

# Manchester Metrolink Steel Sheet Pile Retaining Walls

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**Contract No:** C752

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**Client:** Expanded Limited

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**Location:** Chorlton, Manchester

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**Value:** Approximately £1,965,000.00

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**Summary:** Supply and installation of approximately 1300 tonnes of NSP IIIW section and 630 tonnes of NSP IVW section sheet piles to form retaining walls in an old railway cutting to facilitate construction of Phase 3A of the new Manchester Metrolink.

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Sheet Piling (UK) Ltd were employed by Expanded Piling Ltd on behalf of Principal Contractor MPT to supply and install permanent sheet pile retaining walls at various locations along the line of the new Metrolink.

The design required the installation of NSP IIIW and IVW section sheet piles in lengths varying from 6m to 10m. The sheet piles were designed to act in cantilever in the permanent condition.

The scheme was originally designed using Arcelor Mittal AZ46 sheet piles. However by using our own in-house design department, considerable cost savings were achieved by specifying Nippon Steel piles in lieu of the original Arcelor Mittal Z piles.

The soils generally consisted of sand, overlying clay, overlying sandstone, with the water table being fairly high.

The surrounding area of the site was mainly residential and approximately 57% of the total area of 12,100m<sup>2</sup> was installed using the Silent Vibration Free Pile Press. The remainder were installed using a Bauer Telescopic Leader rig and variable moment vibratory hammer.

The installation works were completed in approximately six weeks with up to 60 No piles per day being installed with the telescopic leader rig and up to 35 piles per day being installed with the Giken Pile Press. Installation of Arcelor Mittal AZ sheet piles would not have been commercially viable using a Giken Z pile press.

Access to the site was restricted to the Principal Contractors compound at the Chorlton end of the site and all materials were distributed along the site using a tractor and trailer.

## Project Images

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