

Summary Details of Sites of International Importance in SEA Area 1

Figure E.1 International Designations in SEA Area 1

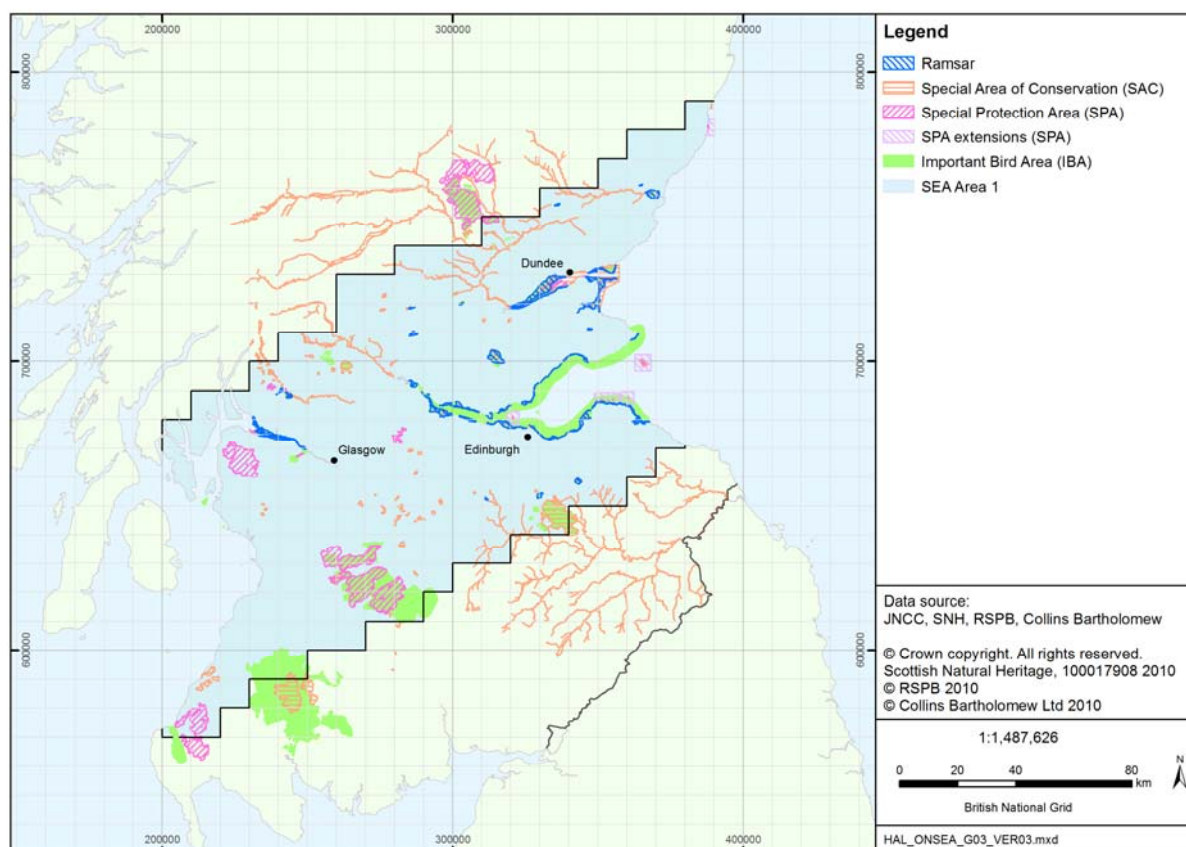


Table E.1 Summary Details of Relevant Special Areas of Conservation (SACs) in SEA Area 1

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Garron Point UK0030356 02 10 08 W 56 59 00 N	15.58	Primary: N/A Qualifying: N/A	Primary: Narrow-mouthed whorl snail <i>Vertigo angustior</i> Qualifying: N/A	Use by the public; geologists, and people conducting information recreation. Changing pattern of grazing by rabbits and roe deer may be problematic. Parts of the site may be vulnerable to certain forms of marine oil pollution and rising sea-levels.	Signage informing users of snail colonies. The introduction of livestock may be advantageous provided erosion does not take place, which should be ensured through a management agreement.
Craigengar UK0012577 03 28 30 W 55 46 20 N	37.31	Primary: N/A Qualifying: European dry heaths, Species-rich <i>Nardus</i> grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe)	Primary: Marsh saxifrage <i>Saxifraga hirculus</i> Qualifying: N/A	Drainage operations.	Continuation of low-intensity grazing.
Dunkeld– Blairgowrie Lochs UK0012638 03 33 15 W 56 34 30 N	428.09	Primary: Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> Qualifying: Transition mires and quaking bogs	Primary: Slender naiad <i>Najas flexilis</i> Qualifying: Otter <i>Lutra lutra</i>	Nutrient inputs. Quaking bogs and transition mire can sustain only low levels of physical disturbance and require high water table	Dependent on maintaining low levels of dissolved nutrients.
River Tweed UK0012691 02 47 30 W 55 36 00 N	3,797.41	Primary: Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation Qualifying: N/A	Primary: Atlantic salmon <i>Salmo salar</i> , otter <i>Lutra lutra</i> Qualifying: Sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i>	Pollution, acidification and eutrophication, river-works and bankside management, genetic pollution and disease, abstraction and impoundment management.	Water Framework Directive, River Tweed Catchment Management Plan, SEPA and EA management.
Flanders Mosses UK0012902 04 12 00 W 56 09 30 N	1,073.58	Primary: Active raised bogs * <i>Priority feature</i> , degraded raised bogs still capable of natural regeneration Qualifying: N/A	Primary: N/A Qualifying: N/A	Drainage.	Part of site is a National Nature Reserve (NNR). Management Agreement in place for programme of ditch-blocking and scrub removal.
Barry Links UK0013044 02 45 00 W 56 28 45 N	789.69	Primary: Embryonic shifting dunes, shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), fixed dunes with herbaceous vegetation ('grey dunes') * <i>Priority feature</i> , Atlantic decalcified fixed dunes (Calluno-Ulicetea) * <i>Priority feature</i> , humid dune slacks Qualifying: N/A	Primary: N/A Qualifying: N/A	Overgrazing.	Joint MoD/SNH Concordat includes grazing management, an SSSI and scrub management plan. There is also an active Conservation Group.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Clyde Valley Woods UK0013089 03 47 50 W 55 43 00 N	434.66	Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Non-native tree and shrub species invasion. Overgrazing, uncontrolled dumping of refuse.	NNR management plan to encourage native broad-leaved woodlands.
Loch Lomond Woods UK0013573 04 40 45 W 56 12 00 N	1,454.33	Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: N/A	Primary: N/A Qualifying: Otter <i>Lutra lutra</i>	Non-native tree and shrub species invasion. Overgrazing.	Woodland Grant Schemes, NNR management plan.
Lendalfoot Hills Complex UK0013592 04 53 15 W 55 11 29 N	1,309.71	Primary: Species-rich <i>Nardus</i> grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe) <i>*Priority feature</i> , alkaline fens Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths, calaminarian grasslands of the <i>Violetalia calaminariae</i> , transition mires and quaking bogs	Primary: N/A Qualifying: N/A	Changes in agricultural practices (e.g. artificial fertilisers).	Dependent on differing grazing and management regimes. Approximately 50% of site covered by management agreements.
Whitlaw and Branhholme UK0013594 02 47 38 W 55 33 00 N	40.71	Primary: Transition mires and quaking bogs Qualifying: Alkaline fens	Primary: Slender green feather-moss <i>Drepanocladus (Hamatocaulis) vernicosus</i> Qualifying: N/A	Agricultural activity accelerating rate of change in wetland sites from open water through fen to carr woodland.	Whitlaw is a NNR and Branhholme subject to a Management Agreement.
Bankhead Moss, Beith UK0019756 04 38 00 W 55 43 10 N	32.5	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Overgrazing.	Owned by MOD and situated on a Royal Naval Armaments Depot, and is therefore well protected from any damage.
Black Loch Moss UK0019757 03 50 00 W 55 54 20 N	108.42	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, burning, overgrazing.	Management agreement to conserve and promote diversity of peatland plant communities. Restricts activities such as drainage and burning and controls grazing levels.
Blawhorn Moss UK0019758 03 47 00 W 55 53 40 N	109	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, fires.	NNR Management Plan addresses potential problems such as fires. Installation of dams and drain-blocks on all the manmade drains and erosion gullies.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Braehead Moss UK0019759 03 39 30 W 55 44 40 N	122.6	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Overgrazing.	NNR Management Plan.
Coalburn Moss UK0019760 03 51 50 W 55 36 15 N	224.32	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, non-native tree species and scrub encroachment.	Several Management Agreements are either in place or being negotiated which include the removal of coniferous woodland and invading scrub, and the blockage of drains.
Cockinhead Moss UK0019761 04 36 30 W 55 42 10 N	48.4	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, invasive tree scrub, fires, peat extraction.	Part of this raised bog covered by a Management Agreement to conserve and promote the development of the range of peatland habitats.
Cranley Moss UK0019762 03 40 30 W 55 42 30 N	101.27	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, invasive tree scrub, fires, peat extraction.	Management Agreements to conserve and promote the development of the diversity of peatland habitats.
Dykeneuk Moss UK0019763 04 37 50 W 55 41 20 N	61.64	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, invasive tree scrub, over-grazing.	Management Agreement covers about 40% of site and makes provision for the maintenance of fences, the damming of drains and the removal of trees or scrub.
Waukenwae Moss UK0019765 04 05 54 W 55 44 00 N	155.49	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, invasive tree scrub, over-grazing, fires.	Management Agreements to restrict the use of fertilisers, pesticides and agricultural activities thought to have a damaging impact (e.g. drainage, burning, grazing).
North Shotts Moss UK0019768 03 47 54 W 55 49 50 N	53.36	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, invasive tree scrub, over-grazing, fires.	Present management compatible with the nature conservation interests. Monitoring is ongoing to ensure long-term favourable condition of the bog.
Kirkcowan Flow UK0019813 04 44 10 W 55 00 10 N	777.57	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, invasive tree scrub, over-grazing, fires.	Management Agreement to conserve the active blanket bog. Controls grazing, drainage and muirburn.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Endrick Water UK0019840 04 24 00 W 56 03 20 N	239.11	Primary: N/A Qualifying: N/A	Primary: Brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> Qualifying: Atlantic salmon <i>Salmo salar</i>	Point and diffuse sources of pollution not thought significant. Gravel extraction.	Development of a river conservation strategy during 2001/2002 under the 'Safeguarding Natura Rivers in the UK' LIFE Project, which addressed all the management issues on the river including gravel extraction.
Merrick Kells UK0019841 04 26 45 W 55 08 00 N	8,698.3	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , siliceous alpine and boreal grasslands, blanket bogs * <i>Priority feature</i> Qualifying: Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> , natural dystrophic lakes and ponds, European dry heaths, depressions on peat substrates of the <i>Rhynchosporion</i> , siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>), siliceous rocky slopes with chasmophytic vegetation	Primary: N/A Qualifying: Otter <i>Lutra lutra</i>	Overgrazing	Small part of site is a NNR but SNH has recommended expansion of this to cover a larger part of the SAC under Forest Enterprise ownership.
Borders woods UK0030094 02 39 45 W 55 34 50 N	53.23	Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines * <i>Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	No details.	Scottish Wildlife Trust and SNH with various management agreements with landowners for about 65% of the site. Integrity of the remaining 35% supported by connection with similar undesignated woodlands.
Craighall Gorge UK0030123 03 20 45 W 56 37 10 N	53.59	Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines * <i>Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Invasion of exotic tree and shrub species.	Uncontrolled spread of regenerating exotic trees and rhododendron is being assessed. Management under a Woodland Grant Scheme.
Upper Strathearn Oakwoods UK0030125 03 51 54 W 56 20 38 N	152.47	Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: N/A	Primary: N/A Qualifying: N/A	Invasion of non-native species.	Comrie Woods subject to Management Agreement with SNH and Drummond Wood subject to a Woodland Grant Scheme contract with Forestry Commission.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Dogden Moss UK0030136 02 30 10 W 55 44 15 N	156.73	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Drainage.	Aims to ensure water levels not reduced by any draining of the moss.
Dun Moss and Forest of Alyth Mires UK0030152 03 20 42 W 56 42 00 N	469.96	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Drainage, grazing, muirburn.	Blocking of drains is being considered. Agri-environment schemes promote positive management over part of the site.
Galloway Oakwoods UK0030153 04 31 45 W 55 00 30 N	355.1	Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: N/A	Primary: N/A Qualifying: N/A	Invasion of exotic species, recreational pressure.	Removal of exotic species, underplanting and encouragement of regeneration. Work being carried out by private owners/occupiers, Forest Enterprise, RSPB and SWT.
Glenartney Juniper Wood UK0030156 04 00 05 W 56 20 15 N	101.74	Primary: <i>Juniperus communis</i> formations on heaths or calcareous grasslands Qualifying: N/A	Primary: N/A Qualifying: N/A	Overgrazing.	Very little regeneration of juniper is taking place due to grazing by sheep, cattle, rabbits and deer. Experimental management needs to be carried out to try and redress this.
Isle of May UK0030172 02 34 25 W 56 11 25 N	356.75	Primary: N/A Qualifying: Reefs	Primary: Grey seal <i>Halichoerus grypus</i> Qualifying: N/A	Recreational pressure and disturbance.	NNR owned and managed by SNH which ensures adequate protection for nature conservation. Visitor pressure concentrated out with seal-breeding season.
Kippenrait Glen UK0030177 03 56 50 W 56 10 30 N	61.56	Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Overgrazing, invasion of non-native species, landslides.	Woodland Grant Scheme in operation over a part of the woodland that includes removal of sycamore and Rhododendron. Impacts of roe deer will be assessed.
Methven Moss UK0030204 03 36 10 W 56 23 30 N	83.7	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage and scrub encroachment.	Restoration of site's hydrology is a priority to prevent further drying of the moss and invasion by birch scrub.
Moffat Hills UK0030208 03 20 00 W 55 24 30 N	2,891.92	Primary: Alpine and Boreal heaths, siliceous alpine and boreal grasslands Qualifying: European dry heaths, hydrophilous tall herb fringe communities of plains and of the montane to alpine levels, blanket bogs <i>*Priority feature</i> ,	Primary: N/A Qualifying: N/A	Overgrazing.	Agri-environment measures available and management of feral goat herds is being addressed.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>), calcareous rocky slopes with chasmophytic vegetation, siliceous rocky slopes with chasmophytic vegetation			
Moorfoot Hills UK0030215 03 01 00 W 55 42 25 N	8,498.99	Primary: European dry heaths, blanket bogs <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Grouse management, sheep grazing and muirburn.	Managed for both commercial and wildlife interests, with light to moderate grazing desired and appropriate muirburn.
Airds Moss UK0030218 04 11 50 W 55 30 10 N	1,359.33	Primary: Blanket bogs <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Overgrazing.	Agreements being negotiated to reduce grazing pressure, and for phased removal of a conifer plantation.
Pitkeathly Mires UK0030239 03 26 40 W 56 18 45 N	61.49	Primary: N/A Qualifying: Transition mires and quaking bogs	Primary: Slender green feather-moss <i>Drepanocladus (Hamatocaulis) vernicosus</i> Qualifying: N/A	Overgrazing.	Grazing by cattle subject to monitoring.
Turflundie Wood UK0030240 03 18 00 W 56 18 50 N	86.36	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	No details.	Maintaining great crested newt population may require creation and restoration of ponds, removal of trees shading ponds, and management of the woodlands.
River South Esk UK0030262 02 55 00 W 56 42 10 N	478.62	Primary: N/A Qualifying: N/A	Primary: Freshwater pearl mussel <i>Margaritifera margaritifera</i> , Atlantic salmon <i>Salmo salar</i> Qualifying: N/A	Activities within catchment, water quality, river engineering.	Livestock exclusion and riparian habitat promotion will improve environmental conditions and assist population recovery of salmon and freshwater mussels.
River Teith UK0030263 04 17 15 W 56 17 00 N	1,312.4	Primary: N/A Qualifying: N/A	Primary: Sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> Qualifying: Atlantic salmon <i>Salmo salar</i>	Few significant threats. Water quality generally high.	Gravel extraction and river engineering will be addressed using practice and advice generated by SNH Research contracts on the Endrick Water SAC and by the 'Safeguarding Natura Rivers in the UK' LIFE Project.
Shelforkie UK0030272 03 50 30 W 56 16 00 N	111.37	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Inappropriate grazing.	Encroachment by birch and Scots pine will be monitored and removed if necessary.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Shingle Islands UK0030274 03 39 50 W 56 38 30 N	77.9	Primary: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Under-grazing, invasion of non-native species.	Expansion of alluvial forest requires a balance with the conservation of nationally important, open-ground, botanical interests.
Threepwood Moss UK0030288 02 46 00 W 55 40 30 N	53.29	Primary: Active raised bogs *Priority feature Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, scrub encroachment.	Main aim to increase the water levels within the moss through damming of drains, removal of scrub and the introduction of low-intensity grazing.
Trossachs Woods UK0030290 04 25 15 W 56 14 10 N	374.94	Primary: Old sessile oak woods with Ilex and Blechnum in the British Isles Qualifying: N/A	Primary: N/A Qualifying: N/A	Invasive species, deer over-grazing.	50% covered by Woodland Grant Scheme for maintenance of Atlantic Oakwood. Forest Enterprise manage parts according to plan approved by SNH.
Tynron Juniper Wood UK0030294 03 50 35 W 55 12 50 N	6.67	Primary: <i>Juniperus communis</i> formations on heaths or calcareous grasslands Qualifying: N/A	Primary: N/A Qualifying: N/A	Rabbit over-grazing, invasive species.	Rabbit control fencing and herbicide application to control bracken is being carried out to address potential threats.
Upper Nithsdale Woods UK0030297 03 52 00 W 55 21 25 N	98.38	Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Overgrazing, invasive species.	Grazing controls and fencing. Control of bracken invasion using methods designed to protect associated water bodies.
Firth of Tay and Eden Estuary UK0030311 02 57 00 W 56 22 00 N	15,412.53	Primary: Estuaries Qualifying: Sandbanks which are slightly covered by sea water all the time, mudflats and sandflats not covered by seawater at low tide	Primary: Common seal <i>Phoca vitulina</i> Qualifying: N/A	Recreational pressure and disturbance.	Tentsmuir Point is a NNR and parts of the Eden Estuary and Inner Tay Estuary are Local Nature Reserves.
River Tay UK0030312 04 05 00 W 56 34 00 N	9,497.72	Primary: N/A Qualifying: Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	Primary: Atlantic salmon <i>Salmo salar</i> Qualifying: Sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> , otter <i>Lutra lutra</i>	Catchment management, water abstraction, hydro-schemes, fish farming.	Monitoring and survey will inform appropriate management of those activities which the site may be vulnerable to.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Peeswit Moss UK0030313 03 03 00 W 55 47 00 N	52.98	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, peat extraction and muirburn.	Current management unlikely to cause further damage to the site. Overall aim to stem the decline in extent and condition of the remaining viable raised bog resource.
Red Moss of Netherley 02 14 00 W 57 02 10 N	92.53	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Drainage, peat extraction, muirburn, over-grazing, prospecting for minerals.	Large part owned by the SWT which developing a management plan to include restorative management such as ditch-blocking.
West Fannyside Moss UK0030316 03 55 05 W 55 56 00 N	33.83	Primary: Blanket bogs <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Drainage, peat digging and muirburn.	SNH currently developing management scheme entitled Natural Care. Overall purpose to stem the decline in extent and condition of remaining viable blanket bog resource.

Table E.2 Summary Details of Relevant Special Protection Areas (SPAs) in SEA Area 1

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Renfrewshire Heights UK9020295 04 45 00 W 55 50 30 N	8,943.24	During the breeding season: Hen harrier <i>Circus cyaneus</i>	N/A	Breeding hen harriers are thus potentially vulnerable to disturbance from recreational activities, although these are largely confined to established tracks/paths. Hen harriers may face habitat loss through poor land/agricultural management, heather loss, peat erosion poor muirburn, overgrazing and the spread of bracken.	The Regional Park, with a dedicated countryside ranger service, presents opportunities to educate users and manage access in ways that minimise potential risks to hen harriers. The Renfrewshire Heights Moorland Management Scheme helps the control of any habitat damage. Harrier numbers are monitored by the South Strathclyde Raptor Study Group.
Slamannan Plateau UK9004441 04 01 10 W 55 59 48 N	591.32	Over winter: Bean Goose <i>Anser fabalis fabalis</i>	N/A	Subject to development pressure, including proposed housing, wind turbines and sewage sludge disposal. Forestry has reduced potential feeding areas. Peat milling has ceased though may recommence. Some recreational disturbance.	Damaging changes in part controlled by provisions of The Nature Conservation (Scotland) Act 2004, and through the 'Slamannan Plateau Bean Goose Management Scheme.' This scheme is closed though hoped that the prescriptions of the scheme will be incorporated in the Scotland Rural Development Programme.
Fowlsheugh UK9002271 02 11 45 W 56 54 45 N	1,303.54	N/A	During the breeding season: Guillemot <i>Uria aalge</i> Kittiwake <i>Rissa tridactyla</i> Razorbill <i>Alca torda</i>	No significant threat at present.	Managed as nature reserve by RSPB.
Loch Lomond UK9003021 04 30 30 W 56 03 45 N	510.49	During the breeding season: Capercaillie <i>Tetrao urogallus</i> Over winter: Greenland white-fronted goose <i>Anser albifrons</i>	N/A	Disturbance from water sports/fishing monitored. Water abstraction. Removal of exotic species.	Managed under Nature Reserve Agreements with owners.
Inner Clyde Estuary UK9003061 04 38 00 W 55 56 50 N	1,826.02	N/A	Over winter: Redshank <i>Tringa totanus</i>	Industrial activity from container terminal and petroleum storage facility.	Contingency plan in place for oil spills. Water quality improving, may influence site productivity - strategy for monitoring future changes.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Black Cart UK9003221 04 26 20 W 55 52 45 N	56.3	Over winter: Whooper swan <i>Cygnus cygnus</i>	N/A	Water quality changes, bird strikes at airport.	Management plan for land north of the river is being drawn up. Airport abuts southern boundary – presence of birds noted in pilot flight information.
Muirkirk and North Lowther Uplands UK9003261 04 04 35 W 55 30 35 N	26,330.31	During the breeding season: Golden plover <i>Pluvialis apricaria</i> , hen harrier <i>Circus cyaneus</i> , merlin <i>Falco columbarius</i> , peregrine <i>Falco peregrinus</i> , short-eared owl <i>Asio flammeus</i> Over winter: Hen harrier <i>Circus cyaneus</i>	N/A	Habitat degradation, loss of heather and peat erosion.	Moorland Management Scheme currently being developed.
Glen App-Galloway Moors UK9003351 04 56 30 W 55 00 20 N	8,942.38	During the breeding season: Hen harrier <i>Circus cyaneus</i>	N/A	Heather habitat fragmentation, over-grazing.	ESA agri-environment scheme may result in more beneficial grazing patterns and SNH developing Moorland Management Scheme.
Montrose Basin UK9004031 02 30 20 W 56 42 40 N	986.6	N/A	Over winter: Greylag goose <i>Anser anser</i> , knot <i>Calidris canutus</i> , pink-footed goose <i>Anser brachyrhynchus</i> , redshank <i>Tringa totanus</i> , oystercatcher <i>Haematopus ostralegus</i> Assemblage qualification: Over winter, the area regularly supports 54,930 individual waterfowl including: pink-footed goose <i>Anser brachyrhynchus</i> , greylag goose <i>Anser anser</i> , oystercatcher <i>Haematopus ostralegus</i> , knot <i>Calidris canutus</i> , redshank <i>Tringa totanus</i> .	Wildfowling.	Management Agreements, SSSI procedures and management of the Local Nature Reserve.
Loch of Kinnordy UK9004051 03 02 40 W 56 40 30 N	85.09	N/A	Over winter: Greylag goose <i>Anser anser</i> , pink-footed goose <i>Anser brachyrhynchus</i>	Recreation pressure – wildfowling, angling.	RSPB manages the site as a wildlife reserve.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Loch Leven UK9004111 03 22 30 W 56 11 48 N	1,611.81	Over winter: Whooper swan <i>Cygnus cygnus</i>	Over winter: Pink-footed goose <i>Anser brachyrhynchus</i> , shoveler <i>Anas clypeata</i> Assemblage qualification: Over winter, the area regularly supports 34,280 individual waterfowl including: whooper swan <i>Cygnus cygnus</i> , pink-footed goose <i>Anser brachyrhynchus</i> , shoveler <i>Anas clypeata</i>	Eutrophication, water quality issues, shoreline erosion, invasive aquatic plants. Recreation pressure – fishing, bird watching and wildfowling.	NNR managed by SNH through a Nature Reserve Agreement, bylaws, liaison with landowners and the presence of wardening staff.
Firth of Tay and Eden Estuary UK9004121 03 05 00 W 56 24 30 N	6,923.29	During the breeding season: Little tern <i>Sterna albifrons</i> , marsh harrier <i>Circus aeruginosus</i> Over winter: Bar-tailed godwit <i>Limosa lapponica</i>	Over winter: Greylag goose <i>Anser anser</i> , pink-footed goose <i>Anser brachyrhynchus</i> , redshank <i>Tringa tetanus</i> Assemblage qualification: Over winter, the area regularly supports 48,000 individual waterfowl including: Velvet scoter <i>Melanitta fusca</i> , pink-footed goose <i>Anser brachyrhynchus</i> , greylag goose <i>Anser anser</i> , redshank <i>Tringa totanus</i> , cormorant <i>Phalacrocorax carbo</i> , shelduck <i>Tadorna tadorna</i> , eider <i>Somateria mollissima</i> , bar-tailed godwit <i>Limosa lapponica</i> , common scoter <i>Melanitta nigra</i> , black-tailed godwit <i>Limosa limosa</i> , goldeneye <i>Bucephala clangula</i> , red-breasted merganser <i>Mergus serrator</i> , goosander <i>Mergus merganser</i> , oystercatcher <i>Haematopus ostralegus</i> , grey plover <i>Pluvialis squatarola</i> , sanderling <i>Calidris alba</i> , dunlin <i>Calidris alpina</i> , long-tailed duck <i>Clangula hyemalis</i> .	Recreation disturbance. Jet planes have crossed site for many years with no apparent effect.	NNR with management plan and resident warden.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Cameron Reservoir UK9004131 02 51 12 W 56 17 32 N	68.76	N/A	Over winter: Pink-footed goose <i>Anser brachyrhynchus</i>	Proposed decommissioning of reservoir as public water supply.	No details.
Forth Islands UK9004171 02 33 20 W 56 11 10 N	9,796.98	During the breeding season: common tern <i>Sterna hirundo</i> , roseate tern <i>Sterna dougallii</i> , sandwich tern <i>Sterna sandvicensis</i>	During the breeding season: Razorbill <i>Alca torda</i> , puffin <i>Fratercula arctica</i> , lesser black-backed gull <i>Larus fuscus</i> , gannet <i>Morus bassanus</i> , shag <i>Phalacrocorax aristotelis</i> , cormorant <i>Phalacrocorax carbo</i> , kittiwake <i>Rissa tridactyla</i> , guillemot <i>Uria aalge</i> .	Recreation pressure.	Isle of May is a NNR managed by SNH. Fidra, The Lamb and Inchmickery are managed by RSPB while Long Craig Island is managed by the Fife Bird Club and the Scottish Wildlife Trust.
Gladhouse Reservoir UK9004231 03 06 00 W 55 47 10 N	186.41	N/A	Over winter: Pink-footed goose <i>Anser brachyrhynchus</i> Assemblage qualification: Over winter, the area regularly supports 3,124 individual waterfowl including: Pink-footed goose <i>Anser brachyrhynchus</i> .	Recreation pressure (shooting/angling), mink.	Site managed as public water supply but SNH inputs into advisory committee which manages water levels and levels of shooting/angling.
Fala Flow UK9004241 02 54 20 W 55 49 00 N	318.04	N/A	Over winter: Pink-footed goose <i>Anser brachyrhynchus</i>	Potential recreation disturbance.	Blanket bog habitat protected through SSSI mechanisms.
Westwater UK9004251 03 24 30 W 55 45 30 N	49.77	N/A	Over winter: Pink-footed goose <i>Anser brachyrhynchus</i> Assemblage qualification: Over winter, the area regularly supports 31,465 individual waterfowl including: Pink-footed goose <i>Anser brachyrhynchus</i> .	Water quality issues (eutrophication), recreation pressure, shooting.	Loch managed as a public water supply.
Forest of Clunie UK9004381 03 35 00 W 56 40 00 N	19,349.38	During the breeding season: Hen harrier <i>Circus cyaneus</i> , merlin <i>Falco columbarius</i> ,	N/A	New afforestation proposals, egg collecting.	Moorland Management Incentive Scheme has been developed.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
		osprey <i>Pandion haliaetus</i> , short-eared owl <i>Asio flammeus</i>			
South Tayside Goose Roosts UK9004401 03 50 00 W 56 15 54 N	331.01	N/A	During the breeding season: Wigeon <i>Anas penelope</i> Over winter: Greylag goose <i>Anser anser</i> , pink-footed goose <i>Anser brachyrhynchus</i>	Water level changes, recreation disturbance.	Management agreement over water levels in Drummond Loch.
Firth of Forth UK9004411 02 53 00 W 56 01 00 N	6,313.72	Over winter: red-throated diver <i>Gavia stellata</i> , oystercatcher <i>Haematopus ostralegus</i> , bar-tailed godwit <i>Limosa lapponica</i> , golden plover <i>Pluvialis apricaria</i> , Slavonian grebe <i>Podiceps auritus</i> On passage: Sandwich tern <i>Sterna sandvicensis</i>	Over winter: pink-footed goose <i>Anser brachyrhynchus</i> , turnstone <i>Arenaria interpres</i> , knot <i>Calidris canutus</i> , redshank <i>Tringa totanus</i> , shelduck <i>Tadorna tadorna</i> , Assemblage qualification: Over winter, the area regularly supports 95,000 individual waterfowl including: red-throated diver <i>Gavia stellata</i> , great crested grebe <i>Podiceps cristatus</i> , Slavonian grebe <i>Podiceps auritus</i> , cormorant <i>Phalacrocorax carbo</i> , pink-footed goose <i>Anser brachyrhynchus</i> , shelduck <i>Tadorna tadorna</i> , wigeon <i>Anas penelope</i> , mallard <i>Anas platyrhynchos</i> , scaup <i>Aythya marila</i> , eider <i>Somateria mollissima</i> , long-tailed duck <i>Clangula hyemalis</i> , common scoter <i>Melanitta nigra</i> , velvet scoter <i>Melanitta fusca</i> , goldeneye <i>Bucephala clangula</i> , red-breasted merganser <i>Mergus serrator</i> , oystercatcher <i>Haematopus ostralegus</i> , ringed plover <i>Charadrius hiaticula</i> , golden plover <i>Pluvialis apricaria</i> , grey plover <i>Pluvialis</i>	Oil and other industrial developments concentrated along the shore. Localised tipping.	Emergency contingency plans in place to minimise impact of any industrial incident. Potential for rising sea levels to remove important habitats with coastal realignment schemes planned.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			<i>squatarola</i> , lapwing <i>Vanellus vanellus</i> , knot <i>Calidris canutus</i> , dunlin <i>Calidris alpina</i> , bar-tailed godwit <i>Limosa lapponica</i> , curlew <i>Numenius arquata</i> , redshank <i>Tringa totanus</i> , turnstone <i>Arenaria interpres</i> .		

Table E.3 Summary Details of Relevant Ramsar Sites in SEA Area 1

Code/Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK13005 02 51 12 W 56 17 32 N	Cameron Reservoir	68.76	Artificial mesotrophic loch with beds of aquatic and marginal vegetation. Open water used as a roost by an internationally important wintering population of pink-footed geese.	6	No factors reported
UK13015 02 54 20 W 55 49 00 N	Fala Flow	318.04	Blanket mire, with some pools, developed at a lower altitude than most blanket mires in Midlothian. Mire and pools support an internationally important goose roost.	6	No factors reported
UK13017 02 53 00 W 56 01 00 N	Firth of Forth	6,313.68	Complex of estuaries, mudflats, rocky shorelines, beaches and saltmarshes. Adjacent urban and industrial areas. Important for a large number of wintering waders and wildfowl.	5, 6	No factors reported
UK13018 03 05 00 W 56 24 30 E	Firth of Tay and Eden Estuary	6,918.42	Extensive invertebrate-rich intertidal mudflats and sandflats created by the massive sediment load deposited by the River Tay. Large areas of reedbed and sand-dune and a small amount of saltmarsh. Important assemblages of wintering and breeding waterfowl. Abertay Sands important as a major haul-out site for grey and common seals.	5, 6	Introduction/invasion flora
UK13021 03 06 00 W 55 47 10 N	Gladhouse Reservoir	186.41	Reservoir built for public water supply, with limited aquatic and emergent vegetation. Largest freshwater body in the Lothians and surrounded by both coniferous and mixed woodland and grassland. Internationally important winter roost for pink-footed goose.	6	No factors reported
UK13024 04 38 00 W 55 56 50 N	Inner Clyde Estuary	1,824.92	Long, narrow, heavily industrialised estuary. Almost the entire site consists of tidal mudflat with a shoreline of unmanaged semi-natural coastal vegetation. Saltmarsh is also present.	6	No factors reported
UK13033 03 22 30 W 56 11 48 N	Loch Leven	1,611.81	Largest naturally eutrophic loch in the British Isles. Relatively shallow and is surrounded by farmland, with a diverse aquatic flora and shoreline vegetation. Supports internationally important wintering populations of pink-footed geese and shoveler.	5, 6, 1	No factors reported
UK13034 04 30 30 W 56 03 45 N	Loch Lomond	236.9	Marshy hinterland around the lower reaches of the River Endrick where it flows into Loch Lomond, and four islands in the loch. Supports several species of nationally scarce plants, and the slow-moving river and lagoons are especially rich in aquatic invertebrates. The area is noted for its wintering waterfowl and supports an internationally important population of Greenland white-fronted geese.	6, 3	No factors reported
UK13038 03 02 40 W 56 40 30 N	Loch of Kinnordy	85.09	Eutrophic loch with associated wetland communities, notably basin mire, swamp and fen. Formally drained. Carr woodlands include willow, alder and birch communities. Range of grassland types present. Roost for internationally important numbers of geese.	1, 6, 2	No factors reported

Code/Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK13046 02 30 20 W 56 42 40 N	Montrose Basin	984.62	Enclosed estuary of the South Esk containing areas of mudflat, marsh and agricultural land, and Dun's Dish, a small eutrophic freshwater loch. Site important internationally for wintering populations of pink-footed goose, greylag goose and common redshank.	5, 1, 6	No factors reported
UK13057 03 50 00 W 56 15 54 N	South Tayside Goose Roosts	331.01	Comprises seven lochs, a number of smaller water bodies and other wetland habitats. Internationally important as a roost for greylag geese and pink-footed geese.	6	No factors reported
UK13060 03 24 30 W 55 45 30 N	Westwater	49.77	Artificial reservoir located 320m above sea level in the Pentland Hills. Regularly provides winter roost for large numbers of wildfowl. In winter large numbers pink-footed geese.	6, 5	No factors reported

*Note: Ramsar criteria:**

1. sites containing representative, rare or unique wetland types
2. supports vulnerable, endangered, or critically endangered species or threatened ecological communities
3. supports populations of plant/animal species important for maintaining regional biodiversity
4. supports plant/animal species at a critical stage in their life cycles, or provides refuge
5. regularly supports 20,000 or more waterbirds
6. regularly supports 1% of the individuals in a population of one species/subspecies of waterbirds
8. important source of food for fishes, spawning ground, nursery and/or migration path

Summary Details of Sites of International Importance in SEA Area 2

Figure E.2 International Designations in SEA Area 2

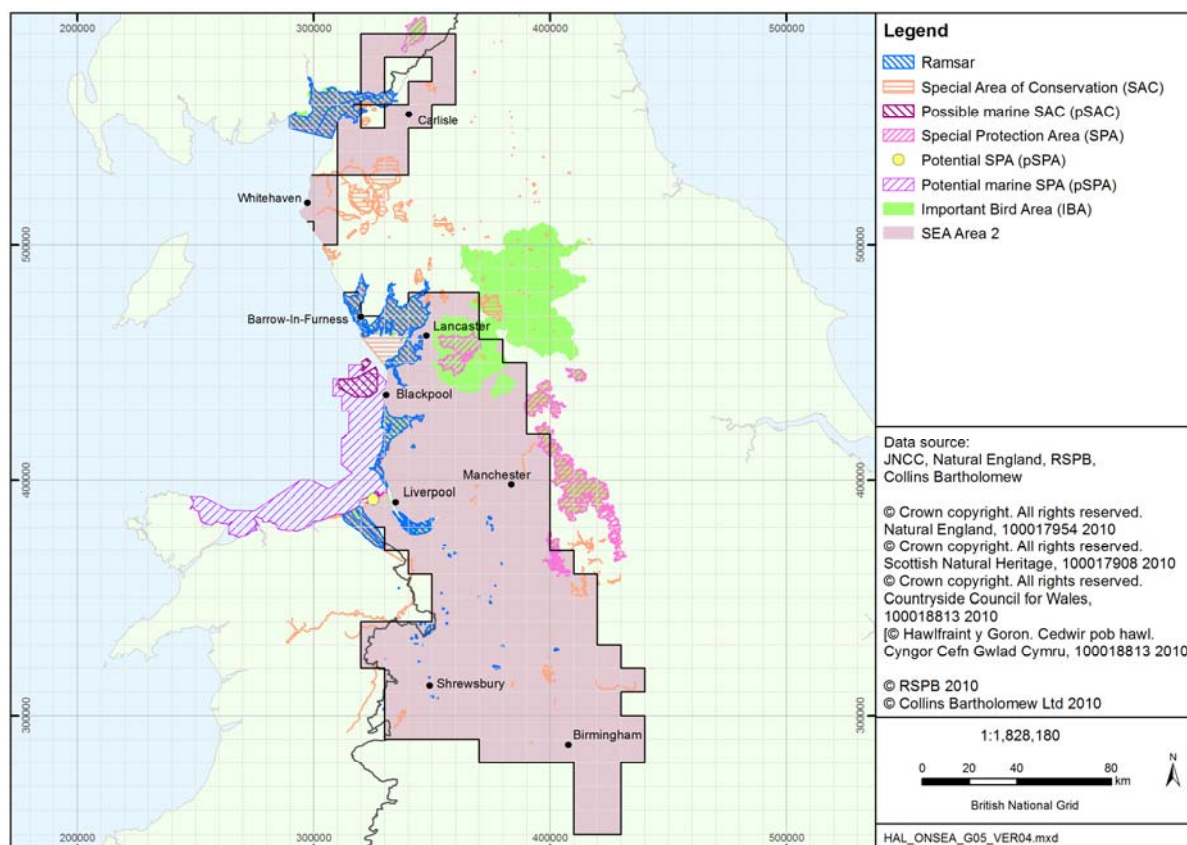


Table E.4 Summary Details of Relevant Special Areas of Conservation (SACs) in SEA Area 2

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
The Stiperstones and The Hollies UK0012810 02 55 24 W 52 35 57 N	601.46	Primary: European dry heaths Qualifying: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	Primary: N/A Qualifying: N/A	Lack of management, scrub encroachment, overgrazing and deterioration of the heathland interest. Neglect and grazing of the coppiced woods has led to deterioration in the woodland interest.	Traditional heather moorland management with rotational burning or cutting supplemented by light grazing. Part of the site is managed as a NNR and management agreements and ESA payments help maintain private areas. Traditional woodland management has been reinstated as part of the NNR management.
Ensor's Pool UK0012646 01 29 11 W 52 20 33 N	3.8	Primary: N/A Qualifying: N/A	Primary: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i> Qualifying: N/A	Pollution and introduction of non-native crayfish, through uncontrolled access.	Managed as a Local Nature Reserve.
Cannock Extension Canal UK0012672 01 58 14 W 52 38 59 N	5.47	Primary: N/A Qualifying: N/A	Primary: Floating water-plantain <i>Luronium natans</i> Qualifying: N/A	Recreational pressure, surface water run-off from roads may cause reduction in water quality.	No details.
Ingleborough Complex UK0012782 02 22 25 W 54 09 36 N	5,769.28	Primary: <i>Juniperus communis</i> formations on heaths or calcareous grasslands, alkaline fens, calcareous rocky slopes with chasmophytic vegetation, limestone pavements * <i>Priority feature</i> Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), blanket bogs * <i>Priority feature</i> , petrifying springs with tufa formation (<i>Cratoneurion</i>) * <i>Priority feature</i> , <i>Tilio-Acerion</i> forests of slopes, screes and ravines * <i>Priority feature</i>	Primary: N/A Qualifying: N/A	Overgrazing, removal of limestone pavement, limestone quarrying.	Wildlife Enhancement Scheme and other forms of agri-environmental agreement being used to promote appropriate management. Limestone Pavement Orders.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Pasturefields Salt Marsh UK0012789 02 00 45 W 52 49 17 N	7.7	Primary: Inland salt meadows <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Water abstraction.	Managed by Staffordshire Wildlife Trust with support from EN's Reserve Enhancement Scheme.
Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses UK0012912 02 45 44 W 52 55 21 N	949.2	Primary: Active raised bogs <i>*Priority feature</i> Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Large-scale commercial peat extraction. Lowering of water level.	Mire rehabilitation under guidance of a management plan.
Oak Mere UK0012970 02 38 20 W 53 12 21 N	68.82	Primary: Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>), transition mires and quaking bogs Qualifying: N/A	Primary: N/A Qualifying: N/A	Nutrient enrichment and chemical pollution. Water level issues. Accidents and spillages on busy road network.	Potential point source discharges investigated by EN and EA. Water-level changes are subject to monitoring.
Morecambe Bay UK0013027 02 57 42 W 54 07 09 N	61,506.22	Primary: Estuaries, mudflats and sandflats not covered by seawater at low tide, large shallow inlets and bays, perennial vegetation of stony banks, <i>Salicornia</i> and other annuals colonising mud and sand, Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>), Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), Fixed dunes with herbaceous vegetation ('grey dunes') <i>*Priority feature</i> , humid dune slacks Qualifying: Sandbanks which are slightly covered by sea water all the time, coastal lagoons <i>*Priority feature</i> , reefs, embryonic shifting dunes, Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) <i>*Priority feature</i> , dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Coastal processes. Potential threats include commercial fisheries, aggregate extraction, gas exploration, recreation.	NGO reserve management plans, EN's Site Management Statements and Coastal WES, the European Marine Site Management Schemes for the Duddon Estuary

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Sefton Coast UK0013076 03 05 06 W 53 34 51 N	4,563.97	Primary: Embryonic shifting dunes, Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), fixed dunes with herbaceous vegetation ('grey dunes') * <i>Priority feature</i> , dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>), Humid dune slacks Qualifying: Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) * <i>Priority feature</i>	Primary: Petalwort <i>Petalophyllum ralfsii</i> Qualifying: Great crested newt <i>Triturus cristatus</i>	Recreation pressure, water abstraction.	Co-ordinated management of the coast achieved through the long-standing Sefton Coast Management Scheme (now the Sefton Coast Partnership).
West Midlands Mosses UK0013595 01 57 40 W 52 51 04 N	184.18	Primary: Natural dystrophic lakes and ponds, Transition mires and quaking bogs Qualifying: N/A	Primary: N/A Qualifying: N/A	Nutrient enrichment from atmospheric deposition. Recreational disturbance.	Management Agreement or by NNR management, and in liaison with the local wildlife trust at Abbots Moss.
North Pennine Dales Meadows UK0014775 02 06 24 W 54 37 31 N	497.09	Primary: Mountain hay meadows Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)	Primary: N/A Qualifying: N/A	Lack of traditional management.	Management agreements and ESA payments being used to promote continuation of traditional management.
Morecambe Bay Pavements UK0014777 02 51 36 W 54 16 28 N	2,609.69	Primary: Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp., <i>Juniperus communis</i> formations on heaths or calcareous grasslands, Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), Limestone pavements * <i>Priority feature</i> , <i>Tilio-Acerion</i> forests of slopes, screes and ravines * <i>Priority feature</i> , <i>Taxus baccata</i> woods of the British Isles * <i>Priority feature</i> Qualifying: European dry heaths, calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> * <i>Priority feature</i> , old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	Primary: Narrow-mouthed whorl snail <i>Vertigo angustior</i> Qualifying: N/A	Inappropriate grazing, conifer plantations.	Large parts of the site are nature reserves and are sensitively managed. EN Wildlife Enhancement Schemes, ESA Agreements, and Woodlands Grant Schemes.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Peak District Dales UK0019859 01 47 16 W 53 05 29 N	2,326.33	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Tilio-Acerion</i> forests of slopes, screes and ravines * Priority feature Qualifying: European dry heaths, <i>Calaminarian</i> grasslands of the <i>Violetalia calaminariae</i> , alkaline fens, calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>), calcareous rocky slopes with chasmophytic vegetation	Primary: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i> Qualifying: Brook lamprey <i>Lampetra planeri</i> , bullhead <i>Cottus gobio</i>	Inappropriate grazing management. Drainage. Limestone or mineral extraction. Invasion of non-native tree species.	Some parts now managed under Countryside Stewardship. English Nature's White Peak Wildlife Enhancement Scheme to enhance conservation value of sites.
Mottey Meadows UK0030051 02 14 13 W 52 43 03 N	43.87	Primary: Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) Qualifying: N/A	Primary: N/A Qualifying: N/A	Agricultural run-off and lowering of water levels.	Owned and managed by EN with all the above issues addressed through the site's management plan.
Brown Moss UK0030100 02 39 12 W 52 56 59 N	32.03	Primary: N/A Qualifying: N/A	Primary: Floating water-plantain <i>Luronium natans</i> Qualifying: N/A	Colonisation by trees - shading, nutrient and hydrological effects on the open water and heathland.	No details.
Calf Hill and Cragg Woods UK0030106 02 41 53 W 54 02 48 N	34.43	Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles, Qualifying: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) * Priority feature	Primary: N/A Qualifying: N/A	No immediate threats.	Limited intervention in land-use/management terms.
Cannock Chase UK0030107 02 01 36 W 52 45 59 N	1,236.96	Primary: European dry heaths Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i>	Primary: N/A Qualifying: N/A	Recreational pressure, bracken invasion. Mining fissures continue to appear and thought to detrimentally affect site hydrology. Water abstraction.	Much of Cannock Chase falls within a popular and well-used Country Park.
Deeside and Buckley Newt Sites UK0030132 03 03 42 W 53 12 09 N	207.52	Primary: N/A Qualifying: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Works associated with mineral extraction. Recreational pressure.	Woodland habitats managed as a Country Park. Visitor management, footpath maintenance and woodland management are undertaken through the Countryside Service and under a Forestry Commission WGS.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Fens Pools UK0030150 02 07 04 W 52 29 48 N	20.4	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Fish introductions, major ground disturbance to surrounding area, desiccation, poor water quality, human disturbance, land contamination.	Expand the number of breeding ponds.
Manchester Mosses UK0030200 02 27 56 W 53 28 16 N	172.81	Primary: Degraded raised bogs still capable of natural regeneration Qualifying: N/A	Primary: N/A Qualifying: N/A	Drainage. Located close to heavy industry (Greater Manchester, Merseyside). Air quality. Groundwater issues.	Risley Moss owned and managed by Warrington Borough Council. Holcroft Moss owned and managed by Cheshire Wildlife Trust. Part of Astley and Bedford Mosses owned and managed by Lancashire Wildlife Trust.
River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid UK0030252 02 51 40 W 53 02 50 N	1,308.93	Primary: Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation Qualifying: N/A	Primary: Atlantic salmon <i>Salmo salar</i> , Floating water-plantain <i>Luronium natans</i> Qualifying: Sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> , bullhead <i>Cottus gobio</i> , otter <i>Lutra lutra</i>	Inappropriate water flow regulation; excessive abstraction; threats to water quality from direct and diffuse pollution; eutrophication and siltation. Degradation of riparian habitats due to engineering works, agricultural practices and invasive plant species. Fisheries.	Issues being addressed by a variety of statutory bodies that are in a position to overcome these threats through regulatory powers and partnerships with landowners, industry and other interested parties.
River Mease UK0030258 01 36 56 W 52 41 59 N	21.86	Primary: N/A Qualifying: Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	Primary: Spined loach <i>Cobitis taenia</i> , Bullhead <i>Cottus gobio</i> Qualifying: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i> , otter <i>Lutra lutra</i>	Water quality and quantity issues. Diffuse pollution and excessive sedimentation have the potential to affect the site.	No details.
Rixton Clay Pits UK0030265 02 28 31 W 53 24 23 N	13.99	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	No details.	Warrington Borough Council owns and manages the site, and has a ranger based on-site.
Rochdale Canal UK0030266 02 09 40 W 53 31 50 N	25.55	Primary: N/A Qualifying: N/A	Primary: Floating water-plantain <i>Luronium natans</i> Qualifying: N/A	Boat movements.	Major restoration scheme to open canal for navigation from Manchester to Yorkshire. EN working together with partners to ensure restoration preserves site interest.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
South Pennine Moors UK0030280 01 46 59 W 53 27 37 N	64,983.13	Primary: European dry heaths, blanket bogs <i>*Priority feature</i> , old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , transition mires and quaking bogs	Primary: N/A Qualifying: N/A	Recreation pressure, accidental fires, over-grazing, muirburn. Atmospheric pollution depleting blanket bog, wet heath and transition mire. Loss of forest habitat.	Management strategy and conservation action programme produced as part of an EU-funded LIFE project for the area to the north of the National Park. Within Park, North Peak and South West Peak ESAs. Countryside Stewardship Scheme and Wildlife Enhancement Scheme (WES) also being used to achieve favourable management.
Bolton Fell Moss UK0030362 02 47 53 W 55 00 41 N	374.74	Primary: Degraded raised bogs still capable of natural regeneration Qualifying: N/A	Primary: N/A Qualifying: N/A	Site has been subject to commercial peat-extraction under an existing planning permission	Measures in hand to acquire permissions and cease peat extraction, thereafter hydrological restoration will be carried out.
Clints Quarry UK0030035 03 18 08 W 54 42 33 N	12.03	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Water levels in the ponds supporting newts are largely dependent on rainfall which has been low in recent years. The site has been relatively undisturbed since quarrying ceased.	Not provided.
Drigg Coast UK0013031 03 25 47 W 54 21 02 N	1,397.44	Primary: Estuaries, Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)*Priority feature, Dunes with <i>Salix repens</i> ssp. <i>Argentea</i> (<i>Salicion arenariae</i>) Qualifying: Mudflats and sandflats not covered by seawater at low tide, <i>Salicornia</i> and other annuals colonising mud and sand, Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>), embryonic shifting dunes, shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), fixed dunes with herbaceous vegetation ('grey dunes') <i>*Priority feature</i> , humid dune slacks	Primary: N/A Qualifying: N/A	There is no threat at present of any development that may affect estuarine processes.	Much of the sand dune area is under Countryside Stewardship Agreements or as a Cumbrian Wildlife Trust Reserve. The vulnerability of the marine site will be further identified by Natural England.
Lake District High Fells UK0012960 03 04 51 W 54 40 34 N	26,996.36	Primary: Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> , Northern	Primary: N/A Qualifying: Slender green feather-moss <i>Drepanocladus (Hamatocaulis) vernicosus</i>	The European habitats on this site, other than acidic scree, are threatened by grazing and more locally grazing combined with	Pressures have been significantly reduced over much of the site by entry into the Lake District ESA scheme, but this largely only slows or possibly arrests

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		<p>Atlantic wet heaths with <i>Erica tetralix</i>, European dry heaths, Alpine and Boreal heaths, <i>Juniperus communis</i> formations on heaths or calcareous grasslands, siliceous alpine and boreal grasslands, hydrophilous tall herb fringe communities of plains and of the montane to alpine levels, blanket bogs * Priority feature, siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>), siliceous rocky slopes with chasmophytic vegetation, old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p>Qualifying: Species-rich <i>Nardus</i> grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe) *Priority feature, alkaline fens, calcareous rocky slopes with chasmophytic vegetation</p>		<p>visitor pressure. Siliceous scree is possibly the least-threatened habitat and is widespread, albeit in a modified state</p>	decline.
<p>Montgomery Canal UK0030213 03 06 56 W 52 40 57 N</p>	55.89	<p>Primary: N/A Qualifying: N/A</p>	<p>Primary: Floating water-plantain <i>Luronium natans</i> Qualifying: N/A</p>	<p>Enrichment through agricultural or domestic nutrient inputs could affect the populations of floating water-plantain. The effects of boat traffic on populations of floating water-plantain are uncertain and are being investigated. Floating water-plantain is vulnerable to colonisation by aggressive species which can have an impact on the canal's ecology. The introduction of certain fish species could also damage aquatic plant populations.</p>	<p>CCW will liaise with owners and occupiers to achieve appropriately scaled and timed management. CCW will liaise with competent and relevant authorities to agree on appropriate methods and practices to ensure that bank protection and other engineering works are undertaken in a sensitive manner.</p>
<p>Raeburn Flow UK0030314 03 06 00 W 54 57 10 N</p>	63.96	<p>Primary: Active raised bogs*Priority feature Qualifying: Degraded raised bogs still capable of natural regeneration</p>	<p>Primary: N/A Qualifying: N/A</p>	<p>Historical peat-cutting and drainage.</p>	<p>Positive habitat works have been agreed with the owner/occupiers and are well underway, including tree and shrub removal, and limited grazing to prevent</p>

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
					scrub regeneration. Ditches are being blocked to encourage <i>Sphagnum</i> growth.
River Derwent & Bassenthwaite Lake UK0030032 03 08 32 W 54 34 35 N	1,832.96	Primary: Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> Qualifying: Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	Primary: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> , sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> , Atlantic salmon <i>Salmo salar</i> , otter <i>Lutra lutra</i> , floating water-plantain <i>Luronium natans</i> Qualifying: N/A	There are problems with sewage, acidification (from rainfall) and pollution with synthetic pyrethroid sheep dips. Flow regimes and sedimentation are affected by flood defence works and abstraction. Much of the land is heavily drained for agriculture or forestry, which results in increased run-off. Overgrazing has caused inputs of sediment and nutrients to the lakes which has affected plant communities.	Phosphorous stripping is being undertaken on part of the site, although it is expected that full recovery may take a decade or more. All issues are recognised in the joint English Nature/Environment Agency Conservation Strategy. All licensed activities which may be contributing to such problems will be addressed through the review process under the Habitats Regulations.
River Ehen UK0030057 03 29 51 W 54 30 55 N	24.39	Primary: N/A Qualifying: N/A	Primary: Freshwater pearl mussel <i>Margaritifera margaritifera</i> Qualifying: Atlantic salmon <i>Salmo salar</i>	Mussels are likely to be adversely affected by the apparent decline in salmonid fish populations and by major eutrophication of the river from sewage works and agricultural run-off. Practices associated with sheep-dipping pose a potential threat at this site.	Water quality issues will be addressed through the review process under the Habitats Regulations and at a catchment level by local Environment Action Plans. Research is required to determine the extent of any problems arising from pearl fishing. Possible concerns over the flows within the river will also be addressed through reviews of abstraction licences where these are considered to be causing a problem.
Solway Firth UK0013025 03 20 12 W 54 58 15 N	43,636.72	Primary: Sandbanks which are slightly covered by sea water all the time, estuaries, mudflats and sandflats not covered by seawater at low tide, <i>Salicornia</i> and other annuals colonising mud and sand, Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>) Qualifying: Reefs, perennial vegetation of stony banks, fixed dunes with herbaceous vegetation ('grey dunes') *Priority feature	Primary: Sea lamprey <i>Petromyzon marinus</i> , river lamprey <i>Lampetra fluviatilis</i> Qualifying: N/A	Flood defence and coastal erosion work, fishing and shellfisheries (including a cockle fishery which is currently closed to allow stocks to recover), saltmarsh/merse grazing, oil and gas exploration (outwith the site), and industrial development.	A management strategy to consider and co-ordinate these activities is being produced by the Solway Firth Partnership. This will set out the means by which it is proposed to secure the sustainable use of the estuary.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
South Solway Mosses UK0030310 03 14 36 W 54 55 33 N	1,962.36	Primary: Active raised bogs *Priority feature Qualifying: Degraded raised bogs still capable of natural regeneration	Primary: N/A Qualifying: N/A	Extensive drainage associated with agricultural reclamation and/or peat extraction. Parts of the site have suffered from uncontrolled fires	Management problems are being addressed through Site Management Statements, management agreements, acquisition, and through implementation of a National Nature Reserve Management Plan in part of the area.
Walton Moss UK0030093 02 46 30 W 54 59 26 N	285.89	Primary: Active raised bogs *Priority feature, degraded raised bogs still capable of natural regeneration Qualifying: N/A	Primary: N/A Qualifying: N/A	Previous land-drainage operations and inappropriate grazing regimes.	Walton Moss includes land managed as a National Nature Reserve. A hydrological monitoring regime is in preparation to inform remedial measures. Grazing has been tackled by enclosure and by Countryside Stewardship agreements.
Shell Flat and Lune Deep pSAC 03 13 0.24 W 53 51 51.33 N	14,019.16	Interest features include Annex I Reefs and Sandbanks which are Slightly Covered by Sea Water all the Time		There is a low risk from a nearby dredge disposal site and physical damage and biological disturbance from trawling activities. Biological disturbance to sandbank features is considered to be moderate due to their exposure to commercial fishing. Coastal heavy metal and synthetic substance discharges pose a moderate threat of toxic contamination to reef features, though threats of non-toxic contamination are low.	No interactions with Licence areas foreseen.

Table E.5 Summary Details of Relevant Special Protection Areas (SPAs) in SEA Area 2

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Morecambe Bay UK9005081 02 57 21 W 54 07 19 N	37,404.6	During the breeding season: Sandwich tern <i>Sterna sandvicensis</i>	Over winter: Pintail <i>Anas acuta</i> , pink-footed goose <i>Anser brachyrhynchus</i> , turnstone <i>Arenaria interpres</i> , dunlin <i>Calidris alpina</i> , knot <i>Calidris canutus</i> , oystercatcher <i>Haematopus ostralegus</i> , bar-tailed godwit <i>Limosa lapponica</i> , curlew <i>Numenius arquata</i> , grey plover <i>Pluvialis squatarola</i> , shelduck <i>Tadorna tadorna</i> , redshank <i>Tringa totanus</i> . On passage: Ringed plover <i>Charadrius hiaticula</i> Assemblage qualification: During the breeding season, the area regularly supports 61,858 individual seabirds including: sandwich tern <i>Sterna sandvicensis</i> . Over winter, the area regularly supports 210,668 individual waterfowl including: pink-footed goose <i>Anser brachyrhynchus</i> , shelduck <i>Tadorna tadorna</i> , pintail <i>Anas acuta</i> , oystercatcher <i>Haematopus ostralegus</i> , grey plover <i>Pluvialis squatarola</i> , knot <i>Calidris canutus</i> , dunlin <i>Calidris alpina</i> , bar-tailed godwit <i>Limosa lapponica</i> , curlew <i>Numenius arquata</i> , redshank <i>Tringa totanus</i> , turnstone <i>Arenaria interpres</i> .	Land-claim for agriculture, over-grazing, dredging, over-fishing, industrial uses and pollution.	Management plans for non-governmental organisation reserves, EN Site Management Statements, European Marine Site Management Scheme, and the Morecambe Bay Partnership.
Leighton Moss UK9005091 02 47 31 W 54 10 03 N	128.61	During the breeding season: Bittern <i>Botaurus stellaris</i> , marsh harrier <i>Circus aeruginosus</i> Over winter: Bittern <i>Botaurus stellaris</i>	N/A	Changes in water quality and level. Agricultural run-off from adjacent land. Saline intrusion.	RSPB reserve managed to maintain and enhance fen and open water habitats to provide optimum conditions for important reedbed birds.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Ribble and Alt Estuaries UK9005103 02 59 14 W 53 42 20 N	12,412.31	<p>During the breeding season:</p> <p>Common tern <i>Sterna hirundo</i>, ruff <i>Philomachus pugnax</i></p> <p>Over winter:</p> <p>Bar-tailed godwit <i>Limosa lapponica</i>, Bewick's swan <i>Cygnus columbianus</i>, golden plover <i>Pluvialis apricaria</i>, whooper swan <i>Cygnus cygnus</i></p>	<p>During the breeding season:</p> <p>Lesser black-backed gull <i>Larus fuscus</i>, black-headed gull <i>Larus ridibundus</i></p> <p>Over winter:</p> <p>pintail <i>Anas acuta</i>, teal <i>Anas crecca</i>, wigeon <i>Anas penelope</i>, <i>Anser brachyrhynchus</i>, scaup <i>Aythya marila</i>, dunlin <i>Calidris alpina</i>, sanderling <i>Calidris alba</i>, knot <i>Calidris canutus</i>, oystercatcher <i>Haematopus ostralegus</i>, black-tailed godwit <i>Limosa limosa</i>, common scoter <i>Melanitta nigra</i>, Curlew <i>Numenius arquata</i>, Cormorant <i>Phalacrocorax carbo</i>, grey plover <i>Pluvialis squatarola</i>, shelduck <i>Tadorna tadorna</i>, redshank <i>Tringa totanus</i>, Lapwing <i>Vanellus vanellus</i>.</p> <p>On passage:</p> <p>Ringed plover <i>Charadrius hiaticula</i>, sanderling <i>Calidris alba</i>, redshank <i>Tringa totanus</i>, whimbrel <i>Numenius phaeopus</i></p> <p>Assemblage qualification:</p> <p>During the breeding season, the area regularly supports 29,236 individual seabirds including: Black-headed gull <i>Larus ridibundus</i>, lesser black-backed gull <i>Larus fuscus</i>, common tern <i>Sterna hirundo</i>.</p> <p>Over winter, the area regularly supports 323,861 individual waterfowl including: cormorant <i>Phalacrocorax carbo</i>, Bewick's swan <i>Cygnus columbianus bewickii</i>, whooper swan <i>Cygnus cygnus</i>, pink-footed goose <i>Anser brachyrhynchus</i>, shelduck <i>Tadorna tadorna</i>, wigeon <i>Anas penelope</i>, teal <i>Anas</i></p>	Recreation, built development (including coastal defence), wildfowling and industry. Overgrazing on saltmarsh. Accidental pollution from the nearby Mersey Estuary and Irish Sea oil and gas fields.	Agreed plans for three NNRs, two LNRs and other initiatives developed by the Sefton Coast Partnership. Wider land management issues being developed via the Ribble and Mersey Estuary Strategies. Sefton Shoreline Management Plan. Oil spill contingency plans maintained.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			<i>crecca</i> , Pintail <i>Anas acuta</i> , scaup <i>Aythya marila</i> , common scoter <i>Melanitta nigra</i> , common scoter <i>Melanitta nigra</i> , oystercatcher <i>Haematopus ostralegus</i> , ringed plover <i>Charadrius hiaticula</i> , grey plover <i>Pluvialis squatarola</i> , golden plover <i>Pluvialis apricaria</i> , lapwing <i>Vanellus vanellus</i> , knot <i>Calidris canutus</i> , sanderling <i>Calidris alba</i> , dunlin <i>Calidris alpina</i> , black-tailed godwit <i>Limosa limosa</i> , bar-tailed godwit <i>Limosa lapponica</i> , curlew <i>Numenius arquata</i> , redshank <i>Tringa totanus</i> .		
Martin Mere UK9005111 02 52 37 W 53 37 24 N	119.89	Over winter: Bewick's swan <i>Cygnus columbianus bewickii</i> , whooper swan <i>Cygnus cygnus</i>	Over winter: Pink-footed goose <i>Anser brachyrhynchus</i> , pintail <i>Anas acuta</i> , wigeon <i>Anas penelope</i> .	Water abstraction for agriculture. Changes in farming practice.	Areas of pasture positively managed under a Countryside Stewardship Scheme.
Mersey Estuary UK9005131 02 49 25 W 53 18 51 N	5,023.35	Over winter: Golden plover <i>Pluvialis apricaria</i>	Over winter: pintail <i>Anas acuta</i> , teal <i>Anas crecca</i> , wigeon <i>Anas penelope</i> , dunlin <i>Calidris alpina alpina</i> , black-tailed godwit <i>Limosa limosa islandica</i> , curlew <i>Numenius arquata</i> , grey plover <i>Pluvialis squatarola</i> , great crested grebe <i>Podiceps cristatus</i> , shelduck <i>Tadorna tadorna</i> , redshank <i>Tringa totanus</i> , lapwing <i>Vanellus vanellus</i> . On passage: Redshank <i>Tringa totanus</i> , ringed plover <i>Charadrius hiaticula</i>	Physical loss through land-claim and development, physical damage caused by dredging, agricultural requirements, toxic and non-toxic contamination and recreation disturbance.	Estuary Management Plan.
Bowland Fells UK9005151 02 33 45 W 53 59 13 N	16,002.31	During the breeding season: Hen harrier <i>Circus cyaneus</i> , merlin <i>Falco columbarius</i>	During the breeding season: Lesser black-backed gull <i>Larus fuscus</i>	Inappropriate grazing, burning.	Overgrazing controlled through Management Agreements or Countryside Stewardship Scheme. Site Management Statements have agreed burning plans and stocking levels.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Peak District Moors (South Pennine Moors Phase 1) UK9007021 01 45 51 W 53 28 03 N	45,270.52	During the breeding season: Golden plover <i>Pluvialis apricaria</i> , merlin <i>Falco columbarius</i> , short-eared owl <i>Asio flammeus</i>	N/A	Significant visitor pressure and disturbance from major urban and industrial centres. Historic air pollution, high grazing pressure and wildfire burns.	Initiatives for sustainable recreation being developed. Two separate ESAs encourage and support habitat restoration.
South Pennine Moors Phase 2 UK9007022 02 04 16 W 53 48 38 N	20,936.53	During the breeding season: Golden plover <i>Pluvialis apricaria</i> , merlin <i>Falco columbarius</i> , short-eared owl <i>Asio flammeus</i>	Assemblage qualification: During the breeding season the area regularly supports: dunlin <i>Calidris alpina alpina</i> , snipe <i>Gallinago gallinago</i> , curlew <i>Numenius arquata</i> , redshank <i>Tringa totanus</i> , lapwing <i>Vanellus vanellus</i> , common sandpiper <i>Actitis hypoleucos</i> , twite <i>Carduelis flavirostris</i> , northern wheatear <i>Oenanthe oenanthe</i> , whinchat <i>Saxicola rubetra</i> , ring ouzel <i>Turdus torquatus</i> .	Heavy recreational pressure. Overgrazing. Adjacent intensive agriculture.	Integrated management strategy and conservation action programme as part of EU-funded LIFE project.
Dee Estuary UK9013011 03 11 02 W 53 18 39 N	13,084.85	Over winter: Bar-tailed godwit <i>Limosa lapponica</i>	Over winter: Pintail <i>Anas acuta</i> , knot <i>Calidris canutus</i> , oystercatcher <i>Haematopus ostralegus</i> , shelduck <i>Tadorna tadorna</i> , redshank <i>Tringa totanus</i> . Assemblage qualification: Over winter, the area regularly supports 90,518 individual waterfowl including: shelduck <i>Tadorna tadorna</i> , pintail <i>Anas acuta</i> , oystercatcher <i>Haematopus ostralegus</i> , knot <i>Calidris canutus</i> , bar-tailed godwit <i>Limosa lapponica</i> , redshank <i>Tringa totanus</i> .	Industrial and urban development. Water quality issues. Over-exploitation of cockle beds.	Sizeable parts of the estuary are in conservation management or are subject to Management Agreements. The Dee Estuary Strategy.
Mersey Narrows and North Wirral Foreshore pSPA UK9020287 03 07 43 W 53 25 09 N	To be confirmed	N/A	Over winter: Redshank <i>Tringa totanus</i> , turnstone <i>Arenaria interpres</i> Assemblage qualification: Over winter, the area regularly supports 20,269 individual waterfowl	No details.	No details.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			including: Dunlin <i>Calidris alpina</i> , knot <i>Calidris canutus</i> , grey plover <i>Pluvialis squatarola</i> , oystercatcher <i>Haematopus ostralegus</i> , cormorant <i>Phalacrocorax carbo</i> , turnstone <i>Arenaria interpres</i> , redshank <i>Tringa totanus</i> .		
Duddon Estuary UK9005031 03 15 24 W 54 10 39 N	6,806.3	During the breeding season: Sandwich Tern <i>Sterna sandvicensis</i>	Over winter: Knot <i>Calidris canutus</i> , pintail <i>Anas acuta</i> , redshank <i>Tringa totanus</i> . Assemblage qualification: Over winter, the area regularly supports 31,505 individual waterfowl including: Knot <i>Calidris canutus</i> , pintail <i>Anas acuta</i> , redshank <i>Tringa totanus</i> .	Intertidal zone being threatened by coastal squeeze due to land claim and coastal defence as well as sea level rise and storm surges. Saltmarshes are grazed by agricultural stock, sometimes at a high level. Waterfowl wintering vulnerable to loss of feeding areas through disturbance, land claim and development.	Issues are being addressed through the Shoreline Management Plan and more locally, Site Management Statements/Positive Management Schemes. Duddon Estuary partnership is addressing some of the threats arising from recreational pressure and bait digging.
Langholm - Newcastleton Hills UK9003271 02 53 14 W 55 12 53 N	TBC	During the breeding season: Hen Harrier <i>Circus cyaneus</i>	N/A	Threats to the moorland which supports the qualifying interest include degradation and loss of heather and peat erosion. Hen harriers potentially vulnerable to disturbance from agricultural practices, game management and recreational activities.	Being addressed through bracken control and management agreements for heather restoration, stocking levels and sensitive muirburn. Joint Raptor Study on the site is being continued and informs best management practice.
Upper Solway Flats and Marshes UK9005012 03 19 17 W 54 58 04 N	30,706.26	Over winter: barnacle goose <i>Branta leucopsis</i> , whooper swan <i>Cygnus cygnus</i> , bar-tailed godwit <i>Limosa lapponica</i> , golden plover <i>Pluvialis apricaria</i> .	Over winter: Pintail <i>Anas acuta</i> , shoveler <i>Anas clypeata</i> , teal <i>Anas crecca</i> , pink-footed goose <i>Anser brachyrhynchus</i> , turnstone <i>Arenaria interpres</i> , scaup <i>Aythya marila</i> , goldeneye <i>Bucephala clangula</i> , dunlin <i>Calidris alpina</i> , sanderling <i>Calidris alba</i> , knot <i>Calidris canutus</i> , oystercatcher <i>Haematopus ostralegus</i> , curlew <i>Numenius arquata</i> , redshank <i>Tringa totanus</i> , grey plover	Some established and new flood defence and coastal erosion works may exacerbate erosion elsewhere within the site. Roosts and feeding areas are vulnerable to disturbance.	Cockle fishery has been closed for a number of years. Other commercial, traditional and shell fisheries are regulated by Government to ensure that they are carried out in a sustainable way and that their impact on bird feeding areas is not significant.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			<p><i>Pluvialis squatarola</i>, shelduck <i>Tadorna tadorna</i>.</p> <p>Assemblage qualification: Over winter, the area regularly supports 133,440 individual waterfowl including: whooper swan <i>Cygnus cygnus</i>, pink-footed goose <i>Anser brachyrhynchus</i>, barnacle goose <i>Branta leucopsis</i>, shelduck <i>Tadorna tadorna</i>, teal <i>Anas crecca</i>, pintail <i>Anas acuta</i>, shoveler <i>Anas clypeata</i>, scaup <i>Aythya marila</i>, goldeneye <i>Bucephala clangula</i>, oystercatcher <i>Haematopus ostralegus</i>, golden plover <i>Pluvialis apricaria</i>, grey plover <i>Pluvialis squatarola</i>, knot <i>Calidris canutus</i>, dunlin <i>Calidris alpina alpina</i>, bar-tailed godwit <i>Limosa lapponica</i>, curlew <i>Numenius arquata</i>, redshank <i>Tringa totanus</i>, turnstone <i>Arenaria interpres</i>.</p>		
Liverpool Bay SPA UK9020294 53 36 30 N 03 13 16 W	197,504.24	Over winter: Red-throated diver	Over winter: Common scoter	-	-

Table E.6 Summary Details of Relevant Ramsar Sites in SEA Area 2

Code/ Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK11035 02 47 31 W 54 10 03 N	Leighton Moss	128.61	Largest reedbed in north-west England situated on the eastern edge of Morecambe Bay. Large areas of open water surrounded by extensive reedbeds in which areas of willow scrub and mixed fen vegetation occur. A typical and varied fen flora has developed in part, whilst the reedbed shows all stages of transition from open water through to woodland.	1	Sedimentation/siltation, pollution – agriculture, salination of groundwater.
UK11039 02 52 37 W 53 37 24 N	Martin Mere	119.89	Areas of open water with associated muddy margins have been created, whilst maintaining seasonally flooded marsh and reed swamp habitats via water level control. In addition large areas of semi-improved damp grassland, unimproved species rich damp grassland and rush pasture have been maintained and enhanced via appropriate grazing management. Important as a refuge for large and diverse wintering, passage and breeding birds community.	5, 6	No factors reported.
UK11041 02 49 25 W 53 18 51 N	Mersey Estuary	5,023.35	Large, sheltered estuary comprising large areas of saltmarsh and extensive intertidal sand and mudflats, with limited areas of brackish marsh, rocky shoreline and boulder clay cliffs, within a rural and industrial environment. Intertidal flats and saltmarshes provide feeding and roosting sites for large and internationally important populations of waterfowl. During the winter, the site is of major importance for duck and waders. The site is also important during spring and autumn migration periods, particularly for wader populations.	5, 6	No factors reported.
UK11043 02 50 25 W 52 54 11 N	Midland Meres and Mosses – Phase 1	510.88	The 16 component sites include open water bodies (meres), the majority of which are nutrient-rich with associated fringing habitats; reed swamps, fen, carr and damp pasture. Peat accumulation has resulted in nutrient poor peat bogs (mosses) forming in some sites in the fringes of meres or completely infilling basins. In a few cases the result is a floating quaking bog or schwingmoor. Range of resulting habitats support nationally important flora and fauna.	1, 2	Introduction/invasion of flora, urban development, eutrophication.
UK11045 02 57 21 W 54 07 19 N	Morecambe Bay	37,404.6	Represents largest continuous intertidal area in Britain. Comprises the estuaries of 5 rivers and the mudflats behind Walney Island. Area is of intertidal mud and sandflats, with associated saltmarshes, shingle beaches and other coastal habitats. Component in the chain of west coast estuaries of outstanding importance for passage and overwintering waterfowl, and breeding waterfowl, gulls and terns.	6, 5, 4	Overfishing
UK11057 02 58 44 W 53 42 41 N	Ribble and Alt Estuaries	13,464.1	Two estuaries which form part of the chain of west coast sites which fringe the Irish Sea. Formed by extensive sand and mudflats backed, in the north, by the saltmarsh of the Ribble Estuary and, to the south, the sand dunes of the Sefton Coast. Tidal flats and saltmarsh support internationally important populations of waterfowl in winter and the sand dunes support vegetation communities and amphibian populations of international importance.	2	Military activities, recreation disturbance, pollution – unspecified, mining, hunting or capture, over-grazing (livestock), general disturbance, erosion.
UK11060 02 23 05 W 53 21 14 N	Rostherne Mere	79.76	The deepest, and one of the largest and most northerly of the meres of the Cheshire Plain. It lies in a hollow surrounded by thick deposits of glacial drift overlying Triassic marls and salt-beds.	1	Introduction of exotic animals, eutrophication.

Code/ Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK11080 02 45 43 W 52 55 20 N	Midland Meres and Mosses – Phase 2	1,588.24	The 18 component sites include open water bodies (meres), the majority of which are nutrient-rich with associated fringing habitats, reed swamp, fen, carr and damp pasture. Peat accumulation has resulted in the nutrient-poor peat bogs (mosses) forming in some sites on the fringes of the meres or completely infilling basins. In a few cases the result is a floating quaking bog or schwingmoor. Habitats support nationally important flora and fauna.	1, 2	Introduction of exotic animals, pollution – agriculture, introduction/ invasion of flora, eutrophication.
UK11082 03 11 02 W 53 18 39 N	The Dee Estuary (Wales)	13,084.85	One of the top five estuaries in the UK for wintering and passage waterfowl populations. Supports extensive areas of intertidal sand and mudflats as well as saltmarsh. Where land-claim has not occurred, the saltmarshes grade into transitional brackish and freshwater swamp vegetation, on the upper shore. The site includes the three sandstone islands of Hilbre with their important cliff vegetation and maritime heathland/grassland. Contrast between the industrialised usage of the coastal belt in Wales and residential and recreational usage in England.	5, 6, 1	Over-fishing, introduction/invasion of flora, transport infrastructure, industrial pollution, pollution – sewage, general disturbance.
UK11022 03 15 24 W 54 10 39 N	Duddon Estuary	6,806.3	Duddon Estuary is formed by the River Duddon and the smaller Kirkby Pool opening into the Irish Sea in south-western Cumbria. Most of the site consists of intertidal sand and mudflats, important for large numbers of wintering and passage waterfowl. A range of grazed and ungrazed saltmarsh habitats occur around the edge of the estuary, especially the sheltered inner section. The site is the most important in Cumbria for sand-dune communities including large areas of calcareous dunes at Sandscale and Haverigg Haws and contrasting acid dunes on North Walney. Artificial habitats include slag banks and a flooded mine working known as Hodbarrow Lagoon, the largest coastal lagoon in north-west England.	2, 4, 5, 6	No factors reported.
UK11079 03 25 27 W 54 54 20 N	Upper Solway Flats and Marshes	43,636.73	The flats and marshes of the Upper Solway Firth form one of the largest continuous areas of intertidal habitat in Britain. The whole estuarine complex is a site of national and international importance for wintering wildfowl and wading birds and is a vital link in a chain of west coast estuaries used by migrating birds. The site is also noted for its populations of breeding birds, natterjack toad <i>Bufo calamita</i> and invertebrates. The geomorphology and vegetation of the estuarine saltmarshes or meres is also of international importance with broad transitions to mature 'upper-marsh' being particularly well represented. A number of rare plant species and geological exposures also occur within the site.	2, 5, 6	No factors reported.

*Note: Ramsar criteria:**

1. sites containing representative, rare or unique wetland types
2. supports vulnerable, endangered, or critically endangered species or threatened ecological communities
3. supports populations of plant/animal species important for maintaining regional biodiversity
4. supports plant/animal species at a critical stage in their life cycles, or provides refuge
5. regularly supports 20,000 or more waterbirds
6. regularly supports 1% of the individuals in a population of one species/subspecies of waterbirds
8. important source of food for fishes, spawning ground, nursery and/or migration path

Summary Details of Sites of International Importance in SEA Area 3

Figure E.3 International Designations in SEA Area 3

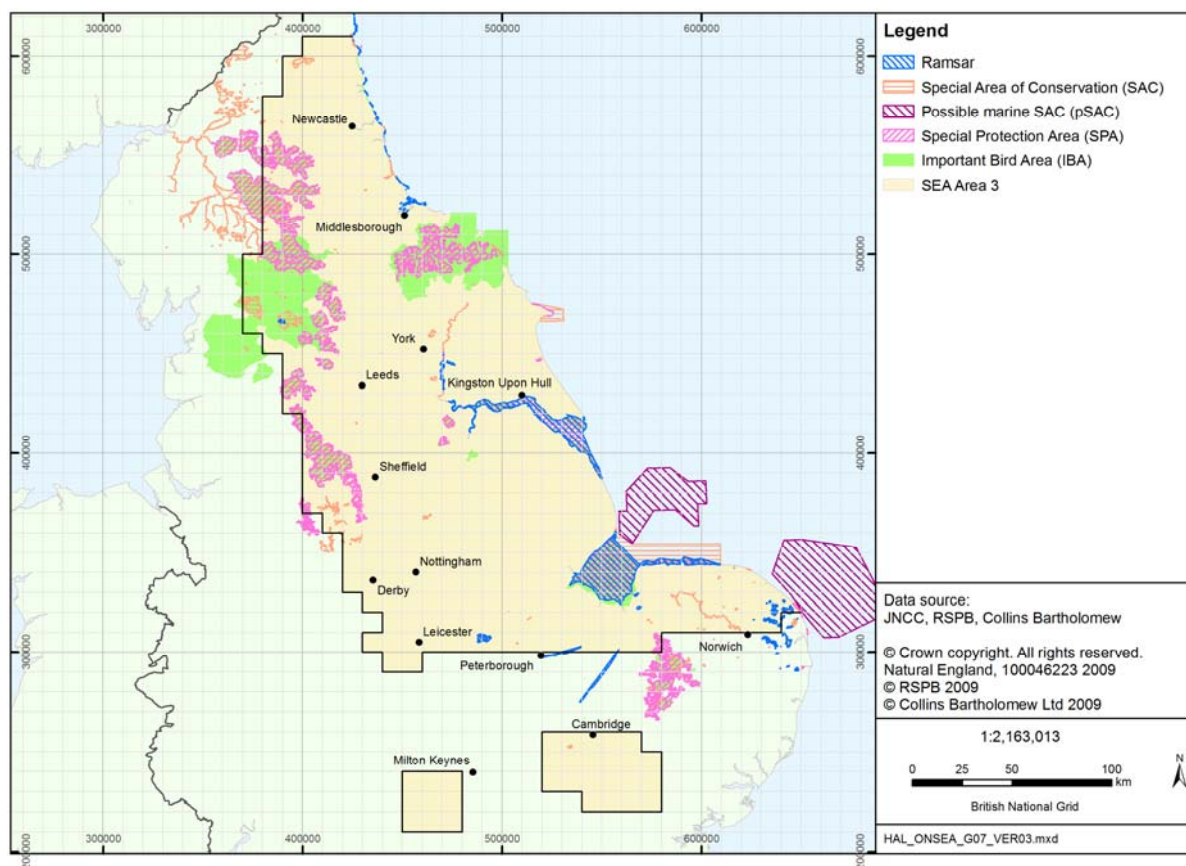


Table E.7 Summary Details of Relevant Special Areas of Conservation (SACs) in SEA Area 3

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Humber Estuary UK0030170 00 45 05W 53 35 21N	36,657.15	Primary: Estuaries, Mudflats and sandflats not covered by seawater at low tide Qualifying: Sandbanks which are slightly covered by sea water all the time, Coastal lagoons *Priority feature, <i>Salicornia</i> and other annuals colonising mud and sand, Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>), Embryonic shifting dunes, Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), Fixed dunes with herbaceous vegetation ('grey dunes') *Priority feature, Dunes with <i>Hippophae rhamnoides</i>	Primary: N/A Qualifying: Sea lamprey <i>Petromyzon marinus</i> , River lamprey <i>Lampetra fluviatilis</i> , Grey seal <i>Halichoerus grypus</i>	Subject to past and ongoing human activity and sea-level change. Issues include coastal squeeze, impacts on sediment budget, geomorphological structure, and function of the estuary, changes in water quality, pressures from build development, disturbance from access and recreation.	Humber Flood Risk Management Strategy is addressing coastal squeeze. Proposed activities require consent from conservation bodies under the Habitats Regulations. Diffuse pollution controlled through Waste Water Framework Directive and Catchment Sensitive Farming Initiatives. The Humber Management scheme was developed by all statutory bodies to assist delivery of their duties under the habitats regulations.
Eversden and Wimpole Woods UK0030331 00 02 05 W 52 09 32 N	66.48	Primary: N/A Qualifying: N/A	Primary: Barbastelle <i>Barbastella barbastellus</i> Qualifying: N/A	Public access/disturbance.	Wimpole Woods is owned and managed by the National Trust. Management aimed at maintaining and enhancing barbastelle populations. Current use of both Eversden and Wimpole woods considered compatible with wood as a foraging/light path for barbastelle.
River Eden UK0012643 02 49 58 W 54 36 19 N	2,463.23	Primary: Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> , water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation, alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) *Priority feature Qualifying: N/A	Primary: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i> , sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> , Atlantic salmon <i>Salmo salar</i> , bullhead <i>Cottus gobio</i> , otter <i>Lutra lutra</i> Qualifying: N/A	Overgrazing of riverbanks and nutrient run-off. Water quality and eutrophication. Alluvial forest fragmentation.	Maintenance of breeding and nursery areas for the species on this site (e.g. lampreys, salmon and otter) depends on the habitat quality of streams and their margins. Conservation strategy with actions to address river quality issues.
River Wensum UK0012647 00 59 38 E 52 43 04 N	381.74	Primary: Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	Primary: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i>	Invasive species, input of silt and agricultural chemicals, channel modification, development on floodplain, water abstraction.	No details.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		Qualifying: N/A	Qualifying: Desmoulin's whorl snail <i>Vertigo moulinsiana</i> , brook lamprey <i>Lampetra planeri</i> , bullhead <i>Cottus gobio</i>		
Birklands and Bilhaugh UK0012740 01 04 31 W 53 12 17 N	271.84	Primary: Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains Qualifying: N/A	Primary: N/A Qualifying: N/A	Recreation pressure, subsidence from past coal mines, under-grazing, air pollution from industrial towns.	Visitor pressure and lack of grazing will be addressed by a management committee and in the management plan.
Castle Eden Dene UK0012768 01 19 29 W 54 45 00 N	194.4	Primary: <i>Taxus baccata</i> woods of the British Isles * <i>Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	No details.	Managed as a NNR and Management Plan provides for regeneration of woodland.
Ingleborough Complex UK0012782 02 22 25 W 54 09 36 N	5,769.28	Primary: <i>Juniperus communis</i> formations on heaths or calcareous grasslands, alkaline fens, calcareous rocky slopes with chasmophytic vegetation, limestone pavements * <i>Priority feature</i> Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), blanket bogs * <i>Priority feature</i> , petrifying springs with tufa formation (<i>Cratoneurion</i>) * <i>Priority feature</i> , <i>Tilio-Acerion</i> forests of slopes, screes and ravines * <i>Priority feature</i>	Primary: N/A Qualifying: N/A	Overgrazing, removal of limestone pavement, limestone quarrying.	Wildlife Enhancement Scheme and other forms of agri-environmental agreement being used to promote appropriate management. Limestone Pavement Orders.
Roydon Common and Dersingham Bog UK0012801 00 29 58 E 52 46 22 N	351.83	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , depressions on peat substrates of the <i>Rhynchosporion</i> Qualifying: European dry heaths	Primary: N/A Qualifying: N/A	Agricultural pollution of catchment. Water abstraction, lack of traditional management.	EA's North West Norfolk River Catchment Plan and Review of Consents. Management agreements and Countryside Stewardship payments for reintroducing traditional management and controlling scrub.
Tyne and Allen River Gravels UK0012816	36.84	Primary: Calaminarian grasslands of the <i>Violetalia calaminariae</i>	Primary: N/A Qualifying: N/A	River course change, succession to grassland and scrub.	Unknown whether management can restore areas where succession taken place, as may no

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
02 29 08 W 54 57 20 N		Qualifying: N/A			longer be sufficient available metals even if the bare shingle re-exposed.
Gang Mine UK0012817 01 34 21 W 53 05 52 N	8.26	Primary: Calaminarian grasslands of the <i>Violetalia calaminariae</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Under-grazing, deposition of limestone dust from quarry.	Partly owned by Derbyshire Wildlife Trust. Other part managed under Countryside Stewardship Scheme and under no immediate threat.
Thrislington UK0012838 01 30 27 W 54 41 20 N	22.58	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Qualifying: N/A	Primary: N/A Qualifying: N/A	Fertiliser input.	Grasslands dependent upon continuous management by seasonally-adjusted grazing and no fertiliser input. NNR and traditional management reintroduced.
Lower Derwent Valley UK0012844 00 55 50 W 53 53 17 N	915.91	Primary: Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) Qualifying: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) *Priority feature	Primary: N/A Qualifying: Otter <i>Lutra lutra</i>	Subsidence from coal mines, water level.	Extant planning permission for deep coal mining has been reviewed and an appropriate compensation/mitigation package has been agreed.
Waveney and Little Ouse Valley Fens UK0012882 01 01 06 E 52 22 42 N	93.18	Primary: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> *Priority feature Qualifying: N/A	Primary: Desmoulin's whorl snail <i>Vertigo moulinsiana</i> Qualifying: N/A	Water abstraction, over-deepening of local rivers and land drainage.	ESA funding to encourage reintroduction of grazing. EN and Suffolk Wildlife Trust NNR. Water level management plans.
Norfolk Valley Fens UK0012892 00 51 22 E 52 31 36 N	616.21	Primary: Alkaline fens Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> *Priority feature, alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) *Priority feature	Primary: Narrow-mouthed whorl snail <i>Vertigo angustior</i> , Desmoulin's whorl snail <i>Vertigo moulinsiana</i> Qualifying: N/A	Reduction of water table and decrease in spring flows from groundwater abstraction.	Management Agreements, Countryside Stewardship and ESA payments help towards reintroduction or promotion of traditional management.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Thorne Moor UK0012915 00 53 51 W 53 38 18 N	1,909.38	Primary: Degraded raised bogs still capable of natural regeneration Qualifying: N/A	Primary: N/A Qualifying: N/A	Peat cutting, water abstraction, agricultural drainage.	Much of site successfully restored to active bog through maintenance of water levels, though a large area is classed as degraded because restoration in early stages.
Border Mires, Kielder – Butterburn UK0012923 02 29 52 W 55 18 17 N	11,851.77	Primary: Blanket bogs <i>*Priority feature</i> , Transition mires and quaking bogs Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths, petrifying springs with tufa formation (<i>Cratoneurion</i>) <i>*Priority feature</i>	Primary: N/A Qualifying: N/A	Forestry drainage, conifer planting, over-grazing, burning.	Programme of rehabilitation of bogs damaged by forestry underway, based on management plans.
Ouse Washes UK0013011 00 12 21 E 52 28 58 N	311.35	Primary: N/A Qualifying: N/A	Primary: Spined loach <i>Cobitis taenia</i> Qualifying: N/A	Water abstraction, water quality (agricultural and sewage pollutants), salinity, turbidity and sediment issues.	Water Level Management Plan agreed by EA and partner organisations. EA also involved in water quality management.
Flamborough Head UK0013036 00 04 37 W 54 06 41 N	6,311.96	Primary: Reefs, vegetated sea cliffs of the Atlantic and Baltic coasts, submerged or partially submerged sea caves Qualifying: N/A	Primary: N/A Qualifying: N/A	Physical damage and toxic contamination.	Management Scheme will identify necessary monitoring systems and measures to maintain features.
Winterton-Horsey Dunes UK0013043 01 41 23 E 52 43 24 N	425.94	Primary: Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) <i>*Priority feature</i> , humid dune slacks Qualifying: Embryonic shifting dunes, shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')	Primary: N/A Qualifying: N/A	Coastal squeeze. Beach-feeding. Water abstraction. Recreation pressure.	Coastal Habitat Action Plan (ChaMP) will attempt to address these issues.
The Broads UK0013577 01 36 40 E 52 43 49 N	5,865.6	Primary: Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp., natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> -type vegetation, transition mires and quaking bogs, calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> <i>* Priority feature</i> , Alkaline fens, alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> ,	Primary: Desmoulin's whorl snail <i>Vertigo moulinsiana</i> , fen orchid <i>Liparis loeselii</i> Qualifying: Otter <i>Lutra lutra</i>	Sea level rise and water abstraction. Saline intrusion. Eutrophication. Recreation pressure.	Partnership between EA, Broads Authority and EN. Broads Plan (Broads Authority), Water Level Management Plans and the ESA scheme are starting to raise water levels, revert arable areas back to grass and encourage sensitive management.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		<i>Alnion incanae</i> , <i>Salicion albae</i> *Priority feature Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)			
Moor House – Upper Teesdale UK0014774 02 18 44 W 54 42 59 N	38,795.99	Primary: Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp., Alpine and Boreal heaths, <i>Juniperus communis</i> formations on heaths or calcareous grasslands, <i>Calaminarian</i> grasslands of the <i>Violetalia calaminariae</i> , siliceous alpine and boreal grasslands, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), hydrophilous tall herb fringe communities of plains and of the montane to alpine levels, mountain hay meadows, blanket bogs *Priority feature, petrifying springs with tufa formation (<i>Cratoneurion</i>) *Priority feature, alkaline fens, Alpine pioneer formations of the <i>Caricion bicoloris-atrofuscae</i> *Priority feature, siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>), calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>), calcareous rocky slopes with chasmophytic vegetation, siliceous rocky slopes with chasmophytic vegetation Qualifying: European dry heaths, limestone pavements *Priority feature	Primary: Round-mouthed whorl snail <i>Vertigo genesii</i> , Marsh saxifrage <i>Saxifraga hirculus</i> Qualifying: N/A	Overgrazing, inappropriate burning, drainage, acid deposition.	Wildlife Enhancement Schemes geared at moorland and pasture, and ESA and Countryside Stewardship schemes.
North Pennine Dales Meadows UK0014775 02 06 24 W 54 37 31 N	497.09	Primary: Mountain hay meadows Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)	Primary: N/A Qualifying: N/A	Lack of traditional management.	Management agreements and ESA payments being used to promote continuation of traditional management.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Craven Limestone Complex UK0014776 02 06 59 W 54 06 04 N	5,328.25	<p>Primary: Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp., semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), active raised bogs <i>*Priority feature</i>, petrifying springs with tufa formation (<i>Cratoneurion</i>) <i>*Priority feature</i>, alkaline fens, limestone pavements <i>*Priority feature</i></p> <p>Qualifying: Calaminarian grasslands of the <i>Violetalia calaminariae</i>, <i>Tilio-Acerion</i> forests of slopes, screes and ravines <i>*Priority feature</i></p>	<p>Primary: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i>, bullhead <i>Cottus gobio</i>, lady's-slipper orchid <i>Cypripedium calceolus</i></p> <p>Qualifying: N/A</p>	Overgrazing, removal of limestone pavement and limestone quarrying. Malham Tarn vulnerable to nutrient enrichment.	Wildlife Enhancement Scheme and other forms of agri-environmental agreement being used to promote appropriate management. Limestone Pavement Orders.
Asby Complex UK0014778 02 37 14 W 54 29 39 N	3,122.23	<p>Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), petrifying springs with tufa formation (<i>Cratoneurion</i>) <i>*Priority feature</i>, alkaline fens, limestone pavements <i>*Priority feature</i></p> <p>Qualifying: Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp., European dry heaths, calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> <i>*Priority feature</i></p>	<p>Primary: Geyer's whorl snail <i>Vertigo geyeri</i>, slender green feather-moss <i>Drepanocladus (Hamatocaulis) vermicosus</i></p> <p>Qualifying: N/A</p>	Overgrazing. Damage of limestone pavements.	Limestone Pavement Orders. Management Agreements are being sought but may be difficult to achieve on common land.
Fenland UK0014782 00 16 44 E 52 18 23 N	618.64	<p>Primary: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> <i>*Priority feature</i></p> <p>Qualifying: N/A</p>	<p>Primary: N/A</p> <p>Qualifying: Spined loach <i>Cobitis taenia</i>, great crested newt <i>Triturus cristatus</i></p>	Lack of traditional management, water abstraction, high nutrients in flood water.	Constituent sites are all NNRs. English Nature, the EA and Anglian Water looking at water management issues.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
The Wash and North Norfolk Coast UK0017075 00 19 05 E 52 56 13 N	10,7761.3	Primary: Sandbanks which are slightly covered by sea water all the time, mudflats and sandflats not covered by seawater at low tide, large shallow inlets and bays, reefs, <i>Salicornia</i> and other annuals colonising mud and sand, Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>), Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>) Qualifying: Coastal lagoons *Priority feature	Primary: Common seal <i>Phoca vitulina</i> Qualifying: Otter <i>Lutra lutra</i>	Coastal squeeze. Dredging and coastal protection works. Disturbance.	Current management underway to address concerns over declines in shellfisheries. Disturbance of seals addressed through the Marine Scheme of Management.
North Northumberland Dunes UK0017097 01 48 01 W 55 41 05 N	1,147.56	Primary: Embryonic shifting dunes, shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), fixed dunes with herbaceous vegetation ('grey dunes') *Priority feature, dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>), humid dune slacks Qualifying: N/A	Primary: Petalwort <i>Petalophyllum ralfsii</i> Qualifying: N/A	Inappropriate grazing regimes. Invasion of non-native plant species. Recreation pressure.	Management Agreements, including Countryside Stewardship being pursued to address problems.
North Norfolk Coast UK0019838 00 36 38 E 52 58 08 N	3,207.37	Primary: Coastal lagoons *Priority feature, perennial vegetation of stony banks, Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>), embryonic shifting dunes, shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), fixed dunes with herbaceous vegetation ('grey dunes') *Priority feature, humid dune slacks Qualifying: N/A	Primary: N/A Qualifying: Otter <i>Lutra lutra</i> , petalwort <i>Petalophyllum ralfsii</i>	Sea-level rise, coastal retreat, water level management, habitat recreation and visitor pressure issues.	Shoreline Management Plan, local biodiversity action plans, water level management plans, Site Management Statements and Wildlife Enhancement Scheme Agreements. Number of NNRs managed by voluntary conservation organisations.
Peak District Dales UK0019859 01 47 16 W 53 05 29 N	2,326.33	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature	Primary: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i> Qualifying: Brook lamprey <i>Lampetra planeri</i> , bullhead <i>Cottus gobio</i>	Inappropriate grazing management. Drainage. Limestone or mineral extraction. Invasion of non-native tree species.	Some parts now managed under Countryside Stewardship. English Nature's White Peak Wildlife Enhancement Scheme to enhance conservation value of sites.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		Qualifying: European dry heaths, Calaminarian grasslands of the <i>Violetalia calaminariae</i> , alkaline fens, calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolia</i>), calcareous rocky slopes with chasmophytic vegetation			
Breckland UK0019865 00 44 42 E 52 31 08 N	7,548.06	Primary: Inland dunes with open <i>Corynephorus</i> and <i>Agrostis</i> grasslands, natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> -type vegetation, European dry heaths, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Qualifying: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) *Priority feature	Primary: N/A Qualifying: Great crested newt <i>Triturus cristatus</i>	Nutrient deposition from the atmosphere and adjacent land, tree/shrub invasion, recreational pressure. Water abstraction.	Managed grazing essential. Management agreements and ESA payments help to re-introduce largely uneconomic traditional management.
Rex Graham Reserve UK0019866 00 33 03 E 52 20 31 N	2.67	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Scrub development, potential road development, vandalism.	Site Management Statement agreed with Forest Enterprise and Suffolk Wildlife Trust.
Barnack Hills and Holes UK0030031 00 24 41 W 52 37 40 N	23.27	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Recreation pressure.	Site leased to, and managed by, English Nature. Management plan in place.
North Pennine Moors UK0030033 01 47 24 W 54 10 10 N	10,3109.4	Primary: European dry heaths, <i>Juniperus communis</i> formations on heaths or calcareous grasslands, blanket bogs *Priority feature, petrifying springs with tufa formation (<i>Cratoneurion</i>) *Priority feature, siliceous rocky slopes with chasmophytic vegetation, old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	Primary: N/A Qualifying: Marsh saxifrage <i>Saxifraga hirculus</i>	Overgrazing. Drainage, excessive muirburn. Acid and nitrogen deposition.	Wildlife Enhancement and Countryside Stewardship schemes starting to overcome problems of overgrazing.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , Calaminarian grasslands of the <i>Violetalia calaminariae</i> , siliceous alpine and boreal grasslands, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), alkaline fens, siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>), calcareous rocky slopes with chasmophytic vegetation			
Denby Grange Colliery Ponds UK0030036 01 35 26 W 53 38 01 N	18.53	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	No real problems currently exist.	English Nature concluded a management agreement with owners to address the loss of terrestrial hibernation habitat.
Devil's Dyke UK0030037 00 21 32 E 52 14 01 N	8.02	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Scrub encroachment of grassland.	Future management plans to address leaf-litter build up through a mowing regime being considered.
Eller's Wood and Sand Dale UK0030039 00 41 00 W 54 15 08 N	4.09	Primary: N/A Qualifying: Petrifying springs with tufa formation (<i>Cratoneurion</i>) <i>*Priority feature</i>	Primary: Geyer's whorl snail <i>Vertigo geyeri</i> Qualifying: N/A	Human and livestock pressure.	English Nature Management Agreement
Grimsthorpe UK0030043 00 28 09 W 52 46 19 N	0.35	Primary: N/A Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)	Primary: Early gentian <i>Gentianella anglica</i> Qualifying: N/A	Overgrazing.	Managed under the terms of a Management Agreement with English Nature.
Orton Pit UK0030053 00 17 06 W 52 32 04 N	74.47	Primary: Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Disturbance, development.	In the process of being converted into a dedicated nature reserve for which a management plan is being prepared.
Portholme UK0030054 00 11 03 W 52 19 15 N	91.93	Primary: Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) Qualifying: N/A	Primary: N/A Qualifying: N/A	Good condition, long history of favourable management.	Part of the site subject to Countryside Stewardship agreement aimed at maintaining alluvial flood meadow. EA produced a Water Level Management plan.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Baston Fen UK0030085 00 19 01 W 52 44 21 N	2.2	Primary: N/A Qualifying: N/A	Primary: Spined loach <i>Cobitis taenia</i> Qualifying: N/A	No details.	Effects of drain management presently unknown.
Beast Cliff – Whitby (Robin Hood's Bay) UK0030086 00 31 02 W 54 24 50 N	260.2	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts Qualifying: N/A	Primary: N/A Qualifying: N/A	Coastal erosion.	Preferred coastal defence option as outlined in the Shoreline Management Plan is 'do nothing'.
Bee's Nest and Green Clay Pits UK0030087 01 38 29 W 53 05 12 N	14.76	Primary: N/A Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Further mineral extraction of silica sands. Unauthorised excavation and tipping. Inappropriate grazing.	Ponds require maintenance and enhancement management for the newts.
Durham Coast UK0030140 01 17 34 W 54 45 32 N	393.63	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts Qualifying: N/A	Primary: N/A Qualifying: N/A	No details	Parts of site managed as NNR. Majority of site in public ownership and management plan is being developed.
Arnecliff and Park Hole Woods UK0030142 00 47 16 W 54 26 00 N	52.49	Primary: N/A Qualifying: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	Primary: Killarney fern <i>Trichomanes speciosum</i> Qualifying: N/A	Extensive disturbance for both iron workings and woodland management.	No details.
Hatfield Moor UK0030166 00 56 38 W 53 32 37 N	1,363.55	Primary: Degraded raised bogs still capable of natural regeneration Qualifying: N/A	Primary: N/A Qualifying: N/A	Peat cutting and water abstraction, drainage, adjacent aggregate extraction affects groundwater levels.	Water Level Management Plans, Site Management Statements, NNR management and Wildlife Enhancement Scheme.
Helbeck and Swindale Woods UK0030167 02 20 02 W 54 32 32 N	136.38	Primary: Tilio-Acerion forests of slopes, screes and ravines * Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Overgrazing.	Agri-environment schemes and management agreements.
Kirk Deighton UK0030178 01 23 47 W 53 56 43 N	4.03	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Water quantity issues. Overgrazing of pond edges.	Fencing of the pond and setting aside a small section of the pasture to improve the habitat for newts.
Nene Washes UK0030222 00 04 42 W 52 34 22 N	88.19	Primary: N/A Qualifying: N/A	Primary: Spined loach <i>Cobitis taenia</i> Qualifying: N/A	Water quality, turbidity and sediment issues. Water abstraction. Sewage. Large-scale mineral extraction could affect the site by underground seepage, increased turbidity.	Water Level Management Plan.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
North York Moors UK0030228 00 54 15 W 54 24 33 N	44,082.25	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths Qualifying: Blanket bogs <i>*Priority feature</i>	Primary: N/A Qualifying: N/A	Drainage and overburning. Potential under-grazing.	Majority of the moorland managed for both sheep farming (by farmers) and for the sporting shooting of grouse (by estates).
Overstrand Cliffs UK0030232 01 19 30 E 52 55 23 N	30.02	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts Qualifying: N/A	Primary: N/A Qualifying: N/A	Coastal protection measures and possible artificial drainage of seepages to reduce slippages.	Shoreline Management Plan allows for 'do nothing', i.e. retreat along all but the extreme eastern end of this section.
Ox Close UK0030234 02 01 28 W 54 18 29 N	141.25	Primary: Calaminarian grasslands of the <i>Violetalia calaminariae</i> Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Tilio-Acerion</i> forests of slopes, screes and ravines <i>*Priority feature</i>	Primary: N/A Qualifying: N/A	Overgrazing by rabbits and livestock.	Rabbit control programme. Fencing to reduce livestock grazing of metalliferous grassland.
Paston Great Barn UK0030235 01 26 58 E 52 51 26 N	0.95	Primary: N/A Qualifying: N/A	Primary: Barbastelle <i>Barbastella barbastellus</i> Qualifying: N/A	Disturbance. Recreation pressure.	Medieval building which is scheduled as an ancient monument. Proposals to develop part of the outbuildings.
River Derwent UK0030253 00 55 40 W 53 55 03 N	411.23	Primary: N/A Qualifying: Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	Primary: River lamprey <i>Lampetra fluviatilis</i> Qualifying: Sea lamprey <i>Petromyzon marinus</i> , bullhead <i>Cottus gobio</i> , otter <i>Lutra lutra</i>	Water level and quality issues and flooding.	Issues relating to water control levels being addressed through a collaborative project between EN, EA and Yorkshire Water.
Saltfleetby–Theddlethorpe Dunes and Gibraltar Point UK0030270 00 13 33 E 53 23 28 N	960.2	Primary: Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), fixed dunes with herbaceous vegetation ('grey dunes') <i>*Priority feature</i> , dunes with <i>Hippophae rhamnoides</i> , humid dune slacks Qualifying: Embryonic shifting dunes	Primary: N/A Qualifying: N/A	Changes in sedimentation rates along the coast caused by coastal protection schemes. Recreational disturbance.	Majority of sites are NNRS.
Skipwith Common UK0030276 00 59 51 W 53 49 40 N	295.2	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths Qualifying: N/A	Primary: N/A Qualifying: N/A	Lack of management – scrub encroachment of heathland.	Management agreement is in place and a large-scale heathland regeneration project being pursued. Extant permission for deep coal mining.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
South Pennine Moors UK0030280 01 46 59 W 53 27 37 N	64,983.13	Primary: European dry heaths, Blanket bogs <i>*Priority feature</i> , Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , transition mires and quaking bogs	Primary: N/A Qualifying: N/A	Recreation pressure, accidental fires, over-grazing, muirburn. Atmospheric pollution depleting blanket bog, wet heath and transition mire. Loss of forest habitat.	Management strategy and conservation action programme produced as part of an EU-funded LIFE project for the area to the north of the National Park. Within Park, North Peak and South West Peak ESAs. Countryside Stewardship Scheme and Wildlife Enhancement Scheme (WES) also being used to achieve favourable management.
Strensall Common UK0030284 01 00 21 W 54 01 47 N	569.63	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths Qualifying: N/A	Primary: N/A Qualifying: N/A	Scrub encroachment.	English Nature pursuing the possibility of a large-scale heathland regeneration project for the site.
Eversden and Wimpole Woods UK0030331 00 02 05 W 52 09 32 N	66.48	Primary: N/A Qualifying: N/A	Primary: Barbastelle <i>Barbastella barbastellus</i> Qualifying: N/A	Current use, including public access considered compatible.	Owned and managed by the National Trust and their management is aimed at maintaining, and where possible, enhancing barbastelle bat population.
Fen Bog UK0030332 00 41 23 W 54 21 55 N	27.49	Primary: Transition mires and quaking bogs Qualifying: N/A	Primary: N/A Qualifying: N/A	Lowering of the existing water table by drainage. Fires, bracken spraying chemicals.	No details.
Simonside Hills UK0030336 02 01 44 W 55 16 02 N	2,082.6	Primary: European dry heaths, Qualifying: Blanket bogs <i>*Priority feature</i>	Primary: N/A Qualifying: N/A	Burning, drainage, recreational pressure, scrub invasion.	Various management plans - MOD, Forest Enterprise, National Park Authority. Wildlife Enhancement Scheme.
Inner Dowsing, Race Bank and North Ridge pSAC 0 41 7.69 E 53 15 28.32N	90,626.23	Interest features include Annex I Reefs and Sandbanks which are Slightly Covered by Sea Water all the Time.	Sandbanks: Moderately vulnerable to Removal, Physical disturbance or abrasion and selective extraction of species. Vulnerable at low levels to Obstruction, Introduction of synthetic compounds and non-synthetic compounds, Changes in suspended sediment and Changes in turbidity. Reefs: Highly vulnerable to Removal, Obstruction, Physical disturbance or abrasion. Moderately vulnerable to Selective extraction of species and Smothering. Vulnerable at low levels Introduction of synthetic and non-synthetic compounds, Changes in suspended sediment and Changes in turbidity.		Management practices to be developed to identify relevant threats.
Haisborough, Hammond and Winterton pSAC 1 54 58.05 E 52 50 08.29 N	184,808.77	Annex I Sandbanks which are Slightly Covered by Sea Water all the Time.	Moderately vulnerable to Physical disturbance or abrasion and Selective extraction of species. Vulnerable at low levels to Removal, Smothering, Obstruction, Introduction of synthetic compounds and Introduction of non-synthetic compounds, Changes in suspended sediment and Changes in turbidity.		Management practices to be developed to identify relevant threats.

Table E.8 Summary Details of Relevant Special Protection Areas (SPAs) in SEA 3

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Breckland UK9009201 00 35 39 E 52 30 54 N	39,433.66	During the breeding season: Nightjar <i>Caprimulgus europaeus</i> , stone curlew <i>Burhinus oedicnemus</i> , woodlark <i>Lullula arborea</i>	N/A	Stone-curlew, nightjar and woodlark are vulnerable to predation from corvids and foxes and to disturbance caused by human activity, including dog-walking. High nitrogen loads from air pollution, development pressure and egg collection are threats.	A recovery project operates to find nests, advise landowners on their operations which might affect stone-curlews, and to ring chicks. Management agreements are in place to provide nest plots and thus safeguard the population.
Thorne and Hatfield Moors UK9005171 00 53 53 W 53 38 16 N	2,449.2	During the breeding season: Nightjar <i>Caprimulgus europaeus</i>	N/A	Lack of management and re-wetting operations on areas outside of those currently worked for peat.	NNR management plans. Review of extant peat extraction permissions under the Habitats Regulations.
Coquet Island UK9006031 01 32 14 W 55 20 06 N	22.28	During the breeding season: Arctic tern <i>Sterna paradisaea</i> , common tern <i>Sterna hirundo</i> , roseate tern <i>Sterna dougallii</i> , Sandwich tern <i>Sterna sandvicensis</i>	N/A	Erosion and vegetation loss through burrowing rabbits and puffins.	Site managed by the RSPB as a nature reserve.
Teesmouth and Cleveland Coast UK9006061 01 07 07 W 54 37 50 N	1,247.31	During the breeding season: Little tern <i>Sterna albfrons</i> On passage: Sandwich tern <i>Sterna sandvicensis</i>	Over winter: Knot <i>Calidris canutus</i> , On passage: Redshank <i>Tringa totanus</i> Assemblage qualification: Over winter, the area regularly supports 21,312 individual waterfowl including: knot <i>Calidris canutus</i> .	Natural sedimentation and eutrophication of sheltered mudflats. Future port development. Recreation pressure.	Development addressed via planning system/Habitats Regs. Other issues by Site Management Statements, NNR bylaws and Tees Estuary Management Plan.
Lower Derwent Valley UK9006092 00 55 34 W 53 53 04 N	915.45	Over winter: Bewick's swan <i>Cygnus columbianus</i> , golden plover <i>Pluvialis apricaria</i> , ruff <i>Philomachus pugnax</i>	During the breeding season: Shoveler <i>Anas clypeata</i> Over winter: Teal <i>Anas crecca</i> , wigeon <i>Anas penelope</i> Assemblage qualification: Over winter, the area regularly supports 40,616 individual waterfowl including: Bewick's swan <i>Cygnus columbianus</i> , wigeon <i>Anas penelope</i> ,	Eutrophication from agricultural run-off and domestic sewage. Water abstraction and water quality issues. Recreational disturbance.	Coal mining occurs adjacent to site and is monitored via a planning agreement.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			teal <i>Anas crecca</i> , golden plover <i>Pluvialis apricaria</i> , ruff <i>Philomachus pugnax</i> .		
Flamborough Head and Bempton Cliffs UK9006101 00 06 48 W 54 07 55 N	212.17	N/A	During the breeding season: Kittiwake <i>Rissa tridactyla</i>	No details.	Part of a European Marine Site. EN will set conservation objectives; identify key human activities which may affect the ornithological interest; identify survey and monitoring systems.
Humber Flats, Marshes and Coasts UK9006111 00 00 39 W 53 37 58 N	15,202.53	During the breeding season: Bittern <i>Botaurus stellaris</i> , marsh harrier <i>Circus aeruginosus</i> , avocet <i>Recurvirostra avosetta</i> , little tern <i>Sterna albifrons</i> Over winter: bittern <i>Botaurus stellaris</i> , hen harrier <i>Circus cyaneus</i> , Bar-tailed godwit <i>Limosa lapponica</i> , golden plover <i>Pluvialis apricaria</i> , avocet <i>Recurvirostra avosetta</i> On passage: Ruff <i>Philomachus pugnax</i>	Over winter: Dunlin <i>Calidris alpina</i> , knot <i>Calidris canutus</i> , redshank <i>Tringa totanus</i> , shelduck <i>Tadorna tadorna</i> , black-tailed godwit <i>Limosa limosa islandica</i> On passage: Redshank <i>Tringa totanus</i> , Dunlin <i>Calidris alpina</i> , knot <i>Calidris canutus</i> , black-tailed godwit <i>Limosa limosa islandica</i> Assemblage qualification: Over winter, the area regularly supports 153,934 individual waterfowl including: teal <i>Anas crecca</i> , wigeon <i>Anas penelope</i> , mallard <i>Anas platyrhynchos</i> , turnstone <i>Arenaria interpres</i> , pochard <i>Aythya ferina</i> , scaup <i>Aythya marila</i> , bittern <i>Botaurus stellaris</i> , dark-bellied brent goose <i>Branta bernicla bernicla</i> , goldeneye <i>Bucephala clangula</i> , knot <i>Calidris canutus</i> , dunlin <i>Calidris alpina</i> , sanderling <i>Calidris alba</i> , ringed plover <i>Charadrius hiaticula</i> , oystercatcher <i>Haematopus ostralegus</i> , bar-tailed godwit <i>Limosa lapponica</i> , black-tailed godwit <i>Limosa limosa islandica</i> , curlew <i>Numenius arquata</i> , whimbrel <i>Numenius phaeopus</i> , ruff <i>Philomachus pugnax</i> ,	Coastal squeeze, encroachment from flood defences, and changing levels of sewage and effluent discharge.	Wider estuarine management issues co-ordinated through Humber Estuary Management Strategy. Also Estuary Shoreline Management Plan (ESMP).

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			golden plover <i>Pluvialis apricaria</i> , grey plover <i>Pluvialis squatarola</i> , avocet <i>Recurvirostra avosetta</i> , shelduck <i>Tadorna tadorna</i> , greenshank <i>Tringa nebularia</i> , redshank <i>Tringa totanus</i> , lapwing <i>Vanellus vanellus</i> .		
Northumbria Coast UK9006131 01 35 18 W 55 27 58 N	1,107.98	During the breeding season: Little Tern <i>Sterna albifrons</i>	Over winter: Purple sandpiper <i>Calidris maritima</i> , turnstone <i>Arenaria interpres</i>	Disturbance by tourists in the summer causing reduced little tern breeding success.	National Trust employs wardens to protect little tern colony.
North York Moors UK9006161 00 53 01 W 54 23 43 N	44,087.68	During the breeding season: Golden plover <i>Pluvialis apricaria</i> , merlin <i>Falco columbarius</i>	N/A	Overgrazing, gripping and heather burning.	Majority of site being managed in a desirable way.
Hornsea Mere UK9006171 00 11 30 W 53 54 15 N	231.2	N/A	During the breeding season: mute swan <i>Cygnus olor</i> Over winter: Gadwall <i>Anas strepera</i>	Water level and quality issues.	Issues regarding water levels, water quality and habitat management addressed in the Heritage Management Plan.
North Pennine Moors UK9006272 02 14 49 W 54 39 24 N	147,246.41	During the breeding season: Golden plover <i>Pluvialis apricaria</i> , hen harrier <i>Circus cyaneus</i> , merlin <i>Falco columbarius</i> , peregrine <i>Falco peregrinus</i>	N/A	Inappropriate grazing and burning regimes. Recreation pressure. Acidic and nitrogen deposition damage to vegetation.	Site managed via management agreements and related incentives, Site Management Statements and pollution control mechanisms.
South Pennine Moors Phase 2 UK9007022 02 04 16 W 53 48 38 N	20,936.53	During the breeding season: Golden plover <i>Pluvialis apricaria</i> , merlin <i>Falco columbarius</i> , short-eared owl <i>Asio flammeus</i>	Assemblage qualification: During the breeding season the area regularly supports: dunlin <i>Calidris alpina alpina</i> , snipe <i>Gallinago gallinago</i> , curlew <i>Numenius arquata</i> , redshank <i>Tringa totanus</i> , lapwing <i>Vanellus vanellus</i> , common sandpiper <i>Actitis hypoleucos</i> , twite <i>Carduelis flavirostris</i> , northern wheatear <i>Oenanthe oenanthe</i> , whinchat <i>Saxicola rubetra</i> , ring ouzel <i>Turdus torquatus</i> .	Heavy recreational pressure. Overgrazing. Adjacent intensive agriculture.	Integrated management strategy and conservation action programme as part of EU-funded LIFE project.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Peak District Moors (South Pennine Moors Phase 1) UK9007021 01 45 51 W 53 28 03 N	45,270.52	During the breeding season: Golden plover <i>Pluvialis apricaria</i> , merlin <i>Falco columbarius</i> , peregrine <i>Falco peregrinus</i> , short-eared owl <i>Asio flammeus</i>	During the breeding season: Dunlin <i>Calidris alpina</i>	Significant visitor pressure and disturbance from major urban and industrial centres. Historic air pollution, high grazing pressure and wildfire burns.	Initiatives for sustainable recreation being developed. Two separate ESAs encourage and support habitat restoration.
The Wash UK9008021 00 17 12 E 52 56 16 N	62,211.66	During the breeding season: Common tern <i>Sterna hirundo</i> , little tern <i>Sterna albigula</i> Over winter: bar-tailed godwit <i>Limosa lapponica</i> , Bewick's swan <i>Cygnus columbianus bewickii</i>	Over winter: pintail <i>Anas acuta</i> , wigeon <i>Anas penelope</i> , gadwall <i>Anas strepera</i> , pink-footed goose <i>Anser brachyrhynchus</i> , turnstone <i>Arenaria interpres</i> , dark-bellied brent goose <i>Branta bernicla</i> , goldeneye <i>Bucephala clangula</i> , sanderling <i>Calidris alba</i> , dunlin <i>Calidris alpina</i> , knot <i>Calidris canutus</i> , oystercatcher <i>Haematopus ostralegus</i> , Black-tailed godwit <i>Limosa limosa islandica</i> , common scoter <i>Melanitta nigra</i> , curlew <i>Numenius arquata</i> , grey plover <i>Pluvialis squatarola</i> , shelduck <i>Tadorna tadorna</i> , redshank <i>Tringa totanus</i> . Assemblage qualification: Over winter, the area regularly supports 400,367 individual waterfowl including: Bewick's swan <i>Cygnus columbianus bewickii</i> , pink-footed goose <i>Anser brachyrhynchus</i> , dark-bellied brent goose <i>Branta bernicla</i> , shelduck <i>Tadorna tadorna</i> , wigeon <i>Anas penelope</i> , gadwall <i>Anas strepera</i> , pintail <i>Anas acuta</i> , common scoter <i>Melanitta nigra</i> , goldeneye <i>Bucephala clangula</i> , oystercatcher <i>Haematopus ostralegus</i> , grey plover <i>Pluvialis squatarola</i> , knot <i>Calidris canutus</i> , dunlin <i>Calidris alpina</i> , sanderling <i>Calidris alba</i> , black-tailed godwit <i>Limosa limosa islandica</i> , bar-tailed	Coastal squeeze, coastal defence works, sea-level rise, and storm surges. Changes in sediment budget caused by dredging and coastal protection, construction of river training walls and flood defence works. Gas exploration. Water abstraction.	Management scheme developed jointly for the SAC/SPA. Management agreements with MOD over weapon ranges. Wash Estuary Management Plan and Local Environment Agency Plans.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			godwit <i>Limosa lapponica</i> , curlew <i>Numenius arquata</i> , redshank <i>Tringa totanus</i> , turnstone <i>Arenaria interpres</i> .		
Gibraltar Point UK9008022 00 20 16 E 53 06 00 N	414.09	During the breeding season: Little tern <i>Sterna albifrons</i> Over winter: Bar-tailed godwit <i>Limosa lapponica</i>	Over winter: Grey plover <i>Pluvialis squatarola</i> , knot <i>Calidris canutus</i>	High visitor pressure. Seaborne pollution, particularly accidental discharge from shipping or from inshore oil and gas drilling operations.	Contingency plans exist for dealing with oil spills. Broadly coincides with the area declared as a NNR and managed by local Wildlife Trust.
Nene Washes UK9008031 00 04 33 W 52 34 41 N	1,517.49	Over winter: Bewick's swan <i>Cygnus columbianus bewickii</i>	During the breeding season: Black-tailed godwit <i>Limosa limosa</i> , shoveler <i>Anas clypeata</i> , garganey <i>Anas querquedula</i> , gadwall <i>Anas strepera</i> Over winter: Pintail <i>Anas acuta</i> , shoveler <i>Anas clypeata</i> , teal <i>Anas crecca</i> , wigeon <i>Anas penelope</i> , gadwall <i>Anas strepera</i>	Water level issues.	Nene Washes Management Strategy Group - Management Plan agreed and a Water Level Management Plan currently being drafted.
Rutland Water UK9008051 00 39 54 W 52 38 52 N	1,556.87	N/A	Over winter: Gadwall <i>Anas strepera</i> , shoveler <i>Anas clypeata</i> , wigeon <i>Anas penelope</i> , teal <i>Anas crecca</i> , tufted duck <i>Aythya fuligula</i> , mute swan <i>Cygnus olor</i> , coot <i>Fulica atra</i> , goosander <i>Mergus merganser</i> , great crested grebe <i>Podiceps cristatus</i> Assemblage qualification: Over winter, the area regularly supports 25,037 individual waterfowl including: great crested grebe <i>Podiceps cristatus</i> , wigeon <i>Anas penelope</i> , Gadwall <i>Anas strepera</i> , teal <i>Anas crecca</i> , shoveler <i>Anas clypeata</i> , tufted duck <i>Aythya fuligula</i> , goldeneye <i>Bucephala clangula</i> , goosander <i>Mergus merganser</i> , coot <i>Fulica atra</i>	Recreation pressure, nutrient inputs, changes in water level. Eutrophication.	Management currently compatible with recreation uses except in periods of drawdown.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
North Norfolk Coast UK9009031 00 35 55 E 52 58 13 N	7,886.79	<p>During the breeding season:</p> <p>bittern <i>Botaurus stellaris</i>, marsh harrier <i>Circus aeruginosus</i>, avocet <i>Recurvirostra avosetta</i>, little tern <i>Sterna albifrons</i>, common tern <i>Sterna hirundo</i>, sandwich tern <i>Sterna sandvicensis</i></p> <p>Over winter:</p> <p>Avocet <i>Recurvirostra avosetta</i></p>	<p>During the breeding season:</p> <p>Redshank <i>Tringa totanus</i>, ringed plover <i>Charadrius hiaticula</i></p> <p>Over winter:</p> <p>wigeon <i>Anas penelope</i>, pink-footed goose <i>Anser brachyrhynchus</i>, dark-bellied brent goose <i>Branta bernicla</i>, knot <i>Calidris canutus</i>,</p> <p>Assemblage qualification:</p> <p>Over winter, the area regularly supports 91,536 individual waterfowl including: pink-footed goose <i>Anser brachyrhynchus</i>, dark-bellied brent goose <i>Branta bernicla</i>, wigeon <i>Anas penelope</i>, avocet <i>Recurvirostra avosetta</i>, knot <i>Calidris canutus</i>.</p>	Sea level rise, storm surges and changes in erosion patterns affecting freshwater grazing marsh and reedbed habitats. Water abstraction. Visitor pressure.	Visitor management strategy developed through the Norfolk Coast Project. Shoreline management strategy will address many of the issues. Large parts of the site managed as nature reserves.
Broadland UK9009253 01 36 00 E 52 43 56 N	5,462.4	<p>During the breeding season:</p> <p>Bittern <i>Botaurus stellaris</i>, marsh harrier <i>Circus aeruginosus</i></p> <p>Over winter:</p> <p>Bewick's swan <i>Cygnus columbianus</i>, hen harrier <i>Circus cyaneus</i>, whooper swan <i>Cygnus cygnus</i></p>	<p>Over winter:</p> <p>Gadwall <i>Anas strepera</i></p>	Increased saline intrusion. Eutrophication. Recreational pressure. Drainage.	Broads Plan (Broads Authority). Water Level Management Plans and ESA scheme encouraging sensitive management. Flood defence works in accordance with EA Broads Strategy.
Great Yarmouth North Denes UK9009271 01 41 10 E 52 44 02 N	149.19	<p>During the breeding season:</p> <p>Little Tern <i>Sterna albifrons</i></p>	N/A	Coast protection schemes disrupting or reducing sediment supply to the SPA. Recreation pressure.	Beach Management Plans required before works proceed. Wardening jointly undertaken by RSPB and EN.

Table E.9 Summary Details of Relevant Ramsar Sites in SEA Area 3

Code/ Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK11010 01 36 00 E 52 43 56 N	Broadland	5,488.61	Includes the river valley systems of the Bure, Yare and Waveney and their major tributaries. Open distinctive landscape comprises a complex and interlinked mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow. Important for recreation, tourism, agriculture and wildlife.	6, 2	Introduction of exotic animals, drainage/reclamation, water diversion, eutrophication, recreation disturbance.
UK11019 00 29 06 E 52 49 49 N	Dersingham Bog	157.75	East Anglia's largest remaining example of a pure acid valley mire, supports extensive bog, wet heath and transition communities over peat. Sustained by groundwater, fed via springs and seepage, from the underlying greensand. Internationally important plant communities, important assemblages of birds and invertebrates.	2	No factors reported
UK11027 00 20 16 E 53 06 00 N	Gibraltar Point	414.09	Consists of an actively accreting sand dune system, saltmarsh and extensive intertidal flats. All stages of dune development are represented, with the older dunes extensively colonised by scrub. Small areas of freshwater marsh and open water. Accommodates large numbers of overwintering birds.	6, 5, 1, 2	General disturbance
UK11031 00 00 39 W 53 37 58 N	Humber Flats, Marshes and Coast (Phase 1)	15,202.53	Inner estuary supports extensive areas of reedbed with areas of mature and developing saltmarsh backed by grazing marsh in the middle and outer estuary. On the north Lincolnshire coast the saltmarsh is backed by low sand dunes with marshy slacks and brackish pools. Supports internationally important numbers of waterfowl in winter and breeding populations in summer.	4, 6, 5, 3	No factors reported
UK11037 00 55 34 W 53 53 04 N	Lower Derwent Valley	915.45	One of the most important examples of traditionally managed species-rich alluvial flood meadow habitat remaining in the UK. The river and these flood lands play a substantial role in the hydrological and ecological functioning of the internationally important Humber basin.	5, 6, 2, 4, 1	Water diversion, reservoir/dam: flooding
UK11038 02 09 44 W 54 05 46 N	Malham Tarn	286.26	Comprises areas of open water, fen, soligenous fen and raised bog. These habitats hold important communities of rare plant species and wetland invertebrates, and are of types now highly restricted due to drainage and land use changes.	1, 2	No factors reported
UK11046 00 04 33 W 52 34 41 N	Nene Washes	1,517.49	Extensive area of seasonally-flooding wet grassland of importance for national and international populations of breeding and wintering waders and wildfowl. Also notable for the diversity of plant and associated animal life within its network of dykes.	6, 2	Vegetation succession
UK11048 00 35 55 E 52 58 13 N	North Norfolk Coast	7,862.39	Low-lying barrier coast site extends for 40km and includes intertidal sands and muds, saltmarshes, shingle and sand dunes, together with areas of land-claimed freshwater grazing marsh and reedbed. Both freshwater and marine habitats support internationally important numbers of wildfowl in winter and several nationally rare breeding birds. The sandflats, sand dune, saltmarsh, shingle and saline lagoons habitats are of international importance for their fauna, flora and geomorphology.	1, 2, 6, 5	No factors reported

Code/ Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK11049 01 35 18 W 55 27 58 N	Northumbria Coast	1,107.98	Comprises several discrete sections of rocky foreshore which regularly support nationally important numbers of purple sandpiper and high concentrations of turnstone. Also includes an area of sandy beach at Low Newton, which supports an nationally important breeding colony of little tern, and parts of three artificial pier structures which form important roost sites for purple sandpiper.	6	No factors reported
UK11051 00 12 19E 52 28 34N	Ouse Washes	2,469.08	Seasonally-flooded washland habitat managed in a traditional agricultural manner. Support nationally and internationally important numbers of wintering waterfowl and nationally important numbers of breeding waterfowl. Large area of unimproved neutral grassland communities and rich aquatic flora.	2, 6, 1, 5	Eutrophication, reservoir/dam: flooding, vegetation succession
UK11061 00 30 02 E 52 46 24 N	Roydon Common	194.1	Lowland mixed valley mire surrounded by heathland. Dry heath of the upper slopes is hydrologically linked with wetter lower slopes, which experience seasonal waterlogging and are colonised by wet heath. Valley bottom permanently waterlogged, and comprises acid bog and nutrient-poor fen communities, blending into more base-rich fen and carr woodland in the valley bottom.	1, 3	No factors reported
UK11062 00 39 54 W 52 38 52 N	Rutland Water	1,360.34	Large eutrophic man-made reservoir. Supports internationally important numbers of gadwall and shoveler and nationally important numbers of eight other species of wildfowl.	6, 5	No factors reported
UK11068 01 07 07 W 54 37 50 N	Teesmouth and Cleveland Coast	1,247.31	Range of habitats (sand and mudflats, rocky shore, saltmarsh, freshwater marsh and sand dunes) on and around an estuary which has been much-modified by human activities. Together these habitats support internationally important numbers of waterbirds.	5, 6	Eutrophication
UK11072 00 17 12 E 52 56 16 N	The Wash	62,211.66	Extensive saltmarshes, intertidal banks of sand and mud, shallow waters and deep channels. Important staging post and over-wintering site for migrant wildfowl and wading birds. Supports valuable shellfish fishery and also an important nursery area for flatfish. Important for breeding common seal and some grey seals. Sublittoral area supports a number of different marine communities.	6, 5, 3, 1	Over-fishing

Note: Ramsar criteria:*

1. sites containing representative, rare or unique wetland types
2. supports vulnerable, endangered, or critically endangered species or threatened ecological communities
3. supports populations of plant/animal species important for maintaining regional biodiversity
4. supports plant/animal species at a critical stage in their life cycles, or provides refuge
5. regularly supports 20,000 or more waterbirds
6. regularly supports 1% of the individuals in a population of one species/subspecies of waterbirds
8. important source of food for fishes, spawning ground, nursery and/or migration path

Summary Details of Sites of International Importance in SEA Area 4

Figure E.4 International Designations in SEA Area 4

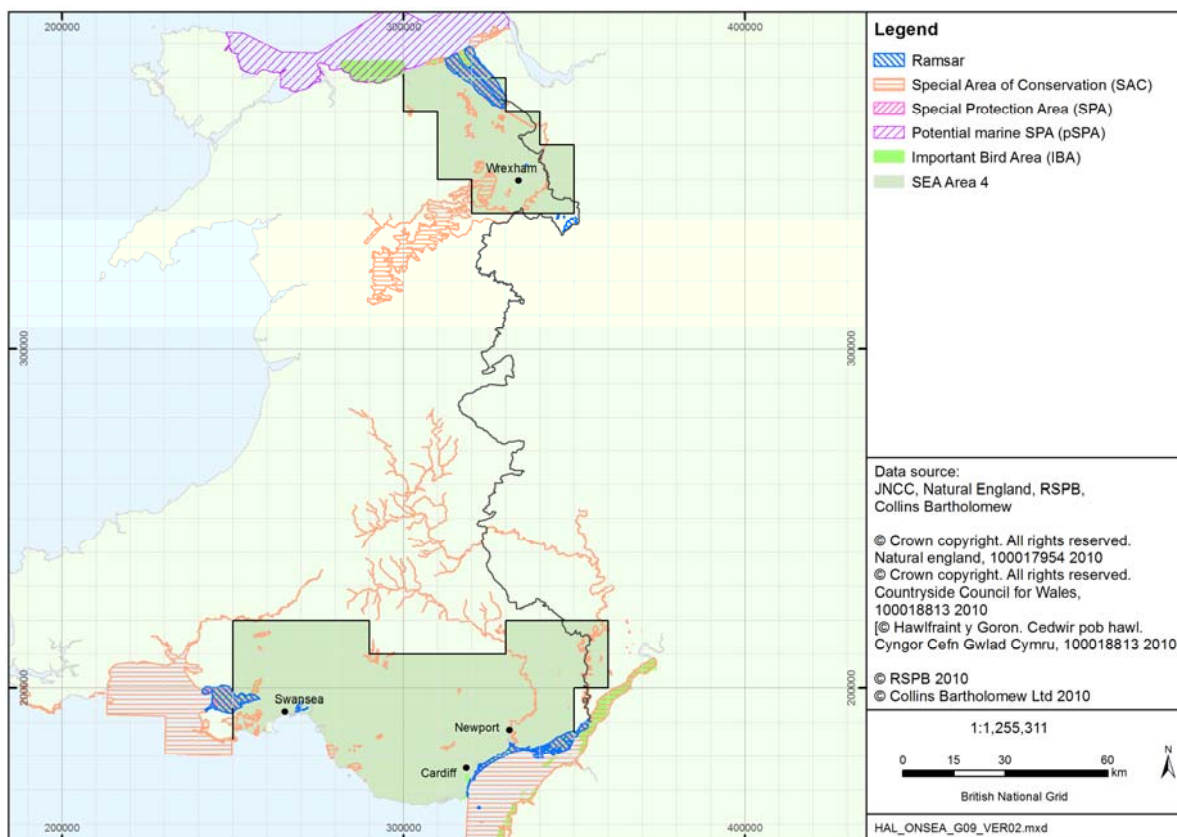


Table E.10 Summary Details of Relevant Special Areas of Conservation (SACs) in SEA Area 4

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Severn Estuary/Môr Hafren UK0013030 02 58 41 W 51 28 07 N	73,715.4	Primary: Estuaries, Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) Qualifying: Sandbanks which are slightly covered by sea water all the time, reefs	Primary: Sea lamprey <i>Petromyzon marinus</i> , River lamprey <i>Lampetra fluviatilis</i> , Twaite shad <i>Alosa fallax</i> Qualifying: N/A	The estuary is vulnerable to land-claim, aggregate extraction, physical developments such as barrage construction, flood defences, industrial pollution, oil spillage and tourism related disturbance.	A management scheme under Regulation 34 of the Habitats Regulations was established in 2004 in relation to the international bird interest. Mechanisms are in place to produce both Regulation 33 advice and a management scheme for the SAC once the site goes forward. The Severn Estuary Partnership seeks to deliver holistic management of the uses of the estuary. In Wales, Community Strategies and Local Biodiversity Action Plans also contribute to achieving the conservation aims for the Estuary.
Kenfig/Cynffig UK0012566 03 44 41 W 51 31 06 N	1,191.67	Primary: Fixed dunes with herbaceous vegetation ('grey dunes') *Priority feature, dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>), humid dune slacks, hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. Qualifying: Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)	Primary: Petalwort <i>Petalophyllum ralfsii</i> , fen orchid <i>Liparis loeselii</i> Qualifying: N/A	Under-grazing. Introduced species.	Maintenance of hydrological regime of dune systems essential. NNRs at Kenfig and Merthyr Mawr.
River Wye/Afon Gwy UK0012642 03 17 59 W 52 01 24 N	2,234.89	Primary: Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation Qualifying: Transition mires and quaking bogs	Primary: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i> , sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> , Twaite shad <i>Alosa fallax</i> , Atlantic salmon <i>Salmo salar</i> , bullhead <i>Cottus gobio</i> , otter <i>Lutra lutra</i> Qualifying: Allis shad <i>Alosa alosa</i>	See Southern and South West England section for details.	

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Wye Valley Woodlands/ Coetiroedd Dyffryn Gwy UK0012727 02 40 43 W 51 39 28 N	916.24	Primary: <i>Asperulo-Fagetum</i> beech forests, <i>Tilio-Acerion</i> forests of slopes, screes and ravines <i>*Priority feature, Taxus baccata</i> woods of the British Isles <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	See Southern and South West England section for details.	
Rodborough Common UK0012826 02 13 06 W 51 43 51 N	104.26	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Qualifying: N/A	Primary: N/A Qualifying: N/A	See Southern and South West England section for details.	
Crymlyn Bog/ Cors Crymlyn UK0012885 03 53 18 W 51 38 11 N	299.45	Primary: Transition mires and quaking bogs, calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> <i>*Priority feature</i> Qualifying: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) <i>*Priority feature</i>	Primary: N/A Qualifying: N/A	Scrub encroachment. Water quantity. Changes in water quality influenced by industrial effluent sources such as oil, pulverised fuel ash and iron-rich mine adit discharge.	NNR management plan. Since announcement in 1997 of closure of the BP Llandarcy Oil Refinery number of studies have been completed to assess site's hydrology and the influence of historic hydrocarbon contamination.
Berwyn a Mynyddoedd de Clwyd/Berwyn and South Clwyd Mountains UK0012926 03 36 26 W 52 50 19 N	27,221.21	Primary: European dry heaths, blanket bogs <i>*Priority feature</i> Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), transition mires and quaking bogs, calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>), calcareous rocky slopes with chasmophytic vegetation	Primary: N/A Qualifying: N/A	Inappropriate agricultural development (drainage, reseeding, application of fertilisers, burning, track construction, damaging grazing regimes). Recreation pressure.	Management Agreements with owners and occupiers and through joint agreements with the Tir Gofal scheme.
River Usk/Afon Wysg UK0013007 03 00 50 W 51 47 45 N	1,007.71	Primary: N/A Qualifying: Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	Primary: Sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> , twaite shad <i>Alosa fallax</i> , Atlantic salmon <i>Salmo salar</i> , bullhead <i>Cottus gobio</i> , otter <i>Lutra lutra</i>	Habitat degradation. Water abstraction.	Excellent habitat for six Annex II freshwater fish including salmon and shads. Usk Catchment Management Plan, the Conservation Strategy, the River SSSI Management Plan, and by the CCW and EA encouraging owners and

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
			Qualifying: Allis shad <i>Alosa alosa</i>		occupiers to carry out positive habitat management through agreements and agri-environment schemes.
Cwm Cadlan UK0013585 03 30 19 W 51 46 38 N	83.93	Primary: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caeruleae</i>), alkaline fens Qualifying: N/A	Primary: N/A Qualifying: N/A	Base enrichment (from rising groundwater) and moisture content. Operations influencing groundwater.	Grasslands dependent on continuance of low intensity agricultural management with minimal use of agro-chemicals.
Wye Valley and Forest of Dean Bat Sites/ Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena UK0014794 02 34 21 W 51 44 15 N	142.7	Primary: N/A Qualifying: N/A	Primary: Lesser horseshoe bat <i>Rhinolophus hipposideros</i> , greater horseshoe bat <i>Rhinolophus ferrumequinum</i> Qualifying: N/A	Human disturbance, structural alteration and changes in ventilation conditions.	Planning regulation, management agreements and monitoring of individual roosts. Site Management Statements agreed with the owners of working mines to secure conservation of the populations alongside continued working. Preparation of Cave Conservation Plans.
Aberbargoed Grasslands UK0030071 03 12 35 W 51 41 06 N	39.78	Primary: N/A Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caeruleae</i>)	Primary: Marsh fritillary butterfly <i>Euphydryas (Eurodryas, Hypodryas) aurinia</i> Qualifying: N/A	Under-grazing and lack of traditional management. Vandalism.	Management plan drawn up and discussions with owners towards securing a management agreement.
Sugar Loaf Woodlands UK0030072 03 01 23 W 51 50 36 N	173.84	Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: N/A	Primary: N/A Qualifying: N/A	Grazing, fires. Airborne acid and nutrient deposition may also be a problem.	Majority of woodland on common land grazed by sheep. Agri-environment schemes offer the best mechanism for securing favourable management in the longer term.
Alyn Valley Woods/ Coedwigoedd Dyffryn Alun UK0030078 03 12 05 W 53 09 31 N	168.3	Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines <i>*Priority feature</i> Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) <i>*Priority feature</i>	Primary: N/A Qualifying: N/A	Previous mineral and limestone workings. Recreation pressure.	Part managed as a Country Park. Visitor management, footpath maintenance and woodland management undertaken through the Ranger Service and under a WGS.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Blackmill Woodlands UK0030090 03 32 39 W 51 33 41 N	71.01	Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: N/A	Primary: N/A Qualifying: N/A	See Southern and South West England for details.	
Blaen Cynon UK0030092 03 31 41 W 51 44 54 N	66.83	Primary: N/A Qualifying: N/A	Primary: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> Qualifying: N/A	Maintenance of the hydrological regime and continuation of traditional agricultural management. Burning, housing, opencast or other industrial development and pollution.	Agricultural management over the majority of the site through management agreements with owners and occupiers.
Cardiff Beech Woods UK0030109 03 16 14 W 51 32 02 N	115.62	Primary: <i>Asperulo-Fagetum</i> beech forests Qualifying: <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature	Primary: N/A Qualifying: N/A	Recreational pressure.	Extensively managed for timber production in the past and currently managed through Woodland Grant Scheme. Number of limestone quarries in the locality, and issues arising from these addressed through the planning system.
Glaswelltiroedd Cefn Cribwr/ Cefn Cribwr Grasslands UK0030113 03 37 41 W 51 32 06 N	58.35	Primary: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>) Qualifying: N/A	Primary: N/A Qualifying: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i>	Quantity and base status of the groundwater.	Maintenance of grazing regime and water level. Management agreements will be used to secure appropriate management over the whole area.
Dunraven Bay UK0030139 03 36 09 W 51 26 32 N	6.47	Primary: N/A Qualifying: N/A	Primary: Shore dock <i>Rumex rupestris</i> Qualifying: N/A	Changes in hydrology.	Lies within Glamorgan Heritage Coast. Managed by agreement for the plant communities it supports.
Coedydd Nedd a Mellt UK0030141 03 34 02 W 51 46 20 N	378.18	Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature	Primary: N/A Qualifying: N/A	Grazing. Recreational pressure. Airborne acid and nutrient deposition.	Majority of the woodland owned by Forestry Commission and is ungrazed.
Deeside and Buckley Newt sites UK0030132 03 03 42 W 53 12 11 N	207.52	Primary: N/A Qualifying: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	See West Midlands and North West England for details.	

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Coedwigoedd Dyffryn Elwy/ Elwy Valley Woods UK0030146 03 27 59 W 53 12 35 N	83.01	Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines <i>*Priority feature</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Grazing, non-native species.	Management agreements in place. Parts of woods are managed under the terms of a Woodland Grant Scheme.
Halkyn Mountain/ Mynydd Helygain UK0030163 03 12 17 W 53 14 06 N	610.36	Primary: Calaminarian grasslands of the <i>Violetalia calaminariae</i> Qualifying: European dry heaths, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Inappropriate agricultural practices (inappropriate grazing, livestock feeding and watering, burning and cutting). Reclamation schemes.	Much of the area is common land traditionally used for grazing of domestic livestock. However use of traditional common grazing rights has declined in recent years.
Johnstown Newt Sites UK0030173 03 01 42 W 53 00 44 N	69.61	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Post-industrial sites subject to threat from unregulated public access, fly-tipping and pollution, pressures for development.	Habitat management is underway on areas owned by the local authority.
River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid UK0030252 02 51 40 W 53 02 50 N	1,308.93	Primary: Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation Qualifying: N/A	Primary: Atlantic salmon <i>Salmo salar</i> , floating water-plantain <i>Loronium natans</i> Qualifying: Sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> , bullhead <i>Cottus gobio</i>	Inappropriate water flow regulation; excessive abstraction; threats to water quality from direct and diffuse pollution; eutrophication and siltation. Degradation of riparian habitats due to engineering works, agricultural practices and invasive plant species. Fisheries.	Issues being addressed by a variety of statutory bodies that are in a position to overcome these threats through regulatory powers and partnerships with landowners, industry and other interested parties.
Afon Tywi / River Tywi UK0013010 03 54 41 W 51 55 12 N	363.45	Primary: N/A Qualifying: N/A	Primary: Twaite shad <i>Alosa fallax</i> , otter <i>Lutra lutra</i> Qualifying: Sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> , Allis shad <i>Alosa alosa</i> , bullhead <i>Cottus gobio</i>	Direct and diffuse pollution, particularly nutrient run-off from agricultural land; eutrophication and increased siltation. Afforestation in the upper catchment contributes to low pH that can affect features further downstream. Features affected by flow conditions and extremes of water temperature. Anadromous fish are vulnerable to barriers to migration. All fish are vulnerable to inappropriate fishing	CCW and the Environment Agency encourage owners and occupiers to carry out positive habitat management through agreements and agri-environment schemes. A SSSI Site Management Plan and a Conservation Strategy has been produced by CCW and a Site Issue Briefing has been jointly produced by EA and CCW. The EA is investigating abstractions and discharges under the review of consents process under the

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
				activities and the introduction of non-indigenous species. Gravel extraction, intensive agricultural land-use, engineering works, invasive plant species and the loss of alder tree-cover through disease can lead to degradation of habitat and water quality. Disturbance relating to recreation and amenity access.	Habitats Regulations and the river is included in their Asset Management Planning Process.
Caeau Mynydd Mawr UK0030105 04 03 57 W 51 47 21 N	25.06	Primary: N/A Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>)	Primary: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> Qualifying: N/A	Future industrial/residential development and increasing agricultural pressure.	Part of the site is owned by Butterfly Conservation, and Section 15 agreements cover ~66% of the site. CCW is in discussion with the owners of the unprotected parts of the site and hopes to conclude management agreements.
Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd UK0020020 04 22 35 W 51 40 00 N	66,101.16	Primary: Sandbanks which are slightly covered by sea water all the time, estuaries, mudflats and sandflats not covered by seawater at low tide, large shallow inlets and bays, <i>Salicornia</i> and other annuals colonising mud and sand, Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) Qualifying: N/A	Primary: Twait shad <i>Alosa fallax</i> Qualifying: Sea lamprey <i>Petromyzon marinus</i> , river lamprey <i>Lampetra fluviatilis</i> , Allis shad <i>Alosa alosa</i> , otter <i>Lutra lutra</i>	Most of the potential threats come from fisheries and related activities such as shellfish management and access issues related to mussel and cockle gathering. CCW is consulted over applications to dredge aggregate from Helwick Bank. These works may have an effect locally on the biology of the Bank, and in conjunction with other coastal defence works may also affect sediment budgets and characteristics over a wider area.	CCW maintains close liaison in particular with the South Wales Sea Fisheries Committee. CCW has encouraged extensive monitoring and further research.
Cernydd Carmel UK0030070 04 02 36 W 51 49 32 N	361.14	Primary: Turloughs *Priority feature Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths, Active raised bogs *Priority feature, <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature	Primary: N/A Qualifying: N/A	Proposals to intensify agricultural practices.	Issues are being addressed through management agreements and Tir Cymen/Tir Gofal agri-environment schemes.
Gower Ash Woods / Coedydd Ynn Gwyr	233.15	Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature	Primary: N/A Qualifying: N/A	Not indicated.	Management is predominantly by non-intervention and includes part of a National Nature

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
UK0030157 04 03 35 W 51 34 29 N		Qualifying: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) * Priority feature			Reserve, a Wildlife Trust Reserve and Local Nature Reserve, and includes educational and visitor information. All areas are within the Gower Area of Outstanding Natural Beauty (AONB). Future management considerations would include selective removal of conifers as well as thinning of beech.
Gower Commons / Tiroedd Comin Gwyr UK0012685 04 10 11 W 51 35 20 N	1,776.72	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths, <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) Qualifying: N/A	Primary: Southern damselfly <i>Coenagrion mercuriale</i> , marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> Qualifying: N/A	Unauthorised burning. Off-road vehicles can cause localised damage.	Burning addressed on Cefn Bryn Common via a Tir Cymen agri-environment agreement. The cutting of fire-breaks together with control of bracken and <i>Rhododendron</i> helps to minimise the damaging effects of burning. The Gower Commons Initiative (2000) is aimed at developing the existing lowland heathland resource via management for countryside enhancement and nature conservation.
Limestone Coast of South West Wales / Arfordir Calchfaen De Orllewin Cymru UK0014787 05 03 21 W 51 37 50 N	1,594.53	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts, fixed dunes with herbaceous vegetation ('grey dunes') *Priority feature Qualifying: European dry heaths, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), caves not open to the public, submerged or partially submerged sea caves	Primary: Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> , early gentian <i>Gentianella anglica</i> Qualifying: Petalwort <i>Petalophyllum ralfsii</i>	Bats are vulnerable to disturbance from recreational users. Chemical/oil pollution from the sea, particularly in aerosol form is a threat.	Maintenance or re-introduction of a traditional grazing regime preceded by burning or cutting if required to reduce scrub. This is being addressed via agri-environment schemes and management agreements. Restoration plans are in place for areas of former sand quarrying. An Integrated Land Management Plan exists for parts of the Pembrokeshire section which are MoD-owned. Close liaison with the British Mountaineering Council over the impact of rock climbing continues.

Table E.11 Summary Details of Relevant Special Protection Areas (SPAs) in SEA Area 4

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Dee Estuary UK9013011 03 11 02 W 53 18 39 N	13,084.85	Over winter: Bar-tailed godwit <i>Limosa lapponica</i>	Over winter: Pintail <i>Anas acuta</i> , knot <i>Calidris canutus</i> , oystercatcher <i>Haematopus ostralegus</i> , shelduck <i>Tadorna tadorna</i> , redshank <i>Tringa totanus</i> . Assemblage qualification: Over winter, the area regularly supports 90,518 individual waterfowl including: shelduck <i>Tadorna tadorna</i> , pintail <i>Anas acuta</i> , oystercatcher <i>Haematopus ostralegus</i> , knot <i>Calidris canutus</i> , bar-tailed godwit <i>Limosa lapponica</i> , redshank <i>Tringa totanus</i> .	Industrial and urban development. Water quality issues. Over-exploitation of cockle beds.	Sizeable parts of the estuary are in conservation management or are subject to Management Agreements. The Dee Estuary Strategy.
Severn Estuary UK9015022 03 02 57 W 51 13 29 N	24,662.98	During the breeding season: Bewick's swan <i>Cygnus columbianus bewickii</i>	Over winter: Gadwall <i>Anas strepera</i> , Russian white-fronted goose <i>Anser albifrons albifrons</i> , dunlin <i>Calidris alpina alpina</i> , shelduck <i>Tadorna tadorna</i> , redshank <i>Tringa totanus</i> . Assemblage qualification: Over winter, the area regularly supports 84,317 individual waterfowl including: Bewick's swan <i>Cygnus columbianus bewickii</i> , Russian white-fronted goose <i>Anser albifrons albifrons</i> , shelduck <i>Tadorna tadorna</i> , gadwall <i>Anas strepera</i> , dunlin <i>Calidris alpina alpina</i> , redshank <i>Tringa totanus</i> , <i>Numenius phaeopus</i> .	Land-claim, aggregate extraction/ dredging, physical developments such as barrage construction, flood defences, pollution (industrial, oil spillage), eutrophication and recreation.	Existing control measures and the Severn Estuary Strategy.
Burry Inlet UK9015011 04 10 40 W 51 38 56 N	6,628	N/A	Over winter: Pintail <i>Anas acuta</i> , shoveler <i>Anas clypeata</i> , teal <i>Anas crecca</i> , wigeon <i>Anas penelope</i> , dunlin <i>Calidris alpina alpina</i> , knot <i>Calidris canutus</i> , oystercatcher <i>Haematopus ostralegus</i> , curlew <i>Numenius</i>	Possible implications from shellfish activity, eutrophication, recreational activities and energy development.	CCW through a liaison group consults with the South Wales Sea Fisheries Committee over shellfish activities and the Environment Agency over eutrophication issues. RSPB and CCW are

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			<p><i>arquata</i>, grey plover <i>Pluvialis squatarola</i>, shelduck <i>Tadorna tadorna</i>, redshank <i>Tringa totanus</i>.</p> <p>Assemblage qualification:</p> <p>Over winter, the area regularly supports 34,962 individual waterfowl including: shelduck <i>Tadorna tadorna</i>, wigeon <i>Anas penelope</i>, teal <i>Anas crecca</i>, pintail <i>Anas acuta</i>, shoveler <i>Anas clypeata</i>, oystercatcher <i>Haematopus ostralegus</i>, grey plover <i>Pluvialis squatarola</i>, knot <i>Calidris canutus</i>, dunlin <i>Calidris alpina alpina</i>, curlew <i>Numenius arquata</i>, redshank <i>Tringa totanus</i>.</p>		<p>reviewing saltmarsh grazing levels on the south side of the estuary. There is close liaison with relevant authorities with regard to the proposed Millennium Coastal Park Project on the north shore in terms of tourism, amenity and recreation. Most recently, there has been a hydro-electric barrage scheme proposed across the mouth of the Burry Inlet.</p>
Liverpool Bay pSPA UK9020294 53 36 30 N 03 13 16 W	197,504.24	Over winter: Red-throated diver	Over winter: Common scoter	-	-

Table E.12 Summary of Relevant Ramsar Sites in SEA Area 4

Code/Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK11080 02 45 43 W 52 55 20 N	Midland Meres and Mosses – Phase 2	1,588.24	The 18 component sites include open water bodies (meres), the majority of which are nutrient-rich with associated fringing habitats, reed swamp, fen, carr and damp pasture. Peat accumulation has resulted in the nutrient-poor peat bogs (mosses) forming in some sites on the fringes of the meres or completely infilling basins. In a few cases the result is a floating quaking bog or schwingmoor. Habitats support nationally important flora and fauna.	1, 2	Introduction of exotic animals, pollution – agriculture, introduction/ invasion of flora, eutrophication.
UK11081 03 02 57 W 51 13 29 N	Severn Estuary (Wales)	24,662.98	Tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide swept sand and rock. Species-poor invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders. Extensive intertidal zone comprising mudflats, sand banks, shingle, and rocky platforms. Heavily grazed saltmarsh fringes the estuary with a range of saltmarsh types present.	1, 8, 5, 4, 3, 6	Recreation disturbance, industrial pollution, pollution – oil, eutrophication, erosion, dredging, pollution – unspecified.
UK11082 03 11 02 W 53 18 39 N	The Dee Estuary (Wales)	13,084.85	One of the top five estuaries in the UK for wintering and passage waterfowl populations. Supports extensive areas of intertidal sand and mudflats as well as saltmarsh. Where land-claim has not occurred, the saltmarshes grade into transitional brackish and freshwater swamp vegetation, on the upper shore. The site includes the three sandstone islands of Hilbre with their important cliff vegetation and maritime heathland/grassland. Contrast between the industrialised usage of the coastal belt in Wales and residential and recreational usage in England.	5, 6, 1	Over-fishing, introduction/invasion of flora, transport infrastructure, industrial pollution, pollution – sewage, general disturbance.
UK14006 03 53 16 W 51 38 08 N	Crymlyn Bog	264.18	Floodplain-valley mire located within a lowland coastal context and is the most extensive wetland of its type in Wales. The mire features a complex mosaic of vegetation types, supporting examples of swamp, tall herb fen, fen meadow and carr communities.	1, 2, 3	Eutrophication
UK14001 04 10 37 W 51 38 55 N	Burry Inlet	6,627.99	Burry Inlet is a large estuarine complex located between the Gower Peninsula and Llanelli in South Wales. It includes extensive areas of intertidal sand and mud flats, together with large sand dune systems at the mouth of the estuary. The site contains the largest continuous area of saltmarsh in Wales (2,200 ha). The Burry Inlet regularly supports large numbers of wildfowl and waders.	5, 6	Erosion.

*Note: Ramsar criteria:**

1. sites containing representative, rare or unique wetland types
2. supports vulnerable, endangered, or critically endangered species or threatened ecological communities
3. supports populations of plant/animal species important for maintaining regional biodiversity
4. supports plant/animal species at a critical stage in their life cycles, or provides refuge
5. regularly supports 20,000 or more waterbirds
6. regularly supports 1% of the individuals in a population of one species/subspecies of waterbirds
8. important source of food for fishes, spawning ground, nursery and/or migration path

Summary Details of Sites of International Importance in SEA Area 5

Figure E.5 International Designations in SEA Area 5

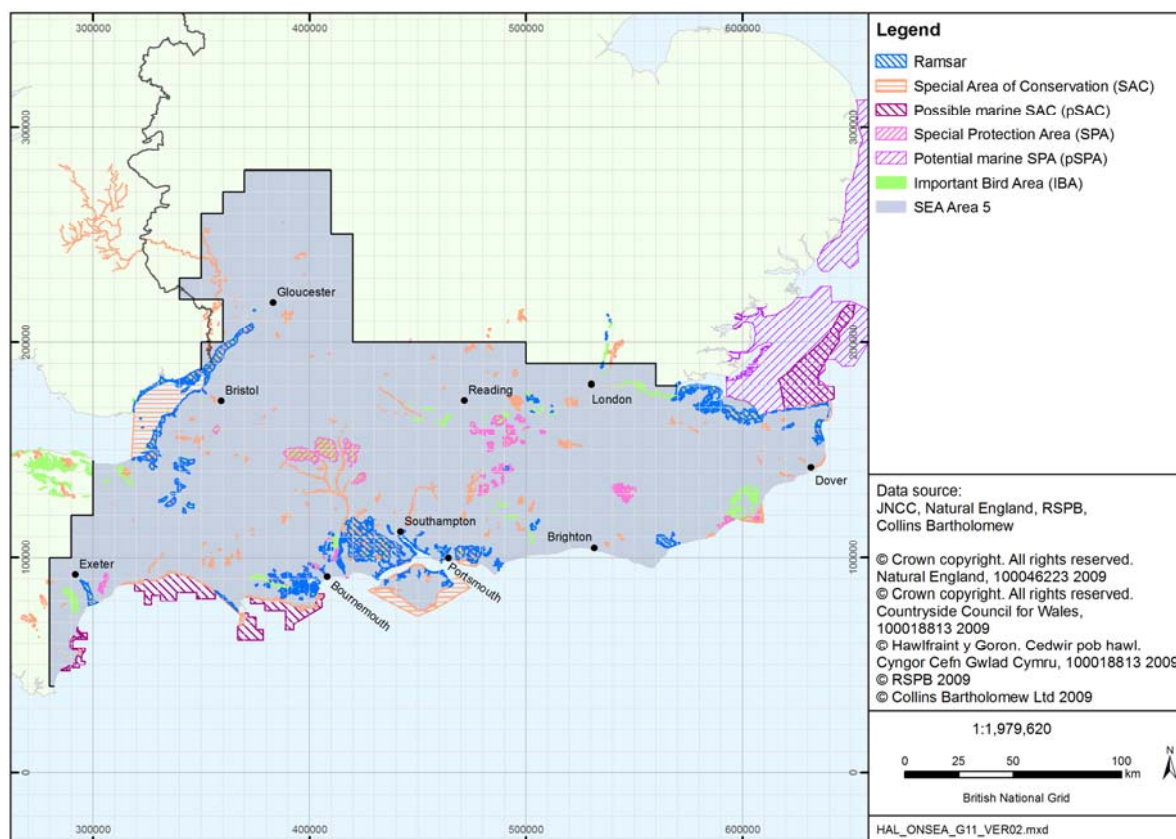


Table E.13 Summary Details of Relevant Special Areas of Conservation (SACs) in SEA Area 5

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Holnest UK0030350 02 28 29 W 50 53 40 N	54.94	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Agricultural diversification and alternative land uses could threaten breeding ponds, foraging areas and hibernation sites.	Agreements have been made with owners to prevent detrimental effects on newt populations.
Fontmell and Melbury Downs UK0012550 02 08 34 W 50 58 20 N	260.75	Primary: N/A Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)	Primary: Early gentian <i>Gentianella anglica</i> Qualifying: N/A	Under-grazing, scrub encroachment, adjacent intensive agricultural practices.	Much of site managed by voluntary nature conservation organisations.
Pewsey Downs UK0012552 01 50 54 W 51 22 18 N	153.87	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) * Priority feature Qualifying: N/A	Primary: Early gentian <i>Gentianella anglica</i> Qualifying: N/A	Under-grazing by cattle and sheep.	Management of NNR takes into account requirements of the orchid-rich calcareous grassland and early gentian. May require increased support through agri-environment schemes/management agreements.
Prescombe Down UK0012553 02 01 14 W 51 01 39 N	76.14	Primary: N/A Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)	Primary: Early gentian <i>Gentianella anglica</i> Qualifying: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i>	Under-grazing by cattle and sheep.	Management of NNR takes into account requirements of the orchid-rich calcareous grassland and early gentian. May require increased support through agri-environment schemes/management agreements.
The New Forest UK0012557 01 40 50 W 50 51 59 N	29,262.36	Primary: Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletea uniflorae</i>), oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> , northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths, <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), depressions on peat substrates of the <i>Rhynchosporion</i> , Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer (<i>Quercion robur-petraeae</i> or <i>Ilici-</i>	Primary: Southern damselfly <i>Coenagrion mercuriale</i> , stag beetle <i>Lucanus cervus</i> Qualifying: Great crested newt <i>Triturus cristatus</i>	Drainage, afforestation of heathland habitats, under-grazing, recreational pressures.	Managed through SAC Management Plan, the National Park, and through supplementary funding for restoration, e.g. LIFE funding.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		<i>Fagenion</i>), <i>Asperulo-Fagetum</i> beech forests, old acidophilous oak woods with <i>Quercus robur</i> on sandy plains, bog woodland *Priority feature, alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) *Priority feature Qualifying: Transition mires and quaking bogs, alkaline fens			
Bath and Bradford-on-Avon Bats UK0012584 02 14 19 W 51 25 03 N	107.16	Primary: N/A Qualifying: N/A	Primary: Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> , Bechstein's bat <i>Myotis bechsteinii</i> Qualifying: Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	Change in environmental conditions, pollution, disturbance.	Efforts being made to fit grilles over most vulnerable mine entrances. If necessary, management agreements will be drawn up.
Beer Quarry and Caves UK0012585 03 06 43 W 50 41 49 N	31.1	Primary: N/A Qualifying: N/A	Primary: Bechstein's bat <i>Myotis bechsteinii</i> Qualifying: Lesser horseshoe bat <i>Rhinolophus hipposideros</i> , Greater horseshoe bat <i>Rhinolophus ferrumequinum</i>	Disturbance.	Site management statement has been agreed with the quarrying company.
Windsor Forest and Great Park UK0012586 00 37 24 W 51 26 08 N	1,687.26	Primary: Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains Qualifying: Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer (<i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i>)	Primary: Violet click beetle <i>Limoniscus violaceus</i> Qualifying: N/A	Changes in management practices.	Sympathetic management being undertaken through the Declaration of Intent signed between English Nature and the owners, the Crown Estate.
Bredon Hill UK0012587 02 03 02 W 52 03 49 N	359.86	Primary: N/A Qualifying: N/A	Primary: Violet click beetle <i>Limoniscus violaceus</i> Qualifying: N/A	Replacement of ancient trees.	Management agreements being used to preserve existing tree stocks and to provide replacement planting.
River Itchen UK0012599 01 20 05 W 50 57 14 N	309.26	Primary: Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	Primary: Southern damselfly <i>Coenagrion mercuriale</i> , bullhead <i>Cottus gobio</i>	Decrease in flow velocities and increase in siltation. Water abstraction.	EA initiating major study of the river's macrophytes from which a predictive model will be developed to aid decisions on water abstraction regime.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		Qualifying: N/A	Qualifying: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i> , brook lamprey <i>Lampetra planeri</i> , Atlantic salmon <i>Salmo salar</i> , otter <i>Lutra lutra</i>		
East Devon Pebblebed Heaths UK0012602 03 21 33 W 50 40 19 N	119.94	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths Qualifying: N/A	Primary: Southern damselfly <i>Coenagrion mercuriale</i> Qualifying: N/A	Changes in agricultural management and quarrying (impact on water chemistry and water levels). Water abstraction.	Majority of site under positive conservation management.
River Wye/Afon Gwy UK0012642 03 17 59 W 52 01 24 N	2,234.89	Primary: Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation Qualifying: Transition mires and quaking bogs	Primary: White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i> , sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , river lamprey <i>Lampetra fluviatilis</i> , twaite shad <i>Alosa fallax</i> , Atlantic salmon <i>Salmo salar</i> , bullhead <i>Cottus gobio</i> , otter <i>Lutra lutra</i> Qualifying: Allis shad <i>Alosa alosa</i>	SAC interests particularly allis and twaite shad populations vulnerable to water quality impacts from changing agricultural land-use (nutrient run-off and increased siltation) and point-source discharges. Riverside development. Fishing activities (salmon). Water abstraction. Recreation.	Joint EN/EA/CCW conservation strategy for the river. River Wye formed part of the <i>Life in UK Rivers</i> project to develop methods for conserving the wildlife and habitats of rivers within the Natura 2000 network of protected European sites.
South Hams UK0012650 03 29 21 W 50 23 54	129.53	Primary: European dry heaths, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Qualifying: Vegetated sea cliffs of the Atlantic and Baltic coasts, caves not open to the public, <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature	Primary: Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> Qualifying: N/A	Disturbance, through public access, recreational activities.	Quarry at Berry Head designated as a NNR and management plan prepared. Buckfastleigh Caves managed as a nature reserve.
Mells Valley UK0012658 02 29 30 W 51 13 33 N	28.22	Primary: N/A Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), caves not open to the public	Primary: Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> Qualifying: N/A	Disturbance from public access.	None of the sites currently managed directly for bats. English Nature discussing access provisions with the owner.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Rooksmoor UK0012681 02 22 11 W 50 53 50 N	61.36	Primary: N/A Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)	Primary: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> Qualifying: N/A	Scrub invasion due to neglect and lack of grazing animals.	EN Management Agreement.
Salisbury Plain UK0012683 01 53 22 W 51 14 45 N	21,438.1	Primary: <i>Juniperus communis</i> formations on heaths or calcareous grasslands, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) *Priority feature Qualifying: N/A	Primary: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> Qualifying: N/A	Lack of management in some areas. Habitat damage.	MOD owned land as well as an NNR. Site interests require low intensity grazing. NNR management plan.
Ebernoe Common UK0012715 00 36 20 W 51 02 09 N	133.94	Primary: Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer (<i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i>) Qualifying: N/A	Primary: Barbastelle <i>Barbastella barbastellus</i> , Bechstein's bat <i>Myotis bechsteinii</i> Qualifying: N/A	Not under any significant threat.	Ancient woodland dependent on traditional management. Sussex Wildlife Trust Management Plan.
The Mens UK0012716 00 32 27 W 51 00 04 N	203.28	Primary: Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer (<i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i>) Qualifying: N/A	Primary: N/A Qualifying: Barbastelle <i>Barbastella barbastellus</i>	Recreation pressure.	Ancient Wealden woodland managed as an area of minimum intervention.
Epping Forest UK0012720 00 01 21 E 51 38 39 N	1,604.95	Primary: Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer (<i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i>) Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths	Primary: Stag beetle <i>Lucanus cervus</i> Qualifying: N/A	Neglect, atmospheric pollutants.	Comprehensive management plan completed and consented in 1998. Subject to provisions of Epping Forest Act (1878).
East Hampshire Hangers UK0012723 00 56 45 W 51 02 06 N	569.69	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites)	Primary: N/A Qualifying: Early gentian <i>Gentianella anglica</i>	Nutrient run-off from agriculture leading to eutrophication.	EN exploring mechanisms to curtail damaging agricultural activities. Also liaising closely with Forestry Commission.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		<p><i>* Priority feature, Asperulo-Fagetum beech forests, Tilio-Acerion forests of slopes, screes and ravines * Priority feature</i></p> <p>Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia), Taxus baccata woods of the British Isles <i>*Priority feature</i></p>			
<p>Chilterns Beechwoods UK0012724 00 35 07 W 51 48 39 N</p>	1,276.48	<p>Primary: <i>Asperulo-Fagetum</i> beech forests</p> <p>Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia)</p>	<p>Primary: N/A</p> <p>Qualifying: Stag beetle <i>Lucanus cervus</i></p>	Lack of appropriate management.	Significant changes to the structural and species diversity of these woods required in order to promote a more natural composition. Woodland Grant Scheme.
<p>Wye Valley Woodlands/ Coetiroedd Dyffryn Gwy UK0012727 02 40 43 W 51 39 28 N</p>	916.24	<p>Primary: <i>Asperulo-Fagetum</i> beech forests, <i>Tilio-Acerion</i> forests of slopes, screes and ravines <i>*Priority feature, Taxus baccata</i> woods of the British Isles <i>*Priority feature</i></p> <p>Qualifying: N/A</p>	<p>Primary: N/A</p> <p>Qualifying: Lesser horseshoe bat <i>Rhinolophus hipposideros</i></p>	Lack of traditional woodland management.	Positive management promoted through management plans (CCW), Site Management Statements (EN) and Management Agreements, and the Woodland Grant Scheme.
<p>Avon Gorge Woodlands UK0012734 02 38 01 W 51 27 50 N</p>	152.35	<p>Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines <i>*Priority feature</i></p> <p>Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia)</p>	<p>Primary: N/A</p> <p>Qualifying: N/A</p>	No significant threats.	Part managed as a NNR and the management of the remainder addressed through a Site Management Statement.
<p>South Dartmoor Woods UK0012749 03 49 09 W 50 31 00 N</p>	2,157.15	<p>Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p>Qualifying: European dry heaths</p>	<p>Primary: N/A</p> <p>Qualifying: N/A</p>	Heavy recreational pressure. Long-term decline of woodland lichens due to air pollution and/or climate change. Heavy grazing and uncontrolled fires (arson).	Within Dartmoor National Park. Parts managed as NNRs. Dartmoor ESA scheme to reduce grazing levels.
<p>Kingley Vale UK0012767 00 49 40 W 50 53 30 N</p>	208.05	<p>Primary: <i>Taxus baccata</i> woods of the British Isles <i>*Priority feature</i></p> <p>Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia)</p>	<p>Primary: N/A</p> <p>Qualifying: N/A</p>	Scrub encroachment of chalk grassland.	Conservation of yew forest requires the maintenance of nurse scrub habitat and regulation of numbers of resident deer.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Great Yews UK0012770 01 49 49 W 51 00 27 N	28.71	Primary: <i>Taxus baccata</i> woods of the British Isles *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Woodland considered to be in good condition.	Little active management carried out except small-scale recreational activity.
Thursley, Ash, Pirbright and Chobham UK0012793 00 41 35 W 51 09 42 N	5,138	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths, depressions on peat substrates of the <i>Rhynchosporion</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Insufficient grazing or other traditional practices. Water abstraction causing loss or damage to wet heath and mire. Neighbouring housing developments. Recreation pressure.	Largely dependent on active heathland management.
Mole Gap to Reigate Escarpment UK0012804 00 16 48 W 51 15 57 N	887.68	Primary: Stable xerothermophilous formations with <i>Buxus sempervirens</i> on rock slopes (<i>Berberidion</i> p.p.), semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) *Priority feature, <i>Taxus baccata</i> woods of the British Isles * Priority feature Qualifying: European dry heaths, <i>Asperulo-Fagetum</i> beech forests	Primary: N/A Qualifying: Great crested newt <i>Triturus cristatus</i> , Bechstein's bat <i>Myotis bechsteinii</i>	Recreation pressure. Neglect and lack of appropriate grazing.	National Trust and Surrey County Council own and manage significant proportion of the site. Smaller areas owned by other local authorities and the local wildlife trust.
Rodborough Common UK0012826 02 13 06 W 51 43 51 N	104.26	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Qualifying: N/A	Primary: N/A Qualifying: N/A	Lack of appropriate grazing, road traffic, recreation pressure.	Management issues addressed through continued liaison, joint working and a Site Management Statement between English Nature and the National Trust.
Wye and Crundale Downs UK0012831 00 58 52 E 51 09 36 N	112.24	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) Qualifying: N/A	Primary: N/A Qualifying: N/A	Lack of appropriate grazing.	Continuous grazing management essential. Part of site managed as a NNR. On other parts, discussion with private land managers to encourage traditional management.
Lewes Downs UK0012832 00 02 51 E 50 51 53 N	146.86	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) Qualifying: N/A	Primary: N/A Qualifying: N/A	Scrub encroachment. Leaching and spray drift of agricultural chemicals.	Continuous grazing management essential. NNR managed by the landowner under a management agreement.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Queendown Warren UK0012833 00 37 24 E 51 20 07 N	14.28	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) Qualifying: N/A	Primary: N/A Qualifying: N/A	Not under any current threat.	Continuous grazing management essential. Site managed as a nature reserve.
Lydden and Temple Ewell Downs UK0012834 01 15 23 E 51 09 43 N	61.7	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) Qualifying: N/A	Primary: N/A Qualifying: N/A	No details.	Continuous grazing management essential. EN's Reserves Enhancement Scheme and Countryside Stewardship schemes to encourage traditional management.
Folkestone to Etchinghill Escarpment UK0012835 01 07 06 E 51 06 22 N	81.94	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) Qualifying: N/A	Primary: N/A Qualifying: N/A	Overgrazing.	Both English Nature and Countryside Stewardship agreements exist on the site.
Castle Hill UK0012836 00 03 04 W 50 50 31 N	114.68	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) Qualifying: N/A	Primary: N/A Qualifying: Early gentian <i>Gentianella anglica</i>	Leaching and spray-drift of agricultural chemicals. Inappropriate grazing.	Continuous grazing management essential. NNR leased to EN from the local authority.
Holme Moor and Clean Moor UK0012883 03 17 30 W 51 01 31 N	7.58	Primary: Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> <i>*Priority feature</i> , alkaline fens Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)	Primary: N/A Qualifying: N/A	Neglect and lack of management.	EN reversed neglect and manages site with permission of owners.
Cothill Fen UK0012889 01 19 46 W 51 41 44 N	43.55	Primary: Alkaline fens Qualifying: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) <i>*Priority feature</i>	Primary: N/A Qualifying: N/A	Cessation of traditional management (grazing and peat-cutting).	Cutting of reed, cutting of areas of tall fen and removal of scrub to increase area and diversity of the short fen habitat.
River Avon UK0013016 01 49 24 W 51 06 14 N	498.24	Primary: Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation Qualifying: N/A	Primary: Desmoulin's whorl snail <i>Vertigo moulinsiana</i> , sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , Atlantic salmon <i>Salmo salar</i> , bullhead <i>Cottus gobio</i> Qualifying: N/A	Land drainage; land use, water abstraction, disposal of sewage effluents and management of the water courses for fishery, agricultural and other uses.	Major land use activities addressed through Local Environment Action Plans, Catchment Abstraction Plans and Water Level Management Plans as well as through management agreements with landowners/occupiers.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Dungeness UK0013059 00 57 10 E 50 55 08 N	3,223.56	Primary: Annual vegetation of drift lines, perennial vegetation of stony banks Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Recreational disturbance, water abstraction, close to an active airport which carries a potential risk from air pollution.	Extensive areas managed as a Nature Reserve.
Sandwich Bay UK0013077 01 22 39 E 51 18 19 N	1,137.87	Primary: Embryonic shifting dunes, shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), fixed dunes with herbaceous vegetation ('grey dunes') *Priority feature, dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) Qualifying: Humid dune slacks	Primary: N/A Qualifying: N/A	Scrub encroachment.	Most of the site unmanaged 'rough' on golf-courses. Control of scrub being undertaken through Management Agreements.
Thanet Coast UK0013107 01 22 33 E 51 23 24 N	2,803.84	Primary: Reefs, submerged or partially submerged sea caves Qualifying: N/A	Primary: N/A Qualifying: N/A	Erosion and natural physical destruction. Recreational pressure.	In preparing management scheme, human activities have been evaluated with stakeholders, and management agreed.
Cotswold Beechwoods UK0013658 02 08 52 W 51 49 07 N	585.85	Primary: <i>Asperulo-Fagetum</i> beech forests Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)	Primary: N/A Qualifying: N/A	No details.	Maintained by a variety of silvicultural practices. Sympathetic Woodland Grant Scheme.
Wormley Hoddesdonpark Woods UK0013696 00 05 19 W 51 44 08 N	335.53	Primary: Sub-Atlantic and medio-European oak or oak-hornbeam forests of the <i>Carpinion betuli</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	Neglect. Recreation pressure.	Present management ranges from benign neglect to active forestry. Much of the site is a NNR.
Blean Complex UK0013697 01 01 43 E 51 18 07 N	520.62	Primary: Sub-Atlantic and medio-European oak or oak-hornbeam forests of the <i>Carpinion betuli</i> Qualifying: N/A	Primary: N/A Qualifying: N/A	No details.	Coppice management in areas of the site maintained as nature reserves by EN, Kent Wildlife Trust and RSPB.
Isle of Wight Downs UK0016254 01 28 18 W 50 40 08 N	461.8	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts, European dry heaths, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Qualifying: N/A	Primary: Early gentian <i>Gentianella anglica</i> Qualifying: N/A	Scrub encroachment. Recreation pressure. Sea cliffs vulnerable to cliff stabilisation schemes, inappropriate grazing.	Coastal strategies, management plans and Management Agreements.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
North Meadow and Clattinger Farm UK0016372 01 58 45 W 51 38 20 N	104.88	Primary: Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) Qualifying: N/A	Primary: N/A Qualifying: N/A	Extraction and renovation of gravel workings potential threat to water levels.	NNR management plan and a site management statement stipulating an appropriate grazing regime.
Chilmark Quarries UK0016373 02 02 11 W 51 04 42 N	10.41	Primary: N/A Qualifying: N/A	Primary: Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> , barbastelle <i>Barbastella barbastellus</i> , Bechstein's bat <i>Myotis bechsteinii</i> Qualifying: Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	Collapse of underground voids and unauthorised access.	Management plan and agreements in place.
Solent and Isle of Wight Lagoons UK0017073 01 08 13 W 50 46 30 N	36.24	Primary: Coastal lagoons *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Water quality issues due to industrial waste disposal/landfill/ discharges and diffuse pollution; the effects of sea-level rise; coastal defence; water level management.	Mechanisms including Biodiversity Action Plans, other coastal strategies, Water Level Management Plans and Management Agreements.
Chesil and the Fleet UK0017076 02 31 22 W 50 36 47 N	1,631.63	Primary: Coastal lagoons *Priority feature, annual vegetation of drift lines, perennial vegetation of stony banks. Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>) Qualifying: Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)	Primary: N/A Qualifying: N/A	Changes in natural coastal processes. Water quality issues. Close to busy shipping lanes, risk of accidental oil pollution. Licence given for offshore oil exploration nearby.	Much of the site privately-owned and managed as nature reserve.
Dorset Heaths UK0019857 02 09 36 W 50 39 03 N	5,730.73	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths, depressions on peat substrates of the <i>Rhynchosporion</i> Qualifying: Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>), calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> * Priority feature, alkaline fens, old acidophilous oak woods with <i>Quercus robur</i> on sandy plains	Primary: Southern damselfly <i>Coenagrion mercuriale</i> Qualifying: Great crested newt <i>Triturus cristatus</i>	Recreational pressure and high incidence of wildfires, disturbance by infrastructure works. Several mineral extraction permissions. Scrub encroachment.	Half the site is now held as NNRs, LNRs and non-statutory nature reserves.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Isle of Portland to Studland Cliffs UK0019861 02 13 34 W 50 37 14 N	1,447.5	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Qualifying: Annual vegetation of drift lines	Primary: Early gentian <i>Gentianella anglica</i> Qualifying: N/A	Coastal erosion and defence, recreational pressure.	Shoreline Management Plans. Establishment of suitable grazing regimes through site management statements. Heritage Coast which covers much of the coast.
St Albans Head to Durlston Head UK0019863 01 59 28 W 50 35 32 N	287.22	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts, semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) *Priority feature Qualifying: N/A	Primary: Early gentian <i>Gentianella anglica</i> Qualifying: Greater horseshoe bat <i>Rhinolophus ferrumequinum</i>	Under-grazing, recreation pressure.	Majority of site owned by a voluntary conservation organisation or by local Government and is being managed for nature conservation and amenity use.
Sidmouth to West Bay UK0019864 02 57 16 W 50 42 57 N	897.3	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts, <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature Qualifying: Annual vegetation of drift lines	Primary: N/A Qualifying: N/A	No immediate threats.	Management of the site assisted by Countryside Stewardship and English Nature's Reserve Enhancement Scheme.
Burnham Beeches UK0030034 00 37 51 W 51 33 36 N	382.76	Primary: Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer (<i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i>) Qualifying: N/A	Primary: N/A Qualifying: N/A	Possible damage from adjacent mineral workings - dust and hydrological changes. Sulphur and nitrogen oxides levels may exceed criteria levels for sensitive vegetation.	Much of the site designated as a NNR and managed to restore grazed pasture woodland and heathland. The National Trust also owns part of the site.
Dorset Heaths (Purbeck and Wareham) and Studland Dunes UK0030038 01 57 57 W 50 39 16 N	2,221.94	Primary: Embryonic shifting dunes, shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), Atlantic decalcified fixed dunes (<i>Calluno-Ulicetia</i>) *Priority feature, humid dune slacks, oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>), Northern Atlantic wet heaths with <i>Erica tetralix</i> , temperate Atlantic wet heaths with <i>Erica ciliaris</i> and <i>Erica tetralix</i> *Priority feature, European dry heaths, depressions on peat substrates of the	Primary: Southern damselfly <i>Coenagrion mercuriale</i> Qualifying: Great crested newt <i>Triturus cristatus</i>	Extensive losses to agriculture, forestry and urban development. Recreation pressures. Wildfires. Disturbance from infrastructure works. Decline in traditional agriculture. Erosion of sand dunes.	About half of the site is now held as NNRs, LNRs and non-statutory nature reserves.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		<p><i>Rhynchosporion</i>, bog woodland *Priority feature</p> <p>Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>), calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> *Priority feature, alkaline fens, old acidophilous oak woods with <i>Quercus robur</i> on sandy plains</p>			
<p>Kennet and Lambourn Floodplain</p> <p>UK0030044</p> <p>01 32 59 W</p> <p>51 25 53 N</p>	114.47	<p>Primary: N/A</p> <p>Qualifying: N/A</p>	<p>Primary: Desmoulin's whorl snail <i>Vertigo moulinsiana</i></p> <p>Qualifying: N/A</p>	<p>Adequate supply of high quality water. Nearby Newbury Bypass.</p>	<p>EA and EN ensuring appropriate water levels, through production of water level management plans and regular monitoring of water quality.</p>
<p>Mendip Woodlands</p> <p>UK0030048</p> <p>02 25 18 W</p> <p>51 12 25 N</p>	253.92	<p>Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature</p> <p>Qualifying: N/A</p>	<p>Primary: N/A</p> <p>Qualifying: N/A</p>	<p>No major threats.</p>	<p>Two parts of the site are NNRs. Cheddar Wood is a Somerset Wildlife Trust nature reserve.</p>
<p>North Somerset and Mendip Bats</p> <p>UK0030052</p> <p>02 44 47 W</p> <p>51 17 10 N</p>	561.19	<p>Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature</p> <p>Qualifying: Caves not open to the public</p>	<p>Primary: Lesser horseshoe bat <i>Rhinolophus hipposideros</i>, greater horseshoe bat <i>Rhinolophus ferrumequinum</i></p> <p>Qualifying: N/A</p>	<p>Human disturbance.</p>	<p>Low levels of grazing resulting in scrub invasion and the development of secondary woodland. Woodland requires a considerable amount of restoration.</p>
<p>Rook Clift</p> <p>UK0030058</p> <p>00 49 58 W</p> <p>50 57 25 N</p>	10.82	<p>Primary: <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature</p> <p>Qualifying: N/A</p>	<p>Primary: N/A</p> <p>Qualifying: N/A</p>	<p>Overgrazing.</p>	<p>Site is in private ownership and managed under the Woodland Grant Scheme.</p>
<p>Solent Maritime</p> <p>UK0030059</p> <p>00 55 40 W</p> <p>50 47 47 N</p>	11,309.25	<p>Primary: Estuaries, <i>Spartina swards</i> (<i>Spartina maritima</i>), Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</p> <p>Qualifying: Sandbanks which are slightly covered by sea water all the time, mudflats and sandflats not covered by seawater at low tide,</p>	<p>Primary: N/A</p> <p>Qualifying: Desmoulin's whorl snail <i>Vertigo moulinsiana</i></p>	<p>Flood defence and coast protection works; coastal squeeze; developments pressures. Accidental pollution from shipping, oil/chemical spills, heavy industrial activities, former waste disposal sites and waste-water discharge; introduction of non-</p>	<p>Management Scheme for European Marine Sites, Biodiversity Action Plans, other coastal strategies, management plans and Management Agreements.</p>

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		coastal lagoons <i>*Priority feature</i> , annual vegetation of drift lines, perennial vegetation of stony banks, <i>Salicornia</i> and other annuals colonising mud and sand, shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')		native species.	
South Wight Maritime UK0030061 01 20 51 W 50 35 29 N	19,862.71	Primary: Reefs, vegetates sea cliffs of the Atlantic and Baltic coasts, submerged or partially submerged sea caves Qualifying: N/A	Primary: N/A Qualifying: N/A	Coast protection works, coastal squeeze, development or intensive agriculture in the hinterland, sewage disposal, accidental pollution from shipping activity, development in the intertidal/subtidal, dredging and dredged spoil disposal, fishing and boating, introduction of non-native species.	Management Scheme for European Marine Sites, Biodiversity Action Plans, other coastal strategies, management plans and Management Agreements.
Ashdown Forest UK0030080 00 04 14 E 51 03 21 N	2729	Primary: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths Qualifying: N/A	Primary: N/A Qualifying: Great crested newt <i>Triturus cristatus</i>	Undergrazing, scrub encroachment. Possible long-term drying out of the site due to borehole extraction and transpiration from increase in vegetation cover.	Majority of site managed by Conservators of Ashdown Forest.
Aston Rowant UK0030082 00 56 55 W 51 40 06 N	127.75	Primary: <i>Juniperus communis</i> formations on heaths or calcareous grasslands Qualifying: <i>Asperulo-Fagetum</i> beech forests	Primary: N/A Qualifying: N/A	No details.	Approximately 95% of the site designated as NNR and is under the direct management control of English Nature.
Blackmill Woodlands UK0030090 03 32 39 W 51 33 41 N	71.01	Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: N/A	Primary: N/A Qualifying: N/A	Overgrazing.	Situated entirely on Common Land, and are subject to rights of common.
Bracket's Coppice UK0030095 02 41 15 W 50 51 38 N	53.66	Primary: N/A Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>)	Primary: Bechstein's bat <i>Myotis bechsteinii</i> Qualifying: N/A	No details.	Majority of the site owned by Dorset Wildlife Trust and Plantlife, and management plans for the two nature reserves take account of the bat's requirements. Land outside the nature reserves covered by Site Management Statements.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Butser Hill UK0030103 00 58 48 W 50 58 18 N	238.66	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>), <i>Taxus baccata</i> woods of the British Isles *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Spray-drift from intensively-managed arable land.	Within the South Downs ESA.
Cerne and Sydling Downs UK0030115 02 28 06 W 50 49 00 N	369.08	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Qualifying: N/A	Primary: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> Qualifying: N/A	Inappropriate grazing level.	Scrub removal and grazing regimes undertaken under ESA management plans and English Nature management agreements.
Dawlish Warren UK0030130 03 26 09 W 50 36 11 N	58.84	Primary: Humid dune slacks Qualifying: Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes'), fixed dunes with herbaceous vegetation ('grey dunes') *Priority feature	Primary: Petalwort <i>Petalophyllum ralfsii</i> Qualifying: N/A	Sand dune erosion, recreational pressure, spray-drift of chemicals.	A Site Management Statement being agreed on.
Dixton Wood UK0030135 02 01 50 W 51 58 47 N	13.14	Primary: N/A Qualifying: N/A	Primary: Violet click beetle <i>Limoniscus violaceus</i> Qualifying: N/A	Lack of future replacement pollards (age-class skewed to older generation) and game management practices.	Management Agreement for creation of new pollards and to prevent further loss.
Duncton to Bignor Escarpment UK0030138 00 37 37 W 50 54 50 N	214.47	Primary: <i>Asperulo-Fagetum</i> beech forests Qualifying: N/A	Primary: N/A Qualifying: N/A	Expansion of pheasant shoots.	Plantations of non-native conifers targeted for complete or partial removal. Deer population controlled by deer stalkers.
Emer Bog UK0030147 01 26 18 W 50 59 24 N	37.5	Primary: Transition mires and quaking bogs Qualifying: N/A	Primary: N/A Qualifying: N/A	Adjacent land-use affecting hydrological processes of the mire. Nutrient-enrichment and potential development.	Managed as nature reserve and site's importance raised through the Local Plan process to ensure that impacts of development proposals fully considered.
Exmoor and Quantock Oakwoods UK0030148 03 34 57 W 51 11 02 N	1,895.17	Primary: Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Qualifying: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) *Priority feature	Primary: Barbastelle <i>Barbastella barbastellus</i> Qualifying: Bechstein's bat <i>Myotis bechsteinii</i> , otter <i>Lutra lutra</i>	Overgrazing. Invasion of non-native species.	Minimum intervention but opportunities being taken to diversify age and species composition to restore near-natural conditions where possible.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Hackpen Hill UK0030162 01 29 31 W 51 33 34 N	35.83	Primary: N/A Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)	Primary: Early gentian <i>Gentianella anglica</i> Qualifying: N/A	Periodic damage by rapid fluctuations in rabbit numbers.	Grazing regime supported financially through an EN Management Agreement.
Hartslock Wood UK0030164 01 06 27 W 51 30 21 N	34.24	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) *Priority feature, <i>Taxus baccata</i> woods of the British Isles *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Not currently considered under significant threat.	Woodland Grant Scheme promotes retention of yew and removal of non-native tree species. Grassland area managed as a nature reserve by the local Wildlife Trust.
Hastings Cliffs UK0030165 00 39 08 E 50 52 07 N	183.72	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts Qualifying: N/A	Primary: N/A Qualifying: N/A	Recreational pressure. Adjacent farming practices. Effect of surrounding coastal protection schemes and offshore activities unknown.	No details.
Hestercombe House UK0030168 03 05 03 W 51 03 07 N	0.08	Primary: N/A Qualifying: N/A	Primary: Lesser horseshoe bat <i>Rhinolophus hipposideros</i> Qualifying: N/A	Human disturbance, change of use, development.	Current knowledge of bat movements by site managers good so there is no immediate threat.
Kennet Valley Alderwoods UK0030175 01 25 39 W 51 24 16 N	56.77	Primary: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Maintenance of constantly high groundwater.	No known threats to groundwater levels. Subject to low levels of intervention and natural processes are allowed to prevail to a large extent. A WGS scheme is in place.
Little Wittenham UK0030184 01 10 24 W 51 37 53 N	68.76	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Not considered to be under any known threat.	Provision of new ponds and the creation of hibernation sites for newts. Managed primarily for nature conservation and environmental education.
Lyppard Grange Ponds UK0030198 02 10 37 W 52 11 53 N	1.09	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Recreational pressure.	Development of a Management Plan. Action plan to remove stickleback, construct hibernacula and refugia, and water management systems being undertaken to secure conservation of the newt population.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Mendip Limestone Grasslands UK0030203 02 51 33 W 51 17 48 N	417.47	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Qualifying: European dry heaths, caves not open to the public, <i>Tilio-Acerion</i> forests of slopes, screes and ravines *Priority feature	Primary: N/A Qualifying: Greater horseshoe bat <i>Rhinolophus ferrumequinum</i>	Recreational pressure. Inappropriate grazing.	Commoning system on which the management of the Crook Peak part of the site depends is breaking down and may cause serious problems in the future.
North Downs Woodlands UK0030225 00 24 13 E 51 20 24 N	287.58	Primary: <i>Asperulo-Fagetum</i> beech forests, <i>Taxus baccata</i> woods of the British Isles *Priority feature Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)	Primary: N/A Qualifying: N/A	Under-grazing in parts.	Yew woodland managed as minimum intervention. Beech woodland as high forest with encouragement of beech regeneration. Chalk grassland needs continuous grazing.
Peter's Pit UK0030237 00 27 56 E 51 20 16 N	28.3	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Neglect and scrub invasion of newt breeding ponds. Urban development, water level potential threat.	EN working with the owners to make the site a secure nature reserve.
Quants UK0030242 03 09 32 W 50 57 11 N	20.29	Primary: N/A Qualifying: N/A	Primary: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> Qualifying: N/A	Disruption of highly interventionist management.	Marsh fritillary population restricted to a comparatively small area (c. 2 ha) and is kept high by a considerable level of management directed at producing 'ideal' habitat.
Richmond Park UK0030246 00 16 28 W 51 26 27 N	846.68	Primary: N/A Qualifying: N/A	Primary: Stag beetle <i>Lucanus cervus</i> Qualifying: N/A	High levels of recreational pressure.	The whole site has been declared a NNR.
River Axe UK0030248 03 02 21 W 50 45 33 N	25.78	Primary: Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation Qualifying: N/A	Primary: N/A Qualifying: Sea lamprey <i>Petromyzon marinus</i> , brook lamprey <i>Lampetra planeri</i> , bullhead <i>Cottus gobio</i>	Potential eutrophication from surrounding land.	Programme of surveys investigating the sources of potential problems. On completion, management advice will be provided to the perpetrators to minimise impacts.
River Lambourn UK0030257 01 25 37 W 51 27 43 N	27.27	Primary: Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation Qualifying: N/A	Primary: Bullhead <i>Cottus gobio</i> Qualifying: Brook lamprey <i>Lampetra planeri</i>	Localised higher water nutrient levels and siltation problems associated with sewage treatment works.	EN and the EA have agreed protocol for dealing with issues affecting the river.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
Shortheath Common UK0030275 00 53 38 W 51 07 25 N	58.94	Primary: Transition mires and quaking bogs Qualifying: European dry heaths, bog woodland *Priority feature	Primary: N/A Qualifying: N/A	Encroachment of invasive scrub and trees.	Wildlife Enhancement Scheme agreement has been entered into in an attempt to address the ecological deterioration.
Stodmarsh UK0030283 01 10 21 E 51 18 23 N	564.64	Primary: N/A Qualifying: N/A	Primary: Desmoulin's whorl snail <i>Vertigo moulinsiana</i> Qualifying: N/A	No details.	Approximately half of the site managed as a National Nature Reserve. Remainder managed in a way that is compatible with nature conservation.
West Dorset Alderwoods UK0030299 02 39 18 W 50 46 06 N	329.29	Primary: Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) *Priority feature Qualifying: <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), old acidophilous oak woods with <i>Quercus robur</i> on sandy plains	Primary: Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> Qualifying: Great crested newt <i>Triturus cristatus</i>	Surrounding land-use and management of water.	Agri-environment schemes, forestry management and planting grants, and Management Agreements are being examined with a view to addressing land-use concerns.
Wimbledon Common UK0030301 00 14 04 W 51 25 56 N	348.31	Primary: N/A Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths	Primary: Stag beetle <i>Lucanus cervus</i> Qualifying: N/A	Heavy recreation pressure.	No details.
Woolmer Forest UK0030304 00 51 01 W 51 05 08 N	666.68	Primary: Natural dystrophic lakes and ponds, European dry heaths, depressions on peat substrates of the <i>Rhynchosporion</i> Qualifying: Northern Atlantic wet heaths with <i>Erica tetralix</i> , transition mires and quaking bogs	Primary: N/A Qualifying: N/A	Neglect and encroachment of invasive scrub and trees. Military activities.	WES agreements being used to address ecological deterioration.
Briddlesford Copses UK0030328 01 13 15 W 50 42 38 N	167.22	Primary: N/A Qualifying: N/A	Primary: Bechstein's bat <i>Myotis bechsteinii</i> Qualifying: N/A	Recreation pressure.	Majority of site owned and managed by the Peoples' Trust for Endangered Species and is subject to a Forestry Commission Woodland Grant Scheme.
Dover to Kingsdown Cliffs UK0030330 01 22 57 E 51 08 38 N	183.85	Primary: Vegetated sea cliffs of the Atlantic and Baltic coasts Qualifying: Semi-natural dry grasslands and scrubland facies: on calcareous substrates	Primary: N/A Qualifying: N/A	Coastal squeeze.	Cliff-top grassland requires grazing, but where this is not feasible mowing is the preferred management. No immediate pressures on the vegetated sea cliff habitat.

Name, Code and Location ¹	Area (ha)	Annex I Habitat	Annex II Species	Vulnerability	Management
		(<i>Festuco-Brometalia</i>) (important orchid sites) *Priority feature			
Mottisfont Bats UK0030334 01 33 29 W 51 02 52 N	196.88	Primary: N/A Qualifying: N/A	Primary: Barbastelle <i>Barbastella barbastellus</i> Qualifying: N/A	No details.	70% of site owned by National Trust who have carried out woodland operations over recent years. 25% of the site is privately owned and not open to public access.
Singleton and Cocking Tunnels UK0030337 00 45 31 W 50 55 18 N	2.45	Primary: N/A Qualifying: N/A	Primary: Barbastelle <i>Barbastella barbastellus</i> Qualifying: Bechstein's bat <i>Myotis bechsteinii</i>	Human disturbance, long term tunnel collapse.	No details.
Parkgate Down UK0030338 01 06 10 E 51 10 16 N	6.94	Primary: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) *Priority feature Qualifying: N/A	Primary: N/A Qualifying: N/A	Not under any current threat.	Continuous grazing management essential. Site managed as a nature reserve.
Crookhill Brick Pit UK0030349 02 30 16 W 50 36 59 N	4.71	Primary: N/A Qualifying: N/A	Primary: Great crested newt <i>Triturus cristatus</i> Qualifying: N/A	Potential hazards (lighting, rats) from the adjacent waste transfer station. Lack of water body maintenance and introduction of invasive non-native plants.	Proposed designation of the land as a Local Nature Reserve.
Poole Bay to Lyme Bay Reefs (inshore pSAC) 02 52 47.08 W 50 39 59.38 N	60,750	Interest features include Annex I Reefs and Submerged or Partially Submerged Sea Caves		Fishing activity in the Lyme Bay Reefs, primarily scallop dredging, has degraded reef structure and biota. Physical damage from abrasion (e.g. anchoring).	Statutory closure on scallop dredging in the Lyme Bay area since July 2008.
Margate and Long Sands (pSAC) 02 21 16.16 E 51 32 11.34 N	55,878	Interest features include Annex I Sandbanks which are Slightly Covered by Sea Water all the Time		Dredging to maintain navigation channels (e.g. the Princes Channel, and aggregate extraction outside the site can lead to local hydrodynamic changes and impacts on benthic communities. A proposed offshore wind farm may generate physical changes to the structure of the banks through piling and cable laying.	Management practices to be developed to identify relevant threats from sources of physical damage and biological disturbance.

Table E.14 Summary Details of Relevant Special Protection Areas (SPAs) in SEA Area 5

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Walmore Common UK9007051 02 22 14 W 51 49 58 N	52.85	Over winter: Bewick's swan <i>Cygnus columbianus bewickii</i>	N/A	Water level issues, inappropriate grazing regime.	Water level management plan, currently in preparation, will ensure appropriate conditions retained for wintering bird interest.
Somerset Levels and Moors UK9010031 02 52 00 W 51 10 14 N	6,388.49	Over winter: Bewick's swan <i>Cygnus columbianus</i> , golden plover <i>Pluvialis apricaria</i>	Over winter: Teal <i>Anas crecca</i> , wigeon <i>Anas penelope</i> , lapwing <i>Vanellus vanellus</i> Assemblage qualification: Over winter, the area regularly supports 73,014 individual waterfowl including: Bewick's swan <i>Cygnus columbianus bewickii</i> , teal <i>Anas crecca</i> , golden plover <i>Pluvialis apricaria</i> , lapwing <i>Vanellus vanellus</i>	Agricultural improvement (e.g. conversion of grassland to arable, land drainage and fertilisers).	Water Level Management Plans, development of Raised Water Level Areas and ESA.
Chew Valley Lake UK9010041 02 37 07 W 51 20 02 N	575.73	N/A	Over winter: Shoveler <i>Anas clypeata</i>	Recreational pressure.	Bristol Water implemented a nature conservation strategy for site.
Exe Estuary UK9010081 03 26 32 W 50 38 50 N	2,345.71	Over winter: Avocet <i>Recurvirostra avosetta</i> , Slavonian grebe <i>Podiceps auritus</i>	Over winter: Dark-bellied brent goose <i>Branta bernicla bernicla</i> , dunlin <i>Calidris alpina</i> , oystercatcher <i>Haematopus ostralegus</i> , Black-tailed godwit <i>Limosa limosa islandica</i> , grey plover <i>Pluvialis squatarola</i> . Assemblage qualification: Over winter, the area regularly supports 23,811 individual waterfowl including: Slavonian grebe <i>Podiceps auritus</i> , dark-bellied brent goose <i>Branta bernicla bernicla</i> , oystercatcher <i>Haematopus ostralegus</i> ,	Recreational pressure. Dredging takes place in approach channel which could affect sediment movement patterns. Potential oil spill issues.	Exe Estuary Management Plan addresses the recreational, disturbance and potential oil spill issues. Substantial areas managed as nature reserves by RSPB, local wildlife Trust and local authorities.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			avocet <i>Recurvirostra avosetta</i> , grey plover <i>Pluvialis squatarola</i> , dunlin <i>Calidris alpina</i> , Black-tailed godwit <i>Limosa limosa islandica</i> .		
Chesil Beach and The Fleet UK9010091 02 31 10 W 50 36 40 N	748.11	N/A	Over winter: Dark-bellied brent goose <i>Branta bernicla</i>	Recreational pressure. Agricultural run-off as potential source of eutrophication. Introduction of non-native species. Port discharges. Close to one of the world's busiest shipping lanes and consequently risk of accidental oil pollution.	Much privately owned and managed as nature reserve. Part of Chesil is Crown Common land. Contingency plans exist for dealing with oil spills.
Dorset Heathlands UK9010101 02 09 33W 50 39 00N	8,168.79	During the breeding season: Dartford warbler <i>Sylvia undata</i> , nightjar <i>Caprimulgus europaeus</i> , woodlark <i>Lullula arborea</i> Over winter: Hen harrier <i>Circus cyaneus</i> , merlin <i>Falco columbarius</i>	N/A	Fragmentation through agriculture, forestry and urban development. Recreational pressure. Several old mineral extraction permissions, some still active. Decline in traditional agriculture.	Support schemes and management initiatives encouraging the re-establishment of traditional management now cover much of the heath. About 43% of the site held as NNRs, LNRs and non-statutory nature reserves.
Poole Harbour UK9010111 02 01 34 W 50 40 52 N	2,271.99	During the breeding season: Common tern <i>Sterna hirundo</i> , Mediterranean gull <i>Larus melanocephalus</i> Over winter: Avocet <i>Recurvirostra avosetta</i>	Over winter: Black-tailed godwit <i>Limosa limosa islandica</i> , shelduck <i>Tadorna tadorna</i> Assemblage qualification: Over winter, the area regularly supports 25,091 individual waterfowl including: shelduck <i>Tadorna tadorna</i> , avocet <i>Recurvirostra avosetta</i> , black-tailed godwit <i>Limosa limosa islandica</i> .	Growth of urban conurbation, associated infrastructure, and development of commercial port. Recreation pressure.	Wytch Farm oilfield has facilities within site; their maintenance and any risks from oil spills are dealt with according to agreed method statements and oil spill contingency plans. Harbour management policies.
East Devon Heaths UK9010121 03 21 32 W 50 40 18 N	1,119.94	During the breeding season: Dartford warbler <i>Sylvia undata</i> , nightjar <i>Caprimulgus europaeus</i>	N/A	Changes in agricultural management, water abstraction and quarrying in immediate vicinity.	Majority of site under positive conservation management.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Chichester and Langstone Harbours UK9011011 00 55 12 W 50 48 23 N	5,810.03	<p>During the breeding season:</p> <p>Little tern <i>Sterna albifrons</i>, sandwich tern <i>Sterna sandvicensis</i>, common tern <i>Sterna hirundo</i></p> <p>Over winter:</p> <p>Bar-tailed godwit <i>Limosa lapponica</i></p>	<p>Over winter:</p> <p>Pintail <i>Anas acuta</i>, shoveler <i>Anas clypeata</i>, teal <i>Anas crecca</i>, wigeon <i>Anas penelope</i>, turnstone <i>Arenaria interpres</i>, dark-bellied brent goose <i>Branta bernicla bernicla</i>, sanderling <i>Calidris alba</i>, dunlin <i>Calidris alpina alpina</i>, ringed plover <i>Charadrius hiaticula</i>, red-breasted merganser <i>Mergus serrator</i>, curlew <i>Numenius arquata</i>, grey plover <i>Pluvialis squatarola</i>, shelduck <i>Tadorna tadorna</i>, redshank <i>Tringa totanus</i></p> <p>Assemblage qualification:</p> <p>Over winter, the area regularly supports 93,230 individual waterfowl including: dark-bellied brent goose <i>Branta bernicla</i>, shelduck <i>Tadorna tadorna</i>, wigeon <i>Anas penelope</i>, teal <i>Anas crecca</i>, pintail <i>Anas acuta</i>, shoveler <i>Anas clypeata</i>, red-breasted merganser <i>Mergus serrator</i>, ringed plover <i>Charadrius hiaticula</i>, grey plover <i>Pluvialis squatarola</i>, dunlin <i>Calidris alpina</i>, sanderling <i>Calidris alba</i>, bar-tailed godwit <i>Limosa lapponica</i>, curlew <i>Numenius arquata</i>, redshank <i>Tringa totanus</i>, Turnstone <i>Arenaria interpres</i></p>	Recreational pressure. Eutrophication. Sea-level rise and coastal squeeze. Water abstraction.	Both harbours managed by statutory bodies whose remits include conservation of the natural environment. Numerous Local Authority and RSPB nature reserves around site. Management Scheme for the Solent Maritime SAC.
New Forest UK9011031 01 39 22 W 50 49 32 N	28,002.81	<p>During the breeding season:</p> <p>Dartford warbler <i>Sylvia undata</i>, honey buzzard <i>Pernis apivorus</i>, nightjar <i>Caprimulgus europaeus</i>, woodlark <i>Lullula arborea</i></p> <p>Over winter:</p> <p>Hen harrier <i>Circus cyaneus</i></p>	<p>During the breeding season:</p> <p>Eurasian Hobby <i>Falco subbuteo</i>, wood warbler <i>Phylloscopus sibilatrix</i></p>	Recreation pressure. Water level issues (e.g. drainage).	New Forest now managed as a National Park.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Portsmouth Harbour UK9011051 01 07 32 W 50 49 41 N	1,248.77	N/A	Over winter: Dark-bellied brent goose <i>Branta bernicla bernicla</i> , dunlin <i>Calidris alpina alpina</i> , black-tailed godwit <i>Limosa limosa islandica</i> , red-breasted merganser <i>Mergus serrator</i>	Modification of physical processes through large-scale land-claim, capital and maintenance dredging, sea defences. Sea level rise and coastal squeeze. Accidental pollution from shipping and heavy industrial activities, former military and waste disposal sites, re-distribution of contaminated sediments. Recreational pressure.	Portsmouth Harbour Plan (non-statutory) aims to address many of these issues. Other strategic issues addressed through the Management Scheme covering European Marine Sites within the Solent complex of estuaries.
Solent and Southampton Water UK9011061 01 31 33 W 50 44 25N	5,505.86	During the breeding season: Mediterranean gull <i>Larus melanocephalus</i> , little tern <i>Sterna albifrons</i> , roseate tern <i>Sterna dougallii</i> , common tern <i>Sterna hirundo</i> , sandwich tern <i>Sterna sandvicensis</i>	Over winter: Black-tailed godwit <i>Limosa limosa islandica</i> , dark-bellied brent goose <i>Branta bernicla</i> , ringed plover <i>Charadrius hiaticula</i> , teal <i>Anas crecca</i> Assemblage qualification: Over winter, the area regularly supports 51,361 individual waterfowl including: dark-bellied brent goose <i>Branta bernicla</i> , teal <i>Anas crecca</i> , ringed plover <i>Charadrius hiaticula</i> , black-tailed godwit <i>Limosa limosa islandica</i>	Modification of physical processes through large-scale land-claim, capital and maintenance dredging, sea defences. Sea level rise and coastal squeeze. Accidental pollution from shipping, heavy industrial activities and former waste disposal sites. Recreational and commercial pressure.	Shoreline Management Plans, Estuarine Management Plans and through the Management Scheme which will cover the European Marine Sites including the Solent and Southampton Water SPA.
Avon Valley UK9011091 01 47 46 W 50 47 02 N	1,385.08	Over winter: Bewick's swan <i>Cygnus columbianus</i>	Over winter: Gadwall <i>Anas strepera</i>	Water level issues.	Management agreements, site management statements, water level management plans and ESA agreements.
Porton Down UK9011101 01 39 15 W 51 07 45 N	1,237.04	During the breeding season: Stone curlew <i>Burhinus oedipnemos</i>	N/A	No significant issues.	Integrated land management plan.
Salisbury Plain UK9011102 01 53 11 W 51 15 14 N	19,688.88	During the breeding season: Stone curlew <i>Burhinus oedipnemos</i>	N/A	Inappropriate management due to military interests.	Integrated Land Management Plan (ILMP).

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
The Swale UK9012011 00 50 21 E 51 21 39 N	6,514.71	N/A	<p>Over winter: Dark-bellied brent goose <i>Branta bernicla bernicla</i>, dunlin <i>Calidris alpina alpina</i>, redshank <i>Tringa totanus</i></p> <p>Assemblage qualification: During the breeding season the area regularly supports: reed warbler <i>Acrocephalus scirpaceus</i>, teal <i>Anas crecca</i>, mallard <i>Anas platyrhynchos</i>, gadwall <i>Anas strepera</i>, ringed plover <i>Charadrius hiaticula</i>, reed bunting <i>Emberiza schoeniclus</i>, coot <i>Fulica atra</i>, moorhen <i>Gallinula chloropus</i>, oystercatcher <i>Haematopus ostralegus</i>, curlew <i>Numenius arquata</i>, grey plover <i>Pluvialis squatarola</i>, shelduck <i>Tadorna tadorna</i>, redshank <i>Tringa totanus</i>, lapwing <i>Vanellus vanellus</i></p> <p>Over winter, the area regularly supports 65,588 individual waterfowl including: dark-bellied brent goose <i>Branta bernicla</i>, gadwall <i>Anas strepera</i>, teal <i>Anas crecca</i>, oystercatcher <i>Haematopus ostralegus</i>, ringed plover <i>Charadrius hiaticula</i>, grey plover <i>Pluvialis squatarola</i>, dunlin <i>Calidris alpina</i>, curlew <i>Numenius arquata</i>, redshank <i>Tringa totanus</i>.</p>	Rapid erosion of intertidal habitat due to natural processes and effects of sea defences and clay extraction. Water borne recreation disturbance.	Terrestrial part of site depends on appropriate grazing and management of water quality and quantity.
Thames Estuary and Marshes UK9012021 00 35 47 E 51 29 08 N	4,838.94	<p>During the breeding season: <i>Avocet Recurvirostra avosetta</i>, hen harrier <i>Circus cyaneus</i></p>	<p>Over winter: Dunlin <i>Calidris alpina</i>, knot <i>Calidris canutus</i>, Black-tailed godwit <i>Limosa limosa islandica</i>, grey plover <i>Pluvialis squatarola</i>, redshank <i>Tringa totanus</i></p> <p>On passage: Ringed plover <i>Charadrius hiaticula</i></p>	Coastal squeeze and erosion of intertidal habitat. Water borne recreation disturbance. Direct land take and indirect disturbance and hydrological effects as a result of development.	Terrestrial part depends on appropriate grazing and management of water. Estuary Management Plan, Water Level Management Plan.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			Assemblage qualification: Over winter, the area regularly supports 75,019 individual waterfowl including: avocet <i>Recurvirostra avosetta</i> , grey plover <i>Pluvialis squatarola</i> , knot <i>Calidris canutus</i> , dunlin <i>Calidris alpina</i> , Black-tailed godwit <i>Limosa limosa islandica</i> , redshank <i>Tringa totanus</i> .		
Medway Estuary and Marshes UK9012031 00 40 38 E 51 24 02 N	4,684.36	During the breeding season: Avocet <i>Recurvirostra avosetta</i> , little tern <i>Sterna albifrons</i> , common tern <i>Sterna hirundo</i> Over winter: Avocet <i>Recurvirostra avosetta</i> , Bewick's swan <i>Cygnus columbianus bewickii</i>	Over winter: pintail <i>Anas acuta</i> , shoveler <i>Anas clypeata</i> , teal <i>Anas crecca</i> , wigeon <i>Anas penelope</i> , turnstone <i>Arenaria interpres</i> , dark-bellied brent goose <i>Branta bernicla bernicla</i> , dunlin <i>Calidris alpina alpina</i> , knot <i>Calidris canutus</i> , ringed plover <i>Charadrius hiaticula</i> , oystercatcher <i>Haematopus ostralegus</i> , godwit <i>Limosa limosa islandica</i> , curlew <i>Numenius arquata</i> , grey plover <i>Pluvialis squatarola</i> , shelduck <i>Tadorna tadorna</i> , greenshank <i>Tringa nebularia</i> , redshank <i>Tringa totanus</i> Assemblage qualification: During the breeding season the area regularly supports: kingfisher <i>Alcedo atthis</i> , mallard <i>Anas platyrhynchos</i> , short-eared owl <i>Asio flammeus</i> , pochard <i>Aythya ferina</i> , hen harrier <i>Circus cyaneus</i> , merlin <i>Falco columbarius</i> , red-throated diver <i>Gavia stellata</i> , cormorant <i>Phalacrocorax carbo</i> , lapwing <i>Vanellus vanellus</i> . Over winter, the area regularly supports 65,496 individual waterfowl including:	Rapid erosion of intertidal habitat. Disturbance from water borne recreation. Pressures from proposed transport and industrial developments.	Terrestrial part depends on appropriate grazing and management of water.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
			Red-throated diver <i>Gavia stellata</i> , great crested grebe <i>Podiceps cristatus</i> , cormorant <i>Phalacrocorax carbo</i> , Bewick's swan <i>Cygnus columbianus bewickii</i> , dark-bellied brent goose <i>Branta bernicla bernicla</i> , shelduck <i>Tadorna tadorna</i> , wigeon <i>Anas penelope</i> , teal <i>Anas crecca</i> , mallard <i>Anas platyrhynchos</i> , pintail <i>Anas acuta</i> , shoveler <i>Anas clypeata</i> , pochard <i>Aythya ferina</i> , oystercatcher <i>Haematopus ostralegus</i> , avocet <i>Recurvirostra avosetta</i> , ringed plover <i>Charadrius hiaticula</i> , grey plover <i>Pluvialis squatarola</i> , lapwing <i>Vanellus vanellus</i> , knot <i>Calidris canutus</i> , dunlin <i>Calidris alpina alpina</i> , black-tailed godwit <i>Limosa limosa islandica</i> , curlew <i>Numenius arquata</i> , redshank <i>Tringa totanus</i> , greenshank <i>Tringa nebularia</i> , turnstone <i>Arenaria interpres</i> .		
Pagham Harbour UK9012041 00 45 38 W 50 45 48 N	636.68	During the breeding season: Little tern <i>Sterna albigrons</i> , common tern <i>Sterna hirundo</i> Over winter: Ruff <i>Philomachus pugnax</i>	Over winter: Dark-bellied brent goose <i>Branta bernicla</i>	Historic land drainage for agriculture. Pollution from sewage.	Majority of the site is a Local Nature Reserve managed by West Sussex County Council.
Thanet Coast and Sandwich Bay UK9012071 01 22 47 E 51 18 18 N	1,870.16	During the breeding season: Little tern <i>Sterna albigrons</i> Over winter: Golden plover <i>Pluvialis apricaria</i>	Over winter: Turnstone <i>Arenaria interpres</i>	Recreational pressures and disturbance. Port development. Potential for oil spills both from vessels and Port Ramsgate. Eutrophication.	Oil spill contingency plans need to be kept updated. Management scheme for European marine site.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Dungeness to Pett Level UK9012091 00 44 59 E 50 55 50 N	1,474.04	During the breeding season: Common tern <i>Sterna hirundo</i> , little tern <i>Sterna albigrons</i> , Mediterranean gull <i>Larus melanocephalus</i> Over winter: Bewick's swan <i>Cygnus columbianus</i>	Over winter: Shoveler <i>Anas clypeata</i>	Coastal erosion. Bird predation. Possible disturbance from aircraft. Recreational pressure. Changing agricultural practices. Overgrazing and lowering of water levels.	Management agreements and water level management plans.
Lee Valley UK9012111 00 02 58 W 51 34 51 N	447.87	Over winter: Bittern <i>Botaurus stellaris</i>	Over winter: Gadwall <i>Anas strepera</i> , shoveler <i>Anas clypeata</i>	Water quality issues. Recreational pressure. Over-extraction of surface water for public supply.	Majority of the site managed in accordance with agreed management plans in which nature conservation is a high or sole priority.
Stodmarsh UK9012121 01 10 19 E 51 18 18 N	481.33	Over winter: Bittern <i>Botaurus stellaris</i> , hen harrier <i>Circus cyaneus</i>	During the breeding season: Gadwall <i>Anas strepera</i> Over winter: Shoveler <i>Anas clypeata</i> , gadwall <i>Anas strepera</i> Assemblage qualification: During the breeding season, the area regularly supports: sedge warbler <i>Acrocephalus schoenobaenus</i> , reed warbler <i>Acrocephalus scirpaceus</i> , wigeon <i>Anas penelope</i> , mallard <i>Anas platyrhynchos</i> , little tern <i>Sterna albigrons</i> , pochard <i>Aythya ferina</i> , tufted duck <i>Aythya fuligula</i> , snipe <i>Gallinago gallinago</i> , Savi's Warbler <i>Locustella luscinioides</i> , common grasshopper warbler <i>Locustella naevia</i> , great crested grebe <i>Podiceps cristatus</i> , water rail <i>Rallus aquaticus</i> , redshank <i>Tringa totanus</i> , lapwing <i>Vanellus vanellus</i> .	Recreation pressure and disturbance. Water abstraction.	Much is a NNR and therefore relatively secure and well managed. Management of parts of the site owned by private land owners being addressed by production of Site Management Statements.
Thursley, Hankley and Frensham Commons (Wealden Heaths Phase 1) UK9012131 00 41 52 W 51 09 44 N	1,869.95	During the breeding season: Dartford warbler <i>Sylvia undata</i> , nightjar <i>Caprimulgus europaeus</i> , woodlark <i>Lullula arborea</i>	N/A	Neglect/lack of appropriate management. Lowering of water levels due to water abstraction.	Thursley Common is a NNR managed by EN. Frensham and Witley Commons managed by National Trust and a large part of the site owned by the MoD.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Wealden Heaths Phase 2 UK9012132 00 51 02 W 51 05 11 N	2,053.83	During the breeding season: Dartford warbler <i>Sylvia undata</i> , nightjar <i>Caprimulgus europaeus</i> , woodlark <i>Lullula arborea</i>	N/A	Heathland fires and development associated with military training activities. Recreational pressure.	Consultation meetings with MoD and management plans on National Trust land.
Thames Basin Heaths UK9012141 00 44 18 W 51 22 18 N	8,274.72	During the breeding season: Dartford warbler <i>Sylvia undata</i> , nightjar <i>Caprimulgus europaeus</i> , woodlark <i>Lullula arborea</i>	N/A	Lack of grazing and other traditional management practices. Development pressure. Military use. Recreation pressure.	Countryside Stewardship and Wildlife Enhancement Schemes. Strategic approach to accommodating development being addressed through the Thames Basin Heaths Area Based Delivery Project.
South West London Waterbodies UK9012171 00 31 27 W 51 27 41 N	828.14	N/A	Over winter: Gadwall <i>Anas strepera</i> , shoveler <i>Anas clypeata</i>	Development pressures, vegetation succession, recreation. Potential future decommissioning of reservoirs and maintenance works, which may require winter draw-down of reservoirs.	Discussions with current owners and occupiers regarding future management, maintenance and decommissioning of the larger reservoirs, in order to maintain the site's interest.
Ashdown Forest UK9012181 00 04 12 E 51 03 44 N	3,207.08	During the breeding season: Dartford warbler <i>Sylvia undata</i> , nightjar <i>Caprimulgus europaeus</i>	N/A	Lack of management and grazing. Recreation pressure. Non-native species.	Integrated Management Plan of the Conservators of Ashdown Forest.
Severn Estuary UK9015022 03 02 57 W 51 13 29 N	24,662.98	During the breeding season: Bewick's swan <i>Cygnus columbianus bewickii</i>	Over winter: Gadwall <i>Anas strepera</i> , Russian white-fronted goose <i>Anser albifrons albifrons</i> , dunlin <i>Calidris alpina alpina</i> , shelduck <i>Tadorna tadorna</i> , redshank <i>Tringa totanus</i> Assemblage qualification: Over winter, the area regularly supports 84,317 individual waterfowl including: Bewick's swan <i>Cygnus columbianus bewickii</i> , Russian white-fronted goose <i>Anser albifrons albifrons</i> , shelduck <i>Tadorna tadorna</i> , gadwall <i>Anas strepera</i> , dunlin <i>Calidris alpina alpina</i> , redshank <i>Tringa totanus</i> , whimbrel <i>Numenius phaeopus</i> .	Land-claim, aggregate extraction/ dredging, physical developments such as barrage construction, flood defences, pollution (industrial, oil spillage), eutrophication and recreation.	Existing control measures and the Severn Estuary Strategy.

Name, Code and Location ¹	Area (ha)	Qualifying Features under Article 4.1 of the Directive	Qualifying Features under Article 4.2 of the Directive	Vulnerability	Management
Arun Valley UK9020281 00 31 40 W 50 55 05 N	528.62	Over winter: Bewick's swan <i>Cygnus columbianus bewickii</i>	Assemblage qualification: Over winter, the area regularly supports 27,241 individual waterfowl including: Bewick's swan <i>Cygnus columbianus bewickii</i>	Inappropriate grazing regime, fertilisers, drainage, water abstraction, river maintenance.	Much of site currently under appropriate management through organisations such as the Sussex Wildlife Trust and the RSPB. Water Level Management Plans.
Outer Thames Estuary (SPA) UK1452174 01 15 44.31 E 51 34 21.46 N	393,734	Qualifies as an SPA, supporting more than 1% (38%) of the UK population of the Annex I species, red-throated diver <i>Gavia stellata</i> Supported 6,486 wintering individuals (1989-2006/07)		Non-physical disturbance from shipping and recreational activity. Potential risk from entanglement in fishing gear.	Site management to be developed around operations which have been identified as generating vulnerabilities in order to maintain interest feature population and habitat extent.

Table E.15 Summary of Relevant Ramsar Sites in SEA Area 5

Code/Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK11004 00 31 40 W 50 55 05 N	Arun Valley	528.62	Area of wet meadows on the floodplain of the River Arun. The neutral wet grassland which is subject to winter, and occasional summer, flooding, is dissected by a network of ditches, several of which support rich aquatic flora and invertebrate fauna. Wintering wildfowl and breeding waders.	2, 5, 3	Water extraction, hunting or capture
UK11005 01 47 46 W 50 47 02 N	Avon Valley	1,385.08	River Avon displays wide fluctuations in water level and parts of the valley are regularly flooded in winter. The Avon valley has a greater range of habitats and a more diverse flora and fauna than any other chalk river in Britain. The valley includes one of the largest expanses of unimproved floodplain grassland in Britain, including extensive areas managed as hay meadow.	1, 6, 2	Agricultural drainage/reclamation, vegetation succession, sedimentation/siltation, pollution – fertilisers and sewage, reservoir/dam: flow regime, recreation disturbance, cutting/clearing of vegetation, introduction/invasion of flora.
UK11012 02 31 10 W 50 36 40 N	Chesil Beach and The Fleet	748.11	The Fleet is the largest and best example of a barrier-built saline lagoon in the UK and Chesil is one of the three major shingle structures in the UK. The salinity gradient, peculiar hydrographic regime and varied substrates, together with associated reedbed and intertidal habitats and the relative lack of pollution in comparison to most other lagoons, have resulted in the site becoming extraordinarily rich in wildlife. Outstanding communities of aquatic plants and animals are present, supporting large numbers of wildfowl, waders and seabirds.	6, 3, 1, 8, 2, 4	Sedimentation/siltation, pollution – fertilisers and agriculture, eutrophication
UK11013 00 55 12 W 50 48 23 N	Chichester and Langstone Harbours	5,810.03	Large, sheltered estuarine basins comprising extensive mud and sand flats exposed at low tide. Of particular significance for over-wintering wildfowl and waders and also a wide range of coastal and transitional habitats supporting important plant and animal communities.	5, 1, 6	Erosion, eutrophication, water diversion, introduction of exotic species, introduction/invasion of flora, pollution – sewage, recreation disturbance.
UK11021 02 09 33W 50 39 00N	Dorset Heathlands	6,730.15	Extensive and fragmented heathland areas centred around the estuary of Poole Harbour and adjacent to the urban conurbation of Bournemouth and Poole. Numerous examples of wet heath and acid valley mire. Transitions to coastal wetland and fen habitat types. The wetland flora and fauna includes a large assemblage of nationally rare and scarce species, especially invertebrates.	3, 2, 1	Eutrophication, pollution – unspecified, recreation disturbance, habitat burning, acid rain.
UK11025 03 26 32 W 50 38 50 N	Exe Estuary	2,345.71	Encompasses the waters, foreshore, low-lying land, three marshes and an unusual double spit across the mouth of the estuary and sand dunes of Dawlish Warren. Complex of habitats supports internationally important numbers of wintering and passage waterfowl, as well as populations of breeding birds and nationally important rare plants and invertebrates.	5, 6	Intensive aquaculture

Code/Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK11034 00 02 58 W 51 34 51 N	Lee Valley	447.87	Series of embanked water supply reservoirs, sewage treatment lagoons and former gravel pits. Waterbodies support internationally important numbers of wintering gadwall and shoveler and nationally important numbers of several other bird species. Contains a range of wetland and valley bottom habitats, both man-made and semi-natural, which support a diverse range of wetland fauna and flora.	2, 6	No factors reported
UK11040 00 40 38 E 51 24 02 N	Medway Estuary and Marshes	4,696.74	Complex of rain-fed, brackish, floodplain grazing marsh with ditches, and intertidal saltmarsh and mudflat. Support internationally important numbers of wintering waterfowl. Rare wetland birds breed in important numbers. The saltmarsh and grazing marsh of international importance diverse assemblages of wetland plants and invertebrates.	2, 6, 5	Eutrophication, erosion, recreation disturbance, transport infrastructure, dredging, water diversion.
UK11047 01 39 22 W 50 49 32 N	The New Forest	28,002.81	Area of semi-natural vegetation including valley mires, fens and wet heath within catchments whose uncultivated and undeveloped state buffer the mires against adverse ecological change. Habitats present are of high ecological quality and diversity with undisturbed transition zones. Other wetland habitats include numerous ponds and a network of small streams mainly acidic in character.	3, 2, 1	Recreation disturbance, drainage/reclamation, introduction/invasion of flora, commercial forestry.
UK11052 00 45 38 W 50 45 48 N	Pagham Harbour	636.68	Central area of saltmarsh and tidal mudflats with surrounding habitats including lagoons, shingle, open water, reed swamp and wet permanent grassland. Intertidal mudflats rich in invertebrate and algae, and provide important feeding areas for birds. Supports internationally important numbers of wintering pintail and nationally important numbers of dark-bellied brent goose, grey plover and black-tailed godwit.	6	Pollution – sewage.
UK11053 00 20 32 E 50 50 30 N	Pevensy Levels	3,577.71	One of the largest and least-fragmented lowland wet grassland systems in south-east England. Low-lying grazing meadows intersected by a complex system of ditches which support a variety of important wetland communities, including nationally rare and scarce aquatic plants and invertebrates. Notable assemblage of breeding and wintering wildfowl.	2, 3	Introduction/invasion of flora, pollution – sewage.
UK11054 02 01 34 W 50 40 52 N	Poole Harbour	2,439.2	Extensive intertidal mudflats support internationally important numbers of waterfowl in winter. These are fringed on the landward side by saltmarshes or reedbeds. River valleys of the lower Frome and Piddle support grazing marsh which is also important for wintering waterfowl.	3, 2, 5, 6, 1	Introduction/invasion of flora, introduction of exotic animals, eutrophication.
UK11055 01 07 32 W 50 49 41 N	Portsmouth Harbour	1,248.77	Large industrialised estuary which includes one of the four largest expanses of mudflats and tidal creeks on the south coast of Britain. Mudflats support large beds of narrow-leaved and dwarf eelgrass, extensive green alga and sea lettuce. Site supports internationally important numbers of wintering dark-bellied brent geese and nationally important numbers of grey plover, dunlin and black-tailed godwit.	3, 6	Coastal engineering, eutrophication, urban development.

Code/Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK11063 01 31 33 W 50 44 25N	Solent and Southampton Water	5,346.44	Comprises estuaries and adjacent coastal habitats including intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland, and grazing marsh. Habitats support internationally important numbers of wintering waterfowl, important breeding gull and tern populations and an important assemblage of rare invertebrates and plants.	6, 5, 1, 2	Dredging, erosion, pollution – unspecified.
UK11064 02 52 00 W 51 10 14 N	Somerset Levels and Moors	6,388.49	Contains the flood plains of the Rivers Axe, Brue, Parrett, Tone and their tributaries. Majority of site only a few metres above sea level and drains through a large network of ditches, rhynes, drains and rivers. Flooding may affect large areas in winter depending on rainfall and tidal conditions. Areas of open water, fen and reedbed. Internationally important numbers of wildfowl in winter and is one of the most important sites in southern Britain for breeding waders. The network of rhynes and ditches support an outstanding assemblage of aquatic invertebrates, particularly beetles.	6, 2, 5	Cutting/clearing of vegetation, erosion, pollution – unspecified, vegetation succession, eutrophication.
UK11065 00 31 27 W 51 27 41 N	South West London Waterbodies	828.14	Comprises a series of reservoirs and former gravel pits that support internationally important numbers of wintering <i>Anas strepera</i> and <i>Anas clypeata</i> .	6	No factors reported.
UK11066 01 10 19 E 51 18 18 N	Stodmarsh	481.33	Wetland site resulting in part from subsidence under the valley of the Great Ouse and aggregate extraction but lies within the natural floodplain of the river. Range of wetland habitats including open water, reedbeds, grazing marsh and alder carr. Supports a number of uncommon wetland invertebrates and plants, and provides breeding and wintering habitats for important assemblages of wetland birds.	2	Flooding, water diversion, vegetation succession, eutrophication.
UK11069 00 35 47 E 51 29 08 N	Thames Estuary and Marshes	5,588.59	Complex of brackish, floodplain grazing marsh ditches, saline lagoons and intertidal saltmarsh and mudflat. Support internationally important numbers of wintering waterfowl. The saltmarsh and grazing marsh of international importance for diverse assemblages of wetland plants and invertebrates.	6, 5, 2	General disturbance, erosion, dredging, eutrophication.
UK11070 01 22 47 E 51 18 18 N	Thanet Coast and Sandwich Bay	2,169.23	Consists of long stretch of rocky shore, adjoining areas of estuary, sand dune, maritime grassland, saltmarsh and grazing marsh. The wetland habitats support 15 British Red Data Book invertebrates, as well as a large number of nationally scarce species. Internationally important numbers of turnstone and nationally important numbers of wintering waders. Used by large numbers of migratory birds.	6, 2	Water diversion, urban development, general disturbance, overgrazing (livestock), recreation disturbance, eutrophication, pollution – agriculture, vegetation succession.
UK11071 00 50 21 E 51 21 39 N	The Swale	6,514.71	Complex of brackish and freshwater, floodplain grazing marsh with ditches, and intertidal saltmarsh and mudflat. Support internationally important numbers of wintering waterfowl. Rare wetland birds breed in important numbers. Saltmarsh and grazing marsh of international importance for diverse assemblages of wetland plants and invertebrates.	5, 6, 2	Erosion, recreation disturbance.

Code/Location	Name	Area (ha)	Description	Criteria*	Adverse Factors
UK11074 00 42 01 W 51 09 52 N	Thursley and Ockley Bogs	265.24	Valley mire complex within a matrix of heathland, where drainage is impeded, and a deep layer of peat has built up. Several areas of open water contribute to the overall diversity of the site, ranging from acidic boggy pools and ditches to large ponds.	3, 2	Water extraction, flooding.
UK11076 02 22 14 W 51 49 58 N	Walmore Common	52.85	Low-lying area in the Severn Vale subject to winter flooding. Variety of habitats including improved neutral grassland, unimproved marshy grassland and open water ditches. The common is part of a series of sites within the Severn Vale which, in winter, form an important refuge and feeding area for wildfowl.	6	No factors reported.
UK11081 03 02 57 W 51 13 29 N	Severn Estuary (Wales)	2,4662.98	Tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide swept sand and rock. Species-poor invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders. Extensive intertidal zone comprising mudflats, sand banks, shingle, and rocky platforms. Heavily grazed saltmarsh fringes the estuary with a range of saltmarsh types present.	1, 8, 5, 4, 3, 6	Recreation disturbance, industrial pollution, pollution – oil, eutrophication, erosion, dredging, pollution – unspecified.

Note: Ramsar criteria:*

1. sites containing representative, rare or unique wetland types
2. supports vulnerable, endangered, or critically endangered species or threatened ecological communities
3. supports populations of plant/animal species important for maintaining regional biodiversity
4. supports plant/animal species at a critical stage in their life cycles, or provides refuge
5. regularly supports 20,000 or more waterbirds
6. regularly supports 1% of the individuals in a population of one species/subspecies of waterbirds
8. important source of food for fishes, spawning ground, nursery and/or migration path

