

Titan

Modular Block Retaining Wall



Engineered for Strength

Modular Walls

Modular block retaining wall systems offer affordable solutions to earth retention needs.

Phi Group is the most experienced specialist in the UK in both the design and installation of modular block wall systems. Since 1994, we have been responsible for the design, supply and construction of over 50,000 sq.m. of wall. This has included the most prestigious projects in the country where innovative design and technical competence have fully satisfied the visions of discerning clients.

Architectural Features

- Split or weathered finishes give the appearance of natural stone in a variety of colours with heavy texture and deep shadows to suit any environment.
- Careful use of fair faced or recessed blocks provide options to create architectural features such as banding and patterns.
- Graceful curves as well as sharp corners can be formed to suit the site layout and add further feature to the walls.
- Cladding blocks can be provided for use on adjacent structures or surfaces to give continuity of appearance.
- Blocks can be supplied that match architectural masonry.
- The tops of Modular block walls can be neatly finished off with coping units either in a matching or contrasting finish.

Engineering Features

- Modular blocks act as retaining walls either as gravity structures (at heights less than 1.5 m.) or by linking the block to soil reinforcement, they become substantial structures capable of resisting high loads to almost any height.
- The variety of reinforcement options enables Titan walls to be used in both fill and cut applications, even where both exist in the same structure.
- Plain faced walls can provide a highly cost effective structure for utility applications or for later facing with an alternative architectural treatment such as brickwork.
- Most soil conditions can be accommodated, and reinforced soil walls offer much reduced bearing pressures over more conventional structures usually eliminating any requirement for ground improvement or piling.
- Parapet units can be used on top of the wall and can be designed to cater for the Highway Agency requirements for vehicle containment barriers.
- Dry build construction.

Technical Approval

British Board of Agrément Certificate No 03/R135. This certificate relates to the use of the Titan wall system for roads and bridges.



Engineered for Architectural finish

Applications

- Retail parks and superstore developments
- Commercial and business parks
- Highway and rail infrastructure projects
- Private and social housing developments
- Airports
- Leisure facilities, stadia and theme parks
- Marinas, quays and river works
- Landscaping schemes

Gravity Walls

Modular blocks may be used for low height retaining walls in non-critical applications. The units lock together, without the need for mortar, to form an attractive monolithic structure to grace projects of any size.

Reinforced Soil

When modular blocks are combined with soil reinforcement placed in compacted backfill, tensile strength is imparted to the soil, thus creating a reinforced soil mass that is capable of outstanding structural performance.

The soil reinforcement can take the form of synthetic polymer geogrids or steel in the form of ladders, mesh or strip. Tensile strength, frictional resistance and durability are all important, but the ability to provide a full strength connection to the modular blocks is the most significant factor when selecting the most cost-effective reinforcement.

Soil Nailed Walls

The use of soil nails as a method for reinforcing in-situ soil enables the modular block wall to be utilised as a facing medium. Apart from the savings in cost, the environmental benefits of avoiding large-scale excavation and muck away are substantial.

Composite structures can also be built that change from soil nailing to reinforced earth, either along their length or part way up their vertical height.



Completed Projects

Colours and Finishes

Modular block walls are available in a range of colours and finishes to match architectural and aesthetic requirements:

- Standard colours: Grey and Amber, but 12 other colours are also available.
- Special colours: Pigments and concrete mix designs are available on request to enable designers to select colours to blend with existing natural features and/or surrounding buildings and structures.
- Split block or weathered finishes available to create natural appearance to the face.
- Plain face or architectural finishes (corrugated etc) are available to suit specific applications.

Design

From concept to construction, Phi Group offers a complete design, supply and construction service undertaken by our in house chartered engineers, and backed up by full indemnity insurance.

Construction

Phi Group's own directly employed experienced construction teams, operate nationwide completing the total design, supply and build package, thus affording, optimum peace of mind and minimum risk, to client and contractor alike.



Phi Group has full Link-up accreditation, enabling the company to provide engineering solutions to the Railway sector.



Phi Group are approved by Constructionline, pre-qualified to work within the public sector.



Phi Group belong to the RIBA CPD Providers Network.



Phi Group
Retaining Structures

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