apse press and media

Kerbing enthusiasm

Phil Brennan describes how recycled plastic has offered two APSE member authorities in the North East of England a sustainable kerbing solution

As green policies become more prevalent, highways engineers are acutely aware of the need to balance the books as well as finding a practicable solution for each particular situation.

Sustainability is already tracked by national performance indicators NI185 and NI186 and the new Carbon Reduction Commitment (CRC) obligatory emissions trading scheme, covering a central part of the UK's strategy to deliver the emission reduction targets set in the Climate Change Act 2008, will place increasing onus upon local authorities as of April 2010. Two APSE member councils in the North East – Gateshead MBC and Newastle City Council – have used kerbing made from composite waste plastic otherwise destined for landfill as part of their efforts to address sustainability during highways projects. In both cases the professionals responsible report that this has offered a cost-effective as well as a practical solution.

Envriokerb was used by Gateshead MBC for its major road widening scheme on the A184 Felling Bypass, which required some 2,200 meters of combined kerb and drainage systems. The systems come in 500mm long one-piece units with a range of components; including droppers, centre stones, inspection and gully units and radius kerbs. The product complies with ISO14001 and conforms to EN1433 linear drainage systems and can be used on motorways, trunk roads, car parks and urban areas. The authority specified 500 x 480 depth drainage kerbs with half battered, splay and transition profiles for this job.

The authority's highways manager, Brian Jones, says the reasons Envirokerb was chosen were because it provided combined kerbing and drainage while also being an environmentally sustainable option.
It is also important that such a solution does not cost any more than conventional concrete, he says: 'As the plastic kerbing is up to 70% lighter than concrete, it can be handled manually while conforming to health and safety regulations. In terms of costs, this means expensive machinery, which usually still requires considerable human effort to align, is not required. Because it was a narrow strip widening, which was easier to lay manually, the cost broke even. The recycled plastic kerbing has also proved resilient; eighteen months on it is doing very well on this busy stretch of A road which experiences high volumes of heavy vehicles.'

Newcastle City Council used a recycled plastic combined kerb and drainage system in a road widening project adjacent to the Civic Centre. This high profile city centre location is always busy with vehicles and pedestrians and with the road being relatively flat it was essential to eliminate the possibility of standing water on the carriageway.

Envirokerb is available in 305mm and 480mm high units to a number of different profiles including slotted dropped kerbs for use at pedestrian crossings.
Approximately 200m of the 305mm units were used for this project.
They were chosen for their environmental credentials and because of the hydraulic properties, which drain water quickly from the carriageway through the inlets in the kerb face.

Peter White, Project Engineer at Newcastle City Council's Environment and Regeneration Directorate, says: 'This combined kerb and drain makes a sensible alternative in such situations. You can't distinguish them from concrete.'

He adds: 'We put recycling and sustainability high on our agenda, but we are spending public money so we also have to be aware of cost. While it may be difficult to beat the cost of standard mass produced pre-cast concrete kerbs, for drainage kerbs the recycled plastic are generally competitive on price.'

'We could buy them for the same price as the concrete equivalent and, as they are so much lighter, there is the advantage that they can be manually handled. This

kept down the plant costs and in this particular location, space was restricted within the traffic management and access would have been difficult for mechanical lifting. The kerbing has been in place for nearly three years and has proved very resilient.'

Faced with the two massive challenges of climate change and the spending squeeze, highways engineers need to ensure products used are as environmentally friendly as possible and also offer maximum value for money from the taxpayers' pound. APSE's seminar *Front line services, climate change and the carbon reduction commitment* in Manchester on 16th July will look at operational service delivery aspects of climate change and the new carbon reduction requirements and what departments such as highways can do to find practical solutions.

Phil Brennan is principal advisor at the Association for Public Service Excellence (APSE). For further information email: pbrennan@apse.org.uk