Spotlight on SSSIs

Working towards the goals of Biodiversity 2020

Issue 5 – December 2014

It is with great pleasure that I bring you the fifth issue of 'Spotlight', the newsletter highlighting the achievements of farmers and other land managers in improving the condition of SSSIs.

England's network of SSSIs was established as a refuge for our rarest species and habitats, and our most important geological treasures. That's why it's so important that each site is well managed and that it makes the best possible contribution to conservation.

Working together with a broad range of partners, Natural England's aim is to improve the condition of all SSSIs. Our medium term goal, set out in the government's biodiversity strategy, is to have 50 per cent of sites in favourable condition by 2020.

During the past few months we have taken stock of recent progress and sought to understand what we are likely to achieve by the end of the decade. The task ahead is a tough one. We need to see an improvement in over 125,000 hectares of SSSIs – or an area roughly the size of Salisbury Plan each year for the next six years. During the past two years though, the proportion of sites in favourable condition has hovered stubbornly at around 36 per cent. Clearly, we are going to have to make much quicker progress if we are to reach our goal for 2020.

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The good news is that our review shows that many SSSIs will improve in condition in the next few years and that it is possible to get 50 per cent of the series into favourable condition by 2020. But this will only be achieved through well-focused action on the part of Natural England staff, working hand in hand with the thousands of landowners, managers and conservation partners that maintain individual sites.

In this issue of Spotlight you can read about a wide range of work taking place on SSSIs to improve nature conservation. On the River Eden in Cumbria the Catchment Sensitive Farming scheme is helping to improve water quality. At Four Ashes Pit in Staffordshire recent restoration work has opened a window onto climatic conditions during the last ice age. And at Clipsham Quarry in Rutland the introduction of sheep grazing and scrub clearance has allowed rare plants and butterflies to flourish again. You can also read about a new team in Natural England, The Field Unit, who have been specifically brought together to help get SSSIs into favourable condition.

I hope you enjoy reading more about how SSSIs are working to conserve England's rarest wildlife, habitats and geological treasures.

Mike Smith
Programme Manager, Protected Sites

All spruced up - geological site management work at Four Ashes Pit SSSI, Staffordshire

Holly Addis (Aberystwyth University), and Eleanor Brown (Natural England Senior Geologist)

In England, over 1200 SSSIs (or about 25 per cent of all SSSIs) are notified for their geology. These are nationally or internationally important sites selected through a Great Britain-wide scientific audit called the Geological Conservation Review. They are a vital resource for both science and society as they help us to understand how our natural environment works and how it changes over time. Natural England works with land owners and occupiers to manage geological SSSIs in England.

Four Ashes Pit, a former sand and gravel extraction site in south Staffordshire, is one such geological SSSI. In the 1960s and 70s it was a working quarry and supplied scientists with information concerning climate change over the last 120,000 years of the Ice Age. The sediments at Four Ashes record the growth and decay of the last British and Irish Ice Sheet, which reached its maximum extent in the Wolverhampton area about 24000 years ago. However, in the last 40 years most of the former quarry has been landfilled and the SSSI had become overgrown and waterlogged. This is a problem because shallow Ice Age sediments are particularly susceptible to disruption by tree roots and damage from soil processes. The SSSI was assessed by Natural England as being in unfavourable condition and much of its scientific interest was thought to have been lost.

Geologists from Keele University visited Four Ashes in 2011 and suggested conservation measures. Shortly afterwards researchers from the University of Liverpool involved in the BRITICE-CHRONO research project (http://britice-chrono.org/) asked to carry out fieldwork at Four Ashes. BRITICE-CHRONO is investigating the timing of the growth and decay of the last British and Irish Ice Sheet, to inform models of ice sheet change for current day ice masses; principally land - ice retreat in Antarctica and Greenland.

This work will help inform projections of future global sea level change. The renewed research interest led Natural England to liaise with the landowner and prioritise Four Ashes for a Conservation and Enhancement Scheme (CES) grant to clear vegetation and improve drainage.

With the assistance of Natural England's Staffordshire Land Management Team, the landowner and farm manager have now completed these works and returned the site to favourable condition.

Following the site management works, researchers from the BRITICE-CHRONO project were able to carry out fieldwork at Four Ashes in late 2013 and 2014.

They exposed the sediments (called Irish Sea Till) that were lain down by glacial ice. The glacier, part of the most recent British and Irish Ice Sheet, originated in the mountains of Scotland and the Lake District, and flowed through the Irish Sea entering the Cheshire, Shropshire and Staffordshire lowlands from the north.

The sands and gravels beneath the glacial sediment were deposited by rivers before the glacier reached the area. Within the sands and gravels are lenses of organic mud which contain pollen and insects, and these fossils tell us more about the cool climatic conditions at Four Ashes before the advance of the glacier.

The sands and gravels contain ice wedges, showing that the area has also been affected by permafrost. Although the fieldwork did reveal that tree roots had disrupted the upper part of the geological profile, it also established that Four Ashes is still an important geological site that gives us insight into the growth of the last British and Irish Ice Sheet.

The successful management works at Four Ashes have restored the site to favourable condition. However, a site visit in July 2014 showed that the vegetation is returning and water levels are rising, therefore regular vegetation and drainage management will be needed

Four Ashes Pit SSSI before clearance. The former pit faces are heavily wooded which is preventing access to the geological profile.

Four Ashes Pit SSSI after clearance works. Note the waterlogging in the former pit floor - here brash from the vegetation clearance was laid down to improve access.

The CES agreement is for five years and so periodic management at Four Ashes will continue.

Four Ashes Pit SSSI is now contributing to the global scientific efforts to understand future ice sheet and sea level change. This achievement shows that partnership working between the landowner and farm manager, Natural England and the academic community has been a great success. The authors thank all those involved in achieving this great result.

Acknowledgements

We acknowledge all those who have assisted with returning this site to favourable condition, including the Landowner and Farm Manager, members of Natural England's Staffordshire Land Management Team, scientists from Keele University and members of the BRITICE-CHRONO project at the University of Liverpool. Holly Addis visited Four Ashes Pit SSSI during a work experience placement at Natural England.

A story of Blacktoft

RSPB Blacktoft Sands bird sanctuary is situated on the South side of the River Ouse and is a Site of Special Scientific Interest (SSSI). It is 122 hectares of tidal reed bed with brackish lagoons and has 270 species of birds including avocet, bearded tit, bittern, hen harrier and marsh harrier and also water voles. Four fantastic Konik (Konig) ponies are used to graze 32 hectares of the site.

Sue Nicholson, Clerk to Blacktoft Parish Council tells us about a boat trip along the River Ouse, which is also SSSI, and the devastation that the December 2013 floods caused.

Last year in June 2013 a group of us from Blacktoft were able to enjoy a morning sailing on THE COMRADE – the Humber Keel based in South Ferriby. An early morning start saw us chug out of the lock gates and into the mighty Humber. We travelled west past Reeds Island and on towards Yokefleet, in our home parish of Blacktoft, on the north bank of the River Ouse. What a fantastic day, what a fantastic river, what a fantastic vessel!

The tide turned at Blacktoft so we 'free wheeled' to just short of Yokefleet and dropped the sail, cutting the engine. Complete and utter silence. But was it? The sound of the sail flapping, the birds, the water and then the sound of the Konig ponies, on the RSPB Blacktoft sands bird sanctuary, crashing through the reeds to see what we were up to. They were so near we could see the whites of their eyes.

Konig ponies graze Blacktoft

But what a difference six months can make. The beautiful river was turned into a demon on the night of Thursday 5 December 2013. The devastation, destruction and heart break caused that night by the tidal surge will be for ever etched on the memories of those who witnessed it.

Another seven months on - July 2014 - and we returned to THE COMRADE for another days sailing. This time we chugged out the lock at South Ferriby and headed east under the magnificent Humber Bridge and out towards the mouth of the estuary passing Hessle and Hull and Immingham.

From a totally different perspective we were able to see other places on the river which had been hit by the tidal surge. But, as in our parish, everything looked as though nothing had happened. From the river we could see no homes turned inside out, no belongings unceremoniously dumped on grass verges, we could see no skips, no businesses struggling to get back on track. But, having experienced what we had all experienced in Blacktoft that fateful night, we knew what everyone hit by the surge had been through, were still going through and quite possibly will still have to endure.

This time we turned on the high tide and ran aground at Hawkins Point. About an hour to enjoy our lunch, mugs of tea and the company of the seals.

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The number of large cargo ships coming in and going out on the tide shows how important this estuary and river is. Hull, Grimsby, Immingham, the inland port of Goole, access to Selby and York (the Ouse), Nottingham and the midlands (the Trent) and even across the country to Liverpool.

This river is mighty and mighty important. The same can be said for the people who live and work along the banks of the river. They are important. The wildlife and the riverbanks are equally important.

Marsh harrier found on Blacktoft Sands SSSI

If this river floods, then the biggest part of the East Riding of Yorkshire will be devastated – from the east coast right across to beyond Howden and upwards to Market Weighton.

Since the tidal surge Blacktoft Parish Council has and still is working very hard with Natural England, the Environment Agency, the Ouse & Humber Drainage Board, the East Riding of Yorkshire Council and MP David Davis to ensure the river and estuary flood defences are improved.

Blacktoft Parish Council has tightened up its emergency plan and has increased its number of pumps and purchased a generator. This equipment will not stop tidal surges or rivers or dykes flooding but will help its residents in their hour of need. It would be lovely if the flood emergency equipment stored in Blacktoft never ever has to be used again, but we must be prepared.

For more information about Blacktoft Sands visit the RSPB website www.rspb.org.uk/reserves/guide/b/blacktoftsands/, email blacktoftsands@rspb.org.uk or telephone: 01405 704665

Working to build bridges and improve habitats on the River Eden in Cumbria

The Catchment Sensitive Farming (CSF) capital grant scheme offered £15.5 million to farmers across England to reduce diffuse water pollution from agriculture in 2013-14, by funding on-farm improvements, including upgrading farm infrastructure.

The scheme saw over 2000 applications received, with a total of 1600 grant offers being made. The scheme offers 50 per cent funding for improvements which help reduce the impact of diffuse water pollution and is match-funded by farmers, with a minimum total of £31m going directly into local economies whilst bringing about measurable improvements to local water quality, which in turn benefits both people and wildlife.

A new element this time round is funding for improvements which will help to improve Natura 2000 nature protection areas – the most vulnerable of our wildlife sites. Over £3m from the CSF capital grant scheme will be spent this year to help protect these sites.

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Using a Catchment Sensitive Farming's Natura 2000 capital grant in a three-way partnership to improve the River Eden

In Cumbria, close working between CSF, the Eden Rivers Trust and farmers, Malcolm and Christine Todd, will reduce diffuse pollution entering Dacre Beck in the River Eden Catchment. This will improve the habitat for fish and the white-clawed crayfish, a species which is in decline but which likes clear, well oxygenated water, in fast flowing rivers.

Croft House Farm is situated on Greaves Beck, a small tributary which flows into Dacre Beck and then into the River Eden. Croft Head is a dairy unit with 140 cows, 230 young stock, 90 beef cattle and 330 sheep. Most of the land at Croft Head has Greaves Beck flowing through it and access to the rest of the farm is across the beck, which flows into Dacre Beck. Dacre Beck is designated as a SSSI for the white-clawed crayfish and other species and is failing water quality targets for both phosphorus and sediment three times over.

The white-clawed crayfish

An infrastructure plan drawn up in 2008 highlighted that slurry storage amounted to a considerable 8-10 weeks. Mr and Mrs Todd have been working towards reducing the volume of slurry created by roofing feeding areas and repairing gutters and drains. They have also now finished a new one million gallon slurry tower. They have already built one bridge across Greaves Beck and wanted to repair an old culvert bridge. In other areas, the cows and machinery had to cross through the beck, introducing soil sediment and associated nutrients into the water.

During a Catchment Sensitive Farming visit, the question of fencing off the beck and building bridges was discussed. Eden Rivers Trust (ERT) are working to protect as much of the river as possible from sediment input and are willing to fund fencing; but the Todd's would still need access across the beck for the cows. This led to the problem of where to locate bridges and how to get the cows there without damaging the land and making the bridges a focus point for introducing sediment into the beck.

After discussing possibilities it was decided that CSF could pay half the costs of extending cow tracks from an existing track, and also roofing over a feeding yard. ERT meanwhile committed to fully fund fencing both sides of the river and half the cost of the building two new bridges, one in a new location to connect the cow tracks and one to replace the existing broken culvert bridge which was a potential barrier to fish migration.

Working together, ERT, CSF and Mr and Mrs Todd were able to agree on a proposal of work which suited all. The cows will benefit from easier and less boggy ground for walking thus reducing lameness and potential vets' bills; the farmers also benefit from reduced time spent moving the cows to distant fields and the river benefits from a reduction in sediment, nutrients and disturbance, whilst a barrier to fish migration is also removed.

Work on the bridges is now complete, as is the slurry storage and the tracks and river fencing will be complete by Christmas, which means that in one year, by working together, the most significant environmental problem on this farm will be resolved

Using CSF funding for N2K sites, with the Eden Rivers Trust funding and Mr and Mrs Todd's resources, particularly with their commitment to addressing slurry storage issues, will enable optimum environmental benefit for the river, the white-clawed crayfish, the SSSI and the farm business.

Hare's-tail cotton grass on Moor SAC/Thorne and Hatfield Moors SPA.

First Site Improvement Plans for Natura 2000 sites published

The Improvement Programme for England's Natura 2000 sites (IPENS) is a project supported by European Union LIFE+ funding, which will enable Natural England, the Environment Agency, and other key partners to plan what, how, where and when they will target their efforts on Natura 2000 sites and areas surrounding them.

Natura 2000

There are 337 Natura 2000 sites in England, in both marine and terrestrial locations, covering over 2 million hectares (these are underpinned by SSSIs).

Natura 2000 is a European designation (including Special Protection Areas and Special Areas of Conservation) to protect some of our most important features, habitats and species. 33,000ha of this is in unfavourable condition and a further 235,000ha is 'at risk' of decline into unfavourable condition.

What is the purpose of IPENS and what will it deliver?

The purpose of IPENS is to achieve the required conservation status on all Natura 2000 sites in England in particular helping to manage the risk of decline and developing solutions for the remaining unfavourable sites. It will improve the condition of our European sites and help us meet the Biodiversity 2020 target for protected sites. By 2015 the programme will produce a Site Improvement Plan for each Natura 2000 site.

Site improvement Plans (SIPs)

IPENS is developing a SIP covering each Natura 2000 site. The SIP is a single, short reference document that covers the whole site - complementing any existing plan(s) for the site. It is not a detailed habitat management plan, or a fully agreed and funded programme of specific measures ready for on the ground delivery, however they have been developed in conjunction with the bodies that will be responsible for delivering the plans.

The SIP:

- Outlines the priority issues affecting the condition of the site.
- Identifies the actions required to address them and who is responsible for taking them forward.
- Highlights potential funding sources to action them.

The actions in a SIP will need to be delivered through a variety of other plans, programmes and interventions for which Natural England and its partners are responsible.

As we move from analysis to action, this will require close working with landowners and managers.

The first SIPs have now been published and are available to view on Natural England's publications catalogue.

All SIPs will be available by the end of December. For further information: IPENS Webpages: IPENS mailbox:

Clipsham Quarry Company

The Clipsham Quarry Company owned by Sue and Alan Thomas is a private, family run business that produces stone block to the highest standard using the traditional quarrying techniques of their ancestors.

Part of the quarry is also SSSI and we caught up with Sue the Managing Director and asked her a few questions about what it's like running a business on land that is also designated SSSI.

How long have you owned Clipsham Quarry and what made you decide to go into this line of business?

I inherited Clipsham Quarry from my Father. It has been in my family since 1876. I am the fourth generation of my family to own and run the quarry.

A marbled white. One of the few butterflies to have increased in the last few years. 20 years ago you saw very few.

Clipsham Quarry is an SSSI – what is it designated for?

The key biological feature of the SSSI is species-rich limestone grassland, although the site is also a geological SSSI because of the exposures of Lincolnshire Limestone.

How large is the SSSI – does it cover the entire quarry?

The SSSI also covers the adjacent woodland, but within the quarry the area is 21.9 hectares (54.2 acres), this is approximately half of the quarry area.

What condition is the SSSI in?

It's currently unfavourable recovering.

What methods do you use to manage the SSSI?

We cut the scrub back occasionally to allow the rare plants and butterflies to flourish. We graze sheep on the area for approximately 8 weeks of the year.

What are the challenges of owning a business that has SSSI on it?

It is quite a responsibility, which we take very seriously. It is costly to employ volunteers to cut the scrub, we have to pay to have the sheep and they need checking regularly. We do our best to protect the area from ramblers etc. by monitoring it regularly.

How do you overcome those difficulties?

Natural England (in particular Martin Banham) has been very supportive in setting up and attending site meetings and guiding us in what we need to do. The Rutland Natural History Society support us by monitoring the site and holding regular moth/butterfly/slow worm/ and plant surveys.

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What are the positives of owning a SSSI?

It is an honour and we are very proud. It is an example of what happens to quarry land when it is quarried out and how it can regenerate and produce rare species.

Martin Banham is the Natural England Adviser for Clipsham Quarry and says 'Sue is working really hard to return the site to favourable condition. By re-introducing grazing and scrub control we are seeing the limestone grassland really benefit; it was just alive with butterflies throughout the spring and summer. I guided them towards a suitable grazier and volunteer team who have been working on the site to manage the scrub.

The quarry showing tree and shrub invasion

Tapping into the site knowledge of local naturalists has been so worthwhile. The management work, solely funded by the owner, has made a fantastic difference and will ultimately return the site to favourable condition.'

Find out more about Clipsham Quarry - http://www.clipshamstone.co.uk/

Natural England Field Unit - A new team of experts at Natural England

Spotlight takes a look at the new Field Unit team, the rare discovery on a SSSI and how their enhanced skills will contribute towards getting SSSI's into favourable condition.

An exciting new team, the Natural England Field Unit (NEFU), has now been set up within Natural England. The Field Unit is made up of 14 original Natural England staff members from around the country and 11 externally recruited.

The team benefit from experienced advisers with a varied range of ecological and habitat management skills and knowledge; combined with the external members of the team that bring a wealth of knowledge from a wide range of organisations such as the Environment Agency, ecological consultancies and charities such as the Bumblebee Conservation Trust and the Wildlife Trust. Skills held by the new recruits include fungus, moss, plant, bird and even diatom (single celled algae with silicon cell walls) identification.

Fungus Finders

The team are already making best use of their skills, including surveying sites, to support area teams. A recent site visit to North Lincolnshire, where the Field Unit have been surveying for rare and scarce lichens, resulted in a discovery of a rare fungus. Lichens are difficult to identify and the Field Unit are pleased to have provided a specialist condition assessment whilst discovering and identifying the rare fungi.

The rare fungus, *Poronia punctata*, commonly called Nail Fungus, is found on the dung of ponies and horses and takes its name from the resemblance of nails. Hugh Williams, the site manager at Risby Warren SSSI said, "Well done to the Fungus Finders! Amazing how you are all able to identify such rare specimens on such a large area - rather like finding a needle in a haystack, well done."

Training and mentoring to increase skills

An important responsibility of the Field Unit is to share their knowledge at every opportunity to enhance the field expertise within area teams through mentoring and training. It is planned that 100 technical (and fun!) courses will be delivered by the NEFU to Natural England staff within the next year. Courses are likely to include geological conservation training, vegetative plant identification (identifying plants when not flowering), fungi identification, bird identification and courses on habitats such as grassland, heathland, woodland and wetlands.

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Enhancing field skills to get SSSIs into favourable condition
Each team member has been encouraged to develop their existing field skills, develop new skills and share experience and knowledge at every opportunity. Enhancing field skills and increasing the confidence of local staff will enable them to carry out work more effectively and efficiently, allowing Natural England to get SSSIs into favourable condition, a Biodiversity 2020 target.

The NEFU staff are passionate about the environment and are very keen to share their knowledge and develop new and existing skills to benefit England's wildlife. Much of the work carried out will involve SSSIs and the team will be carrying out many surveys on SSSIs in the coming year. It is the beginning of an exciting time for all involved!

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**

Please also let us know if you would like to receive future copies of the SSSI Annual Statement and newsletter. You can email us on sssi@naturalengland.org.uk or call 0845 600 3078

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