Enhancing our natural environment

Biodiversity Strategy and Action Plan

WONDERFUL ON TAP

SEVERN TRENT

This is our Biodiversity Strategy and Action Plan. It sets out the full range of ways in which we will take serious and substantive action, playing our part in addressing the nature emergency. Our approach starts with our direct responsibilities for protecting habitats and species. But it goes much further – adapting the way we work as a business to help drive nature recovery at a landscape scale across our region.

Contents

Further information on Severn Trent's approach to the environment and biodiversity

This Biodiversity Strategy and Action Plan forms part of our wider Caring for our Environment document. Further information about our approach to the environment can be found in our Approach to Championing Pollinators which you can find on our website. Collectively these documents set out our approach to fulfil, and go beyond the biodiversity requirements agreed with the Environment Agency and Natural England in line with legislation; This includes but is not limited to The Water Industry Act 1991, The Environment Act 1995, The Natural Environment and Rural Communities Act 2000 (NERC) and The Environment Act 2021.

This document will be reviewed every two years to assess progress and make updates.

About Severn Trent

Severn Trent operates two of the UK's 11 regulated water and wastewater businesses in England and Wales, Severn Trent Water Limited and Hafren Dyfrdwy Cyfyngedig. We supply 2 billion litres of clean drinking water every day to more than 4.6 million households and businesses, and treat 3.2 billion litres of wastewater. This document relates primarily to Severn Trent Water's business in England. The Welsh business operates under an aligned set of principles but undertakes separate initiatives and reporting.

Only
14%
of UK rivers meet good ecological status

Globally the UK are amongst the bottom
10%
of countries on the Biodiversity Intactness Index

From the wild moors and limestone dales of the Peak District to the river valleys of the Severn and the lowlands of the Trent, our region is blessed with rich, diverse, and beautiful landscapes and habitats.

But we cannot take the natural environment for granted. Globally, we are facing a 'sixth mass extinction', with more than 1 million species at risk. In the UK, successive State of Nature reports have charted inexorable declines in species and habitats. We are amongst the bottom 10% of countries globally on the Biodiversity Intactness Index and have failed to reach 17 of the 20 biodiversity targets set by the UN in 2010. 25% of our mammals and 50% of our birds are in danger of extinction. According to government figures, only 14% of UK rivers meet good ecological status.

These threats may be exacerbated by climate change as already depleted and fragmented ecosystems struggle to adapt to changing temperature and rainfall patterns. So the actions we take now to protect nature are more important than ever. As managers of land and water, we believe we have a part to play,

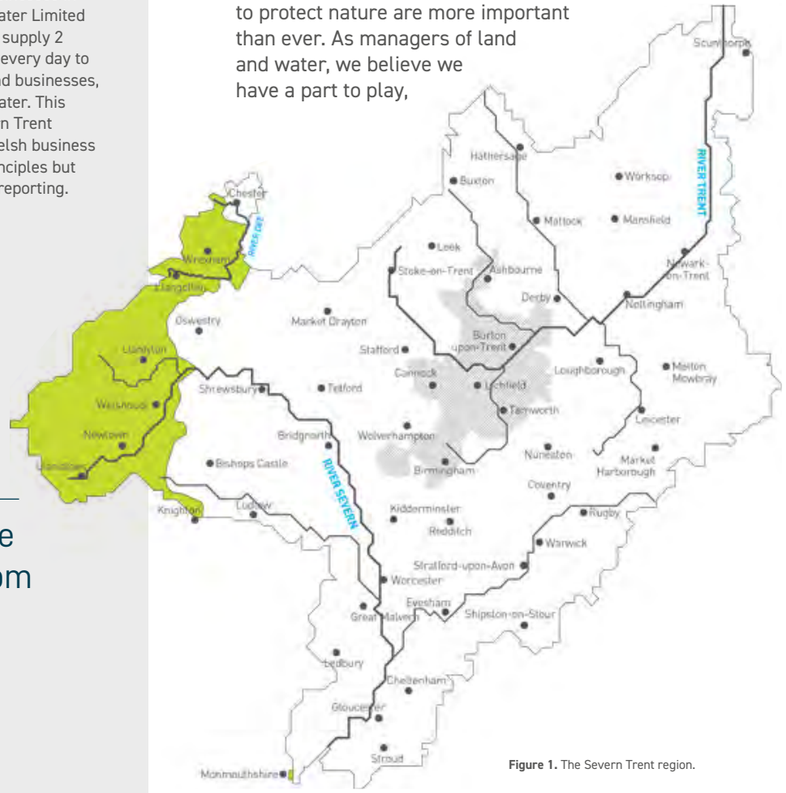


Figure 1. The Severn Trent region.

both in fulfilling our statutory duties, and beyond this, in working with our partners to plot a course for nature recovery. Ultimately this means doing our part to address some of the underlying causes of biodiversity loss – things like outdated agricultural practices, pollution, and over-abstraction of water.

When we look after nature, we look after water

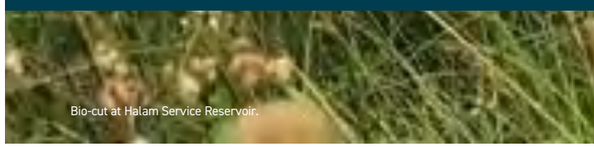
Investing in protecting and improving the natural environment is more than just the right thing to do, it is also a practical business imperative. Our environment is the vital partner to our reservoirs, treatment works, and pipelines; capturing, holding, cleaning, and carrying our water. So a flourishing environment plays an important role in helping us deliver our core activities more effectively and efficiently.

More broadly, the habitats and ecosystems in our region have the potential to help businesses and communities moderate and adapt to the effects of climate change. We expect therefore that in the next decades, the health of our environment will be reflected in the health of the wider Midlands economy. When nature and economy thrive together, they will set our region apart.

In our Biodiversity Strategy and Action Plan, we set out the ways in which we are making action for nature a practical priority for us; shaping the way we manage land and habitats. But equally important, we set out how action for nature is integral to delivering our core business - from careful stewardship of water resources to the nature-based tools we use to look after our water catchments.

Our priorities:

- Nature recovery on our own land
- Boosting nature beyond our boundaries
- Making nature integral to catchment management



Bio-cut at Halam Service Reservoir.

Making nature a core part of the way we do business

Our strategy starts by addressing our own impacts on ecosystems – including, critically, rivers and streams – but also sensitive habitats on land. We then detail how we will safeguard and enhance key habitats and species on our estate through a phased approach over the coming years, as well as supporting nature-friendly practices on productive land that we own. Ultimately, and beyond either of these two ways of working, we aim to invest in nature as an asset across our region irrespective of ownership, targeting 'nature-based solutions' to help look after the water catchments on which our business is based.

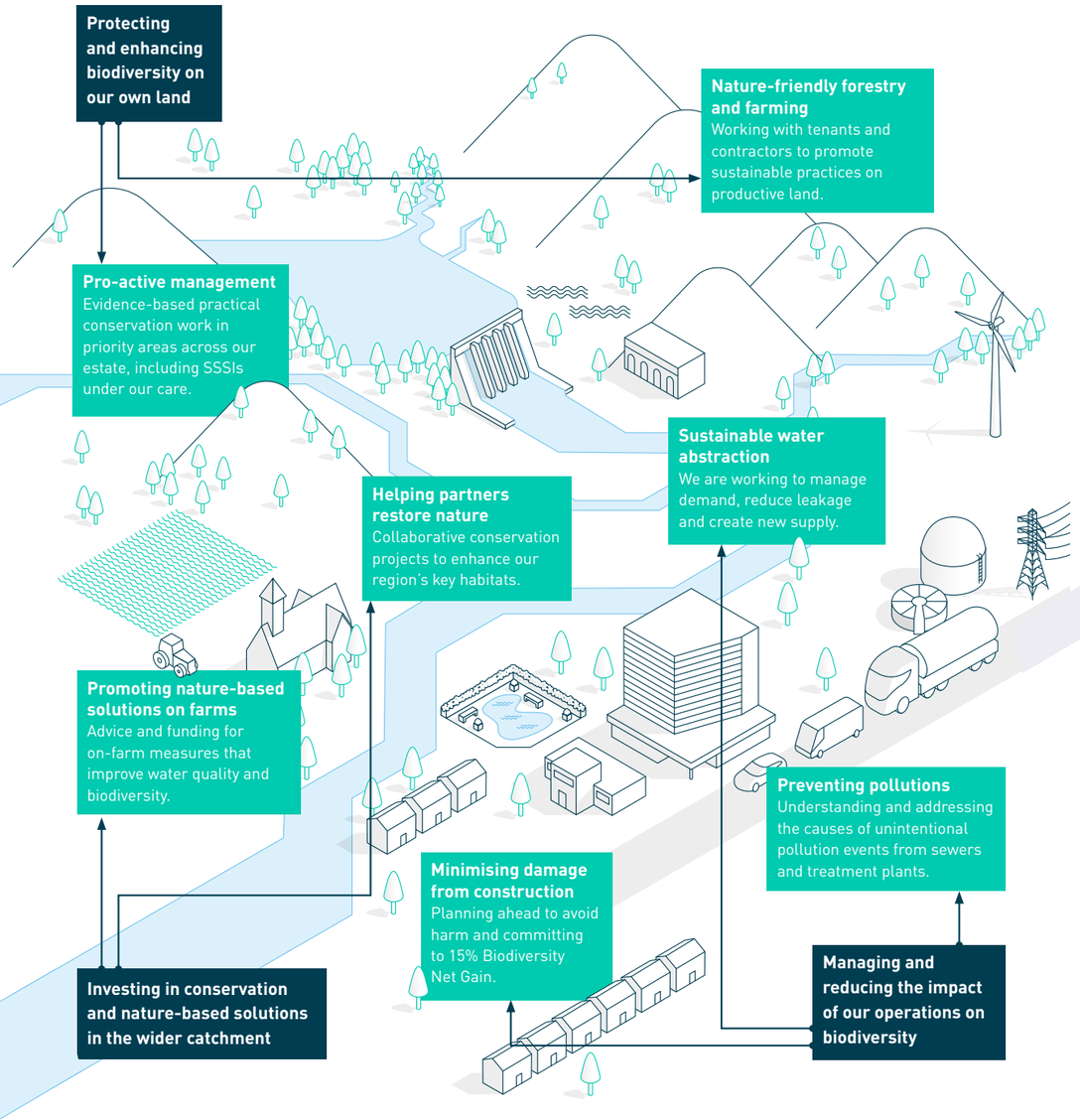
This translates into three pillars of action, involving teams across Severn Trent, from ecologists, to catchment specialists, to teams working on water supply, and wastewater treatment.

1. Managing and reducing the impact of our operations on biodiversity
2. Protecting and enhancing biodiversity on our own land
3. Investing in conservation partnerships and nature-based solutions in the wider catchment

Taking action for nature shapes the way we manage land and habitats, we're making it a practical priority. But equally, we set out how action for nature is integral to delivering our core business from careful stewardship of water resources to the nature-based tools we use to look after our water catchments.

Our biodiversity strategy in action

How Severn Trent works across the landscape to protect and restore nature.



We are committed to acting sensitively within our environment and making sure we minimise our impact wherever possible. Ultimately, we want our 'footprint' to be well within the carrying capacity of the environment in which we operate.

As with all water companies, our core activities - providing clean water, and removing and treating wastewater - have implications for the natural environment on which we depend.

The key areas where we need to manage risks to biodiversity from our operations are as follows:

1. **Water abstraction.** Abstraction of water for use by businesses and communities risks damaging ecosystems if it is not done in the right places, and at sustainable levels.

2. **Preventing pollutions.** Release of wastewater from sewers and treatment plants into watercourses at times of heavy rainfall or due to blockages can cause ecological harm.

3. **Groundwork and construction operations.** Putting in place essential new infrastructure and maintaining the integrity of our existing network sometimes requires us to work in or near sensitive habitats, with the potential for damage.

Here, we set out our approach to minimising environmental degradation in each of our operation types, including our commitment to 15% biodiversity net gain when completing capital projects.

1.Managing and reducing impact of our operations on **biodiversity**

1.1 Water abstraction

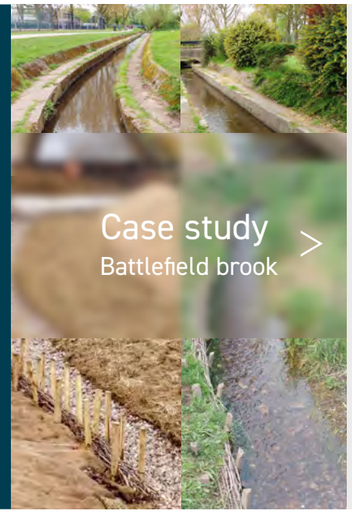
Healthy rivers need consistent and plentiful flows of water in order to function as habitats for plants and animals, and to support the well-being of local people. We want to keep the rivers flowing and the wetlands wet. That means we need to ensure that our abstraction of water – the rate at which we pump water from rivers and aquifers – is at a sustainable level, minimising impacts on water flow or quality. Our approach to achieving sustainable levels of water abstraction involves a combination of demand reduction and active management of where and how we take water out of the environment. How we do this:

Demand reduction

Our water efficiency programme has already saved around 25 million litres per day between 2015 and 2020 through water efficiency advice for customers, free and subsidised water saving products on request, and targeted home water efficiency checks. We are also committed to reducing leakage, with a goal to reduce leakage by 15% by 2025, and 50% by 2045. We will achieve this by continuing to invest in recruiting, training, and managing high quality water network technician teams to find and fix leaks earlier and faster, ideally before they begin to cause a problem. We are also investing in technology and innovation.

Why this matters for biodiversity

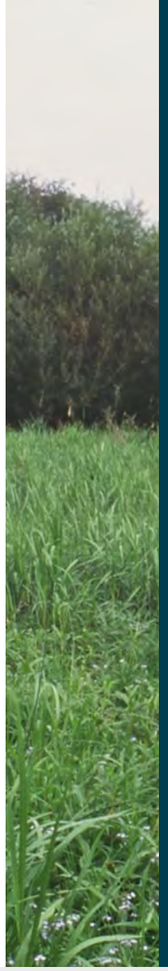
When rivers and streams run low or dry, the space and resource for the plants and animals that live in, on and around them decreases, limiting their ability to survive and reproduce. Low water levels also concentrate pollutants and limit the extent to which high water temperatures are moderated – with direct impacts on species' health.



Reducing abstraction and enhancing habitats to promote biodiversity

Battlefield Brook rises on the Lickey Hills and flows south westwards to become the Sugar Brook in Bromsgrove. In its lower reaches it flows through Sanders Park which is a priority Biodiversity Action Plan site and an important public amenity. The brook flows over an 'over-abstracted' groundwater unit, so to make our abstraction in the region more sustainable we are implementing a solution to reconfigure the existing public water supply system to reduce long term abstraction and provide additional flow support to the brook.

The Battlefield Brook also required habitat improvements to enable the watercourse to achieve "good" river quality status. This scheme will remove approximately 300m of the existing concrete channel running through the park and replace it with a naturalised channel which will connect the already naturalised sections of the upstream and downstream reaches of the brook. This work aims to improve local habitat and provide an environment in which wildlife, such as water voles, can populate and traverse between the natural upstream and downstream sections of the brook.

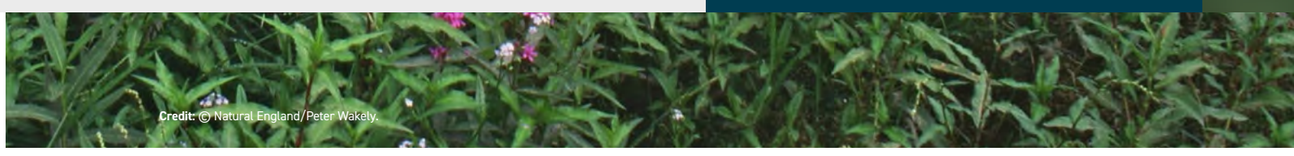


We have installed 40,000 new data loggers across the network and we have recently helped to convene the World Water Innovation Fund, a collaborative group of leading water companies across the globe focused on exploring new technologies and best practice to conserve water resources.

Abstraction management

Water abstraction by water companies, farmers and industry is licensed by the Environment Agency and managed under the Catchment Abstraction Management Strategy (CAMS) process. We are committed to playing our part in ensuring that our abstraction is sensitive to environmental needs, and deploy a variety of measures including:

- **Actively managing existing impacts.** We are reducing our abstraction in areas where it may be having an adverse impact on rivers. We are working with partners on mitigation measures at 11 sites, and we are piloting abstraction management projects in two areas, in collaboration with Defra.
- **Moving abstraction to less vulnerable areas.** We have committed to creating 68Ml/d of new supply capacity to ensure security of supplies while reducing abstraction from unsustainable sources by up to 39Ml/d by 2030. We will not increase abstraction where there is evidence it could cause a deterioration of a water body's Water Framework Directive status. Where potentially unsustainable effects of abstraction are identified, we will work with our regulators and other stakeholders to develop sustainable solutions, which could include measures at the same location, or using alternative sources of water to replace any unsustainable abstraction.
- **Balancing water resource needs across catchments.** Water doesn't follow neat boundaries, so as an industry we increasingly need to move water from the areas where it is most plentiful to where it is most needed. Severn Trent is working with partners to investigate ways of transferring water from the North West to the South East via an interconnector – a series of pipes, rivers and canals that can move water across the country when it is required.


Credit: © Natural England/Peter Wakely.

1.2 Improving the health of our region's rivers

Combined Sewage Overflows are vital in protecting people from flooding and are widely used across the UK. Whilst CSOs are only responsible for 3% of reasons for rivers in England not achieving good ecological status, we fully understand the concern around them and the impact they can have on rivers.

What are we doing to improve this?

Our aim is to dramatically reduce the use of overflows, but with over 90,000km of sewer pipes, we can't replace the system overnight. That said, there's still lots we are doing.

We are continuing to invest £100m a year on our sewage network, improving our sewer systems, reducing sewer flooding and pollutions and installing more monitoring capability.

We're also increasing sewer capacity and storage to slow the flow of water during wet weather, so overflows are less likely to be triggered. Our commitment is to reduce the use of storm overflows to an average of 20 per year by 2025.

We are continuing to install monitors at all of our CSOs and sewage treatment works; these help us to assess performance and make the required improvements. By the end of 2022 we hit our target of installing 100% coverage. This is an on-going process, and one where collaboration with partners will be critical. So for example, we are exploring, along with the wider sector, enhanced systems for monitoring and reporting on the operation of overflows. And we continue to work to educate customers (domestic and business) to prevent items that might cause blockages – such as wet wipes, fats, oils and grease – from entering into our systems.

'Slowing the flow' through our landscapes

As well as continuing to invest to increase capacity and storage across our network, we also work across the landscape to slow the flow of water in storm conditions, making overflows much less likely to be triggered. We are doing this through engineering works such as increased sewer and storage capacity as well as 'nature-based solutions', such as tree planting, habitat restoration and soil management – These all help slow the rate at which water passes though the landscape. We work in urban areas too, in partnership with local councils, to install blue-green soft infrastructure like rain gardens, drainage ponds and permeable paving (something often referred to as SUDs - Sustainable Urban Drainage Systems). Our £75m plans under the government Green Recovery scheme to invest in blue-green interventions in Mansfield includes thousands of rain gardens, bioswales and tree/flower planters, all of which will improve urban biodiversity as well as contributing to the absorption of 58,000 m^3 of storm water.

We are making good progress in tackling the underlying causes of pollutions, having completed a large programme of work (underpinned by meeting the objectives of the Water Framework Directive) in AMP6 (2015-2020) and with an even larger programme planned in AMP7 (2020-2025). And we know that improving river quality is strongly supported by our customers. So we will build on our track record to do more to mitigate the impact we have on the natural environment. Based on Environment Agency measures (RNAGS), we're committed to making sure that our operations will not be the reason for unhealthy rivers by 2030, as well as reduce spills from storm overflows to an average of 20 per year by 2025.

Why this matters for biodiversity

Overall river quality is dependent on many factors – including water companies' effluent quality and storm overflows, pollutants from agriculture, runoff from roads and urban areas, and industrial pollution. Farming and land management practices is a significant source of river pollution (40%). Reducing agricultural runoff containing pollutants, such as pesticide and fertiliser residues, is a key part of our biodiversity and water quality work.

Get in touch

ecologymatters@severntrent.co.uk

Get River Positive

Rivers transform the communities around them and we know that, as a water company, there is more we need to do to take a leading role in making all our rivers the healthiest they can be.

River health is essential not only to the communities we serve, but also to our ability to provide you vital water on tap. So, it makes sense for us to take a leading role in not only protecting them, but also enhancing them.

Get River Positive is a firm commitment to take action now through five pledges that lead the charge in protecting and revitalising rivers. We want everyone in our region to hold us to account, we will publish clear measurements for success and we will be reporting back on progress regularly.

These pledges will help further control issues such as plastic pollution. Microplastics are a high-profile issue of concern for customers and society, and are currently under investigation by the water industry. The ecological dynamics of microplastic (<5 mm) are well documented in marine ecosystems, but the sources, abundance, and ecological role of microplastic in rivers are unknown and likely to be substantial. Whilst the removal rate of microplastics through sewage treatment is high (80-95%), several studies point at storm overflows as one of the most common pathways for microplastics to enter the environment. Our first pledge will directly contribute to improving their prevalence in the environment.

Get River Positive 5 Pledges

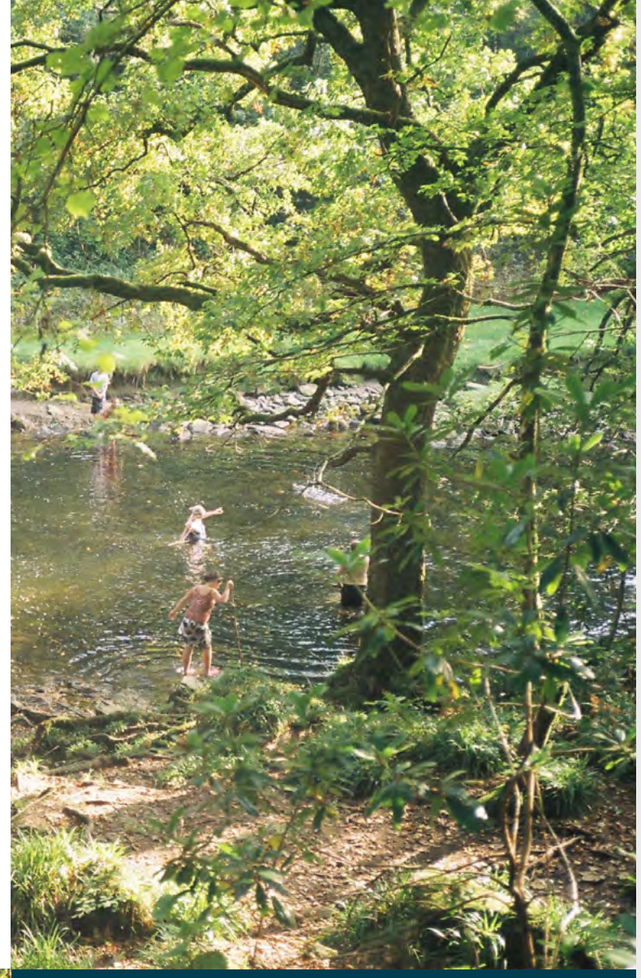
Pledge 1
Ensure storm overflows and sewage treatment works do not harm rivers

Pledge 2
Create more opportunities for everyone to enjoy our region's rivers

Pledge 3
Support others to improve and care for rivers

Pledge 4
Enhance our rivers and create new habitats so wildlife can thrive

Pledge 5
Be open and transparent about our performance and our plans



More than a million customers stand to benefit directly from our pilots, through access to clean bathing waters, whilst biodiversity and aquatic life also stands to benefit - supporting fish populations including salmon, and river animals such as otters.

Creating bathing quality rivers

Water companies have invested £25bn since privatisation and yet only 14% of rivers meet good ecological status. Furthermore, only two stretches of river in the UK are currently designated as bathing quality, the Wharfe, Yorkshire and the Thames at Port Meadow, Oxford - unlike many in Europe. There are no easy answers to this 'knotty problem' – whilst addressing pollutions from combined sewer overflows is part of the picture, agricultural runoff is also a major contributor. And there are emerging risks such as pharmaceutical residues and antimicrobial resistance. The river Clun is a good example of where we've done all we can to get the river to good ecological status, but we are only one part of the problem **www.stwater.co.uk/get-river-positive/our-regions-rivers-today/**

We want to help find coordinated solutions that can work at scale, so, through the Government and Ofwat's Green Recovery scheme, we will be improving over 50km of rivers in Warwickshire and Shropshire by 2025. One on the river Leam (Warwickshire) and another on the river Teme (Shropshire). This will redefine how future river improvements should be delivered. These pilots will deliver enormous insight into how we can accelerate river quality improvements in an affordable manner and, critically, reveal how we can address emerging water quality risks. More than a million customers stand to benefit directly from our pilots, through access to clean bathing waters, whilst biodiversity and aquatic life also stands to benefit - supporting fish populations including salmon, and river animals such as otters.

1.3 Groundwork and construction operation

Maintaining and upgrading our network of pipes, pumps and treatment stations to meet demand for water does require us to carry out physical works within our landscape. Our approach to doing this is always based on minimising harm wherever possible. We do this by integrating biodiversity considerations into our strategy, policies and planning, and carrying out biodiversity assessments at an early stage in any capital projects.

We also recognise that biodiversity impacts are context-dependent, some habitats are more resilient than others, and that there are some unique habitats and ecosystems that simply cannot be compensated for. So we will always take care to understand the particular features of the habitat at risk, and adapt our response accordingly.

In addition to these general principles, we put particular emphasis on compensating for unavoidable losses of habitat, through 'biodiversity net gain', and on protecting sensitive sites.

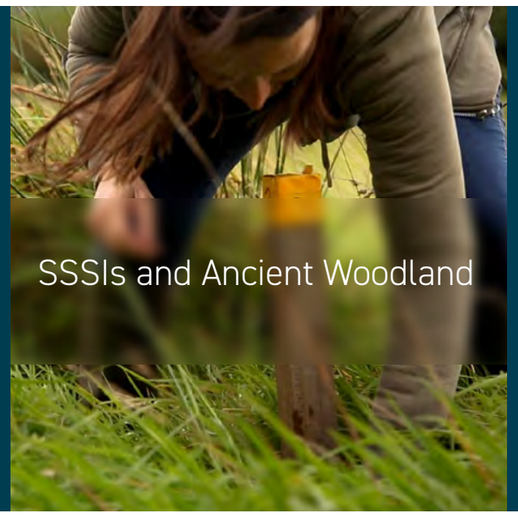
How we do this:

Biodiversity net gain

Where biodiversity loss is unavoidable in new capital projects, we are committed to best practice in biodiversity net gain, so we will always leave nature better than we found it. On all capital projects that require a preliminary ecological appraisal, we will go beyond the statutory 10% additional biodiversity gain when we compensate for any biodiversity loss, instead targeting 15%. We will seek to take an integrated and evidence-based approach to biodiversity net gain, so that any compensatory projects are contributing towards wider nature restoration priorities at local, regional and national levels, rather than being isolated efforts. In general, we will aim for net gain projects to be planned with local partners, aiming to deliver long term resilience and enhanced ecological connectivity. Net gain projects could include habitat creation on our own land, where appropriate and beneficial.

Why this matters for biodiversity

Physical disruption to habitats, or destruction of habitats when they are converted to other land uses, creates a direct loss of biodiversity. This is a particular problem when the habitats or species are uncommon, declining or restricted in area. The damage represents a bigger proportional 'hit' – to overall populations or areas, from which they have less capacity to recover. Damage or loss is also problematic for habitats or populations that are slow to develop or establish – such as ancient woods.



SSSIs and Ancient Woodland

SSSIs

Sites of Special Scientific Interest (SSSIs) are officially designated conservation areas notable for their rare fauna, flora or geological features. They can cover terrestrial or freshwater areas. It is the duty of landowners to conserve the special features of these sites, and they must also seek consent for any potentially damaging activities. England has 4,100 SSSIs and Wales has around 1,000 of them.

Ancient Woodland

Ancient Woodland is defined as any area that's been wooded continuously since at least 1600 AD. These areas are special for their wildlife, soils and cultural, recreational and historical value.

The definition also includes ancient woodland sites that have been replanted (e.g. with plantation conifers) but still retain ancient woodland features such as undisturbed soil, ground flora or fungi, and can also include wood pastures and historic parkland.

Our commitment

Severn Trent has committed to invest a further £20 million to help protect three Special Areas of Conservation in the Midlands.

Following the launch of our Get River Positive Plan - five pledges to transform river water quality across their region - we will be accelerating our work to protect designated special areas of conservation on the river Clun in Shropshire, the river Mease in Leicestershire and the Upper Wye catchment in Derbyshire.

Special Areas of Conservation (SAC) are amongst the most important and sensitive sites in the UK and protected by legislation. Analysis by Natural England and the Environment Agency shows that reductions in nutrients including phosphates are all needed to restore and support the natural habitats.

Credit: © Natural England/Peter Roworth.

Minimising harm to sensitive sites

Whilst we always take steps to minimise environmental impacts in capital projects and our general operations, we pay particular attention to vulnerable and valuable habitats such as Sites of Special Scientific Interest (SSSIs) and ancient woodlands.

Our approach to these sites follows two steps:

Screening

We screen locations where potentially damaging operations are due to happen, or where there is a high risk of unplanned incidents. If these locations overlap with or are nearby to a sensitive site, then an enhanced mitigation plan is implemented. Sensitive sites are sites that are officially designated and scheduled as important for conservation, ancient woods, or sites which contain species or habitats with statutory protection.

Response

Where a site is screened as sensitive, we take the following three step process:

- **Avoidance of harm** – taking steps to, where possible, design out risks to sensitive sites from planned works by adapting operations before they commence.
- **Risk assessment and management** – systematic and documented risk identification and mitigation for affected habitat, species, and sites. This pays close attention to the characteristics and autecology of species and habitats at risk.
- **Monitoring and remedial action** – follow-up monitoring of site response, and remedial action where required, is factored into sensitive site management.

Get in touch

ecologymatters@severntrent.co.uk

2. Protecting and enhancing **biodiversity** on our own land

Credit: © Natural England/Peter Wakely.

Beyond minimising the impacts of our operations, we are also direct stewards of over 10,000 hectares of land in England. The characteristics of the landholdings within our estate vary considerably, but it consists of a mix of farmland, freshwater habitats, grassland, scrub, woodland and urban areas (see figure 2.) We are serious about using the way we manage our land to make an active contribution to biodiversity, not only because it is the right thing to do for nature, but also because it is the smart thing to do for a business that is so rooted in, and dependent on the natural environment.

We do this in two main ways:

- **Practical conservation work.** A rigorous, phased approach to enhance biodiversity, not just in specially designated sites, but across our estate, creating new areas for nature to thrive.
- **Nature-friendly forestry and farming.** Working with our tenants and contractors to promote practices that combine productivity with improved biodiversity.

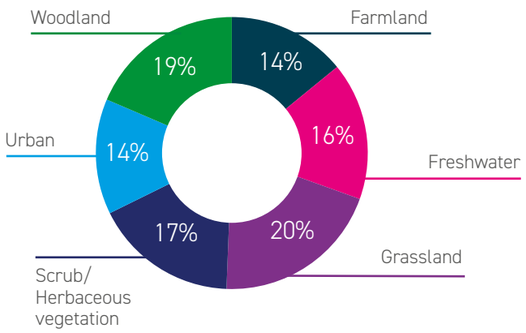
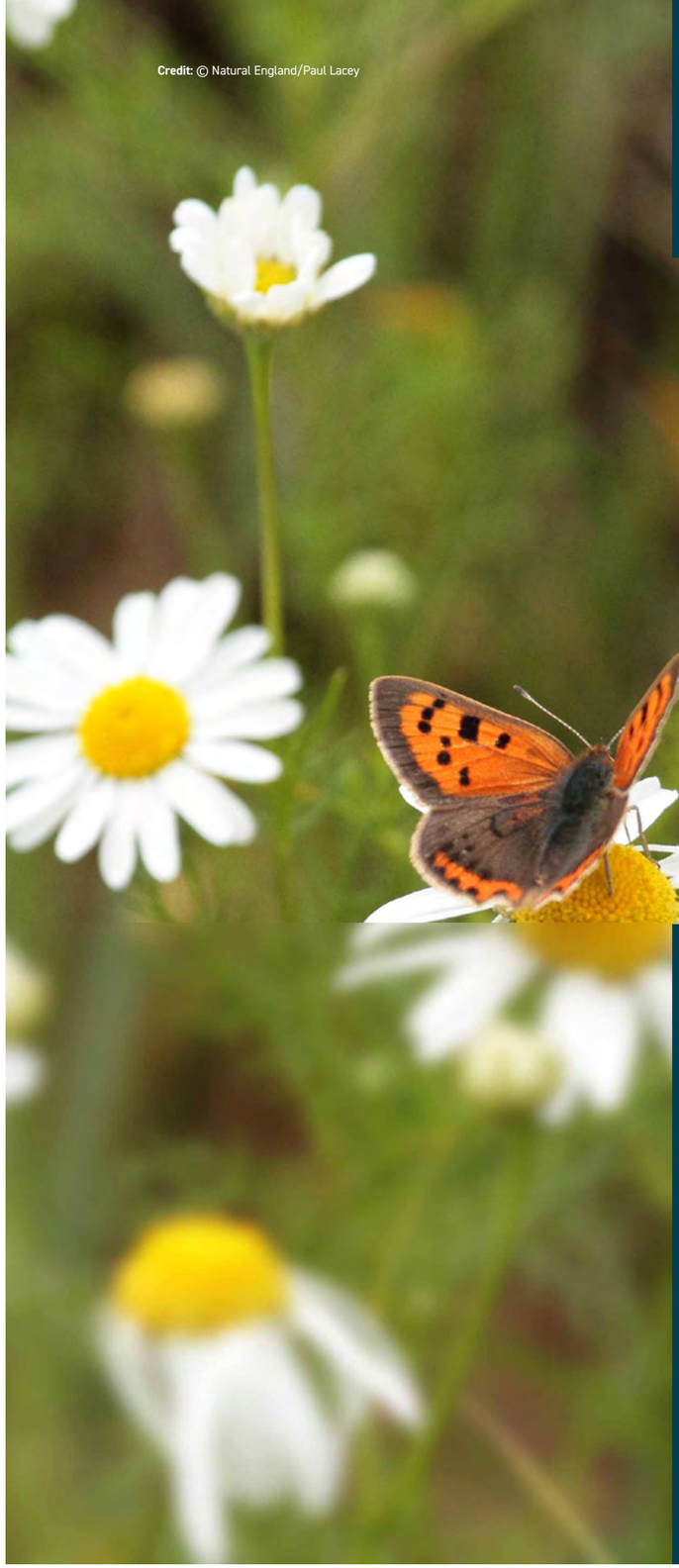


Figure 2.
Severn Trent Water's Landholding (England)



Credit: © Natural England/Paul Lacey

Why this matters for biodiversity

Nature faces huge challenges across the board. It is not enough to focus just on protecting special sites like SSSIs - we need to find more space for nature to thrive on all land. That's why our phased approach will eventually provide conservation management plans across our whole estate.

2.1 Practical conservation on our own land

Our aim is that the majority of land under the direct control of Severn Trent should be managed to improve and promote biodiversity. In order to do this, we need to understand the current condition of the land and create tailored management plans, so we are aiming to undertake biodiversity audits and produce management plans for all of our sites over 1 hectare in size - over 500 sites in total.
We are taking a phased approach to achieving this, and in Phase 1 (2019) we identified and audited 63 priority sites covering around 3000ha, on which we are now undertaking targeted interventions.

How we manage our land is a great responsibility, and one that we will do with great care to ensure that we make an active, positive contribution to biodiversity.

Our approach to protected species

In the UK there are a number of plant and animal species which are protected by law, with varying levels of protection depending on their conservation status and other factors. In England, many of our rarest and most threatened species are listed under Section 41 (S41) of the 2006 Natural Environment and Rural Communities (NERC) Act, and are subsequently known as S41 species of Principle Importance (SPI) or S41 NERC species.

There are over 900 species listed as S41 Species of Principle Importance (SPI). These are critical to our strategy to improve biodiversity on our land. During our biodiversity audits, we looked for S41 Species of Principle Importance (SPI) and any other protected species on our sites.

On our 63 audited sites, 52 had protected species, with an average of 12 species per site. As our audits just capture a snapshot of the site, it's likely that we have many more. To make sure that these species thrive, we have ensured that any advice to enhance and improve the sites has been designed to improve the habitat for the protected species present.

Some notable S41 Species of Principle Importance on Severn Trent's sites:

Great Crested Newt - *Triturus Cristatus*

Dingy Skipper - *Erynnis Tages*

Cinnabar Moth - *Tyria Jacobaeae*

Red-Shanked Carder-Bee - *Bombus Ruderarius*

Bullfinch - *Pyrrhula Pyrrhula Subsp. Pileate*

Cuckoo - *Cuculus Canorus*

Brown Long-Eared Bat - *Plecotus Auratus*

Otter - *Lutra Lutra*

Grass Snake - *Natrix Natrix*

Credit: © Natural England/Peter Wakely.

How we do this

Selecting priority sites

Our first phase of 63 priority sites covers a total of around 3,000 ha and includes woodland, grassland, wetland, and over 100km of hedgerows. The sites have been selected to include formally designated nature sites (e.g. SSSIs) owned by Severn Trent, sites over 20ha in size, and sites accessible to the public (such as visitor experience sites).

Selection of priority sites for subsequent phases is also being influenced by work that we have carried out to better understand our landscape as a whole. In 2019 Severn Trent commissioned Ecosulis to develop a regional biodiversity strategy, comprising of strategy maps, to assist with informing future biodiversity and nature recovery. The maps provide priority areas for key ecological enhancements within the region, by highlighting a number of key features in the landscape including flooding risk, priority habitat present, priority species present, and designations present (see figure 3). The maps are being used to improve prioritisation of our efforts, allowing us to work at locations which will benefit both Severn Trent land and the regional landscape.

Phase 1 & 2	Phase 3
SSSI Visitor experience sites Sites >20 ha Highlighted for opportunity by site manager	Sites greater than 1ha with 100m buffer applied for: SSSI SAC LWS B-lines Bird ringing Engaged site managers Adjacent to 3rd-party Severn Trent funded project Had a PEA (Preliminary Ecological Appraisal) Upcoming PEA

Table 2. Selection criteria for priority sites.

Case study

Wolston Waste Water Treatment Site

Connecting across the wider landscape

We have identified spare land on our Wolston waste water treatment site, Warwickshire, which would be ideal for providing links between an adjacent Wildlife Trust restoration project and the existing SSSI at Brandon Marsh. By creating these linkages we not only improve the biodiversity value of our own land but also the neighbouring areas. Warwickshire Wildlife Trust will be partnering us on this project and our own employees will get the opportunity to help with the implementations of this project through our corporate volunteering scheme Community Champions.

Credit: © Natural England/Peter Roworth.

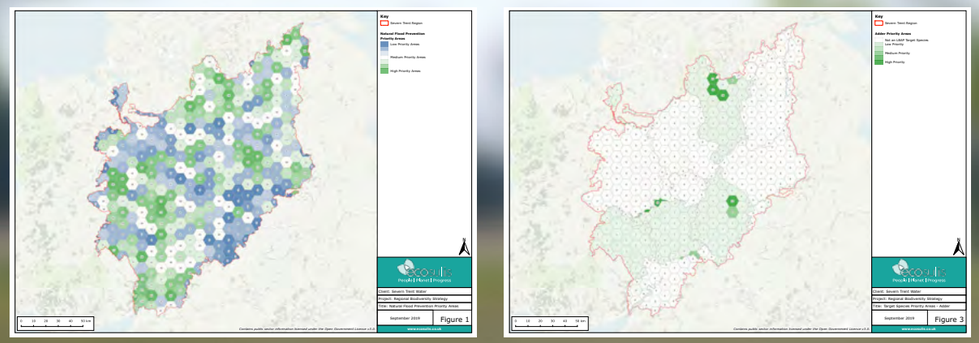


Figure 3. Biodiversity strategy maps, which can be used to formulate how our nature recovery efforts can be influential at a regional level. The map on the left highlights areas that are of high priority (green hexagons) for wetland areas. The map on the right highlights areas that are of high priority to adders (Vipera berus).

Yellow boundary – ST owned land. Land to the left of the blue line will be improved for biodiversity.

Scale 1:13,000

Figure 4: Example biodiversity survey map.

Focus on SSSIs and Local Wildlife Site

Sites of Special Scientific Interest (SSSIs) and Local Wildlife Sites (LWSs) act as refuges for species in a landscape where the number of "wild" places are decreasing. They support a range of plants and animals which struggle to survive in the wider landscape, especially in areas that are heavily influenced and managed by people. Therefore, protecting these special sites is a way for us to safeguard biodiversity for the future.

That's why we are committed to bringing the SSSIs and LWSs on our land into favourable condition through site-specific management plans. All our SSSi sites will have management plans and consented work programmes in place by 2025, and we aim that all sites will have moved to improving or favourable assessment by 2030. There are a far greater number of LWSs intersecting with our landholdings – almost 600 – and LWS presence features as one of the key criteria for selecting our priority biodiversity sites.

There are also 189 third party SSSIs, and a greater number of LWSs, within 100m of our land holdings. By paying special attention to our own land near to designated sites we can help to support their integrity by creating buffer areas of high biodiversity value, increasing the ecological connectivity of these sites into the wider landscape. See our SSSI Strategy for full details, for a copy of this document you can email **Ecologymatters@severntrent.co.uk**

Carrying out site audits

In order to ensure that our activities produce targeted and scientifically informed outcomes to improve biodiversity, for Phase 1 we commissioned The Wildlife Trusts and The Rivers Trust to produce detailed surveys and management plans for each site. Each site and its habitats are carefully described, listing features such as invasive species, indicator plant species, invertebrate habitats, pollinator habitats and overall condition (see land cover example in figure 4). This includes surveying for protected species and habitats and those listed as priorities in Section 41 of the Natural Environment and Rural Communities Act 2006, which are described as those "of principal importance for the purpose of conserving biodiversity". The auditing process is now being further standardised and improved for Phase 2.

On the 63 audited sites, the surveyors found protected species on 52 of the sites, averaging at 12 a site, and found protected habitats on 54 of the sites. It is also important to remember, especially for the species surveys, that each survey only gives a snapshot of the true number of species on a site.

The high number of protected species and habitats on our sites are an indication of their biodiversity value, further highlighting the need to work with and improve these sites.

Despite the high number of priority species found in the sites, assessments of site condition suggest that there is room for significant improvement for biodiversity. Figure 5 describes how each site's condition was marked during the audits. Generally, but not exclusively, sites with "No change in condition" were in need of management.

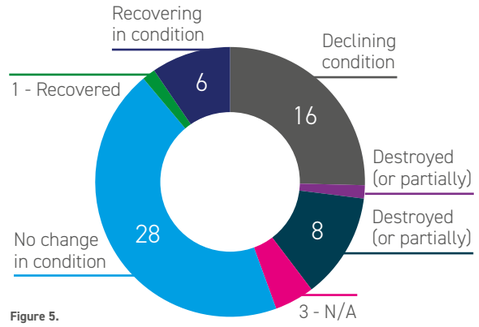


Figure 5.

Of the 63 audited sites, the surveyors found protected species on 52 of the sites.

Credit: © Natural England/Peter Wakely.

How we are enhancing biodiversity on our priority sites

In order to improve the condition of the priority sites, our biodiversity audits have recommended site - and habitat-specific improvements. For example, at most of our woodland sites we are creating more varied and biodiverse habitats for wildlife through management measures such as thinning and coppicing, leaving deadwood for invertebrates, and adding bat and bird boxes. This is in addition to new woodland creation at some sites. We are creating new wetland habitats through re-wetting and pond creation, and enhancing existing wetlands by removing excess vegetation around ponds, creating breeding areas for birds, and providing otter holts. A summary of recommended measures across different habitat types is provided in tables 3 and 4.

	Woodland and scrub	Grassland	Wetland	Hedgerow
Number of sites with habitat	61	63	Unknown	21
Total improvement suggestions	50	57	45	19
Creation of habitat	0	1	12	4
Enhancement of habitat	47	45	20	10
Creation and Enhancement	3	11	13	5

Table 3. Types of improvement suggestions for the priority sites surveyed by the Wildlife Trusts, split by habitat type and improvement advice type.

	Woodland and scrub	Grassland	Wetland	Hedgerow
Habitat creation	Creation or expansion of woodland	Create a wildflower meadow through sowing seed mix and mowing regimes	Create ponds; Re-wet areas; Create shallow scrapes; Create habitats e.g., reedbed	Create new native hedgerow
Habitat Enhancement	Thinning; Coppicing; Replacement with native trees; Bat and bird boxes; Increase deadwood; Diversify understory	Implement mowing regimes (various); Improve meadows through sowing and mowing regimes; Prevent scrub encroachment; Prevent herbicide application	Remove vegetation shading pond; Phosphate reduction scheme at outflow; General riverbank management; Add otter holts; Create breeding areas for birds (rafts, nest banks)	Gap in hedgerows; Allow expansion; General management needed
General	Remove litter and tree guards; Create holes in fences for small animals to pass through; Staff training on species surveys; Green roofing for buildings			

Table 4. The most frequently advised courses of action for creation and enhancement on the sites.

Monitoring our impact

All of our audited sites will be re-audited within a 5-year timescale to assess the impact of our interventions. Outside of formal audits, Severn Trent has also implemented a Biodiversity Monitoring Programme on sites where we are creating or enhancing meadow grasslands or managing woodlands. Using a citizen science approach, volunteers from our on-site teams are monitoring fauna and flora year-round using the Severn Trent Biodiversity Monitoring App (see figure 6), allowing us to collect timely and accurate data. There are two key groups of species which are being monitored as part of the programme. One of those groups is pollinator focused, and involves transects monitoring bumblebees, butterflies and flowering plants. There is also fixed-point monitoring covering reptiles, bats, birds and dormice, led by our ecologists. This work will help to evidence the benefit we're providing for wildlife through the improvements we are making. A screenshot of our internal ST Biodiveristy monitoring app, over 60 records have already been made for grassland species, including white tailed bumblebees, bee orchids, and yellow rattle.

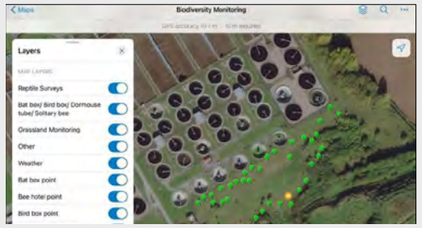


Figure 6. A screenshot of Severn Trent's Biodiversity Monitoring App. This app allows easy and accurate data collection on biodiversity across our sites.

Improving our approach to grounds maintenance

In addition to our priority sites strategy, we are also reviewing how we approach grounds maintenance in parts of our estate. Whilst there is an imperative to maintain site access and promote good health and safety practices, we are working towards a full assessment of where these needs can be balanced with biodiversity improvements. We have already worked with our grounds maintenance contractor to carry out mapping to assess where we can use 'bio-cuts' to leave longer grass – a stark contrast to what would have previously been considered 'normal' i.e. a tennis-court length monoculture.

Other measures include reduced levels of mowing overall, removal of grass cuttings to reduce soil fertility (promoting wildflower growth), and leaving organic matter in piles to create invertebrate habitats. Sites that have adopted these approaches, such as the Halam Service Reservoir (see figure 7), have shown an increase in plant species and invertebrates. Alongside this, we also aim to reduce pesticide and herbicide application to an absolute minimum. Our policy on Weed and Insect Control Techniques states that "Pesticides should be seen as a last resort for the management of water company land and assets. All other non-chemical options should be explored prior to use."

Figure 7. Bio-cut at Halam Service Reservoir.

2.2 Nature-friendly forestry and farming

A significant proportion of our land is either agricultural land for grazing or crop production, or forestry land producing timber. We support the use of these lands for productive outputs providing things that people need, but we want this to happen in ways that also safeguard and improve biodiversity.

Land has been managed increasingly intensely over the last 50 years or more. This includes scaled-up and simplified cropping systems, involving higher applications of artificial pesticides and fertilisers, and the removal of hedgerows to make fields bigger to accommodate for large farming equipment. Practices like these can have huge impacts on flora and fauna and have a direct link to water quality too, with phosphates and nitrogen from agricultural land causing eutrophication and the loss of biodiversity in rivers and other watercourses.

But there is increasing recognition that long-term productivity and profitability can be better achieved by working with nature, rather than against it.

This is reflected in the growth of sustainable forest management and agroecological or regenerative farming practices.

Very little of our productive farmland or woodland is managed 'in hand', directly by us. Instead, across England and Wales we have around 281 tenancy agreements with farmers, ranging from short term grazing licenses to Farm Business Tenancies and longer-term Agricultural Holding Act leases. Our forestry land is managed on our behalf by contractors, often under long-term forest management agreements. As a landowner we see these arrangements as partnerships, through which we can set terms, work together, and create opportunities to shape land management enterprises that are productive in ways that are good for nature, water, society and livelihoods.

How we do this:

Sustainable Forestry

People have been actively working the woods and forests in this country for most of the time since the last ice age. Extracting timber, whether for construction, pit props, fuel, ships, or pulp and paper has never had to mean the destruction of the forest itself – in fact timber's economic value has often secured its protection in forest law. But forestry can be destructive, and in the 20th Century, aspects of plantation forestry – from mechanisation and chemical use, to planting trees in the wrong place, to creating uniform stands of exotic conifers – have damaged soils, habitats, and water catchments.

We have integrated sustainable forest management into our estate through outlining the delivery of environmental and social outcomes into a long-term plan for managing the forest resource on our land. It influences the choice of species, the rate and pattern of felling, how trees are restocked, and how ecological, cultural and recreational features and value are identified, protected and enhanced. When all costs and returns are taken into account, working like this usually ends up making most financial as well as sustainability sense. Sustainable forest management principles are codified in standards such as UKWAS, and the FSC Standard, and they underpin the way we shape our forest management plans, and how we let our forestry contracts.

Removing invasive non-native species (INNS)

Invasive Non-Native Species (INNS) are species which have been introduced to a location considered to be outside of their natural distribution. To be classed as invasive, these species will have the ability to rapidly spread, resulting in a negative impact on that location's ecosystem function, and by extension us. In fact, the cost of INNS to the British economy is estimated to be approximately £1.7 billion a year. The big impact of INNS on local ecosystem function and health, all which could reflect on the quality of water in the landscape, means that it's vital they are appropriately managed.

Whilst we need to manage INNS across our whole estate, the audits carried out across our priority sites indicate that around three quarters of these sites have INNS, with around half of all sites requiring management intervention. These interventions are part of the detailed biodiversity management plans drawn up for each site. Our obligation includes the need to manage any existing INNS on our sites, to ensure that they do as little damage as possible.

The most effective form of management for INNS is to prevent them occurring in the first place. That is why over AMP7 we will be looking across our business activities to ensure we manage the risk of spread of INNS, as well as removing those we already have. Activities to manage the spread of INNS include undertaking risk assessments at some of our major raw water transfers.

Japanese Knotweed.

Why this matters for biodiversity

70% of the UK's land area is used for agriculture, and without changes to how this land is managed, there is a risk that biodiversity will continue to decline no matter how good we are at protecting and enhancing nature in reserves and designated sites.

Notable INNS on Severn Trent's sites:

Japanese Knotweed - *Fallopia Japonica*

Himalayan Balsam - *Impatiens Glandulifera*

Rhododendron - *Rhododendron Ponticum*

Snowberry - *Symphoricarpos Albus*

Bay Laurel - *Laurus Nobilis*

Cherry Laurel - *Prunus Laurocerasus*

Cotoneaster - *Cotoneaster Simonsii*

Japanese Rose - *Rose Rugosa*

Giant Hogweed - *Heracleum Mantegazzianum*

Signal Crayfish - *Pacifastacus Leniusculus*

Regenerative farming

We are what we eat, and most of what we eat comes from the land. This relationship has shaped our landscapes, soils and ecosystems since before the Iron Age, through farming. As with forestry, productivity from farming needn't be in conflict with the health and vitality of the land itself. But in particular through the 20th Century, aspects of farming technologies and systems have seriously damaged the natural assets in our landscapes on which farming ultimately depends. This has impacts on the long-term productivity of the land, and knock-on impacts on the water quality, air quality, greenhouse gas emissions, and quality of life for people.

These challenges are widely recognised now, and are reflected in big changes in regulations and farm subsidy regimes, as well as in private sector markets for ecosystem functions. It's also reflected in the growing use, and mainstreaming of regenerative farming methods – that is, agricultural systems that build up the long-term productive capacity of the land, rather than eroding it. Regenerative approaches integrate extended rotations, the use of cover crops, reductions in artificial inputs, and focus on biological means of building soil health and fertility.

These shifts in farming may be transformative for nature in the UK, as well as holding many water resource management benefits for us as a water company. It's why, through our relationships with farmers on over 200 agricultural leases, lets, and tenancies on our land, we will help make nature-based solutions and regenerative farming practices an opportunity to build resilient farm businesses, as well as an opportunity for nature recovery.

Get in touch

ecologymatters@severntrent.co.uk

3. Investing in **conservation** partnerships and nature-based solutions in the wider catchment

Severn Trent's landholdings are only a drop in the ocean of the landscape as a whole. But we know that the water cycle operates at landscape scale. The ways in which land and ecosystems are protected and managed across our region have an enormous impact on the quality of the water that we collect, store, and provide to our customers. There is an enormous impact, too, on the ecological quality of rivers and their ability to support a diversity of aquatic life. The way that our ecosystems are connected is of fundamental value to biodiversity - nature does not follow boundaries, and joining up isolated habitats allows biodiversity to flourish.

While we cannot control the landscape, we can make strategic investments to influence key factors that affect our business – such as rainwater infiltration, and agricultural runoff – and help to boost the biodiversity of our region as a whole. Working in partnership with others is key to achieving our aims in this area. Overall in 2020 we worked with 72 different organisations to deliver biodiversity improvements, and worked with 80 different landowners through grant schemes. Over 429 farmers from our region applied to the Severn Trent Environmental Protection Scheme (STEPS) biodiversity options, which Is discussed in more detail below.

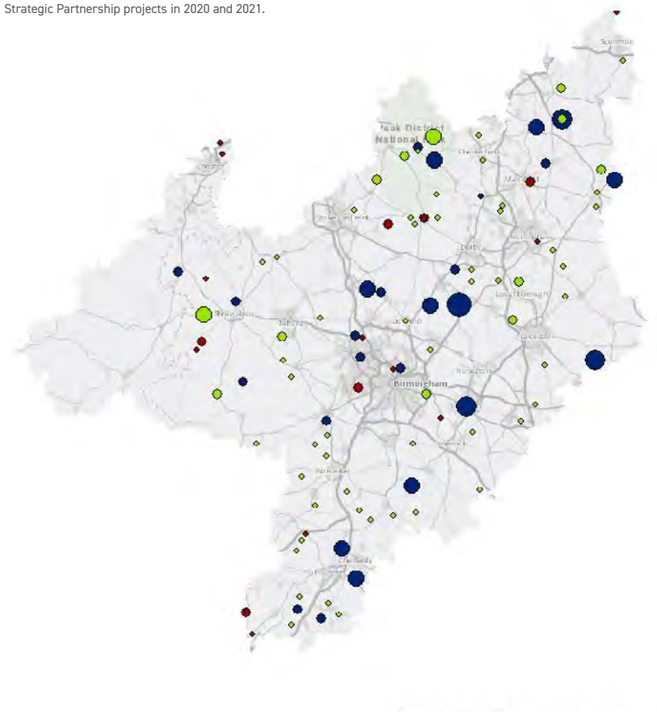
Our catchment work has two main strands:

- **Helping to restore key natural habitats and ecosystems.** We participate in collaborative conservation projects to protect and enhance key landscape features, habitats and biodiversity.

- **Working with farmers to fund nature-based solutions.** We provide advice and funding for on-farm measures that help us to meet our strategic goals around water quality and the environment.

Credit: © Natural England/Peter Wakely

Figure 8. Boost for Biodiversity (B4B) and Strategic Partnership projects in 2020 and 2021.



Legend

Boost for Biodiversity (B4B) 2020
- 0.200000 - 10.000000 ha
- 10.000001 - 50.000000 ha
- 50.000001 - 100.000000 ha
- 100.000001 - 500.000000 ha
- 500.000001 - 1000.000000 ha

Boost for Biodiversity (B4B) 2021
- 0.500000 - 10.000000 ha
- 10.000001 - 50.000000 ha
- 50.000001 - 100.000000 ha
- 100.000001 - 500.000000 ha
- 500.000001 - 1000.000000 ha

Strategic Partnerships
- 0.000000 - 10.000000 ha
- 10.000001 - 50.000000 ha
- 50.000001 - 100.000000 ha
- 100.000001 - 500.000000 ha
- 500.000001 - 1000.000000 ha

3.1 Helping to restore key natural habitats and ecosystems

As well as productive landscapes, our region is home to a mosaic of natural habitats small and large, including well-known landscape features such as the heaths, forests and parklands of Cannock Chase, the Peak District National Park, and the Shropshire Hills Area of Outstanding Natural Beauty.

These areas act as reservoirs of biodiversity in the landscape and are a vital resource for recreation and enjoyment for everyone in our region. Many natural habitats also serve critical functions for the water cycle such as slowing and storing water. By reducing flood risk, this in turn helps to reduce the risk of our sewer systems from becoming overwhelmed which can result in the unintentional release of contaminants into freshwater ecosystems. So, investing in the restoration of habitats such as peat bogs can ultimately help us to reduce the rates of asset failure in our network.

For all of these reasons, we are investing in targeted conservation and restoration action with a range of partners right across our region, as well as funding smaller conservation initiatives. For example, in 2021 we funded 20 innovative biodiversity initiatives through our Boost for Biodiversity grant scheme (see figure 8).

How we do this:

Great Big Nature Boost

One of the biggest nature campaigns in the UK, our Great Big Nature Boost will see us working to improve biodiversity across 5,000 hectares in the Severn Trent region by 2027 - an area of land bigger than Gloucester. This commitment significantly exceeds our regulatory target of improving 1090 ha by 2025. Achieving this relies fundamentally on developing and nurturing meaningful relationships with key conservation partners across the region and beyond.

Our partners, who are largely non-profit conservation organisations, are expertly placed to design and execute ambitious and scientifically informed conservation projects, and we are proud to work with them to meet our joint strategic objectives for nature recovery.

Our headline ambitions are:

- **Planting over 1.3m trees:** Trees not only provide homes for our incredible native wildlife, but they also contribute to natural flood management, and help remove carbon from the environment. We are contributing to strategically selected tree planting projects like the National Forest, and working to ensure that the trees that we plant are native or naturalised species sourced from UK nurseries.
- **Restoring hedgerows:** Hedgerows provide crucial resources for a range of wildlife, from flowers to pollinators to nesting places for birds, as well connecting areas of natural habitat in the landscape. They therefore help to provide a range of ecosystem services that make for a healthier landscape.
- **Establishing wildflower meadows:** Wildflowers encourage beneficial insects and birds, which are natural predators of pests that would otherwise damage farmers' crops. Farmers may then use less pesticide and fungicide, reducing the risk of chemicals running into lakes and rivers.
- **Restoring moorland:** Diverse and dense vegetation on moors provides important habitat for birds such as curlew and skylark. Along with tree cover in gullies and on valley sides, healthy moorland helps to make soil less prone to erosion, and reduces the impact of flooding.
- **Bog and peatland restoration:** Healthy peatbogs trap and store millions of tonnes of carbon and absorb vast quantities of water, acting like big sponges. In many places, peat has been drained, dried out, and exposed to the elements. This releases carbon back into the atmosphere and allows sediment to be washed into watercourses. With restoration we can re-wet, and reset, the system.

Why this matters for biodiversity

While our natural world is heavily degraded, islands of biodiversity and gems of high conservation importance are still located across our region. Preserving these sites and restoring them in all their glory is a cornerstone for the wider recovery of nature.

Moors for the Future Partnership

Started in 2003, the Moors for the Future Partnership works to protect one of the most degraded landscapes in Europe. Using innovative conservation techniques, the Partnership has transformed over 34 square kilometres of bare and degraded peat bogs in the Peak District National Park and South Pennines.

From 2020 to 2025, we will continue to work in the Upper Derwent Valley of the Peak District, to enhance flood prevention and keep valuable soils on the moorland instead of washing away into valleys and reservoirs below. This includes funding the planting of sphagnum moss over 613 ha – this moss is a key component of blanket bogs and can hold up to 20 times its weight in water, providing up to **30%** reductions in the peak discharge of large storms (Pilkington et al 2015). Other projects under Moors for the Future include blocking the grips - which were dug many years ago to drain the bogs - and gullies - caused by natural erosion – in order to help the moors retain more water.

The partnership is supported by the Peak District National Park Authority, Environment Agency, National Trust, Pennine Prospects, RSPB, Severn Trent, United Utilities, Yorkshire Water, and receives advice from Natural England, National Farmers Union, Heather Trust, Woodland Trust, Triodos Bank and the British Mountaineering Council.

Credit: Moors for the Future.

Funding projects through Boost for Biodiversity

In addition to strategic partnership projects within our region, we also support small-scale initiatives through our Boost for Biodiversity grant scheme. This specifically targets smaller projects enabling local authorities, councils, schools, NGOS, local conservation groups and community groups to enhance the natural environment.

Since 2018 we've funded over 50 small projects including tree planting, woodland management, wildflower meadows and wetland creation. This funding helps to keep our work responsive to local needs and gives us a window into community priorities across our area. We follow project progress until completion, offering advice and a helping hand where we can.

In 2021 our Boost for Biodiversity projects encompassed over

160ha

of improvements

Boost for Biodiversity: On a Tree by a River

The Tame Valley Wetlands, the RSPB and West Midlands Bird Club have teamed up to secure £20,020 from the Severn Trent Boost for Biodiversity scheme for the **'On a Tree by a River'** project. The work aims to increase the population and local range of Willow Tits in the Tame Valley, by creating new habitats and raising community awareness of the species.

3.2 Working with farmers to fund nature-based solutions

The majority of our region's land is farmland, and much of the water that ends up in our pipes has travelled over and through this land first. As it does so, it picks up residues of whatever is on that land, whether that be manure from livestock (which can contain hormones and antibiotics), nitrogen and phosphorus from fertilisers, excess soil and sediment, or traces of pesticides.

At our treatment plants we invest heavily in cleaning the water we provide to customers, to ensure that any trace substances from agricultural land are at safe levels. But this is an expensive and chemical-intensive process, and we would prefer for the water coming into our treatment plants to be cleaner, so we need to treat it less intensively. Indeed, we estimate that for every £1 we spend to reduce runoff of phosphates, nitrates and other agricultural chemicals entering the water in the first place, we avoid £2 - £20 of treatment costs.

But the other, and critical, reason to control what is going into our water from farmland is biodiversity, avoiding problems like the deadzones caused by eutrophication, or the harm to aquatic life caused by pesticides, which can also bioaccumulate in the food chain. Here, we estimate that £1 spent on prevention can generate £4 of wider environmental benefits.

How we do this:

Farming for Water

Our catchment management programme Farming for Water works directly with farmers to deliver a suite of integrated solutions that boost on-farm biodiversity at the same time as reducing agricultural inputs to improve water quality. The overall aim is promote nature-based solutions to keep nutrients where they are needed - in productive soils rather than washing out into watercourses. This can include agroecological methods such as rotations and cover cropping, which reduce the need for fertiliser use, or planting of trees and wildflower meadow areas that absorb and filter water as well as providing new habitats.

Together with our partners in the farming community we have already made great progress, delivering water quality improvements for around 1,600 km of river between 2015 and 2020, and reducing farming's contribution to phosphates in some watercourses by up to 66%. In the coming years we are investing to expand Farming for Water further. Through risk mapping, catchment walkovers and data analysis, we have identified areas where water quality is especially sensitive to how the land and crops are managed, allowing us to prioritise our actions. In total our ambitious plans cover 44 catchments and 432,000 hectares. This will see us working with two thirds of all farmers in our region to improve 3,700km of rivers - 50% of all the rivers in our region - by the end of 2025.

Why this matters for biodiversity

The country as a whole faces a significant challenge to meet the Government's 25 Year Environment Plan target of **75%** good ecological status in UK rivers as soon as possible - the current figure is just **14%**. Discharges from agriculture and land management are the single most significant cause of failure to meet the targets, so improving on-farm practices is key to making progress.

Get in touch

ecologymatters@severntrent.co.uk

Our catchment management programme, Farming for Water, works directly with farmers to deliver a suite of integrated environmental solutions, all with the aim of protecting water at source, impacting river health and drinking water quality.

STEPS: Grant funding for improvements

The Severn Trent Environmental Protection Scheme (STEPS) offers grant funding for farm improvements such as pesticide handling areas, watercourse fencing, cover crops, biodiversity and woodland management options. In the last five years the scheme has distributed over 1,500 grants collectively worth over £5 million for water quality improvements, negating the need for £74 million of investment in our treatment processes.

SOFA: On-farm advice

Our Specialist On-Farm Advice (SOFA) programme offers 11 bespoke, specialist farm advice visits, complemented by a further five soil and manure sampling suites to aid farmers in their soil, nutrient, water and pesticide management. Specialist contractors deliver the visits alongside the farm's local agricultural advisor, before providing a comprehensive report and recommendations with links to our funding opportunities and those through our partners. Over the last decade, our 21 farm advisers have engaged with 98% of the farmers in our priority catchments and built strong relationships with them.

Farm to Tap: Payment for Ecosystem Services Mitigating Diffuse Agricultural Pollution

Our Farm to Tap scheme, launched in 2016, pays farmers directly to keep pesticides out of watercourses, through the changing of farm practice and using alternative cultural methods. This contributes to improvements in drinking water quality and helps us reduce energy, chemicals, and further costs in our water treatment process. In 2019/20 and 2020/21, Farm to Tap helped to ensure we had no drinking water quality failures relating to the target pesticide at any of our treatment works.

Farm to Tap: Swap Your Nozzles

Again, mitigating diffuse pollution from pesticide run off and drift from crop spraying. The scheme, aims to increase farmers and farm contractors knowledge on how to improve spray efficiencies for chemical inputs. The workshops provide information on reducing spray drift and minimising the risk of pesticides reaching watercourses. Attendees are offered a free set of low drift spray nozzles to use with their equipment. A total of 218 farmers responsible for over 41,000 ha have now signed up to Swap Your Nozzle workshops, which are held to BASIS and NRoSO (National Register of Sprayer Operators) best practice standards.

Encouraging pollinators on farms

Pollinators are species which aid the transport of pollen from one plant to another, allowing plant reproduction to take place. Insect pollination provides a range of essential services in the UK, such as crop production and supporting wildflower populations, contributing an estimated £400m per year to the UK economy. Pollination is provided by a range of species, from bees and butterflies to beetles and moths. It is estimated that there are at least 4,000 species of pollinators in the UK.

Unfortunately, a widespread loss of pollinator species across the UK has occurred over the past few decades due to a number of factors including pesticide use, habitat loss and climate change. We are working to protect pollinators through a number of interventions, including improving habitat and reducing chemical inputs across our estate, and working with farmers to help them to the same. Our STEPS programme is an important part of how we are helping to reduce key risks to pollinators and provide new pollinator habitats. Full details of our wider work focused on pollinators can be found in our Pollinator Strategy.

This farm was previously managed for livestock grazing but was transitioned to intensive cereal production during the 20th century. We have worked with the farmer to fund the investment in seed required to revert 82ha to the previous acid grassland, reducing pesticide and fertiliser use and runoff. Small steps have seen an improvement already, with 30m field margins tempting brown hares, badgers, buzzards and foxes to the farm.

Appendix 1

Our Biodiversity Priority Sites

Below/opposite are the 63 priority sites audited during Phase 1 of our biodiversity audits:

Site Name	Site condition change	Statutory or Non-statutory Designations at time of audit
Aslockton STW – Bio Area	No change in condition	None
Bamford Intake & Treatment Wks	No change in condition	None
Barnhurst WRW Pendeford	No change in condition	Potential Site of Importance
Barston	Declining condition	None
Belper	No change in condition	None
Blackminster	n/a	None*
Bromwich Road WRW Worcester	n/a	None*
Carsington Reservoir	No change in condition	Local Wildlife Site
Carver's Rocks (Foremark Reservoir)	No change in condition	SSSI
Charnwood Lodge (unit 6)	Declining condition	SSSI
Checkley STW (Blythe Valley)	Declining condition	None
Churchdown	Good condition	Local Wildlife Site
Claymills	Declining condition	None
Coalport	Declining condition	Local Wildlife Site
Coleshill	Declining condition	Local Wildlife Site
Coven Heath	No change in condition	None
Crankley Point (Newark) STW	No change in condition	None
Crump Meadow - Cinderford	Declining condition	None
Derby STW (Spondon)	No change in condition	Local Wildlife Site
Draycote Water	Recovered	Local Wildlife Site (pending)
Drum Hill Res Breadsall Moor	Declining condition	Local Wildlife Site
Strongford	Declining condition	None
Finham	Declining condition	Local Wildlife Site
Goscote	Recovering in condition	Potential Site of Importance
Hallgates DSR	No change in condition	SSSI
Hamps and Manifold Valleys (Waterhouses WWTW)	No change in condition	SSSI
Hewletts	Recovering in condition	None
Kidderminster WRW	Declining condition	None*
Kirkby in Ashfield STW	No change in condition	None
Ladderedge	Recovering in condition	None
Ledbury	Destroyed (or partially)	None
Leek	Declining condition	None
Linacre Reservoir	Good condition	Local Wildlife Site
Mansfield	No change in condition	None
Matlock Lea	No change in condition	Local Wildlife Site
Melton	No change in condition	None
Mile Oak	No change in condition	None
Minworth	Good condition	Site of Importance (SINC)
Monkmoor STW	Declining condition	Local Wildlife Site (& Proposed SSSI)
Netheridge	Good condition	Local Wildlife Site
Newhall Reservoir Meadow	Good condition	SSSI
Overseal STW	No change in condition	None
Priorslee Lake	No change in condition	Local Wildlife Site
Rainworth	No change in condition	None
Ray Hall	No change in condition	Potential Site of Importance
Retford	No change in condition	None
Roundhill	Recovering in condition	None
Rushmoor WRW	No change in condition	Local Wildlife Site
Shustoke Reservoir	Good condition	Local Wildlife Site
Stanford	Recovering in condition	Local Wildlife Site (pending)
Staunton Harold Reservoir (Calke Park and Dimminsdale SSSIs)	No change in condition	SSSI
Stoke Bardolph STW	No change in condition	None
Strensham	Good condition	None
The Malvern Hills (British Camp) Lower Wyche	n/a	SSSI
Thornton Reservoir	No change in condition	Local Wildlife Site
Tittesworth	No change in condition	Site of Importance (SINC)
Trimpley Reservoir (Wyre Forest SSSI)	Good condition	SSSI
Wall Grange WSS	Declining condition	Local Wildlife Site
Wanlip STW	Recovering in condition	None
Westwood Brook (Stonebrook on GISST)	No change in condition	None
Wigston	No change in condition	None
Wolston	Declining condition	Local Wildlife Site
Wyelands Intake/Lydbrook WTW	Declining condition	None*

* Site has no designation but is close to other sites with designations.

Appendix 2

How we are meeting our obligations

This document, alongside our SSSI Strategy and Pollinator Strategy set out how we will meet our obligations to protect and improve biodiversity, agreed with the Environment Agency and set out in the relevant Measure Specification Form. The following table sets out the key measures and where to find further information on how we are responding:

What we need to do	Where to find further information
A review of land management regimes at Severn Trent Water owned/managed sites.	This document, section 2.1
Take action to protect, restore and enhance any NERC section 41 species and habitats that are present on land owned or managed by the water company to prevent deterioration of populations and/or habitats.	This document, section 2.1 SSSI Strategy
Provision for offsetting deterioration through replacement habitat creation (e.g. for construction of new assets).	This document, section 1.3
Support partnership projects and where appropriate work on 3rd party land which aim to enhance and protect biodiversity species and habitats in catchments where the water company operates and in situations where the aim of the project is to contribute to the principles of Biodiversity 2020 and NERC Act 2006.	This document, section 3

Honey Bee **Credit:** © Natural England/Allan Drewitt.

Bog asphodel (Narthecium ossifragum)
Credit: © Natural England/Derek Ratcliffe.

Orange Tip (Anthocharis cardamines)
Credit: © Natural England/Allan Drewitt.

Hoverfly (Seriocomyia silentis)
Credit: © Natural England/Allan Drewitt.

Nature does not follow boundaries, and joining up isolated habitats allows biodiversity to flourish.

Get in touch

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In the last five years the STEPS scheme has distributed over

1,500

grants collectively worth over

£5 million

for water quality improvements, negating the need for

£74 million

of investment in our treatment processes.

"Severn Trent's support has been fundamental to us bringing Willow Tits, one of the most threatened native bird species in the UK, back from the brink of extinction."

Ian Wykes, development manager at Tame Valley Wetland.

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