

Making Space for Nature - Assessment of non-SSSI semi-natural habitats and the potential for ecological networks in the Ant Valley - The Broads

Aim

The Lawton Review recommendation 14 relates to managing protected landscapes, such as the Broads. This document sets out where we are towards achieving recommendation 14 and sets out suggestions of what is required, particularly for non-SSSI areas, to achieve this target for the Ant valley as a whole.

Background

The Lawton Review refers to managing protected landscapes and makes the following recommendation (Page 80 Making Space for Nature):

'England's National Parks and Areas of Outstanding Natural Beauty frequently contain a richness of wildlife which contributes to their special qualities. Although they are designated for a number of reasons, the statutory purpose of both of these designations includes the conservation of nature, and they together contain more than 50% of SSSIs by area. Despite this, the evidence that protected landscapes provide biodiversity benefits over and above those delivered by SSSI or LWS designations outside these areas is mixed. Nonetheless these large areas undoubtedly provide an excellent base for delivering a more effective ecological network, not least because their legal standing, governance and management plans provide a basis for coordinated action to integrate effective ecological networks with landscape and other uses, including farming, education, recreation, tourism and the provision of other ecosystem services.

We believe that National Parks and AONBs should become exemplars of coherent and resilient ecological networks. This will require strong leadership and high levels of cooperation between landowners, public bodies, businesses and the voluntary sector.

Recommendation 14. In view of the opportunity presented by their existing statutory remits, in National Parks and AONBs:

- (a) favourable condition of SSSIs should be achieved as quickly as possible;
- (b) non-SSSI semi-natural habitat should be brought under management equivalent to SSSI standards; and
- (c) other land should be managed so as to enhance connectivity.'

This document firstly identifies where the condition of semi-natural non-SSSIs in the Ant valley are reaching SSSI standards and where further assessments are required to determine condition. Its second aim is to bring together existing ecological opportunity mapping, produced under the Broads BAP, to provide an approach for categorising 'other land' as referred to in the Lawton Review that is required to enhance connectivity and ecological integrity.

Reviewers

The review was undertaken by Natural England and Broads Authority staff that have extensive on the ground experience of the sites and with the Broads Authority having particularly the non-designated land.

Resource

Each of the four members of staff involved spent 2 hours reviewing the maps and identifying the potential additional land, and 3 hours looking at some of these areas on the ground. The mapping and write-up took an additional 11 hours. The total therefore for this part of the exercise involved 31 hours.

Draft maps

The draft maps attached show the extent of additional land for consideration within a revised boundary. One map shows the area to the north of the Ant Broads & Marshes SSSI and the other shows the Ant valley south to the River Bure. These maps are an internal Broads Authority, Natural England starting point for wider discussions with land owners/managers. Some of these discussions are ongoing and the sites identified would remain on the map, others might be removed or modified following wider discussions and some may be added.

Data sources

- Extensive and detailed knowledge of SSSIs by Adrian Gardiner; extensive and detailed knowledge of designated and non-designated land by BA staff.
- Broads' Authority BAP habitat opportunity mapping project.
- Broads' Authority Ant Valley potential habitat creation projects.
- UKP aerial photographs.

Data gaps

The main data gap relates to the need for detailed survey for all potential features over the land identified in categories 1 - 6 above. There is good data for all of the sites identified in Category 1. There may be existing data for other sites in categories 2 – 6 and this would need to be collated.

Linked with the survey needs above and potential designation, would be the need to identify land ownership for all the parcels that fall outside of the existing SSSIs.

Category	Name of SSSIs	Area (ha)	Comments
SSSIs	<i>Ant Broads & Marshes</i>	745.77	
	<i>Alderfen Broad</i>	21.60	
	<i>Smallburgh Fen</i>	7.63	
	<i>Broad Fen, Dilham</i>	38.55	
	<i>East Ruston Common</i>	39.49	
	Total SSSI	853.04	87% in favourable or recovering condition
1	Existing high ecological value of N2K/ SSSI quality	153.29	
2	Wet woodland, probably of N2K/ SSSI quality	231.19	
3	Semi-natural vegetation not of SSSI quality	706.16	
4	Areas necessary for hydrological integrity	118.36	
5	Areas necessary for management integrity	31.99	
6	Heathland/ acid grassland of SSSI/ CWS quality	50.64	

Category 1 – existing high ecological value of N2K/ SSSI quality (153.29ha)

These are sites of high known value, at least equal to that of the existing SSSIs. This comprises 60.15ha of fen/ open water habitat and 93.14ha of grazing marsh with lowland ditch systems. Both habitats will support SPA bird populations, invertebrate assemblages and species (swallowtail, Norfolk hawker dragonfly, Desmoulin's whorl-snail), otter, and vascular plant assemblage species.

Category 2 – wet woodland, probably of N2K/ SSSI quality (231.19ha)

These are all known wet woodland sites, the majority of which are considered to be of equal value to those areas within the existing SSSIs. At the time of SSSI notification, the focus was largely on protecting the fen and open water habitat which was undergoing decline at the time. The importance of the Broads' wet woodland was given greater recognition at the time of SAC designation when 'Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*' was recognised. The status of sites in this category would need to be confirmed through detailed survey work.

Category 3 – semi-natural vegetation not of SSSI quality (706.16ha)

This is the largest category identified, and is generally not considered of SSSI quality at the present time. However, there are some significant caveats to this statement that would need to be validated in the light of extensive fieldwork. Certainly, a number of the blocks of land are known to support a significant proportion of the Broadland SPA populations. For example, St Benet's Levels at the south of the Ant is a key area for Bewick's swan and whooper swan. Additionally, some of the grazing marsh blocks may contain dyke systems of high value.

The primary inclusion of these category 3 areas would be to allow for adaptation to climate change, principally for fen, wet woodland and wet grassland (including lowland ditch systems) habitat creation. This is potentially a significant issue in the Broads system in the foreseeable future. Some of this is habitat enhancement is already occurring, such as with the fen creation project at South Fen, between Broad Fen, Dilham SSSI and East Ruston Common SSSI. It would also play a key role in improving hydrological functioning across the whole valley and within the existing SSSIs, protection of peat, carbon sequestration and ecological connectivity.

These category 3 sites do largely fall within the definition of land to support the integrity of the site within the context of the SSSI guidelines, and as such could be largely be justified for inclusion within a revised boundary (following survey work). However, they are also clearly part of the wider landscape scale context of the existing SSSIs, and part of the consideration being given to the protection of biodiversity through the Lawton review and the forthcoming White Paper.

Category 4 – areas necessary for hydrological integrity (118.36ha)

Whilst the first 3 categories would all significantly contribute to improving hydrological functioning, this category is where this would be the primary function, coupled with direct amelioration of diffuse pollution issues.

Category 5 – areas necessary for management integrity (31.99ha)

The preceding categories all contribute to management integrity. This category identifies those sites where this is the primary function. It should be noted that there are potentially many situations around the edges of the existing SSSIs where land would be required to support management within the floodplain, particularly where grazing is introduced.

Category 6 – heathland/ acid grassland of SSSI/ CWS quality (50.64ha)

Heathland/ acid grassland was once extensive on the lighter soils of the valley sides within the Broads, and is now all but disappeared. The sites identified all currently support heathland/ acid grassland of varying quality and condition. All require restoration, some of which is occurring through HLS. Aside from these areas there are further locations where heathland/ acid grassland creation would be achievable/ desirable.

Recommendations

Consider extension of the SSSI boundary

The proposed boundary extensions are detailed on the attached maps, and constitute a potential additional 1291.63ha. They are based on the best current knowledge of those involved in the exercise, but are unlikely to be exhaustive. Six categories have been adopted to capture the different status of the blocks of land involved, following the categories identified for extensions in Phase 1 of this exercise. There are also significant further areas within the catchment where land management has an impact on the existing SSSIs.

The potential boundary extension could result in land designated from the River Bure in the south to the headwaters of the Ant. It would potentially link all five existing SSSIs in the Ant Valley forming a contiguous block of designated land. There would be significant time commitment to complete the review to the point where a revised package could be presented to NE Council. Additional guidance would be required to underpin the selection for areas for inclusion in a revised site from categories 3 – 6. This particularly relates to how we address adaptation to climate change, hydrological functioning, management integrity and ecological connectivity in future SSSI selection. The majority of category 2 land is currently managed by the Broads Authority.

There are a range of problems and issues associated with the designation of a large SSSI; if the above was actioned, it would result in an SSSI of over 2000ha.

Designation of a Local Wildlife Sites

The Broads has few Local Wildlife Sites. These are sites are designated for high biodiversity value but do not receive full protection (e.g. County Wildlife Sites, Local Nature Reserves. Lawton recognises that they can be used to influence the direction of agri-environment funds and landowner awareness but in general their management is under-funded. Local Wildlife Sites are important to future ecological networks, because they not only provide wildlife refuges in their own right but can act as stepping stones and corridors to link and protect nationally and internationally designated sites. Government policy is to provide protection to LWS through the planning system.

Designating a Local Site network and improving the ecological quality will require proper engagement with landowners, together with the provision of management advice and support. Effective Local Site designation targeted at the wet woodland area of 231ha would result in greater awareness of the importance of this habitat thus protection through the Planning process.

Prioritisation of Environmental Stewardship

HLS is the single most important tool for managing many components of England's ecological network. The prioritisation of payments towards the areas identified in this report and working with willing land managers is essential. A partnership approach is required to focus efforts of local NE, RSPB, BA, Wildlife Trust officers to deliver simple, Broads relevant, packages of advice to enable quality targeted HLS schemes.

The Broads valley-side opportunity mapping (<http://www.broads-authority.gov.uk/managing/broads-biodiversity-action-plan.html>) ranks all land parcels close to Broads semi-natural habitats that may act as a buffer zones, stepping stone habitats or corridors. HLS cannot be expected to fund everything. This report prioritises land within two categories (5 and 6) and suggests potential areas for these within the Ant valley.

Lawton recommends an 'ELS-Plus' scheme that pays more than ELS and can be more precisely targeted, for example to buffer a particular site or sites. It is uncertain if funding constraints will result in any translation into policy.

Landscape-scale approach

A Broads partnership approach to delivering landscape scale 'natural enhancement areas', developed by the Conservation Partnership, needs to be focused around 'enhancing our changing wetland'. This will be guided under the area Broads Plan and Broads Adaptation Plan.

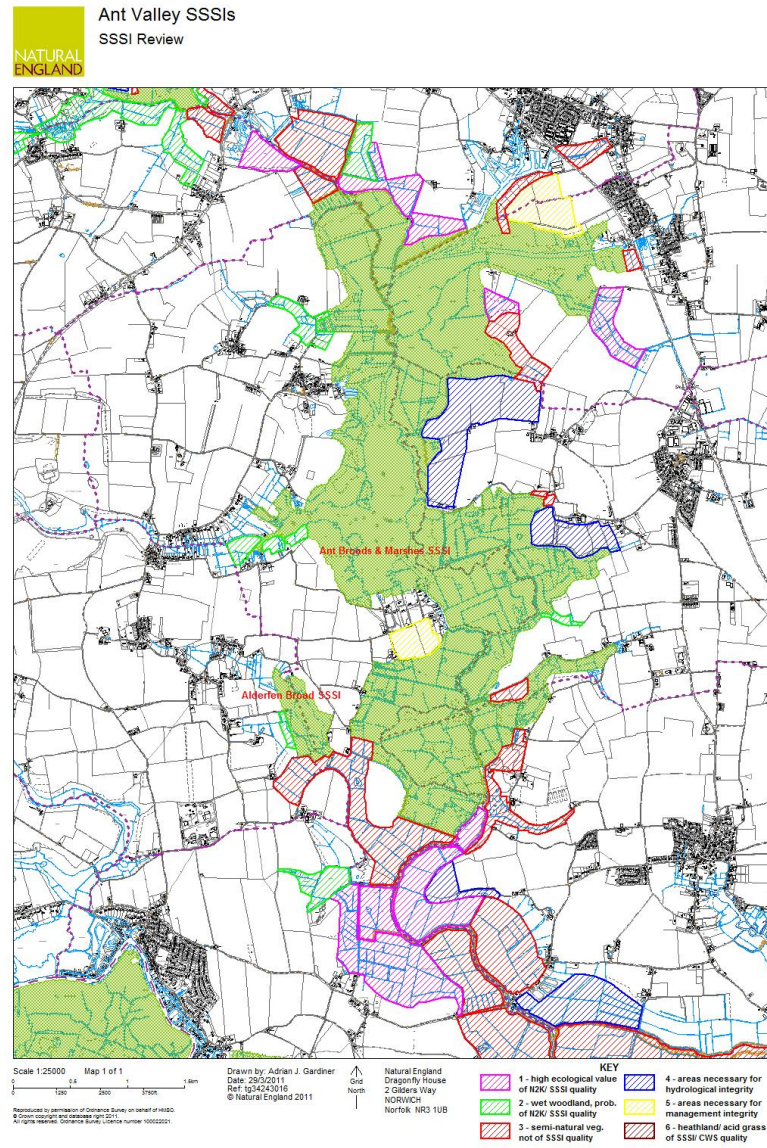
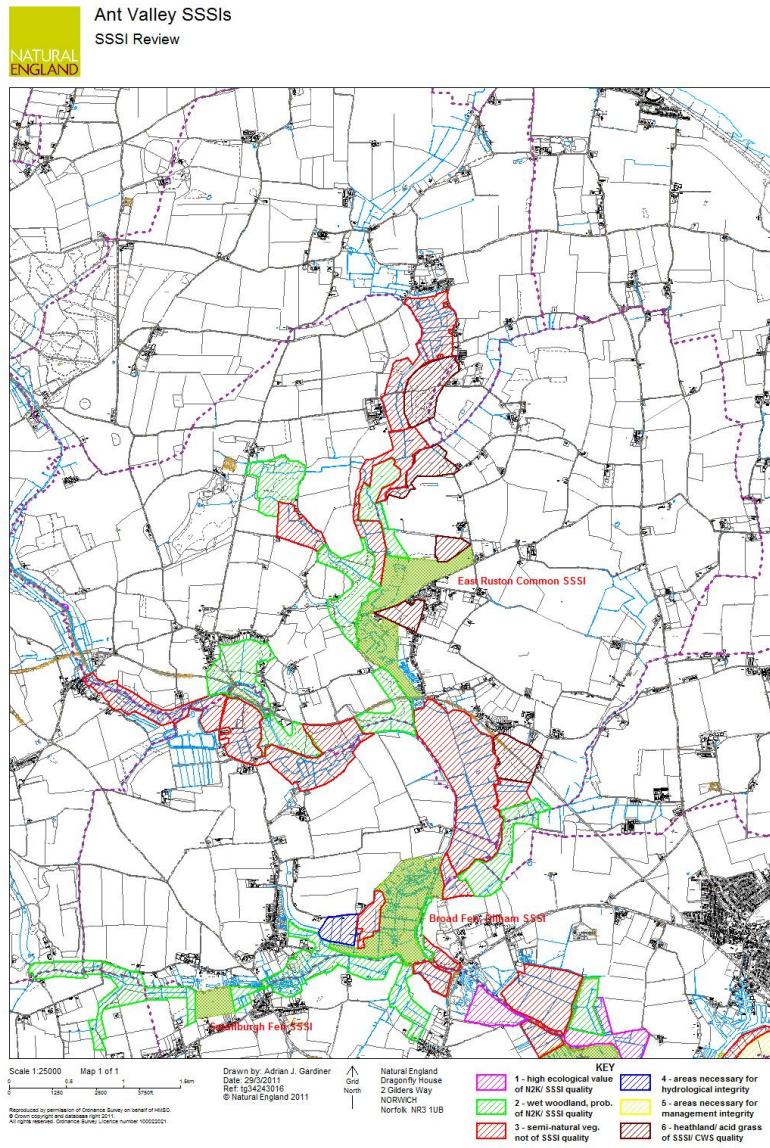
The category 3 habitats present a significant opportunity for developing climate change adaptation projects in the Broads. These category 3 habitats, combined with category 4 and 5 (for hydrological and management integrity) provide an area-based prioritisation for enhancements required for future water management (from the upland and within the flood plain) in particular.

Setting out the wetland enhancement and adaptation required to build resilience on a valley by valley approach will provide a framework for investment going forward. This approach could be used as a pilot for other Broads valleys as required. Mechanisms to achieve this on the ground could include face to face advisor scheme to work with landowners to share information, opportunities and direct funding.

Biodiversity funding in the form of ESA, Stewardship and ES provides over £5 million to the Broads (2009/10) providing significant socio-economic impact on a landscape-scale. With agri-environment spending restrictions and CAP reform likely resulting in less funding, the challenge to diversify and retain valued biodiversity, landscape and access through payments for ecosystem service needs to be a major focus of a Broads landscape approach.

Authors: Andrea Kelly (Broads Authority officer/ 01603 756000)
Adrian Gardiner (E. Norfolk & the Broads - SSSI lead adviser/ 0300 060 1967)
Chris Bielby (E. Norfolk & the Broads - SSSI lead adviser/ 0300 060 2845)
Phil Heath (Broads Authority officer/ 01603 756000)

Maps



Appendix 1 – SSSI details and assessment

Number of notified features: Ant Valley SSSIs (current total) 30

Ant Broads & Marshes	24
Alderfen Broad	13
Smallburgh Fen	6
Broad Fen, Dilham	16
East Ruston Common	5

List of current notified features (bulleted):

Notified feature	Ant B&M	Alderfen	Smallburgh	Broad Fen	E. Ruston
Assemblages of breeding birds - Lowland open waters and their margins	✓	✓			
Invertebrate Assemblage	✓			✓	
Lowland ditch systems	✓			✓	
Population of Schedule 8 plant - <i>Liparis loeselii</i> , Fen Orchid	✓			✓	
Standing waters	✓			✓	
Vascular Plant Assemblage	✓	✓		✓	
M5 - <i>Carex rostrata</i> - <i>Sphagnum squarrosum</i> mire	✓	✓			
M9 - <i>Carex rostrata</i> - <i>Calliergon cuspidatum/giganteum</i> mire	✓				
M13 - <i>Schoenus nigricans</i> - <i>Juncus subnodulosus</i> mire			✓		
M22 - <i>Juncus subnodulosus</i> - <i>Cirsium palustre</i> fen meadow			✓		
M24 - <i>Molinia caerulea</i> - <i>Cirsium dissectum</i> fen-meadow	✓				
S2 - <i>Cladium mariscus</i> swamp and sedge-beds	✓				
S24 - <i>Phragmites australis</i> - <i>Peucedanum palustris</i> tall-herb fen	✓	✓		✓	
S27 - <i>Carex rostrata</i> - <i>Potentilla palustris</i> swamp	✓				
W2 - <i>Salix cinerea</i> - <i>Betula pubescens</i> - <i>Phragmites australis</i> woodland	✓	✓		✓	✓
W5 - <i>Alnus glutinosa</i> - <i>Carex paniculata</i> woodland	✓	✓	✓	✓	✓
W6 - <i>Alnus glutinosa</i> - <i>Urtica dioica</i> woodland	✓		✓		✓
H1 - <i>Calluna vulgaris</i> - <i>Festuca ovina</i> heath					✓
U4a - <i>Festuca ovina</i> - <i>Agrostis capillaris</i> - <i>Galium saxatile</i> lowland acid grassland					✓
Otter	✓	✓	✓	✓	
Desmoulin's whorl-snail	✓	✓		✓	
Breeding Bittern	✓				
Non breeding bittern		✓		✓	
Breeding Marsh harrier	✓			✓	
Non breeding marsh harrier		✓	✓	✓	
Non breeding Gadwall	✓	✓		✓	
Non breeding Shoveler	✓	✓		✓	
Wintering waterfowl assemblage	✓	✓		✓	
Outstanding dragonfly assemblage	✓				
Norfolk hawkmer dragonfly	✓				

Assessment against SSSI guidelines

Features for deletion

No features have been identified for deletion.

Features for addition

The following features should be considered for inclusion within the existing SSSIs:

Swallowtail	(chapter 18; 2.1.3)	all sites
Crane	(not mentioned)	Ant Broads & Marshes only

An extended SSSI would also provide supporting habitat for two species that form part of the Broadland SPA, but which are not currently supported by the existing Ant Valley SSSIs:

Bewick's swan	(chapter 14; Appendix A)
Whooper swan	(chapter 14; Appendix A)

Features present on existing SSSIs, but not recognised as notified interest

There are no proposed changes to the habitat features recognised for each SSSI, apart from East Ruston Common. East Ruston Common was an important fen site historically and provided one of the few examples within the Broads of heathland grading into fen through an important transition community. The fen was severely damaged through water abstraction, leading to degradation of the peat substrate. Through a Bittern Life project the degraded peat was removed and the site restored. The resulting fen and open water communities that are recovering well (other than the presence of *Crassula*) do not form part of the notified interest for the site as they were already destroyed at the time of notification.

Bird, invertebrate and vascular plant species would need to be considered against all of the existing sites.