

European Offshore Wind Deployment Centre Environmental Statement

Chapter 14: Statutory Designations and Conservation

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|--------|---|----|
| 14 | STATUTORY DESIGNATIONS AND CONSERVATION | 4 |
| 14.1 | Conservation Designations | 7 |
| 14.1.1 | Requirement for a Habitats Regulation Appraisal (HRA) | 8 |
| 14.1.2 | Marine (Scotland) Act 2010 | 17 |
| 14.2 | References | 18 |

14 STATUTORY DESIGNATIONS AND CONSERVATION

- 1 This section of the ES is for information and is not an assessment chapter. Although the proposed site does not lie within a designated area, the north-east coast of Scotland does support many sites of national and international importance for wildlife. Table 14.1 presents the designated sites that may be affected by the proposed EOWDC. These sites are identified on Figure 14.1. Any effects on designations have been considered in the individual impact assessments.

| TABLE 14.1 Designated Sites Potentially Impacted By the Proposed EOWDC | | |
|---|--|--|
| Designation | Approximate distance from proposed EOWDC (km) | Citation Information |
| Special Areas of Conservation (SACs) | <i>Convention of Natural Habitats and of Wild Fauna and Flora Directive (92/43/EEC) transposed in the UK through the Conservation (Natural Habitats) Regulations 1994.</i> | |
| River Dee SAC | 7.5 | Annex II species, Freshwater Pearl Mussel, Atlantic Salmon, Otter |
| Sands of Forvie SAC | 7.2 | Annex I habitats, Embryonic shifting dunes, shifting dunes along the shoreline with <i>Ammophila arenaria</i> , decalcified fixed dunes with <i>Empetrum nigrum</i> , humid dune slacks |
| Buchan Ness to Collieston SAC | 12.2 | Annex 1 habitats, vegetated sea cliffs |
| River South Esk SAC | 63 | Annex II species: Atlantic salmon, Freshwater pearl mussel |
| Firth of Tay and Eden Estuary SAC | 96 | Annex II species: Common seal Annex I habitats: Estuaries, Intertidal mudflats and sandflats, Subtidal sandbanks |
| Isle of May SAC | 119 | Annex II species: Grey seal Annex I habitats: Reefs |
| Moray Firth SAC | 150 | Annex II species: Bottlenose dolphin Annex I habitats: Sandbanks which at all times are covered by seawater |
| Berwickshire and North Northumberland Coast SAC | 150 | Annex II species: Grey seal Annex I habitats: Large shallow inlets and bays' Mudflats and sandflats not covered by seawater at low tide, Reefs, Submerged or partially submerged sea caves |
| Special Protection Areas (SPAs) and Ramsar Sites | <i>Council Directive 79/409/EEC on the Conservation of Wild Birds</i> | |
| Ythan Estuary, Sands of Forvie and Meikle Loch SPA & Ramsar | 7.2 | Qualifying species, Article 4.2 pink-footed goose, Article 4.1 Sandwich tern, common tern, little tern Article 4.2 eider, redshank and lapwing, pink-footed goose |
| Buchan Ness to Collieston SPA | 9.5 | Article 4.2: holding in excess of 20,000 seabirds: fulmar, shag, kittiwake, herring gull and guillemot. |
| Loch of Skene SPA & Ramsar | 21 | Qualifying species: Article 4.1: whooper swan, greylag goose. |
| Fowlsheugh SPA | 31.1 | Qualifying species: kittiwake, guillemot, Article 4.2 seabird assemblages: fulmar, herring gull and razorbill |
| Loch of Strathbeg SPA & Ramsar | 47.6 | Qualifying species: Sandwich tern. Article 4.2 waterfowl assemblages: whooper swan, pink-footed goose, barnacle goose, greylag goose, teal |
| Montrose Basin SPA & Ramsar | 63 | Article 4.2 over winter, graylag goose, knot, pink-footed goose, redshank Article 4.2 waterfowl assemblage: dunlin, oystercatcher, eider, wigeon, shelduck, redshank, knot, graylag goose, pink-footed goose. |
| Troup, Pennan and Lion's Heads SPA | 74.3 | Article 4.2 seabird assemblages: fulmar, kittiwake, guillemot, herring gull and razorbill. |

| TABLE 14.1 Designated Sites Potentially Impacted By the Proposed EOWDC | | |
|---|--|---|
| Designation | Approximate distance from proposed EOWDC (km) | Citation Information |
| Firth of Tay & Eden Estuary SPA & Ramsar | 96 | Qualifying species Article 4.1 breeding: marsh harrier, little tern Article 4.2 wintering redshank Article 4.2 waterfowl assemblage, pink-footed goose, greylag goose, cormorant, shelduck, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, goosander oystercatcher, grey plover, sanderling, dunlin, black-tailed godwit |
| Forth Islands SPA | 124.4 | Qualifying species: Article 4.1 Annex 1 species: Arctic tern, roseate tern, common tern, Sandwich tern. Article 4.2 migratory species; Northern gannet, European shag, lesser black-backed gull, Atlantic puffin Article 4.2 Seabird assemblage: razorbill, common guillemot, black-legged kittiwake, herring gull, great cormorant, northern gannet, lesser black-backed gull, European shag, Atlantic puffin, northern fulmar, Arctic tern, common tern, roseate tern, Sandwich tern |
| Firth of Forth SPA | 134 | Article 4.1 wintering populations: red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit Article 4.1 post-breeding: Sandwich tern Article 4.2 wintering populations pink-footed goose, shelduck, knot, redshank, turnstone. Article 4.2 wintering waterfowl assemblage: great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard, lapwing |
| Fair Isle SPA | 298 | Qualifying species: Arctic skua, Arctic tern, Fair Isle wren, fulmar, gannet, great skua, guillemot, kittiwake, puffin, razorbill, shag, Seabird assemblage |
| National Nature Reserves (NNRs) | <i>National Parks and Access to the Countryside Act (1949)</i> | |
| Forvie NNR | 7.2 | Sand dune, foreshore, estuarine, spit, dune heath, slacks, rough pasture and cliffs habitat |
| St Cyrus NNR | 53 | Sand dune, heathland and cliffs |
| Sites of Special Scientific Interest (SSSIs) | <i>Wildlife and Countryside Act (1981/1985)</i> | |
| Corby, Lily and Bishops Lochs SSSI | 6.7 | Wetland sites, aquatic vegetation, wildfowl roost |
| Foveran Links SSSI | 4.8 | Mobile foreshore and dunes, interesting vegetation assemblages, migrating birds, moulting |

| TABLE 14.1 Designated Sites Potentially Impacted By the Proposed EOWDC | | |
|---|--|---|
| Designation | Approximate distance from proposed EOWDC (km) | Citation Information |
| | | and passage sea ducks and divers, and coastal geomorphology |
| Sands of Forvie and Ythan Estuary SSSI | 7.2 | Sandwich tern, common tern and little tern |
| Meikle Loch and Kippet Hills SSSI | 11 | Pink-footed goose, greylag goose, teal, pochard, wigeon, tufted duck. |
| Collieston to Whinnyfold SSSI | 15 | Breeding seabirds, guillemot, kittiwake, shag, razorbill, fulmar |
| Loch of Skene SSSI | 21 | Breeding tufted duck, Non-breeding, goosander, goldeneye, mallard, pochard, teal, wigeon, common gull, greylag goose. |
| Bullers of Buchan Coast SSSI | 22 | Maritime cliff habitat. Breeding bird assemblage: guillemot, shag, kittiwake, herring razorbill, puffin |
| Fowlsheugh SSSI | 31.1 | Breeding seabirds, kittiwake, guillemot, razorbill, puffin, fulmar shag |
| Loch of Strathbeg SSSI | 47.6 | Wildfowl: pochard, tufted duck, wigeon, goldeneye, goosander, mute swan, pink-footed goose, greylag goose, Seaduck, Divers |
| St Cyrus and Kinnaber Links SSSI | 53 | Sand dunes, salt marsh, grassland, breeding birds: fulmar, shelduck, eider, curlew, redshank, ringed plover, oystercatcher, sedge warbler, grasshopper warbler, wheatear, stonechat, whinchat, kestrel, buzzard, sparrowhawk and peregrine. |
| Other Designations | <i>Ministerial Conference on the Environment (1973); Countryside Act 1968; National Parks and Access to the Countryside Act (1949)</i> | |
| Donmouth Local Nature Reserve | 5.0 | Birds that feed and roost, Grey seals |
| Balmedie Country Park | 2.7 | Recreation and leisure interests |
| Forvie Biogenetic Reserve | 7.2 | Heathland Interest. |

- 2 There are no other national or local landscape designations such as national scenic areas within the vicinity of the proposal that have the potential to be affected by the proposed project.
- 3 In pre-scoping consultation, SNH highlighted, in conjunction with the JNCC that they are in the process of identifying possible marine SPAs. Currently, there have been no sites identified within Aberdeen Bay.

14.1 Conservation Designations

- 4 A number of protected sites and species in the vicinity of the proposed EOWDC site are designated both internationally and nationally (Table 14.1). The following section provides details of these designations and sites identified of relevance to the proposed project.

14.1.1 Requirement for a Habitats Regulation Appraisal (HRA)

- 5 Under the Conservation (Natural Habitats, & c.) Regulations (as amended), the relevant Competent Authority (in this case the Scottish Government) must consider the effect of a development on the integrity of a European site. If the development is considered likely to have a significant effect on that site, the competent authority would undertake a Habitats Regulation Appraisal using information supplied as part of the EIA process to accurately determine risk to site integrity. Special Areas of Conservation (SACs) or Special Protection Areas (SPAs) constitute a European site.
- 6 Initial consultation with statutory bodies has indicated that the interaction between the proposed EOWDC and European sites in the wider area would need to be considered as part of the EIA process and that Habitats Regulation Appraisal may be required.

14.1.1.1 International Sites

Ramsar Sites

- 7 These sites are internationally important wetland sites protecting wildfowl habitat. Ramsar sites are designated under the Convention of Wetlands of International Importance. The Convention was adopted in Ramsar, Iran, in 1971 and ratified by the UK Government in 1976.

Natura 2000 Sites

- 8 The two most influential pieces of European legislation relating to nature conservation are the “Habitats” Directive and the “Birds” Directive. The ‘Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora’, commonly known as the Habitats Directive, adopted in 1992, complements and amends the 1979 ‘Council Directive 79/409/EEC on the conservation of wild birds’, commonly known as the Birds Directive. A further Directive *On The Conservation of Wild Birds* (Directive 2009/147/EC) is a codified version of the 1979 Directive.
- 9 The Birds Directive protects all wild birds, their nests, eggs and habitats within the European Community. It gives EU member states the power and responsibility to classify Special Protection Areas (SPAs) to protect birds, which are rare or vulnerable in Europe as well as all migratory birds that are regular visitors.
- 10 The Habitats Directive builds on the Birds Directive by protecting natural habitats and other species of wild plants and animals. Together with the Birds Directive, it underpins a European network of protected areas known as Natura 2000. This network includes SPAs classified under the Birds Directive and Special Areas of Conservation (SAC) under the Habitats Directive.
- 11 Annexes I and II of the Habitats Directive identify a set of habitats (Annex I) and species (Annex II), which require special conservation measures to be taken by Member States. These lists of habitats and species have been used to define the ‘features’ of a site which form the basis for designating the site as a SAC. Marine SACs may be put forward for habitats of conservation importance (listed in Annex I to the Habitats Directive) or for species of conservation importance (listed in Annex II) (Table 14.2).

| Annex I Habitats Considered for SAC Selection in UK Offshore Waters | Species Listed in Annex II Known to Occur in UK Offshore Waters |
|---|---|
| Sandbanks which are slightly covered by seawater all the time Reefs (bedrock, biogenic and stony) – Bedrock reefs – made from continuous outcroppings of bedrock which may be of various topographical shape (e.g. pinnacles, offshore banks) – Stony reefs – these consist of aggregations of boulders and cobbles which may have some finer sediments in interstitial spaces (e.g. cobble and boulder reefs, iceberg ploughmarks) – Biogenic reefs – formed by cold water corals (e.g. <i>Lophelia pertusa</i>) and the polychaete worm <i>Sabellaria spinulosa</i> Submarine structure made by leaking gases Submerged or partially submerged sea caves | Grey seal (<i>Halichoerus grypus</i>) Harbour or common seal (<i>Phoca vitulina</i>) Bottlenose dolphin (<i>Tursiops truncatus</i>) Harbour porpoise (<i>Phocoena phocoena</i>) Salmon (<i>Salmo salar</i>) Otter (<i>Lutra lutra</i>) Freshwater pearl mussel (<i>Margaritifera margaritifera</i>) |

Source: JNCC (2002, 2010)

Special Protection Areas (SPAs)

Buchan Ness to Collieston SPA

- 12 Buchan Ness to Collieston Coast SPA is located on the coast of Aberdeenshire in North-east Scotland, approximately 9.5 km from the EOWDC site. It is a 15 km stretch of south-east facing cliff formed of granite, quartzite and other rocks running to the south of Peterhead, interrupted only by the sandy beach of Cruden Bay. The low, broken cliffs (generally less than 50 m high) show many erosion features such as stacks, arches, caves and blowholes. The varied coastal vegetation on the ledges and cliff tops includes maritime heath, grassland and brackish flushes.
- 13 The site is of importance as a nesting area for a number of seabird species (Gulls and Auks). These birds feed outside the SPA in the nearby waters as well as more distantly. It is the sea bird assemblage of international importance that qualifies Buchan Ness to Collieston as a SPA. The area qualifies under Article 4.2 of the Habitats Directive (79/409/EEC) by regularly supporting at least 20,000 seabirds.
- 14 During the breeding season, the area regularly supports 95,000 individual seabirds (Count, as at mid-1980s) including: Guillemot (*Uria aalge*), Kittiwake (*Rissa tridactyla*), Herring Gull (*Larus argentatus*), Shag (*Phalacrocorax aristotelis*), Fulmar (*Fulmarus glacialis*).

Ythan Estuary, Sands of Forvie and Meikle Loch SPA

- 15 The Ythan Estuary, Sands of Forvie and Meikle Loch make up an area of 1016.24 ha. The site comprises the long, narrow estuary of the River Ythan and eutrophic Meikle Loch. At its mouth, the river splits an extensive area of sand dunes with the Forveran Links on the west bank and the Sands of Forvie dune system on the east bank. Extensive mud-flats in the upper reaches of the estuary are replaced by coarser gravels with mussel (*Mytilus edulis*) beds closer to the sea (JNCC, 2010).

- 16 These varying habitats give rise to a varied substrate including clay, sands and gravel, extensive areas of bare mud, small areas of salt marsh with representative northern salt marsh flora. Small areas of club-rush swamp are associated with the salt marsh. In the upper parts of the estuary there is a reed bed and near the mouth of the estuary there are shifting sand dunes and areas of bare shingle. To the west of the estuary there is a large area of improved grassland.
- 17 The margins of the estuary are varied with areas of salt marsh, reed bed and poor fen, heath and scrub, coniferous woodland and grassland. Meikle Loch is an important roost site for geese, which feed away from the SPA on surrounding farmland in winter. It is a eutrophic loch supporting limited aquatic vegetation. In summer, the coastal habitats of the dunes and estuary provide an important breeding site for three species of tern, whilst in winter the estuary holds large numbers of waders, ducks and geese.
- 18 The site qualifies under a number of articles of the European Directive. Firstly, the site qualifies under Article 4.1 of the Habitats Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive. During the breeding season it supports common tern (*Sterna hirundo*), 265 pairs representing up to 2.2 % of the breeding population in Great Britain, little tern (*Sterna albifrons*), 41 pairs representing up to 1.7 % of the breeding population in Great Britain and Sandwich tern (*Sterna sandvicensis*), 600 pairs representing up to 4.3 % of the breeding population in Great Britain (Seabird Census Register).
- 19 This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of migratory species. Over-winter pink-footed goose (*Anser brachyrhynchus*), 17,213 individuals representing up to 7.7 % of the wintering Eastern Greenland/Iceland/UK population (winter peak means).
- 20 The site also qualifies under Article 4.2 of the Directive by regularly supporting at least 20,000 waterfowl. Over winter, the area regularly supports 51,265 individual waterfowl including: redshank *Tringa totanus*, lapwing *Vanellus vanellus*, eider *Somateria mollissima*, and pink-footed goose *Anser brachyrhynchus*.
- 21 The Ythan Estuary and Meikle Loch sites are also designated as a Ramsar wetland site. The justification for this designation is the assemblages of internationally important waterfowl and the species/populations occurring at levels of international importance.

Loch of Strathbeg SPA

- 22 The Loch of Strathbeg is located in north-eastern lowland coats of Scotland, in Aberdeenshire, inland from Rattray Head and covers an area of 615.93 ha.
- 23 The SPA provides wintering habitat for a number of important wetland bird species, particularly wildfowl (swans, geese and ducks), and is also an important staging area for migratory wildfowl from Scandinavia and Iceland/Greenland. In summer, coastal parts of the site are an important breeding area for Sandwich tern (*Sterna sandvicensis*), which feed outside the SPA in adjacent marine areas.

- 24 The site qualifies under Article 4.1 of the Habitats Directive (79/409/EEC) by supporting populations of European importance of species listed on Annex I of the Directive. During the breeding season it supports Sandwich tern (*Sterna sandvicensis*), 530 pairs representing up to 3.8 % of the breeding population in Great Britain. Over winter it supports barnacle goose (*Branta leucopsis*), 226 individuals representing up to 1.9 % of the wintering population in Great Britain and whooper swan (*Cygnus cygnus*), 183 individuals representing up to 3.3 % of the wintering population in Great Britain.
- 25 This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of migratory species. Over winter it supports greylag goose (*Anser anser*), 3,325 individuals representing up to 3.3 % of the wintering Iceland/UK/Ireland population, pink-footed goose, (*Anser brachyrhynchus*), 39,924 individuals representing up to 17.7 % of the wintering Eastern Greenland/Iceland/UK population.
- 26 In addition area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl and being a wetland of international importance. Over winter, the area regularly supports 49,452 individual waterfowl including: teal (*Anas crecca*), greylag goose, (*Anser anser*), pink-footed goose, (*Anser brachyrhynchus*), barnacle goose, (*Branta leucopsis*), and whooper swan, (*Cygnus Cygnus*).
- 27 The majority of the site is managed by the Royal Society for the Protection of Birds (RSPB) for conservation and primarily for the SPA interest. Scottish Natural Heritage (SNH) has piloted a Strathbeg Goose Management Scheme to alleviate the conflict between the geese, which roost on the loch, and the surrounding farms where they feed.
- 28 The Loch of Strathbeg site is also a designated Ramsar site as the loch constitutes the largest dune slack pool in the UK and the largest water body in the north-east Scottish lowlands, one of the very few naturally eutrophic lochs of the size in the region. The site also qualifies under criterion 5 and 6 with assemblages of international importance, especially peaks in winter, and species/populations occurring at levels of international importance.

Loch of Skene SPA

- 29 Loch of Skene lies approximately 21 km from the proposed EOWDC location.
- 30 The qualifying species is greylag goose, which roost on the loch during the winter. The population of wintering greylag geese on the Loch has declined in recent years as increasing numbers of greylag geese now winter in Orkney.
- 31 In addition to greylag geese the loch also holds nationally important numbers of goldeneye (*Bucephala clangula*) and goosander (*Mergus merganser*) during the winter and a large roost of common gulls occurs during the winter. During the summer the loch holds 50 to 100 pairs of tufted duck.

Fowlsheugh SPA

- 32 Fowlsheugh is a 10.15 ha stretch of cliffs to approximately 31.1 km south of the proposed EOWDC location. It is an important site for breeding seabirds with up to 145,000 birds present including guillemot, razorbill, kittiwake, fulmar and herring gull. The site is also part of an RSPB reserve.

Troup, Pennan and Lion's Heads SPA

- 33 The sea cliffs along Troup, Pennan and Lion's Head SPA hold internationally and nationally important numbers of seabirds, notably kittiwake, guillemot, fulmar, herring gull and razorbill. There is a seaward extension out to 2 km from the cliffs, which are approximately 74.3 km from the project location.

Montrose Basin SPA

- 34 The Montrose Basin lies approximately 63 km to the south of the proposed EWODC and comprises of a large tidal basin containing mud flats and marsh.
- 35 The area is important for wintering and migrating wildfowl and waders, particularly pink-footed and graylag geese. Other species of importance include: eider, wigeon, shelduck and waders such as knot, oystercatcher and dunlin.

Fair Isle SPA

- 36 Fair Isle lies halfway between Mainland Shetland and Orkney. It has a rocky, cliff coastline with adjacent coastal waters, heather moorland, acidic grassland, maritime grassland and crofting in-bye. There is a seaward extension out to 2 km from the island.
- 37 The island lies nearly 300 km from the proposed EWODC site and contains a large assemblage of breeding seabirds the most relevant of which is the gannet that has a foraging range during the breeding season in excess of 300 km. Other species present includes Auks, Skua and Terns as well as fulmars and shags.

Firth of Tay and Eden Estuary SPA

- 38 The Firth of Tay & Eden Estuary SPA is a complex of estuarine and coastal site in eastern Scotland stretching from the mouth of the River Earn in the inner Firth of Tay east to Barry Sands on the Angus coast and St Andrews on the Fife Coast. The site lies approximately 96 km to the south of the proposed development.
- 39 It holds a nationally important breeding population of marsh harrier and little tern. It also holds nationally important wintering and migrating populations of a variety of wildfowl and waders including pink-footed goose, graylag goose, eider, scoters and waders such as bar-tailed godwit and oystercatcher.

Firth of Forth SPA

- 40 The Firth of Forth SPA is a complex of estuarine and coastal habitats in south-east Scotland stretching east from Alloa to the coasts of Fife and East Lothian. The site lies approximately 134 km to the south of the proposed EOWDC. It contains nationally important wintering populations of wildfowl and waders including pink-footed goose, red-throated diver, Slavonian grebe, golden plover and bar-tailed godwit and ducks including goldeneye, eider and long-tailed duck.

Forth Islands SPA

- 41 The Forth Islands SPA comprises a series of islands situated in the Firth Forth and includes the Bass Rock and the Isle of May. It is a site holding internationally and nationally important seabirds including gannet, fulmar, shag, cormorant, common tern, Sandwich tern, Arctic tern and roseate tern. Three species of auk: puffin, razorbill and guillemot, and three species of gull: herring, lesser black-backed and kittiwake are found there.

Special Areas of Conservation (SACs)

Buchan Ness to Collieston Coast SAC

- 42 Buchan Ness to Collieston Coast, an area of 207.52 ha, is a designated special area of conservation (SAC). The site includes shingle sea cliffs and islets, bogs marshes, water fringed vegetation and fens as well as heath, scrub, maquis, garrigue, phygrana, humid grassland, and mesophile grassland. Such habitat qualifies the site as an Annex I Habitat, 1230 Vegetated Sea Cliff of the Atlantic and Baltic Coasts.
- 43 The vegetated cliff slopes support a wide range of coastal vegetation types with an abundance of such local species as Scots lovage (*Ligusticum scoticum*) and roseroot (*Sedum rosea*). In several places the cliff edge retains semi-natural plant communities such as maritime heath, acid peatland and brackish flushes. All these are now rare on the coast of North-east Scotland and this section of coastline contains some of the best remaining examples. Possibly due to the local microclimate and the presence of lime-rich soils, these communities contain several plants, which are associated with dry, calcareous grassland, including carline thistle (*Carlina vulgaris*) and cowslip (*Primula veris*). Sea wormwood (*Seriphidium maritimum*) also occurs. The cliffs and offshore stacks support a scattered but considerable colony of cliff-nesting seabirds with bird-influenced vegetation.

Sands of Forvie SAC

- 44 The Sands of Forvie SAC includes an area of coastal sand dunes, beaches, machair, inland water bodies, sea cliffs, bogs, marshes, water fringed vegetation, fens, heath, scrub, marquis and garrigue, phygrana, humid grassland and mesophile grassland covering an area of approximately 734.05 ha. There are three primary reasons for selecting Sands of Forvie as an SAC. These include the embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* (white dunes), decalcified fixed dunes with *Empetrum nigrum* and humid dune slacks.
- 45 Sands of Forvie is one of only three sites on the east coast of Scotland which represent the northern part of the UK range of embryonic shifting dunes. Sands of Forvie is one of the most geomorphically active dune systems in the UK and as a result the site contains significant representation of dune types associated with shifting sands. Present throughout the site are identifiable zones of lyme-grass (*Leymus arenarius*) and sand couch (*Elytrigia juncea*).
- 46 In recent years, Terns have bred in much lower numbers owing to predation and the periodic overtopping of the favoured shingle beds by sand. There is growing concern about the effects of eutrophication on the estuary and its flora and fauna. The continuing build up of algal mats has apparently led to a reduction in the populations of invertebrates, which are the prey of waterfowl such as redshank and shelduck.

- 47 The site forms the Forvie National Nature Reserve, which is managed for its nature conservation interest under an agreed management plan. The site is also 100 % covered by SSSI designation.

Moray Firth Marine SAC

- 48 The Moray Firth was designated by Scottish Ministers as a Special Area of Conservation (SAC) on 17 March 2005. The Moray Firth marine SAC has been designated for the species bottlenose dolphin (*Tursiops truncatu*), which is, listed on Annex II of the Habitats Directive, as well as for the Annex I habitat 'Sandbanks which are slightly covered by sea water all the time'.
- 49 The conservation objectives for the Moray Firth marine SAC with regards to bottlenose dolphins are:
- to avoid deterioration of the habitats of the qualifying species (bottlenose dolphin *Tursiops truncatus*) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for the qualifying interest
 - to ensure for the qualifying species that the following are established then maintained in the long-term:
 - population of the species as a viable component of the site
 - distribution of the species within the site
 - distribution and extent of habitats supporting the species
 - structure, function and supporting processes of habitats supporting the species
 - no significant disturbance of the species.
- 50 The conservation objectives ensure that the obligations of the Habitats Directive are met; that is, there should not be deterioration or significant disturbance of the qualifying interest. This will also ensure that the integrity of the site is maintained and that it makes a full contribution to achieving favourable conservation status for its qualifying interests (SNH, 2006).

River Dee SAC

- 51 The River Dee SAC lies inland from the proposed project and enters the sea at Aberdeen. The river contains three qualifying species otter (*Lutra lutra*), freshwater pearl mussel (*Margaritifera margaritifera*) and Atlantic salmon (*Salmo salar*). The salmon enter the river throughout the year and the freshwater pearl mussel relies upon the salmon for part of its life cycle when it uses the salmon as a host species. Otters are infrequent on the coast and the majority of the otter population found along the Dee is upstream from the river mouth.

River South Esk SAC

- 52 The River South Esk SAC is adjacent to the Montrose Basin SAC as the river runs into the basin. The river is nationally important for salmon and freshwater pearl mussel.

Firth of Tay and Eden Estuary SAC

- 53 The Firth of Tay and Eden Estuary SAC lies approximately 96 km to the south of the proposed EOWDC. The sites comprise of coastal habitats including, estuaries, sand banks, sand flats and mud flats and holds a population of common seal.

Isle of May SAC

- 54 The Isle of May SAC covers an area of 357 ha and lies 119 km to the south of the proposed development. Grey seal is a qualifying species present and the population has increased significantly since the 1980's when approximately 500 pups were born each year to 2,100 pups in 2,000. The population has since levelled off.

Berwickshire and North Northumberland Coast SAC

- 55 This large SAC comprising of large variety of habitats including large shallow inlets and bays, mudflats, reefs and sea caves covers an area of 60,545 ha. The site holds a population of grey seals. The site lies approximately 150 km to the south of the proposed development.

14.1.1.2 National Sites

Sites of Special Scientific Interest (SSSI)

Corby, Lilly and Bishops Lochs SSSI

- 56 Corby, Lilly and Bishops Lochs are designated as Sights of Special Scientific Interest under the Wildlife & Countryside Act (1981). The Lochs lie approximately 6.7 km inland from the proposed EOWDC location. The lochs contain locally important vegetation and invertebrate populations. The Lochs also use to hold roosting greylag geese but the numbers roosting on the Lochs has reduced in recent years.

Foveran Links SSSI

- 57 Extensive sand dune systems lie to the north of the proposed development. Up to the Ythan Estuary. The 205 ha Foveran Links SSSI contains plant communities not found elsewhere along the coast and a variety of habitats including, fixed dunes, dune pastures, marshes and heaths.

Sands of Forvie and Ythan Estuary SSSI

- 58 The Sands of Forvie lie approximately 7.2 km to the north of the proposed EOWDC location. The site is also covered by the SAC.
- 59 It is an extensive area of sand dunes containing a wide range of typical dune habitats and very diverse range of flora. The site holds the UKs largest breeding colony of eider ducks and nationally and internationally important populations of pink-footed geese and other wildfowl and waders.

Meikle Loch and Kippet Hills SSSI

- 60 Meikle Loch and Kippet Hills SSSI lies approximately 11 km to the north-west of the proposed development. The Loch is freshwater Loch and holds internationally important number so f geese, particularly pink-footed geese

which roost on the Loch and feed in the neighboring area. Other wildfowl species present include graylag goose and teal, wigeon and tufted duck

Collieston to Whinnyfold SSSI

- 61 This coastal SSSI holds nationally important populations of breeding seabirds including kittiwake, guillemot, razorbill and shag. The site lies approximately 15 km to the north of the proposed development.

Bullers of Buchan SSSI

- 62 The rocky maritime cliffs at the Bullers of Buchan contain breeding seabirds including guillemots, razorbills, puffins, fulmars and shags.

Fowlsheugh SSSI

- 63 The cliffs at Fowlsheugh hold the largest breeding seabird colony in the North-east with national important numbers of kittiwakes, guillemots, razorbills as well as puffins, fulmar and shag.

Loch of Skene SSSI

- 64 The Loch of Skene is approximately 21 km inland from the proposed EOWDC. The site holds nationally important numbers of breeding tufted duck and during the winter goldeneye, goosander, pochard, teal and wigeon. The Loch use to hold nationally important numbers of geese and swans but numbers present on the loch have decreased in recent years. During the winter there is a large common gull roost on the loch.

Loch of Strathbeg SSSI

- 65 The Loch of Strathbeg is a large shallow freshwater loch on the coast to the north of the proposed development. It is of international importance for its wildfowl, particularly passage and wintering pink-footed geese. It also holds nationally important numbers of whooper swan, graylag goose and important concentrations of pochard, tufted duck, wigeon, goldeneye, goosander and mute swans.

St Cyrus and Kinnaber Links SSSI

- 66 St Cyrus and Kinnaber Links SSSI is a coastal SSSI located approximately 53 km to the south of the proposed development. It comprises of a wide range of habitats including sand dunes, shingle, silt marsh and grassland. It has diverse range of breeding birds including waders: curlew, redshank, ringed plover and oystercatcher. Breeding passerines include sedge warbler, grasshopper warbler and whinchat and stonechat.

14.1.1.3 Local Sites

Biodiversity

- 67 Following the 1992 Rio Earth Summit, the UK Biodiversity Action Plan was published in 1994. At the local level, this is implemented through the North East Scotland Local Biodiversity Action Plan (LBAP). LBAP is a partnership of local authorities, environmental, forestry, farming, land and education agencies, businesses and many individuals involved in biodiversity across North East Scotland (Aberdeen, Aberdeenshire and Moray)

- 68 Most of the North East action for biodiversity is addressed through Habitat Action Plans (HAPs), which incorporate action for associated priority species. These HAPs are grouped under the broader habitat headings of Coastal & Marine; Farmland & Grassland; Woodland; Montane, Heath & Bog; Wetland & Freshwater; and Urban (NESBiodiversity, 2007).
- 69 The Coastal and Marine Habitat Action Plans (HAPs) are the most relevant for the proposed development. The protection of these coastal and marine habitats is a top priority for North East LBAP and several specific action plans have been developed, including:
- Coastal Sand Dunes and Shingle
 - Coastal Cliffs and Heaths [action plan development in progress]
 - Marine Habitats [action plan development in progress]
 - Estuarine and Intertidal Habitats
- 70 A number of species has been identified with dedicated North East Action Plans (NESBiodiversity, 2007).

14.1.2 Marine (Scotland) Act 2010

- 71 The Marine (Scotland) Act (which applies to Scottish territorial waters) introduces new powers relating to functions and activities in the Scottish marine area, including provisions concerning marine plans, licensing of marine activities, the protection of the area and its wildlife including seals, and regulation of sea fisheries. The Act comprises six key elements: the formation of Marine Scotland, a strategic marine planning system, a streamlined marine licensing system, improved marine nature conservation measures, improved measures for the protection of seals and improved enforcement measures (JNCC, 2010).
- 72 Marine Scotland will deliver integrated marine management functions relating to marine science and data, planning, policy development and delivery, compliance, monitoring and enforcement, whether fully or executively devolved to Scottish Ministers out to 200 nautical miles; and will work closely with the UK Marine Management Organisation (MMO) established under the UK Marine and Coastal Access Act 2009 (JNCC, 2010).
- 73 Scottish Marine Protection Areas (MPAs) are a new national designation under the **Marine (Scotland) Act** for inshore waters and the **Marine and Coastal Access Act 2009** for offshore waters. Scottish Ministers have executive devolution of authority for the designation of MPAs for the conservation of important marine biodiversity and geodiversity out to 200 nm.
- 74 Within the Marine Nature Conservation element, powers in the **Marine (Scotland) Act** enable Scottish Ministers to designate three types of Marine Protected Area (MPA) across Scottish territorial waters: Nature Conservation MPAs; Historic MPAs; and Research/Demonstration MPAs (JNCC, 2010).
- 75 The Scottish MPA project has been established by Marine Scotland (Scottish Government), Scottish Natural Heritage and the Joint Nature Conservation Committee (JNCC) to identify and recommend MPAs for the conservation of nationally important features of marine biodiversity and geodiversity to Government. Scottish MPAs will be identified using science-based selection criteria, but socio-economic information may be taken into account when

selecting between sites of equal scientific merit and to identify likely management issues (Natural England, 2010).

- 76 The new MPA powers allow Scotland to contribute to the UK's European and International marine conservation commitments, such as those laid out under the Marine Strategy Framework Directive, the OSPAR Convention and the Convention on Biological Diversity (JNCC, 2010) and the government is required by European law to introduce a network of MPAs by the end of 2012 (Natural England, 2010).

14.2 References

JNCC (Joint Nature Conservation Committee) (2010) <http://www.jncc.gov.uk> [Date accessed –June 2011]

Natural England (2010)
http://www.naturalengland.org.uk/about_us/news/2010/230210.aspx [Date accessed - June 2011]

NESBiodiversity (2007) www.nesbiodiversity.org.uk North East Scotland Local Biodiversity Action Plan (LBAP) website.

SNH (2006) Moray Firth Special Area of Conservation, Advice under Regulation 33(2) of The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended).
http://www.snh.org.uk/pdfs/about/directives/Moray_Firth.pdf. [Date accessed June 2011]