



## CASE STUDY: KINGSMILL HOSPITAL

### The Client

Located in Sutton-in-Ashfield in Nottinghamshire, King's Mill Hospital has been praised as a benchmark example of sustainable healthcare construction. The BREEAM 'excellent' rated project has involved extensive re-development of existing facilities to create a single, contemporary hospital offering 28 new wards, a state-of-the-art diagnostic and treatment centre, a new emergency care and assessment centre with an out-of-hours GP service and a dedicated women and children's centre.

The development incorporates a wide range of innovative features to achieve a practical yet striking building with exemplary environmental performance. The scheme includes the largest geothermal lake loop scheme in Europe and a tri-generation plant that, together, provide all the hospital's cooling requirements without the need for chillers and 40% of the hospital's heating requirements, reducing the re-developed hospital's carbon footprint by 400 tonnes a year.

### The Challenge

The hospital's design called for an ambulance canopy for the diagnostics and treatment centre that would protect waiting patients and crews arriving at the hospital from the elements without blocking natural light from the building. This had to be delivered against strict budgetary restrictions and offer a specification that was aligned to the scheme's sustainability goals. It also had to be specified in accordance with BS 5950 and be capable of handling loads of up to 6,399kg.

### The Solution

J&J Carter was approached to answer the brief for the ambulance canopy by main contractor, Skanska, following a recommendation from another contractor on site. The original design came in over budget and the J&J Carter team was then able to simplify the design to bring it in within budget whilst still meeting all the technical, design and sustainability criteria.

The steel structure was fabricated from circular, hollow mild steel and each column was hot dip-galvanised prior to painting to ensure effective rainwater drainage and provide corrosion protection. The columns were also used as containment for electrical cables to power the canopy's lighting units and these were housed within conduit inside the hollow struts.

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