

**PROFORMA FOR RECORDING MARINE SCOTLAND'S
 CONSIDERATION OF A PROPOSAL AFFECTING A
 POTENTIAL/DESIGNATED SAC OR SPA**

SITE DETAILS Voith HyTide Fall of Warness

FILE REF: FKB/Z232

1a. Name of Natura site affected & current status

1. Faray and Holm of Faray Special Area of Conservation	2. Sandy Special Area of Conservation
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1b. Name of component SSSI if relevant

Faray and Holm of Faray SSSI	Sandy SSSI
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1c. European qualifying interests & whether priority/non-priority:

11. Faray and Holm of Faray Special Area of Conservation Grey seal	12. Sandy Special Area of Conservation Common seal
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1d. Conservation objectives for qualifying interests:

	To avoid deterioration of the habitats of the qualifying species (detailed in section 1c) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long term:
	<ul style="list-style-type: none"> • Population of the species as a viable component of the site • Distribution of the species within site • Distribution and extent of habitats supporting the species • Structure, function and supporting processes of habitats supporting the species • No significant disturbance of the species

PROPOSAL DETAILS

2a. Proposal title & name of consultee (i.e. applicant or competent authority)

Deployment of tidal turbine at Fall of Warness (foundations already in place)

2b. Date of Consultation: SNH response to Marine Licence consultation received 25th April 2012

2c. Type of Case: Appropriate Assessment (AA) of the proposed deployment of tidal turbine at Fall of Warness, EMEC test facility, Orkney.

2d. Details of proposed operation (inc. location, timing, methods):

Voith Hydro successfully installed the support structure for its HyTide turbine at EMEC's tidal test site at the Fall of Warness in Orkney in July 2011. This step of the project is for the installation of the turbine along with connection of the device to the EMEC's existing subsea cable. The device will be installed at a depth of approx 33m. It is a 3 bladed turbine with a generating capacity of up to 1MW. The diameter of the blades is 13 metres initially, although these may be changed for 16 metre blade during the project. The rotor will have a swept area of 132.73m² (13m diameter blades) or 200.96m² (with 16m diameter blades). Operation of the turbine is expected to last for 3-4 years.

The following activities are planned:

- Installation of a J-tube and jumper cable onto the support structure
- Repositioning of the existing subsea cable to within close proximity of the support structure
- Connection of jumper cable to EMEC's subsea cable
- Installation of 2 instrumentation packages (incl. ADCPs) on stand-alone gravity mounts located on the seafloor 45m in front of and behind the turbine.
- Connection of instrumentation cable to turbine.
- Installation, operation and retrieval for maintenance of the turbine
- Decommissioning of turbine at end of project in 2017

There are 3 options for installation methods for the turbine:

1. Using DP construction vessel
2. Using submerged lift
3. Using crane barge or gantry crane barge

Final methods will be detailed in the construction method statement.

Installation and cable connection is planned for August 2012, with operation and monitoring beginning in February 2013.

ASSESSMENT IN RELATION TO REGULATION 20 or 48

3a. Is the operation directly connected with or necessary to conservation management of the site? YES/NO *If YES give details:*

The operation is not connected with or necessary to conservation management of the site.

*If yes and it can be demonstrated that the tests in 3b have been applied to all the interest features in a fully assessed and agreed management plan then consent can be issued but rationale must be provided, including reference to management objectives. If no, or if site has several European qualifying interests and operation is not directly connected with or necessary to the management of **all** of these then proceed to 3b*

3b. Is the operation likely to have a significant effect on the qualifying interest? Repeat for each interest on the site.

During the consultation phase of the Marine licensing process, SNH concluded that the proposed deployment of the tidal energy device is not likely to have a significant effect on the qualifying interest of any SPAs. The proposal is not likely to have a significant effect on the qualifying interests of North Rona, Isle of May and Berwickshire and North Northumberland SACs. There is however likely to be a significant effect on the qualifying interests of the Faray and Holm of Faray and Sanday SACs as the site is located approximately 5km from Faray and Holm of Faray and 16km from Sanday SAC.

Potential impacts include disturbance associated with the physical presence or noise associated with vessel movements and device operation which may cause a disturbance to the qualifying interests detailed in section 1c, or collision risk with the turbine. During vessel operations there may also be a risk of injury to seals through contact with vessel thrusters. The application states that activities associated with the proposal may occur at any time of year which therefore includes the respective most sensitive periods of breeding, pupping and moulting for the two seal species.

Other devices are already operational at the Fall of Warness: Hamerfest Strom, Atlantis, Scotrenewables, TGL, and Open Hydro and therefore cumulative impacts must be considered.

- i) indicate which feature of interest could be affected by the proposed operation and briefly in what way; if none proceed to v), otherwise continue;*
- ii) refer to other plans/projects with similar effects/other relevant evidence;*
- iii) consider scale, longevity, reversibility of effects;*
- iv) consider whether proposal contributes to cumulative or incremental impacts with other projects completed, underway or proposed;*
- v) give Yes/No conclusion for each interest.*

YES

If no for all features, a consent or non-objection response can be given and recorded under 4 (although if there are other features of national interest only, the effect on these should be considered separately). If potential significant effects can easily be avoided, record modifications required under 3d.

If yes, or in cases of doubt, proceed to 3c.

3c. Appropriate Assessment of the implications for the site in view of the site's conservation objectives.

- i) Describe for each European qualifying interest the potential impacts of the proposed operation detailing which aspects of the proposal could impact upon them.*
- ii) Evaluate the significance of the potential impacts, e.g. whether short/long term, reversible or irreversible, and in relation to the proportion/importance of the interest affected, and the overall effect on the site's conservation objectives. Record if additional survey information or specialist advice has been obtained.*

SNH advised that the conservation objectives which require further consideration are:

- a) significant disturbance to seals
- b) population of the species as a viable component of the SAC.

Based on appraisals carried out SNH concluded that the proposal will not adversely affect any of the identified Natura sites. The appraisal was based on the following factors:

- The number of seals observed indicated by the EMEC wildlife observation data for seals collected between 2007 and 2010 within the deployment area and within the wider Fall of Warness test site is low.
- the proposal is far enough away from SACs for there to be no direct impacts, or disturbance, to the seals while they are within the SACs (assuming appropriate vessel transit routes);
- the large extent of alternative foraging habitat available to seals, based on their known foraging ranges, should localised displacement occur due to disturbance,
- the limited area coverage of the proposal, particularly in a wide and relatively open sea area;
- combined with the limited duration of operation at the EMEC tidal test facility, suggests that there would be no adverse impact on the qualifying features of the SAC.

SNH also concluded that the consideration of cumulative and in combination effects will not adversely affect the integrity of any SAC. This assessment considered the following factors:

- Consideration of all current deployments at the Fall of Warness site;
- previous assessments of other deployments at Fall of Warness;
- the wide distribution of alternative habitat potentially available;
- the limited area of the proposal;
- combined with the limited duration of operation at the EMEC tidal test facility, suggests that there would be no detectible impact on the qualifying features of and SAC.

Marine Scotland has previously carried out collision risk modelling on devices deployed at the Fall of Warness and found that risks are minimal.

The PBR (potential biological removal) is intended to ensure that the total numbers of seals for which licences may be issued in each Seal Management Area do not reach a level that may adversely impact on local seal populations. Each local PBR takes into account the status of the local seal populations for each species and reflects recent population trends. Common seal populations have declined markedly over the last 15 years and the PBR for the species is low, only 18 for Orkney. The Grey seal PBR is 959 for Orkney. Marine Scotland has issued 9 common seal licences and 260 grey seal licences this year to date. The deployment of this device on its own and in combination with other devices deployed at the Fall of Warness will not lead to the PBR figure being breached.

Conclusion

Marine Scotland agrees with the findings of the SNH appraisal that the development will not have an adverse effect on the integrity of the Faray and Holm of Faray and Sanday SACs.

3d. Conditions required.

Indicate conditions/modifications required to ensure adverse effects are avoided, & reasons for these.

<i>Condition: e.g.:</i>	<i>Reason:</i>
<p>A construction method statement (CMS) (as part of the EMMP) or similar document to be agreed with Marine Scotland and relevant consultees at least two months before the start of any works. It should include details of commencement dates, duration of works and installation methods for the device and associated infrastructure (including vessel details).</p> <p>An Environmental Management and Mitigation Plan (EMMP) agreed with Marine Scotland and SNH, detailing all mitigation and monitoring measures during installation, operation, maintenance and decommissioning of device and associated infrastructure. It should cross-reference with the Commitments Register and be an iterative document accounting for final details within the CMS (see above).</p> <p>See SNH response for what is to be included in EMMP</p>	<p>To ensure all environmental issues are taken into account.</p> <p>To ensure all environmental issues are taken into account and impacts risks minimised, particularly for marine mammals (EPS, SACs, SSSIs) and basking sharks.</p>

4. RESPONSE

a) Marine Scotland's Comments

For Marine Scotland advice to other authorities:

Provided that the mitigation and monitoring measures outlined in the relevant sections of the supporting EMMP which will be provided by the developer and signed off by Marine Scotland and SNH are adhered to then the installation, operation and decommissioning of the Voith HyTide device will not adversely affect the integrity of both the Faray and Holm of Faray and Sanday SACs
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For Marine Scotland response to request for opinion on effects of permitted development:

Will not adversely affect integrity of the sites
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For Marine Scotland response to application:

Licence process will continue

Name of assessor	Robert Main
Date	May 2012