

## 5. Enclosed Cofferdams

### 5.1 Rectangular

#### 5.1.1 Panel Driving Method

The craneage available should have sufficient reach to enable each pile to be interlocked into the previously pitched pile, before driving commences adjacent to a corner pile.

Working around the perimeter, the final and closing panel, which should include a corner pile, must be pitched and interlocked with the partly driven first pair of piles, before driving is commenced. This is to ensure satisfactory closure of the cofferdam.

In small cofferdams it is advantageous to pitch all piles before commencing driving as this will alleviate probable difficulties in closing the cofferdam.

#### 5.1.2 Pitch and Drive Method

Driving should commence and stop at 5 double piles from the final corner. Closure of the cofferdam is achieved by adjusting the alignment of the wall either inwards or outwards to suit the dimensions of the piles being used.

It is important that verticality of the piles is maintained during driving of the plain and corner piles; any tendency to lean must be corrected, if necessary by using taper piles.

If the cofferdam dimensions have to be strictly adhered to, then special fabricated piles will probably have to be provided.

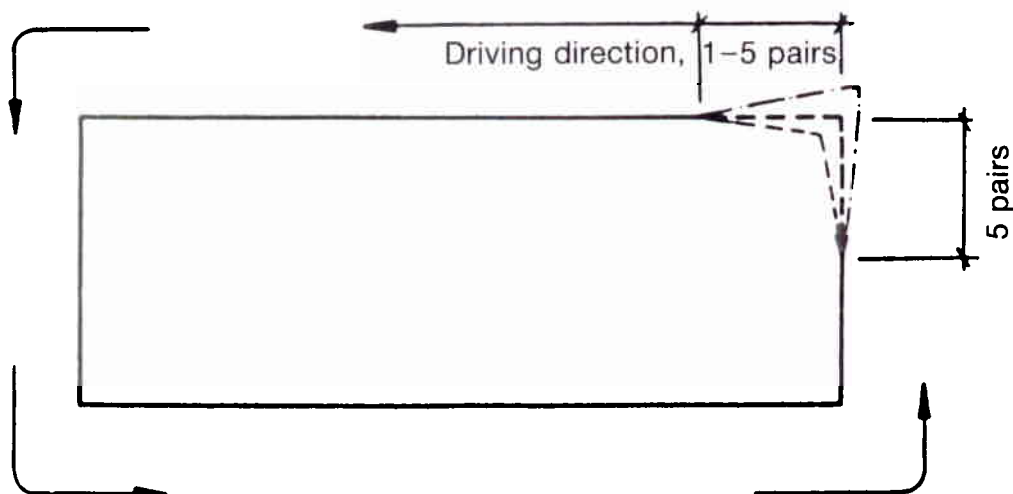


Figure 5.1.2

## 5.2 Circular cofferdams

The length of the pile, straightness, and the soil pressed into the interlock during driving have a considerable influence on the achievable deviation of one pile from another. These deviations increase the friction in the interlocks considerably.

For small cofferdams it is prudent, where possible, to pitch and interlock all the piles around a driving template before starting to drive. Driving should progress in stages using a short lead of one pile to the adjoining pile.



Figure 5.2

In large cofferdams strict control on verticality must be maintained, preferably using panel driving techniques to facilitate closure of the cofferdam. It may be necessary also to re-arrange the final panel by increasing or reducing the radius of the cofferdam slightly, or by introducing a specially fabricated pile.

Cofferdams of small diameters may not be achievable with just interlock rotation, and therefore may require the introduction of prebent piles or fabricated special piles.

