

Hampshire County Council Partners in Innovation (PII)

Demonstration Project 5

A3 Bus Priority Corridor

Background

This series of leaflets describes a number of projects demonstrating the technical, environmental and cost benefits that arise from the use of recycled and secondary aggregates in highway works in Hampshire. Working in partnership together, Hampshire County Council, Raynesway Construction Southern and Foster Yeoman adopted sustainable policies for highway maintenance works. A Partners in Innovation project, carried out by TRL and funded by the Department of Trade and Industry, enabled these practices to be captured in a number of demonstration projects. The material diverted from landfill as a result of the partnership is assisting Hampshire County Council with their Public Service Agreement (PSA) target to divert an additional 40,000 tonnes of material from landfill per annum by 2005.



Activity:	Construction of A3 bus priority corridor
Location:	Portsmouth to Clanfield
Application:	General fill, unbound sub-base, capping, lower trench fill
Material:	Recycled asphalt (road planings), recycled concrete aggregate (crushed kerbs), subsoil
Amount used:	3,900 tonnes
Date:	April 2002 to May 2005 (project ongoing, expected completion date April 2007)
Client:	Hampshire County Council
Contractor:	Dyer and Butler
Designer:	Hampshire County Council Engineering Consultancy; Atkins
Specification:	Specification for Highway Works

Summary

The A3 bus priority corridor project was included in Hampshire County Council's Local Transport Plan 2001-06. The project is managed under a Local Authority and bus company partnership and is designed to provide residents with the choice of a reliable, convenient and safe service as an alternative to using a car.

The works affect a 12 km stretch of road from Portsdown Hill to Clanfield and involve road widening and carriageway and footway reconditioning. Some of the existing wide verges were reallocated for the bus lane. At the project inception point, Hampshire County Council adopted a preference towards using recycled materials. The contractor therefore used the road planings generated by the works in the capping layer of the widened road, in the sub base for the footpaths and as trench fill material. The existing kerbs were crushed using a low noise, non-invasive machine and used as a gravel type material to form the sub base of the resurfaced footways. Topsoil and subsoil were also recovered and reused, with any surplus being diverted to other Dyer and Butler works. A long-lived surface dressing was applied to minimise the disruption which would otherwise be caused by resurfacing works in the future.

'Material Use Sheets' were trialled in this project. The information gathered allows linking of surplus materials from one site to another and reduces the need for primary aggregate. The project is over half way through and shown to be embracing the goals of sustainable development. New practices are being developed, which will be used in other HCC projects to promote recycling and best practice.

Technical Benefits

- The reuse of materials generated in-situ minimised the need to import primary aggregates and reduced haulage costs.
- The road planings were used successfully in capping and sub base layers and as trench fill material
- Introduction of Material Use Sheets extended the possibilities of recycling at other sites within the county



Environmental Benefits

- Reduction in use of primary aggregates and waste disposed to landfill.
- Reduction in noise by use of low noise crusher for the concrete kerbs
- Use of more durable surfacing reduces future disruption and gives better whole life cost for the project

Benefits to Local Authorities

The use of recycled aggregates benefited Hampshire County Council in two ways. It contributed to targets under the Public Service Agreement for diversion of materials from landfill (3,900 tonnes to date) and also led to cost savings (£87,000) compared to conventional methods. Whole life costing enabled the use of more durable surfacing and material use sheets enabled surplus materials to be used elsewhere in the county. Recycling had direct tangible benefits for the local authority as well as broader environmental and technical benefits.