



# Gateways

## ***Introduction***

Gateways have been used over the centuries to mark the entry to a special place. So it is appropriate that gateway features have been adapted for use as a traffic calming measure.

## ***Regulations***

The Traffic Calming Regulations 1993 provide for a gateway to be used "to indicate the presence in a length or lengths of highway of traffic calming works". Those works may be ones prescribed by the regulations, or specially authorised, or they may be road humps.

Gateways may be constructed on the verge, footway or cycle track. One of the main features will usually be vertical elements at the sides of the road. It is also possible for a gateway to span the carriageway. In common with all traffic calming features, a gateway may include paving, grass or other cover; pillars, planters, walls, rails or fences; and trees, shrubs and other plants.

Where a gateway precedes road humps it does not by itself constitute the necessary speed reducing feature required in advance of a road hump constructed under the Highways (Road Humps) Regulations.

Other traffic calming works may be combined with a gateway. These could include pinch points, build-outs, islands and rumble devices, together with changes of carriageway colour and/or texture and the use of appropriate signing. Where changes in the surface of the

carriageway are used, it will usually be most effective if they start at the gateway, rather than in advance of it. This helps to give greater prominence to the gateway itself.

It has been found that any speed reduction achieved by a gateway treatment can be extremely local and may be eroded over time. To achieve the most beneficial effect, other traffic calming features will have to be located close to the gateway, and extend over the length of road over which speeds need to be constrained.

As mentioned in Traffic Advisory Leaflet 7/93, traffic calming measures cannot be used by themselves to prevent access. Therefore, both the horizontal and vertical elements of a gateway must be constructed so that it can be negotiated by any vehicle entitled to use the road.

## ***Visibility***

A gateway should be sited so that drivers do not encounter it suddenly. This could be hazardous and may not bring about the desired reduction in speeds. The gateway should be visible over at least the stopping distance for the 85th percentile of the approach speed. Basing the distance on the current speed limit will often not be sufficient, and speed survey measurements will be needed to identify the 85th percentile. Site inspection will confirm whether the stopping distance is sufficient, or needs to be increased. Care should be taken when considering placing gateways on long curves where they might not initially be in the driver's line of vision.



## ***Conspicuity***

To achieve the maximum speed reduction possible, the gateway must be conspicuous. This can be achieved in a variety of ways using vertical and horizontal elements. Within any aesthetic constraints imposed by the location, colours used should contrast with the surroundings.



## ***Horizontal Elements***

These can take the form of a contrasting coloured surfacing, which may also be textured or form a distinct rumble device. The area should normally be at least 5m in length so that it is clearly visible from a distance. Smaller lengths have been used but these will be less visible. Longer lengths up to 10m can improve conspicuity, but beyond this may detract from the effect of the gateway. Edgeline hatched markings can make the carriageway appear narrower than it is whilst still allowing larger vehicles to overrun these areas if necessary. Build-outs, chicanes and pinch-points can also be used to create a narrowing effect.



## ***Islands***

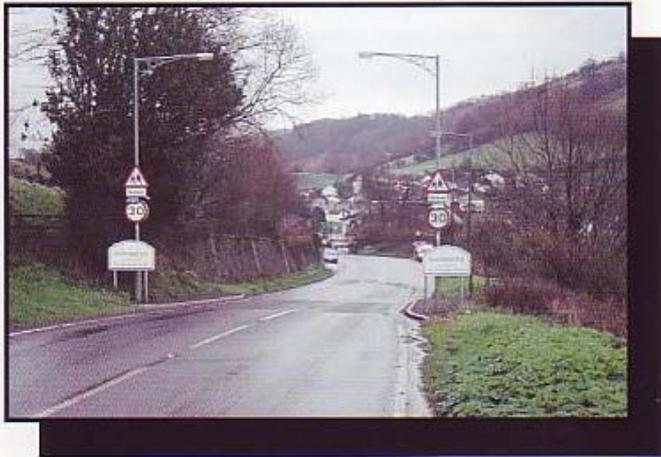
These can be used to enhance the effect of a gateway, and to reduce overall carriageway widths. Islands must be appropriately signed, and sufficient lane width retained to suit all vehicles likely to use the gateway. Where farm equipment or specialist commercial or military vehicles have to negotiate a gateway, it can be helpful to use ghost islands formed by markings or overrun areas. Islands can be placed towards one side of a gateway to give protection to cycle lanes or cycle slips.



## ***Vertical Elements***

A gateway composed of vertical elements alone is unlikely to influence vehicle speeds. Where a reduction in speeds is sought, it is recommended that gateways are always used in conjunction with horizontal elements. When choosing the location of a gateway there should be sufficient clear verge width to accommodate the vertical elements. Any vertical element should be set back from the road sufficiently to ensure that vehicles cannot come into contact with them. Location of any of the vertical elements in a footway or cycle

track should be avoided unless there is sufficient space remaining to allow the safe and convenient passage of cyclists or pedestrians. If signs used at a gateway span a footway or cycle track there should be adequate headroom for users.



## **Signs**

Often gateways will be positioned at the start of a speed limit zone. The signs for the speed limit can be enhanced by the use of yellow backing boards, which currently need special authorisation. One of the Village Speed Control Working Group (VISP) schemes has, with special authorisation, incorporated flashing amber lights. Whilst this may add to the conspicuity of the signs, the treatment may not be suitable for all areas. A combination of signs such as speed limits and village names currently requires special authorisation, and advice on this is obtainable from the Department's regional offices.



## **Entry Treatments**

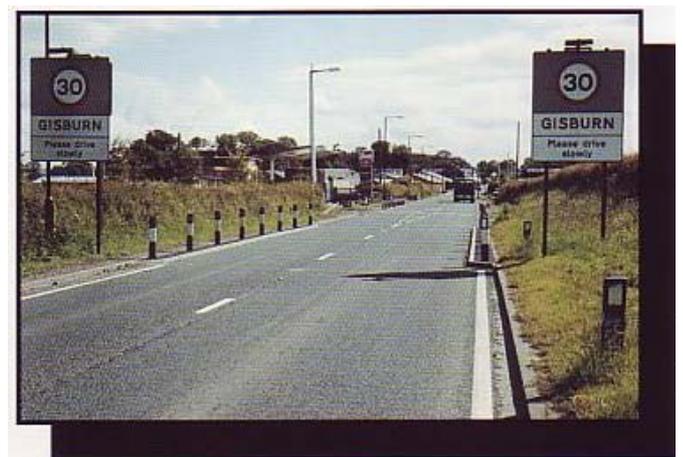
This is a form of gateway which has been developed for use at side roads to announce

to drivers leaving the major road that they are entering an area of different character. Entry treatments will normally be associated with urban areas. They may be used alone, or to indicate the start of a series of traffic calming measures. Where the feature amounts to a road hump used in isolation from others, special authorisation should be sought. Entry treatments can be important in identifying the gateways to 20mph zones.



## **Locations**

Gateways should be located so that they do not interfere with access to frontage properties. In rural areas a gateway located near to the first buildings in a community helps to emphasise a change in character of the road.



## **Research**

The Department has undertaken research to assist the VISP work. Along with other traffic calming features, the group is investigating the effects of gateways at villages. Full results of this work will be available in Spring 1994. Some county highway authorities have

installed a number of gateways at villages outside of the VISIP studies. These schemes have been monitored, and the full results have been published for the Department by the Transport Research Laboratory (TRL) in Project Report 35, The Effectiveness of Village Gateways in Devon and Gloucestershire.

The TRL report indicates that gateways can effect speed reductions of up to 6mph. However, where reductions have been achieved, these have not been sustained over any distance, and speeds within the village have at most been reduced by only 1 or 2mph. In some cases increases in speed have occurred. Gateways sited at naturally occurring hazards, such as sharp bends or the crest of hill, did not achieve any speed reduction.

Evidence to date is that a gateway used on its own should not be expected to achieve large reductions in speeds. For maximum benefit it needs to be used in conjunction with other measures in the area.

### **Gateway Design**

Gateways for traffic calming are a relatively new concept in the UK. They provide good opportunities for the involvement of the public in the design process, as well as the inter-working of professional disciplines such as traffic and highways engineers, planners,

architects, landscape architects, artists, sculptors and conservation officers. Gateways can be modern in concept, or follow more traditional lines. Authorities might consider constructing a mock-up to assist in gauging public reaction. The Department would welcome information on innovative approaches to the design of gateways.

### **References**

- Traffic Calming Act 1992
- Highways (Traffic Calming) Regulations SI 1993 No 1849
- TA Leaflet 3/93 - Traffic Calming Special Authorisations
- TA Leaflet 7/93 -Traffic Calming Regulations
- TA Leaflet 11/93 - Rumble Devices
- TA Leaflet 12/93 - Overrun Areas
- TRL Project Report 35, The Effectiveness of Village Gateways in Devon and Gloucestershire

### **Enquiries**

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