

Healthy hedgerows on your land

Healthy hedgerows benefit farmers, provide life support for wildlife and many public and environmental benefits. You can manage your hedgerows to increase farm profitability, save money, reduce risks, help the environment, and generate income.

Healthy hedgerows

We want to help farmers and landowners by providing free management advice on how to have healthy hedgerows. This leaflet explains why and how to manage your hedgerows to make sure they're in a good condition to reach their economic, environmental and ecological potential.

As a conservation charity, our reason for focusing on hedgerows is their value to wildlife - but healthy hedgerows also benefit the environment and can provide financial benefits to farmers.

Useful hedgerows

You may value your hedgerows for crop protection and pollination, as a stock barrier, a livestock shelter, a wildlife haven, a source of income or as a landscape feature. Keeping hedges healthy maximises all these benefits and ensures they thrive. Of course, the way you manage your hedgerows will reflect what you use them for. All hedgerows need to be managed on a cycle if they're to be viable in the long-term, but there's plenty of flexibility in this cycle for your hedgerows to suit your farm and your needs.

We know that the cost of hedgerow maintenance can be a burden, especially where a hedgerow isn't fulfilling its economic potential. But it's easy to underestimate the role they play on your farm; healthy hedgerows offer a better chance at generating a financial return. Luckily, sometimes the best action for the hedge, is also the most cost effective.

A useful, profitable hedge stands the best chance of surviving in the long term.



In this leaflet



The benefits of healthy hedgerows on your farm



Top tips for hedgerow management



The hedgerow management cycle



Surveying to health check your own hedgerows

Why are we worried about hedgerows?

Hedgerows are one of our country's most widespread and valuable habitats, with great cultural and historical value. But their future can't be taken for granted.

Last century tens of thousands of miles of hedgerows were lost, making the ones that remain all the more valuable. Happily the rate of direct removal has drastically reduced in recent years, and it is fantastic to see that new hedges are going back in. However, many hedges are still at risk through the way they're managed.

Hedgerows need management or they turn into a line of trees, but managing them requires working with their natural lifecycle. It is impossible to keep a hedgerow at the same point in its lifecycle indefinitely without the structure declining. We see this when hedges are trimmed to the same level year after year; they lose stems, lose vegetation near the base, and become gappy. If this persists, the gaps get larger as the structure fails and we risk losing them altogether.

It's vital that we manage our remaining hedgerows in a way that ensures their survival long term. There's a lot at stake. Our simple management advice can provide you with the knowledge you need to do that.

Threats to hedgerows



Over-trimming – hedges lose base vegetation, gaps form, hedge is slowly lost, especially hedges cut to the same point repeatedly.



Neglect – overtime hedges lose the vegetation at their base and turn into a line of trees.



Close ploughing – damages tree and hedge roots leaving them more vulnerable to disease, drought and other threats.



Spray drift – affects the plants, insects and animals able to live in a hedge



Disease – can have a terrible impact on our hedgerow tree species.



Direct removal – even when replacement hedges are planted, it's a while before they are as valuable as a mature hedge.



Soil protection

Reduce pollution

Shelter

The benefits of healthy hedgerows

Flood control

Crop protection

Wood fuel

Wildlife

Pollinators

Pest control





Shade

What have hedgerows ever done for us?

As well as their value to wildlife, they deliver benefits that can save you money and increase the profitability of your farm.

Crops

Wind damage - hedgerows can provide a wind break and increase crop yields by reducing damage that cold strong winds do such as:




-  crop lodging which makes them much more difficult to harvest and dramatically reduce yield.
-  premature flower and fruit shedding,
-  shoot damage
-  chilling injuries

Reduced pesticide use - hedgerows increase populations of predator and parasitic species which are the natural enemies of crop pests. Farmland birds and predatory invertebrates such as spiders, beetles and wasps all feed on, and therefore limit, pest species.

Pollinators - hedgerows help support diverse pollinators, essential for crop pollination and crop yields. They provide food for pollinators throughout the year when crops aren't in flower, as well as places to nest.

Soil

Hedgerows reduce soil erosion by:

-  reducing surface wind speeds
-  acting as a barrier to water runoff
-  their roots which help to stabilise the soil surface

Tree and shrub roots grow deeper than crops to access nutrients deeper in the

soil profile. This process cycles nutrients into the topsoil.

Shelter creates warmer soils, extending the growing season.

Livestock

Shelter - livestock without shelter have a higher mortality and require more food. Shelter increases lamb survival rates, reducing the effect of wind chill and hypothermia.

Shade - in the summer months, heat stress reduces milk yield in dairy herds and affects fertility, growth rates and disease resistance.

Diet diversity - supplementary feeding on native hedgerow plants can increase livestock gut microbial diversity, help immune function, and improve feed conversion efficiency.

Biosecurity - thick, stock-proof hedges can create barriers to the spread of disease such as bovine TB by reducing animal-to-animal contact between farms.

Parasitic load - livestock may self-medicate by browsing on common species found in hedgerows. Some leaves have anti-parasitic properties, rough surfaces that act as a rasping plug or can cause a purging response.

Water & flood control

Water infiltration - plant roots help soils absorb water faster. This enables the soil to act like a sponge soaking up flood water, rather than allowing it to run off the surface.

Tree and hedgerow roots run deep, allowing a larger, deeper area of the soil profile to act like a sponge, thus absorbing more water.

The soil under a hedge stores more water, and stores it faster preventing and delaying its movement downslope.

Water uptake - trees and shrubs remove water from soils by absorbing and transpiring it.

Reducing silt in waterways - silted waterways are more prone to flooding. Much of the silt in our waterways is field run off. Hedges and hedgerow trees help prevent soil erosion and stop sediment reaching our streams and rivers.

Slowing flood water - by slowing water flows, trees reduce the impact of flooding, allowing more time for soil infiltration, and time to respond to flood warnings.

Our environment

Carbon storage - hedgerows store carbon above and below ground, so can help us in our fight against climate change

Pollution - hedgerows reduce the amount of fertilisers, pesticides and sediment that reach watercourses. They act as a physical barrier, increasing infiltration to the soil, and recycle nutrients through the trees, shrubs and

other plants. They also improve air quality by capturing pollution particles.

Other

Sustainable wood fuel - hedges and hedgerow trees can provide sustainable wood fuel, without losing land from production. This can be used or sold as fuel or timber.

Pollarding, a traditional tree management technique, can provide both wood fuel and animal fodder.

Privacy - hedgerows can act as a screen and protect privacy, shielding farm assets and buildings from public sight.

Sense of place - hedgerows are a defining feature of our countryside, with deep and significant cultural and historical importance. They tell the story of our farming traditions over many centuries and add to regional distinctiveness. They make farms more attractive which may help with farm diversification projects.

Wildlife - hedgerows provide a home, food, shelter and corridors to travel for wildlife. 70% of the UK is agricultural land so the importance of your hedgerows for wildlife cannot be overstated.

Hedgerow management top tips

These simple management tips will help your hedgerow thrive. If your hedgerows are managed by contractors, please share this information with them and discuss how you want your hedgerows to be trimmed.

Some measures will save you time or money, others may cost more or require increased labour, but in the long term we think these measures will be good choices for you, and hugely positive for our native wildlife.


	Do	Don't
Lifecycle	<p>✓ Use the hedgerow management cycle to guide your management decisions and planning. All hedges will require rejuvenation (laying or coppicing) at some point, but with careful management, you can keep a hedge healthy for 40 or more years before you need to rejuvenate it. The hedge management cycle can be followed to provide wood-fuel which can generate income.</p>	<p>✗ Hedgerows cannot be kept at the same point of their lifecycle indefinitely without damaging their structure and threatening their future.</p>
Gaps	<p>✓ Plant up gaps in your hedgerow with locally suitable species. This is a good chance to increase the number of woody species, making it more robust, and better suited for wildlife.</p>	<p>✗ Gaps are often a sign that a change in hedge management is needed. They tend to get worse if the management approach isn't altered.</p>
Trees	<p>✓ Allow new young standard trees to grow; either select and protect suitable young trees, coppice a section and select a new stem from the regrowth, or plant a tree directly. Gaps in hedges are often a good opportunity to plant new hedgerow trees.</p>	<p>✗ Existing trees can be damaged or lost if hedge trimming is not done with care.</p>

A hedgerow is a living system and needs flexible management

Gaps in hedges reduce their value both to us and to wildlife

Hedgerows provide a great opportunity to increase the number of trees without more land

Hedge cutting

	Do		Don't
When	<p>✓ Cut hedges as late in the cutting season as you can, ideally in late winter if and where conditions allow. This provides hedgerow fruit for wildlife over winter.</p>	<p>Wildlife relies on hedgerows for food in winter</p> <p>Blossom and fruit grow on second year wood on most hedgerow shrubs</p> <p>Cutting hedgerows at the same point indefinitely will damage their structure</p>	<p>✗ Cutting hedges in late summer/early autumn removes most of the fruit that could help prepare wildlife for winter. Avoid cutting hedges in bird breeding season.</p>
How often	<p>✓ Cut hedges every two or even three years. This allows the hedge to provide food for wildlife. Cutting each hedge every 3rd year can mean cutting only 1/3rd of your hedges in any one year, so cutting less frequently can also save you money</p>		<p>✗ Cutting hedges every year massively reduces the amount of food a hedge can provide for wildlife. It hastens the structural decline of your hedge which can be expensive to repair. You may have to structurally rejuvenate (lay or coppice) the hedge or plant up gaps more frequently.</p>
How	<p>✓ Raise cutting height and width slightly with each cut. Trim on a two or preferably three year rotation.</p>  <p>When they outgrow their space, they can be reshaped (or rejuvenated if they are losing cover at the base). Cutting in an 'A' shape improves the quality of the hedge habitat.</p>		<p>✗ Cutting hedges at the same level repeatedly causes scar tissue, forming a 'hard knuckle' at the trim line. Over time, cutting to the same height damages the structure of the hedge, which may lose vegetation at the base, and develop gaps as the shrubs struggle and die.</p>

Hedgerow management cycle

Tall and overgrown

Manage as a line of trees, if necessary undertake selective thinning



Rejuvenate recently laid, coppiced

Coppice, retaining a few trees and plant up gaps

Lay or coppice. Retain hedge trees, plant up any gaps.

Res



Dense and well managed

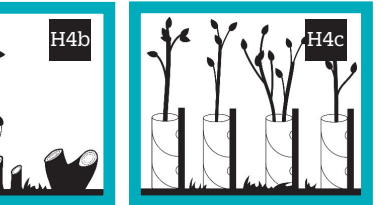
Enter hedge into **non-intervention period**

↑ If left unmanaged, the hedge structure will start to deteriorate

-  Good condition hedge
-  Fair condition hedge
-  Poor condition hedge
-  Management choices for healthy hedge cycle
-  Neglect or poor management
-  Management actions



Hedgerows are a dynamic system - it isn't possible to keep them at exactly the same point indefinitely. Managing them on a cycle ensures their health and long term survival.



...nated
...opped, or planted

...shape

Frequent trimming in first five years

Coppice, retain a few trees, plant up gaps, control invasive species

"let up" for laying plant up any gaps

...se
...well-
...aged



Raise cutting height and width slightly with each cut. **Trim on** a two or preferably three year **rotation**.



Over-trimmed



If trimmed to the same level repeatedly the structure will start to deteriorate

No matter what hedge you're starting with, there's a way to bring it back to the healthy hedge cycle with good management.








Key to Hedgerow Management cycle

Over-trimmed



H1








H1 Over-trimmed

-  Heavily over-trimmed, hard knuckle at trim line
-  Many gaps, sparse stems
-  Bases may be gnarled or rotting
-  Usually low and narrow
-  May be invaded by elder, sycamore or other invasive species
-  Lacks branches and foliage in the lower parts
-  Closely and frequently flailed to the same line



H2




H2 Over-trimmed

-  Over-trimmed, hard knuckle at trim line
-  Infrequent stems
-  May be developing mushroom shaped growth
-  Often low and narrow
-  Closely and frequently flailed to the same line
-  May lack branches and foliage in the lower parts
-  Base canopy may or may not extend to the ground



H3

H3 Over-trimmed




-  Over-trimmed, hard knuckle may be starting to form
-  Still has frequent healthy stems
-  Base canopy may or may not extend to the ground

Rejuvenated



H4a




H4a Rejuvenated - recently laid

-  Hedge stems cut at base and laid on their sides.
-  Depending on time since being laid, significant regrowth may have grown from the base. The horizontal stems (alive or dead) should still be visible
-  Approximately laid within the last five years



H4b


H4b Rejuvenated - recently coppiced

-  Stems all cut at ground level, stumps may be visible
-  Significant regrowth may be visible from cut bases
-  Approximately coppiced within the last five years



H4c

H4c Rejuvenated - recently planted

-  Approximately planted within the last five years
-  Stems may still be protected by tree guards






Dense and managed








Tall and overgrown







H5 Dense and managed

-  Healthy dense hedgerow
-  Have obviously been trimmed in the fairly recent past. (may have shoots protruding but retains basic shape)
-  Frequent healthy stems
-  Dense amongst most of their length
-  About 2m or more in height






H6 Dense and managed

-  Healthy dense hedgerow not recently trimmed.
-  May have 'straggly' appearance with protruding woody branches
-  May be in a non-intervention stage of management
-  May be on a longer trim rotation, e.g. three year cut
-  About 3m or more in height






H7 Dense and managed

-  May have a straggly appearance with numerous long woody branches protruding from the main body
-  Usually still quite dense, but increasing volume may start to shade the lower branches
-  Has frequent healthy stems, about 4m high.
-  This is an unmanaged, overgrown version of H6

H8 Tall and overgrown

-  Mature hedgerow, tall and leggy
-  May have spreading tops
-  Not been trimmed for many years
-  Lacks significant foliage in the lower parts
-  Stems still healthy, but may be infrequent and getting too large to lay

H9 Tall and overgrown

-  Over-mature hedgerow, tall and leggy
-  Spreading tops might be dying back
-  Collapse possible
-  No significant woody foliage in the lower parts
-  May be developing gaps

H10 Tall and overgrown - line of trees

-  Hedgerow has developed into a line of trees
-  Very little, if any, woody undergrowth

Hedge cutting – why the need for change?

By virtue of using hand tools for cutting, hedges have effectively been managed on a cycle of rejuvenation for hundreds of years. Hand tools don't easily cut all the annual growth off a hedge as some of it will already have become woody, so hedges tended to get bigger each year. Once too big to easily cut by hand, they were left to grow out for a number of years. And when they thinned at the base, and no longer stock proof, they were layed. This process rejuvenated the hedge, allowed new growth to come from the base, and restarted the management cycle. In this way, laying extends the life of a hedge indefinitely which is in part why we still have so many ancient hedges today.



Hand tools didn't cut through the woodier growth, so hedges would get slightly bigger at each cut.

But we've seen a lot of changes to the way we manage hedges in the last century. Once we adopted tools that more easily cut back a whole year's growth, hedges stopped getting bigger each year. They never got too tall to trim and fell out of the traditional cycle. While hedges coped with this for a while, the long-term structural damage is evident. The base of the hedge thins, the stem density is reduced and they can become gappy as stressed hedge shrubs are lost. The last Countryside Survey showed that only 48% of hedges nationwide remain in good structural health.



We now have the opportunity to combine traditional methods with new insights and modern tools. We're not talking about a return to hand tools, but instead tweaking the ways in which we use the tools we have.

Free hedge management app
You could be six questions away from
healthy hedgerows

Healthy 
Hedgerows

Healthy Hedgerows is a free hedge management app designed specifically for farmers. It's quick and simple to use, and gives instant management advice for each hedge surveyed.

While it might be easy to apply the hedge lifecycle to one or two hedges; to do this across a whole farm is more difficult. Which is where the speed and simplicity of this Healthy Hedgerows app comes in. It takes just six questions for this app to understand where in the lifecycle each hedge is and deliver management advice

accordingly. This makes it entirely possible for busy farmers to update their hedge management plans across a whole farm.

Shelter, shade, pollinators, pest control, soil protection, flood prevention, diverse browse, wood-fuel, stock control, carbon storage, pollution absorption. Whatever you value your hedgerows for, healthy hedgerows do it better.

<https://hedgerowsurvey.ptes.org/healthy-hedgerows-survey>

Healthy Hedgerows is part of Close the Gap, a year-long programme focused on achieving bigger, healthier, better-connected hedgerows.

Close the Gap is funded by the Government's Green Recovery Challenge Fund. The fund is being delivered by The National Lottery Heritage Fund in partnership with Natural England and the Environment Agency

Green Recovery Challenge Fund



The National Lottery Heritage Fund




Will this also help wildlife?

Agricultural land amounts to over 70% of the country, and hedgerows are one of the best wildlife habitats within it. One study counted 2070 different species in just one hedgerow in Devon, so a healthy hedge can be an ecological powerhouse!

And happily, a natural side effect of managing hedges rotationally on a lifecycle, is that a farm will always have hedges at all the different stages; this means some shorter dense hedges, some taller wider hedges. And this really helps wildlife, which loves this diversity of hedge habitat.

Good hedges help wildlife in three main ways; they

-  are a physical home for nesting birds, small mammals and insects.
-  are a complementary habitat; providing shelter and food.
-  act as a wildlife corridor, connecting up other habitat across the country.

For more information about hedgerow management:

hedgerows@ptes.org

www.ptes.org/hedgerows



What we want to see:



Bigger, better and more joined up hedgerows



Hedgerows that benefit farms, wildlife and the environment



Hedges managed using the hedgerow management cycle



Gaps in hedgerows planted up



Young hedgerow trees given the space to grow



Hedgerows cut at the appropriate time and frequency

For more information about hedgerow management:

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With thanks to Hedgelinek www.hedgelinek.org.uk, Robert Wolton and Nigel Adams for their advice and expertise.

people's
trust for
endangered
species

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