

Hampshire County Council Partners in Innovation (PII)

Demonstration Project 2

Recycled Asphalt in Footway works

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:	Footway renewal works
Location:	B3047 at Martyr Worthy
Application:	Cold recycled bitumen bound material with foamed bitumen binder (Foamix®)
Material:	Recycled asphalt
Amount used:	150m ³
Date:	November - December 2004
Client:	Hampshire County Council
Contractor:	Raynesway Construction Southern Ltd (main contractor) Foster Yeoman (cold recycled bitumen bound material)
Specification:	Specification for Highway Works

Summary

Cold recycled bitumen bound material with a foamed bitumen binder (Foamix®) has been used extensively in highway and footway works in Hampshire as it enables the use of recycled asphalt from other projects and saves energy compared to conventional hot asphalt.

This project was undertaken as part of the term maintenance programme. It was trying to push the boundaries towards a new way of using Foamix® in footways. Normally a full surface course would have been placed, but in this case a surface dressing was laid on top of the Foamix® instead. The B3047 at Martyrs Worthy was chosen for its rural location as a suitable test area.

The existing footway surfacing was removed along with any plant/ root damaged/ contaminated sub-base. The footway was overgrown and significant clearing was required prior to work starting. The total length of the footway which was reconstructed was 711m. The footway was constructed to allow for a 0.08m Foamix® layer. Foamix® was also used to repair any areas where damaged sub-base had been removed. The total quantity of Foamix® used on site was 100m³ for the base/binder course and 50m³ for repairing the sub-base. A surface dressing was laid on top and the use of Foamix® in this new application was successful.

Technical benefits

- The surface dressing was laid straight on top of the Foamix®, avoiding having to lay a full surface course
- Foamix® was used both for the base/binder course and for repairing the sub-base, avoiding the need to bring different materials to site
- Foamix® was easy to handle and available from the nearby depot at Micheldever



Environmental benefits

- Reuses asphalt from highway works elsewhere in Hampshire in new asphalt
- Less energy required for cold mix material, saving in CO₂ emissions
- Saving in use of primary 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. It also demonstrated a new application for Foamix®, which can now be used elsewhere in the county. Recycling had direct tangible benefits for the local authority as well as broader environmental and technical benefits.