Department for **Transport**

Traffic Advisory Leaflet 2/94 August 1994



Entry Treatments

Introduction

Entry treatments have been developed for use at side roads so that drivers leaving a major road are in no doubt that they are entering a road of a different character. The treatments are a form of gateway, described in broader terms in Traffic Advisory Leaflet 13/93.

Design

The design of an entry treatment can incorporate a wide variety of features. These include:

- build-outs and pinch-points
- changes in surface texture or colour
- vertical deflections of the carriageway
- bollards and planting
- tactile paving
- signing
- vertical design elements (posts, pillars, walls, fences etc)

Locations

Entry treatments will normally be used in urban areas. Depending on the features they incorporate, they may be used alone or to indicate the start of a series of traffic calming measures. They can be an effective means of identifying the beginning of 20mph zones. Entry treatments should be located so that they do not interfere with access to frontage properties, and with particular attention to safety on the major road where this carries high speed traffic. A combination of these features can heighten the visual impression given to drivers, reinforcing the message that the driver is entering a different driving environment.

Traffic calming measures as permitted by the Highways (Traffic Calming) Regulations 1993 cannot be used to prevent access where this is not lawfully prohibited. Design of an entry treatment should therefore allow for the passage of any vehicle entitled to use the road. This does not mean, however, that the scheme cannot include elements designed to discourage access.

Vertical Deflections

An entry treatment can incorporate an isolated road hump or the first in a series of humps along a side road. In both circumstances the design will need to comply with the requirements of the Highway (Road Humps) Regulations 1990. Alternatively it may be possible to obtain special authorisation, but a full justification of why the requirements of the regulations cannot be met will be required (see Traffic Advisory Leaflet 3/93).

Differences in level between the surface of the entry treatment and the main carriageway should not be severe, as this may have an adverse effect on the stability of cyclists and motorcyclists turning across the entry. If any upstands are created they should not exceed 15mm and vertical faces should not be greater than 6mm. Rumble devices often generate unwelcome noise and should generally be avoided near to residential properties (see Traffic Advisory Leaflet 11/93).

Materials

Materials can vary but may include concrete blocks, granite setts and coloured surfacings. Some of these can cause pain and discomfort for disabled people. Materials which have a high slip resistance in wet conditions should be used. Noise generated from an irregular surface may create difficulties in some instances.

The use of contrasting materials and colours can be helpful in distinguishing between footway and carriageway where this would not otherwise be clear.

Carriageway Narrowings

The extent to which a carriageway is narrowed will depend on local circumstances, including traffic flows on both the major and the side road, traffic composition, and turning movements.

Where the side road forms a one way street, carriageway widths will normally be sufficient only for single vehicles access or egress, typically in the range 3.0-3.5m.

If the side road is two way it may be appropriate to reduce the carriageway to a single lane width at the entry treatment. In these instances it will be necessary to examine whether any unacceptable delays or safety disbenefits will result from vehicles waiting to turn from the major road. Conflicts may also arise between vehicles entering and exiting the side road.

Setting the entry treatment back into the side road may provide waiting space for vehicles entering the side road. This would need to be balanced against any difficulties or inconvenience caused to pedestrians, together with the reduced visual impact of the feature from the main road.

A width of 5.0m will normally accommodate two way traffic. Where the side road is lightly trafficked this could be reduced to 4.6m in









some cases. Where regular access is required by large vehicles it will not normally be appropriate to reduce the width below 5.5m. At times, greater widths may be necessary, especially if the narrowing is sited where vehicles are still turning whilst passing through it.

Pedestrians

Entry treatments can provide improved side road crossing facilities for pedestrians. Build outs reduce the width of road which pedestrians have to cross. Flat top road humps, raised to the level of the footway, provide a level crossing facility.

The use of kerb upstands at crossing points should be avoided. An upstand of more than 6mm may interfere with the movement of people in wheelchairs. Pedestrians with visual impairment may then find it difficult to distinguish between the footway and the road, and tactile surfacing as recommended in Disability Unit Circular 1/91 should be installed to assist this user group.

Where the width of the carriageway is maintained over the entry treatment, pedestrian refuges can be provided to assist crossing movements.

Cyclists

Where a road hump is installed as part of an entry treatment, concern has been expressed that the safety of left turning cyclists and motorcyclists can be compromised if they are required to negotiate the hump at an angle. However, studies have not indicated any significant problems of this nature.

The use of cycle lane bypasses may be appropriate on occasions, to prevent cyclists from being squeezed by other vehicles or to allow a vertical deflection to be avoided. Care must be taken in these circumstances to ensure that pedestrians are aware of the route which cyclists can take.

Bollards

Bollards can be used to improve the visual impact of the entry treatment, and to aid the differentiation between the carriageway and

the footway where this is necessary. Their use will be constrained by the available footway width: bollards should be no nearer than 0.5m to the edge of the carriageway. They should not be positioned where they might cause difficulties for pedestrians, particularly those pushing prams, for people in wheelchairs or visually impaired people. Problems for visually impaired people will be reduced where bollards are 1m high with some colour contrast around the top. Care should be taken to ensure that bollards are located away from swept vehicle paths, and do not interfere with the sight lines of any road user group.







Signing

Entry treatments at the entrances to 20mph zones will serve to reinforce the message of the signs, that drivers are entering an environment of a different character. Traffic Advisory Leaflet 7/91 and Traffic Advisory Leaflet 2/93 give further information.

It should be made clear to traffic approaching the junction from the side road that, having crossed the entry treatment it is still necessary to give way to traffic on the major road. It is therefore advisable that the appropriate Give Way markings, and signs as necessary, are retained.

Elsewhere, unless absolutely necessary, signing should be avoided. Where additional signing is required at particular locations, care should be taken that pedestrian paths are not obstructed and signs are clearly visible to drivers.

Speed Reduction

Any speed reduction resulting from the passage of a vehicle across an entry treatment is unlikely to be sustained for any distance, and may be eroded over time, unless additional traffic calming features are introduced along the remainder of the road.

Kerb Radii

Kerb radii should be as tight as possible taking account of the character of the traffic using the road. Where access is generally confined to car traffic, 4.0m radii may be used. The use of smaller radii may result in vehicles overrunning the kerb, unless wider entry widths of 5.5m or more are provided. Where large vehicles will occasionally require access 6.0m radii are more appropriate and this may need to be increased further where frequent access by larger vehicles is necessary.

Planting

The appearance of an entry treatment can be enhanced by sensitive planting. However, care must be taken to ensure that vegetation and foliage do not interfere with the sight lines of pedestrians, cyclists and drivers either on entry or exit, or obstruct visually impaired pedestrians.

Costs

The cost of entry treatment will depend on the range of techniques employed and on local site conditions. Entry treatments introduced in four London boroughs in conjunction with the pilot Red Route varied in cost between £7,000 and £16,000 per site in 1992. It should also be remembered that if modifications to an entry treatment are required at some stage in the future, then the costs of these will be significantly increased where statutory undertakers have been permitted to locate manholes etc within any buildouts.

References

- Highways Act 1980
- Traffic Calming Act 1992
- Highway (Road Humps) Regulations (SE 1990/703)
- Highways (Traffic Calming) Regulations (SI 1993/1849)
- Traffic Advisory Leaflet 7/91: 20 MPH Speed Limit Zones
- Traffic Advisory Leaflet 2/93: 20 MPH Speed Limit Zone Signs
- Traffic Advisory Leaflet 3/93: Traffic Calming Special Authorisations
- Traffic Advisory Leaflet 7/93: Traffic Calming Regulations
- Traffic Advisory Leaflet 11/93: Rumble Devices
- Traffic Advisory Leaflet 12/93: Overrun Areas
- Traffic Advisory Leaflet 13/93: Gateways
- Disability Unit Circular 1/91: The use of dropped kerbs and tactile surfaces at pedestrian crossing points

Enquiries

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