suggests possible ways forward.



Introduction

In July 1991 the Secretary of State for Transport announced a joint study between the County Surveyors' Society and the Department of Transport to investigate measures for constraining the speed of vehicles passing through villages.

The Village Speed Control Working Group comprised representatives of the County Surveyors' Society, the Welsh Office, the Scottish Office, the Department of Transport and the Transport Research Laboratory (TRL).

The Schemes

24 village schemes were monitored, 19 from England, 4 from Scotland and 1 from Wales. 8 of the schemes were trunk roads (4 in England and 4 in Scotland).

In 11 of the schemes, measures were used only on the approaches; 4 schemes relied purely on measures within the villages; and 9 had measures both on the approaches and within the villages.

Full details of the schemes, and the measures employed, are contained in the reports mentioned in the References. Briefly, where gateways were used on the approaches these consisted of enhanced signing, with carriageway narrowings of some kind involving either physical changes or the use of edge lines and hatched markings. A few had central islands and many incorporated surface treatments. In 5 schemes 30mph roundel

markings were used at the gateways, and in 2 of these schemes the roundels were continued through the village. For 3 villages a sequence of transverse bar markings were laid on the approaches.

Measures employed in the villages included pelican crossings, a speed camera, and mini roundabouts.

Effectiveness

As the measures were intended to reduce the speeds of the fastest drivers, a good indicator of a scheme's effectiveness was changes in the 85th percentile speed.

For the 11 schemes without measures in the village, those with only minor gateway treatments achieved reductions in 85th percentile speeds which were generally below 3mph at the gateways and below 2mph in the village. With more significant treatments at gateways, speed reductions of 6 - 7mph were attained, with reductions in the village of some 2-3mph. Where major gateways relying on more physically restrictive treatments were installed, reductions in 85th percentile speeds were 10mph in some cases, though within the village these schemes did not show any greater speed reductions that the other gateway schemes.

For the 4 schemes which relied purely on measures in the villages alone, 85th percentile speed reductions were less than 3mph. Amongst these schemes was one using a speed camera. At this site no advanced warning signs were used, and because the camera was installed prior to changes in legislation no enforcement action could be taken. Speed cameras emit a flash when a photograph is taken, and this is noticeable to drivers. The initial operating setting of the camera in this case was 25mph above the speed limit, reducing to 21mph above later on. If the camera had been set to operate at a lower vehicle speed, it could have had a more significant influence on driver behaviour. At the settings used, 60 vehicles a day were photographed.

For the 9 schemes having both measures in the village and significant gateways, generally 85th percentile speeds at the gateways were reduced by up to 9mph, and within the village by up to 10mph. However, in one scheme having measures in the village and a major gateway, both using significant physical restrictions, 85th percentile speeds reductions of about 12mph were obtained at the gateways and within the village.

Even with the more significant schemes, 85th percentile speeds recorded after installation still exceeded the speed limit. The limit was 30mph in the majority of cases and 40mph for the others, with the exception of Tunstall where the national speed limit of 60mph applied. In this case, "after" 85th percentile speeds were brought down from about 47mph to about 37mph.

The public opinion surveys revealed that the majority of respondents were aware that changes had been made, but there was considerable variation in the extent to which people had been consulted before the scheme. Half the respondents had mentioned traffic speed as a problem before the schemes were implemented. Heavy traffic was also viewed with concern.

Between a third and half of the respondents considered that the schemes had slowed traffic, but in two villages relatively high proportions of those surveyed thought there were no benefits at all. It was strongly believed in all the villages that, whilst changes were necessary, the speed reductions achieved were not enough.

Site	County	Road	Date	Measures	Cost £k
1. Bigrigg	Cumbria	A595(T)	4/93	Pelican crossing in village.	48.3
2. Billingford	Norfolk	B1145	8/92	1 gateway: enhanced signing, red surface, narrowing by edge lines to 5.8m.	2.0
3. Bloxham	Oxford	A361	3/92	Speed camera in village.	30.0
4. Burland	Cheshire	A534	4/93	2 gateways: enhanced signing with vehicle-actuated lights and red patches. Red patches with "30" roundels in village.	17.0
5. Contin	Highland	A835(T)	3/93	2 gateways: enhanced signing, coloured surface, narrowing by centre hatching and edge lines. "30" roundels (repeated in village).	14.5
6. Crimond	Grampian	A952(T)	4/93	2 gateways: enhanced signing, red surface, narrowing by centre hatching and "tooth" markings.	15.2
7. Crondall	Hants	C46	2/93	1 gateway: enhanced signing, pinch point with outbound priority.	8.5
8. Dairsie	Fife	A91(T)	3/93	Gateways: enhanced signing red surface, narrowing by edge lines to 6m, textured bands, "30" roundel.	43.7
9. Gisburn	Lancs	A59(T)	3/93	2 gateways: enhanced signing (1 only), narrowing, advance warning signs. Mini-roundabouts, islands in village.	50.8
10. Halberton	Devon	C769	6/92	2 gateways: red/white surface, narrowing by island and hatching, "30" roundel.	16.3
11. Hartley Wintney	Hants	A30	1/93	1 gateway: enhanced signing, narrowing by kerb extensions and hatching.	10.1
12. Hermitage	Berks	B4009	3/93	1 gateway: enhanced signing, red/grey surface, pinch effect.	4.4
13. Jersey Marine	W. Glam	B4290	12/92	2 gateways: 4.5m pinch point with outbound priority, weight restriction, advance warning signs.	17.6
14. Long Preston	Yorks	A65(T)	5/93	Pelican crossing in village with warning signs.	11.4
15. Ludford	Lincs	A631	2/93	Gateways: enhanced signing, advance warning signs on one approach, yellow bars on other. Speed limit repeater signs/markings in village.	4.3
16. Matfield	Kent	B2160	9/92	2 gateways: enhanced signing	50.0
17. Middleton	Humberside	A163	5/92	2 gateways: narrowing by hatching and island. Edge lines, mini-roundabout with cobbled area, centre hatching, and islands in village.	50.0
18. North Frodingham	Humberside	B1249	5/92	Hatching, footway extensions and sheltered parking in village.	11.6
19. Roade	Northants	A508	8/93	2 gateways: enhanced signing, narrowing, illumination. Mini-roundabout, additional zebra crossing, and edge lines in village.	63.5
20. Sanquhar	Dumfries	A76(T)	12/92	Gateways: enhanced signing, red/grey surface, centre hatching with white bar markings and school markings on approach, and "30" roundels inside gateway.	17.1
21. South Warnborough	Hants	B3349	5/93	1 gateway: enhanced signing, narrowing by kerbs and markings, rumble strips on approach.	13.7
22. Stratton-on-the-Fosse	Somerset	A367	9/92	2 gateways: pinch point with outbound priority. Pinch points and narrowings in village.	39.2
23. Temple Sowerby	Cumbria	A66(T)	2/93	Illuminated pedestrian refuge in village. Enhanced signing on approach.	5.0
24. Tunstall	Lancs	A683	10/92	2 gateways: enhanced signing. Buff bar markings (approaches and village).	5.7

Ways Forward

The results from the study have highlighted the need to consider carefully what is required of measures being installed in villages. It is clear that to achieve major reductions in speeds a mixture of gateways and complementary measures is required. However, a minimal approach involving little more than enhanced signing at gateways can sometimes offer a useful interim measure, and residents will recognise the value of this. Further studies are being made to establish the most appropriate measures, which are unlikely to be the same for each village.

Distinctively designed gateways can produce significant speed reductions at the approaches. On their own they will seldom be sufficient to bring the 85th percentile speeds below the prevailing speed limit, nor will they result in any significant reduction to speeds within the village. Siting a gateway near to the first of the buildings encountered, rather than at the village boundary which may be some distance away, will help to persuade drivers that there is a need to reduce speed.

The use of speed limit roundels was too limited to draw firm conclusions. However, the indication was that they appeared to contribute towards reductions in speeds both at gateways (where they were just one of a number of features), and through the villages. Whether their effect declines as drivers became more used to them is not yet clear. Other types of sign markings, including some of those used in other countries, could be equally effective. Such markings would require special authorisation. A school children warning marking was used near the gateway at Sanquhar, but it was not possible to isolate the effect of the marking alone, either as a warning sign or as a speed reducing feature.

Mini roundabouts or false roundabouts can help to break up long straight stretches, and allow the use of vertical deflections which may be appropriate in some cases. Rumble devices, however, may generate too much noise, and are generally regarded as an alerting device rather than an effective speed reduction measure.

Crimond

30mph Roundels

Middleton Roundabout

More experience is being gained with horizontal deflections and greater use of these is advocated. Where physical islands or build-outs are unsuitable or too expensive, the use of hatched markings on a coloured surface offers an alternative.

Coloured surfaces will not in themselves generally result in significant speed reductions. Instead, they act as a limited reminder of the need to reduce speed, and may enhance the appearance of the carriageway, dependent on the material used.

In certain cases it may be appropriate to consider the creation of a 20mph zone within a village. This would require sufficient devices to be installed to ensure that average speeds do not exceed 20mph. Costs considerations may demand a phased approach to the implementation of such a zone.

Further studies and monitoring are being carried out which should yield more advice on appropriate measures to use in villages.

Costs

These ranged from £2,000 to £63,500. They are indicative only, as a complete breakdown of costs was not available in all cases. Additionally, where the speed camera was used the scheme absorbed the whole costs of camera operation, whereas nowadays a single camera would be used to cover several sites.

Monitoring

The TRL monitoring included analysis of before and after speeds, using 85th percentile speeds in all cases and mean speeds in the majority of schemes. Before and after flows were also analysed. Public opinion surveys were carried out for 5 of the schemes. Longer term monitoring is scheduled for most of the village schemes.

Special Authorisations

The Department of Transport and the Scottish Office gave special authorisations for some of the measures used. This does not guarantee that similar authorisation would be given in the future. Further information on special authorisations is contained in Traffic Advisory Leaflet 3/93.

References

- Village Speed Control Working Group - Final Report, June 1994
- TRL Project Report 85 - Speed Reduction in 24 Villages; Details from the VISP Study
- Traffic Advisory Leaflet 3/93 - Traffic Calming: Special Authorisations
- Traffic Advisory Leaflet 11/93 - Rumble Devices
- Traffic Advisory Leaflet 12/93 - Overrun Areas
- Traffic Advisory Leaflet 13/93 - Gateways

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