Kings Crescent Estate

Hackney, London

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Type bygning:

Kunder og utviklere:
Higgins Construction

Arkitekt:
Karakusevic Carson Architects with Henley Halebrown Rorrison Architects

Ingeniører/spesialistplanleggere:
Peter Brett Associates

Byggentreprenør:

Fullføring:
2017

Prosjektlink:
https://www.hackney.gov.uk/kings-crescent-estate

Located in Stoke Newington, the Kings Crescent Estate is a large scale regeneration project consisting of 273 new build properties.

MAX FRANK's BBA certified Egcobox® thermal break connectors, Shearail® punching shear reinforcement and Egcodorn shear dowels were selected for use on this scheme.

The masterplan for the five-year, four-stage regeneration of this estate, was prepared on behalf of the Council and led by Karakusevic Carson Architects. More than 760 homes, comprising of one, two, three and four bedrooms, including shared ownership and private sale, will be available. External refurbishment works will be carried out on a further 101 homes.

Construction of the project is taking place in various blocks, ranging in height from 5-storey to 12-storey, with space for a Community Centre and retail units at ground floor level. The new buildings have been designed to be integrated into their local surroundings using clear and simple designs which change in height in certain locations.

This estate is part of the London Borough of Hackney Council's 2,760-home estate regeneration programme – one of London's largest schemes for building homes for social renting, shared ownership and private sale.

MAX FRANK's Egcobox® thermal break connectors, Shearail® punching shear reinforcement and Egcodorn® shear dowels were selected for the following reasons:

Egcobox® - insulated steps in flat slabs
Balconies are popular with occupiers for the opportunity to enjoy outside living space. However, even with structurally safe solutions, a major issue is heat transition. Egcobox® thermal breaks are a proven and effective means to combat heat loss and minimise the risk of condensation and mould.

The geometry of the floor slab and balconies dictated the type of Egcobox®

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specified. James Peacock, Principal Engineer at Peter Brett Associates advised, "MAX FRANK thermal balcony connectors were used throughout the building and were found to be an efficient solution to the problem of providing insulated steps in the flat slabs". Egcobox® type MM-HV connectors were installed to overcome potential issues relating to changes in depth where steps in the slab were located.

The Site Engineer stated, "Our experience of Max Frank's Egcobox® was positive from start to finish. As a company MAX FRANK were extremely well organised in terms of ordering and transporting the product to site. The Egcobox® itself was of a high quality and our operatives found it simple to install. Our team would be happy to use this product again on any future projects".

Shearail® - a simple and effective method
Shearail® is a pre-fabricated punching shear reinforcement system for flat, piled and post-tensioned slabs. It is designed to increase construction speed, improve build quality and reduce dependency on skilled labour - significantly reducing on-site costs.

James Peacock at Peter Brett Associates commented, "Shearail® was used to provide punching shear reinforcement to the flat slab floor construction. The Shearail® system provided a simple and efficient method of providing the necessary reinforcement, reducing both the installation time and likelihood of mistakes".

Shearail® is the only punching shear system approved by both CARES and BBA and provides many advantages over links - it is quicker to fit, easier to check and a better end anchorage is gained when using shear studs as their full strength is developed straight away.

Egcodorn® and Egcodubel shear load connectors
MAX FRANK's Egcodorn® shear load connectors were used as dowel bars - to transfer shear loads at movement joints - also known as expansion and contraction joints. The Structural Engineer opted to use Egcodorn® as it is extremely effective at transferring these loads, whilst having minimal component thickness plus simple to install which helped the Contractor meet onsite deadlines.

The Egcodorn® sleeved component was nailed to formwork and cast with the initial pour, no drilling of either the concrete or formwork was required. Once the formwork was struck, the dowel component was pushed into the sleeve element and cast-in with the second pour.

MAX FRANK Egcodubel dowels were used on Block DZ1 from the 5th floor to the 9th floor where there was a 200mm thick cantilever balcony present that was in the region of 21 metres long. Typically a 10mm to 20mm expansion joint is provided with a dowel Egcodubel positioned 200mm from the cantilever edge to stop differential movement at the end of the balcony.

Software and design support
The punching shear reinforcement was designed using MAX FRANK's Shearail® software with the assistance of the technical team. The Engineer was pleased with the overall design service received, "the software was simple and intuitive to use and MAX FRANK's technical team were knowledgeable and promptly responded to queries."

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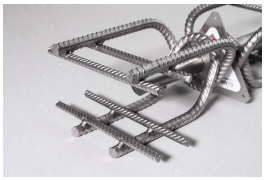
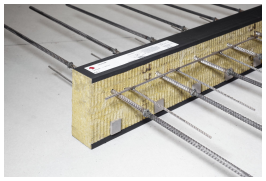
Produkter som brukes:



Egcodorn® skjærkraftdybel



Egcobox® kuldebrobryter

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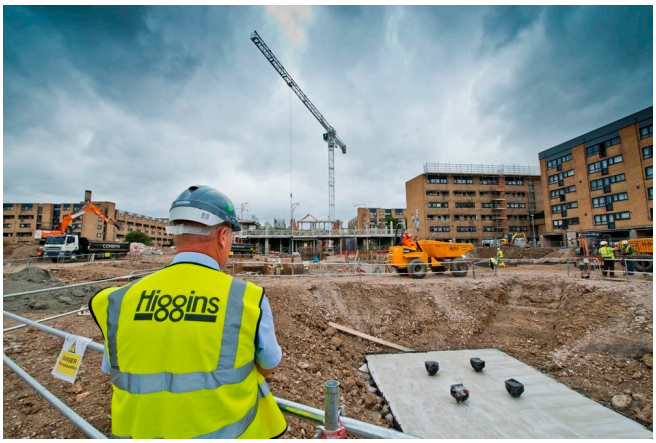

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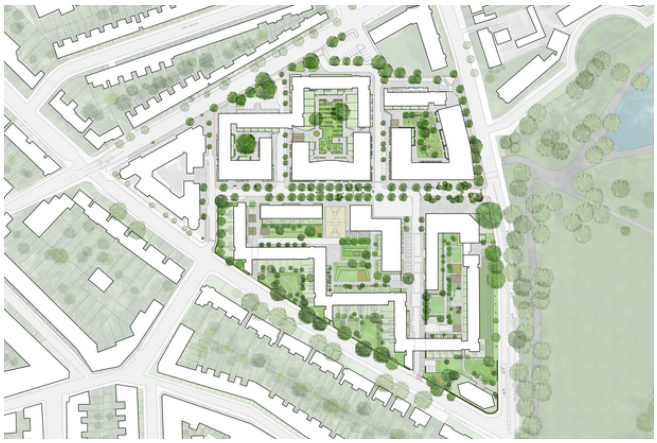

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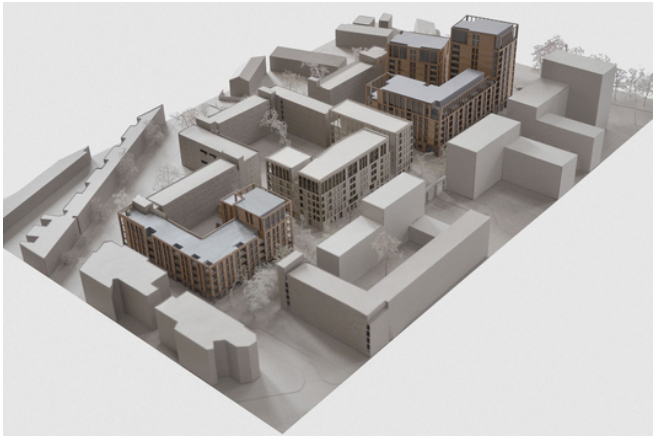

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