SHEET PILING

RETAINING STRUCTURES



Sheet piles are used across a wide range of applications to form retaining structures, creating structurally sound and, where required, watertight walls or barriers.

They are used to construct cantilever, propped and anchored retaining structures, making them suitable for a variety of sectors and applications.

Steel sheet piles are manufactured as hot-rolled sections in U or Z profiles. Their interlocking design makes them suitable for both temporary and permanent works in land-based and marine environments.

The performance of a sheet pile section is dependent on its geometry and the characteristics of the soil in which it is installed.

We provide innovative, commercially viable solutions through our in-house design team, utilising modern installation and extraction techniques to deliver complex sheet piling packages.

UNDERSTANDING SHEET PILING



Steel sheet piles can be installed using a variety of modern and traditional methods:

- **Side-grip Movax vibratory hammers** attached to excavators or road–rail vehicles, suitable for restricted access and confined working conditions.
- **Telescopic leader rigs** with resonance-free or variable-moment vibratory hammers, which reduce vibration during installation and extraction.
- **Vibration free silent pile presses** using press-in techniques, ideal for environmentally sensitive areas, confined spaces, and hard-to-reach locations.
- **Conventional methods** using large cranes with hammers, where sheet piles are installed through temporary piling gates.

Driving assistance can also be provided where necessary through impact driving, water jetting, or pre-drilling/pre-augering.

PROJECT ADVANTAGES

- Reusable and recyclable sheet piled sections, suitable for temporary or permanent works
- Pile lengths adaptable to varying ground conditions, with design life enhanced by sacrificial thickness or protective coatings
- Capable of resisting horizontal and vertical loads, and can be anchored or propped as required
- Vibration-free press methods minimise noise and disturbance, ideal for environmentally sensitive or inner-city locations
- Suitable for restricted or confined spaces
- Telescopic leader rigs with resonance-free / variable-moment vibratory hammers which reduce vibration during installation

EXAMPLE APPLICATIONS

- Temporary works, including retaining walls and cofferdams to facilitate excavation and construction of below ground structures
- Thrust and reception pits for pipelines
- Permanent retaining walls, providing an economical basement solution capable of supporting both vertical and horizontal loads from earth and water pressures
- Highways retaining walls and bridge abutments
- Embankment retention and stabilisation, suitable for flood alleviation schemes, rail infrastructure, coastal protection, and revetment toe restraints
- Marine structures, widely used in ports and harbours for quay walls and jetties