

# Standing water

## Our objective for this habitat is:

To conserve the range and extent of still and very slow moving water bodies, and increase the resource in association with other wetland BAP habitats, specifically for the benefit of wildlife.



Gouthwaite (E Moss)

## Introduction

This Habitat Action Plan covers still waters, such as lakes (defined as over 2ha in area), reservoirs, gravel pits, ponds, seasonal flashes and other inundation habitats. Ripon Canal and slow-flowing ditches that are species-rich are also covered under this HAP.

Open waters can be categorised by their nutrient status and this affects their wildlife interest. They can be nutrient-poor (oligotrophic), having a narrow range of nutrients (mesotrophic) or nutrient-rich (eutrophic).

Nationally, mesotrophic lakes are uncommon being dependent both on the chemistry of the underlying rocks and a low level of pollution. Mesotrophic waters are characterised by clear water throughout the year. Algal blooms rarely occur and they have a number of characteristic aquatic and marginal plants. This is matched by a significant invertebrate interest, with a number of rare species. They are very sensitive to changes in nutrient levels and fertiliser and other run-off can alter their status, making them more eutrophic. There is a very high risk of losing their mesotrophic status. Thus in intensively agricultural areas, eutrophic waters are more common. Eutrophic waters can have extensive algal blooms in summer. Larger sites often have considerable bird interest for both breeding and wintering populations.

All types may be associated with extensive areas of other habitat types and dense fringing vegetation such as reedbed, swamp, fen and marsh. Some aquatic species are as dependent on the surrounding habitat as they are on the water body itself, such as amphibians and dragonflies, which are independent of water for parts of their life-cycle. All sites therefore also need to be considered and managed in the context of their surrounding land. Both reedbeds and fens have dedicated Habitat Action Plans.

A number of plant and animal assemblages are important. Species-rich aquatic vegetation, including the pollution-indicating stoneworts, occur in mesotrophic waters. Key sites for breeding or wintering water birds include Gouthwaite Reservoir and Hay-a-Park SSSIs and the Ripon racecourse complex, including Nicholson's lagoons.

Inundation habitats occur on the shorelines of the larger waterbodies and are affected by the varying water level. Some specific species occur in these zones including invertebrates and the plants pillwort, mudwort, thread rush and the rare liverwort violet crystalwort. The drawdown zone is an important but largely ignored sub-

habitat and therefore two indicator plants have been selected as priority species.

Standing waters and associated terrestrial habitat can provide valuable resources for otter and water vole. In addition, these species are flagship species for promoting the importance of standing waters. Sand martins have a stronger link with the Flowing water HAP, but also have an action in this plan. Similarly, the common eel is important in standing water but is dealt with in the Flowing water HAP.

## Legal status

The Water Directives Framework is a key piece of legislation which should result in higher water quality standards.

## National status

Although widespread, quality open water habitat is declining largely from the loss of ponds and nutrient enrichment of water bodies.

## Regional status

The regional habitat audit deals only with the two UKBAP priority habitats. It lists nine mesotrophic lakes (two in Harrogate) and four eutrophic ones. The two Harrogate mesotrophic waters are Gouthwaite Reservoir SSSI and Black Heath Pond and Queen Mary's Dubb in Ripon Parks SSSI, although the latter may have now become subject to eutrophication.

## Local status

The Harrogate habitat audit gives a total of 382ha of standing water at 55 sites of Importance for Nature Conservation (SINCs). A breakdown of the key water bodies in the district by type is given below.

## Lakes

Lakes occur throughout the district and include some important complexes such as Staveley lakes. Both mesotrophic and eutrophic lakes are UKBAP priority habitats, most however, are eutrophic. Ornamental lakes, such as at Studley, Ripley, Denton Hall and Allerton Park, are often associated with the many parks of the district and add greatly to the biodiversity of these habitats (see Lowland wood pasture and parkland HAP). Well designed and managed fishing lakes and ponds may also be valuable for wildlife.

## Reservoirs

Reservoirs are numerous in the district, particularly on the higher ground and many are popular recreation sites. Reservoirs with rich biodiversity interest, which are designated as SINC, include: Thruscross, Swinsty, Fewston and Lindley Wood Reservoirs in the Washburn Valley, and Leighton, Roundhill, Lumley Moor to the east of Nidderdale. Beaverdyke reservoir in Haverah Park and March Ghyll reservoir in Wharfedale are also SINC. Gouthwaite Reservoir in Upper Nidderdale is a SSSI, the importance of which has long been recognised by local ornithologists.

## Disused gravel pits

Gravel beds, which were laid down in pre-glacial times along the courses of the proto-Ure and proto-Nidd (predecessors of the current rivers) have been extensively exploited since the 1950s. The resulting presence of large expanses of open water, left behind by former gravel workings form havens for wintering wildfowl and passage waders and the rich birdlife of disused gravel pits is very well known to birdwatchers. These result from the workings of the gravel extraction industry and can provide excellent wildlife habitat. This resource is maximised when nature conservation is the main focus for restoration and after use.

Disused gravel pits also hold important breeding populations of some species such as little ringed plover and are feeding areas for hirundines (swallows and martins). Sand martins breed at some mineral sites where suitable banks occur. Artificial breeding walls for sand martin have been tried, but may not be ideal as they are prone to the build up of parasites. However, 2m vertical banks are adequate for sand martin colonies to form. Banks which are higher than this have to be battered back for safety reasons.

The Swale and Ure Washlands Project (SUWP) working with North Yorkshire County Council (the minerals planning authority) has been instrumental in developing restoration plans to further increase their biodiversity value, e.g. by the establishment of extensive reedbeds which are likely to attract specialist birds and which may in the longer term lead to the development of fen. Several of the gravel pits in the district are now managed as nature reserves. Those important for wildlife include Marfield near Masham, Bellflask near North Stainley, the Ripon Racecourse complex, Staveley and Farnham. Hay-a-Park near Knaresborough is an SSSI designated for its wintering population of goosander.

The RSPB and the minerals industry sponsor a useful 'nature after minerals' website which includes lots of practical information on habitat creation for mineral sites restoration. (<http://www.afterminerals.com/>)

## Canals

The only sections of canal in the district are the Ripon Canal and Milby Cut at Boroughbridge, managed by British Waterways, who intend to prepare a dedicated BAP for Ripon Canal. Ripon Canal is a short stretch of slow-moving water fed by the Skell in Ripon and joining the River Ure near Littlethorpe. It is designated as a SINC for its rich



Ripon Canal basin (HBC)

assemblage of emergent plants. It is not clear to what extent these may have been impacted by the re-opening of the canal to boat traffic in the early 90s.

## Ponds

Ponds are scattered throughout the district. Most of these are man-made except a few upland tarns, glacial kettleholes and gypsum sink-holes. Their wildlife interest varies enormously depending largely on nutrient enrichment. Many ponds hold populations of amphibians, including common frog, common toad and the three newt species and are important for insects such as dragonflies. Clusters of ponds are likely to be of more value for amphibians, than individual, isolated ones. Temporary or seasonal ponds can also be of considerable wildlife interest.

In the uplands, nutrient-poor tarns are one of the most natural habitats in the district and may support populations of scarce invertebrates. Many ponds have been lost over the last 50 years in the countryside and villages due to agricultural improvement and the development of alternative methods for watering stock and horses. Water quality can be affected by agricultural run-off. Farm and village ponds that have large numbers of tame ducks and geese tend to be eutrophic and very poor for wildlife.

In the past small clay-pits for brick-making led to the creation of many suitable ponds for great crested newt. Many of these have now been lost or converted into fish ponds. The presence of large numbers of fish is incompatible with some wildlife so it is beneficial to amphibians and invertebrates to keep some ponds fish-free.



Rossett LNR (E. Moss)



In the light of the decline of ponds in the wider countryside, garden ponds are vitally important for wildlife. There is much useful information on pond wildlife and a 'pond creation toolkit' on the Pond Conservation Trust website (<http://www.pondconservation.org.uk/>)

### Local priority species:

- **Pillwort (a fern)**
- **Mudwort**
- **Stoneworts**
- **Violet crystalwort (a liverwort)**
- **Thread rush**
- **Golden dock**
- **Flat-stalked pondweed**



Plompton Rocks (E. Moss)

### Status of priority species

The fern Pillwort (UKBAP) - a rare plant that grows in the draw-down zone of standing waters. It occurs naturally at one site with a probable introduction at an adjacent fishing pond.

Thread rush - one small colony on the edge of Fewston Reservoir. Easily overlooked.

Mudwort - indicator plant of 'draw-down' zone of reservoirs, etc. - just two recent records.

Stoneworts - indicators of unpolluted water due to their specific requirements. Occur in the better mesotrophic standing waters and are a good indicator of water quality.

Violet crystalwort - this unusual plant occurs at just one location in a reservoir. It is no longer a UKBAP Priority Species.

Flat-stalked pondweed - recorded in ponds at Ripon Parks MoD Training Area and Ripon Canal (also Westwick Lock on the River Ure.)

Little ringed plover - breeds on early successional stages of disused gravel pits. Requires sustained provision of such habitats.

### Requirements

The following are beneficial:

- High water quality (protection from pollution and excessive nutrient input).
- Adequate water supply.

- Sensitive management, including allowing ponds to go through all stages of succession.
- Maintaining a variety of sub-habitats, including marginal habitats.
- Maintaining a complex of pools (up to 400m apart and connected by good habitat) within a site helps to safeguard against local extinctions. Different stages of succession.
- Some temporary pools.
- Good quality surrounding habitat benefits those species that do not spend their whole life cycle in water, such as amphibians and dragonflies.
- Minimal disturbance from people and dogs - especially needed by breeding birds.
- Control of non-native, invasive species of plant and animal.
- Appropriate water level management, including natural water level fluctuations.
- Some bare ground around water bodies.

### Threats

- Direct threat from drainage, excessive water abstraction and conversion to other land uses.
- Damage and disturbance caused by recreational use.
- Loss of traditional farm ponds through neglect.
- Nutrient enrichment from agricultural, industrial or domestic sources can change mesotrophic lakes to eutrophic ones.
- Introduced species of invasive plants and animals. Problems include American mink, American signal crayfish, Canadian pondweed, Australian swamp stonecrop, Water fern and Himalayan balsam.
- Inappropriate stocking of fish.
- Inappropriate/insensitive pond restoration.
- Successional loss of man-made habitats preferred by Little ringed plover.
- Disturbance to breeding and roosting birds and otters.
- Stabilisation of water levels in still waters, when the fluctuation of levels is desirable.

### Current local action

- Mineral after-use Conservation Advisory Groups exist for the Marfield, Ripon City Quarry and Bellflask sites.
- A number of water bodies are managed for nature conservation such as at Staveley, Marfield and Farnham.
- Local community involvement in pond restoration and management e.g. Rossett Local Nature Reserve and Aspin Pond, Knaresborough.
- Harrogate District Biodiversity Action Group advises on gardening for wildlife including garden ponds.

## Opportunities

- Environment Agency flood alleviation measures could include floodplain wetlands.
- Wetland options are available under the Environmental Stewardship Scheme (ESS) agreements for farmers.
- Some 50,000 ha of the eastern part of the district falls within a Nitrogen Vulnerable Zone.
- Mineral restoration opportunities specifically and exclusively for creation of high quality water bodies for nature conservation.
- School ponds can provide excellent outdoor education opportunities.
- Advisory handbooks are available from the Pond Conservation Trust.
- Sustainable Drainage Schemes (SuDS) in new developments.

## LINKS WITH OTHER HDBAP PLANS:

**Fens HAP**

**Reedbeds HAP**

**Flowing water HAP**

**Gardens and urban wildspace SAP**

**Otter SAP**

**Water vole SAP**

**Bats SAP**

**Great crested newt SAP**



Roecliffe Nature Reserve (Roecliffe resident)

### UKBAP links:

UKHAP definitions <http://jncc.defra.gov.uk/page-5706>

Broad Habitat Statement - Standing Open Water & Canals

Eutrophic standing water HAP

Mesotrophic lakes HAP

The UKBAP Review, 2007 has identified Oligotrophic and Distrophic lakes and ponds as new UKBAP Priority Habitats