

Stop the rock

In the first of a new series of practical street design notes, Kensington & Chelsea explains its specification for laying large York stone slabs where vehicles overrun.

It is said that places which are clean and tidy are less likely to encourage crime. Places which are also free of street clutter encourage you to look around with a more discerning eye and appreciate the locality for what it is, that is, its 'special characteristics'. Less clutter, even to the extent of producing clean unobtrusively patterned and undamaged paving slabs, can help enhance the local distinctiveness of an area.

Large concrete slabs, that is those up to 600mm x 900mm, are a good quality surface where the cost of natural stone cannot be justified. The reason that large slabs of any material are considered to be unsuitable, though, is that they are liable to be broken by overrunning vehicles.

Ron Wright, highways manager at the Royal Borough of Kensington & Chelsea has a working lifetime's experience in highway maintenance. As the third generation in his family to serve the Royal borough he has a keen interest in the long term quality of its streetscape. 'The council considers that high standards of footway materials, workmanship and maintenance are really important,' Wright explains. 'Natural York stone slabs in sizes up to 600mm x 900mm are our normally specified footway material. They are easily obtained and, when well laid, give a clean, uncluttered and traditional appearance that sets off the fine buildings in the borough.'

The most critical problems for all slabs are breakage and rocking, which causes trip hazards. The most frequent breakages are caused by vehicles overrunning. Once the slabs are broken the under bed gets washed away and the broken pieces rock about. For the places where moderate overrunning by vehicles cannot be avoided, the council has developed a robust specification. Under the slabs there is a 100mm thick concrete base, to specification C25P. This concrete is carefully compacted and allowed to cure.

The slabs themselves are then laid on a 25mm-thick lime mortar bed. Wright says this thickness allows the slabs to be accurately levelled. In all the borough's streets the council has to expect the slabs to be lifted for access to underground services. The lime mortar bed does not adhere to the slabs as strongly as cement mortar and so the slabs can be lifted more easily and without being damaged. In fact, the lime mortar can be cleaned off.

The gaps between the slabs are 10mm to 12mm and are pointed. To make sure that there are no mortar splashes left on the slabs, the council uses a thin metal template. The 10mm to 12mm gap is wide enough to allow the pointing to be cut out by a machine in order to lift the slabs.

In places where a tactile surface is needed, such as at zebra crossings, the council often uses a York stone slab of the same colour for the surrounding slabs. This gives a degree of warning and protection for people with visual impairment while maintaining a clean and neat appearance to the footway.

Before the council used York stone generally, these same thorough techniques were applied when large concrete slabs were laid (see diagram). As Wright himself adds: 'We insist that these workmanship procedures are adopted by including photographs or finished work and precise methods of operation in specifications.'



Cluttered, poorly maintained streets (above) contrast sharply with example in Kensington & Chelsea (left). Here, well-laid slabs give a clean and traditional finish to the footway

