



MERSEYLINK MERSEY GATEWAY BRIDGE

Temporary dewatering of 3no x 40m diameter bridge pier cofferdams across the River Mersey for new bridge

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Stuart Wells Limited

Temporary deep well dewatering system with pumping tests and monitoring to ensure effectiveness

MERSEY GATEWAY BRIDGE PIERS

Stuart Wells designed the dewatering system consisting of 6no x 32m deep pumping wells installed around the internal perimeter of each bridge pier cofferdam. Passive pressure relief wells were installed in the central section with an array of vibrating wire monitoring piezometers to monitor and record groundwater levels and pressures. Pumping tests during commissioning confirmed the effectiveness of the design.

MANCHESTER SHIP CANAL BRIDGE PIERS

Dewatering using a deep well pumping system with internal wells located within the sheet pile cofferdams that extended into the canal.



Objective

A temporary dewatering system was required for three 40m diameter cofferdams as part of the construction of the Mersey Gateway Bridge.

Dewatering was also required to allow construction of the bridge pier cofferdams crossing the Manchester Ship Canal.



Solution

Site investigation data was used to design the dewatering system for the Mersey Bridge piers with pumping tests during the commissioning stage to confirm the effectiveness of the dewatering design.

For the Manchester Ship Canal Bridge piers, dewatering was achieved using a deep well pumping system with continual monitoring of discharge flow and water quality.

Services	<u>Deep Well Dewatering</u>
Location	Runcorn to Widnes, Cheshire
Industry	Transport