

CASE STUDY

REGEN - In-Situ Recycling

Re-use of Tar Bound arisings provides huge savings for Cumbria

Scheme: Prior Hall Lane, Ireby, Wigton
Rigwood to Binsey, Bewaldeth, Cockermouth
Tallentire Hill, Tallentire, Cockermouth

Principal Client: Cumbria County Council

Date: 2020-22

Area: 11,716 m²

In-Situ Process: REGEN - In-Situ Recycling

CO₂ Saving: 178 tonnes

Tar: Hazardous Tar Bound Planings encapsulated within HBM: 2902 tonnes



Prior Hall Lane



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The REGEN schemes for Cumbria in the past couple of years have been not only delivered during the challenging times of Covid but have also provided an opportunity for huge Commercial and Environmental efficiencies.

During these programmes of work, 4 sites were identified for reconstruction utilising SPL's REGEN Process. This involves the in-situ recycling of the carriageway, whereby specialist cold treatment recyclers pulverise and re-engineer existing road materials by adding cementitious binders to create a platform for Surface Dressing.

Evolved rural roads tend to have poor foundations and often insufficient depths of granular material for SPL's recycling process. On occasion imported material can make up this lack of volume and contribute to the re-construction process. The imported material is mixed with the existing carriageway to form part of the Hydraulically Bound Layer.

For Cumbria, having identified the presence of tar within the roads to be recycled, it was possible (and acceptable) to introduce Tar Bound materials planed out of traditionally repaired roads elsewhere in the county.

CASE STUDY

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By adding the tar bound material to the proposed site for recycling it meant the receiving road benefitted from the additional granular material from an engineering stand, the hazardous material could be put safely to good use encapsulated within the HBM and the REGEN sites were not only being rejuvenated in terms of shape and condition but also provided great commercial advantage.

Environmentally, the client has re-used assets they already own in the form of failed roads and commercially they have avoided huge disposal costs of contaminated planings.

Faced with potential disposal costs of up to £160 per tonne, these four Regen schemes were able to safely encapsulate just under 3000 tonnes of tar bound arisings from elsewhere in the county saving the authority a little under £500,000 in total.

Whilst there are haulage costs associated with moving this material to the recycling sites, the choice to embrace “In-Situ Recycling” has more than offset these movements.

CASE STUDY

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3,700 tonnes of material were recycled over these schemes which would have potentially generated 185 lorry journeys from and to the site. These movements not only increase the heavy loads and stresses on our rural network, often already overworked, but also add to the disruption faced by both commercial and private road users.

SPL and our clients are mindful of reducing disruption wherever possible and deliver high outputs, recycling a minimum of 2000 m² per shift, which can then be Surface Dressed as we go using our self-delivered 10 & 6mm Double Dressing; allowing access to residents, commercial units and farms within a few hours of completion. Building smarter and early contractor involvement allows for planning and strategies around materials and processes which not only benefit our clients' budgets but also those living within the constituency.

