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Enlarged Pile Heads

Application

Floor slabs with or without load transfer platforms or reinforced granular blankets

Raft foundations with or without load transfer platforms or reinforced granular blankets

Hardstanding areas and road embankment supports with load transfer platforms or reinforced granular blankets

Advantages

- Slab construction more economical
- Reduces punching shear
- Eliminates expensive pile trimming
- Barriers and membranes can be laid over pile heads
- Eliminates expensive trimming and sealing

Patents

UK Patent No 2334543
UK Patent No 2363152
UK Patent No 2378471
Ireland Patent No 2001/0545
Europe Patent No 0937825
Europe Patent No 1283307
US Patent No 6168350
US Patent No 6168350
US Patent No 6641333

Trademarks

CEMCAP®



The requirement for integral enlarged pile heads has increased greatly as a result of engineers and main contractors looking for the most efficient and economical foundation solutions for their clients. Cementation Skanska has developed a range of specially adapted head formers for use with DCIS, precast driven or bored piling techniques.

The Process

Specially adapted head formers are driven or drilled into the ground at the start of the piling operation depending on the piling process in use and the site ground conditions. Formers are generally conical in shape and up to 900mm in diameter, however square heads can also be accommodated with certain processes. During the concreting operation a sufficient head of concrete

is maintained, to ensure the integrity of the integral enlarged pile head during the extraction of the head former.

Pile reinforcement can project through the enlarged pile head if required or be terminated below the finished head level to meet particular design requirements.

Typical Site Applications

Piles are installed on a square or triangular grid pattern to support the following:

- a) Floor slabs with or without load transfer platforms or reinforced granular blankets.
- b) Raft foundations with or without load transfer platforms or reinforced granular blankets.

c) Hardstanding areas and road embankment supports with load transfer platforms or reinforced granular blankets.

As heads are an integral part of the pile construction and are finished at ground level, expensive pile trimming is eliminated. Under slab barrier and/or waterproofing membranes can be laid directly over pile heads so that expensive cutting and sealing around pile shafts is not necessary.

Advantages

The enlarged pile heads reduce the effects of punching shear and therefore more economical slab construction can be used.

