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species



**Helping hedgehogs on your land.
Practical advice for farmers
and land managers.**

Hedgehogs in the rural landscape

Hedgehogs are still widespread across Britain but are in serious decline, particularly in the rural environment. This makes them a species of conservation concern. Evidence shows they are now particularly scarce across arable farmland.

Possible reasons for hedgehog decline include changes in land use reducing access to suitable nesting sites and habitats for shelter and hibernation. Long-term hedgerow structural decline, fewer field boundaries and unfarmed margins and use of pesticides means less invertebrate prey. The effects of climate change on food availability and mild weather potentially causing hedgehogs to awaken more frequently during hibernation may also impact their survival.

Hedgehogs are also preyed upon by badgers, and badgers compete with hedgehogs for food. However, the two species have coexisted in Britain for millennia. High badger numbers may have an impact on hedgehog numbers locally, but badgers aren't the single most important factor affecting hedgehogs. Hedgehogs are also declining in areas where there are few or no badgers. Improving habitat quality, availability and connectivity to ensure hedgehogs have access to plenty of feeding and nesting sites will allow the two species to continue to co-exist.

As a key indicator of a healthy and sustainable countryside, the absence of hedgehogs is a serious concern for agriculture. Farmers and landowners can help.

Right: Mixed agricultural land with scrub and woodland connected across the landscape by hedgerows provides a mosaic habitat suitable for hedgehogs.





Hedgehog ecology

Nesting

For most of the year, hedgehogs are mainly nocturnal or active at dusk. During the day, they rest in summer nests, loose constructions in long grass, leaf piles or tussocky vegetation. Females will also build more sturdy breeding nests, in which to nurse offspring. Summer and breeding nests require a mix of different materials, which are usually constructed in long, tussocky grass, the bases of hedges or in dense shrubs. Between November and April, hedgehogs usually hibernate. Hibernation nests (hibernacula) are sturdy structures made from deciduous leaves in hedgerows, bramble patches or log piles.

Habitat connectivity

Hedgehogs are highly active and range widely. They need to be able to move freely through a well-connected variety of habitats to find food, mates and areas to nest. For safety they tend to move through the landscape close to linear features such as hedges and walls, though they will travel through more open land too, particularly when there is vegetative cover. Macroinvertebrate prey, their preferred food, tends to be more abundant near the edges of fields. Radio-tracking studies show that hedgehogs can often travel up to 3km a night in rural landscapes, with males travelling further than females.

Left: Hedgerow with mixed thick growth at the base, and a tussocky grass margin

Diet

Hedgehogs are principally predators of macroinvertebrates such as beetles, worms, earwigs, caterpillars and millipedes. Access to water is very important.

Managing land for hedgehogs

There are three main habitat requirements to consider when managing land for hedgehogs:

- ▶ Areas providing nesting sites and shelter throughout the year
- ▶ Areas to forage in
- ▶ Joined up habitats that hedgehogs can move between easily

Beneficial management actions

This guide highlights management actions that are hedgehog-friendly, including:

1. Hedgerow management
2. Field margin availability and management
3. Field size in relation to habitat availability
4. Ploughing regimes in relation to prey availability
5. Areas of scrub and decaying vegetation

For hedgehogs to flourish in the countryside, land management that creates a mosaic of habitat that provides shelter and abundant food is essential. Hedgehog populations can become isolated due to lack of connective landscape features and where there is too much uniformity. When taking action, such as planting new hedgerows and creating unmanaged tussocky field margins, consider both the wider landscape and where hedgehogs are already found. Hedgehogs need a mixture of varied habitats which include areas to forage. They may already live in areas around farm buildings or where farms connect to village edges.

Connecting these habitats into and through your land will enable hedgehogs to repopulate suitable new and improved habitat.

By taking a larger, farm-wide approach, you can provide a greater variety of well-connected habitat that can support hedgehogs alongside other wildlife. The various agri-environment schemes are designed to help conserve and restore habitat for wildlife, and many of the management actions will benefit hedgehogs. Large numbers of farmers and landowners already take a sustainable approach to agriculture, but if hedgehogs are to thrive in our countryside, they need a widespread and sustained effort to target effective habitat creation measures where they are needed most.



1. Hedgerow management

Action

Gap-up and restore hedges that are no longer well connected.

Benefit for hedgehogs

Hedgehogs tend to avoid crossing wide open ground and prefer to move around a landscape near shelter and safety. The shelter and connectivity of hedges help hedgehogs move safely to find mates, food and other suitable habitats.

Rejuvenate any hedges that are thinning at the base to re-establish a thick, dense structure from the ground up (ideally by hedgelaying).

Hedges with good ground cover and understorey provide suitable sites for summer and winter nests, as well as shelter. Bramble and rose outgrowths, and fallen leaves provide materials for nesting.

Trim hedges every two or three years (ideally in late winter), allowing them to flower and fruit. Avoid clearing growth at ground level to protect hedgehog hibernation sites.

Flowers and fruits support invertebrates on which hedgehogs feed.

Trim to maintain a thick base – an “A” shaped hedge encourages dense vegetation at ground level.

“A” shaped hedges allow light to reach the base of the hedge, keeping it thick and accommodating outgrowth. Brambles and roses improve the structure of the hedge for nesting hedgehogs.

Plant new hedges to connect habitats.

New hedges extend existing hedgehog habitat. In particular species-rich hedges support a greater abundance and diversity of invertebrates for hedgehogs to feed on.

Action cont'd

Do not cultivate or spray within 2m of the base of your hedge and take action to avoid spray drift. (Hedgerow Regulations 2024 – England only).

Protect hedges from heavy grazing to maintain hedge base growth.

Benefit for hedgehogs cont'd

Diverse vegetation both at the hedge base and the margin is important both for hedgehogs and for the food they rely on.

Enabling thick vegetation to establish at the base of a hedge maintains a good habitat for hedgehogs.

These actions also benefit:



birds



butterflies



dormice



bats



A good wildlife hedge structure

Structural complexity
helps animals at different
stages of their lifecycle

Hedgerow
trees

Adjusting height and
width through its lifecycle

Connectivity to the
wider landscape

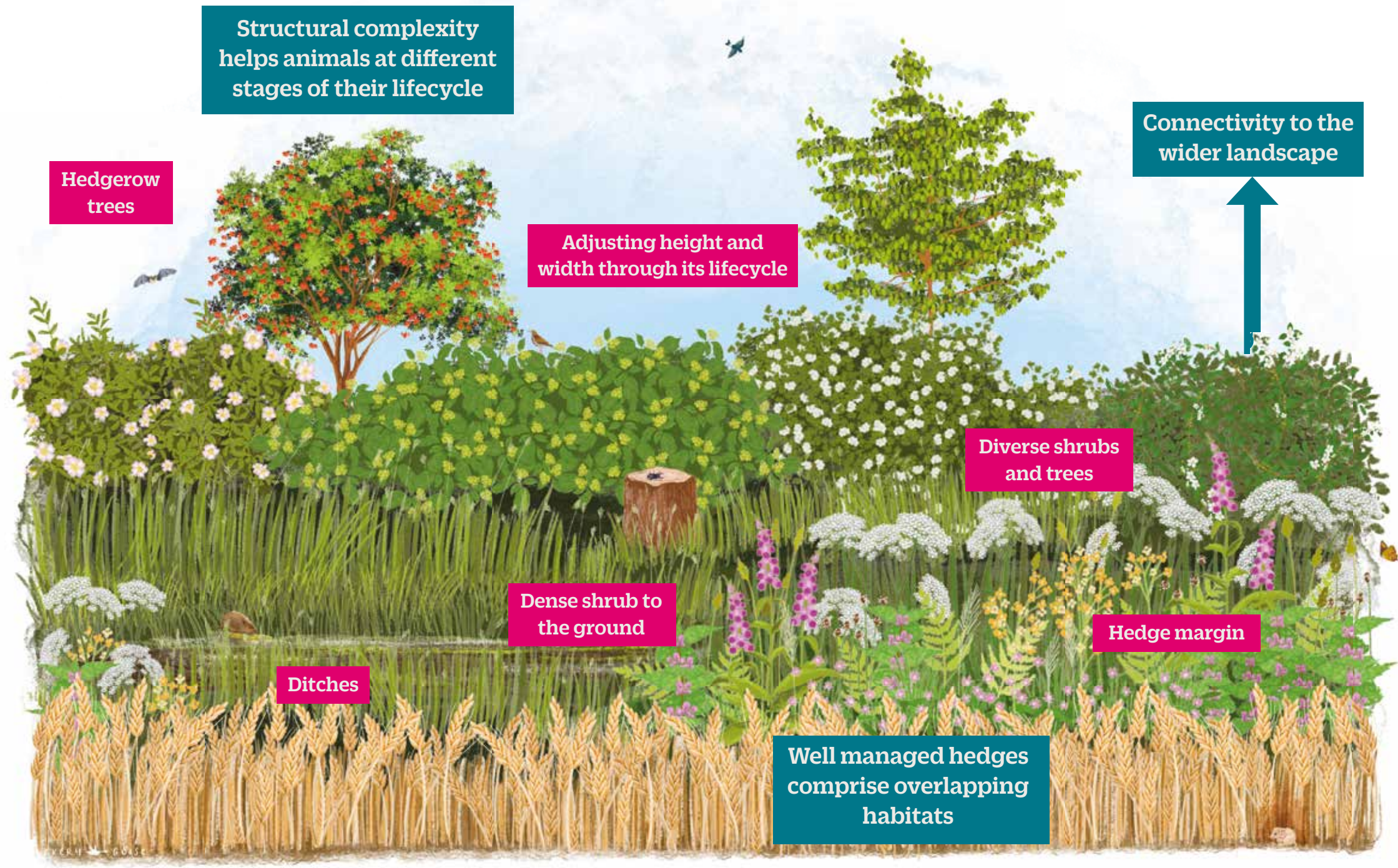
Diverse shrubs
and trees

Dense shrub to
the ground

Hedge margin

Ditches

Well managed hedges
comprise overlapping
habitats



2. Field margin availability and management

Action

Maintain at least 3–6m-uncropped and unsprayed margins in cropped fields.

Benefit for hedgehogs

On arable and other cultivated land, hedgehogs mostly forage along field margins, venturing into open fields more frequently later in the growing season when crops provide cover.

Wide margins provide food and nesting material that might otherwise be scarce. Hedge buffers or conservation headlands add to the provision of food and shelter.

Where possible, leave margins of 2m uncut and unsprayed in silage fields. Consider sowing seed-mixes that will encourage invertebrates.

Provides hedgehogs with nesting and foraging resources.

Avoid driving on grassy margins or using them as footpaths.

Minimising the use of grassy margins as footpaths or vehicle routes will help keep resting hedgehogs safe.

Cut to reduce scrub encroachment on rotation (ideally around every 3 years), and not cutting the full perimeter in one year.

Tussocky grassland is ideal cover for hedgehogs. It also provides good conditions for summer daytime nests. If it is particularly thick, hedgehogs may use it for hibernation.

Dense undergrowth is a great habitat for beetles, spiders and caterpillars which hedgehogs feed on.

These actions also benefit:



partridges



harvest mice



owls



snakes



3. Field size in relation to habitat availability

Action

Where possible, create a mosaic of field sizes and uses, e.g., large and small, arable and pasture.

Benefit for hedgehogs

Mixing field sizes increases the length of linear features and creates opportunities to restore and connect hedges. Hedgehogs use these features to move through the landscape safely and benefit from a mix of different habitats.

Where large fields are needed, maintain grassy margins and conservation headlands, ensuring hedgerows are well managed.

These provide foraging and nesting sites and improve connectivity.

Establish and maintain beetle banks across large, arable fields.

Beetle banks break up expanses of open field and provide “corridors”, offering cover, for hedgehogs to move through. This can encourage hedgehogs to use larger areas of farmland.

These actions also benefit:



birds



beetles



butterflies



owls



bees



snakes



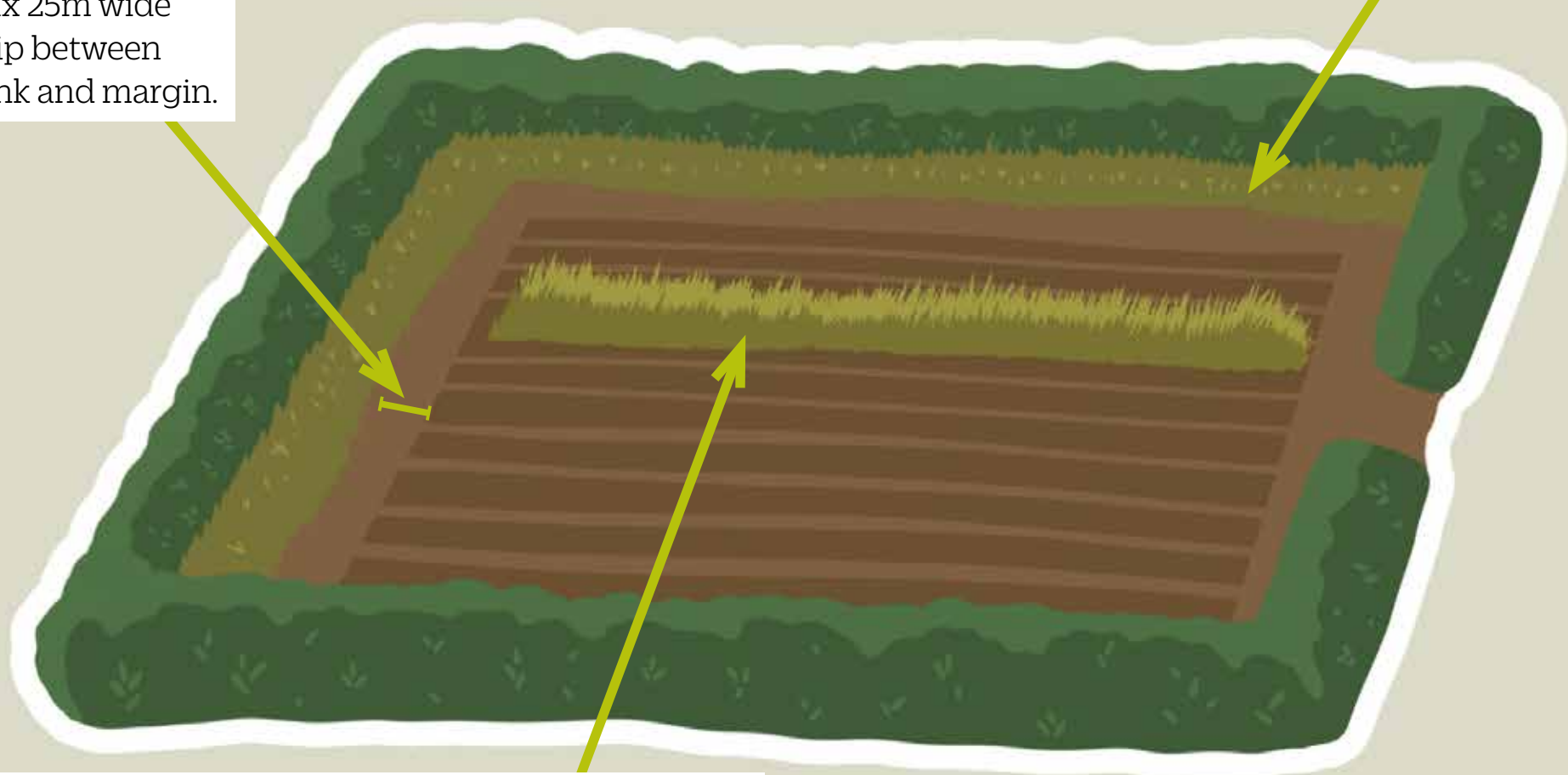
partridges



Beetle banks and field margins

Max 25m wide strip between bank and margin.

2–9m uncropped field margins – provides nesting and foraging habitat for hedgehogs.



1–2m wide beetle bank, raised 0.4m above the tilled ground. Seed with tussock and matt forming grasses such as Timothy, cock's foot and red fescue. Mow once or twice annually until established. No mowing will be required after this period. Hedgehogs may use tussocky grass for nesting during the day.

Field size and layout

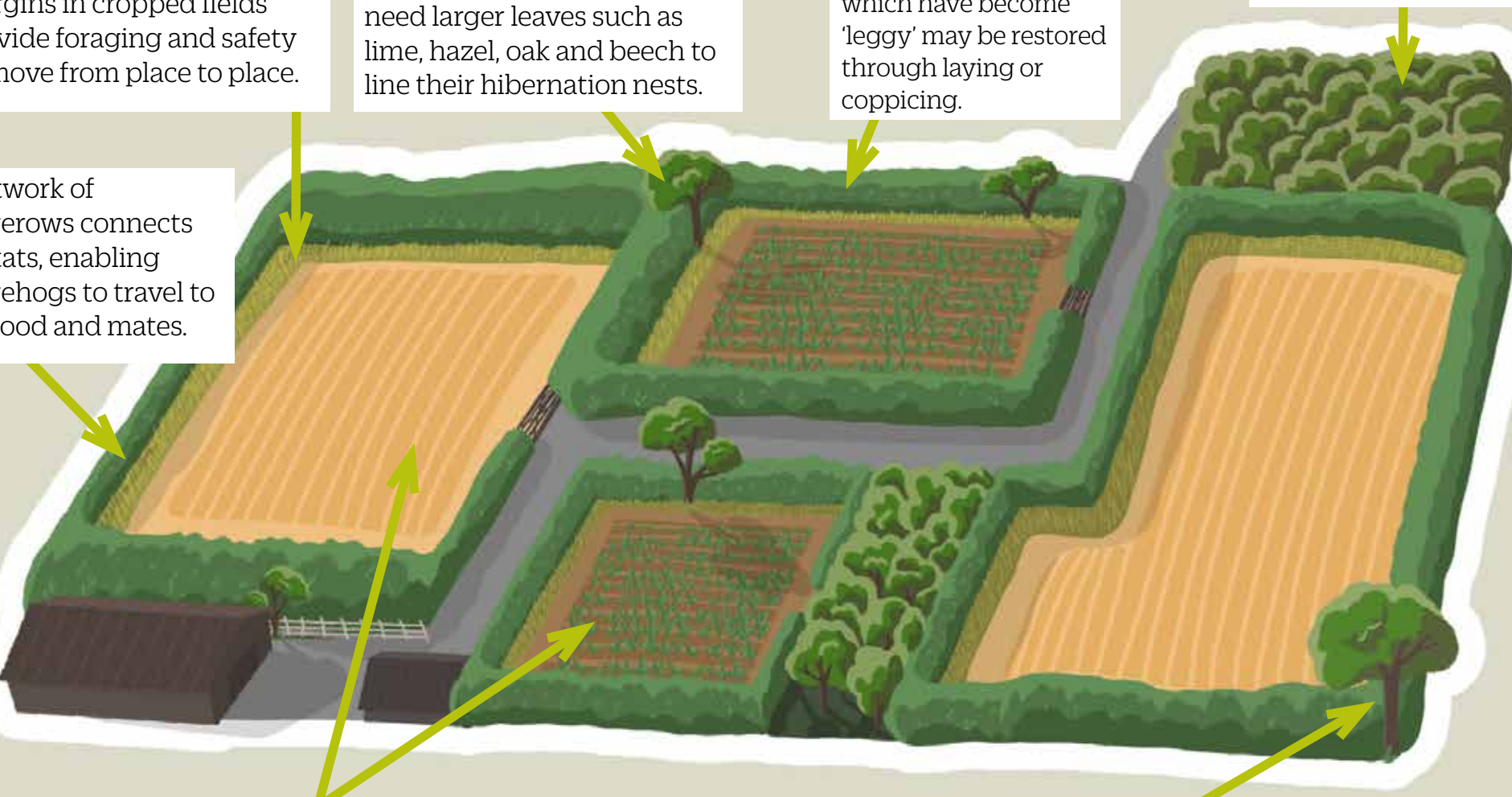
Minimum 2m wide grassy margins in cropped fields provide foraging and safety to move from place to place.

Hedges should consist of a variety of species. Hedgehogs need larger leaves such as lime, hazel, oak and beech to line their hibernation nests.

Hedgerows in good structural condition, with plenty of thorny scrub at the base, provide shelter and nesting opportunities for hedgehogs. Hedges which have become 'leggy' may be restored through laying or coppicing.

Allow woodlands and copses to contain plenty of dense, thorny undergrowth.

A network of hedgerows connects habitats, enabling hedgehogs to travel to find food and mates.



Mixed field sizes and uses maximise the opportunities for hedgehogs to forage and travel along nearby linear features.

Standard trees within hedgerows provide diversity supporting invertebrate prey species and a variety of leaf sizes for hedgehogs to use while nesting.

4. Ploughing – till or no till?

No till farming is an option that offers many benefits, not just for hedgehogs. It can result in improved soil structure. No till also means you are keeping more of the nutrients your soil needs right where they belong. It also allows more beneficial invertebrates to colonise and remain within the cropped field, supporting your crops and providing forage for birds, hedgehogs and other creatures.

Why no till?

- ▶ Increased soil fertility. No till farming can be beneficial, not only for hedgehogs but for soil fertility.
- ▶ Soil erosion can be reduced by leaving more crop residue on the surface in the months when there are no crops growing. This reduces run-off, allowing rain to work its way down into your soil bringing increased moisture and beneficial nutrients into it.
- ▶ Minimizing the compaction of your soil, enabling it to maintain a higher availability of soil invertebrates.

Tractor direct drilling seed through stubble.





Pasture with scrubby woodland and hedgerows to connect habitats.

5. Woodland, scrub and decaying vegetation

Action

Leave areas of scrub or dying vegetation. Leaf litter can be left in situ or collected into piles near tree lines or hedgerows.

Establish and maintain sheltered areas with bramble.

Benefit for hedgehogs

This provides cover and nesting materials, as well as foraging sites, and means less disturbance for hedgehogs.

Bramble provides sturdy hibernation sites that are less susceptible to disturbance.

These actions also benefit:



6. Helping hedgehogs through hibernation

Hedgehogs usually hibernate from October/November through to March/April. During mild winters hedgehogs can remain active well into November and December. Hibernation is a technique animals use to conserve energy when food is less readily available. Hedgehogs can use several different hibernation nests during this period - research has shown that a hedgehog is likely to move nesting sites at least once but often more, so can sometimes be seen out and about during these months.

Hibernation is a critical time for hedgehogs and it is vital that they can rest undisturbed. Disturbing a hibernating hedgehog is bad for the hedgehog as it uses up its precious energy reserves in order to become active again. If you are working in an area that could be a nesting site, check for hedgehogs first but whenever possible avoid working on potential nesting habitats.

Hedgehogs need a good food supply in the months leading up to winter in order to build fat reserves to provide energy throughout hibernation. They also need suitable nest materials and plenty of secure nesting sites. When they wake up in spring, or sooner in mild winters, they need a secure food supply - the availability of plenty of invertebrates.

Where?

Hedgehogs prefer to build their hibernation nests near broad-leaved hedgerows and woodlands. They will also hibernate in sheltered areas around the farmyard. The availability of suitable nest materials and safe sites are important for successful overwintering. A mixed landscape with a mosaic of habitats provides the best chance for hedgehogs during hibernation. Mature, managed hedgerows, woodland patches, scrubby areas and some unkempt/unmanaged areas likely to be of significant value.

Land management practices can influence whether hedgehogs hibernate successfully or not. It is best, if possible, to avoid or minimise clearance of scrub and piles of vegetation during winter in case hedgehogs are nesting there. Whilst hedgehogs can wake up and move to new nesting sites, it is best to try to avoid disturbing areas where they are likely to be hibernating because any activity over winter uses up precious energy supplies.

Hedgehog emerging from hibernating in a hollow log



7. Reducing hazards

Hedgehogs encounter many hazards across urban and rural landscapes. In the rural environment, farm machinery such as tractors, combine harvesters, cultivators and brush cutters pose a threat. It's unclear whether such hazards affect hedgehogs at a population level, but simple alterations, such as minimising driving on rough ungrazed/uncultivated land and checking potential habitats for hedgehogs ahead of carrying out work, can save lives. Cutting crops or silage from the centre out or from one side to the other, rather than spiralling inwards, can enable hedgehogs and other small mammals to move away from the machinery.

Cattle grids

If a hedgehog falls into the pit beneath a cattle or sheep-grid, the near-vertical walls beneath the grid are too steep for the animal to climb out. The result could be a drawn-out death by dehydration and/or starvation.

The solution

An escape ramp for hedgehogs and other small animals is nothing elaborate. Escape ramps for small animals should always be provided in at least one but preferably two corners of the pit (preferably "outer" corners i.e. corners to which the cattle/sheep do not have access). Ramps (150 – 200 mm wide) can be made of concrete, wood or metal, should not have a smooth surface and should have a slope not exceeding 1 in 2. The pit should be adequately drained. If it is impossible for an animal to gain access to the whole of the pit i.e. if it is sectionalised, more ramps would be required.

For further details refer to British Standards Institution (2006) BS 4008:2006 Specification for cattle grids. London: BSI.

7. Reducing hazards cont'd

Electric fencing

Electric fences for livestock pose extreme danger to hedgehogs, due to their instinct to curl into a ball, which can exacerbate any entanglement resulting in them receiving multiple shocks. This usually results in death.

The solution

Cattle and other large livestock

We do not recommend the use of electric fences with electrified wires lower than 30cm. Strands higher than 30cm will allow hedgehogs to safely pass underneath.

Where livestock management offers no alternative and electric fencing must be used, cut off the power of the first and second line above the ground to allow a non-live distance of at least 30cm between the ground and the first powered line. This is enough space to avoid any danger for roaming hedgehogs but remaining effective for livestock. Keep wire and netting taut and check regularly to mitigate the risk of entanglement.

Chicken coops and pheasant pens

Electric netting to keep predators away from chickens and pheasants also poses an extreme risk to hedgehogs. If electric fencing must be used, netting can be made safer for hedgehogs by cutting the first and second strands of netting at the first and last post – this will cut the power to those strands, removing the risk of hedgehogs getting shocked.

Alternatively, plastic sheeting covering the first two strands will also prevent a small animal like a hedgehog being shocked.

Agri-Environment Schemes

There are a variety of agri-environment schemes and other sources of funding for hedgehog-friendly initiatives. These vary across England, Scotland and Wales. Please visit our website for full up to date information about the schemes in your part of the UK.

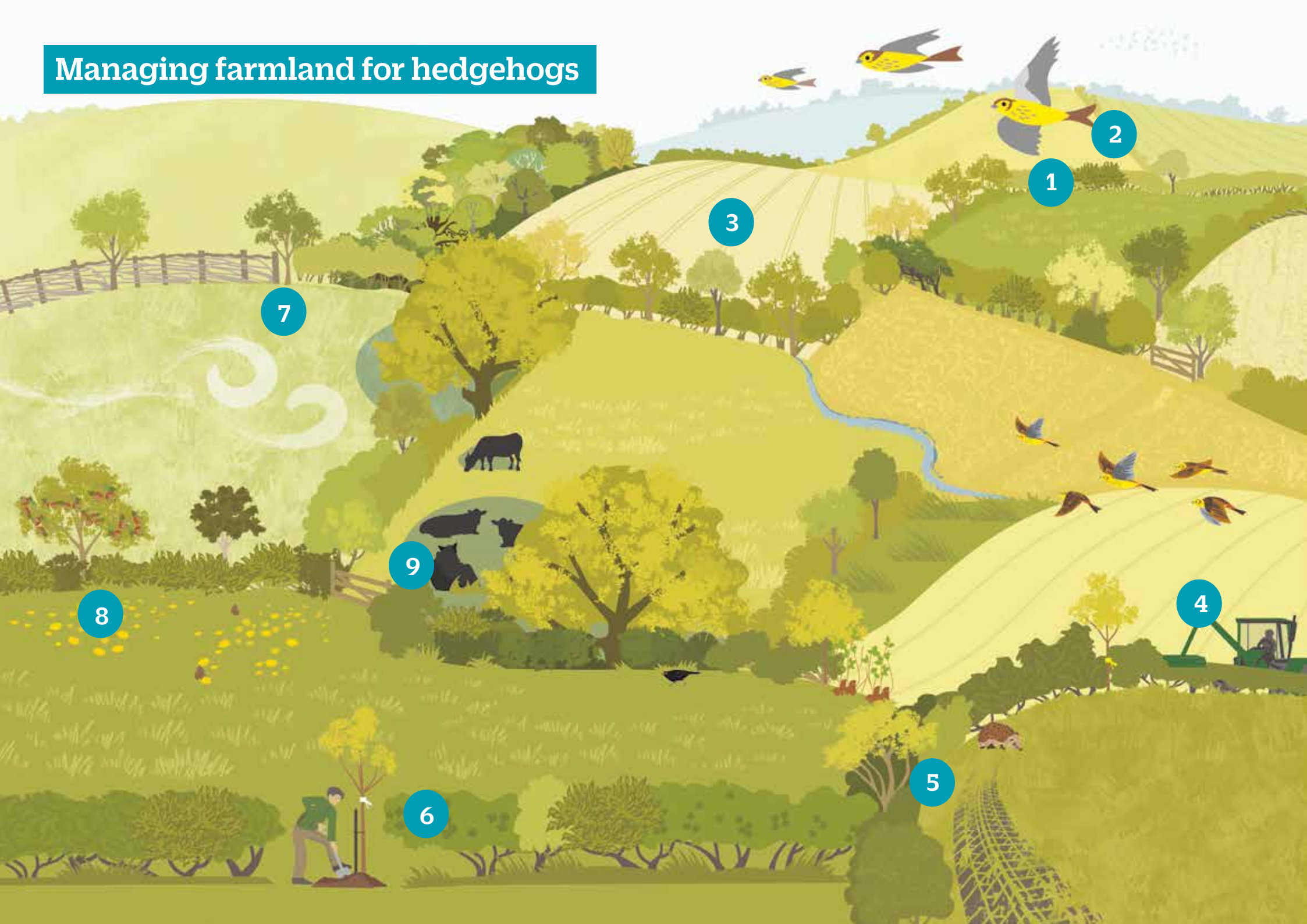


Go to **ptes.org/agri-environment-schemes-aes-and-other-funding-opportunities** or scan the QR code.

Farmland showing a variety of well-connected habitats.



Managing farmland for hedgehogs



Managing farmland for hedgehogs

key

- 1 Hedgehogs use linear features to move around the countryside. Allowing wide strips of long, tussocky grasses and scrub to grow alongside walls and unhedged fences can increase cover from predators.
- 2 A patchwork of different land uses is perfect for hedgehogs, increasing the diversity of invertebrate prey in a mosaic of habitats.
- 3 Hedgehogs spend little time venturing into arable fields, but increasing the potential for worms and other invertebrate prey through low and no till farming and reducing or eliminating pesticide usage is beneficial.
- 4 If carrying out hedgerow management (and other land management tasks that impact hedgehog habitat) try not to disturb hibernating and nesting hedgehogs.
- 5 Avoid driving on uncropped field margins to avoid resting and mobile hedgehogs.
- 6 Rejuvenate gappy hedges by coppicing or laying, and plant up any gaps.
- 7 Unimproved pastureland is a preferred habitat for hedgehogs to forage in.
- 8 Where possible, allowing fields to go ungrazed or uncut will provide the long, tussocky grasses that hedgehogs nest in during the daytime.
- 9 Hedgerow and in-field trees can provide the larger leaves that hedgehogs need to create substantial hibernation nests.

Britain's National Hedgehog Conservation Strategy

Britain's National Hedgehog Conservation Strategy, published by People's Trust for Endangered Species and the British Hedgehog Preservation Society, has been created in response to trends highlighted in the State of Britain's Hedgehogs 2022 report, which revealed that British hedgehogs have declined by between 30–75% in rural areas since 2000.

To tackle this ongoing decline, we worked collaboratively with over 30 stakeholders to create a national strategy that can guide the change that's desperately needed. Stakeholders include leading conservation NGOs, academics, educational institutions, hedgehog rehabilitators and organisations within the transport and farming sectors.



Scan the QR code to read the strategy.

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

01584 890 801
info@britishhedgehogs.org.uk
www.britishhedgehogs.org.uk
registered charity no. 1164542

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