

Action Plan Scope:

This Action Plan covers five UK priority habitats; Reedbed, Fen, Lowland raised bog, Blanket bog and Coastal and floodplain grazing marsh^a, which together cover the full range of lowland terrestrial wetland habitat types found in Wales¹. While Gwynedd does not hold any Lowland raised bog, actions can be taken within the LBAP area that will contribute towards its conservation on a UK and European scale (e.g. the promotion of peat alternatives).

Lowland fens included within this plan are wide ranging and are defined as peat or mineral-based terrestrial wetlands which receive water and nutrients from surface and / or groundwater sources as well as rainfall¹. Not only are “rich” and “poor” fen communities included, but also most NVC swamp communities. Reedbeds (swamps dominated by reed *Phragmites australis*) and open water habitats (covered by Lakes, ponds and ditches HAP) occur at one end of the succession spectrum, while Lowland raised bogs and Wet woodland (covered by a separate Action Plan) occur at the other. Blanket bog included in this plan refers to all lowland areas (below the general limit of agricultural enclosure or below 300m in altitude) of blanket peat bearing semi-natural vegetation, and also extends to strongly modified vegetation on peat where this plays an important role in the protection of adjacent bog. Where marshy grassland occurs on deep peat (0.5 m depth or more) it is included within this Action Plan rather than that for Rhos pasture¹.



Grazing marsh systems differ from the other four priority habitats in that they represent essentially cultural landscapes intensively managed for grazing and shaped by a history of human control over drainage and sedimentation, with coastal examples having typically been derived from saltmarsh or freshwater swamp habitats¹. Fens and reedbeds may occur within the context of coastal or floodplain grazing marshes, as indeed may Wet woodlands and Rhos pasture. The primary habitat element of grazing marshes is unimproved and improved grasslands, together with component ditch systems.

^a Action should be usually reported against the relevant UK priority type, but see Priority habitats of Wales (2003) for more details of when to report against Coastal and floodplain grazing marsh and when to report against component habitats e.g. Rhos pasture.

1. CURRENT STATUS

1.1 Legislation and priority status

International	Habitats Directive ^b Birds Directive ^c Ramsar wetland sites ^d Water Framework Directive ^e
UK and Wales	SSSI legislation ^f UK BAP priority CROW Act 2000 ^g Water Act 2003 Land Drainage Act 1991 Water Resources Act 1991 Various statutory duties of Environment Agency Wales water management and pollution control functions
Gwynedd	Snowdonia BAP ^h Llŷn AONB

1.2 Status in Wales and beyond

Welsh fens are of outstanding importance by virtue of their extent, diversity and quality and present a microcosm of the range of variation found within British fens¹. There is an estimated 6200 ha of fen habitat occurring in Wales, encompassing c2700 ha of basin, valley and floodplain mire and 2100 ha of flush vegetation in the lowlands, together with c 1400 ha of swamp¹ (figures from the Lowland Habitats Survey of Wales (1987-1997) and the RSPB Inventory of Welsh reedbeds (1993, 1995)).

There is an estimated 460 ha of Welsh reedbed, amounting to approximately 10% of the total UK cover of this habitat (some 5,000 ha), and the notable concentrations in some Welsh LBAP areas represent an important western UK stronghold¹. Wales supports a total of 1700 ha of lowland blanket bog, of which 1200 is modified bog, which reflects the extent to which this habitat has undergone modification.

Grazing marshes and floodplain grasslands are widespread in lowland Britain, covering an estimated total area of 300,000 ha, however only a small proportion of this is semi-natural grassland. A total of 54,600 ha of grassland habitat types have been recorded within coastal levels and floodplain landscapes in Wales, within a CCW inventory of Welsh grazing marsh and floodplain sites¹.

1.3 Status in Gwyneddⁱ

Gwynedd contains approximately 10% of the Welsh resource of UK priority habitat fen; a total of 610 ha have been recorded here including 310 ha Phase I fen category, 200 ha flush and 100 ha of

^b Lowland wetlands are included within some SACs under the "Habitats Directive" - Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Fens are covered by three habitats listed under Annex I, "Transition mires and quaking bogs", "Alkaline fens" and "Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*".

^c Lowland wetlands (particularly reedbeds) are included within some SPAs under the "Birds Directive" - Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds.

^d Cover some lowland wetlands, particularly reedbeds.

^e Water Framework Directive 2000. Integrated river basin management - environmental objectives will be set involving ecological targets for surface waters.

^f Wildlife and Countryside Act 1981, Countryside and Rights of Way (CROW) Act 2000

^g Under Section 74 of the CROW Act 2000, the Welsh Assembly Government has produced a "List of Species and Habitats of Principal Importance for the Conservation of Biological Diversity". Crown Copyright 2003.

^h Action Plans for Coastal and floodplain grazing marsh and for Raised bogs

ⁱ Within this document the term "Gwynedd" refers to areas outside the Snowdonia National Park area, except where specified otherwise

swamp¹. In Gwynedd a total of 118 sites supporting fen habitats have been identified in Gwynedd of which some are particularly important (together with Anglesey) for calcareous fens, as exemplified by Cors Geirch.

35 ha of reedbed have been recorded from Gwynedd (or nearly 8% of the Welsh resource)¹, split between 27 sites, however, only seven of these sites contain reedbed areas greater than 2 ha. Estuarine reedbed sites include Y Foryd, near Caernarfon, and the lower Glaslyn Marshes while the lower reaches of the Penrhos and Rhydhir river systems along with the backwater area in Pwllheli has one of the largest associated reedbed areas in Gwynedd.

Although blanket bog is most widespread in upland areas, 27 ha of lowland blanket bog exist in Gwynedd with the best example at Rhosgyll Fawr.

3800 ha of grassland habitat and 71 ha of arable habitat within coastal and floodplain grazing marsh have been recorded from Gwynedd, or approximately 8% of the total for Wales¹. Coastal grazing marshes occur close to Traeth Lafan and Y Foryd, and at the seaward end of the Glaslyn Marshes, with smaller areas around Tywyn and Fairbourne. Probably the best examples of floodplain grazing marsh in Gwynedd can be found alongside the Afon Dyfrdwy downstream of Llyn Tegid and the upper Glaslyn marshes.

Gwynedd is therefore of considerable importance for lowland wetland habitats.

2. FACTORS AFFECTING THESE HABITATS IN GWYNEDD

- Agricultural improvement and intensification (such as drainage, fertiliser application, conversion to silage production and / or to intensive grazing (heavy cattle grazing being a particular problem for reedbeds).
- Conversion of coastal and floodplain grazing marsh habitat to arable.
- Lack of or inappropriate management of existing fens and reedbeds can, and has, lead to drying, scrub encroachment and succession to woodland on some sites, while decline in traditional management of coastal and floodplain grazing marsh is detrimental to habitat quality.
- Drainage and lowering of water tables.
- Tipping or infill of reedbed sites in particular.
- Past inappropriate flood prevention measures and watercourse management.
- Pollution and nutrient enrichment from surrounding land, as a result of agricultural activity, afforestation, point and diffuse pollution (especially a problem for “valley fens”).
- Fragmentation, isolation and disturbance as a result of land development (e.g. roads, rail, housing) and extractive industries which can, and has, led to critically small population sizes of several key species dependant on specific wetland habitat types.
- A lack of strategic approach to the management of the fen resource within Gwynedd. There is an urgent need to coordinate efforts, especially on the Llŷn, as well as across other parts of NW Wales, to support related wetland systems, particularly on Anglesey.
- Disturbance as a result of recreational activities is a problem for some reedbed species.
- Colonisation by invasive species (e.g. Japanese knotweed).
- Atmospheric pollution and potentially climate change.

3. ASSOCIATED GWYNEDD SAPS / HAPS / TAPS

Wet woodland, Lowland meadows and pasture, Coastal saltmarsh, Rhos pasture, Lakes, ponds and ditches, Invasive plants

Otter, Brown hare, Water vole, Bats, Lapwing, Farmland birds, Newts, Marsh fritillary, Whorl snails, Bumblebees

4. CURRENT ACTION IN GWYNEDD

4.1 Site and habitat protection

- Areas of lowland wetland occur within sites designated as SACs (Corsydd Llŷn; Corsydd Eifionydd), SPAs (Traeth Lafan; Aber Dyfi) and Ramsar sites (Anglesey and Llŷn fens).
- There are many areas of lowland wetland designated as SSSI - fen sites include Cors Geirch, Llyn Glasfryn, and Cors Gyfelog; blanket bog includes Rhosgyll Fawr, reedbeds include Cors Llyferin and Cors Geirch; and coastal and floodplain grazing marsh includes Glaslyn marshes and Dyfi.
- Areas of lowland wetland also occur within numerous areas identified as potential Wildlife Sites.
- Reedbed habitat is designated as LNR at Lôn Cob Bach.
- Lowland wetland habitat also occurs within non-statutory sites, such as within the Spinnies and Abergowen Wildlife Trust Nature Reserves.
- Environment Agency Wales implements relevant legislation as outlined above, through licensing and consents including discharge consents, abstraction licensing, Land Drainage Consents and Groundwater Authorisations.
- Areas of lowland wetlands normally fall within the scope of the Environmental Impact Assessment (EIA) Regulations for use of Uncultivated Land and Semi-Natural Areas for intensive agricultural purposes

4.2 Management and programmes of action

- CCW have management agreements with some landowners or occupiers to bring about positive conservation management. CCW wardens manage areas of grazing marsh on the Dyfi NNR and the fens at Cors Geirch and Cors Gyfelog.
- Gwynedd Council wardens manage an area of reedbed at Lôn Cob Bach, as well as coastal grazing marshes at Morfa Madryn and Morfa Aber. The North Wales Wildlife Trust (NWWT) manages areas of lowland wetland at the Spinnies and Abergowen as Nature Reserves while the RSPB also manage such habitats alongside the Dee and Dyfi estuaries.
- Environment Agency Wales is carrying out a review of best practice for the maintenance of lowland drainage systems. Its Flood Defence section uses a Bradshaw weed-cutting bucket to carry out all its ditch management minimising damage to vegetation roots. It also carries out habitat enhancement schemes in mitigation for unavoidable damage during flood defence operations.
- Habitat creation and management schemes have proved successful in some areas of lowland wetland habitat, often funded through agri-environment grant schemes, e.g. Llŷn ESA, Tir Gofal. Floodplain habitat is incorporated as a mandatory habitat within Tir Gofal.
- The HLF funded Wetlands for Wales project may provide opportunities for large-scale management works on wetland sites within the region. Environment Agency Plans include actions relevant to these habitats, e.g. Water Level Management Plans.

- The RSPB have reduced the area of wet woodland at Llyn Ystumlllyn in recent years to extend the reedbed area, which would provide ideal habitat for breeding birds such as the bittern.

4.3 Survey, research and monitoring

- CCW has compiled an inventory (including digitised maps) and undertaken a conservation review of wetland habitats in Wales.

5. ACTION PLAN OBJECTIVES^j

1. To maintain and protect the existing areas of lowland wetlands and secure their appropriate long-term management
2. To seek and exploit opportunities for enhancing or re-creating lowland wetland systems, incorporating one or more BAP priority habitat types
3. To restore fen habitat in suitable areas in order to increase the total area of fen by 2%^k
4. To restore areas of existing reedbed in suitable areas (those with an existing conservation interest) which are 2 or more ha in extent, in order to increase the total area of reedbed by 30%^l
5. To identify areas of lowland blanket bog within Gwynedd, prevent further loss and deterioration, and undertake restoration management upon an agreed proportion of the resource
6. To restore 2% of grazing marsh habitat which has become too dry, is intensively managed, or is not managed favourable for wildlife interests^m
7. To contribute to the conservation of lowland raised bog in adjacent LBAPs, throughout the UK and Europe
8. To raise public awareness, understanding and enjoyment of lowland wetland habitats

6. PROPOSED ACTIONS

Code	Action	Partner(s) ⁿ
Policy and legislation		
1	Through the planning process, ensure developments in sensitive locations are compatible with conservation of lowland wetlands. TARGET/TIMESCALE: Ongoing	GC, Relevant partners
2	Ensure that all examples of lowland wetlands which meet the relevant criteria are designated as Wildlife Sites TARGET/TIMESCALE: Start process of designation, by 2007	GC, CCW, NWWT
3	Ensure that the EIA Regulations for Uncultivated Land and Semi-Natural Areas are implemented on all areas of lowland wetlands. TARGET/TIMESCALE: Ongoing	WAG, Relevant partners
Species / habitat management and protection		
4	Promote and support grant schemes including Tir Gofal, Llŷn ESA and / or use management agreements to secure favourable management and / or restoration of lowland wetland habitats, taking into account the needs of associated LBAP	FWAG Cymru, CCW, CLA, WAG, FUW, GC, NFU

^j Taking into consideration all related LBAP habitats, especially Wet woodland and Rhos pasture

^k Targeting sites now occupied by non-wetland vegetation such as improved grassland

^l Determining the extent to which reedbed should be maintained or rehabilitated can be difficult for sites where reed-dominated vegetation abuts or occurs as a component of another BAP priority type – see Priority habitats of Wales for more details.

^m Targeting sites with specific species interests or containing areas where semi-improved grassland is present to act as a seed source

ⁿ Lead partner for this action is indicated by bold typeface, see section 7.2 for explanation of abbreviations

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	species and habitats. TARGET/TI MESSCALE: Ongoing	Cymru, NT, NWWT, RSPB Cymru
5	Implement the NGIP to bring about appropriate management and / or restoration and creation of lowland wetlands. TARGET/TI MESSCALE: By 2008	GC, Relevant partners.
6	Prepare and implement Water Level Management Plans, including sympathetic management of important wetland areas and careful assessment of routine and non-routine flood defence works or drainage. TARGET/TI MESSCALE: Ongoing	EAW, Relevant partners
7	Establish restoration and / or appropriate management of priority areas of existing reedbed TARGET/TI MESSCALE: Favourable management of 50%, Restoration of 12 ha, by 2015	CCW, GC, NWWT, WAG, NT, RSPB Cymru
8	Establish restoration management of all areas of fen within statutory sites currently judged as unfavourable, together with at least 30% of the non-statutory resource. TARGET/TI MESSCALE: Restoration of 10 ha by 2015	CCW, GC, NWWT, WAG, NT, RSPB Cymru
9	Establish restoration and / or appropriate management of areas of blanket bog including areas identified in action no. 12. TARGET/TI MESSCALE: To be set	CCW, GC, NWWT, WAG, NT, RSPB Cymru
10	Establish restoration and / or appropriate management of priority areas of existing coastal and floodplain grazing marsh. TARGET/TI MESSCALE: Favourable management of 50%, Restoration of 10 ha, by 2015	CCW, GC, NWWT, WAG, NT, RSPB Cymru
Advisory		
11	Provide integrated advice to landowners and managers on appropriate management of lowland wetlands. TARGET/TI MESSCALE: Ongoing	CCW, CLA, WAG, FUW, GC, NFU Cymru, NT, NWWT
Survey, research and monitoring		
12	Identify all lowland wetland sites in Gwynedd through a programme inventory of available data (Phase One, Wildlife Site and other surveys) and appropriate ecological surveys and target key sites for management and restoration (former sites adjacent to, or close to, existing sites that are suitable for reversion) TARGET/TI MESSCALE: By 2007	CCW, GC, CEH, GC, NT, NWWT, RSPB Cymru, UWB
13	Encourage surveys of associated species found on lowland wetlands and research into the management requirements of key species TARGET/TI MESSCALE: Ongoing	CCW, CEH, GC, NT, NWWT, RSPB Cymru, UWB
Communications and publicity		
14	Raise awareness of the uses of reedbeds for a variety of purposes e.g. flood defence mechanisms, water treatment, thatch roofing and recreational activities such as birdwatching and basket-making. TARGET/TI MESSCALE: Ongoing	CCW, EAW, GC, NT, NWWT, RSPB
15	Encourage use of peat alternatives for domestic and commercial consumption by publishing articles in relevant publications and giving talks to relevant groups. TARGET/TI MESSCALE: Ongoing	GC, CCW, NT, NWWT, RSPB
16	Raise awareness of lowland wetland and their conservation among landowners and managers by publishing articles in relevant publications and giving talks to relevant groups (e.g. publications and local meetings of NFU, FUW, CLA) TARGET/TI MESSCALE: Ongoing.	CCW, GC, NT, NWWT, RSPB
17	Raise public awareness of lowland wetlands and their conservation through media articles, open days, walks, interpretation and events. TARGET/TI MESSCALE: Ongoing.	GC, CCW, NT, NWWT, RSPB

7. PARTNERS & OPPORTUNITIES

7.1 Overall lead partner for HAP

Countryside Council for Wales (CCW)

Environment Agency Wales (EAW)

7.2 Key partners

Country Land and Business Association (CLA)

Farming and Wildlife Advisory Group Wales (FWAG Wales)

Welsh Assembly Government (WAG)

Farmers Union of Wales (FUW)

Gwynedd Council (GC)

National Farmers Union (NFU)

National Trust (NT)

CYMAD

North Wales Wildlife Trust (NWWT)

RSPB Cymru

University of Wales Bangor (UWB)

7.3 Opportunities

Landowners and land managers, farming unions

8. ACKNOWLEDGEMENTS

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9. ABBREVIATIONS

LBAP: Local Biodiversity Action Plan, BAP: Biodiversity Action Plan, SAP: Species Action Plan, HAP: Habitat Action Plan, TAP: Topic Action Plan, NVC: National Vegetation Classification, SSSI: Site of Special Scientific Interest, SAC: Special Area of Conservation, SPA: Special Protection Area, LNR: Local Nature Reserve, ESA: Environmentally Sensitive Area, HLF: Heritage Lottery Fund, EIA: Environmental Impact Assessment.

Version 1, 2005

¹ Jones, P.S. et al, 2003. Priority habitats of Wales: a technical guide. CCW.