

Vision for Essex Ponds

Village and farm ponds are managed for biodiversity and have been re-created or re-established where beneficial and sustainable.

Buffer zones and other measures are adopted to reduce erosion and pollution from the wider environment.

New, clean water ponds are created to help replace those lost through man-made and natural processes.

Populations of key national and Essex pond-associated species have increased and are spread more widely throughout the county.



Ponds

National Description

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

- Habitats of international importance: Ponds that meet criteria under Annex I of the Habitats Directive.
- Species of high conservation importance: Ponds supporting Red Data Book species, UK BAP species, species fully protected under the Wildlife and Countryside Act Schedule 5 and 8, Habitats Directive Annex II species, a Nationally Scarce wetland plant species, or three Nationally Scarce aquatic invertebrate species.
- Exceptional assemblages of key biotic groups: Ponds supporting exceptional populations or numbers of key species. Based on (i) criteria specified in guidelines for the selection of biological SSSIs (currently amphibians and dragonflies only), and (ii) exceptionally rich sites for plants or invertebrates (i.e. supporting ≥ 30 wetland plant species or ≥ 50 aquatic macroinvertebrate species).
- Ponds of high ecological quality: Ponds classified in the top PSYM category ("high") for ecological quality (i.e. having a PSYM score $\geq 75\%$). [PSYM (the Predictive SYstem for Multimetrics) is a method for assessing the biological quality of still waters in England and Wales; plant species and / or invertebrate families are surveyed using a standard method; the PSYM model makes predictions for the site based on environmental data and using a minimally impaired pond dataset; comparison of the prediction and observed data gives a % score for ponds quality].
- Other important ponds: Individual ponds or groups of ponds with a limited geographic distribution recognised as important because of their age, rarity of type or landscape context e.g. pingos, duneslack ponds, machair ponds.

Priority habitat ponds can be readily identified by standard survey techniques such as those developed for NVC, Common Standards Monitoring, the National Pond Survey or for specific species groups. Ponds will need to be distinguished from other existing priority habitat types. The general principle to be applied is that where the standing water element is functionally a component of another priority habitat and that priority habitat definition takes account of the standing water element then it should be treated as part of that habitat. For example small waterbodies within blanket bog should be considered as part of the blanket bog priority habitat, but ponds in heathland (which are not dealt with through the heathland HAP) should be considered under the pond priority habitat. Agreement has been reached with the lake HAP group

that the pond priority habitat will cover most water bodies up to 2 ha while the lake priority habitat will cover most water bodies greater than 2ha. As with other potentially overlapping priority habitat types a small proportion of cases will need to be individually assessed to decide how they are best dealt with.

Ponds are widespread throughout the UK, but high-quality examples are now highly localised, especially in the lowlands. In certain areas high quality ponds form particularly significant elements of the landscape, e.g. Cheshire Plan marl pits, the New Forest ponds, pingos of East Anglia, mid-Wales mawn pools, the North East Wales pond landscape, the forest and moorland pools of Speyside, dune slack pools, the machair pools in the Western Isles of Scotland, and examples of Habitats Directive Annex I pond habitats across Northern Ireland.

Estimates, based on the relatively small pond data sets currently available, suggest that around 20% of the c.400,000 ponds outside curtilage in the UK might meet one or more of the above criteria. An inventory of ponds, including many high quality sites, has been established as part of the National Pond Monitoring Network and work is in progress to add further known sites to this database. This is publicly accessible (for non-sensitive sites/species) at www.pondnetwork.org.uk. Currently about 500 high quality sites are listed on this database. The National Pond Monitoring Network (NPMN) will provide the main mechanism for monitoring priority habitat ponds. The NPMN was established in 2002 as a partnership of organisations involved in pond monitoring led by the Environment Agency and Pond Conservation.

Standing open waterbodies come in a wide range of types and sizes, some formed naturally and some as a result of human activity. Ponds here are defined as small bodies of water – between 1 square metre (m sq) and 2 hectares (ha) in area – which hold water for more than four months in a year. Anything larger than 2 ha is defined as a lake. Small ponds make up the majority of waterbodies in the UK.

Man-made waterbodies include reservoirs, ponds in gardens or belonging to local communities (e.g. village-green ponds) and ponds created by landowners for fishing, shooting, watering stock or for amenity purposes. They also include ponds and lakes created by waterlogging of old brick/tile pits, flooding of old clay workings, and old sand and gravel pits. Natural waterbodies can occur in depressions created by glacial action, natural subsidence or river activity. In addition to permanent waterbodies, ponds that seasonally dry out are important for a variety of species of conservation concern.

Waterbodies are classified according to their nutrient status: nutrient-rich (eutrophic) waters predominate in lowland areas, where their nutrient status is often artificially increased by agricultural fertilisers, while nutrient-poor (oligotrophic) waters tend to occur in the uplands. Waterbodies with intermediate nutrient levels are classed as mesotrophic. Peaty and acidic waterbodies, which are occasionally found in bogs and heathland are termed dystrophic. Ponds in particular have suffered a huge decline (a loss of more than 75%) over the last 100 years. The current number of ponds in the UK has been estimated at around 375,000, with about 229,000 in lowland Britain. All forms of waterbody have suffered a decline in quality due to agricultural intensification, pollution or poor management.

Waterbodies are of great importance for wildlife: around 3,500 of the UK's invertebrate species live in freshwater and up to half of these live in ponds. Over two-thirds of Red Data Book invertebrates occur in ponds, as do 300 species of vascular plants, including half of the UK's wetland plants. Larger waterbodies are of particular importance to bird life. Waterbodies are commonly fringed by other important wetland habitats such as reedbed, fen, marshy grassland and wet woodland or 'carr'. These are covered in other action plans.

STATUS IN ESSEX

At present there is no inventory or comprehensive assessment of the pond resource in Essex. Reliable data on pond numbers and mapped counts (based on Ordnance Survey data) are unreliable because of the irregularity with which maps are updated. If it assumed that the Countryside Survey average density for Great Britain (c. 1.75 ponds/km²) is applicable this suggests that there around 6500 ponds in the county, however this is likely to be a gross underestimate and certainly many areas of the county have a greater pond density than this figure would suggest.

Whilst we have incomplete knowledge of numbers and locations and even less knowledge of the wildlife that they contain we do know that they do form an extremely important component of the biodiversity of Essex. While we will aim to gather more information, this won't stop actions to preserve and improve ponds in Essex.

New ponds are recognised as being an important habitat in themselves and many new ponds are enthusiastically created in public areas and private gardens. All are of value for wildlife. In the wider landscape continue to be subject to a number of factors and in terms of numbers and quality are declining across Essex.

Neglect/lack of management. Natural succession – through silting, build-up of dead plant matter or overgrowth of marginal vegetation.

Introduced species of plant and animal can cause a range of problems including the loss of native aquatic flora. In particular invasive plant species (e.g. New Zealand pigmyweed *Crassula helmsii*) can be a serious problem. In addition the stocking and over-stocking with fish can also cause reduction in wildlife value.

Over-zealous pond clearance, resulting in loss of habitats around the edge of waterbodies.

Reedbed and swamp vegetation is often cleared during conservation work to maintain areas of open water. However, management should ensure that at least some of this important habitat is retained.

Damage and disturbance caused by recreational use of waterbodies.

Pollution from many sources affects waterbodies. In urban areas many ponds receive rainwater runoff directly from roads and buildings. Also some commonly used pesticides contain endocrine-disrupting chemicals.

Nutrient enrichment (eutrophication) caused by agricultural fertiliser runoff creates a serious problem in many waterbodies. Intensive agriculture is also a source of nutrients, silt and other pollutants.

Direct loss of ponds to development, agriculture or infilling because they are perceived to be dangerous to the public.

Dumping and infilling of ponds with waste.

Climate change – affecting water supply, causing ponds to dry out in summer.

No single body in Essex has responsibility or an outstanding remit for ponds. Success will best be achieved by partnership working between many local partners together with the national HAP leads - Pond Conservation and the Environment Agency.

Pond Conservation – Pond Conservation is the national charity dedicated to protecting the wildlife of our freshwaters: ponds, rivers, streams and lakes. They give advice, carry out research, promote practical action and lobby policy makers to ensure that freshwater wildlife and habitats have a secure future. info@pondconservation.org.uk or www.pondconservation.org.uk

Million Ponds Project – partnership project run by Pond Conservation aiming to bring back healthy clean-water habitats to the landscape. See their web site.

The Pond Book (second edition) - comprehensive guide to the creation and management of clean water, wildlife ponds. Available through Pond Conservation web site.

Appendix One - Flagship pond definition

Flagship Ponds are a sub-set of about 1% of the Priority Ponds. Flagship Ponds are Priority Ponds of particular value because they support BAP species, very rich assemblages and/or are important pond types. They can be individual pond sites or a pond complex.

The aim is to work directly with Flagship sites to ensure that they are monitored and their quality is maintained. This will ensure that the sites do not degrade. It will also provide information about threats to high-quality sites and effective means of mitigation.

The aim is to make sure that Flagship Pond sites are monitored and have a local guardian who will liaise with landowners, carry out high-level monitoring and where appropriate provide a link with specialist advisers.

For more information, see Pond Conservation web site.

Appendix Two – High Quality Potential Ponds

Ponds of high quality potential are small waterbodies located in areas where they drain a semi-natural surface-water catchment, and are unlikely to be significantly impacted by human activity in after-use.

Semi-natural is defined as land which is not cultivated or intensively managed, and which does not receive inputs of nutrients, pesticides or other pollutants (excepting unavoidable airborne pollutants).

A pond's surface water catchment is defined as land up hill of the pond, from which water drains into the pond.

Where ponds are groundwater fed, the groundwater should not have significantly elevated levels of nitrate or other pollutants.

Ponds should not be significantly impacted by man in after-use. For example, the new ponds should be left to colonise naturally: non-native plants should never be added. The ponds should not be stocked with fish; un-natural populations of ducks should not be encouraged e.g. by leaving food. Ideally ponds should not be located near paths or other areas where their sediments are likely to be significantly affected by public pressure e.g. swimming dogs. If ponds *are* located close to publicly accessible areas care should be taken with site design or signage to prevent impacts from ducks, dogs, introduction of invasive plant species, fish etc.

Targets

National Targets (draft HAP) Ponds		Target, date
1	Maintain the number of priority pond sites – approximately top 20% of ponds (see national definition above) England = 43,000	England 43,000 ongoing
2	Maintain the quality of flagship pond sites – approx. top 1% of priority pond sites (for definition see Appendix One)	England 264 by 2010 528 by 2015 800 by 2020
3	Restore pond sites to deliver Priority Species targets	No target set yet
4	Create new pond sites of high quality potential, delivered through the Million Ponds project, led by Pond Conservation. (see Appendix Two)	England 795 by 2010 7,950 by 2015 31,800 by 2020

East of England Targets Ponds		target date
1	No specific East of England region targets	2015

Essex Targets Ponds		Target, date
1	No loss of existing pond resource	ongoing
2	Maintain quality of 3 best ponds in each district	2020
3	Restore 20 ponds to optimum biodiversity condition	2020
4	Create 20 new ponds of high quality potential and ponds for people	2020