

Guidelines for the selection of County Wildlife Sites in Somerset

Somerset Environmental Records Centre / Somerset Wildlife Trust

Version 5.4 - August 1997 with minor addition December 2004

Approved by the SERC Management Group

HABITAT GUIDELINES

EC Habitats Directive

5H0 All sites with one or more habitats that are listed in Annex 1 of the EC Habitats Directive, 1992. (See Annex A). Size limits will be applied as in the relevant habitat criteria.

5H1 WOODLAND

Ancient woodland

5H1.1 All extant semi-natural broadleaved woodland ≥ 2 ha. on ancient sites (use Inventory and Tithe Wood or comparable historical sources other than that shown as plantation). 1,2

5H1.2 Extant broadleaved woodland ≥ 0.5 ha. shown as wooded (including plantation) on the Tithe Map or Inventory if recent field survey has identified 4 Somerset ancient woodland indicators. (see Annex B) 3,4

5H1.3 Broadleaved plantation or mixed woodland/plantation on ancient woodland sites > 2 ha. and tithe woodland still semi-natural > 2 ha. if recent field survey has identified at least 4 Somerset ancient woodland indicators. 3,4

5H1.4 Conifer plantation on ancient woodland or tithe sites > 2 ha. if recent survey has identified

- at least 4 Somerset ancient woodland indicators or
- coniferisation less than 30 years old or failing or
- rides with > 30 plant species. 3,4,5

Recent woodland

5H1.5 Woodland which is not believed to be of ancient origin, but which carries a semi-natural canopy and meets all of the following qualifications:

- it has a diverse and well-developed structure (ground flora/shrub layer/ canopy, or ride/glade system)
- it has a flora which is rich in the context of the woodland community concerned, normally with a vascular plant species list in excess of 80 species.
- the features of value are present in at least 50% of the woodland area
- the site is ≥ 2 ha.
- it is not severely degraded 2,6

Wet woodland

5H1.6 Sites with ≥ 2 ha. of woodland and containing ≥ 0.5 ha of the following NVC communities: W1, W2, W4, W6, W7 (see also Corine type 44) (see Annex C)

Scrub

5H1.7 Sites with ≥ 2 ha. of NVC community W23 (*Ulex europaeus* - *Rubus fruticosus* scrub)

5H1.8 Wood-pasture and parkland 7A, 7B, 7C

Sites meeting *all* of the following:

- at least 5 veteran trees
- a minimum density of trees with veteran tree characteristics (recorded hollows or rot holes or standing dead wood or bracket fungi) of 0.1 trees per hectare
- some veteran trees without veteran tree characteristics present additionally



5H1.9 Green Lanes

Green lanes where one or both sides of the lane comprises important hedgerows evaluated using ecological criteria as used in the Hedgerow Regulations, 1997. 7D

5H1.10 Woodlands within the Exmoor National Park that are defined as Section 3 Woodlands on the National park Conservation Map, except those that were selected for that status only for landscape reasons.

1. *Criterion 5H1.1 can be applied even in the absence of field survey data.*
2. *Semi-natural woodland is defined as all woodland stands which do not obviously originate from planting, the distribution of species generally reflecting natural variations in site and soil. For practical purposes semi-natural woodlands are also taken to include woods where true semi-natural stands have been slightly modified by planting, e.g. mixed coppice containing a scattering of ornamental conifers, sweet chestnut etc., and also mature plantations of native species which have attained semi-natural characteristics.*
3. *"Recent" means 10 years old or less for woodland and 5 years old for non-woodland habitats, i.e. for woodlands in the year 1996 31 December 1985 should be regarded as the cut off point, in 1997 use 31 December 1986 etc. See also note 31 for policy on resurvey and status checking frequencies.*
4. *Ancient woodland indicators will only be counted if they occur in the main body of the woodland rather than on the boundaries only.*
5. *Patchworks of conifer and broadleaved - refer to SSSI Guidelines for guidance on whether conifer areas should be omitted or included. Normally, except for conifer plantation on ancient woodland sites less than 30 years old, blocks of solid conifer >3ha. should be excluded, but good rides through the blocks may be retained.*
6. *"Severely degraded" means that if the site management were to be immediately changed to the optimum the site would be unlikely to regain most of its previous nature conservation importance within 10 years.*

Green lanes and hedgerows

7. *For the present hedgerows will only be included in CWS selected under other criteria (e.g. bats, dormice, grasslands, green lanes). Although many other hedgerows of equivalent value may exist in the county, SERC does not have the resources to evaluate these at the present time.*
- 7A *The definition of a veteran tree is that used by the Somerset Veteran Trees project, 1996/7 (i.e. those trees with a girth greater than or equal to 3.7m at breast height; 1.3m. Those trees that fail this criterion can still qualify if they exhibit veteran characteristics such as rot hollows, bracket fungi, large proportion of standing dead wood).*
- 7B *Site boundaries of wood pasture and parkland sites will be extended to include all trees with veteran characteristics recorded in the vicinity of the core site, to a maximum inter-tree distance of 300 metres.*
- 7C *Veteran trees also occur in County Wildlife Sites selected using other criteria e.g. H1 Woodlands and H2 Grasslands S2 Non-vascular plants and S8 Invertebrates. Veteran Tree Sites selected using the saproxylic invertebrate Ecological Index of Continuity (see 5S8.4) need not meet the above criteria.*
- 7D *Green lanes frequently also qualify under species criteria. Those selected using species criteria do not necessarily also need to meet the above criterion.*

5H2 GRASSLAND

5H2.1 Semi-natural mesotrophic/calcareous/calcifugous grassland sites > 0.5 ha. with a high non-ruderal forb content or a number of species indicative of the NVC community types listed in Annex C. 8,9,10

5H2.2 Where full NVC analysis is available, all sites >0.5 ha. (except severely degraded examples) of the NVC communities listed in Annex C: (see Annex C) 8,9,10

8. *Most "marshy grassland", will be referred to in the "mires" section of the criteria. However NVC community MG8 will be included here. Fen meadows and rush-pasture are referred to in the mires section.*
9. *If 25% or more of a field area meets the above criteria then the whole field will be selected as CWS.*



10. A Road verge will normally only be selected if it meets the above criteria and its width exceeds 1 metre over most of its length.

5H3 HEATHLAND

5H3.1 All heathland areas > 1 ha. (>25% ericaceous dwarf shrubs cover).

5H4 FRESHWATER HABITATS Vascular plants:

Standing waters (Lakes, ponds, gravel-pits, reservoirs and canals).

5H4.1 Sites with higher than average number of submerged, floating and emergent plant species for a community type (see SSSI Guidelines, Tables 12/13, pp 125-127) or with species that indicate that the site is likely to fall in this category.

5H4.2 Sites with > or = 4 Potamogeton species.

5H4.3 All mesotrophic sites except severely degraded.

5H4.4 Sites with a transition from freshwater to saline conditions except severely degraded.

5H4.5 Marl water bodies (alkalinity > 100 mg/l CaCo₃).

Lowland ditch systems

5H4.6.1 Complex interconnected ditch systems (excluding completely shaded ditches) >1 km. in total ditch length where at least 25% of the wet ditches have \geq 10 submerged/floating/emergent/wet bank species per 20m length with at least one 20m length per field side sampled. Improved grasslands/arable land between ditches will be included within sites as buffer zone. 11, 12, 12A, 12B

5H4.6.2 Any ditch with a 20m length with at least 15 (brackish ditch 10) floating, submergent, emergent/ wet-bank species plus any connecting ditches with at least 10 (brackish ditch 6) of the above species. 11, 12, 12A, 12B

5H4.6.3 Any site sample with either at least 10 different invertebrate orders or at least 35 aquatic invertebrate species. 12

Flowing waters (Rivers and streams)

5H4.7 The best example in the county of a whole river from source to saline limit of each river type (see annex E) 12C

5H4.8 Sections of rivers/streams with confirmed recent records indicating high biological quality:

- Dipper
- White-clawed crayfish 12D

5H4.9 Sections of rivers/streams with > or = 2 confirmed recent records of the following species:

- Kingfisher
- Water shrew
- Stoneflies (except Nemouridae)
- Otter
- water vole 12D (see also 5S3.4.1)

5H4.10 Tufa springs and Water Courses

5H4.10.1 Tufa spring with actively building tufa mound and/or any associated mire or flush community provided not seriously degraded. 12A

5H4.10.2 Tufa depositing stream with at least 10 vascular plant species per 20m length or 15 aquatic invertebrate species per sample. 12

CWS boundary of lowland ditch systems to include 8m buffer on either side and to extend the length of field boundary from which sample taken. The 8m buffer zone applies also to river County Wildlife Sites.



11. Such a sample can include aerial and terrestrial trapping of invertebrate species associated with water for at least part of their life-cycle.
- 12A Boundary of stream and flowing ditch CWS to extend to nearest confluence in either direction or, in the case of tufa depositing streams, the extent of tufa deposition.
- 12B If in a resurvey an existing CWS ditch/rhyne fails to meet the CWS criteria and the ditch/rhyne has been recently keeched or cleared out, CWS status will not be removed unless other serious degradation of the water course has taken place.
- 12C Neighbouring counties will be consulted on cross boundary catchments.
- 12D The lengths of river sections to be defined as County Wildlife Sites on the use of indicator species will vary according to the species. Upstream sections from the records will be included to a greater extent than downstream sections.

5H5 MIRES AND SWAMPS (Including bogs, fens, swamps and most marshy grasslands) 14

5H5.1 All mires \geq 0.5ha. 15

5H5.2 All swamp and marginal wetland communities \geq 0.5 ha.

14. This uses the term mire in the NVC and Phase 1 classification sense, i.e. *sensu lato*. It includes blanket bog, raised bog, modified bog (but see note 15), flushes, springs, fens, valley mires, basin mires and flood-plain mires. It includes classes E & F of the NCC/RSNC classification, class E of the Phase 1 classification and all of the mire, swamp and tall-herb fen NVC communities.

15. Cut-over raised bog sites should only be selected where the hydrology is linked with adjacent wetland County Wildlife Sites/ SSSIs.

5H6 COASTAL/ MARINE 16

5H6.1 All saltmarshes $>$ 1 ha. except severely degraded (for definition see note ??).

5H6.2 All sand-dunes except severely degraded.

5H6.3 All shingle beaches if any part of them partially vegetated.

5H6.4 All sea cliffs and cliff tops except developed and severely degraded sites.

5H6.5 All Section 3 Cliff and Foreshore defined in the Section 3 Conservation Map (Wildlife and Countryside (Amendment) Act 1985) within the Exmoor National Park.

16. Criteria for the evaluation of the marine environment off the Somerset coast will be developed in the future when sufficient survey data is available.

5H7 UPLAND HABITATS 17

5H7.1 Sites with the NVC U19 *Thelypteris limbosperma* - *Blechnum spicant* community.

5H7.2 Bracken communities (NVC U20) with a diverse vernal flora including e.g. *Viola* spp. 18

5H7.3 Section 3 Moor and Heath within the Exmoor National Park defined on the Section 3 Conservation Map. (Wildlife and Countryside (Amendment) Act 1985).

17. Sites selected for upland heath, mire, grassland, scrub and woodland will be selected under other relevant habitat criteria irrespective of altitude.

18. Lower altitude examples of NVC U20 community (see Annex C) will be included here.

5H8 MOSAIC SITES



5H8.1 Sites with 2 or more semi-natural habitats in mosaic, including those where individually one or more of the habitats may fail to meet County Wildlife Site criteria with respect to size, or where such a mosaic site is contiguous with a SSSI.

5H9 ARTIFICIAL HABITATS

5H9.1 Disused Quarries - usually assessed on other criteria, but sites which demonstrate good examples of active succession may be included with numbers of notable species slightly lower than otherwise required.

5H9.2 Disused mining sites - sites > 0.5 ha. with flora showing adaptations to heavy metal-rich soils.

19. Other types of artificial habitat (below) must qualify under other habitat or species criteria.

- *Arable land (including set-aside)*
- *Improved grassland*
- *Orchards*
- *Hedgerows*
- *Dry stone walls*
- *Road verges*
- *Railway verges*
- *Disused railways*
- *Disused airfields*
- *Parks*
- *Golf courses*
- *Gardens*
- *Cemeteries*
- *Churchyards*
- *Tips*
- *Sewage works*
- *Industrial sites*
- *Derelict land*
- *Disused buildings*

19A In defining site boundaries all semi-natural habitat, except linear features, adjacent to the core site selected will be included within the site.

SPECIES GUIDELINES 20

20. The boundaries of sites selected as County Wildlife Sites on species grounds will vary according to the species' typical ranges and habitat requirements.

Habitats Directive Species

5S0 Sites with recent records of one or more species listed in Annex 2 of the EC Habitats Directive, 1992 (see Annex F).

Note: Bullhead will be excluded from this criterion as the species is common and widespread within Somerset.

5S1 VASCULAR PLANTS

5S1.1 All sites with 1 or more RDB species, nationally rare or nationally scarce species. 21, 22

5S1.2 Sites with 2 or more Somerset notable species (fourth edition - 1995). 21, 22B

21. Site boundaries will be determined by reference to habitats and in the absence of semi-natural habitat will be determined with reference to the autecology and gene ecology of the species concerned.



22. For all references to RDB status in these criteria, published sources will be used (except mammals, see note 23) and account will also be taken of official but unpublished reviews of RDB status against IUCN criteria.

22B For criterion 1.2 contiguous areas comprising no more than 0.5 hectares (and in the case of linear features 0.5 km.) will be evaluated. The maximum distance between notable records is 500 metres. This note applies to all criteria using notable species.

5S2 NON-VASCULAR PLANTS (Lichens, bryophytes, fungi, charophytes)

5S2.1 Sites with 1 or more RDB, nationally rare, nationally scarce species. 22

5S2.2 Sites with 2 or more Somerset notable species.

5S2.3 Sites with 4 or more Hygrocybe species found in a single visit or 6 or more Hygrocybe species in total.

5S3 MAMMALS 23, 24

5S3.1 Otter

5S3.1.1 All confirmed recent holt and lying-up sites.

5S3.1.2 River catchments in regular recent use, including all bankside wetland, scrub and woodland.

5S3.2 Bats

5S3.2.1 All known recent Greater and Lesser Horseshoe summer roosts with more than 20 individuals, together with contiguous semi-natural habitat including hedgerows.

5S3.2.1 All winter roosts where 5+ Lesser Horseshoe bats and any greater horseshoe bats have been recently recorded.

5S3.2.3 All summer roosts of Barbastelle, Bechsteins, Brandts, and Leislars together with contiguous semi-natural habitat.

5S3.2.4 All breeding roosts of Grey Long-Eared, Natterers, Daubentons, Whiskered and Noctule together with contiguous semi-natural habitat.

5S3.2.5 Winter roosts of above species with ≥ 2 of the above species or more than 10 animals of the above species occupying roost at any time.

5S3.3 Dormouse

5S3.3.1 All sites with recent records.

5S3.4 Water Vole

5S3.4.1 All sites with recent records.

5S3.5 Harvest Mouse

5S3.5.1 All sites with recent records.

23. The Red Data Book for Mammals (Mammal Society, 1993) is not used here for evaluation because of the inconsistency of its criteria compared with official red data books.

24. Badger setts will be recorded separately from the County Wildlife Site system. The presence of a badger sett in itself will not justify County Wildlife Site status.

5S4 BIRDS

5S4.1 Sites with $> 0.5\%$ of total British breeding population of any native species.



5S4.2 All recently used breeding sites of Somerset Category B or D notable species (breeding or declining breeder notables). (see Annex G)

5S4.3 Sites which regularly have held 3 or more Somerset category C notable species (wintering notables see Annex G) 25

5S4.4 Sites which regularly have held, recently, more than 0.25% of total British non-breeding population of a species. (see Atlas of Wintering Birds, BTO) 25

5S4.5 Sites which regularly support, recently, bird species of European importance. (Annex 1 of Birds Directive) 25

25. "Regularly" will be interpreted as at least 3 years in 5. If available data is insufficiently frequent to decide this judgment of probabilities will be used.

5S5 REPTILES

5S5.1 Sites with recent records of ≥ 3 reptile species

5S6 AMPHIBIANS

5S6.1 Sites with "good population" of Warty Newt (see annex H)

5S6.2 Sites with assemblage score of $>$ or $= 3$ (see annex H)

5S7 FISH

5S7.1 Sites with recent records of one or more species listed on Annex 2 of the EC Habitats Directive (see Annex F), excluding bullhead.

5S8 INVERTEBRATES

5S8.1 Sites where invertebrate survey has indicated special species assemblages (see note 26) or 1 or more Somerset notable species 27: These are most likely in the following habitats:

5S8.1.1 Live ancient trees with dead and decaying wood

5S8.1.2 Large river shingle banks

5S8.1.3 South-facing bare ground/sandy exposures

5S8.1.4 Unstable soft rock coastal cliffs

5S8.1.5 Tufa springs

5S8.2 Sites with a recently recorded RDB species

5S8.3 Sites with 1 or more recently recorded nationally scarce species or 2 or more recently recorded Somerset notable species 27

5S8.4 Sites with veteran trees with a saproxylic invertebrate ecological index of continuity >15 28

5S8.5 Any wetland site sample with either at least 10 different invertebrate orders or at least 35 aquatic species. Such a sample can include aerial and terrestrial trapping of species associated with water for at least part of their life-cycle.

5S9.0 Sites with three or more notable species from two or more taxonomic groups.

26. It is not currently possible to define the number of species within an invertebrate group which constitutes an outstanding assemblage. There will be considerable variation within each group, depending upon the habitat being reviewed and the geographical area concerned. More detailed studies are necessary to reveal the number and composition of species assemblages, based upon systematic sampling procedures and the use of community analysis techniques to identify and classify recurrent invertebrate assemblages.



27. *Excluding those nationally scarce species that are considered by national experts to be seriously under-recorded and likely to have a much more widespread national distribution than currently known*
28. *Harding PT and Alexander KNA (1994). The use of saproxylic invertebrates in the selection and conservation of areas of relic forest in pasture-woodland. British Journal of Entomology and Natural History 7 (supplement) 21-26.*
- 28A *(all invertebrate criteria) Older records will be accepted if the record is reliable, extinction at that site is not confirmed and the relevant habitat is still extant at that site. This is to reflect the relative infrequency of invertebrate recording)*
- 28B *(all invertebrate criteria) Invertebrate records are only taken into account if the recording technique used was site specific (i.e. did not attract invertebrates from a large surrounding geographical area).*

General Notes

Educational, social, access and aesthetic value

29. *These criteria do not include consideration of educational, social, access or aesthetic value of wildlife sites. While these aspects are important to nature conservation we do not believe they should be used in the evaluation of County Wildlife Sites in Somerset because:*

- *Somerset already has large areas of land with open access close to centers of population.*
- *The criteria for these aspects are necessarily subjective and would undermine the objective nature of the criteria used.*
- *There are established mechanisms for meeting these other objectives e.g. local authority management of urban fringe sites.*

Survey and Assessment Frequency

30. *SERC aims to undertake detailed field survey (habitats and vascular plants) of all woodland County Wildlife Sites at least every 20 years and all County Wildlife Sites comprising other habitats at least every 5 years. SERC also aims to undertake a status check through aerial photograph interpretation or field visit of every County Wildlife Site every 5 years. If this status check suggests significant change since the last field survey a new full field survey will then be undertaken.*
31. *All sites evaluated for the first time will be evaluated against the criteria approved at the time of evaluation. Re-evaluation leading to deletion of County Wildlife Site status will only take place if a new field survey demonstrates that a site fails to meet the new criteria; or if SERC is reliably informed that the site has been damaged to an extent that the value is now below the threshold required by the new criteria. County Wildlife Site status will not be removed from a site as a result only of a change of criteria. However, in the case of woodland sites reviewed in the routine 5 yearly review of all County Wildlife Site statuses, if the previous survey was between February to June inclusive and clearly shows that the site would not meet the new criteria its County Wildlife Site status is removed.*
32. *In order to avoid excessive woodland re-survey in the short term (for applying the revised criteria) sites with previous surveys undertaken outside of the spring period will be retained as County Wildlife Sites if it is judged that spring survey would indicate conformity with the new criteria. Such sites will be marked on the database.*

Annex A - EC Habitats Directive, 1992

Habitats listed on Annex 1 which are believed to be present in Somerset, with minimum size limits for CWS selection

<i>Corine code</i>	<i>Habitat</i>	<i>Minimum size (hectares)</i>
11.25	Sandbanks which are slightly covered by sea water all the time	-
13.2	Estuaries	-
14	Mudflats and sandflats not covered by seawater at low tide	-
21	Lagoons	-
	Reefs	-
17.2	Annual vegetation of drift lines	-
17.3	Perennial vegetation of stony banks	-
18.21	Vegetated sea cliffs of the Atlantic and Baltic coasts	-
15.11	Salicornia and other annuals colonising mud and sand	1
15.12	Spartina swards	-
15.13	Atlantic salt meadows (<i>Glauco-Puccinellietalia distansis</i>)	1
16.211	Embryonic shifting dunes	-
16.212	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	-
16.221 to 16.227	Fixed dunes with herbaceous vegetation (grey dunes)	-
16.31 to 16.35	Humid dune slacks	-
22.13	Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation	-
22.14	Dystrophic lakes	-
31.11	Northern Atlantic wet heaths with <i>Erica tetralix</i>	1
31.2	Dry heaths (all subtypes)	1
34.2	Calimarian grasslands	0.5
34.31 to 34.34	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>)	0.5
37.31	<i>Molinia</i> meadows on chalk and clay (Eu-Molinion)	0.5
51.2	Degraded raised bogs	0.5
52.1 & 52.2	Blanket bog	
54.5	Transition mires and quaking bogs	0.5
53.3	Calcareous fens with <i>Cladium mariscus</i> and <i>Carex davallianae</i>	0.5
54.12	Petrifying springs with tufa formations (<i>Cratoneurion</i>)	-
54.2	Alkaline fens	0.5
61.1	Siliceous scree	-
41.12	Beech forests with <i>Ilex</i> and <i>Taxus</i> rich in epiphytes (<i>Ilici-Fagion</i>)	0.5
41.13	<i>Asperulo-Fagetum</i> beech forests	0.5
41.4	<i>Tilio-Acerion</i> ravine forests	0.5
41.53	Old oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	0.5
42.A71 to 42.A73	<i>Taxus baccata</i> woods	0.5
44.A1 to 44.A4	Bog woodland	0.5

Note: This table amended with additions but no deletions in 2004.

Annex B - Somerset vascular plant ancient woodland indicators

Note - this list was compiled by SERC (P. Williams and W G Butcher, 1995.) after extensive analysis of vascular plant data from a sample of ancient woodland and secondary woodland sites.

<i>Anemone nemorosa</i>	Wood Anemone
<i>Chrysosplenium alternifolium</i>	Alternate-leaved Golden Saxifrage
<i>Colchicum autumnale</i>	Autumn Crocus
<i>Euphorbia amygdaloides</i>	Wood spurge
<i>Galanthus nivalis</i>	Snowdrop
<i>Galium odoratum</i>	Sweet Woodruff
<i>Hypericum androsaemum</i>	Tutsan
<i>Lamiastrum galeobdolon</i>	Yellow Archangel
<i>Lathraea squamaria</i>	Toothwort
<i>Luzula pilosa</i>	Hairy Woodrush
<i>Luzula sylvatica</i>	Great Woodrush
<i>Melica uniflora</i>	Wood Mellick
<i>Milium effusum</i>	Wood Millet
<i>Neottia nidus-avis</i>	Bird's-nest Orchid
<i>Paris quadrifolia</i>	Herb Paris
<i>Polygonatum multiflorum</i>	Common Solomon's Seal
<i>Polystichum aculeatum</i>	Hard-shield Fern
<i>Prunus avium</i>	Wild Cherry
<i>Quercus petraea</i>	Sessile Oak
<i>Ranunculus auricomus</i>	Goldilocks Buttercup
<i>Ribes rubrum</i> sens. str.	Red Currant
<i>Sorbus torminalis</i>	Wild Service Tree
<i>Taxus baccata</i>	Yew
<i>Ulmus glabra</i>	Wych Elm
<i>Viola reichenbachiana</i>	Early Dog Violet

Annex C - List of NVC Communities mentioned in the text:

NVC Code	NVC Community
Woodland	
W1	Salix cinerea-Galium palustre woodland
W2	Salix cinerea-Betula pubescens-Phragmites australis woodland
W4	Betula pentandra-Carex rostrata woodland
W6	Alnus glutinosa-Urtica dioica woodland
W7	Alnus glutinosa-Fraxinus excelsior-Lysimachia woodland
W23	Ulex europeaus - Rubus fruticosus scrub
Grassland	
MG1d	Arrhenatherum elatius grassland - Festuca rubra sub-community
MG4	Alopecurus pratensis-Sanguisorba officinalis grassland
MG5	Cynosurus cristatus- Centaurea nigra grassland
MG8	Cynosurus cristatus-Caltha palustris grassland
MG11	Festuca rubra-Agrostis stolonifera- Potentilla anserina grassland
MG12	Festuca arundinacea grassland
MG13	Agrostis stolonifera - Alopecurus geniculatus grassland
CG1	Festuca ovina- Carlina vulgaris grassland
CG2	Festuca ovina- Avenula pratensis grassland
CG3	Bromus erectus grassland
CG4	Brachypodium pinnatum grassland
CG5	Bromus erectus - Brachypodium pinnatum grassland
CG6	Avenula pubescens grassland
CG7	Festuca ovina - Hieracium pilosella - Thmus praecox/pulegioides grassland
U1	Festuca ovina- Agrostis capillaris- Rumex acetosella grassland
U2	Deschampsia flexuosa grassland
U3	Agrostis curtisii grassland
U4	Festuca ovina-Agrostis capillaris-Galium saxatile grassland
U20	Pteridium aquilinum-Galium saxatile community
Mires	
M	All mire communities
Swamps/fens	
S	All swamp and tall-herb fen communities

Annex D Lowland ditch systems

Definitions of good and exceptional (see section H4.6)

<i>Diversity</i>	<i>No. of submerged/floating/emergent/wet bank species per 20 metre length</i>
Freshwater	
Exceptional	15 or more
Good	10-14
Fair	6-9
Poor	5 or fewer
Brackish	
Exceptional	10 or more
Good	6-9
Fair/poor	1-5

Annex E - River types

<i>Type 1</i>	<i>Lowland rivers with minimal gradients, in England</i>
Type 2	Clay rivers
Type 3	Chalk and oolite rivers
(Type 4)	Rivers with impoverished ditch floras, in lowland England) ¹
(Type 5)	Rivers on rich geological strata in Scotland and northern England) ²
Type 6	Rivers on sandstone, mudstone and hard limestone in England and Wales
Type 7	Mesotrophic rivers downstream from oligotrophic catchments
Type 8	Oligo-mesotrophic rivers, predominantly upland
Type 9	Oligotrophic rivers of mountains and moorlands
(Type 10)	Ultra-oligotrophic rivers in mountains) ²

¹ Rivers of this type should not be selected

² These river types do not occur in Somerset

Annex F - Species on Annex 2 of the EC Habitats Directive, 1992

The following species have recent records in Somerset - others may occur.

Vascular Plants

Early gentian

Mammals

Greater Horseshoe Bat

Lesser Horseshoe Bat

Barbastelle

Bechstein's bat

Otter

Amphibians

Great Crested Newt

Butterflies

Marsh fritillary

Beetles

Stag beetle

Crustaceans

Freshwater crayfish

Fish

Brook lamprey

River lamprey

Sea lamprey

Spined loach

Bullhead

Atlantic Salmon

Allis shad

Twaite shad

Annex G - extract from Notable Species Dictionary – Birds**BIRDS**

Common Name	Scientific Name	Status	Code
Avocet	<i>Recurvirostra avosetta</i>	BL, SPEC2/3, WL, LP,	AC
Bar-tailed Godwit	<i>Limosa lapponica</i>	SPEC2/3, WI, WL	C
Barn Owl	<i>Tyto alba</i>	BDM, SPEC2/3, LP	BC
Barnacle Goose	<i>Branta leucopsis</i>	SPEC2/3, WI, WL, Annex I	C
Bean Goose	<i>Anser fabalis</i>	WL, Annex I	AC
Bearded Tit	<i>Panurus biarmicus</i>	BL, LP	ABC
Bewick's Swan	<i>Cygnus columbianus</i>	SPEC2/3, WI, WL, LP,	AC
Bittern	<i>Botaurus stellaris</i>	BD, HD, P, LP, Annex I	ABC
Black Redstart	<i>Phoenicurus ochruros</i>	BR	ABC
Black-necked Grebe	<i>Podiceps nigricollis</i>	BR, LP, Annex I	ABC
Black-tailed Godwit	<i>Limosa limosa</i>	HD, LP	ABC
Black-throated Diver	<i>Gavia arctica</i>	BR, SPEC2/3, LP, Annex I	AC
Brambling	<i>Fringilla montifringilla</i>	BR, LP	C
Brent Goose	<i>Branta bernicla</i>	SPEC2/3, WI, WL	C
Cetti's Warbler	<i>Cettia cetti</i>	BR	ABC
Cirl Bunting	<i>Emberiza cirlus</i>	BD, P, LP	ABC
Common Gull	<i>Larus canus</i>	SPEC2/3	C
Common Scoter	<i>Melanitta nigra</i>	BD, P, LP	C
Corn Bunting	<i>Miliaria calandra</i>	BD, HD, P	ABC
Crossbill	<i>Loxia curvirostra</i>	LP	ABC
Curlew	<i>Numenius arquata</i>	BI, SPEC2/3, WI	BC
Dartford Warbler	<i>Sylvia undata</i>	HD, LP, Annex I	ABC
Dunlin	<i>Calidris alpina</i>	SPEC2/3, WI, WL	BC
Eider	<i>Somateria mollissima</i>	WL	C
Fieldfare	<i>Turdus pilaris</i>	BR, LP	C
Firecrest	<i>Regulus ignicapillus</i>	BR, LP	ABC
Gadwall	<i>Anas strepera</i>	SPEC2/3, WI, WL, Annex I	ABC
Gannet	<i>Sula bassana</i>	BI, BL, SPEC2/3	C
Golden Plover	<i>Pluvialis apricaria</i>	WI, Annex I	BC
Goldfinch	<i>Carduelis carduelis</i>	BDM	CD
Goosander	<i>Mergus merganser</i>	none	ABC
Goshawk	<i>Accipiter gentilis</i>	LP	ABC
Great Grey Shrike	<i>Lanius excubitor</i>	none	AC
Great Northern Diver	<i>Gavia immer</i>	WI, LP, Annex I	AC
Green Sandpiper	<i>Tringa ochropus</i>	LP	AC
Greenshank	<i>Tringa nebularia</i>	BL, LP	AC
Grey Plover	<i>Pluvialis squatarola</i>	WI, WL	C
Greylag Goose	<i>Anser anser</i>	WI, WL	BC
Guillemot	<i>Uria aalge</i>	BI, BL	BC
Hawfinch	<i>Coccothraustes</i>	BDM	BC
Hen Harrier	<i>Circus cyaneus</i>	HD, LP, Annex I	ABC
Jack Snipe	<i>Lymnocyptes minimus</i>	SPEC2/3	C
Knot	<i>Calidris canutus</i>	SPEC2/3, WI, WL	C
Lapland Bunting	<i>Calcarius lapponicus</i>	LP	AC
Lapwing	<i>Vanellus vanellus</i>	WI	BC
Lesser Spotted Woodpecker	<i>Dendrocopos minor</i>	none	BC
Linnet	<i>Carduelis cannabina</i>	BD, P	CD
Little Gull	<i>Larus minutus</i>	BR, SPEC2/3, LP	AC
Long-eared Owl	<i>Asio otus</i>	none	BC
Long-tailed Duck	<i>Clangula hyemalis</i>	LP	C
Marsh Harrier	<i>Circus aeruginosus</i>	HD, LP, Annex I	ABC
Mediterranean Gull	<i>Larus melanocephalus</i>	BR, LP, Annex I	AC
Oystercatcher	<i>Haematopus ostralegus</i>	WI, WL	CD
Pink-footed Goose	<i>Anser brachyrhynchus</i>	WI, WL, Annex I	C
Pintail	<i>Anas acuta</i>	BR, SPEC2/3, WI, WL, LP,	BC
Pochard	<i>Aythya ferina</i>	WI, WL, Annex I	BC
Purple Sandpiper	<i>Calidris maritima</i>	BR, WI, LP	C
Razorbill	<i>Alca torda</i>	BL	BC
Red Kite	<i>Milvus milvus</i>	HD, LP, Annex I	AC
Red-necked Grebe	<i>Podiceps grisegena</i>	BR	AC
Red-necked Phalarope	<i>Phalaropus lobatus</i>	HD, LP	AC
Red-throated Diver	<i>Gavia stellata</i>	SPEC2/3	AC



Common Name	Scientific Name	Status	Code
Redshank	<i>Tringa totanus</i>	SPEC2/3, WI	BC
Redwing	<i>Turdus iliacus</i>	BR, LP	C
Ringed Plover	<i>Charadrius hiaticula</i>	WI	BC
Ruff	<i>Philomachus pugnax</i>	BR, WL, LP, Annex I	C
Sanderling	<i>Calidris alba</i>	none	C
Scaup	<i>Aythya marila</i>	BR, SPEC2/3	AC
Shelduck	<i>Tadorna tadorna</i>	BI, WI, WL	BC
Shore Lark	<i>Eremophila alpestris</i>	LP	AC
Short-eared Owl	<i>Asio flammeus</i>	SPEC2/3, Annex I	BC
Shoveler	<i>Anas clypeata</i>	WI, Annex I	BC
Skylark	<i>Alauda arvensis</i>	BD, P	CD
Slavonian Grebe	<i>Podiceps auritus</i>	BR, LP	AC
Snipe	<i>Gallinago gallinago</i>	BDM	BC
Snow Bunting	<i>Plectrophenax nivalis</i>	BR, LP	AC
Song Thrush	<i>Turdus philomelos</i>	BD, P	CD
Teal	<i>Anas crecca</i>	WI, Annex I	BC
Turnstone	<i>Arenaria interpres</i>	WI	C
Twite	<i>Carduelis flavirostris</i>	HD	C
Velvet Scoter	<i>Melanitta fusca</i>	SPEC2/3, WL, LP	AC
Waxwing	<i>Bombycilla garrulus</i>	none	AC
White-fronted Goose	<i>Anser albifrons</i>	WL, Annex I	C
Whooper Swan	<i>Cygnus cygnus</i>	BR, WI, WL, LP, Annex I	AC
Wigeon	<i>Anas penelope</i>	WI, WL, Annex I	C
Wood Sandpiper	<i>Tringa glareola</i>	BR, SPEC2/3, LP, Annex I	C
Woodlark	<i>Lullula arborea</i>	BD, P, LP, Annex I	ABC

KEY to statuses:

Red List Criteria

- BD >=50% decline in UK breeding population or range over the previous 25 years
- HD historical population decline in the UK between 1800-1995
- SPEC1 Species of global conservation concern

Amber List Criteria

- BDM moderate decline (25-49%) in UK breeding population or range over the previous 25 years
- BR five year mean of 0.2-300 breeding pairs in the UK
- BI >=20% of the European population in the UK
- WI >=20% of the north-west European (wildfowl), East Atlantic Flyway (waders) or European (others) non-breeding populations in the UK
- BL >=50% of the UK breeding population can be found in 10 or fewer sites, but not BR
- WL >=50% of the UK non-breeding population can be found in 10 or fewer sites
- SPEC2/3 species with an unfavourable conservation status in Europe

Other categories

- LP Legally protected by Wildlife and Countryside Act (1981)
- P Biodiversity Action Plan Priority species
- Annex I Species protected under Annex I of the EU Birds directive

Key To Codes

- A Notable sightings, this category includes birds with low national populations (less than 10,000 individuals) at any time of year. A sighting of a bird in this category at any time of year constitutes a notable record
- B Breeding notable, this category includes species which are uncommon breeders at a national scale and which breed or have bred in Somerset or the South-west. For a record to be notable a bird must be showing some evidence of breeding
- C Wintering notable, this category includes species which are uncommon winterers or which winter in internationally important numbers, a sighting of this bird in autumn or winter constitutes a notable record, providing it is not simply flying over a site on its migratory route.
- D Declining breeder, this category includes species which breed in too large a number to be selected for category B, but which have declined in breeding numbers. For a sighting to be a notable record, birds must be exhibiting some evidence of breeding.



Annex H - Assemblages of amphibians

		<i>Low population</i>	<i>Good population</i>	<i>Exceptional population</i>
		Score 1	Score 2	Score 3
Great crested newt	Seen or netted in day	<5	5-50	>50
	Counted at night	<10	10-100	>100
Smooth newt	Netted in day or	<10	10-100	>100
	Counted at night			
Palmate newt	Netted in day or	<10	10-100	>100
	Counted at night			
Common toad	Estimated	<500	500-5,000	>5,000
	Counted	<100	100-1,000	>1,000
Common frog	Spawn clumps counted	<50	50-500	>500

Scores have to be for breeding sites observed during the breeding season. Daytime netting should be made during a 15 minute period for sites with less than 50m of water's edge, for 30 minutes for sites with 50-100m etc.