

Project Profile - Civil Engineering & Infrastructure



PROJECT

Hams Hall Rail Freight Terminal,
Birmingham

SUMMARY

Rail freight handling facility refurbishment, including concrete reinstatement of pavements, drainage channels and level crossings

PRODUCTS

Fastfill

CLIENT

Associated British Ports

CONSULTING ENGINEERS/SPECIFIER

Morgan Tucker

CONTRACTOR

Pikehaven Ltd

BACKGROUND ►

Hams Hall is the UK's busiest inland rail freight container terminal and operational capacity has trebled in recent years. Located eight miles outside Birmingham, it is based on a 27 acre site adjacent to the Nuneaton-to-Birmingham railway line and handles sea traffic to and from ports including Southampton, Tilbury and Felixstowe, as well as traffic via the Channel Tunnel. Hams Hall currently handles over 100,000 sea freight containers each year by rail.

Concrete repairs were needed on pavements, drainage channels and level crossings as over time, the concrete had deteriorated as a result of abrasion, impact damage, fuel leakage and other factors. The terminal is used for container lifting and storage, locomotive refuelling, shunting and wagon stabling, so the concrete deck needs to be able to be exceptionally hard-wearing. As the rail freight terminal is constantly busy during the working week, repairs needed to be carried out over a single weekend so rapid strength development was essential.

THE SOLUTION ►

Fastfill, a rapid setting, single component Portland-cement based, Class R4 structural mortar, was specified for the reinstatement of the concrete. Designed for the repair of areas which cannot be taken out of service for long periods, or in locations subjected to heavy wear such as platforms, decks, floors and footpaths, it can be applied up to 100mm in a single application or for full section repairs up to 300mm when bulked out with sand or aggregate. An application of just 7.5mm of **Fastfill** provides the same level of waterproofing as 1000mm of typical concrete. In this case, the main repairs were planned out to 40mm and reinstated with **Fastfill** and in some areas, the concrete was completely removed and bulked out **Fastfill** was applied at a depth of 200mm.

It rapidly develops strength, allowing foot traffic within 45 minutes and forklift traffic within two hours, ultimately achieving a compressive strength of 60MPa within 28 days. With no need for substrate or inter-layer priming, it is water-based and non-toxic, presenting no hazards during application. **Fastfill** will cure normally even in very cold weather conditions at temperatures as low as -10°C and it is both CE marked in accordance with BS EN 1504 and backed by British Board of Agrément (BBA) approval.

In total, over 12 tonnes of **Fastfill** was applied over a single weekend.



FM 41091
EMS 597350
OHS 597351

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