



Planting a new hedge. an Action on Climate in Teignbridge Wildlife Warden Project

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Background:

Devon probably has the best hedges in the world - it certainly has a lot of them; it is estimated that there are over 30,000 miles in the county! Hedges were originally made to provide ownership boundaries and stock-proof enclosures - but they have always been appreciated by wildlife too.

For various reasons, the medieval open field system was never as widespread in Devon as it was in much of England; so, while many hedges in the Midlands are only 100-300 years old, many Devon hedges are over 700 years old. Add in the fact that many Devon hedges were planted on a substantial hedge bank, and it becomes obvious why they are so valuable to wildlife and so effective at slowing water run-off and soil erosion.



How Hedges can help wildlife and the environment:

Planting a new, carefully planned hedge, using a wide range of native shrubs, trees and wildflowers, can provide enormous benefits:

- a new habitat for nearly every sort of wildlife
- a new source of food for many different species
- a corridor connecting habitats to each other
- reduced flooding - especially if the hedge has a bank and follows a contour
- slower water run-off, reducing soil erosion
- a wind-break for crops
- shelter for grazing animals
- a beautiful and interesting landscape

The cost of hedge-planting:

Planting a hedge is fairly straight-forward, but it is costly and there is no direct pay-back for a farmer. So, if the hedge is to be planted on farmed land, some sort of grant aid is usually needed.

Approximate costs:

Buying, planting & protecting whips (using non-plastic, biodegradable spiral guards)	£20/metre
Stock fencing one side	£4/metre
Making a hedge bank (hard to calculate, needs availability of a small digger and qualified driver.	Defra grant is £12/metre

(See information about funding and grants at the end of this leaflet.)

Planning your hedge

- ◆ Think about soil type and drainage: is your site acid or alkaline, sandy or clayey, wet or dry, exposed or sheltered? Pick species that like your conditions.
- ◆ Look at your site from several different places and try to imagine a mature hedge there - would it look right there? Is it the route of an old hedge that has been grubbed out? Does it follow a contour (this could make it useful for flood and soil erosion prevention)?
- ◆ Think how large the hedge will get and how much management it will need. In small spaces, in gardens or close to buildings a traditional Devon hedge may not be the right choice – smaller ornamental species may be better.
- ◆ Never plant trees under or near power or phone lines and try to avoid underground services, especially drains.
- ◆ Don't remove an old hedge to plant a new one – some care and pruning will usually revive an old hedge. You can plant up the gaps if they are large, but the young shrubs will need extra help to compete with the existing hedge plants (eg more watering). Coppicing the old hedge will allow in more light in and will reinvigorate the existing plants.
- ◆ Tree planting in an existing hedge: Well-established hedgerows are not usually a suitable site for tree planting! There is a lot of competition for light and moisture. It is also difficult for hedge trimmer operators to identify young trees and manoeuvre around them while using very complicated machines. It is usually better to select an existing plant of a suitable species with a strong, straight and sound stem – mark it well and it will have a better chance of survival. If trees are planted, a gap must be cut in the hedge for them, and mulch mats should be used with a high tree guard and a painted marker stake for protection.

Creating a Traditional Devon Hedge.

Should I make a hedge bank?

Yes, if you possibly can! It is especially important if the hedge is to have a role preventing floods or soil erosion. Most traditional Devon hedges are built on a bank, which is approximately 1 metre high. Hedge banks can be stone-faced or turfed.

Hedge banks have a number of advantages over hedges without a bank:

- They reduce soil erosion, especially on steep and sloping ground.
- They slow down water flow following heavy rain - and can reduce down-stream flooding
- They quite often include a ditch - when constructing a bank, a ditch is dug and provides much of the material needed for the bank.
- The hedge bank needs to be quickly planted up with native shrubs and trees to prevent its bare soil from being eroded.
- The hedge bank should be turfed (using turf carefully removed before the bank is built), or stone-faced, (using easily available stone - originally stones were gathered from nearby arable fields before they were seeded).
- Hedge banks can provide a valuable habitat for much-loved hedgerow plants. Most wild flowers will need to be seeded in after the bank has been made. Small mammals and invertebrates will usually quickly follow.

Making a hedge bank:

Building hedge banks generally means using a mini-digger with a qualified mini-digger driver. For short banks a bank can be built with a team of good volunteers.

If the bank is being made from soil removed to create a ditch, then the ditch levels need to be planned very carefully so that water runs quite slowly in the ditch.

First the turf needs to be removed and stacked carefully - either by hand or by a good mini-digger operator. The turfs can be used later to face the bank. See Devon Hedge Groups [Hedge creation](#)

What size of plants should I use?

It is best to plant very young shrubs and trees (1-3 years old) as they will establish more easily and grow faster. These are often called 'whips', and can be bought from tree nurseries in a range of specified heights. For a hedge you can use shrubs that are '20 to 40cm' tall, or '40 to 60cm' tall. For hedgerow trees you can either use these really small sizes, or chose plants that are slightly taller (60 to 90cm or 90 to 120cm) so that they are more obviously standards and less likely to be pruned!

How many plants will I need?

To make a good thick, dense hedge, you need to plant 5 plants per metre of hedge (in a double, staggered row – see below). If your hedge doesn't need to be stock-proof, you can use 4 plants per metre, but it will take longer to thicken up and will offer less protection to wildlife.

What species should I use?

Most traditional Devon hedges, have three main species, depending on conditions - blackthorn, hawthorn and hazel

- you will also want some other shrubby species – exactly which you should plant will depend on your circumstances, eg soil type and whether you need to avoid poisonous berries (for example in school grounds)
- you will probably want a few standard-sized trees too – oak and ash are most common, but now ash trees are dying of ash die-back and **should not** be planted. You can add others to suit your personal preference

The table below suggests a standard mix of suitable hedge species for neutral soil, but you can vary the 'Additional Species' to suit. The numbers given are for 25 metres of hedging at 5 plants per metre.

Species	Number
Key hedge species	
Blackthorn	25
Hawthorn	25
Hazel	25
Field Maple	20
Additional species	
English Oak	5
Elder	5
Wild Rose	5
Guelder Rose	5
Spindle	5
Standard Trees	
Oak, Field Maple etc	5
Total	125 (=25 metres worth)

More information about suitable hedging plants.

Key:

E = suitable for exposed sites.

S = suitable for shady sites

C = tolerates sea winds

F = fast growing

P = may be poisonous - children beware!

Key Hedge Plants

The main bulk of most traditional Devon hedges are made up of these four species:

Species	Maximum height	Preferred conditions
Blackthorn	13ft/4m	Tolerant of most soils. Found in hedges right across the district. Its spines keep livestock at bay, but beware of suckers if the adjacent ground is not regularly grazed or mown. Good for sloe gin! – C, E & F
Hawthorn	30ft/9m	Very tolerant - all but very wet or acid soils. As with blackthorn, this is a key, traditional hedging plant with spines to keep livestock at bay – C, E
Hazel	30ft/9m	Very tolerant and found in hedges almost everywhere. In taller hedges it may reward you with nuts. - S
Field Maple	65ft/20m	Tolerant of most soils. Found in hedges almost everywhere, usually as part of the hedge itself (kept small by trimming) but could also be grown as a hedge standard tree - S

Additional Hedge Plants

Add any of these species which are suitable for your conditions and bring variety to your hedge – they look good and attract more wildlife

Species	Size	Preferred conditions
Alder Buckthorn	15ft/5m	Good as part of a hedge mix on damp & acid soils. Berries P. Food plant of Brimstone butterflies.
Broom	7ft/2m	Good for sandy soils. Colourful flowers – E
Dogwood	13ft/4m	Avoid acid soils. Leaves an attractive purple in autumn.
Gorse	7ft/2m	Tolerant and resilient even in very poor, but try to mix with other varieties, as it will eventually grow tall and leggy. It is very spiny. Colourful, fragrant flowers – C, E
Guelder Rose	13ft/4m	Avoid acid soils. Attractive flowers and berries and excellent for wildlife. P (slightly)
Spindle	13ft/4m	Avoid acid soils. Has very attractive, but poisonous, berries. P
Wayfaring Tree	13ft/4m	A good one to add to your hedge mix if you have alkaline (limestone) soil. - P (slightly)
Wild Rose species	3-10ft/1-3m	Tolerant of most soils. Add to hedges for colourful flowers and berries. Useful if you want something spiny. Dog rose is very vigorous and will quickly establish and grow tall. Field rose is smaller - F
Elder	30ft/9m	Fairly tolerant. Good for wildlife and wine makers! – C, F, Raw berries P
Grey Willow	30ft/10m	Its growth is rather 'lax' so it is not good for making dense hedges. However, it is happy on wet soils, so good for hedges alongside streams or in damp meadows – C, F
English Oak	100ft/30m	Tolerant, but avoid very wet soils. A classic hedgerow tree, but in Devon it also often forms part of the hedge itself, kept small by trimming. – C, Acorns P

Hedgerow Standard Trees

Having standard size trees along your hedge will add to the landscape and wildlife value – plant them at random intervals to avoid them looking too regimented.

Species	Size	Preferred conditions
Crab Apple	30ft/9m	Tolerant. Useful for hedges next to orchards, where they will help to cross-pollinate the orchard apples - fruit edible, but very sour, can be used for preserves.
Rowan	30ft/10m	Prefers light, acid soils - avoid heavy soils. Popular with people and birds for its attractive flowers and berries. – C, E
Alder	70ft/22m	Prefers wet soils, so very useful if your hedge is in a damp field or beside a stream. E, F & S
Field Maple	65ft/20m	Tolerant of most soils. Found in hedges almost everywhere, usually as part of the hedge itself, kept small by trimming, but could be grown as a hedge standard tree - S
Wild Cherry	50ft/15m	Fairly tolerant, fast growing. Attractive blossom, birds love the sour cherries. F
English Oak	100ft/30m	Tolerant, but avoid very wet soils. Classic hedgerow tree. – C, Acorns P
Sessile Oak	100ft/30m	Prefers thinner, more acid soils than English Oak. Use instead of English Oak on moorland fringes and Haldon Ridge – Acorns P
Small-leaved Lime	100ft/30m	Prefers fertile, clay soil. More often used as a hedge tree for formal or parkland settings - S

Planting:

Planting Season

- Bare-rooted plants establish better than pot-grown plants, whose roots have been constrained and may even be pot-bound.
- Planting is most successful between early December and early February, when the plants are dormant.
- It is important to plant before your trees/shrubs burst into leaf.
- Planting should never be carried out in frosty or water-logged conditions.

Using mycorrhiza

- We recommend the use of Mycorrhizal fungi when planting hedges.
- Mycorrhizal inoculation is the technique of introducing beneficial soil fungi directly to the roots and the surrounding soil, when planting trees and shrubs. A mixture of different endomycorrhizal and ectomycorrhizal species is often used.
- Mycorrhizal fungi are beneficial species of fungi that grow in association with plant roots.
- They need the plant to provide them with sugars; the plants benefit from water and nutrients that the fungal hyphae extract from the soil.
- The mycorrhizae increase the absorptive area of a plant, providing a secondary root system.
- All trees have a symbiotic relationship with specific types of fungi; neither fungi nor plants could survive in many uncultivated situations without this symbiotic (mutually beneficial) arrangement. Mycorrhizas also seem to protect plants against some root diseases.
- Phosphorus is often in very short supply in soils - or is only present in insoluble forms, limiting what the plant roots can extract. Mycorrhizas are probably vital for accessing phosphorous in uncultivated soils.
- Phosphorus-rich fertilisers that are used in fields and gardens replace the role of the mycorrhiza - but may also suppress their growth; so, don't use mycorrhiza in these circumstances.

Before Planting

Trees and shrubs should always be handled with care - roots are easily bruised and damaged and must never be allowed to get dry.

- ◆ Keep them in plastic bags, or a bucket of water until the second you are ready to plant them.
- ◆ Add water to the bags if necessary, and 'dunk' the roots in a bucket of water/mycorrhizal solution just before planting.
- ◆ It is important the young plants are kept moist and kept covered, as exposure to a cold wind for even a few minutes can kill them.
- ◆ They are best kept inside two plastic bags - a white outer bag and a black inner bag. (This keeps them at the right temperature).
- ◆ If they cannot be planted within 2-3 days of fetching them from the nursery the plants should be "heeled-in" in light, moist soil until planting is possible.

Planting your hedge:

Notch planting is quick, easy and suitable for most small trees and shrubs. Because it disturbs the soil less than digging a hole, **less carbon is released during planting:**

- ◆ Make two slits with a sharp spade in the form of a 'T'.
- ◆ (Drive in a cane if you are going to use one).
- ◆ Hold the notch open with the spade, and place the shrub in the hole, with the mark of the tree's previous planting just below ground level.
- ◆ Then lift the tree up a little so that its roots can spread out.
- ◆ Firm the ground down and water the shrub in well. Water the plants even if it is raining – this is to wash the soil around the roots.
- ◆ If a tree guard is to be used then carefully put it over the plant.
- ◆ If a tree mat is to be used, put it around the plant and peg it down.
- ◆ Prune hedge shrubs to about 20cm (8") high. This will encourage young plants to bush out. It will also reduce the loss of water through the leaves in spring (which can be more than the young root system can provide, causing stress and even death) and reduces the risk of the plant bending over because of the weight of the leaves.
- ◆ Don't prune the trees you want to grow as standard trees. They need a single strong 'leader' shoot.

Notch Planting diagram:

Protecting your hedge

- ◆ If the area is grazed, your trees must be properly fenced against livestock. Fields grazed by horses need high fences erected a good distance outside the planting area. You may need to use rabbit netting if there are a lot of rabbits about.
- ◆ **Remove weeds** from a 1-metre diameter around each tree, to stop them competing with the tree for light and water. Keep it clear of weeds by:
 - covering with a generous mulch of wood chips or similar, or
 - by frequent hand-weeding by hand, or
 - by using a wool or coir mat.

Preferably not by using a plastic mat, artificial-fibre carpet, tarpaulin or silage wrap. These will degrade and leave micro-plastics in the soil, which will kill vital soil organisms.

Preferably not by spraying before planting with a herbicide e.g. "Roundup". Herbicides leave chemical residues in the soil that harm soil organisms. If you do use herbicides, always follow the instructions on the label very carefully.

- ◆ Make sure the mulch or mat stays just clear of the tree stem to avoid any danger of the tree rotting; peg mats down at the corners.
- ◆ Hedge shrubs and small trees will not need stakes, fertiliser or compost.
- ◆ Tree guards protect plants against vole and rabbit damage and against strimmers and mowers! Guards mark the trees' presence clearly and provide a mini greenhouse environment that speeds growth. The guards may need to be held upright with a cane or stake.
- ◆ Depending on the animals to be protected against and the size of plant, tree guards can be bought in varying heights and diameter. As a guide, approximate heights are given below:
 - Rabbits/Hares/Voles and strimmers – up to 75cm
 - Sheep – 1.5m
 - Deer – 1.8m
 - Cattle/Horses – 2m
- ◆ **Biodegradable tree guards** are a bit more expensive, but don't pollute the soil (spiral guards start at £1.30 depending on quantity): See [green-tech biodegradable-spiral-guard](#) or [gogreenguards](#). They are made of biodegradable plant-plastic or strong cardboard. Tree planting is fun - but removing the guards 3 years later is often awkward, or simply forgotten, leaving degrading, dangerous and ugly plastic blowing around.
- ◆ You can make your own recycled tree guards from 2 litre, plastic drinks bottles. Cut the top and bottom off for a short guard, or attach one on top of another for a tall, rabbit-proof guard. Slide a cane through slits in the bottle, or tie it on so it won't blow away. Collect them up when they stop being needed.
- ◆ Tree guards are not needed if the hedge is properly protected against livestock **and fenced against rabbits**.

Protecting your Trees:

- Your trees will need taller tree guards - make them more conspicuous with ribbons made from strips of colourful cotton cloth.
- Once you have removed the tree guards (after 3-4 years) cut off some of the lower branches every year with secateurs, to encourage a tall straight tree. If the 'lead' shoot is damaged or broken, select the next best branch - it will soon straighten out.

After Care

- ◆ Young trees and shrubs need to be kept weeded for at least 3 years, either by hand weeding or by using a mulch or mulch mat (you may have to renew organic mulch from time to time).
- ◆ Mowing and strimming are not good methods as grass thrives when cut and will take valuable ground moisture from the young tree. Strimming is also likely to bruise, "ring bark" and quickly kill the tree, no matter how careful you are.

- ◆ For the first few years the young plants should be watered in very dry weather – a good watering once a week is much better than a small amount every day, as slightly dry conditions stimulate root growth.

Can I get help with hedge planting costs?

For larger hedge planting schemes, you may be able to get help from the following sources:

- Through the **Woodland Trust**:
The Woodland Trust are funding new hedges through [MOREhedges](#), available from November 2019. They can help with funding if you're planting new hedgerows on your land. They can subsidise 60% of the cost if you plant more than 100 metres of new hedging with a large tree growing through every six metres.
- **Countryside Stewardship**. Farmers and other land managers may be eligible to apply for an agreement with Natural England that will provide financial support for their land management including hedge restoration and management. The Government will continue to offer **Countryside Stewardship** agreements in 2021, **2022** and 2023. **Countryside Stewardship** will eventually be replaced with the new **Environmental Land Management** (ELM) scheme. This will follow trialling and testing and a national pilot involving farmers and land managers. <https://www.gov.uk/countryside-stewardship-grants/planting-new-hedges-bn11>
- January 2021: There will be probably be more government grant schemes soon - use an internet search for more info.

Community Projects:

Many projects need very little actual funding - putting out a request for paper, flower pots, compost, people who will grow seedling trees etc on the village Facebook page can motivate people to help you **and** do similar things themselves!

Here are some sources of funding for projects such as hedge planting:

- You may have a local **wildlife group** that can apply and bank the money for use.
- **Through ACT**: Could Wildlife Wardens please contact us (audrey@boveyclimateaction.org.uk or flavio@actionclimateteignbridge.org) if you are thinking of applying for funding as Action on Climate in Teignbridge Wildlife Wardens, as we are more likely to be successful if several Wardens don't apply to one Parish Council or one Councillor at much the same time!
- **TCVS**: For further advice and guidance around fundraising for voluntary groups, please contact [Teignbridge Community and Voluntary Services](#). They may have information about small local Trusts and Funds which could help you.
- **Your Parish Council**:
Under Section 137 of the Local Government Act 1972, Parish Councils have discretionary powers to award grants to local groups or organisations for the purposes of bringing a direct benefit to the parish or its residents. To be considered for an award, applicants should apply for a grant with details of their project. You are most likely to be awarded funding for your project if you have already been keeping in close contact with them - for example:
 - introducing yourself to the Council at an early stage (see Section 15 for information you can send to them)
 - talking to the environment committee or nominated Councillor about your role and your ambitions
 - sending them monthly or 2-monthly reports about what you have been doing.
 - working with other groups and individuals within your Parish, to show that there is widespread support for your project.

Your District Council:

The info below is from <https://www.teignbridge.gov.uk/community-and-people/communities/community-funding/funding-for-community-and-voluntary-groups/>

Funding for community and voluntary groups: There are grants and funding streams available for community and voluntary groups.

Rural Aid:

- individuals and members of the public are not able to apply for Rural Aid funding; applications must be made through town and parish councils. For contact details for your town or parish council, please visit [town and parish councils](#)
- The Rural Aid grant is only available for the following parishes: Abbotskerswell, Ashcombe, Ashton, Bickington, Bishopsteignton, Bovey Tracey, Broadhempston, Chudleigh, Coffinswell, Denbury, Doddiscombsleigh, Dunchideock, Dunsford, Exminster, Haccombe, Hennock, Holcombe Burnell, Ide, Ideford, Ilsington, Ipplepen, Kenn, Kenton, Mamhead, Ogwell, Powderham, Shaldon, Shillingford, St George, Starcross, Stokeinteignhead, Tedburn St Mary, Teignrace, Torbryan, Trusham, Whitestone, and Woodland. If your parish is not included in this list, you are not eligible for Rural Aid grant funding

Teignbridge District Council Councillor's Community Funds:

- If you want to apply to the **Councillors' community** fund, please contact your local Councillor(s). Applications for the Councillor's Community Fund can be made through your [local councillor](#).
- The **Councillors' Community** Fund can only support one-off projects and cannot be used to replace any withdrawn public funding or provide/imply any ongoing support. Applications can only be received from not-for-profit groups and organisations **and not** individuals. Local Councillors have £1,000 each municipal year to spend on projects within their Wards. There is no lower limit but projects costing more than £1,000 could be supported by other Councillors combining monies if they wanted to.

Devon County Councillor's Locality Budgets: <https://www.devon.gov.uk/democracy/councillors-nav/locality-budgets/>

- Each of our county councillors has a locality budget fund of £10,000 that they can use to respond to local needs in any financial period (April to March). **nb Be aware that the end of March time-limit for using this grant may be a problem if it is applied for late in the financial year and must be used within a few weeks.**
- Councillors can, if they wish, make grants to support projects or activities that benefit the communities they represent.
- Locality budget funding adds value to projects that are beneficial to local communities, and help meet the Council's strategic objectives as described in the Council's [Better Together 2014-2020](#) plan.
- Projects are diverse and reflect the needs of local communities. All projects should include some other financial contribution(s) and/or local support.
- Any properly constituted not-for-private-profit voluntary or community group (including town and parish councils) can apply to their local county councillor for a grant from the locality budget fund.
- Each councillor will normally make their own decision on which applications they wish to support, the only exception would be where the councillor may have a conflict of interest and the decision will have to be approved by an officer provided that:
 - the locality budget fund grant will be normally used within the financial period (April to March) of each year.
 - the grant is not used to benefit individuals or private businesses.
- You can find details of the grants which councillors have already made from their locality budget fund by viewing their [individual profile pages](#).

To discuss a **locality budget fund application**, you should contact your [local county councillor](#) in the first instance. You can view a [map](#) of each of the Council's electoral divisions to help you to identify your local councillor. Use the link above to find the application form and further details.

Devon Hedge Group website is a good source of hedge information: <https://devonhedges.org/>
Including leaflet s such as: https://devonhedges.org/wp-content/uploads/2015/11/8_Hedge-Creation-1.pdf

Some of this information is from a leaflet originally prepared by the Countryside Management Section, Teignbridge District Council. Our thanks to TDC for allowing us to use it.



[ACTion on Climate in Teignbridge](#) - Ecology Group



ACTion on Climate in Teignbridge is a CIC registered in England, number 12278894.
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ACT supports Teignbridge District Council, town and parish councils, community groups and residents to make the district carbon neutral, sustainable, resilient and healthy.