

Hedgerows and Treelines

F3

LORNE GILL/SNH



NEAR CARGILL, PERTSHIRE

DEFINITION

Hedgerows are generally classified as continuous linear scrub less than 4m high. Within the context of this Habitat Action Plan hedges will include boundary features such as hedgerow trees and treelines. Extended hedges are lengths of hedgerow adjoined by wide grassy margins left unploughed in arable areas and fenced off in areas grazed by livestock.

CURRENT STATUS AND EXTENT OF HABITAT

Hedgerows remain an integral part of the lowland farm landscape in Tayside. Whilst important for cultural and landscape reasons, hedges play a vital part in maintaining the biodiversity of Tayside. Significant lengths of hedgerow exist throughout the region, although the length of hedge lost between 1940 and 1980 was around 1,000km - 25% of the estimated total of 4,000km.

Whilst conservation management techniques for hedgerows are generally well known, neglect and decline in the quality and quantity of hedgerows still occurs in Tayside and throughout the UK.

KEY SPECIES

P = UK Priority Species **C** = UK species of conservation concern

Mammals	Stoat	<i>Mustela erminea</i>	C
	Weasel	<i>Mustela nivalis</i>	C
	Common shrew	<i>Sorex araneus</i>	C
Birds	Grey partridge	<i>Perdix perdix</i>	P
	Bullfinch	<i>Acanthis cannabina</i>	P
	Linnet	<i>Pyrrhula pyrrhula</i>	P
	Reed bunting	<i>Emberiza schoeniclus</i>	P
	Song thrush	<i>Turdus philomelos</i>	P
	Yellowhammer	<i>Emberiza citrinella</i>	C
	Tree sparrow	<i>Passer montanus</i>	P

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Invertebrates	Ringlet butterfly	<i>Aphantopus hyperantus</i>	
Plants	Oak Ash Hawthorn Blackthorn Common knapweed	<i>Quercus robur</i> <i>Fraxinus excelsio</i> <i>Crataegus monogyna</i> <i>Prunus spinosa</i> <i>Centaurea nigra</i>	

NATURE CONSERVATION IMPORTANCE

Lengths of hedgerow play an important role in the maintenance of species diversity. Much of the land in Tayside consists of cultivated arable or intensively managed grassland. These land use types provide only a limited amount of habitat for invertebrate, bird and mammal species. Therefore field boundary features have an extremely important role to play in terms of maintaining farmland biodiversity. Over 600 species of plant, 1,500 of insects, 65 birds and 20 species of mammals have been recorded feeding or living in hedgerows at some point in their life cycle.

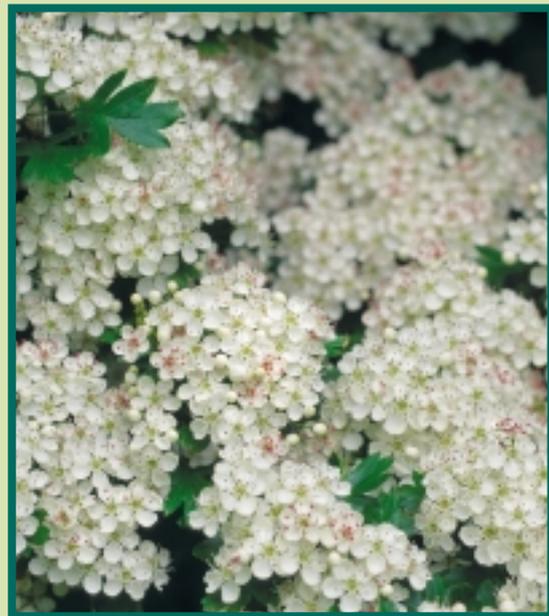
Sympathetic management also determines the conservation importance of hedges. Large, wide, bushy hedges support about 19 different species of bird whilst mechanically tidy, frequently cut hedges support only about 8 breeding species.

Hawthorn

Our word for hedge derives directly from the Saxon “haeg”; hawthorn means “hedge-thorn” having been intrinsically part of our hedgerow tradition for well over a millennia. Many plants and animals are eponymously associated with hedges – Hedgehog *Erinaceus europaeus* and Hedge parsley *Torilis spp.* to name but two. There are in fact over forty traditional hedge names used for a wide variety of species throughout the UK including the ‘hedge sparrow’, a name once commonly used for the Dunnock *Prunella modularis*.

Much planted during the 18th century, the hawthorn is still used as the main shrub in our hedges today as its spiny character deters livestock from straying. Left to grow on, the hawthorn becomes a small bushy tree much loved for its ‘may blossom’. There are over 1,000 different species of Hawthorn throughout the world.

“The Bread and Butter” Tree has long been used by man not only to stave off hunger, but since the 19th century it has been widely used on a global scale as a heart tonic to regulate circulation. It also helps lower cholesterol, aids digestion and has a mild sedative action. Over 200 European commercial medicines use hawthorn as their main constituent.



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Hedgerows can offer nest sites for UK Biodiversity Action Plan species such as Song thrush *Turdus philomelos* and Linnet *Pyrrhula pyrrhula*, whilst Grey partridge *Perdix perdix* and Yellowhammer *Emberzia citrinalla* often nest on the ground in the bottom of hedges, particularly where there is a wide grass margin. Yellowhammers and Song thrushes also rely on hedgerow trees as song posts, whilst Kestrels *Falco tinnunculus* and Barn owls *Tyto alba* often use them for hunting.

Old trees often found in hedgerows and treelines provide important roost sites for bats such as Pipistrelle *Pipistrellus pipistrellus*, Natterer’s *Myotis nattereri* and Daubenton’s *Myotis daubentoni*. Birds, including the Tree sparrow *Passer montanus*, whose numbers have plummeted to only 11% of their original population, use holes in dead trees for nesting. Many invertebrate, lichen and fungi species are associated with old hedgerow trees, especially oak.

Hedgerows and Treelines

F3

Hedges are also excellent ways of linking different wildlife sites providing 'wildlife corridors'. Bats use hedges as navigation aids and prefer flying along hedges and treelines than to flying across large fields. Other species, particularly invertebrates such as spiders, ground beetles and hoverflies are often found in hedge bottoms and tussocky field margins. All these insects are significant in assisting with pest control, the hoverflies also playing an important role as pollinators.

Whilst hedgerow trees and treelines can enhance biodiversity there are some situations where their introduction is less desirable. Ground nesting birds such as the Grey partridge will avoid areas where trees are present. Wading birds such as Lapwing *Vanellus vanellus* and Redshank *Tringa totanus* and songbirds such as Skylark *Alauda arvensis* need open areas for nesting; they avoid wooded areas in order to reduce their risk of nest predation. In areas of Grey partridge habitat hedgerow trees should be no closer than one every 100 metres.



RSPB

Yellowhammer

The Yellowhammer is found on farmland throughout the UK. Slightly larger than a chaffinch it is notable for its yellow head and rusty red rump. It generally nests in hedges, scrub, grassy margins and small plantations and feeds on seeds and berries. Together with the Song Thrush, it relies on mature hedgerow trees which it uses as song posts to reinforce its territory during the breeding season. The population has seen a decline of 5% in the last 25 years.

NATIONAL BIODIVERSITY CONTEXT

“The UK Biodiversity target for hedgerows is to halt all loss of ancient and species-rich hedgerow by 2005. A target has been set for the favourable management of 50% of species-rich and ancient hedgerows by 2005.”

19

ECOLOGY AND MANAGEMENT

Poor management of hedgerows is a contributory factor in the decline of the length and quality of hedgerows in Tayside. A recent survey of farmers in England suggests that hedges are not managed to best effect and anecdotal information suggests the same is true of hedgerows in Tayside. In England 80% of hedges were trimmed annually although most land managers were aware that less frequent trimming is better for wildlife. Only 6% of hedges were trimmed in January / February the recommended month for carrying out work.

The greatest variety of birds will be found in dense hedges at least 2m tall, although for birds to breed successfully hedges need to be 1.4m tall and at least 1.2m wide so that nests can be hidden from predators. A good mix of shrub species will provide winter food for a variety of birds, provided the hedges are trimmed every second year and in late winter. Hedges also provide cover for flocks of finches feeding on winter stubble. Tall roadside hedges on upland habitats and grassland will also deter Barn owls flying into the path of traffic.

CURRENT FACTORS CAUSING LOSS OR DECLINE

- Field enlargement has been the main factor resulting in loss of boundary features.
- Current economic factors in farming mean that the majority of new hedge planting will be carried out only with financial assistance.
- The almost universal use of stock fencing as a means of retaining stock has meant that hedges as stock-proof barriers are no longer necessary and therefore may be lost.

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- The majority of farmland hedges are cut on a yearly basis, generally in late summer. This management results in a gradual decline in the quality of hedgerows as well as greatly reducing the number of berries left as food for birds throughout the winter months.
- Farm operations can often have an impact on hedgerows. Spray drift and fertilisers in hedge bottoms can often encourage undesirable species such as Cleavers *Galium aparine*. Ploughing too close to the hedge can damage roots thus weakening plants and hedgerow trees.
- Lack of replacement of fallen hedgerow trees.

Case Study

Cockerstone Farm

Cockerstone Farm is a mixed farm 7 miles north-west of Perth. The 131 hectare farm has a range of livestock and arable crops. It is part of the SNH / Eagle Star Strathord Estate Initiative, a project set up to demonstrate good practice in the creation and management of on-farm habitats for conservation.

It was agreed that the farm would provide an opportunity to demonstrate how an agri-environmental scheme could benefit an average family farm and to test different management options and prescriptions which could inform future replacements for existing schemes. The project, starting in late 2002, will also look at alternative methods and criteria for the payment to farmers for environmental management and any training requirements that may be required to achieve this.

One of the aspects the project will focus on is hedgerows and their management. As part of the scheme 360m of old 'gappy' hedge will be coppiced to provide young vigorous stems to rejuvenate the hedge. Other work will include 450m of new hedge planting. Different techniques of establishment and management will be tried and demonstrated.



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HEDGE PLANTING

MAIN THREATS TO KEY SPECIES

Bat spp.	Loss and fragmentation of hedgerows, especially hedge 'flyways' and wildlife corridors. Removal of mature trees used as roosts.	
	UK Importance of Tayside population:	moderate
Song thrush	Removal of mature trees leads to loss of song posts and territory boundaries. Reliant on a good source of food throughout the winter, especially insects, berries and fallen fruit.	
	UK Importance of Tayside population:	moderate
Linnet	Inappropriate hedge management will remove hedge-top perches the birds use during breeding. Winter flocks rely on ground feeding in fields; during the summer they rely on hedges for insects.	
	UK Importance of Tayside population:	moderate

Hedgerows and Treelines

F3

Tree sparrow	Loss of nesting sites when mature trees are removed or hedges over-trimmed. Winter flocks rely on ground feeding in fields; during the summer they rely on hedges for insects.	
	UK Importance of Tayside population:	moderate
Native Tree spp. (inc. oak, ash, holly and hawthorn)	Damage to tree roots because of ploughing too close to hedges. Inappropriate hedge management damages health of hedge and destroys young standard trees. Inappropriate removal of standing dead wood or tidying away of fallen trees from field corners.	
	UK Importance of Tayside population:	small

OPPORTUNITIES AND CURRENT ACTION

The Rural Stewardship Scheme (RSS) introduced in 2001 to replace the Countryside Premium Scheme includes options for:

- the planting of new hedgerows
- management of existing hedgerows
- management of extended hedges

The Scheme, given adequate funding, provides the best opportunity to improve the amount and quality of hedgerows throughout Tayside.

If agreement holders under the previous Countryside Premium Scheme are given the option of continuing the positive management of options they have already started (including hedgerow creation and management), the biodiversity benefits will continue.

Both FWAG and SAC employ advisers who can provide farmers with advice on how to manage hedgerows for biodiversity. Some of this advice is available free of charge to the farmer or landowner.

OBJECTIVES AND TARGETS

	Objectives	Targets
1	Prevent further decline in the length and quality of hedgerows and treelines in Tayside.	No decline in length and quality of hedgerows after 2010.
2	Identify the true extent and quality of hedgerows in Tayside. Monitor hedgerow loss as well as levels of new planting.	Identify and begin monitoring by 2005.
3	Encourage appropriate management to maintain and enhance hedgerow quality. Inform and educate farmers and land managers as well as providing training to operators carrying out hedge cutting.	Set up regular training courses and a co-ordinated awareness-raising programme by 2003.
4	Aim to have a significant percentage of hedgerows under good management by 2010.	25% of hedgerows under positive management
5	Restore past hedgerow lines and create new hedges to link existing habitat features. Encourage the use of agri-environment schemes to plant new hedges and extended hedges where appropriate.	Aim to have 50% of farms in Tayside entered into an agri-environment scheme containing some new hedgerow creation.

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Stakeholders

- Landowners (including commercial landowners), land managers, contractors, road and rail consultants, advisory bodies, government bodies, general public.

ACTION FOR BIODIVERSITY

		Action - Hedgerows and Treelines	Deliverers		To take place by	Meets Objective No.
			Lead Partners	Partners	02 03 04 05 06 07 11 16	
LBAP Ref.	A	Policy and legislation				
F3	1	Where appropriate make available information on grant-aid for management, creation and restoration of hedgerows.	FWAG SAC	SEERAD SNH	# # # # # # # #	
F3	2	Investigate the implementation of legislation to protect hedgerows and prevent further decline in length or quality.	SNH		# # # #	
	B	Site safeguard and management				
F3	1	Encourage the use of agri-environment schemes to plant new hedges where appropriate.	NFUS SLF	FWAG SAC SNH	# # # # # # # #	
F3	2	Encourage appropriate management of hedgerows including less frequent cutting and the restoration of gappy hedges.	FWAG SAC	SLF NFUS	# # # # # # # #	
	C	Species management and protection				
F3						
	D	Advisory				
F3	1	Ensure adequate advice is available to all landowners on grants and best practice.	FWAG SAC		# # # # # # # #	
F3	2	Ensure training and advice is available to farmers, land managers and operators carrying out hedge cutting.	TBP		# # # # # # # #	
	E	Research and monitoring				
F3	1	Identify the true extent and quality of hedgerows in Tayside and monitor hedgerow decline and new planting.	SNH	TBP	# # # #	
F3	2	Monitor and review this plan – ensure this plan is being delivered annually and in detail after 5 years.	TBP		# # # # # # # #	
	F	Promotion and awareness-raising				
F3	1	Promote the importance of hedges and treelines through all advisory groups and interested organisations.	TBP		# # # # # # # #	