

CASE STUDY

MAKERS

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Structural Refurbishment

PROJECT

The Chubb Building

STRUCTURE

Concrete Frame

CLIENT NAME

Revelan UK Limited

CONTRACT



The Chubb Building on Lionel Street in Birmingham has been an iconic land mark for many years, but has unfortunately fallen into disrepair from its original use of a multistorey office block, for the Chubb lock manufacturer. As with many such buildings they wished to repair rather than demolish and decided a change of use.

Makers were contacted by a local consulting engineer who were working alongside a regional contractor who'd had the scheme for the derelict Chubb Building on their books for a few years and had the contract to change the use from offices to accommodation; installing a further 2 floors to increase the overall m2 of the building to accommodate further residential apartments.

Makers were tasked with organising a visual inspection of the external facades and also to assess the repair works within the building itself.

This identified spalling and cracking of the coatings and failure of not just the original concrete, but also of previous repairs where the steel had continued to expand and force the existing repairs out as well.

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Before



Before



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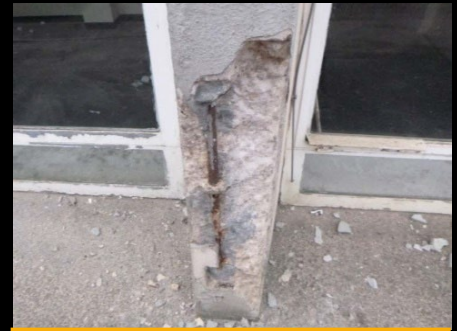
...makes the difference



Concrete Spalls



Exposed Reinforcement



Start of Breaking out

Working from the visual survey Makers were instructed to perform a Hammer Test of the whole building, this also included internal elements such as columns and soffits as well. A total of over 100kg of spalling substrate was removed, much of it not visible from the initial walk round. This provided the manufacturer Sika Ltd with the means to provide a fully warranted repair specification.

This consisted of total corrosion management Sika 610, Monotop 615 Repair Mortar, FerroGard 903 MCI along with a finish of Monotop 620 pore filler, also an Anti-carbonation coating of 552W primer/Sikagard 550W elastic.

Unfortunately, the work's package was then put on hold for 18 months. The scheme finally commenced January 2024

The weather was challenging but the building was fully scaffolded and sheeted, so we could raise the application temperature to the desired application range. We started by breaking out the concrete ensuring all steel reinforcement was assessed before replacing any that had lost section. Then applying the primers/repair and Migratory Corrosion Inhibitors as per the Sika's specification, giving a pleasing aesthetic finish with a 10-year warranty.

The building was also assessed on the internals for any further remediation and the repairs were completed whilst the windows were being replaced and the additional 2 storeys were being installed by the main contractor.



After



After



After

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