

Floodplain & Grazing Marsh Action Plan

Scottish Biodiversity List habitat: Yes

UK Biodiversity List of Priority Habitats: Yes

Summary

It is estimated that there is 300,000 ha of grazing marsh in the UK. However, only a small proportion of this grassland is semi-natural, supporting a high diversity of native plant species (Estimated 10,000ha in the UK).

The largest area of this habitat in North Lanarkshire is in the Kelvin Valley, with the greatest continuous extent found to the south of Kilsyth between Banknock and Dumbreck Local Nature Reserve. Over the last 2 centuries much of this area has been drained or built on. The remaining extent tends to be in poor condition due to the lack of, or inappropriate, management.

Habitat Profile

Floodplain and grazing marsh can be defined as periodically inundated pasture or meadow with ditches containing standing fresh water, which regulate or maintain the water levels. These ditches are especially rich in plants and invertebrates. Almost all areas are grazed and some are cut for hay and silage. Sites may contain seasonal water filled pools, or less often, permanent ponds such as old ox-bow lakes containing emergent swamp communities.

This is a diverse habitat definition, covering drained and improved grassland and marshy habitats, with a high proportion of rushes, sedges or Meadowsweet. All of these habitats are regularly liable to periodic flooding, mainly from October to April. The grasslands are found on alluvial nutrient rich-soil created by the periodic flooding of rivers and streams.

The main grassland groups are:

- Improved grassland, often re-seeded with Ryegrass, Timothy or Clover mixes.
- Fen or marshy grassland with a high proportion of rushes, sedges or Meadowsweet.
- Wet pasture with a predominance of tall herbs such as Valerian or Wild angelica.

Floodplain and grazing marsh supports a wide variety of animals; the species present often dependent upon the type of grassland present. It is particularly important for breeding waders such as Redshank, Snipe, Lapwing and Curlew. Improved grassland that floods on a regular basis supports winter flocks of grazing Greylag geese and Whooper swans.

Grassland comprising of mostly rushes or sedges supports wintering and breeding Reed buntings, whilst wet, herb rich pasture provides habitat for Grasshopper warblers. Emergent plants such as Branched bur-reed provide winter food for a variety of ducks.

Current Status

Floodplain and grazing marsh was common along the larger watercourses in North Lanarkshire prior to the industrial revolution. However, industrial development led to many drainage and water flow control schemes that reduced the flooding of these rivers and the size of their floodplains. The greatest loss of habitat was likely to have been on the Clyde Haughs where Strathclyde Loch now stands and the floodplain of the River Kelvin. The Kelvin Valley, around the Forth and Clyde Canal at Kilsyth, is the largest and most intact area of floodplain grazing marsh in the country. A small area of grazed floodplain grassland with shallow ponds occurs by the River Clyde, south east of RSPB Baron's Haugh Nature Reserve.

The draining of the Kelvin is well documented in the Old Statistical Account of Kilsyth in 1795, "The Kelvin takes its rise near the center of this parish... in slow, oozing serpentine course... overgrown with fags, rushes and water lilies; so that it frequently overflowed the adjacent valley, giving it the appearance of a great lake, or considerable arm of the sea". A new channel was cut in the early 1790's; it was almost straight and much deeper than the original river. This drainage turned 300 acres of meadow into arable land and 60 acres of moss into meadow. The river channel is now largely artificial and the predominant grassland type present in the River Kelvin floodplain is drained, improved grassland used for pasture and silage.

The Water Framework Directive (WFD) is a wide-ranging piece of European legislation which became law in Scotland through the Water Environment and Water Services (Scotland) Act (WEWS) 2003. The Act was supplemented by the Water Environment (River Basin Management planning: Further Provision) (Scotland) Regulations 2013 and the Cross-Border River Basins Districts (Scotland) Directions 2014. The Act created a new River Basin management Planning (RBMP) process to achieve environmental improvements to protect and enhance our water environment in a sustainable way; The Water Environment (Controlled Activities) (Scotland) Regulations 2011 are in place to manage activities which may impact on the water environment.

The Water Framework Directive (WFD) aims to improve and protect the water environment on a catchment scale. Its aims are to:

- Prevent deterioration and enhance status of aquatic ecosystems, including groundwater
- Promote sustainable water use
- Reduce pollution

- Contribute to the mitigation of floods and droughts

Scottish Ministers have powers to introduce controls over a range of activities which can have an adverse impact upon the water environment. These regulations are more commonly known as the Controlled Activity Regulations (CAR). If you intend to carry out any activity which may affect Scotland's water environment, you must be authorised to do so. Discharges, disposal to land, abstractions, impoundments and engineering works in inland waters are all regulated by SEPA.

The reform of the Common Agricultural Policy (CAP) has seen a significant change to the structure that delivers payments to farmers. The Pillar I payment (direct payment) now requires farmers to take forward a mandatory "greening" component that is set at 30% of the direct payment. These three greening practices are (i) Maintaining existing permanent grassland (ii) Crop diversification and (iii) Having ecological focus areas on agricultural land. By including a compulsory greening component in Pillar I, it is hoped that public goods such as biodiversity and climate mitigation can be delivered through farming.

The Scottish Rural Development Programme (SRDP) 2014-2020 delivers Pillar II of the EU Common Agricultural Policy (CAP). It funds economic, environmental and social measures for the benefit of rural Scotland. The main priorities are:

- Enhancing the rural economy
- Supporting agricultural businesses
- Protecting and improving the natural environment
- Addressing the impact of climate change
- Supporting rural communities

Current Factors Affecting This Habitat

- Physical habitat destruction through agricultural improvements such as drainage, ploughing and re-seeding. Dredging, bank reinforcement and bunding of rivers and streams can often lead to drying out of marshy grassland areas. These actions are now regulated by SEPA through CAR.
- Poor water quality of adjacent burns and rivers can have a knock on effect to floodplain and grazing habitat. Pollutants can enter the system via floodwater, which then lodge in the sediment and ultimately within the plants themselves. There is an added danger to waders and other animal life through the introduction of petrochemicals to food-chains

via discharge into the river system.

- Neglect in the form of a decline in traditional management. Winter grazing and high-density summer stocking rates can cause severe poaching. This can damage established plants and disturb wildlife.
- Use of inorganic fertilisers on improved grassland adjacent to unimproved tall herb marshy grassland communities, resulting in wetland eutrophication.
- Afforestation of floodplain grazings, leading to loss of habitat, disruptions of flight paths and providing convenient lookout post for bird predators.
- Agricultural improvements of marshy grassland to drier pastures, through drainage and/or re-seeding. Introduction of insensitively designed cycle ways, walkways and possible golfing facilities on or bordering floodplain grazing habitat could damage plant communities/and or disturb feeding or nesting wetland birds.
- In-filling of low lying floodplain grazing or wetland areas.

Current Action

- There are three sites where conservation measures have been undertaken by North Lanarkshire, at Dumbreck Marsh Local Nature Reserve (LNR), owned by North Lanarkshire Council (NLC), Dullatur Marsh Site of Special Scientific Interest (SSSI), which is mostly a Scottish Wildlife Trust (SWT) Reserve, and Baron's Haugh Royal Society for the Protection of Birds (RSPB) reserve. Various projects were undertaken during the period of the previous LBAP.
- Significant habitat improvements at Dumbreck Local Nature Reserve as part of the Water Environment and NLC funded Garrell Burn river restoration 2022.

Proposed Objective, Targets and Actions

Objectives

1. Maintain and enhance existing floodplain grazing habitats.

Action	Meets Objective Number	Action by	Target
Site Safeguard and Management			
1.1 Take forward action to ensure that Dumbreck Marsh is managed appropriately for breeding waders.	1	NLC	Dumbreck Marsh management plan to be updated by 2024.
1.2 Develop a landscape scale initiative focusing on floodplain and grazing marsh	1	NLC	Take forward landscape scale conservation project in the Kelvin Valley with neighbouring Local Authority by 2028.
1.3 Restore and sympathetically manage floodplain grazing habitat through management agreements with the owners of local SSSI's, SINCs and other targeted sites.	1	NLC, NS	Three management agreements in place by the end of 2028.
Monitoring and research			
2.1 Identify key areas of grazing marsh in the Kelvin Valley.	1	NLC	Develop a list of key sites by 2025.
Communication and publicity			
3.1 Develop and promote awareness and training event on floodplain and grazing marsh with respect to agri-environment schemes for private landowners and farmers.	1	NLC	Deliver three workshops by end of 2028.

Authors:

Updated by Laura McCrorie, Conservation and Biodiversity Manager 2022

Further reference

www.floodplains.org – Technical guidance on management of floodplains.