PROJECT CASE STUDY

The Cruciform Building UCL

Roof Refurbishment for Grade II Listed Building

BACKGROUND

CLIENT	Cruciform Services Ltd
SECTOR	Healthcare / Heritage
LOCATION	Gower Street, London
SOLUTION	Flat & Pitched Roofing

The Cruciform Building, UCL, London is a Grade II listed building designed by the renowned Victorian architect, Alfred Waterhouse, who also designed the Natural History Museum in South Kensington.

Following receipt of extensive condition reports Inspire were tasked with undertaking major repairs to the listed building roofs which comprised traditional pitched Westmoreland slate coverings along with refurbishment to various gutters, facades, turrets and flat roofs. All works had to be in accordance with heritage requirements in terms of like for like materials.

Health and safety was a major factor in the successful and safe delivery of this project with particular attention paid to PPE and Working at Height Regulations. Due to the nature of the site, particular attention also had to be given to ensure compliance with all environmental requirements in terms of waste control and working with lead products.

Prior to undertaking this work Inspire met with Camden Council's Safety Officer to agree on what localised pavement closure/protection was required. Access scaffolding / guard rails was then erected to the low level flat roof to provide phased safe access to the roof areas concerned. However, erecting scaffolding around the rest of the building proved to be too expensive and technically complex, so the client accepted Inspire's suggestion to complete the pitched roofing works using specialist rope access instead.

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THE WORKS

A mixture of pitched and flat roofing works were carried out on this extensive refurbishment project, with headline features as follows:

- Following extensive research random sized matching salvaged "Westmoreland" slates were procured for installation. The slates had to match the existing material and be approved by the CA and Client prior to works commencing.
- Specialist Code 4, 5 and 6 leadworks were also carried out by Inspire.
- To remain in keeping with the listed status of the building it was imperative that the flat roof refurbishment provided an end result with the same appearance of the existing roof.
- The client required a 10 year warranty, and a roof survey was undertaken along with core samples of the existing roof build up and condition.
- A 2-layer 'Safe2Torch' self-adhesive bituminous roof overlay system was installed onto the specified flat roof along with the main lower level roof area.
- The new felt system re-used the existing stone chippings, with any shortfall being made up of new matching stone chippings which Inspire located through its supply chain. A test area was undertaken and approved by the Client prior to commencement.

THE RESULT

Using the agreed rope access method, all cracked, slipped, broken or otherwise defective roof slates were carefully removed and replaced across the building, taking care to match the existing slates in place. We then responsibly and carefully carted away all debris arising. Workmanship and repairs were carried out in strict accordance with BS 8000-6 - Slating and tiling of Roofs and Walls - Code of Practice.

Along with random slate replacement there were a number of lead flashing repairs required, along with gutter cleaning and re-painting of timber turrets across the building. Approximately 370 slates were replaced to various roof areas serving the complete building.

The specified flat roof along with the main lower level roof area were over-laid using a two layer self-adhesive system. This 'Safe2Torch' system was selected due to the age of the building and the high degree of fire risk associated with its timber construction.

Some additional major defects were also identified by the rope access technician in terms of bulging brickwork and loose coping stones. These were at high level and posed a major health and safety risk. Urgent instructions were therefore given for scaffolding to be erected and protective measures put in place, and these repairs were then duly completed.

Pre-planning and excellent communication was important to completing all works in line with the programme set and in meeting the project's additional compliance requirements. It also enabled us to exceed all expectations of the Client with regards to health and safety, quality and workmanship.

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