# M67 St Anne's Bridge Replacement

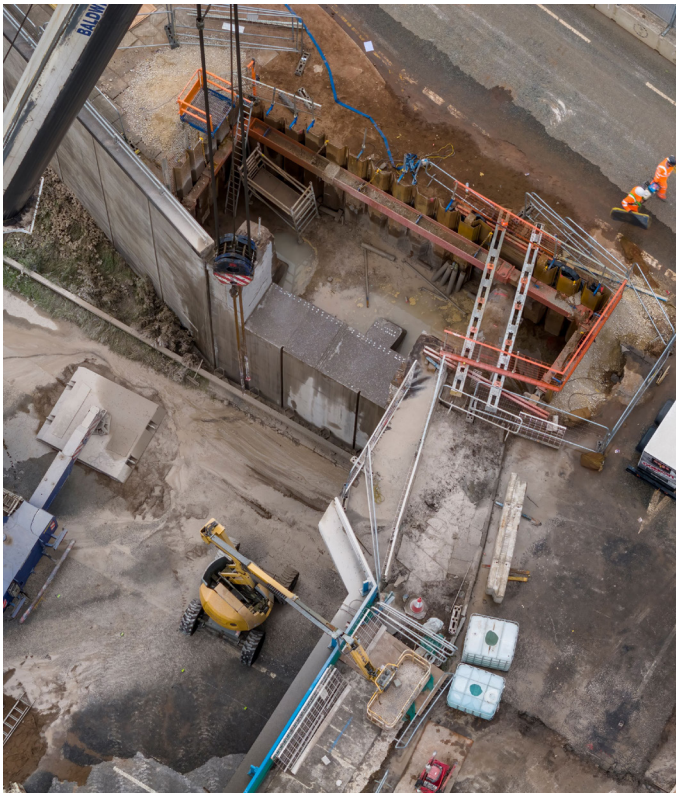
**Customer:** Tilbury Douglas

**Location:** Manchester, UK

**Products:** Sheet Piling, GeoBrace 390

## Case Study

**ALTRAD RMD KWIKFORM SUPPORTS TILBURY DOUGLAS WITH ROAD BRIDGE DEMOLITION AND REBUILD**



The M67 St Anne's Bridge Replacement Project is a scheme for Client National Highways located at Denton (Greater Manchester) and Tilbury Douglas has been appointed by National Highways as Principal Contractor.

Altrad RMD Kwikform (Altrad RMDK) were appointed by Tilbury Douglas to provide the temporary works solution to enable the replacement of the bridge deck of St Anne's Road Bridge in Manchester.

St Anne's Road Bridge crosses the M67 at Junction 2 in Manchester and enables access to St Anne's Road and Audenshaw from the A57/Hyde Road. The original concrete bridge deck, approximately 1500mm thick will be replaced with a new semi-integral bridge deck comprising of steel plate girders and a reinforced concrete deck.

Tilbury Douglas were contracted as Principal Contractor for the scheme. The project includes the demolition and replacement of the existing deck, as the reinforced concrete to both deck and upper sections of the abutment were not up to standards.

Altrad RMDK were appointed early at the concept stage of the project to design and supply the temporary works for not only the earthworks support, but also to provide structural support to the existing services within the bridge deck.

## Project phases

Due to the presence of a 750mm diameter water main within the existing deck, that had to remain operational until its replacement is installed, the project needed be completed in two phases east and west of the bridge. Each phase consists of the demolition and removal of the existing deck, then the removal of the decks cantilever sections, hydro-demolition of the existing abutment to reduce the bearing shelf height, recast the new bearing shelf, before placement of the new bridge beams and reinforced concrete deck.

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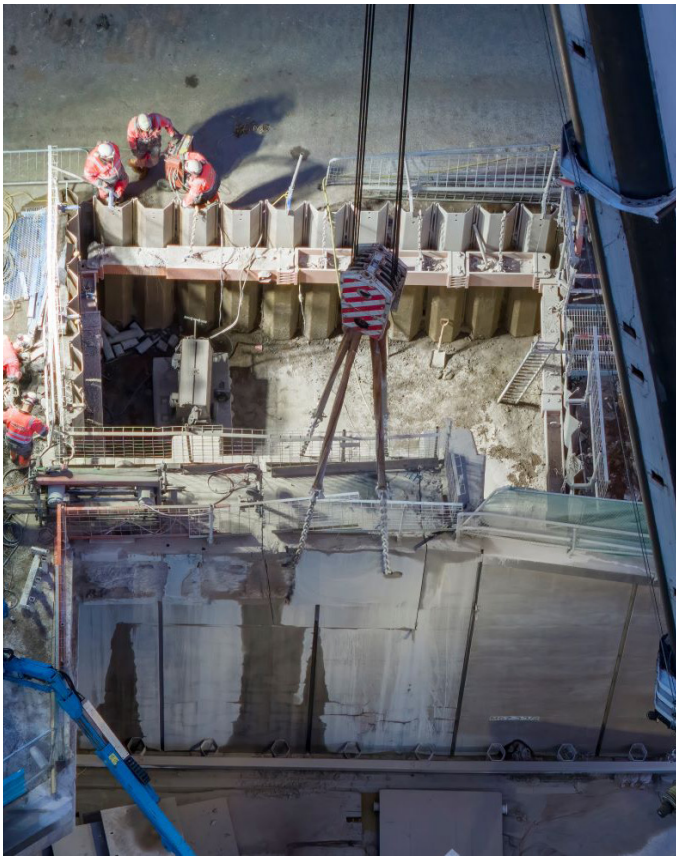

Phase one will also include the installation of a Altrad RMDK heavy duty service rack support, installed in advance of the main activities, and the installation of two new 600mm diameter watermains.

## Rebuilding the new bridge

Due to the congestion of existing services within the carriageway and the limited remaining road width available to allow two lanes of traffic to remain open on Hyde Road for the duration of the works, a single-sided propped cantilever support system was proposed.

The solution consists of unclutched sheet piling to the perimeter of the excavation to minimise working area, with a single high-level frame supporting three sides of the excavation, with the return ends fixed to the existing concrete abutment.

The Altrad RMDK Geobrace 390 system provides a clear span solution with minimal deflections allowing optimum clear working areas for both the repair works and water main support.

Altrad RMDK has supplied the first phase of equipment which was installed prior to any demolition works and continues to work closely with Tilbury Douglas as the works progress.

Phase two is due to start later in 2024 and will involve the demolition of the remaining deck and top part of the abutments, followed by the reconstruction of the abutments, and installation of beams and deck.

Lesley Dean, Engineering Manager for Ground Shoring at Altrad RMDK, said: “We are delighted to have collaborated with Tilbury Douglas on this project, consulting on the most effective temporary works solution and assisting on site where required.

“The phasing of the works has been particularly challenging, accommodating changes that have arisen on site and reacting accordingly.”

Carlos García, Project Manager at Tilbury Douglas, said: “It has truly been a pleasure to have Lesley Dean as part of the Altrad RMDK team developing the temporary works design needed for the project. Her extensive knowledge and expertise have been invaluable assets, providing exceptional support to our site team. Her contributions have played a crucial role in the development of the necessary temporary works, essential for successfully completing the scheme.”