

# Devon hedge management 1: maintaining and repairing turf and stone facing

True Devon hedges consist of an earth bank faced with either turf or stone on top of which shrubs and trees usually grow. The choice of bank facing material depends upon the local availability of suitable quarry or field stones.

Various theories have been put forward to explain why these banks, which are often massive, were constructed. These include stock shelter from severe winds, prevention of soil erosion, raising hedge shrubs above wet land and, with respect to some of the wider hedges, as rabbit warrens. In Brittany the ancient Celts are thought to have believed that the souls of the dead reside under trees on banks. Stones cleared from fields are often used to face banks.

This section reviews the methods for maintaining stone faced and turf faced hedges. It is complemented by section 8, *New turf faced banks and planting*. Further relevant information can be found in section 13, *Moving hedges* and section 14, *Pipelines*.

Tenant farmers are advised to consider the hedge maintenance terms of their tenancy agreements and the risk of dilapidation notices.

## Maintenance

Hedgebanks are man-made structures so they need periodic maintenance. This may be a result of:

- The slow erosion of soil from the top of the bank to the bottom in heavy rain. This effect can be made worse by the shading effects of mature trees reducing the ground vegetation which stabilises the bank. Likewise, grass and brambles growing on the top of banks can, if they are not grazed or cut, shade out vegetation growing on the sides of banks creating bare patches.



*Repairing stone facing.* ©Robert Wolton

- Erosion of vegetation and subsequent soil loss due to stock climbing on or rubbing against the bank.
- Hedge shrubs and trees being allowed to grow too tall and either destabilising the bank through wind causing roots to rock, or stems falling over taking soil with them, so creating gaps in the bank.
- Rabbits and badgers burrowing into the bank, eventually causing gaps.
- Large vehicles and farm machinery damaging the banks alongside narrow lanes.

Turf faced banks benefit from 'casting-up', the process of replacing fallen soil back on the top (or crowns) of banks, restoring the bank height and profile. Casting-up is made much easier if the hedge has been planted as a double row of shrubs and steeped (laid) along either edge, known as a double comb, leaving a wide central area into which the soil can be placed. Casting-up is generally practised when the hedge has just been steeped, or after it has been flailed short.



A fine example of stone facing at Morte Point.  
©Robert Wolton

It is most important that any repair work uses facing (either turf or stone) that matches the existing bank. Stone faced banks may need dislodged heavy top stones replacing, their weight securing the lighter stones underneath.

To reduce the shading effects of shrubs, trees, brambles and long grass which can result in bare patches on bank faces making them vulnerable to erosion, hedges should not usually be allowed to develop into lines of trees; their side branches should be trimmed regularly, and the lower limbs of mature trees removed. Any fencing should be placed close to the hedge, so the grass and brambles (but not any young trees!) can be grazed. For more information see section 12, *Hedgerow trees*; section 11, *Trimming* and section 4, *Modern farming*.



Figure 1: Banks, whether stone or turf faced, should have concave faces for strength. When stone faced, the largest stones should be at the base.  
Heather Harley after original in first edition

## Stone faced bank repairs

Damaged banks should be taken back to firm stones and then rebuilt in courses, as follows:

1. The largest faced stones should be at the base and the smallest at the top, except for a few large ones used for bonding the two sides together and for capping stones. (Figure 1.)
2. Backfill with soil at the completion of each course and tamp well. This infill material needs to be packed in tightly behind and between the face stones. The use of anything other than very small stones as infill with soil is likely to increase the possibility of slumping as soil trickles down between the stones. The repair should be finished with a layer of turf, preferably just above a course of large flat stones used to secure the stones below.
3. The style of the existing hedge should be followed. The batter on a stone faced bank is generally less than that of a turf faced bank, perhaps 30 cm (1 foot) for a bank 2 m (6 feet) high. The concavity should be 8-10 cm (3-4 inches).
4. Rough faced stones generally sit best on their edge, though larger flat stones can be better laid horizontally (Figure 2).

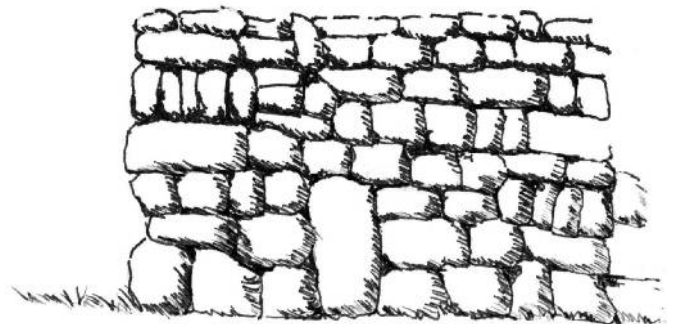


Figure 2: Rough stones generally sit best when vertical, larger flat stones when horizontal.  
Heather Harley after original in first edition



## Turf faced bank repairs

A mini-digger, wheeled digger or tracked excavator is very useful for big jobs and major restoration projects, provided the soil infill is compacted well - if it is not, then the face will slump.

The use of weld mesh for repairs is not recommended, largely because of the difficulty of compacting the enclosed soil adequately, resulting in turf facing falling away and the banks slumping as the soil trickles through the mesh, leaving the wire exposed and looking ugly.

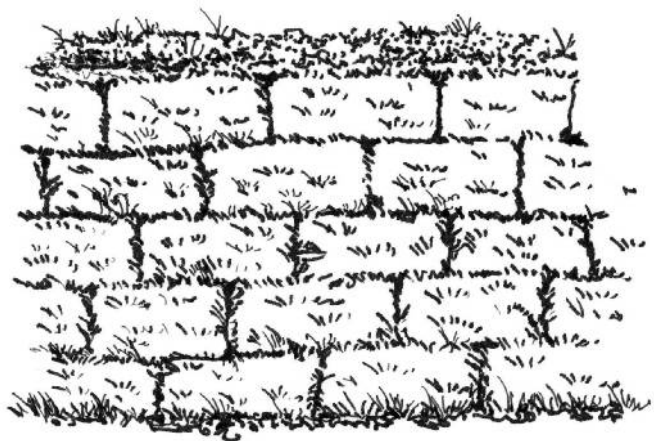
For small gapping up work, sites where access is difficult or where conservation volunteers are involved, traditional manual methods are best:

1. Cut back the bank to the original width and form a well tamped ledge for the new turves.
2. Cut turf from the adjacent field in square blocks the width of a shovel and about 10-12.5 cm (4-5 inches) deep (the depth of a shovel). The angle at which the bottom of each turf is cut will determine the angle that it sits on the bank. Turves cut from nitrogen-rich soils typically produce dense lush grass, nettle, goosegrass and dock growth, smothering desirable herbs like primroses and violets and, through shading, creating bare patches on the bank sides which are vulnerable to erosion. So, use nutrient-poor turves if possible.
3. Place the turves grass face out on the bank in level courses, each one set back about 1 cm (½ inch) from the one below to ensure that rainwater runs down the face evenly and that turves are watered uniformly. Make sure that, as in bricklaying, the courses overlap (Figure 3).



*Don Gaskins cutting turves to re-face the bank behind. Note the curved handle of the Devon shovel, useful as a form for the concave face of the bank.*  
©Maxine McAdams

4. At the end of each completed course fill in behind the turf with loose soil from the base of the bank and tamp down well, using a length of hard stem wood, about 25-40 cm (1-1½ foot) long and 5 cm (2 inches) in diameter. At the end of the repair, the firmness of the packing can be checked by pushing a stick into the bank in a gap between turves and noting the resistance.



*Figure 3: Turves should overlap those in the course below, as in brick laying.*  
Heather Harley after original in first edition

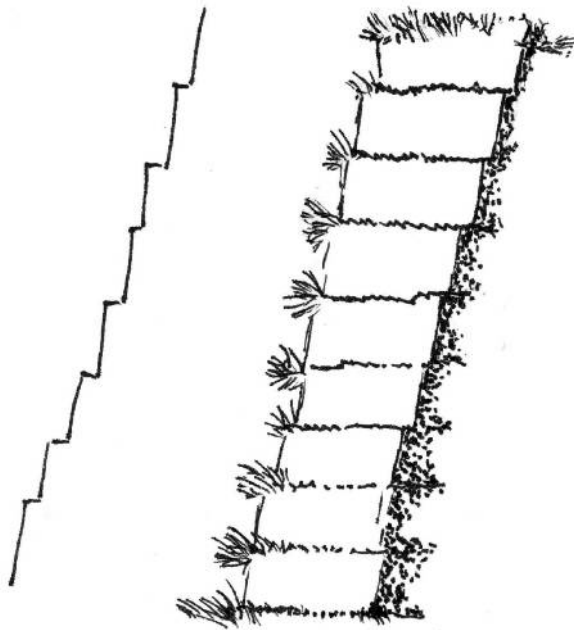


Figure 4: Each layer of turf should be set back to create a batter of about 30 cm for every 1 m height. Heather Harley, amended from first edition

5. The face should slope backwards (the batter) by approximately 30 cm (1 foot) for every 1 m (3 feet) in height (Figure 4). Some bank repairers like to have less batter on the wetter south to west facing faces and more on the drier north to east facing banks. The final courses should slope back less, creating a concave face. This is a strong shape, allowing some bulging out in the middle without the risk of turves becoming loose (Figure 1).
6. Take the turves up to the height of the existing bank and finish with loose soil or turf over the crown of the bank.



Repairing a damaged bank using a wheeled digger. The hedge has been steeped along one comb, leaving the other side to do later. ©Robert Wolton

## Hand tools

A traditional Devon shovel with a curved handle is not only the best tool for the work, it can also be used to check the profile of the final bank. A digger (a single sided mattock) is the other traditional tool for both stone faced and turf hedging. This can be used for both digging out and firming up turves and backfill.

## Protection of bank repairs

Both stone faced and turf banks can be very prone to damage by stock, particularly cattle. In some situations it may be appropriate to put up a strand of barbed wire (temporary or permanent) about 1 m (3 feet) high and 0.5 m (20 inches) out from the bank base. This distance may have to be increased if horses are involved. For more information on fencing, see section 4, *Modern farming, management cycle and fencing*.

## Further information

1. Agate, E. 1998. *Hedging: A Practical Handbook*. BTCV.
2. Müller, G. 2013. *Europe's field boundaries: Volumes 1 and 2*. Neuer Kunstverlag, Stuttgart.
3. Natural England Technical Information Note TIN 039. 2008. *Devon field boundaries: restoration standards for agri-environment schemes*. [www.gov.uk/natural-England](http://www.gov.uk/natural-England)



Kevin Clarke beside a massive hedgebank he restored and faced with granite stones on his Dartmoor farm. ©Robert Wolton