

CASE STUDY

Residential Estate Road

‘Over 80 tonnes Tar encapsulated on site’

Scheme: Glamis Gardens Peterborough
Authority: Peterborough City Council
Client: Skanska
Date: July 2017
In-Situ Process: 240mm HBM
Surface: 50mm Asphalt



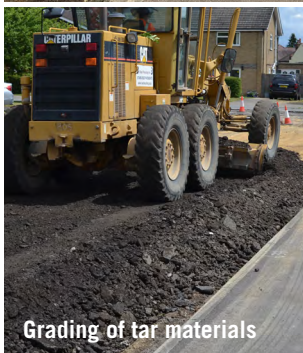
Upper coal tar layer planed off and held in lorries on site



Deep planing of ‘clean’



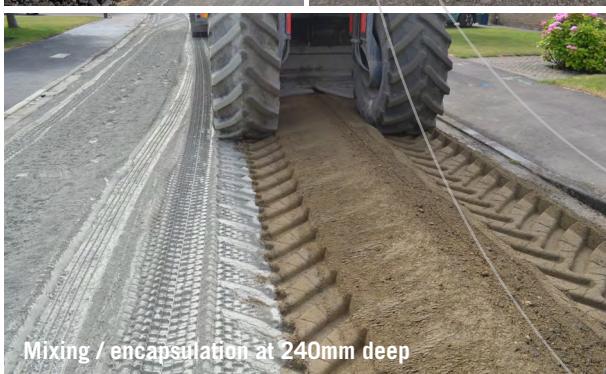
Return of tar bound layer



Grading of tar materials



Checking powder content



Mixing / encapsulation at 240mm deep

Development and expansion plans at The Jack Hunt School, located in the residential area of Netherton in Peterborough, had lead local residents to be concerned that the development will adversely impact on their neighbourhood and their own properties. It was of utmost importance therefore to keep levels of disruption around the pre-construction works to a minimum.

Glamis Gardens (a quiet cul-de-sac) is to provide access to the development site during construction through a gated entrance onto the East side of the playing fields to the south of the school itself.

In order to minimise the impact of construction traffic, the carriageway itself required structural enhancement and surfacing.

Initially a full reconstruction of the carriageway was reviewed as a potential solution and residents were advised that a 3 week programme of works restricting access was likely.

In addition to this lengthy programme, hazardous coal tar had been identified within the upper layers of the road which would mean expensive disposal arrangements of the materials leaving the site.

In selecting In Situ Recycling for the scheme the programme was reduced to 1 week, Tar arisings were kept on site and encapsulated within the new structural Hydraulically Bound Material and lorry and plant movements were dramatically reduced for surrounding residents.



Mixing / encapsulation and compaction



Grading and compaction



Finished recycled layer after application of emulsion and bituminous grit



Asphalt finishing surface



SPL's initial works involved planing out 70mm the existing contaminated asphalt and setting aside for recycling within the carriageway. A further 50mm of the clean aggregate from the lower layers was then removed and carted away for storage and re-use elsewhere. This 70mm material removal allowed for the 50mm depth of new asphalt surfacing to meet threshold and kerb levels as well as any bulking during the recycling process.

Despite the works being carried out under a road closure, the residents of Glamis Gardens were left with full and safe vehicular and pedestrian access to their properties before the start and at the end of each shift. In addition to this access was accommodated during the works by pedestrian and vehicle marshalling.

In line with QA procedure SPL test the blended cement spread rate to ensure the content was 4% by volume and arranged for UKAS Accredited Technician to take samples of the recycled HBM in order laboratory test and verify conformance with the design intent in terms of depth, moisture content and stiffness.

On completion of the recycling, the works were left ready for some ironwork adjustment in preparation for the surfacing on the fourth and final day.



SKANSKA

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