TARMAC
A CRH COMPANY

Client:	Sheffield City Council
Contractor:	Tarmac, Principal contractor Amey
Location type:	Urban roads
Completion:	2019 and on going

ULTIFOAM

Proven performance

Recycle contaminated (Tar) road arisings Ultifoam produces Cold Recycled Bound Material to The Specification for Highway Works Clause 948

The Challenge

Sheffield City Council wanted a sustainable solution to contaminated (Tar) road arisings produced during highways maintenance. Contaminated material needed to be securely removed and transported for processing.

Our solution

A mobile plant was established in a depot at Armthorpe Doncaster which is approximately 20 miles East of Sheffield. The plant equipment includes crushing, screening, bitumen and lime/cement storage and cold mixing plant.

Contaminated materials produced by the replacement and maintenance of roads are sent to the site for investigation to determine material constituents.

The road arisings are transported by registered waste carriers to the Armthorpe facility for recycling into products that meet the EA requirements in Regulatory Position Statement 075 and the Armthorpe facility can accept up to 2000 tonnes per day from the Sheffield contract.

Results and Benefits

ULTIFOAM closed-loop recycling technology allows up to 95% of all road arisings to be reused, including tar bound materials.

Using UTLIFOAM has many advantages on the contract.

Fewer lorry movements - establishing the plant within one mile of the contract resulted in less traffic movements. Lorries delivering planings to the plant also took a return load of ULTIFOAM to site.

Complete control - the laying operation had complete control of deliveries, even break times were coordinated between the site and mixing plant.

Ambient Material - because the material is mixed cold overlaying the material can be carried out immediately after final compaction.

Energy Savings - In addition to its energy saving and recycling benefits ULTIFOAM is also an Environment Agency approved method for recycling tar-contaminated planings.

Approved by The Highways Agency to help meet sustainability and recycling targets.

In situ Density – There is an approximate 8% saving in asphalt usage over conventional.

Additional information

Planing arisings from the contract are transported into the depot where they are inspected and stocked. They are then loaded on to a three-way screen which produces a 0-10mm, 10-20mm/10-14mm and oversize product. The oversize is fed direct into an impact crusher which reduces the aggregate to a 0-20mm which is then fed back onto the three-way screen. The screened planings plus the addition of PFA (pulverised fuel ash) imported from a local power station forms the aggregate for ULTIFOAM. The aggregate is then used via a controlled feeding system and mixed with foam bitumen, cement and water to produce SHW clause 948 product.

Recycled materials produced and reused on the scheme

Several variations of ULTIFOAM were produced depending on the application. These included

20mm ULTIFOAM QVE for use in highway works with traffic loading up to 80MSA (equivalent to DBM50/HDM conventional asphalt).

20mm and 14mm ULTIFOAM SVE, this is a storage grade material which is generally used for footpaths, cycle tracks and unclassified roads.

For more information contact email@tarmac.com

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