



DRAFT REVISED PLAN SEPTEMBER 2015

PONDS

1. INTRODUCTION

This action plan covers natural and man-made ponds, Warwickshire's lakes & reservoirs having a separate plan. Any depression in the ground which collects and retains a sufficient amount of precipitation can be considered a pond. If the water body is of a sufficient size it is then known as a lake but the technical distinction between a pond and a lake has not been universally standardised.



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Although the international [Ramsar Wetland Convention](#) sets the upper limit for pond size as 8ha (19.768 acres), The [UK Ponds Biodiversity Action Plan](#) (BAP) defines ponds as 'permanent and seasonal standing water bodies less than 2ha in size' but in [Higher Level Stewardship](#) the upper limit of a pond is 1ha. Ponds are highly variable in size and in this plan a pond is defined as any water body up to, and equal to, 1ha in size. A more ecologically meaningful distinction might be that ponds tend to be dominated by shallow-water and edge habitats whereas a lake has a true open-water zone where submerged plants and algae predominate.

The total number of ponds in Britain has been declining over the last century and it is estimated that up to a third have been lost in the last 50 years. Many of these ponds had a man-made origin as a supply of water for stock (field ponds) which in recent decades have suffered a decline in biodiversity value due to agricultural intensification leading to neglect (silting-up), pollution (e.g. from fertilizers/pesticides/herbicides) and loss/deterioration of associated surrounding habitat.

Ponds can support a large array of fully aquatic and emergent plants, including 'macrophytes' like water lilies, pondweeds, reeds, and reed-maces plus microscopic algae. Animals using the water body include fish, a wide range of waterfowl (e.g. ducks, swans, grebes, rails), herons, herptiles (frogs, newts, grass snake), many types of insect (notably dragonflies, midges, water beetles) and other invertebrates such as water snails, leeches and crustaceans (e.g. crayfish and smaller isopods). Some of these can require very specific parts of a water body or other specific conditions related to water depth, water quality, water body size, water level fluctuations (summer draw-down can benefit many species), plant abundances, the presence/absence of fish or other predators and low levels of disturbance.

Management to create a network of open, well-oxygenated and weedy ponds permits the existence of a substantial pool of aquatic species and thus substantially higher species diversity than if ponds are overgrown by trees. Aquatic plants are eliminated in highly shaded ponds through the lack of light and this reduces the availability and quality of feeding, hunting and hiding habitats for invertebrates. In addition, high inputs of organic matter from fallen leaves and branches leads to considerable decomposition and the development of intense anoxia (lack of oxygen). In any one area, the management of a

few ponds each year maintains a mix of early-, mid- and late-succession ponds, individual ponds exhibiting different levels of shading, oxygen and aquatic plant cover. There is a peak of species diversity 3-5 years after management and no evidence to suggest that the disturbance associated with tree and mud removal leads to the loss of any species. (Sayer et al., (2013) However, in both urban and rural areas, a single pond can be an important wildlife habitat and should be retained and maintained.

The margins of ponds are very important, and often are the most diverse part of a water body. At the best examples, they are characterised by broad fringes of varied emergent and other marginal vegetation and plentiful exposed wet mud. Many species of invertebrate have their larval stage located here. In arable fields it is important that a 2m wide of non-cultivated land is left around a pond to intercept pollutants and provide shelter for amphibians that are not totally aquatic such as great crested newts and toads.

The majority of Warwickshire's ponds are eutrophic, i.e. having waters rich in mineral and organic nutrients that promote a proliferation of plant life, especially algae, which can reduce the dissolved oxygen content and cause the extinction of other organisms. However, a few local water bodies may not be eutrophic, e.g. Coleshill Pool.

New ponds and wetlands are being created within new developments as part of [sustainable drainage systems](#) (SuDS). These are designed to reduce the potential impact of new and existing developments with respect to surface water drainage discharges, helping to manage flood risk and water quality and provide a range of amenity benefits that create great places to live, work and play. Good practice and design information is available (see **section 9**).

2.	OBJECTIVES *	TARGETS*
Associated Action Plans are: 'Open Mosaic Habitats on Previously Developed Land', 'Lakes & Reservoirs', 'Roadside Verges', 'Parks & Public Open Spaces', 'Gardens', 'Woodland', 'Allotments', 'Bats', 'Great Crested Newt', 'Otter' and 'Water Vole'		
PLEASE CONSULT THE '<i>GENERIC HABITATS</i>' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR OBJECTIVES COMMON TO ALL HABITAT PLANS		
A.	To achieve condition of existing water bodies up to 1ha that are currently in unfavourable condition, to favourable or recovering, focussing action on clusters of ponds to create a functional network.	2026
B.	To restore 142 degraded pond sites.	2026
C.	To expand the extent of the habitat by creating 142 new open water bodies, targeting particularly areas that link existing wetland habitats.	2026
*Derived from Regional Spatial Strategy Phase 3 Technical Report (2009) and based on a minimum mapping unit of 0.25ha. Numerical targets have been incorporated into section 6. See Generic Habitats Plan for rationale for derivation of targets and definitions of favourable and unfavourable condition ('Habitats overview' in 'State of the Natural Environment' (NE,2008,p49).		

3. NATIONAL BAP OBJECTIVES & TARGETS:

Originally within the Eutrophic Standing Waters UK BAP, a separate UK 'Ponds' BAP was included in the new list of Priority Habitats published in 2007 ([Joint Nature Conservation Committee](#)) and was updated in 2010-11. A description of the habitat may be seen online. To be of Priority Habitat quality the pond must meet one or more of the following criteria:

- **Habitats of international importance:** ponds that meet criteria under Annex 1 of the [Habitats Directive](#).
- **Species of high conservation importance;** ponds supporting [Red Data Book](#) species, UKBAP species, species fully protected under the [1981 Wildlife & 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 [Sites of Special Scientific Interest](#) (SSSIs) (currently amphibians and dragonflies only), and (ii) exceptionally rich sites for plants or invertebrates (i.e. supporting ≥ 30 wetland plant species² or ≥ 50 aquatic macro-invertebrate 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.

4. CURRENT STATUS

The Habitat Biodiversity Audit HBA (2012) figure for open standing water, including ponds, lakes, reservoirs, flooded gravel pits, water filled ditches and canals is 1,930 ha with 7422 standing water features. There are approximately 5,152 water bodies up to 1ha in area covering a total area of 685.28ha (figures should be treated as an approximation due to limitations of the available data); average pond size is 0.12ha. Provided targets for restoration and expansion are met, this number will have increased by 88 sites by 2015 and 284 sites by 2026.

4.1 Legal and Policy Status

A wide range of species and habitats are protected under international and domestic laws, including the [Wild Birds Directive](#) (1979), the [Wildlife and Countryside Act](#) (1981), the [Conservation Regulations](#) (1994) and [EC Habitats Directive](#) (1992). Protection of sites is afforded nationally through SSSI, [Special Areas of Conservation](#) (SAC) and [Local Nature Reserve](#) (LNR) statutory status. Other sites are offered recognition of their value through

Local Wildlife Site status (LWS), Local Character Areas and identified Landscape Scale Areas. The [National Planning Policy Framework](#) (2012) chapter/section 11 states conditions with regard to any development negatively affecting biodiversity, including protected sites, ancient woodland and other irreplaceable habitats (paragraph 118). The Wildlife & Countryside Act and schedule 2 of the [Conservation of Habitats & Species Regulations](#) (2010) make it an offence to intentionally kill, injure, take, possess, sell, buy or transport a range of species.

Ensor's Pool in Nuneaton is both a SSSI and a SAC in recognition of its important population of white-clawed crayfish.

The [Environment Agency](#) (EA) has a duty to promote the conservation of flora and fauna associated with water. The EA has less direct influence on off-line water bodies, but work is being carried out on main rivers to eliminate the sources of excessive nutrients.

Local authorities and the Canal and River Trust, formerly British Waterways, also have statutory duties towards nature conservation, and some water bodies are within sites under their control, such as some Local Wildlife Sites (LWSs) and Local Nature Reserves (LNRs). These bodies also have some responsibility for pollution control. LWS designated so far (2013) are ponds at Sutton's Spinney in Rugby, at [Abbey Fields](#) in Kenilworth, at Dickens Heath, Bentley Heath and Chadwick Cottage Farm in Solihull and at Duggins Lane, Westwood Way, Pickford Farm, Ley Farm, Hearsall Golf Course and Finham Park in Coventry.

4.2 Current Factors Affecting the Habitat

- **Lack of management** to maintain openness and oxygenation by aquatic plants.
- **Enrichment caused by nitrates or phosphates** primarily in sewage or fertiliser run-off.
- **Other pollution** from organic matter, silt, heavy metals and domestic litter.
- **Lowering of water levels** caused by over abstraction of surface or ground water, or by drainage (though natural, seasonal fluctuations can be beneficial).
- **Desiccation** as a result of climate change.
- **Urbanisation and in-filling** of ponds.
- **Poor management of recreational activities** bank-side activities leading to bank erosion, damage to water-side habitats, etc.
- **Changes in surrounding land-use** that alter the water table, change the pollution load or degrade or remove valuable adjacent habitat.
- **Stocking with certain fish**, e.g. carp and bream which uproot plants whilst feeding, increasing the turbidity of the water and depleting food resources for wildlife. Important species such as great crested newt can be eliminated by fish predation.
- **Excessive bird levels** especially Canada geese and gulls can cause eutrophication through their droppings. Food given to them by humans can also contribute to eutrophication and attract brown rats, causing problems with egg predation. Canada geese and other feral wildfowl also damage and reduce

marginal vegetation through trampling and compete with native wildfowl for nest sites.

5. LOCAL ACTION

- An accurate digitised database of water bodies in the sub-region has been established by the Habitat Biodiversity Audit (HBA) and is annually updated. However, the condition is not recorded other than for LWS ponds.
- [Warwickshire Amphibian & Reptile Team](#) – 2006 Pond Survey to check all past records for great crested newts.
- [Warwickshire Wildlife Trust](#) (WWT) undertakes pond surveys on its 55 nature reserves to look at water quality, presence of great crested newts and white-clawed crayfish, pond clusters and landscape scale conservation, etc. and uses the findings to inform the site management plans. This includes the provision of training for volunteers.
- WWT is undertaking ongoing habitat enhancement of ponds on some of its reserves working with Nature Force, its volunteer work party. Recent work includes reed pulling in the pond at [Ryton Wood](#) to ensure the retention of open water within the woodland, to provide a mosaic of habitat.
- WWT pond creation (2007-2011) at [Eathorpe Marsh](#), [Tocil Wood](#) and [Shadowbrook Meadows](#) reserves.
- New business parks and other developments are increasingly incorporating pools within their landscaping, eg. fishing lakes.
- Friends of Brandon Wood (FOBW) restored the Jubilee Pond (2012).
- A new pond has been created on the National Police College near Ryton Wood (pers.comm. M. Slater, 2014)
- The [Environmental Stewardship Scheme](#) administered by Natural England offers funding for the creation of ponds (some new ones have already been created, e.g. farmland near Mappleborough Green and also management options:
 - **ELS options** are:
 - OE7/EE7: buffering in-field ponds in organic grassland/ improved permanent grassland
 - OE8/EE8: buffering in-field ponds in rotational land/ arable land
 - **HLS options** are:
 - OHE7/HE7: buffering in-field ponds in organic grassland / improved permanent grassland
 - OHE8/HE8: buffering in-field ponds in rotational land / arable land
 - HQ1/ HQ2: maintenance of ponds of high wildlife value less than 100 m2 /more than 100 m2
 - HD9; maintenance of designed/engineered water bodies – not more than 1ha
 - **HLS capital items:**
 - SCR/SCP: Creation of temporary ponds – first 100 m2 /over 100 m2
 - PC / PCP: Pond creation – first 100m2 / over 100m2
 - PR / PRP: Pond restoration – first 100 m2 / over 100m2

- Detailed bird recording is long established at many key sites e.g. [Brandon Marsh](#), [Draycote Water](#), Tame and Blythe Valley sites, [Coombe Country Park](#) and Seeswood Pool.
- The implementation of Farm Waste Management Plans is part of the 'Cross Compliance' checking for all farms receiving funding from Defra.
- Shakespeare Birthplace Trust - restoration of the pond at Mary Arden's Farm at Wilmcote(2013)
- The HBA (2014) is using the Great Crested Newt Habitat Suitability Index ([ARG UK Advice Note 5](#)) to evaluate the quality of pond clusters. The index of suitability of a cluster (= 1 for 4 or more ponds per km²) is derived from dividing the number of ponds within 1km of the survey pond by 3.14 (pi).

6. PROPOSED LOCAL ACTIONS

ACTION	Lead	Partners	By
PLEASE CONSULT THE 'GENERIC HABITATS' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL HABITAT PLANS			
Policy, Legislation & Protection			
PL1. Continue to select all qualifying ponds as LWSs and enter onto database.	LWSP	HBA LAs	ongoing
PL2. Ensure that the protection of all ponds is included in Local Development Frameworks, Neighbourhood Plans and any other relevant strategies, including targets for restoration and expansion for each Local Authority to maintain a functional network of ponds across the district.	WCC	NE WWT HBA LAs	ongoing
PL3. Ensure that new minor or major developments result in net biodiversity gain through adherence to the mitigation hierarchy.	WCC	NE WWT LPAs NWBC NBBC	ongoing
Site / Species Safeguard & Management			
SM1. Maintain favourable ecological condition of all existing networks of ponds with surrounding buffering habitat, (see RM2), by appropriate management, especially those holding UK Biodiversity Action Plan Priority Species & Red Data Book species.	tbc	NE EA CRT STW WWT	ongoing
SM2. Achieve condition of 1 network of ponds per district, with surrounding buffering habitat, currently in unfavourable condition, by appropriate management, especially those holding UK	WCC	NE LOs	LAs 2018

ACTION	Lead	Partners	By
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Biodiversity Action Plan Priority Species & Red Data Book species.			
SM3. Encourage appropriate management of all LWS water bodies to maintain condition or improve to good condition.	LWSP	NE CRT WWT	STW EA ongoing
SM4. Restore 44 degraded ponds and their surrounding buffering habitat in both urban and rural areas for wildlife and communities by 2015 and another 98 by 2026 -	tbc	NE CFE FOBW FC	WCV 2015-2026
SM5. Expand the area of the habitat by creating 44 new ponds with surrounding buffering habitat within 250m of existing ponds by 2015 and a further 98 by 2026, in both urban and rural areas.	tbc	NE EA CFE WWT SRNBG WCV	2015-2026
Advisory			
A1. Signpost Best Practice Guidelines to appropriate landowners via agri-environment schemes on the management, restoration and creation of ponds and to other landowners, e.g., of golf courses, new housing schemes.	NE	WWT	CFE ongoing
Research & Monitoring			
RM1. Maintain a digitised inventory of all water bodies up to 1ha.	HBA	WCC WWT	ongoing
RM2. Identify 1 cluster of ponds per district to achieve using the highest great crested newt suitability index available (see Local Action).	LWSP	WCC WWT	2014
RM3. Use existing guidance for the assessment of the biodiversity value of pond clusters to include plants (macrophytes) invertebrates, fish and waterfowl levels (Freshwater Habitats Trust).	LWSP	WDG WWT	ongoing
RM4. Audit the condition of all identified pond clusters including the presence of invasive non-native species in the Earlswood cluster in the Arden landscape area as the initial pilot area.	WWT	CRT WART PCs	LOs Ongoing 2014/15
RM5. Using results of RM4 and connectivity mapping, identify opportunities for pond restoration and creation.	HBA	WWT LAs	WDG ongoing

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Communication, Publicity & Education			
CP1. Promote pond conservation throughout the sub-region by holding a promotion campaign linked to World Wetland Day.	WWT	WART SBT	ongoing

Abbreviations: BC – Butterfly Conservation, CFE – Campaign for the Farmed Environment, CRT – Canal & River Trust, CSG – Core Steering Group, EA – Environment Agency, FC – Forestry Commission, FOBW – Friends of Brandon Wood, HBA – Habitat Biodiversity Audit partnership, HBA – Habitat Biodiversity Audit partnership, LAs – Local Authorities, LOs – Landowners, LPAs – Local Planning Authorities, LWSP – Local Wildlife Sites Project, NE – Natural England, PCs – Parish Councils, SBT – Shakespeare Birthplace Trust, SRNBG – Sun Rising Natural Burial Ground, STW – Severn Trent Water, WART – Warwickshire Amphibian & Reptile Team, WCC – Warwickshire County Council, WCV – Warwickshire Conservation Volunteers, WDG – Warwickshire Dragonfly Group, WWT – Warwickshire Wildlife Trust.

7. PROGRESS WITH ACTIONS

From 2015–2020 there will be a rolling programme of reporting on progress, of 10 action plans per year with an annual summary of results. Results will be entered into the national Biodiversity Action Reporting System [BARS](#). Progress with this plan up to 2008 can be seen at www.warwickshirewildlifetrust.org.uk/LBAP.

8. BIBLIOGRAPHY

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- DEFRA (2011) [Biodiversity 2020](#): A strategy for England's wildlife and ecosystem services.

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RSPB (2013) State of Nature – a stocktake of all our native wildlife by 25 wildlife organisations.

HBA (2013) The State of the Habitats of Warwickshire, Coventry and Solihull.

Brooks, S. & Cham, S. (2014) [Dragonflies & Damselflies of Great Britain & Ireland](#). British Wildlife Publishing.

9. FURTHER INFORMATION

Habitat Biodiversity Audit (HBA) for Warwickshire, Coventry & Solihull – mapping data set and associated information. Phase 1 ([JNCC](#)) 1996-2002 and Phase 2 (Local Wildlife Sites) ongoing.

[Biodiversity Planning Toolkit](#) - a new online resource to help incorporate biodiversity and geodiversity into the planning system and new development.

[Natural England](#) (2005). Free booklet on Garden ponds and boggy areas: havens for wildlife. Tel. 01733 455101

[Freshwater Habitats Trust](#) The Pond Book - A guide to the management and creation of ponds. Also available a Parish Pond Survey Recorders Pack. See the [Water Friendly Farming](#) and [MillionPonds](#) projects. Tel. 01865 483249

[National Pond Monitoring Network](#) - runs training courses in standard pond survey methods every summer.

[Royal Society for the Protection of Birds](#) (2007). Ponds for Wildlife leaflet. Tel. 01967 680551 .

[Amphibian & Reptile Groups of the UK](#) (ARG)

[Amphibian & Reptile Conservation Trust](#) (ARC)

[Flora Locale](#) – promotes the restoration of wild plants and habitats for the benefit of biodiversity, landscapes and people in town and countryside.

[Plantlife](#) - a charity which carries out plant species and habitat conservation, owns and manages nature reserves, campaigns, and raises awareness through education.

[Susdrain](#) - provides a range of resources for those involved in delivering sustainable drainage systems (SuDS) including up-to-date guidance to underpin the planning, design, approval, construction and maintenance of SuDS.

[Freshwater Habitats Trust](#) 'A Guide to the Methods of the National Pond Survey' (1998) and 'A guide to monitoring the ecological quality of ponds and canals using PSYM' (2002).

Wildfowl & Wetlands Trust (2015) – the [Wetland Manifesto](#) is a 10 point plan to look after the UK's remaining wetlands.

10. CONTACT

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