

# Lyme Valley Temporary Steel Sheet Pile Retaining Cofferdam

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**Contract No:** C816

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**Client:** North Midland Construction PLC

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**Location:** Lyme Valley, Stoke-on-Trent

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**Value:** Approximately £60,000.00

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**Summary:** Design, supply, installation and extraction of steel sheet piles to form a temporary earth retaining cofferdam. The cofferdam facilitated the excavation and construction of the proposed Storage Tank Shaft. The cofferdam was circular and had an approx. internal diameter of 28.67 lin.m (152 no. piles). The sheet piles were supported at three levels using RC ring beams (by others).

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**Drawing Ref:** Sheet Pile Cofferdam Plan, Sections & Detail

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Sheet Piling UK Ltd were employed by North Midland Construction PLC for the design and construction of a temporary steel sheet pile cofferdam of 28.67m internal diameter, to allow excavation to a depth of approximately 9.0m such that a reinforced concrete collar could be constructed. The first permanent shaft ring was constructed at the collar level. Subsequent shaft rings were then placed by underpinning. The sheet piles were supported at two other levels with Reinforced concrete ring beams during the excavation works.

The 152 no. NSP.3W/ 4W sheet piles at 12.0m long were installed using an ABI Telescopic Leader Rig mounted with a high frequency MR600V vibro hammer. The general soil profile consisted of Made ground over soft alluvial Clays over medium dense Sands and Gravels over highly weathered Mudstone. The cofferdam design assumed a full hydrostatic head of water. Due to the variable Mudstone levels, some of the sheet piles required 'back-driving' using a 2.4te Hydraulic Drop Hammer to achieve the minimum design toe levels.

The scheme specification also required that the cofferdam design was independently checked by a 3rd Party organisation.


## Project Images





## Downloads

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 [Sheet Pile Cofferdam Plan, Sections & Detail](#)