ADFIL
Construction Fibres

Port of Felixstowe
Transport Road

CASE STUDY

Felixstowe United Kingdom

With thousands of vehicle movements per day on the port roads with heavy cargo the original black paving system became unstable creating an uneven surface and the blocks being moved out of place. Using an Durus Macro fibre concrete solutions ensured speed of construction and a longer service life on the road without fear of corrosion to the reinforcement.

Project Owner

Hutchison Port Holdings

Contractor

Freedom Group

Product Used

Durus EasyFinish 5kg m3

Volume of concrete

1000m3

Challenge

Due to the high volume traffic both on land and on the port side this project needed to be completed with the minimal amout of disruption. At the same time as the port functionng.

The appointed contractor, Freedom Group asked ADFIL to provide an equivalent solution using DURUS synthetic macro to allow them to minimise construction time and cost, whilst ensuring service life and durability of the heavy trafficed road.

Solution

- A professionally indemnified synthetic fibre solution, using DURUS EasyFinish as provided by ADFIL Design Engineers.
- The addition of fibre improves the durability of the concrete and also provides protection against heavy surface wear.
- The solution was accepted by the Client and Contractor.
- The concrete supplier was given Technical Support to ensure the mix design was correct.
- Site support was also given during installation.

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By eliminating steel mesh, large areas can be poured and finished, with saw cut contraction joints being made the following day.

Without the need for handling, cutting and fixing of steel mesh, construction time is vastly reduced and associated health & safety hazards elliminated.

Benefits of the solution

The Contractor was able to show a significant reduction in construction time by eliminating the need for steel placement and fixing in the construction schedule. This also presented an significant overall cost saving due to reduced man hours and spiralling costs of steel mesh. A reduction in the port function was also a major positive to using fibres on this project.

The use of ADFIL DURUS synthetic macro fibres to replace conventional steel mesh reinforcement give an embedded carbon saving of around 60%, allowing the project to improve its sustainability credentials.*

*Reference DURUS EasyFinish macro synthetic fibre Environmental Product Declaration (EPD)

The new road surface will ensure better transportation of goods.

Installation benefits

The concrete was poured directly into the formwork in larger volumes, with saw cut joints being made the following day.

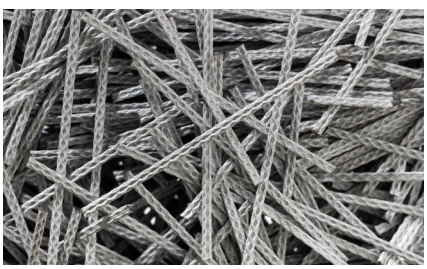
There was no requirement for heavy steel mesh to be handled, cut and placed, which eliminated significant Health & Safety hazards and reduced construction time.

Result

The external concrete works were completed to the satisfaction of the Client.

The use of DURUS synthetic macro fibres has maintained post crack structural performance, while reducing construction time, overall cost and embedded carbon.

Products used



DURUS EasyFinish Synthetic Macro Fibre
Replaces conventional steel mesh reinforcement for post crack residual flexural strength in ground bearing appilications.

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