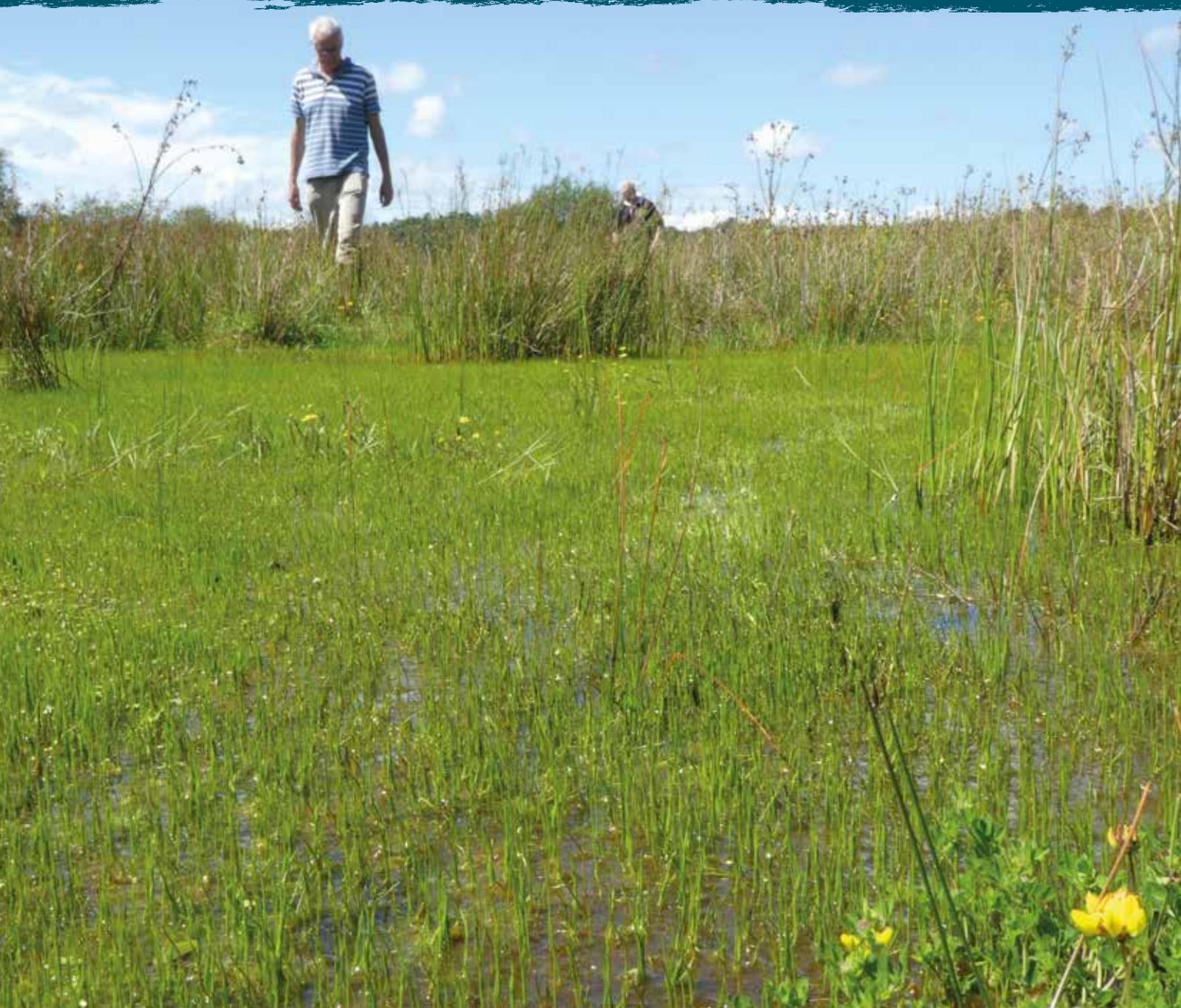


People, Ponds and Water Project Summary report



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Acknowledgements

We have been overwhelmed by the enthusiasm and support of the hundreds of volunteers who have given their time to support the People, Ponds and Water project - early morning site visits, midnight surveys, scaling mountains and venturing into dense scrub; there has been no end to the lengths they have been willing to go to, to discover and protect the species and places they love.

We particularly thank our funders:

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- Beryl Thomas Animal Welfare Trust
- BGL Group
- Defra
- Garfield Weston Foundation
- Natural England
- Natural Resources Wales
- New Forest Catchment Partnership
- Thames Water
- Trust for Oxfordshire's Environment
- ValPak
- Welsh Government
- Yorkshire County Council



Development of the PondNet, Clean Water for Wildlife and Flagship Ponds projects were completed in partnership with the following species groups, organisations, and land managers:

- Amphibian and Reptile Groups of the UK
- Aquatic Coleopterists Conservation Trust
- Aquatic Plant Taxonomic Group
- Amphibian and Reptile Conservation Association
- Association of Local Environmental Record Centres
- Biological Records Centre
- Blackpool Council
- Bodorgan Estate
- Botanical Society of Britain and Ireland
- Bradley Green Common Group
- British Pteridological Society
- Buckinghamshire County Council
- BugLife
- Chailey Commons Society
- Cheshire East Council
- City of London Corporation
- Conchological Society
- Defence Infrastructure Organisation
- Dragonfly Society
- Earth Trust
- Earthwatch
- Environment Agency
- Escrick Park Estate
- Flintshire County Council
- Forestry Commission
- Friends of Rawcliffe Meadow
- Froglife
- Gloucestershire County Council
- Groundworks
- Natural England
- Natural Resources Wales
- National Trust
- RSPB
- Snowdonia National Park Authority
- Species Recovery Trust
- Stow Bedon Fuel Allotment Society
- Stow-cum-Quy Trust
- Thames Water
- The Wildlife Trusts
- Yorkshire Water

People, Ponds and Water
Summary Report
2015-2018



Above: The New Forest - one of the most important sites for freshwater wildlife in England and Wales
Cover image: Tadnoll and Winfrith Flagship Pond site - lawns of the rare aquatic fern *Pilularia globulifera* carpet a complex of new shallow ponds which were created less than 10 years ago on an area of improved grassland



1. The vision for People, Ponds and Water

The People, Ponds and Water project is a national partnership working with volunteers across England and Wales to monitor, manage and protect freshwater wildlife.

Freshwaters and the species they support are amongst the most threatened habitats in our modern world. Clean unpolluted water is scarce across most of England and Wales and extinction rates for freshwater biodiversity are significantly higher than for terrestrial and marine habitats.

In spite of this, formal monitoring of freshwaters covers less than 1% of the habitat resource, and mostly focusses on the main rivers and larger lakes. We know very little about the condition and status of our ponds, headwater streams, ditches and smaller lakes.

Monitoring of freshwater species is also extremely patchy. Historically, efforts have concentrated on just a few charismatic species or has relied on ad-hoc recording which makes it hard to undertake robust analysis to identify change and the reasons for change.

Knowledge gaps such as these create critical barriers to habitat and species protection. As part of People, Ponds and Water we aimed to bring together an army of trained freshwater champions who would help provide the evidence.

We know that more than 90% of lowland waterbodies are degraded but the top 10% of ponds support around 70% of all freshwater species, including more rare and protected species than rivers, lakes or ditches. So it is vitally important that we protect our best freshwater habitats and species to ensure they stay in good condition.



The best-of-the-best ponds form part of a network of the highest quality pond sites. Supporting land managers and local communities can play a vital role; helping to raise awareness of the importance of these sites and implement practical management solutions based on best practice so that the species they support can thrive.

The aims of the project were to:

- Aim 1.** Gather evidence on freshwater habitats and species
- Aim 2.** Protect the best freshwater habitats
- Aim 3.** Champion freshwater biodiversity

The People, Ponds and Water ethos is that, the best way to protect freshwater habitats is to increase people's enjoyment, knowledge and experience of them.

In the People, Ponds and Water project we wanted to inspire people to connect with, understand and participate in the protection of their freshwater environment.

Volunteers would become directly involved in actions that would make a nationally significant difference to the long-term protection of Britain's freshwater heritage.



People, Ponds and Water has harnessed the power of more than **15,000 volunteers** to gather data on the health of freshwater habitats in England and Wales

The People, Ponds and Water team have collected over **16,200 records** from more than **10,000 sites**

The project has worked with more than **600 statutory and non-statutory organisations** and community groups, and undertaken practical management on **72** of the best pond sites in the UK

Project delivery has been achieved through three overlapping project elements:

PondNet: A volunteer survey network to collect statistically robust data to identify trends in pond quality and pond species, including uncommon plants and animals. Survey methodologies are standardised and include environmental metrics; giving information that will help to explain the reasons for changes in biological quality, and ultimately help to guide the direction of freshwater policy.

Clean Water for Wildlife: A citizen science survey to raise awareness of the true extent of nutrient pollution, and identify clean water habitats in England and Wales, with the ultimate aim of helping to protect biodiversity. Nutrient pollution is invisible so often doesn't seem 'real' to people. Using quick kits makes it possible for people to easily 'see' pollution for the first time.

Flagship Ponds: A network of some of the most important pond sites in England and Wales, known to support populations of species under threat. Local communities develop sustainable plans for these sites. Schools and local groups work on citizen science projects, bespoke to each site. New funding is provided to undertake monitoring, management, pond creation and help species recovery.



2. PondNet

PondNet is the first national volunteer survey network for pond habitats and uncommon pond plants and animals in England and Wales.

Over the last three years we've built a monitoring network of randomly selected sites, securing landowner permissions and recruiting and training volunteers.

At a national level, we worked with species groups and experts to produce statistically robust and repeatable survey techniques.

At a local level, support from Environmental Record Centres, a network of highly skilled local experts and the limitless enthusiasm of our volunteers has made the survey a success.

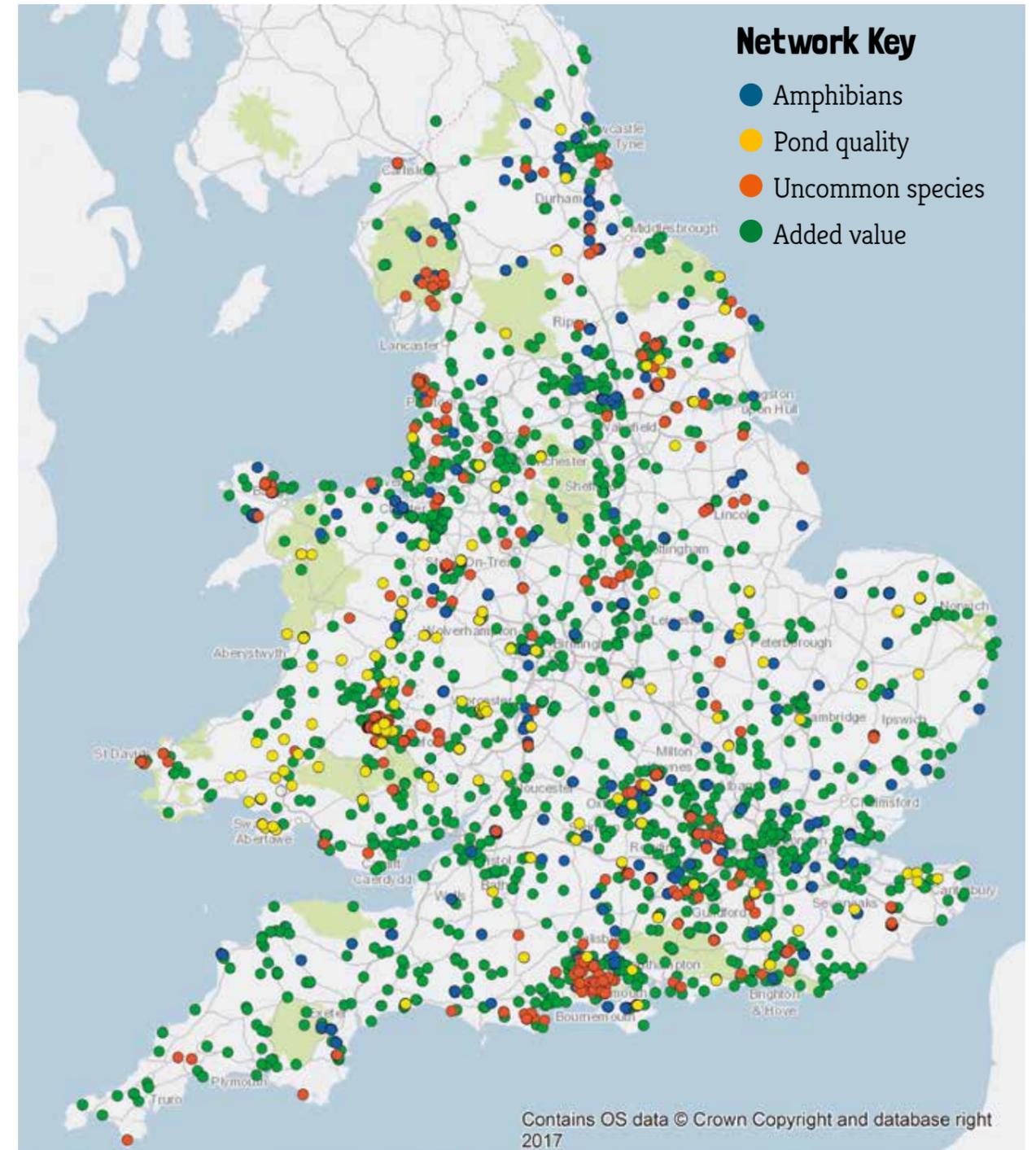
Volunteers have submitted **8,500 individual records** from over **3,300 ponds**

PondNet has collected statistically significant data on **15 priority pond species**

We've held over **210 training events** for more than **1,500 volunteers**

Our **survey packs and 'How to videos'** are **available online**, including 32 species ID and survey sheets

New data on plant and invertebrate communities has enabled us to **report on the status of pond habitats** in protected sites and in the wider countryside



PondNet is comprised of several overlapping sub-networks:

Amphibian network: recording the number of occupied ponds per randomly selected 1 km grid square (including eDNA Great Crested Newt surveys).

Pond quality network: plant and invertebrate surveys of randomly selected ponds.

Uncommon plants and invertebrates: monitoring populations of uncommon plant and invertebrate species at specific known ponds using a standardised methodology.

Added value sites: volunteer selected sites including PondNet spawn surveys (Common Frog and Common Toad) and community surveys for dragonflies.

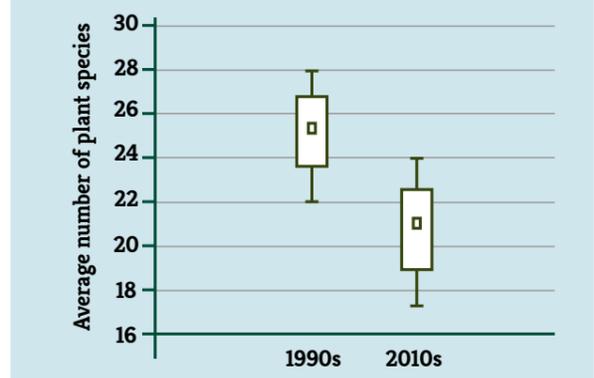


Pond quality surveys

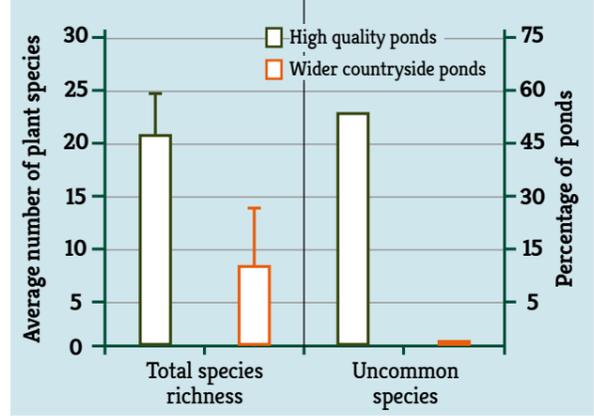
In the early 1990s Freshwater Habitats Trust undertook the first survey of high quality ponds in the UK. The results revealed that ponds were exceptionally rich and important habitats, supporting more species, and more rare species than our best rivers. In 2015-16 the People, Ponds and Water project provided an opportunity to re-visit some of these amazing ponds and see how they had changed.

Disappointingly two-thirds of the high quality ponds in England had lost a significant number of plant species and a disproportionate number of uncommon species over the c. 25 years between surveys. High quality ponds in Wales retained more of their species but similar losses were recorded in the number of uncommon plants.

PondNet surveys of wider countryside ponds, outside of nature reserves, also revealed a worrying picture. The average total number of wetland plants recorded per pond was less than half of the total from high quality pond sites. In the survey, less than 1% of wider countryside ponds were found to support an uncommon plant species compared to 78% of high quality pond sites.



Decline in species richness of high quality ponds



The poor condition of wider countryside ponds compared with high quality sites in terms of species richness and the proportion of ponds supporting uncommon species

A national network to monitor Great Crested Newts



© PIET SPAANS (CC BY-SA 2.5)

One of the great achievements of the PondNet project has been the establishment of a national monitoring network for Great Crested Newts. The network requires an annual survey of over 130 1 km grid squares, encompassing 380 ponds, and a team of over 450 volunteers.

This was an ambitious target given the spatial and temporal scale of the survey, and a traditional survey which required at least four night time visits to establish species absence. But, thanks to additional funding from Natural England, Defra and others, we were able to purchase eDNA (environmental DNA) kits to test for the presence of Great Crested Newts in all our ponds.

The advantages of the eDNA technique has been the ease and accuracy with which volunteers can survey large numbers of sites with just one visit and minimal training. It is unlikely that we would have gathered such a large amount of data without this exciting technique.

The eDNA survey has given us a lot of new information:

We estimate that between 18-32% of 1 km grid squares in England are occupied by Great Crested Newts, and in the short term this isn't changing.

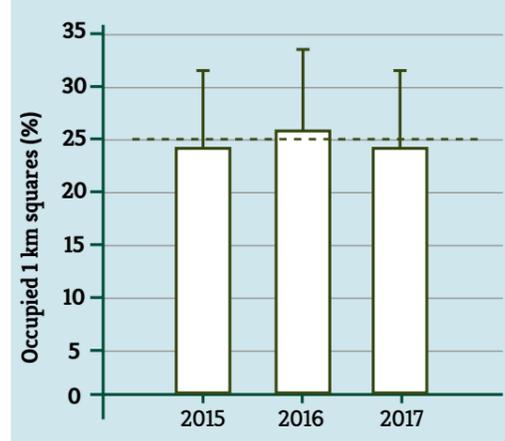
Around 13% of ponds are occupied by Great Crested Newts within their range in England, and data on habitat quality collected at the same time has shown a significant correlation between pond quality and Great Crested Newt occupancy. Ponds which were poor quality were unlikely to be occupied by Great Crested Newts.

Pond occupancy per 1 km grid square was lower than expected. Even in squares with lots of ponds, Great Crested Newts were only found to occupy a small proportion of the available habitat. In the majority of squares (41%) newts were only recorded from between 26-50% of the ponds.

Overall, there were no significant short term changes in square occupancy, pond occupancy or the number of occupied ponds per square, but we'd like to collect more data over longer time scales, ideally for another 2-3 years.



Volunteers used a new eDNA technique to detect the presence of Great Crested Newts



Estimated number of 1 km grid squares occupied by Great Crested Newts in England (± 7% margin of error). Change over the last three years was not significant.

Surveys for uncommon species



Medicinal leech are one of the most fascinating species we have surveyed as part of the PondNet project. In medieval history their use as a cure all in medicine resulted in a widespread distribution around the UK.

In more recent history their numbers had dwindled to a handful of known sites and concerns were raised about their status. Surveys in the late 1990's painted a slightly better picture as a large number of new sites were found in Cumbria and Kent. But whilst the Kent sites have been well monitored over the last 20 years, there have been few or no surveys at other sites in England and Wales

One of the main issues with surveys for the leeches is their lethargy in cold weather and their reluctance to move towards volunteers mimicking prey if they have already had a good feed. Our Welsh PondNet volunteers hit on a novel idea to use hay bales as potential breeding habitat and on the first check they were rewarded with handfuls of newly hatched leeches!

The surveys have also revealed the importance of emergent vegetation and associated thatch, which provides a natural substrate in which the leeches will lay their cocoons. At some sites overzealous management to remove this habitat to create 'open water' has almost certainly contributed to their decline.

Medicinal leech
Hirudo medicinalis



© NEIL PHILLIPS



© CHLOE RICE



Tubular Water-dropwort is a rare wetland plant associated with the drawdown zone and shallow water of ponds and ditches in low nutrient floodplain grasslands and wet meadows.

Like many species within this habitat type, it has undergone dramatic losses since the 1950s, primarily because of land drainage, a lack of conservation grazing, and nutrient enrichment. Still a relatively widespread species, no systematic survey had taken place to assess its status on ponds.

PondNet volunteers and dedicated research student Chloe Rice surveyed c. 70 ponds in England with a recent record (post 1980) for Tubular Water-dropwort.

The results were shocking - Tubular Water-dropwort could not be found at 40% of ponds with previous records. Only 13% of sites had more than 2,000 individual plants, whilst 35% had fewer than 100 plants; and many had only one or two.

Plants like Tubular Water-dropwort may come and go from a site as part of a natural dynamic population, and plants may reappear at some of the sites recorded as absent in this survey. But, fragmentation and increasing pressures on the freshwater environment are leading to extinction debts with little chance that species will recover once they have been lost.

Tubular Water-dropwort
Oenanthe fistulosa



3. Clean Water for Wildlife

Clean Water for Wildlife is a nationwide project to raise awareness of the critical importance of clean unpolluted water for freshwater wildlife.

In the first national survey of its kind, we recruited citizen scientists to gather data about nutrient pollution from all kinds of freshwaters including ponds, lakes, rivers, streams and ditches, all of which are important for freshwater wildlife.

Freshwater plants and animals need nutrients to grow, they have evolved over millions of years in a world where water naturally had very low nutrient levels. When we add more, even the smallest amount, it causes profound changes to the freshwater environment.

Excess nutrients cause algae, fungi, bacteria and some water plants to grow rapidly. This smothers slower growing and more delicate species, eventually killing them off, which has a knock on effect for the animals that depend on them.

As nutrient levels increase, sensitive species are lost and the habitat slowly becomes poorer in wildlife. Many polluted habitats will still have some wildlife, but they won't have the rich diversity or sensitive species that depends on clean water.

In lowland England and Wales, there are such large quantities of nutrients draining from farmland and urban areas that it's hard to find any rivers or large streams which are free from these pollutants, a serious issue for both our own health and the health of the environment.

The cleanest sites are likely to be the smaller freshwaters; the ponds and small lakes, smaller streams and ditches, located in places which are isolated from pollution sources.

Before Clean Water for Wildlife we had little information on the location of these unpolluted sites. Whilst government agencies monitor the larger streams and rivers and a few big lakes; nutrient pollution had not been measured in most of the smaller habitats.

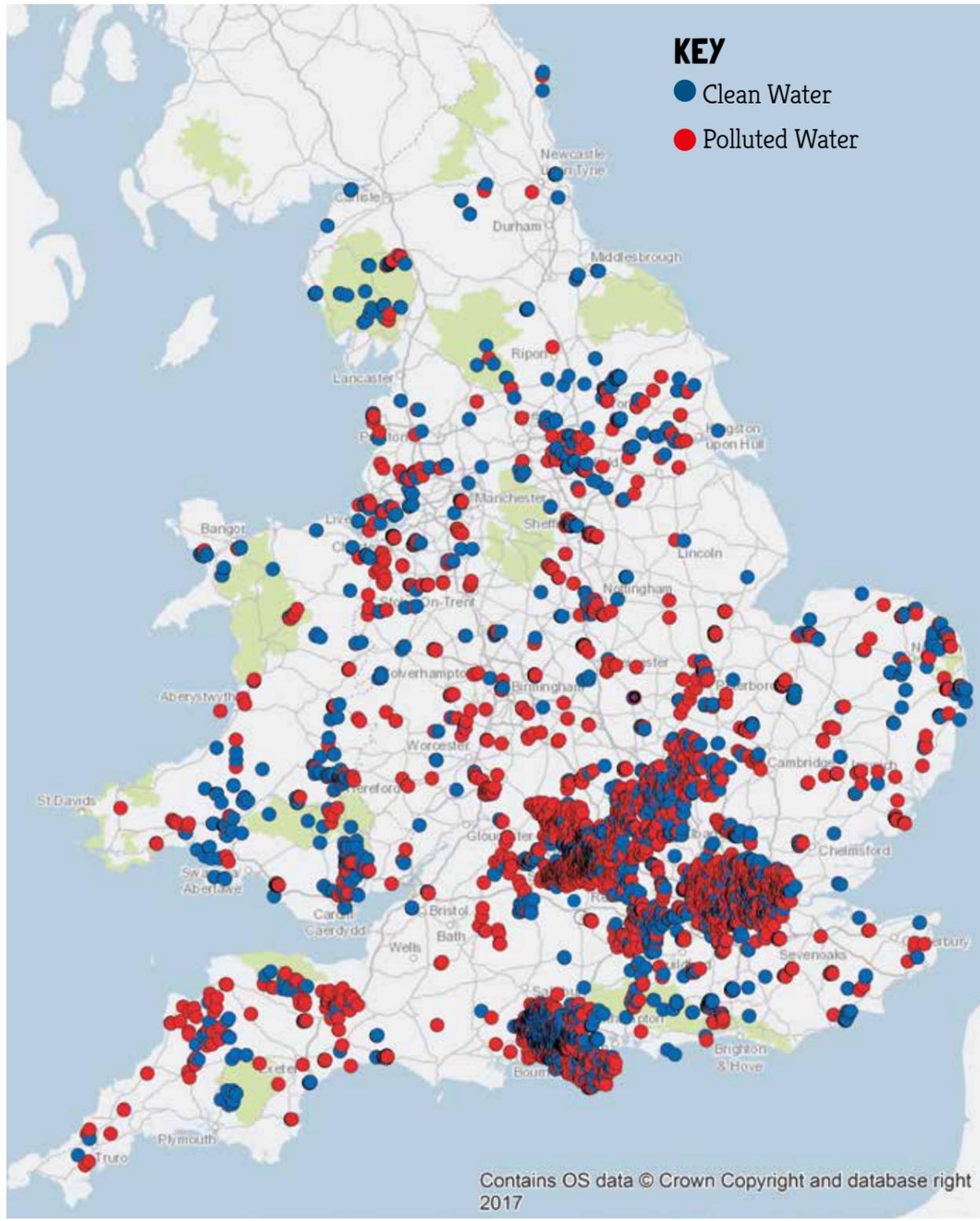
Until recently there were several challenges to identifying pollution free freshwaters at a landscape scale. You can't see nutrients in water; it may look crystal clear but can still be polluted, and in the past the only way to find out was to undertake expensive laboratory tests. The alternative method used biotic indices but these required highly skilled plant and invertebrate surveyors.

The Clean Water for Wildlife survey used new innovative 'quick kits' to assess the level of nitrogen (as nitrate) and phosphorus (as phosphate) pollution; two nutrients which can pose a major risk to wildlife.

The kits required no previous experience and with the resources available on the People, Ponds and Water website it meant anyone and everyone could help to plug the knowledge gap.



Opposite page: Clean Water for Wildlife has been a hugely popular element of the People, Ponds and Water project. Water quality test kits have been sent out far and wide, to volunteers of all ages and interests. We've used them on PondNet and Flagship Pond sites, with community wildlife groups, reserve managers, schools and colleges, professionals in industry, and local individuals who've taken their dogs with them to test the freshwater habitats in their own neighbourhood.



Water quality results collected by volunteers and staff as part of Clean Water for Wildlife funded by the Heritage Lottery Fund, Thames Water for Wildlife funded by Thames Water, the Earthwatch Freshwater Watch programme (London) and New Forest Catchment Partnership (Hampshire).

Over 30,000 water quality kits were distributed across England and Wales through the Clean Water for Wildlife survey.

We continue to receive more results on a daily basis through the WaterNet on-line data portal, but so far just under 10,000 records have been submitted from around 7,000 freshwater habitats, including ponds, lakes, rivers, streams and ditches.

The bad news is the extent of nutrient pollution. We found high levels of nitrates and phosphates amongst all freshwater habitat types.

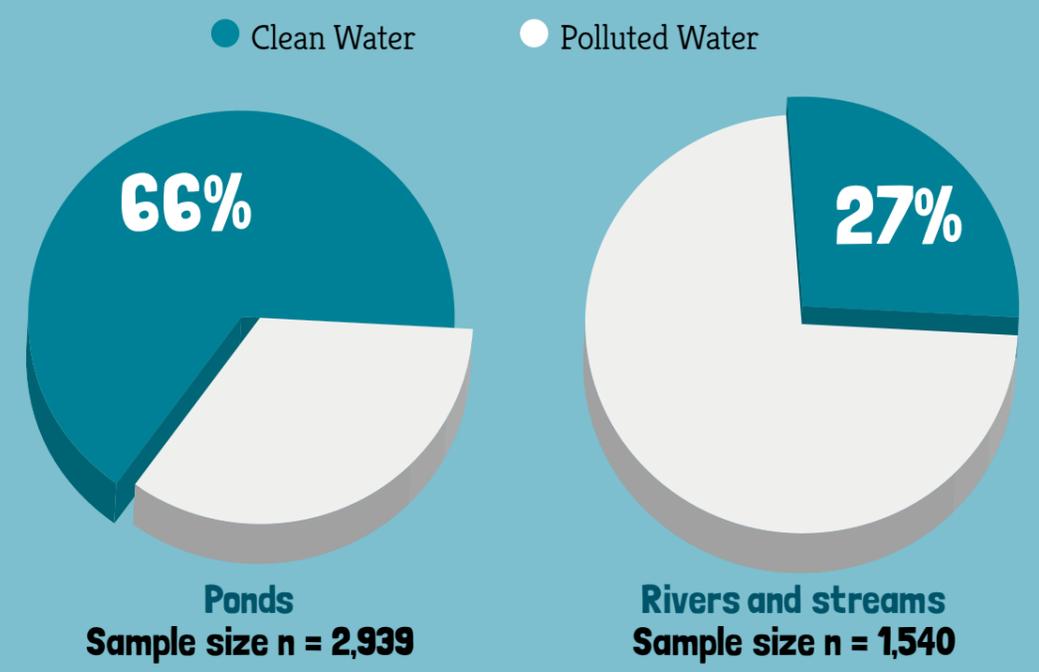
The good news is that people found clean unpolluted water in all the landscapes they tested, and some landscapes were almost completely free from nutrient pollution.

And more good news is that the results reveal for the first time the national importance of small waterbodies in the clean water network.

The majority of the clean water was concentrated in ponds - 66% of the ponds tested had clean water; whilst few running waters were free from nutrient pollution - only 27% of rivers and streams tested had clean water.

66%
 of the ponds tested had clean water

Proportion of ponds, rivers and streams with clean water in England and Wales



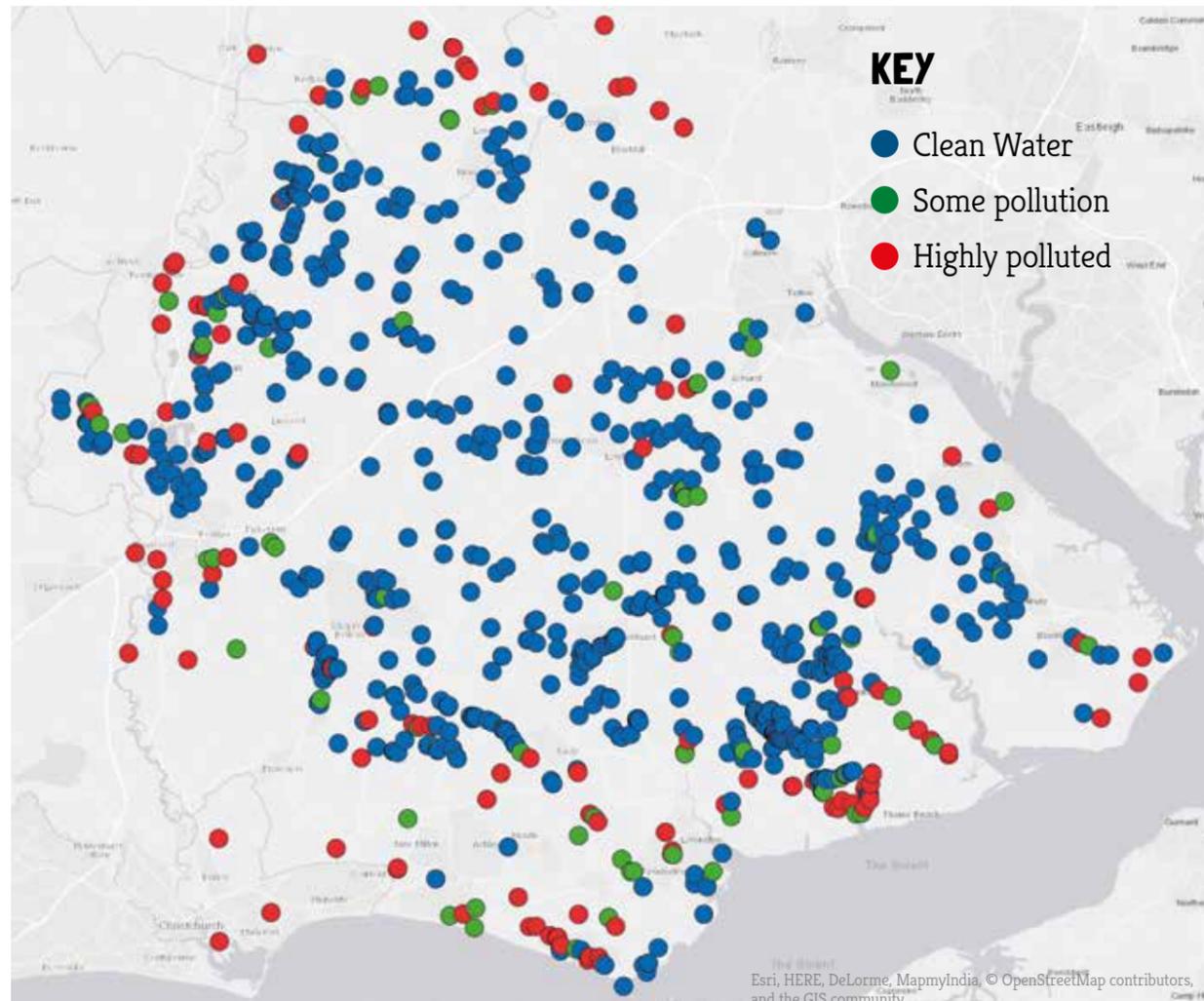
'Clean water' has a chemistry and biology that would be normal for its area in the absence of significant human pressure. It is sometimes called 'the natural background', 'minimally impaired water quality' or, 'the reference condition'.

In terms of legislation it is water categorised as 'High' on the five point Water Framework Directive water quality classification of High, Good, Moderate, Poor or Bad.

In our analysis of the People, Ponds and Water data 'clean water' refers to waterbodies with Total Nitrogen concentrations below 1mg/L and Total Phosphorus concentrations below 50µg/L. This broadly equates to Water Framework Directive 'High' status (or its equivalent for ponds).



New Forest National Park

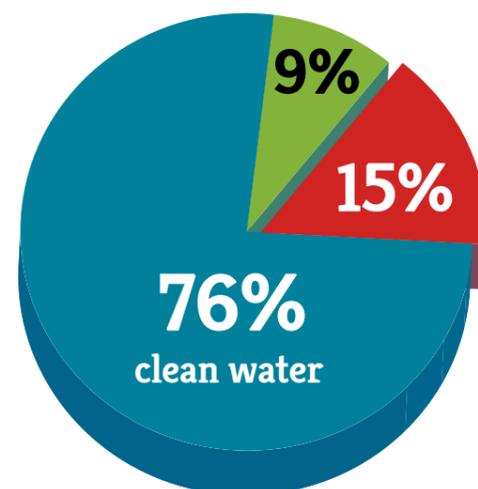


Unlike the rest of lowland England and Wales, the New Forest National Park is a landscape dominated by clean unpolluted freshwater habitats. Over three quarters of the sites (76%) showed no evidence of nutrient pollution.

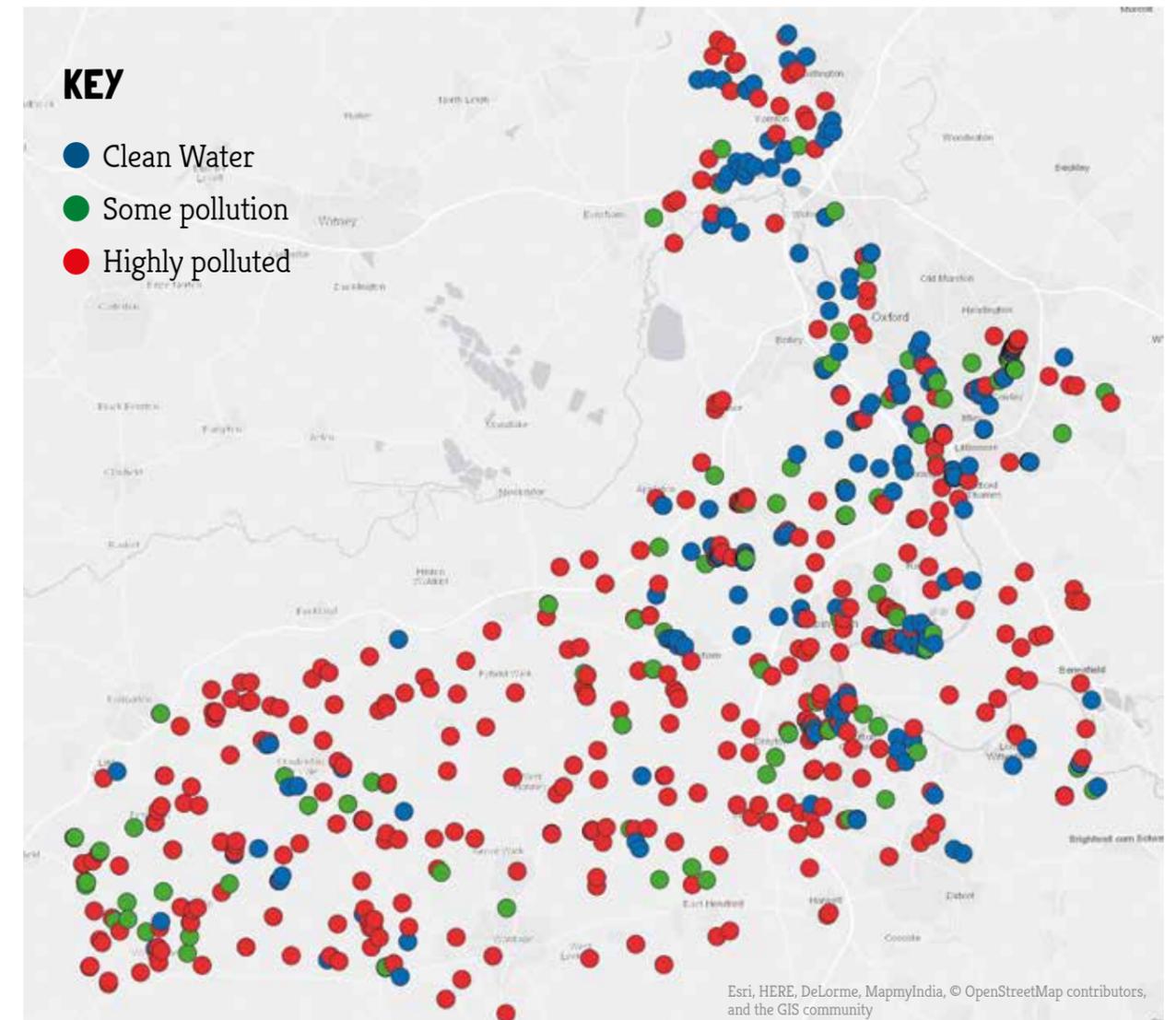
The 'open forest', the area of semi-natural habitats and uncultivated land in the core of the Forest produced 72% of the clean water samples, whilst the intensively farmed and urban areas on the edge of the Forest were dominated by polluted samples.

This is the first time any information on water quality within the New Forest has been collected at a landscape scale and it's now easy to see why this unique landscape supports some of the richest and rarest freshwater wildlife in the UK and Europe.

Proportion of clean water and polluted habitats in the New Forest



Ock Catchment

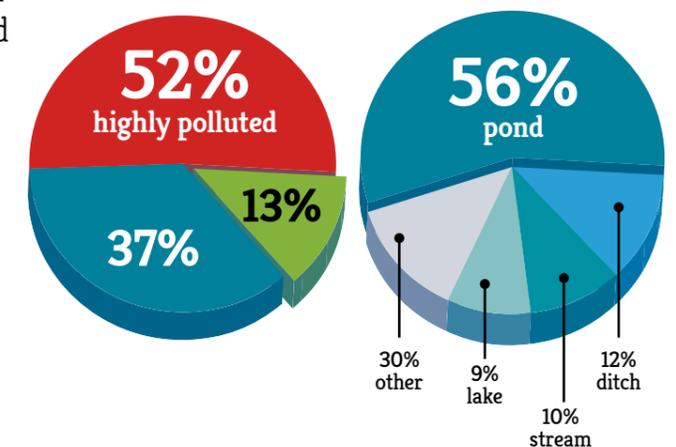


Typical of the urban and rural landscapes we sampled in England and Wales, the Ock Catchment's freshwater habitats suffered from both nitrate and phosphate pollution – 13% had some pollution and 52% were highly polluted.

The clean freshwaters (37%) had a patchy distribution, and were located in semi-natural habitats like woodland, fens and meadows.

The results of the survey demonstrate the importance of ponds and smaller running waters to provide clean water habitats in otherwise polluted landscapes – 56% of clean water habitats were ponds.

Proportion of clean water and polluted habitats in the Ock Catchment and the proportion of habitats which were found to have clean water





4. Flagship Ponds

Flagship Ponds are the very best pond sites in England and Wales; identified because they support populations of the some of the UK's rarest species and because they represent some of the least impacted most diverse pond habitats remaining in the country.

PondNet and Clean Water for Wildlife have provided important information on the current status of freshwaters in England and Wales; and it's clear that many habitats and species are increasingly in trouble.

In spite of these challenges we estimate that around 20% of the 400,000 or so ponds in the UK, still achieve Priority Pond status including:

- Ponds which support species of high conservation importance
- Ponds with exceptional populations or numbers of key species
- Ponds of high ecological quality
- Important pond types, e.g. dune slack ponds and pingo pools

Flagship Ponds are a sub-set of the very best Priority Ponds. They support one or more of the very rarest pond plant and animal species, a very rich assemblage of species, or internationally important pond types.

An important reason for giving a pond Flagship status is to create a focus for protection and monitoring, and to help raise awareness of a site's importance at local and regional level. Every Flagship Pond site should:

- Be monitored appropriately
- Have a management plan in place which relates specifically to the ponds and the species they support
- Appoint a local "guardian" who will: carry out high-level monitoring and where appropriate liaise with the landowner and provide a link with specialist advisers

The Flagship Ponds project identified 70 Flagship Pond sites in need of immediate support, about half of all the Flagships which have been identified in England and Wales.

Over the last 3 years of the People, Ponds and Water project we've:

Worked with over **600 active volunteers** on Flagship Pond sites

Run more than **90 training sessions** with species experts to upskill Flagship Group volunteers

Held 50+ pond events, from water quality testing, to evening talks and daytime walks – reaching a further 1,300 people in the wider community around the Flagship Pond sites

Undertaken practical management, including pond creation and species recovery work on all of our Flagship Pond sites



The Flagship Pond network: 72 of the most important pond sites in England and Wales

Barkbooth Lot
A wonderful site for the medieval cure all - the Medicinal Leech

Llyn Tegid
Now the only place in the UK where the Glutinous Snail still survives

Skipworth Common
Home to Pillwort - a delicate aquatic fern

Willow Tree Fen
One of the last ponds for the statuesque Greater Water-parsnip

Stow Bedon Common
One of the few English sites for Pond Mud Snail - a temporary pond specialist

Grech Heath
One of only a handful of sites for the dazzling, but tiny, Pondweed Leafhopper

The Lizard
Home to many endangered plants and animals including the winter buttercup, Three-lobed Water-crowfoot



Cock Marsh Flagship Pond Site



Cock Marsh Flagship Pond site is a small National Trust reserve on the River Thames floodplain. It was reputed to be one of only three sites where the exceptionally rare plant Brown Galingale could be found – but no one knew if the plant was still there.

In 2016 our regional project officer, Peter Case, worked with the site managers, volunteers and local people, to provide training in plant identification, ecology and management for Brown Galingale.

What we found was extraordinary: over 10,000 plants of Brown Galingale were recorded, meaning that the site has by far the largest population in the UK. We also learnt new lessons about the plant's ecology – nearby trees were critical to the plants survival: their shelter encouraged cattle to linger at the pond edges creating bare muddy ground – perfect for Brown Galingale. This new information has changed the way the site will be managed in the future.



Brown Galingale
Cyperus fuscus

Inglestone Common's Flagship Ponds



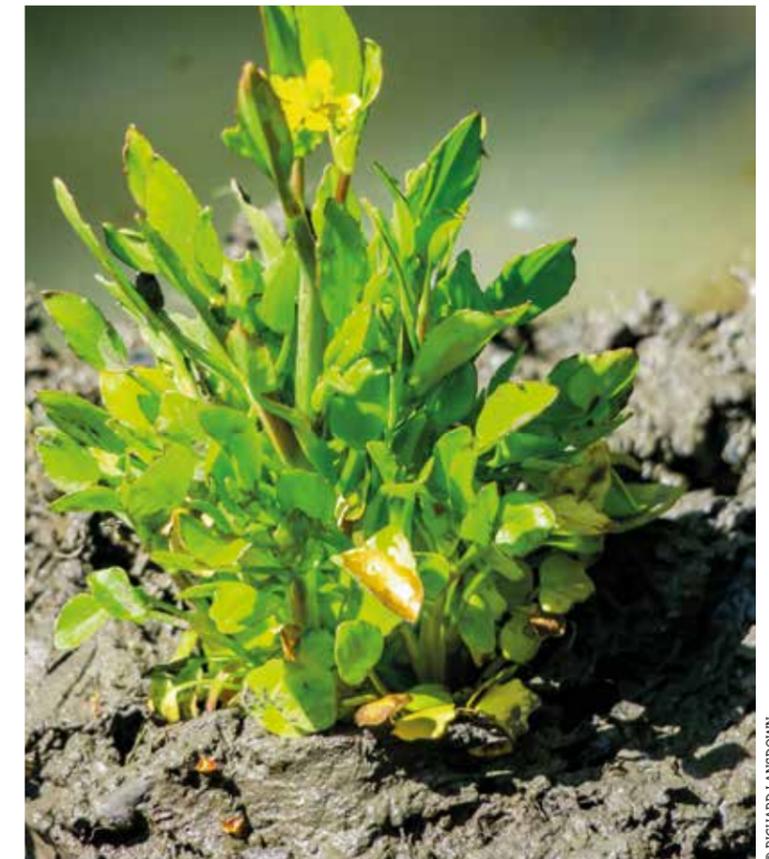
Inglestone Common is one of only two sites in the UK for the endangered buttercup Adder's-tongue Spearwort. This plant thrives on the poached edges of temporary ponds. Over time, cessation of grazing on the common has resulted in unfavourable conditions and in the last few years only a handful of plants have been recorded there.

A Flagship Group comprised of national experts, lead organisations and the site managers, South Gloucestershire Council, developed a plan for the site, to reintroduce appropriate levels of grazing for Adder's-tongue Spearwort and remove dense scrub which was inhibiting germination.

The Flagship Ponds project with funding from the Heritage Lottery Fund and Valpak, was able to fund work by the Millennium Seed Bank at Kew to cultivate seeds collected historically from Inglestone. In 2016, we held a series of events to plant out the young seedlings into the newly managed habitat. Each plant is capable of producing over 820 seeds in one year, with the largest plants able to produce 3080 seeds.

Provided we continue to maintain levels of grazing on the site the population should be restored to its former strength in no time!

Adder's-tongue
Spearwort *Ranunculus
ophioglossifolius*



© RICHARD LANSDOWN



Inholms Clay Pit's Flagship Ponds



Inholms Clay Pit Flagship Pond site is a former clay extraction site, now a local nature reserve managed by Surrey Wildlife Trust. The site has developed into a mosaic of species rich grassland, scrub and older secondary woodland. To add to this diversity a complex of seven ponds were created on the site as part of Freshwater Habitats Trust's (then Pond Conservation) Million Ponds Project. In 2013, local botanists attempted an experimental introduction of Starfruit to the two largest new ponds on the reserve. Starfruit is a globally threatened plant and without this work was on the brink of extinction in the wild in the UK.

Hundreds of Starfruit plants have appeared on the ponds every year since. At other sites where introduction attempts have been made in the past, the number of plants declined and then disappeared. Therefore, this may be the first successful introduction programme for Starfruit in this country.

We've worked with the Flagship Group to standardise recording and document the introduction of Starfruit and subsequent management of the site, invaluable information for the national conservation of the species. We have also provided funds for the creation of new ponds and fencing to keep the ponds free from the pressures of recreation at this popular site.

Starfruit
Damasonium alisma

Strensall Common Flagship Pond Site

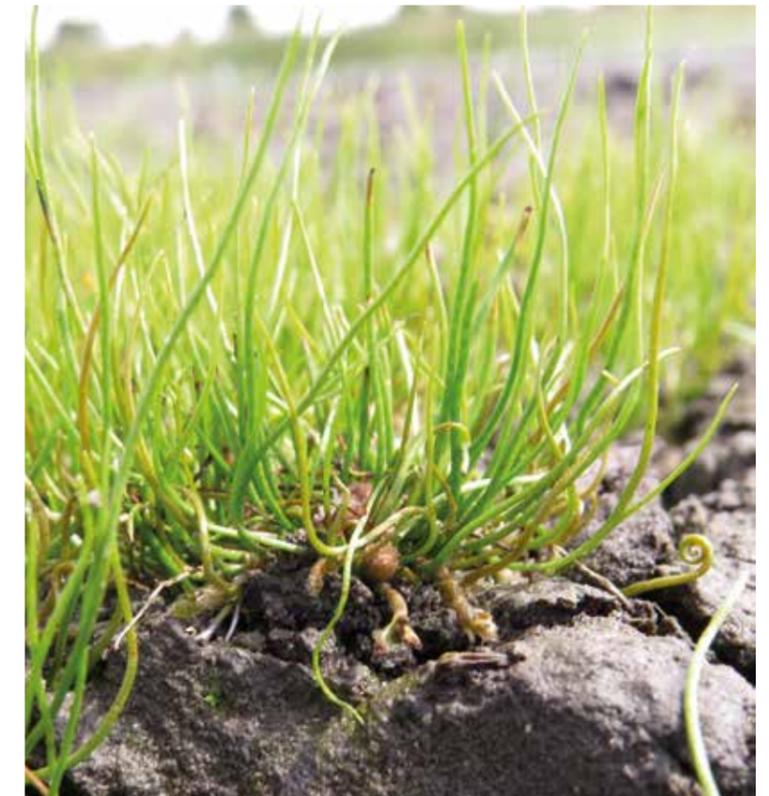


Strensall Common, Yorkshire, is one of only two remaining areas of extensive open heathland in the Vale of York. It was identified as a Flagship Pond site due to its exceptional importance for rare freshwater wildlife and the numerous dragonflies and amphibians that have been recorded from the site.

The shallow scrapes, pools and ponds dotted across the heath are covered in the rare aquatic fern Pillwort and are also home to thousands of Pond Mud Snail - making this the largest and most extensive site for these species in the region. One of the oldest ponds on the common, Kidney Pond, also supports several Nationally Scarce species, including Tubular Water-dropwort and Marsh Stitchwort.

Freshwater Habitats Trust teamed up with the Yorkshire Branch of Butterfly Conservation to recruit a new community of Flagship Pond volunteers to tackle the scrub which has slowly encroached around many of the ponds. Armed with loppers and bowsaws which were purchased for the project, dozens of volunteers were mobilised to ensure the ponds and the species they support have a bright and healthy future.

Pillwort
Pilularia globulifera





© DICK EASTWOOD

A selection of the community groups who've made the Flagship Pond project a success. From top left: The Begwyns, Blackpool Pond Trail, Brown Moss, Sound Common and South Weirs New Forest.



5. Building the Flagship Pond family

The Flagship Ponds project is a demonstration of the power that communities have to raise awareness and take practical steps to protect pond habitats and save freshwater wildlife – and now the network is growing:



Top Hill Low, Yorkshire

Anne Heathcote, our regional officer in the North, visited Top Hill Low as a potential PondNet training venue. The site turned out to be fantastic, it was teeming with dragonflies and supported the rare and declining plant Greater Water-parsnip.

Anne introduced the site manager to the Flagship Pond principles and he was delighted that we could designate Top Hill Low as a Flagship Pond site.

The designation will raise the profile of the ponds and the importance of the rich marginal vegetation around them which supports so many important species.

Aberffraw, Isle of Anglesey

Sam Bosanquet, a national expert in mosses and liverworts, volunteered his time to offer expert advice at our Newborough Warren Flagship Pond site. He mentioned that he knew of another site on Anglesey which supported at least four rare dune slack bryophytes; and the site was in desperate need of some management work to save them.

Hannah Shaw, our Welsh regional officer, went to look at the site with Sam and agreed that it would easily qualify for Flagship Pond status. Within a few weeks the volunteer team from Newborough were on the site helping to remove small areas of turf by hand, to create the bare ground needed by these rare miniatures. These slacks will wet up over the winter to create mini temporary ponds in the dunes which should create ideal conditions for the bryophytes to germinate.





6. The State of Pond Nature

People, Ponds and Water has achieved a lot in its first three years.

- We've produced up-to-date information on the status and change of pond habitats and priority species, trialling new techniques which have opened up species recording to new audiences. This has revealed some worrying trends which indicate that declines are occurring across many pond habitats and species groups, even within protected sites.
- We've generated the first ever data on the extent of nutrient pollution in all waterbody types across England and Wales. Nutrient pollution is widespread, but a few landscapes retain clean water and clean water ponds can be found even in the most polluted landscapes.
- We've worked with conservation groups, national and local experts, and passionate volunteers to protect and manage some of the most important pond sites in England and Wales; including recovery of species to sites where they had been lost.
- Most importantly, we've raised the profile of the importance of ponds for freshwater wildlife and put in place monitoring and conservation strategies which will help to maintain the best ponds sites for future generations.

We will publish a more detailed report on the State of Pond Nature in the coming months. Individual reports and data can be downloaded from the People, Ponds and Water website: <https://freshwaterhabitats.org.uk/projects/people-ponds-water>.



What next...

- **PondNet** will continue with annual surveys of many of our priority species including Great Crested Newts, Medicinal Leech and Pillwort. We are also extending the network to undertake more pond habitat surveys at local and regional levels.
- **Clean Water for Wildlife** has introduced a valuable new tool to freshwater monitoring and all our future projects, as well as the projects of many of our partner organisations, are likely to include an element of rapid nutrient pollution assessment.
- **The Flagship Pond network** is already growing with the addition of new sites to the network, but we have also begun to develop projects which will further the work on the current suite of sites; including plans to extend out from these high quality landscapes to build Important Freshwater Areas.

And finally . . .



A Huge Thank You!

To all the People, Ponds and Water volunteers.

Contact us

Freshwater Habitats Trust's aim is to protect freshwater life for everyone to enjoy. Our vision is that all threatened freshwater plants and animals have recovered and developed sustainable populations, the UK has a functioning network of freshwater habitats: The Freshwater Network, and people value freshwater habitats and their wildlife. We deliver our conservation aims through our expert staff and our conservation, community, research and policy work.

If you would like to receive regular updates from Freshwater Habitats Trust or to find out about future projects and volunteering opportunities please get in touch.

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