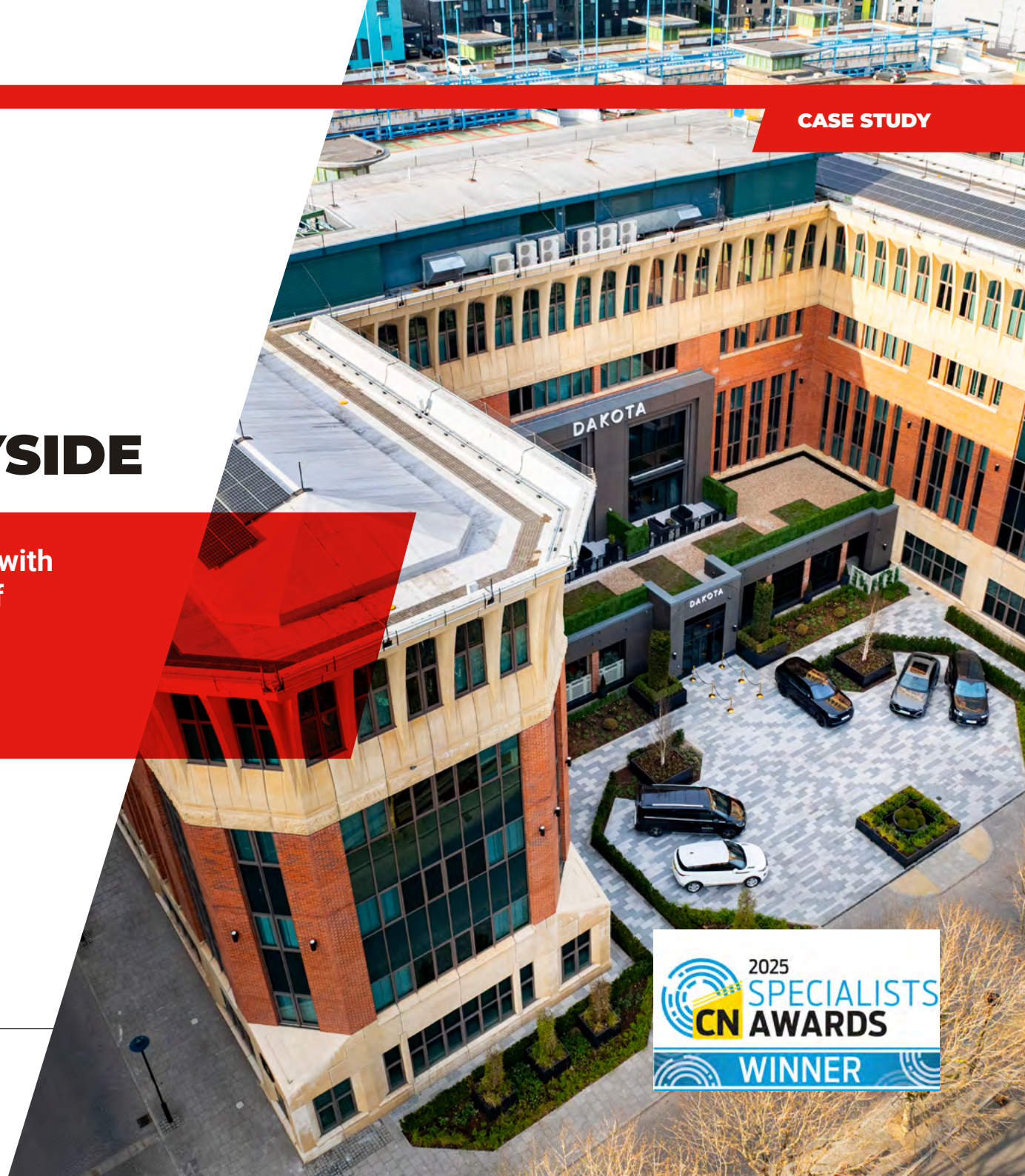
CASE STUDY

DAKOTA HOTEL, NEWCASTLE QUAYSIDE

IKO Permatec LI waterproofing system with IKO Elements sedum blanket green roof
261m²

Project sector: Hospitality



2025 CN SPECIALISTS AWARDS WINNER

CONTRACTOR

BriggsAmasco Ltd

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CASE STUDY

PROJECT OVERVIEW

IKO, in collaboration with BriggsAmasco Ltd, transformed an empty building at Newcastle's prestigious St Ann's Wharf into the city's newest Dakota Hotel. The project involved a full waterproofing and green roof installation for a 118-room luxury hotel extension. Situated in the vibrant Quayside area, this adaptive reuse project showcases how sustainable construction practices can seamlessly blend with premium developments.

Crucially, the specification included IKO Permatec LI—an advanced, low-impact waterproofing solution that supports long-term building resilience while significantly reducing environmental footprint. IKO Permatec LI offers more than 50% lower upfront embodied carbon compared to standard hot melt systems, making it an ideal choice for construction projects aiming to meet ambitious decarbonisation goals. The system was paired with 180mm IKO enertherm XPS insulation. A 45m² IKO Elements sedum blanket green roof was installed, with the remaining areas completed using 20/40 rounded washed ballast.

Following completion, the project was recognised with the Outstanding Contribution to Sustainability award at the Construction News Specialist Awards, acknowledging the collaborative approach and specification-led decisions taken throughout the scheme. The award reflects how early engagement between manufacturer and contractor aligned technical performance with the project's sustainability objectives.

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CHALLENGES

The key challenge was designing a green roof system that not only met environmental goals but also adhered to strict wind resistance requirements for this prominent Quayside location. Wind uplift calculations indicated that the lightweight sedum needed to be reinforced.

This called for a tailored engineering solution, requiring close collaboration between IKO and BriggsAmasco to enhance the original design. The solution needed to ensure structural stability against high winds, without compromising the environmental benefits, such as supporting local biodiversity.

Alongside these technical challenges, the project team needed to ensure that sustainability ambitions were delivered in a practical way, without introducing unnecessary risk to programme or performance. This required close collaboration and clear communication between all parties to ensure design intent could be successfully translated on site.

SOLUTION

The IKO Permatec LI waterproofing system was selected for its combination of technical performance and sustainability benefits. Like the original IKO Permatec, it offers a robust, fully bonded hot melt membrane with integrated anti-root protection—ideal for green roof systems—but with a significantly reduced carbon footprint.

As part of IKO's commitment to environmental performance, IKO Permatec LI is manufactured using a carefully engineered formulation with over 50% lower upfront embodied carbon, as verified by third-party EPD data. This allowed the project team to meet both durability and decarbonisation requirements, aligning with wider ESG targets and circular economy principles. Its exceptional durability aligned perfectly with the building's

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SOLUTION (CONTINUED)

exposed Quayside location, minimising future maintenance and ensuring long-term reliability—critical for a high-specification hospitality development. The system also supports sustainable construction logistics through zero-wrapper waste deliveries and full recyclability, reducing packaging on site and supporting low waste installation practices.

To address the uplift risks specific to this site, IKO and BriggsAmasco developed a custom build-up using IKO's extensive substrate system. This ensured the sedum blanket remained firmly in place during high wind conditions while retaining its ecological value. The solution exemplified how product performance and environmental protection can be achieved simultaneously through thoughtful design and close supplier–contractor collaboration.

Beyond the environmental benefits, the project also offered invaluable STEM experience to two apprentices—one in quantity surveying and the other in design—who played a critical role in navigating the project's technical complexities from inception to completion.

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SOLUTION (CONTINUED)

Quality control was paramount throughout the installation. IKO conducted meticulous stage-by-stage inspections to uphold the highest standards throughout installation. The result was a top-tier waterproofing solution that skilfully balanced sustainability with the unique demands of high-end hotel construction.

Early collaboration between IKO and Briggs Amasco played a key role in refining the specification and addressing site-specific challenges as they emerged. In a recent interview, Steve Dalton, Technical, Quality & R&D Manager at IKO, and Kobir Ahamed, Sustainability Manager at Briggs Amasco, reflected on how open dialogue and considered material selection helped balance performance requirements with reduced embodied carbon considerations.

This collaborative approach supported the delivery of a practical, high-performing roofing solution and contributed to the project's recognition at the Construction News Specialist Awards.

PRODUCT / SYSTEMS

- IKO Permatec LI waterproofing system
- IKO enertherm XPS insulation (180mm)
- IKO Elements sedum blanket green roof
- IKO extensive substrate system
- IKO mechanical fixings

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