

Figure D.1 Natural Areas Relevant to SEA Areas 2, 3 and 5

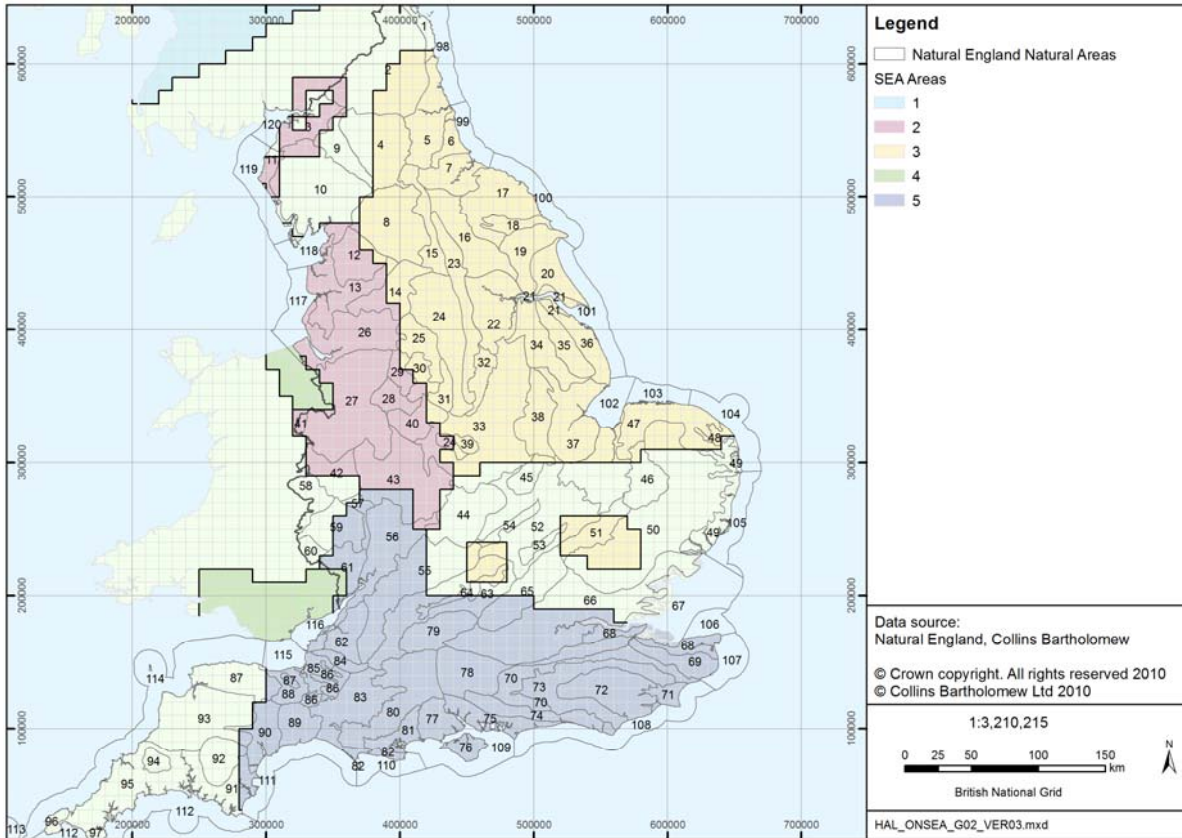


Table D.1 Overview of Natural Areas (SEA Areas 2, 3 and 5)

#	Natural Area	Summary
SEA Area 2: West Midlands, North West England and Southern Scotland		
3	Solway Basin	Intensively cultivated area situated between the Cumbria High Fells and Dales, the Eden Valley and the Border Uplands to the south and east, and the Solway Firth. Most of the area is mixed dairy and livestock farming with some arable. Towards the coast there are large areas of lowland raised mire. There are extensive areas of estuarine lowland raised mires along the southern edge of the Solway Firth, other basin mires, fens and marshy grasslands that are scattered thinly across the area.
9	Eden Valley	A landscape of enclosed, agricultural land and woodland between the Lake District Fells to the west, the Pennines to the east and the limestone country of Orton, Asby and the Yorkshire Dales to the south. To the north it merges into the coastal plain around Carlisle and the Solway. Semi-natural woodland is mostly associated with the river valleys and stream sides. There are several large conifer plantations. The area has outstanding aquatic and wetland habitats associated with the River Eden and its tributaries; the river gorge and valley woods, the few remaining heaths and mires, and the remaining examples of species-rich meadow and pasture.
10	Cumbria Fells and Dales	The mountains of the Lake District rise into the montane zone and include examples of high-level heaths, grasslands and rock and scree communities. The submontane zone has heath, grassland and mire communities and locally extensive woodlands which are rich in Atlantic bryophytes. Lakes, tarns and rivers are a very important component of the area and associated habitats include swamps and marshy grasslands. In the lowlands, woodland forms significant cover both on acid rocks and on the extensive outcrops of limestone. Grasslands include a range of communities and those on limestone are of particular interest. Some of the most important areas of limestone pavement in Britain occur here.

#	Natural Area	Summary
11	West Cumbria Coastal Plain	The area the agriculture is rich dairy pasture land but to the north this gives way to rougher grazing for sheep and beef cattle. The wildlife interest of the area lies in the outstanding coastal habitats of saltmarsh, sand dune, shingle beaches and coastal cliffs, the mossland at the head of the Duddon Estuary, the coastal tarns, basin mires and wet grasslands, the rivers and lagoons, the valley woodlands, and the rougher wet grasslands to the north and east of Workington.
12	Forest of Bowland	High Millstone Grit-capped summits and expansive areas of wild, open rolling heather moorland and blanket bog managed principally for grouse and sheep. Provide habitat for important populations of red grouse, hen harrier, merlin, peregrine and golden plover. Moorland incised by steep, wooded river valleys and surrounded by a soft, undulating landscape with rush-filled pastures, herb-rich hay meadows and broadleaved woodland, separated by lush agricultural grassland, parkland and water bodies.
13	Lancashire Plain and Valleys	Intensively-farmed area with arable, horticulture and dairy farming. Fragmented remnants of habitats remain including peat bogs, meadows, ancient woodlands. Lakes, reservoirs and coastal grazing marshes support breeding and wintering waterfowl and waders. Numerous field ponds support great crested newt.
118	Morecambe Bay	At low water Morecambe Bay forms a vast expanse of intertidal sandflats with smaller areas of mudflat around Walney Island and the Lune Channel. Large area of saltmarsh fringes the Bay and is grazed by stock in most cases. Near-natural transitions between intertidal flats, saltmarsh, swamp and woodland are well displayed. Series of low limestone cliffs rising from the saltmarsh. Diverse fauna including internationally important wintering wildfowl.
14	Southern Pennines	See East Midlands and Eastern England for details.
24	Coal Measures	See East Midlands and Eastern England for details.
26	Urban Mersey Basin	Very densely populated area with the major cities and industries developing around the rivers Mersey and Irwell and associated network of canals, rivers and valleys. Most of the habitats have been modified and created by human activity. Important often fragmented habitats include raised bogs, ancient woodlands and heathland. Great crested newts occur in network of ponds.
117	Liverpool Bay	The hinterland of Liverpool Bay is heavily developed with both industrial and residential areas prominent along the coastline. Intervening stretches of relatively unprotected coast of great importance. Dee, Mersey and Ribble estuaries among the largest in Britain with extensive areas of mudflats, sandflats, saltmarsh and grazing marsh. Support very high numbers of wildfowl, waders, seaduck and divers during winter, and during the spring and autumn migration periods. Sand dunes dominate the Sefton Coast.
27	Meres and Mosses	Important wetland area extending from Shrewsbury in the south to the Knutsford area in the north, as far east as central Staffordshire and as far west as Wrexham. The rural landscape in which they occur is a gently undulating plain broken by sandstone ridges with agriculture the main land use. Wetland habitats include open water, swamp, fen, alder carr, marshy grassland and peat bog.
28	Potteries and Churnet Valley	The sprawling conurbation of the Potteries contrasts with the wild landscape of the uplands to the north; the sheltered, wooded valleys and pastures of the Churnet Valley to the south-east, and the rural landscape of the Staffordshire/Cheshire plain to the south and west. Industrial expansion of the Potteries towns powered by the underlying, mineral-rich geology of the Coal Measures. Despite the considerable impact of industry, substantial areas of semi-natural habitat remain, principally in the steep-sided valleys of the River Churnet and its tributaries. Also largely unmodified, ancient countryside of small fields and well-developed hedgerows.
29	South West Peak	Landscape characterised by Millstone Grits and Coal Measures formed during the Carboniferous period. Mosaic of closely related landform and vegetation patterns including extensive tracts of wild, heather-dominated moorland and blanket bog with wooded cloughs. Around the small-scale enclosed farmsteads there are meadows, rushy pastures and more productive farmland. The area is important for moorland breeding birds and ground nesting waders.
30	White Peak	See East Midlands and Eastern England for details.
40	Needwood and South Derbyshire Claylands	Woodlands are a distinctive feature with the remaining woodland consisting of fragments around the former forest of Needwood. Parklands are also a significant feature of the landscape. The principal river draining the area is the Dove, which has a broad floodplain of low-lying, wet meadows. Formerly these were much more widespread particularly along the floodplains of the rivers Trent and Dove. Small, isolated fragments of traditional hay meadows remain.

#	Natural Area	Summary
41	Oswestry Uplands	The character of the Oswestry Uplands Natural Area lies in the undulating landscape of Carboniferous Limestone hills with calcareous grasslands and occasional rocky outcrops together with steep wooded valleys with marsh and fen habitats on the valley floor. This has resulted in a diverse assemblage of rare and uncommon flora and fauna. Changes in land management practice however, have caused some decline in the nature conservation interest within the Natural Area.
43	Midlands Plateau	Mineral wealth of the area was a major factor in the development of the Midlands Plateau as an industrial area and the area has an outstanding variety of geological features. On the sandstone, heathlands predominate, e.g. Cannock Chase and Sutton Park. Unimproved grasslands, although relatively rare, also a feature of the area. Habitats in urban areas include remnants of semi-natural habitats such as valley mires and ancient woodlands, meadows and ponds.
SEA Area 3: East Midlands and Eastern England		
1	North Northumberland Coastal Plain	Low-lying land running northwards from the Coquet valley to the River Tweed, and westwards to the Fell Sandstone moorland edge and low-lying land in Tweed valley. Characterised by an open agricultural landscape with Whin Sill outcrops and the river valleys of the Coquet, Aln, Tweed and Till. Broadleaved woodlands largely confined to these river valleys.
2	Border Uplands	Upland rolling moors of Northumberland and north-east Cumbria. Extensive open landscape of moorland and blanket bog. Farming dominated by sheep and cattle, with game management important at higher altitudes. Agricultural improvement, heavy grazing and drainage locally gives rise to acidic grasslands and extensive areas of purple moor grass-dominated moors, but the remaining moorlands are of high landscape and ecological value. Commercial forestry widespread.
4	North Pennines	Upland bogs blanket the open moorland with mosaics of heather, cotton-grass, bilberry, bracken and acid grassland and associated species. Geological features include exposures of Whin Sill, limestone caves and pavements and the area's rich mining heritage stems from veins of lead and zinc deposited in the limestone. Semi-improved pastures and hay meadows of the low-lying dales contain flower-rich meadows which attract snipe, redshank, curlew and lapwing. Alder, ash and oak woodland found in sheltered areas, gorges and valley sides.
5	Northumbria Coal Measures	Carboniferous Coal Measure rocks underlie this lowland area. The area has been worked for coal and associated minerals since Roman times and industrial developments and transport routes have developed to use the local products. River valleys provide important wildlife and habitat features within an intensively managed landscape. Heathlands, wetlands and flower-rich grasslands scattered through the area with ponds, often formed by mining subsidence of value for birds.
6	Durham Magnesian Limestone Plateau	Coincides with outcrop of Permian Magnesium-rich limestone escarpment. Predominantly agricultural in character. Urban areas include Sunderland, Peterlee and Newton Aycliff. Industrial character of the area shown by the many Limestone quarries and coal spoil heaps. Semi-natural habitats are concentrated on the limestone escarpment and the coast.
7	Tees Lowland	Considerable land-claim from the Tees Estuary but remnants exist including grazing marsh, open water and wetlands. Large areas of the Lower Tees are dense conurbation. In the south, there are internationally important rocks of Jurassic age and Pleistocene submerged forests. The land rises to the south to meet the North York Moors at an abrupt escarpment characterised by mixed woodland on the face and steep-sided gill woodlands. To the north and north-west the land rises gradually onto the Magnesian Limestone ridge. In places, the steep valleys of the Tees and the Leven retain characteristic ancient woodlands.
98	Northumberland Coast	Unusually high habitat diversity when compared with the majority of the North Sea coast. Varied nature derives from variety of rock and sediment types, including sandstone, limestone and hard volcanic rock. Extensive areas of intertidal sediment flats at Lindisfarne support extensive beds of eelgrass. Diverse hard rock reefs support rich benthic communities. Farne and Coquet Islands support important breeding and wintering colonies of seabirds and grey seals.
99	Tyne to Tees Coast	Varied coastline including limestone cliffs, rocky shore platforms, headlands and sandy bays, and sand dunes. Some mudflats survive on the tidal part of the Tyne and Wear, and Tees Estuary. Dumped coal waste forms a covering in the subtidal reaching up to the extreme high tide level.
8	Yorkshire Dales	Upland landscape of rounded hills and moors separated by broad valleys cut into Carboniferous rocks of limestone, millstone grit and shale. Geologically the area is considered to be outstanding for its 'karst' (limestone) landforms, cave systems and exposures of Carboniferous rocks.

#	Natural Area	Summary
		Habitats of international importance include limestone pavements and grasslands, blanket bog, upland heathland and upland hay meadow grasslands. Smaller areas of raised bog, fen and open water. Moorland supports important populations of grouse, merlin and golden plover.
12	Forest of Bowland	See West Midlands and North West England for details.
14	Southern Pennines	Upland areas of heather-dominated moorland, blanket bog and acid grassland. In places the effects of past enclosure, present-day overgrazing and past atmospheric pollution have reduced the once varied moorland vegetation to one dominated by purple moorgrass, cotton-grass and mat-grass. Many reservoirs are present providing valuable wintering and breeding habitat for wildfowl and waders. Fast-flowing streams drain the moorland plateau, cutting steeply inclined ravines into the surrounding hills with wet grasslands and varied woodlands present.
15	Pennine Dales Fringe	Rolling landscape forming the transition between the Pennines to the west and the lowlands to the east. Numerous small rivers drain the land and cut into the Carboniferous gritstone and limestone rocks before flowing into the five major rivers (Tees, Swale, Ure, Nidd and Wharfe) that cross the area. Characterised by pastoral agriculture with some mixed and arable farming on the main floodplains.
16	Vale of York and Mowbray	Predominantly flat, open land between the Pennines to the west and the North York Moors and Yorkshire Wolds to the east. Area's character influenced by widespread glacial deposits and the many rivers including the Derwent, Swale, Nidd, Ure, Wharfe and Ouse, which flow into the Humber Estuary. Riverine habitats, (e.g. the Lower Derwent Valley) are of nature conservation importance as are heathlands within the dominant arable land or improved grassland.
17	North York Moors and Hills	Underlying geology of uplands is sandstone and shale with a belt of limestone exposed along the southern edge. Large expanse of open heather moorland of considerable importance for its vegetation and breeding birds, especially golden plover and merlin. The area is dissected by numerous valleys supporting a mosaic of largely improved grasslands, semi-natural woodland, fast-running rivers and bracken on the slopes. Remnants of species-rich limestone grassland and calcareous fens in south. Some large tracts of conifer plantations.
18	Vale of Pickering	Low-lying, east-west plain bounded by the escarpment of the Yorkshire Wolds to the south, and the foothills of the North York Moors to the north. Rivers are a dominant influence in the landscape although most of the river habitats have been modified to some degree. The River Derwent is particularly important for its floodplain grasslands that support breeding and wintering bird populations.
19	Yorkshire Wolds	Undulating hills dissected by a large number of dry valleys, forming a characteristic chalk karst landscape. Intensively cultivated with crops but there are still numerous hillsides with floristically rich grasslands. Small number of ancient woods of nature conservation importance. Important chalk springs and streams support distinctive plants and insects. Jurassic and Cretaceous sediments of geological importance.
100	Saltburn to Bridlington	Coastline largely dominated by hard cliffs of chalk, limestone and sandstone with some soft cliffs of boulder clay. The high chalk cliffs of Flamborough Head support important seabird breeding populations. Wave-cut chalk platforms support a unique diversity of algal species.
20	Holderness	Low-lying plain of boulder clay, interspersed with areas of glacial gravel and sand. The hollows of the hummocky impervious clay once supported many pools and lakes, of which only Hornsea Mere (internationally important for birds) now remains. The River Hull fed by calcareous springs in the Yorkshire Wolds supports a variety of wildlife associated with the river and adjacent wetlands.
21	Humber Estuary	The Humber Estuary is 120km long, 14km at its widest point and drains one-fifth of the land mass of England. Supports a variety of coastal habitats including saltmarsh and mudflats. Ranks amongst the top five British estuaries for the size of the visiting waterfowl populations that overwinter and it is internationally recognised for its bird interest.
101	Bridlington to Skegness	The soft cliffs of Holderness which are subject to a high rate of erosion provide valuable material to sustain natural and man-made features within this maritime area. Diverse range of coastal habitats, including saline lagoons, saltmarsh, sandflats, mudflats, sand dunes and shingle bars, support an abundance of wildlife.
22	Humberhead Levels	Open, flat plain dominated by the major river systems of the Ouse and Trent which feed the western end of the Humber Estuary. Parts are now below sea-level and are maintained as agricultural land by pumping with fields bounded by dykes and hedgerows. Important peatlands of Thorne, Crowle, Goole and Hatfield Moors. Floodplain grasslands and localised areas of fen and reedbeds also important.

#	Natural Area	Summary
23	Southern Magnesian Limestone	Much of the light and dry soils have been cultivated leaving only small remnants of original vegetation. The unimproved grasslands and ancient woodlands harbour a rich flora, with associated scrub being important for insects. Base-rich flushes, rivers and streams form important wetland features. Quarries, cuttings, gorges and natural outcrops expose important geological sections in the limestone.
24	Coal Measures	Characterised by dense populations centred on a number of towns and cities that developed largely as a result of the underlying coal fields. Associated shales of geological importance as yield rich fossil floras. Gently undulating topography and the network of towns and cities is characterised by a matrix of acidic ancient and secondary woodlands, valley wetlands, neutral and acid grasslands, and mixed agriculture. Canals, mill-ponds and natural rivers are also important features.
25	Dark Peak	Upland heathland and blanket bog support nationally important breeding populations of golden plover, dunlin, merlin and short-eared owl. Rough grassland, hay meadow and pasture support lapwing, curlew and twite. Characteristic steep-sided valleys or cloughs with fast-flowing streams. Woodland largely confined to the cloughs and moorland fringes. Reservoirs are a characteristic feature. Geology dominated by Upper Carboniferous shales and sandstones.
29	South West Peak	See West Midlands and North West England for details.
30	White Peak	Distinctive area of pale Carboniferous limestone surrounded by dark gritstone moors. Gently rolling plateau dissected by steep-sided dales. The limestone or 'karst' scenery is dramatic with spectacular caves. Most important habitats are ancient ashwoods, calcareous grasslands and limestone rivers many of which hold populations of white-clawed crayfish. Plateau dominated by improved pasture but maintains characteristic drystone walls. Metal-rich grasslands, dewponds and hay meadows of nature conservation importance.
31	Derbyshire Peak Fringe and Lower Derwent	Small fast-flowing brooks run from the Dark Peak into the urban fringe of Chesterfield. Many of these were dammed in the past and these provide important habitats for pondweeds, great crested newts, migrating waders and breeding and wintering wildfowl. Mires and swamps are found along the river valleys. Woodland sparsely distributed, with concentrations in the narrow steep-sided valleys and isolated copses on higher ground. Mixed stock rearing with rough grazing and permanent pasture is the main land cover.
32	Sherwood	Land use dominated by agriculture and conifer plantations with only a small proportion of ancient or semi-natural woodland. Important wood pastures and heathland found in the parklands of the Dukeries. Wetlands are scarce with a few rivers, ornamental ponds, reedbeds and marsh.
33	Trent Valley and Rises	Despite a large part of the area being under intensive agriculture, important habitats include neutral grassland and a number of acidic and calcareous grassland sites associated with local differences of geology. Wet floodplain grasslands along the Soar and Trent rivers support some of the richest wildlife and are important for birds. Important woodlands include ancient semi-natural stands, wet woodland and parkland. Standing water habitats of particular wildlife interest are restored gravel pits, reservoirs and canals; there are no natural large standing waters.
34	North Lincolnshire Coversands and Clay Vales	Comprises two broad lowland plains or clay vales separated by a watershed that stretch south from the Humber Estuary to the Wash. The majority of the area is either under intensive farming, conifer plantations or quarries, but important habitats include heathlands, inland sand dunes and ancient woods.
35	Lincolnshire Wolds	Rolling landscape that rises over 150m above sea level and is largely under arable cultivation. Important habitats include calcareous, acidic and neutral grasslands. River headwaters and chalk streams constitute the main aquatic and riparian habitats, with small areas of marsh and springline flushes in the steep river valleys. Little woodland remains in the Wolds.
36	Lincolnshire Coast and Marshes	Generally flat coastal plain that is largely under arable cultivation. Despite this, there are habitats rich in wildlife including meadow and pasture grasslands. Wet grasslands near the coast support large numbers of wildfowl and coastal birds but drainage has led to a loss of most of this habitat. Important freshwater habitats include streams, drainage ditches, blow wells and disused sea bank clay pit.
102	The Wash	Largest estuarine system in the UK where the Rivers Ouse, Nene, Welland and Witham drain into the North Sea. Despite large freshwater input, marine processes dominate its physical and biological character. Large area of intertidal mudflats and sandflats support the largest numbers of migrating waterfowl of any site in the UK. Largest colony of common seals in England and an important nursery ground for flatfish. Valuable fringing habitats of conservation significance include saline lagoons, shingle structures and dune complexes.

#	Natural Area	Summary
37	The Fens	Low-lying, level terrain which rarely reaches 10m above sea level. Land is predominantly cultivated with little natural or semi-natural habitat remaining. Rich soils and varied intensive agricultural use emphasise the scale and geometry of the land and produce strong seasonal colour changes within the landscape. Woodland cover is very sparse. Marshes, swamps and fens add a distinct character to the area with straight drainage channels exerting a strong influence in the landscape.
38	Lincolnshire and Rutland Limestone	Lot of woodland with broadleaved woodland, scrub and wood pasture all found. Small pockets of calcareous grassland. Freshwater habitats include rivers and streams and a few flooded sand and gravel pits important for breeding birds. Farming is the principal land use and the farms have some habitats important for wildlife including unimproved grasslands, hedges, streams, ponds and woodland copses. Quarrying of limestone has gone on since the Roman period.
39	Charnwood	The upper peaks formed from Precambrian rocks which contain internationally important fossils. Charnwood Forest has a variety of habitats including extensive woodlands, some of which are remnants of medieval parks, and acid grassland and lowland heath on the hills. Fast-flowing streams support rare animals such as the freshwater crayfish and brook lamprey, and three large reservoirs and their associated wetland habitats are important for breeding and wintering wildfowl.
40	Needwood and South Derbyshire Claylands	See West Midlands and North West England for details.
45	Rockingham Forest	Well-wooded area of higher ground between the Rivers Welland and Nene in Northamptonshire and the Soke of Peterborough. The land between the wooded areas is mainly arable with fragments of neutral grassland. Quarrying has been a feature of the area for many centuries for the extraction of limestone for building and ironstone for the local iron industry.
46	Breckland	Gently undulating plateau underlain by Cretaceous chalk. Important glacial features include patterned ground and ice depressions (pingos) of high geological and biological importance. The open landscape is important for its remaining heathland and acid/calcareous mosaics of grass-heath and associated species. Chalk rivers.
47	North Norfolk	The gravels, sands, chalk erratics and boulder clays left behind after the ice age determine natural vegetation patterns. Diverse habitats include heaths and mires in the north-west, a number of ancient woods and heaths with valley mires in the centre, and a disparate area of highly fertile soils ending in soft slumping coastal cliffs.
103	Old Hunstanton to Sheringham	Consists of the narrow strip of coastline along North Norfolk and the adjacent shallow seabed. Coastal habitats amongst the best in Britain with extensive sand dunes and saltmarshes and the biological and geomorphological interest of the barrier island of Scolt Head and the large shingle spit at Blakeney Point is outstanding. The mobile cliffs between Overstrand and Mundesley include some of the finest soft cliff habitat in Britain.
104	Sheringham to Lowestoft	Consists of a narrow strip of coastline and the adjacent North Sea. Cliffs between Sheringham and Happisburgh demonstrate the stratigraphy of the area and, through natural erosion, supply material to the dunes of nature conservation interest further south. West Runton possesses one of the few areas of intertidal rock in East Anglia, including the only well-developed chalk reef found between North Yorkshire and Kent.
48	The Broads	The low-lying land in the river valleys of the Bure, Yare and Waveney contains a number of habitats, both fresh and saline, including rivers and broads, floodplain fens, dykes and ronds (strips of land that lie between the river and flood embankment). Internationally important for a wide range of outstanding wildlife features including plant species, invertebrates and wintering waterfowl.
SEA Area 5: Southern and South West England		
55	Cotswolds	Underlain by Jurassic Limestones of international importance for their fossils and stratigraphy. Area supports over 50% of the national resource of species-rich limestone grassland. Significant areas of ancient woodland.
56	Severn and Avon Vales	Low-lying, undulating plain through which the Rivers Severn and Avon, and their many tributaries, flow. Much of the land adjacent to the rivers still floods regularly in winter and there are relict wetland sites and features such as old pollards, wet pastures, ditches and tall hedges. Woodlands tend to be fairly small and are scattered throughout.

#	Natural Area	Summary
57	Malvern Hills and Teme Valley	Malvern Hills rise sharply from the Severn Valley floodplain to a height of about 400m. Hill tops covered by acid grassland and small areas of heathland, merging into bracken, scrub and woodland on the lower slopes. The River Teme, with its steep sides and wooded dingle valleys, has a narrow floodplain supporting arable and pasture land.
59	Central Herefordshire	Landscape predominantly lowland in character, with a few isolated flat-topped hills and a rolling plateau in the north-east. Large blocks of woodland occur on the more distinct hills and dingle woodlands occur where river sections run through a steep valley.
61	Dean Plateau and Wye Valley	Dominated by woodland with the largest areas of ancient semi-natural woodland in the Wye Valley and Woolhope Dome. Remnants of heathland found within some forested areas. Includes the middle and most of the lower sections of the River Wye, plus its many tributaries and numerous streams.
62	Bristol, Avon Valleys and Ridges	Characterised by alternating ridges and broad valleys with some steep wooded slopes and open rolling farmland. The large urban expanse of the city of Bristol dominates the central part. Important geological features include limestone caves and gorges. Important habitats include pockets of grassland, woodland and parkland and a number of reservoirs and rivers.
116	Severn Estuary	The immense tidal range (the second highest in the world) and classic funnel shape make the Severn Estuary unique in Britain and very rare worldwide. The intertidal zone of mudflats, sandbanks, rocky platforms and saltmarsh is one of the largest and most important in Britain. The estuarine fauna includes internationally important populations of waterfowl, important invertebrate populations and large populations of migratory fish.
63	Thames and Avon Vales	Gently rolling landscape with a mixture of arable and grass fields surrounded by thick hedgerows and interspersed with small woods. This is a very rural area with Oxford, Aylesbury and Swindon the only large built-up areas. Woodland is common on the slightly higher ground. Flooded gravel pits form a series of wetlands of high nature conservation value.
64	Midvale Ridge	Low band of limestone hills stretching east-west across the otherwise low-lying plain of the Thames and Avon clay vales. Soils are generally sandy and free-draining giving rise to a distinctive landscape of dry woodlands, sandy pastures and arable fields interspersed with many small settlements. Very important species rich habitats include calcareous fens and flushes and grassy heaths.
65	Chilterns	The chalk escarpment is a dominant geological and landscape feature which rises steeply from the Vale of Aylesbury. Habitats of importance for nature conservation comprise chalk downland and scrub, ancient semi-natural and secondary woodlands, and species-rich hedgerows with small areas of acid grassland.
66	London Basin	About one-third of the area is covered by London and the wildlife of the area is characterised by islands of semi-natural habitats. These habitats include large areas of woodland and heathland. Freshwater habitats include the River Thames and its tributaries, canals, flooded gravel pits reservoirs and associated wetlands.
67	Greater Thames Estuary	Coast and low-lying hinterland between the mouth of the Stour Estuary on the Essex/Suffolk border and the Swale Estuary in north Kent. Extensive saltmarshes and mudflats separated by man-made sea defences. Low lying areas were formerly subject to more frequent flooding, but are now mainly arable land, with much grassland and some substantial areas of grazing marsh. Urban development on the coast mainly confined to higher ground except in the inner Thames Estuary.
68	North Kent Plain	North of Canterbury, on the heavy clay soils and higher ground, is the heavily wooded area of the Blean. Further east on the gentle dip slope of the North Downs, the plain is rather poor in wildlife but is rich agricultural land. The chalk outlier that forms the Isle of Thanet characterised by an open, intensive arable landscape. Separating the above areas from each other are the floodplains of the Stour and Watsum, with low-lying marshes, reedbeds and wet grassland.
106	North Kent Coast	Much of the coast is of special conservation interest, comprising mainly unstable cliff and foreshore (shingle, sand and mudflats) with smaller areas of saltmarsh, coastal lagoons and cliff-top grassland. Internationally important numbers of sanderling and turnstone and nationally important populations of four more bird species. Supports about 10% of all the chalk coasts in northern European and is of international importance for its caves and reefs.
107	East Kent Coast	Important sand dune systems, chalk cliffs, cliff-top grassland, grazing marsh, saltmarsh, mudflats, sandflats and shingle foreshore. Nationally and internationally important populations of birds, including turnstone and little tern. The Natural Area is of international importance for its chalk marine cave and reef habitats.

#	Natural Area	Summary
69	North Downs	Extends across an outcrop of chalk from Farnham in the west to the white cliffs of Dover in the east. On the south-facing scarp slope, grazing has maintained a species rich grassland. North-facing dip slope has been agriculturally improved for arable farming and improved pasture. Many of the downland ridges are wooded with oak, ash, beech and yew. Patches of heathland on top of the Downs.
70	Wealden Greensand	Forms a conspicuous Greensand ridge running east to west across Surrey and Kent terminating in coastal cliffs at Folkestone Warren. Lowland heath is the most characteristic habitat. Many ancient woodlands have survived though often in fragmented patches and on steeper slopes. Several river valleys, notably the Arun, the Rother and the Wey support grazing meadows, marshy grassland, reedbeds and wet woodlands. Other habitats include dry acidic grassland and parkland.
71	Romney Marshes	Shingle beaches and flat marshland between Hythe in Kent and Pett in Sussex. Includes Dungeness, where the geomorphology, plants, invertebrates and birds are all of international importance. Human land use has been important in fashioning the present landscape, through the drainage of the marshes, military activity, gravel digging, and the construction of housing, roads and power stations.
108	Folkestone to Selsey Bill	Majority of coast very low-lying and heavily defended against flooding and erosion, although stretches of both chalk and clay cliffs exist. Apart from the cliffs much of the coastline is shingle. Muds and silts occur within Pagham Harbour and the estuaries of the Arun, Ouse, Cuckmere and Rother. Number of saline lagoons which support highly restricted lagoonal species. Wide range of birds such as wildfowl and waders in internationally important numbers. Chalk reefs occur below the chalk cliffs between Brighton and Eastbourne and continue some way into the sublittoral.
72	High Weald	Dominated by Lower Cretaceous sandstones and clays which form a landscape of high forested ridges and valleys. Numerous stream valleys and steep ravines and scattered outcrops of massive sandstone rocks. The Rivers Medway, Ouse and Rother flow through steep-sided valleys which are fundamental to the overall landscape character. Densely wooded with abundant semi-natural ancient woodland. Patchwork of small fields, hedges and sunken lanes. Important heathland in Ashdown Forest.
73	Low Weald and Pevensey	Predominantly low-lying region dominated by wet, heavy clay soils. Gently undulating topography, with steep-sided stream valleys, ridges and plateaux. Extensive ancient semi-natural woodland. Local areas of damp, neutral grassland support a rich meadow flora. Wetland habitats important component of the landscape and include rivers and streams, ponds and larger water bodies, and grazing marsh in the river floodplains, most notably Pevensey Levels.
74	South Downs	Underlain by chalk that extends from near Winchester to meet the sea at Beachy Head. Narrow, steep, mostly northerly-facing scarp of downland is broken only by the valleys of the Rivers Arun, Adur, Ouse and Cuckmere (and associated riverside habitats). Much of the south-facing slope has been cultivated for arable crops. Notable areas of chalk grassland, chalk heath and scrub on escarpment. Areas of ancient woodland concentrated in the west.
75	South Coast Plain and Hampshire Lowlands	Landscape split between the generally open, often featureless landscape of the coastal plain and the more varied landscape in the west. Although relatively small in extent, the south-facing slopes of Portsdown Hill support some high quality chalk grassland. The floodplains of the chalk rivers Test and Itchen contain some botanically rich neutral grassland and fen and fen-meadows occur.
76	Isle of Wight	The main habitats supported on the island include chalk grassland, neutral meadows, ancient semi-natural broad-leaved woodland and relict heathland and acid grassland. Important fossils from Lower Cretaceous to the Lower Tertiary sections and the cliffs and landslips support a number of rare plants.
109	Solent and Poole Bay	Despite its heavy industrial and recreational use, the area includes important natural and undisturbed lengths of coast. Extensive areas of intertidal mudflats, saltmarshes and shingle habitats support important numbers of migratory wildfowl and waders and resident seabird colonies. The area contains the highest density of brackish water lagoons in the country (15% of the national resource) which support a number of rare, specialist plants and animals. The coastline exposes a sequence of Cretaceous and Tertiary rocks of international importance.
77	New Forest	Open landscapes include the broad floodplain of the River Avon, the open marshes towards the coast and extensive tracts of heathland. More intimate enclosed landscapes are provided by the countryside of villages, hedged lanes, small fields, and coppice woodlands, grazed wood pastures and forestry plantations. The complex of heathland, mire and pasture woodland is unique and owes its character to the historic common grazing system.

#	Natural Area	Summary
78	Hampshire Downs	Part of the broad belt of chalk downland which runs through central southern England. Large scale landscape of open rolling country with broad, gently domed undulating plateaux dissected by both steep and shallow valleys, numerous distinct hilltops, ridges and scarps. The main habitats include extensive chalk grasslands, ancient woodlands, river valleys with chalk streams, and arable headlands.
79	Berkshire and Malborough Downs	Chalk downlands with important chalk grasslands and weathered sarsen stones. Key wildlife habitats are broadleaved woodland, wood pasture, grazing marsh and associated tall fen, the rich chalk rivers of the Kennet, Lambourne and Pang and the remaining fragments of biodiversity-rich arable land with its populations of rare plants and animals.
80	South Wessex Downs	Most notable habitats are chalk grassland including Salisbury Plain, chalk rivers, woodland and arable land, with smaller areas of meadow land and wetland habitats. The main geological features are chalk plateaux, scarp and dip slopes, clay with flints deposits and valleys, both dry and occupied by rivers and streams.
81	Dorset Heaths	Valley mires are a particular feature of the heathland and fen vegetation occurs in some of the river valley wetlands and on the edge of the heathland where the water is affected by the nearby chalk. Four significant rivers flow within floodplains through the area and these support important plant, insect and bird communities.
82	Isles of Portland and Purbeck	Calcareous grassland is the most extensive semi-natural habitat with fine examples on the chalk and limestone of Purbeck and Portland. Woods of various sizes scattered within the area with many of these ancient. Disused quarries and tunnels left behind by the stone quarrying industry provide valuable refuges for wildlife (e.g. bats).
110	South Dorset Coast	At Studland the sheltered chalk coastline supports important algal communities and beds of eelgrass. The southern Purbeck coastline is exposed and geologically varied and includes the Purbeck Marine Wildlife Reserve. Sea bed consists mainly of rocky reefs and ledges and coarse sand and gravel waves. Portland Harbour is a sheltered, enclosed bay and is of high scientific interest for its marine communities and species.
83	Wessex Vales	Characterised by abundance of small ancient woods linked by a network of species-rich hedges enclosing pastures and meadows. Deeply incised valleys contain streams and wet woodlands. Lowland wood pastures and parklands of international importance contain rare epiphytic lichens. The diverse range of habitats present including the mines and quarries of the Vale of Wardour are important for bats.
84	Mendip Hills	Underlain by limestone and supports characteristically species-rich grasslands and woodlands on thin soils. The geology of the area is important with fossil-rich exposures, caves and a spectacular limestone gorge. Large reservoirs in the area are important for their populations of wintering wildfowl. Caves and mines provide winter roosts for bats and the dormouse has one of its strongest British populations in the woods and hedgerows of the Mendip Hills.
85	Somerset Levels and Moors	Largest area of lowland wet grassland and associated wetland habitat remaining in Britain, covering about 35,000ha in the floodplains of the rivers Axe, Brue, Parrett and Tone. Used for summer cattle grazing often in conjunction with hay or silage production, with willow growing an important traditional activity. Supports internationally important numbers of waterfowl in winter and breeding waders.
115	Bridgwater Bay	A succession of limestones and shales of Triassic and Jurassic age form low cliffs from Blue Anchor to Hinkley Point. To the north the hard Carboniferous Limestone of Brean Down forms extensive sheer cliffs. Between Hinkley Point and Brean Down the estuaries of the Parrett and Brue cut through the low-lying alluvium of the Somerset Levels. Much of the grazing marsh below high tide mark and protected from tidal inundation by a combination of dune systems, shingle ridges and constructed earth banks.
86	Mid Somerset Hills	Steep hillsides rising above the Somerset Levels and Moors are the most characteristic feature of the area. Underlying geology is of Late Triassic and Early Jurassic sediments which contain many fossils. Habitats highly characteristic of the area include ash-maple woodlands, calcareous grasslands and neutral grasslands. These habitats are linked to a system of hedgerows of high conservation value.
87	Exmoor and the Quantocks	Exmoor is fringed by a ring of undulating hill slopes which, to the north, are truncated by the steep cliffs of the Bristol Channel Coast. Elsewhere the hills gradually fall away to merge with the surrounding rolling landscapes of the Culm Measures of Devon and Somerset. Numerous streams radiate from the central upland, many of them combining to form several major deep valleys, often wooded, cutting through hill slopes and creating the characteristic hog's-back ridges.

#	Natural Area	Summary
88	Vale of Taunton and Quantock Fringes	Comprises broad valley running between the Quantock and the Brendon Hills extending east to Bridgwater and the Somerset Levels. Underlying geology largely Permo-Triassic Mudstones. Woodland cover is low with most woods being small farm copses, however there are many trees and shrubs associated with ancient hedgerows. Semi-natural habitats are generally highly fragmented within a quite intensively farmed landscape. Linear features such as the hedgerows and the rivers and streams are critical in maintaining the wildlife interest of the area.
89	Blackdowns	Plateaux area which includes the catchments of the rivers Culm, Axe and Otter. Many of the valleys have a network of small, hedge-lined fields that are generally used for pasture, although other land uses include forestry and tourism. Underlain by Cretaceous Upper Greensand, although some of the westernmost outcrops of Chalk in England also occur. Important habitats include lowland heathland, wet heath and acid grassland, purple moor-grass and rush pastures and other mires. One of the most important Natural Areas for ancient and species-rich hedgerows.
111	Lyme Bay	Comprises over 150km of the most varied, spectacular and ecologically important coastline in England. The variety and interest relates to the complex geology, which is renowned for its layers of Jurassic rock with fossil remains. Important coastal habitats include shingle ridges, sand dunes, estuaries, brackish lagoons, soft and hard sea cliffs, and woodland. The Fleet, a large saline lagoon, supports several nationally rare and scarce species.
90	Devon Redlands	Characterised by the New Red Sandstone Rocks which underlie the area around Exeter, including the lower catchment of the River Exe and a significant part of the River Otter catchment. Lowland area dominated by mixed farmland with a scattering of towns and villages including Exeter City. The area is of international importance for its lowland heathland. Other notable habitats include ancient woodland, hedgerows, rivers, canals, lush fens and wildflower-rich grasslands.
91	South Devon	Undulating landscape of rolling hills dissected by numerous river valleys. Geology of the area is of considerable significance, particularly in quarry, mine and coastal exposures. Lowland heathland, species-rich neutral and calcareous grasslands, freshwater marsh and lagoons are of national importance. Other notable habitats include ancient woodlands, lowland farmland and hedgerows, ponds, rivers and streams and urban habitats, particularly in Plymouth and Torbay.
92	Dartmoor	Largest area of unglaciated moorland in Britain and also the largest granite massif in England. The moor is of international importance for its blanket bogs, upland heaths and valley mires and supports breeding populations of several upland birds at the extreme southern edge of their range in Europe. Other important wildlife habitats include upland oak woodland, Rhos pasture and fast-flowing rivers.
93	The Culm	The Culm Measures are named after the Carboniferous slates, shales and sandstones which underlie the area. Predominant land use is grass production for livestock. Contains one of the greatest concentrations of species-rich grasslands remaining in the UK of Rhos pastures, known locally as Culm Grassland. Fields separated by a rich network of species-rich hedges and copses which support much biodiversity. Three major rivers cross the Culm Measures, the Taw, Torridge and Tamar, and together these support the greatest density of otters in England.

Source: Natural England Natural Areas Webpage (<http://www.naturalareas.naturalengland.org.uk/>)