

Stone Dykes

F4



LORNE GILL/SNH

DRYSTANE DYKE

DEFINITION

Dykes, whether dry stone or mortared, are found throughout Tayside. The great dyke-building period in Scotland was from 1750 -1850 following the Enclosure Acts. Many of these linear features have lasted 200 years. Primarily of landscape and stockholding importance, dykes also have a role to play in terms of wildlife conservation particularly for invertebrates and small mammals. Drystone dykes were, historically, the dominant field boundaries where rocky outcrops, thin soils and climate made the use of hedgerows impractical. Lowland, more fertile regions also contain a significant number of drystone walls.

CURRENT STATUS AND EXTENT OF HABITAT

Many dykes are in poor or very poor condition. Whilst some have the potential to be restored there are many that are beyond repair. In central Scotland it is estimated that only 14% of dykes are in good stockproof condition. 49% are in the advanced stages of dereliction and are unlikely to be rebuilt. The remaining 37% are in poor condition but have the potential to be restored.

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
Birds	Wheatear	<i>Oenanthe oenanthe</i>	C
	Stonechat	<i>Saxicola torquata</i>	C
	Whinchat	<i>Saxicola rubetra</i>	C
Amphibians and Reptiles	Slow-worm	<i>Anguis fragilis</i>	C
	Common Frog	<i>Rana temporaria</i>	C
	Common Toad	<i>Bufo bufo</i>	C
	Common Lizard	<i>Lacerta vivipera</i>	C

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Invertebrates	a mason bee Bumble bees	<i>Osmia parietina</i> <i>Bombus spp</i>	P
Plants	Saxifrage spp. Maidenhair spleenwort Lichen spp. Liverworts and Mosses spp.	<i>Saxifraga spp</i> <i>Asplenium trichomanes</i>	

NATURE CONSERVATION IMPORTANCE

Dykes contain numerous holes and cracks that provide growth, shelter and nest sites for a variety of plants and animals. Pioneer plants such as lichens and mosses colonise walls in unpolluted areas, these in turn providing rooting for the Saxifrage species and ferns such as Maidenhair spleenwort *Asplenium trichomanes*. Insects (spiders, woodlice, bees and wasps for example) utilise walls and species such as the Stoat *Mustela erminea* can use them as cover and hunting ground. Wheatear *Oenanthe oenanthe* often nest in dykes.

In terms of nature conservation importance fallen or derelict dykes can often be equally important as standing dykes. This is particularly the case in the more intensively farmed areas where fallen dykes and their associated grassy margins provide cover and habitat for a wide range of species.



LAURIE CAMPBELL

The Slow Worm *Anguis fragilis* is a common inhabitant of drystone dykes. Though often mistaken for a snake the slow-worm is, in fact a legless lizard - and it can move quite fast if disturbed. Slow-worms like warmth and live on sunny banks and hillsides where there is good cover such as grass, scrub or stones.

NATIONAL BIODIVERSITY CONTEXT

Although there is no UK Action Plan for dykes the National Habitat Statement suggests that targets similar to those for hedges should be aspired to.

Owing to the specialist knowledge needed to record the many lichen, moss and fern species in Tayside, their distribution and status is not generally known. There are, however, a number of factors affecting the many species found on stone dykes - air pollution, for instance, especially from diffuse sources such as motor vehicles which raise concentrations of ammonia in the air. This can subsequently result in the decline of the rarer lichens that depend on nutrient-poor conditions. Localised nutrient enrichment can also occur where livestock concentrate in one area or where dung or fertilisers are spread.



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CAPTION

Excess shade from shrubs and trees can affect some mosses and lichens on drystone dykes. Recreational use can also cause local damage, i.e. by indiscriminate climbing on to walls or trampling of lichens and ferns.

ECOLOGY AND MANAGEMENT

The majority of dykes are left unmanaged and any reconstruction of dykes is normally carried out with grant aid from an agri-environment scheme. A large amount of dyke restoration has been carried out as part of the Breadalbane Environmentally Sensitive Area Scheme.

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CURRENT FACTORS CAUSING LOSS OR DECLINE

- Fences have, in most cases, replaced dykes as effective stock-proof barriers.
- Farm and estate sizes have grown with livestock utilising wider tracts of hill ground.
- There has been a decline in the number of people with the necessary skills required for dyke restoration work.
- Cost and time requirements mean dyke restoration is no longer viable without grant aid.
- Removal of dyke material for other uses and sale to garden centres.

MAIN THREATS TO KEY SPECIES

Wheatear	Loss of nest sites	
	UK Importance of Tayside population:	small
Spleenwort	Removal of habitat Pollution Climate change	
	UK Importance of Tayside population:	small

OPPORTUNITIES AND CURRENT ACTION

Agri-Environment Schemes

Any farm or estate currently entered into an agri-environment scheme (CPS, RSS or ESA) has the dykes on the holding identified in the conservation audit. These dykes are protected under the conditions of the scheme and cannot be removed. Grants are available under the current agri-environment scheme to fund dyke restoration work.

Advice

FWAG and SAC employ advisers who can provide farmers with advice on grants available for dyke restoration. Some of this advice is available free of charge to the farmer.

Case Study

Dry Stone Walling Association

The DSWA is a charitable organisation committed to promote and preserve the art of dry stone walling throughout the UK. The Association has 20 branches nationally, of which five cover Scotland. The Central Scotland Group takes in part of Tayside and consists of 60 members, including both professional and amateur wall builders. The group's main remit is to train new members in the art of dry stone walling, whilst more advanced classes are held for old hands at which members can learn the art of building on steep slopes and that of artistic dry stone walling.

The organisation is involved in local community and conservation projects and works closely with the National Trust for Scotland and Scottish National Heritage. Recent work includes mending walls at Barrie's Birthplace in Kirriemuir, making raised flowerbeds in Blairgowrie and constructing a conservation enclosure at Blair Atholl.

OBJECTIVES AND TARGETS

Objectives		Targets
1	Prevent further decline in the length and quality of dykes in Tayside.	No decline in length and quality of dykes after 2010.
2	Identify the true extent and quality of dykes in Tayside.	Identify by 2005.
3	Promote the importance of dykes in terms of biodiversity, shelter and stockproofing.	
4	Ensure dykes are protected from further destruction and removal.	Prevent further removal and destruction of dykes by 2010.
5	Encourage uptake of agri-environment schemes to ensure the restoration of dykes.	Ensure that 50% of farms with dykes in Tayside are entered into an agri-environment scheme using the dyke restoration grant by 2010.

Stakeholders

- Landowners, farmers, land managers and advisors, DSWA, government bodies, conservation volunteer groups, general public.

ACTION FOR BIODIVERSITY

		Action - Stone Dykes	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											
F4	1	Where appropriate continue to make available information on grant aid for restoration of dykes.	FWAG SAC	SEERAD SNH	#	#	#	#	#	#	#	#	
	B	Site safeguard and management											
F4	1	Encourage the use of agri-environment schemes to restore dykes where appropriate.	NFUS SLF	FWAG SAC SNH	#	#	#	#	#	#	#	#	
	C	Species management and protection											
F4													
	D	Advisory											
F4	1	Ensure adequate advice is available to all landowners on grants and best practice.	FWAG SAC	SNH	#	#	#	#	#	#	#	#	
	E	Research and monitoring											
F4	1	Examine future plans to identify decline in amount of drystone dykes as well as levels of reconstruction.	SNH DSWA		#	#	#	#					
F4	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											
F4	1	Promote the importance of stone dykes through advisory groups and interested organisations.	TBP		#	#	#	#	#	#	#	#	