# CASE STUDY

# Structural Refurbishment



## ...makes the difference

## PROJECT

**BT** Pendleton

### STRUCTURE

Office

### CLIENT

BT / CBRE



## CONTRACT

BT Pendleton, also known as the BT exchange building in Pendleton, Salford Greater Manchester, was constructed in the 1960's. The exact year of construction is not commonly cited, but the building is known for its brutalist architectural style, which was prominent during this era. The structure would be served as a major telecommunications hub for British telecommunications (BT)

Makers were tasked with carrying out an external refurbishment of the building including cleaning of all concrete faces, concrete repairs, application of a corrosion inhibitor, application of a fairing coat followed by an anti-carbonation coat. Following on from a refurbishment survey it was highlighted that the existing window panels and mastic around the windows contained asbestos this was removed and replaced during the project.

Due to the unique design of the building a full scaffold was required to provide access to all external faces to allow multiple trades to carry out their works.

All areas where thoroughly cleaned using a high-pressure water jetter to remove dirt, debris and loose or deteriorated concrete before a full hammer survey was carried out to highlight the extent of the repairs, once this was completed, we were then able to start the repair process.

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Before



After







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Marking up the extent of repair





All perimeters of the repairs were saw cut to sound concrete using hand held grinders and the deteriorated concrete removed using electric breakers back to sound concrete, any exposed rebar was then cleaned using wire brushes before a protective coating was applied. A suitable repair mortar was then applied by hand according to the manufacture's instructions and consideration was taken regarding the weather conditions to protect the repairs from extreme temperatures, moisture or drying winds during the curing process, properly executed concrete repairs can extend the life span of the structure and restore its functionality and aesthetics.

Once all concrete repairs were complete an application of corrosion inhibitor was applied to protect the reinforced steel within the concrete structure from further corrosion caused by environmental damage and carbonation. This was applied in multiple coats using sprayers to ensure even coverage over the entire concrete surface. Adequate time was allowed for the inhibitor to migrate into the concrete before a final wash over the surface to wash off any excess material.

A fairing coat was then applied to the concrete surfaces to provide a smooth, uniform, and visually appealing finish before 2 coats of anti-carbonation paint was applied to protect the concrete surfaces from carbonation, which can lead to the corrosion of reinforcement bars this also improved the appearance of the building giving it a uniform visually appealing finish.

Before the project commenced a refurbishment survey was carried out which highlighted asbestos within the existing window panels and mastic around the window frames this also had to be addressed.



#### **Removal of concrete**

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Reinstatement



Protective coatings applied







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The asbestos within the refurbishment report highlighted the requirement of the removal of the window panels and replacement with A2 versapanel boards, this upgrade not only ensures a safer environment by eliminating hazardous materials but also enhances the overall quality and durability of the window installations. There was also asbestos within the mastic around all window frames which required removing and replacing, all works involving asbestos were executed with the highest standards of safety and efficiency by a licenced specialist. This comprehensive approach minimizes risks and protects both individuals and the environment from asbestos-related hazards, the windows throughout the building were coated in BT's corporate colours which are integral to its brand identity.

To support local wildlife, we were instructed to install swallow bird boxes to various locations around the building, contributing to biodiversity and environmental sustainability before the scaffold was removed.

This once run down building now stands transformed, showcasing a fresh and modern appearance following Makers extensive refurbishment works which ensures the building meets current standards ultimately prolonging usability, lifespan and preserving its value.



Primer coat applied to panels

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Final coat applied to panels



Elevation now complete







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