UK TECHNICAL ADVISORY GROUP ON THE WATER FRAMEWORK DIRECTIVE

Guidance on the Identification of Natura Protected Areas [Final]

This Guidance Paper is a working draft defined by the UKTAG. It documents the principles to be adopted by agencies responsible for implementing the Water Framework Directive (WFD) in the UK. This method will evolve as it is tested, with this working draft amended accordingly.			
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1. Purpose

This paper sets out UKTAG's advice on the identification of relevant Natura 2000 sites for inclusion on the register of Protected Areas required under Article 6 of the Water Framework Directive.

2. Background

Article 6 of the Directive requires Member States to ensure the establishment of a register, or registers, of all Protected Areas lying within each river basin district that have been designated as requiring special protection under specific Community legislation for the protection of their surface water or groundwater or for the conservation of habitats and species directly depending on water.

The register or registers must include protected areas covered by Annex IV of the Directive. Annex IV lists, among other things, areas designated for the protection of habitats or species where the protection or improvement of the status of water is an important factor in their protection, including relevant Natura 2000 sites designated under Directive 93/43/EEC (the Habitats Directive) and Directive 79/409/EEC (the Birds Directive).

Under the Habitats and Birds Directives, Member States are required to identify Special Areas of Conservation and Special Protection Areas for the conservation of specific habitats and species. The conservation status of some of these habitats and species will be directly dependent on the status of water. Where the habitats and species for which a Natura site has been designated include one or more habitats and species directly dependent on the status of water, the site will be included on a Protected Area Register.

3. Ecological criteria for water dependency

There is wide range of types of water dependency amongst Natura 2000 habitats and species. For example, Natura habitats include specific surface water habitats, such as oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea,* and Natura species include those that live in

surface waters, such as lampreys and Atlantic salmon. Other Natura habitats and species depend on saturation conditions caused where groundwater is at or near the surface of the ground or where surface water flooding is frequent. Natura habitats and species may also depend directly on aquatic processes (e.g. sand dunes reliant on the movement of sediment in adjacent coastal waters) or on increased humidity associated with nearby water.

Table 1 sets out the ecological criteria UKTAG has used to identify those Natura habitats and species likely to be directly dependent on the status of water.

Table 1: Ecological criteria for identifying Natura Habitats and Species that are directly dependent on the status of water

Natura 2000 SPECIES	Natura 2000 HABITATS
1.a Aquatic species living in surface waters as defined in Article 2 of the Water Framework Directive (e.g. bottle-nose dolphin, freshwater pearl mussel)	2.a Habitats which consist of surface water or occur entirely within surface water, as defined in Article 2 of the Water Framework Directive (e.g. oligotrophic waters; estuaries; eelgrass beds)
1.b Species with at least one aquatic life stage dependent on surface water (i.e. species that use surface water for breeding; incubation, juvenile development; sexual maturation, feeding or roosting - including many Natura bird and invertebrate species)	2.b Habitats which depend on frequent inundation by surface water, or on the level of groundwater (e.g. alluvial alder wood, blanket bog, fens)
1.c Species that rely on the non-aquatic but water-dependent habitats relevant under 2.b and 2.c in the habitats column of this Table (e.g. Killarney fern).	2.c Non-aquatic habitats which depend on the influence of surface water - e.g. habitats reliant on the spray or humidity caused by a surface water body (bryophyte-rich gorges)

4. Examples of water dependent Natura Habitats and Species

4.1 Natura Species

a. **Species that live in surface water**. The white clawed crayfish *Austropotamobius pallipes* completes its entire life cycle in rivers, lakes, or transitional waters. It therefore depends directly on the condition of surface water bodies. Other examples of Natura species completing their entire lifecycles in surface waters include floating water plantain and freshwater pearl mussel.

b. **Species with an aquatic life stage in surface water or which depend on water for feeding or breeding**. The osprey *Pandion haliateus* feeds on fish in rivers, lakes and transitional waters. They therefore depend on a functioning surface water ecosystem to provide sufficient fish. Other examples of Natura species depending for parts of their lifecycle on surface water include southern damselfly and redshank

c. **Species that rely on habitats that are not aquatic, but which are water dependent**. Desmoulin's whorl snail, *Vertigo moulinsiana*, is found in calcareous wetlands bordering lakes or rivers. The species depends on recurrent inundation of these areas by surface water. Other examples of Natura species that depend on water dependent habitats include Killarney fern, fen orchid and dunlin.

4.2 Natura Habitats

a. **Habitats that consist of surface water or occur entirely within surface water.** Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion vegetation* fall within the river surface water category. Other examples of Natura surface water habitats include estuaries coastal lagoons and oligotrophic to mesotrophic standing waters with benthic vegetation of the *Chara* spp

b. **Habitats that depend on frequent inundation or saturation by surface waters, or on the level of groundwater**. Atlantic salt meadows occur on saltmarsh within the intertidal zone, and depend on tidal inundation as well as the morphological condition of the intertidal zone. Other examples of Natura habitats depending on inundation, saturation or groundwater levels include some lowland hay meadows, blanket bogs, bog woodland, alluvial forests and some *Molinia* meadows.

c. **Non-aquatic habitats that depend on the direct influence of surface water.** Shifting sand dunes along the shoreline depend on aquatic processes to ensure delivery of sediment for their continued existence. They are therefore affected by disruptions to sediment transport resulting from morphological changes to coastal waters and particularly alterations to the intertidal zone of such waters. Other examples of water dependent non-aquatic habitats include some old sessile oak woods (bryophyte rich) and perennial vegetation of stony banks.

5. List of relevant water dependent Natura Habitats and Species

Appendix 1 contains a working list of all Natura habitats and species identified as being directly dependent on the status of water according to the criteria set out in Section 4 above, and which occur in at least one Natura site in the UK. The working list also identifies the total number of sites designated for the particular habitat or species in the UK. This information is summarized in the Table 2 below.

Table 2: Total numbers of Natura 2000 sites in UK designated for habitats and species that are directly dependent on the status of water. E = England; ES = England/ Scotland; EW = England/ Wales; NI = Northern Ireland; S = Scotland; W = Wales; OF = UK Offshore Waters

Site Type	E	ES	EW	NI	S	W	OF
cSACs	183	3	3	41	217	84	0
pSACs	17	0	3	9	2	0	1
SPAs	78	1	2	11	135	14	0
SPA candidate	4	0	0	2	5	3	0
TOTAL:	**282**	**4**	**8**	**63**	**359**	**101**	**1**

6. Natura Protected Areas and River Basin Management Planning

Article 4.1(c) of the Water Framework Directive requires Member States, in managing their water bodies, to achieve compliance with any standards and objectives for Protected Areas by 22/12/2015 at the latest unless otherwise specified in the

Community legislation under which the individual protected areas have been established.

The identification of relevant Natura sites as Protected Areas means that the achievement of the water-related standards and objectives for those sites will be an objective of the river basin management planning process. It does not mean that the achievement of non water-related standards and objectives for the sites will be delivered through the river basin planning process. For example, intrusive land-based activities may disturb wildfowl nesting at the water's edge even though the water status needs of the wildfowl are achieved.

By 22/12/2004, Article 5 of the Water Framework Directive requires, among other things, an assessment of the risk failing to meet the water-related standards and objectives for Protected Areas. In undertaking these assessments, it will be important to take account of the sensitivity of the water-dependent Natura habitats and species to anthropogenic changes in the status of water. The sensitivity of any one Natura habitat and species may be very different from one site to the next. Figure 1 outlines the basic assessment requirements.

All water dependent habitats and species identified for protection within Natura 2000 sites will have conservation objectives established under the Habitats Regulations. These will usually be an expression of biological aims and objectives but specific values for the relevant physico-chemical or hydromorphological qualities of surface waters or for the chemical quality or level of groundwater have been defined in some cases. For the purposes of the pressures and impacts analysis, the surface water and groundwater related needs of all Natura Protected Areas will have to be characterised to the extent required to decide if there is a risk of failing to achieve their water-related standards and objectives.

The first risk assessments will rely heavily on existing information. This will be variable across the UK. In England and Wales, the Environment Agency has established an inventory of those Natura 2000 sites that may be affected by consented activities. This inventory is used for the purpose of reviewing those Agency consents that may affect Natura sites. The information gained during the review of consents will greatly assist the pressures and impacts analyses. However, since the main criterion for identifying sites relevant to the review of consents is the presence of relevant Environment Agency consents rather than the presence of water dependent species and habitats, (i) the Protected Area Register may include other relevant Natura sites; (ii) the relevant objectives for the sites that are on the Agency’s inventory may be at risk from pressures not subject to Agency consents.

The water-related standards needed to meet the objectives for Natura Protected Areas may be more or less stringent than those required to achieve good surface water status, good groundwater status, other Protected Area objectives or other relevant objectives specified under paragraph 1 of Article 4 of the Water Framework Directive. In accordance with paragraph 2 of Article 4, the most stringent objective will apply.

For the purposes of the first Article 5 risk assessments, the information required on the water-related standards and objectives for a Natura site will depend, in part, on whether the standards and objectives are equivalent to, or more or less stringent than, those required to achieve good status. For example, if the relevant Natura standards and objectives were equivalent to those required for good status, an assessment of the risk of failing to achieve good status would also provide information for determining if the achievement of the relevant Natura objectives were at risk. If the water-related standards and objectives for the Natura site were less stringent than those required for good status, more detailed information on the Natura standards and objectives might only be needed if a risk of failing good status were identified. The additional information would be needed to enable an assessment of whether the relevant Natura objectives were also at risk.

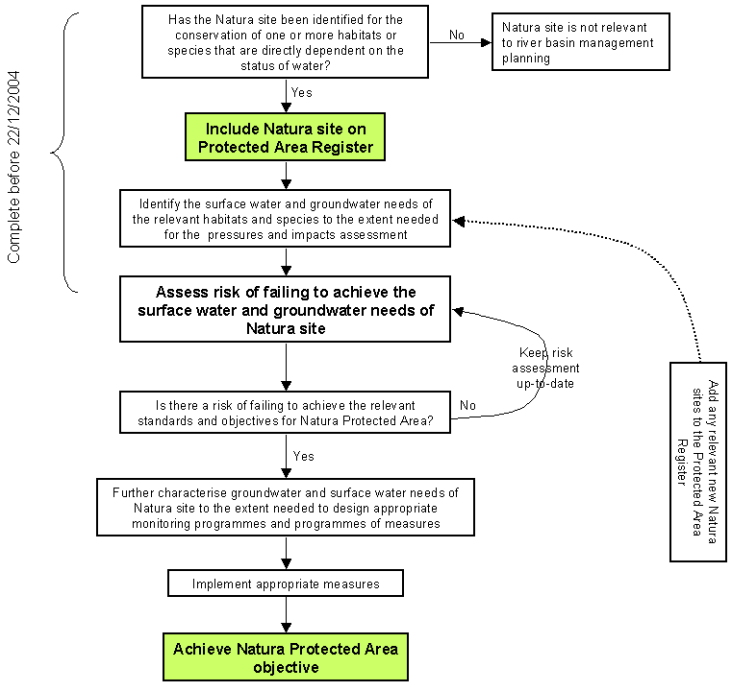

Figure 1: Outline of the identification of, and assessment risks to, Natura Protected Areas in the river basin management planning process

The following examples provide an indication of how the relevant Natura standards and objectives may be integrated into the Article 5 assessments.

6.1 Example 1: Species that live in water

Natura Site: River Wye SAC

Water dependent features: Atlantic salmon.

Example of water related Natura standards and objective: Proportion of fine sediments in spawning gravels < 20%; < 0.06mg/l P in spawning areas. If the status of Atlantic salmon is to be favourable, then the Natura standards must be achieved in relevant water bodies, or parts of water bodies, in the Wye basin. These standards may be more or less stringent than those required to achieve good surface water status. The Article 5 pressures and impacts assessment must consider the requirements of the most stringent objective. Should a risk of failure to achieve the water-related objectives

for the Natura site be identified, appropriate measures must be identified within the programme of measures.

Other water dependent species and habitats: Allis shad; Twaite shad; brook, river and sea lampreys; bullhead; otter; white clawed crayfish; water courses with water crowfoot beds; transition mires; and quaking bogs.

6.2 Example 2: Habitats that rely on frequent inundation or saturation from surface waters, or a supply of groundwater.

Natura site: Cors Caron (Tregaron Bog) cSAC (relies upon groundwater and river)

Water dependent features: Active raised bogs; degraded raised bogs still capable of natural regeneration; depressions on peat substrates of the rhynchosporion bog woodland; otter; transition mires; and quaking bogs.

Example of water related objective: 95% of all active raised bog and degraded raised bog saturated by water from all sources for 90% of the year. Anthropogenic impacts on adjacent bodies of groundwater and surface water could compromise these water-related objectives.

6.3 Example 3: Habitats that consist of surface water or occur entirely within surface water

Natura site: Penllyn ar Sarnau (Llyn Peninsula and Sarnau) cSAC. Estuaries on this site are sand bar drying, low nutrient.

Water dependent features: Estuaries; mudflats and sandflats not covered by seawater at low tide; coastal lagoon; large shallow inlets and bays; Atlantic salt meadows; salicornia and other annuals colonising mud and sand; sandbanks which are slightly covered by sea water all the time; reefs; *Glauco-Puccinellietalia maritimae*; *Spartina* swards; submerged or partially submerged sea caves.

Example of water related objective: For the estuary**,** maintain the full range and current proportions (within natural variability) of sediment infaunal communities and rocky communities from fully saline sands to low salinity muds and full salinity sheltered rock to low salinity sheltered rocky communities.

Appendix 1

Table 3: Water dependent SAC habitats

Interest Code	Water dependent SAC Habitat features	Lay Title
H1110	Sandbanks which are slightly covered by sea water all the time	Subtidal sandbanks.
H1130	Estuaries	Estuaries.
H1140	Mudflats and sandflats not covered by seawater at low tide	Intertidal mudflats and sandflats.
H1150	Coastal lagoons	Lagoons.
H1160	Large shallow inlets and bays	Shallow inlets and bays.
H1170	Reefs	Reefs.
H1210	Annual vegetation of drift lines	Annual vegetation of drift lines.
H1220	Perennial vegetation of stony banks	Coastal shingle vegetation outside the reach of waves.

H1230	Vegetated sea cliffs of the Atlantic and Baltic coasts	Vegetated sea cliffs.
H1310	*Salicornia* and other annuals colonising mud and sand	Glasswort and other annuals colonising mud and sand.
H1320	*Spartina* swards (*Spartinion maritimae*)	Cord-grass swards.
H1330	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Atlantic salt meadows.
H1420	Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)	Mediterranean saltmarsh scrub.
H2110	Embryonic shifting dunes	Shifting dunes.
H2120	Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")	Shifting dunes with marram.
H2130	Fixed dunes with herbaceous vegetation ("grey dunes")	Dune grassland.
H2140	Decalcified fixed dunes with *Empetrum nigrum*	Lime-deficient dune heathland with crowberry.
H2150	Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)	Coastal dune heathland.
H2160	Dunes with *Hippophae rhamnoides*	Dunes with sea-buckthorn.
H2170	Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)	Dunes with creeping willow.
H2190	Humid dune slacks	Humid dune slacks.
H21A0	Machairs	Machair.
H2250	Coastal dunes with *Juniperus* spp.	Dunes with juniper thickets.
H2330	Inland dunes with open *Corynephorus* and *Agrostis* grasslands	Open grassland with grey-hair grass and common bent grass of inland dunes.
H3110	Oligotrophic waters containing very few minerals of sandy plains: *Littorelletalia uniflorae*	Nutrient-poor shallow waters with aquatic vegetation on sandy plains.
H3130	Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*	Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels.
H3140	Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.	Calcium-rich nutrient-poor lakes, lochs and pools.
H3150	Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation	Naturally nutrient-rich lakes or lochs which are often dominated by pondweed.
H3160	Natural dystrophic lakes and ponds	Acid peat-stained lakes and ponds.
H3170	Mediterranean temporary ponds	Mediterranean temporary ponds.
H3180	Turloughs	Turloughs.
H3260	Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	Rivers with floating vegetation often dominated by water-crowfoot.
H4010	Northern Atlantic wet heaths with *Erica tetralix*	Wet heathland with cross-leaved heath.
H4020	Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix*	Wet heathland with Dorset heath and cross-leaved heath.
H4030	European dry heaths	Dry heaths.
H6130	Calaminarian grasslands of the *Violetalia calaminariae*	Grasslands on soils rich in heavy metals.
H6230	Species-rich *Nardus* grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe)	Species-rich grassland with mat-grass, in upland areas.
H6410	*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	Purple moor-grass meadows.
H6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	Tall herb communities.
H6510	Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)	Lowland hay meadows.
H7110	Active raised bogs	Active raised bogs.
H7120	Degraded raised bogs still capable of natural regeneration	Degraded raised bog.
H7130	Blanket bogs	Blanket bog.
H7140	Transition mires and quaking bogs	Very wet mires often identified by an unstable 'quaking' surface.

H7150	Depressions on peat substrates of the *Rhynchosporion*	Depressions on peat substrates.
H7210	Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*	Calcium-rich fen dominated by great fen sedge (saw sedge).
H7220	Petrifying springs with tufa formation (*Cratoneurion*)	Hard-water springs depositing lime.
H7230	Alkaline fens	Calcium-rich springwater-fed fens.
H7240	Alpine pioneer formations of the *Caricion bicoloris-atrofuscae*	High-altitude plant communities associated with areas of water seepage.
H8110	Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*)	Acidic scree.
H8120	Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)	Base-rich scree.
H8210	Calcareous rocky slopes with chasmophytic vegetation	Plants in crevices in base-rich rocks.
H8220	Siliceous rocky slopes with chasmophytic vegetation	Plants in crevices on acid rocks.
H8310	Caves not open to the public	Caves not open to the public
H8330	Submerged or partially submerged sea caves	Sea caves.
H91A0	Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Western acidic oak woodland.
H91D0	Bog woodland	Bog woodland.
H91E0	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)	Alder woodland on floodplains.

Table 4: Number of sites (cSACs) designated for each relevant Habitats Directive habitat (by country).
NB: excluding features with global rating of 'D'. E = England; ES = England/ Scotland; EW = England/ Wales; NI = Northern Ireland; S = Scotland; W = Wales; OF = UK Offshore Waters

Code	E	ES	EW	NI	S	W
H1110	8	1		2	6	5
H1130	9	1	1		2	4
H1140	12	3	1	2	6	5
H1150	9			1	7	3
H1160	4	1		1	3	4
H1170	9	2	1	2	15	4
H1210	7	1		3	2	
H1220	7	1		1	2	1
H1230	16	1		2	15	5
H1310	6	2		1	1	3
H1320	2					
H1330	10	2	1	4	4	5
H1420	4					
H2110	10	1		3	7	3
H2120	14	1		4	12	3
H2130	11	2		4	11	4
H2140					2	
H2150	5			1	4	
H2160	1					
H2170	7			2	1	4
H2190	12	1		1	8	4
H21A0					6	

H2250					2	
H2330	1					
H3110	3				1	
H3130	5			3	31	7
H3140	7			1	4	3
H3150	3			2	8	3
H3160	2			4	16	1
H3170	1					
H3180				1		1
H3260	10	1	1	3		5
H4010	24			5	29	11
H4020	4					
H4030	43			5	42	21
H6130	9				7	4
H6230	1			2	18	1
H6410	15			2		15
H6430	2				22	3
H6510	5					
H7110	6		1	9	25	5
H7120	8		1	2	22	3
H7130	9			8	49	8
H7140	11		1	3	16	7
H7150	7				20	5
H7210	9			1		3
H7220	7			1	7	1
H7230	16			4	22	7
H7240	1				13	1
H8110	3			2	20	2
H8120	2			1	7	1
H8210	5			1	24	5
H8220	4			2	22	3
H8310	4		1			3
H8330	4	1		1	4	5
H91A0	16			11	23	15
H91D0	4			3	8	3
H91E0	13			3	10	10
Total	**427**	**22**	**9**	**114**	**586**	**219**

Table 5: Number of sites (pSACs) designated for each relevant Habitats Directive habitat (by country).
NB: excluding features with global rating of 'D'. E = England; ES = England/ Scotland; EW = England/ Wales; NI = Northern Ireland; S = Scotland; W = Wales; OF = UK Offshore Waters.

Code	E	ES	EW	NI	S	W	OF
H1110	1		1		1		
H1130			1				
H1140							
H1150							

H1160							
H1170							1
H1210							
H1220							
H1230	1						
H1310							
H1320							
H1330							
H1420							
H2110							
H2120							
H2130							
H2140							
H2150							
H2160							
H2170							
H2190							
H21A0							
H2250							
H2330							
H3110							
H3130							
H3140							
H3150							
H3160							
H3170							
H3180							
H3260			1	1			
H4010	1						
H4020							
H4030	2						
H6130							
H6230							
H6410							
H6430							
H6510							
H7110	1			6			
H7120	1						
H7130					1		
H7140	3						
H7150							
H7210							
H7220							
H7230							
H7240							
H8110							

H8120							
H8210							
H8220							
H8310							
H8330							
H91A0							
H91D0							
H91E0							
Total	**10**	**0**	**3**	**7**	**2**	**0**	**1**

Table 6: Water dependent SAC species

	Water dependent SAC species features	Lay Title
S1013	*Vertigo geyeri*	Geyer's whorl snail.
S1014	*Vertigo angustior*	Narrow-mouthed whorl snail.
S1015	*Vertigo genesii*	Round-mouthed whorl snail.
S1016	*Vertigo moulinsiana*	Desmoulin's whorl snail.
S1029	*Margaritifera margaritifera*	Freshwater pearl mussel.
S1044	*Coenagrion mercuriale*	Southern damselfly.
S1065	*Euphydryas* (*Eurodryas, Hypodryas*) *aurinia*	Marsh fritillary butterfly.
S1092	*Austropotamobius pallipes*	White-clawed (or Atlantic stream) crayfish.
S1095	*Petromyzon marinus*	Sea lamprey.
S1096	*Lampetra planeri*	Brook lamprey.
S1099	*Lampetra fluviatilis*	River lamprey.
S1102	*Alosa alosa*	Allis shad.
S1103	*Alosa fallax*	Twaite shad.
S1106	*Salmo salar*	Atlantic salmon.
S1149	*Cobitis taenia*	Spined loach.
S1163	*Cottus gobio*	Bullhead.
S1166	*Triturus cristatus*	Great crested newt.
S1308	*Barbastella barbastellus*	Barbastelle.
S1323	*Myotis bechsteinii*	Bechstein's bat.
S1349	*Tursiops truncatus*	Bottlenose dolphin.
S1351	*Phocoena phocoena*	Harbour porpoise.
S1355	*Lutra lutra*	Otter.
S1364	*Halichoerus grypus*	Grey seal.
S1365	*Phoca vitulina*	Common seal.
S1393	*Drepanocladus* (*Hamatocaulis*) *vernicosus*	Slender green feather-moss.
S1395	*Petalophyllum ralfsii*	Petalwort.
S1421	*Trichomanes speciosum*	Killarney fern.
S1441	*Rumex rupestris*	Shore dock.
S1528	*Saxifraga hirculus*	Marsh saxifrage.
S1614	*Apium repens*	Creeping marshwort.
S1831	*Luronium natans*	Floating water-plantain.
S1833	*Najas flexilis*	Slender naiad.
S1903	*Liparis loeselii*	Fen orchid.

Table 7: Number of sites (cSACs) designated for each relevant Habitats Directive species (by country).
NB: excluding features with global rating of 'D'. E = England; ES = England/ Scotland; EW = England/ Wales; NI = Northern Ireland; S = Scotland; W = Wales; OF = UK Offshore Waters

Interest Code	E	ES	EW	NI	S	W
S1013	2				3	2
S1014	2			1		1
S1015	1				2	
S1016	8					1
S1029	3			3	19	1
S1044	7					4
S1065	12			3	4	13
S1092	9		1	1		
S1095	7	3	3		3	7
S1096	8	1	2		3	4
S1099	5	3	3		3	7
S1102	1		1			4
S1103			2			4
S1106	7	1	2	3	18	4
S1149	5					
S1163	12		2			4
S1166	24				3	5
S1308	1					
S1323	2					
S1349					1	2
S1351						
S1355	12	1	2	4	46	12
S1364	2	1			5	3
S1365	1			2	9	
S1393	2				2	6
S1395	6	1		1	1	5
S1421	1					
S1441	7					3
S1528	2			1	2	
S1614	1					
S1831	4		1			9
S1833					5	
S1903	1					2
Total	**155**	**11**	**19**	**19**	**129**	**103**

Table 8: Number of sites (pSACs) designated for each relevant Habitats Directive species (by country).
NB: excluding features with global rating of 'D'. E = England; ES = England/ Scotland; EW = England/ Wales; NI = Northern Ireland; S = Scotland; W = Wales; OF = UK Offshore Waters

Interest Code	E	ES	EW	NI	S	W

S1013						
S1014						
S1015						
S1016						
S1029						
S1044						
S1065				2		
S1092						
S1095						
S1096						
S1099						
S1102						
S1103						
S1106						
S1149						
S1163						
S1166	1					
S1308	3					
S1323	1					
S1349						
S1351						
S1355						
S1364						
S1365						
S1393						
S1395						
S1421						
S1441						
S1528						
S1614						
S1831						
S1833						
S1903						
Totals	**5**	**0**	**0**	**2**	**0**	**0**

Table 9: Water dependent SPA species. B = Breeding; W= Wintering; P = Passage

Water dependent SPA Features	Common name	Seasons
Acrocephalus paludicola	Aquatic Warbler	P
Acrocephalus schoenobaenus	Sedge Warbler	B
Acrocephalus scirpaceus	Reed Warbler	B
Actitis hypoleucos	Common Sandpiper	B
Alca torda	Razorbill	B
Alcedo atthis	Kingfisher	B
Anas acuta (North-western Europe)	Pintail	W
Anas clypeata (North-western/Central Europe)	Shoveler	BW
Anas crecca (North-western Europe)	Teal	BW

Anas penelope (Western Siberia/North-western/North-eastern Europe)	Wigeon	BW
Anas platyrhynchos (North-western Europe)	Mallard	BW
Anas querquedula (Western Siberia/Europe/Western Africa)	Garganey	B
Anas strepera (North-western Europe)	Gadwall	BW
Anser albifrons albifrons (North-western Siberia/North-eastern & North-western Europe)	White-fronted Goose	W
Anser albifrons flavirostris (Greenland/Ireland/UK)	Greenland White-fronted Goose	W
Anser anser (Iceland/UK/Ireland)	Greylag Goose	BW
Anser brachyrhynchus (Eastern Greenland/Iceland/UK)	Pink-footed Goose	W
Aquila chrysaetos	Golden Eagle	BR
Arenaria interpres (Western Palearctic - wintering)	Turnstone	W
Asio flammeus	Short-eared Owl	B
Aythya ferina (North-western/North-eastern Europe)	Pochard	BW
Aythya fuligula (North-western Europe)	Tufted Duck	W
Aythya marila (Northern/Western Europe)	Scaup	W
Botaurus stellaris (Europe - breeding)	Bittern	BW
Branta bernicla bernicla (Western Siberia/Western Europe)	Dark-bellied Brent Goose	W
Branta bernicla hrota (Canada/Ireland)	Light-bellied Brent Goose	W
Branta bernicla hrota (Svalbard/Denmark/UK)	Light-bellied Brent Goose	W
Branta leucopsis (Eastern Greenland/Scotland/Ireland)	Barnacle Goose	W
Branta leucopsis (Svalbard/Denmark/UK)	Barnacle Goose	W
Breeding bird assemblage	Breeding bird assemblage	B
Bucephala clangula (North-western/Central Europe)	Goldeneye	BW
Burhinus oedicnemus (Western Europe - breeding)	Stone Curlew	B
Calidris alba (Eastern Atlantic/Western & Southern Africa - wintering)	Sanderling	PW
Calidris alpina alpina (Northern Siberia/Europe/Western Africa)	Dunlin	W
Calidris alpina schinzii (Baltic/UK/Ireland)	Dunlin	B
Calidris canutus (North-eastern Canada/Greenland/Iceland/North-western Europe)	Knot	W
Calidris maritima (Eastern Atlantic - wintering)	Purple Sandpiper	W
Caprimulgus europaeus	Nightjar	B
Carduelis flavirostris	Twite	B
Catharacta skua (World)	Great Skua	B
Cepphus grylle (East Atlantic)	Black Guillemot	B
Charadrius hiaticula (Europe/Northern Africa - wintering)	Ringed Plover	BPW
Charadrius morinellus (Europe - breeding)	Dotterel	B
Circus aeruginosus	Marsh Harrier	B
Circus cyaneus	Hen Harrier	BW

Clangula hyemalis (Iceland/Greenland)	Long-tailed duck	W
Coturnix coturnix	Quail	B
Crex crex (Europe/Africa/Western Asia)	Corncrake	B
Cygnus columbianus bewickii (Western Siberia/North-eastern & North-western Europe)	Bewick`s Swan	W
Cygnus cygnus (Iceland/UK/Ireland)	Whooper Swan	PW
Cygnus olor (North-western Mainland & Central Europe)	Mute Swan	BW
Egretta garzetta (Sub-Saharan Africa - breeding)	Little Egret	P
Emberiza schoeniclus	Reed Bunting	B
Falco columbarius	Merlin	BW
Falco peregrinus	Peregrine	B
Falco subbuteo	Hobby	B
Fratercula arctica	Puffin	B
Fulica atra (North-western Europe - wintering)	Coot	BW
Fulmarus glacialis (North Atlantic)	Fulmar	B
Gallinago gallinago (Europe - breeding)	Snipe	BW
Gallinula chloropus (Europe/Northern Africa)	Moorhen	B
Gavia arctica (Western Siberia/Europe)	Black-throated Diver	B
Gavia stellata (North-western Europe - wintering)	Red-throated Diver	BW
Haematopus ostralegus (Europe & Northern/Western Africa)	Oystercatcher	BW
Hydrobates pelagicus (World)	Storm Petrel	B
Larus argentatus (North-western Europe (breeding) and Iceland/Western Europe - breeding)	Herring Gull	B
Larus canus (West and Central Europe)	Common Gull	B
Larus fuscus (Western Europe/Mediterranean/Western Africa)	Lesser Black-backed Gull	B
Larus marinus (North-east Atlantic - breeding)	Great Black-backed Gull	B
Larus melanocephalus	Mediterranean Gull	B
Larus ridibundus (North-western Europe - breeding)	Black-headed Gull	B
Limosa lapponica (Western Palearctic - wintering)	Bar-tailed Godwit	W
Limosa limosa islandica (Iceland - breeding)	Black-tailed Godwit	W
Limosa limosa limosa (Western Europe/W Africa)	Black-tailed Godwit	B
Locustella luscinioides	Savi's Warbler	B
Locustella naevia	Grasshopper Warbler	B
Loxia scotica	Scottish Crossbill	B
Lullula arborea	Woodlark	B
Melanitta fusca	Velvet Scoter	W
Melanitta nigra (Western Siberia/Western & Northern Europe/North-western Africa)	Common Scoter	BW
Mergus merganser (North-western/Central Europe)	Goosander	W
Mergus serrator (North-western/Central Europe)	Red-breasted Merganser	W
Milvus milvus	Red Kite	B
Morus bassana (North Atlantic)	Gannet	B
Numenius arquata (Europe - breeding)	Curlew	BW
Numenius phaeopus (Europe/Western Africa)	Whimbrel	BP
Oceanodroma leucorhoa (North Atlantic)	Leach's Storm-petrel	B

Oenanthe oenanthe	Wheatear	B
Pandion haliaetus	Osprey	B
Pernis apivorus	Honey Buzzard	B
Phalacrocorax aristotelis (Northern Europe)	Shag	B
Phalacrocorax carbo (North-western Europe)	Cormorant	BW
Phalaropus lobatus	Red-necked Phalarope	B
Philomachus pugnax (Western Africa - wintering)	Ruff	BPW
Phylloscopus sibilatrix	Wood Warbler	B
Pluvialis apricaria (North-western Europe - breeding)	Golden Plover	BW
Pluvialis squatarola (Eastern Atlantic - wintering)	Grey Plover	W
Podiceps auritus (North-western Europe)	Slavonian Grebe	BW
Podiceps cristatus (North-western Europe - wintering)	Great Crested Grebe	BPW
Porzana porzana (Europe/Africa)	Spotted Crake	B
Puffinus puffinus	Manx Shearwater	B
Pyrrhocorax pyrrhocorax	Chough	BW
Rallus aquaticus (Europe)	Water Rail	W
Recurvirostra avosetta (Western Europe/Western Mediterranean - breeding)	Avocet	BW
Rissa tridactyla (Eastern Atlantic - Breeding)	Kittiwake	B
Saxicola rubetra	Whinchat	B
Seabird assemblage	Seabird assemblage	B
Somateria mollissima (Britain/Ireland)	Eider	W
Stercorarius parasiticus (North Atlantic)	Arctic Skua	B
Sterna albifrons (Eastern Atlantic - breeding)	Little Tern	B
Sterna dougallii (Europe - breeding)	Roseate Tern	B
Sterna hirundo (Northern/Eastern Europe - breeding)	Common Tern	B
Sterna paradisaea (Arctic - breeding/Southern Oceans - wintering)	Arctic Tern	B
Sterna sandvicensis (Western Europe/Western Africa)	Sandwich Tern	BP
Sylvia undata	Dartford Warbler	B
Tadorna tadorna (North-western Europe)	Shelduck	BW
Tetrao urogallus	Capercaillie	B
Tringa glareola (Europe- breeding)	Wood Sandpiper	B
Tringa nebularia (Europe/Western Africa)	Greenshank	BW
Tringa totanus (Eastern Atlantic - wintering)	Redshank	BPW
Troglodytes troglodytes fridariensis	Fair Isle Wren	B
Turdus torquatus	Ring Ouzel	B
Uria aalge (East Atlantic)	Guillemot	B
Vanellus vanellus (Europe - breeding)	Lapwing	BW
Waterfowl assemblage	Waterfowl assemblage	W

Table 10: Number of sites (SPAs) for which each feature is designated (by country)

Interest Name	E	ES	EW	NI	S	W
Acrocephalus paludicola	1					
Acrocephalus schoenobaenus	1					
Acrocephalus scirpaceus	2					
Actitis hypoleucos	2					

Alca torda				1	15	1
Alcedo atthis	1					
Anas acuta (North-western Europe)	12	1	1			1
Anas clypeata (North-western/Central Europe)	18	1			1	1
Anas crecca (North-western Europe)	18	1			2	1
Anas penelope (Western Siberia/North-western/North-eastern Europe)	18				3	1
Anas platyrhynchos (North-western Europe)	5				1	
Anas querquedula (Western Siberia/Europe/Western Africa)	2					
Anas strepera (North-western Europe)	17		1		1	
Anser albifrons albifrons (North-western Siberia/North-eastern & North-western Europe)	3		1			
Anser albifrons flavirostris (Greenland/Ireland/UK)					12	1
Anser anser (Iceland/UK/Ireland)	2				18	
Anser brachyrhynchus (Eastern Greenland/Iceland/UK)	6	1			16	
Aquila chrysaetos					7	
Arenaria interpres (Western Palearctic - wintering)	9	1			4	
Asio flammeus	4				3	
Aythya ferina (North-western/North-eastern Europe)	8			1	1	
Aythya fuligula (North-western Europe)	4			1	1	
Aythya marila (Northern/Western Europe)	3	1			1	
Botaurus stellaris (Europe - breeding)	8					
Branta bernicla bernicla (Western Siberia/Western Europe)	21					
Branta bernicla hrota (Canada/Ireland)				3	1	
Branta bernicla hrota (Svalbard/Denmark/UK)	1					
Branta leucopsis (Eastern Greenland/Scotland/Ireland)					11	
Branta leucopsis (Svalbard/Denmark/UK)		1				
Breeding bird assemblage	5				4	
Bucephala clangula (North-western/Central Europe)	5	1		1	6	
Burhinus oedicnemus (Western Europe - breeding)	1					
Calidris alba (Eastern Atlantic/Western & Southern Africa - wintering)	8	1			2	
Calidris alpina alpina (Northern Siberia/Europe/Western Africa)	17	1	1		2	1
Calidris alpina schinzii (Baltic/UK/Ireland)	2				6	

Calidris canutus (North-eastern Canada/Greenland/Iceland/North-western Europe)	15	1	1	1	1	1
Calidris maritima (Eastern Atlantic - wintering)	1				2	
Caprimulgus europaeus	4					
Carduelis flavirostris	2					
Catharacta skua (World)					9	
Cepphus grylle (East Atlantic)					4	
Charadrius hiaticula (Europe/Northern Africa - wintering)	18				7	
Charadrius morinellus (Europe - breeding)					8	
Circus aeruginosus	6				1	
Circus cyaneus	17				9	1
Clangula hyemalis (Iceland/Greenland)	1				2	
Coturnix coturnix	1					
Crex crex (Europe/Africa/Western Asia)					9	
Cygnus columbianus bewickii (Western Siberia/North-eastern & North-western Europe)	17		1	1		
Cygnus cygnus (Iceland/UK/Ireland)	5	1		3	9	
Cygnus olor (North-western Mainland & Central Europe)	5					
Egretta garzetta (Sub-Saharan Africa - breeding)	1					
Emberiza schoeniclus	1					
Falco columbarius	8				5	2
Falco peregrinus	1			1	2	1
Falco subbuteo	2					
Fratercula arctica					11	1
Fulica atra (North-western Europe - wintering)	4					
Fulmarus glacialis (North Atlantic)					12	
Gallinago gallinago (Europe - breeding)	5				1	
Gallinula chloropus (Europe/Northern Africa)	2					
Gavia arctica (Western Siberia/Europe)					11	
Gavia stellata (North-western Europe - wintering)	1				10	
Haematopus ostralegus (Europe & Northern/Western Africa)	10	1	1		6	2
Hydrobates pelagicus (World)	2				8	1
Larus argentatus (North-western Europe (breeding) and Iceland/Western Europe - breeding)					3	
Larus canus (West and Central Europe)					2	
Larus fuscus (Western Europe/Mediterranean/Western Africa)	6				2	
Larus marinus (North-east Atlantic - breeding)	1				3	

Larus melanocephalus	3					
Larus ridibundus (North-western Europe - breeding)	1					
Limosa lapponica (Western Palearctic - wintering)	9	1	1	1	5	
Limosa limosa islandica (Iceland - breeding)	11				1	
Limosa limosa limosa (Western Europe/W Africa)	2					
Locustella luscinioides	1					
Locustella naevia	1					
Loxia scotica					4	
Lullula arborea	3					
Melanitta fusca					2	
Melanitta nigra (Western Siberia/Western & Northern Europe/North-western Africa)	3				3	
Mergus merganser (North-western/Central Europe)	1				1	
Mergus serrator (North-western/Central Europe)	3				2	
Milvus milvus						2
Morus bassana (North Atlantic)					7	1
Numenius arquata (Europe - breeding)	13	1			1	2
Numenius phaeopus (Europe/Western Africa)	1				1	
Oceanodroma leucorhoa (North Atlantic)					6	
Oenanthe oenanthe	1					
Pandion haliaetus					9	
Pernis apivorus	1					
Phalacrocorax aristotelis (Northern Europe)	1				9	
Phalacrocorax carbo (North-western Europe)	5			1	6	1
Phalaropus lobatus					1	
Philomachus pugnax (Western Africa - wintering)	8					
Phylloscopus sibilatrix	1					
Pluvialis apricaria (North-western Europe - breeding)	13	1		1	3	
Pluvialis squatarola (Eastern Atlantic - wintering)	19	1			2	1
Podiceps auritus (North-western Europe)	1				7	
Podiceps cristatus (North-western Europe - wintering)	5				1	1
Porzana porzana (Europe/Africa)					1	
Puffinus puffinus					2	2
Pyrrhocorax pyrrhocorax					2	6
Rallus aquaticus (Europe)	1					
Recurvirostra avosetta (Western Europe/Western Mediterranean - breeding)	16					

Rissa tridactyla (Eastern Atlantic - Breeding)	1			2	18	
Saxicola rubetra	1					
Seabird assemblage	3				31	
Somateria mollissima (Britain/Ireland)	1				2	
Stercorarius parasiticus (North Atlantic)					5	
Sterna albifrons (Eastern Atlantic - breeding)	22				5	
Sterna dougallii (Europe - breeding)	3			2	1	1
Sterna hirundo (Northern/Eastern Europe - breeding)	14			5	6	1
Sterna paradisaea (Arctic - breeding/Southern Oceans - wintering)	2			1	11	1
Sterna sandvicensis (Western Europe/Western Africa)	11			2	4	1
Sylvia undata	3					
Tadorna tadorna (North-western Europe)	16	1	2		2	1
Tetrao urogallus					7	
Tringa glareola (Europe- breeding)					3	
Tringa nebularia (Europe/Western Africa)	1				1	
Tringa totanus (Eastern Atlantic - wintering)	25	1	2	2	9	1
Troglodytes troglodytes fridariensis					1	
Turdus torquatus	1					
Uria aalge (East Atlantic)				1	20	
Vanellus vanellus (Europe - breeding)	10				2	
Waterfowl assemblage	36	1	2	3	12	1
TOTAL	**614**	**20**	**14**	**34**	**471**	**39**