

Offshore Oil & Gas Licensing

27th Seaward Round

Habitats Regulations Assessment

Block Screening

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1 Introduction

On 1st February 2012, the Secretary of State for the Department of Energy and Climate Change (DECC) invited applications for licences in the 27th Seaward Licensing Round. Applications for Traditional Seaward, Frontier Seaward and Promote Licences covering over 400 blocks/part Blocks have been received.

The draft plan to hold a 27th Seaward Licensing Round had previously been subject to a Strategic Environmental Assessment (SEA), completed in October 2011. The SEA [Environmental Report](#) includes detailed consideration of the status of the natural environment and potential effects of the range of activities which could follow licensing, including potential effects on conservation sites. The SEA Environmental Report was subject to a 3 month public consultation period, and a [post-consultation report](#) summarising and responding to feedback received has been produced as an input to DECC licensing decisions.

The exclusive rights to search and bore for petroleum in Great Britain, the territorial sea adjacent to the United Kingdom and on the UK continental shelf (UKCS) are vested in the Crown and the Petroleum Act 1998 gives the Secretary of State for Energy and Climate Change the power to grant licences to explore for and exploit these resources. Offshore licensing for oil and gas exploration and production commenced in 1964 and progressed through a series of Seaward Licensing Rounds. The award of a licence under the Petroleum Act 1998 does not confer an automatic right to conduct any offshore activities, which are subject to a range of statutory permitting and consenting requirements, including, where relevant, activity specific Appropriate Assessment (AA) under Article 6(3) of the Habitats Directive (Directive 92/43/EC).

The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 (as amended) (OPAR 2001) implement the requirements of Article 6(3) and Article 6(4) of the Habitats Directive (92/43/EEC) with respect to oil and gas activities in UK waters, and for all activities in offshore waters by the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). Additionally within territorial waters, the Habitats Directive is transposed into UK law via the Conservation of Habitats and Species Regulations 2010 in England and Wales, the Conservation (Natural Habitats, &c.) Regulations 1994 in Scotland (for non-reserved matters), and the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

To comply with its obligations under OPAR 2001, the Department is undertaking a Habitats Regulations Assessment (HRA), the first stage of which is a screening assessment to determine whether award of any Blocks applied for is likely to have a significant effect on a site, either individually or in combination with other plans or projects. In doing so, the Department has applied the Habitats Directive test (elucidated by the European Court of Justice in the case of Waddenzee (Case C-127/02)) which is:

Any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects

Where a plan or project not directly connected with or necessary to the management of a site is likely to undermine the site's conservation objectives, it must be

considered likely to have a significant effect on that site. The assessment of that risk must be made in the light inter alia of the characteristics and specific environmental conditions of the site concerned by such a plan or project.

This screening has systematically:

- Identified the relevant Natura 2000 sites in the area of each Block applied for or likely to be affected by the grant of a licence for such a Block (applying the Waddenzee test as set out above)¹. Relevant Natura 2000 sites considered included designated, candidate, possible and draft coastal, marine and offshore SACs and SPAs, the location of which in relation to the Blocks indicate the possibility of interactions.
- Considered the potential oil and gas activities that could follow from the licensing of each Block applied for and in particular the potential sources of significant effects on Natura 2000 sites. This included both a generic consideration of oilfield activities and the evidence base for effects, and a Block specific consideration based on DECC assessment of prospectivity and indications of potential activity levels from the application for each Block.
- Identified those Blocks from which no significant effects were likely on relevant Natura 2000 sites, for example because of distance or the features or natural history of the species for which the site is designated are not at risk.
- Identified those Blocks from which potentially significant effects on relevant Natura 2000 sites were possible; for such Blocks further assessment beyond this screening is required before licensing decisions are made.

This screening assessment has been undertaken in accordance with the European Commission Guidance (EC 2000) and with reference to various other guidance and reports, including the Habitats Regulations Guidance Notes (EN 1997; SEERAD 2000), the National Planning Policy Framework (DCLG 2012²) and English Nature Research report, No. 704 (2006).

As part of this process, DECC consulted with the Joint Nature Conservation Committee (JNCC), Natural England, Scottish Natural Heritage (SNH), the Countryside Council for Wales (CCW) and the Northern Ireland Environment Agency (NIEA) on the draft of this screening assessment.

¹ EC 2000

² Which states that “listed or proposed Ramsar sites”, should receive the same protection as European sites – see Appendix B.

2 Blocks Applied For

Offshore Blocks for which applications have been made during the 27th Seaward Licensing Round and considered in this screening assessment are shown on Figure 1 and listed in Table 1. Note, the majority of these Blocks have been licensed previously.

Figure 1: Map showing Blocks considered in this screening

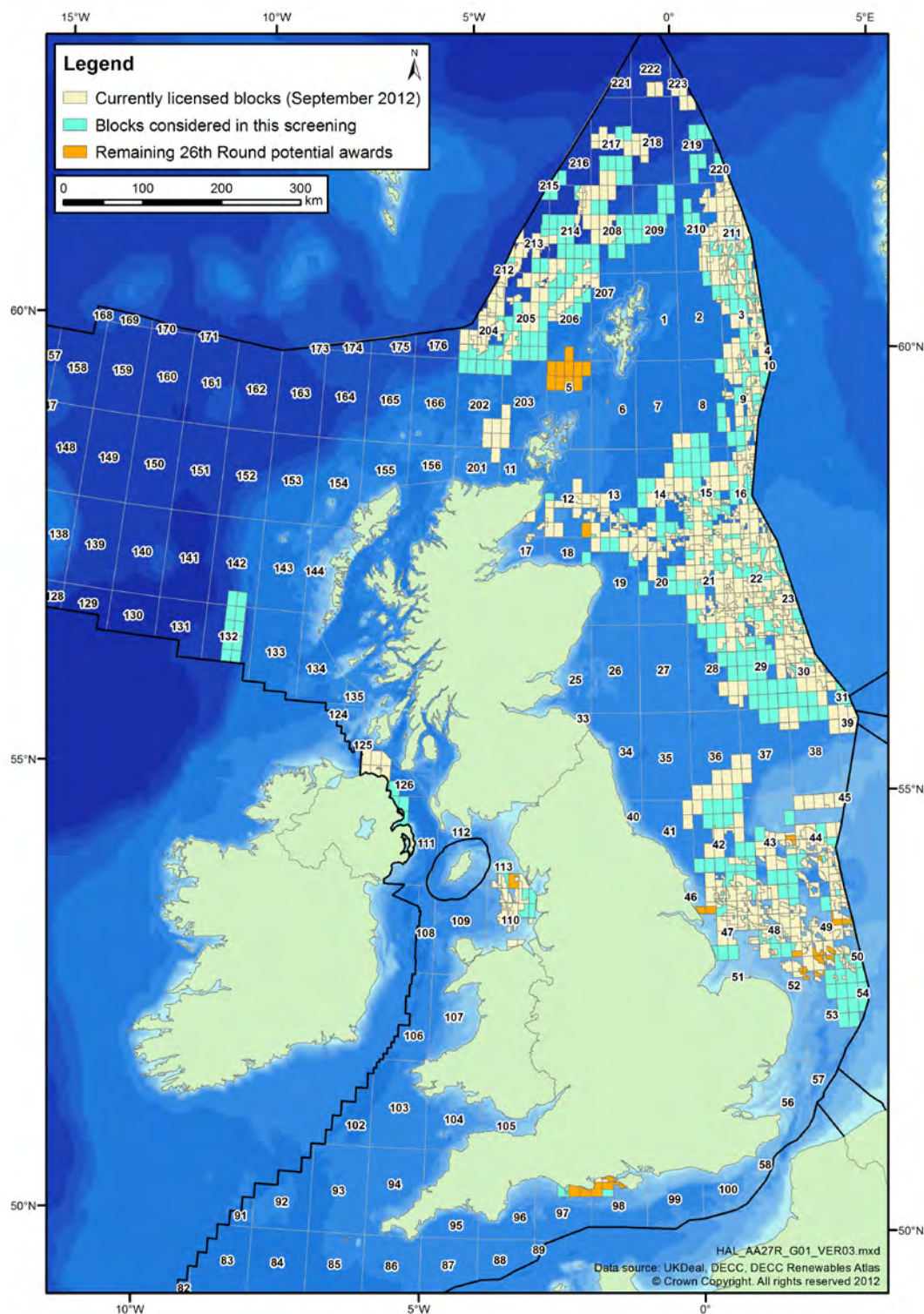


Table 1: List of Blocks applied for in the 27th Seaward Licensing Round

2/4b	14/12	21/15b	29/9a	42/23	53/8	205/22b	211/26b
2/10a	14/16	21/16	29/10c	42/24b	53/9	205/23	211/27d
3/2b	14/20e	21/17b	29/11	42/25b	53/10	205/24	211/28b
3/2c	14/23	21/26	29/12	42/25d	53/14	205/25	211/29b
3/4b	14/28a	21/27c	29/13	42/28e	53/15	205/26c	213/5
3/6	14/29b	22/1b	29/14	42/29b	53/19	205/26d	213/15b
3/7c	14/30c	22/3a	29/16	42/30b	53/20	205/27	213/20a
3/8c	15/1	22/6d	29/17	43/10	54/1	205/28	213/26a
3/9c	15/2	22/6e	29/18	43/12	54/6	205/29	213/29
3/9e	15/3	22/8b	29/22	43/13c	54/11	205/30	213/30
3/10a	15/6	22/9b	29/23	43/14b	97/13	206/1b	214/1
3/11c	15/7	22/10b	29/24	43/15b	98/12b	206/2	214/4c
3/12	15/8	22/11b	29/25	43/16	110/4b	206/3c	214/11
3/13b	15/12a	22/12b	29/27	43/20f	110/5	206/4b	214/12
3/14h	15/16e	22/13c	29/28	43/21c	110/9c	206/6	214/13
3/14j	15/17b	22/14d	29/29	43/25	110/10	206/7b	214/16a
3/15b	15/17c	22/14e	29/30	43/26b	111/1	206/9b	214/17
3/20c	15/18c	22/15b	30/1g	43/28	111/2	206/10b	214/18
3/23	15/18d	22/15c	30/2b	43/29	111/7	206/11c	214/22
3/24c	15/19d	22/19a	30/2e	43/30b	113/22	206/13b	214/23
3/28c	15/20f	22/19b	30/3b	44/13	113/27d	206/14	214/24
8/5	15/21e	22/20c	30/3c	44/16b	125/30	208/6	214/25
8/20	15/23c	22/22c	30/12c	44/16c	126/26	208/7	214/27a
8/25	15/24a	22/24f	30/12e	44/18e	132/3	208/14	214/28
8/27	15/25c	22/25d	30/13c	44/19a	132/4	208/15	214/29
8/28	15/26a	22/25f	30/14b	44/21c	132/8	208/18a	214/30b
9/1b	15/28a	22/26b	30/16g	44/23g	132/9	208/19a	214/30c
9/2d	16/2c	22/27b	30/18c	47/3j	132/13	208/20	214/30d
9/3e	16/6b	22/28b	30/21	47/3k	132/14	208/21	215/30
9/4	16/11b	22/29b	30/26	47/8e	132/18	208/23	216/26
9/8b	16/12b	22/30d	30/27	47/15d	132/19	208/24	216/27
9/9f	16/13b	23/6	30/28	47/22	142/28	208/26	217/14
9/9g	16/16	23/11b	31/21	47/23	142/29	209/4	217/15
9/10b	16/17c	23/16d	31/26	47/24	202/1	209/5	217/22
9/12b	16/18b	23/16e	31/27	48/1e	202/2	209/9	217/23
9/13e	18/10	23/16g	36/30	48/4b	202/3	209/10	217/24
9/13f	19/2	23/17	37/3	48/5	202/4	209/11	217/25
9/14b	19/3	23/22c	37/4	48/10c	202/5	209/12	217/29
9/17a	19/10b	23/27b	38/2	48/11e	203/1	209/13	217/30
9/19b	20/3d	28/2b	38/3	48/17d	204/20c	209/14	219/13
9/22a	20/14	28/3	38/4	48/18c	204/26b	209/16	219/14
9/23a	20/16	28/4	39/1a	48/23c	204/27b	209/17	219/15
9/26	20/19	28/8	39/2a	48/24	204/28b	210/7	219/23
9/27	20/20	28/9b	42/2	48/25c	204/28c	210/12	219/24
12/16a	21/3e	28/14	42/3	49/4b	204/29b	210/13	219/28
13/23d	21/5c	28/15	42/4	49/8b	204/30b	210/25b	220/21
13/24c	21/6b	28/20	42/5	49/21d	205/4c	211/17	220/22
13/25	21/7a	29/4b	42/7	49/29b	205/12	211/19b	
13/26b	21/8c	29/5d	42/8b	49/30e	205/15	211/21b	
13/29c	21/9b	29/6b	42/9b	50/26	205/16b	211/22b	
14/5	21/10b	29/7b	42/20	53/3a	205/17	211/23e	
14/10	21/10c	29/7c	42/21	53/4a	205/20	211/23f	
14/11	21/14a	29/8b	42/22	53/5c	205/21c	211/24c	

3 Licensing and Activity

3.1 Licensing

The exclusive rights to search and bore for and get petroleum in Great Britain, the territorial sea adjacent to the United Kingdom and on the UK Continental Shelf (UKCS) are vested in the Crown and the Petroleum Act 1998 (as amended) gives the Secretary of State the power to grant licences to explore for and exploit these resources. The main type of offshore Licence is the Seaward Production Licence. Offshore licensing for oil and gas exploration and production commenced in 1964 and has progressed through a series of Seaward Licensing Rounds. A Seaward Production Licence may cover the whole or part of a specified Block or a group of Blocks. A Licence grants exclusive rights to the holders “to search and bore for, and get, petroleum” in the area covered by the Licence. A Licence does not confer any exemption from other legal/regulatory/fiscal requirements.

There are three types of Seaward Production Licences:

- Traditional Production Licences are the standard type of Seaward Production Licences and run for three successive periods or Terms. Each Licence expires automatically at the end of each Term, unless the licensee has made enough progress to earn the chance to move into the next Term. The Initial Term lasts for four years and the Licence will only continue into a Second Term of four years if the agreed Work Programme has been completed and if 50% of the acreage has been relinquished. The Licence will only continue into a Third Term of 18 years if a development plan has been approved, and all the acreage outside that development has been relinquished.
- Frontier Production Licences are a variation of the Traditional Production Licence with longer terms. A Frontier Production Licence has a longer Initial Term (six years as opposed to four) with the objective of allowing companies to screen larger areas. After 3 years, the licensee must relinquish 75% of the licensed acreage. At the end of the Initial Term, the exploration Work Programme must have been completed and the licensee must relinquish 50% of what is left (i.e. leaving one eighth of the original licensed area). A variation on the Frontier Production Licence was introduced prior to the 26th Round. Designed for the particularly harsh West of Scotland environment, it is similar to the existing Frontier Licence but with an initial term of nine years with a Drill-or-Drop decision to be made by the end of the sixth year and (if the licensee chooses to drill) drilling to be completed within the remaining three years of the initial term.
- In the 21st Round (2002) the Department introduced Promote Licences. The general concept of the Promote Licence is that the licensee is given two years after award to attract the technical, environmental and financial capacity to complete an agreed Work Programme. In effect, DECC will defer (not waive) its financial, technical and environmental checks until the preset Check Point. Promote licensees are not allowed to carry out field operations until they have met the full competence criteria. The way this is implemented is that each Promote Licence carries a "Drill-or-Drop" Initial Term Work Programme. The Licence will therefore expire after two years if the licensee has not made a firm commitment to DECC to complete the Work Programme (e.g. to drill a well). By the same point, it must also have satisfied DECC of its technical, environmental and financial capacity to do so.

The model clauses and terms and conditions which are attached to Licences are contained in Regulations.

It is noted that the environmental management capacity and track record of applicants is considered by DECC, through written submissions and interviews, before licences are awarded.

3.2 Activity

As part of the licence application process, applicant companies provide DECC with details of work programmes they propose in the first term to further the understanding or exploration of the Blocks(s) in question. These work programmes are considered with a range of other factors in DECC's decision on whether to license the Blocks and to whom. There are three levels of drilling commitment:

A **Firm Drilling Commitment** is a commitment to the Secretary of State to drill a well. Applicants are required to make firm drilling commitments on the basis that, if there were no such commitment, the Secretary of State could not be certain that potential licensees would make full use of their licences. However, the fact that a licensee has been awarded a licence on the basis of a "firm commitment" to undertake a specific activity should not be taken as meaning that the licensee will actually be able to carry out that activity. This will depend upon the outcome of all relevant environmental assessments.

A **Contingent Drilling Commitment** is also a commitment to the Secretary of State to drill a well, but it includes specific provision for DECC to waive the commitment in light of further technical information.

A **Drill-or-Drop (D/D) Drilling Commitment** is a conditional commitment with the proviso, discussed above, that the licence is relinquished if a well is not drilled.

Note that Drill-or-Drop and Contingent work programmes (subject to further studies by the licensees) will probably result in a well being drilled in less than 50% of the cases.

It is made clear in the application guidance that a Production Licence does not allow a licensee to carry out all petroleum-related activities from then on. Field activities, such as seismic survey or drilling, are subject to further individual controls by DECC, and a licensee also remains subject to controls by other bodies such as the Health and Safety Executive. It is the licensee's responsibility to be aware of, and comply with, all regulatory controls and legal requirements.

The proposed work programmes for the first four-year period are detailed in the licence applications. For some activities, such as seismic survey noise and oil spills, the impacts can occur some distance from the licensed Blocks and the degree of activity is not necessarily proportional to the size or number of licensed Blocks in an area. For the case of direct physical disturbance, the licence Blocks being applied for are relevant, although there may still be pipelines that cross unlicensed Blocks should any significant development ensue after the initial four-year exploratory period.

For the purposes of the screening assessment, the implications of geophysical survey and drilling were considered in a generic way for all the Blocks applied for.

On past experience, less activity actually takes place than is bid at the licence application stage. A proportion of Blocks awarded may be relinquished without any field activities occurring.

Activity after the initial term is much harder to predict, as this depends on the results of the initial phase, which is, by definition, exploratory. Typically less than half the wells drilled reveal hydrocarbons, and of that half, less than half again will yield an amount significant enough to warrant development. Depending on the expected size of finds, there may be further drilling to appraise the hydrocarbons (appraisal wells). Discoveries that are developed may require further drilling, wellhead infrastructure, pipelines and possibly production facilities such as platforms, although most recent developments are largely tiebacks to existing production facilities rather than stand alone developments.

The extent and timescale of development, if any, which may ultimately result from the licensing of these Blocks is therefore uncertain.

4 Relevant Natura 2000 Sites

Sites were considered for inclusion/exclusion in the screening assessment with respect to their location to the Blocks which are the subject of licence applications and in terms of the foreseeable possibility of interactions. Sites considered include designated Natura 2000 sites and potential sites for which there is adequate information on which to base an assessment.

The sites considered in this screening are shown in Figures 2 and 3 (Note, smaller scale maps are included in Appendices A and B). In accordance with Government policy (e.g. as set out in the National Planning Policy Framework and the Marine Policy Statement), the relevant sites considered include classified and potential SPAs, designated and candidate SACs and Sites of Community Importance³ (SCIs). Guidance in relation to sites which have not yet been submitted to the European Commission is given by Circular 06/2005 (ODPM 2005) which states that: *“Prior to its submission to the European Commission as a cSAC, a proposed SAC (pSAC) is subject to wide consultation. At that stage it is not a European site and the Habitats Regulations do not apply as a matter of law or as a matter of policy. Nevertheless, planning authorities should take note of this potential designation in their consideration of any planning applications that may affect the site.”*

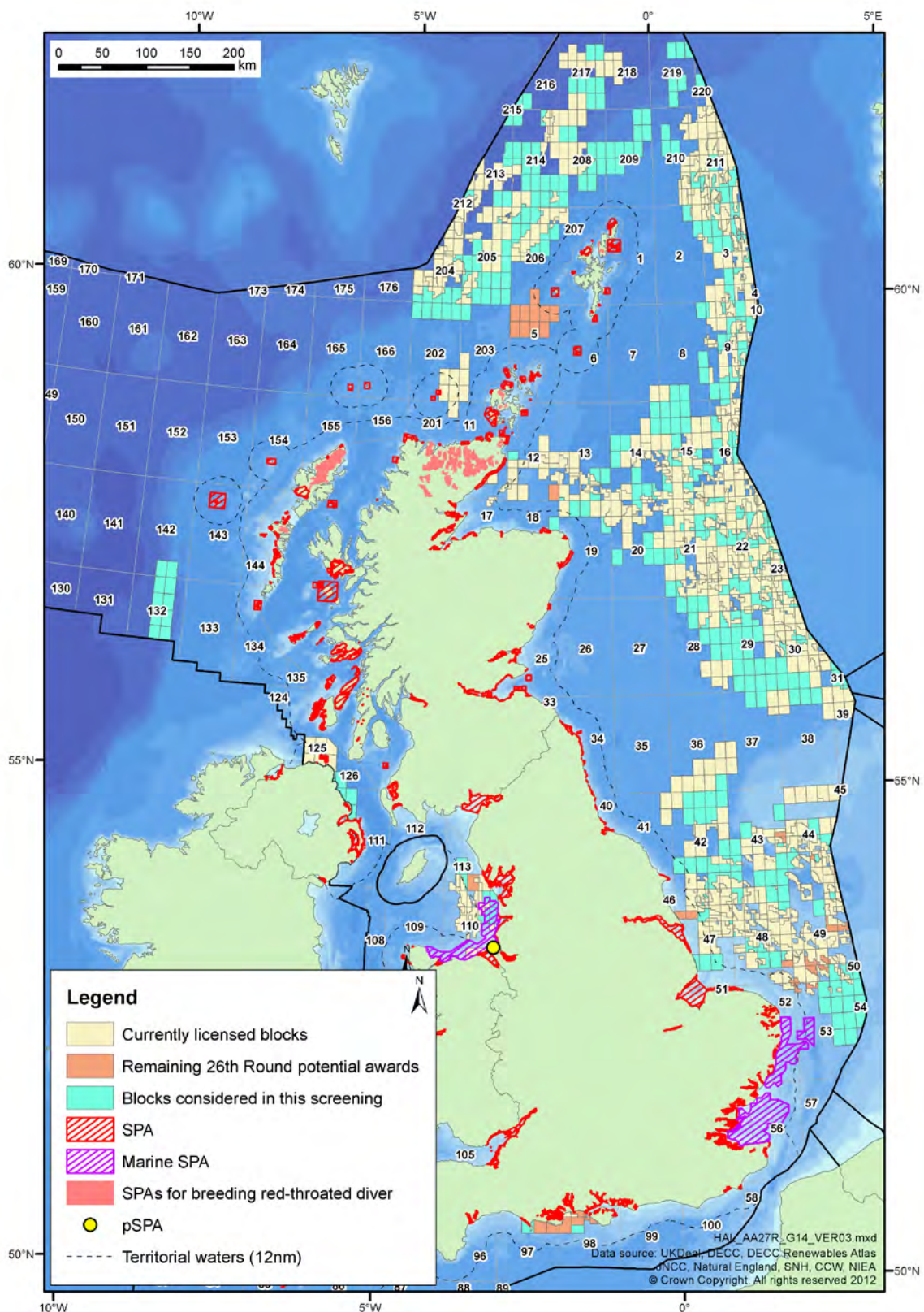
The relevant sites are detailed in Appendix A and include:

- Coastal and marine Natura 2000 sites along the coasts of the United Kingdom and in territorial waters
- Offshore Natura 2000 sites (i.e. those largely or entirely beyond 12nm from the coast)
- Riverine Natura 2000 sites designated for migratory fish and/or the freshwater pearl mussel
- Natura 2000 sites designated for breeding red-throated divers

In addition, Natura 2000 sites in the waters of other member states at or adjacent to the UK median line have been considered (see Appendix A – Section A7).

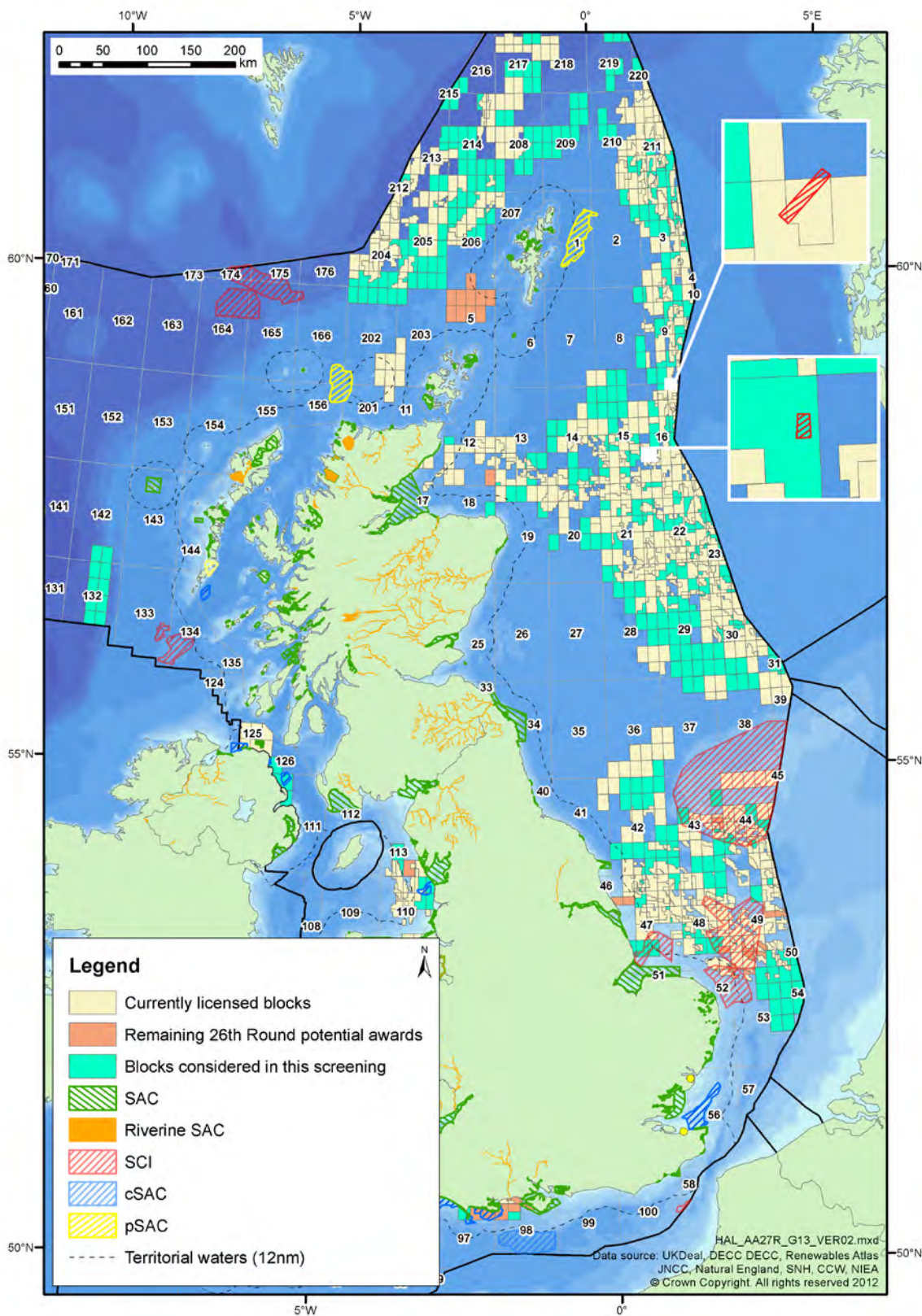
³ Sites of Community Importance (SCIs) are more advanced in the SAC designation process than cSACs – these have been adopted by the European Commission but not yet formally designated by the government of the relevant country.

Figure 2: Map showing Blocks considered in this screening and relevant Special Protection Areas



Note: A number of onshore SPAs designated for breeding red-throated diver (shown in pink) are included where there is potential for interaction with marine activities

Figure 3: Map showing Blocks considered in this screening and relevant Special Areas of Conservation



Note: Only those riverine SACs are included where there is potential for interaction with marine activities e.g. SACs designated for migratory fish and/or freshwater mussels

5 Screening Assessment

This screening assesses the potential implications for Natura 2000 sites of the potential award of licences for UKCS Blocks in the 27th Licensing Round, rather than considering the implications of specific individual projects. The award of such licences may or may not give rise to subsequent development activity, the implications of which have been considered in this screening in so far as possible. Where relevant, such future activities will themselves be subject to the screening procedure and tests under the Habitats Directive.

This screening assessment has considered all Blocks applied for in the 27th Round, their location relative to the Natura 2000 sites, and in terms of the foreseeable interactions from activities that could follow from licensing. These activities, effects, legal and other controls are extensively described in previous DECC SEA Environmental and Technical Reports and Appropriate Assessments and are not duplicated here (see www.offshore-sea.org.uk).

Use has been made of advice prepared by the conservation agencies under the various Habitats Regulations, since this typically includes advice on operations that may cause deterioration or disturbance to relevant features or species. The Regulation 33 Advice (now Regulation 35 under the Conservation of Habitats and Species Regulations 2010) includes an activities/factors matrix derived from Marlin (www.marlin.ac.uk) where applicable. However, it is noted that several of the “probable” effects highlighted in the matrices are not inevitable consequences of oil and gas exploration and production since they can be mitigated through timing, siting or technology (or a combination of these). There is an expectation that these options would be evaluated in the environmental assessments required as part of activity consenting. Reference has also been made to the Natural England European Marine Site Risk Review (Coyle & Wiggins 2010); although oil or chemical spills at sea were not directly covered, the review noted that “national contingency procedures are in place to ensure that any such spill can be cleaned up with the least environmental damage being caused”.

A consideration of the potential for the above sources to result in likely significant effects was made, informed by the evidence base in the scientific literature, relevant DECC Strategic Environmental Assessments, and Environmental Statements prepared for exploration, development and decommissioning activities. Based on this consideration, this screening assessment has been restricted to those sources of impact generally considered (see for example Appendix 2 in SEA 4 available at http://www.offshore-sea.org.uk/site/scripts/consultation_download_info.php?downloadID=42) to have the potential to affect relevant Natura 2000 sites, specifically:

- Physical disturbance and other effects (e.g. pipeline trenching, marine discharges)
- Underwater noise (in particular, seismic surveys)
- In-combination effects (e.g. cumulative and synergistic and secondary/indirect effects)
- Oil spills (including all liquid phase hydrocarbons)

Where potential for a significant effect on a listed habitat or species cannot be excluded on the basis of objective information (e.g. the geographic location of the sites, and the general characteristics of habitat and species present), it is proposed that the offer for licensing of these Blocks will be subject to an AA with appropriate consultation, if required.

5.1 Screening for Natura 2000 sites vulnerable to physical and other effects

Physical disturbance e.g. from pipeline trenching, and placing facilities or deposits on the seabed (e.g. rock dump for rig stabilisation or pipeline protection) were considered to have the potential to result in significant effects only if the Block was within or impinged on the site boundary. The scale of direct impacts and potential secondary effects are well documented in shelf depth (<200m) areas (from studies around oil & gas facilities and in connection with other marine industries such as cable laying and aggregate dredging), but less so in the deeper water areas. There is no evidence that the sediment plumes from activities such as pipeline trenching have detectable effects on mobile species.

Marine discharges from exploration and production activities include produced water, sewage, cooling water, drainage, drilling wastes and surplus water based mud (WBM), which in turn may contain a range of hydrocarbons, various production and utility chemicals, metal ions or salts. In addition to these mainly platform-derived discharges, a range of discharges is associated with operation of subsea infrastructure (hydraulic fluids), pipeline testing and commissioning (treated seawater), and support vessels (sewage, cooling and drainage waters).

The effects of the majority of these have been judged negligible in previous DECC SEAs in the context of UK offshore oil and gas exploration and production, based on a wide variety of monitoring data and risk assessment results. These discharges are subject to a range of legal controls and would also be considered in detail in project specific AAs, Environmental Statements and chemical risk assessments under existing permitting procedures.

Drilling discharges of WBM and cuttings drilled with WBM may cause:

- Plume formation and turbidity, mainly associated with silt and clay particles which do not settle rapidly through the water column
- Settlement of particulates on the seabed, potentially causing physical smothering and changes to substrate characteristics
- Organic enrichment and subsequent oxygen depletion associated with enhanced aerobic microbial activity in surface sediments
- Direct toxicity effects in the water column and affected seabed

None of the above effects have been found to be significant following extensive use and discharge of WBM in the North and Irish Seas. The chemical formulation of WBM avoids or minimises the inclusion of toxic components, and the materials used in greatest quantities (barite and bentonite) are of negligible toxicity. Most of the WBM drilling chemicals typically used are categorised by OSPAR as PLONOR (Pose Little Or No Risk to the marine environment).

5.1.1 Sites with scoter and red-throated diver

Several of the Blocks are within or close to sites designated for birds potentially vulnerable to physical disturbance such as common scoter and red-throated diver (e.g. see Map A.2 and A3). Based on consultee advice during the 26th Round, effects on the common scoter feature of the Rinns of Islay SPA and the red-throated diver feature of the Caithness and Sutherland Peatlands SPA can be screened out and are therefore not further assessed here.

The Blocks applied for in the Irish Sea are near the Ribble and Alt Estuaries SPA and are partly within the Liverpool Bay SPA (two Blocks in Quadrant 110 about the coastal SPA site boundaries, and four intersect the Liverpool Bay SPA). Site feature disturbance through

oilfield vessel traffic was considered unlikely to result in significant effects because of the relatively low intensity during routine operations and since mitigation is possible for construction e.g. through routing or timing measures. However, based on consultee advice received during the 26th Round, the Blocks applied for in Quadrant 110 will be subject to an AA if required prior to any decision on whether to grant licences.

5.1.2 Southern North Sea SCIs

The North Norfolk Sandbanks SCI, Dogger Bank SCI, Inner Dowsing, Race Bank and North Ridge SCI and Haisborough, Hammond and Winterton SCI (see Map A.14) have been proposed on account of the presence of extensive areas of Annex I habitat, sandbanks which are slightly covered by sea water all the time. The sites also contain a number of existing exploration wells, pipelines or gas fields and several Blocks have been applied for within the boundaries of these candidate SACs. Consequently the sites may be affected by a variety of activities including drilling, pipelaying via direct physical disturbance and deposits of rock and other particulates. While local effects are foreseeable, activities that might follow award of licences in the 27th Licensing Round would modify an extremely small area of these Natura 2000 sites and as rapid recovery has been observed in many similar circumstances such effects are not considered to be significant. Risks of significant effects from major projects are also mitigated through the existing legal framework for the respective activities.

However, based on the number of blocks applied for, and the potential for cumulative effects, it is concluded that blocks wholly within or overlapping with these sites will be subject to an AA if required prior to any decision whether to grant licences.

5.1.3 Scanner and Braemar Pockmarks SCIs

Pockmark SACs may be affected by direct physical damage, physical disturbance and interruption of the gas or fluid flow on which they depend. Specific mitigation measures are available to ensure the conservation objectives for the sites are not compromised by oilfield activities, in particular controls on anchoring to avoid physical damage and on well location and trajectory to prevent interruption of the flow of shallow gas supplying and maintaining the features. One Block applied for in the 27th Round encompasses the Scanner Pockmark site and several Blocks applied for are within the vicinity of the Braemar Pockmarks site (see Map A.12). Consequently further assessment is considered necessary before a decision on licence award for Blocks situated by either of these SCIs.

5.1.4 North West of Scotland SCIs

A number of sites are present off the north west of Scotland (see Map A.15) which are designated, or have been selected for their Annex I reef habitat: the Darwin Mounds SCI (biogenic *Lophelia pertusa*), Stanton Banks SCI (stony), Wyville Thomson Ridge SCI (stony). Such reef features and their associated biota may be affected by physical disturbance and damage from drilling rig anchoring, drilling discharges, pipeline laying etc. However, since the closest block applied for is some 50km distant, such interactions and thus significant effects on site integrity are considered unlikely.

5.1.5 Other Offshore potential SACs and candidate SACs

A number of offshore sites have been selected for designation based on qualifying Annex I reef features, and are presently potential SACs (pSACs, cSACs or SCIs). These include Solan Bank pSAC, Anton Dorhn Seamount pSAC, Pobie Bank pSAC, Wight-Barfleur Reef cSAC and Pisces Reef Complex cSAC (see Maps A.13, A.15, A.16, A.17 & A.19). A single cSAC, the Croker Carbonate Slabs (see Map A.17), has been selected for the Annex I habitat, Submarine structures made by leaking gases.

None of the Blocks applied for impinge on any of these pSACs or cSACs for which physical disturbance could cause an impact to the site. A Block applied for in Quadrant 98 in the English Channel is 12km to the north of the Wight-Barfleur Reef cSAC, though the other offshore pSACs and cSACs are some distance from any of the Blocks applied for (between 30 and 70km).

Additional sites not considered here include Hatton Bank pSAC and North West Rockall Bank SCI, as these are distant from any Blocks applied for (minimum of ca. 190km). Though these are not mapped for this screening exercise, the features for which they have been selected for designation are listed in Table A.8.

5.1.6 Coastal and marine sites impinged on by Blocks applied for

Several Blocks applied for in the 27th Round overlap with or are immediately adjacent to the boundaries of coastal and marine Natura 2000 sites, these are in the Channel including Chesil and The Fleet SAC (see Maps A.4 and A.10), the Outer Moray Firth in proximity of Troup, Pennan and Lion's Heads SPA (see Map A.1), Northern Ireland including Red Bay cSAC, Belfast Lough SPA, Larne Lough SPA (see Maps A.2 and A.8) and the Irish Sea including Liverpool Bay SPA, Morecambe Bay SPA and Shell Flat and Lune Deep SCI (see Maps A.2 and A.8). In view of this it is concluded that these Blocks will be subject to an AA if required prior to any decision whether to grant licences.

5.1.7 Coastal sites not impinged on by Blocks applied for

The majority of Blocks applied for in the 27th Licensing Round are several tens of kilometres offshore and remote from Natura 2000 sites. Significant effects from consequent activities are thus unlikely. It is unlikely that any new terminals would be built as a result of developments following 27th Round Licensing. While new pipelines could conceivably come ashore at existing terminals, either through or near to coastal SACs and SPAs, there are well proven methods to prevent significant impacts. There is a legal framework, via the necessary pipeline consents, OPAR 2001 and EIA Regulations, to ensure that correct project design and mitigation is employed so that significant effects on Natura 2000 sites are avoided. Pipeline proposals with the potential to adversely affect site integrity would be subject to AA prior to decisions on consent, which could be refused, or amended, if such effects could not be avoided or a case made for Imperative Reasons of Overriding Public Interest and suitable compensatory measures identified.

5.2 Screening for Natura 2000 sites vulnerable to acoustic disturbance

The majority of Blocks applied for in the 27th Licensing Round are several tens of kilometres offshore and remote from UK Natura 2000 sites designated for birds (see Figure 2) and for marine mammals and fish (see Figure 3). Two sites of other member states in the southern North Sea which abut the median lines have marine mammals as qualifying features (see Map A.14 and Table A.10). Potential effects of anthropogenic noise on receptor organisms range from acute trauma to subtle behavioural and indirect ecological effects for example on prey species, complicating the assessment of significant effects. The sources, measurement, propagation, ecological effects and potential mitigation of noise associated with hydrocarbon exploration and production have been extensively reviewed and assessed. Significant effects were only considered possible for those SACs with marine mammals and fish as a primary or secondary feature, and in Blocks impinging on the boundaries of SPAs. Although seismic survey, piling and other oilfield noise is detectable by marine mammals, waterbirds and their prey, there is no evidence that such noise (suitably mitigated) presents

a risk to the viability of populations in UK waters. This would require direct mortality, behavioural response with implications for reproductive success (e.g. disturbance at fixed breeding locations) or reduced long-term ecological viability (e.g. sustained displacement from foraging grounds). In the localised areas of Natura 2000 sites designated for marine mammals, acoustic disturbance associated with seismic is intermittent and there is no evidence that cumulative effects of previous survey effort have been adverse. Despite considerable scientific and effects monitoring effort, no evidence of significant effect in relation to population viability or disturbance of Natura 2000 qualifying species has been found to result from hydrocarbon exploration and production noise.

A number of simple analyses on common noise sources have shown that, except at very close range, seismic and other oilfield noise is well within the frequency and received level range of noises to which bottlenose dolphin, harbour porpoise, grey and harbour seals, and various fish species are frequently exposed. Several studies note disturbance reactions in those species as a result of exposure to vessels and high frequency devices such as net pingers, which appear to have greater potential to interfere with cetaceans (e.g. because the noise is continuous or because it is tonal rather than 'white noise'). Although hydrocarbon production platforms are sources of semi-continuous noise, they have not been observed to result in adverse effects on marine mammal and fish occurrence in the vicinity of an installation.

In-combination effects from seismic surveys are not considered to be any greater than isolation effects; seismic surveys are deliberately not undertaken in the presence of other noise sources (such as construction piling) that would compromise the acoustic signals. Existing assessment requirements and mitigation measures are considered adequate to identify and prevent in-combination effects occurring sequentially in an area over time. It is not envisaged that noise originating from activities in the great majority of Blocks applied for in the 27th Licence Round would result in significant effects on Natura 2000 sites with birds, marine mammals and fish as qualifying features, either in terms of population viability or significant disturbance of the species. However, a number of Blocks in proximity to such sites will be subject to an AA if required, prior to any decision on whether to grant licences.

5.3 Screening for Natura 2000 sites vulnerable to oil spills

Oil spills can have potentially adverse environmental effects, and are accordingly controlled by a legal framework aimed at minimising their occurrence, providing for contingency planning, response and clean up, and which enables prosecutions. It is not credible to conclude that an oil spill will never occur as a result of 27th Round licensing, in spite of the regulatory controls and other preventative measures in place.

In April 2010, a major incident occurred in the US Gulf of Mexico. During an exploratory well in deep water off the coast of Louisiana, there was an explosion and fire on the semi-submersible drilling rig Deepwater Horizon. The rig was drilling in a water depth of 5,000ft with the oil reservoir at 18,000ft. Several reports into the cause of the incident and implications for activities on the UKCS have been produced, with a number of recommendations being integrated into UK guidance (e.g. DECC 2010, 2011). As part of the investigation UK regulators contacted their counterparts in the United States (the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE)) to understand the cause of the incident and whether there are implications for safety at offshore operations on the UK continental shelf. The independent, UK based, Maitland review panel (Maitland 2011) evaluated the recommendations emerging from these reports and considered their relevance to the oil and gas industry on the UKCS. They assessed to what extent

modifications or improvements to the UK regulatory regime could be informed by lessons learnt from the Deepwater Horizon incident.

DECC (along with other parts of government) have considered the implications of these various findings and implemented a series of actions in response.

The Health and Safety Executive (HSE) is responsible for regulating the risks to health and safety arising from work in the Offshore Industry on the UKCS. Inspectors from HSE's Offshore Division subsequently undertake offshore inspections of well control/integrity arrangements and related safety issues, and also review well designs and procedures. In the UK a safety case regime exists with specific safeguards including:

- The Offshore Installations (Safety Case) Regulations 2005 require written safety cases and risk assessments to be prepared by the operator, and then approved by HSE, for all mobile offshore drilling rigs operating in the UK.
- A system of well notification, where the HSE reviews well design and procedures.
- A requirement for the design and construction of a well to be examined by an independent and competent specialist.
- A scheme of independent verification of offshore safety critical equipment such as blowout preventers to ensure they are fit for purpose.
- Checks that workers involved in well operations have received suitable information, instruction, training and supervision.
- Offshore inspections of well control and integrity arrangements, and related safety issues, by specialist inspectors from HSE's Offshore Division.
- Weekly drilling reports submitted to HSE by operators.

A review carried out by DECC found that the existing system is fit for purpose, but in light of the Deepwater Horizon spill the regime has been strengthened further:

1. DECC has increased the oversight of drilling operations through the recruitment of additional offshore environmental inspectors in its Aberdeen office. This has increased the number of annual environmental inspections of mobile drilling rigs.
2. In light of the Gulf of Mexico incident, DECC has reviewed the indemnity and insurance requirements for operating in the UK Continental Shelf.
3. Industry trade association Oil and Gas UK established a group comprised of regulators, industry and trade union representatives (the Oil Spill Prevention and Response Advisory Group - OSPRAG) to examine the UK's strengths and weaknesses in responding to a Gulf like incident. OSPRAG was active for 16 months, before reaching conclusions that recommended the setting up of a number of bodies with responsibility for ensuring drilling operations in UK waters remain robust and fit for purpose. The Oil Spill Response Forum (under guidance of Oil and Gas UK) will keep the oil spill toolkit, including subsea dispersants and spill modelling, under review. The Well Life Cycle Practices Forum will have responsibility for drilling and well engineering management functions. Regular interaction between Oil and Gas UK and OPOL (Offshore Pollution Liability Association Limited) will be maintained to exchange views on financial responsibilities. Additionally, in June 2012, Oil and Gas UK issued draft guidelines on financial responsibility for well operations in the UKCS, including assessment methodology for potential costs of well control, pollution remediation and compensation.
4. In May 2011 exercise 'Sula' was undertaken to test the UK's capacity to respond to a deepwater drilling related oil spill to the West of Shetland. A tier 2/3 deployment demonstration took place in Sullom Voe, Shetland alongside a separate Emergency Equipment Response Deployment (EERP), designed to test the dispersion of free flowing oil from a well, clearing of a well head of debris and the placement of a capping device to close off the flow from a well. An independent assessment of the deployments concluded

- that the ability to deploy all the equipment mobilised for the exercises (including surveillance equipment, aerial and surface dispersant application, containment and recovery and shoreline response) was proven and all the onshore equipment was seen in fully operational conditions with the oil spill response team fully conversant in its use.
5. DECC has issued a series of letters (in December 2010, July 2011 and September 2011) to all UK operators specifying a number of requirements and expectations regarding oil pollution prevention, response, emergency plans and consenting. These have been combined in supplementary guidance issued by DECC⁴.
 6. The EU has asked companies operating in EU waters to provide assurances that they are ensuring safe practice and that they are able to take on full responsibilities for environmental and other damage if an incident were to occur.

The southern part of the North Sea is a gas province and so, although a blowout might in theory occur there, it would not result in significant oil spillage. Some other areas of the North Sea contain oil reservoirs which have insufficient pressure to support a blow out similar in nature to the Deepwater Horizon spill. Oil has to be actively pumped up from those reservoirs in order to produce it. But there remain other oil reservoirs, including some in deeper waters to the west of Shetland, where in theory a blowout could occur should the safety measures in place fail.

Potential risks of oil spills are mitigated in the southern North Sea and the Blocks applied for in the eastern Irish Sea by the nature of the hydrocarbons present in those areas (natural gas; whilst there are a number of oilfields in Liverpool Bay, the prospectivity of the Blocks applied for is for gas). In the case of the majority of Blocks being applied for where prospectivity is for crude oil, the distance offshore allows for natural dispersion before a slick would approach a Natura 2000 site. Modelling, and field experiments and experience indicates that very large diesel spills in the UK disperse naturally within 8 to 9 hours, travelling some 25km under worst case conditions (constant 30 knot onshore wind). This allows a distinction in terms of relative risk, to be made between Blocks in the southern North Sea gas province and those in other areas. Aerial surveillance of the gas condensate spill resulting from the Elgin platform gas release in the central North Sea in March 2012 suggested that the extent of sea surface contamination, represented by a sheen, was limited to 20km², with the vast majority of the release entering the atmosphere.

Similarly, although strong winds can come from any direction and in any season, the predominant winds in the UK are from the southwest which for Blocks to the east of the UK would push spilled oil away from the coast. However, in view of the relative proximity to the coast of a number of the Blocks applied for including Blocks in Quadrants 125, 126 and 111 off the Northern Irish coast, Quadrants 97 and 98 in the central Channel, a group of Blocks to the west of Shetland, and Blocks in the outer Moray Firth will be subject to an AA if required prior to any decision on whether to grant licences. These Blocks are listed in Section 5.5 below.

A number of Blocks have been applied for in the deep water to the west of Shetland (see Figure 1). There have been numerous Blocks licensed in these deep water areas in previous licensing rounds and extensive exploration drilling has been undertaken to the west of Shetland over several decades resulting in a number of hydrocarbon field developments. In connection with this exploration and field development, assessment has been undertaken of the behaviour of spills and contingency planning. The presence of the North Atlantic Drift/shelf edge current strongly flowing to the northeast, and legal requirements on well design safety and spill contingency planning, mitigate against the likelihood of significant

⁴ DECC website

http://og.decc.gov.uk/en/olgs/cms/environment/leg_guidance/deepwater/deepwater.aspx

effects on Natura 2000 and other conservation sites arising from oil spills from activities in those areas. The award of Seaward Production Licences for the Blocks in this area will not in itself lead to significant effects on Natura 2000 sites, since they do not permit subsequent field activities.

5.4 In-combination effects

In-combination effects include cumulative, synergistic and secondary/indirect effects. The screening assessment included consideration of other human activities likely to cause cumulative or synergistic effects that when taken in-combination with the activities associated with Block licensing would have a likely significant effect on Natura 2000 sites so as to undermine the conservation objectives of a site. This consideration was of necessity tentative, in some respects, given the uncertainty of the scale and timing of activities which could follow licensing of 27th Round Blocks. However, there are effective regulatory mechanisms in place to ensure that operators and DECC take such considerations into account during activity permitting. These mechanisms generally allow for public participation in the process, and in the case of oil and gas activities and a range of other developments also include project specific Appropriate Assessment.

Adopting a precautionary approach, prior to any decision on whether to grant licences, further assessment of potential in-combination effects will be undertaken for a number of Blocks in the Channel, southern North Sea, and outer Moray Firth which are, for example, near potential sites of offshore wind farm construction and for which in-combination effects can be conceived from existing and projected activities/installations.

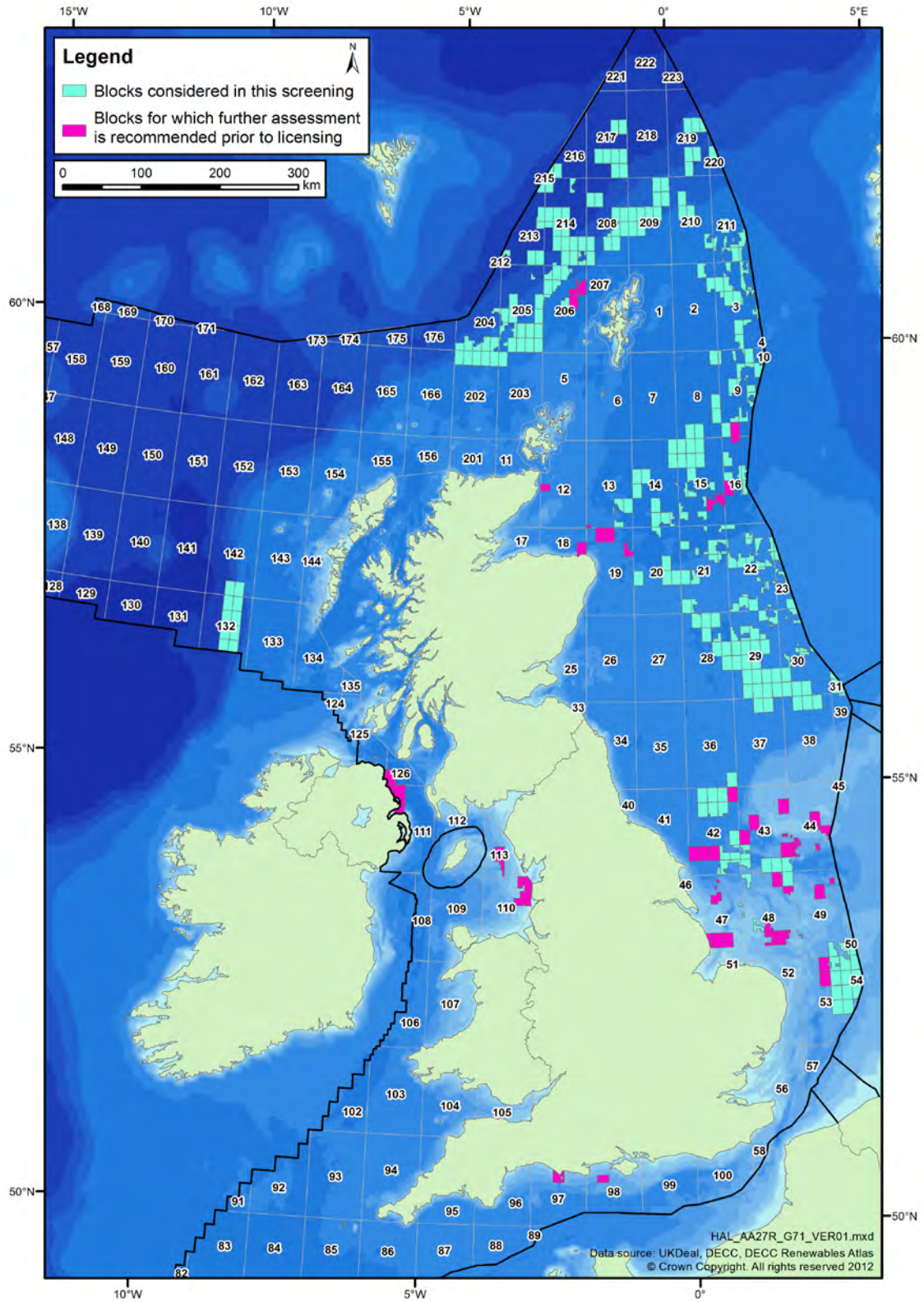
5.5 Conclusion

This screening assessment is based on the Blocks applied for in the 27th Round and has considered the likelihood for significant effects on Natura 2000 sites from activities that could follow licensing of Blocks. The screening concluded that for the majority of the Blocks, licensing would not have the potential to cause significant effects on Natura 2000 site(s), on the understanding that subsequent field activities will be subject to specific activity permitting and HRA (where appropriate) to ensure appropriate mitigation measures are applied to planned operations and the prevention of potential for accidents. However, a number of Blocks (listed below and shown in Figure 4 overleaf) will be subject to an AA prior to any decision whether to grant licences.

Table 2: Blocks for which further assessment is recommended prior to licensing decisions

9/27	19/10b	43/25	47/3j	49/8b	111/7
12/16a	19/2	44/13	47/3k	53/3a	113/22
125/30	19/3	44/16b	47/8e	53/8	113/27d
126/26	42/21	44/16c	48/10c	97/13	206/10b
13/26b	42/22	44/18e	48/18c	98/12b	206/14
15/20f	42/23	44/19a	48/23c	110/10	206/9b
15/24a	42/5	44/21c	48/24	110/4b	
15/25c	43/10	44/23g	48/25c	110/5	
16/16	43/12	47/22	48/4b	110/9c	
16/2c	43/16	47/23	49/21d	111/1	
18/10	43/20f	47/24	49/4b	111/2	

Figure 4: Map showing Blocks for which Appropriate Assessment is recommended prior to licensing decisions



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Appendix A - The designated sites

A1 Introduction

The following maps and tables show the locations of potentially relevant European sites and their qualifying features. The sites in this Appendix are ordered thus:

- A2 Coastal and marine Special Protection Areas
- A3 Special Protection Areas for breeding red-throated diver
- A4 Coastal and marine Special Areas of Conservation
- A5 Offshore Special Areas of Conservation
- A6 Riverine and freshwater Special Areas of Conservation
- A7 Sites in the adjacent waters of other member states

A2 Coastal and Marine Special Protection Areas⁵

Special Protection Areas (SPAs) are protected sites classified in accordance with Article 4 of the EC Birds Directive of 1979. Sites are classified for rare and vulnerable birds and for regularly occurring migratory birds. The SPAs included in this section are coastal sites which have been selected for the presence of one or more of the bird species listed in Box A.1 (below). In 2009, Marine extensions were added to 31 existing seabird breeding colony SPAs in Scotland, the details of which are also included below. Those sites that have been approved by the UK government and are in the process of being classified are known as potential SPAs (pSPAs).

The JNCC website notes that, *“The legal list of qualifying species, for which a Special Protection Area (SPA) has been selected and is managed, is given on the relevant SPA citation (available from the country agency concerned). A review of UK network of SPAs was co-ordinated by JNCC in the late 1990s. Following formal submission to, and agreement by, relevant Ministers, the results were published in 2001. This Review revised the list of qualifying species at some SPAs.*

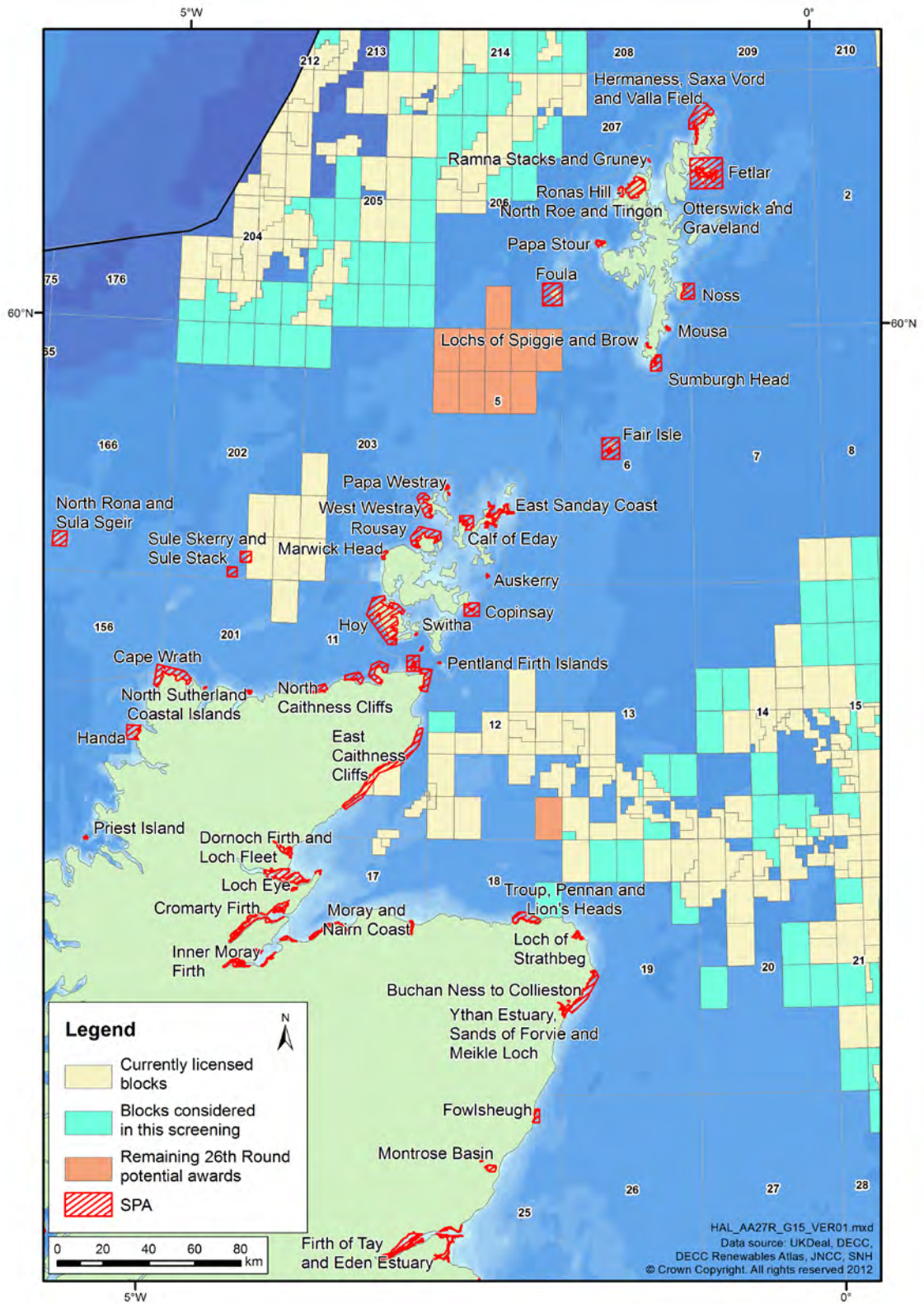
However, it is taking some time to revise all the relevant SPA citations in the light of these agreed changes to the affected lists of qualifying species. Where there is a mismatch between species listed in extant citations and listed in the 2001 Review for the same sites, there has been confusion as to the ‘correct’ list of qualifying species to be used at any site for purposes of management, assessment and development control.

The individual site accounts in 2001 Review should be taken as the definitive list of qualifying species at the SPAs concerned. However, at sites where there remain differences between that list of qualifying species and the extant site citation, then the relevant country agency should be contacted for further guidance.”

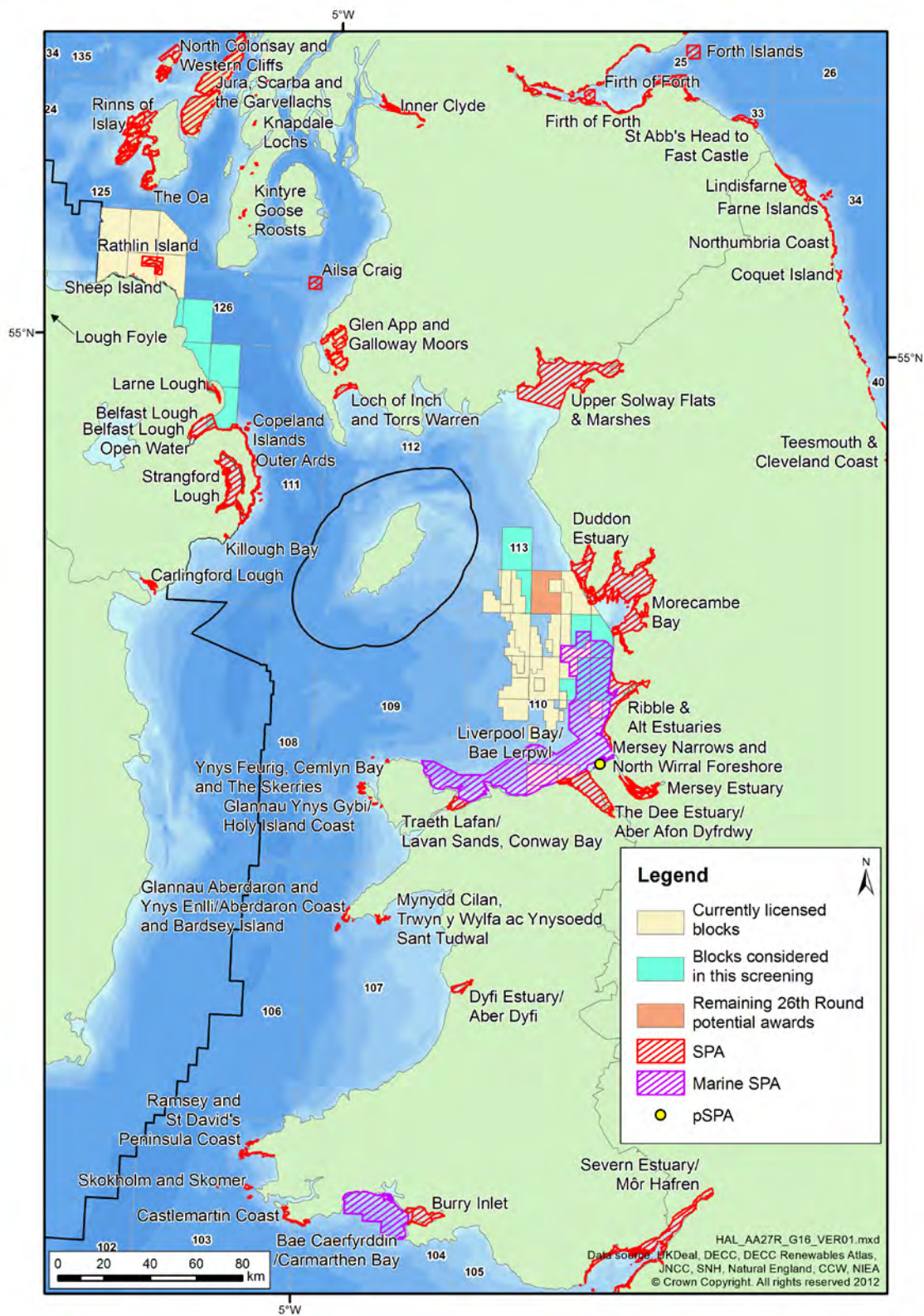
A review of SPA sites was undertaken to identify where a mismatch between the qualifying species lists existed. Each country agency (NE, SNH, CCW, NIEA) was contacted to clarify those features which should be considered. The species listed in Table A.1 reflect the outcome of this review.

⁵ Note: The tables also include a number of inland SPAs supporting breeding red-throated divers.

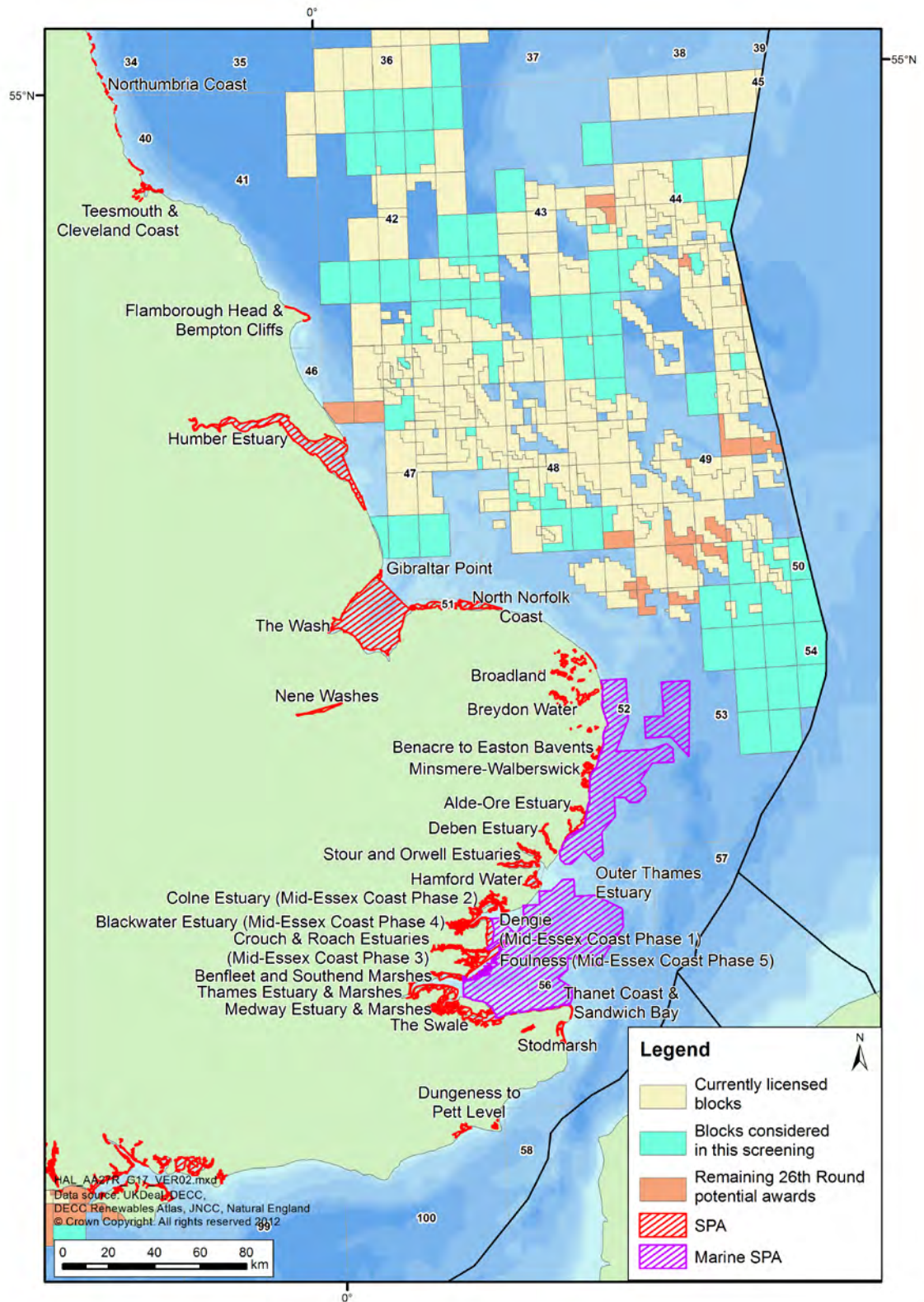
Map A.1: Location of SPAs – Shetland to the Tay



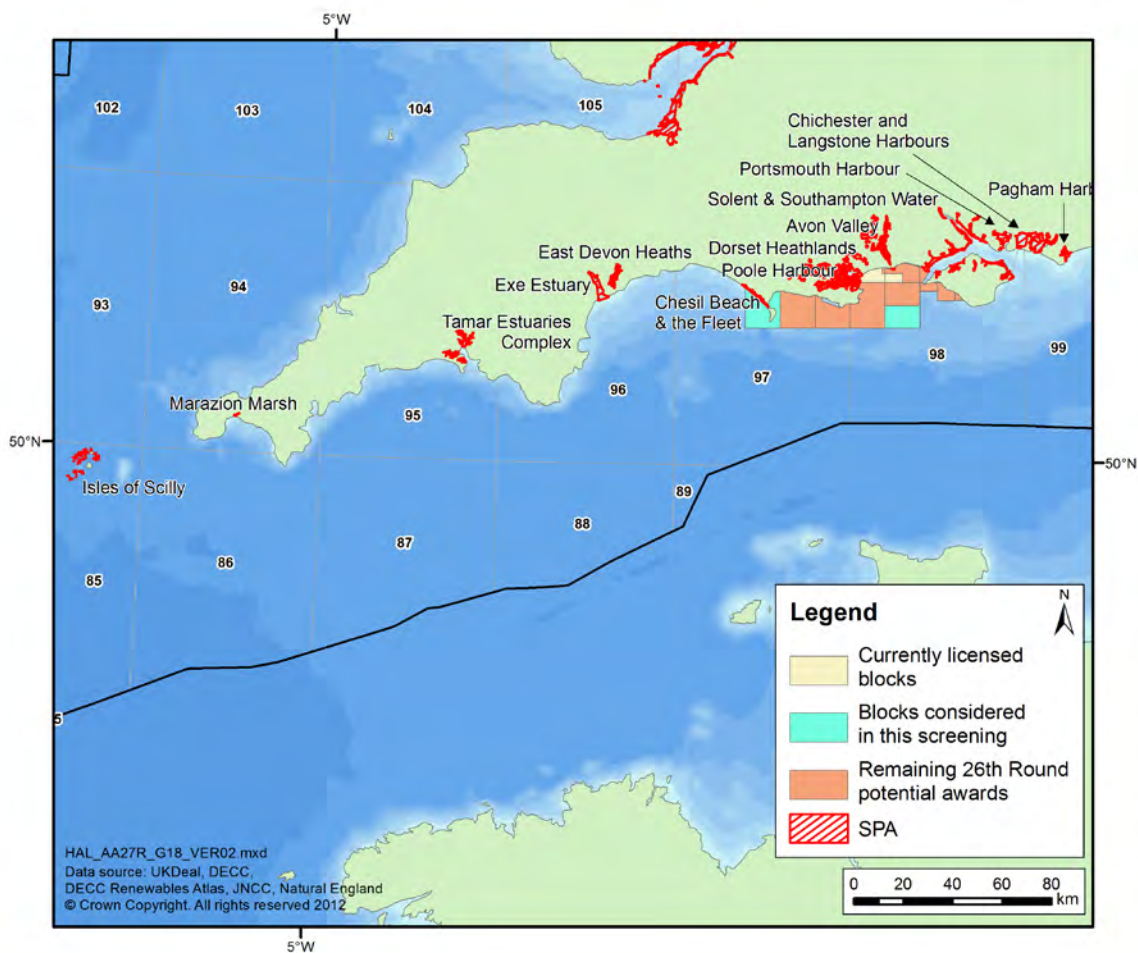
Map A.2: Location of SPAs – Forth to Teesmouth and Islay to Bristol Channel



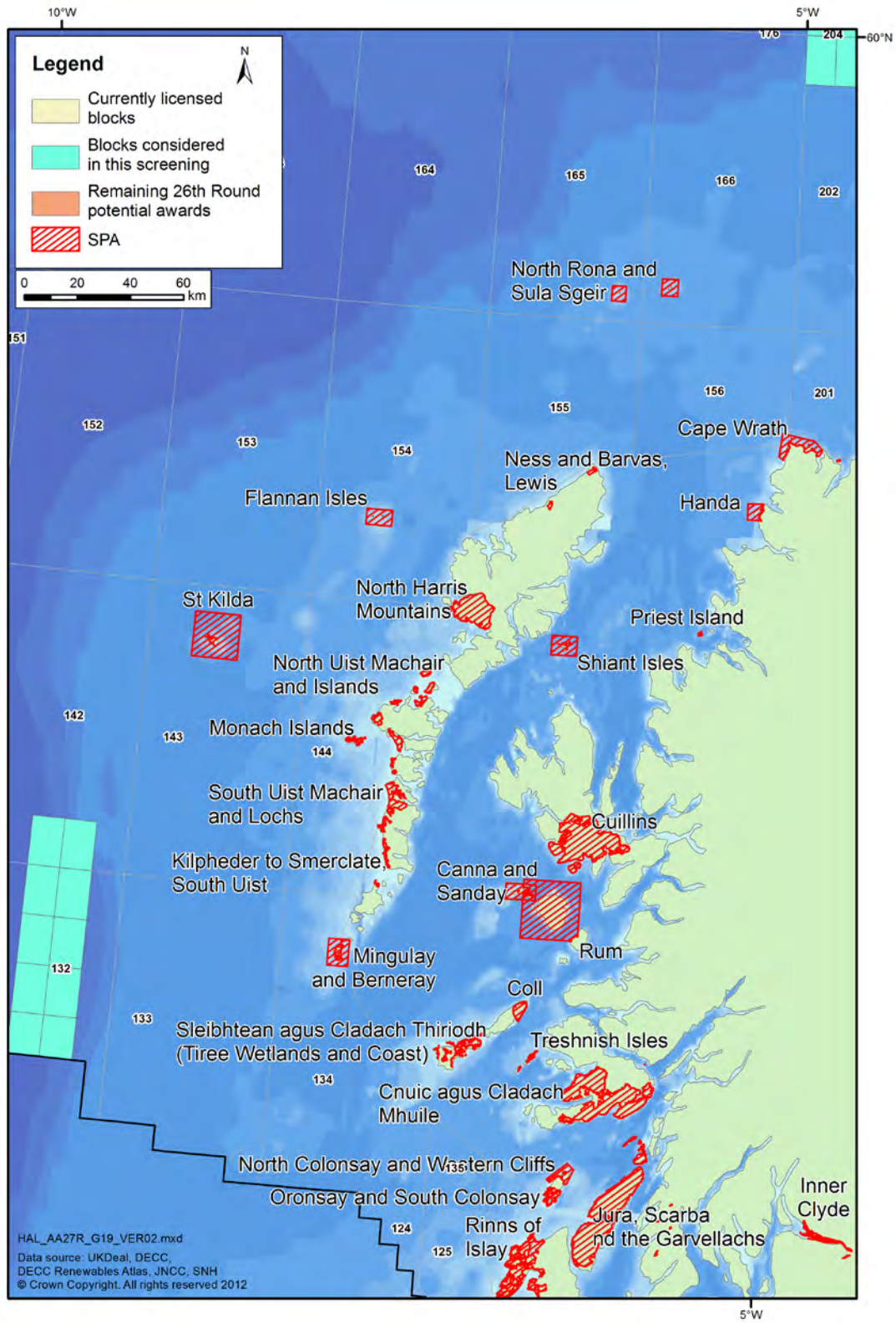
Map A.3: Location of SPAs – Northumbria to Kent



Map A.4: Location of SPAs – Isle of Wight to Bristol Channel



Map A.5: Location of SPAs – Cape Wrath to Islay



Box A.1: Migratory and/or Annex I bird species for which SPAs are selected in the UK

Divers and grebes	Waders
Red-throated diver <i>Gavia stellata</i>	Oystercatcher <i>Haematopus ostralegus</i>
Black-throated diver <i>Gavia arctica</i>	Avocet <i>Recurvirostra avosetta</i>
Little grebe <i>Tachybaptus ruficollis</i>	Stone curlew <i>Burhinus oedipnemus</i>
Great crested grebe <i>Podiceps cristatus</i>	Ringed plover <i>Charadrius hiaticula</i>
Slavonian grebe <i>Podiceps auritus</i>	Dotterel <i>Charadrius morinellus</i>
Seabirds	Golden plover <i>Pluvialis apricaria</i>
Fulmar <i>Fulmarus glacialis</i>	Grey plover <i>Pluvialis squatarola</i>
Manx shearwater <i>Puffinus puffinus</i>	Lapwing <i>Vanellus vanellus</i>
Storm petrel <i>Hydrobates pelagicus</i>	Knot <i>Calidris canutus</i>
Leach's petrel <i>Oceanodroma leucorhoa</i>	Sanderling <i>Calidris alba</i>
Gannet <i>Morus bassanus</i>	Purple sandpiper <i>Calidris maritima</i>
Cormorant <i>Phalacrocorax carbo carbo</i>	Dunlin <i>Calidris alpina alpina</i>
Shag <i>Phalacrocorax aristotelis</i>	Ruff <i>Philomachus pugnax</i>
Guillemot <i>Uria aalge</i>	Snipe <i>Gallinago gallinago</i>
Black guillemot <i>Cephus grylle</i>	Black-tailed godwit <i>Limosa limosa</i> (breeding)
Razorbill <i>Alca torda</i>	Black-tailed godwit <i>Limosa limosa islandica</i> (non-breeding)
Puffin <i>Fratercula arctica</i>	Bar-tailed godwit <i>Limosa lapponica</i>
Gulls, terns and skuas	Whimbrel <i>Numenius phaeopus</i>
Arctic skua <i>Stercorarius parasiticus</i>	Curlew <i>Numenius arquata</i>
Great skua <i>Catharacta skua</i>	Redshank <i>Tringa totanus</i>
Mediterranean gull <i>Larus melanocephalus</i>	Greenshank <i>Tringa nebularia</i>
Black-headed gull <i>Larus ridibundus</i>	Wood sandpiper <i>Tringa glareola</i>
Common gull <i>Larus canus</i>	Turnstone <i>Arenaria interpres</i>
Lesser black-backed gull <i>Larus fuscus</i>	Red-necked phalarope <i>Phalaropus lobatus</i>
Herring gull <i>Larus argentatus</i>	Little egret <i>Egretta garzetta</i>
Great black-backed gull <i>Larus marinus</i>	Waterfowl
Kittiwake <i>Rissa tridactyla</i>	Bewick's swan <i>Cygnus columbianus bewickii</i>
Sandwich tern <i>Sterna sandvicensis</i>	Whooper swan <i>Cygnus cygnus</i>
Roseate tern <i>Sterna dougallii</i>	Bean goose <i>Anser fabalis</i>
Common tern <i>Sterna hirundo</i>	Pink-footed goose <i>Anser brachyrhynchus</i>
Arctic tern <i>Sterna paradisaea</i>	Russian white-fronted goose <i>Anser albifrons albifrons</i>
Little tern <i>Sterna albifrons</i>	Greenland white-fronted goose <i>Anser albifrons</i>
Crakes and rails	Icelandic greylag goose <i>Anser anser</i>
Spotted crane <i>Porzana porzana</i>	Greenland barnacle goose <i>Branta leucopsis flavirostris</i>
Corncrake <i>Crex crex</i>	Svalbard barnacle goose <i>Branta leucopsis</i>
Coot <i>Fulica atra</i>	Dark-bellied brent goose <i>Branta bernicla bernicla</i>
Bittern <i>Botaurus stellaris</i>	Light-bellied brent goose <i>Branta bernicla hrota</i>
Birds of prey and owls	Shelduck <i>Tadorna tadorna</i>
Honey buzzard <i>Pernis apivorus</i>	Wigeon <i>Anas penelope</i>
Red kite <i>Milvus milvus</i>	Gadwall <i>Anas strepera</i>
Marsh harrier <i>Circus aeruginosus</i>	Teal <i>Anas crecca</i>
Hen harrier <i>Circus cyaneus</i>	Mallard <i>Anas platyrhynchos</i>
Golden eagle <i>Aquila chrysaetos</i>	
Osprey <i>Pandion haliaetus</i>	

Merlin <i>Falco columbarius</i>	Pintail <i>Anas acuta</i>
Peregrine <i>Falco peregrinus</i>	Shoveler <i>Anas clypeata</i>
Short-eared owl <i>Asio flammeus</i>	Pochard <i>Aythya ferina</i>
Other bird species	Tufted duck <i>Aythya fuligula</i>
Capercaillie <i>Tetrao urogallus</i>	Scaup <i>Aythya marila</i>
Nightjar <i>Caprimulgus europaeus</i>	Eider <i>Somateria mollissima</i>
Woodlark <i>Lullula arborea</i>	Long-tailed duck <i>Clangula hyemalis</i>
Fair Isle wren <i>Troglodytes troglodytes fridariensis</i>	Common scoter <i>Melanitta nigra</i>
Aquatic warbler <i>Acrocephalus paludicola</i>	Velvet scoter <i>Melanitta fusca</i>
Dartford warbler <i>Sylvia undata</i>	Goldeneye <i>Bucephala clangula</i>
Chough <i>Pyrrhocorax pyrrhocorax</i>	Red-breasted merganser <i>Mergus serrator</i>
Scottish crossbill <i>Loxia scotica</i>	Goosander <i>Mergus merganser</i>

Table A.1: SPAs from Shetland to Kent and their Qualifying Features (North Sea)

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
SHETLAND				
Sumburgh Head SPA	2439.62	Breeding: Arctic tern	N/A	Breeding: Seabirds
Lochs of Spiggie and Brow SPA	141.48	Over winter: Whooper swan	N/A	N/A
Foula SPA	7985.49	Breeding: Arctic tern Leach's storm petrel Red-throated diver	Breeding: Great skua Guillemot Puffin Shag	N/A
Papa Stour SPA	569.03	Breeding: Arctic tern	Breeding: Ringed plover	N/A
Ronas Hill-North Roe and Tingon SPA	5470.2	Breeding: Red-throated diver Merlin	Breeding: Great skua	N/A
Ramna Stacks and Gruney SPA	11.59	Breeding: Leach's storm petrel	N/A	N/A
Hermaness, Saxa Vord and Valla Field SPA	6833.04	Breeding: Red-throated diver	Breeding: Gannet Great skua Puffin	Breeding: Seabirds
Fetlar SPA	16962.16	Breeding: Arctic tern Red-necked phalarope	Breeding: Dunlin Great skua Whimbrel Fulmar Arctic skua Black guillemot	Breeding: Seabirds

⁶ A seabird assemblage of international importance. The area regularly supports at least 20,000 seabirds, or, a wetland of international importance. The area regularly supports at least 20,000 waterfowl.

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
Noss SPA	3338.34	N/A	Breeding: Gannet Great skua Guillemot Kittiwake	N/A
Mousa SPA	197.98	Breeding: Arctic tern Storm petrel	N/A	N/A
Fair Isle SPA	6824.40	Breeding: Arctic tern Fair Isle wren	Breeding: Guillemot Razorbill Great skua Puffin Fulmar Shag Kittiwake Arctic skua Guillemot	N/A
ORKNEY				
Pentland Firth Islands SPA	170.51	Breeding: Arctic tern	N/A	N/A
Switha SPA	57.39	Over winter: Barnacle goose	N/A	N/A
Hoy SPA	18122.17	Breeding: Peregrine Red-throated diver	Breeding: Great skua	Breeding: Seabirds
Marwick Head SPA	492.96	N/A	Breeding: Guillemot Kittiwake	N/A
Rousay SPA	5483.37	Breeding: Arctic tern	N/A	Breeding: Seabirds
West Westray SPA	3781.29	Breeding: Arctic tern	Breeding: Razorbill Kittiwake Arctic skua Guillemot	Breeding: Seabirds
Papa Westray (North Hill and Holm) SPA	245.71	Breeding: Arctic tern	Breeding: Arctic Skua	N/A
Calf of Eday SPA	2668.91	N/A	N/A	Breeding: Seabirds
East Sanday Coast SPA	1515.23	Over winter: Bar-tailed Godwit	Over winter: Purple sandpiper Turnstone	N/A
Auskerry SPA	101.97	Breeding: Arctic tern Storm petrel	N/A	N/A

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
Copinsay SPA	3607.7	N/A	Breeding: Great black-backed gull Kittiwake Guillemot	N/A
Sule Skerry and Sule Stack SPA	3890.55	Breeding: Leach's storm petrel Storm petrel	Breeding: Gannet Puffin Shag	N/A
NORTH COAST OF SCOTLAND				
North Caithness Cliffs SPA	14621.14	Breeding: Peregrine	Breeding: Razorbill Fulmar Kittiwake Guillemot Puffin	N/A
North Sutherland Coastal Islands SPA	221.11	Over winter: Barnacle goose	N/A	N/A
MORAY FIRTH AND ABERDEENSHIRE				
East Caithness Cliffs SPA	11690.92	N/A	Breeding: Razorbill Black guillemot Fulmar Herring gull Great black-backed gull Shag Cormorant Kittiwake Guillemot	N/A
Dornoch Firth and Loch Fleet SPA	7836.33	Breeding: Osprey Over winter: Bar-tailed godwit	Over winter: Greylag goose Wigeon	Over winter: Waterfowl
Loch Eye SPA	205.14	Over winter: Whooper swan	Over winter: Greylag goose	N/A
Cromarty Firth SPA	3766.24	Breeding: Common tern Osprey Over winter: Bar-tailed godwit Whooper swan	Over winter: Greylag goose	Over winter: Waterfowl

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
Inner Moray Firth SPA	2339.23	Breeding: Common tern Osprey Over winter: Bar-tailed godwit Cormorant Teal Wigeon Goldeneye, Gossander, Oystercatcher	Over winter: Greylag goose Red-breasted merganser Redshank Scaup	Over winter: Waterfowl
Moray and Nairn Coast SPA	2410.25	Breeding: Osprey Over winter: Bar-tailed godwit Common scoter, Dunlin Long tailed duck, Oystercatcher Red breasted merganser Velvet scoter Wigeon	Over winter: Greylag goose Pink-footed goose Redshank	Over winter: Waterfowl
Troup, Pennan and Lion's Heads SPA	3367.21	N/A	Breeding: Guillemot Kittiwake Herring gull Razorbill Fulmar	Breeding: Seabirds
Loch of Strathbeg SPA	615.94	Breeding: Sandwich tern Over winter: Whooper swan Barnacle goose	Over winter: Teal Greylag goose Pink-footed goose	Over winter: Waterfowl
Buchan Ness to Collieston Coast SPA	5400.94	N/A	Breeding: Kittiwake Guillemot Fulmar Shag Herring gull	Breeding: Seabirds
Ythan Estuary, Sands of Forvie and Meikle Loch SPA	1016.24	Breeding: Common tern Little tern Sandwich tern	Over winter: Pink-footed goose	Over winter: Waterfowl
Fowlsheugh SPA	1303.54	N/A	Breeding: Razorbill Guillemot Kittiwake Herring gull Fulmar	Breeding: Seabirds

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
SOUTH OF ABERDEENSHIRE				
Montrose Basin SPA	984.61	N/A	Over winter: Greylag goose Knot Pink-footed goose Oystercatcher Redshank	Over winter: Waterfowl
Firth of Tay and Eden Estuary SPA	6923.29	Breeding: Little tern Marsh harrier Over winter: Bar-tailed godwit	Over winter: Greylag goose Pink-footed goose Redshank	Over winter: Waterfowl
Forth Islands SPA	9796.98	Breeding: Roseate tern Common tern Sandwich tern Arctic tern	Breeding: Razorbill Puffin Lesser black-backed gull Gannet Shag Cormorant Kittiwake Guillemot	N/A
Firth of Forth SPA	6313.72	Over winter: Red-throated diver Oystercatcher Bar-tailed godwit Golden plover Slavonian grebe On passage: Sandwich tern	Over winter: Pink-footed goose Turnstone Knot Shelduck Redshank	Over winter: Waterfowl
Imperial Dock Lock, Leith SPA	0.11	Breeding: Common tern	N/A	N/A
St Abb's Head to Fast Castle SPA	1736.52	N/A	Breeding: Guillemot	Breeding: Seabirds
NORTHEAST ENGLAND				
Lindisfarne SPA	3679.22	Breeding: Little tern Roseate tern Over winter: Whooper swan Bar-tailed godwit Golden Plover	Over winter: Wigeon Icelandic greylag goose Svalbard light-bellied brent goose Sanderling Dunlin Long-tailed duck Red-breasted merganser Grey plover Eider Shelduck On passage: Ringed plover	Over winter; Waterfowl

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
Farne Islands SPA	101.86	Breeding: Common tern Arctic tern Sandwich tern Roseate tern	Breeding: Guillemot Puffin	Breeding: Seabirds
Northumbria Coast SPA	1107.98	Breeding: Little tern	Over winter: Purple sandpiper Turnstone	N/A
Coquet Island SPA	22.28	Breeding: Arctic tern Common tern Roseate tern Sandwich tern	Breeding: Puffin	Breeding: Seabirds
Teesmouth and Cleveland Coast SPA	1247.31	Breeding: Little tern On passage: Sandwich tern	On passage: Ringed plover Over winter: Knot Redshank	Over winter: Waterfowl
YORKSHIRE AND HUMBER				
Flamborough Head and Bempton Cliffs SPA	212.17	N/A	Breeding: Kittiwake	Breeding: Seabirds
Humber Estuary SPA	37630.24	Breeding: Bittern Marsh harrier Avocet Little tern Over winter: Bittern Hen harrier Bar-tailed godwit Golden plover Avocet On passage: Ruff	Over winter: Dunlin Knot Black-tailed godwit Shelduck Redshank On passage: Dunlin Knot Black-tailed godwit Redshank	Non-breeding: Waterfowl
LICOLNSHIRE, NORFOLK AND SUFFOLK				
Gibraltar Point SPA	414.09	Breeding: Little tern Over winter: Bar-tailed godwit	Over winter: Grey plover Sanderling Knot	Over winter: Waterfowl

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
The Wash SPA	62211.66	Breeding: Common tern Little tern Marsh harrier Over winter: Avocet Bewick's swan Bar-tailed godwit Golden plover Whooper Swan	On passage: Ringer plover Sanderling Over winter: Black-tailed godwit Pintail Wigeon Gadwall Pink-footed goose Turnstone Dark-bellied brent goose Goldeneye Sanderling Dunlin Knot Oystercatcher Common scoter Curlew Grey plover Shelduck Redshank	Over winter: Waterfowl
North Norfolk Coast SPA	7886.79	Breeding: Bittern Marsh harrier Avocet Little tern Common tern Sandwich tern Roseate tern Mediterranean gull Montagu's harrier Over winter: Avocet Bar-tailed godwit Golden plover Hen harrier Ruff	Breeding: Redshank Ringed plover On passage: Ringed plover Over winter: Wigeon Pink-footed goose Dark-bellied brent goose Knot Pintail Redshank	Over winter: Waterfowl
Broadland SPA	5462.4	Breeding: Bittern Marsh harrier Over winter: Bittern Ruff Bewick's swan Whooper swan Wigeon	Over winter: Gadwall Pink-footed goose Shoveler	Over winter: Waterfowl
Great Yarmouth North Denes SPA	149.19	Breeding: Little tern	N/A	N/A

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
Breydon Water SPA	1202.94	Breeding: Common tern Over winter: Bewick's swan Avocet Golden plover On passage: Ruff	Over winter: Lapwing	Over winter: Waterfowl
Benacre to Easton Barents SPA	516.83	Breeding: Bittern Little tern Marsh harrier Over winter: Bittern	N/A	N/A
Minsmere-Walberswick SPA	2018.92	Breeding: Bittern Nightjar Marsh harrier Avocet Little tern Woodlark Over winter: Hen harrier Avocet Bittern	Breeding: Shoveler Teal Gadwall Over winter: Shoveler Gadwall Russian white-fronted goose	N/A
Alde-Ore Estuary SPA	2416.87	Breeding: Marsh harrier Avocet Little tern Sandwich tern Over winter: Ruff Avocet	Breeding: Lesser black-backed gull Over winter: Redshank	Breeding: Seabirds Over winter: Waterfowl
Deben Estuary SPA	978.93	Over winter: Avocet	Over winter: Dark-bellied brent goose	N/A

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
Stour and Orwell Estuaries SPA	3676.92	Breeding: Avocet Over winter: Hen harrier	Over winter: Pintail Dark-bellied brent goose Knot Dunlin Black-tailed godwit Grey plover Redshank Shelduck Turnstone On passage: Redshank	Over winter: Waterfowl
ESSEX AND KENT				
Outer Thames Estuary (Margate and Long Sands) SPA	379,268.14	Over winter: Red-throated diver	N/A	N/A
Hamford Water SPA	2187.21	Breeding: Little tern Over winter: Avocet Gloden plover Ruff	Over winter: Teal Dark-bellied brent goose Ringed plover Black-tailed godwit Grey plover Shelduck Redshank On passage: Ringed plover	N/A
Foulness (Mid-Essex Coast Phase 5) SPA	10968.9	Breeding: Avocet Little tern Common tern Sandwich tern Over winter: Hen harrier Bar-tailed godwit Avocet Golden plover	Breeding: Ringed plover Over winter: Dark-bellied brent goose Knot Oystercatcher Grey plover Redshank	Over winter: Waterfowl
Colne Estuary (Mid-Essex Coast Phase 2) SPA	2701.43	Breeding: Little tern Over winter: Hen harrier Avocet Golden plover	Breeding: Pochard Ringed plover Over winter: Dark-bellied brent goose Redshank	Over winter: Waterfowl

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
Medway Estuary and Marshes SPA	4684.36	Breeding: Avocet Little tern Common tern Over winter: Bewick's swan Avocet	Over winter: Pintail Shoveler Teal Wigeon Turnstone Dark-bellied brent goose Dunlin Knot Ringed plover Oystercatcher Black-tailed godwit Curlew Grey plover Shelduck Greenshank Redshank	Breeding: Kingfisher Mallard Short-eared owl Pochard Hen harrier Merlin Red-throated diver Cormorant Lapwing Over winter: Waterfowl
Benfleet and Southend Marshes SPA	2251.31	N/A	Over winter: Dark-bellied brent goose Dunlin Knot Ringed plover Grey plover On passage: Ringed plover	Over winter: Waterfowl
Dengie (Mid-Essex Coast Phase 1) SPA	3127.23	Over winter: Hen harrier Bar-tailed godwit	Over winter: Dark-bellied brent goose Knot Grey plover	Over winter: Waterfowl
Thanet Coast and Sandwich Bay SPA	1870.16	Breeding: Little tern Over winter: Golden plover	Over winter: Turnstone	N/A
Thames Estuary and Marshes SPA	4838.94	Over winter: Hen harrier Avocet	Over winter: Dunlin Knot Black-tailed godwit Grey plover Redshank On passage: Ringed plover	Over winter: Waterfowl
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA	1735.58	Over winter: Hen harrier	Over winter: Dark-bellied brent goose	Over winter: Waterfowl

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁶
The Swale SPA	6514.71	Breeding: Avocet Marsh harrier Mediterranean gull Over winter: Avocet Bar-tailed godwit Gloden plover Hen harrier	Over winter: Dark-bellied brent goose Dunlin Redshank Black-tailed godwit Grey plover Knot Pintail Shoveler On passage: Ringed plover	Over winter: Waterfowl
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	4395.15	Breeding: Little tern Over winter: Hen harrier Avocet Golden plover Ruff	Breeding: Pochard Ringed plover Over winter: Dark-bellied brent goose Dunlin Ringed plover Black-tailed godwit Grey plover Redshank Shelduck On passage: Ringed plover	Over winter: Waterfowl
Dungeness to Pett Level SPA	1474.04	Breeding: Common tern Little tern Mediterranean gull Over winter: Bewick's swan On passage: Aquatic warbler	Over winter: Shoveler	N/A

Table A.2: SPAs from Sutherland to Severn Estuary and their Qualifying Features

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁷
WEST SCOTLAND				
Cape Wrath SPA	6737.26	N/A	N/A	Breeding: Seabirds
North Rona and Sula Sgeir SPA	6850.58	Breeding: Leach's petrel Storm petrel	Breeding: Razorbill Puffin Fulmar Great black-backed gull Gannet Kittiwake Guillemot	Breeding: Seabirds
Flannan Isles SPA	5832.82	Breeding: Leach's petrel Storm petrel	Breeding: Razorbill Puffin Guillemot	N/A
St Kilda SPA	29014.62	Breeding: Leach's petrel Storm petrel	Breeding: Razorbill Fulmar Manx shearwater Gannet Kittiwake Puffin Guillemot	N/A
North Uist Machair and Islands SPA	4876.35	Breeding: Corncrake Over winter: Barnacle goose	Breeding: Dunlin Ringed plover Oystercatcher Redshank Over winter: Ringed plover Turnstone Purple sandpiper	N/A
Monach Isles SPA	595.74	Breeding: Little tern Over winter: Barnacle goose	Breeding: Black guillemot	N/A
Aird and Borve, Benbecula SPA	361	Breeding: Corncrake	N/A	N/A

⁷ - A seabird assemblage of international importance. The area regularly supports at least 20,000 seabirds, or, a wetland of international importance. The area regularly supports at least 20,000 waterfowl.

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁷
South Uist Machair and Lochs SPA	3352.28	Breeding: Corncrake Little tern	Breeding: Dunlin Oystercatcher Redshank Ringed plover Over winter: Ringed plover Sanderling	N/A
Kilpheder to Smerclate, South Uist SPA	380.63	Breeding: Corncrake	N/A	N/A
Eoligaray, Barra SPA	144.04	Breeding: Corncrake	N/A	N/A
Mingulay and Berneray SPA	7801.72	N/A	Breeding: Razorbill Fulmar Shag Kittiwake Guillemot	N/A
Handa Island SPA	3205.61	N/A	Breeding: Guillemot Great skua Kittiwake Arctic skua Razorbill	Breeding: Seabirds
Priest Island SPA	131.68	Breeding: Storm petrel	N/A	N/A
Shiant Isles SPA	6935.65	Over winter: Barnacle goose	Breeding: Razorbill Puffin Fulmar Shag Guillemot	Breeding: Seabirds
Canna and Sanday SPA	6566.8	N/A	N/A	Breeding: Seabirds
Rum SPA	46716.21	Breeding: Red throated-diver Golden eagle	Breeding: Manx shearwater	Breeding: Seabirds
Coll SPA	2321.88	Over winter: Greenland white-fronted goose Barnacle goose	N/A	N/A
Sléibhtean agus Cladach Thiriodh (Tiree Wetlands and Coast) SPA	1938.59	Over winter: Greenland white-fronted goose Barnacle goose	Breeding: Dunlin Oystercatcher Redshank Ringed Plover Over winter: Turnstone Ringed plover	

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁷
Treshnish Isles SPA	240.67	Breeding: Storm petrel Over winter: Barnacle goose	N/A	N/A
Glas Eileanan SPA	1.43	Breeding: Common tern	N/A	N/A
Cnuic agus Cladach Mhuile (Mull Coast and Hills) SPA	29248.97	Resident: Golden eagle	N/A	N/A
Oronsay and South Colonsay SPA	2016.86	Breeding: Corncrake Chough Over winter: Chough	N/A	N/A
North Colonsay and Western Cliffs SPA	3307.22	Breeding: Chough Over winter: Chough	N/A	Breeding: Seabirds
Knapdale Lochs SPA	112.39	Breeding: Black-throated diver	N/A	N/A
Gruinart Flats, Islay SPA	3261.32	Breeding: Chough Over winter: Barnacle goose Greenland white-fronted goose Chough	Over winter: Canadian light-bellied brent goose	N/A
Bridgend Flats, Islay SPA	331.16	Over winter: Barnacle goose	N/A	N/A
Rinns of Islay SPA	9407.46	Breeding: Chough Corncrake Hen harrier On passage: Whooper swan Over winter: Greenland white-fronted goose Chough	Breeding: Common scoter	N/A
Eilean na Muice Duibhe (Duich Moss), Islay SPA	576.42	Over winter: Greenland white-fronted goose	N/A	N/A
The Oa SPA	1943	Breeding: Chough	N/A	N/A

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁷
Laggan, Islay SPA	1230.02	Over winter: Barnacle goose Greenland white-fronted goose	N/A	N/A
Kintyre Goose Roosts SPA	412.37	Over winter: Greenland white-fronted goose	N/A	N/A
NORTH NORTHERN IRELAND				
Lough Foyle SPA	2204.36	Over winter: Bar-tailed godwit Berwick's swan Golden plover Whooper swan	Over winter: Light-bellied brent goose	Over winter: Waterfowl
Copeland Islands SPA	201.52	Breeding: Arctic tern	Breeding: Manx shearwater	N/A
Sheep Island SPA	3.5	Breeding: Cormorant	N/A	N/A
Rathlin Island SPA	3344.62	Breeding: Peregrine	Breeding: Guillemot Razorbill Kittiwake	Breeding: Seabirds
EAST NORTHERN IRELAND				
Larne Lough SPA	395.94	Breeding: Common tern Roseate tern	Over winter: Canadian light-bellied brent goose	N/A
Belfast Lough SPA	432.14	Over winter: Bar-tailed godwit	Over winter: Redshank Turnstone	Over winter: Waterfowl
Belfast Lough Open Water SPA	5592.99	N/A	Over winter: Great crested grebe	N/A
Outer Ards SPA	1410.41	Breeding: Arctic tern Over winter: Golden plover	Over winter: Canadian light-bellied brent goose Ringed plover Turnstone	N/A
Strangford Lough SPA	15580.79	Breeding: Arctic tern Common tern Sandwich tern Over winter: Bar-tailed godwit Golden plover	Over winter: Knot Canadian light-bellied brent goose Redshank Shelduck	Over winter: Waterfowl
Killough Bay SPA	104.23	N/A	Over winter: Canadian light-bellied brent goose	N/A

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁷
Carlingford Lough SPA	827.12	Breeding: Common tern Sandwich tern	Over winter: Canadian light-bellied brent goose	N/A
SOUTHWEST SCOTLAND				
Black Cart SPA	56.3	Over winter: Whooper swan	N/A	N/A
Inner Clyde Estuary SPA	1826.02	N/A	Over winter: Redshank	N/A
Ailsa Craig SPA	2759.57	N/A	Breeding: Razorbill Gannet Lesser black-backed gull Guillemot Herring gull	Breeding: Seabirds
Glen App-Galloway Moors SPA	8942.38	Breeding: Hen harrier	N/A	N/A
Loch of Inch & Torrs Warren SPA	2111.04	Over winter: Greenland white-fronted goose Hen harrier	N/A	N/A
Upper Solway Flats and Marshes SPA	30706.26	Over winter: Bar-tailed godwit Barnacle goose Golden plover Whooper swan	Over winter: Curlew Dunlin Sanderling Knot Oystercatcher Pink-footed goose Pintail Redshank Shoveler Teal Turnstone Scaup Goldeneye Grey plover Shelduck On passage: Ringed plover	Over winter: Waterfowl
NORTHWEST ENGLAND				
Duddon Estuary SPA	6806.3	Breeding: Sandwich tern	Over winter: Knot Pintail Redshank On passage: Ringed plover Sanderling	Over winter: Waterfowl

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁷
Morecambe Bay SPA	37404.6	Breeding: Sandwich tern Little tern Over winter: Bar-tailed godwit Golden plover	On passage: Ringed plover Sanderling Over winter: Curlew Dunlin Grey plover Knot Oystercatcher Pink-footed goose Pintail Redshank Shelduck Turnstone Bar-tailed godwit Breeding: Lesser black-backed gull Herring gull	Breeding: Seabirds
Ribble and Alt Estuaries SPA	12361.13	Breeding: Common tern Ruff Over winter: Bar-tailed godwit Bewick's swan Golden plover Whooper swan	Breeding: Lesser black-backed gull Black-headed gull On passage: Ringed plover Sanderling Redshank Whimbrel Over winter: Black-tailed godwit Dunlin Grey plover Knot Oystercatcher Pink-footed goose Pintail Redshank Sanderling Shelduck Teal Wigeon Scaup Common scoter Curlew Cormorant Lapwing	Breeding: Seabirds Over winter: Waterfowl
Mersey Narrows and North Wirral Foreshore pSPA	2089.41	N/A	Over winter: Redshank Turnstone	Over winter: Waterfowl

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁷
Mersey Estuary SPA	5033.14	Over winter: Golden plover	On passage: Redshank Ringed plover Over winter: Dunlin Pintail Redshank Shelduck Teal Lapwing Great crested grebe Grey plover Curlew Black-tailed godwit Wigeon	Over winter: Waterfowl
Liverpool Bay SPA	170292.94	Over winter: Red-throated diver	Over winter: Common scoter	Non breeding: Waterfowl
The Dee Estuary SPA	13076.29	Breeding: Common tern Little tern On passage: Sandwich tern Over winter: Bar-tailed godwit	On passage: Redshank Over winter: Pintail Knot Oystercatcher Turnstone Black-tailed godwit Curlew Dunlin Grey plover Redshank Shelduck	Over winter: Waterfowl
NORTH AND WEST WALES				
Traeth Lafan / Lavan Sands, Conway Bay SPA	2642.98	N/A	Over winter: Oystercatcher Curlew On passage: Great crested grebe	N/A
Ynys Seiriol / Puffin Island SPA	31.21	N/A	Breeding: Cormorant	N/A
Ynys Feurig, Cemlyn Bay and The Skerries SPA	85.66	Breeding: Arctic tern Common tern Roseate tern Sandwich tern	N/A	N/A
Glannau Ynys Gybi/Holy Island Coast SPA	352.59	Breeding: Chough Over winter: Chough	N/A	N/A

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁷
Glannau Aberdaron and Ynys Enlli/Aberdaron Coast and Bardsey Island SPA	505.03	Breeding: Chough Over winter: Chough	Breeding: Manx shearwater	N/A
Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal / Mynydd Cilan, Trwyn y Wylfa and the St Tudwal Islands SPA	373.55	Breeding: Chough Over winter: Chough	N/A	N/A
Dyfi Estuary / Aber Dyfi SPA	2056.6	Over winter: Greenland white-fronted goose	N/A	N/A
SOUTH WALES				
Ramsey and St David's Peninsula Coast SPA	845.63	Breeding: Chough Over winter: Chough	N/A	N/A
Skokholm and Skomer SPA	427.71	Breeding: Storm petrel Chough Short-eared owl	Breeding: Razorbill Puffin Manx shearwater Lesser black-backed gull	Breeding: Seabirds
Grassholm SPA	10.73	N/A	Breeding: Gannet	N/A
Castlemartin Coast SPA	1122.32	Breeding: Chough Over winter: Chough	N/A	N/A
Burry Inlet SPA	6627.99	N/A	Over winter: Pintail Shoveler Teal Gadwall Dunlin Knot Oystercatcher Whimbrel Grey plover Shelduck Redshank	Over winter: Waterfowl
Bae Caerfyrddin/ Carmarthen Bay SPA	33410.03	N/A	Over winter: Common scoter	N/A

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁷
Severn Estuary SPA	24662.98	Over winter: Bewick's swan	Over winter: Gadwall Russian white-fronted goose Dunlin Shelduck Redshank Curlew Pintail On passage: Ringed plover	Over winter: Waterfowl

Table A.3: SPAs from North Devon Coast to Kent and their Qualifying Features

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁸
CORNWALL AND DEVON				
Isles of Scilly SPA	401.64	Breeding: Storm petrel	Breeding: Lesser black-backed gull	Breeding: Seabirds
Marazion Marsh SPA	54.58	On passage: Aquatic warbler Over winter: Bittern	N/A	N/A
Tamar Estuaries Complex SPA	1955	On passage: Little egret Over winter: Avocet Little egret	N/A	N/A
Exe Estuary SPA	2345.71	Over winter: Avocet Slavonian grebe	Over winter: Dark-bellied brent goose Dunlin Eurasian oystercatcher Black-gailed godwit Grey plover	Over winter: Waterfowl
East Devon Heaths SPA	1119.94	Breeding: Dartford warbler Nightjar	N/A	N/A
SOUTH COAST				
Chesil Beach and The Fleet SPA	748.11	Breeding: Little tern	Over winter: Dark bellied brent goose	N/A

⁸ A seabird assemblage of international importance. The area regularly supports at least 20,000 seabirds, or, a wetland of international importance. The area regularly supports at least 20,000 waterfowl.

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁸
Poole Harbour SPA	2271.99	Breeding: Common tern Mediterranean gull On passage: Aquatic warbler Little egret Over winter: Avocet Little egret	Over winter: Black tailed godwit Shelduck	Over winter: Waterfowl
Avon Valley SPA	1385.08	Over winter: Bewick's swan	Over winter: Gadwall	N/A
Solent and Southampton Water SPA	5505.86	Breeding: Common tern Little tern Mediterranean gull Roseate tern Sandwich tern	Over winter: Black tailed godwit Dark bellied brent goose Ringed plover Teal	Over winter: Waterfowl
Portsmouth Harbour SPA	1248.77	N/A	Over winter: Dark bellied brent goose Dunlin Black-tailed godwit Red-breasted merganser	N/A
Chichester and Langstone Harbours SPA	5810.03	Breeding: Little tern Sandwich tern Common tern Over winter: Bar tailed godwit Little egret On passage: Little egret	Over winter: Pintail Shoveler Teal Wigeon Turnstone Dark bellied brent goose Sanderling Dunlin Ringed plover Red-breasted merganser Curlew Grey plover Shelduck Redshank Black-tailed godwit On passage: Ringed plover	Over winter: Waterfowl
Pagham Harbour SPA	636.68	Breeding: Little tern Common tern Over winter: Ruff	Over winter: Dark-bellied Brent goose Pintail	N/A

A3 Special Protection Areas for breeding red-throated diver

The following SPAs represent those sites which are only included because they support breeding red-throated diver. The other bird species included within the site designations are listed for completeness.

Map A.6: Location of SPAs for breeding red-throated diver

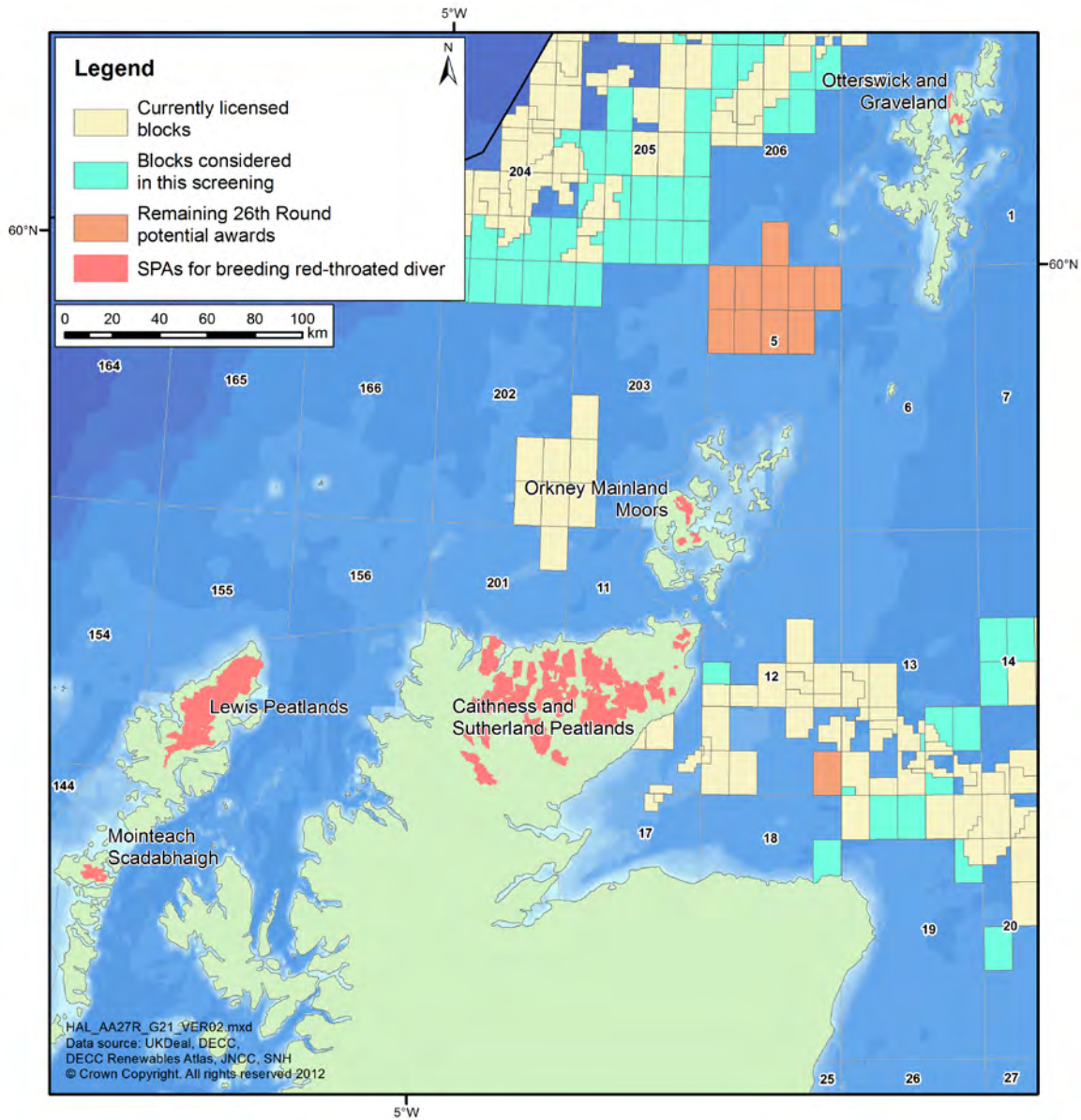


Table A.4: Relevant SPAs designated for breeding red-throated diver

Site Name	Area (ha)	Article 4.1 Species	Article 4.2 Migratory Species	Article 4.2 Assemblages ⁹
Otterswick and Graveland SPA	2241.41	Breeding: Red-throated diver	N/A	N/A
Orkney Mainland Moors SPA	4444.35	Breeding: Hen harrier Red-throated diver Short-eared owl Over winter: Hen harrier	N/A	N/A
Caithness and Sutherland Peatlands SPA	145516.75	Breeding: Black-throated diver Golden eagle Golden plover Hen harrier Merlin Red-throated diver Short-eared owl Wood sandpiper	Breeding: Dunlin Common scoter Greenshank Wigeon	N/A
Mointeach Scadabhaigh SPA	4148.44	Breeding: Black-throated diver Red-throated diver	N/A	N/A
Lewis Peatlands SPA	58984.23	Breeding: Black-throated diver Golden eagle Golden plover Merlin Red-throated diver	Breeding: Dunlin Greenshank	

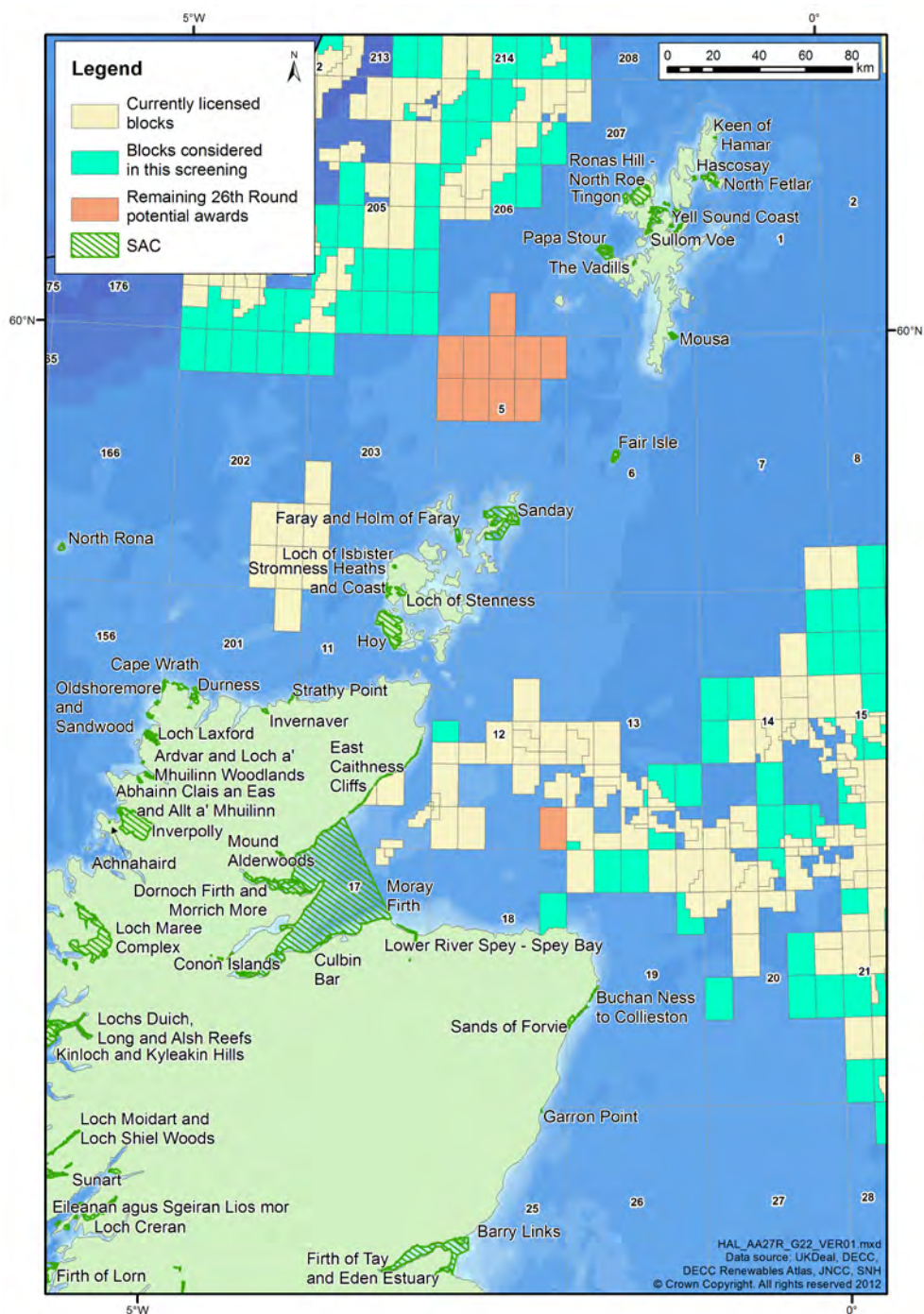
⁹A seabird assemblage of international importance. The area regularly supports at least 20,000 seabirds, or, a wetland of international importance. The area regularly supports at least 20,000 waterfowl.

A4 Coastal and Marine Special Areas of Conservation

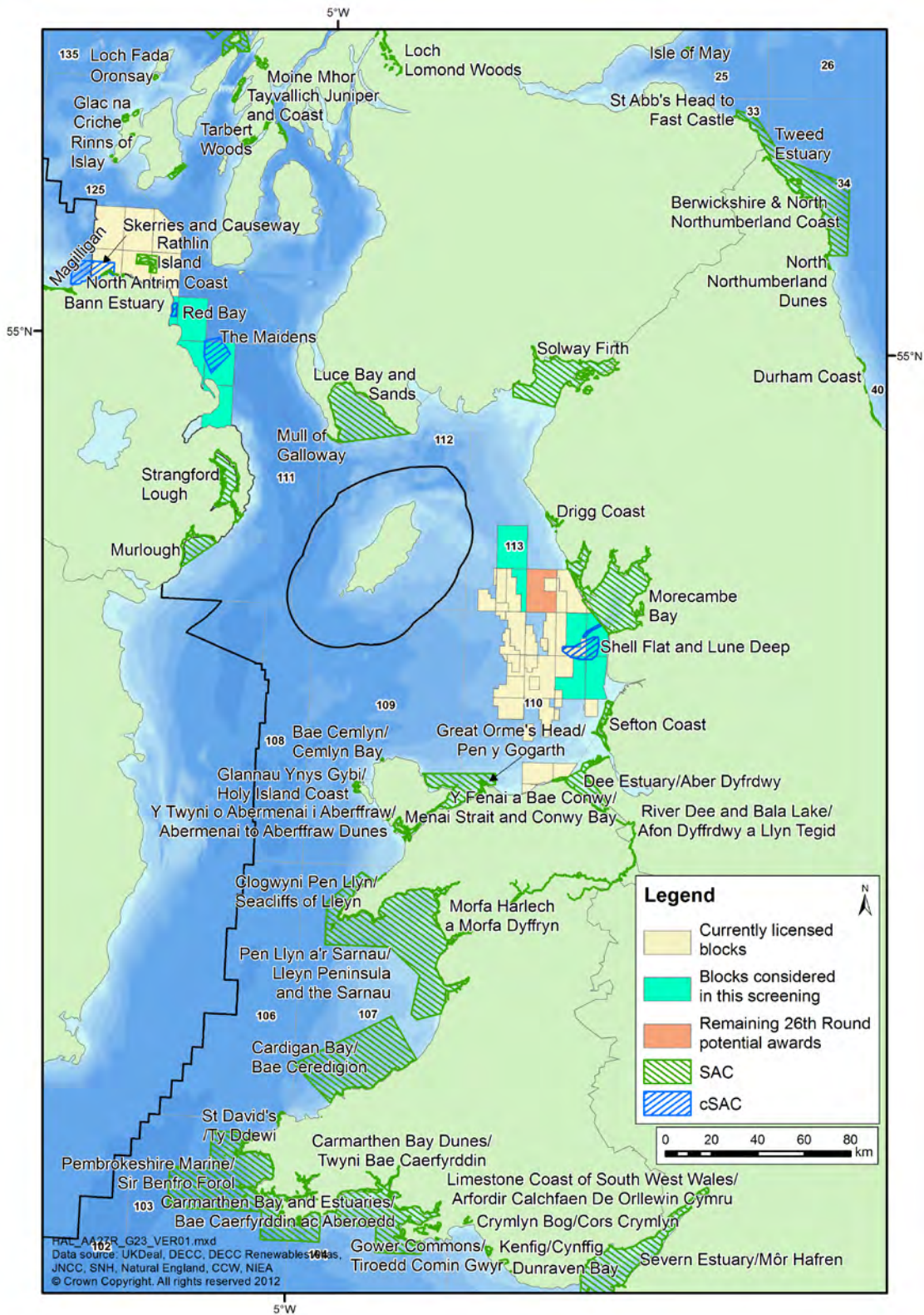
This section includes coastal or nearshore marine (within 12nm boundary) Special Areas of Conservation (SAC) sites which contain one or more of the Annex I coastal habitats listed in Box A.2 (below) or examples of Annex II qualifying marine species.

Relevant offshore (out with or crossing the 12nm boundary) SACs are included on the maps here and described in Section A5. Riverine/freshwater SACs which are designated for migratory fish and/or freshwater pearl mussel are considered in Section A6.

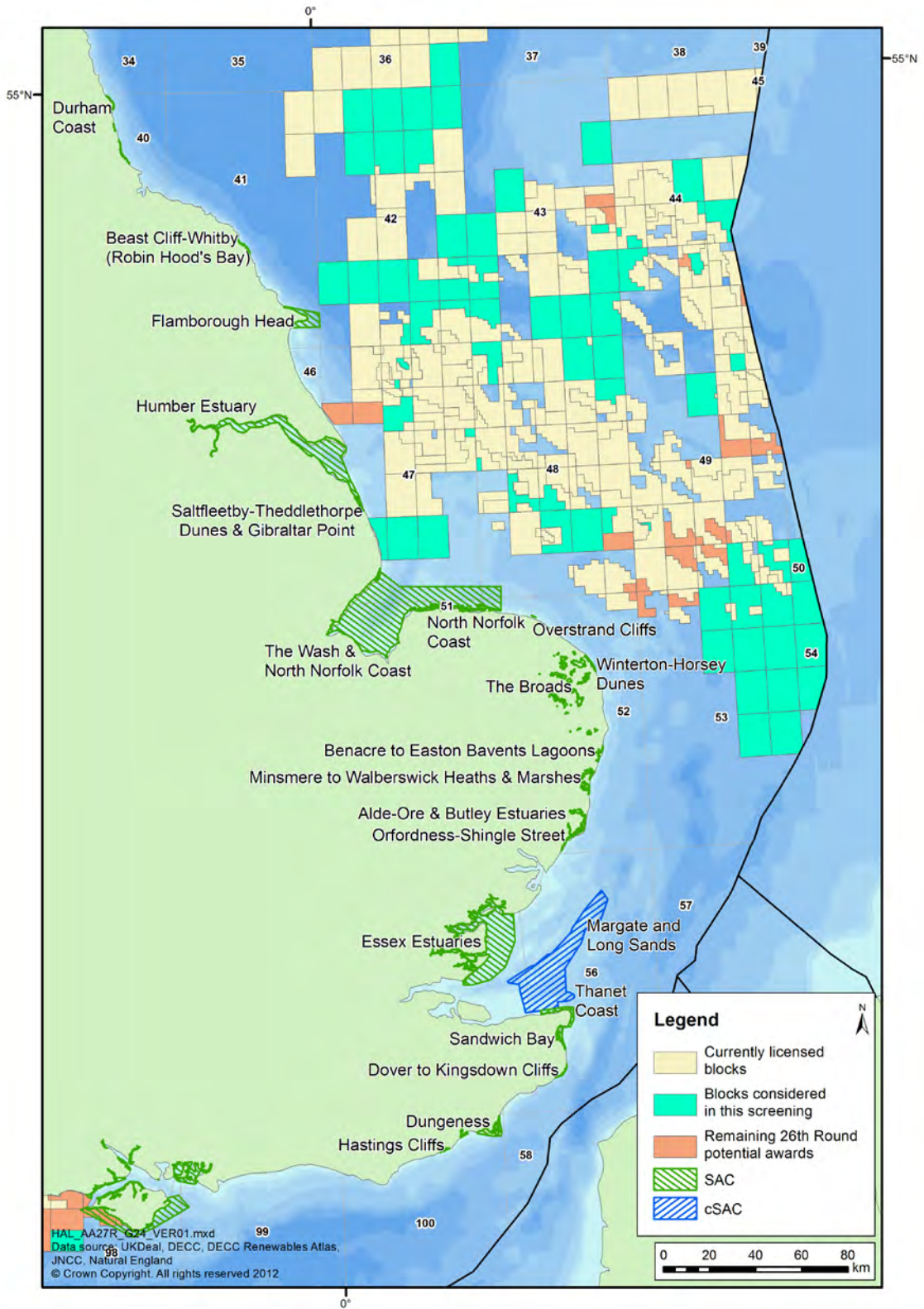
Map A.7: Location of SACs – Shetland to the Tay



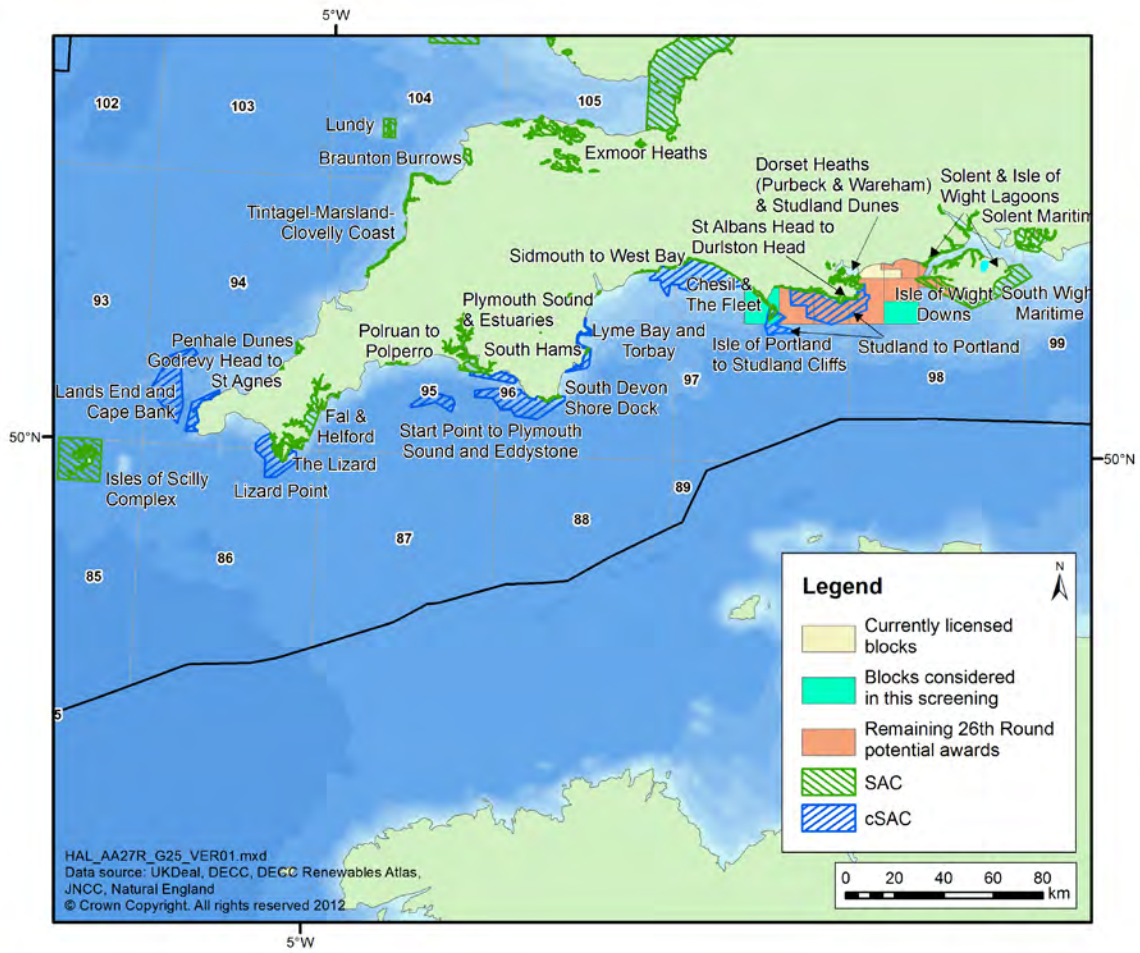
Map A.8: Location of SACs – Forth to Teesmouth and Islay to Bristol Channel



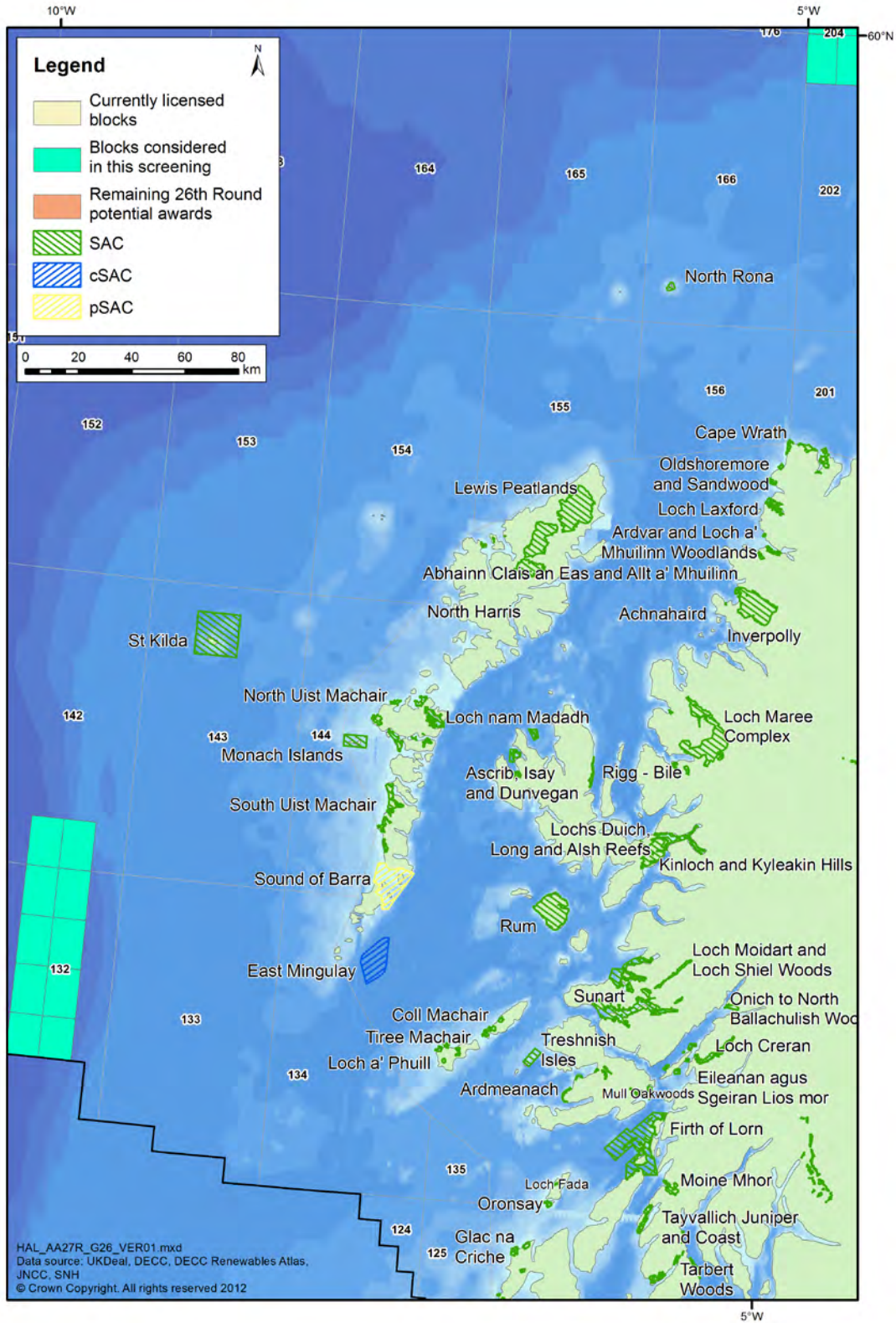
Map A.9: Location of SACs – Northumbria to Kent



Map A.10: Location of SACs – Isle of Wight to Bristol Channel



Map A.11: Location of SACs – Cape Wrath to Islay



Box A.2: Annex 1 Habitat abbreviations used in site summaries

Annex I Habitat (abbreviated)	Annex I Habitat(s) (full description)
Bogs	Active raised bogs * Priority feature Blanket bogs * Priority feature Bog Woodland * Priority feature Degraded raised bogs still capable of natural regeneration Depressions on peat substrates of the <i>Rhynchosporion</i> Transition mires and quaking bogs
Caves	Caves not open to the public
Coastal Dunes	Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) Coastal dunes with <i>Juniperus</i> spp. Decalcified fixed dunes with <i>Empetrum nigrum</i> Dunes with <i>Hippophae rhamnoides</i> Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) Embryonic shifting dunes Fixed dunes with herbaceous vegetation (`grey dunes`) * Priority feature Humid dune slacks Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (`white dunes`)
Coastal Lagoons	Coastal lagoons * Priority feature
Estuaries	Estuaries
Fens	Alkaline fens Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> * Priority feature Petrifying springs with tufa formation (<i>Cratoneurion</i>) * Priority feature
Forest	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 Old sessile oak woods with <i>Quercus robur</i> on sandy plains <i>Tilio-Acerion</i> forests of slopes, screes and ravines * Priority feature
Grasslands	Alpine and subalpine calcareous grasslands Calaminarian grasslands of the <i>Violetalia calaminariae</i> Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) * Priority feature Species-rich <i>Nardus</i> grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe) * Priority feature
Heaths	Alpine and Boreal heaths Dry Atlantic coastal heaths with <i>Erica vagans</i> European dry heaths Northern Atlantic wet heaths with <i>Erica tetralix</i>
Inlets and bays	Large shallow inlets and bays
Limestone pavements	Limestone pavements * Priority feature

Machairs	Machairs
Mudflats and sandflats	Mudflats and sandflats not covered by seawater at low tide
Reefs	Reefs
Rocky slopes	Calcareous rocky slopes with chasmophytic vegetation
Running freshwater	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation
Salt marshes and salt meadows	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>) <i>Salicornia</i> and other annuals colonising mud and sand <i>Spartina</i> swards (<i>Spartinion maritimae</i>)
Sandbanks	Sandbanks which are slightly covered by sea water all the time
Scree	Calcareous and calcshist scree of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>) Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)
Scrub (mattoral)	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
Sea caves	Submerged or partially submerged sea caves
Sea cliffs	Vegetated sea cliffs of the Atlantic and Baltic coasts
Standing freshwater	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. Mediterranean temporary ponds Natural dystrophic lakes and ponds Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> -type vegetation Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>
Vegetation of drift lines	Annual vegetation of drift lines
Vegetation of stony banks	Perennial vegetation of stony banks

Table A.5: SACs from Shetland to Essex and their Qualifying Features

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
SHETLAND					
The Vadills SAC	62.43	Coastal lagoons	N/A	N/A	N/A
Papa Stour SAC	2076.69	Reefs Sea caves	N/A	N/A	N/A
Tingon SAC	569.3	Bogs	Standing freshwater	N/A	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Ronas Hill-North Roe SAC	4900.9	Standing freshwater Heath Bogs	Heath Scree	N/A	N/A
Sullom Voe SAC	2698.55	Inlets and bays	Coastal lagoons Reefs	N/A	N/A
Yell Sound Coast SAC	1540.55	N/A	N/A	Otter <i>Lutra lutra</i> Harbour seal <i>Phoca vitulina</i>	N/A
Keen of Hamar SAC	38.52	Grasslands Scree	Heath	N/A	N/A
North Fetlar SAC	1581.93	Heath Fens	N/A	N/A	N/A
Mousa SAC	530.6	N/A	Reefs Sea caves	Harbour seal <i>Phoca vitulina</i>	N/A
Fair Isle SAC	561.27	Sea cliffs	Heaths	N/A	N/A
Hascosay SAC	164.92	Bogs	N/A	N/A	Otter
ORKNEY					
Hoy SAC	9499.7	Sea cliffs Standing freshwater Heath Bog	Heath Fens Rocky slopes	N/A	N/A
Loch of Stenness SAC	791.87	Coastal lagoons	N/A	N/A	N/A
Stromness Heaths and Coasts SAC	635.78	Sea cliffs Heath	Fens	N/A	N/A
Faray and Holm of Faray SAC	785.68	N/A	N/A	Grey seal <i>Halichoerus grypus</i>	N/A
Sanday SAC	10971.65	Reefs	Sandbanks Mudflats and sandflats	Harbour seal <i>Phoca vitulina</i>	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
NORTH COAST OF SCOTLAND					
Strathy Point SAC	203.58	Sea cliffs	N/A	N/A	N/A
Invernaver SAC	294.54	Coastal dunes Heath Grasslands	Coastal dunes Fens	N/A	N/A
Durness SAC	1212.74	Coastal dunes Standing freshwater Grasslands Limestone pavements	Coastal dunes Heath Grasslands Fens	N/A	Otter <i>Lutra lutra</i>
Cape Wrath SAC	1018.18	Sea cliffs	N/A	N/A	N/A
MORAY FIRTH AND ABERDEENSHIRE					
East Caithness Cliffs SAC	442.64	Sea cliffs	N/A	N/A	N/A
Mound Alderwoods SAC	297.33	Forests	N/A	N/A	N/A
Moray Firth SAC	151341.67	N/A	Sandbanks	Bottlenose dolphin <i>Tursiops truncatus</i>	N/A
Conon Islands SAC	120.11	Forests	N/A	N/A	N/A
Dornoch Firth and Morrich More SAC	8700.53	Estuaries Mudflats and sandflats Saltmarsh and salt meadows Salt meadows Coastal dunes	Sandbanks Reefs	Otter <i>Lutra lutra</i> Harbour seal <i>Phoca vitulina</i>	N/A
Culbin Bar SAC	612.88	Vegetation of stony banks	Salt meadows Coastal dunes	N/A	N/A
Lower River Spey - Spey Bay SAC	652.6	Vegetation of stony banks Forests	N/A	N/A	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Buchan Ness to Collieston SAC	207.52	Sea cliffs	N/A	N/A	N/A
Sands of Forvie SAC	734.05	Coastal dunes	N/A	N/A	N/A
SOUTH OF ABERDEENSHIRE					
Garron Point SAC	15.58	N/A	N/A	Narrow-mouthed whorl snail <i>Vertigo angustior</i>	N/A
Barry Links SAC	789.67	Coastal dunes	N/A	N/A	N/A
Firth of Tay and Eden Estuary SAC	15412.53	Estuaries	Sandbanks Mudflats and sandflats	Harbour seal <i>Phoca vitulina</i>	N/A
Isle of May SAC	356.75	N/A	Reefs	Grey seal <i>Halichoerus grypus</i>	N/A
Berwickshire and North Northumberland Coast SAC	65045.5	Mudflats and sandflats Inlets and Bays Reefs Sea caves	N/A	Grey seal <i>Halichoerus grypus</i>	N/A
St Abb's Head to Fast Castle SAC	127.52	Sea cliffs	N/A	N/A	N/A
Tweed Estuary SAC	155.93	Estuaries Mudflats and sandflats	N/A	N/A	Sea lamprey <i>Petromyzon marinus</i> River lamprey <i>Lampetra fluviatilis</i>
NORTHEAST ENGLAND					
North Northumberland Dunes SAC	1147.56	Coastal dunes	N/A	Petalwort <i>Petalophyllum ralfsii</i>	N/A
Durham Coast SAC	393.63	Sea cliffs	N/A	N/A	N/A
YORKSHIRE AND THE HUMBER					
Beast Cliff-Whitby (Robin Hood's Bay) SAC	260.2	Sea cliffs	N/A	N/A	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Flamborough Head SAC	6311.96	Reefs Sea cliffs Sea caves	N/A	N/A	N/A
Humber Estuary SAC	36657.15	Estuaries Mudflats and sandflats	Sandbanks Salt marshes and salt meadows Coastal lagoons Coastal dunes	N/A	River lamprey <i>Lampetra fluviatilis</i> Sea lamprey <i>Petromyzon marinus</i> Grey seal <i>Halichoerus grypus</i>
LINCOLNSHIRE, NORFOLK AND SUFFOLK					
Saltfleetby - Theddlethorpe Dunes and Gibraltar Point SAC	960.2	Coastal dunes	Coastal dunes	N/A	N/A
The Wash and North Norfolk Coast SAC	107761.28	Sandbanks Mudflats and sandflats Inlets and bays Reefs Salt marshes and salt meadows	Coastal lagoons	Harbour seal <i>Phoca vitulina</i>	Otter <i>Lutra lutra</i>
North Norfolk Coast SAC	3207.37	Coastal lagoons Vegetation of stony banks Salt marshes and salt meadows Coastal dunes	N/A	N/A	Otter <i>Lutra lutra</i> Petalwort <i>Petalophyllum ralfsii</i>
Overstrand Cliffs SAC	30.02	Sea cliffs	N/A	N/A	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
The Broads SAC	5865.6	Standing freshwater Bog Fens Forests	Grasslands	Desmoulin's whorl snail <i>Vertigo moulinsiana</i> Fen orchid <i>Liparis loeselii</i>	Otter <i>Lutra lutra</i>
Winterton-Horsey Dunes SAC	425.94	Coastal dunes	Coastal dunes	N/A	N/A
Benacre to Easton Bavents Lagoons SAC	366.93	Coastal lagoons	N/A	N/A	N/A
Minsmere to Walberswick Heaths and Marshes SAC	1265.52	Vegetation of drift lines Heath	Vegetation of stony banks	N/A	N/A
Alde, Ore and Butley Estuaries SAC	1561.53	Estuaries	Mudflats and sandflats Salt marshes and salt meadows	N/A	N/A
Orfordness-Shingle Street SAC	901.19	Coastal lagoons Vegetation of drift lines Vegetation of stony banks	N/A	N/A	N/A
ESSEX AND KENT					
Essex Estuaries SAC	46140.82	Estuaries Mudflats and sandflats Salt marshes and salt meadows	Sandbanks	N/A	N/A
Hamford Water pSAC	50.35	N/A	N/A	Fisher's estuarine moth <i>Gortyna borelii lunata</i>	N/A
Tankerton Slopes and Swalecliffe pSAC	13.01	N/A	N/A	Fisher's estuarine moth <i>Gortyna borelii lunata</i>	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Thanet Coast SAC	2803.84	Reefs Sea caves	N/A	N/A	N/A
Dover to Kingsdown Cliffs SAC	183.85	Sea cliffs	Grasslands	N/A	N/A
Sandwich Bay SAC	1137.87	Coastal dunes	Coastal dunes	N/A	N/A
Hastings Cliffs SAC	183.72	Sea cliffs	N/A	N/A	N/A
Dungeness SAC	3223.56	Vegetation of drift lines Vegetation of stony banks	N/A	Great crested newt <i>Triturus cristatus</i>	N/A
Margate and Long Sands cSAC	64,914	Sandbanks	N/A	N/A	N/A

Table A.6: SACs from Sutherland to Severn Estuary and their Qualifying Habitats

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
WEST SCOTLAND					
Inverpolly SAC	11877.32	Standing freshwater Heath Bogs	Heath Grassland Scree Rocky slopes Forest	Otter <i>Lutra lutra</i>	Freshwater pearl mussel <i>Margaritifera margaritifera</i>
North Rona SAC	628.53	N/A	Reefs Sea cliffs Sea caves	Grey seal <i>Halichoerus grypus</i>	N/A
Oldshoremore and Sandwood SAC	443.73	Coastal dunes Machairs	Coastal dunes	N/A	N/A
Loch Laxford SAC	1221.33	Inlets and bays	Reefs	N/A	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Ardvar and Loch a' Mhuilinn Woodlands SAC	805.99	Forest	N/A	N/A	Freshwater pearl mussel <i>Margaritifera margaritifera</i> Otter <i>Lutra lutra</i>
Achnahaird SAC	21.37	N/A	N/A	Petalwort <i>Petalophyllum ralfsii</i>	N/A
Loch Roag Lagoons SAC	43.62	Coastal lagoons	N/A	N/A	N/A
Tràigh na Berie SAC	153.75	Machairs	N/A	N/A	N/A
St Kilda SAC	25467.58	Reefs Sea cliffs Sea caves	N/A	N/A	N/A
North Uist Machair SAC	3048.54	Salt meadows Machairs Standing freshwater	Vegetation of drift lines Coastal dunes	N/A	Slender naiad <i>Najas flexilis</i>
Loch nam Madadh SAC	2320.38	Coastal lagoons Inlets and bays	Sandbanks Mudflats and sandflats Reefs	Otter <i>Lutra lutra</i>	N/A
Obain Loch Euphoirt SAC	348.59	Coastal lagoons	N/A	N/A	N/A
Monach Islands SAC	3646.58	Machairs	Coastal dunes	Grey seal <i>Halichoerus grypus</i>	N/A
South Uist Machair SAC	3432.65	Machairs Standing freshwater	Coastal lagoons Vegetation of drift lines Coastal dunes	Slender naiad <i>Najas flexilis</i>	Otter <i>Lutra lutra</i>
Sound of Barra pSAC	N/A	Reefs Sandbanks	N/A	Harbour seal <i>Phoca vitulina</i>	N/A
East Mingulay cSAC	N/A	Reefs	N/A	N/A	N/A
Ascrib, Isay and Dunvegan SAC	2584.99	N/A	N/A	Harbour seal <i>Phoca vitulina</i>	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Rigg - Bile SAC	500.89	Sea cliffs	Forest	N/A	N/A
Lochs Duich, Long and Aish Reefs SAC	2380.86	Reefs	N/A	N/A	N/A
Rum SAC	10835.33	Standing freshwater Heaths Grasslands Scree	Sea cliffs Heaths Grasslands Bogs Fens Scree Rocky slopes	Otter <i>Lutra lutra</i>	N/A
Glen Beasdale SAC	507.32	Forest	N/A	N/A	Freshwater pearl mussel <i>Margaritifera margaritifera</i> Otter <i>Lutra lutra</i>
Sound of Arisaig (Loch Ailort to Loch Ceann Traigh) SAC	4556.65	Sandbanks	N/A	N/A	N/A
Sunart SAC	10246.72	Forest	Reefs Heath Forest	Otter <i>Lutra lutra</i>	N/A
Coll Machair SAC	851.33	Coastal dunes Machairs	Coastal dunes Standing freshwater	Slender naiad <i>Najas flexilis</i>	N/A
Tiree Machair SAC	785.46	Coastal dunes Machairs Standing freshwater	Coastal dunes	N/A	N/A
Treshnish Isles SAC	1962.66	N/A	Reefs	Grey seal <i>Halichoerus grypus</i>	N/A
Eileanan agus Sgeiran Lios mór SAC	1139.62	N/A	N/A	Harbour seal <i>Phoca vitulina</i>	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Loch Creran SAC	1226.39	Reefs	N/A	N/A	N/A
Ardmeanach SAC	374.79	Grassland	Sea cliffs	N/A	N/A
Loch Moidart and Loch Shiel Woods SAC	1756.77	Forests	Mudflats and sandflats Forests	N/A	Otter <i>Lutra lutra</i>
Mull Oakwoods SAC	1401.89	Forests	N/A	N/A	Otter <i>Lutra lutra</i>
Firth of Lorn, Marine SAC	20975.01	Reefs	N/A	N/A	N/A
Oronsay SAC	340.07	Machairs	N/A	N/A	N/A
Moine Mhor SAC	1150.41	Bogs	Mudflats and sandflats Salt marshes and salt meadows Forests	N/A	Marsh fritillary butterfly <i>Euphydryas (Eurodryas, Hypodryas) aurinia</i> Otter <i>Lutra lutra</i>
Glac na Criche SAC	265.33	Bogs	Sea cliffs Heaths	N/A	Marsh fritillary butterfly <i>Euphydryas (Eurodryas, Hypodryas) aurinia</i>
Rinns of Islay SAC	1149.7	N/A	N/A	Marsh fritillary butterfly <i>Euphydryas (Eurodryas, Hypodryas) aurinia</i>	N/A
South-East Islay Skerries SAC	1498.3	N/A	N/A	Harbour seal <i>Phoca vitulina</i>	N/A
Tayvallich Juniper and Coast SAC	1213.47	Scrub (matorral)	N/A	Marsh fritillary butterfly <i>Euphydryas (Eurodryas, Hypodryas) aurinia</i>	Otter <i>Lutra lutra</i>

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Tarbert Woods SAC	1595.97	Forests	N/A	N/A	N/A
NORTH NORTHERN IRELAND					
Magilligan SAC	1058.22	Coastal dunes	Coastal dunes	N/A	Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> Petalwort <i>Petalophyllum</i> <i>ralfsii</i>
Bann Estuary SAC	347.94	Coastal dunes	Salt marshes and salt meadows Coastal dunes	N/A	N/A
Rathlin Island SAC	3344.62	Reefs Sea cliffs Sea caves	Sandbanks Vegetation of drift lines	N/A	N/A
North Antrim Coast SAC	314.59	Sea cliffs	Vegetation of drift lines Salt marshes and salt meadows Coastal dunes Grasslands	Narrow-mouthed whorl snail <i>Vertigo angustior</i>	N/A
Red Bay cSAC	965.54	Sandbanks	N/A	N/A	N/A
The Maidens cSAC	9784.83	Reef	Sandbank Sea caves	N/A	Harbour porpoise <i>Phocoena phocoena</i>
Skerries and Causeway cSAC	13686.60	Reef	Sandbank	N/A	Grey seal <i>Halichoerus grypus</i>

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
EAST NORTHERN IRELAND					
Strangford Lough SAC	15398.54	Mudflats and sandflats Coastal lagoons Inlets and bays Reefs	Vegetation of drift lines Vegetation of stony banks Salt marshes and salt meadows	N/A	Harbour seal <i>Phoca vitulina</i>
Murlough SAC	11902.03	Coastal dunes	Sandbanks Mudflats and sandflats Salt marshes and salt meadows Coastal dunes	Marsh fritillary butterfly <i>Euphydryas (Eurodryas, Hypodryas) aurinia</i>	Harbour seal <i>Phoca vitulina</i>
SOUTHWEST SCOTLAND					
Lendalfoot Hills Complex SAC	1309.71	Grassland Fens	Heaths Grasslands Bogs	N/A	N/A
Mull of Galloway SAC	136.39	Sea cliffs	N/A	N/A	N/A
Luce Bay and Sands SAC	48759.28	Inlets and bays Coastal dunes	Sandbanks Mudflats and sandflats Reefs	N/A	Great crested newt <i>Triturus cristatus</i>
Solway Firth SAC	43636.72	Sandbanks Estuaries Mudflats and sandflats Salt marshes and salt meadows	Reefs Vegetation of stony banks Coastal dunes	Sea lamprey <i>Petromyzon marinus</i> River lamprey <i>Lampetra fluviatilis</i>	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
NORTHWEST ENGLAND					
Drigg Coast SAC	1397.44	Estuaries Coastal dunes	Mudflats and sandflats Salt marshes and salt meadows Coastal dunes	N/A	N/A
Morecambe Bay SAC	61506.22	Estuaries Mudflats and sandflats Inlets and bays Vegetation of stony banks Salt marshes and salt meadows Coastal dunes	Sandbanks Coastal lagoons Reefs Coastal dunes	Great crested newt <i>Triturus cristatus</i>	N/A
Sefton Coast SAC	4563.97	Coastal dunes	Coastal dunes	Petalwort <i>Petalophyllum ralfsii</i>	Great crested newt <i>Triturus cristatus</i>
Dee Estuary SAC	15805.07	Mudflats and sandflats Salt marshes and salt meadows	Estuaries Sea cliffs Vegetation of drift lines Coastal dunes	N/A	River lamprey <i>Lampetra fluviatilis</i> Sea lamprey <i>Petromyzon marinus</i> Petalwort <i>Petalophyllum ralfsii</i>

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
River Dee and Bala Lake SAC	1308.93	Running freshwater	N/A	Atlantic salmon <i>Salmo salar</i> Floating water-plantain <i>Luronium natans</i>	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>
Shell Flat and Lune Deep cSAC	10565	Sandbanks Reefs	N/A	N/A	N/A
NORTH AND WEST WALES					
Great Orme's Head / Pen y Gogarth SAC	302.63	Heaths Grasslands	Sea cliffs	N/A	N/A
Y Fenai a Bae Conwy/Menai Strait and Conwy Bay SAC	26482.67	Sandbanks Mudflats and sandflats Reefs	Inlets and bays Sea caves	N/A	N/A
Bae Cemlyn/Cemlyn Bay SAC	43.43	Coastal lagoons	Vegetation of stony banks	N/A	N/A
Glannau Ynys Gybi/Holy Island Coast SAC	464.27	Sea cliffs Heaths	Heaths	N/A	N/A
Glannau Môn: Cors heli/Anglesey Coast: Saltmarsh SAC	1058	Salt marshes and salt meadows	Estuaries Mudflats and sandflats	N/A	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Y Twyni o Abermenai i Aberffraw/Abermenai to Aberffraw Dunes SAC	1871.03	Coastal dunes	Standing freshwater	Petalwort <i>Petalophyllum ralfsii</i> Shore dock <i>Rumex rupestris</i>	N/A
Clogwyni Pen Llyn/Seacliffs of Llyn SAC	1048.4	Sea cliffs	N/A	N/A	N/A
Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau SAC	146023.48	Sandbanks Estuaries Coastal lagoons Inlets and bays Reefs	Mudflats and sandflats Salt marshes and salt meadows Sea caves	N/A	Bottlenose dolphin <i>Tursiops truncatus</i> Otter <i>Lutra lutra</i> Grey Seal <i>Halichoerus grypus</i>
Morfa Harlech a Morfa Dyffryn SAC	1062.57	Coastal dunes	N/A	Petalwort <i>Petalophyllum ralfsii</i>	N/A
Cardigan Bay/Bae Ceredigion SAC	95860.36	Sandbanks Reefs Sea caves	N/A	Bottlenose dolphin <i>Tursiops truncatus</i>	Sea lamprey <i>Petromyzon marinus</i> River lamprey <i>Lampetra fluviatilis</i> Grey seal <i>Halichoerus grypus</i>
SOUTH WALES					
Limestone Coast of South West Wales/Arfordir Calchfaen de Orllewin Cymru SAC	1594.53	Sea cliffs Dunes	Heaths Grasslands Sea caves Caves	Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> Early gentian <i>Gentianella anglica</i>	Petalwort <i>Petalophyllum ralfsii</i>

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Pembrokeshire Marine/Sir Benfro Forol SAC	138069.45	Estuaries Inlets and bays Reefs	Sandbanks Mudflats and sandflats Coastal lagoons Salt marshes and salt meadows Sea caves	Grey seal <i>Halichoerus grypus</i> Shore dock <i>Rumex rupestris</i>	Sea lamprey <i>Petromyzon marinus</i> River lamprey <i>Lampetra fluviatilis</i> Otter <i>Lutra lutra</i> Allis shad <i>Alosa alosa</i> Twaite shad <i>Alosa fallax</i>
St David's/Ty Ddewi SAC	935.47	Sea cliffs Heaths	N/A	Floating water-plantain <i>Luronium natans</i>	N/A
Carmarthen Bay and Estuaries/Bae Caerfyrddin ac Aberoedd SAC	66101.16	Sandbanks Estuaries Mudflats and sandflats Inlets and bays Salt marshes and salt meadows	N/A	Twaite shad <i>Alosa fallax</i>	Sea lamprey <i>Petromyzon marinus</i> River lamprey <i>Lampetra fluviatilis</i> Allis shad <i>Alosa alosa</i> Otter <i>Lutra lutra</i>
Carmarthen Bay Dunes / Twyni Bae Caerfyrddin SAC	1206.32	Coastal dunes	N/A	Narrow-mouthed whorl snail <i>Vertigo angustior</i> Petalwort <i>Petalophyllum ralfsii</i> Fen orchid <i>Liparis loeselii</i>	N/A
Gower Commons/Tiroedd Comin Gwyr	1776.72	Heaths Grasslands	N/Ar	Southern damselfly <i>Coenagrion mercuriale</i> Marsh fritillary butterfly <i>Euphydryas aurinia</i>	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Crymlyn Bog / Cors Crymlyn SAC	299.45	Bogs Fens	Forest	N/A	N/A
Kenfig/Cynffig SAC	1191.67	Coastal dunes Standing freshwater	Salt marshes and salt meadows	Petalwort <i>Petalophyllum ralfsii</i> Fen orchid <i>Liparis loeselii</i>	N/A
Dunraven Bay SAC	6.47	N/A	N/A	Shore dock <i>Rumex rupestris</i>	N/A
Severn Estuary/Môr Hafren SAC	73715.4	Estuaries Mudflats and sandflats Salt marshes and salt meadows	Sandbanks Reefs	Sea lamprey <i>Petromyzon marinus</i> River lamprey <i>Lampetra fluviatilis</i> Twaite shad <i>Alosa fallax</i>	N/A

Table A.7: SACs from North Devon coast to Kent and their Qualifying Features

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
CORNWALL AND DEVON					
Exmoor Heaths SAC	10705.87	Heaths	Sea cliffs Bogs Fens Forest	N/A	N/A
Braunton Burrows SAC	1346.64	Coastal dunes	Mudflats and sandflats	Petalwort <i>Petallophyllum ralfsii</i>	N/A
Lundy SAC	3064.53	Reefs	Sandbanks Sea caves	N/A	Grey seal <i>Halichoerus grypus</i>
Tintagel– Marsland- Clovelly Coast SAC	2429.84	Sea cliffs Forest	Heaths	N/A	N/A

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Penhale Dunes SAC	621.34	Coastal dunes	Coastal dunes	Petalwort <i>Petalophyllum ralfsii</i> Shore dock <i>Rumex rupestris</i> Early gentian <i>Gentianella anglica</i>	N/A
Godrevy Head to St Agnes SAC	128.07	Heaths	N/A	Early gentian <i>Gentianella anglica</i>	N/A
Isles of Scilly Complex SAC	26850.95	Sandbanks Mudflats and sandflats Reefs	N/A	Shore dock <i>Rumex rupestris</i>	Grey seal <i>Halichoerus grypus</i>
The Lizard SAC	3257.11	Sea cliffs Standing freshwater Heaths	N/A	N/A	N/A
Fal and Helford SAC	6387.8	Sandbanks Mudflats and sandflats Inlets and bays Salt marshes and salt meadows	Estuaries Reefs	Shore dock <i>Rumex rupestris</i>	N/A
Polruan to Polperro SAC	213.39	Sea cliffs	Heaths	Shore dock <i>Rumex rupestris</i>	N/A
Plymouth Sound and Estuaries SAC	6402.03	Sandbanks Estuaries Inlets and bays Reefs Salt marshes and salt meadows	Mudflats and sandflats	Shore dock <i>Rumex rupestris</i>	Allis shad <i>Alosa alosa</i>

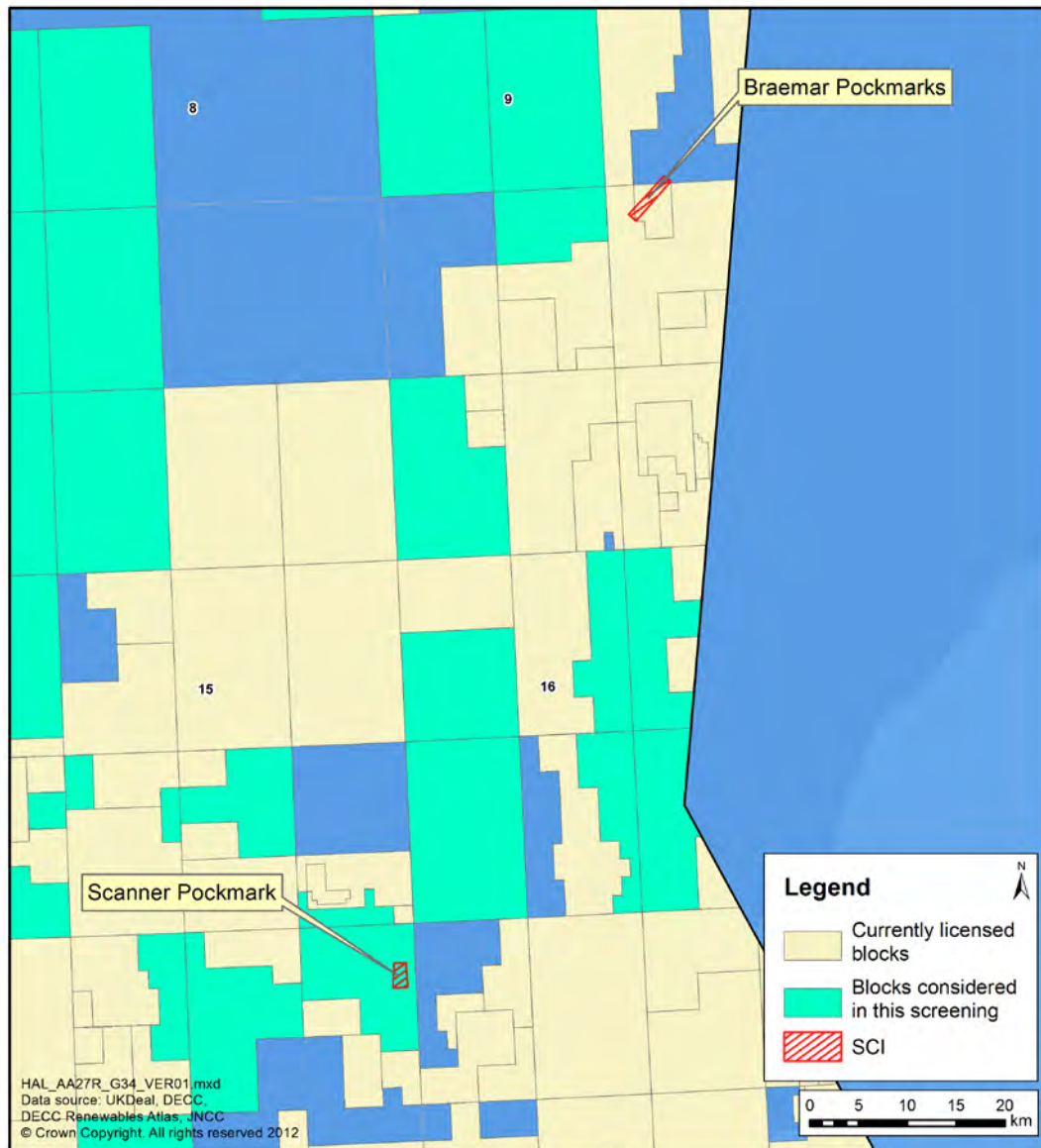
Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Blackstone Point SAC	7.38	N/A	N/A	Shore dock <i>Rumex rupestris</i>	N/A
South Devon Shore Dock SAC	341.01	Sea cliffs	N/A	Shore dock <i>Rumex rupestris</i>	N/A
South Hams SAC	129.53	Heath Grassland	Sea cliffs Caves Forest	Greater horseshoe bat <i>Rhinolophus ferrumiquinum</i>	N/A
Dawlish Warren SAC	58.84	Coastal dunes	Coastal dunes	Petalwort <i>Petalophyllum ralfsii</i>	N/A
Sidmouth to West Bay SAC	897.3	Sea cliffs Forest	Vegetation of drift lines	N/A	N/A
Lands End and Cape Bank cSAC	30,172	Reefs	N/A	N/A	N/A
Lizard Point cSAC	13988	Reefs	N/A	N/A	N/A
Start Point to Plymouth Sound & Eddystone cSAC	34076.13	Reefs	N/A	N/A	N/A
Lyme Bay and Torbay cSAC	31,248	Reefs Sea Caves	N/A	N/A	N/A
SOUTH COAST					
Chesil and the Fleet SAC	1631.63	Coastal lagoons Vegetation of drift lines Vegetation of stony banks Salt marshes and salt meadows	Salt marshes and salt meadows	N/A	N/A
Isle of Portland to Studland Cliffs SAC	1447.5	Sea cliffs Grassland	Vegetation of drift lines	Early gentian <i>Gentianella anglica</i>	N/A
St Albans Head to Durlston Head SAC	287.22	Sea cliffs Grassland	N/A	Early gentian <i>Gentianella anglica</i>	Greater horseshoe bat <i>Rhinolophus ferrumiquinum</i>

Site Name	Area (ha)	Annex 1 Habitat Primary	Annex 1 Habitat Qualifying	Annex II Species Primary	Annex II Species Qualifying
Dorset Heaths (Purbeck and Wareham and Studland Dunes SAC)	2221.94	Coastal dunes Standing freshwater Heath Bogs	Grassland Fens Forest	Southern damselfly <i>Coenagrion mercuriale</i>	Great crested newt <i>Triturus cristatus</i>
Solent and Isle of Wight Lagoons SAC	36.24	Coastal lagoons	N/A	N/A	N/A
South Wight Maritime SAC	19862.71	Reefs Sea cliffs Sea caves	N/A	N/A	N/A
Solent Maritime SAC	11325.09	Estuaries Salt marshes and salt meadows	Sandbanks Mudflats and sandflats Coastal lagoons Vegetation of drift lines Vegetation of stony banks Salt marshes and salt meadows Coastal dunes	N/A	Desmoulin's whorl snail <i>Vertigo moulinsiana</i>
Isle of Wight Downs SAC	461.8	Sea cliffs Heaths Grassland	N/A	Early gentian <i>Gentianella anglica</i>	N/A
Studland to Portland cSAC	33177.41	Reefs	N/A	N/A	N/A
Bridlesford Copses SAC	167.22	N/A	N/A	Bechstein's bat	N/A

A5 Offshore Special Areas of Conservation

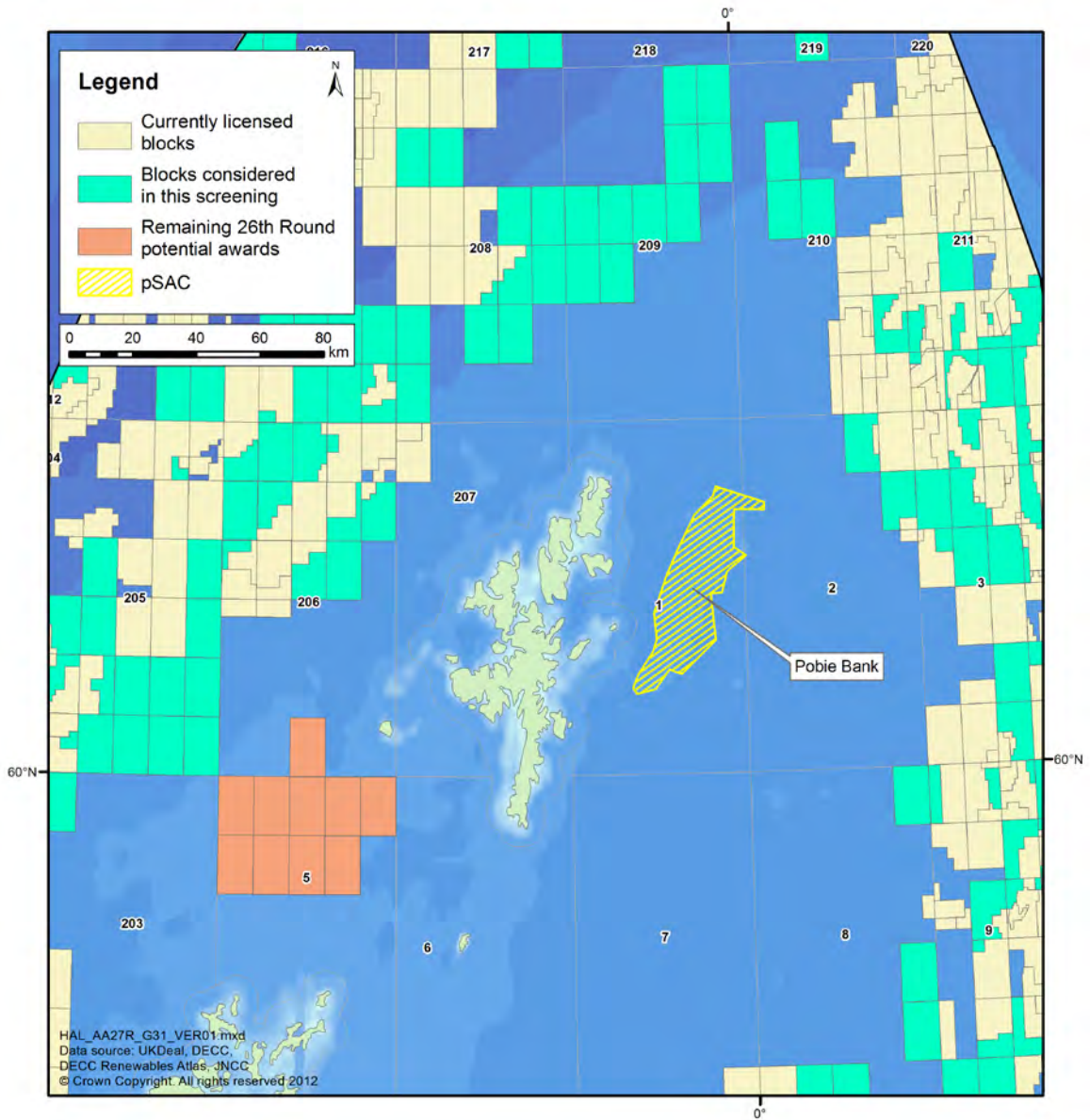
This section considers the relevant candidate, possible and draft SACs, and SCIs, located in UK offshore waters – see Maps below and Table A.8¹⁰. Candidate SACs have been submitted to the European Commission for consideration, but not yet formally adopted, unlike possible SACs which have yet to be submitted to the EC and draft SACs which have yet to be formally approved by the UK government as sites for public consultation. SCI sites have been adopted by the European Commission but are not yet formally designated by the government of the relevant country.

Map A.12: Location of offshore Special Areas of Conservation, northern North Sea

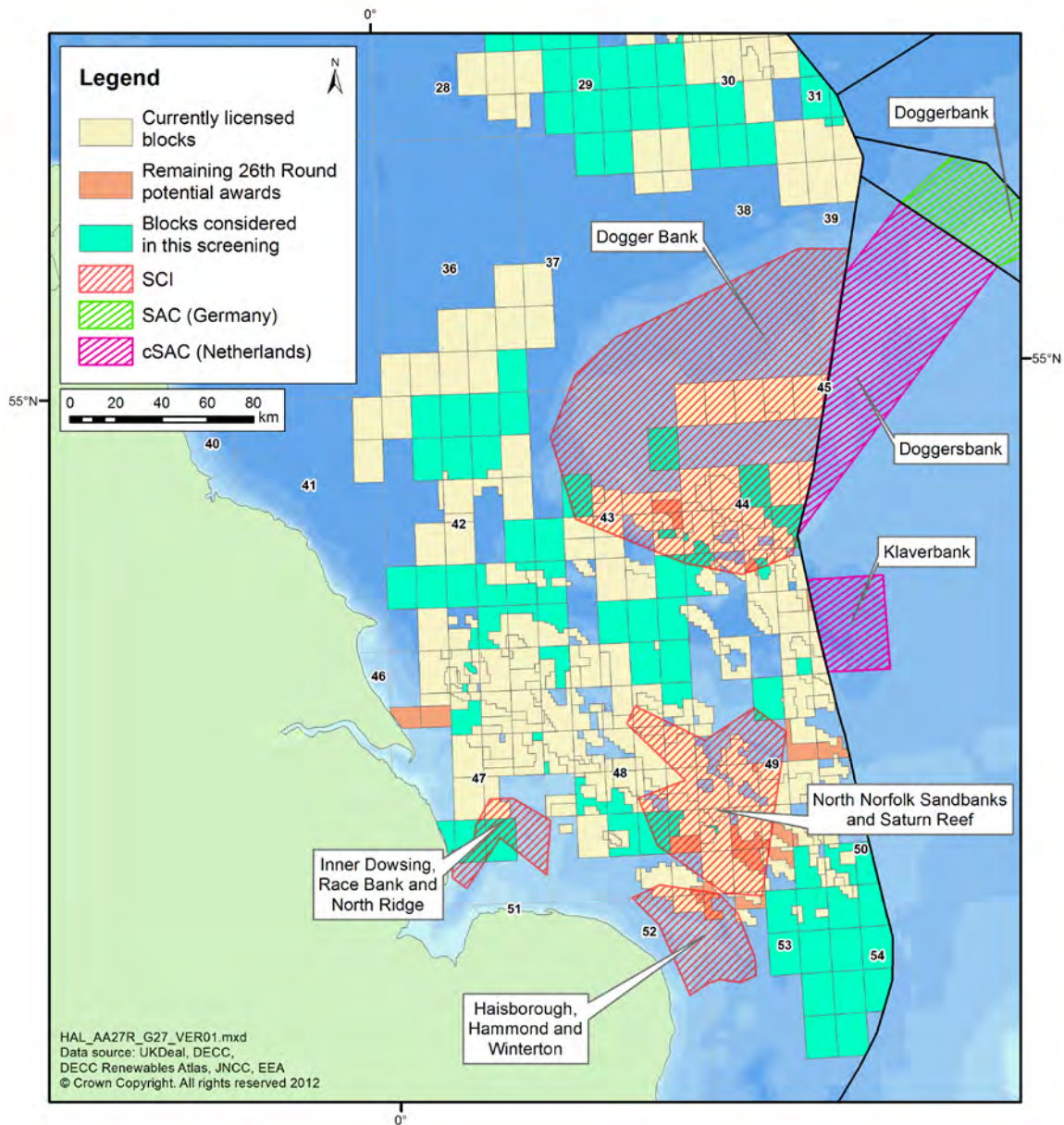


¹⁰ Sites in the adjacent waters of other member states are also identified where relevant on maps and described in Section A7.

Map A.13: Location of offshore Special Area of Conservation, east of Shetland

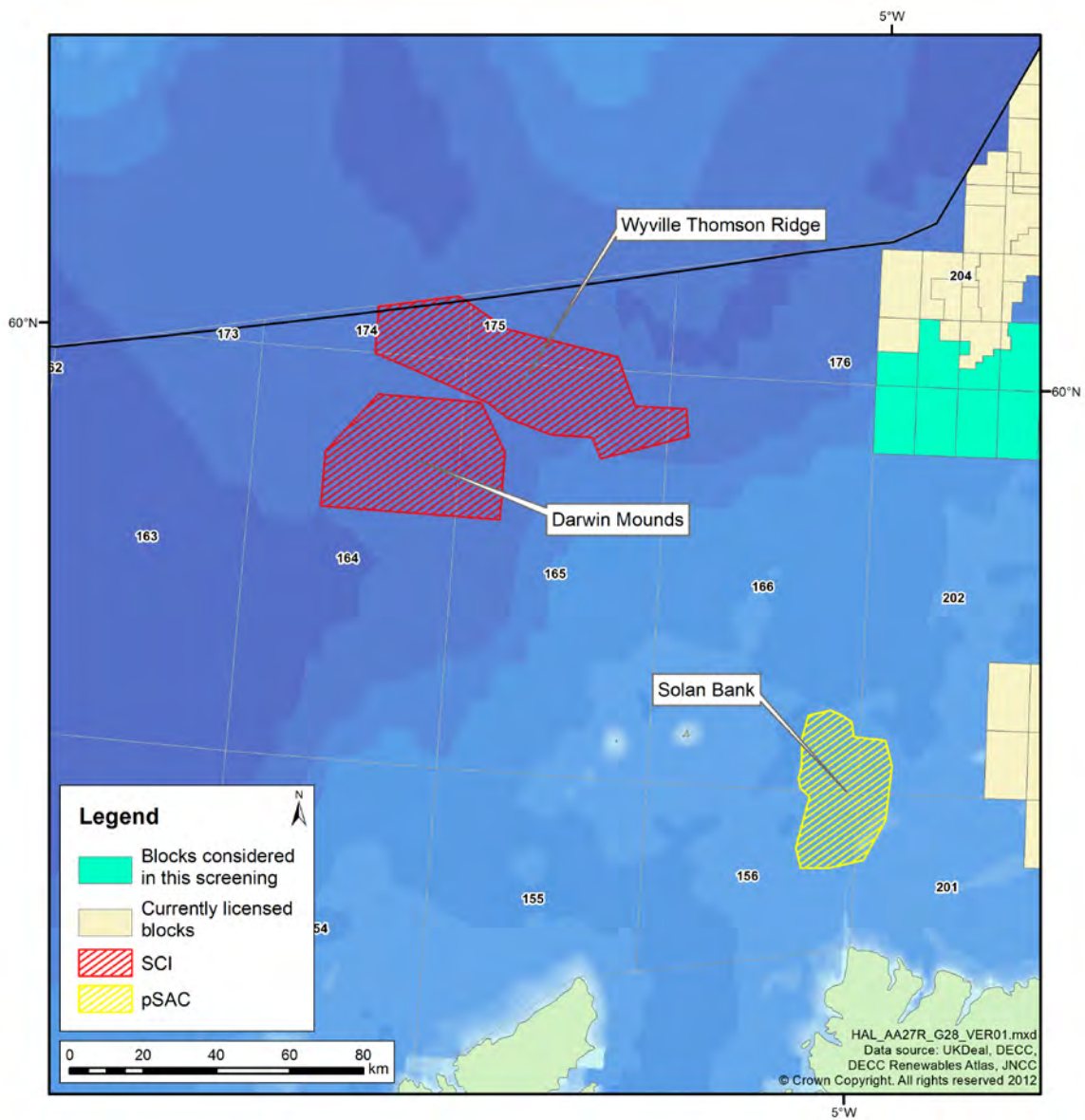


Map A.14: Location of offshore Special Areas of Conservation, southern North Sea

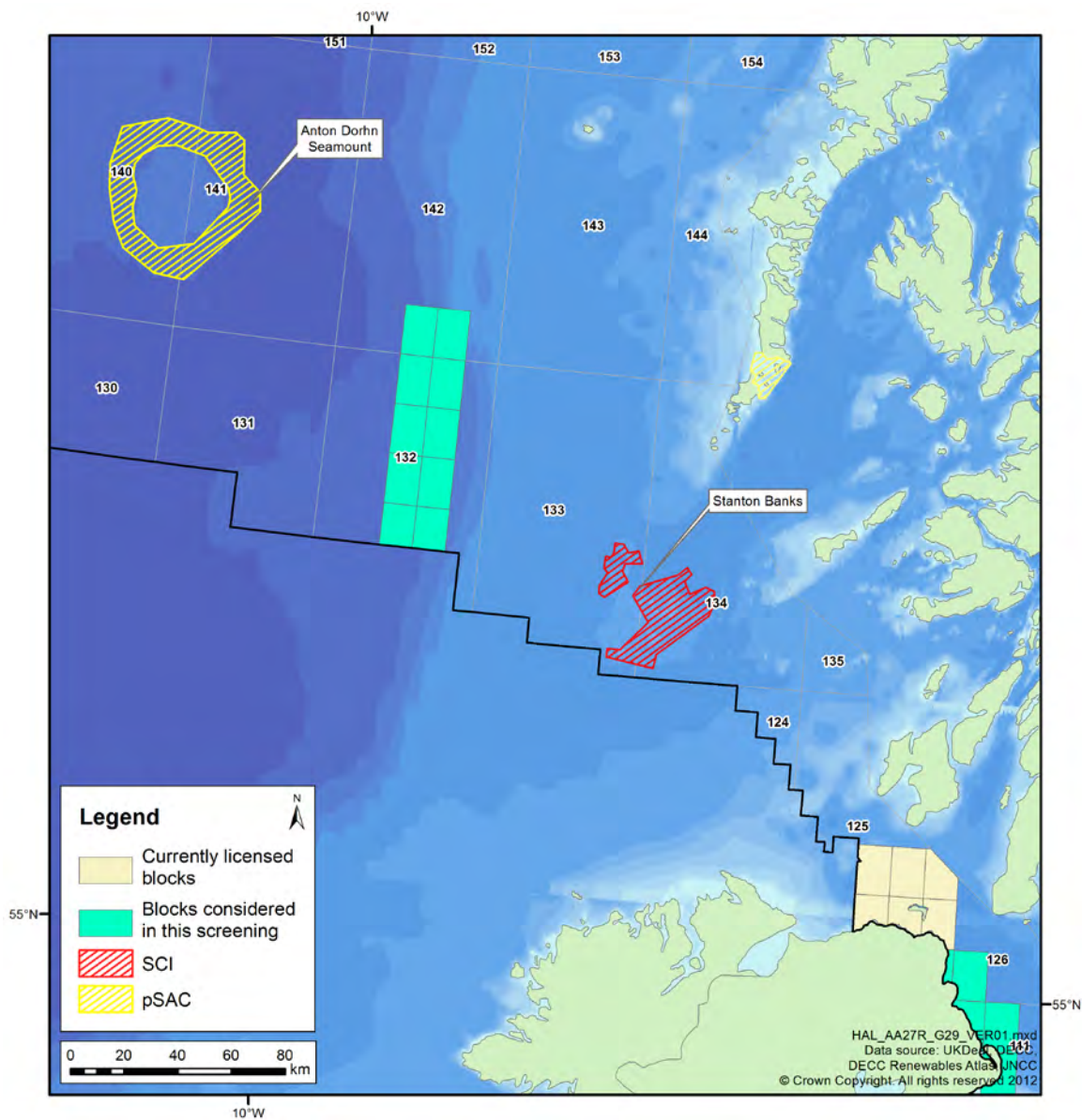


Note this map also includes SACs in German and Dutch waters – see Section A7

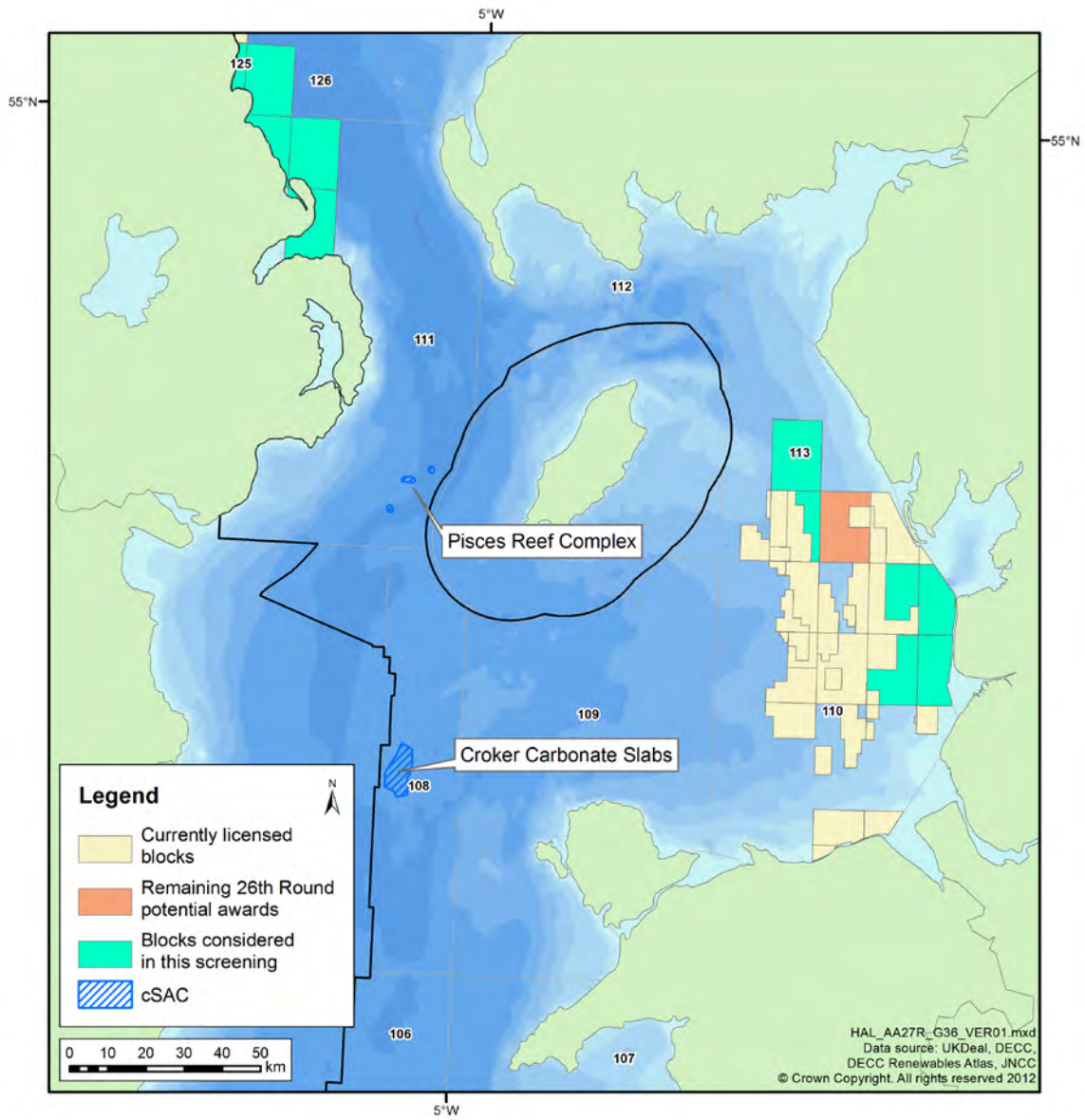
Map A.15: Location of offshore Special Areas of Conservation, north west of Scotland



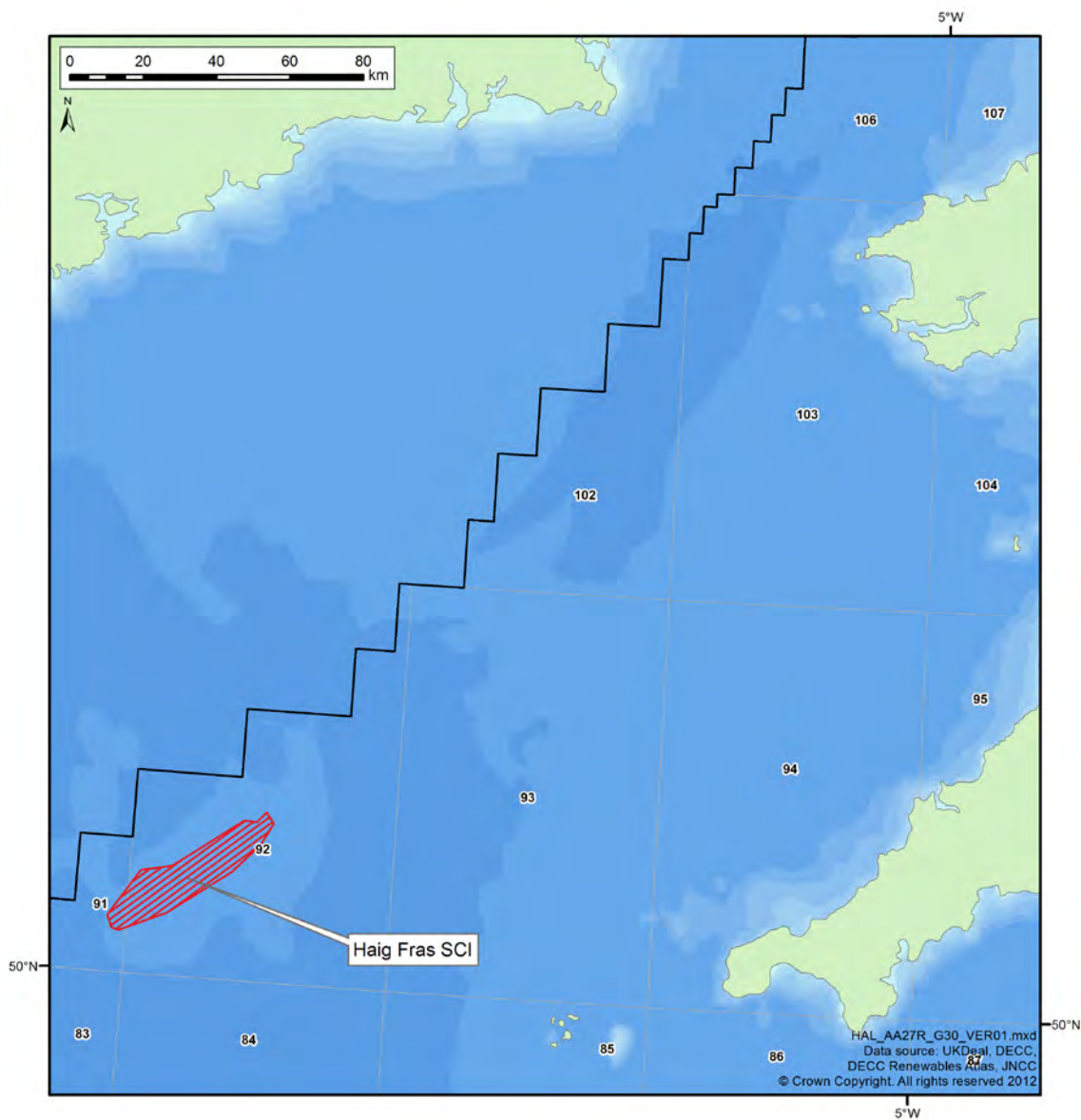
Map A.16: Location of offshore Special Areas of Conservation, west of Scotland



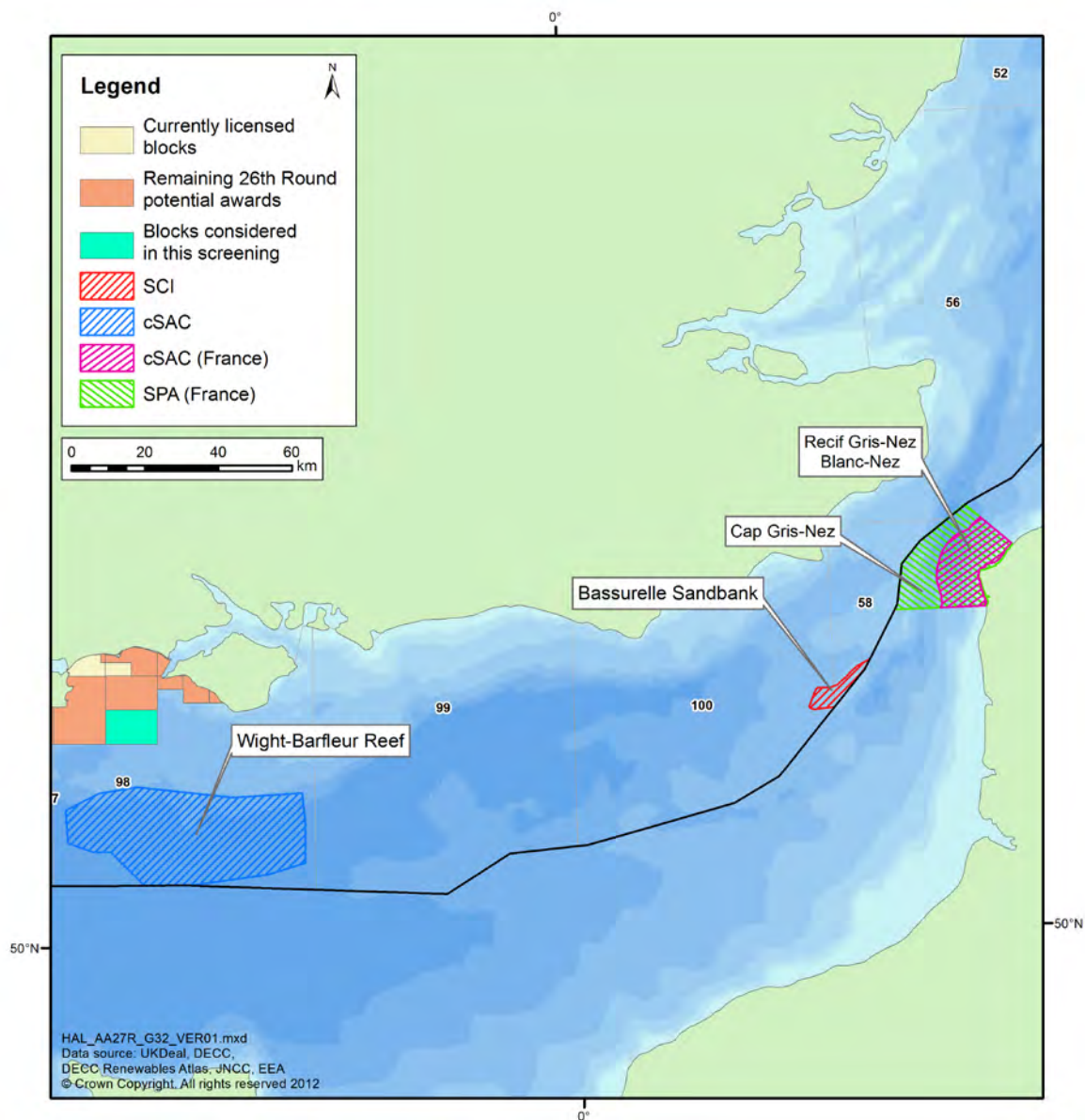
Map A.17: Location of offshore potential Special Areas of Conservation, Irish Sea



Map A.18: Location of offshore Special Area of Conservation, western approaches



Map A.19: Location of offshore Special Areas of Conservation, in the Channel



Note: this map also shows the location of French Natura 2000 sites in the Straits of Dover – see Section A7.

Table A.8: Offshore SACs and their Qualifying Features

Site Name	Area (ha)	Annex 1 Habitat	Annex II Species
Dogger Bank SCI	1,233,115	Sandbanks	N/A
North Norfolk Sandbanks and Saturn Reef SCI	360,341	Sandbanks Reefs	N/A
Inner Dowsing, Race Bank and North Ridge SCI	84,514	Sandbanks Reefs (biogenic <i>Sabellaria spinulosa</i>)	N/A
Haisborough, Hammond and Winterton SCI	146,759	Sandbanks Reefs (biogenic <i>Sabellaria spinulosa</i>)	N/A
Darwin Mounds SCI	137,726	Reefs	N/A
Wyville Thomson Ridge SCI	173,995	Reefs	N/A
Scanner Pockmark SCI	335	Submarine structures made by leaking gases	N/A
Braemar Pockmarks SCI	518	Submarine structures made by leaking gases	N/A
Pobie Bank Reef pSAC	101,125	Reefs	N/A
Solan Bank Reef pSAC	85,593	Reefs	N/A
North-West Rockall Bank SCI (beyond scope of maps)	436,526	Reefs (biogenic <i>Lophelia pertusa</i>)	N/A
Anton Dohrn Seamount pSAC	142,861	Reefs	N/A
East Rockall Bank pSAC (beyond scope of maps)	369,489	Reefs	N/A
Hatton Bank pSAC (beyond scope of maps)	1,569,433	Reefs	N/A
Stanton Banks SCI	81,727	Reefs	N/A
Croker Carbonate Slabs cSAC	6,591	Submarine structures made by leaking gases	N/A
Pisces Reef Complex cSAC	697.14	Reefs	N/A
Haig Fras SCI	48,103	Reefs	N/A
Bassurelle Sandbank SCI	6,709	Sandbanks	N/A
Wight-Barfleur Reef cSAC	137,344	Reefs	N/A

A6 Riverine and Freshwater Special Areas of Conservation

The following riverine and freshwater SACs designated for migratory fish and/or the freshwater pearl mussel are also considered.

Map A.20: Location of riverine and freshwater SACs

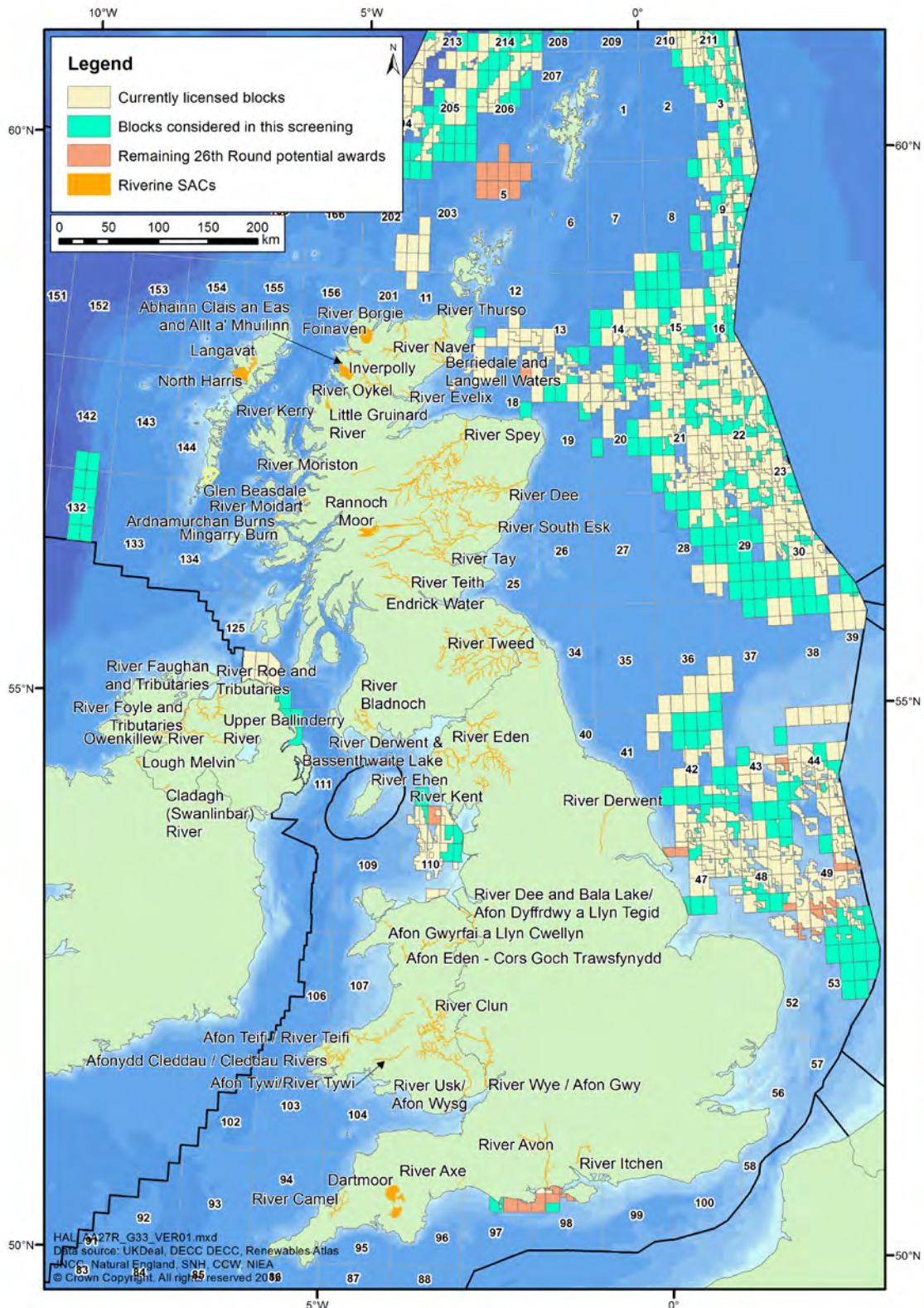


Table A.9: Relevant riverine and freshwater SACs designated for migratory fish and/or the freshwater pearl mussel

Site Name	Freshwater pearl mussel <i>Margaritifera margaritifera</i>	Migratory fish ¹
Mingarry Burn	✓	-
Ardnamurchan Burns	✓	-
River Moidart	✓	-
Glen Beasdale	✓	-
Rannoch Moor	✓	-
River Moriston	✓	AS
River Kerry	✓	-
Little Gruinard River	-	AS
River Oykel	✓	AS
Inverpolly	✓	-
Abhainn Clais An Eas and Allt a'Mhuilinn	✓	-
Ardvar and Loch a'Mhuilinn Woodlands	✓	-
Foinaven	✓	-
River Borgie	✓	AS
North Harris	✓	AS
Langavat	-	AS
River Thurso	-	AS
River Naver	✓	AS
Berriedale and Langwell Waters	-	AS
River Evelix	✓	-
River Spey	✓	AS, SL
River Dee	✓	AS
River South Esk	✓	AS
River Tay	-	AS, RL, SL
River Teith	-	AS, RL, SL
Endrick Water	-	AS, RL
River Tweed	-	AS, RL, SL
River Derwent	-	SL, RL
River Itchen	-	AS
River Avon	-	AS, SL
River Axe	-	SL
Dartmoor	-	AS
River Camel	-	AS
River Wye / Afon Gwy	-	AS, SL, RL, TS, ASH
River Usk / Afon Wysg	-	AS, SL, RL, TS, ASH
Afon Twyi / River Tywi	-	SL, RL, TS, ASH
Afonydd Cleddau / Cleddau Rivers	-	SL, RL
Afon Teifi / River Teifi	-	AS, SL, RL
River Clun	✓	-

Site Name	Freshwater pearl mussel <i>Margaritifera margaritifera</i>	Migratory fish ¹
Afon Eden - Cors Goch Trawsfynydd	✓	AS
Afon Gwyrfai a Llyn Cwellyn	-	AS
River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid	-	AS, SL, RL
River Kent	✓	-
River Derwent & Bassenthwaite Lake	-	AS, SL, RL
River Ehen	✓	AS
River Eden	-	AS, SL, RL
River Bladnoch	-	AS
River Roe and Tributaries	-	AS
Upper Ballinderry River	✓	-
Cladagh (Swanlinbar) River	✓	-
Lough Melvin	-	AS
Owenkillew River	✓	AS
River Foyle and Tributaries	-	AS
River Faughan and Tributaries	-	AS

¹ SL - Sea lamprey *Petromyzon marinus*, RL - River lamprey *Lampetra fluviatilis*, AS - Atlantic salmon *Salmo salar*, TS - Twaite shad *Alosa fallax*, ASh - Allis shad *Alosa alosa*

A7 Sites in the adjacent waters of other member states

See also Maps A.14 and A.19.

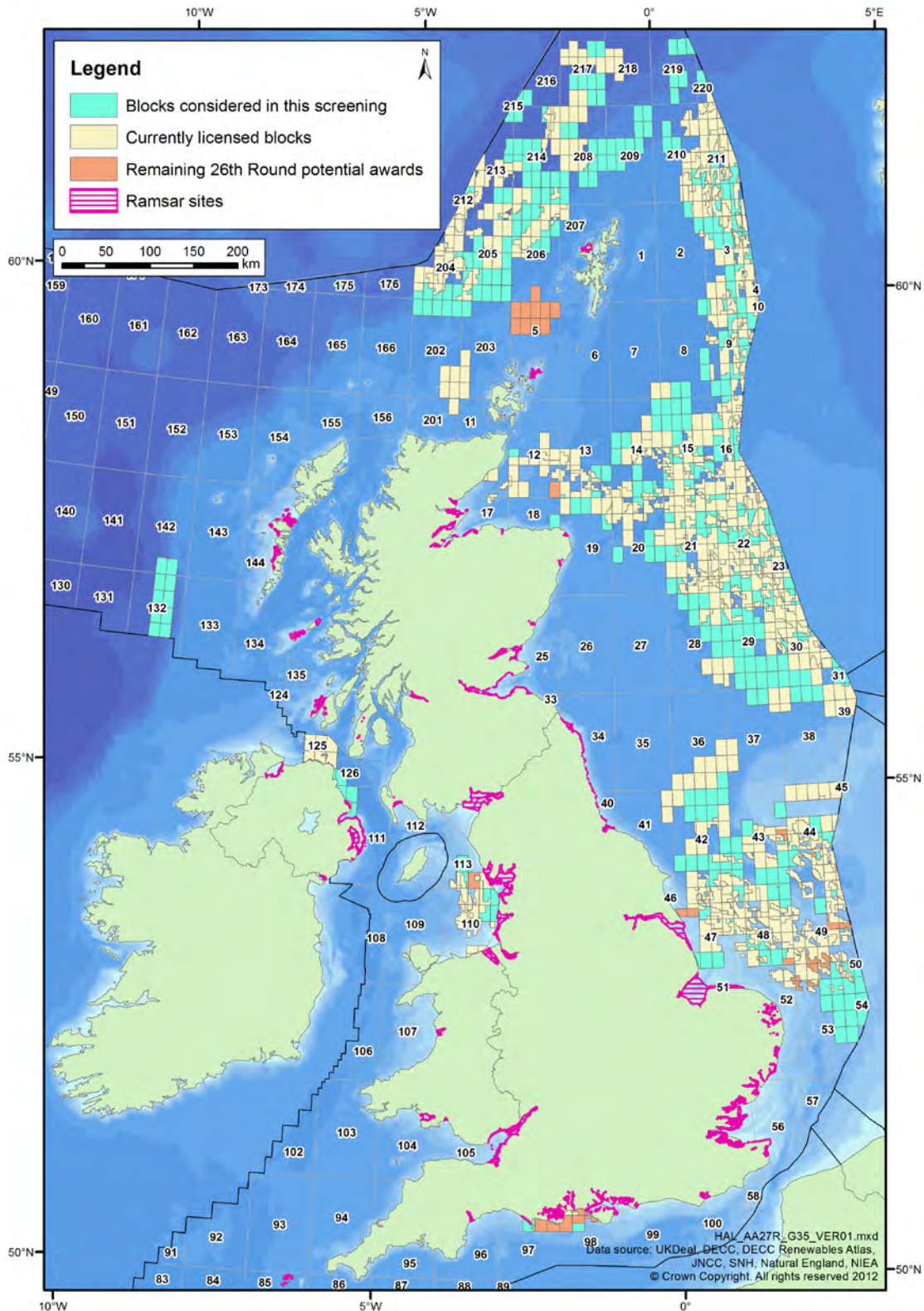
Table A.10: Sites in the adjacent waters of other member states

Site Name	Area (ha)	Annex 1 Habitat	Annex II Species
Doggerbank SAC (Germany)	169,895	Sandbanks	Harbour porpoise <i>Phocoena phocoena</i> Harbour seal <i>Phoca vitulina</i>
Doggersbank cSAC (Netherlands)	417,750	Sandbanks	Harbour porpoise <i>Phocoena phocoena</i> Harbour seal <i>Phoca vitulina</i> Grey seal <i>Halichoerus grypus</i>

Site Name	Area (ha)	Annex 1 Habitat	Annex II Species
Klaverbank cSAC (Netherlands)	123,733	Reefs	Harbour porpoise <i>Phocoena phocoena</i> Harbour seal <i>Phoca vitulina</i> Grey seal <i>Halichoerus grypus</i>
Recifs Gris-Nez Blan-Nez – SCI (France)	29,156	Sandbanks, Reefs	Harbour porpoise <i>Phocoena phocoena</i> Grey seal <i>Halichoerus grypus</i> Harbour seal <i>Phoca vitulina</i>
Cap-Gis-Nez – SPA (France)	56,224	An extension of the area of existing SPA abuts the median line. The extension covers over 480 km ² of surface in depths up to 69m. Migrating and wintering bird communities. Breeding fulmars, herring gulls, kittiwakes Also breeding Greater black-backed gull, lesser black backed gull, peregrine falcon	

Appendix B - Ramsar Sites

Map B.1: Location of coastal Ramsar Sites



With the exception of Pevensey Levels, the coastal Ramsar sites are also SPA.s and/or SACs (although site boundaries are not always strictly coincident and a Ramsar site may comprise one or more Natura 2000 sites), see tabulation below.

The Pevensey Levels Ramsar site is mainly terrestrial but includes some shingle and intertidal mud and sand.

Table B.1: Coastal Ramsar sites and corresponding Natura 2000 sites

Ramsar Name	SPA Name	SAC Name
Alde–Ore Estuary	Alde–Ore Estuary	Alde, Ore and Butley Estuaries Orfordness – Shingle Street
Avon Valley	Avon Valley	River Avon
Belfast Lough	Belfast Lough Belfast Lough Open Water Outer Ards	
Benfleet and Southend Marshes	Benfleet and Southend Marshes Foulness (Mid-Essex Coast Phase 5)	Essex Estuaries
Blackwater Estuary (Mid-Essex Coast Phase 4)	Blackwater Estuary (Mid-Essex Coast Phase 4) Dengie (Mid-Essex Coast Phase 1)	Essex Estuaries
Breydon Water Bridgend Flats, Islay	Breydon Water Bridgend Flats, Islay	
Broadland	Broadland	The Broads
Burry Inlet	Bae Caerfyrddin/ Carmarthen Bay Burry Inlet	Carmarthen Bay and Estuaries/ Bae Caerfyrddin ac Aberoedd Carmarthen Bay Dunes/ Twyni Bae Caerfyrddin
Caithness and Sutherland Peatlands	Caithness and Sutherland Peatlands	
Carlingford Lough	Carlingford Lough	
Chesil Beach and The Fleet	Chesil Beach and The Fleet	Chesil and the Fleet
Chichester and Langstone Harbours	Chichester and Langstone Harbours	Solent and Isle of Wight Lagoons Solent Maritime
Coll	Coll	
Colne Estuary (Mid-Essex Coast Phase 2)	Colne Estuary (Mid-Essex Coast Phase 2)	Essex Estuaries
Cors Fochno and Dyfi	Dyfi Estuary / Aber Dyfi	Pen Llyn a`r Sarnau/ Lleyrn Peninsula and the Sarnau
Cromarty Firth	Cromarty Firth	Conon Islands Moray Firth
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3)	Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Dengie (Mid-Essex Coast Phase 1)	Essex Estuaries
Crymlyn Bog		Crymlyn Bog/ Cors Crymlyn

Ramsar Name	SPA Name	SAC Name
Deben Estuary	Deben Estuary	
Dengie (Mid-Essex Coast Phase 1)	Blackwater Estuary (Mid-Essex Coast Phase 4) Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Dengie (Mid-Essex Coast Phase 1)	Essex Estuaries
Dornoch Firth and Loch Fleet	Dornoch Firth and Loch Fleet	Dornoch Firth and Morrich More Moray Firth Mound Alderwoods
Dorset Heathlands	Poole Harbour	Dorset Heaths (Purbeck and Wareham) and Studland Dunes
Duddon Estuary	Duddon Estuary Morecambe Bay	Morecambe Bay
East Sanday Coast	East Sanday Coast	Sanday
Eilean na Muice Duibhe (Duich Moss), Islay	Eilean na Muice Duibhe (Duich Moss), Islay	
Exe Estuary	Exe Estuary	Dawlish Warren
Firth of Forth	Firth of Forth	
Firth of Tay & Eden Estuary	Firth of Tay & Eden Estuary	Barry Links Firth of Tay & Eden Estuary
Foulness (Mid-Essex Coast Phase 5)	Benfleet and Southend Marshes Foulness (Mid-Essex Coast Phase 5)	Essex Estuaries
Gibraltar Point	Gibraltar Point The Wash	Saltfleetby–Theddlethorpe Dunes and Gibraltar Point The Wash and North Norfolk Coast
Gruinart Flats, Islay	Gruinart Flats, Islay Rinns of Islay	Rinns of Islay
Hamford Water	Hamford Water	
Humber Estuary	Humber Estuary	Humber Estuary Saltfleetby–Theddlethorpe Dunes and Gibraltar Point
Inner Clyde Estuary	Inner Clyde Estuary	
Inner Moray Firth	Inner Moray Firth	Moray Firth
Isles of Scilly	Isles of Scilly	Isles of Scilly Complex
Killough Bay	Killough Bay	
Kintyre Goose Roosts	Kintyre Goose Roosts	
Larne Lough	Larne Lough	
Lewis Peatlands	Lewis Peatlands	Langavat
Lindisfarne	Lindisfarne Northumbria Coast	Berwickshire and North Northumberland Coast North Northumberland Dunes
Loch an Duin		Loch nam Madadh

Ramsar Name	SPA Name	SAC Name
Loch Eye	Loch Eye	
Loch of Inch and Torrs Warren	Loch of Inch and Torrs Warren	Luce Bay and Sands
Loch of Strathbeg	Loch of Strathbeg	
Lough Foyle		Faughan River and Tributaries Magilligan
Medway Estuary and Marshes	Medway Estuary and Marshes Thames Estuary and Marshes	
Mersey Estuary	Mersey Estuary	
Minsmere–Walberswick	Minsmere–Walberswick	Minsmere to Walberswick Heaths and Marshes
Montrose Basin	Montrose Basin	
Moray and Nairn Coast	Moray and Nairn Coast	Culbin Bar Lower River Spey – Spey Bay Moray Firth River Spey
Morecambe Bay	Duddon Estuary Morecambe Bay	Morecambe Bay
North Norfolk Coast	North Norfolk Coast The Wash	North Norfolk Coast The Wash and North Norfolk Coast
North Uist Machair and Islands	North Uist Machair and Islands	North Uist Machair
Northumbria Coast	Northumbria Coast Teesmouth and Cleveland Coast	Berwickshire and North Northumberland Coast Durham Coast North Northumberland Dunes
Outer Ards	Belfast Lough Outer Ards Strangford Lough	Strangford Lough
Pagham Harbour	Pagham Harbour	
Pevensey Levels		
Poole Harbour	Poole Harbour	Dorset Heaths (Purbeck and Wareham) and Studland Dunes
Portsmouth Harbour	Portsmouth Harbour	
Ribble and Alt Estuaries	Ribble and Alt Estuaries	Sefton Coast
Rinns of Islay	Rinns of Islay	Glac na Criche Rinns of Islay
Ronas Hill – North Roe and Tingon	Ronas Hill – North Roe and Tingon	Ronas Hill – North Roe Tingon
Severn Estuary	Severn Estuary	River Usk/ Afon Wysg River Wye/ Afon Gwy Severn Estuary/ Môr Hafren
Sléibhteán agus Cladach Thiriodh (Tiree Wetlands and Coast)	Sléibhteán agus Cladach Thiriodh (Tiree Wetlands and Coast)	Tiree Machair

Ramsar Name	SPA Name	SAC Name
Solent and Southampton Water	Solent and Southampton Water	Solent and Isle of Wight Lagoons Solent Maritime South Wight Maritime
South Uist Machair and Lochs	South Uist Machair and Lochs	South Uist Machair
Stour and Orwell Estuaries	Stour and Orwell Estuaries	
Strangford Lough	Outer Ards Strangford Lough	Strangford Lough
Teesmouth and Cleveland Coast	Northumbria Coast Teesmouth and Cleveland Coast	Durham Coast
Thames Estuary and Marshes	Medway Estuary and Marshes Thames Estuary and Marshes	
Thanet Coast and Sandwich Bay	Thanet Coast and Sandwich Bay	Sandwich Bay Thanet Coast
The Dee Estuary	The Dee Estuary	Dee Estuary/ Aber Dyfrdwy
The Swale	The Swale	
The Wash	Gibraltar Point North Norfolk Coast The Wash	The Wash and North Norfolk Coast
Upper Solway Flats and Marshes	Upper Solway Flats and Marshes	River Eden Solway Firth
Ythan Estuary and Meikle Loch	Ythan Estuary, Sands of Forvie and Meikle Loch	Sands of Forvie

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