

General Advice

These instructions should be read in conjunction with the contract specification and drawings. They are intended to provide guidance in normal installation situations and are addressed to the installer on site. If there are any questions related to the design, unusual installation challenges, or any doubt, consult ABG for further advice. In all situations, responsibility for installation remains with the Installer.

Description

ABG Piledrain is a geocomposite drain comprising of an impermeable single cusped HDPE core with a nonwoven geotextile wrap across the cusped face and bonded to the edges of the core (**Fig. 1**). Its main application is to collect water from the space between contiguous bored concrete piles (**Fig. 2**).

Delivery and storage

Piledrain is available to order in widths of 275mm, 550mm and 1.1m x 50 m roll lengths to accommodate the majority of site configurations and should be stored on site by stacking on a dry, level surface.

Health and safety & chemical resistance

The material does not present a health hazard and no special precautions are required.

Resistant to all common chemicals and does not support fungal growth. Concrete will not penetrate the geotextile covering.

Equipment and materials required (**Fig. 3**).

- **Piledrain** geocomposite
- Safety knife & safety gloves for cutting and fixing **Piledrain** geocomposite
- Nail gun, stainless steel nails & plastic washer fixings (to accommodate the 12mm thickness of the **Piledrain** plus 30-40mm embedment into the concrete).

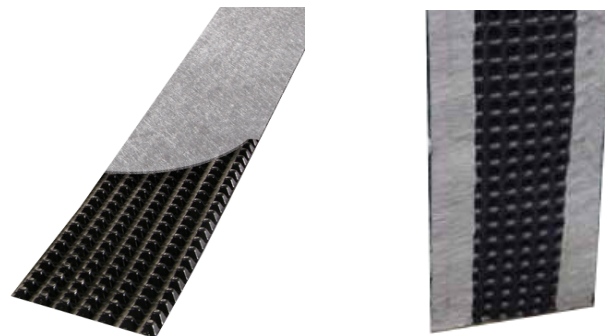


Fig. 1: Piledrain geocomposite with cusped drainage core and filter geotextile. The front face of the product (shown above left) is fixed to the gap in between concrete piles to channel ground water.

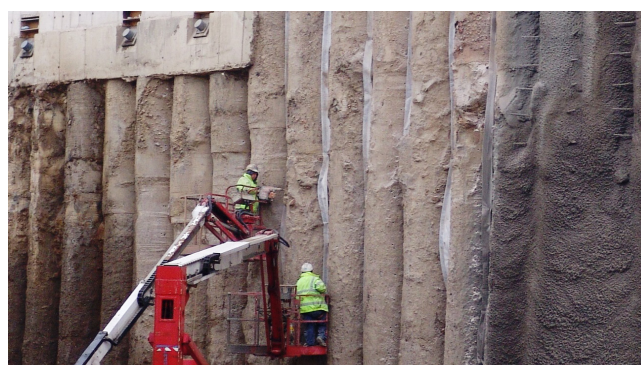


Fig. 2: Piledrain nailed into position between contiguous bored concrete piles.



Fig. 3: Piledrain, safety knife & safety gloves, nail gun, stainless steel nails & plastic washers.

Installation Method

Step 1 - Cut **Piledrain** to length of the pile, plus an allowance to extend the bottom of the drain to a collector pipe or channel at the base. (**Fig. 4 & Fig. 7**).

Step 2 - Compact soil between piles where possible or introduce a compressible, porous fibre board to act as a back shutter. (**Fig. 5**).

Step 3 - Offer **Piledrain** up to the gap between piles such that the top of the cusps and geotextile covering is facing towards the soil to be drained. The drain hangs down the full length of the pile and is in close contact with both piles and soil in a "U" shape. Ensure the **Piledrain** spans equally over the gap between the piles, with each edge in close contact with the piles. (**Fig. 5**).

Step 4 - Using a nail gun fix the **Piledrain** to each pile using stainless steel nails and plastic washers at 0.5m centres down each pile. (**Fig. 6**). The length of nail will depend on the concrete strength, such that the nail penetrates 30–40mm into the concrete.

Step 5 - At the lower end, cast a plinth of no fines concrete in which there's a perforated pipe, or haunch a layer of drainage aggregate around the pipe. Alternatively a drainage channel can be cast within the concrete plinth to support a pre-cast slab. Gently curve the **Piledrain** from the vertical to horizontal and terminate around the drainage pipe / into the channel as shown. (**Fig. 7**).

Step 6 - Final facing to the contiguous pile wall is usually a pre-cast concrete panel, in-situ concrete panel or sprayed concrete.



Fig. 4: Roll out and cut **Piledrain** to required length with safety knife.

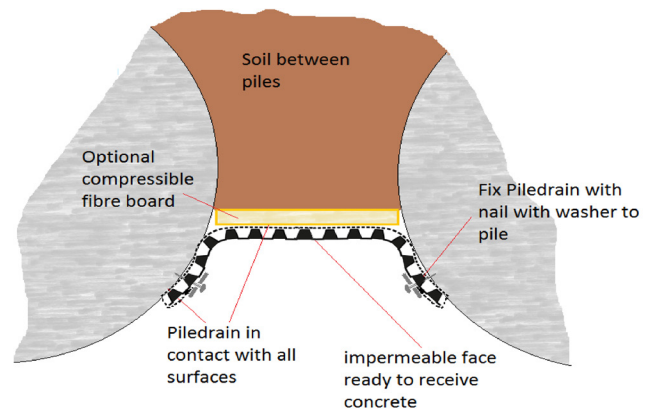


Fig. 5: **Piledrain** fixed / nailed into concrete pile walls, ensuring each edge is in close contact with the piles.



Fig. 6: Using a nail gun fix the **Piledrain** to each pile using stainless steel nails and plastic washers at 0.5m centres down each pile.

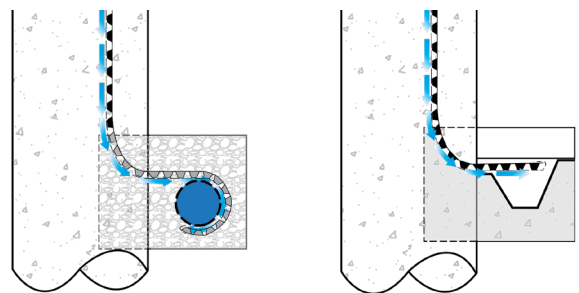


Fig. 7: Examples of **Piledrain** fed into gravel surround to collector pipe, or into a drainage channel cast in the concrete plinth to support a PCC slab.