

FACTSHEET

Timber Dams

Timber dams are slightly permeable gully blocks that are used both to slow the flow of water downstream, and to create pools. They are (deliberately) leaky, such that they can trap water from high rainfall events and then slowly release some or all of it (thereby making an empty space ready to trap the next rainfall event). During this process they also trap sediment that would otherwise be lost from the moor. Slowly the sediment accumulates until it fills the pool, at which time the dam loses its water storage function but has raised the bed of the gully, which can then be recolonised by vegetation such as cotton grass or *Sphagnum* moss (possibly artificially aided, eg through plug planting or seeding).

Dams should be no more than five or six planks high. The planks and posts must be driven into the peat sufficiently to prevent undercutting of the peat, and should be keyed into the sides by at least 30cm to prevent side-cutting (see Figure 1, below). A splash plate of stone or timber should be positioned beneath the spillway as a baffle to prevent undercutting.

Hard or softwood may be used for the dam construction. Elm and oak are preferred for durability with western red cedar or Douglas fir used as softwood alternatives. Moors for the Future specify FSC-approved timber that is untreated (to prevent chemicals leaching into the peat or water).

PURPOSE

- Can create pools, and trap sediment, allowing for re-vegetation

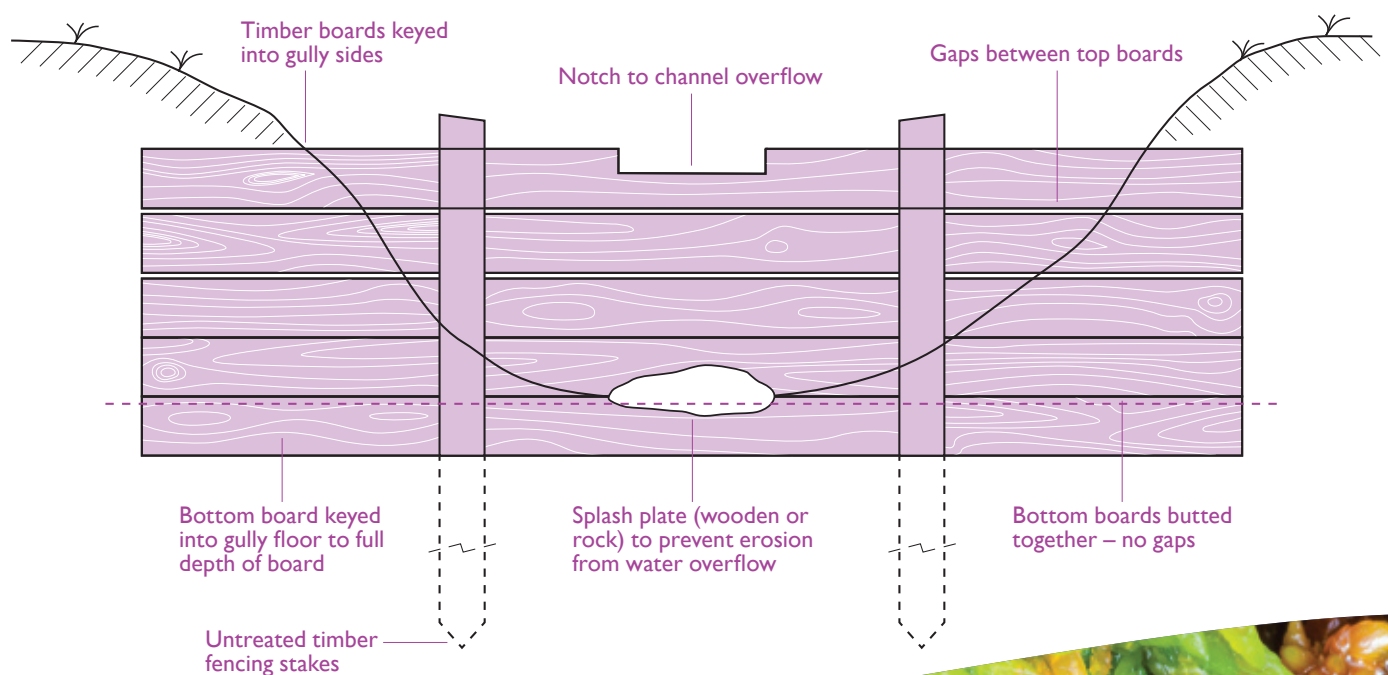
ADVANTAGES

- No vehicular access required – timber can be airlifted to any location and dams constructed using hand tools
- Can be installed across a range of gully profiles

DISADVANTAGES

- Require enough peat in which to drive stakes to support dam
- Can make it difficult to cross gullies on foot when pools are full

Figure 1: Timber dam construction



CASE STUDY: KINDER SCOUT

These sequences of images demonstrate the effects of timber dams installed on Kinder Scout in 2013. Note the amount of water and/or sediment trapped by each dam.

September 2013



September 2014



March 2015



Once the water and sediment have stabilised behind the dams, the next step is to introduce vegetation through plug planting or seeding. *Figure 2*, below, illustrates *Sphagnum* moss behind a timber dam.



Figure 2: Sphagnum moss colonising the pool behind a timber dam on Kinder Scout

MoorLIFE2020

This factsheet is one of a series produced by the MoorLIFE 2020 project. A Moors for the Future Partnership project in the EU designated South Pennine Moors Special Area of Conservation. Delivered by the Peak District National Park Authority as the lead and accountable body (the Coordinating Beneficiary). On the ground delivery is being undertaken largely by the Moors for the Future staff team with works also undertaken by staff of the National Trust High Peak and Marsden Moor Estates, the RSPB Dove Stone and Pennine Prospects (the Associated Beneficiaries).

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