CASE STUDY

Roof Refurbishment

MAKERS

...makes the difference

PROJECT

Metquarter, Liverpool

STRUCTURE

Roof

CLIENT

Savills

CONTRACT



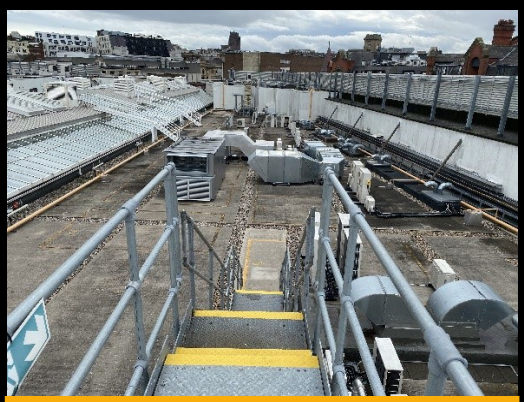
The Metquarter is a multi-use complex located in the heart of Liverpool City Centre. The former Liverpool General Post Office building now houses numerous shops, food outlets and on its upper floors, the LMA, a media, music and performing arts institution co-owned by global superstar Robbie Williams.

The large roof area was suffering from a number of water ingress issues, causing damage internally to the building. The roof had exposed concrete pads, with no waterproofing upon them, leaving the areas exposed to the elements. The internal roof gullies were also a cause for concern with an inverted waterproofing system greatly reducing water flow to the outlets.

A WestWood Liquid Technologies Wecryl R230 liquid waterproofing system was chosen for this project. This PMMA system was perfect for application on this roof as it is fleece-reinforced to create a durable and reliable roof waterproofing membrane. The system is extremely versatile and great for working on roofs with obstacles and difficult access such as this.

One of the biggest challenges on this project was the inverted roofing system located within the internal gullies. This comprised of approximately 120 tonnes of ballast across the whole roof, holding the insulation in position. This ballast was reducing waterflow in the gullies, leading to ineffective drainage. It was decided that the ballast was to be removed from the roof area, so the gullies could be waterproofed with insulation laid in a traditional built-up roofing system.

To remove this ballast, Makers employed one of our specialist supply chain partners to utilise a suction excavation machine. Due to the city centre location of the Metquarter, careful planning and preparation were required to ensure the removal went smoothly and did not impact the general public.



Before



External

T: 0845 899 4444
E: sales@makers.biz
W: www.makers.biz

Makers, Office Building 4,
Shenstone Business Park
Lynn Lane, Shenstone, WS14 0SB

Registered in England No: 6348341 Registered Office as above.

ISO 9001 QUALITY MANAGEMENT

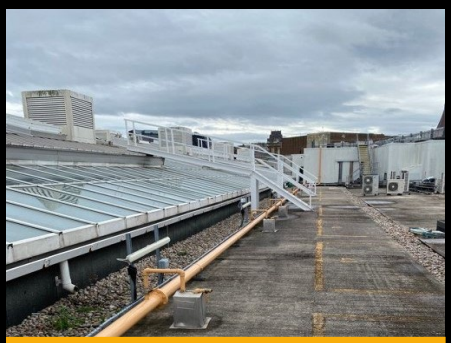
ISO 14001 ENVIRONMENTAL MANAGEMENT

ISO 45001 HEALTH & SAFETY MANAGEMENT

CASE STUDY

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Before



Before



During

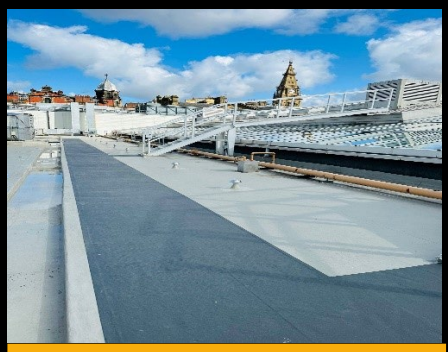
This innovative method resulted in the ballast being removed within three days; safely and with relative ease. Thus, saving considerable man hours and programme time. The removal demonstrates Makers innovative approach to problem solving, to deliver favourable outcomes that are cost effective for our clients.

Following the removal of the ballast, the roof was primed with WestWood Wecryl 276 Primer. New 150mm insulation was installed to the gullies to upgrade thermal performance in these areas. The Westwood Wecryl R230 Waterproofing System was then installed to the roof area by Makers WestWood approved operatives.

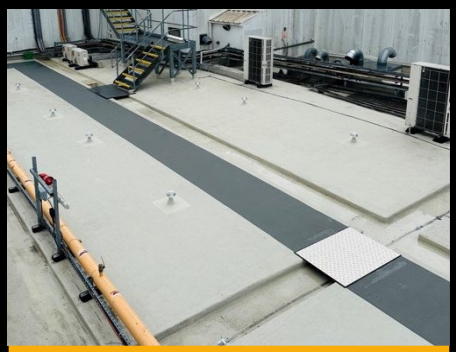
Another key issue on this project was the large number of M&E equipment located on the roof. Maker's operatives had to work effectively to properly waterproof underneath and around this plant equipment. Some of this had been positioned on the roof deck, inclusive of gas pipes and boxes. Makers employed our specialist M&E subcontractor to facilitate the lifting of these units, positioning them back on a big foot system, so that all of the roof area could be waterproofed to a high quality. Some of this work had to be completed out-of-hours at night when the plant machinery was not in operation so it could be shut down. For example; units that supply the food outlets within the Metquarter.

Furthermore, it was established through roof testing that the concrete roof substrate had trapped moisture located within it. This would cause issues with the new waterproofing membrane in the form of outgassing. This occurs when the substrate heats up in the summer months and the trapped moisture evaporates causing blistering in any liquid applied waterproofing system. To mitigate against this, Makers installed 45 mushroom roof vents, cored directly into the concrete. These vents allow for moisture to escape the concrete substrate when it evaporates and greatly reduces the risk of any outgassing damaging the waterproofing membrane.

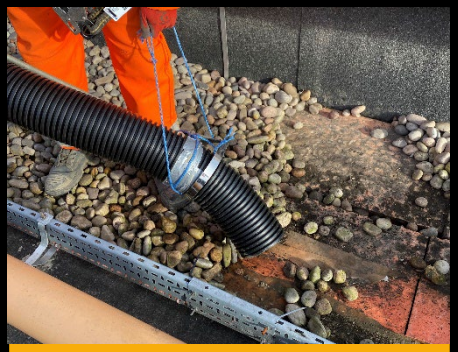
Due to the awkward nature of the roof and all of the many M&E obstacles, Makers designed the programme of works in sections, to complete and achieve manufacturer sign off on each section before moving to the next. This ensured the roof was complete to a quality standard and no hard to access areas were missed, ensuring the client achieved their full 20-years warranty.



After



After



Ballast Removal

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W: www.makers.biz

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