

# Ponds & Lodges

*A pond is a natural or man-made water body, 1m<sup>2</sup> to 2ha in area, that holds water for at least 4 months of the year*



## Ecology

Ponds occur in a variety of situations including abandoned industrial sites, marl pits, brickworks and flooded mineral workings, as a result of mining subsidence and quarrying, as well as in more natural locations in woodlands and on farms. Ponds in parks and gardens are also an important biodiversity resource particularly in urban and suburban areas.

When ponds are created they can be quickly colonised by plants and animals. The speed at which this happens, the number and type of species is strongly influenced by three key factors: how clean the water is, how varied the shape or design is, and how close it is to other freshwater habitats, to provide colonising material. There is often no need to introduce plants or animals. However, planting of native vegetation can discourage

vandalism, and benefit species conservation by decreasing the chance of non-native species dominating.

Ponds go through the aging process, known as natural succession; they may become shallower and covered by vegetation, or shaded by mature trees. This process could take hundreds or thousands of years. All types and ages of ponds are potentially good wildlife habitats. Ponds that go through natural succession do not usually turn into dry land – they turn into temporary or seasonal ponds. Temporary ponds are an important and highly threatened habitat.

Lodges are man-made waterbodies, with most examples originating from the industrial revolution. These were created to hold water for industrial processes - notably in Greater Manchester for the textile industry. Lodges

differ in size but are generally associated with streams and rivers. In terms of biodiversity interest, there is little difference between lodges and ponds. Generally lodges are larger with more extensive areas of open water, with some areas of marginal vegetation within them with species such as common reed, great reedmace and reed canary grass.

A range of species are associated with ponds and lodges, including wetland plants, aquatic invertebrates, amphibians, mammals and birds. Bats roost in some of the culverts associated with lodges in addition to using ponds and lodges as important feeding areas. Some species are specific to ponds, or a type of pond, such as temporary or seasonal, and are easily lost if the pond is changed.

Ponds can also help to prevent flooding by storing surface water during periods of heavy rainfall. The water can then slowly soak into the ground or aquifers instead of rushing down streams or rivers and causing flooding. They can also help to clean up water from agricultural land. Water running off fields can be sent through a series of ponds, which remove the sediments and fertiliser, before it enters a stream or river.

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### Notable species include:

|                           |                                   |
|---------------------------|-----------------------------------|
| Common frog               | <i>Rana temporaria</i>            |
| Common toad               | <i>Bufo bufo</i>                  |
| Smooth newt               | <i>Triturus vulgaris</i>          |
| Palmate newt              | <i>Triturus helveticus</i>        |
| Great crested newt        | <i>Triturus cristatus</i>         |
| Water vole                | <i>Arvicola terrestris</i>        |
| Bats                      |                                   |
| Grass snake               | <i>Natrix natrix</i>              |
| Reed Bunting              | <i>Emberiza schoeniclus</i>       |
| Emperor dragonfly         | <i>Anax imperator</i>             |
| Broad-bodied chaser       | <i>Libellula depressa</i>         |
| Great diving beetle       | <i>Dytiscus marginalis</i>        |
| Diving beetles            | <i>Ilybius guttiger</i>           |
|                           | <i>Dytiscus circumflexus</i>      |
|                           | <i>Rhantus suturalis</i>          |
| Water beetle              | <i>Agabus unguicularis</i>        |
| Scavenger beetles         | <i>Cercyon ustulatus</i>          |
|                           | <i>Cercyon</i>                    |
|                           | <i>convexiusculus</i>             |
|                           | <i>Cercyon tristis</i>            |
|                           | <i>Helochares punctatus</i>       |
| Marsh beetle              | <i>Cyphon pubescens</i>           |
| Shining ram's-horn        | <i>Segmentina nitida</i>          |
| Mud snail                 | <i>Lymnaea glabra</i>             |
| Lesser marshwort          | <i>Apium inundatum</i>            |
| Ivy-leaved water crowfoot | <i>Ranunculus fluitans</i>        |
| Galingale                 | <i>Cyperus longus</i>             |
| Whorled water milfoil     | <i>Myriophyllum verticillatum</i> |
| Great dock                | <i>Rumex hydrolapathum</i>        |

In urban areas, new ponds can be part of Sustainable Urban Drainage Systems (SUDS) through the creation of detention basins, retention ponds or new wetlands. It

can be designed into new developments or retrofitted into existing sites. SUDS can capture water from roads, car parks and other surfaces, helping to reduce flood risk and prevent pollution of other water bodies.



(GMEU)

### Priority habitat description

Ponds for the purpose of the UK BAP priority habitat classification are defined as permanent and seasonal standing water bodies from 1m<sup>2</sup> up to 2 ha in extent, which meet one or more of the following criteria:

- ◆ Ponds that meet criteria under Annex 1 of the Habitats Directive.
- ◆ Ponds with important species such as Red Data Book species, BAP species, species on Schedule 5 and 8 of the Wildlife and Countryside Act, Habitats Directive Annex II species, a Nationally Scarce wetland plant species, or three

Nationally Scarce aquatic invertebrate species.

- ◆ Ponds with exceptional species assemblages or large populations of key species such as amphibians and dragonflies, or exceptionally rich sites for plants or invertebrates (supporting 30 or more wetland plant species or 50 or more aquatic macroinvertebrate species).
- ◆ Ponds of high ecological quality, as defined by Pond Conservation's Predictive System for Multimetrics (PSYM).
- ◆ Other ponds important because of their age, rarity of type or landscape context.

In Greater Manchester all ponds and lodges are considered of value and this action plan therefore covers all such features not just those covered by the UK BAP definition.

### Current status and distribution

#### National

There are an estimated 487,000 ponds in Great Britain (not including curtilage i.e. gardens etc) ([Countryside Survey 2007](#)). At the start of the 20<sup>th</sup> century, there were approximately 1.25 million ponds. This

means we have lost over three quarters of a million ponds in the last 100 years. Not only are there fewer ponds, but also the remaining ponds are more likely to be larger, deeper, and degraded by pollution, invasive species or inappropriate management. The Countryside Survey (2007) revealed an increase from 60% to 72%, of ecologically poor or very poor quality pond sites in England and Wales since 1996.

### Greater Manchester

There is currently no data on the number of ponds in Greater Manchester. Ponds are found in all parts of Greater Manchester, and are thought to be relatively numerous for an urban area. There are particularly high densities of ponds on the western side of Greater Manchester, especially around Wigan and in Bury, Salford and Bolton, where the pond network is known as the Wigan Pondway. Important pondscapes are also found in Trafford, Manchester, Stockport and on the Oldham/Tameside border.

Lodges are a common feature associated with the mill towns of Lancashire and Greater Manchester. They are important to the biodiversity of the region as they make a significant contribution to nature conservation, particularly in areas where natural water bodies are less extensive. Lodges occur in all ten districts of Greater Manchester. Recently a rare plant - Floating

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water plantain (*Luronium natans*) was found in a Rochdale lodge.

Although there is a national plan focussing on Priority Ponds, it is important to remember that all ponds are valuable. Ponds are important for local wildlife, and are a vital part of an ecological network, allowing certain plants and animals to move around the landscape, to colonise new sites, and buffering sites against the loss of species. This network is particularly important for ensuring pond wildlife can survive climate change. Since pond numbers have dropped so low, the network is fragile, and in some areas it is broken; some ponds are isolated and the wildlife that lives in them is at risk of disappearing completely from the local area.

### Sites Important for Ponds and Lodges in Greater Manchester:

|                             |      |            |
|-----------------------------|------|------------|
| Brookheys Covert            | SSSI | Trafford   |
| Compstall                   | SSSI | Stockport  |
| Dunham Park                 | SSSI | Trafford   |
| Cotteril Clough             | SBI  | Manchester |
| Cowlishaw Farm              | SBI  | Oldham     |
| Heald Green                 | SBI  | Stockport  |
| Holden Clough               | SBI  | Tameside   |
| Barracks Lodge              | SBI  | Bury       |
| Doffcocker Lodge            | LNR  | Bolton     |
| Culvert & Lodge at Standish | SBI  | Wigan      |
| Kirklees Brook              | SBI  | Bury       |
| Manchester Airport          | SBI  | Manchester |
| Moses Gate                  | SBI  | Bolton     |

### Legal

Ponds are not directly protected by legislation (except for a small number of special pond types listed on Annex 1 of the Habitats Directive and not found in Greater Manchester). However, ponds that support protected species, such as great crested newts or water voles, do receive protection under species legislation (e.g. [Wildlife and Countryside Act 1981, Conservation \(Natural Habitats &c\) Regulations 1994](#)).

Ponds receive some protection through the planning process. 'Planning Policy Statement 9: Biodiversity and Geological Conservation' (PPS9) and the associated guidance require local authorities to conserve important natural habitats (including ponds) with policies that enhance and add to natural habitats, and aim to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through policies in plans.

Regulation 37 of the Conservation (Natural Habitats, &c) Regulations 1994 ensures that planning policy considers certain landscape features that perform a stepping-stone function "(such as ponds or small woods)" which "are essential for the migration, dispersal and genetic exchange of wild species". Local Nature Reserves and Sites of Biological Importance, cover a proportion

of Greater Manchester's ponds, providing some protection.

### Factors affecting the habitat

Nationally, pond loss can be attributed to filling in, land drainage, and lowering of the water table. Infilling by natural succession on its own does not necessarily result in the loss of the pond; it results in a temporary pond, which is also an important habitat. Ponds may be filled in for a variety of reasons, including development, increasing land area for agricultural production, and health and safety concerns.

Pond degradation can be caused by pollution, inappropriate management, introduction of inappropriate native species, neglect (where management is required to maintain certain conditions for key species), deepening of temporary ponds, linking ponds to watercourses and loss or degradation of surrounding habitats. In, or near to, densely populated areas, duck feeding, introduction of fish, and introduction of invasive non-native plants are a significant threat. The sale of invasive non-native plants is commonplace and is thought to be a significant factor in their spread. Surface drainage from roads and other hard surfaces can also result in pollution, as well as, causing uncontrolled rise in water levels.

Although large numbers of ponds are created each year, the new ponds are not a like-for-like replacement of the high quality ponds that are lost. Some new ponds may be of limited value due to poor design and planning together with sometimes a lack of management in the first few years. They may also be created for other purposes e.g. angling.

## Current actions

The [UK Draft Habitat Action Plan](#) for ponds of high ecological quality is led by [Pond Conservation](#) and the Environment Agency. To help deliver Target 4 (creation of high quality potential ponds), Pond Conservation is running the [Million Ponds Project](#) to provide encouragement, training and support to create 600,000 new ponds of high quality potential in the next 50 years. A Pond Creation Toolkit for wildlife friendly pond creation has already been produced and is available at [www.pondconservation.org.uk](http://www.pondconservation.org.uk).

Pond Conservation has set up the [Important Areas for Ponds initiative](#) (IAP) to identify networks of priority ponds – the most important ponds for biodiversity. Important Areas for Ponds are geographical areas which support significant numbers of high quality ponds. Within each Important Area, ponds are classified as either of national or European importance, according to the

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species or groups of species that they support. IAP reports have been carried out in Wales and South East England and will be extended to the rest of the UK, including Greater Manchester. This should help to protect ponds by focussing conservation effort.



(Pond Conservation)

There is currently a great deal of pond creation and management activity within Greater Manchester (in parks, gardens, farmland, conservation projects, and associated with development). There is also a large amount of information and advice freely available about ponds in books and via the Internet, although not all of it is accurate. The best sources are The Pond Book and organisations like Pond Conservation and the Wildlife Trusts that advise and campaign on pond issues, e.g. invasive species.

DEFRA has proposed to add many invasive non-native plants species to Schedule 9 of the Wildlife and Countryside Act, banning the

sale of these plants, and making it illegal to release them into the wild.

In Greater Manchester, there have been a range of surveys carried out (by the Pond Life Project and local authorities) to provide information on pond wildlife in the area, and some local authorities have put their information on GIS systems to make it more accessible. In some areas, policies have been incorporated into local planning documents to ensure ponds are considered throughout the planning process.

Ponds have also been created at Ince near Wigan for use in mine water treatment. This is another useful aspect of ponds.

### Objectives and targets

| Objective  | Target   | Quantity | Target Date |
|--|--|----------|-------------|
| Establish the number of priority Ponds in Greater Manchester | Collect together data of known ponds and identify Priority Ponds.  | -        | 2011        |
| Maintain the number of Priority Ponds.                       | Maintain net number of Priority Ponds in Greater Manchester – no net loss of ponds through development, lack of management etc.                              | Unknown  | 2015        |
| Establish Flagship Pond Sites                                | Identify and establish Flagship Pond sites and protect for conservation and educational value.   | 10       | 2015        |
| Achieving condition and restoration                          | Improve sites that are in poor condition and where possible restore a subset of the best sites into favourable condition/ to potential Priority Pond status. | 50 Sites | 2015        |
| Pond Creation  | Create new ponds of high quality potential.  | 30 Ponds | 2015        |

## Proposed actions

- ◆ Gather information about the existing pond resource in Greater Manchester, including number and quality of ponds, and identification of Important Areas for Ponds, to enable targeted conservation action and monitoring of changes to the pond resource. PC, GMBP, GMEU, LA's, WT's. 2011.
- ◆ Ensure that existing legislation and local policy is fully implemented to protect ponds, and that appropriate policies are included in development plans, such as the Local Development Framework (LDF'S), to maintain and enhance the pond resource. GMEU, NE, EA, LA's, WT's. Ongoing
- ◆ Provide information to planners, developers and ecological consultants on best practice pond conservation. PC, NE, EA, GMEU, GMBP. Ongoing
- ◆ Put in place ways (designation, management plans etc) of maintaining the condition of the best ponds. PC, NE, EA. 2011
- ◆ Encourage the use of Sustainable Urban Drainage Systems in new developments to protect wetlands from sources of poor quality water, and to create more habitats. EA, UU, LA's. Ongoing
- ◆ Engage with developers to encourage protection of existing ponds and high quality habitat creation in new development sites. Where ponds are lost there should be a 2 for 1 replacement scheme adopted. EA, NE, LA's, GMEU. Ongoing
- ◆ Create 5 new ponds per year with the potential to be high quality (unpolluted water supply, good design, good location). PC, LA's, WT's, GMBP. 2015
- ◆ Work with anglers and fisheries managers to encourage sensitive management of ponds and discourage inappropriate fish introductions. PC, EA, NE, WT's, LA's. Ongoing
- ◆ Engage with retailers, garden pond owners and fish enthusiasts to halt the release of non-native plants into ponds, and implement control measures on sites where there is a risk of such plants spreading to other sites. PC, LA's, EA, WT's. Ongoing
- ◆ Work on sites with water quality issues, non-native species, inappropriate management etc to

improve the sites, leading to population increases of key species or increases in species diversity. PC, EA. LA's. WT's, NE. 2015

- ◆ Raise awareness of the value of ponds and where people can get accurate information and advice about ponds. PC, GMBP, WT's, LA's. Ongoing

| Lead Partners |   |
|---------------|---|
| EA            | Environment Agency                      |
| GMBP          | Greater Manchester Biodiversity Project |
| GMEU          | Greater Manchester Ecology Unit         |
| LA's          | Local Authorities                       |
| NE            | Natural England                         |
| PC            | Pond Conservation                       |
| UU            | United Utilities                        |
| WT's          | Wildlife Trusts                         |

## Best practice guidelines

Some good examples of pond & lodge management, creation and enhancement across Greater Manchester include:

- ◆ Pond creation at Three Sisters in Ashton in Makerfield.
- ◆ New retention ponds at Kingsway, Rochdale.

- ◆ Creation of a pond on the roof of the Unicorn Grocery in Chorlton.

In addition Bury MBC commissioned a survey of all the ponds in the borough thereby establishing a baseline of information.

**Further advice about ponds can be found here:**

- ◆ [Pond Creation Toolkit](#)  
A number of fact sheets providing information about best practice are available to download from the Pond Conservation website.
- ◆ [Pond creation on aggregate sites](#)  
Advice for planners and developers, including pond creation for water voles.
- ◆ [Herpetological Conservation Trust](#)  
Advice on pond creation and management for amphibians and reptiles.
- ◆ [National Pond Monitoring Network](#)  
Guidance and forms for standard pond survey methods.

## Impact of invasive species

- ◆ Great Britain Non-native Species website. [www.nonnativespecies.org](http://www.nonnativespecies.org)

- ◆ [Centre for Ecology & Hydrology](#)  
Information sheets on the best methods of control for various invasive plants (Environment Agency).

## Links to relevant BAP's

Black Redstart  
Great Crested Newt  
Reedbeds & Bittern  
Water Vole

## References

Carey, P.D.; Wallis, S.; Chamberlain, P.M.; Cooper, A.; Emmett, B.A.; Maskell, L.C.; McCann, T.; Murphy, J.; Norton, L.R.; Reynolds, B.; Scott, W.A.; Simpson, I.C.; Smart, S.M.; Ulyett, J.M.. 2008 [Countryside Survey: UK Results from 2007](#). NERC/Centre for Ecology & Hydrology, 105pp. (CEH Project Number: C03259).

See Pond Conservation website <http://www.pondconservation.org.uk/> for information on the UK pond HAP, Important Areas for Ponds and the Million Ponds Project, plus advice and information on ponds in general.

Williams *et al* (1999) *The Pond Book: a guide to the management and creation of ponds*. Pond Conservation, Oxford

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## Acknowledgements

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