



Knuckle Pile



Federation of Piling Specialists



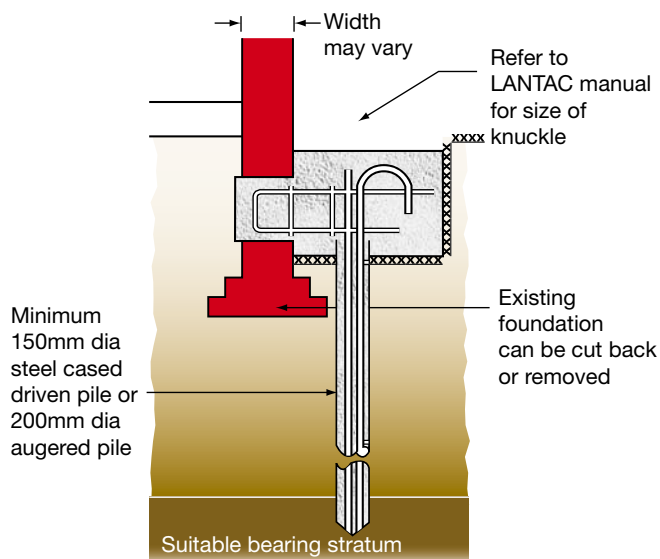
Deep Foundations Institute



Association of Specialist Underpinning Contractors and Engineered Foundations



Preparation completed - Ready to pour



Section through knuckle

U4 System can be adapted to suit heave conditions

N.B. Capacity of knuckle is governed by the pile eccentricity from the subject wall.

Description

The stabilisation of an existing wall foundation by the installation of a series of RB knuckle piles connected to the existing wall from one side.

Loading Capabilities

Loadings up to 100kN/m can be catered for with this system, dependent upon underlying bearing strata. Individual knuckles are generally rated at 50kN.

Application

All types of shallow foundation stabilisation, especially where traditional underpinning is unsuitable or where access is restricted.

Installation Procedure

Excavate a small area at each knuckle position. Break out projection of foundation as necessary. Install either by driving casing or augering, a 150mm diameter pile at centres as required to accommodate loadings; break out a 300mm x 300mm pocket in existing brickwork; install main knuckle reinforcement; concrete knuckle ensuring adequate cover to reinforcement. Install at 0.5m - 1.5m centres.

Advantages

- LANTAC approved system.
- Less disruption than traditional underpinning.
- Fast compared with traditional underpinning.
- Access required from one side of the wall only.
- Occupants may not have to be relocated.

