



DAVE BELL

WET GRASSLAND

## INTRODUCTION

Wet grassland is one of the most rapidly diminishing wetland types in Britain. Our coastal grazing marshes, floodplains, wash lands, water meadows and river valley pastures are part of a traditional farming system. Losses of wet grassland have only been well documented since the Second World War, but in this period there have been dramatic declines in breeding wading bird populations and the other flora and fauna assemblages associated with this habitat.

The value of the wet grassland habitat is becoming increasingly recognised beyond the benefits it provides over and above its conservation value. Flood alleviation, nutrient and pollution absorption and groundwater recharge are all additional benefits being utilised. The management of existing wet grassland and the possibility of its restoration or creation should all aim to take advantage of these functional values. A wider vision of the value of wetlands within floodplains and catchments should also be developed.

## DEFINITION

Wet Grassland is, for the purpose of this Habitat Action Plan, defined as periodically inundated pasture or meadow with ditches which maintain the water levels containing standing brackish or fresh water. Almost all areas are grazed and some areas are cut for hay. Sites may contain seasonal water-filled hollows and permanent ponds with tall fen species such as reeds, but not extensive areas.

This is comparable with the definitions used by the Biodiversity Steering Group for Coastal and Floodplain Grazing Marsh and by The Wet Grassland Guide. This definition includes the following broad wetland types:

- **Semi-natural floodplain grassland**

This occurs where floodplains are subjected to a semi-natural hydrological regime. Insh Marshes in Strathspey is an excellent example of this. Naturally functioning floodplains are rare in the UK where most rivers are intensely regulated and engineered.

- **Water meadows**

In some areas deliberate controlled flooding was used to boost fertility, raise hay yields and enable grazing earlier in the year.

- **Wet grassland with intensive water level management on drained soils**

Many wetlands on both peat and alluvial soils have been converted to productive agricultural grassland (for example some areas of Montrose Basin). These areas now have artificial highly regulated water regimes. The grass mixture is frequently improved. However, some areas still contain significant botanical interest within field areas and drainage ditches.

- **Lochside wet grassland**

These are areas of wet grassland around the margins of lochs which may be temporarily inundated owing to seasonal water level increases, for example Loch Kinnordy.

Other areas to consider for conversion or re-instatement could well include land currently under intensive grassland or even cereal production.

**Sites/ Site Distribution**

- Parts of:
- Strathallan
  - Strathmore
  - Loch Freuchie Meadows (SSSI)
  - Glen Clova
  - Tay/Isla Valley
  - Montrose Basin

**CURRENT STATUS AND EXTENT OF HABITAT**

There is an estimated 300,000 hectares of grazing marsh in the UK which includes wet grassland and coastal marshes. Scotland's allocation of this total is believed to be in the region of 40,000 ha. Only a small proportion of this overall figure is semi-natural, supporting a high diversity of native plant species (2,500 ha in Scotland, Ireland and Wales).

Although no full estimate for the extent of wet grassland is currently available for Scotland, Newson estimated around 3,000 km<sup>2</sup> as having potential. Wet grassland (or land with the potential to be so) in Tayside is largely distributed along the main straths and glens, but exists in varying size of area throughout the region. While there are some excellent examples, overall the region's wet grassland is greatly reduced as most potential areas are intensively farmed.

**NATURE CONSERVATION IMPORTANCE**

Wet grassland is important for breeding waders and wintering waterfowl. Farmland birds, including Skylark *Alauda avensis*, are also important species of this habitat. Wet grassland can provide significant hunting territory for Barn owl *Tyto alba* and Short-eared owl *Asio flammeus*, as well as Merlin *Falco columbaris* and Peregrine falcon *Falco peregrinus*. This habitat is typically diverse in plant species and supports many different invertebrate species.

**KEY SPECIES**

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

<b>Mammals</b>	Otter	<i>Lutra lutra</i>	<b>P</b>
	Water vole	<i>Arvicola terrestris</i>	<b>P</b>
	Pipistrelle bat	<i>Pipistrelle pipistrellus</i>	<b>P</b>

Wet Grassland

F5

<b>Birds</b>	Redshank	<i>Tringa totanus</i>	<b>C</b>
	Lapwing	<i>Vanellus vanellus</i>	<b>C</b>
	Snipe	<i>Gallinago gallinago</i>	<b>C</b>
	Curlew	<i>Numenius arquata</i>	<b>C</b>
	Wigeon	<i>Anas penelope</i>	<b>C</b>
	Teal	<i>Anas crecca</i>	<b>C</b>
	Skylark	<i>Alauda arvensis</i>	<b>C</b>
	Barn owl	<i>Tyto alba</i>	<b>C</b>
	Short-eared owl	<i>Asio flammeus</i>	<b>C</b>
	Merlin	<i>Falco columbaris</i>	<b>C</b>
	Peregrine falcon	<i>Falco peregrinus</i>	<b>C</b>
<b>Amphibians</b>	Common Frog	<i>Rana temporaria</i>	<b>C</b>
	Common Toad	<i>Bufo bufo</i>	<b>C</b>
<b>Invertebrates</b>	Small pearl-bordered fritillary	<i>Boloria selene</i>	<b>C</b>
	Sword Grass moth	<i>Xylena exsoleta</i>	<b>P</b>
	Damselfly spp.		
	Grasshopper spp.		
	Hoverfly spp.		
<b>Plants</b>	Brackish water-crowfoot	<i>Ranunculus baudotii</i>	<b>P</b>
	Pillwort	<i>Pilularia globulifera</i>	
	Ragged Robin	<i>Lychnis flos-cuculi</i>	
	Selfheal	<i>Prunella vulgaris</i>	
	Yellow rattle	<i>Rhianthus minor</i>	
	Greater Birdsfoot trefoil	<i>Lotus uliginosus</i>	
	Globe flower	<i>Trollius europeaeus</i>	
	Jointed Rush	<i>Juncus articulatus</i>	
	Northern Marsh Orchid	<i>Dactylorhiza purpurella</i>	
	Fungus spp.		

Lapwing

Over the past 25 years there has been a dramatic UK decline in the lapwing population, but its numbers in Tayside seem to remain optimistically constant.

The species will nest on open farmland as well as wet grassland. They prefer to nest in large fields with good all-round visibility. Pairs will often nest nearby to increase their protection from predators. Although they feed on a wide range of invertebrates, earthworms are a particularly important part of their diet.



RSPB

NATIONAL BIODIVERSITY CONTEXT

There is a UK Habitat Action Plan for Lowland Wet Grassland. Its main objectives are:

- Maintain existing diversity, distribution and extent. Evaluate other habitat types fully.
- Maintain and, where technically and ecologically practicable, enhance the extent and distribution of wet grazing levels.
- Re-establish nationally important assemblages of plants, invertebrates, breeding wading birds and nationally important concentrations of wintering waterfowl.
- Restore wet grassland from drier, semi-improved or improved grassland or arable land over the next five years.



LORNE GILL/SNH

Globe flower

These distinctive plants with their large buttercup-like flowers grow in wet upland pastures. The effects of global warming are being widely researched and it is species such as the Globe flower, which prefers a cool northerly climate, that are under increasing scrutiny.

CURRENT FACTORS CAUSING LOSS OR DECLINE

30

Drainage of land for agriculture, alteration of flooding regimes, lowering of water levels, nutrient loading, inappropriate grazing or cutting and abandonment all affect wet grassland habitats. Further factors may be classified as follows:

**Widespread effects**

- Agricultural intensification, including drainage and re-seeding
- Neglect and decline of traditional management
- Declines in the national cattle herd

**Possible localised effects**

- Industrialisation and urbanisation
- Salt water flooding due to sea level rise

MAIN THREATS TO KEY SPECIES

<b>Otter</b>	incidental mortality, primarily by road deaths	
	UK Importance of Tayside population:	<b>moderate</b>
<b>Redshank</b>	loss of habitat, especially through wetland drainage disturbance of nesting sites afforestation	
	UK Importance of Tayside population:	<b>moderate</b>
<b>Curlew</b>	loss of habitat disturbance of nesting sites	
	UK Importance of Tayside population:	<b>moderate</b>

Tayside Biodiversity Partnership

Wet Grassland

F5

<b>Snipe</b>	loss of habitat, especially through wetland drainage	
	UK Importance of Tayside population:	unknown
<b>Skylark</b>	loss of habitat changes in farming practices	
	UK Importance of Tayside population:	high
<b>Short-eared Owl</b>	loss of habitat lack of prey	
	UK Importance of Tayside population:	unknown
<b>Common Frog</b>	loss of habitat, especially through wetland drainage	
	UK Importance of Tayside population:	unknown
<b>Brackish water crow-foot</b>	loss of habitat	
	UK Importance of Tayside population:	unknown
<b>Pillwort</b>	loss of habitat, especially through drainage of wetland and ponds	
	UK Importance of Tayside population:	moderate

OPPORTUNITIES AND CURRENT ACTION

**Legislation and designation**

- Areas may be notified as SSSI, SPA, SAC, RAMSAR sites.
- The Scottish Environment Protection Agency and Scottish Water have some conservation duties inherited from predecessor organisations. These bodies have statutory responsibilities for pollution control and prevention.

**Incentive schemes**

- Rural Stewardship Scheme prescriptions encouraging sympathetic management of wet grassland exist but could be further promoted.

OBJECTIVES AND TARGETS

	Objectives	Targets
1	Ensure no net loss in area or reduction in quality of wet grassland in Tayside, accounting for natural processes.	No net loss in area or reduction in quality of the habitat by 2007.
2	Establish the location, extent and quality of existing and potential areas of wet grassland. Identify areas that could be restored.	Identify and survey all substantial (c.10ha. +) wet grassland areas by 2003. Identify areas of this habitat which could be restored by 2003.
3	Restore areas of degraded habitat in identified areas (see Objective 2). Set a target area for re-instatement to be reached by 2007.	Begin restoration of degraded habitat by 2003. Set a target for restoration by 2002.
4	Produce integrated management plans that promote the maintenance and enhancement of the biodiversity of wet grassland. Incorporate them into other plans such as Catchment Plans, as appropriate.	The inclusion of wet grassland management within individual Rural Stewardship Scheme plans. The inclusion of wet grassland management within other plans relating to other LBAP priorities.



5	As a matter of priority set up a programme of events to raise awareness of wet grassland, its importance and the need for its conservation in Tayside. Establish best practice resource for use by practitioners.	Set up awareness and education programme by 2003.
---	---	---

**Stakeholders**

- Landowners, land managers and advisers, statutory bodies, general public.

**ACTION FOR BIODIVERSITY**

		Action - Wet Grassland	Deliverers		To take place by	Meets Objective No.
			Lead Partners	Partners	02 03 04 05 06 07 11 16	
<b>LBAP Ref.</b>	<b>A</b>	<b>Policy and legislation</b>				
F5	1	Complete SAC and pSAC consultation and designation processes for all currently identified areas.	SNH	SE EU	#	
F5	2	Following a survey of wet grassland (see Research and Monitoring) designate important sites as local Wildlife Sites and incorporate them into the planning system.	SNH	SWT, SEPA, PKC, AC DCC	#	
F5	3	Ensure all regional planning documents take full account of wet grassland as a habitat of potential national and international importance.	SNH	PKC AC DCC	# # # # # #	1
	<b>B</b>	<b>Site safeguard and management</b>				
F5	1	Oppose development or other proposed activities that threaten loss or damage to this habitat.	PKC DCC AC	SEPA, SWT RSPB SNH	# # # # # #	1
F5	2	Help raise awareness of the need for appropriate management and restoration of wet grassland through whole farm plans and prescriptions for incentive schemes such as RSS and its successors.	FWAG SAC	SEPA SEERAD	# # # # # # # #	1,3,4
F5	3	Prioritise management actions on a site-by-site basis following audit and survey of site conditions.	TBP		#	All
	<b>C</b>	<b>Species management and protection</b>				
F5						
	<b>D</b>	<b>Advisory</b>				
F5	1	Visit all landowners and land managers who have examples of wet grassland. Advise them about management which could be carried out to maintain and enhance this habitat.	SAC FWAG	RSPB	#	1,5
	<b>E</b>	<b>Research and monitoring</b>				
F5	1	Survey wet grassland areas in the region and use the data obtained to identify areas where restoration is possible and to act as a baseline for wet grassland to be surveyed every five years.	SNH	SWT, SAC FWAG, PKC DCC, AC	#	
F5	2	Monitor the delivery of this plan yearly and in detail every five years.	TBP		# # # # # # # #	
F5	3	Ensure all data collected for this Plan is shared with a Biological Records Centre.	TBP		# # # # # # # #	
	<b>F</b>	<b>Promotion and awareness-raising</b>				
F5	1	Identify farms where there is sympathetic management for wet grassland. Conduct a series of farmwalks/open days/training events for other farmers, advisers and anyone else who may be interested.	SAC FWAG	SWT	# # # # #	1,5