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Case Study
Car Parks

Client | Various
Role | Specialist Contractor

Deck Waterproofing to Various NHS Sites

NHS Sites

// St James Hospital, Leeds - *Restoring Performance & Aesthetics*

// Queen Elizabeth Hospital, Birmingham - *Engineering In A Live Environment*

// Aintree Hospital, Liverpool - *Ahead of Schedule, Beyond Expectation*

// Poole Hospital, Poole - *Revitalising A Vial Structure*

// Queens Hospital, Romford - *Modernising For Performance & Safety*

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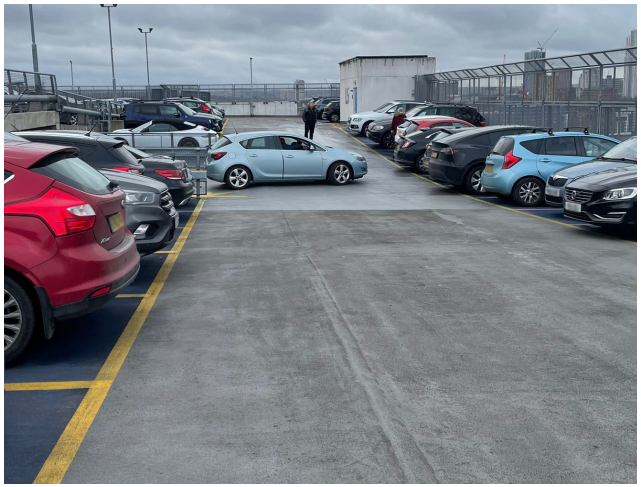

From emergency departments to MSCP's, NHS facilities operate around the clock to serve millions of people every year. Ensuring these vital spaces remain safe, resilient and functional requires technical precision, seamless co-ordination and an unwavering commitment to quality.

Across multiple NHS estates, from Liverpool to Poole, our team has delivered a series of complex refurbishment projects that demonstrate how innovation, collaboration and expertise can transform critical infrastructure while keeping essential services fully operational. Each site presented unique challenges – from failing waterproofing systems to operational constraints in live hospital environments.

St James Hospital MSCP – *Restoring Performance & Aesthetics*

At St James Hospital in Leeds, the MSCP's split-level top deck had suffered from delamination due to multiple waterproofing systems failing over time. The surface was debonding extensively, compromising both safety and appearance.

The entire deck was stripped back to the original substrate using mechanical planing and blasting to create the ideal surface profile. Over 3,000m^2 of decks were then treated with Deckshield Rapide ED1 with crack banding – a fast curing, durable waterproofing system ideal for hospital environments.

For the ramps, Deckshield Rapide ED-R was applied to withstand heavy traffic and load stresses. Aesthetic and functional improvements followed: drive aisles in grey and parking bays in blue, enhancing visual clarity and user experience.

The completed top deck now boasts long-lasting waterproofing protection, improved durability and a refreshed, modern appearance, ensuring reliable performance under daily hospital traffic demands.

Queen Elizabeth Hospital A&E Apron – *Engineering in a Live Environment*

The Queen Elizabeth Hospital, Birmingham involved a complex refurbishment of the A&E Apron, one of the hospitals most operationally sensitive areas. Given the 24/7 nature of emergency services, the works were meticulously phased into 8 stages to maintain the critical hospital operations throughout.

The scope included the removal and replacement of the waterproofing system, concrete repairs, installation of new drainage and new joint systems. Ride-on planers were used to remove the existing waterproofing system, followed by detailed concrete assessments including hammer tests and pull-off tests. Sika's RB58 fully reinforced waterproofing system was selected for its high performance and reliable waterproofing characteristics.

Dust, noise and environmental controls were central to the projects success, alongside rigorous health and safety management, on-site banksman, COSHH compliance and continuous environmental monitoring.

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Through detailed planning, dedicated traffic management and strict operational controls, the A&E apron refurbishment was completed seamlessly, delivering a robust, watertight and long-lasting surface without ever compromising emergency access or patient care.

Aintree Hospital MSCP – *Ahead of Schedule, Beyond Expectation*

Aintree Hospital's MSCP had reached the end of its serviceable life, with the existing waterproofing system suffering from widespread delamination and significant water ingress. Through meticulous planning, strategic resource allocation and favourable weather conditions, the project – initially scheduled for 11 weeks – was completed in just 6 weeks.

Following the surface preparation, specialist planers and captive blasting, Sika Tecfast was used for rapid concrete repairs. A Radflex S200 expansion joint was installed alongside Sika 406KC joint sealant to enhance flexibility and protection.

Over 5,330m^2 of the top deck and ramps were then protected with the Sika RB58 fully reinforced waterproofing system, ensuring long-term durability against UV exposure and heavy traffic.

A refreshed line-marking scheme and improved bay layout completed the transformation, enhancing both aesthetics and functionality. Delivered well ahead of schedule, the project exemplified proactive planning and technical precision.

Poole Hospital MSCP – *Revitalising a Vital Structure*

Constructed in 1993, the six storey MSCP had deteriorated after decades of heavy use and exposure. The split-level top deck's original waterproofing system and drainage infrastructure had failed, allowing water ingress and chloride contamination which led to widespread corrosion and spalling.

A comprehensive refurbishment was undertaken, beginning with the removal of the existing waterproofing system and concrete repairs using the Sika Monotop range. The outdated drainage was replaced with ACO gullies and outlets, while defective joints were upgraded with modern, watertight alternatives.

To ensure complete protection, a Sika RB58 fully reinforced waterproofing system was applied to over 2,000m^2 of decks and ramps. Once the top deck was completed, attention turned to the internal areas, where the soffits, columns and decks were repaired using Sika Monotop 610 and 615.

The works were carefully phased to maintain car park operations, with temporary traffic management and communication plans ensuring uninterrupted hospital functionality.

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This complex refurbishment not only restored the structure's integrity but extended its life for decades – combining durability, technical precision and minimal disruption to the hospital users.

Queens Hospital MSCP, Romford – *Modernising for Performance & Safety*

The Queens Hospital MSCP's ageing asphalt top deck had reached the end of its serviceable life, suffering from potholes, cracking and surface wear. Rather than a full strip-off, a cost-effective overcoating strategy was chosen to minimise noise, dust and disruption.

Surface preparation was carried out using ride-on blasting machines, followed by asphalt repairs and replacement of the movement joints with Radflex S200. The entire 5,643m^2 top deck was then waterproofed with Tremco's Deckshield Rapide EDF, providing a seamless, durable and UV-resistant waterproofing system.

Internally, over 2,100m^2 of decks received upgraded line markings and pedestrian routes, improving safety, visibility and compliance with modern standards. The car park remained open throughout the works, with phased, clear traffic management ensuring uninterrupted access for hospital staff and visitors. The results: a modern, compliant and durable facility designed to meet the hospitals growing demand.

A Shared Commitment to Quality & Care

Across all these NHS sites, our approach remained consistent: deliver technically robust, sustainable and future-proofed refurbishment solutions while keeping hospitals fully operational.

Through advanced materials, strategic phasing and unwavering focus on health, safety and environmental responsibility, each project was completed to the highest standard – extending asset lifespans, improving usability and reinforcing the essential infrastructure that supports the NHS every day.

For further advice and/or information regarding any of our services, please visit www.cemplas.co.uk.

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