

**Traffic schemes and traffic management measures** A good practice guide



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# TRAFFIC SCHEMES AND TRAFFIC MANAGEMENT MEASURES

A holistic approach where there is a proven need.

The Council has a holistic approach to traffic management in which the needs of all road users are considered equally, an important issue when dealing with such a densely populated and congested area as the Royal Borough. The increasing competition between different users creates new challenges for urban design. The need for improved access for everyone using the public highway puts extreme stress on limited road space. Strategic planning and careful co-ordination are vital.

The Royal Borough is committed to encouraging road user autonomy and responsibility by removing barriers and restrictions in the allocation of road space. The Council has found this can be achieved without compromising the goal of road safety.

In the Royal Borough traffic schemes are carefully considered and only introduced if there is a proven need or they would provide a positive benefit. All traffic schemes have an impact on the street scene, so our challenge is to minimise any adverse effects. Engineers are encouraged to be innovative and to look for alternatives to the common options. The Council will not consider any schemes that would transfer traffic from one residential road to another. All traffic schemes are made up of a collection of the individual elements discussed earlier in this guide. They may include major features such as crossings or roundabouts or they may simply consist of signs and road markings. Regardless of the size of the scheme, the main streetscape design principles always apply. A minimalist, co-ordinated approach that respects the local character and enhances the public realm must prevail and all elements, including street furniture, must be considered in the initial stages of scheme design.

In order to achieve road safety targets set by the Department for Transport and the Mayor of London it has generally been the practice to introduce a variety of traffic schemes aimed at reducing the number of collisions involving personal injury.

The past successes of our area traffic studies have reduced the number of accidents to such a low level that it is more difficult to identify trends and patterns in our accident statistics. We still consider engineering measures where these can be effective, but also explore other methods to achieve these targets. These include better education, improved enforcement and initiatives such as the school travel plan and increased use of the internet.



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## TRAFFIC CALMING SCHEMES

Traditionally traffic calming schemes such as chicanes, kerb build-outs and speed humps were used to slow traffic. In the 1980's the Royal Borough worked closely with the Transport Research Laboratory developing the new concept of traffic calming. Several of the original experiments were implemented in the Borough in residential roads where traffic speeds were high resulting in many personal injury accidents.

Whilst further schemes have been implemented since those first trials they have only been at locations where the original objective of reducing speed related collisions can be met.

However, over recent years these methods have become increasingly unpopular. The emergency services are concerned about delayed response times, local residents complain of increased vehicle noise and pollution and residents of nearby roads suffer the effects of displaced traffic. In addition, the benefits offered by such schemes are debatable. The small roads in the Royal Borough do not encourage high speeds and surveys have shown that in most residential streets vehicle speeds are relatively slow.

It is virtually impossible to introduce traffic calming measures that will not have an adverse effect on the street scene. Kerb build outs and chicanes affect kerb alignments, speed humps and cushions require ugly road markings and all schemes cause further clutter with signs and posts.

After consideration of these points the Council has decided to endorse its original objective of only introducing traffic calming schemes where there is a record of speed related personal injury collisions.

When carrying out resurfacing works existing traffic calming schemes are reviewed. Where traffic patterns have changed or other schemes, which remove the original traffic speed/accident problem, have been implemented rendering the traffic calming scheme redundant it is possible to remove the traffic calming measures.



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## **20 MPH SCHEMES**

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We have recently introduced a 20 mph speed limit on Exhibition Road as part of the wider improvements and because the special design of the road encourages lower speeds. However we have no plans to implement 20 mph limits more widely.

The key issue is one of enforceability. Without the use of expensive and unpopular measures enforcement would rely upon a heavy and unrealistic commitment from the police. We will therefore only consider introducing 20 mph zones or speed limits in exceptional circumstances, where there is a clear history of speed-related collisions involving personal injury.



20 mph limit in Exhibition Road



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## **SPEED INDICATOR SIGNS**

At locations where the Council or the local community has concerns over traffic speeds and there is evidence of speeding traffic, we will consider installing speed indicator signs on a temporary basis, to help deter drivers from speeding. These signs display the speed of any vehicle exceeding the speed limit and also serve as a monitoring device, providing useful data on both the speed of traffic and the number of vehicles using the road. By using these signs on a temporary basis only, we maximise their effectiveness and also avoid the cumulative effect of adding new signs.

Wherever possible we erect these signs on existing lamp columns although their weight precludes their use on certain types of column.



Speed indicator sign



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## **ENTRY TREATMENTS AND RAISED TABLES**

Entry treatments and raised tables are areas where the carriageway is raised to pavement level. A raised table involves a complete junction whereas for an entry treatment the raised section of carriageway is limited to a side road only.

At junctions where traffic speeds are a problem, raised tables and entry treatments can help to improve safety by reducing traffic speeds. We therefore consider constructing these at junctions where there is a recognised speed related road safety problem. These can be expensive and we will use asphalt surfacing in most cases to minimise construction time and costs.



Entry treatment in Pelham Street



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## **MINI-ROUNDABOUTS**

We have two designs for mini-roundabouts in the Borough. The first of these has a central disc formed of granite setts in place of the standard white thermoplastic domed marking. Less visually intrusive, this design is more sympathetic to the surroundings and can also be more effective in ensuring that drivers use the roundabout correctly.

At other locations, for example in areas where white stucco buildings are the predominant architecture, the standard white dome blends in well with the immediate surroundings and is our preferred design.



 $\label{eq:mini-roundabout} \mbox{ Mini-roundabout with granite setts} - \mbox{ Chepstow Villas}$ 



Mini-roundabout with white dome - Abingdon Road



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## **PEDESTRIAN CROSSINGS**

A 'straight-across' layout is generally considered preferable to a staggered crossing as it results in less delay to pedestrians. Staggered crossings are avoided wherever possible and are only installed if a 'straight-across' arrangement cannot be achieved owing to site conditions.

The main principles of streetscape design are applied to all crossings. Guard railing is only introduced in exceptional circumstances, tactile paving is laid to the layout described earlier, road markings and signs are kept to a minimum, with traffic signals mounted on lamp columns where appropriate. Surfaces are of the same colour throughout.

Where pedestrian refuges are installed to help pedestrians to cross the road a central refuge beacon is rarely needed and will only be installed if there is a recognised problem of drivers failing to notice the refuge and this cannot be rectified by improved lighting or other means of improving visibility.



Straight-across crossing – Kensington High Street



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A single 'no entry' sign is sufficient

## **ONE-WAY SCHEMES**

In the 1970s many one-way streets were implemented in the Royal Borough to enable kerbside residential parking to be provided. However, one-way streets and road closures, which were implemented to reduce traffic through the residential areas, can be inconvenient for local residents and can be an obstacle in their daily lives.

Generally, traffic patterns are now established and not subject to major change. Therefore, the introduction of a new one-way system needs careful consideration as such schemes can have a severe impact on a wide area. Nearby roads can be adversely affected by diverted traffic and roads that are made one way can experience increased vehicle speeds, particularly narrow streets where two way traffic previously acted as a natural form of traffic calming. Signs and road markings should be kept to the minimum sufficient to inform road users.





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## **ROAD CLOSURES AND ACCESS RESTRICTIONS**

Individual road closures are now rarely introduced in the Royal Borough. The adverse affect on surrounding roads, access difficulties for emergency vehicles and the necessary introduction of barriers and signs do not conform to Council policy.

In exceptional circumstances road closures can be implemented for road safety purposes. An example of this was the closure of a road to improve road safety for pupils walking between two school buildings.

We also consider introducing closures on an experimental basis.



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## **PEDESTRIANISATION**

Fully pedestrianised areas are difficult to achieve. The need for servicing for shops, accommodation of public transport and the accessibility needs of disabled people mean that few areas can be solely for pedestrians.

Many of the streets in the Royal Borough have a variety of different functions and most shopping streets also serve as through routes for traffic. Unless there are suitable alternative routes it would not be practical to prevent vehicles using these roads. It is not acceptable merely to move the traffic out of one street to the detriment of neighbouring streets. The Council has therefore looked for an alternative approach which can improve the pedestrian environment whilst maintaining access for vehicles. This has led to the recent introduction of single surface schemes.



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## **SINGLE SURFACE SCHEMES**

The aim of single surface schemes is to create a better balance of priorities between drivers and pedestrians. The most recognisable characteristics are the absence of street clutter and the elimination of kerbs. We have implemented a range of single surface schemes around the Borough, designed with the aims of slowing traffic down, changing priorities and ensuring accessibility for all.

In Exhibition Road we created an inviting and accessible space based on the single surface concept with a corduroy strip providing delineation between areas designated for pedestrians only and areas where vehicles are permitted.



Exhibition Road - single surface





**Corduroy delineator on Exhibition Road** 



**Exhibition Road - before** 



**Exhibition Road - after** 





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On Hans Crescent we created a single surface area paved in high quality natural stone, selected both for its hard wearing properties and to complement the colours of the adjacent buildings. To eliminate the need for traditional signs and lines to control movement, we have defined the vehicle route through the paved area by carefully placed street furniture, new trees and new street lighting.

We will consider implementing accessible space and single surface schemes at other locations where we think that it is appropriate.







Single surface in Hans Crescent





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## **CYCLE ROUTES**

In the Royal Borough all road users are considered equally and one group is not favoured at the expense of others. The Council supports cycling by providing good road surfaces and parking facilities and promotes routes by 'soft' measures such as maps and publicity rather than physical measures such as signing.

Rather than segregate users, the Council prefers to encourage a safe use of mixed road space. Experience shows that in some cases mixed use roads can promote safety, whereas dedicated cycle lanes can give a false sense of security to cyclists. Also, given the increasing number of cyclists, on many routes dedicated lanes cannot provide sufficient capacity. For these reasons we do not generally provide marked 'with-flow' cycle lanes on the carriageway although, where road width permits, we seek to provide a wider nearside lane. We will accommodate cycle lanes in exceptional circumstances. For example, the Mayor of London has now introduced Cycle Superhighways, two of which run through the Royal Borough for part of their route. We have worked closely with TfL to minimise the impact of Cycle Superhighway Route 8 (Wandsworth – Westminster) on the streetscape of the Royal Borough as it crosses Chelsea Bridge.

We have agreed in principle to accommodate Cycle Superhighway Route 9 (Hounslow – Hyde Park) as it runs through the Borough along Kensington High Street. Our key design consideration will be to avoid the use of blue surfaces and minimise clutter such as signage on such a sensitive road. The route will only be identified by road markings in the form of the cycle symbol and the route number, together with signs on lamp columns.



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Signing for contra-flow cycling

## **CONTRA-FLOW CYCLING**

We recognise the benefits of allowing two-way cycling in one-way streets. The conventional approach would be to provide segregated lanes with splitter islands to accommodate signs and to separate the cyclists from opposing traffic. Our view is that this approach has an adverse effect on the street environment, is expensive to construct and maintain and can be difficult to accommodate where roads are narrow or there is a heavy demand for parking.

We have successfully run trials in the use of 'no entry' signs with a supplementary 'except cycles' plate as an alternative. At our trial sites we have also used minimal carriageway markings, providing only short sections of cycle entry and exit lanes at each end of the road rather than marking out a cycle lane for its full length. Drivers of oncoming vehicles are made aware of the presence of cyclists by clear signs.

Our trials have shown that improved cycle access can be achieved without reducing compliance by motor vehicles and the DfT has now issued new guidance approving this sign configuration. We will therefore be continuing with this approach to contra-flow cycling. This will be of benefit to the increasing number of cyclists and will support the Mayor of London's Cycle Hire scheme, which includes many cycle docking stations in or close to quiet one-way streets.



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## BUSES

Bus priority measures have been introduced in Central London for over thirty years with the first bus lane in the Royal Borough introduced in 1974. For many years bus lanes were considered the only measure that could be introduced to give bus priority. However, with the introduction of improved traffic signal technology and the decriminalisation of parking, giving local authorities the ability to focus parking enforcement at key locations or routes, there are now alternatives to the bus lane. Therefore, the Council does not see scope to introduce new bus lanes and indeed has removed some, without measurable loss in terms of bus journey times.

In a dense urban area like the Royal Borough the provision of bus lanes has an adverse effect on other traffic and often leads to increased congestion and the diversion of traffic into unsuitable residential roads. Our aim is that any scheme which improves bus movement must also improve amenity for other road users. The Council's approach is regularly to review waiting and loading restrictions at key locations and to ensure the appropriate level of parking enforcement is committed to ensure free traffic flow.

Bus lay-bys conflict with the streetscape principle of maintaining a kerb line that reflects the building line. New bus lay-bys will not be introduced in the Royal Borough and any existing ones will be removed and the original kerb line reinstated. The Council recognises the benefits provided by the information boards at bus stops telling passengers when the next bus is due.



Bus shelter incorporating bus information board - Kensington High Street

