The Charter for Small Waters

Most of the water environment is made up of small waters. Yet policy makers have paid less attention to this vital part of the water environment than bigger, more obvious, waters.

To protect life in freshwaters properly we must take account of small waters: they are the lifeblood of the water environment, some of our most natural, wildlife rich habitats and vital if we are to resist the impacts of climate changes. They are the streams we paddle in and the ponds we dip in for the joy of seeing tiny fish and insects. They are the tumbling mountain torrent and the quiet shaded pools.

They are the local pond and the local streams, the familiar everyday countryside that is vital to the survival of nature.

Executive summary

Around 75% of England's freshwaters are small water bodies, including streams, ponds, small lakes, springs, flushes and ditches. These habitats support over 70% of our freshwater species, and provide essential resource and connectivity across the wider landscape.

Small waters represent a significant opportunity to take efficient, effective measures to drive environmental improvement for the freshwater network in the short to medium term, at relatively low cost. These significant benefits should be realised through a programme of protection, restoration, creation and monitoring for small waters.

Introduction – the value of small waters

Small waters (Box 1) make up around 75% of England's freshwaters[1], and are used by over 70% of our freshwater species.

These headwater, tributary and coastal streams, and small lakes, ponds, springs, flushes and ditches are important habitats for both rare and declining species, and support a large proportion of regional freshwater biodiversity. For example, 10% of all the UK's priority species can be found in ponds, and one third of the macroinvertebrate biodiversity of a catchment can be unique to its headwaters.[2] Headwaters, the starting point of all of our rivers, are also vital spawning grounds for declining Atlantic Salmon and Sea Trout.

Small waters are essential components of the wider landscape, providing important habitat and resources for freshwater, wetland and terrestrial species, and supporting ecological networks and connectivity. Recent data show that actively creating, restoring and managing small waterbodies has the potential to rapidly increase landscape-scale freshwater biodiversity at a time of increasing threat and need.[3]

Ponds, streams and wetlands within terrestrial habitats add complexity and edge habitats which are important for overall species richness. Small waterbodies are a critical part of the habitat matrix in forests, heaths, fens and floodplains. In farmland, ponds can support substantial pollinator biomass, and provide foraging areas for birds and bats, as well as the critically endangered European eel.[4] [5] Brown trout selectively use small first order streams for spawning, and as juvenile habitat.

Alongside their importance to biodiversity, small waters can also deliver-nature based solutions to water pollution, climate change, flooding and droughts thereby buffering impacts downstream, and provide opportunities for people to engage with vibrant nature in their local area.

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[1] In England and Wales, the total length of first and second order streams is 126,338 km, or 73.4% of the total running water network: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6162339/

[2] Biggs, J., von Fumetti, S., and Kelly-Quinn, M. (2017). The importance of small waterbodies for biodiversity and ecosystem services: implications for policy makers. Hydrobiologia, 793, 3–39. https://link.springer.com/article/10.1007/s10750-016-3007-0services: implications for policy makers | Hydrobiologia (springer.com)

[3] Williams, P., Biggs, J., Stoate, C., Szczur, J., Brown, C., & Bonney, S. (2020). Nature based measures increase freshwater biodiversity in agricultural catchments. Biological Conservation, 244, 108515.

[4] Walton, RE; Sayer, CD; Bennion, H; Axmacher, JC; (2021) Improving the pollinator pantry: Restoration and management of open farmland ponds enhances the complexity of plant-pollinator networks. Agriculture, Ecosystems & Environment , 320 , Article 107611.

[5] Lewis-Phillips, J., Brooks, S.J., Sayer, C.D., Patmore, I.R., Hilton, G.M., Harrison, A., Robson, H. and Axmacher, J.C., 2020. Ponds as insect chimneys: Restoring overgrown farmland ponds benefits birds through elevated productivity of emerging aquatic insects. Biological Conservation, 241, p.108253.

Protecting and enhancing small waters is essential to both a healthy water environment, and for maintaining and enhancing the wider terrestrial landscape for nature. This will be critical to delivering legally binding targets under the Environment Act, including species extinction risk and species abundance targets.

Of the 1,020 species which are considered under the halting species decline target, 94% of the freshwater invertebrate species, a third of fish and all the wetland plants can be found in small waters. In 2023, 7 of the 34 freshwater or migratory native fish species assessed in the regional red list were classified as threatened; these species require specific habitats variously associated with small waters.[6] Demonstrating their critical importance for wider biodiversity, 25% of all vascular plant species considered under the target and at least 20% of *all* breeding bird species can be found in association with small freshwaters. The water vole - now endangered in England– makes extensive use of small streams, ponds, ditch systems and wetlands. These small waters are also utilised by the majority[7] of the UK's amphibian and reptile species, almost a third of which are threatened with risk of extinction.[8]

[6] Aquatic Conservation: Marine and Freshwater Ecosystems | Aquatic Journal | Wiley Online Library
[7] Small Water Bodies in Great Britain and Ireland: Ecosystem function, human-generated degradation, and options for restorative action - ScienceDirect
[8] https://www.arc-trust.org/news/extinction-risk-defined-for-britains-amphibians-and-reptiles

Box 1. What are small waters?

Headwater streams: Furse (2000) defined headwaters as streams within 2.5 km from the source, and most specialists identify headwaters as first, second or third-order water courses and this is the approach adopted here. Priority headwaters use this definition.

Ponds: small standing waters varying in size from 1 m^2 to 2 ha which may be permanent or seasonal, man-made or natural (Brown et al., 2006; Céréghino et al., 2008; Collinson et al., 1995; Pond Conservation Group, 1993).

Small lakes: lakes between 2 ha and 50 ha, the point at which the Water Framework Directive separates off smaller waters.

Ditches: Man-made channels created primarily for agricultural purposes, and which usually: (i) have a linear planform; (ii) follow linear field boundaries, often turning at right angles; (iii) show little relationship with natural landscape contours.

Springs: places where the groundwater emerges at the surface with a natural, concentrated, discharge rate high enough to maintain flow on the surface (Cantonati et al., 2006; van Everdingen, 1991).

Flushes: peat or mineral-based terrestrial wetlands which receive water and nutrients from surface and/or groundwater sources as well as rainfall. The soil, which may be peaty or mineral, is waterlogged, with the water table close to or above the surface for most of the year.

Scrapes: shallow ponds of less than 1m depth which hold rain or flood water seasonally, and which remain damp for much of the year. They are found in fields, most commonly in farmland.

The problem

Though some positive steps have been taken,[9] the importance of small waters is not yet adequately recognised in UK legislation. This means that this substantial part of the water environment does not have adequate policy tools to ensure its protection, management and restoration. Small ponds can and often are simply filled in.

For example:

- **There is no routine monitoring of small waters.** Monitoring under the Water Framework Directive regulations currently excludes most standing waters less than 50 hectares, and combines about three quarters of all headwaters together with downstream waters, meaning that specific pressures upon small waters are not identified, and actions to address them are not prioritised. Monitoring of headwaters, ponds and ditch systems - some of our most biodiverse freshwaters - remains irregular. For springs and flushes, even the location and extent of existing habitat is poorly documented.

- **The conservation of small waters is not adequately supported by current environmental targets.** For example, targets based on area (i.e. to protect and conserve 30% of land and sea for biodiversity by 2030) inherently fail to incentivise the protection and restoration of small freshwaters: small waters are small, and so make a limited contribution to achievement of these area-based targets when considered in isolation. Similarly, pollution targets based on gross pollutant loads (i.e. reduce phosphorus from treated wastewater by 80% by 2038; reduce nitrogen, phosphorus, and sediment pollution from agriculture by at least 40% by 2038) deprioritise small freshwaters, because – though often causing deleterious impacts due to limited dilution - the gross volume of pollutants these waters receive is relatively small.

As a case in point, the water industry could deliver significant improvements that would benefit small waters. However, the existing water environment legislative framework effectively excludes small freshwaters, and particularly standing waters. Improving the state of the water environment in line with recent legislative drivers, such as the Storm Overflows Discharge Reduction Plan and the Levelling Up and Regeneration Act, will require considerable focus and

[9] Examples of positive steps taken include the 2023 publication '[Guide to the Restoration, Creation and Management of Ponds: Bringing Ponds Back to Life]' developed with support from Natural England.

funding during Asset Management Period 8 (AMP8: 2025-2030) and beyond but, as currently conceived, this investment will do little to improve the condition of smaller waters that make up a large part of the water environment.

The huge delivery burden faced by the water industry during AMP8 is evident in the record investment proposals set out within draft Price Review 2024 (PR24) business plans. Yet the above legislative drivers, in combination with the steer issued to the water industry by Government in summer 2023[10], will see a large portion of PR24 spending directed towards expensive concrete solutions to water pollution, such as the construction of storm tanks to prevent sewage spills and upgrades to sewage treatment works to reduce nutrient discharges. By determining investment priorities based on the 'per kilo' cost of reducing nutrient discharges (rather than on the ecological benefit that the load reduction would have for the receiving watercourse), the focus is inevitably driven towards larger works, which are typically located in larger, downstream, reaches of rivers. Inevitably, this means that that there will be little or no benefit to upper reaches (e.g. headwater streams), nor to small lakes and ponds.

[10] WCL_Letter_Secretary_of_State_PR24_Ambition_10_08_2023.pdf & Water firms urged to save money by diluting climate change plans (thetimes.co.uk)

What is needed? The Charter for Small Waters

The Charter for Small Waters is a set of recommendations for the coming decade and beyond, which sets out policy proposals to protect and restore small waterbodies. Its recommendations relate to England, but we hope the charter's ambitions will resonate in other UK nations. It is underpinned by three key principles:

- **Follow the evidence**: small waters are a vital part of the water network. To effectively manage the freshwater environment, attention must be paid to small waters.
- **Protect the best and build out**: recovering freshwater means protecting the most important sites for biodiversity and building out from these areas.
- **Value for money**: small waters are cost-effective to restore or create. As common and widespread features of rural and urban landscapes, there are many opportunities for communities, landowners and land managers to engage with these habitats and make a positive contribution to protecting the water environment. This empowers people, encourages innovation and reduces the 'bureaucratic drag' implicit in bigger, more costly, schemes.

We need a programme of protection, restoration, creation and monitoring for small waters.

This will complement work already happening in larger waters, driven by existing legislative drivers, and will provide positive environmental outcomes in the shorter term, at lower cost. Embracing small waters will deliver multiple benefits for freshwater and wider biodiversity, and drive progress on the Environment Act species abundance and extinction risk targets.

High-quality small waters can be created and restored rapidly. Doubling the number of high-quality small waters would make considerable advances towards nature's recovery, at relatively low cost. For example, we estimate that doubling the density of ponds in England would cost approximately £1.5 billion – for context, less than 10% of planned water industry environmental investment during AMP8 (2025-2030). This would increase the abundance of wetland plants across landscapes by as much as 40%, and boost populations of half of all freshwater species of principal importance listed under Section 41 of the Natural Environment and Rural Communities Act (2006).[3]

In the next iteration of the Environmental Improvement Plan, currently under review, the government should consider introducing a freshwater biodiversity target which explicitly recognizes the importance of small waters. Alternatively, such a target could be agreed in the

next review of Environment Act target. Wildlife and Countryside Link member organisations would welcome the opportunity to work with government to codevelop such a target.

Box 2. How many small waters are there?

Ponds: c 250,000 in England of which 20% Priority Ponds

Small lakes: c8,500

Headwaters: 150,000 km of which 20% Priority habitat

Springs: currently unknown

Flushes: currently unknown

Small wetlands: estimated 10,000 ha in c 3500 sites

1. Protection

What's needed: Protection for small waters should be fully integrated into planning and agri-environment policy, catchment plans and water environment policy (e.g. Water Environment (WFD) Regulations) to ensure their value is recognised and to provide policy levers for their conservation.

This can be delivered by:

- Promoting small waterbody protection across UK policy through a new freshwater biodiversity target.
- Identifying and mapping small waterbodies with the greatest conservation value.
- Recognising the value of small waters within the Biodiversity Net Gain system.
- Ensuring small waters are prioritised in Local Nature Recovery Strategies.
- Driving protection for small waters through catchment plans and management.

Promoting small waterbody protection across UK policy.

Setting a national freshwater biodiversity target which explicitly recognises the importance of small waters would help to ensure their protection across all policy areas, including planning and agri-environment policy.

In the UK there is precedent for recognising the importance of specific types of waterbodies and securing their protection through legislation. For example, an amendment to the Levelling Up and Regeneration Act (LURA) was successfully introduced to explicitly add chalk streams to the definitions of 'environmental protection' and 'natural environment' within the Act, driving Government to consider chalk streams when setting future environmental assessment frameworks.

The Government should make similar efforts to boost the statutory consideration given to small waters, including through the next review of Environment Act targets.

Existing water pollution targets (reduce phosphorus from treated wastewater by 80% by 2038; reduce nitrogen, phosphorus, and sediment pollution from agriculture by at least 40% by 2038) should be accompanied by strong governmental steer, orienting pollution reduction actions towards waterbodies where they will have the greatest ecological impact. Often, these will be small waters.

Identifying and mapping small water bodies with the greatest conservation value.

Identifying and mapping small waters with the greatest conservation value will help to ensure that these vital habitats can be protected.

The approach taken should follow that adopted for Priority Ponds, which are identified through primarily biological criteria, as set out originally in the UK Biodiversity Action Plan. Ponds are identified as priority habitats on the basis of ecological quality, biological richness, the occurrence of uncommon or endangered species and evidence of freedom from pollution. All have a legal basis for their protection, through the Natural Environment and Rural Communities (NERC) Act 2006. For headwaters, small lakes, springs, flushes, ditches and wetlands, potential policy mechanisms are the Natural England priority freshwater habitats mapping projects for streams, rivers, lakes and ponds, the establishment of a UK wetland inventory, and revisions of the Environmental Improvement Plan.

Natural England should also review the occurrence and condition of small waters in the Sites of Special Scientific Interest (SSSI) series, and ensure that the condition of these waterbodies is evaluated as part of SSSI condition assessments.

Defra should continue to support Natural England's work to map the abundance and quality of small waters through the England Ecosystem Assessment.

We also recommend that the Environment Agency creates a national map of headwaters, as shown on the Ordnance Survey Mastermap layer, available as part of the Catchment-based Approach.

Recognising the value of small waters within the Biodiversity Net Gain system.

Because biodiversity units are calculated according to habitat area, small standing waters are currently disadvantaged by their small size under the Biodiversity Net Gain (BNG) system. Priority ponds should be reclassified as 'very high distinctiveness' habitats within the statutory biodiversity metric, to better reflect their high biodiversity value relative to area.

Small waters which cannot be recreated, such as ponds which were created through the action of glaciation (e.g. pingos and kettle holes), should be included in updated Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations.

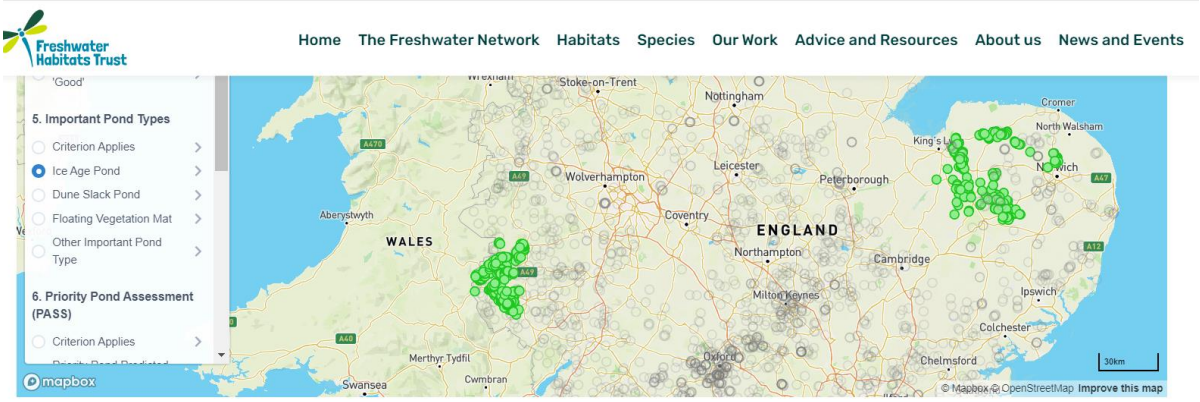

Figure 1. The location of Ice-age ponds in England. There are two known main concentration of these irreplaceable habitats in Herefordshire (kettle holes) and Norfolk (pingos).

Ensuring small waters are specifically included in Local Nature Recovery Strategies.

As Local Nature Recovery Strategies develop, Natural England should include a reminder of the importance of small waters in the next steps of guidance for LNRS authorities. LNRSs should where possible include actions to protect, restore, create and monitor small waters. Freshwater Habitats Trust have published guidance for Responsible Authorities on incorporating small waters into Local Nature Recovery Strategies.

Protecting small waters can more easily and cheaply achieve outcomes when compared to the difficulties faced in solving the multitude of problems facing larger waters. These easy wins should be prioritised within LNRSs, to ensure that strategies deliver fast, tangible benefits for freshwater biodiversity. [11]

Driving protection for small waters through catchment plans and management.

Important Freshwater Landscapes (IFLs) cover 36% of England and are the most important landscapes for freshwater biodiversity (Figure 2). Catchment plans in these areas could prioritise measures and funding to buffer small waters and wetlands, supported with large-

[11] FHT-Small-Freshwaters-Guidance-for-LNRSs.pdf

scale clean water pond creation programmes. In all catchment plans, priority small waters should be explicitly recognised. Blueprint members could produce a checklist for catchment partnerships, to aid the incorporation of small waters into catchment planning.

Several water companies are trialling and testing approaches to whole catchment management, which incorporate headwater systems with varying degrees of 'all waterbody' protection and management. For example, a 5-year trial by Anglian Water in the catchment of Pitsford Reservoir (Northamptonshire) is evaluating the impact of management of headwater streams, ponds and ditches on freshwater biodiversity, flows and water quality, with results expected in 2025.

A partnership programme further developing and testing this approach is needed to test the concept in each water company region. Ofwat should drive this programme of measures to integrate catchment land management and wastewater treatment operations, building on approaches being tested and developed by Anglian Water, Wessex Water and Northumbrian Water, with particular focus on headwater catchments.

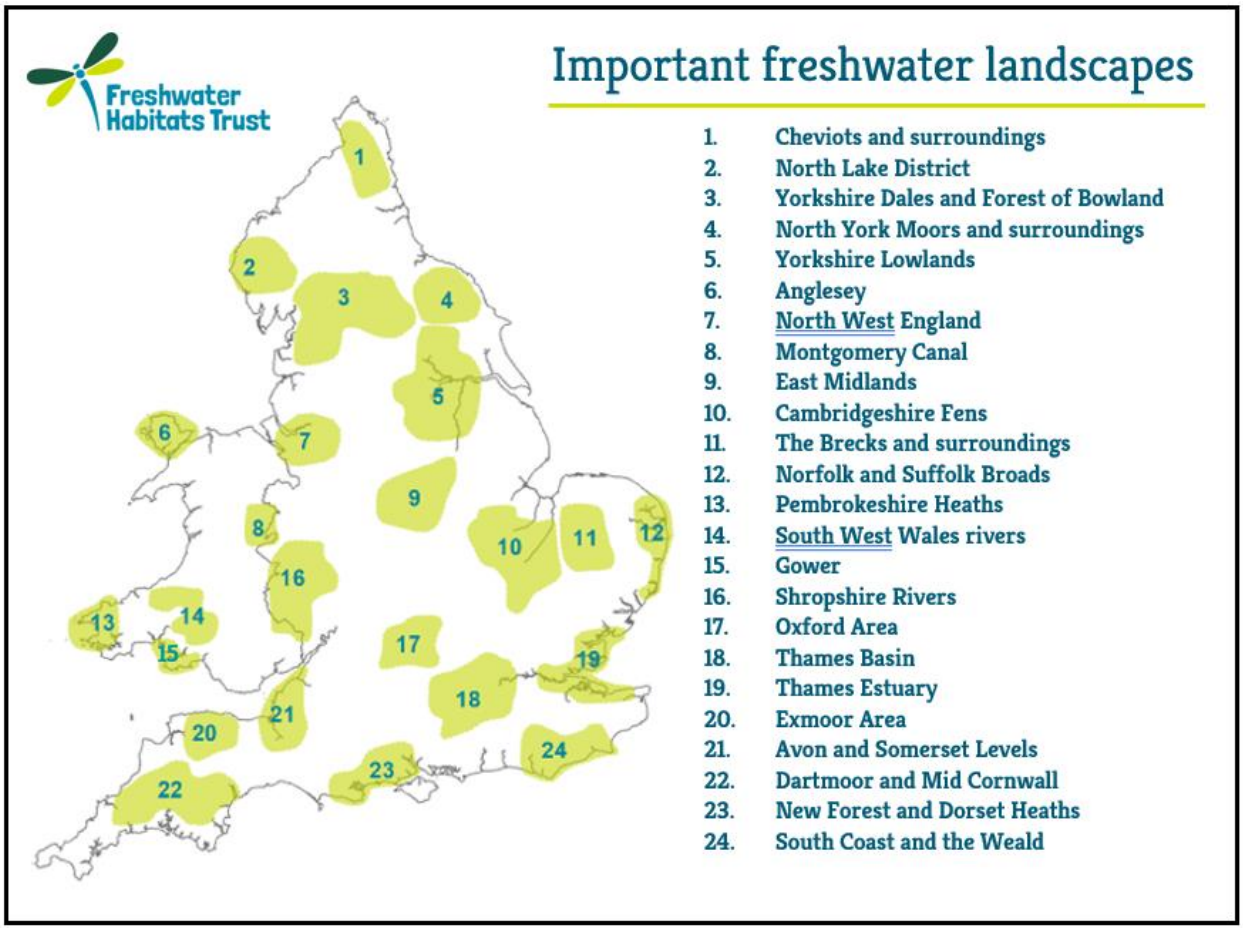

Figure 2. Important Freshwater Landscapes in England and Wales

2. Restoration

What's needed: A programme of work to restore small waters is needed, including through incorporating small freshwaters work within woodland planting and wider terrestrial habitat restoration.

This can be delivered by:

- Promoting restoration of high-quality small waters and their catchments through a new freshwater biodiversity target.
- Driving small waters restoration through improved options in agri-environment schemes.
- Funding a programme of restoration. Funding derived from water industry fines should also be directed to small waters, via the Water Restoration Fund.

Promoting restoration of high-quality small waters and their catchments through a new freshwater biodiversity target.

Setting a national freshwater biodiversity target which explicitly recognises the importance of small waters would greatly promote their restoration - and the restoration of their catchments. This should be linked to the Environment Act targets for species abundance and the occurrence of species at risk of extinction, with targets set for both to be increasing in small waters.

Because the catchments of small waters tend to be correspondingly small, catchment-based measures to reduce diffuse pollution are particularly effective, and should be promoted. These catchment measures could be effectively delivered as an outcome of nature restoration or nature-friendly farming initiatives such as Catchment Sensitive Farming.

Promoted measures should include:

- Creating large buffers (50-100m[12]) of low intensity land around high-quality small waterbodies and wetlands.[13]
- Testing and implementing Stage 0 river restoration in small streams and rivers.

[12] We recommend larger buffers than are commonly applied because buffers become most reliable above 50 m in width. Some studies have shown effectiveness requires even greater widths, with up to 150 m and above recommended to prevent movement of more mobile pollutants (e.g. nitrogen, some pesticides) (Sawatzky and Fahrig, 2019; Wang et al., 2020)..

[13] A review of the effectiveness of vegetated buffers to mitigate pesticide and nutrient transport into surface waters from agricultural areas - ScienceDirect

- Implementing an upper catchment restoration programme, driven by Ofwat, focused on headwater catchments and associated small waters.

Driving small water restoration through improved options in agri-environment schemes.

There are opportunities to drive the restoration of small water bodies through the Environmental Land Management Scheme (ELM) that are not being utilised. Though providing valuable additional support for freshwater habitats, scheme payments have struggled to-date to deliver large-scale improvements to small waters in the farmed environment.

Payments newly available under the combined Sustainable Farming Incentive (SFI) and Countryside Stewardship (CS) offer to de-intensify the catchments of ponds and streams are welcomed, alongside buffer payments and grants to create and restore small waters.

To ensure that new payments deliver tangible improvements in freshwater biodiversity, the following changes should be implemented:

- Increasing pond creation/restoration capital grants to properly reflect the engineering costs, and immense benefits, of pond creation.
- Extending buffer payments beyond the current 20m-wide cap, and encouraging the establishment of buffers in guidance for pond management SFI/CS options.
- Focus Catchment Sensitive Farming (CSF) advice at headwater catchments as a priority, since they are much easier to clean up in totality. Also, extend the remit of CSF to cover high-quality standing waters such as priority ponds.

Funding a programme of restoration as part of the next Price Review.

A Small Waters Restoration Plan should be developed for the next asset management period (AMP9). This funded programme of restoration should also incorporate the creation of small water habitats (see Section 3 for further detail).

As recommended in Blueprint's PR24 report, the water industry should also work to direct greater investment towards headwater infrastructure, and catchment/nature-based solutions, during AMP9.[14] The current focus on reducing gross phosphorus loads (driven by Environment Act targets) directs investment towards large works on large rivers, where ecological gains will be relatively modest. A more outcome-focused approach would steer a greater portion of

[14] https://www.wcl.org.uk/docs/WCL_Blueprint_PR24_Scorecard_Sept_2024.pdf

investment towards smaller streams, where upgrades are likely to deliver faster, more cost-effective ecological benefits.

Without such investment in headwater stream restoration, there is high risk that investments in improvements to the downstream water environment will be compromised. Headwater stream restoration programmes should be piloted between 2025 and 2030 to inform further investment in AMP9.

We recommend that small water restoration projects would be worthwhile recipients of funding from the new Water Restoration Fund. However, this should not be the only source of financial support.

3. Creation

What's needed: Clear national guidance to drive the creation of small water body habitat, including through greater support for nature-based solutions.

This can be delivered by:

- Promoting creation of high-quality small waters through a new freshwater biodiversity target, supported by a funded delivery programme.
- Providing greater support for and prioritisation of nature-based solutions.
- Streamlining the planning system to promote small water creation.

Promoting creation of high-quality small waters and their catchments through a new freshwater biodiversity target, supported by a funded delivery programme.

Alongside small waterbody protection and restoration, a new freshwater biodiversity target should aim to promote small freshwater habitat creation at scale.

We recommend that Government should aim to double the number of high-quality small waters - including doubling the number of priority ponds. We estimate that doubling the number of ponds in England would cost £1.5 billion, and would increase the abundance of wetland plants across landscapes by as much as 40%.[3] Delivered over the next 20 years, pond creation on this scale would transform the fate of England's freshwater biodiversity, and generate a step change in progress towards statutory nature recovery goals.

Funding for this programme could come from a blend of private and public sector funding, including water sector investment, Environmental Land Management schemes and nature markets (e.g. Biodiversity Net Gain, District Licencing for Great Crested Newts). A bespoke habitat creation fund could provide additional impetus.

Pond and wetland creation should also be integrated within existing habitat creation drivers, such as the England Woodland Creation Offer. Woodlands present a significant opportunity for freshwater habitat creation, given lower levels of pollution than urban or farmed landscapes. Woodland habitats also benefit functionally from the inclusion of freshwater habitats, with small water creation helping to restore and maintain terrestrial habitat quality.

Providing greater support for and prioritisation of nature-based solutions.

Small waters can deliver multiple benefits for people and nature. This includes provision of high-quality habitat to support biodiversity, improving water quality, building resilience to both

flooding and drought, and enhancing access to quality natural spaces with benefits for both physical and mental health.

Greater support for and prioritisation of nature-based solutions (NbS) by Government and regulators will unlock barriers to their uptake within regulated sectors such as the water industry, and therefore drive further creation of small water habitats.

Action required from Government to achieve this includes:

- Setting a clear, strategic regulatory framework that will drive all regulators towards facilitating the uptake and use of NbS and provide investors with the framework and incentive to invest. Regulators and local authorities should be adequately funded to ensure they have sufficient expertise, training and resources to facilitate NbS projects.
- Setting clear, comprehensive national guidance to ensure consistent, high quality NbS projects are delivered.
- Providing more funding for NbS, for example, through CaBA partnerships, a dedicated pot in the flood grant-in-aid fund, and through better rewards and incentives for farmers under ELM to work with nature to deliver catchment-sensitive farming and tackle water pollution.
- Directing regulators to adopt a 'nature first' commitment, such that regulated industries including the water industry must explore NbS options before more traditional 'grey' solutions. This could be achieved by introducing a Green Duty on regulators.[15]

In addition, the construction of Sustainable Drainage (SuDS) features[16] for flood risk management purposes offers the opportunity to deliver new nature-rich small water habitats, if delivered well, and could see the addition of biodiversity-rich features in urban and suburban environments which are often otherwise lacking in such provisions. Government should urgently act to implement Schedule 3 of the Flood and Water Management Act 2010, in line with the key recommendation of its own review, and to ensure that statutory design standards include a preference for 'green' or 'soft' SuDS over hard-engineered options, and promote links with Local Nature Recovery Strategies so that SuDS provisions are tailored to local biodiversity priorities.

[15] Policy note - Apply a Green Duty to public bodies.pdf

[16] https://assets.publishing.service.gov.uk/media/63bc504dd3bf7f263846325c/The_review_for_implementation_of_Schedule_3_to_The_Flood_and_Water_Management_Act_2010.pdf

Streamlining the planning system to promote small water creation

Small water creation currently sits in a planning grey area, which often causes delays and costs for conservation organisations, as well as piling unnecessary burdens on stretched Local Planning Authorities. Upcoming reform to the planning system could be made nature positive by removing these administrative barriers to small water creation. This could be achieved through:

- Considering the case for introducing a permitted development right for small waters creation, and or refurbishment of their habitats, or amending the Town and Country Planning Act 1990 to explicitly exclude habitat creation works from the definition of 'development'.
- Amending the Biodiversity Gain Requirements (Exemptions) Regulations 2024 to exempt habitat creation works that meet strict criteria from biodiversity net gain.

4. Monitoring

What's needed: A national monitoring programme for small water bodies, complementing current river and lake monitoring programmes and the Natural Capital and Ecosystem Assessment (NCEA) programme.

This can be delivered by:

- Implementing a national monitoring programme for small water bodies, ensuring that regulatory bodies such as the Environment Agency and Natural England are sufficiently funded to deliver it.
- Developing a national map of headwater streams, derived from the Ordnance Survey MasterMap.
- Working in partnership at catchment scale to unlock further monitoring.

Implementing a national monitoring programme for small waterbodies.

Monitoring is needed to ensure that the state of the water environment can be accurately assessed, and that the stressors impacting small waters can be understood and addressed. Monitoring is also essential to ensure that progress against targets can be assessed – including progress against the new freshwater biodiversity target proposed here.

A national monitoring programme should build on the NCEA pond monitoring undertaken by Natural England, and headwater monitoring undertaken by the Environment Agency. This should cover all small waters and should report on habitat condition following statistical approaches adopted for the PondNet programme, developed by Natural England.

This should include elements that enable habitat condition to be assessed (e.g. PSYM for ponds), and wetland plant and invertebrate monitoring for the evaluation of species targets. Vertebrate eDNA monitoring should be used to evaluate fish, amphibian and aquatic mammal distribution.

Ultimately, standing and flowing small waters should be properly integrated into statutory (WFD) monitoring and River Basin Management Planning.[17] This would ensure that the entirety of the water landscape is captured in this assessment, and that actions to improve the overall health of waters can be targeted where they are most needed.

[17] WCL_Blueprint_WFD_Position_Paper_July_2024.pdf

The Environment Agency, Natural England, and other relevant regulatory bodies must be sufficiently funded to enable delivery of this robust, effective monitoring regime.

Developing a national map of headwater streams, derived from the Ordnance Survey MasterMap.

A national map of headwater streams should be developed, derived from the Ordnance Survey MasterMap. This should be made freely available under an Open License. Whilst MAGIC already includes some elements of MasterMap data (e.g. some Priority ponds are shown as MasterMap polygons), these are not accessible to non-government bodies.

This will facilitate the further monitoring and recording of small waters, in addition to supporting all aspects of small water protection, restoration and creation potential, and assessing their contribution to improving connectivity between habitats.

A good example of this in practice can be found in the Swiss Government national mapping portal, which identifies the order of all streams – a critical base layer of information for the effective management of small running waters.

Working in partnership at catchment scale to unlock further monitoring.

Statutory agencies, eNGOs, and organisations such as the UK Centre for Ecology and Hydrology (CEH), who are funded by research councils, should work in partnership to design and implement integrated freshwater monitoring programmes. This could be driven through requiring every catchment plan to include proposals for monitoring the effectiveness of work to protect, restore and create small waters.

For example, the PSYM national assessment system for small lakes and ponds was originally developed in partnership by the Freshwater Habitats Trust and the Environment Agency. Likewise, the PondNet national eDNA monitoring programme for Great Crested Newt has been co-developed by Natural England and eNGOs, and the CaSTCo programme by eNGOs, Ofwat, and water companies.

This must be further supported by exploration of the value of citizen science in the production of trend monitoring data.

Conclusion

Small waters are hugely important for people and wildlife. These vital habitats underpin the health of not only the whole freshwater environment, but also the wider terrestrial landscape.

Small waters represent a significant opportunity to take efficient, effective measures to drive environmental improvement in the short to medium term, at relatively lower cost. We urge Government to adopt this Charter for Small Waters and realise these benefits.

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1. In England and Wales, the total length of first and second order streams is 126,338 km, or 73.4% of the total running water network: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6162339/

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8. https://www.arc-trust.org/news/extinction-risk-defined-for-britains-amphibians-and-reptiles

9. Examples of positive steps taken include the 2023 publication 'Guide to the Restoration, Creation and Management of Ponds: Bringing Ponds Back to Life' developed with support from Natural England.

10. WCL_Letter_Secretary_of_State_PR24_Ambition_10_08_2023.pdf & Water firms urged to save money by diluting climate change plans (thetimes.co.uk)

11. FHT-Small-Freshwaters-Guidance-for-LNRSs.pdf

12. Sawatzky and Fahrig, 2019; Wang et al., 2020

13. A review of the effectiveness of vegetated buffers to mitigate pesticide and nutrient transport into surface waters from agricultural areas - ScienceDirect

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15. Policy note - Apply a Green Duty to public bodies.pdf

16. https://assets.publishing.service.gov.uk/media/63bc504dd3bf7f263846325c/The_review_for_implementation_of_Schedule_3_to_The_Flood_and_Water_Management_Act_2010.pdf

17. WCL_Blueprint_WFD_Position_Paper_July_2024.pdf

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