



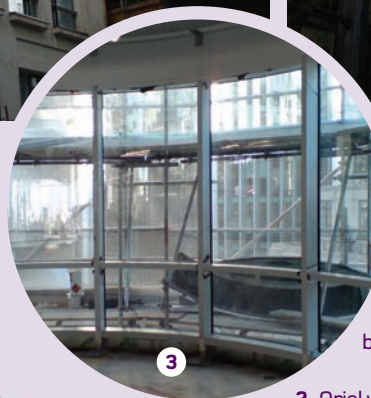
CONSTRUCTION ON NOT-SO-EASY STREET



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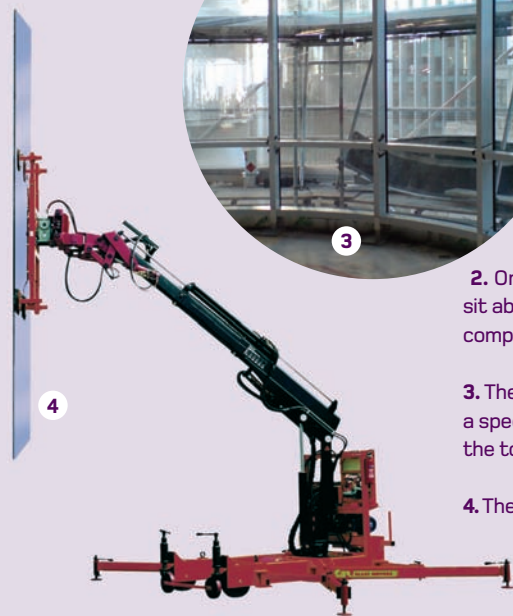
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1. Scaffolding was limited to the curved portion of the building. The unitised windows on the straight facade were installed using an internal crane that sat in a temporary void in the floor slabs before being dismantled.

2. Oriel windows on the Lime Street elevation sit above a pedestrian passage – another site complication.

3. The curved curtain walling sections needed a special silicone-based sealant to deal with the tolerances between glass and transom.

4. The ergonomic manipulation unit, supplied by hire company GGR, proved invaluable when installing the straight curtain walling panels on the first floor.



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stone facade panels offsite and crane them into position. The windows were assembled at EAG's base, then shipped to the Weston-super-Mare factory of stonework supplier Marble Mosaics. Although Lime Street is not the first time this off-site fabrication method has been used, it is the largest contract to date.

Before the composite panels reached the site, EAG and Rolfe Judd tested a sample to check how the detailing of the glazing and aluminium box sections interfaced with the stone. Taylor Woodrow's testing facility in Leighton Buzzard simulated a 50-year storm – apparently using an engine from a Second World War Lancaster bomber.

The results highlighted a problem with the

weatherproofing. At the corners, the EPDM membrane around the perimeter was deflected out of shape. So the team designed an internal catchment tray at the base of the window to control the way that any rainwater driven inside the unit is redirected to the outside of the building.

'We always recommend to the client seeing how a test window, using all the relevant detailing from the project, works in practice. In this case we were proved correct, the test paid for itself over and over again,' says Rolfe Judd's Robertson.

Weatherproofing the curved screens and projecting oriel windows also needed special care. The tolerances between the curve of the

glass and the curve of the transom created gaps that were too large to be managed by a conventional gasket. So EAG used Schüco's NCM bonding incorporating Sika SG20 silicone, normally used where blast-proofing is required. The oriel windows on the Lime Street elevation used the same product instead of a gasket.

The access difficulties at Lime Street and the lateral thinking used to overcome them have turned the site into a showcase for off-site fabrication. 'Logistically, it's been the most challenging project I've worked on,' says Sharp. 'But it meant we almost had an instant building. Once the unitised windows were in, it went from steel frame to weatherproof building very quickly.' **cm**