Spotlight on SSSIs

Working towards the goals of Biodiversity 2020

Issue 10 – Summer 2017

I'm delighted to bring you the tenth issue of 'Spotlight', the newsletter highlighting the achievements of farmers and other land managers improving the condition of SSSIs.

A warm welcome to a new contributor – Richard Dyer from South East Water who tells us of a pilot project to re-introduce the endangered wart-biter cricket on SSSIs, helping increase the proportion of SSSIs in favourable condition.

This project started in 2015 as a collaboration between Natural England, Buglife and the Zoological Society of London. We eargerly anticipate the results of the translocation of 121 wart-biters this summer, as it takes at least two years for them to develop and hatch.

We hear from Catchment Sensitive Farming (CSF) officers, Simon Richardson and Roy Hayes, how monitoring the water quality, and CSF advice is helping to protect West Sedgemoor SSSI, one of the low lying wetland sites that makes up the Somerset Levels and Moors.

We have details of the responses to the SSSI owner/occupier survey which was run in the last issue. Thank you to all of you who filled it in. The survey is still running so there is still an opportunity to have your say – it only takes 10 minutes…

Contents

Foraging has been much in the news lately and Natural England encourages people to get out into the countryside to enjoy natural delights in a way that avoids damaging sensitive habitats and species – find out more below.

Finally, I am very pleased to tell you that the latest SSSI report (article below) shows another significant improvement for habitats and wildlife across a number of SSSIs. This is due again to the hard work and commitment from all our partners, farmers and landowners – thank you!

I hope you enjoy reading this issue.

Caroline Cotterell
Director, Strategy Implementation

Horsehay Quarry SSSI – where geological interests rest easy with other conservation features.

Dr David Evans, Senior Environmental Specialist, Natural England.

Horsehay Quarry SSSI (also known as Duns Tew Quarry), near Duns Tew in north Oxfordshire is designated for its exposures of the Middle Jurassic (168 ma) Horsehay Sand Formation.

The Horsehay Sand Formation is worked by Oxfordshire quarry company Smith and Sons (Bletchington) Ltd for sand, which is mixed with other aggregates, or used to make mortars. Despite extending from near Peterborough to near Chipping Norton, exposures of the Horsehay Sand Formation are infrequent and poor.

Extraction in one of the quarries has recently ceased. It has been restored so that access to the geological interest is retained and other nature conservation features are being developed or enhanced, in part as integral components of the new and extended geological exposures.

The quarry is the largest and most extensive exposure of the Horsehay Sand Formation. This formation consists of sands containing structures such as ripples and cross-bedding, as well as seams of clay pellets and sporadic shell debris. They are considered to have been formed on intertidal to subtidal sandflats, perhaps influenced by a nearby delta. Although resting on the Northampton Sandstone Formation, the junction between the two formations represents a gap in deposition (unconformity) with a duration of about six million years.

Sensitive planning

The quarry restoration has been carefully planned by Martin Layer (Planning & Estates Manager) in liaison with Natural England and with local conservation groups to extend the adjacent local wildlife site to create a larger managed nature reserve with permissive public access.

The restoration leaves an extensive and stable face exposure of the Horsehay Sand Formation and overlying Sharps Hill and Taynton formations, and shows a complex assemblage of sedimentary structures that may provide further data in relation to the origins of the sands. The hummocky upper surface of the Northampton Sand Formation forms the floor of the quarry, and the junction with the Horsehay Sand Formation may easily be exposed by clearance of a small quantity of talus.

Restored face exposing the Horsehay Sand Formation and the Sharps Hill Formation (brown) at the top of the face.

Enhancing biodiversity

As with the geological interest of the SSSI, opportunities have been taken to develop and enhance biodiversity. Sand martins are now showing keen interest in the restored quarry face and alongside burrowing hymenoptera (bees, wasps and ants) may soon nest there. Quarry waste has been re-profiled so as to drain into an ephemeral pond.

This introduces water for the first time in to this otherwise dry landscape and will attract waders, ground nesting and farmland birds and support a wide range of invertebrates.

Parts of the site will develop as calcareous grassland while other areas of bare sand will be left to recolonize naturally.

Access will be managed through permissive paths around the perimeter which are located below the crest of the new landform to help reduce disturbance to the birds from people and dogs. An exception to this is a path leading to a bird screen viewpoint sited above the waterbody. It will be possible to arrange access from Smiths Bletchington to study the geological interest when the risk of disturbance to any breeding birds is minimal.

The restoration of this part of Horsehay Quarry provides an example of how particular characteristics of geological sites can be used and integrated into other nature conservation interests whilst being retained for educational and future research.

Achieving the Biodiversity 2020 goals - report on progress

Jonathan Pearce, Biodiversity 2020 Co-ordinator, Natural England

The past year has seen significant improvement for habitats and wildlife across a number of SSSIs. These include Colony Bog and Bagshot Heath, and the Devil's Punch Bowl, both in Surrey; South Dartmoor in Devon; the New Forest in Hampshire; and Gouthwaite Reservoir in Yorkshire.

Bagshot Heath

At Colony Bog and Bagshot Heath, more than 700 hectares of heathland and mires were surveyed and recorded in 'favourable condition'. The site includes the Pirbright Ranges, one of the most active military firing ranges in the country. A few years ago, the heath was characterised by recurring fires producing blackened earth followed by the rapid colonisation of birch, pine and bracken. Nowadays the heath is more open, with scattered trees and bushes, short heather and patches of gorse. This change is due in part to the introduction of red deer by Surrey Wildlife Trust, who are responsible for the nature conservation management of the ranges.

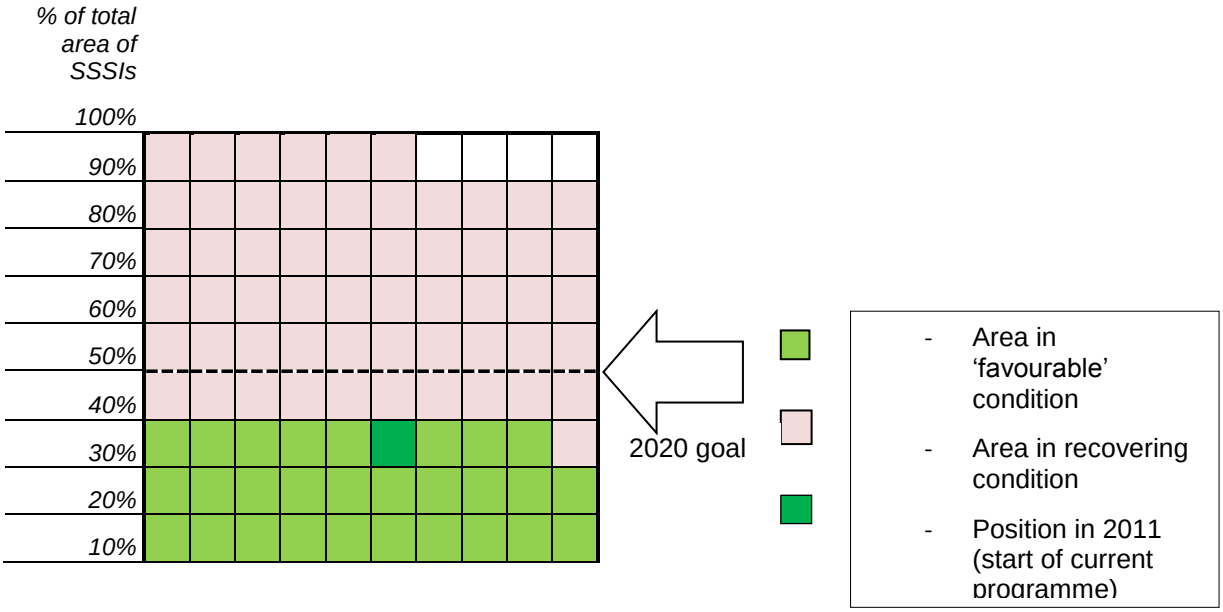
The grazing and browsing carried out by the deer has really improved the area, preventing the development of dense scrub and reducing the risk of recurring fire. This novel approach to heathland management is being funded through a Higher Level Stewardship scheme. The SSSI is an important site for three rare bird species, nightjar, woodlark and Dartford warbler, which will benefit from these improvements to the heathland habitats.

Fossil shells - Gilbert's Pitt

Improvements have also been made at many smaller sites over the past year. An amazing success story has been Gilbert's Pit, a geological SSSI in East London. Here, significant geological deposits dating back 55 million years have been re-exposed and made accessible by volunteers from the London Geodiversity Partnership, working together with the Royal Borough of Greenwich and Natural England. The importance of being able to actually see and touch the rocks which underlie parts of London has been emphasised by visits to the site by engineers working on Crossrail and other major engineering projects.

The past year has seen three new SSSIs notified in England. West Pennines Moors in Lancashire and Greater Manchester extends across several upland habitats and support an impressive array of breeding birds, including merlin, curlew, snipe, lapwing and redshank. At 74 square kilometers it is the largest SSSI to be notified since 2004. Two other new sites are Mid-Cornwall Moors created from an amalgam and extension of six smaller SSSIs, and Pen Park Hole, a 200 foot Triassic cavern underneath the city of Bristol,

Across the country there has been an overall increase of around 5,000 hectares of SSSIs achieving 'favourable' condition in the year between April 2016 and April 2017. 'Favourable' means that all the habitats, species or geological features for which a site is notified are being adequately conserved. The proportion of all SSSIs currently in favourable condition is now close to 39%. Our medium term goal, as part of the government's Biodiversity 2020 strategy, is that half of all sites achieve this state by that year. As the chart shows, (see below) progress towards this milestone over recent years has been slow, but it is moving consistently in the right direction.



Key SSSIs that have improved to favourable condition since April 2016

SSSI	Area improved	Key features
Colony Bog and Bagshot Heath	779	Heathland, mires, nightjar, woodlark, Dartford warbler
South Dartmoor, Devon	690	blanket bog
Geltsdale & Glendue Fells, Cumbria	509 hectares	Blanket bog, upland birds
Bushy Park and Home Park, Greater London	353	Veteran trees, invertebrates
The Cheviot, Northumberland	257 hectares	Blanket bog, upland birds
New Forest, Hampshire	315	Ancient woodland, mires, heathland
Devil's Punch Bowl, Surrey	278	Heathland, grassland
Goonhilly Downs, Cornwall	220 hectares	Heathland, rare plants
Moorhouse and Cross Fell, County Durham	197	Blanket bog
Erme Estuary, Cornwall	163 hectares	Estuary, woodland
Gouthwaite Reservoir, Yorkshire	150 hectares	Wildfowl

Dartford warbler

Nightjar

Reintroduction of endangered wart-biter crickets at Deep Dean

Richard Dyer - Biodiversity Lead, South East Water

The biodiversity element of South East Water's National Environment Programme (NEP) places a duty on the company to investigate all company assets within the South Downs Nature Improvement Area (NIA) and to seek opportunities for biodiversity enhancement schemes.

Assessments were carried out at 72 company owned sites and 10 pilot scheme sites were identified and signed off by Natural England and the Environment Agency by March this year.

Objectives for the 10 pilot schemes are to focus on enhancing a variety of priority habitats and species listed in the Natural Environment and Rural Communities Act 2006. The pilot schemes on SSSIs aim to fulfil Biodiversity 2020 objectives and increase the proportion of SSSIs in favourable condition.

Rare insects and plants will be encouraged to flourish

One of the pilot projects identified was at the company's Deep Dean Water Treatment Works in East Sussex. Deep Dean is a particularly important site as it supports a diverse range of specialist chalk downland species, including potentially the endangered wart-biter cricket *(Decticus verrucivorus)* which is now confined to just a handful of sites in the UK.

With Natural England's involvement and agreement throughout, and in collaboration with experts from Buglife and the Zoological Society of London, work to support the wart-biter cricket recovery programme initially began in 2015.

Sarah Henshall from Buglife and South East Water Biodiversity Lead, Richard Dyer.

Wart-biter cricket

Following a full assessment of Deep Dean's chalk grassland habitat to ensure all the necessary elements were present – short sward, longer tufts of grass and small areas of bare ground – a total of 73 wart-biters were translocated from the donor site at Castle Hill NNR in August 2015.

Catch and release programme initiated

The Castle Hill population of wart-biters had been assessed as being large enough to support a catch and release programme. Where possible the wart-biters were introduced in pairs with one male and one female introduced to a chosen tuft.

Regular checks were made by South East Water's Environment team over the winter months to ensure appropriate levels of grazing and scrub control and the desired sward structure would be present for the second translocation of 48 wart-biters, which took place over summer 2016.

Between August 2015 and September 2016 a total of 121 wart-biter crickets were translocated from Castle Hill to Deep Dean. The success of the wart-biter reintroduction programme will not be fully known until this summer due to the wart-biter eggs taking at least two years to develop and hatch.

Sarah Henshall from Buglife said: "We were delighted when South East Water's environment team recognised the opportunity to encourage rare insects and plants to flourish at Deep Dean on its restored chalk grassland. We hope our partnership means the reintroduced wart-biter crickets will once again thrive at this special site."

Work continues on this pilot project, combined with ongoing and refining management practices that improve the chalk grassland at Deep Dean – key elements in ensuring that SSSI favourable condition status is reached by 2020 and South East Water fulfils its Natural Environment and Rural Communities (NERC) duties.

Protecting the Water Quality and Ecology of West Sedgemoor

Simon Richardson and Roy Hayes Natural England

West Sedgemoor Site of Special Scientific Interest (SSSI) is one of the low lying wetland sites making up the Somerset Levels and Moors RAMSAR and Special Protection Area (SPA).

It stretches over 1000ha of floodplain grazing marsh comprising rush pasture, fen meadow and mire habitats. Small fields and linear ditches support diverse aquatic flora and invertebrate fauna, which are designated features of the SSSI.

The ditch network connects to larger water courses, mostly supplied with water from the River Parrett and local catchment. Poor water quality can impact on ditch ecology leading to excessive algae and duckweed blooms during the summer. Blooms shade submerged aquatic plants and cause oxygen depletion increasing the risk of fish mortality.

In 2015/16, using Water Framework Directive funding (WFD), Natural England (NE) commissioned Plymouth University to undertake water quality monitoring to look in more detail at nutrient distribution across the site.

Continuous monitoring of the West Sedgemoor Site of Special Scientific Interest

Sampling of the ditch network confirmed phosphate levels significantly exceeded WFD Targets (Environment Agency (EA) data), with highest concentrations at inlets and downstream of local catchment inputs. Ecological indicators of eutrophication, including algae and duckweed, also exceeded target limits.

NE has worked closely with the EA, Wessex Water and the Internal Drainage Board (IDB) to improve water quality and highlight the impact of river-borne sources of phosphate on the SSSIs of The Somerset Levels and Moors. Wessex Water has already installed a chemical phosphate removal plant at a key sewage treatment works.

However, analysis of data indicates additional phosphate reduction from point and diffuse sources is needed to meet Favourable Condition.

Catchment Sensitive Farming (CSF) has worked in the catchment for several years helping to protect water quality and tackle diffuse water pollution from agriculture. Extensive cattle grazing during summer is essential to maintain the SSSI's features, but farming activity in the wider catchment can impact on water quality.

CSF has provided free advice and access to capital grants to help address phosphate, nitrate and sediment issues. Through specialist advisory visits and soil sampling, CSF has helped improve targeting of nutrients away from fields with high Phosphate indices. Farm infrastructure advice and grants have helped improve slurry and silage management on farms with over 35 grants awarded locally.

Roy Hayes, CSF Officer said "West Sedgemoor is a challenging catchment with a significant number of livestock farms, including dairy enterprises, operating close to the SSSI. We are working with farmers who deal with large volumes of slurry and the infrastructure issues that arise from this".

Owen Paterson MP (2nd left) visited one farm to look at improvements made through CSF. Roy Hayes (far left of the photo) spoke about the project's benefits and how it is helping to reduce the impact of agriculture on water quality, locally and across other catchments in Somerset.

In order to restore the SSSI to Favourable Condition, additional action will probably be required in three key areas - further reduction of nutrients in the wider catchment and from local sources; interception of nutrients from the River Parrett if feasible; taking opportunities to manage the ditches and make them more resilient to nutrient enrichment. Funding has been secured for a PhD study to investigate options associated with ditch management.

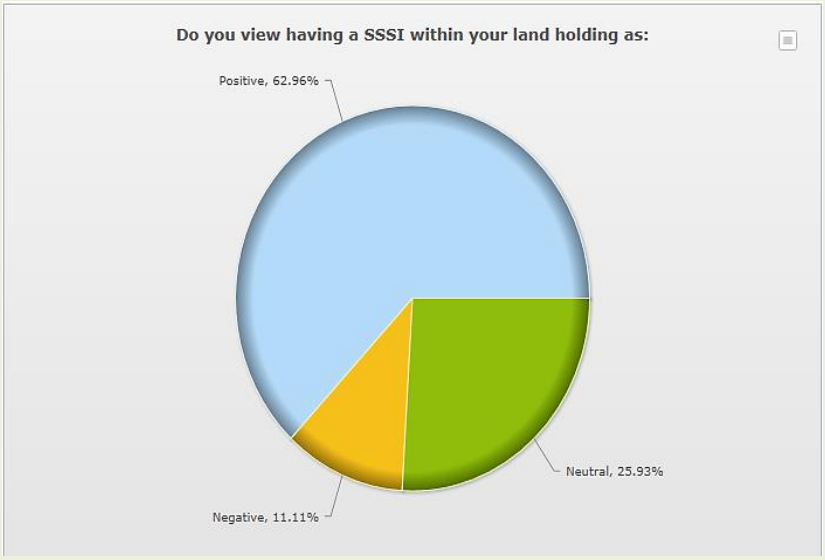
Owen Paterson visits a local farm

Results – SSSI Owner/Occupier Survey

In the last issue of Spotlight, Natural England asked for your views on SSSIs; covering what motivates you to manage your SSSIs and what you would find most useful to help with that management.

There was a good response to the survey from a diverse range of owners and occupiers managing a variety of land holdings including mixed farms, woodland and moorland.

62% of respondents consider that having a SSSI within their land holding is a positive thing, with some really great comments being made;
"It shows that the work we have done over the last 48 years of managing the site is working"
"Proud to have ground that is exceptionally good for wildlife"



Of those who had a less positive view, the most common issue related to the restrictions in place due to the site's designation, although many accepted that these were necessary to safeguard the importance of the site.

The motivations described in the survey were equally encouraging with a huge percentage, over 88%, citing supporting wildlife as one of the most important drivers with providing/maintaining habitats a close second at over 81%.

One of the most valuable aspects of the survey came through the answers provided for what would be most useful to assist with managing SSSI land.

The most positive response came in relation to having contact with other landowners with similar land, which all respondents saw as useful/ very useful.

	Very useful	Somewhat useful	Not very useful	Not at all useful
Contact with landowners with similar land	36.0% (9)	64.0% (16)	0.0% (0)	0.0% (0)
Maps annotated with management details	41.7% (10)	45.8% (11)	8.3% (2)	4.2% (1)
Illustrated guides on wildlife and habitat management	25.0% (6)	58.3% (14)	12.5% (3)	4.2% (1)
Fact sheets on species identification and habitat management	20.8% (5)	62.5% (15)	8.3% (2)	8.3% (2)
Walks and/or talks to discuss management	28.0% (7)	56.0% (14)	8.0% (2)	8.0% (2)

In addition to the potential ideas listed above, over half the respondents requested more effective guidance as to the environmental benefits and reasoning behind specific techniques to assist with the on-going management of their SSSIs.

The information gathered through the survey provides invaluable evidence that Natural England's focus on collaborating with land managers, listening to their motivations and providing advice and support to achieve those aims, is likely to be a most effective way of achieving better conservation.

Thank you to everyone who has taken the time to respond. If you were unable to complete the survey previously and would like to have the opportunity to voice your opinions, the survey is still it is still running and can be found at the following link.
http://www.smartsurvey.co.uk/s/sssi-occupier2/

hawthorn young buds and berries can be foraged

Foraging for wild food on protected sites

Natural England encourages people to get out into the countryside and sample its delights – collecting autumn fruits or gathering elder flowers for summer cordial are great activities that connect people with nature - but we also want to ensure that foraging activities avoid damaging sensitive habitats and species.

To this end Natural England are working with land managers, educational foragers, commercial food supply companies and environmental organisations to facilitate sustainable wild foraging practices. Jointly we want to support people foraging for personal use to enjoy the great outdoors and learn more about the natural environment, as well as enabling commercial foragers to develop practices that help manage our more precious environments, including our protected sites.

Protected Sites

Foraging for wild food on protected sites usually requires permissions to be in place before activities take place. For example, on land without a public access provision, land owner permission should always be sought before carrying out foraging activity.

However, where land is also designated as a SSSI, Natural England consent might also be required. This consent process allows us to assess the impacts of proposed activity and provide advice on how to avoid activity that might damage or disturb the wildlife the site is important for.

On land that has public access provision (for example Countryside and Rights of Way Open Access land or a public right of way is present) the right of public access will not extend to the foraging and gathering for wild food, or byelaws may be in place that specifically restricts foraging. As a result it's worth researching your foraging sites and making sure that you have any necessary permissions in place.

Natural England is only able to issue consent to legally notified owners and occupiers of SSSI land – another good reason to seek landowner permission before carrying out foraging activity.

Other considerations
All wild plants, whether they are in a protected site or not, are protected against unauthorised uprooting by the Wildlife and Countryside Act (1981). In addition, it an offence to intentionally pick, uproot or destroy certain wild plants that are included in Schedule 8 of the Act. Schedule 8 plants include a range of mosses, lichens and flowering plants including Derbyshire feather moss, New Forest beech lichen, and Pennyroyal. A full list of schedule 8 plants can be found here.

Further information
If you would like any further information relating to Natural England's Foraging Partnership or advice on foraging activities on protected sites please contact ProtectedAreas@naturalengland.org.uk

We have a statutory duty to keep up-to-date contact details for our SSSI owners / occupiers. Please can we have the following details to ensure our records are correct:

- **Your name**
- **Name of SSSI**
- **Postal Address**
- **Email Address you would like correspondence sent to**

If you would like to receive future copies of the SSSI Annual Statement and newsletter, please let us know by email on sssi@naturalengland.org.uk or call 0300 060 3900

Photo credits
Front cover: Alnmouth Saltmarsh and Dunes Site of Special Scientific Interest Northumberland Natural England/Peter Wakely.
Page 3: Restored face exposing the Horsehay Sand Formation and the Sharps Hill Formation (brown) at the top of the face – David Evans, Natural England.
Page 4: Bagshot Heath – Graham Steven, Natural England; Fossil shells – David Evans, Natural England.
Page 5**:** Dartford Warbler – Tom Lee, Natural England; Nightjar – Natural England.
Page 6**:** Sarah Henshall and Richard Dyer - Ady Kerry on behalf of South East Water.
Page 7: Sonde continuous monitoring - Alex Taylor University of Plymouth.
Page 8: Owen Paterson - Roy Hayes, Natural England.
Page 9: Hawthorne foraging – David Burton – Natural England.

Natural England is here to secure a healthy natural environment for people to enjoy, where wildlife is protected and England's traditional landscapes are safeguarded for future generations.

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