

Traffic Advisory Leaflet 7/95
November 1995



Traffic islands for speed control

Introduction

Islands can be introduced in the highway for a variety of purposes. This leaflet reviews the range of circumstances in which islands can be used for traffic calming, in order to control vehicle speeds.

Legislative powers

There are a number of powers under which islands can be constructed in the carriageway: The Traffic Calming Act 1992 amended the Highway Act 1980 and the Roads (Scotland) Act 1984 to allow the construction of features whose primary purpose is to promote road safety, or preserve or improve the local environment.



The Highways (Traffic Calming) Regulations 1993 and the Roads (Traffic Calming) (Scotland) Regulations 1994, made under this primary legislation, define an island as "a work without facilities for pedestrians constructed in

a carriageway to reduce carriageway width or to deflect the flow of vehicular traffic". The primary purpose of islands introduced under the Traffic Calming Regulations, therefore, is to control vehicle speeds, and thus to reduce accidents or improve the local environment.

Section 64 of the Highways Act 1980 and section 27 of the Roads (Scotland) Act 1984 allow for works to be introduced to separate traffic moving in opposite directions in a carriageway, and to regulate movements at junctions. This could include, for example: the creation of dual carriageway roads; central islands at roundabouts; islands to protect contraflow cycle lanes; the channelisation of traffic streams at complex junctions.



Section 68 of the Highways Act 1980 and section 27(c) of the Roads (Scotland) Act 1984 allow the construction of refuges in the carriageway to facilitate pedestrian crossing movements. Assessment criteria for the provision of pedestrian crossings, including

pedestrian refuges, and their design are discussed in Local Notes 1/95 and 2/95.

Islands installed under powers provided by sections 64 and 68 of the Highway Act 1980 and section 27 of the Roads (Scotland) Act 1984 can and often have been used for traffic calming purposes.

Locations and Approach Speeds

Care needs to be taken that islands which substantially narrow the carriageway are not encountered at high speeds, especially where these are combined with kerbside build outs. To ensure approach speeds are not excessive, motorists will need to have to modify their speeds as necessary prior to reaching the island. Islands should therefore either not be more than 80m and preferably within 60m of a junction or a feature indicating a change in the driving environment; or within a traffic calming scheme; or visible over at least the stopping distance for the 85th percentile of the approach speed. An island should not be located where it would obstruct access to individual properties



Narrowings

Islands can be used to narrow the carriageways, sometimes in combination with build outs. This may be as part of a gateway to indicate the start of a traffic calming scheme (Traffic Advisory leaflet 13/93), or as a feature to maintain low speeds within a traffic calming scheme.

Where an island has been used to narrow the carriageway and the remaining carriageway is greater than 3.5m, the speed control effect is likely to be predominantly psychological.

Further details of issues relating to narrowings are given in Traffic Advisory Leaflet 9/94 Horizontal Deflections.

Overrun areas

The design of islands will not normally be suitable for vehicles to be driven over them. If it is intended that vehicles should be able to traverse features occasionally, then they should be designed in accordance with the dimensions specified for overrun areas in the Highways (Traffic Calming) Regulations 1993 (see Traffic Advisory Leaflet 12/93) or shown in the Schedule to the Roads (Traffic Calming) (Scotland) Regulations 1994.

Overrun areas can be used in combination with islands to encourage a greater deflection in the driving line for light motor vehicles. This can give greater reductions in speed, whilst allowing adequate space for larger vehicles to manoeuvre around the island.

Chicanes

Islands can be used within a chicane where there is a two way flow through the chicane. This can prevent the tendency for drivers to minimise the deflection by encroaching into the opposite lane. Overrun areas might also be used for this purpose. Care needs to be taken in these instances to ensure that the design of the overrun area does not encourage vehicles to cross into the opposite lane.



Speed Cushions

An island sited between a pair of cushions can discourage indiscriminate parking in the vicinity of the cushions, which could otherwise create problems for buses attempting to

straddle the cushion, or prevent cyclists and motorcyclists from using the nearside gap between the kerb and the cushion.

However, if the island is likely to be used as a pedestrian crossing point, then it is preferable to provide a pedestrian refuge and position the cushions before the refuge, offset to one another. This allows pedestrians to make use of the refuge and cross between the cushions at one level.

Offset islands

Islands do not have to be centrally positioned relative to the carriageway. An offset island may be used, for example, to provide protection for a cycle lane or introduce a cycle bypass, in addition to its speed control purpose. An offset island which provides a cycle lane bypass of a standard road hump would not compromise the requirements of the Highways (Road Humps) Regulations 1990 or the Road Humps (Scotland) Regulations 1990, and therefore the road hump would not require special authorisation.



Larger vehicles

Traffic calming measures (including islands) cannot be used to prevent access to sections of the highway where this is not lawfully prohibited. Where islands are used to reduce carriageway widths, consideration should be given to the types of vehicles which may be expected to require access, including emergency services vehicles. Layout and positioning should ensure adequate clearance for the largest types of vehicles to be expected in that location. Attention should be paid to routes designated for use by vehicles carrying abnormal loads. In rural areas the access requirements of agricultural vehicles will need to be considered.



Roundabouts

Where a small central island is used, this can be a useful influence on vehicle speed. If it is intended that vehicle speeds should be below 25mph, then the roundabout geometry should ensure that the deflection provided encourages vehicles to slow down on approaching the roundabout, maintain their reduced speed on the circulatory carriageway, and discourages vehicles from accelerating away from the roundabout as they exit. Aligning approach arms at 90 (to the circulatory carriageway, and keeping entry radii relatively small, can also be an effective means of improving the drivers view of cyclists.

The give way markings prescribed for use at roundabouts with small central islands (diagram 1003.3 in the Traffic Signs Regulations and General Directions 1994) provide the speed reducing feature required by the Highways (Road Humps) Regulations 1990 and the Road Humps (Scotland)

Regulations 1990 to be used in advance of the start of a road scheme.

"False" roundabouts

Islands can be used to create a roundabout with no side road connections (ie. with only two arms), and can be used where space is available to give good deflection of motor vehicles. These could be used as part of a gateway feature, or to break up long straight sections within a traffic calming scheme.

As with ordinary roundabouts, give way markings (TSRGD diagram 1003.3) can be placed on the approach arms to a "false" roundabout, and can be used as the necessary speed reducing feature prior to the commencement of a road hump scheme.

Close attention to the design of a "false" roundabout will be required, to ensure that the deflection provided is sufficient to appropriately influence the speeds of vehicles passing through it.

TSRGD 1994 does not allow the creation of "false" mini-roundabouts.



Pedestrians

In siting islands consideration should be given to existing and likely pedestrian flows and movements, remembering that pedestrians will cross the road where it is most convenient for them to do so. Judgements will need to be taken on whether pedestrians are likely to use the island to help them cross the road, and whether it would be safe for pedestrians to cross there.

Where an island is likely to be used as a pedestrian crossing facility a pedestrian refuge

may be a more appropriate provision, in which case, dropped kerbs and tactile surfacing are recommended (Disability Unit Circular 1/91; SOID Circular 2/1994).

Where an island requires vehicles to make a relatively sharp deflection, motorists may concentrate their attention on this manoeuvre, and be less aware of nearby pedestrians. It may therefore be necessary to introduce additional features to discourage the use of the island for pedestrian crossing purposes, or if possible to ensure the island is sited away from pedestrian desire lines.

Cyclists

The proximity of motor vehicles is often threatening to cyclists when negotiating localised carriageway narrowings if the width is not sufficient for the two to pass through comfortably side by side.

Where a narrowing reduces the lane width to less than 3.5m, facilities to enable cyclists to bypass the narrowing may be of value. This may be in the form of a cycle lane bypass around the feature. Alternatively, where a series of narrowings are being constructed there may be scope to provide a cycle track away from the carriageway.



Lighting

The Traffic Calming Regulations 1993 require an island to be clearly visible to approaching vehicles at all times. It is normal good practice to indicate pedestrian refuges and other islands positioned in the carriageway by internally illuminated bollards. It is recommended that this practice is similarly adopted where islands are used for traffic calming purposes. A keep left sign (Traffic

Signs Regulations and General Directions 1994 Diagram 610) mounted on a post within the island can also be a useful addition.

Street Furniture

Any street furniture placed on an island should be set back at least 0.5m from the kerb edge.

Enquiries

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References

- Highways Act 1980
- Roads (Scotland) Act 1984
- Highways (Road Humps) Regulation 1990 (SI 1990/703 & 1990/1500)
- Road Humps (Scotland) Regulations 1990 (SI 1990 2623)
- Traffic Calming Act 1992
- Highways (Traffic Calming) Regulations 1993 (SI 1993/1849)
- Roads (Traffic Calming) (Scotland) Regulations 1994 (SI 1994 2488)
- Traffic Signs Regulations and General Directions 1994 (SI 1994/1519)
- Traffic Advisory Leaflet 7/93: Traffic Calming Regulations
- Traffic Advisory Leaflet 12/93: Overrun Areas
- Traffic Advisory Leaflet 13/93: Gateways
- Traffic Advisory Leaflet 1/94: VISIP A Summary
- Traffic Advisory Leaflet 4/94: Speed Cushions
- Traffic Advisory Leaflet 9/94: Horizontal Deflections
- Traffic Advisory Leaflet 11/94: Traffic Calming Regulations (Scotland)
- Local Transport Note 1/95: The Assessment of Pedestrian Crossings
- Local Transport Note 2/95: The Design of Pedestrian Crossings
- Disability Unit Circular 1/91: The use of dropped kerbs and tactile surfaces at pedestrian crossing points [SOID 2/1994]

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