

Comparison of the results of two vegetation surveys for Catfield Fen.

Introduction

Catfield Fen covers two ownerships, the British Butterfly Conservation Society (BBCS) land and that of Mr and Mrs Harris. Both areas experience the same hydrological regime although the land levels are different with the BBCS land lying lower. The two ownerships were surveyed as part of the Fen Resource Survey of the early 1990s. 37 quadrats were collected during this survey. The location of the quadrats are not exactly known but were situated within the relevant vegetation unit. The survey also produced a National Vegetation Classification (NVC) map for both ownerships. More recently Natural England's condition assessment programme collected a further 64 quadrats across the Fen during 2007 and 2009. These data were used to examine change in the following ways.

Assessment of change at the NVC community level between the two surveys, using data from the BBCS land.

The NVC classification of the quadrats collected during 2007 was compared against the NVC map produced as part of the Fen Resource Survey of the early 1990s. It is important to recognise the differences in the data sets due to different surveyors, time of year etc. Also that the range of vegetation (species present and constancy) within an NVC community is itself reasonably broad. Hence this analysis would only be able to identify a major deterioration in the vegetation quality of the site, through an observable trend across the site. Such a deterioration is likely to manifest itself as a general degradation from a S24 tall herb fen community to those indicative of drier more nutrient rich conditions such as S26. It is important to note if such a shift is evident, then serious, probably irreversible damage would have occurred. If however such a shift in the quality of the vegetation were not detected, then it would not be possible to ascertain if change was or was not occurring. This is on account of the lag time between adverse environmental conditions and its influence over NVC community present on site and the degree of change that may have occurred not being detectable at the NVC level. Again we would stress that this analysis is at the NVC community level and not the species level.

The results showed the vast majority of quadrat sites exhibited very little change. Most changes were minor with vegetation changing from one NVC sub-community of S24 to another, probably indicating a change in herbaceous dominant species. There were however two locations where real change did appear to have occurred, these being:

- The extreme south west of the site, which in the early 1990s was dense scrub on solid peat surrounded by recent willow scrub (W2b). By 2007 the scrub had been cleared and a turf pond dug over part of the area. The fen reclaimed from the scrub is now best described as S26a, S25c and S26d. Clearly in this location change is an artefact of the historical management of the area.
- The other area where change was evident is the east side of the 'Island' (rectangular compartment on the southern boundary of the site). Again it is clear from old aerial photographs that this was a scrub invaded piece of fen that has more recently been reclaimed to an open condition. This is producing areas of vegetation of the S25c and S26d types, however other areas were fully restored to S24 types. Again this change is directly related to management history.

Using the above assessment Natural England sees no evidence of major shifts in NVC community within Catfield Fen. This is welcomed as it confirms at this time serious, probably irreversible damage has not occurred on site. At the same time, on the data we hold, we cannot conclude that damaging shifts in the vegetation quality are not occurring on account of the lag time between adverse environmental conditions and its manifestation in NVC community present on site. Further, the degree of change that may have occurred to date may not yet be detectable at the NVC level.

Changes in woody species on the part of Catfield Fen owned by Mr & Mrs Harris and evidence for a recent increase.

It is clear from looking at a sample of historic aerial photographs, that where river Ant fens are not regularly cut or cleared, woody species establish. This statement holds true for Catfield Fen. The part of Catfield Fen in the ownership of Mr & Mrs Harris has a continuous history of cutting and clearing management hence it provides a valuable opportunity to examine evidence in changes of woody species establishment. The table below shows the % of quadrats that contained woody species (seedlings or saplings) during two surveys of the open fen communities of Catfield Fen.

Survey location and date	Number of quadrats	Number of quadrats with woody species	Percentage of quadrats with woody species
Mr & Mrs Harris land early 1990s	20	2	10%
Mr & Mrs Harris land 2009	16	6	37.5%

The data does appear to show an increase in woody species within the open herbaceous fen communities of Mr & Mrs Harris's land. The increase in woody species could be due to a number of individual or several factors in combination, these include drying conditions increasing opportunities for germination or changes in the management of the open fen.

Summary

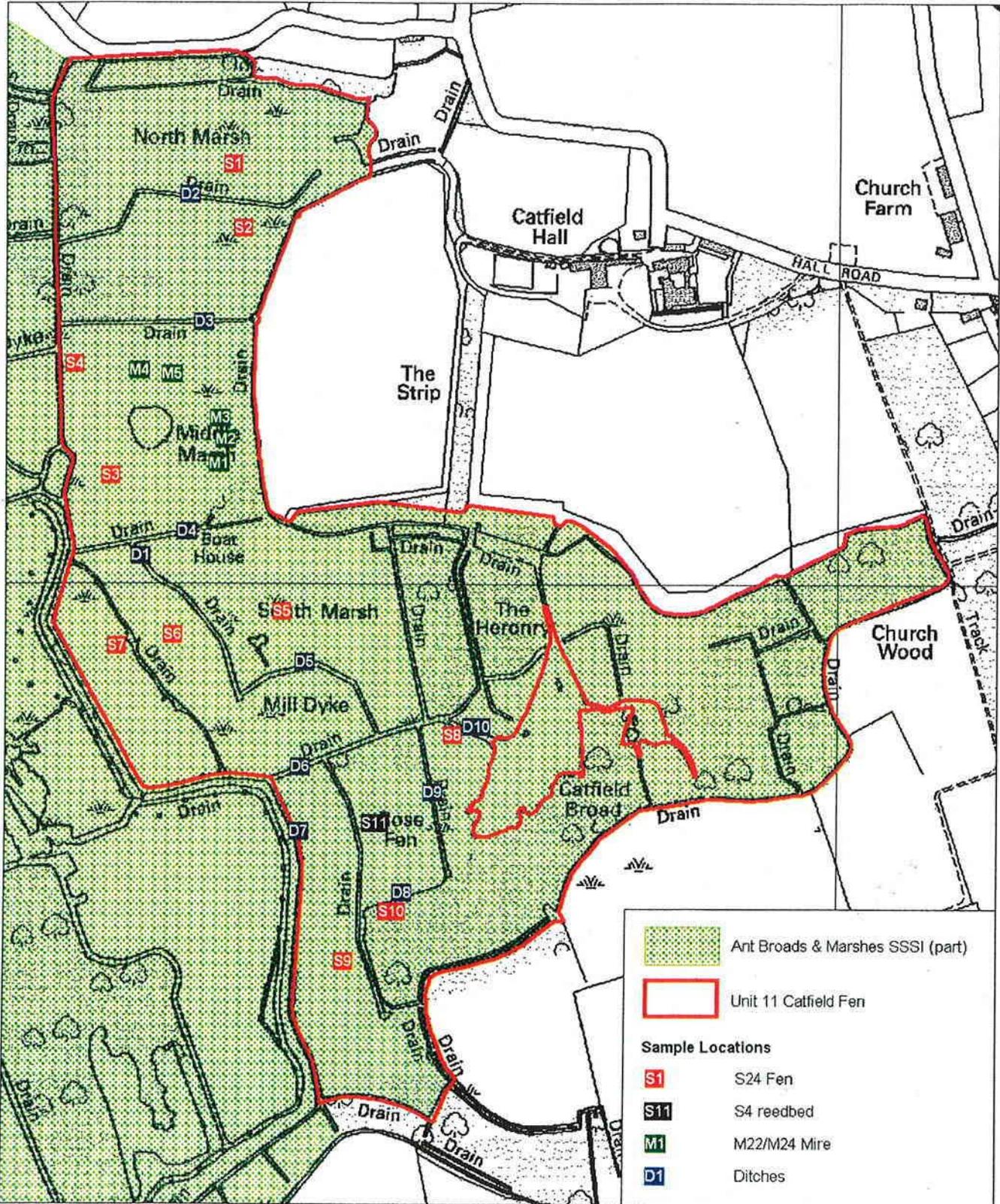
- Natural England sees no evidence of major shifts in NVC community within Catfield Fen, hence at this time serious, probably irreversible damage has not occurred on site.
- We cannot however conclude that damaging shifts in the vegetation quality are not occurring on account the lag time between adverse environmental conditions and its manifestation in NVC community present on site.
- There is evidence to show an increase in woody species within the open herbaceous fen communities that have remained in continuous cutting and clearing management.
- The increase in woody species could be due to a number of individual or several factors in combination, these include drying conditions increasing opportunities for germination or changes in the management of the open fen.

Clive Doarks - 21th December 2010

Ant Broads & Marshes SSSI

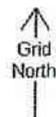
Unit 11 Catfield Fen

Condition Assessment 11-12 July 2009



Scale 1:5000 Map 1 of 1
 0 100 200 300m
 0 250 500 750ft

Drawn by: Rick Southwood
 Date: 18/9/2009
 Ref: tg37582100
 © Natural England 2009



Natural England
 19 The Green
 Woodbastwick
 Norwich
 Norfolk
 NR13 6HH

Sample S11 (lowered reedbed within Rose Fen) corresponds to a species-poor S4 reedbed community, and is included for interest; it does not form part of the assessed habitat.

S11
37538
20756
✓
✓
40%
✓
2
1
✓
✓
✓
✓
✓
Dense red
✓





Site Name:

Ant Broads & Marshes
Catfield Fen (T Harris)

Feature: M22 FEN (but affinities with M24?)

	1	2	3	4	5
Sample number:					
Date:		12-Jul-09			
Unit:		11			
Grid ref. of sample:		TG			
Surveyors:		R Southwood			
Area attribute					
No reduction in total extent in relation to baseline	✓	✓	✓	✓	✓
Overall assessment					
Habitat structure					
Height > 2cm (excluding <i>Juncus</i> sp.), but no more than 25% over 40cm (including <i>Juncus</i> sp.)	✓	✓	✓	✓	✓
Total extent of litter <25%	✓	✓	✓	✓	✓
Bare ground no more than 10% cover	✓	✓	✓	✓	✓
	Cut 2008	Cut 2008	Cut 2008	Uncut	Uncut
Overall assessment					
Vegetation composition					
At least 2 positive indicators of M22 frequent and 4 occasional throughout or locally > 10% of the sward	3F, 1O	2A, 1F, 3O	1A, 3O, 1R	1A, 2O, 1R	2F, 4O, 1R
Negative indicator species - no species more than occasional, or more than 5% cover	✓	✓	✓	✓	1F
Negative indicator species - scrub/ trees no more than 5% cover	✓	✓	✓	✓	✓
Jointed rushes (<i>J. acutiflorus</i> , <i>J. articulatus</i> , <i>J. subnodulosus</i>) at least occasional throughout sward	✓	✓	✓	✓	✓
All <i>Juncus</i> sp. No more than 80% cover with no more than 50% <i>J. conglomateratus</i> , <i>J. effusus</i> and <i>J. inflexus</i>	✓	✓	✓	✓	✓
Waterlogging - large <i>Carex</i> sp. < 20% cover	✓	✓	✓	✓	✓
Waterlogging - <i>Deschampsia cespitosa</i> , large grasses (i.e. <i>Glyceria</i> , <i>Phalaris</i> , <i>Phragmites</i>) < 10% cover	✓	✓	✓	✓	✓
<i>Senecio aquaticus</i> no more than occasional or more than 5% cover	✓	✓	✓	✓	✓
Overall assessment					
Species composition					
<i>Alnus glutinosa</i>					
<i>Alnus</i>					
<i>Angelica sylvestris</i>					
<i>Anthoxanthum odoratum</i>	F	O	O	O	O
<i>Agrostis stolonifera</i>					
<i>Berula erecta</i>					
<i>Betula</i> sp.					
<i>Calluna vulgaris</i>					
<i>Calamagrostis canadensis</i>					
<i>Calyptstegia sepium</i>					
<i>Deschampsia cespitosa</i>					
<i>Diarrhena terrestris</i>					
<i>Elymus repens</i>					
<i>Festuca ovina</i>					
<i>Glyceria</i>					
<i>Phalaris</i>					
<i>Phragmites</i>					
<i>Scirpus cespitosus</i>					
<i>Senecio aquaticus</i>					
<i>Sparganium angustifolium</i>					
<i>Stachys palustris</i>					
<i>Utricularia vulgaris</i>					
<i>Valeriana spiralis</i>					
<i>Vallisneria spiralis</i>					
<i>Zizania</i>					

Frequent 10 - 30%
Occasional 3 - 10%
Rare <3%

Species	Unique ref no.	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859		
Acer pseudoplatanus																																				
Agrostis stolonifera																																				
Alnus glutinosa																																				
Aneura pinguis																																				
Aulacomnium palustre																																				
Berula erecta																																				
Betula pendula																																				
Betula pubescens																																				
Betula sp.																																				
Brachythecium rutabulum																																				
Bryum pseudotriquetrum																																				
Calamagrostis canescens																																				
Calligon cordifolium																																				
Calligon giganteum																																				
Calligonella cuspidata																																				
Caltha palustris																																				
Calyptogeia muelleriana																																				
Campyllum stellatum																																				
Cardamine pratensis																																				
Carex acutiformis																																				
Carex appropinquata																																				
Carex disticha																																				
Carex elata																																				
Carex nigra																																				
Carex nigra x elata																																				
Carex panicea																																				
Carex pseudocyperus																																				
Carex rostrata																																				
Carex vesicaria																																				
Carex viridula ssp. brachyrhyncha																																				
Chara virgata																																				
Cicuta virosa																																				
Cirsium dissectum																																				

Species	Unique ref no.	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859			
Cirsium palustre	418	S24d	S24f	S02b	S24e	S24e	S24e	S02	S24f	S24g	S24g	S24f	S24f	S24e	S26a	S25c	S02	S26d	S24g	S24g	S24g	S24	S24g	S25c	S26d	S25c	S26d	S25c	S24g	S24g	S24g	S24g	S24f	S24f			
Cirsium vulgare	419																																				
Cladium mariscus	420																																				
Crataegus monogyna	445																																				
Drepanocladus aduncus	1654		3																																		
Drosera rotundifolia	494																																				
Dryopteris carthusiana	501																																				
Dryopteris cristata	3518																																				
Dryopteris dilatata	499																																				
Epilobium hirsutum	521																																				
Epilobium palustre	525																																				
Epilobium parviflorum	526		1																																		
Equisetum fluviatile	533																																				
Eriophorum angustifolium	546																																				
Eupatorium cannabinum	558	1																																			
Eurhynchium praelongum	1677																																				
Filipendula ulmaria	583																																				
Frangula alnus	588																																				
Fraxinus excelsior seedling	589																																				
Galium aparine	605																																				
Galium palustre	609	2																																			
Galium uliginosum	612	3																																			
Glyceria maxima	640																																				
Holcus lanatus	680	2																																			
Hydrocharis morsus-ranae	689																																				
Hydrocotyle vulgaris	690	4	2	1	3	2	3	2	2	1	2	2	2	2	4	5	2	1	2	1	4	5	2	1	2	1	4										
Hymnum cupressiforme	1766																																				
Impatiens capensis	2857																																				
Impatiens glandulifera	708																																				
Iris pseudacorus	715																																				
Juncus articulatus	722																																				
Juncus effusus	730	3																																			
Juncus subnodulosus	2732	8	5	5	7	7	5	3	4	2	4	3	4	4	4	3	3	2	4	4	5	3	3	3	3	7	8	9	7	4	2	2	2	5			

Species	Unique ref no.	827 A0706-1	828 A0706-2	829 A0706-3	830 A0706-4	831 A0706-5	832 A0706-6	833 A0706-7	834 A0706-8	835 A0706-9	836 A0706-10	837 A0706-11	838 A0706-12	839 A0706-13	840 A0706-14	841 A0706-15	842 A0706-16	843 A0706-17	844 A0706-18	845 A0706-19	846 A0706-20	847 A0706-21	848 A0706-22	849 A0706-23	850 A0707-24	851 A0707-25	852 A0707-26	853 A0707-27	854 A0707-28	855 A0707-29	856 A0707-30	857 A0707-31	858 A0707-32	859 A0707-33					
Ranunculus lingua	1093	S24d	S24f	S24f	S24e	S24e	S24e	S24e	S24f	S24g	S24g	S24f	S24f	S24e	S26a	S25c	S24f	S26d	S24g	S24g	S24	S25c	S25c	S24g	S24g	S24g	S24g												
Rhannus cathartica	1105																																						
Rhizomnium punctatum	1801									2	3																												
Riccardia multifida	2254																																						
Rubus fruticosus agg.	1136										3																												
Rumex hydrolapathum	1144																																						
Salix alba	1165																																						
Salix aurita	1167																																						
Salix caprea	1168																																						
Salix cinerea	1169																																						
Salix repens	1179																																						
Salix sp.	2716																																						
Sambucus nigra	1187																																						
Samolus valerandi	1189						2																																
Schoenus nigrans	1207		5	5																																			
Scorpidium scorpioides	1947				3																																		
Scrophularia auriculata	1219																																						
Scutellaria galericulata	1223																																						
Sium latifolium	2973						2																																
Solanum dulcamara	1268	1																																					
Sphagnum fimbriatum	1964									6																													
Sphagnum flexuosum	1976																																						
Sphagnum palustre	1971																																						
Sphagnum squarrosum	1980									4																													
Sphagnum subnitens	1973									6																													
Stellaria media	1298																																						
Stellaria palustris	1302	1																																					
Thelypteris palustris	1328	3									3																												
Typha angustifolia	1361																																						
Typha latifolia	1362																																						
Urtica dioica	1368																																						
Utricularia minor	1371		3																																				
Utricularia vulgaris	1373		2	4	3	3																																	

Species	Unique ref no.	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859				
		S24d	S24f	S02b	S24e	S24e	S24e	S02	S24f	S24g	S24g	S24f	S24f	S24f	S24e	S26a	S25c	S02	S26d	S24g	S24g	S24g	S25c	S24g	S24g	S24g	S24g	S25c	S26d	S25c	S24g	S24g	S24g	S24f	S24g	S24f		
		827 A0706-1	828 A0706-2	829 A0706-3	830 A0706-4	831 A0706-5	832 A0706-6	833 A0706-7	834 A0706-8	835 A0706-9	836 A0706-10	837 A0706-11	838 A0706-12	839 A0706-13	840 A0706-14	841 A0706-15	842 A0706-16	843 A0706-17	844 A0706-18	845 A0706-19	846 A0706-20	847 A0706-21	848 A0706-22	849 A0706-23	850 A0706-24	851 A0706-25	852 A0706-26	853 A0706-27	854 A0706-28	855 A0706-29	856 A0706-30	857 A0706-31	858 A0706-32	859 A0706-33				
		636804	636792	636780	636776	636779	636794	636785	636755	636737	636718	636695	636675	636674	636656	636669	636703	636718	636736	636719	636738	636747	636721	636697	636795	636777	636790	636819	636816	636836	636815	636780	636773	636777				
		1381																																				
		1405																																				

Species	Unique ref no.	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	892	893	894	895	896	897	877	878	879	880	881	882	883	884	885	886				
Acer pseudoplatanus	103																																					
Agrostis stolonifera	122																																					
Alnus glutinosa	153																																					
Aneura pinguis	2256																																					
Aulacomnium palustre	1482																																					
Benula erecta	232																																					
Betula pendula	237																																					
Betula pubescens	236																																					
Betula sp.	2802	2																																				
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Bryum pseudotriquetrum	1546																																					
Calamagrostis canescens	269	3	5	7	3	4																																
Calligon cordifolium	1444																																					
Calligon giganteum	1446																																					
Calligonella cuspidata	1445																																					
Caltha palustris	279																																					
Calyptogeia muelleriana	2080																																					
Campylopus stellatum	1571																																					
Cardamine pratensis	295																																					
Carex acutiformis	302																																					
Carex appropinquata	2669																																					
Carex disticha	317																																					
Carex elata	320																																					
Carex nigra	333																																					
Carex nigra x elata																																						
Carex panicea	339																																					
Carex pseudocyperus	346																																					
Carex rostrata	352																																					
Carex vesicaria	361																																					
Carex viridula ssp. brachyrhyncha	329																																					
Chara virgata	2730																																					
Cicuta virosa	411																																					
Cirsium dissectum	2714																																					

Species	Unique ref no.	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	892	893	894	895	896	897	877	878	879	880	881	882	883	884	885	886																	
Cirsium palustre	418	S24g	S24g	S24d	S24g	S24g	S02	S24g	S24g	S25c	S24g	S24g	S02	S04a	S02	S02	S24g	S02	S24g	W02b	S24f	S24g	S24g	S24g	S24e	S24d	S24d	S24e	S24e	S24d	S24g	S24d	S24d	S24e	S24e																
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Juncus effusus	730																																																		
Juncus subnodulosus	2732																																																		

NVC C Northng Eastngs

Unique ref no.

Species	765	767	3074	798	2167	802	813	823	830	831	2183	855	862	876	886	893	910	917	931	2222	2223	998	3198	955	961	1795	990	1891	1025	1049	1066	1078	1089	
Lemna minor																																		
Lemna trisulca																																		
Liparis loeselii																																		
Lonicera periclymenum																																		
Lophocolea bidentata																																		
Lotus pedunculatus																																		
Lychnis flos-cuculi																																		
Lycopus europaeus																																		
Lysimachia vulgaris																																		
Lythrum salicaria																																		
Marchantia polymorpha																																		
Mentha aquatica																																		
Menyanthes trifoliata																																		
Molinia caerulea																																		
Myosotis laxa																																		
Myrica gale																																		
Oenanthe fistulosa																																		
Ophioglossum vulgatum																																		
Osmunda regalis																																		
Pellia endiviifolia																																		
Pellia epiphylla																																		
Persicaria amphibia																																		
Peucedenum palustre																																		
Phalaris arundinacea																																		
Phragmites australis																																		
Plagiomnium rostratum																																		
Poa trivialis																																		
Polytrichum commune																																		
Potamogeton coloratus																																		
Potentilla palustris																																		
Pteridium aquilinum																																		
Quercus robur																																		
Ranunculus flammula																																		

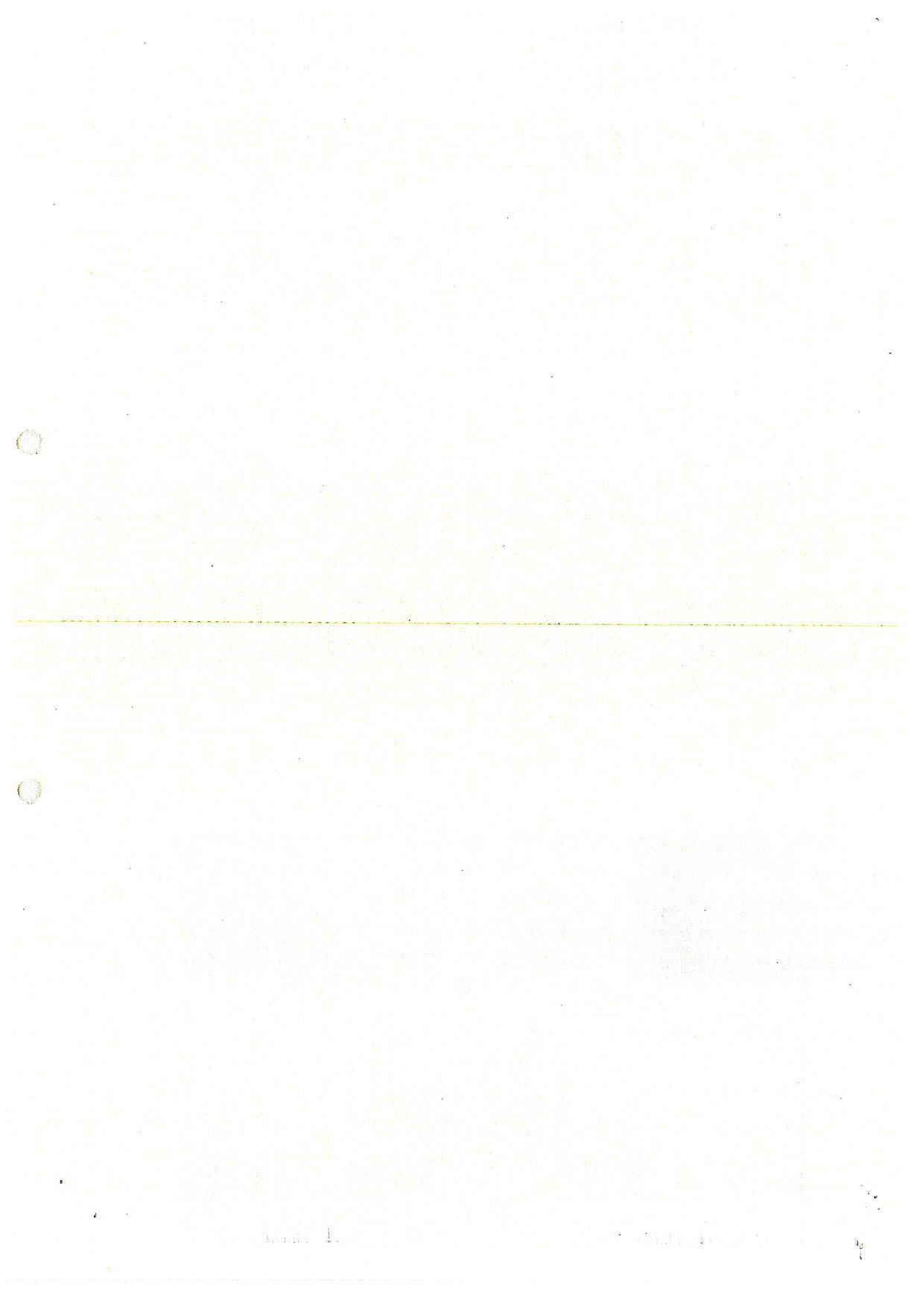
Species	Unique ref no.	887 A0710-61	888 A0711-62	889 A0711-63	890 A0711-64	891 A0711-65
	Eastings					
	Northings					
	NVC					
		524g 921205 637206	524e 921193 637141	524e 921165 637147	524g 921185 637073	524g 921178 637004
Acer pseudoplatanus	103					
Agrostis stolonifera	122					
Alnus glutinosa	153					2
Aneura pinguis	2256					
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Betula sp.	2802					
Brachythecium rutabulum	1519					
Bryum pseudotriquetrum	1546					
Calamagrostis canescens	269	3			2	3
Calliergon cordifolium	1444					
Calliergon giganteum	1446	4				3
Calliergonella cuspidata	1445		4	4		
Caltha palustris	279					
Calyptogeia muelleriana	2080			2		
Campylium stellatum	1571					
Cardamine pratensis	295		2	2		
Carex acutiformis	302		3			
Carex appropinquata	2669					
Carex disticha	317					
Carex elata	320		3	4		2
Carex nigra	333					
Carex nigra x elata						
Carex panicea	339					
Carex pseudocyperus	346			2		
Carex rostrata	352					
Carex vesicaria	361					
Carex viridula ssp. brachyrhyncha	329					
Chara virgata	2730					
Cicuta virosa	411					
Cirsium dissectum	2714					

Species	Unique ref no.	887 A0710-61	888 A0711-62	889 A0711-63	890 A0711-64	891 A0711-65
		821205 637206	821193 637141	821165 637147	821185 637073	821178 637004
		5248	5248	5248	5248	5248
	NVC C Northng Eastings					
		418				
Cirsium palustre						
Cirsium vulgare		419				
Cladium mariscus		420	1	2	7	4
Crataegus monogyna		445				
Drepanocladus aduncus		1654				
Drosera rotundifolia		494				
Dryopteris carthusiana		501				
Dryopteris cristata		3518				
Dryopteris dilatata		499				
Epilobium hirsutum		521				
Epilobium palustre		525				1
Epilobium parviflorum		526				
Equisetum fluviatile		533				
Eriophorum angustifolium		546				
Eupatorium cannabinum		558				
Eurhynchium praelongum		1677				
Filipendula ulmaria		583				
Frangula alnus		588				
Fraxinus excelsior seedling		589				
Galium aparine		605				
Galium palustre		609	2			1
Galium uliginosum		612				
Glyceria maxima		640				
Holcus lanatus		680				
Hydrocharis morsus-ranae		689				
Hydrocotyle vulgaris		690	1			
Hydrum cupressiforme		1766				
Impatiens capensis		2857				
Impatiens glandulifera		708				
Iris pseudacorus		715	3	2	2	
Juncus articulatus		722				
Juncus effusus		730				
Juncus subnodulosus		2732	8		4	4

Species	Unique ref no.	887 A0710-61	888 A0711-62	889 A0711-63	890 A0711-64	891 A0711-65
		821205 637206	821193 637141	821165 637147	821185 637073	821178 637004
		5248	5248	5248	5248	5248
	NVC					
	Eastings					
	Northings					
Lemna minor	765					
Lemna trisulca	767					
Liparis loeselii	3074					
Lonicera periclymenum	798					
Lophocolea bidentata	2167					
Lotus pedunculatus	802					
Lychnis flos-cuculi	813					
Lycopus europaeus	823	2	2	2	2	
Lysimachia vulgaris	830	3	3	3	1	3
Lythrum salicaria	831	1			3	
Marchantia polymorpha	2183					
Mentha aquatica	855			1		
Menyanthes trifoliata	862					
Molinia caerulea	876					
Myosotis laxa	886					
Myrica gale	893	5	4			2
Oenanthe fistulosa	910					
Ophioglossum vulgatum	917					
Osmunda regalis	931					
Pellia endiviifolia	2222					
Pellia epiphylla	2223					
Persicaria amphibia	998					
Peucedenum palustre	3198	1	1		1	1
Phalaris arundinacea	955					
Phragmites australis	961	5	10	10	6	8
Plagiomnium rostratum	1795		3			
Poa trivialis	990					
Polytrichum commune	1891					
Potamogeton coloratus	1025					
Potentilla palustris	1049	2	2	2	2	
Pteridium aquilinum	1066					
Quercus robur	1078					
Ranunculus flammula	1089					

Species	Unique ref no.	887 A0710-61	888 A0711-62	889 A0711-63	890 A0711-64	891 A0711-65
		821205 637206	821193 637141	821165 637147	821185 637073	821178 637004
		524g	524g	524g	524g	524g
	NVC					
	Northings					
	Eastings					
Ranunculus lingua	1093	2				
Rhamnus cathartica	1105					
Rhizomnium punctatum	1801					
Riccardia multifida	2254					
Rubus fruticosus agg.	1136					
Rumex hydrolapathum	1144	2	1	1		
Salix alba	1165					
Salix aurita	1167					
Salix caprea	1168	2	2			
Salix cinerea	1169			3	4	3
Salix repens	1179					
Salix sp.	2716					
Sambucus nigra	1187					
Samolus valerandi	1189					
Schoenus nigricans	1207					
Scorpidium scorpioides	1947					
Scrophularia auriculata	1219					
Scutellaria galericulata	1223				1	
Sium latifolium	2973		1	2		
Solanum dulcamara	1268		3			
Sphagnum fimbriatum	1964					
Sphagnum flexuosum	1976					
Sphagnum palustre	1971					
Sphagnum squarrosum	1980					
Sphagnum subnitens	1973					
Stellaria media	1298					
Stellaria palustris	1302					
Thelypteris palustris	1328	4			5	5
Typha angustifolia	1361	2	2			4
Typha latifolia	1362					
Urtica dioica	1368					
Utricularia minor	1371					
Utricularia vulgaris	1373		3	6		4

Species	Unique ref no.	887 A0710-61	888 A0711-62	889 A0711-63	890 A0711-64	891 A0711-65
		637206	637141	637147	637073	637004
		321205	321193	321165	321185	321178
		S248	S24e	S24e	S248	S248
Valeriana officinalis	1381					
Veronica scutellata	1405					
Total no. of species:		15	20	16	12	16
S24 5 key species (green & orange)		6	3	3	6	6
S24 5 key sp. combined 80% cover		17	6	6	18	16
S24/S2 <i>U. dioica</i> , <i>R. fruticosus</i> no more than 1		0	0	0	0	0
S24/S2 <i>U. dioica</i> , <i>R. fruticosus</i> no more <5% cover (4 = 4 - 10% ~ <4)		0	0	0	0	0
S24/S2 Scrub - no more than scattered, <10% (4 = 4 - 10% ~ <4)		2	2	3	4	5
Alien species		0	0	0	0	0
S2/S2a Cladium mariscus: constant in dense stands (5-10) S2b Cladium present						
Herb height (cm)		100	170	210	120	140
Open water (%)		20	25	70	70	25
Bare ground (%)		0	0	0	0	0
Litter cover (%)		70	90	100	100	100
Bryophyte cover (%)		5	5	5	0	3
Herb cover (%)		100	100	100	100	100



S24 *Phragmites australis*-*Peucedanum palustris* tall-herb fen
SSSI Condition Assessment

Site Name:	Ant Broads and Marshes	Unit	3
Date	2007	Surveyor	ELP – Ecology, Land & People (consultancy)

Condition: **Favourable maintained** Favourable recovered Unfavourable recovering
 Unfavourable no change Unfavourable declining Partially destroyed/Destroyed

Comments	17/53 samples had < 5 positive indicator species – this is because samples have been included from the transitional communities around the periphery of the core S24 areas
----------	--

Attribute (* = mandatory attribute. One failure among mandatory attributes = unfavourable condition)	Target	Estimate for attribute	✓ X
*Extent of community (recoverable reduction = unfavourable; non-recoverable reduction = partially destroyed)	No loss without prior consent	Appears to be no change in extent between aerials taken in 1999 & 2006	✓
*Habitat composition: No loss of the component types (balance between open fen & scrub/woodland also considered)	No loss without prior consent	Appears to be no change in extent between aerials taken in 1999 & 2006	✓
Habitat structure: total extent of litter cover across the areas assessed	< 25%	10/53 <25%	X
*Habitat structure total extent of bare ground	<5%	11/53 >5%	X
*Vegetation composition: frequency of positive indicator species <i>Calamagrostis canescens, Cladium mariscus, Eupatorium cannabinum, Filipendula ulmaria, Galium palustre, Juncus subnodulosus, Lythrum salicaria, Peucedanum palustre, Phragmites australis:</i>	At least 5 species constant, one of which must be <i>Phragmites</i> , combined cover >80%.	17/53 < 5 species <i>Phragmites</i> in every sample 7/53 <80%	X
*Vegetation composition: frequency of negative indicator species <i>Urtica dioica and Rubus fruticosus</i>	Not more than 1	53/53 have not more than 1	✓
*Vegetation composition: frequency of negative indicator species <i>Urtica dioica and Rubus fruticosus</i>	<5% cover	2/53 >5%	✓
*Vegetation composition: frequency of negative indicator species Woody species (<i>Alnus, Betula, Salix, Rhododendron, Pinus</i> etc)	No more than scattered <10%	5/53 >10%	✓

Desmoulin's whorl snail: dense unbroken stands of listed tall fen	No loss of extent	Appears to be no change in extent between aerials taken in 1999 & 2006	✓
Desmoulin's: water table close to the surface such that it is squelchy all year		-	-
Desmoulin's: replacement of preferred dominant species by dense tall reed or by plants of drier condition, e.g. <i>Urtica dioica, Epilobium hirsutum</i> , & low grasses invading the litter layer, within pre-selected stands	<10%	<i>U. dioica</i> & <i>E. hirsutum</i> not recorded	✓
Desmoulin's: average height of stands	>50cm	41/41 > 50cm	✓

Entered on Ensis ✓

S2 *Cladium mariscus* Swamp & Sedge beds
SSSI Condition Assessment

Site Name:	Ant Broads and Marshes	Unit	3
Date	2007	Surveyor	ELP – Ecology, Land & People (consultancy)

Condition: **Favourable maintained** Favourable recovered Unfavourable improving
 Unfavourable no change Unfavourable declining Partially destroyed/Destroyed

Attribute (* = mandatory attribute. One failure among mandatory attributes = unfavourable condition)	Target	Estimate for attribute	✓ X
*Extent of community (recoverable reduction = unfavourable; non-recoverable reduction = partially destroyed)	No loss without prior consent	Appears to be no change in extent between aerials taken in 1999 & 2006	✓
*Habitat composition: No loss of the component types (balance between open fen & scrub/woodland also considered)	No loss without prior consent	Appears to be no change in extent between aerials taken in 1999 & 2006	✓
Habitat structure: total extent of litter cover across the areas assessed	< 25%	8/8 > 25%	X
*Habitat structure total extent of bare ground	<5%	4/4 > 5%	X
*S2/S2a <i>Cladium</i> sub-community: <i>Cladium mariscus</i> :	Constant stands (5 – 10 DOMIN)	5/6 constant stands	✓
*S2b <i>Menyanthes trifoliata</i> sub-community:	<i>Cladium mariscus</i> open stands, less than 1m tall, with pools of open water	1 sample of S2b 51 – 75% <i>Cladium</i> 100% open water 130cm tall	✓
*S2b Vegetation composition: frequency of positive indicator species <i>Menyanthes trifoliata</i> , <i>Potentilla palustris</i> , <i>Carex lasiocarpa</i> , <i>Scorpidium scorpioides</i> , <i>Urticularia vulgaris</i> , <i>Phragmites australis</i> , <i>Juncus subnodulosus</i>	At least 3 species present, combined cover <50% with <i>Phragmites</i> <20%	1/1 3 species	✓
*Vegetation composition: frequency of negative indicator species Woody species (<i>Alnus</i> , <i>Betula</i> , <i>Salix</i> , <i>Rhododendron</i> , <i>Pinus</i> etc)	<10% cover	None recorded	✓
*Vegetation composition: invasive non-native species	Absent	None recorded	✓

Sites of Special Scientific Interest

Ant Broads And Marshes

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[Condition Assessments](#)

[Unit Managements](#)

[Ant Broads And Marshes](#)

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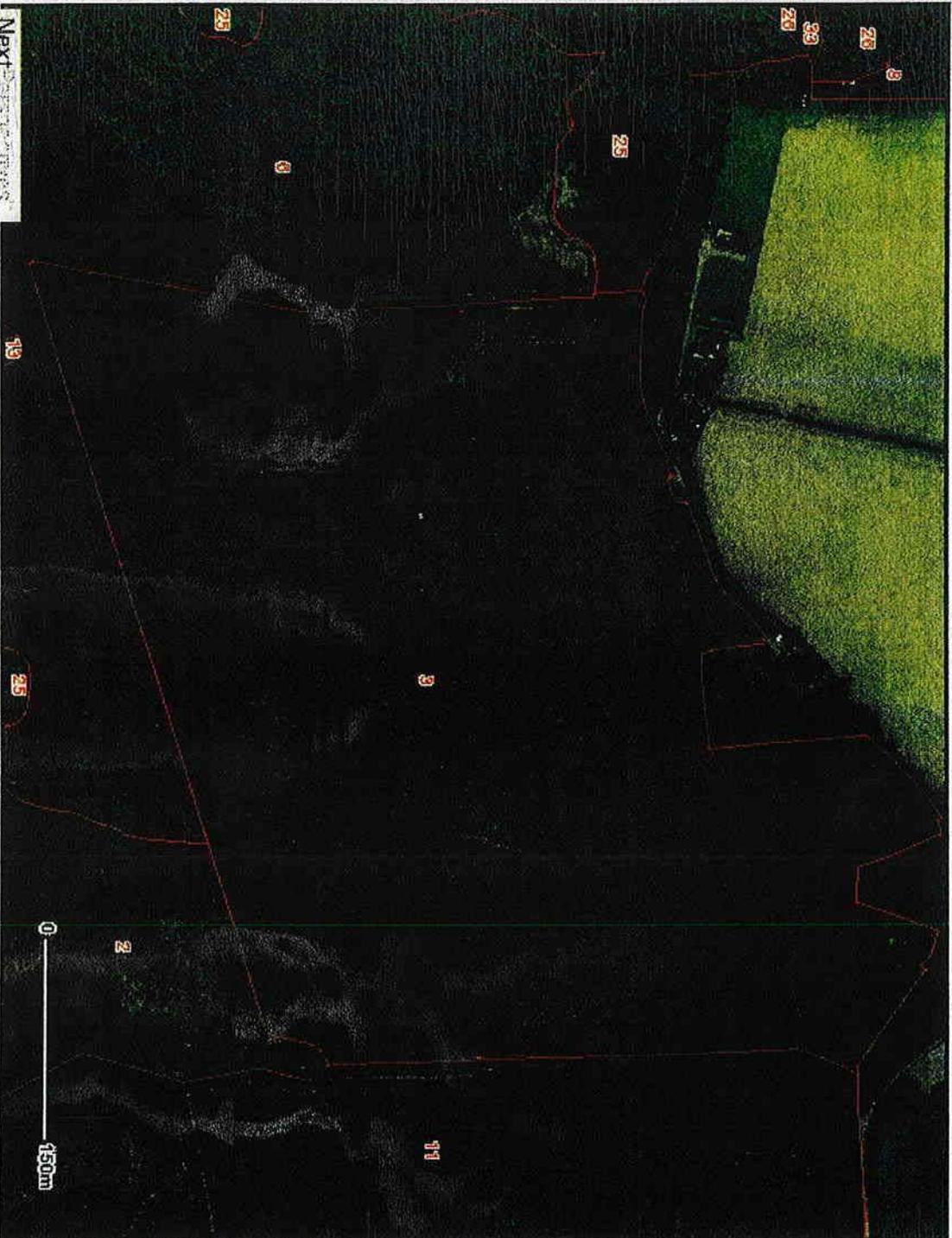
[Remedies view](#)

Unit 3

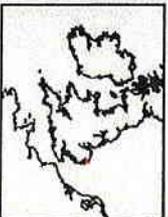
Unit name	Bbcs		
CO Responsible	Adrian Gardiner		
Unit area (ha)	25.25		
District, county	North Norfolk, Norfolk		
Unit Grid Ref	TG369212		
NNR	<input checked="" type="checkbox"/>		
SAC	<input checked="" type="checkbox"/>		
Ramsar	<input checked="" type="checkbox"/>		
SPA	<input checked="" type="checkbox"/>		
Target Visit	24 Months		
Site unit ID	1015926		
Site unit status	Live		
Unit Management	Live 0 (Planned 0) (Archived 3)		
Condition details (Last 5)			
16 June 2004	Favourable		
26 October 1998	Unfavourable Recovering		
At Risk - Air Pollution	Yes		
L1 Feature details			
Level 1 feature details	E33B - Fen: Flood Plain, Basic		
Level 1 key	251110		
Operational feature name	Woodland/Fen And Open Water		
Main habitat category	Fen, Marsh And Swamp - Lowland		
Created by	(NK2CX) on 13/08/1997		
Last modified by	Clive Doarks (NK2CD) on 07/04/2009		
Level 2 Features			
H3150 - natural eutrophic lakes with magnopotamion or hydrocharition	No comments	FAVOURABLE	SAC
H7210 - calcareous fens with c. mariscus + species of c. davallianae	No comments	FAVOURABLE	SAC
H91E0 - alluvial woods with a. glutinosa; f. excelsior	No comments	FAVOURABLE	SAC
S1016 - vertigo moulinsiana, snail	No comments	FAVOURABLE	SAC
S1355 - otter, lutra lutra	No comments	FAVOURABLE	SAC

ENGLAND

Ant Unit 3 1999



Key
Site Unit



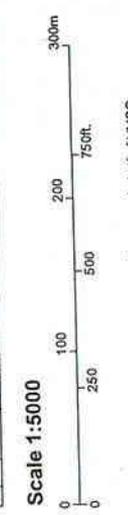
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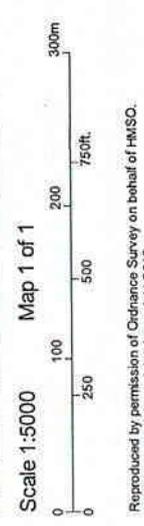
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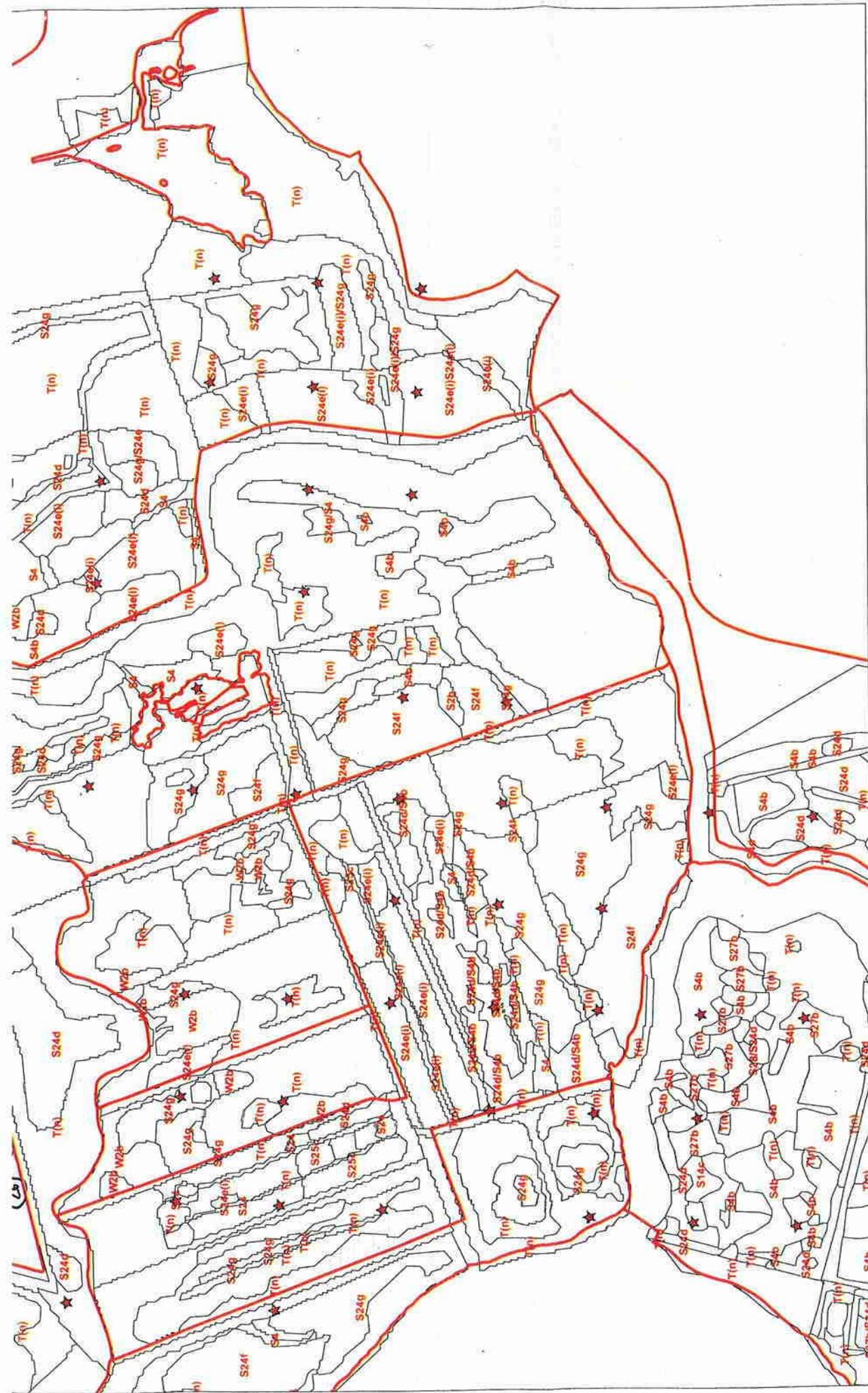


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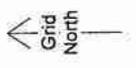


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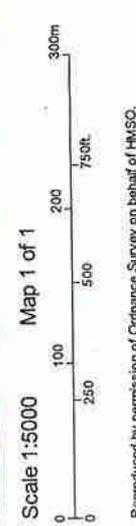
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