Conservation Advice Note 3

CN3
January
2022

Earth Banks in Guernsey

Development & Planning Authority

Introduction

Earth banks (also known as hedge banks or earth hedges) are found as field or land boundaries only in the south west of England, the north west of France, and the Channel Islands, where deep, silty loess soils are coincident with a mild, damp climate. These two factors enable the construction and survival of steep-sided earth banks contrary to conventional engineering principles. So our earth banks are of international significance, and are an attractive feature.

Traditional earth banks are a special part of Guernsey's character and heritage and are protected through the Island's planning laws. The banks are more usually found in the high parishes where suitable soils occur (see Figure 1). In the lower parishes, where sandy soils are not suited to the making of earth banks, boundaries have traditionally been formed by ancient walls of cyclopean boulders (see Figure 2) and more recently by dry-stone or rubble masonry walls (see Figure 3).

Earth banks are best for wildlife if they are grass covered, but native hedging shrubs and trees may also grow on the banks. Roadside banks have occasionally been faced with stone at the base, to protect the bank from erosion (see Figure 4).

Figure 1
Earth bank, Rue Des Morts, St Andrew.

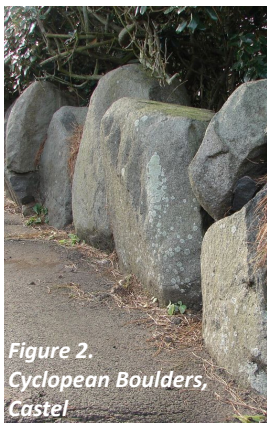

Figure 2.
Cyclopean Boulders, Castel

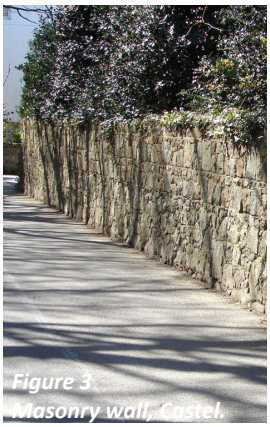

Figure 3
Masonry wall, Castel.

Maintenance

It is best to limit hedge cutting of earth banks to the June and September cuts required by the Parish Constables in order to retain a vigorous covering of vegetation, as plant roots help to stabilise the bank. For stability it is also important for the bank to remain damp and vegetation cover is important to achieve this.

Banks should not be covered with a sheet or membrane, such as Mypex, or artificial turf or grass. Ultimately this will result in drying and erosion of the bank, as well as causing loss of an important wildlife habitat.

The cutting of banks should not be too close; after cutting, the remaining growth should still be several inches long. Excessive trimming, leaving almost no leaf cover or, worse still, scraping the earth surface, causes roots to dry out and the vegetation to die. If using flail mowers or strimmers, special care should be taken to hold the cutting heads away from the surface of the bank.

The use of broad-leaved evergreen trees/hedging shrubs on banks is discouraged, as they shed rain off the banks and leave the earth bank dry. It is best to use native deciduous or spine-leaved plants e.g. Blackthorn (Sloe), Hawthorn (May) or Gorse (Furze).

Every year or two, scrape up any earth, leaves, etc that collect along the base, and throw this debris on to the top of the bank. This nourishes the plants growing there and makes good any slumping.

Figure 4
Stone-faced earth bank, La Planque Lane, St Martin.

Erosion

A problem with earth banks is that they sometimes erode and collapse. Common causes are:

- poor maintenance (as noted above), such as the planting of broad-leaved evergreen hedging or excessive strimming.
- the formation of cavities within banks by rotting away of dead tree stumps and roots. This may be made worse where tree roots previously held the bank together.
- Excavation by animals, including rats, which often occurs near sources of food such as bird feeders.
- Direct erosion by passing vehicles, or by vehicles emerging from an exit and wearing away a bank, whether adjacent to the exit or on the opposite side of a narrow road.

Figure 5
Earth bank erosion.

Construction

Earth banks are all formed with a core of compacted subsoil which must be of a cohesive, silty type. Topsoil or any sort of sandy soil or "recycled" soil will not be suitable. The bank should be built up in 150mm (6 inches) deep layers, each layer being compacted before applying the next layer and then, as necessary, trimming the whole bank to shape upon completion. Alternatively, the bank may be constructed as earth fill compacted in layers between "walls" of thick turfs laid grass uppermost in brick-like courses (Figure 6), in which case no further turf covering or grass seeding will be needed. A 150mm (6 inches) layer of topsoil on the top of the bank will be useful if the intention is to plant a hedge on the bank.

A plain earth bank should be covered in turfs laid grass face outermost (Figure 7) or, especially if built during Spring or early Autumn, the bank may be sown with grass seed – preferably fine lawn grasses without any rye grass.

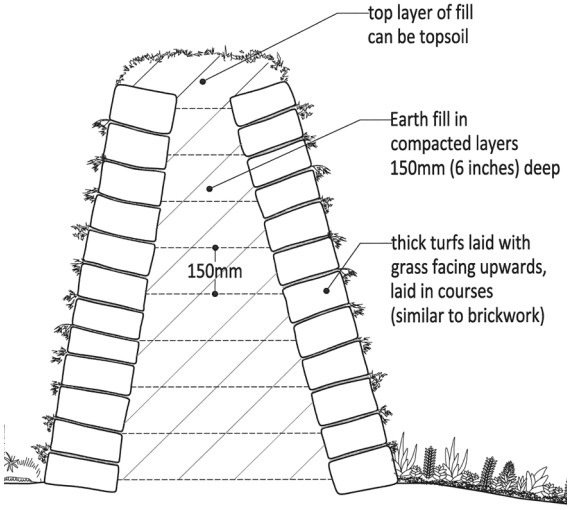

Figure 6.
Construction with turf "walls"

The faces should slope inwards at an angle, or "batter", of about 80° or 4 in 1 - e.g. the face of a 1.2m (4 feet) high earth bank would slope back by about 300mm (1 foot). This batter imparts greater stability to the bank, and also allows more rainfall to land on the face, keeping the vegetation cover in good condition (see Figure 8).

Repair

If any part of the bank starts to slump, don't wait for it to collapse completely; cut out the unstable material to make a cavity that is level at the bottom, then fill this with silt/clay subsoil, i.e. the light coloured soil found 300mm (1 foot) or so beneath the ground surface. This should be placed in horizontal 150mm (6 inches) deep layers, the top and face of each layer being compacted, e.g. beaten hard with the back of a spade. The repaired area should be sown with grass seed, or have a layer of turf pegged in place. Ideally, repairs should be done in the Spring or early Autumn to give the new grass covering the best chance of survival.

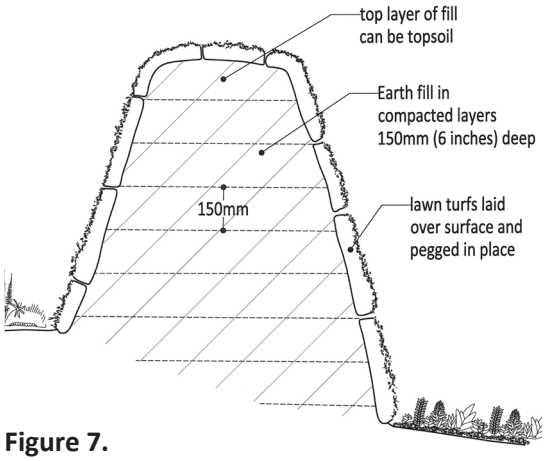

Figure 7.
Construction with thin turfs after construction

Alternatively, after cutting out the failing section to make a flat bottomed cavity, use chunky turfs about 4" (100mm) thick. Build the turfs up like a brick wall across the cavity, grass side uppermost, to leave thin strips of green across a mostly earth face. Any gap behind the turf wall should be filled with subsoil and compacted very firmly as each layer of turfs is completed. To finish the bank, any hollows or dips along the top should be filled with soil.

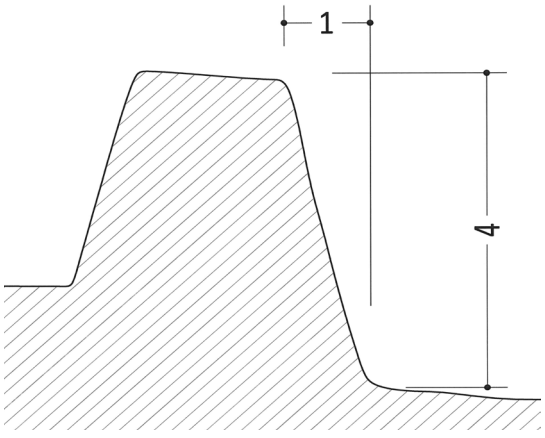

Figure 8.
4 in 1 Batter

Whichever repair method you use, you should aim for a batter or sloping back of the bank face (see Figure 8).

Where erosion by vehicles is the main problem, the base of the bank can be protected by inserting large stones at intervals along the roadside face. Alternatively, a stone wall face to the lower part of the earth bank could be formed. If so, the stones should be built up and backed by well consolidated soil as the work progresses. Above the level of the wall the core soil should be placed and compacted, then faced with turf as described above. Use dry-stone construction, or fill the joints only with earth and/or weak lime mortar.

Note: concrete foundations, concrete backing or cement mortar filling to stone wall joints should all be avoided, as they contribute to the conditions which most often cause earth banks to fail.

Making an Application for Planning Permission

If you wish to build a new earth bank within or along the boundary of the domestic curtilage of a house, no planning permission is required provided that it is not more than 2m high, or not more than 900mm high if in front of any elevation of the house which faces a highway, and neither the house nor proposed earth bank is within a site of special significance (for full details refer to the Exemptions Ordinance). **For a new bank elsewhere, or to materially alter the appearance of an existing bank (e.g. increase or reduce its height or build a stone face), you will need to get planning permission before starting work.** You can apply using an Application Form, which is available from Sir Charles Frossard House together with an explanatory leaflet, or on-line at www.gov.gg/planning. The removal of any part of an earth bank which forms a field boundary or adjoins a highway (e.g. road, footpath, etc) also requires planning permission.

Your application should be accompanied by drawings showing clearly the location of the earth bank on your property, the height of the bank and any other relevant information.

The repair or maintenance of an existing earth bank does not normally require planning permission if the shape and size of the bank is not significantly changed.

Rue Des Roquettes, St Andrew.

Ruette Des Vauxbelet, St Andrew.

Further Information

The Island Development Plan (November 2016) contains relevant planning policies. In particular, reference should be made to the general policies of the Plan (which are prefixed 'GP') and to the Annexes to the Plan. The Island Development Plan can be downloaded from the States of Guernsey website at https://gov.gg/planningpolicy

St Saviour's Church.

Useful Publications

BROOKS, A. & AGATE, E. Hedging: A Practical Handbook. *Doncaster: British Trust for Conservation Volunteers, 1998. ISBN 0 946752 17 6.*

Contact Us

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Go to www.gov.gg/planning for additional guidance material and planning information, or request a pre-application discussion.

Les Petites Vallees, Castel

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