

# REPEATABLE, REALISTIC AND RISK-FREE

Repeatable construction using homegrown materials and offsite construction techniques are going to be key to derisking healthcare projects and delivery, says Mark Shepherd, Director at MPA Precast and MPA Masonry.



A restructured New Hospitals Programme is focused on a changing NHS estate and a deliverable programme over the next decade and when Wes Streeting, Secretary of State for Health & Social Care unveiled Labour's revised New Hospitals Programme (NHP) earlier this year, he was quick to brand the previous administration's programme target of 40 new hospital projects by 2030 as undeliverable.

Realistic delivery in a challenging fiscal environment means that the new programme is based on a new staged delivery timetable. Wave zero will see the delivery of projects which are already in the advanced stages of development completed within the next three years. Wave one will then follow with projects in construction

between 2025 and 2030 and waves two and three will be completed right up to 2039.

Prior to the NHP, each new hospital building would have been designed, developed and built as a standalone bespoke project for an NHS Trust. The programme is focused on standardisation, using the repeatability of designs to build better and faster as part of a co-ordinated national plan overseen by the Department of Health & Social Care and NHS England.

While the NHS programme is clearly not as ambitious on timescales as it once was, it is still competing for resources - people, materials and plant - at a time when infrastructure and housing pipelines are set to be significant over the next decade. Like

other sectors, it is also attempting to deliver a complex programme when global materials supply chains, particularly for imported steel, are unpredictable due to the impact of President Trump's tariffs on the global economy.

Against this backdrop it's important that the Government and NHS estate maximise the speed and repeatability of offsite construction and use component-led construction to reduce on-site labour and de-risk the delivery of the NHP programme. The revised programme also provides a major opportunity to retain as much economic value in the UK as possible.

Precast concrete is an established modern method of construction (MMC) offsite solution and is



increasingly playing a vital role in delivering high-quality, efficient healthcare buildings. Part of an essential UK concrete manufacturing sector, precast uses homegrown materials to reduce the demand for imports, ensure security of supply, while cutting carbon and protecting high skilled jobs.

Importantly, precast concrete components enable faster construction with minimal disruption which is crucial for live hospital environments but also repeatable hospital designs.

With consistent factory-controlled quality, precast elements provide excellent fire resistance, acoustic separation, and thermal performance, all of which are essential for patient safety, comfort, and operational efficiency.

Although MMC is often associated with lightweight materials, precast concrete has long been established as a reliable MMC solution. The use of precast concrete panels for both floor and wall units has been proven over many years, offering significant benefits such as structural integrity, durability, fire resistance, and acoustic performance - often surpassing those of lightweight alternatives. Concrete is an inherently non-combustible material with the highest fire safety rating of class A1, reducing risk in a hospital environment.

From a health and safety perspective, construction workers can be better protected on MMC projects as its techniques reduce both the amount and scope of traditional on-site construction activities. The installation



of precast concrete has recently seen new innovations, including the use of air-inflated crash bags and nets to ensure that workers operate in the safest environment when fitting the precast elements.

The delivery of the newly revised NHP programme remains an ambitious plan but with new pragmatic timeframes. With standardised, high-quality designs it can be a blueprint for offsite delivery and an economic catalyst for the sector. Precast concrete has an important role in de-risking projects and delivering a new, modern NHS estate that's fit for the future.

Images: 01-04. Precast concrete is a key MMC material to transform healthcare facilities. Courtesy Techrete Ltd

## AWARD WINNING PRECAST HEALTHCARE INNOVATION

During the COVID-19 pandemic, John Sisk & Son engaged Techrete to provide 348 precast concrete panels for the Rock Wing at Mater Misericordiae University Hospital in Dublin. Designed by Scott Tallon Walker Architects, the brief was to create a modern wing which would provide the hospital with occupancy for an additional 5,000 patients annually.

Techrete's punch window panels incorporate a terracotta veneer, with an acid etched finish to the concrete elements and glazing which was installed at their facility in Dublin. The flat wall panels to the stair core feature concrete fins, echoing the solar shading provided by the window fins on the main elevations. Dummy joints to the top of the stair core provide an additional design feature. The hospital emblem was cast into the large wall panel to the main building entrance using a bespoke rubber mould.

The Rock Wing won both 'Building of the Year (Medical and Health)' at the Building and Architect Awards 2024 and the 'Public Buildings and Infrastructure' award at the RIAI Awards the same year, as well as 'Healthcare Project of the Year' at the 2025 Irish Building and Design Awards this spring in Dublin. Steven McGee, Chief Operating Officer, Sisk Ireland & UK said: "This is an amazing example of a value for money approach to speedily developing a healthcare asset in super quick time during the pandemic."

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