

Dow Corning® Quality Bond Silicone Fabricators Specified to create Giant Structurally Glazed Artwork

Case Study: Newcastle City Library



City
Newcastle upon Tyne

Country
United Kingdom

Products
Dow Corning® 3362
Silicone Insulating Glass Sealant
Dow Corning® 993
Silicone Structural Glazing Sealant

Architect
Ryder

Structural Glazing Fabricator
Structural Glazing Ltd

Insulating Glass Manufacturer
Solaglas Architectural Bishop Auckland

Curtain Wall Contractor
Dane Architectural Systems Ltd,
Newcastle

Main Contractor
Tolent Construction Ltd

Developers
Kajima/Tolent/Ryder Partnership

The Project

- The new library was built as part of a £40.2 million private finance initiative scheme.
- One of the biggest public libraries in the UK featuring access on two levels, the new library will include a 185 seat performance space, displays of local heritage treasures, a crèche, a café and computers - reflecting the revolution in new information technology.
- Standing in an area with vast pedestrian access which connects the retail city centre, the universities and the cultural centres, the library provides a catalyst for regeneration in this area of the city. The library also has a viewing gallery giving panoramic views of the city.
- Originally designed by renowned architect Sir Basil Spence and constructed in the 1960's, the original library closed in September 2006. The new library was handed over to Newcastle City Council on March 3rd 2009.
- Dow Corning silicone insulating glazing and structural bonding products were specified not only due to their proven performance record but also thanks to Dow Corning's industry quality assurance initiative, *Quality Bond*™.

The Challenge

The structurally glazed John Dobson Street facade of the city library features a giant piece of artwork, named 'Four Questions', which was created by local artist Kathryn Hodgkinson. This, through the use of laminated graphics, incorporates the words of local Newcastle residents, who responded to the four questions 'what makes you happy', 'what do you fear', 'what would you change' and 'what gives you hope'. It was produced using over 1500 square metres of a new generation of temperable solar control glass from Saint Gobain which gives a high level of neutrality whilst reducing heat at the same time. Each of the large 276 panels, which were typically 1500 x 4050 mm in size, had to be bonded correctly within a unitized Schuco system and individually referenced, produced and packed in sequence so that they could be installed in order on site to create this stunning image.

The Solution

Due to the complexity of this facade construction and with quality assurance and good workmanship always a priority, curtain wall contractor Dane Architectural Systems Ltd insisted on the selection of insulating and structural bonding fabricators which had a long and proven performance record of project success. Solaglas of Coventry were selected for the fabrication of the insulating glass units and Structural Glazing Ltd carried out the structural bonding of these units onto the unitized curtain wall frame. Goff Monaghan, Technical Director of Dane Architectural Systems Ltd explained 'Both Solaglas and Structural Glazing Ltd have been audited and certified as Dow Corning® Quality Bond members. We recognise the considerable benefit and peace of mind that specifying members on construction projects can offer since this recent initiative from Dow Corning ensures that improved quality assurance and quality management principles are closely followed'.

Dow Corning 3362 Silicone Insulating Glass Sealant

A neutral curing silicone sealant specifically formulated for use as a secondary seal in the manufacture of high performance insulating glass units, with outstanding adhesion to a wide range of substrates including coated, enamelled and reflective glass. *Dow Corning 3362* has excellent temperature stability, is resistant to ozone and ultra-violet radiation and is certified by European Technical Approval ETA 03/0003 and complies with EN 1279 requirements.

Dow Corning 993 Silicone Structural Glazing Sealant

Certified by European Technical Approval ETA 01/0005, *Dow Corning 993* exhibits excellent weathering properties and high resistance to ultra-violet radiation, heat and humidity once cured. It is ideal for structural bonding of glass and metal, including coated, enamelled and reflective glass.

About Quality Bond™

Quality Bond lifts silicone sealing and bonding to the highest level through the instigation of standards of best practice in quality control, quality assurance and product application by specialist silicone fabricators and applicators. *Quality Bond* allows customers and specifiers to share in Dow Corning's industry-leading expertise and benefit from our proven global performance track record. For more information, please visit www.qualitybond.com.

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