

Aim

To block drains in order to raise the water table where peat dams may not be appropriate due to drain size or slope.

When to use

- ◆ On drains greater than 1.5m wide and/or 1.2m deep.
- ◆ On flatter sites but also effective on steeper slopes.
- ◆ When only a few dams are required or when reinforcement at the bottom of a run of dams may be appropriate.
- ◆ If it is not cost effective to get an excavator on site to make peat dams.
- ◆ If dams made from peat alone not deemed robust enough due to volume of water in wider ditches.
- ◆ On key drain exit points on lowland raised bogs.

Best Practice

- ⇒ Piling will only create a good seal if driven into at least 75cm of solid peat. More solid peat is usually found below the 50cm of soft peat in the base of the ditch.
- ⇒ The dam must extend well into the banks either side of the drain. As a rule of thumb the width of each one of these extensions into the bank should equal the width of the ditch.
- ⇒ If there is likely to be a lot of water coming over the overflow, place branches, heather sods or tree trunks in the flow to stop undercutting of the dam.

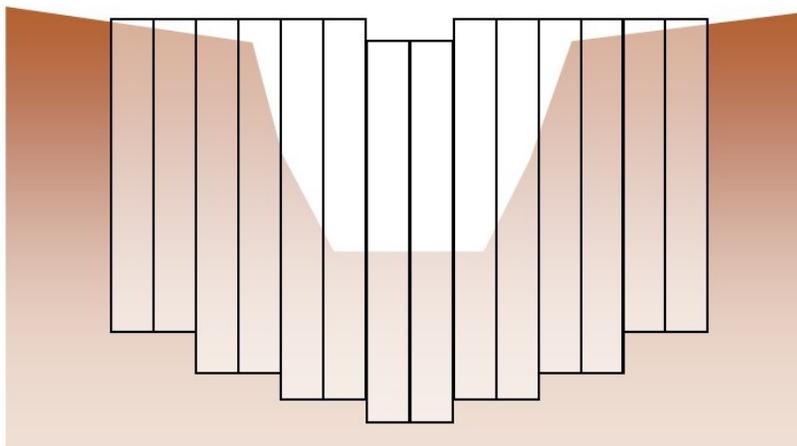


Machinery

- ◆ Can be done by hand
- ◆ An excavator can be useful to drive in plastic piling
- ◆ Consider machinery being used to transport materials to site (tracked vehicles can cause less damage)

When most prone to failure

- ◆ If they are not reinforced
- ◆ If seal is not sufficient (sides and base not properly keyed in)
- ◆ When installed in drains with very shallow or no peat in base
- ◆ On previously afforested sites. Roots make it very difficult to sink the plastic piling and get a good seal (also consider historic remnants of trees in deeper layers of peat).
- ◆ In drains with high flow rates (water can overflow, or splashback can erode base)



As a guide only one third of the dam will be visible on completion. The total quantity of plastic piling required will be approximately twice the cross-section area of the ditch, although this can increase to 3 times for dams wider than 3 metres.

Points to remember

- ◆ Plastic piling and wood to reinforce a structure is much more expensive than peat dams.
- ◆ Transporting materials on and off site has to be considered.
- ◆ Plastic piling dams will need good reinforcement on steeper slopes and where ditches are wider than 1.5m.
- ◆ Dam must extend sufficiently into bank either side of drain.
- ◆ Plastic can become brittle over time and can be damaged easily. Plastic piling dams are not suitable as crossing points. In some circumstances timber bracing, if substantial, can be used for crossing.
- ◆ Can be very effective and are capable of holding back a lot of water. Consider using different profiles based on flow/dam width.
- ◆ Plastic dams can catch fire and may leach chemicals over time.
- ◆ Larger structures, particularly those using plastic, can have a visual impact.
- ◆ Ensure dams are not installed on natural water courses and CAR licensing requirements are met.

Further Guidance and Support

Peatland ACTION Project Officers are available to help you with your project. Please contact us as at peatlandaction@nature.scot to be put in touch with your local Officer.

Practical Peatland Restoration Notes:

Ditch Blocking Basic Principles
Wooden and Composite Dams
Peat Dams
Wave Damming and “Zipping”

YouTube Videos:

[Ditch Blocking](#)

Peatland ACTION Documents:

[Guidance - Peatland ACTION– Installing peat dams and plastic dams](#)