REVISED PLAN MARCH 2022

PONDS

1. INTRODUCTION

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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.

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 Urban 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)** that seeks for these balancing ponds to have associated ecological benefits through inclusion of standing water and marginal and emergent vegetation.

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 ***'GENERIC HABITATS'*** ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR OBJECTIVES COMMON TO ALL HABITAT PLANS		
A.	**To achieve a functional network of ponds across the sub-region.**	**2030**
B.	**To restore another 125 degraded pond sites.**	**2030**
C.	**To expand the extent of the habitat by creating a further 100 new open water bodies.**	**2030**

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(JNCC) and was updated in 2010-11. A description of the Ponds 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 EC Habitats Directive (1992).

- **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 ≥75%). [**PSYM** (the **P**redictive **SY**stem for **M**ultimetrics) 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 (2017) figure for open standing water, including ponds, lakes, reservoirs, flooded gravel pits, water filled ditches and canals is 1,876ha with 7971 standing water features. There are approximately 7708 water bodies up to 1ha in area covering a total area of 746.3 ha (figures should be treated as an approximation due to limitations of the available data); average pond size is 0.12ha. Since 2017 at least 26 ponds have been created by Local Authorities, Warwickshire Wildlife Trust (WWT) Warwickshire Amphibian & Reptile Team (WART) and landowners.

Designated in 2014 as Local Wildlife Sites are Westwood Way Ponds (LWS), Coventry and Millpool Spinney (LWS). Criteria for water bodies /ponds are under review to include a wider range of species than just great crested newt (GCN).

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 Sites of Special Scientific Interest (SSSI) designation, 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 (2021) paragraph 180 states conditions with regard to any development negatively affecting biodiversity, including protected sites, ancient woodland and other irreplaceable habitats. The Wildlife & Countryside Act and schedule 2 of the Conservation

of Habitats & Species Regulations (2019, EU Exit) make it an offence to intentionally kill, injure, take, possess, sell, buy or transport a range of species.

The EU Directives for Habitats and Birds, leading to the creation of Natura 2000 sites of SAC's and SPA's respectively, have been translated into UK law through the Conservation of Habitats & Species Regulations (EU exit, 2019). These will remain post-Brexit unless those Regulations are themselves updated or modified.

Ensor's Pool in Nuneaton is both a SSSI and a SAC in recognition of its important population of white-clawed crayfish. However, in 2014 survey revealed no crayfish present, thought to be due to infection by non-native crayfish. Natural England (NE) organised a number of surveys at the site during 2015 but extensive trapping failed to catch a single 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.
- New business parks and other developments are increasingly incorporating pools within their landscaping, e.g. fishing lakes.
- The implementation of Farm Waste Management Plans is part of the 'Cross Compliance' checking for all farms receiving funding from Defra.
- Agri-environment schemes administered by Natural England (NE) offered funding for the creation of ponds up to 2013. In 2016 Entry Level (ELS) and Higher Level (HLS) options were:
  - EE7: buffering in-field ponds in organic grassland/ improved permanent grassland
  - EE8: buffering in-field ponds in rotational land/ arable land
  - HE7: buffering in-field ponds in organic grassland / improved permanent grassland
  - HE8: buffering in-field ponds in rotational land / arable land
- **Pond surveys** by:
  - Freshwater Habitats Trust (2015-16) **-** survey of 13 ponds at 7 sites, the majority of which has been surveying for great crested newt using eDNA.
  - WART – 2006 Pond Survey to check all past records for great crested newts.
  - 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; the findings are used to inform the site management plans. This includes the provision of training for volunteers. It uses 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 km^2) is derived from dividing the number of ponds within 1km of the survey pond by 3.14 (pi).
  - University of Warwick 2018 – surveys carried out as part of a survey of the whole campus.
- **Invasive species control:**
  - WWT trialled the control of lesser pondweed (*Potamogeton pusillus*) with weevils (*Eurychiopsis lecontei*) at Ashlawn Cutting in 2017.
  - Long Itchington Primary School addressed its problem with Australian swamp stone crop (*Crassula helmsii)* in 2014.
- **Pond restoration:** for details see Ponds Progress Report on WWT website:
  - **Friends of Brandon Wood** (FOBW) has carried out restoration of 3 ponds between 2012–2020; another 3 are to be improved with biodiversity offsetting money.
  - **WWT** has restored a number of ponds in the sub-region, often with support from Butterfly Conservation Warwickshire, undertaken habitat enhancement of ponds on some of its reserves working with Nature Force, its volunteer work party.

- **WART** has restored great crested newt ponds at 4 sites.
- Other organisations known to have carried out pond restoration are the Shakespeare Birthplace Trust, St Alphege Junior School, Marie Curie Hospice, Solihull, and Haseley.

- **Pond creation:** for details see **Ponds Progress Report** on WWT website:
  - **WWT:** ponds created at 4 of its reserves
  - **WART:** has a target of 1 pond/year and so far has created them at 8 sites
  - **DM Kineton**: 3 ponds created for GCN relocation.
  - **National Police College:** 1 pond created near Ryton Wood.
  - **Coventry:** 2 ponds created and smooth newts translocated.
  - **North Warwickshire:** creation of 7 ponds at Mancetter quarry.
- **Pond creation as part of SuDS schemes:**
  - **Nuneaton & Bedworth Borough Council (**NBBC): – creation of 3 ponds at Weddington and Lower Farm.
- **Pond creation as part of new developments:**
  - **Rugby Borough:** 22 ponds created as part of new developments.
  - **Stratford upon Avon:** 3 ponds created and 2 ponds and a scrape planned in connection with WCC District Licensing work for GCN.
  - **Warwick District Council** (WDC): creation of 4 ponds with developers as part of the Gaydon Relief Road works.
  - **Warwick:** 2 ponds created and 2 ponds planned in connection with WCC District Licensing work for GCN.
- District Level Licensing **–** the current national licensing system for great crested newts has been replaced by a District Level Licensing scheme (DLL). This is being developed by the Warwickshire County Council (WCC) Ecology Team on a district-by-district basis. A network of connected ponds will be restored and/or created in advance of potential development which will be in strategic areas for the expansion and increase of the overall great crested newt population (see Great Crested Newt action plan on WWT website).

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	NE HBA WCC LAs SMBC CCC	ongoing
PL2. Ensure that the protection of all ponds is included in Local Development Plans, Neighbourhood Plans and any other relevant strategies.	WCC	NE WWT LAs SMBC CCC	ongoing
PL3. Ensure that new minor or major	WCC	NE LPAs WWT	ongoing

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developments aim for net biodiversity gain through adherence to the mitigation hierarchy.			
PL4. Refresh and ensure implementation of biosecurity policy, re site visits and survey work.	WWT	EA	2022
PL5. Promote the creation of ponds through the biodiversity off-setting process.	WCC	LAs SMBC CCC	ongoing
Site / Species Safeguard & Management			
SM1. Recommend appropriate management of all LWS water bodies to maintain condition or improve to good condition.	LWSP	NE STW CRT EA WWT	ongoing
SM2. Restore 55 degraded ponds and their surrounding buffering habitat in both urban and rural areas for wildlife and communities by 2025 and a further 70 by 2030 (see **Great Crested Newt plan SM3).**	LOs	NE WCV FOBW CFE WCC/DLL FC	2025-2030
SM3. Expand the area of the habitat by creating 45 new ponds with surrounding buffering habitat within 250m of existing ponds by 2015 and a further 55 by 2030, targeting particularly areas that link existing wetland habitats in both urban and rural areas (see **Great Crested Newt plan SM2).**	LOs	NE EA WWT CFE WCV SRNBG WART WCC/DLL	2025-2030
SM4. Implement invasive species control.	EA	WWT CRT LAs LOs	ongoing
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. Carry out connectivity mapping to identify locations for pond restoration and creation to create clusters (see Great Crested Newt action plan **RM4** and **SM1).**	HBA	WCC LAs	ongoing

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RM3. Use existing guidance for the assessment of the biodiversity value of ponds to include plants (macrophytes) invertebrates, fish and waterfowl levels)	LWSP	WDG FHT WWT	ongoing
RM4. Maintain invasive species records.	WBRC	EA	ongoing
Communication, Publicity & Education			
CP1. Promote pond and wetland conservation on social media, e.g. World Wetland Day.	WWT	WART SBT	ongoing
CP2. Promote the biosecurity process 'Check Clean Dry'.	EA	WWT	ongoing

Abbreviations: BCW – Butterfly Conservation Warwickshire, **CFE** – Campaign for the Farmed Environment, **CRT** – Canal & River Trust, **DLL** – District Level Licensing Scheme, **EA** – Environment Agency, **FC –** Forestry Commission, **FHT –** Freshwater Habitats Trust, **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. Progress with this plan up to 2019 can be seen at www.warwickshirewildlifetrust.org.uk/LBAP.

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RSPB (2016) State of Nature – a stocktake of all our native wildlife by over 50 wildlife organisations.

Natural England (2016) Conservation Strategy for the 21st Century Sets out how NE will help deliver DEFRA's ambitions for the environment to reverse biodiversity loss, sustain distinctive landscapes and enhance engagement with nature.

Stoate, C. (2017) The Allerton Project's first 25 years: pt. 2. A way of reducing the impact of food production on water is the creation of small field edge or field corner settlement ponds, fed by drains or ditches. These provide an opportunity for sediment to be captured and subsequently returned to the land. British Wildlife, vol 29, no 1, pp38-43.

Worldwide Fund for Nature (2018) The Living Planet Report: aiming higher. Published in collaboration with the Zoological Society of London.

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.

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).

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 is a Parish Pond Survey Recorders Pack. See the Water Friendly Farming and MillionPonds projects. Tel.01865 483249. The

PondNet project is setting up long-term volunteer monitoring to track changes in common and uncommon freshwater species to build up a picture of ponds nationally. Methodology to monitor amphibians, wetland plants, invertebrates, rare species and dragonflies has been developed.

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.

Amphibian & Reptile Groups of the UK (ARG)

Amphibian & Reptile Conservation Trust (ARC)

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.

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

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The Wildlife Trusts: Help Wildlife at Home shows simple things to help wildlife.

10. CONTACT

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