



PRECAST FOUNDATION PACKAGES

**WE
KNOW
CONCRETE**

PILING | FOUNDATIONS | PRECAST



EXPERTISE

Precast Foundation Packages provide a complete sub-structure solution for new build domestic dwellings and commercial buildings and can be used when difficult or contaminated site ground conditions are encountered.

The core elements of the foundation package are load bearing piles, PCC pile caps, PCC ground beams and a structural floor. These elements produce a monolithic sub-structure, or 'tabletop' allowing follow-on trades to work from a clean, level and dry platform.

Different pile types and techniques can be used with the Foundation Package to best suit the existing site ground conditions.

Suitable pile types include:

- Precast Concrete Driven Piles
- Tubular Steel Driven Piles
- CFA (Continuous Flight Auger) Bored Piles
- Bottom Driven Low Vibration Mini Piles

The most economical and suitable pile type can be assessed from an analysis of the site soil investigation report. Consideration can also be given to the use of low vibration and reduced noise piling techniques for use in residential or environmentally sensitive areas.

Precast Foundations Packages provide an economical and value-engineered sub-structure, without producing the unnecessary waste of concrete, blockwork and excavation work involved with in-situ and traditional foundation methods.



- Single source sub-structure provider
- Minimum excavation and site preparation
- Cost savings on traditional foundation methods (note comparison)
- NHBC and building control approved
- High quality factory produced product to ISO 9001 accreditation
- High accuracy of finished product suitable for timber frame and modular superstructures
- Flexible and bespoke structural design to clients requirements

SureFound System

The diagram illustrates the SureFound System, a precast concrete foundation solution. It shows a cross-section of the system installed on a precast pilecap. The main components and their dimensions are as follows:

- Inner Leaf (Block or Timber Frame):** The central vertical element.
- Outer Leaf:** The outer vertical element.
- Finishes and membranes to Architects Details:** Applied to the inner and outer leaves.
- Subfloor ventilation to Architects details:** Located below the suspended floor.
- External Ground Level (Varies):** The ground level outside the building.
- 150mm dp Suspended Floor (Taranto B&B/PCU):** The floor slab above the SureFound beam.
- Internal Ground Level:** The ground level inside the building.
- 150mm Void:** The gap between the suspended floor and the SureFound beam.
- SureFound Beam:** 350mm wide, 350mm deep, 150mm drainage holes at 600mm c/c.
- Precast Pilecap:** 230mm/380mm deep.
- Plot drainage under beam:** The drainage system located beneath the SureFound beam.

Dimensions:

- 895 mm:** Total height of the SureFound beam.
- 150 mm:** Depth of the suspended floor.
- 225 mm:** Height of the SureFound beam above the internal ground level.
- 350 mm:** Total height of the SureFound beam.
- 230 mm:** Depth of the precast pilecap.

600
Piling Platform Level

Plot drainage above beam

Insitu Concrete ground beam: Min. 450mm wide x 450mm deep

The diagram illustrates a cross-section of a building's floor and foundation. At the base is a thick, grey concrete foundation. Above this, a horizontal layer of insulation is shown with diagonal hatching. A central vertical element, likely a column or beam, is depicted with a cross-hatched pattern. To the left of this central element, there is a layer of insulation with a wavy pattern, followed by a layer of concrete with horizontal lines. A horizontal line with a downward-pointing arrow is labeled 'Plot drainage above beam'. To the right of the central element, there is another layer of insulation with a wavy pattern, followed by a layer of concrete with horizontal lines. A horizontal line with a downward-pointing arrow is labeled 'Insitu Concrete ground beam: Min. 450mm wide x 450mm deep'. On the far left, a vertical dimension line with a curved arrow indicates a height of '600' and is labeled 'Piling Platform Level'.

This architectural floor plan shows a building layout with various rooms and structural elements. The plan includes a grid system with dimensions: 220, 3480, 1980, 1950, 3568, 1980, 1380, 220, and 1980. Rooms are numbered 1 through 38. Key features include:

- Room 1: A small room at the top left.
- Room 2: A room below room 1.
- Room 3: A large room in the center.
- Room 4: A room to the right of room 3.
- Room 5: A room to the right of room 4.
- Room 6: A room at the top right.
- Room 15: A room on the left side.
- Room 16: A room below room 15.
- Room 17: A room to the right of room 16.
- Room 21: A room to the right of room 17.
- Room 22: A room at the bottom right.
- Room 29: A room on the left side, below room 15.
- Room 30: A room below room 29.
- Room 31: A room to the right of room 30.
- Room 35: A room below room 31.
- Room 36: A room to the right of room 35.
- Room 37: A room to the right of room 36.
- Room 38: A room at the bottom right.

 Structural details include:

- Dimensions: 220, 3380, 7312, 3902, 220.
- Labels: 100, 50 P.O., 20, 50 P.O., 21 P.O., 1104, 100.
- Letters: A, B, C, D.
- Room numbers: 1, 2, 3, 4, 5, 6, 15, 16, 17, 21, 22, 29, 30, 31, 35, 36, 37, 38.

Structural floor plan of the first floor. The plan shows a rectangular layout with a central column labeled '60 G.O.'. Beams are labeled: BEAM AA 2, BEAM Y 2, BEAM H, BEAM W 2, BEAM EE 4, BEAM W 1, and BEAM W 2. Dimensions include 350, 1622, 2243, 4073, 1215, and 5250. Section lines A-A, B-B, and H-H are indicated. The plan is oriented with 'FRONT' at the bottom.



EXPERIENCE

Taranto has over 20 years' experience of the design, manufacture and installation of Precast Foundation Packages for domestic dwellings and commercial units. Our design team were heavily involved in the research and development of Foundation Packages and have developed the product to suit modern building techniques such as timber frame and modular superstructures.

Our in-house structural design team produce bespoke designs and construction layouts for each project (see pile and beam layouts on previous page); whilst our in-house geotechnical design team analyse site conditions and design a foundation suitable to the building type and to the ground and environmental conditions on site.

The Taranto Foundation Package system has been used on many of the largest housing projects in both the UK and Ireland, as well as new build nursing homes, schools, libraries, council buildings, retail and commercial units.

SOLUTIONS

Taranto is the only company in both the UK and Ireland to design, manufacture and install each of the core elements of the Foundation Package. All of the elements of our **Foundation Package, piles, pile caps, ground beams and structural floors**, are designed and manufactured in house and are made to the highest factory standards and accredited with ISO 9001 and CE mark.

Through the use of our full product range, Taranto offers value engineering and considerable cost savings to our clients. We offer the largest range of PCC pile sizes available in the UK and Ireland and our in-house geotechnical design team can choose the most economical and technically suitable pile to meet our clients' needs; there is no need for costly over design and waste with the Taranto Foundation Package.

Our designs are full insured with a continuous professional indemnity policy of £5,000,000 and a full 12 year insurance backed warranty is available on all our design, manufacture and installation works.



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