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Ref: A4MR-SEAG-Z-MGT110-SLE-178

Address: Marine Scotland,
Marine Laboratory
PO Box 101
375 Victoria Road
Aberdeen
AB11 9DB

Seagreen Wind Energy Limited
C/o SSE Renewables
1 Waterloo Street
Glasgow
G2 6AY

Attention: Andrew Sutherland

Dear Andrew,

**Seagreen Round 3 Firth of Forth Zone 2 – Phase 1 Offshore
Proposed Approach to HRA Report – Information for Appropriate Assessment**

Seagreen's proposed approach to submission of the Phase 1 Offshore HRA Report was discussed with Marine Scotland at the meeting on 30 May 2012. At that meeting Seagreen advised that relevant information, including the proposed format and content of the report would be submitted to Marine Scotland. This is primarily intended to enable agreement between Seagreen and Marine Scotland on what will be included within the HRA Report.

The overall aim of the HRA Report, which will principally draw upon information contained within the Phase 1 Offshore Environmental Statement (ES), is to inform and assist Marine Scotland to undertake an appropriate assessment. The overall concept for presentation of the HRA Report is to make full use of the ES chapters and technical appendices to ensure that there is no unnecessary duplication of information. However, it should be noted that the HRA Report will include new analysis of the ES data and may need to include extra narrative not required for the purposes of the Environmental Impact Assessment (EIA).

The following information presents an outline of what Seagreen expects to include within the HRA Report. Due to the large number of both protected sites and cumulative projects that potentially interact with the Seagreen Phase 1 development, much of the information will need to be tabulated to allow for clear presentation of information.

General Approach

The general approach to the HRA Report can be summarised as follows:

- It is driven by the legal requirements of the regulations;
- It is a test of the projects' impact on the integrity of the relevant European sites, as measured in relation to the sites' Conservation Objectives; and
- It will provide a summary which is, accessible, short and cross-linked and will seek to signpost rather than duplicate the analyses and conclusions of the ES and relevant technical appendices.

The proposed structure of the HRA Report and the content of the relevant sections are described as follows.

1. Introduction:

This will include:

- The HRA context from Habitats & Birds Directives;
- Discussion of the Article 6 assessment:
 - Step One: is the proposal directly connected with or necessary for site management for nature conservation?
 - Step Two: is the proposal likely to have a significant effect on the site?
 - Step Three: can it be ascertained that the proposal will not adversely affect the integrity of the site? Note that with regard to ornithology, it will not be possible to undertake a final assessment of effect on integrity until the Population Viability Analysis (PVAs) (being undertaken on behalf of Marine Scotland) are finalised. Whilst PVA will also be undertaken for (some) marine mammal species it is likely that given current knowledge a preliminary assessment will be made.
- A description of the guidance used;
- An introduction to the report; and
- An audit trail of decisions leading up to the report's production e.g. details of the screening process and associated consultation (the screening response will be provided as an appendix to the report).

2. Ornithology HRA

2.1 Analysis of Conservation Objectives and Site Integrity

The structure of this section will be based on an initial table of species and sites under consideration. It will include discussion of:

- Why these species are included and reference to the screening exercise including a brief justification for species not considered;
- The approach to considerations of effects on SPA Conservation Objectives including key attributes, direct and indirect effects and supporting processes. It will explain what effects we are considering in the HRA and the justification for screening out any potential effects covered by the Conservation Objectives (e.g. direct impacts on SPA habitats);
- The approach to species-specific attributes and apportionment of the Seagreen site population across SPAs, based on foraging range for breeding birds and migratory routes for passage birds. Advice on the treatment of wintering birds has not been provided by SNH/JNCC and is currently awaited by Seagreen; and
- Cumulative impact considerations including data implications. Specifically, the assessment will be based on best available Scottish Territorial Waters (STW) data. Rochdale information and the HRA Screening Report have been shared via the Forth and Tay Offshore Wind Developers Group (FTOWDG).

2.2 Data used and supporting information

The section will begin with a table listing technical reports used and key sources of information e.g. EIA data and supporting external data. Data standards and confidence in their quality will be discussed including the limitations of the data available. The differences between the ESAS and Perrow survey methods will be described including the implications of any differences arising from the use of either method.

2.3 Species accounts

Each relevant species will be dealt with in turn. The decision to organise this section of the report on a species by species basis rather than site by site is based on preferences expressed by JNCC and SNH (phone calls of 02/03/2012). Both organisations stated that the most useful reports they had reviewed were analysed in this way. The following details provide a summary of the approach.

- The approach will be a species by species approach considering population level effect as key measure of site integrity;
- Key step will be to apportion impact to relevant SPAs. A clear audit trail describing this process will be required for both Seagreen and other projects in-combination with the Phase 1 sites;
- The first step of assessment will be to assess at the Seagreen project level (i.e. Project Alpha, Project Bravo and a discussion of Transmission Asset Project;)
- The cumulative impact of Project Alpha, Project Bravo and Transmission Asset Project will be clearly stated prior to any consideration of cumulative impacts with other relevant projects (STW Offshore Wind Farms (OWFs), other OWFs or onshore projects);
- Information will then be summarised by SPA (see Table 1) for each species and will include data from all relevant projects i.e. cumulative effects will be covered; and
- Descriptions will take account of site condition, overall site monitoring results and the overall status of the population (national trends).

Cumulative effects

- A summary of the other relevant projects (STW Offshore Wind Farms (OWFs), other OWFs or onshore projects) considered and which species and SPAs these cover will be presented as a table;
- Effects of each STW OWF site on each species will be apportioned to each SPA (see Table 2);
- For non-wind farm developments, a qualitative, prose-based assessment will be made; and
- The potential impact of Phases 2 and 3 will be recognised but not considered quantitatively in accordance with the approach to cumulative impact assessment set out in Seagreen's letter dated 21 May 2012 (Seagreen Ref: A4MRSEAG-Z-MGT110-SLE-142) which has been agreed with Marine Scotland.

2.4 SPA accounts

After all the species accounts are undertaken Seagreen will present a summary for each SPA including each Seagreen site alone and in-combination with other projects.

The summary will be tabulated. Seagreen consider that a tabular approach is the best way to present this complex, multi-stage assessment, from individual species up to the SPA level.

These tables will summarise the cumulative impact per species, per SPA, therefore each species account will have an assessment of likely significant effect at a Project, Phase and cumulative level. This table will require reference to data sources for impact of the other developments.

The final table will pull together the species information for each project plus the cumulative effect on an SPA by SPA basis. Therefore, for each SPA Seagreen will have assessed all of its species on a proportionate basis. Example summary tables are presented below.

Example Table 3: Summary of impact for each species within each SPA, one table per SPA

Species	Effect Alpha	Effect Bravo	Effect other projects	Effect Cumulative
Kittiwake				
Gannet				

3. Fish HRA (salmonids, lamprey, pearl mussel)

3.1 Analysis of Conservation Objectives and Site integrity

The structure of this section will be based on an initial table of species and sites under consideration. It will include discussion of:

- Why these species are included and reference to the screening exercise including a brief justification for species not considered; and
- The approach to considerations of effects on SAC Conservation Objectives including key attributes, direct and in direct effects and supporting processes. It will explain what effects we are considering in the HRA and the justification for screening out many of the potential effects covered by the Conservation Objectives (e.g. direct impacts on SAC habitats).

3.2 Species accounts

Each relevant species will be dealt with in turn. This section of the report will be organised on a species by species basis rather than site by site basis.

The approach for fish and shellfish will, necessarily, be a much higher level and more qualitative assessment due to the availability of data regarding the species in the marine phase (where any effect will occur). Seagreen therefore anticipate that this section of the HRA will be brief, due to these limitations.

Therefore for each species there will be the following structure:

- Justification of qualitative approach (data and confidence);
- Summary of potential impacts – noise, disturbance, habitat loss – referring back to relevant discussions in the ES;
- In-combination effects – STWs OWFs, Beatrice OWF, Moray Firth OWF and the European Offshore Wind Deployment Centre (EOWDC); and
- Conclusions.

Example Table 1: Effects of Seagreen, one table per species, impacts described per project and per relevant SPA

SPA	SPA population	SPA condition	Alpha Effect size	Proportion of SPA population affected	% rise in background mortality	Bravo effect Size	Proportion of SPA population	% rise in background mortality	Alpha and Bravo effect size	Proportion of SPA population affected	% rise in background mortality
Buchan Ness to Collieston Coast	X 0000	e.g. Favourable maintained	Number drawn from EIA technical report								
St Abb's Head to Fast Castle											
Fowlsheugh											
Forth Islands											

SPA population - taken from citation or SPA Review

Condition - taken from latest site reporting (SNH) if available

Proportion of SPA population - the proportion of the population affected by the project (assigned on a proportionate basis)

Likely impact on integrity – whether significant or non-significant

Example Table 2: Cumulative impacts of Seagreen STW sites and other relevant projects, one table per species, impacts described per project and per relevant SPA

SPA	SPA population	Alpha effect (e.g. % mortality, displacement etc.)	Bravo Effect	NING Effect	Inch Cape Effect	Others	Proportion of SPA population
Buchan							
St Abbs							
Fowlsheugh							
Forth Island							

Whilst there is a requirement to relate the impact back to the relevant SAC, it is considered that as the effects will be so minor, that this will negate the requirement to undertake a detailed apportionment exercise, as will be undertaken for birds (and given data available this will be impossible in any case).

4. Marine Mammals HRA

4.1 Analysis of Conservation Objectives and Site integrity

The structure of this section will be based on an initial table of species and sites under consideration. It will include discussion of:

- Why these species are included and reference to the screening exercise including a brief justification for species or sites not considered; and
- The approach to considerations of effects on SAC Conservation Objectives including key attributes, direct and indirect effects and supporting processes. It will explain what effects Seagreen are considering in the HRA and the justification for screening out many of the potential effects covered by the Conservation Objectives (e.g. direct impacts on SAC habitats).

4.2 Data used and supporting information

It will be an important part of this assessment to discuss the limitations of available data, the various analyses used and the causal linkages discussed between potential sources and the assessed effects.

4.3 Species accounts

Each relevant species will be dealt with in turn. This section of the report will be organised on a species by species basis rather than site by site basis.

Harbour seal

JNCC and SNH have stated that the Tay & Eden Estuary SAC is the only harbour seal SAC where there is connectivity. For HRA the reference population for harbour seals, both within and outwith the breeding period, is the population of the east coast management area (ECMA). Following consultation with JNCC and SNH, the ECMA population will be taken as being equivalent to the Tay & Eden Estuary SAC population.

JNCC and SNH recommend that effects on the species are considered in the context of a population level assessment framework. This has now been agreed to be undertaken on behalf of Marine Scotland and Seagreen will not be presenting information for appropriate assessment with regard to population level effects.

Grey seal

Grey seals are much more wide-ranging, therefore on JNCC and SNH advice the HRA process will only apply to this species as a breeding interest (when the seals are most closely associated with a particular SAC).

JNCC and SNH have stated that the grey seal breeding populations of Isle of May SAC and Fast Castle (within Berwickshire and North Northumberland Coast SAC) need to be considered. The reference populations of the HRA have been confirmed by SNH and JNCC as the ECMA. JNCC and SNH advise that there may need to be some interpretation to consider impacts against each of the SAC populations.

JNCC and SNH recommend that effects on the species are considered in the context of a population level assessment framework. This has now been agreed to be undertaken on behalf of Marine Scotland and Seagreen will not be presenting information for appropriate assessment with regard to population level effects.

Bottlenose dolphin

The Moray Firth SAC is the only SAC requiring consideration in respect of bottlenose dolphin. JNCC and SNH recommend that the east coast population is the reference population for the HRA process. The Moray Firth SAC will be taken as being equivalent to this.

JNCC and SNH recommend that the cumulative impacts of the FTOWDG and Moray Firth OWFs should be considered together as the reference population for each is the same i.e. the east coast bottlenose dolphin population.

Key impacts

- Physical injury or death.
 - This impact will be discussed briefly, but is possible to mitigate using standard procedures therefore there will not be a long discussion of this.
- Effects of displacing mammals from potentially large proportions of their foraging and/or transiting habitats for prolonged periods of time during piling.
 - This assessment is undertaken in detail in the ES on a single pile model and then scaled up for the temporal effects over the two years of anticipated piling works.
 - Work on the in-combination effects (STWs, Beatrice, Moray Firth Offshore Wind farm and EOWDC) has been conducted on behalf of FTOWDG and this will form the basis of the in-combination assessment.
- Potential risk of collision and/or 'corkscrew deaths'.
 - This will be a qualitative assessment – clearly it is not possible to quantify boat movements to determine this. In addition, many effects can be mitigated through adherence to best practice and the development of Marine Mammal Mitigation Protocol.
- Indirect effect – impacts upon prey.
 - Given the spatial area of potential impact upon prey species, this effect will need to be addressed with regard to all of the prey species affected.

At this point the assessment will end; this information should be fed into the PVA which will be undertaken on behalf of Marine Scotland. Each species account will need to be related back to

the relevant SAC for the final judgement on effect upon site integrity, but this will require the PVA results. Seagreen may submit preliminary conclusions in the interim.

5. General Points

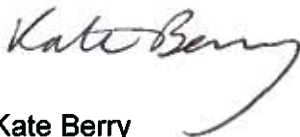
Seagreen are aware of Marine Scotland's preference for the HRA Report to be submitted together with or a short time after the ES and consent applications. It is understood that this preference relates to early availability of information to assist the statutory and non-statutory consultees in providing responses during the consultation process and to ensure relevant information is available for wider public consultation.

Seagreen confirms that the HRA Report will not provide any new data not already included within the ES. As such it will not constitute additional information and will not be required to be advertised or consulted on as an addendum to the ES. It should also be noted that the HRA Report is not a statutory document and as such does not require to be separately advertised or consulted on under the Habitat Regulations.

Marine Scotland have advised that the HRA Report should not present final conclusions where the outcome of PVA work is not available at the time of submission and the approach set out above reflects this advice in relation to population level impacts. Seagreen will endeavour to meet the HRA Report submission timescale preferred by Marine Scotland but are unable to provide a definite timescale for submission of the report at this time. We will continue discussion with Marine Scotland on this matter.

I hope that the above information on the proposed approach to the HRA Report is helpful. The comments of Marine Scotland are requested in order that the proposed approach can be finalised and agreed, although further discussion will be required in respect of the timing for submission of the report as referred to above. Seagreen would also welcome an update on progress of the Marine Scotland Research Projects including the PVA scopes of work being undertaken by Marine Scotland based on previous discussion and agreement with FTOWDG.

Yours sincerely

A handwritten signature in black ink that reads "Kate Berry".

Kate Berry
Development and Consents Manager