



Enhancing our natural environment

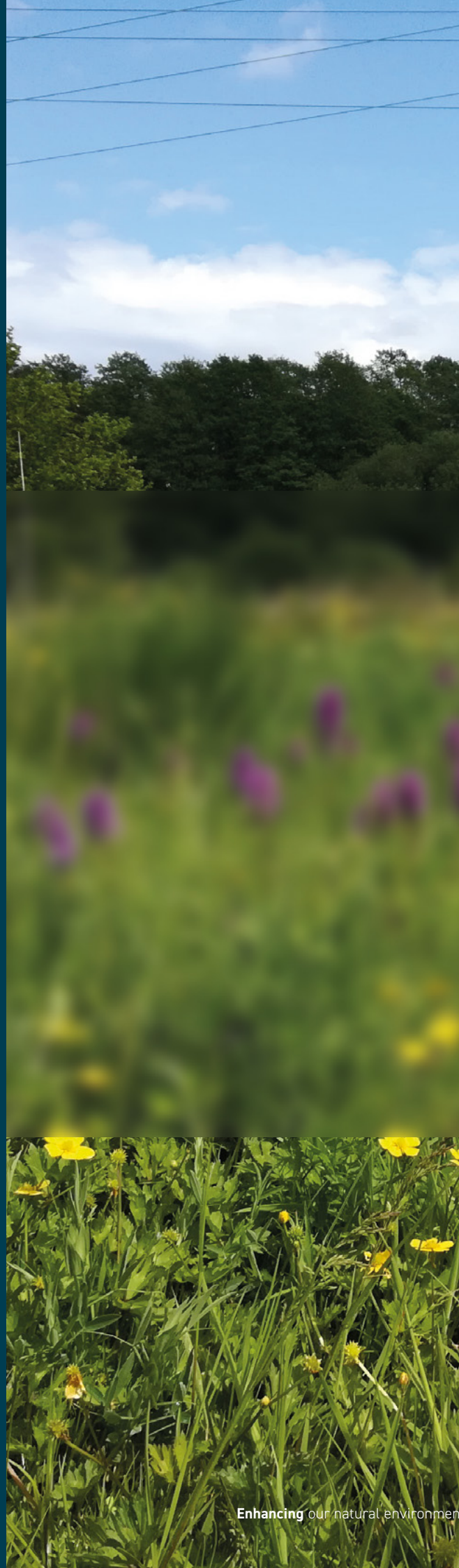
Protecting and
enhancing Sites of
Special Scientific
Interest

WONDERFUL ON TAP

SEVERN
TRENT



This is our approach for protecting and enhancing Sites of Special Scientific Interest (SSSIs) that we own, or which might otherwise be impacted by our work. We have a statutory obligation to look after these special places, but more than that, we see SSSIs as foundational 'reservoirs of biodiversity' around which we can build our contribution to nature recovery across the regional landscape.



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1. Why Sites of Special Scientific Interest matter

Scattered across our region lie many designated sites of particular importance for biodiversity – Sites of Special Scientific Interest (SSSIs). It's vital that these sites are cared for, to the benefit of both nature and people.

1.1 What are SSSIs?

SSSIs are areas of special interest due to the plants and animals which are found on them, or because of their landscape features. They form a network across the UK and hold the country's best wildlife and geological sites, including some of the UK's most important and iconic species and habitats. They were first notified under the National Parks and Access to the Countryside Act in 1949 and there are now over 4,000 SSSIs in England and over 1,000 in Wales. The SSSIs cover about 7% and 12% of England and Wales land areas respectively, much of which is considered to be internationally important for wildlife.

Since then it should be noted that the Wildlife and Countryside Act 1981, is the current legislation that determines what are SSSIs in both Wales and England, and how they should be protected and managed. However, devolved legislation has created two different bodies in Wales (Natural Resources Wales) and England (Natural England) who can then interpret the legislation differently. This difference at the moment relates mainly to, process, funding and support for land owners and occupiers. As an organisation that has land in England and Wales, it is important to us to ensure that all our stakeholders are aware that how we deliver our commitments may alter slightly, in England and Wales.

If a site is designated as a SSSI, it is legally protected from a number of detrimental activities, and there are restrictions and regulations regarding how the site is managed.

SSSIs in England:
4,000
7% of land

SSSIs in Wales:
1,000
12% of land

Distribution of SSSIs, owned or managed by Severn Trent

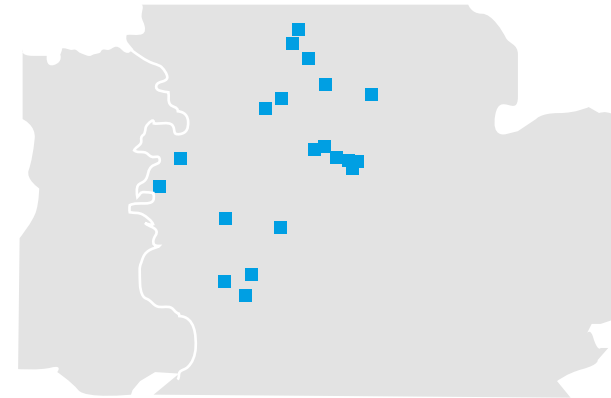


Figure 1: The geographical distribution of SSSIs which are owned or managed by Severn Trent.

For example, it is an offence to intentionally damage the site, and permission is needed to undertake potentially damaging activities on the site. Statutory bodies also have a general duty to further the conservation and enhancement of the special feature of the SSSI. These regulations are designed to protect the site, in turn protecting the UK's most precious species and habitats.

1.2 Why do they matter?

SSSIs act as a refuge for species in a landscape where the number of "wild" places is decreasing. They support a range of plants and animals which struggle to survive in the wider landscape, especially in areas where landscapes are heavily influenced and managed by people. Therefore, protecting SSSIs is a way for us to safeguard biodiversity for the future.

As well as providing a home for important wildlife species, keeping SSSIs in good condition is part of ensuring that the UK has a healthy, well-functioning landscape as a whole. Diverse and ecologically complex landscapes are better at providing a range of ecosystem services that we depend on to survive, such as clean water and carbon sequestration.



Our priorities:

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





1.3 SSSIs owned or managed by Severn Trent

We own and manage approximately 500ha of land within the boundary of 50 sites designated as SSSIs in England. The sites are distributed in various locations across the region, each varying in shape and size according to its features. The map above shows the geographical distribution of SSSIs which are owned or managed by Severn Trent, and a full list of these SSSIs can be found in Appendix 1.

Our SSSIs are made up of a range of different habitat types, each with its own assemblage of plant and animal species. The biggest habitat type within our SSSI holdings is standing open water and canals, followed closely by broadleaved, mixed and yew woodland, and neutral grassland. A full breakdown of the habitat types within SSSI land owned or managed by Severn Trent are shown in the chart opposite.

1.4 Other SSSIs close to our land or operations

There are over 720 SSSIs within the Severn Trent boundary. Many of these have the potential to be impacted by our operations and land management. Of this total number of sites, two categories are of particular relevance to Severn Trent – SSSIs close to our network infrastructure, and SSSIs close to our landholdings.

SSSIs close to our waste and water assets

The first category of SSSIs is those with close proximity to our assets such as water mains or waste pipes. This includes assets located directly within third party SSSI areas. These SSSIs may incur a negative impact if an asset failed such as a burst water main or sewer pollution, or due to the over-abstraction of water. To ensure that we understand which of our operations could pose a problem, we have devised a risk approach to assess the potential consequences of damage to SSSIs and will continue to carry out further analysis.

Habitat for SSSI land, in hectares, owned or managed by Severn Trent

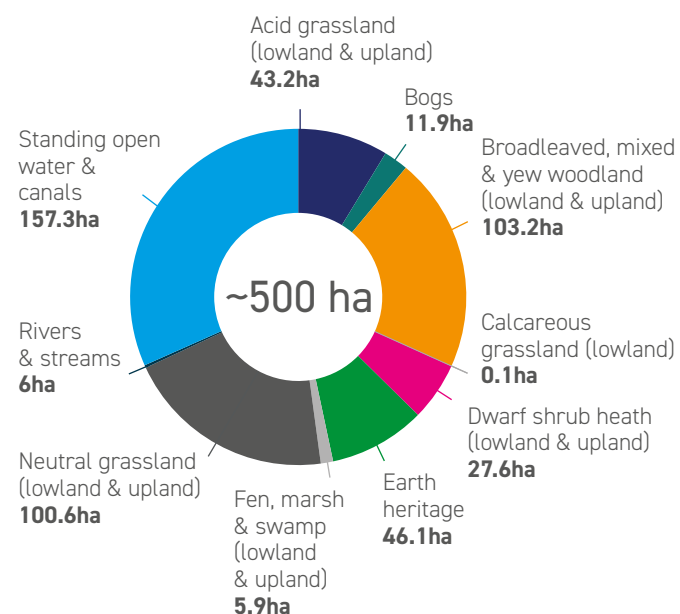


Figure 2: The habitat descriptions for SSSI land, in hectares, which is owned or managed by Severn Trent.

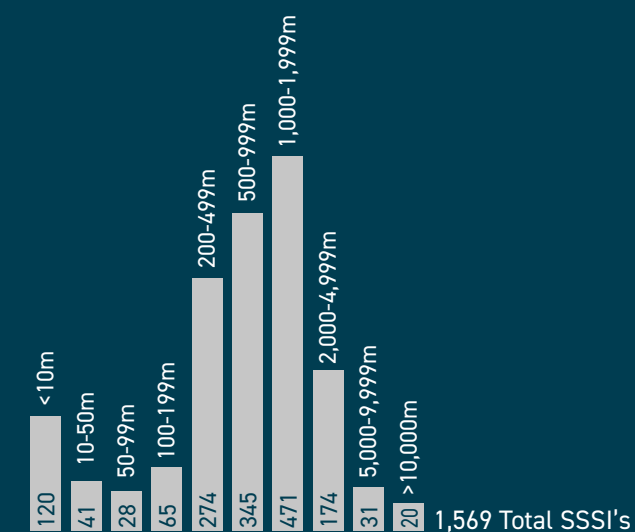
SSSIs close to our landholdings

The second category of importance is SSSI sites that are directly or closely adjacent to our landholdings. Due to the interconnectivity of the landscape, management of land adjacent to SSSIs can have a significant impact on their ecological health. We have 189 SSSI sites that are within 100m and 528 sites within 500m of our landholdings. A full breakdown of the number of SSSIs within varying distances of our landholdings can be seen in the bar chart opposite.

This data allows the proximity of SSSIs to be taken into account when works are being carried out on our land, and when planning biodiversity management and interventions. For example, our biodiversity priority sites for active management (see our Biodiversity Strategy and Action Plan) have been selected with proximity to SSSIs as one of the key criteria.



Distance to landholding (metres)





2. Protecting SSSIs from our operations

In capital projects and our general operations, we pay particular attention to vulnerable and valuable habitats such as SSSIs and ancient woodlands.

Screening

We screen locations where there maybe a higher risk of things going wrong during planned works or where there is a higher 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:

- 1 **Avoidance of harm** - taking steps to, where possible, design out risks to sensitive sites by adapting operations before they commence.
- 2 **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.
- 3 **Monitoring and remedial action** – follow-up monitoring of site response, and remedial action where required, is factored into the sensitive site strategy.

As a regulated water company, we are also required to strictly follow mandatory guidelines to safeguard SSSIs, applying to almost any activity undertaken on the site. This means that when considering any developments in relation to designated sites, we need to adhere to certain environmental legislation.

To ensure that we follow the legislation correctly, Severn Trent has created a series of policies to be put in place when carrying out activities that might impact SSSIs. These policies are summarised in the sub-sections below, with further detail available in the Appendices.

2.1 Planned works

There will be times when we need to repair our assets, replace them, or build/install new ones. If these planned works are known to be taking place in an area that might impact a SSSI, we will require assent - express approval or agreement - from Natural England, or Natural Resources Wales, to carry out those works. We have a stringent process for these operations which will ensure our impact on SSSIs is minimised if we need to undertake planned works that require assent. The process for these is as follows:

Prioritisation:

Factoring in risk to SSSIs in investment/operational decisions

Option appraisal:

Identifying risks/mitigation/opportunities for SSSI

Scheme design:

Refining mitigation, compensation and gain

Permissions:

Obtaining assent for works on SSSI

The full policies behind this process can be found in Appendix 2.1.

2.2 Risks and controls

Severn Trent has implemented a number of controls, to try and mitigate the risk of something going wrong. These include, but are not limited to, raising awareness and educating people on SSSIs through e-learning modules, toolbox talks and job specific training.

2.3 Emergency incidents

Despite putting controls in place, there is always a risk that emergencies will happen. An emergency is a situation that has occurred which is not foreseen and one under which as a company we have to act immediately to restore the status quo. This could

relate to breaches in both our clean water and dirty water networks which then encroach onto a designated site. Due to the urgency in which these matters need to be fixed, we must undertake repairs/ actions to stop the problem without seeking assent for these actions. Therefore, we have set out policies to ensure that our actions during emergencies damage any nearby SSSIs as little as possible.

Generally, in these situations we notify Natural England or Natural Resources Wales as soon as possible, and preferably within 24 hours of entering the SSSI or nearby land. In Appendix 4.0, we state the actions that need to be carried out when an incident is classed as an emergency on a SSSI.

Severn Trent's policies emphasise that any work carried out during emergency incidents that might impact SSSIs will take all reasonable steps to mitigate risk to the SSSI, heeding advice given by an ecologist on site. In addition, any works taking place after day 20 of the incident will require assent as is the case with planned works not considered emergencies.

The full policies for emergencies can be found in Appendix 2.2.

Sensitive sites are areas that are officially designated and scheduled as important for conservation, ancient woods, or sites which contain species or habitats with statutory protection.

Get in touch

ecologymatters@severntrent.co.uk



3. Enhancing biodiversity on our Special Sites of Scientific Interest

Beyond protecting SSSIs from harm, we have a particular focus on enhancing biodiversity on SSSIs that intersect with our own land. We will have management plans and consented work programmes in place for all Severn Trent landholdings with SSSI designations by 2025. Following this, we aim to move all of these sites into improving or favourable condition by 2030.

3.1 Assessing the condition of our SSSIs

All of our SSSIs are independently assessed of their condition which then feeds into the creation of bespoke management plans. Natural England classes the condition of a large percentage of our SSSIs as unfavourable, although the majority of these are also classed as 'recovering'. Currently 70.27ha of our SSSI designated land is considered to be in favourable condition.

A number of our SSSI sites have also been assessed as part of Phase 1 of our estate-wide biodiversity audit, undertaken by the Wildlife Trusts. These audits found a range of exciting species in our SSSIs, including Section 41 (S41) Species of Principle Importance (SPI) and Habitats of Principle Importance (HPI). S41 Species and Habitats of Principle Importance are those that have been identified as being the most threatened in the UK, therefore requiring conservation action.

Site condition of habitat types (ha)

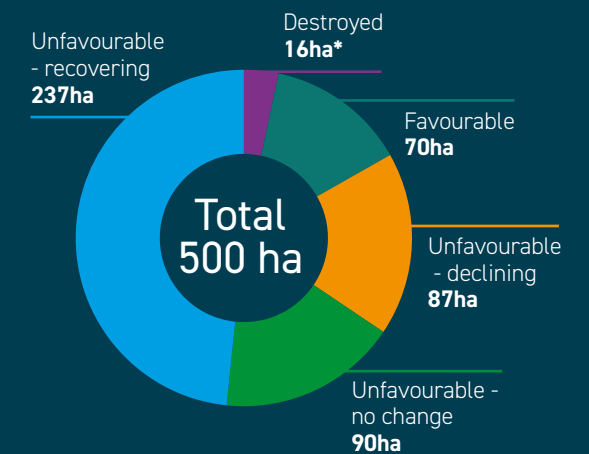


Figure 3: The condition of SSSI designated land, in hectares, which is owned or managed by Severn Trent.

Foremark Reservoir, is a large site comprising of about 14,500ha in total. Carvers Rocks, a site of about 16ha at the southern tip of the reservoir is a scheduled SSSI for its geology and plants.

The site is comprised of lowland mixed deciduous woodland, which is a S41 Habitat of Principal Importance (HPI). This habitat, with its unique species composition and structure, is rare across the UK and is thought to have declined by about 30-40% over the last 50 years.

During the biodiversity audit of the site, an S41 Species of Principle Importance (SPI), the Dingy Skipper (*Erynnis Tages*) was noted to be present on the site. This small butterfly, which is found in warm, open grasslands as well as within woodland clearings and rides, has seen a big population decline across the UK, hence its priority status.

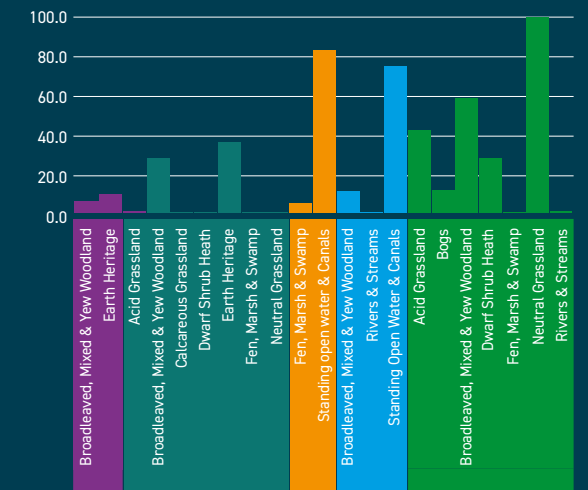


Figure 4: The condition of SSSI designated land, in hectares, split by habitat type, which is owned or managed by Severn Trent.

Carvers Rocks >

*Please note, only the geological interest is destroyed as the interest feature is no longer accessible due to the growth of the ecological feature - woodland and grassland - covering the geology. The woodland feature is in favourable condition and the acid grassland is in unfavourable recovering, but the Natural England reporting system does not allow this to be recorded.



3.2 SSSI management plans

Once the SSSIs have been carefully assessed, each will have its own bespoke management plan created in order to maintain its current classification or where possible to restore it to a more favourable condition. We will achieve a high standard of SSSI management plans by working on and obtaining approval for the plans in consultation with Natural England and Natural Resource Wales.

We have set out a number of policies to ensure that the management plans are optimised and gain appropriate approval. This includes the need to seek regular advice from and final approval from Severn Trent's Biodiversity and Ecology team, whether the plans are being made internally by Severn Trent's Visitor and Engagement team or by contractors. Our policies ensure that our SSSIs are managed appropriately, and we will continue to work closely with Natural England and Natural Resources Wales to ensure that remains the case.

We will have management plans and consented work programs in place for all Severn Trent landholdings with SSSI designations by 2025. Following this, we aim to have all of these sites (where possible) moving into improving or favourable conditions by 2030. We are currently working on a package of works with Natural England to create holistic management plans for a number of sites. Seven of these have the creation and approval of management plans underway at a variety of stages. Two of the SSSIs (totalling 4 sites) have management plans approved.

Where Severn Trent shares SSSI ownership, we will take all reasonable steps with co-owners and partners to achieve this, but there are aspects that will be out of our control. For example, where we do not have full control of a site, we will be less able to put in place control measures to prevent the spread and establishment of Invasive Non-Native Species (INNS)

such as New Zealand Pygmyweed (*Crassula Helmsii*), which would affect the status of the site when evaluated by Natural England.

The full policies for SSSI land management can be found in Appendix 2.3.

We are currently working on a package of works with Natural England to create holistic management plans for a number of sites.

Bespoke management at Cropston Reservoir SSSI >

Cropston SSSI is a large site which had been left largely unmanaged for a long period of time. As a result, there was a significant amount of willow tree growth along the reservoir banks which needed to be managed in order to return the SSSI to a more favourable state. The encroachment of the willow had significantly overshadowed areas where some of the plant species found on the "SSSI features" were shaded and unable to thrive.

As such, work has been led by one of our Senior Ecologists to manage the willow growth. A variety of techniques have been used, including traditional forestry and some more innovative techniques, to reduce willow encroachment. As a result, there is now more space and better conditions for biodiversity to flourish on the reservoir banks.

Recent surveys found all the key species noted in the 'SSSI features' are living in the SSSI, meaning we are well on our way to improving our status. However, there is still an issue with phosphate levels in the water. We now have plans in place to tackle this issue, and we are hopeful that once this has been delivered, and Natural England carry out the next review the site will be well on its way to achieving a status for some units, from "Unfavourable - Declining" (assessed August 2016), to "Favourable", or at the very least "Unfavourable - Recovering".





Appendix 1

List of SSSIs where Severn Trent own or manage land within the SSSI boundary

- | | |
|---|--------------------------------|
| Beacon Hill, Hangingstone and Out Woods | Long Mynd |
| Birklands West and Ollerton Corner | Minchinhampton Common |
| Blackbrook Reservoir | Morton Pool and Pasture |
| Bradgate Park and Cropston Reservoir | Newhall Reservoir Meadow |
| Brandon Marsh | Ogston Reservoir |
| Buddon Wood and Swithland Reservoir | One Barrow Plantation |
| Calke Park | Poolhay Meadows |
| Carver's Rocks | River Blythe |
| Charnwood Lodge | River Dee (England) |
| Churnet Valley | River Teme |
| Clee Hill Quarries | River Wye |
| Coombe Hill | Roche Abbey Woodlands |
| Cornbrook Dingle | Rowlee Bridge |
| Crich Chase | Severn Ham, Tewkesbury |
| Crofts Mill Pasture | Stenders Quarry |
| Cromford Canal | Sutton Park |
| Dark Peak | Teversal Pastures |
| Dimminsdale | The Malvern Hills |
| Dove Valley and Biggin Dale | The Stiperstones & The Hollies |
| Dymock Wood | Tiddesley Wood |
| Eastern Peak District Moors | Upton Warren Pools |
| Froghall Meadow and Pastures | Wilden Marsh and Meadows |
| Hamps and Manifold Valleys | Wyre Forest |
| Hencott Pool | |
| Kirkby Grives | |
| Lathkill Dale | |
| Leek Moors | |



We will achieve a high standard of SSSI management plans by working on and obtaining approval for the plans in consultation with Natural England and Natural Resource Wales.





Appendix 2

Summary of the Severn Trent's SSSI policies

2.1 Planned works

1. From the very inception of the concept or plan (gate 1) advice will be sought from Severn Trent's Biodiversity and Ecology Team for all SSSI's impacted by creation, maintenance, or repair of assets, as well as any works relating to redundant assets. This applies to works being designed in house as well as by contractors and sub-contractors on behalf of Severn Trent.
2. For all new and repairing of assets, a full environmental options appraisal using a scoring matrix, rating the environmental impact, is carried out to justify why an SSSI has to be impacted, with a full acknowledgement of addition of monies to meet any conditions or requirements of the regulators. This must be supported by the Severn Trent Biodiversity and Ecology Team at gate 1 to progress further in the design.
3. For creation, maintenance, or repair of assets, at each gate from 2 to 4 there is evidence of consultation with Severn Trent Biodiversity and Ecology Team and highlighting of how the advice has been incorporated into detailed design. Copies of the evidence should be emailed to ecologymatters@severntrent.co.uk. This will cover, pre-construction (enabling works and ground investigations where necessary), construction, and reinstatement. Methodologies of working practices and details of how the SSSI is to be restored and/or how full mitigation for impact of the works will be managed (as defined by the New Environment Act) should be documented and presented in the Works Information and Environmental Risk Register.
4. The Severn Trent Biodiversity and Ecology Team will assist in getting the assent for the works and ensure that any

mitigation is in place and effective, including when the works are being undertaken by land and planning agents on our behalf.

5. Sign-off at gate 5 can only occur if Severn Trent Biodiversity and Ecology Team has endorsed that the company has met its duties on completion, confirmed by Natural England or Natural Resources Wales. This will ensure that we adhere to the different legislation in relation to Wales and England.

2.2 Emergency incidents

6. Network Control will identify whether an incident is on, near to, or could impact a SSSI and provide site specific action plans for high-risk activities/sites to the team on the ground in operations. They must also inform Severn Trent Biodiversity and Ecology Team immediately. This will define the start of the emergency and will then allow operations up to 5 days to start work on site and to have it classed as an emergency under 28P4(b) WCA1981.
7. Operations will notify Natural England with details about the works within the prescribed timescale. They will also provide information about the operations to be carried out and how the site is to be restored. They will also seek guidance from the Severn Trent Biodiversity and Ecology Team who can provide advice and who can aid the informing of Natural England if necessary. All work will be notified using the appropriate pro-forma and e-mailed to protectedsites@naturalengland.org.uk
8. Operations will take all reasonable steps to mitigate risk to SSSIs during emergency incidents, heeding advice given by an ecologist on site.



Appendix 2

Summary of the Severn Trent's SSSI policies

9. If further works are necessary after the initial incident, then these then shift to planned work procedures following the emergency incident and Severn Trent Biodiversity and Ecology Team will liaise with Natural England when the incident is closed.
10. Operations will provide an explanation of the emergency incident in the form of an incident log which should contain, a map of the works, photos, description of the techniques used and restoration of the area. This will be sent to Natural England (protectedsites@naturalengland.org.uk) as well as providing a copy to Severn Trent Biodiversity and Ecology Team (ecologymatters@severntrent.co.uk).
11. If the works need to be completed quickly but are not started on the ground within 5 days of Natural England being notified, defined as an emergency above (policy 6), then a discretionary advice service (DAS) contract should be sought for assent instead. Severn Trent Biodiversity and Ecology Team must be consulted to aid this process and to provide guidance to ensure compliance and to achieve the best environmental outcomes.

2.3 SSSI management

12. All SSSI land owned or managed by Severn Trent will have a management plan which outlines its management. This plan will form the consent for the activities identified to restore or maintain favourable condition. The plans will be approved by Severn Trent Biodiversity and Ecology Team before they are ratified and consented by Natural England, or Natural Resource Wales.
13. Sites managed by the Visitor and Engagement Team (VET) will be managed by them, but they will do so in liaison with Biodiversity and Ecology Team. When the VET is undertaking works

which have been approved in the management plan, they will only need to liaise with the Biodiversity and Ecology Team once a year. For any other works not in the management plan and therefore not consented, they must consult Natural England and the Biodiversity and Ecology Team to obtain consent before undertaking any other operation not covered by the management plan.

14. For sites not managed by the VET and where the management plan is being delivered by a contractor, or another body, the contractor or other body must liaise with the Severn Trent Biodiversity & Ecology team at least twice a year for general works approved in the management plan. For any other works they must consult the Biodiversity and Ecology Team who will then obtain consent from Natural England before allowing the contractor, or other body to undertake any other task not covered by the management plan.

2.4 Duties related to biodiversity outside of SSSIs

15. The policies on SSSIs from 1-14 are an exemplar of how the company wishes to deal with its wider biodiversity commitment within the wider landscape when carrying out its functions as a 28G authority. The same activities relating to our statutory functions, which impact on biodiversity, and which are not on designated sites, can follow the identical procedures and policies as set out above.
16. All teams can seek guidance and advice from the Biodiversity and Ecology Team to aid the delivery of the ODI for AMP7.



Appendix 3

Risks and controls

There are a number of ways that our assets and activities can impact a SSSI. To reduce the risk of unexpected incidents which could impact an SSSI, Severn Trent has implemented a number of controls. The full list of risks and subsequent controls are listed below.

Risk	Controls
1. Burst rising main	<ul style="list-style-type: none"> - Increased monitoring. - Contingency plans and efficient incident response. - Proactive maintenance of assets.
2. Pollution of watercourse from sewer	<ul style="list-style-type: none"> - Increased sensors and proactive monitoring, particularly in high risk areas e.g. Sutton Park. - Proactive maintenance. - Efficient incident response.
3. Unpermitted discharge from a storm overflow to a SSSI linked to a watercourse	<ul style="list-style-type: none"> - Increased monitoring. - Performance dashboard for EDM monitors. - Proactive maintenance of assets.
4. Burst water mains damaging SSSIs	<ul style="list-style-type: none"> - New job codes being put in place for efficient response. - Proactive asset maintenance.
5. Damage caused to SSSI whilst responding to an urgent water incident	<ul style="list-style-type: none"> - Dynamic risk assessments for better mitigation and response. - Training and awareness for accessing and response near SSSIs.
6. Damage caused to SSSI by over abstraction	<ul style="list-style-type: none"> - Long term plans guided by EA and Natural England. - WINEP programmes to identify, investigate and manage sites at risk. - GIS layers to identify Groundwater Dependent Terrestrial Ecosystems (GWDTE), investigate and manage impacts proactively. - Water level management plans in place on SSSI reservoirs.
7. Pollution from a bioresources asset	<ul style="list-style-type: none"> - Containment assessments. - Effective monitoring. - Proactive asset maintenance. - Drainage plans. - Effective incident response plans on site.
8. Pollution from waste or water treatment site that flows to surface water	<ul style="list-style-type: none"> - Incident response processes on site. - Proactive asset maintenance. - Drainage marked to identify and control spills from assets.

Table 1: Risks posed to SSSIs through our operations and our response.

There are also general controls in place, including awareness and education on SSSIs through existing and future e-learning, consulting and notifying before carrying out work (or retrospectively in an emergency), Environmental Management System, tool box talks and job-specific training.



Appendix 4

Emergency incidents in SSSIs

An emergency is a situation that has occurred which is not foreseen and one under which as a company we need to act immediately. The table below states the actions that need to be carried out when an incident is classed as an emergency on a SSSI. The actions taking place within the first 20 days are classed as emergency actions and therefore do not require assent for action. Any actions taking place after 20 days will require assent from Natural England or Natural Resources Wales.

Suggested timescales for incident to be classed as an emergency						
	Day 1-3	Day 5	Day 7	Day 10	Day 20	Complete
Network Control	█					
Notification to NE or NRW	█	█				
Emergency operations start on the ground	█	█	█			
Emergency operations complete	█	█	█	█	█	
Operations start on the ground which are not an emergency					█	█
Fast track DAS contract agreed with NE			█	█	█	

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