

Buncefield Distribution Centre

Bringing a building back to life



Project: Distribution Centre, Buncefield
Client: J Murphy & Sons
Project Type: Refurbishment
Project Size: 37,000m²
Project Architect: MSA Architects
Main Contractor: J Murphy & Sons
Cladding Contractor: CA Roofing Services
Material: Twin-Therm®

CA Group have completed work to repair a distribution warehouse which was partially destroyed during the 2005 Buncefield disaster.

More than 30 buildings around the site were either badly damaged or destroyed in the explosions, including the warehouse that CA Refurbishment were working on for Birmingham-based Astral Developments. The impact on the warehouse which at the time was almost at completion phase, was severe. Not only did it damage the roof and walls, it also destroyed the steel columns and the rafters acting as the supporting structure. Partial demolition was the only answer.



In June 2009 the site was acquired by J Murphy & Sons, who acted as main contractors and CA Refurbishment Division were once again awarded the contract to re-clad the same building.

This was the first time in the company's history that it had been involved in the build, part demolition and rebuild of the same structure and in a very short time frame – the whole process took just four years giving us a unique insight into the 'cradle-to-cradle' process.

Based on the premise that the solutions adopted in the conception of a building also take into account its end-of-life

impact, from both a sustainability and cost saving perspective, 'cradle-to-cradle' construction requires that building materials used are ecologically compatible, economically acceptable and socially responsible in equal measure.

Work on the warehouse, which was once again constructed using the CA Twin-Therm® system, is now complete. The roof features Colorcoat HPS200 Ultra® by Tata Steel, which is guaranteed for up to 40 years and has an optimised Galvalloy® metallic coating for corrosion resistance and cut edge protection.

The walls incorporate Colorcoat Prisma® by Tata Steel, providing the combination of durability and aesthetic appeal. Both products are made exclusively in the UK.

The partial demolition of the original build meant that CA Refurbishment were inevitably facing the kind of end-of-life issues that would usually only occur after a building has been in operation for a period of 30-40 years, however, because the structure incorporated CA's Twin-Therm® built up roof and wall system, which has been developed to provide a net commercial benefit on scrap values at end-of-life, many of the anticipated costs were mitigated.

All of the steel which was no longer viable in the build, was recycled, generating considerable income and due to its non-hazardous make-up, the glasswool insulation, which is used in the Twin-Therm® system, was sent to landfill. Whilst not the optimum solution in terms of true sustainability, the disposal of glasswool insulation has a significantly lower environmental and financial impact than the disposal of blown insulation. This is due to the use of CFC's or HCFC's as the blowing agent and the specialist demolition and disposal techniques* which are required once these compounds reach end-of-life status.

CA is committed to making the subject of disposal costs a key factor in the decision making process and the company actively encourages clients to challenge contractors on their use of CFC's, HCFC's and VOC's. Ultimately, it is only by addressing the issue of disposal costs and their effective management at the start of a building project that they can be avoided at the end of the build.

*UNEP report of the technology and economic assessment panel May 2005. Report on the task force on foam end of life issues.



Before



After