



### 4.1 GENERAL PRINCIPLES

The main aims should be simplicity of design and layout, and overall quality, bearing in mind maintenance considerations, and cost limitations. The best of existing older paving should be retained and reinstated wherever possible. A clear design strategy is needed at the outset of repaving schemes, and larger or key schemes. It is important that one person is responsible for design decisions.

### 4.2 PROBLEMS

Fussy mixtures of paving materials and colour are to be avoided as they almost always result in poor townscape.

### Other issues include:

- Footway 'build outs' in a different material to the main footway look poor. 'Build outs' are generally not recommended see under para. 4.6 below.
- Crossover materials not related to the footway detract from the streetscape
- Coloured materials are generally out of place for use as paving in this Borough
- Too many materials in one place creating poor streetscape
- Poor utilities work
- Tactile paving and other materials at odd angles to the main paving
- Opportunities not taken to use higher quality materials
- Poor attention to detail by access covers, posts and other obstructions
- Access related problems such as uneven materials and upstands on crossovers.



Build out in different material



Too many materials

### 4.3 GUIDELINES

In urban locations, where possible, use traditionally sized slabs. Where funding allows, York stone is recommended for key areas. For other areas reinforced slabs should be considered where there is a danger of vehicle damage. This will reduce the need for bollards and other obstructions. Floorscape surface materials should be suited to purpose.

### 4.4 CONSERVATION

Historic paving elements should always be retained within schemes where possible. Examples are areas of granite setts/kerbs and York stone paving/kerbs.



Historic granite paving



Historic York stone and brick paving



York stone paving

### 4.5 FOOTWAY SURFACING

The main materials in use are summarised below:

### York stone

The best choice for key schemes used in urban areas, such as in Central Richmond to replace red brick. Colour of York stone according to location- it can reinforce local distinctiveness. Grey and light buff tones are used.

**Sawn finish** – rather than riven paving is to be used. Reclaimed York stone paving is appropriate in certain historic locations (i.e. Richmond Green).

**Stone setts** – these are useful for detailing in association with areas of York stone, and they may also be used for smaller scale areas of paving.

A sealant is used to reduce the impact of staining from chewing gum etc.

Detail in laying is very important:

- Gaps between slabs should be within 10mm
- Small individual pieces of paving are to be avoided
- Recessed access covers to utilities should be provided and the paving taken as close to the cover as possible. Wide areas of mortar should be avoided; any mortar should match the colour of the paving. Angled cutting by access covers may look neater than straight cutting.



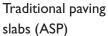
York stone setts





Traffic islands (before and after)







Reuse paving slabs

### **Granite setts and kerbs**

- Good for loading bays, crossovers etc.
- Traffic islands use granite kerbs wherever possible and 100mm³ granite setts, rather than tarmac or concrete blocks
- Pub hatches smooth granite kerbs are easier to walk over
- Granite kerbs and drainage channels these should always be retained where they already exist
- Granite kerbs should always be used in conservation areas. Elsewhere their use should be considered
- Dropped kerbs should provide a smooth join with no upstand.

### Traditional paving slabs (ASP)

This is preferred to other forms of non-natural paving especially in conservation areas. Consideration should be given to reinforced slabs where vehicle overriding is anticipated. Slab paving is normally laid with joints that are pointed up. The joints should be within 13mm. The Council is currently experimenting with butt jointed reinforced slabs. It is preferable that these are rectangular in shape in order to replicate the traditional pattern of paving flags.

In some situations it may be possible to relay older slabs that tend to have a more appealing surface texture. These should be grouped in areas rather than mixed with new slabs as the sizes may be slightly different.

### Small element paving slabs

The scale of these slabs does not work well on wide footways but can be used on narrower footways where black/sand carpet finishes might otherwise be used. Colour should always be grey. Half slabs rather than concrete blocks should be used to achieve the bonding pattern.

### Concrete blocks/bricks

Red brick paving is discontinued except for localised maintenance of existing paving. Coloured concrete blocks are not to be used. Grey concrete blocks are generally only used for detail areas in association with small element paving. They are normally not to be used for footway build outs.

### **Gravel**

Sealed gravel – This has worked well as a towpath material. It is laid on a bituminous surface and has been used to upgrade existing bituminous footways. Care should be taken to ensure that the type of sealed gravel chosen is appropriate for its use; some are not suitable for vehicle movements and some can give too urban an appearance in some settings. Suitability for disabled access should be checked.

Heritage and Natratex finishes have both been used successfully but tend to give a different appearance to one another. Heritage paving has been used to upgrade footways in Ham and Petersham. Natratex has been used on verges and around tree pits where other paving has become disturbed.

**Breedon gravel** —This surfacing provides a less urban character and is particularly appropriate in open areas. The material has been used for paths across Richmond Green. It is also used as a surfacing material for tree pits. Maintenance implications needs to be born in mind.



Small element paving slabs



Sealed gravel



Breedon gravel



Cycle and footpath in Natratex finish



Grey tactile paving/Charcoal tactile paving



York stone tactile paving





Buff tactile paving

Avoid odd angles



Avoid long tails on tactile paving

### Bituminous/sand carpet

This type of surfacing is comparatively low cost and can subsequently be upgraded to a sealed gravel surface, as has been done in Ham and Petersham.

Sand carpet includes crushed gravel rolled into the surface. Reinstatement works can make the surface look untidy.

### Tactile paving

This is a difficult element to incorporate into the street scene. There are two particular problems in relation to the street scene: colour and orientation.

It is proposed that tactiles should normally be in a grey finish, or in York stone when set in an area of stone paving. Charcoal tactiles may be used where there are particular safety implications.

Red tactiles are particularly ugly, and coloured ones generally have a negative visual effect. An exception is the use of buff tactile paving in areas of sealed gravel footway as has been used in Ham and Petersham.

'Tails' should be limited in length as this is another disruptive element. No concrete block surround should be used when installing tactile paving. Inset utility covers must be used where appropriate.

The orientation of the tactile paving to the main paving is critical. Odd angles are very detrimental to the street scene and should be avoided. In new schemes it may be necessary to alter kerb lines to avoid this problem. This needs to be addressed at the initial design stage, not on site with the slabs ready to be installed.

There is a need to avoid the confusing use of tactile/corduroy paving, and keep layouts simple.



Obtrusive traffic control utility boxes



Recessed cover in sealed gravel



Neatly finished manhole cover

## **Utility boxes**

These should be sited unobtrusively at the back of the footway, and painted in a dark colour to relate to adjoining street furniture. 'Jumbo' boxes are to be avoided.

## Traffic light control boxes

The possibility of locating electrical gear in a less obtrusive way is being investigated. Where this is not possible they should be sited as unobtrusively as possible, related to other items of street furniture if appropriate, and painted to match the surrounding colour of street furniture. Use only one box where possible to avoid clutter. Graffiti resistant paint should be considered. 'Artex' finishes are not to be used, but raised panels will reduce the risk of flyposting.

### **Access covers**

Recessed covers should be provided in areas of York stone paving and in any other key paving scheme in town or local centres. Avoid slippery material. Covers should as far as possible be aligned with paving. Angle cutting of slab paving around covers may produce a neater appearance.

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Sealed gravel



Light grey anti-skid surfacing



Pedestrian refuge

## 4.6 CARRIAGEWAY SURFACING

The colour of the carriageway is normally black and is surfaced in stone mastic asphalt (SMA), hot rolled asphalt or dense bitumen macadam. SMA is preferred and this provides a quieter surface. Consideration can be given to a sealed gravel type finish in certain locations. This has been used on Twickenham riverside.

There is a requirement to provide anti-skid surfacing at controlled crossings and traffic signals. It is also provided at locations with a record of skidding accidents. Grey bauxite finish is generally preferred as it has a softer appearance than buff finish. There may be exceptions in less urban areas.

## Pedestrian refuges/traffic islands

- Traffic islands should be paved in 100mm³ granite setts
- Walking surface paving should be kept as simple as possible, and related to adjoining areas of paving
- Ends of islands granite setts
- Central island columns are not normally to be installed
- Other issues related to pedestrian refuges are considered under Railings 5.4, Signage 6.3.

### **Speed reduction measures**

20mph zones have a primary aim of improving safety. 'Gateway' features and furniture should relate to the area in which they are situated. Painted timber has been used in Petersham. Furniture and markings should be minimised. 'Virtual' speed humps should not be used. Footway 'build outs' are generally not to be used unless there is a strong safety case or in connection with retaining mature trees. They are particularly intrusive where they result in paving at a different angle to the main footway paving.

### Carriageway marking

The great array of road markings in various colours has a highly negative impact on the street scene. The following measures are proposed to help alleviate this situation:

**Yellow lines** – 50mm wide deep cream coloured lines to be used in all situations, regardless of existing width and colour. This colour should also be used for any loading markings on kerbs. Avoid deep indentations which can cause cycles to swerve.

**Bus lanes** – Coloured bus lanes should be in stone mastic asphalt (SMA) to avoid the surface wearing off and provide a softer colour contrast to other materials. There may be exceptional situations where a coloured finish should not be used.



20 mph zone in Ham and Petersham



Narrow yellow lines





Bus lane in red SMA

### **Cycle lanes**

These should not have a coloured surface, unless this is required for safety purposes, in which case this should be in a SMA finish to ensure durability and avoid strident contrasts. Neutral materials should be used where cycle lanes form a part of the footway to avoid detracting from the street scene.

### Hatching and other road markings

Subject to safety requirements, hatch road markings should be reduced to a minimum. They are often used extensively around pedestrian refuges and similar and can be so complex that they are unintelligible to road users as well as being highly disruptive to the streetscape. If necessary a 'relaxation' should be sought. A raised area of granite setts and kerbs may provide a more attractive alternative to diagonal lines.

- Yellow hatch markings should only be used where this is essential
- 'Dragon's teeth' hatching (triangular warning markings) are also ugly and the need for them should be minimised as much as possible
- Hatch markings around corners at the ends of roads can be very ugly and should only be used in exceptional circumstances. Other measures should be sought to prevent parking here.

### Crossovers

A crossover policy has been agreed. Normally crossovers should be constructed in the same materials as the main footway. Some areas of the Borough are characterised by granite crossovers (granite setts with bands of granite kerbs). The use of such crossovers will be encouraged in such areas and more generally in conservation areas.



Over dominant hatch road markings



Traditional granite crossover



Recent granite crossover