

Best practice at Farringdon – Eco-reinforcement



Overview

The design requirements for the integrated ticket hall pile caps are such that they will require over 500 tonnes of high tensile reinforcement. To ensure that the most sustainable solution is provided the project is using the new-to-the-market Eco-reinforcement certified rebar that conforms to all NR, British and EU standards for quality and strength.

The reinforcement is forged from almost 95% recycled steel - from disused structural steelwork to sheet steel - it's all melted down and reformed into high tensile reinforcing bar.

The benefit of this solution is that all the scrap steel used in the fabrication is all responsibly sourced. The fabricator can trace exactly where the scrap supply has come from throughout the supply chain. This way the embodied carbon footprint of each single bar of the 500 tonnes can be tracked.



Eco-reinforcement steel used in the ITH



Eco-reinforcement rebar

Benefits

- Eco-reinforcement complies with BRE Framework Standard for the Responsible Sourcing of Construction Products BES 6001: September 2008. This Standard provides criteria against which environmental management, as well as social and economic facets of sustainable construction products, can be assessed and independently certified. It is a third-party certification scheme which assesses and recognises responsibly sourced reinforcing steel products.
- The reinforcing steel utilised in the ITH is provided by a company certified to supply Eco-Reinforcement (Express Reinforcement).
- Eco-Reinforcement provides a holistic approach to managing reinforcing steel products from the point at which constituent materials are harvested/recovered through manufacture and fabrication, through use, re-use and recycling.
- The Eco-Reinforcement Standard provides a certifiable framework for the assessment of responsible sourcing principles, procedures and practices throughout the life of the product and its constituent materials. Amongst other things, this looks at:

- Material traceability through the supply chain
- Environmental and social requirements
- Greenhouse gas emissions
- Resource use
- Waste management
- Water extraction
- Lifecycle assessment (LCA)
- Transport impacts
- Employment and skills
- Local communities

Targets and objectives

Use of eco-reinforcement on the Farringdon project has helped meet our targets and objectives in the following areas:

- CEEQUAL – material use; energy; waste management; transport.
- Sustainable Design and Construction strategy – transport; energy and carbon; waste.
- Farringdon Targets and objectives – restrict carbon emissions; use sustainable materials in a sustainable way.