



people's  
trust for  
endangered  
species

# 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 in 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.

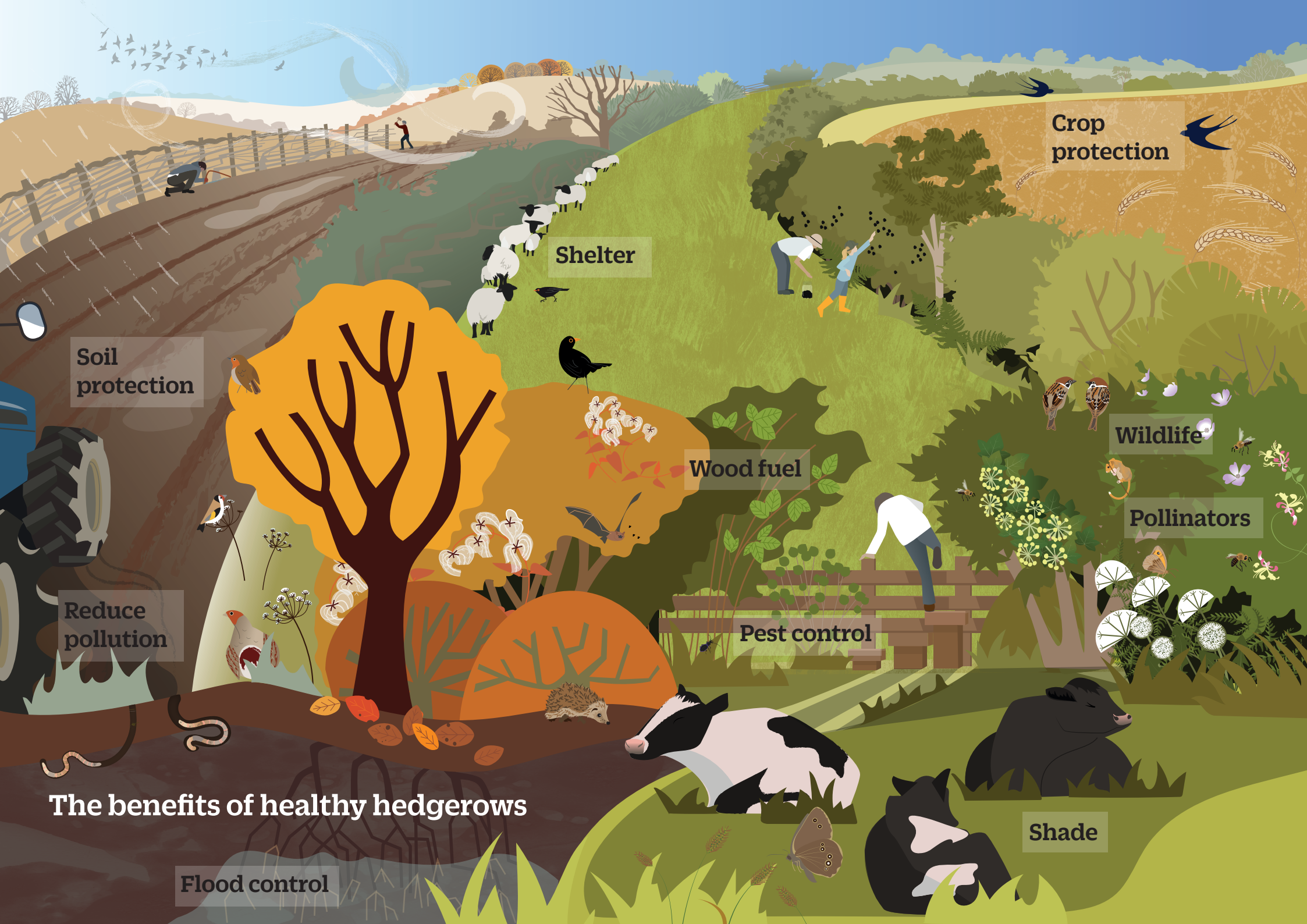
Last century tens of thousands of miles of hedgerows were lost, making the ones that remain all the more valuable. Happily the rate of direct removal has drastically reduced in recent years, and it is fantastic to see that new hedges are going back in. However, many hedges are still at risk through the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



Crop protection

Shelter

Soil protection

Wood fuel

Wildlife

Pollinators

Reduce pollution

Pest control

The benefits of healthy hedgerows

Shade

Flood control







---

## 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>✗ 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 3<sup>rd</sup> year can mean cutting only 1/3<sup>rd</sup> 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>

**Wildlife relies on hedgerows for food in winter**

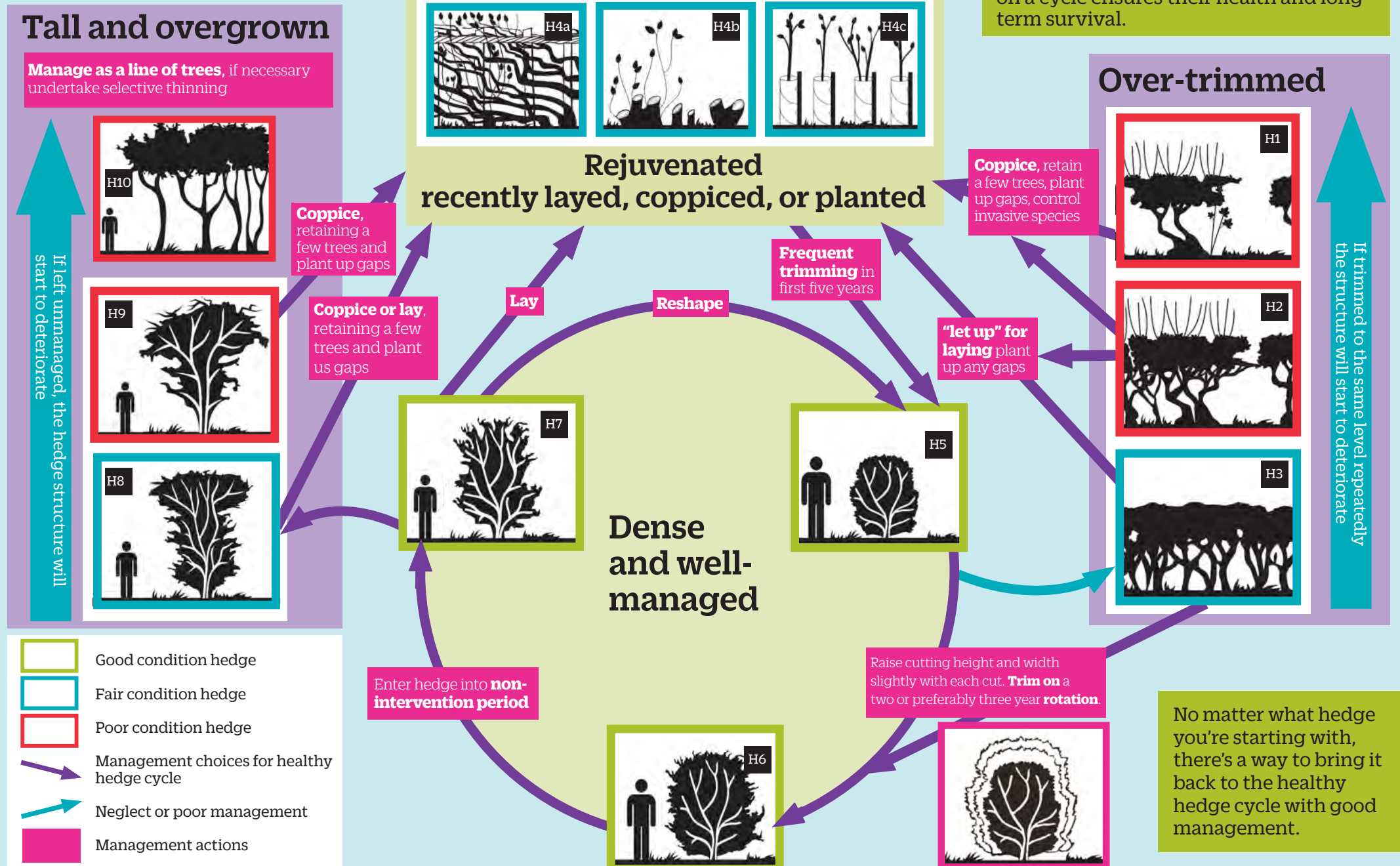
**Blossom and fruit grow on second year wood on most hedgerow shrubs**

**Cutting hedgerows at the same point indefinitely will damage their structure**



# Hedgerow management cycle

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.





# Key to Hedgerow Management cycle

## Over-trimmed



### 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 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 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 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 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 Rejuvenated - recently planted

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

## Dense and managed



### 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

## Tall and overgrown



### 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



---

## Health-check your hedgerows today

We will give you free, comprehensive advice about the health of your hedges, and a free, bespoke management plan for each hedgerow you survey.

The hedgerow management cycle in this leaflet can give you a broad idea about managing your hedgerows, but if you carry out a quick survey of your hedge we can provide more detailed information about what condition your hedge is in, and how you can improve each element.

Just complete our simple survey online, and you'll receive instant feedback on the **connectivity**, **structure** and **wildlife** value of your hedge.

No matter what condition your hedges are in, we can provide the management advice you need to help you create healthy hedgerows that work for the environment, for nature, and for your farm.

Please visit [www.hedgerowsurvey.ptes.org](http://www.hedgerowsurvey.ptes.org)

### Connectivity

70% of the UK is agricultural land and hedgerows often provide the safest route of travel for our wildlife. Whether this is dormice who use shrubby growth to travel, or flying creatures like insects and bats who take advantage of the shelter that hedgerows provide. We need a well-connected network of hedges to help our wildlife thrive. The **Great British Hedgerow Survey** assesses connectivity through measuring hedgerow gaps and connections.



### Structure

From the herbaceous vegetation at the bottom, to the woody shrubs that make up the structure and the trees that tower above the hedge canopy, all the parts that make up a hedge play a role for wildlife.

The structure of a hedge gives us an insight into its health, and helps us understand the best possible management plan for it to thrive in the future. To assess the structure, the survey looks at the shape and size of a hedge, and the characteristic signs of structural damage, like scar tissue at the trim line, or loss of vegetation at the base.



### Wildlife value

Hedgerows are particularly important now, when we are seeing worrying declines in our native wildlife. They provide a home, forage, a hunting ground, shelter and routes of travel in our increasingly intensively managed landscape. Within our agricultural landscape, hedgerows are one of best homes for wildlife. But some hedges are better for wildlife than others. By counting the number of plant species that makes up a hedge, counting the hedgerow trees and looking at the hedgerow base, the survey assesses how valuable the hedge is to wildlife. The sooner you understand the health of your hedgerows, the sooner you can act to save you money, boost productivity and help wildlife to thrive.



## **Win £200 or £400 worth of trees for your hedgerows!**

If you found this booklet useful, please visit [www.ptes.org/fw](http://www.ptes.org/fw) to answer a quick survey that will take about two minutes. Understanding whether our message is reaching you, our target audience, is crucial for us to justify our ongoing work, and it should only take a couple of minutes of your time. All feedback helps support our work.







One lucky person who responds will be awarded with their choice of £200 cash or £400 worth of trees for your hedgerows. Winners will be chosen in May 2020.

For more information about hedgerow management:

[\*\*hedgerows@ptes.org\*\*](mailto:hedgerows@ptes.org)

[\*\*www.ptes.org/hedgerows\*\*](http://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

**With thanks to Hedgeline [www.hedgeline.org.uk](http://www.hedgeline.org.uk), Robert Wolton and Nigel Adams for their advice and expertise.**

people's  
trust for  
**endangered**  
species

**020 7498 4533**  
**enquiries@ptes.org**  
**www.ptes.org**  
registered charity no. 274206