

# Hampshire County Council Partners in Innovation (PII)

## Demonstration Project 1

### Embankment Stabilisation on A325

#### 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

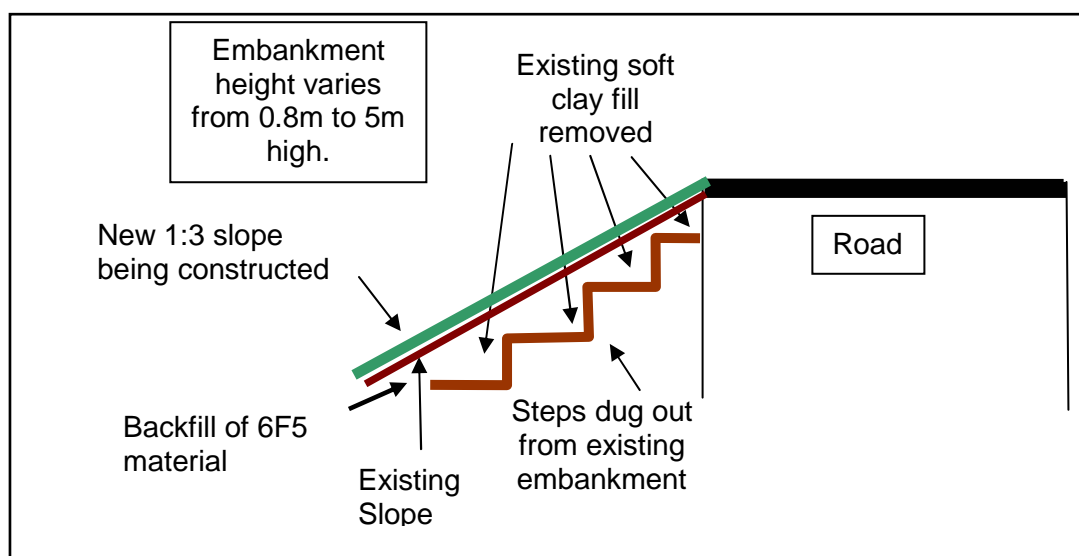


TRL and funded by the Department of Trade and Industry, enabled these practices to be captured in a number of demonstration projects. The material diverted from landfill as a result of the partnership is assisting Hampshire County Council with their Public Service Agreement (PSA) target to divert an additional 40,000 tonnes of material from landfill per annum by 2005.

<b>Activity:</b>	Repair of weak clay embankment on A325
<b>Location:</b>	A325 near Alice Holt, N E Hampshire
<b>Application:</b>	Selected granular fill
<b>Material:</b>	Recycled aggregate
<b>Amount used:</b>	29,000 tonnes
<b>Date:</b>	September 2004 to January 2005
<b>Client:</b>	Hampshire County Council
<b>Contractor:</b>	Raynesway Construction Southern Ltd (main contractor) Wessex Construction Ltd (recycled aggregates) Day Aggregates (recycled aggregates) TJ Aggregates (recycled aggregates)
<b>Designer:</b>	Hampshire County Council
<b>Specification:</b>	Specification for Highway Works

## Summary

Embankment stabilisation was required on the A325 between the junction of the B3006 at Sleaford and north to the Hampshire county boundary at Holt Pond. The work covered a distance of about 1.8km. The embankment was previously made up of poor quality clay. The embankment was dug out in benches and the excavated material was replaced with Class 6F5 selected granular fill (see diagram). Recycled aggregate obtained from processing inert construction and demolition waste was used as the Class 6F5 material. The embankment ranged from 0.8 m to 5.0 m in height and the works required a total of 29,000 tonnes of imported fill. The new embankment was built at a uniform slope of 1:3. The imported fill was supplied by local suppliers Wessex Construction Ltd, Day Aggregates Ltd and TJ Transport from Selborne.



## Technical Benefits

- The Specification called for Class 6F5 selected granular fill, which is normally used as a coarse grained capping layer imported to site. This was to ensure a well graded granular material with a high angle of internal friction was used.
- Recycled aggregates performed as well as primary aggregates.
- Reduced haulage costs compared to equivalent primary aggregates.

## Environmental Benefits

- Reduction in use of primary aggregates and reduced haulage distances.
- Reduction in overall waste being disposed of to landfill within the county.
- Savings in fuel and emissions of CO<sub>2</sub> by using a local supply of recycled aggregates.

## Benefits to Local Authorities

The use of recycled aggregates in this project had double benefits for Hampshire County Council. It contributed to targets under the Public Service Agreement for diversion of materials from landfill and also led to cost savings compared to conventional methods. Recycling had direct tangible benefits for the local authority as well as broader environmental and technical benefits.