



SCOTTISH EXECUTIVE

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Transport Division 4

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Your ref:
Our ref: 2SPC/1/18 (1)

Date: 20 June 2003

Dear Mr [REDACTED]

APPLICATION FOR CONSENT UNDER THE COAST PROTECTION ACT 1949: ROBIN RIGG OFFSHORE WINDFARM

1. I am responding to your application on behalf of Offshore Energy Resources Ltd/Solway Offshore Ltd of 12 July 2002 seeking approval of the Scottish Ministers to undertake Marine Works at Robin Rigg in the Solway Firth. This letter records the Scottish Ministers' decision.

2. I am directed by the Scottish Ministers to issue this letter of consent, subject to conditions, to Offshore Energy Resources Ltd/Solway Offshore Ltd ("the developer") solely for the purposes of Section 34 of the Coast Protection Act 1949, to undertake the following Works:

- The construction of an offshore windfarm, below the level of mean high water springs, at Robin Rigg in the Solway Firth comprising the installation of offshore wind turbines on foundations which will either comprise monopiles or multi-piles, installation of an offshore substation and sub-sea cabling between the wind turbines, as shown on foreshore plan number: 1/18/1.

3. The positions of the Works are given in the table at Annex A and shown in the associated plan at Annex A.

Consideration

4. In assessing this application, the Scottish Ministers have considered advice from consultants with knowledge of maritime issues. The Maritime and Coastguard Agency (MCA) and Northern Lighthouse Board (NLB) had no objections, although responded with comments and proposed conditions which are reflected in this decision letter.

5. The Scottish Ministers have also given particular consideration to the comments received by the Royal Yachting Association (RYA) about clearance heights of rotor blades from the wind farm and about the proposed exclusion zone for shipping. These issues have been the subject of considerable discussion with the MCA and in coming to a decision Scottish Ministers have considered advice from that organisation.

6. The clearance height issue concerns the distance between the bottom of the wind farm blades and the risk of colliding with the mast of a yacht or other vessel. The MCA has examined the evidence provided and is content with the risk analysis prepared by the developer. This involves a minimum clearance of 18 metres above mean high water springs, subject to a suitable emergency management system being in place.

7. I can now confirm that the MCA are content with the emergency management system, which covers radar and radio communications, as proposed by the developer. This is included as part of the consent granted under the above Act attached.

Grant of Consent

8. The Scottish Ministers give their consent to the Works subject to those conditions set out in Annexes B and C. Any failure to comply with any of the conditions of consent will result in an offence being committed under section 36(1)(b) of the 1949 Act:

9. This consent shall be valid for a period of 25 years from the commencement of the development (unless otherwise applied for). In respect of standard condition 4 of the Annex B, the applicant is also asked to make any application to renew this consent at least eight weeks before its expiry date. Operating without a consent may constitute an offence under section 36(1)(a) of the 1949 Act. Additional expenditure may also be incurred.

10. Any revisions to the application of 12 July 2002 shall require an amendment to be approved by Scottish Ministers, taking into account appropriate consideration of the Maritime and Coastguard Agency and the Northern Lighthouse Board. Any failure to do so will invalidate the consent.

11. The developer is asked to note that, in addition to the construction phase, all conditions specified in this consent apply for the operational lifetime of the windfarm and during the period of its decommissioning.

Environmental Considerations

12. The Scottish Ministers as competent authority under regulation 48 of the Conservation (Natural Habitats, &c) Regulations 1994, have a duty to:

- Determine whether the proposal is directly connected with or necessary to site management for conservation, and, if not,
- Determine whether the proposal is likely to have significant effect on the site either individually or in combination with other plans or projects; and, if so, then
- Make an appropriate assessment of the implications (of the proposal) for the site in view of that site's conservation objectives; then, if appropriate,
- Attach conditions to any consent, in order to protect such designated sites.

13. Further to this duty and taking into account advice from Scottish Natural Heritage the Scottish Ministers consider that:

a) *there are no environmental conditions of consent at this time*

14. You should satisfy yourself that you have obtained any necessary powers and consents to undertake the works.

15. You should notify the Scottish Ministers if the Works are removed before this consent expires. The Scottish Ministers should also be advised of any subsequent change of name, address or ownership so that the consent may be amended, if appropriate, to ensure its validity.

Yours sincerely



DEREK WILLIS

CO-ORDINATES OF WIND FARM AND LOCATION PLAN

ANNEX A

Co-ordinates
Prepared by: NGD, Natural Power
Date: 18th May 2002

Layout Sol_110302_D2
Labelled as per HS/Private Members Bill maps:

Label	Easting (m)	Northing (m)
A1	280703	543186
A2	281153	542882
B1	280130	542823
B2	280524	542750
B3	280892	542541
B4	281357	542368
B5	281753	542132
C1	280517	542726
C2	280953	542630
C3	280352	542349
C4	280789	542134
C5	281181	541854
C6	281692	541751
D1	280897	542838
D2	280324	542311
D3	280777	542101
D4	280174	541816
D6	280002	541720
D8	280898	541838
D7	281424	541341
E1	280346	542230
E2	280711	542088
E3	280150	541879
E4	280583	541672
E5	280989	541489
E6	280419	541288
E7	280828	541098
E8	281237	540902
F1	280118	541830
F2	280550	541681
F3	280985	541448
F4	280405	541258
F5	280810	541078
F6	280246	540878
F7	280649	540678
F8	281087	540488
G1	280918	541413
G2	280343	541214
G3	280806	541024
G4	280227	540840
G5	280628	540661
G6	280080	540474
G7	280471	540285
G8	280901	540098
H1	280175	540806
H2	280621	540690
H3	280032	540418
H4	280489	540247
H5	280974	540061
H6	280303	539874
H7	280733	539706
J1	280426	540128
J2	280848	539948
J3	280287	539788
J4	280698	539616
J6	280159	539449
J8	280508	539284
K1	280980	539127
K2	280389	538940
K3	280802	538771
Sub-station platform	281150	540380
Met. Mast	280814	539284

Point where sub-sea grid connection crosses Scotland-England Border:

Easting (m)	Northing (m)
281510	540140

This is an approximate location.
The actual point of crossing will be dependent on the final cable route.

Trawling Exclusion
Excludes 100m radius (50m potential variation & 50m blade length) from turbines, mast and sub-station platform

Point	Easting (m)	Northing (m)
T1	280708	543280
T2	281218	543072
T3	281681	542141
T4	281258	540320
T5	280570	539187
T6	280404	539008
T7	280458	539187
T8	280788	541446
T9	280320	542418

Construction Exclusion
Excludes 380m (300m + 50m potential variation) radius from turbines, mast and sub-station platform

Point	Easting (m)	Northing (m)
C1	281041	543876
C2	282189	542302
C3	281404	540044
C4	280247	538707
C5	280237	538890
C6	280511	541482
C7	280071	542882

Project:
Proposed Offshore Wind
Farm, Solway Firth

Title:
Site Layout at 1:20,000

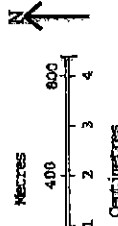
Key:



Wind Turbine
Area for Potential Deviation of Turbine Base Location
Area for Potential Deviation of Turbine Blades
33 kV Cable Route
Area for Potential Deviation of 132kV Cable Route
Assessment Mat with 50m Zone of Potential Deviation
Offshore Mounted Substation & Helipad with Zone of Potential Deviation
Boundary for exclusion of Vessels during Construction
Boundary for Exclusion of Trailing Vessels during Operation
132 kV Cable Route
Area for Potential Deviation of 132kV Cable
Scotland - England border

Scale: 1: 20,000

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Date: 22-05-02 **Prepared by:** DB

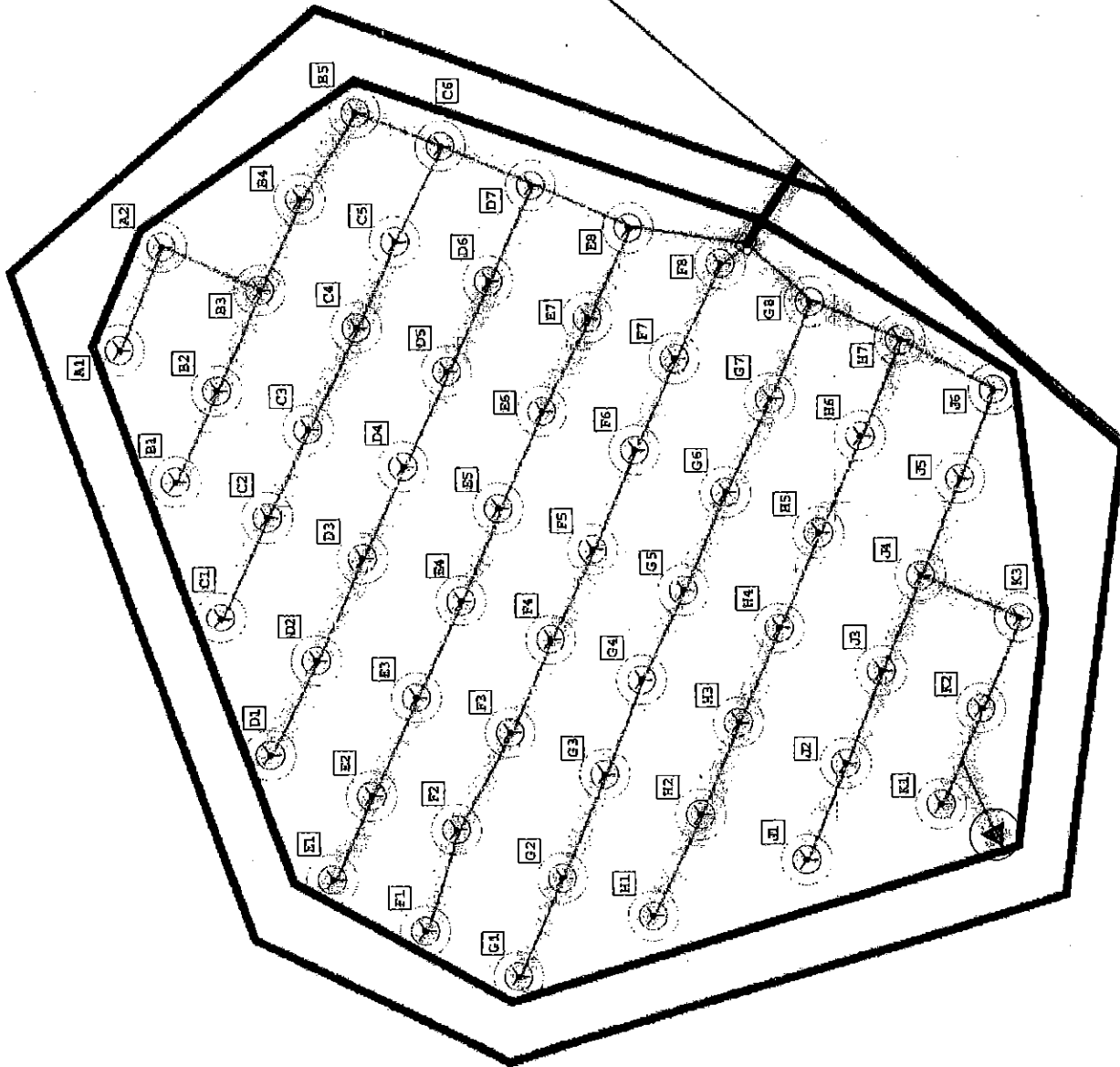
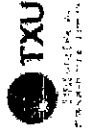
Drawing No: SOL_FF_Layout.tif **Checked by:** DB

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Client:

Solway Offshore Ltd
A 100% Energy Company
and
Offshore Energy Re-
sources Ltd



ANNEX B

APPLICATION FOR CONSENT UNDER SECTION 34 OF THE COAST PROTECTION ACT 1949: OFFSHORE WINDFARM AT ROBIN RIGG IN THE SOLWAY FIRTH

I. STANDARD CONDITIONS OF CONSENT: MARINE WORKS

1. The Works should be marked and lighted as required by the Northern Lighthouse Board if the Scottish Ministers at any time direct.
2. The Works shall be maintained at all times in good repair.
3. In constructing and maintaining the turbines, the electrical substation or the anemometry mast, the undertaker may deviate laterally up to a limit of 50 metres from the locations described in Annex A.
4. The consent shall not, unless renewed, continue in force after the expiry of the period specified in the consent.
5. If the consent expires and has not been renewed then the Works should be removed from tidal waters and not replaced without the further consent of the Scottish Ministers.
6. No radio beacon or radar beacon operating in the Marine frequency bands shall be installed or used on the Works without the prior written approval of the Scottish Ministers.
7. If in the opinion of the Scottish Ministers the assistance of a Government Department, including the broadcast of navigational warnings, is required to deal with any emergency arising from:
 - a) the failure to mark and light the Works as required by the consent
 - b) the maintenance of the Works
 - c) the drifting or wreck of the Works,

the owner of the Works shall be liable for any expenses incurred in securing such assistance.

8. Officers of HM Coastguard, Northern Lighthouse Board, Scottish Executive or any other person authorised by the Scottish Ministers, shall be permitted to inspect the Works at any reasonable time.
9. You must inform Scottish Ministers when the Works are completed. If the consent specifies lighting/marketing conditions you must inform Scottish Ministers and the lighting authority when they have been established.

II. SPECIFIC CONDITIONS OF CONSENT

1. The Maritime and Coastguard Agency shall be consulted on the design and agree the operation of the Emergency Management System for the wind farm before construction commences. The design should comply with such guidance as MCA may issue from time to time, the latest being as attached. This emergency procedure is to be maintained both during construction and the operational life of the wind farm. Failure to maintain this system at an acceptable level to Scottish Ministers, in consultation with the Maritime and Coastguard Agency will result in the consent being suspended.
2. The developer shall in consultation with the Maritime and Coastguard Agency establish safety zones around the wind farm both during construction and operation and while the works are in place. Their form, extent and number are to be agreed with the Maritime and Coastguard Agency.
3. Timely and efficient notices to mariners and other navigational warnings or the position of the wind farm shall be promulgated to mariners in the shipping and fishing industry through the UK Hydrography Office and HM Coastguard.
4. The text and determination of the number of broadcasts required is at the discretion of the UK Hydrography Office and HM Coastguard.
5. The UK Hydrography Office, Ministry of Defence, Taunton, Somerset TA1 2DN must be notified of the installation of the works. They must be provided with a copy of this consent and foreshore plan to enable the works to be included on nautical charts.
6. Appropriate scour protection, as determined by Scottish Ministers, having taken advice from other appropriate parties, shall be maintained during the operational life of the wind farm.
7. The navigational warning or ship impact protection work shall be maintained for the operational life of the wind farm.
8. On notification to the Scottish Ministers of intention to decommission the wind farm turbines and associated equipment, the Maritime and Coastguard Agency shall also be informed. The decommissioning plan shall be agreed with Scottish Ministers who shall, prior to agreeing the plan, consult with the Maritime and Coastguard Agency with respect to the safety of shipping.

TECHNICAL REQUIREMENTS

REQUIREMENTS AND PROCEDURES FOR WIND TURBINE GENERATOR SHUTDOWN IN THE EVENT OF A SEARCH & RESCUE, COUNTER POLLUTION OR SALVAGE INCIDENT IN OR AROUND A WIND FARM

I. Design Requirements

The wind farm shall be designed and constructed to satisfy the following design requirements for emergency rotor shut-down in the event of either a search and rescue (SAR), counter pollution or salvage operation in or around a wind farm:

1. All wind turbine generators (WTGs) will be marked with clearly visible identification numbers, whose dimensions and illumination will be agreed with the MCA and the Commissioner of Northern Lights.
2. All WTGs shall be equipped with control mechanisms that can be operated from the Central Control Room of the wind farm.
3. The WTG control mechanisms shall allow the Control Room Operator to shut down any or all of the WTGs within 60 seconds of initiating the shut-down procedure.
4. The WTG control mechanisms shall allow the Control Room Operator to fix and maintain the position of the WTG blades to within 5 degrees of either the 12/4/8 or 10/2/6 o'clock positions (the "Emergency Shut-Down Positions") as determined by the Maritime Rescue Co-ordination Centre or Maritime Rescue Sub Centre (MRCC/SC).
5. Nacelle hatches shall be capable of being opened from the outside. This will allow rescuers (e.g. helicopter winch-man) to gain access to the tower if tower occupants are unable to assist and when a sea-borne approach is not possible.
6. Ladders shall be positioned on the down weather side of the tower.

II. Lighting Requirements

During construction phase

Additional navigation marking and lighting shall be required to be deployed and used in conjunction with existing established Aids to Navigation and therefore the following marks are required:-

1. A Conical Yellow buoy fitted with a yellow multiplication cross laid in approximate position $54^{\circ} 45.637'N$, $003^{\circ} 44.524'W$ and also in position $54^{\circ} 47.212'N$, $003^{\circ} 40.242'W$. These buoys shall have a flashing Yellow light every 5 seconds (FI Y 5s), and have a visible range of at least 3 nautical miles.
2. A Yellow Can buoy fitted with a yellow multiplication cross laid in approximate position $54^{\circ} 46.373'N$, $003^{\circ} 38.570'W$ and also in position $54^{\circ} 43.639'N$, $003^{\circ} 42.075'W$. These buoys shall have a Yellow light flashing 4 every 12 seconds (FI (4) Y 12s), and have a visible range of at least 3 nautical miles. The buoys will also be fitted with a radar reflector.
3. An Audible Fog Signal shall be established in the approximate centre of the proposed area. The audible range of this Fog Signal should be at least 2 miles and omni-directional. This signal shall have a character of Morse "U" sounding every 30 secs.
4. The existing beacon flashing yellow every 5 seconds in position $54^{\circ} 45.428'N$, $003^{\circ} 40.096'W$ shall be discontinued on establishing the lit buoys.

The marking as described will allow vessels to pass into and out of the Solway Firth using the North and South channels avoiding the developed Windfarm site. Northern Lighthouse Board will assess the suitability of the proposed marking when a decision has been made on the final positions and numbers of turbine masts to be established.

It is also acceptable to have the buoys substituted by Lit Beacons of the same character and topmark if the project team decide that a suitable base and/or anchoring method can be achieved whilst the plant and machinery are on site, and the maintenance/repair of the beacons can be achieved.

Any barges or drill-rigs engaged in these operations shall have marking and lighting as per the Standard Marking Schedule for Offshore Installations and at all other times in accordance with the International Regulations for Preventing Collisions at Sea

Established site

The established site shall have the turbines marked and lit as per IALA recommendation 0-117 with specific turbines lit in the following manner;

1. Turbine masts B5, J6 and the Anemometer mast shall be fitted with a yellow, all round light flashing 4 every 12 seconds (FI(4)Y 12s), mounted at least 6 metres above mean high water springs.

2. Turbine masts A-1 and G-1 shall be fitted with a yellow, all round light flashing every 5 seconds (F1 Y 5s), mounted at least 6 metres above mean high water springs. The range of these lights shall be 5 nautical miles and arranged in such manner that they shall be visible from all approaches to the site.
3. With regards to the Fog signal, the site shall have an omni-directional sound signal emitting a morse "U" every 30 seconds (.._) and have an audible range of 2 nautical miles.
4. Should the Civil Aviation Authority require lighting of the helicopter landing platform in order to comply with the relevant safety requirements, the Commissioners of Northern Lighthouses shall be advised, as shall the Hydrographer of the Navy.
5. The Lit Beacon in position 54 45.432 N, 003 40.096 exhibiting a Yellow light flashing every 5 seconds shall be expunged on the completion of the site when the new navigational lighting of the turbines has been established.
6. The Statutory Sanction of the Commissioners of Northern Lighthouses must be sought to erect and exhibit the proposed new Navigational Lights and Fog Signal, also to expunge the beacon as described above.