Sustainable Road Maintenance

A ScotAsh product case study

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2005

QUEEN'S AWARD FOR ENTERPRISE WINNER 2005

Green roads provide economic solutions

ScotAsh and Proficio Technology Ltd have joined forces to offer bespoke, engineered solutions for the sustainable maintenance of roadways.

The conventional approach to road maintenance incurs a huge environmental burden – the disposal of excavation spoil to landfill, the use of primary aggregates and the fuel consumption, emissions and road safety impacts of using heavy vehicles to transport materials.

Now, custom blending techniques from powder technologists at ScotAsh and the roadway engineering expertise of Proficio Technology have combined to devise performance-based specifications that make recycled roadways an economic and environmentally sound alternative.

The projects featured in this case study both resulted in significant cost savings over the conventional approach to road maintenance.

Finsbury Park

Finsbury Rark, opened in 1869, is a grade 2-listed park in the London Borough of Haringey. The historic carriage drive was recently repaired as part of a major £5m restoration project.

The granular surfaced, asphalt road was starting to break down in areas, due to age. Instead of digging the road out, removing the material to landfill and building a brand new road, a value engineering solution was developed to conduct in-situ stabilisation over a 1.5km stretch.

The damaged road was excavated and the arising were milled in situ using a Wirtjen machine. This mixture was then injected with RSA/PT, a pozzolanic and hydraulic material custom blended by ScotAsh.

Work under way at Finsbury Park (main picture) and the remediation project at Rainham Landfill site, above.

Following the addition of water and rotovation, the mixture was compacted back down, giving a good result with 100% recycled materials – and no heavy lorry movements through the park.

Rainham Landfill Site

A similar project was conducted at Rainham Landfill site in Essex, where the main approach road had come to the end of its life.

Reinstatement of the road involved selecting suitable waste aggregates from the landfill site, milling them and mixing with a custom blended ScotAsh RSA/PT power to ensure the repaired roadway would perform well despite the impact from heavy trucks.

This is an example of how ScotAsh products can be used to improve the quality and performance of low -grade aggregates in purpose engineered projects.

The new roadway used more than 60% recycled materials and was delivered at a lower cost and with considerably less environmental impact than a conventional solution.

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