



dublin array

An Offshore Wind Farm
on the Kish and Bray Banks



Environmental Impact Statement

January 2012 - Revision 1

Reviewed and Updated by

MRG MRG CONSULTING ENGINEERS LIMITED
consulting engineers

Prepared by

SAORGUS | ENERGY LTD

Volume 3 of 5 - Appendix A
EIS Consultations

Phone / Email	Name1	Address1	Address2	Address3	Address4	Salutation
01 67222222	Mr Ciaran McNamara, Executive Manager,	Planning Department,	Dublin City Council,	Block 4 Floor 3, Civic Offices,	Wood Quay, Dublin 8	Mr McNamara
01 2054700	Mr Michael Gough, Director of Services,	Planning Department,	Dún Laoghaire Rathdown County Council,	Town Hall, Marine Road,	Dún Laoghaire, Co. Dublin	Mr Gough
01 8905670	Mr David O'Connor, Director of Services,	Planning Department,	Fingal County Council,	County Hall, Main Street, Swords,	Fingal, Co. Dublin	Mr O'Connor
0404 20100	Mr Brian Doyle, Director of Services for Planning and Economic Development,	Planning Section,	Wicklow County Council,	County Buildings, Station Road,	Wicklow	Mr Doyle

Saorgus Energy Ltd

Enterprise House, Kerry Technology Park,
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18/11/2005

Re: Kish and Bray Banks Offshore Wind Farm Project

Dear «Salutation»,

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The turbines will consist of a tower height of up to 90m, with a rotor diameter of up to 90m. The wind farm will be connected to the mainland by means of an undersea cable to a point near Bray.

Renewable energy generated from the wind provides many environmental and economic benefits for Ireland.

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- The development will help to reduce our dependence on imported fossil fuels that would otherwise be required to generate electricity and it will help to improve our control over the security of electricity supply.
- Direct employment will be provided during the construction, continued monitoring and operational phases of the project.

The proposed wind farm on the Kish and Bray Banks will also provide additional local benefits.

- Wind data that has been collected as part of this project is being made available to Met Éireann to assist in weather forecasting in Dublin Bay.
- The marking of the wind farm on the shallow Kish and Bray Banks will make for safer navigation for commercial and recreational marine traffic.

The Environmental Impact Assessment for the proposed development is currently being undertaken. As part of this work, we now invite any comments that you would like to make in relation to the proposed development.

As part of the environmental impact assessment work, a landscape visual consultant has been contracted to document the visual impact of the development through the preparation of zone of visual influence maps and photomontages. These photomontages will be made available in due course. Please find attached a list of the proposed location of the sites from which the visual impact will be assessed.

If you would like to make any comments or suggestions in relation to the proposed development please contact me at the above address or by e-mail at Damien.Courtney@saorgus.com. With your permission, submissions that are made may be included in the Environmental Impact Statement.

Yours sincerely

Damien Courtney
Saorgus Energy Ltd

Kish and Bray Offshore Wind Farm – Visual Reference Points for Photomontages

Viewpoint	Easting	Northing	Description
VP1	332005	193076	View from scenic carpark overlooking Wicklow Town at Corporation Lands, Co. Wicklow
VP2	331762	203869	View from beach entrance at Six Mile Point, Newcastle, Co. Wicklow
VP3	328029	205518	View from high bend in the N11 road at Kilmullin, Co. Wicklow
VP4	329528	212767	View from seating area at Greystones Harbour, Co. Wicklow
VP5	323780	213091	View from the summit of the Sugar Loaf mountain, Co. Wicklow
VP6	327893	217729	View from elevated position on walkway around Bray Head, Co. Wicklow
VP7	327391	218084	View from the southern end of the Bray promenade, Co. Wicklow
VP8	323134	220070	View from the top of the hill at Carrickgollogan, Co. Dublin
VP9	326058	225529	View from the obelisk at the top of Killiney Hill, Co. Dublin
VP10	326513	225809	View from seating area along Vico Road adjacent to Dalkey Hill, Co. Dublin
VP11	327226	226611	View from seating area at Coliemore harbour, Dalkey, Co. Dublin
VP12	324757	228537	View close to the entrance to the East Pier, Dun Laoghaire, Co. Dublin
VP13	319584	231613	View from the road R131 adjacent to public parking area and amenity close to Sandymount, Co. Dublin
VP14	318104	234250	View from the East-Link toll bridge, Ringsend, Co. Dublin
VP15	318402	236089	View from link road between R131 at Dublin Port and the coast road near Clontarf, Co. Dublin
VP16	322205	235136	View from a point approximately 300m from the end of the Bull Wall, North Bull Island, Co. Dublin
VP17	325102	239248	View from the coast road R105 facing Dublin Bay at Sutton, Co. Dublin
VP18	329595	237364	View from scenic viewpoint adjacent to car park at The Summit, Howth Head, Co. Dublin
VP19	326256	250417	View from car park at scenic viewpoint close to the Martello Tower at Portrane, Co. Dublin
VP20	327233	253805	View facing south / south-east from entrance to new housing estate in Rush, Co. Dublin

Phone / Email	Name1	Address1	Address2	Address3	Address4	Salutation
021-4534000 pclarke@bge.ie	Mr Peter Clarke, Operations Manager – Interconnector Services,	Bord Gáis Éireann, Bord Gáis Headquarters,	PO Box 51,	Gasworks Road,	Cork	Mr Clarke
oregan@bim.ie 01-8393396	Mr Pat O'Regan,	Bord Iascaigh Mhara,	BIM Office, The Pier,	Howth,	Co. Dublin	Mr O'Regan
018842600	Mr John O'Connor, Chief Executive Officer,	The Central Fisheries Board,	Unit 4, Swords Business Campus,	Balheary Road, Swords,	Co. Dublin	Mr O'Connor
	Captain Robert McCabe, Local Lights Inspector,	Commissioners of Irish Lights,	16 Lower Pembroke Street,	Dublin 2		Capt Mc Cabe
018042000	Mr Michael Lally,	Defence of Defence, Property Management Branch,	Coláiste Caoimhin, St. Mobhi Road,	Glasnevin	Dublin 9	Mr Lally
	Mr Niall Callan, Secretary General,	Department of the Environment, Heritage and Local Government,	Custom House Quay,	Dublin 1		Mr Callan
	Mr David Dingham,	Dublin Port Company,	Port Centre,	Alexandra Road,	Dublin 1	Mr Dingham

Phone / Email	Name1	Address1	Address2	Address3	Address4	Salutation
	Mr Sean Smith, Head of Optical Network Design,	Eircom,	Eircom National Management Centre,	Citywest Business Campus,	Dublin 24	Mr Smith
	Mr Patrick Reid,	Radio and Satellite Manager,	Eircom National Management Centre,	Citywest Business Campus,	Dublin 24	Mr Reid
056 7770777	Ms Alison Harvey, Planning Officer,	The Heritage Council,	Rothe House,	Kilkenny		Ms Harvey
	Ms Sinead Quirke, Head of Aerodromes and Airspace Standards Dept.,	Irish Aviation Authority,	Aviation House,	Hawkins Street, Dublin 2		Ms Quirke
01 6620922	Mr Eamonn Torpey, Department of Communications, Marine and Natural Resources,	Irish Coast Guard,	Leeson Lane,	Dublin 2		Mr Torpey
01 2710100	Mr Paddy Boyd, Chief Executive,	Irish Sailing Association,	3 Park Road,	Dún Laoghaire,	Co. Dublin	Mr Boyd
	Lt Cmd John Leech,	Irish Water Safety,	The Long Walk,	Galway		Lt Cdr Leech
01 476 6500	Ms Yvonne Shields, Director of Strategic Planning and Development,	Marine Institute,	80 Harcourt Street,	Dublin 2		Ms Shields

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01 8744900	Capt Nick Cantwell,	Marine Survey Office,	26-27 Eden Quay,	Dublin 1		Capt Cantwell
	Dr Bishop	North Wicklow Coastal Environmental Group,	3 Main Street,	Kilcoole,	Co. Wicklow	Dr Bishop
01 8049600	Mr Kevin Kennedy,	Commission for Communications Regulation,	Abbey Court, Irish Life Centre,	Lower Abbey Street,	Dublin 1	Mr Kennedy
	Mr Peter Vercoe-Rogers,	RTE,	Donnybrook,	Dublin 4		Mr Rogers
01 2845050 / 2304448	Ms Mary Newman	RNLI Ireland,	15 Windsor Terrace,	Dún Laoghaire,	Co. Dublin	Ms Newman

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18/11/2005

Re: Kish and Bray Banks Offshore Wind Farm Project

Dear «Salutation»,

Saorgus Energy Ltd is leading the development of an offshore wind farm to be located on the Kish and Bray Banks in the Irish Sea approximately ten kilometres off the coast of Dublin / Wicklow. The wind farm is to be developed in a number of phases commencing with sixteen turbines to be constructed in the summer of 2006 with the capability to generate 50MW of power. It is intended that subsequent phases will be developed over the following five year period with up to 145 turbines, equivalent to 435MW, being finally installed – see the attached diagram of the proposed site layout and phasing. This approach will allow for continuous monitoring of each phase of the development to be carried out, with ongoing development being dependent on the results of the previous phases.

The turbines will consist of a tower height of up to 90m, with a rotor diameter of up to 90m. The wind farm will be connected to the mainland by means of an undersea cable to a point near Bray.

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Yours sincerely

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Dr. Simon Berrows,
Irish Whale and Dolphin Group,
Merchant's Quay,
Kilrush,
Co. Clare

08/11/2004

Re: Kish and Bray Banks Offshore Wind Farm Project

Dear Dr. Berrows,

Saorgus Energy Ltd is leading the development of an offshore wind farm to be located on the Kish and Bray Banks in the Irish Sea approximately ten kilometres off the coast of Dublin / Wicklow. The wind farm is to be developed in a number of phases commencing with sixteen turbines to be constructed in the summer of 2006 with the capability to generate 50MW of power. It is intended that subsequent phases will be developed over the following five year period with up to 145 turbines, equivalent to 435MW, being finally installed – see the attached diagram of the proposed site layout and phasing. This approach will allow for continuous monitoring of each phase of the development to be carried out, with ongoing development being dependent on the results of the previous phases.

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Saorgus Energy Ltd

Phone / Email	Name1	Address1	Address2	Address3	Address4	Salutation
01 6472445	Mr. Chris O'Grady, The Director of Planning,	National Parks and Wildlife Service,	Dept. of the Environment, Heritage and Local Government,	7 Ely Place,	Dublin 2	Mr. O'Grady
01 8354370	Mr Brendan Price,	The Irish Seal Sanctuary,	An Clochán, Tobergregan,	Garristown,	Co. Dublin	Mr Price
0404 67455	Captain John Barlow,	Wicklow Port Company,	North Quay,	Wicklow		Capt Barlow

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19/11/2004

Re: Kish and Bray Banks Offshore Wind Farm Project

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	Mr. Stephen Jackman,	BT Subsea Cables,	Subsea Cable Systems,	18-20 Millbrook Road East,	Southhampt on SO15 1HY, England	Mr Jackman
	Mr. Jon Ford,	Cable & Wireless Submarine Cable Management,	Waterside House, Waterside Park,	Longshot Lane, Bracknell,	Berkshire RG12 1XL, England	Mr Ford
01 2787022	Mr Donnachda Byrne, Environmental Officer,	The Eastern Regional Fisheries Board,	15A Main Street,	Blackrock,	Co. Dublin	Mr Byrne
	Mr. Hugh O'Rourke, Secretary,	Irish Federation of Sea Anglers,	67 Windsor Drive,	Monkstown,	Co. Dublin	Mr. O'Rourke
01 6687077	Mr Lorcán O'Cinnéide, Chief Executive,	Irish Fish Producers Organisation,	11 Eglin Road,	Dublin 4		Mr O'Cinnéide
	Mr Frank Doyle, General Secretary,	Irish Fishermen's Organisation,	Cumberland House,	Fenian Street,	Dublin 2	Mr Doyle

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Ms Emer Sheahan,
Technical Department,
RTE,
Donnybrook,
Dublin 4

10/12/2004

Re: Kish and Bray Banks Offshore Wind Farm Project

Dear Ms Sheahan,

Saorgus Energy Ltd is leading the development of an offshore wind farm to be located on the Kish and Bray Banks in the Irish Sea approximately ten kilometres off the coast of Dublin / Wicklow. The wind farm is to be developed in a number of phases commencing with sixteen turbines to be constructed in the summer of 2006 with the capability to generate 50MW of power. It is intended that subsequent phases will be developed over the following five year period with up to 145 turbines, equivalent to 435MW, being finally installed – see the attached diagram of the proposed site layout and phasing. This approach will allow for continuous monitoring of each phase of the development to be carried out, with ongoing development being dependent on the results of the previous phases.

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Yours sincerely

Damien Courtney
Saorgus Energy Ltd

Damien Courtney

From: <douglas.percy@bt.com>
To: <Damien.Courtney@saorgus.com>
Cc: <derek.cassidy@esat.com>; <alasdair.wilkie@hiberniaatlantic.com>;
<bepeck@sealinemarineservices.fsnet.co.uk>
Sent: 26 November 2004 10:44
Attach: Kish.doc
Subject: Kish & Bray Banks Wind Farm Project

Dear Damien, thank you for your letter regarding the Kish & Bray Banks Offshore Wind Farm Project. I have looked at the proposed location of the wind farms and note that there are no in use submarine cables which pass through the area, however there are two in use cables that land in Dublin Bay, ESAT 2 & Hibernia, and pass close North & East of the banks.

I would ask that you bring the position of these cables to the notice of the developers to prevent any damage during the construction phase.

I would also request that you keep me informed of the planned routes for the Export cables so we can enter consultation regarding any potential cable crossings.

I have copied this email to Alasdair Wilkie of Hibernia and Barry Peck chairman of the UKCPC Technical Sub Group for information.

Best Rgds

Douglas Percy

Manager Marine Liaison

BT Global Submarine Cable Systems

Tel:02380 837928

Fax:02380 229981

Mob:07715 482694

<<Kish.doc>>

"BT Group plc

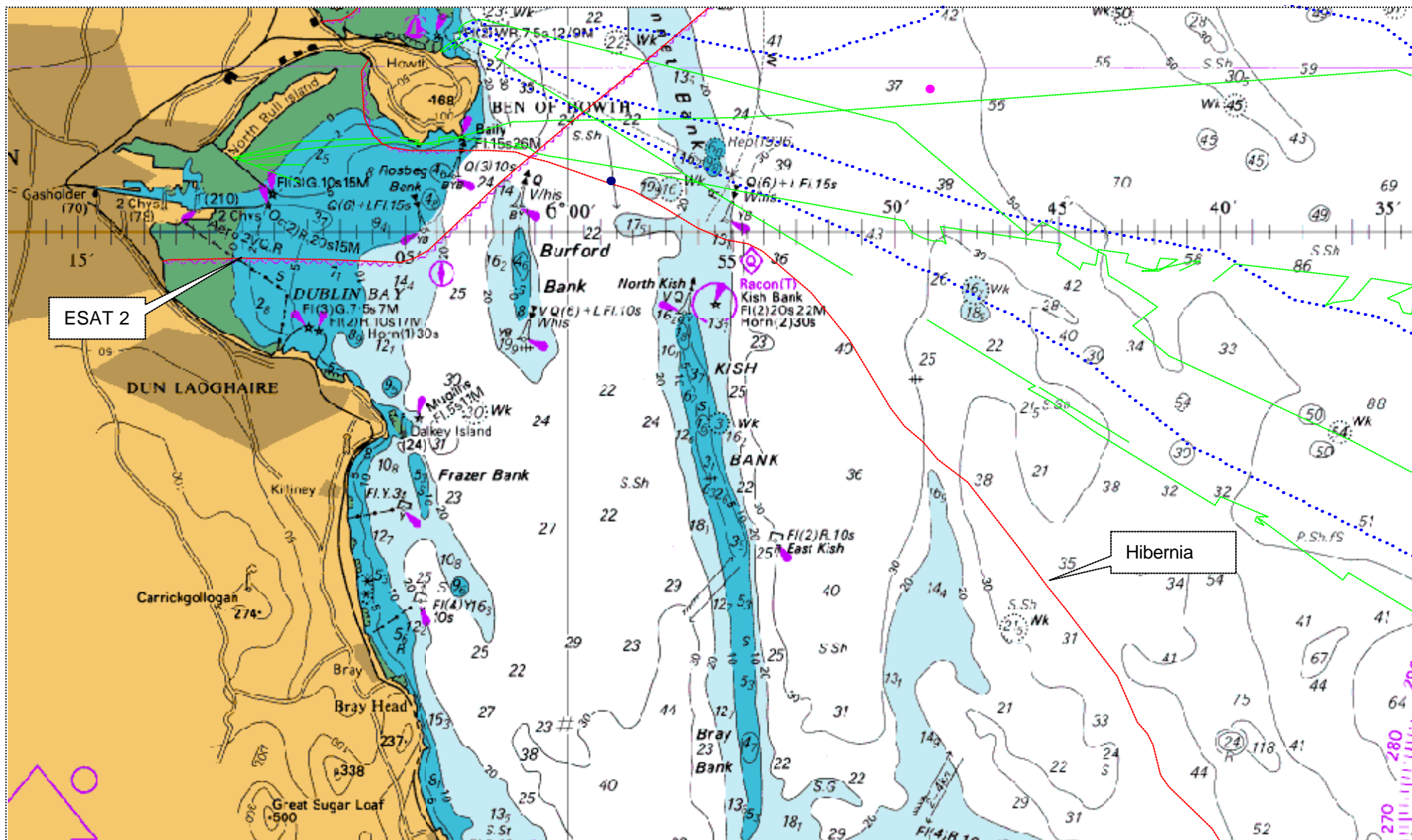
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Kish & Bray Banks, Submarine Cables



RECEIVED
BY DC DATE 18/5/05



IRISH AVIATION AUTHORITY
ÚDARÁS EITLIÓCHTA NA hÉIREANN

AVIATION HOUSE, HAWKINS STREET, DUBLIN 2, IRELAND
TEL: (01) 671 8655 FAX: (01) 679 2934
WEB SITE: www.iaa.ie

Aerodromes and Airspace Standards Department

17th May 2005

Mr. Damien Courtney
Saorgus Energy Ltd
Kerry Technology Park,
Tralee
Co.Kerry

RE: Kish and Bray Banks Offshore Windfarm Project

Dear Mr. Courtney:

Further to this morning's telephone conversation, I can conform that the Irish Aviation Authority has no objections to the proposed development of up to 145 wind turbines, maximum blade tip height of 160 metres at the Kish and Bray Banks.

The Authority will require the turbines to be lit in accordance with OAM 09/02 "Offshore Wind Farms Conspicuity Requirements", and will also require notification of the erection of the turbines, this is a requirement under the Obstacles to Aircraft in Flight Order, S.I. 215 of 2005, copies of OAM 09/02 and S.I. 215 of 2005 are enclosed with this letter.

Please contact the undersigned if you require any further information.


Yours sincerely,

Pieter van Velzen
Aeronautical Officer

REGISTERED OFFICE: AVIATION HOUSE, HAWKINS STREET, DUBLIN 2, IRELAND
REGISTERED No: 211002



BOARD OF DIRECTORS
DONAL J. CLARKE (CHAIRMAN), EAMONN BRINNAN (JOINT EXECUTIVE),
NEIL BHANAGAN, KEVIN CAFFEY, FRANK CONWAY, KATHLEEN DAILY

 <p>IRISH AVIATION AUTHORITY <small>ÚDARÁS EITHEOLAÍOCH NA hÉIREANN</small> <small>OPERATING STANDARDS DEPARTMENT</small></p>	<p>OPERATIONS ADVISORY MEMORANDUM (OAM)</p>	<p>OAM.</p> <p>No: 09/02</p> <p>Re-Issue Date: 18/11/03</p>
<p>Title</p>	<p>Offshore Wind Farms Conspicuity Requirements Advisory Material for the Protection of Air Navigation Safety</p>	

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Attachment 1.

Diagram showing publicly licensed aerodromes, military aerodromes and radar facilities not located on aerodromes.

Attachment 2.

Template for providing information required for promulgation – *Notification of Plan to Erect Wind Machines and Association Structures.*

Offshore Wind Farms Conspicuity Requirements

Advisory Material for the Protection of Air Navigation Safety

1. General

1.1 Introduction

- 1.1.1 This document sets out certain minimum requirements for the lighting, marking, radar enhancing and supply of information for promulgation to ensure the conspicuity of offshore wind farm machines and associated structures.
- 1.1.2 The aircraft operations which have been considered in determining this guidance material include:
- a) en-route instrument and visual flight between aerodromes;
 - b) local instrument and visual flight associated with an aerodrome;
 - c) search and rescue (SAR) activity;
 - d) helicopter operations in support of offshore installations, vessels and lighthouses.
- 1.1.3 Aircraft operations must comply with the Irish Aviation Authority (Rules of the Air) Order, 2001 (S.I. No. 568 of 2001) which provides that, generally, an aircraft shall not be flown:
- a) at a height less than 500ft above the ground or water, or
 - b) closer than 500ft to any structure.
- Flight at a height of 500ft requires a minimum flight visibility of 3kms.
- 1.1.4 There may be inaccuracies associated with aircraft altimetry. An aircraft attempting to fly at 500ft above the sea may, in certain circumstances, inadvertently be lower than 500ft above mean sea level.
- 1.1.5 SAR activity is exempted from the above specified minimum height and flight visibility requirements and can be anticipated to operate at 500ft or lower levels in adverse weather conditions for the purpose of saving life.
- 1.1.6 Helicopters supporting explorations rigs, vessels, lighthouses and offshore production platforms would not be subject to the above minimum height and flight visibility requirements while landing or taking off in accordance with normal aviation practice.

- 1.1.7 An object which is higher than 90m in height is considered to have significance for the en-route operations of aircraft in Irish airspace.

1.2 Purpose

The purpose of this document is to provide general guidance for lighting, marking and radar enhancement requirements and also on information required for promulgation to ensure the conspicuity of wind farm machines and associated structures, so as to protect air navigation safety.

1.3 Applicability

- 1.3.1 This guidance material is applicable, generally, for offshore wind farms and associated structures which are not located:

- a) within 8 nautical miles of publicly licensed aerodromes; or
- b) within 32 nautical miles of Air Navigation Services Radar and other radio navigation facilities; or
- c) within 4 nautical miles of any permanent offshore helipads. (Note: some lighthouses, e.g. Kish Lighthouse, have helipads).

- 1.3.2 Within such areas specified at 1.3 (a) through (c) above, marking, lighting and radar enhancing requirements and information required for promulgation will require to be assessed on an individual basis.

- 1.3.3 Taking account of all the factors specified at 1.1 above, the lighting, marking and radar enhancing requirements and information required for promulgation to protect air navigation safety are outlined below.

2. Conspicuity Requirements

2.1 General

Lighting and marking requirements to protect air navigation safety consists of the same lighting and marking installed to protect marine navigation, supplemented as necessary for the protection of air navigation safety.

2.2 Lighting Requirements

2.2.1 Lighting Requirements to Protect Marine Navigation Safety

The following general minimum specification for lighting is assumed for application in the interests of safety of marine navigation, as determined by the Commissioners of Irish Lights¹:

¹ Specification for Lighting Requirements to protect Marine Navigation Safety as outlined at 2.2.1 is provided by the Commissioners of Irish Lights.

- a) Yellow lights will be fixed to all machines and shall be located appropriately at a point(s) on the structure above the Highest Astronomical Tide but below the lowest point of the arc of the structure's rotor blades. Such lights will be visible through 360° in azimuth and will have vertical divergence of 5° above and below the horizontal, 5 nautical miles visibility and a minimum of 99% availability.
- b) Structures chosen as suitable for representing the periphery of wind farms are termed *Significant Peripheral Structures*. Such structures will be spaced along the periphery of wind farms at intervals of no more than 3 nautical miles, where practicable. Such structures will be lighted with flashing lights of distinctive navigational characteristic fitted above the Highest Astronomical Tide but below the lowest point of the arc of the structure's rotor blades. Such lights will be visible through 360° in azimuth and have a vertical divergence of 5° above and below the horizontal, 10 nautical miles visibility and a minimum of 99% availability.

2.2.2 Lighting Requirements to Protect Air Navigation Safety.

The lighting required to protect air navigation will be the lighting specified to protect marine navigation safety, as per 2.2.1 above, supplemented as follows².

All *Significant Peripheral Structures*, of height = 90m, to the highest point of the structure including the top of blade spin where appropriate, above Mean Sea Level, will be fitted with high intensity warning lighting meeting the following requirements:

- a) the lighting must be mounted on the highest point practicable of the fixed structure;
- b) be in accordance with the International Civil Aviation Organisation (ICAO) Annex 14 standards, on a H24 basis, for High Intensity Type A lighting:-
 - colour white with a flash rate of 40~60 fpm;
 - have an effective intensity, with background luminance above 500cd/m², of 200,000 cd ± 25%;
 - have an effective intensity, with background luminance 50~500cd/m², of 20,000 cd ± 25%;
 - have an effective intensity, with background luminance below 50cd/m², of at least 2,000 cd;
 - light fittings will be fully cut off so that practically no light will be emitted below the horizontal, or as otherwise agreed with the IAA;

² Specification for Lighting Requirements to protect Air Navigation Safety as outlined at 2.2.2 is provided by the Irish Aviation Authority.

- all lights across the farm should flash in synchronisation and reductions in light intensity should occur simultaneously, if practicable;
 - be visible through 360° in azimuth.
- c) any light which fails shall be repaired or replaced as soon as is reasonably practicable. An alerting system for light failure will be put in place, such as remote monitoring or other suitable method agreeable to the IAA.

2.3 Marking Requirements

2.3.1 Marking Requirements to Protect Marine Navigation.

The following general minimum specification is assumed for application to protect marine navigation safety, as determined by the Commissioners of Irish Lights³:

- a) high visibility yellow from high water mark to the specified level of the marine navigation protection lights, or
- b) double yellow bands as specified;
- c) fog signals may be required to be fitted on *Significant Peripheral Structures* in wind farm developments.

2.3.2 Marking Requirements to Protect Air Navigation Safety.

The marking required to protect air navigation will be the marking required to protect marine navigation, as per 2.3.1 above.

2.4 Radar Enhancers/Reflectors.

2.4.1 Radar Enhancers Required to Protect Marine Navigation Safety

Significant Peripheral Structures may be required to be fitted with Radar Enhancers, Transponders, Reflectors and/or Marine Radar Automatic Identification Systems (AIS) as determined by the Commissioners of Irish Lights⁴.

2.4.2 Radar Reflectors Required to Protect Air Navigation Safety

Significant Peripheral Structures must be fitted with Radar Reflectors⁵.

³ Specification for Marking Requirements to protect Marine Navigation Safety as outlined at 2.3.1 is provided by the Commissioners of Irish Lights.

⁴ Specification for Radar Enhancers required to protect Marine Navigation Safety as outlined at 2.4.1 is provided by the Commissioners of Irish Lights.

⁵ Specification for Radar Reflectors required to protect Air Navigation Safety as outlined at 2.4.2 is provided by the Irish Aviation Authority.

3 Information Required for Promulgation

3.1 Information Required by IAA Prior to the Erection of Structures

At least three months in advance of the erection of wind machines or associated structures, the following information shall be supplied to the Irish Aviation Authority for promulgation in a manner considered appropriate by the Authority:

- a) positional data representing the Estimated Position of each machine or structure to be erected. The geodetic datum to which all obstructions shall be referred is the World Geodetic System of 1984 (WGS-84). Co-ordinates should be provided in degrees, minutes, seconds and decimals of a second, as appropriate;
- b) the estimated maximum elevation of each structure in feet and metres;
- c) proposed lighting details for each structure;
- d) proposed marking details for each structure;
- e) whether it is proposed that a Radar Enhancer / Transponder / Reflector or Radar AIS be fitted;
- f) minimum and maximum spacing between structures;
- g) planned earliest date of erection, and
- h) any other information considered relevant for air navigation.

Note: A template for supplying information required for promulgation is provided at attachment 2.

3.2 Information Required by C.I.L. Prior to the Erection of Structures

At least three months in advance of the erection of any structure, the information listed in 3.1 (a) to (h) shall be provided in an Application for Statutory Sanction, as required under the Merchant Shipping Acts, to the Commissioners of Irish Lights, with the proviso that the information referred to in (h) shall be that as pertains to marine navigation.

3.3 Information Required After Erection of Structures

Within three months of the completion of the development of a wind farm or part of a wind farm, updated information, as per 3.1 above, shall be supplied to the Irish Aviation Authority. The positional data will be derived by survey in accordance with the IAA specification for Obstruction Surveys (OAM 4/97), which is available on application from the Safety Regulation Division of the IAA.

The developer will thereafter be required to provide updated relevant information on any subsequent alterations to the wind farm.

This information shall also be supplied to the Commissioners of Irish Lights.

Note: A template for supplying information required for promulgation is provided at Attachment 2

4 Responsible Bodies

This guidance material has been developed by the Safety and Regulation Division (SRD) of the IAA in consultation with the Commissioners of Irish Lights. Any queries regarding the contents of this material, relating to air navigation safety, should be addressed in writing to:

Safety and Regulation Division,
Irish Aviation Authority,
Aviation House,
Hawkins Street,
Dublin 2.

Any queries regarding the contents of this material relating to the specification provided by the Commissioners of Irish Lights, to protect marine navigation, should be addressed in writing to:

The Inspector of Lights,
Commissioners of Irish Lights,
16 Lower Pembroke Street,
Dublin 2.

5 Future Revision of this Document

This document may be subject to future revision. Any interested party may propose an amendment to its provisions. Amendments will be agreed in consultations between the IAA, CIL, the Department of Communications, Marine and Natural Resources, and other interested parties.

Attachment 1.

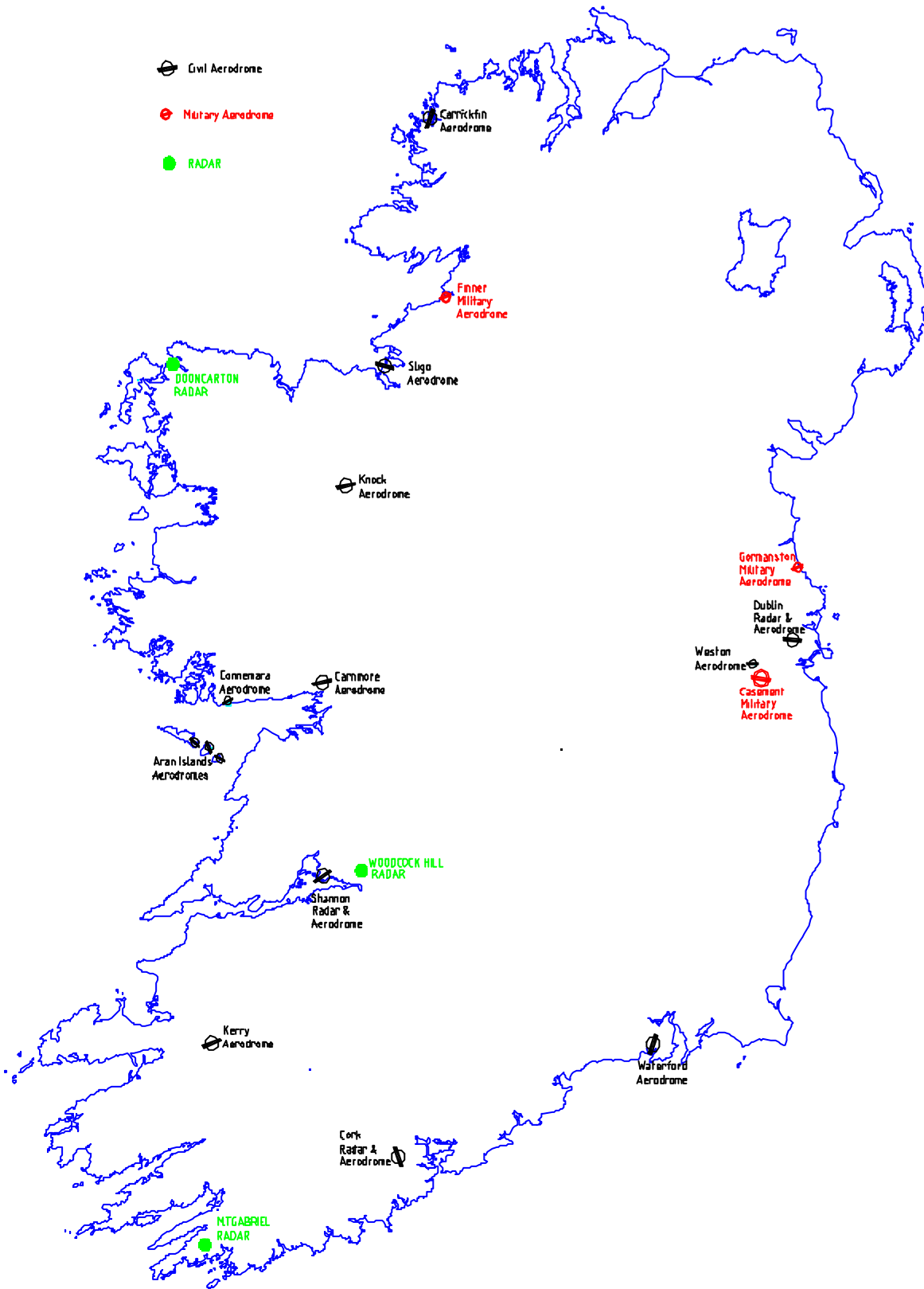
Diagram showing publicly licensed aerodromes, military aerodromes and radar facilities not located on aerodromes.

Attachment 2.

Template for supplying information required for promulgation – *Notification of Plan to Erect Wind Machines and Associated Structures.*

Attachment 1

Publicly Licensed Aerodromes, Military Aerodromes and Radar Facilities not located on Aerodromes



STATUTORY INSTRUMENTS

S.I. No. 215 of 2005

IRISH AVIATION AUTHORITY

(OBSTACLES TO AIRCRAFT IN FLIGHT) ORDER, 2005

PUBLISHED BY THE STATIONERY OFFICE
DUBLIN

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IRISH AVIATION AUTHORITY**(OBSTACLES TO AIRCRAFT IN FLIGHT) ORDER, 2005****S.I. No. 215 of 2005**

The Irish Aviation Authority in pursuance of sections 5, 58, 59 and 60 of the Irish Aviation Authority Act 1993 (No. 29 of 1993) as amended, hereby orders as follows:

Short Title and Commencement

1. This Order may be cited as the “Obstacles to Aircraft in Flight Order, 2005” and shall come into operation on the first day of May, 2005. The Irish Aviation Authority (Obstacles to Aircraft in Flight Order, 2002 (S.I. No. 14 of 2002) and the Irish Aviation Authority (Obstacles to Aircraft in Flight) (Amendment) Order, 2002 (S.I. No. 591 of 2002) are hereby revoked.

2. Definitions

“AIP Ireland” means the Aeronautical Information Publication for Ireland required by Annex 15 to the Chicago Convention to be published by each ICAO member state providing various aeronautical data;

“the Authority” means the Irish Aviation Authority;

“the Act” means the Irish Aviation Authority Act (1993), No. 29 of 1993 as amended;

“aerodrome” has the meaning ascribed to it in the Act;

“aerodrome licensee” means the person responsible for a licensed aerodrome to whom the licence for that aerodrome has been issued;

“aerodrome reference point” means the designated geographical location of an aerodrome and is a point near the initial or planned geometric centre of the aerodrome;

“aeronautical study” means a safety analysis associated with the operation of aircraft;

“Annex 4” means Annex 4 to the Chicago Convention as referenced in the Schedule to the Act and available as indicated in the Schedule to this Order;

“Annex 14” means Annex 14 to the Chicago Convention as referenced in the Schedule to the Act and available as indicated in the Schedule to this Order;

“the Convention” means the Chicago Convention;

“en-route obstacle” means an object outside the airspace defined by aerodrome obstacle limitation surfaces, extending to a height of 90 metres or more above ground or water surface level at the site of the object, thereby having significance for the en-route operation of aircraft;

“instrument runway” means a runway intended for the operation of aircraft using instrument approach procedures;

“licensed aerodrome” means an aerodrome in respect of which a licence under the Irish Aviation Authority (Aerodromes and Visual Ground Aids) Order, 2000 is in force;

“navigable airspace” means, for the purposes of this Order, airspace above the territory of the State which is available for the flight of aircraft;

“obstacle” means any fixed (whether temporary or permanent) or mobile object or a part thereof that extends above a defined surface intended to protect aircraft in flight or exceeds a specific height above ground or water surface level;

“obstacle clearance” means, in relation to an obstacle in the vicinity of an aerodrome, the lowest height or altitude above the elevation of the relevant runway threshold or the aerodrome elevation, as applicable, used in establishing compliance with the appropriate clearance criteria above an obstacle for an aircraft in flight;

“obstacle limitation surfaces” means a series of imaginary surfaces in space, the dimensions and gradients of which are provided in Annex 14, which define the limits to which objects may project vertically into the airspace surrounding an aerodrome so as to permit aircraft to be operated safely. These surfaces are defined in Chapter 4 of Annex 14;

“obstacle protection surface” means an inclined plane preceding a runway served by a visual approach slope indicator system as defined in Chapter 5 of Annex 14;

“potential en route air navigation obstacle” means an object extending to a height of 45m above ground or water surface level at the site of the object and which thereby may have significance for the en-route operation of aircraft;

“precision approach runway” means an instrument runway served by an instrument landing system;

“reference code number” means a number assigned as part of an aerodrome reference code delineating the runway length range in accordance with the criteria of Chapter 1 of Annex 14;

“safeguarding map” means a map prepared by or on behalf of an aerodrome licensee showing the obstacle limitation surfaces for each runway or proposed runway of a particular aerodrome or proposed aerodrome or in respect of those surfaces for any development proposed to an existing runway or aerodrome for the purposes of safeguarding the aerodrome against developments which would have an adverse effect for aircraft operations;

“take-off flight path area” means a quadrilateral area on the surface of the earth lying directly below and symmetrically disposed about the take-off flight path from a runway.

3. Applicability

This Order shall apply to existing and proposed manmade objects of permanent or temporary construction or alteration and apparatus of a permanent or temporary nature or any alteration thereto, objects of natural growth and terrain. The standards shall apply to the use of navigable airspace by aircraft and to existing or proposed air navigation facilities, licensed aerodromes, air traffic services routes including approach and departure routes to and from instrument and other runways.

4. Definition of an Obstacle

- (1) An existing object, including a mobile object, is and a future object would be, an obstacle to air navigation if it is of greater height than any of the following heights or surfaces:

- (a) A height of 45 metres above ground or water surface level at the site of the object or an object which otherwise constitutes an en-route obstacle or a potential en-route obstacle in accordance with this Order;
 - (b) A height within a runway approach area, a runway departure area or a circling approach area, which would result in the vertical distance between any point on the object and the established minimum instrument flight altitude or height as specified for the aerodrome concerned in the “AIP Ireland” within that area to be less than the required obstacle clearance. The analysis of the significance of such obstacles may have to be determined by an aeronautical study in accordance with subparagraph (4) of Article 5 of this Order;
 - (c) The surface of an obstacle limitation surface as defined in Chapter 4 of Annex 14 to the Convention;
 - (d) The surface of an obstacle protection surface as defined in Chapter 5 of Annex 14 to the Convention;
 - (e) An inclined plane surface, with a slope of either 1.2 per cent or 1.0 per cent, superimposed on a take-off flight path area and extending either to 10 kilometres or 12 kilometres respectively from the end of the runway concerned as specified in Chapter 3 of Annex 4.
- (2) The surfaces specified in paragraph (1) above may also be defined in relation to a specific aerodrome on a safeguarding map prepared by or on behalf of the aerodrome licensee and lodged with the local Authority responsible for planning in the vicinity of that aerodrome under the Planning and Development Act 2000.
 - (3) The dimensions, orientation and characteristics of these surfaces are defined in Annexes 4 and 14 to the Convention as appropriate in relation to runway size and use at the aerodrome concerned.

5. Reporting and Information in respect of Obstacles

- (1) A person shall not cause to be erected or constructed an object as defined in sub-paragraph (a) of paragraph (1) of Article 4 of this Order without first notifying the Authority in writing of that intended erection or construction at least thirty days prior to such erection or construction and shall provide such information in relation thereto to the Authority as may be requested under paragraph (3) of this Article.

(Note: This requirement is separate from any permission required to be obtained under the Planning and Development Act, 2000 in respect of the said erection or construction).

- (2) A person shall not cause to be erected or constructed any object as defined in Article 4 of this Order within a radius of 10 kilometres of a licensed aerodrome without first notifying the aerodrome licensee of that aerodrome in writing of that intended erection or construction at least thirty days prior to such erection or construction and shall, additionally and where requested, provide such information in relation thereto to the Authority as may be required under paragraph (3) of this Article.

(Note: This requirement is separate from any permission required to be obtained under the Planning and Development Act, 2000 in respect of the said erection or construction).

- (3) The Authority may require a person as specified in paragraphs (1) or (2) of this Article to make available to it information relating to an obstacle, including its geographic latitude and longitude, elevation and height.
- (4) The Authority may require the conduct of an aeronautical study for the purposes of subparagraph (b) of paragraph (1) of Article 4 of this Order or otherwise if it considers it necessary in a particular case.

6. Marking and Lighting of Obstacles

The Authority may require the marking and lighting of an obstacle defined in accordance with Article 4 of this Order in accordance with such instructions as the Authority may give in a particular case or by a direction under this Order to a person as specified in paragraphs (1) or (2) of Article 5 of this Order or to any other person or organisation as appropriate.

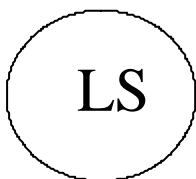
7. Directions

The Authority may give directions in relation to such matters to which the Order relates. Directions under this Order may be issued as Notices to Aerodrome Licensees, Aeronautical Information Circulars, by public notice or by private notice in writing sent by post or by electronic means to the organisation, person or persons affected.

8. Guidance Material

The Authority may from time to time publish or otherwise provide guidance documentation on the determination and classification of obstacles for the purposes of this Order.

**Given under the common seal of the Irish Aviation Authority this
25th day of April, 2005.**



Neil Branagan Director

Donal Downing Director

Schedule

1. Copies of Annexes 4 and 14 to the Chicago Convention may be obtained from:

International Civil Aviation Organisation
Document Sales Unit
999 University Street
Montreal, Quebec
Canada H3C 5H7

2. The postal address of the Authority is:

The Irish Aviation Authority

Aviation House
Hawkins Street
Dublin 2

EXPLANATORY NOTE

(This Note is not part of the Order and does not purport to be a legal interpretation)

This Order defines obstacles to aircraft in flight for the purpose of airspace protection in the State at and in the vicinity of aerodromes and elsewhere in the State and specifies reporting and information requirements with respect thereto.



04 June 2004

Our ref: MS 53/7/Lease
(please quote on all correspondence)

Mr Aidan Forde
Director
Saorgus Energy Ltd
Kerry Technology Park
Tralee
Co Kerry

**Proposed construction of an offshore windfarm on Kish / Bray Banks
Kish Consortium (Saorgus Energy Ltd)**

Dear Mr Forde

I attach a copy of a letter received from the Commissioners of Irish Lights (CIL) in response to this Division's request for their observations on the draft layout of all phases of the above project as forwarded by you to Tom Burke.

Recommendations / concerns contained in the CIL letter should be addressed as part of the preparation of the EIS for the project.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Marie Flynn'.

Marie Flynn
Coastal Zone Management Division
Tel No. 01 6782135
e-mail: marie.flynn@dcmnr.gov.ie



COMMISSIONERS OF IRISH LIGHTS
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Marine Department

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F + 353-1-632 1946

E marine@cil.ie

W www.cil.ie

Mr Tom Burke
Coastal Zone Management Division
Department of Communications, Marine and Natural Resources
Lesson Lane
Dublin 2

Your Ref: MS 53/7/Lease

Our Ref: IMS/69/99

Date: 31 May 2004

RE: KISH/BRAY BANKS – SAORGUS ENERGY LTD

Dear Mr Burke,

I refer to your letter dated 25 May 2004 regarding the above.

From the safety of navigation perspective our primary concern is that the turbine park (and the associated works during the construction phase) be properly marked in accordance with IALA guidelines.

Early consultation and application for Statutory Sanction for the required aids to navigation is advised. Marking guidelines have been agreed between CIL and the IAA. However, the Marine Marking section of these guidelines is under ongoing review based on experience on Arklow Bank and international developments.

A further concern relates to possible radio interference particularly with regard to Radar, VHF and AIS. To this end it is recommended that the leaseholders be required to provide researched opinion on the likely effect of the development including shadowing, reflections and phase changes. It should be noted that Phase 5 of the development is within the radar coverage of the Dublin Port VTS radar.

No information is given regarding the cable route to shore. Depending on the route chosen and the method used, issues may arise in relation to marking, trenching and electro magnetic interference.

Yours sincerely,

CAPT. ROBERT MCCABE
LOCAL AIDS TO NAVIGATION INSPECTOR

RMC/vb

Damien Courtney

From: "McCabe R" <r.mccabe@cil.ie>
To: <damien.courtney@saorgus.com>
Cc: "Hickey S" <s.hickey@cil.ie>; <tom.burke@dcmnr.ie>
Sent: 22 December 2004 12:10
Attach: Letter to DCMNR.pdf; MGN 275.pdf
Subject: Kish & Bray Bank Wind Park

Damien,

Apologies for the delay in replying to your request for comments in relation to your EIS.

We had previously commented on this application to DCMNR in May 2004 and a copy of that correspondence is attached.

The UK MCA have published a Marine Guidance Notice on Navigational Safety aspects of renewable energy projects. In the absence of other published guidance we would expect providers to follow the approach set out in this notice a copy of which I have attached.

I hope this information is of assistance.

Should you have any queries please let me know.

Regards

Captain Robert Mc Cabe.
Aids to Navigation Inspector.

<<Letter to DCMNR.pdf>> <<MGN 275.pdf>>

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F + 353-1-632 1946

E marine@cil.ie

W www.cil.ie

Mr Tom Burke
Coastal Zone Management Division
Department of Communications, Marine and Natural Resources
Lesson Lane
Dublin 2

Your Ref: MS 53/7/Lease

Our Ref: IMS/69/99

Date: 31 May 2004

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CAPT. ROBERT MCCABE
LOCAL AIDS TO NAVIGATION INSPECTOR

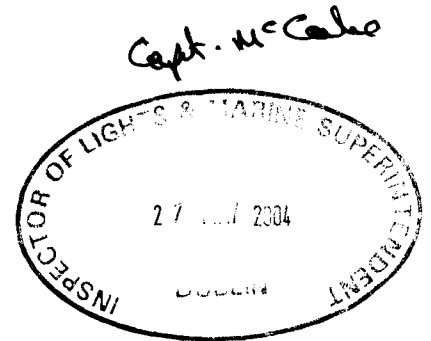
RMC/VB



25 May 2004

Our ref: MS 53/7/Lease
(please quote on all correspondence)

Mr J J Hickey
Inspector of Lights
Commissioners of Irish Lights
16 Pembroke Street
Dublin 2



COMMERCIALLY SENSITIVE

**Proposed construction of an offshore windfarm on Kish / Bray Banks
Kish Consortium (Saorgus Energy Ltd)**

Dear Mr Hickey

Saorgus Energy Ltd, on behalf of the Kish Consortium, has forwarded to this Department a draft layout of the anticipated phasing of the project construction for the above proposed offshore windfarm as follows:

- Summer 2005 - carry out final engineering investigations for AER6 project
- Autumn 2005 - finalise all design and tendering for AER6 project
- Winter 2005/6 - award contracts for construction of Phase 1 AER6 project
- Spring 2006 - commence construction of first phase (50MW) at S end of Kish Bank and N end Bray Bank and carry out final engineering investigations for phase 2
- Winter 2006/7 - award contracts for construction of Phase 2
- Spring 2007 - commence construction of second phase at Bray Bank and carry out final engineering investigations for phase 3
- Winter 2007/8 - award contracts for construction of Phase 3
- Spring 2008 - commence construction third phase at Bray Bank and carry out final engineering investigations for phase 4
- Winter 2008/9 - award contracts for construction of Phase 4
- Spring 2009 - commence construction fourth phase at middle Kish Bank and carry out final engineering investigations for phase 5
- Winter 2009/10 - award contracts for construction of Phase 5
- Spring 2010 - commence construction fifth phase at N Kish Bank

I attach a copy of drawing No. 1006 Rev 3 showing preliminary lay out of all five phases and number of turbines per phase.

131

Tom. Burke

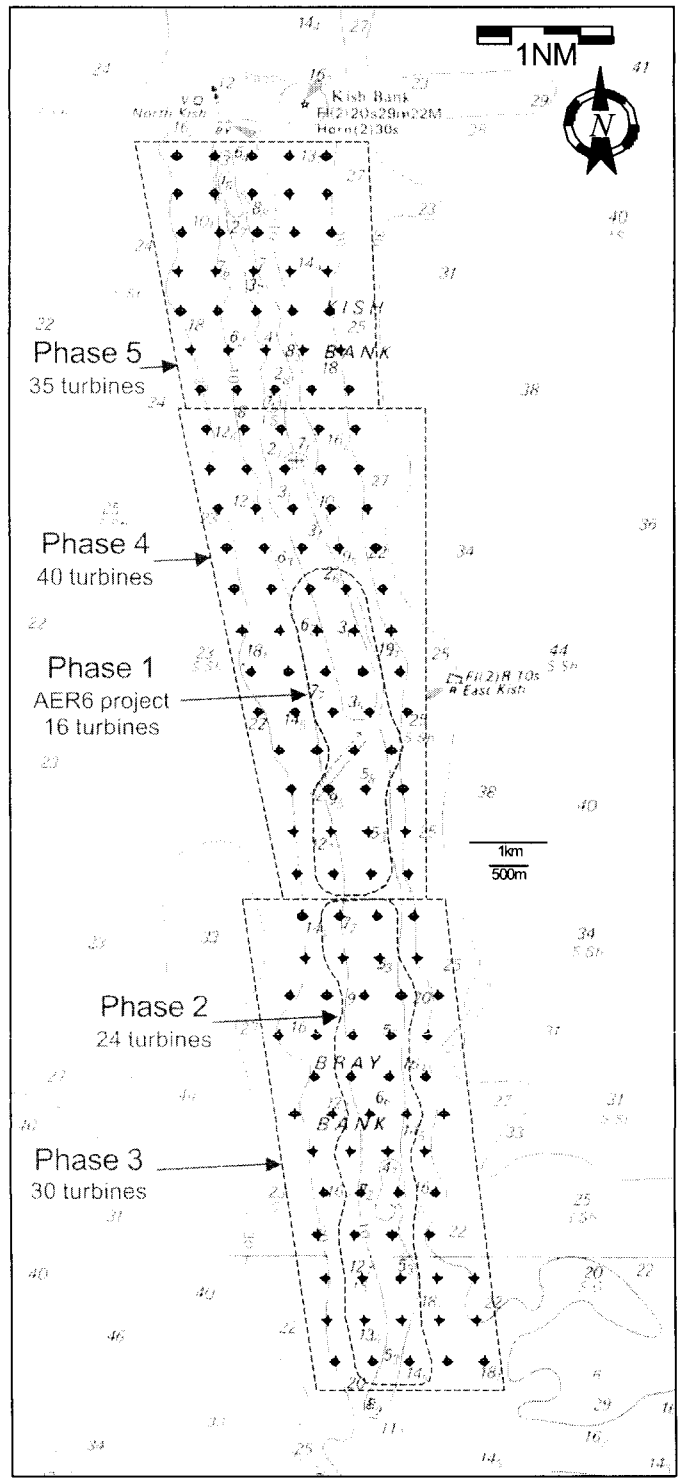
159

I would be grateful for any observations / concerns you have on the above from a safety of navigation aspect.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Tom Burke', written in a cursive style.

Tom Burke
Assistant Principal
Coastal Zone Management Division



<p>Kish and Bray Banks Project</p>	<p>Saorgus Energy Ltd</p>		
	<p>Preliminary layout of all five phases totalling 145 turbines</p>		
<p>Turbines are Vestas V90, >500m separation</p>			
<p>Saorgus Energy Ltd, Kerry Technology Park, Tralee, Co. Kerry. Phone: 066.7129144 www.saorgus.com</p>	<p>SIZE</p>	<p>FSCM NO</p>	<p>DWG NO</p>
			<p>1006</p>
	<p>SCALE</p>	<p>As shown</p>	<p>SHEET</p>
			<p>1 OF 1</p>
			<p>REV</p>
			<p>3</p>

Proposed UK Offshore Renewable Energy Installations (OREI) - Guidance on Navigational Safety Issues.

Notice to Other UK Government Departments, Offshore Renewable Energy Developers, Port Authorities, Shipowners, Masters, Ships' Officers, Fishermen and Recreational Sailors.

Summary

This guidance note highlights issues that need to be taken into consideration when assessing the impact on navigational safety from offshore renewable energy developments, proposed for United Kingdom internal waters, territorial sea or in a Renewable Energy Zone, when established, beyond the territorial sea.

Key Points

- The recommendations in this guidance note should be used, primarily, by offshore renewable energy installation developers, seeking consent to undertake marine works.
- Specific annexes address issues covering; site position, structures and safety zones (Annex 1), developments, navigation, collision avoidance and communications (Annex 2), safety and mitigation measures recommended for OREI during construction, operation and decommissioning (Annex 3), search and rescue matters (Annex 4), Section 36 of the Electricity Act 1989, as amended by the Energy Act 2004 (Annex 5) and Article 60 of the United Nations Convention on the Law of the Sea (UNCLOS) (Annex 6).

Introduction:

- 1.1 Offshore Renewable Energy Installations (OREI) include offshore wind farms, marine current turbines, wave generators and any other installation, with the potential to affect marine navigation and safety, proposed for United Kingdom (UK) internal waters, territorial sea or in a Renewable Energy Zone (REZ), when established, beyond the territorial sea.
- 1.2 Recommendations in this guidance note should be taken into account by OREI developers seeking formal consent for

marine works. Failure by developers to give due regard to these recommendations may result in objections to their proposals on the grounds of navigational safety. Additional information on the process for consenting offshore windfarms and the regulatory framework is available from the Offshore Renewables Consents Unit of Department for Trade and Industry (DTI)¹. It should be noted, however, that DTI is not responsible for consenting projects in Northern Ireland internal and territorial waters.

¹ www.dti.gov.uk/energy/leg_and_reg/consents/guidance.pdf

- 1.3 The considerations and criteria contained in the attached annexes are intended to address the navigational impact of OREI proposed for UK sites. Their development necessitates the establishment of a clear consents process to deal with potential detrimental effects. The consent regime must take account of local factors, national standards and international aspects which could influence the establishment of an OREI. Under the regime, consents will not be granted if OREIs are likely to interfere with the use of recognised sea lanes essential to international navigation.
- 1.4 The Energy Act 2004 establishes a regulatory regime for OREI beyond territorial waters, in the UK's REZ, and supplements the regime which already applies in Great Britain's internal and territorial waters. Section 99 of the Act deals specifically with navigation and introduces a new section, 36B with the title "duties in relation to navigation" into section 36 of the Electricity Act 1989. The text of section 36, as amended by the Energy Act, is attached at Annex 5. Under 36B(1) a consent cannot be granted for an OREI which is likely to interfere with the use of recognised sea lanes essential to international navigation. This term is married at 36B(7) to Article 60(7) of the United Nations Convention on the Law of the Sea. The text of Article 60 is attached at Annex 6. 36B(2) consolidates into section 36 the provisions of section 34 of the Coast Protection Act 1949
- 1.5 The recommendations have been developed in consultation with DTI, the devolved government authorities for Scotland, Wales and Northern Ireland, mariners in the commercial, military, fisheries and recreational sectors, relevant associations and port authority representatives, the General Lighthouse Authorities (GLA) and emergency support services such as the Royal National Lifeboat Institution (RNLI).
- 2. How and when the recommendations should be used.**
- 2.1 This Guidance Note, as the name implies, is intended for the guidance of developers and others. Whilst non mandatory, failure to heed the guidance may result in delaying the consents process. The recommendations should be taken into account by OREI developers and their contracted environmental and risk assessors in the preparation of Scoping Reports (SR), Environmental Impact Assessments (EIA) and resulting Environmental Statements (ES).
- 2.2 These should evaluate all navigational possibilities, which could be reasonably foreseeable, by which the siting, construction, establishment and decommissioning of an OREI could cause or contribute to an obstruction of, or danger to, navigation or marine emergency services. They should also be used to assess the most favourable options to be adopted.
- 2.3 Potential navigational or communications difficulties caused to any mariners or emergency services using the site area and its environs should be assessed. Those difficulties which could contribute to a marine casualty leading to injury, death or loss of property, either at sea or amongst the population ashore, should be highlighted as well as those affecting emergency services. Consultation with local and national search and rescue authorities should be initiated and consideration given to the types of vessels and equipment which might be used in emergencies. This should include the possible use of OREI structures as emergency refuges.
- 2.4 Assessments should be made of the consequences of ships deviating from normal routes or recreational craft entering shipping routes in order to avoid proposed sites. Special regard should be given to evaluating situations which could lead to safety of navigation being compromised e.g. an increase in 'end-on' or 'crossing' encounters, reduction in sea-room or water depth for manoeuvring etc.
- 2.5 *In terms of navigational priority, these recommendations do not encourage a differentiation to be made between any types of seagoing water craft, operations, or mariners.*

3. **Annexes:**
- 3.1 The recommendations contained therein apply to all sites, whether within the jurisdiction of port limits or in open sea areas. However, port authorities may require developers to comply with their own specific criteria. In addition, where proposals within port limits could affect navigation or emergency planning, the port authorities will be under an obligation to review its safety management system, in accordance with the Port Marine Safety Code. Such reviews should be undertaken in parallel with the OREI developer's Environmental Impact Assessment and the outcome addressed in the resulting Environmental Statement.
- 3.2 OREI developers should comply with the recommendations during all phases of their planning, construction, operation and decommissioning.
- 3.3 Information concerning their navigational impact during these four phases should be promulgated in ample time to all relevant mariners, organisations and authorities.
- 3.4 Contingency arrangements to deal with marine casualties in, or adjacent to sites, including responses to environmental pollution, should be planned, and practised to test their efficiency.
- 3.5 The following annexes contain recommendations on:
- Annex 1:** Considerations on site position and structure.
- Annex 2:** Navigation, collision avoidance and communications.
- Annex 3:** Safety and mitigation measures recommended for OREI during construction, operation and decommissioning.
- Annex 4:** Standards and procedures for wind turbine generator shutdown in the event of a search and rescue, counter pollution or salvage incident in or around a wind farm.
- 3.6 The following annexes contain regulatory extracts:
- Annex 5:** Section 36 of the Electricity Act 1989 (as amended by the Energy Act 2004).
- Annex 6:** Article 60 of the United Nations Convention on the Law of the Sea (UNCLOS), relating to artificial islands, installations and structures in the exclusive economic zone.
- 3.7 **Note:** *The Maritime and Coastguard Agency (MCA) reserves the right to vary or modify these recommendations on the basis of experience or in accordance with internationally recognised standards in the interest of safety of life at sea and protection of the marine environment. As other types of offshore renewable energy installations are developed, new annexes to this document will be introduced and a revision of this Marine Guidance Note will be issued.*

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August 2004

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Safer Lives, Safer Ships, Cleaner Seas

Department for
Transport

The MCA is an executive agency
of the Department for Transport

Considerations on Site Position, Structures and Safety Zones

1. Traffic Survey

An up to date² traffic survey of the area concerned should be undertaken. This should include all vessel types and is likely to total at least four weeks duration but also taking account of seasonal variations in traffic patterns. These variations should be determined in consultation with representative recreational and fishing vessel organisations, and, where appropriate, port and navigation authorities. Whilst recognising that site-specific factors need to be taken into consideration, any such survey should, in general, assess:

- a. Proposed OREI site relative to areas used by any type of marine craft.
- b. Numbers, types and sizes of vessels presently using such areas.
- c. Non-transit uses of the areas, e.g. fishing, day cruising of leisure craft, racing, aggregate dredging, etc.
- d. Whether these areas contain transit routes used by coastal or deep-draught vessels on passage.
- e. Alignment and proximity of the site relative to adjacent shipping lanes.
- f. Whether the nearby area contains prescribed routeing schemes or precautionary areas.
- g. Whether the site lies on or near a prescribed or conventionally accepted separation zone between two opposing routes.
- h. Proximity of the site to areas used for anchorage, safe haven, port approaches and pilot boarding or landing areas.
- i. Whether the site lies within the limits of jurisdiction of a port and/or navigation authority.
- j. Proximity of the site to existing fishing grounds, or to routes used by fishing vessels to such grounds.
- k. Proximity of the site to offshore firing/bombing ranges and areas used for any marine military purposes.
- l. Proximity of the site to existing or proposed offshore oil / gas platform, marine aggregate dredging, marine archaeological sites or wrecks, or other exploration/exploitation sites.
- m. Proximity of the site relative to any designated areas for the disposal of dredging spoil.
- n. Proximity of the site to aids to navigation and/or Vessel Traffic Services (VTS) in or adjacent to the area and any impact thereon.
- o. Researched opinion using computer simulation techniques with respect to the displacement of traffic and, in particular, the creation of 'choke points' in areas of high traffic density.

² Generally within 12 months prior to submission of the Environmental Statement

2. OREI Structures

It should be determined:

- a. Whether any features of the OREI, including auxiliary platforms outside the main generator site and cabling to the shore, could pose any type of difficulty or danger to vessels underway, performing normal operations, or anchoring.

Such dangers would include clearances of wind turbine blades above the sea surface, the least depth of current turbine blades, the burial depth of cabling, etc.

Note: Recommended minimum safe (air) clearances between sea level conditions at mean high water springs (MHWS) and wind turbine rotors are that they should be suitable for the vessels types identified in the traffic survey but generally not less than 22 metres. Depths, clearances and similar features of other OREI types which might affect marine safety should be determined on a case by case basis.

- b. Whether any feature of the installation could create problems for emergency rescue services, including the use of lifeboats, helicopters and emergency towing vessels (ETVs)
- c. How rotor blade rotation and power transmission, etc., will be controlled by the designated services when this is required in an emergency.

Note: Annex 4 of this document details HM Coastguard recommended standards and procedures for the use of an Active Safety Management System (ASMS) in the event of an incident in or around an offshore wind farm.

3. Assessment of Access to and Navigation Within, or Close to , an OREI

To determine the extent to which navigation would be feasible within the OREI site itself by assessing whether:

- a. Navigation within the site would be safe :
 - i. by all vessels, or
 - ii. by specified vessel types, operations and/or sizes.
 - iii. in all directions or areas, or
 - iv. in specified directions or areas.
 - v. in specified tidal, weather or other conditions.
- b. Navigation in and/or near the site should be :
 - i. prohibited by specified vessels types, operations and/or sizes.
 - ii. prohibited in respect of specific activities,
 - iii. prohibited in all areas or directions, or
 - iv. prohibited in specified areas or directions, or
 - v. prohibited in specified tidal or weather conditions, or simply
 - vi. recommended to be avoided.
- c. Exclusion from the site could cause navigational, safety or routeing problems for vessels operating in the area.

Note : Relevant information concerning a decision to seek a "safety zone" for a particular site during any point in its construction, operation or decommissioning, should be promulgated to MCA and other interested parties without delay.

Navigation, collision avoidance and communications

1. The Effect of Tides and Tidal Streams :

It should be determined whether or not:

- i. Current maritime traffic flows and operations in the general area are affected by the depth of water in which the proposed installation is situated at various states of the tide i.e. whether the installation could pose problems at high water which do not exist at low water conditions, and vice versa.
- ii. Set and rate of the tidal stream, at any state of the tide, has a significant affect on vessels in the area of the OREI site.
- iii. Maximum rate tidal stream runs parallel to the major axis of the proposed site layout, and, if so, its effect.
- iv. The set is across the major axis of the layout at any time, and, if so, at what rate.
- v. In general, whether engine failure or other circumstance could cause vessels to be set into danger by the tidal stream.
- vi. Structures themselves could cause changes in the set and rate of the tidal stream.
- vii. Structures in the tidal stream could be such as to produce siltation, deposition of sediment or scouring, affecting navigable water depths in the windfarm area or adjacent to the area.

Note: In relation to Sub Paragraph vii above, it is considered necessary that a hydrographic survey of the site and its immediate environs be undertaken to establish a baseline. Such a survey should be undertaken to at least International Hydrographic Organization (IHO) Order 1 standard multibeam bathymetry , with final data being supplied as a digital full density data set, and erroneous soundings flagged as deleted but included in the data set.

2. Weather:

To determine if:

- i. The site, in normal, bad weather, or restricted visibility conditions, could present difficulties or dangers to craft, including sailing vessels, which might pass in close proximity to it.
- ii. The structures could create problems in the area for vessels under sail, such as wind masking, turbulence or sheer.

3. Visual Navigation and Collision Avoidance:

To assess the extent to which:

- i. Structures could block or hinder the view of other vessels under way on any route.
- ii. Structures could block or hinder the view of the coastline or of any other navigational feature such as aids to navigation, landmarks, promontories, etc.

4. **Communications, Radar and Positioning Systems :**

To provide researched opinion of a generic and, where appropriate, site specific nature concerning whether or not:

- i. Structures could produce radio interference such as shadowing, reflections or phase changes, with respect to any frequencies used for marine positioning, navigation or communications, including Automatic Identification Systems (AIS), whether ship borne, ashore or fitted to any of the proposed structures.
- ii. Structures could produce radar reflections, blind spots, shadow areas or other adverse effects:
 - a. Vessel to vessel;
 - b. Vessel to shore;
 - c. VTS radar to vessel;
 - d. Racon to/from vessel.
- iii. OREI, in general, would comply with current recommendations concerning electromagnetic interference.
- iv. Structures and generators might produce sonar interference affecting fishing, industrial or military systems used in the area.
- v. Site might produce acoustic noise which could mask prescribed sound signals.
- vi. Generators and the seabed cabling within the site and onshore might produce electro-magnetic fields affecting compasses and other navigation systems.

5. **Marine Navigational Marking :**

To determine:

- i. How the overall site would be marked by day and by night taking into account that there may be an ongoing requirement for marking on completion of decommissioning, depending on individual circumstances.
- ii. How individual structures on the perimeter of and within the site, both above and below the sea surface, would be marked by day and by night.
- iii. If the site would be marked by one or more racons and/ or,
- iv. If the site would be marked by an Automatic Identification System (AIS) transceiver, and if so, the data it would transmit.
- v. If the site would be fitted with a sound signal, and where the signal or signals would be sited.
- vi. Whether the proposed site and/or its individual generators would comply in general with markings for such structures, as required by the relevant General Lighthouse Authority (GLA) or recommended by the Maritime and Coastguard Agency, respectively.
- vii. The aids to navigation specified by the GLAs are being maintained such that the 'availability criteria', as laid down and applied by the GLAs, is met at all times. Separate detailed guidance is available from the GLAs on this matter.
- viii. The procedures that need to be put in place to respond to casualties to the aids to navigation specified by the GLAs, within the timescales laid down and specified by the GLAs.

Safety and mitigation measures recommended for OREI during construction, operation and decommissioning.

- 3.1 Mitigation and safety measures will be applied to the OREI development appropriate to the level and type of risk determined during the Environmental Impact Assessment (EIA). The specific measures to be employed will be selected in consultation with the Maritime and Coastguard Agency and will be listed in the developer's Environmental Statement (ES). These will be consistent with international standards contained in, for example, the Safety of Life at Sea (SOLAS) Convention - Chapter V, IMO Resolution A.572 (14)³ and Resolution A.671(16)⁴ and could include any or all of the following:
- i. Promulgation of information and warnings through notices to mariners and other appropriate media.
 - ii. Continuous watch by multi-channel VHF, including Digital Selective Calling (DSC).
 - iii. Safety zones of appropriate configuration, extent and application to specified vessels.
 - iv. Designation of the site as an area to be avoided (ATBA).
 - v. Implementation of routeing measures within or near to the development.
 - vi. Monitoring by radar, AIS and/or closed circuit television (CCTV).
 - vii. Appropriate means to notify and provide evidence of the infringement of safety zones or ATBA's.
 - viii. Any other measures and procedures considered appropriate in consultation with other stakeholders.

³ General Provisions on Ships' Routeing, adopted 20 November 1985

⁴ "Safety Zones and Safety of Navigation around Offshore Installations and Structures", adopted 19 October 1989.

Standards and procedures for wind turbine generator shutdown in the event of a search and rescue, counter pollution or salvage incident in or around a wind farm.

1. Design Requirements

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

- i. All wind turbine generators (WTGs) will be marked with clearly visible unique identification characters. The identification characters shall each be illuminated by a low-intensity light visible from a vessel thus enabling the structure to be detected at a suitable distance to avoid a collision with it. The size of the identification characters in combination with the lighting should be such that, under normal conditions of visibility and all known tidal conditions, they are clearly readable by an observer, stationed 3 metres above sea levels, and at a distance of at least 150 metres from the turbine. It is recommended that lighting for this purpose be hooded or baffled so as to avoid unnecessary light pollution or confusion with navigation marks. (Precise dimensions to be determined by the height of lights and necessary range of visibility of the identification numbers).
- ii. All WTGs should be equipped with control mechanisms that can be operated from the Central Control Room of the wind farm.
- iii. Throughout the design process for a wind farm, appropriate assessments and methods for safe shutdown should be established and agreed, through consultation with MCA and other emergency support services.
- iv. The WTG control mechanisms should allow the Control Room Operator to fix and maintain the position of the WTG blades as determined by the Maritime Rescue Co-ordination Centre or Maritime Rescue Sub Centre (MRCC/SC).
- v. Nacelle hatches should 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 sea-borne approach is not possible.
- vi. Access ladders, although designed for entry by trained personnel using specialised equipment and procedures for turbine maintenance in calm weather, could conceivably be used, in an emergency situation, to provide refuge on the turbine structure for distressed mariners. This scenario should therefore be considered when identifying the optimum position of such ladders and take into account the prevailing wind, wave and tidal conditions.

2. Operational Requirements

- i. The Central Control Room should be manned 24 hours a day.
- ii. The Central Control Room operator should have a chart indicating the Global Positioning System (GPS) position and unique identification numbers of each of the WTGs in the wind farm.
- iii. All MRCC/SCs will be advised of the contact telephone number of the Central Control Room.

- iv. All MRCC/SCs will have a chart indicating the GPS position and unique identification number of each of the WTGs in all wind farms.

3. **Operational Procedures**

- i. Upon receiving a distress call or other emergency alert from a vessel which is concerned about a possible collision with a WTG or is already close to or within the wind farm, the MRCC/SC will establish the position of the vessel and the identification numbers of any WTGs which are visible to the vessel. The position of the vessel and identification numbers of the WTGs will be passed immediately to the Central Control Room by the MRCC/SC.
- ii. The control room operator should immediately initiate the shut-down procedure for those WTGs as requested by the MRCC/SC, and maintain the WTG in the appropriate shut-down position, again as requested by the MRCC/SC, until receiving notification from the MRCC/SC that it is safe to restart the WTG.
- iii. Communication and shutdown procedures should be tested satisfactorily at least twice a year

Note: Other types, designs and configurations of OREI will be similarly evaluated and procedures laid down by the Maritime and Coastguard Agency, in consultation with appropriate stakeholders, during the Scoping and Environmental Impact Assessment processes.

Section 36 of the Electricity Act 1989 (as amended by the Energy Act 2004)

36 Consent required for construction etc of generating stations

- (1) Subject to subsections (2) and (4) below, a generating station shall not be constructed at a relevant place (within the meaning of section 4), and a generating station at such a place shall not be extended or operated except in accordance with a consent granted by the Secretary of State.
- (2) Subsection (1) above shall not apply to a generating station whose capacity –
 - (a) does not exceed the permitted capacity, that is to say, 50 megawatts; and
 - (b) in the case of a generating station which is to be constructed or extended, will not exceed the permitted capacity when it is constructed or extended;

and an order under this subsection may make different provision for generating stations of different classes or descriptions.
- (3) The Secretary of State may by order provide that subsection (2) above shall have effect as if for the permitted capacity mentioned in paragraph (a) there were substituted such other capacity as may be specified in the order.
- (4) The Secretary of State may by order direct that subsection (1) above shall not apply to generating stations of a particular class or description, either generally or for such purposes as may be specified in the order.
- (5) A consent under this subsection –
 - (a) may include such conditions (including conditions as to the ownership or operation of the station) as appear to the Secretary of State to be appropriate; and
 - (b) shall continue in force for such a period as may be specified in or determined by or under the consent.
- (6) Any person who without reasonable excuse contravenes the provisions of this section shall be liable on summary conviction to a fine not exceeding level 5 on the standard scale.
- (7) No proceedings shall be instituted in England and Wales in respect of an offence under this section except by or on behalf of the Secretary of State.
- (8) The provisions of Schedule 8 of the Act (which relates to consents under this section and section 37 below) shall have effect.
- (9) In this Part “extension”, in relation to a generating station, includes the use by the person operating the station of any land (wherever situated) for a purpose directly related to the generation of electricity by that station and “extend” shall be construed accordingly.

36A Declarations extinguishing etc. public rights of navigation

- (1) Where a consent is granted by the Secretary of State or the Scottish Ministers in relation to –
 - (a) the construction or operation of a generating station that comprises or is to comprise (in whole or in part) renewable energy installations situated at places in relevant waters, or
 - (b) an extension that is to comprise (in whole or in part) renewable energy installations situated at places in relevant waters or an extension of such an installation,

he or (as the case may be) they may, at the same time, make a declaration under this section as respects rights of navigation so far as they pass through some or all of those places.

- (2) The Secretary of State or the Scottish Ministers may make a declaration only if the applicant for the consent made an application for such a declaration when making his application for the consent.
- (3) A declaration under this section is one declaring that the rights of navigation specified or described in it -
 - (a) are extinguished;
 - (b) are suspended for a period that is specified in the declaration;
 - (c) are suspended until such time as may be determined in accordance with provision contained in the declaration; or
 - (d) are to be exercisable subject to such restrictions or conditions, or both, as are set out in the declaration.
- (4) A declaration under this section -
 - (a) has effect, in relation to the rights specified or described in it, from the time at which it comes into force; and
 - (b) continues in force for such a period as may be specified in the declaration or as may be determined in accordance with provision contained in it.
- (5) A declaration under this section -
 - (a) must identify the renewable energy installations, or proposed renewable energy installations, by reference to which it is made;
 - (b) must specify the date on which it is to come into force, or the means by which that date is to be determined;
 - (c) may modify or revoke a previous such declaration, or a declaration under section 101 of the Energy Act 2004; and
 - (d) may make different provision in relation to different means of exercising a right of navigation.
- (6) Where a declaration is made under this section by the Secretary of State or the Scottish Ministers, or a determination is made by him or them for the purposes of a provision contained in such a declaration, he or (as the case may be) they must either -
 - (a) publish the declaration or determination in such a manner as appears to him or them to be appropriate for bringing it, as soon as is reasonably practicable, to the attention of persons likely to be affected by it; or
 - (b) secure that it is published in that manner by the applicant for the declaration.
- (7) In this section -

“consent” means a consent under section 36 above;

“extension”, in relation to a renewable energy installation, has the same meaning as in Chapter 2 of Part 3 of the Energy Act 2004

“relevant waters” means waters in or adjacent to Great Britain which are between the mean low water mark and the seaward limits of the territorial sea.

36B Duties in relation to navigation

- (1) Neither the Secretary of State nor the Scottish Ministers may grant a consent in relation to any particular offshore generating activities if he considers, or (as the case may be) they consider, that interference with the use of recognised sea lanes essential to international navigation:
 - (a) is likely to be caused by the carrying on of those activities; or
 - (b) is likely to result from their having been carried on.
- (2) It shall be the duty both of the Secretary of State and of the Scottish Ministers, in determining:
 - (a) whether to give a consent for any particular offshore generating activities, and
 - (b) what conditions to include in such a consent, to have regard to the extent and nature of any obstruction of or danger to navigation which (without amounting to interference with the use of such sea lanes) is likely to be caused by the carrying on of the activities, or is likely to result from their having been carried on.
- (3) In determining for the purposes of this section what interference, obstruction or danger is likely and its extent and nature, the Secretary of State or (as the case may be) the Scottish Ministers must have regard to the likely effect (both while being carried on and subsequently) of -
 - (a) the activities in question; and
 - (b) such other offshore generating activities as are either already the subject of consents or are activities in respect of which it appears likely that consents will be granted.
- (4) For the purposes of this section the effects of offshore generating activities include:
 - (a) how, in relation to those activities, the Secretary of State and the Scottish Ministers have exercised or will exercise their powers under section 36A above and section 101 of the Energy Act 2004 (extinguishment of public rights of navigation); and
 - (b) how, in relation to those activities, the Secretary of State has exercised or will exercise his powers under sections 94 and 95 and Chapter 3 of Part 2 of that Act (safety zones and decommissioning).
- (5) If the person who has granted a consent in relation to any offshore generating activities thinks it appropriate to do so in the interests of the safety of navigation, he may at any time vary conditions of the consent so as to modify in relation to any of the following matters the obligations imposed by those conditions -
 - (a) the provision of aids to navigation (including, in particular, lights and signals);
 - (b) the stationing of guard ships in the vicinity of the place where the activities are being or are to be carried on; or
 - (c) the taking of other measures for the purposes of, or in connection with, the control of the movement of vessels in that vicinity.

- (6) A modification in exercise of the power under subsection (5) must be set out in a notice given by the person who granted the consent to the person whose obligations are modified.
- (7) In this section –
- ‘consent’ means a consent under section 36 above;
- ‘offshore generating activities’ means –
- (a) the construction or operation of a generating station that is to comprise or comprises (in whole or in part) renewable energy installations; or
- (b) an extension of a generating station that is to comprise (in whole or in part) renewable energy installations or an extension of such an installations;
- ‘the use of recognised sea lanes essential to international navigation’ means –
- (a) anything that constitutes the use of such a sea lane for the purposes of Article 60 (7) of the United Nations Convention on the Law of the Sea 1082 (Cmnd 8941); or
- (b) any use of waters in the territorial sea adjacent to Great Britain that would fall within paragraph (a) if the waters were in a Renewable Energy Zone.
- (8) In subsection (7) ‘extension’, in relation to a renewable energy installation, has the same meaning as in Chapter 2 of Part 2 of the Energy Act 2004.

Article 60 UNCLOS - Artificial islands, installations and structures in the exclusive economic zone

1. In the exclusive economic zone, the coastal State shall have the exclusive right to construct and to authorize and regulate the construction, operation and use of:
 - a. artificial islands;
 - b. installations and structures for the purposes provided for in article 56 and other economic purposes;
 - c. installations and structures which may interfere with the exercise of the rights of the coastal State in the zone.
2. The coastal State shall have exclusive jurisdiction over such artificial islands installations and structures, including jurisdiction with regard to customs fiscal health, safety and immigration laws and regulations.
3. Due notice must be given of the construction of such artificial islands, installations or structures, and permanent means for giving warning of their presence must be maintained. Any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization. Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States. Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed.
4. The coastal State may, where necessary, establish reasonable safety zones around such artificial islands, installations and structures in which it may take appropriate measures to ensure the safety both of navigation and of the artificial islands, installations and structures.
5. The breadth of the safety zones shall be determined by the coastal State taking into account applicable international standards. Such zones shall be designed to ensure that they are reasonably related to the nature and function of the artificial islands, installations or structures, and shall not exceed a distance of 500 metres around them, measured from each point of their outer edge, except as authorized by generally accepted international standards or as recommended by the competent international organization. Due notice shall be given of the extent of safety zones.
6. All ships must respect these safety zones and shall comply with generally accepted international standards regarding navigation in the vicinity of artificial islands, installations, structures and safety zones.
7. Artificial islands, installations and structures and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation.
8. Artificial islands, installations and structures do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea, the exclusive economic zone or the continental shelf.

Damien Courtney

From: "Alasdair Wilkie" <alasdair.wilkie@hiberniaatlantic.com>
To: "Damien Courtney" <damien.courtney@saorgus.com>; <douglas.percy@bt.com>
Cc: "Aidan Forde" <aidan.forde@saorgus.com>; <bepeck@sealinemarineservices.fsnet.co.uk>; <derek.cassidy@esat.com>
Sent: 26 November 2004 15:10
Attach: Hibernia.Atlantic.SegC.as.laid.RPL.18.Aug.03.xls
Subject: RE: Kish & Bray Banks Wind Farm Project

Damien,

I have attached the most recent RPL for our cable as I see that the chartlet that you have used does not include our cable on it.

Kind Regards

Alasdair Wilkie BSc MIEE MIEEE
Marine Manager

Hibernia Atlantic
International Exchange Centre
Clonshaugh Industrial Estate
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Ireland

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From: Damien Courtney [mailto:damien.courtney@saorgus.com]
Sent: 26 November 2004 11:01
To: douglas.percy@bt.com
Cc: Aidan Forde; bepeck@sealinemarineservices.fsnet.co.uk; Alasdair Wilkie; derek.cassidy@esat.com
Subject: Re: Kish & Bray Banks Wind Farm Project

Douglas,

Thank you for your response in regard to the Kish and Bray Offshore Wind Farm Project.

I will bring the position of the cables that you outlined to the attention of the developers. In the meantime, I can confirm that the intended export cable route will come to shore close to Bray town (see attached), so it should not necessitate any cable crossings with the ESAT 2 and Hibernia cables. I will keep you updated of the planned cable routes.

Kind regards,
Damien

----- Original Message -----

From: douglas.percy@bt.com
To: Damien.Courtney@saorgus.com
Cc: derek.cassidy@esat.com ; alasdair.wilkie@hiberniaatlantic.com ;

bepeck@sealinemarineservices.fsnet.co.uk

Sent: Friday, November 26, 2004 10:44 AM

Subject: Kish & Bray Banks Wind Farm Project

Dear Damien, thank you for your letter regarding the Kish & Bray Banks Offshore Wind Farm Project. I have looked at the proposed location of the wind farms and note that there are no in use submarine cables which pass through the area, however there are two in use cables that land in Dublin Bay, ESAT 2 & Hibernia, and pass close North & East of the banks.

I would ask that you bring the position of these cables to the notice of the developers to prevent any damage during the construction phase.

I would also request that you keep me informed of the planned routes for the Export cables so we can enter consultation regarding any potential cable crossings.

I have copied this email to Alasdair Wilkie of Hibernia and Barry Peck chairman of the UKCPC Technical Sub Group for information.

Best Rgds

Douglas Percy

Manager Marine Liaison

BT Global Submarine Cable Systems

Tel:02380 837928

Fax:02380 229981

Mob:07715 482694

<<Kish.doc>>

"BT Group plc

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Damien Courtney

From: "Alasdair Wilkie" <alasdair.wilkie@hiberniaatlantic.com>
To: "Damien Courtney" <damien.courtney@saorgus.com>
Sent: 06 December 2004 14:50
Subject: RE: Kish & Bray Banks Wind Farm Project

Damien,

Many thanks for that, I had realised that it did not cross the proposed export cable.

For interest it would be nice to see our cable correctly charted on your map as I believe that our cable goes quite close (relatively) to the top right hand corner of the proposed windfarm.

Kind Regards

Alasdair Wilkie BSc MIEE MIEEE
Marine Manager

Hibernia Atlantic
International Exchange Centre
Clonshaugh Industrial Estate
Dublin 17
Ireland

Phone: + 353 1 867 3600
Mobile: +44 7958 215 474
Fax: +353 1 867 3601

From: Damien Courtney [mailto:damien.courtney@saorgus.com]
Sent: 30 November 2004 06:18
To: Alasdair Wilkie
Subject: Re: Kish & Bray Banks Wind Farm Project

Alasdair,

Thank you for forwarding the RPL for your cable. We note after examining the coordinates that it does not cross the proposed export cable route for the Kish / Bray Wind Farm.

Kind regards,
Damien

----- Original Message -----

From: [Alasdair Wilkie](#)
To: [Damien Courtney](#) ; [douglas.percy@bt.com](#)
Cc: [Aidan Forde](#) ; [bepeck@sealinemarineservices.fsnet.co.uk](#) ; [derek.cassidy@esat.com](#)
Sent: Friday, November 26, 2004 3:10 PM
Subject: RE: Kish & Bray Banks Wind Farm Project

Damien,

I have attached the most recent RPL for our cable as I see that the chartlet that you have used does not

include our cable on it.

Kind Regards

Alasdair Wilkie BSc MIEE MIEEE
Marine Manager

Hibernia Atlantic
International Exchange Centre
Clonshaugh Industrial Estate
Dublin 17
Ireland

Phone: + 353 1 867 3600
Mobile: +44 7958 215 474
Fax: +353 1 867 3601

From: Damien Courtney [<mailto:damien.courtney@saorgus.com>]
Sent: 26 November 2004 11:01
To: douglas.percy@bt.com
Cc: Aidan Forde; bepeck@sealinemarineservices.fsnet.co.uk; Alasdair Wilkie; derek.cassidy@esat.com
Subject: Re: Kish & Bray Banks Wind Farm Project

Douglas,

Thank you for your response in regard to the Kish and Bray Offshore Wind Farm Project.

I will bring the position of the cables that you outlined to the attention of the developers. In the meantime, I can confirm that the intended export cable route will come to shore close to Bray town (see attached), so it should not necessitate any cable crossings with the ESAT 2 and Hibernia cables. I will keep you updated of the planned cable routes.

Kind regards,
Damien

----- Original Message -----

From: douglas.percy@bt.com
To: Damien.Courtney@saorgus.com
Cc: derek.cassidy@esat.com ; alasdair.wilkie@hiberniaatlantic.com ;
bepeck@sealinemarineservices.fsnet.co.uk
Sent: Friday, November 26, 2004 10:44 AM
Subject: Kish & Bray Banks Wind Farm Project

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I would ask that you bring the position of these cables to the notice of the developers to prevent any damage during the construction phase.

I would also request that you keep me informed of the planned routes for the Export cables so we can enter consultation regarding any potential cable crossings.

22/11/2005

I have copied this email to Alasdair Wilkie of Hibernia and Barry Peck chairman of the UKCPC Technical Sub Group for information.

Best Rgds

Douglas Percy

Manager Marine Liaison

BT Global Submarine Cable Systems

Tel:02380 837928

Fax:02380 229981

Mob:07715 482694

<<Kish.doc>>

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Mr. Damien Courtney,
Saorgus Energy Ltd.,
Enterprise House,
Kerry Technology Park,
Listowel Road,
Tralee,
Co. Kerry.

21st December 2004

Dear Mr. Courtney,

Thank you for your letter of the 3rd of November 2004 giving details of your proposed Windfarm development, to be located on the Kish and Bray Banks, of the coasts of Co. Dublin and Co. Wicklow.

We note the extensive size of your proposed Wind farm development and its location in close proximity to a large number of viewers of RTE services in the County Dublin and Wicklow areas. Hence we would like to do further analysis on this proposal and its possible implications for TV and Radio reception in the area.

I will contact you again in January 2005.

Yours sincerely,

Emer Sheahan

Emer Sheahan.
Senior Broadcast Engineer,
Frequency Coverage and Planning Dept,
RTE
Nutley Building,
Donnybrook, Dublin 4.
Tel 01 2082154,
Email emer.sheahan@rte.ie

Mr. Damien Courtney,
Saorgus Energy Ltd.,
Enterprise House,
Kerry Technology Park,
Listowel Road,
Tralee,
Co. Kerry.

27th April 2005

Dear Mr. Courtney,

Thank you for your letter of the 3rd of November 2004 giving details of your proposed Windfarm development, to be located on the Kish and Bray Banks, of the coasts of Co. Dublin and Co. Wicklow.

At this point in time it is not possible to accurately predict the likely impact of your proposed windfarm on reception of Irish TV and Radio services. However because of the extent of the windfarm and its proximity to the east coast it could be considered to represent a large-scale reflecting surface.

The proposed development could possibly increase interference levels from UK stations into the Dublin and Wicklow regions. The interference could manifest itself both directly and indirectly.

A direct effect could be the following -:

Our main station at Kippure in Co. Wicklow operates on the same frequencies as Winter Hill, a high power site in the north-east of England. These two stations are presently matched in power so as not to interfere with each other to any great extent. If however the availability of signals from Winter Hill was significantly increased due to reflections from the blades of the turbines of the proposed wind-farm this would give rise to co-channel interference to reception of Irish services from Kippure which would appear as patterning on viewers screens. This interference would particularly manifest itself during high pressure weather conditions. While some viewers would have aerial discrimination which permit their aerials to reject the Winter Hill channels this may not be possible in all

RTÉ Transmission Network Limited

Directors: Patrick Wright (Chairman), Mick Kehoe (Executive), Tom O'Linn (and Company Secretary), Cathal Goan, Conor Hayes, Brendan Crinion
Registered Number: 364909. Registered Office: Donnybrook, Dublin 4. VAT Number: 5384905G. A Subsidiary of Radio Telefís Éireann.
Trading as "RTÉ NL".

areas. We would not be able to change Kippure's channels because of the scarcity of UHF channels available on the East Coast. All TV frequencies currently in use are co-ordinated internationally. If Kippure's frequencies were changed it would possible also give rise to a requirement to frequency changes in the UK. In the light of this at present we do not have a ready technical solution should this problem arise.

An indirect effect could be as following :-

Our low-power station at Greystones operates on the same channels as the UK station at Llandonna in North Wales. Llandonna is a high power station (100 kW ERP). At present some viewers using our Greystones station may also have TV aerials pointed to receive a UK station like Arfon also in North Wales. If the UK services from Llandonna were to be greatly enhanced by way of reflections from the proposed wind-farm they could then in theory represent a significant source of interference to reception of the Irish TV services from Greystones.

As with the Kippure example it is most unlikely that we would be able to change channels at Greystones to alleviate the problem because the scarcity of available UHF channels in the east coast region. A possible solution in this case might be to install channel filters at the domestic aerial.

As I indicated above there are many viewers in the south Dublin and north Wicklow areas who receive their UK TV services (across the Irish Sea) from UK stations in Wales. While it is not our responsibility to ensure reception of UK services in the Republic it should be noted that there is also a possibility that some of these viewers may have their UK reception impaired.

We currently have a policy of asking windfarm developers to sign our Protocol Document. This document gives us some assurance that should interference arise as a result of the development of a wind-farm that the developer will carry out any necessary remedial measures. I have enclosed a copy of the document for your consideration and would be grateful if you would execute it and return it to me.

Yours sincerely,

Emer Sheahan

Emer Sheahan,
Senior Broadcast Engineer,
Frequency Coverage and Planning Dept,
RTE NL
Nutley Building,
Donnybrook, Dublin 4.
Tel 01 2082154,
Email emer.sheahan@rte.ie

An Roinn Cumarsáide,
Mara agus Acmhainní Nádurtha
Baile Átha Cliath 2.



RECEIVED

BY DC DATE

Department of Communications,
Marine and Natural Resources
Dublin 2

MS53/55

11 May, 2005

*James
For info
Tom*

Ms Emer Sheahan
Senior Broadcast Engineer
Frequency Coverage and Planning Department
RTÉ NL
Nutley Building
Donnybrook
DUBLIN 4

Dear Ms Sheahan

Thank you for your letter of 9 May regarding the possibility of interference with TV services from the operation of the proposed Kish/Bray Banks.

These are issues which we would expect to see covered by the environmental impact assessment (EIS) which will be required to accompany the Foreshore Lease application and, subject to it being found to meet minimum statutory requirements, will subsequently be placed for public consultation.

I will note your concerns and ensure that you are notified when the public consultation period commences.

I am also copying this letter to Saorgus for its information.

Yours sincerely

Tom Burke
Assistant Principal
Coastal Zone Management Division

Baile Átha Cliath 4,
 Telephone +353 (0)1
 Facsimile +353 (0)

Dublin 4, Ireland
 Telephone +353 (0)1
 Telefax +353 (0)1 2

Mr. Tom Burke,
 Assistant Principal Officer,
 Coastal Zone Management Division,
 Dept. of Communications, Marine and Natural Energy,
 Leeson Lane,
 Dublin 2.

9th May 2005

Dear Mr. Burke,

Saorgus Energy Ltd. recently informed us of their proposal to develop an off-shore Windfarm, to be located on the Kish and Bray Banks, off the coasts of Co. Dublin and Co. Wicklow.

While we appreciate the many economic and environmental benefits that renewable energy from wind-farms provide we feel it is encumberent on us to point out the possible effects that such a proposed development could have on reception of Irish TV and Radio services in the Republic.

It is now well documented that in certain circumstances Wind-farms can cause interference to reception of TV and (to a lesser extent) Radio services. Reception problems are caused by unwanted reflections from the blades of the turbines, which can cause flicker, shadows or patterning to appear on viewers' TV screens. We have recorded several examples in the past, most recently in Baileborough, Co. Cavan. In this latter case some viewers have had the reception of the UK TV services seriously ameliorated by a newly built windfarm. While it is not our responsibility to ensure reception of UK services in the Republic I use it here as an example of the problems that can and do arise.

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 Trading as "RTÉ NL".

The proposed Wind-farm development on the Kish and Bray banks is an extensive one. Up to 145 turbines are to be located approximately 10 kilometres off the east coast from north of Dun Laoghaire in County Dublin to south of Greystones in County Wicklow. Hence it could be seen to represent a large-scale reflecting surface capable of reflecting incoming signals from UK transmitting stations in Wales and the North of England into the eastern coastal regions of counties Dublin and Wicklow.

The proposed development could possible increase interference levels from UK stations into the Dublin and Wicklow regions. The interference could manifest itself in two ways, directly and indirectly.

A direct effect could be the following -:

Our main transmitter station at Kippure in Co. Wicklow has an extensive coverage area serving Counties Wicklow and Kildare as well as parts of Counties Dublin and Meath. Kippure operates on the same frequencies or channels as Winter Hill, a UK high power transmitter station in the north-east of England. These two stations are presently matched in power so as not to cause significant interference to each other. If however the availability of signals from Winter Hill was significantly increased due to reflections from the blades of the turbines of the proposed wind-farm, this would give rise to co-channel interference to reception of Irish TV services from Kippure, which would manifest itself as patterning on viewers screens. This interference would be intensified during high-pressure weather conditions. While some viewers would have aerial discrimination which would allow their aerial to reject the Winter Hill signals this may not be so in all areas.

It is most unlikely (if not impossible) that we would be able to change Kippure's channels because of the scarcity of TV channels available on the east-coast. More significantly, all TV channels must be internationally co-ordinated with neighbouring countries including the UK. Hence any change to Kippure's channels would be a non-trivial task with an uncertain outcome to the process. Because Kippure is a high power station any changes to its channels (due solely to the Windfarm) would most likely, also require changes to stations in the UK - a request that would most likely be considered unwarranted by the UK administration.

In the light of this, we do not at present have a technical solution should this problem arise.

The corollary of this argument is also possible i.e. Irish TV (and Radio) signals could become a source of increased interference to UK stations.

An indirect effect could be as follows -:

Our low power station at Greystones operates on the same channels as the UK station at Llandonna in North Wales. Llandonna is a high power station (100 kW ERP). At present viewers using our Greystones services may also have TV aerials pointed to receive the UK station at Arfon also in North Wales. If the UK services from Llandonna were to be greatly enhanced by the proposed windfarm they could then in theory represent a significant source of interference to reception of the Irish TV services from Greystones.

As with the Kippure example, it is most unlikely that we would be able to change channels at Greystones to alleviate the problem. However, a technical solution might be found for some of the affected viewers which may resolve the problem. However we would like to point out this is a liability that would have to be covered completely by the developer.

Finally as mentioned above there are many viewers in the south Dublin and north Wicklow areas who at present receive their UK analogue TV services (across the Irish Sea) from UK stations in Wales. Again while it is not our responsibility to ensure reception of UK services in the Republic, we would like to point that there is also a possibility that some of these viewers may have their existing UK analogue TV reception impaired due to interference from unwanted reflections from the blades of the turbines.

We have written to Damien Courtney of Saorgus Energy Ltd., explaining our concerns. However as the Department of Communications, Marine & Natural Resources is the licensing body for this project we consider that it is important that you are made aware of the possible implications for TV and Radio reception should this proposed wind-farm development be constructed.

If you would like to discuss this further please do not hesitate to contact me at the address below.

Yours sincerely,

Emer Sheahan,
Senior Broadcast Engineer,
Frequency Coverage and Planning Dept,
RTENL
Nutley Building,
Donnybrook, Dublin 4.
Tel 01 2082154,
Email emer.sheahan@rte.ie

Oifig an Ard Rúnaí
Office of the Secretary General



12 November 2004

AN ROINN COMHSHAOIL
OIDHREACHTA AGUS
RIALTAIS ÁITIÚIL
DEPARTMENT OF THE
ENVIRONMENT, HERITAGE AND
LOCAL GOVERNMENT

Mr Damien Courtney
Saorgus Energy Ltd.
Enterprise House
Kerry Technology Park
Listowel Road
Tralee
Co. Kerry

TEACH AN CHUSTAIM
BAILE ÁTHA CLIATH I
CUSTOM HOUSE, DUBLIN I

Tel No: +353 1 888 2000

LoCall No: 1890 20 20 21

Fax No: +353 1 874 0693

Dear Mr. Courtney

I have been asked by the Secretary General to acknowledge receipt of your letter of 3 November 2004 regarding the Kish and Bray Banks Offshore Wind Farm Project.

Yours sincerely,

A handwritten signature in purple ink, which appears to read 'David Hanlon', is written above the typed name.

David Hanlon

Private Secretary to the Secretary General

RECEIVED

BY DC | DATE 23/11/04



AN ROINN COMHSHAOIL, OIDHREACHTA AGUS RIALTAIS ÁITIÚ
DEPARTMENT OF THE ENVIRONMENT, HERITAGE
AND LOCAL GOVERNMENT

19 November 2004

Our Ref: G2004/558

Mr. Damien Courtney,
Saorgus Energy Ltd.,
Enterprise House,
Kerry Technology Park,
Listowel Road,
Tralee,
Co. Kerry

Re: Kisk and Bray Banks Offshore Wind Farm Project


A Chará,

I wish to acknowledge receipt of your recent enquiry in relation to the above.

Your enquiry has been allocated the above reference number which should be used in all correspondence with the Department of the Environment, Heritage and Local Government. In addition your enquiry has been circulated to a number of relevant individuals/Divisions within this Department for their comments and we will revert to you in due course.

If you need any further assistance please contact the undersigned.

Mise le meas,


Yvonne Doolan,
Development Applications Unit

AN ROINN COMHSHAOIL

OIDHREACHTA AGUS

RIALTAIS ÁITIÚ

DEPARTMENT OF THE

ENVIRONMENT, HERITAGE AND

LOCAL GOVERNMENT

DÚN SCÉINE

LÁNA FHEARCAIR

BAILE ÁTHA CLIATH 2

DÚN SCÉINE

HARCOURT LANE

DÚ 2

Tel: +353 1 411 7109

Fax: +353 1 411 7120

RECEIVED

BY DC DATE 30/12/04

AN ROINN COIMHSHAOIL, OIDHREACHTA & GUS RIALTA
DEPARTMENT OF THE ENVIRONMENT, HERITAGE
AND LOCAL GOVERNMENT

22 December, 2004

Our Ref: G2004/558

Mr. Damien Courtney,
Saorgus Energy Ltd.,
Enterprise House,
Kerry Technology Park,
Listowel Road,
Tralee,
Co. Kerry

Re: Application for proposed offshore windfarms on the Kish and Bray Banks in the Irish Sea

Dear Mr. Courtney,

We refer again to your letter of 3 November 2004 regarding the above-proposed development. Outlined below are the underwater archaeological recommendations of the Department of the Environment, Heritage and Local Government.

Both the Kish and Bray Banks are areas of high potential for underwater archaeology, particularly in the form of shipwrecks. These areas have been natural navigational hazards for centuries and are the last resting-place of a large number of ships that foundered whether due to bad weather or grounding on the banks at low water or a combination of both. The records of the Underwater Archaeology Unit of this Department list a large number of shipwrecks for these two sandbanks, with known locations for some of these wrecks.

Therefore, it is our recommendation that the area to be impacted be subject to an underwater archaeological impact assessment in advance of any works taking place. This assessment should be included as a condition in any grant of licence permission that may issue.

Underwater Archaeological Impact Assessment should be compiled as follows:

1. The applicant should engage the services of a suitably qualified archaeologist to undertake the underwater archaeological impact assessment and this should be licensed to the Department of the Environment, Heritage and Local Government under the National Monuments Acts 1930-2004.
2. The Impact Assessment should consist of a detailed desktop study, including consulting with the Underwater Archaeology Unit's Shipwreck Archive, Register of Monuments and Places, Ports and Harbours Record (if applicable) and the National Museum's Topographical Files, as well as relevant local sources. The archaeologist should carry out an intertidal survey with metal detection of all areas to be impacted at the lowest water spring tides for the proposed land fall section of the proposed development. This latter survey should also take in any areas of the immediate foreshore/land area that may be due to be impacted.

AN ROINN COIMHSHAOIL

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RIALTAIS ÁRTOIL

DEPARTMENT OF THE

ENVIRONMENT, HERITAGE AND

LOCAL GOVERNMENT

DUN SCÉINE

LÁNA PHEARCAIR

BALZ AITHA CHATHÉ

DUN SCÉINE

HARCOURT LANE

DUBLIN 2.

Tel: +353 1 461 7109

Fax: +353 1 461 7120

3. The entire area due to be impacted on both banks should be subject to a detailed geophysical survey undertaken to the specifications for underwater archaeology and this survey should be licensed to the Department of the Environment, Heritage and Local Government under the National Monuments Acts 1930-2004. The geophysical survey should incorporate side scan sonar, magnetometer and bathymetric survey. The results of the geophysical survey should be interpreted by a suitably qualified and experienced geo-archaeologist and this person should be named on the method statement accompanying the Detection Device Licence application to this Department.
4. If anomalies of archaeological potential are identified as a result of the geophysical survey, these should be archaeological diver-truthed with metal detection should be undertaken as part of the Impact Assessment. This should be carried out by a suitably qualified underwater archaeologist licensed to the Department of Environment, Heritage and Local Government under the National Monuments Acts 1930-2004 and all diving should be done to the specifications of the Health and Safety Authority's Safety in Industry (Diving Operations) Regulations 1981, SI422.
4. Results from all previous studies – coring, seabed sampling, etc. should be made available to the archaeologist undertaking the Archaeological Impact Assessment. This is to inform them further on the nature and extent of the proposed development and seabed morphology and these results, where pertinent, should also be included in the Underwater Archaeological Impact Assessment Report.
5. When the underwater assessment is completed the archaeologist should submit a detailed report to the Department of the Environment, Heritage and Local Government for consideration. The report should address all potential impacts (detailed Impact Statement) on the area and should put forward specific archaeological recommendations to properly mitigate the potential impacts on known or previously unknown archaeology.
6. No decision should be made on this application until the Underwater Archaeology Unit has had the opportunity to evaluate the further information as requested. A recommendation based on the information will then be forwarded to the Department of Communications, Marine and Natural Resources.

Reason: To ensure the continued preservation (either *in situ* or by record) of places, caves, sites, features or other objects of archaeological interest.

This recommendation is based on papers submitted to this Department on a pre-planning basis and is made without prejudice to any decision the Minister may take upon sight of a formal planning application.

Yours sincerely,



Aoife O'Shea

Development Applications Unit

30th January 2005

Your Ref: MS53/55/L1
Our Ref: M2006/09

*Recd
2/2/06*



Coastal Zone Management Division,
Department of Communications, Marine and Natural Resources,
Lesson Lane,
Dublin 2.

AN ROINN COMHSHAOIL,

OIÐHREACHTA AGUS

RIALTAIS ÁITIÚIL

DEPARTMENT OF THE

ENVIRONMENT, HERITAGE AND

LOCAL GOVERNMENT

Re: EIS for proposed offshore wind-farm on Kish and Bray Banks by Saorgus Energy Ltd.

A Chara,

We refer to the Environmental Impact Statement as received by this Department in relation to the above-proposed development. Outlined below are the further requirements of the Department of the Environment, Heritage and Local Government.

The archaeological assessment component of the EIS undertaken by O'Riordan and Turk was desk-based and it provides a very general overview of the maritime and underwater archaeological environment of the area as well as the proposed works. It is insufficient, however, in its content and does not allow for a value judgement to be made by this Department on the proposed works or potential impacts for the offshore wind-farm on underwater archaeology. The report refers to Wheeler's survey and results of the Banks in 2001 but does not give any details, including no information on the two wrecks identified by Wheeler. While the work undertaken by Wheeler in 2001 was informative, it should be noted that this was undertaken as a geological appraisal of the Banks and not for archaeological purposes. It should also be noted that the survey undertaken by Wheeler did not include full coverage/sonar overlap of either the Kish or Bray Banks.

Though the EIS states that the landfall works for the proposed wind farm is to form part of a separate application, the impact of the proposed works cannot be detached from the present application, particularly immediate to both the Kish and Bray Banks. The potential impacts of cable routes on underwater archaeology will need to be assessed and results included as part of the overall underwater archaeological assessment. This should include all routes between the Banks and proposed areas of landfall, an intertidal and terrestrial archaeological survey.

It is therefore recommended that the underwater archaeological assessment report be updated to include a more detailed assessment of all potential impacts for the proposed wind-farm development and resubmitted as Further Information.

Locations for all geotechnical investigations, grab samples, vibrocores, cone penetrations surveys, etc. should be provided to the archaeologist undertaking the updated assessment and this data should be included in the report. All such investigations should not proceed until the updated archaeological assessment report has been received by this Department and until exact locations for the turbines and associated work have been finalised and forwarded to the Underwater Archaeology Unit for consideration.

DÚN SCÉINE

LÁNA FHEARCAIR

BAILE ÁTHA CLIATH 2

DÚN SCÉINE

HARCOURT LANE

DUBLIN 2

Tel: +353 1 888 3109

Fax: +353 1 478 0721



The updated underwater archaeological assessment should take the following format:

Underwater Archaeological Impact Assessment:

- 1) The developer is required to engage the services of a suitably qualified archaeologist ✓ to carry out an underwater archaeological assessment of the areas to be impacted. This should include all areas to be impacted – including the Kish and Bray Banks, seabed for the cable routes from the Banks to the foreshore, the foreshore itself and immediate land areas selected for the proposed landfall for the wind-farm transmission cables.
- 2) All areas to be impacted underwater should be subject to extensive geophysical ✓ survey, to be undertaken to the specifications for underwater archaeological survey and this should be licensed to the Department of the Environment, Heritage and Local Government.
- 3) It is recommended that the geophysical survey comprise of high-resolution side-scan ✓ survey, magnetometry survey, sub-bottom profile survey, multi-beam and bathymetric survey. The results of the geophysical survey should be interpreted by an archaeo-geophysicist and all anomalies plotted across the area of the Kish and Bray Banks.
- 4) All identified anomalies should be inspected by way of an underwater archaeological ✓ dive survey with metal detection survey. Both surveys should be licensed under the National Monuments Acts 1930-2004 and it is advised that all diving be undertaken to the Health and Safety Authority's Safety in Industry (Diving Operations) Regulations 1981, S1422.
- 5) The foreshore and terrestrial areas due to be impacted for the onshore transmission ✓ cables should be subject to intertidal and field survey and the desktop study should be updated to look at all the relevant sources for these areas, including the relevant Archaeological Inventory of the Department of the Environment, Heritage and Local Government and Topographical Files held in the National Museum of Ireland. The updated report should also include re-analysis of the National Shipwreck Inventory held by the Department of the Environment, Heritage and Local Government to include wrecks for all areas to be impacted, including the areas between the sandbanks and landfall.
- 6) Results from previously undertaken hydrological surveys for all areas to be impacted should also be assessed from an archaeological perspective and results included in the underwater archaeological assessment report. This may include looking at the possible long-term impact of changes in hydrology and therefore the nature of the banks themselves, possibly leading to exposure of previously buried archaeology.
- 7) Having completed the work, the archaeologist should submit a written report to the Department of the Environment, Heritage and Local Government. Where archaeological material/features are shown to be present, preservation *in situ*, preservation by record (excavation) or archaeological monitoring of some of or all of the proposed works may be required.

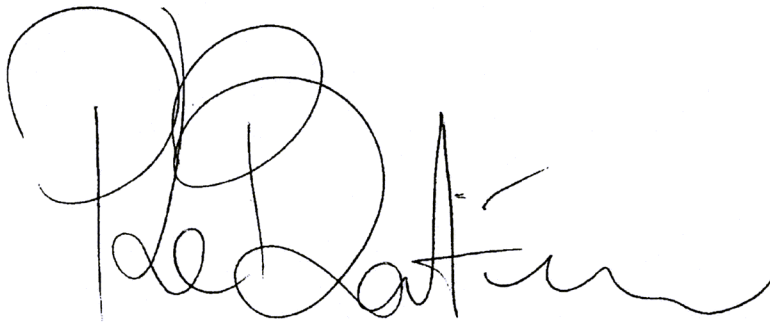
Reason: To ensure the continued preservation (either *in situ* or by record) of places, caves, sites, features or other objects of archaeological interest.

Kindly forward any further information to the following address as soon as it issues. In addition, no decision should be made on this application until this Department has had the opportunity to evaluate the further information submitted as requested.

The Manager,
Development Applications Unit,
The Department of the Environment, Heritage and Local Government,
Dun Sceine,
Harcourt Lane,
Dublin 2.

Please acknowledge receipt of this letter and forward the relevant receipt to the address above.

Mise le meas,

A handwritten signature in black ink, appearing to read 'Proinsias De Bátúin'. The signature is fluid and cursive, with a large initial 'P' and 'D'.

Proinsias De Bátúin
Development Applications Unit

RECEIVED
BY DC DATE 22/11/



Department of Defence
An Roinn Cosanta

Our Ref: 441/01

17 November, 2004.

Mr. Damien Courtney,
Saorgus Energy Ltd.,
Enterprise House,
Technology Park
Listowel Road,
Tralee, Co Kerry.

Proposed Kish and Bray Banks Offshore Wind Farm Project

Dear Mr Courtney,

I am to refer to my letter dated 8 November, 2004 and previous correspondence in connection with the proposed Kish and Bray Banks Offshore Wind Farm Project. I wish to advise that this Department has no objection to the proposed development.

Yours faithfully,

N. Armstrong
Property Management Section

Attn: Damien Courtney,
Saorgus Energy Ltd,
Enterprise House,
Kerry Technology Park,
Listowel Road,
Tralee,
Co. Kerry

Eircom Radio Division,
1st. Floor, NMC Building,
Bianconi Avenue,
Citywest Business Park,
Dublin 24.
11th December 2004.

Dear Sir,

Thank you for your enquiry on the interference potential of your proposed windfarm development at Kish & Bray Banks, offshore wind farm.

Having plotted the co-ordinates given for the wind turbines, against our transmitter station positions, radio link paths and cable routes, **I have determined that the proposed layout as shown does not pose an interference risk to the Eircom radio network and I can also confirm that there is no risk to any Eircom submarine cable in the Irish sea.**

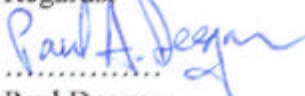
However as Eircom is committed to the principle of site sharing it is entirely possible that other operators would have their equipment located on our mast and our records may not show the paths of their radio links. Neither would we have records of any other operator's submarine cables. Therefore it is always advisable to contact all other radio equipment operators, both fixed line and mobile, in order to get their approval.

Further, if the layout or position of the proposed windfarm is altered in any way, please contact me again with the revised co-ordinates for approval.

I can be contacted at 01-413-4032, mob. 087-2310985 or e-mail pdeegan@eircom.ie should you need any further assistance or clarification,

Best wishes for a successful venture,

Regards,


Paul Deegan



Mr Damien Courtney
Saorgus Energy Ltd
Enterprise House,
Kerry Technology Park,
Listowel Road,
Tralee
County Kerry.

21 Jan 2005.

Re: Yours dated 03/11/04 and Kish & Bray Banks Offshore Wind Farm Project.

Dear Mr Courtney,

The ability to have the rotation of the turbines stopped in certain marine emergency situations is a standard requirement for the Irish Coast Guard for offshore Wind Farms. It would also be required that lighting/marks etc would be in compliance with IALA and IAA requirements.

The Irish Coast Guard will require to meet the developers for this project at an early stage before construction works commence in order to discuss emergency plans and procedures and to have details of vessels used during the project.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Eamon Torpay'.

Eamon Torpay
SAR Operations Manager.

Damien Courtney

From: "Paddy Boyd" <paddy@sailing.ie>
To: <damien.courtney@saorgus.com>
Cc: "Harry Hermon" <harry@sailing.ie>
Sent: 18 November 2004 11:41
Subject: Kish and Bray Banks Wind Farm Project

Dear Mr Courtney

Thank you for your letter in relation to the EIA for the proposed Kish and Bray Bank Wind Farm.

Initially we would comment that these are areas currently navigable by small craft and the establishment of a wind farm would effectively remove this considerable area from public usage.

We will consult with relevant affiliated bodies and my colleague, Harry Hermon, harry@sailing.ie, will contact you at a later stage.

Yours sincerely

Paddy Boyd
Chief Executive/Secretary General
t 2710100
e paddy@sailing.ie



Irish Water Safety

Comann Sábháilteacht Uisce

RECEIVED

BT IDc | DATE 17/11/04

The Long Walk, Ga. way, Ire
A: Bóthar Fada, Gaillimh, É
Tel: 091 - 56 44 01 | InCall
Fax: 091 - 56 47 00 | Email:
Website: www.iws.ie

Mr. Damien Courtney
Project Coordinator
Saorgus Energy Ltd
Enterprise House
Kerry Technology Park
Listowel Road
Tralee
Co Kerry

15th November 2004

Dear Damien,

Thank you very much for your letter on the Kish and Bray Banks – Proposed Offshore Wind farms dated 3 November 2004.

The Association welcomes the development of Wind farms and the use of renewable energy for our state as a long-term strategy in meeting the nations requirements of electrical power.

The existing IALA recommendations for structures of this type should be reviewed as a result of the large number of turbines being erected. The Association is concerned that a light curtain may be established as a result of the large number of turbines being erected. This may cause difficulties for seamen when navigating in their proximity at night or during periods of restricted visibility.

There is also a concern that these large developments of turbines will create a large radar shadow that may contribute towards a radar-assisted collision in their proximity. This matter needs to be considered to ensure the safe navigation of vessels in their proximity.

The use of RACONS should be considered when deciding on how best to mark and identify these navigational hazards and clearly identify safe navigational passages around them.

A safety exclusion zone should be considered around these navigational hazards in an attempt to reduce the likelihood of collisions. This is particularly important for small craft that will have made passages over the two areas for many years.

There will be an increased risk of drowning during the construction and erection of these turbines. The Association requests that all persons operating on or near the water during the project would wear a lifejacket at all times to minimize the risk of a drowning. The use of protective clothing e.g. dry suits or immersion suits should be considered to guard employees against cold shock and hypothermia should there be an accidental immersion. Service craft operating to and from the farms should encourage all passengers to wear their lifejackets when onboard.

It is not understood how "The marking of the wind farm on the shallow Kish and Bray banks will help to serve as a navigational aid for commercial and recreational marine traffic". Both commercial and leisure craft have made passages over these banks for centuries and should they suffer mechanical failure in close proximity to the farms then they run the risk of being carried by tide and or wind on to the farms with potentially disastrous results.

The Association has no difficulty with this submission being included in the Environmental Impact Statement. Should you wish to discuss these matters in greater detail then please do not hesitate to contact me.

Yours in safety



Lt Cdr John F M Leech
Chief Executive

Merchants Quay,
Kilrush,
County Clare

Tel: 086 8545450
Email: Simon.Berrow@iwdg.ie

RECEIVED
BY De [DATE 10/11/04]

9 November, 2004

RE: Kish and Bray Bank proposed windfarms

Dear Damien,

Thank you for your invitation to comment on the proposed wind farm development on the Kish and Bray Banks and its potential impact on cetaceans. This area is a good site for a number of cetacean species especially harbour porpoise, which is on Annex II of the Habitats Directive. Although data are limited, certainly there is evidence that Risso's dolphin use the site and it is possible that Minke whales may also during the summer and autumn.

We had quite a considerable input into the Codling Bank EIS in which our strongest argument was the importance of proper baseline data on the relative abundance and distribution of cetaceans, especially harbour porpoise, to enable any impact, positive or negative to be measured. The construction of offshore wind farms may have a beneficial effect in the long term through acting as artificial reefs and increasing the fish biomass in the area. Without proper baseline data any impact positive or negative cannot be quantified.

For this we recommend a power analysis is carried out designed to determine how many sightings need to be made to determine impacts at different spatial scales. Once you know how many sightings you require you can design a sampling methodology in the area of the proposed wind farm to collect these data. We would recommend fieldwork is carried out over at least 12 months to record any seasonal variation.

We would also wish to see an attempt to measure any transmission of sound or vibration into the sea through the turbine pylon and its attenuation with distance. We feel these data are essential to determine the spatial scale of any long term impact which may cause displacement etc.

The IWDG have over 7000 sighting records in its database, if you require us to generate a report on sightings in this particular area we are happy to do so. We charge €300 per day plus any expenses incurred and I estimate this review would take 2 days.

If you wish for any further clarification please contact me.

Many thanks



Dr Simon Berrow

Saorgus Energy Ltd

Enterprise House, Kerry Technology Park,
Listowel Road, Tralee, Co. Kerry
TEL + 353 66 7129144
FAX + 353 66 7190329
EMAIL info@saorgus.com
WWW www.saorgus.com

16 September 2011.

Corporate Governance,
Dept. Arts Heritage & the Gaeltacht,
23 Kildare St.
Dublin 2.

Re: Request under the Freedom of Information Act for Ornithological & Mammal Reports on the Arklow Banks Offshore Windfarm by Airtricity/SSE for the years 2008, 2009, 2010, 2011 to date.

Dear Sir/Madam,

We Saorgus Energy Ltd. are in process of developing an offshore windfarm in Dublin Bay and as part of our update submission to the Dept. of the Environment, Community and Local Government we are required to include data from other windfarms.

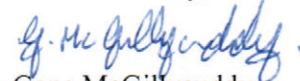
The Arklow Bank (Airtricity/SSE) offshore windfarm have been carrying out these surveys for the past number of years, all of which have been submitted to the Dept. (NPWS) and they are in the possession of the Dept. (NPWS).

We requested copies from the Dep. via our consultants Ecological Consultants Ltd. and directly with Airtricity/SSE, neither was forthcoming, hence the reason for the request via the Freedom of Information Act.

We require copies of the Ornithological and Mammal surveys carried out in the years 2008, 2009 2010 and 2011 to date.

A cheque for the fee of €15.00 is in the post today.

Yours Sincerely,



Gene McGillicuddy.
Mob: 086 245 4661.

PROTOCOL

between:

Saorgus Energy Ltd.,
and

RTE/Network.

concerning the wind-farm at

The Kish and Bray Offshore Banks in the Irish Sea.

"Developer" :

Saorgas Energy Ltd., Enterprise House, Kerry Technology Park, Listowel Road, Co. Kerry.

"RTÉ" :

The statutory body currently known as **Radio Telefis Éireann** and its assignees and successors in title in respect of its transmission network.

"Development" :

Proposed development by way of initial construction or intensification of use of a Windfarm at **Kish and Bray Offshore Banks, Irish Sea**

"Viewer(s)" :

Proprietor (or agent of proprietor) of a private residence or business premises where a television set, for which a current television licence is held, is used and/or a Broadcast radio receiver.

"Local Dealer" :

Mr. Eddie Totterdell, Manager, Totterdells, 16 Main Street, Bray, Co. Wicklow, being a television engineer/dealer carrying on business in the vicinity of the Development and nominated by agreement of both the Developer and RTÉ.

Interference on Viewers' Television Sets and/or Broadcast Radio Receivers

1. When RTÉ is put on notice, whether by telephone or written communication, that a Viewer is having problems with their reception of television or radio signals for which RTE is responsible, RTÉ will undertake a preliminary assessment, over the telephone or by other means of communication, and ascertain whether or not the Windfarm is a likely cause of the interference complained of.

Both parties to this Protocol note that the type of interference caused by electromagnetic disturbance emanating from Windfarms manifests itself in very specific ways on television sets and broadcast radio receivers.

2. The customer will be requested to contact the Local Dealer.
 - 2.1 The Local Dealer will arrange directly with the Viewer to make a visit to the Viewer's house and assess the cause of the interference. The Local Dealer will take whatever steps are necessary to remedy the interference.
3. The Local Dealer will prepare a brief report in writing which will be sent to the Developer and to RTÉ. If the Local Dealer is of the view that the interference is due to interference from the Development, the dealer will send an invoice in respect of the site visit and remedial work to the Developer (up to a maximum of €400.00) (such figure to be index linked – upwards only – by reference to the Consumer Price Index published by the Central Statistics Office, calculated on the basis of the average increase over the 12 month period preceding demand for reimbursement by RTÉ.). If the invoice in respect of the site visit and remedial work is likely to be in excess of Eur 400.00 (as adjusted), the Local Dealer must be required to contact both RTÉ and the Developer prior to carrying out the remedial work. The Developer, however, is the party primarily liable for the discharge of any amounts due in respect of any such site visit and remedial work, whether these amounts exceed €400.00 (as adjusted) or not. If the Local Dealer identifies that the problem is due to some other cause, the Local Dealer will invoice the Viewer in the usual way.
4. In the following paragraph the term "transposer site" shall mean one or more transposer sites if applicable.
5. Where the reception interference problem affects a number of Viewers in the same vicinity, and this is identified by the Local Dealer and/or RTÉ, it may be that it will be necessary for RTÉ to develop an alternative or additional transposer site within that locality.
 - 5.1 The Developer, in this instance, will be responsible for all the costs associated with the development of the new transposer site, where this transposer site is necessitated exclusively and wholly by the presence of the Development.
 - 5.2 The maximum expenditure incurred by RTÉ in the provision of the new transposer site (arising from sections 5 and 5.1) will be €125,000, (such figure to be index linked – upwards only – by reference to the Consumer Price Index published by the Central Statistics Office, calculated on the basis of the average

increase over the 12 month period preceding demand for reimbursement by RTÉ). A detailed estimate to be submitted to the Developer in advance for comment.

- 5.3 If the cost of acquiring and developing a new transposer site exceeds the sum of €125,000, or if the alternative transposer(s) is/are necessitated only partially by interference caused by the Development, then the Developer and RTÉ will enter into negotiations to ascertain how the cost of remedying the problem being experienced by Viewers in the locality might most equitably be met. The Developer, however, shall be the party primarily liable for the discharge of any amounts due in respect of the acquisition and development of a new transposer site to the extent that such an acquisition and development is attributable to the presence of the Development.
- 5.4 Where the acquisition and development of a transposer site is additional to the transposer(s) serving the locality prior to the commencement of operation of the Development, the Developer shall be liable to reimburse to RTÉ the ongoing operational costs of the said additional transposer for so long as same shall be necessary to counteract the interference with Viewers' reception caused by the Development, up to a maximum of €12,500 per annum (such figure to be index linked – upwards only – by reference to the Consumer Price Index published by the Central Statistics Office, calculated on the basis of the average increase over the 12 month period preceding demand for reimbursement by RTÉ).
- 5.5 Developer will be entitled to see copies of operational costs to the extent that company confidentially is not breached.
- 5.6 The Developer shall be entitled to retain its own engineer to inspect and report on the source of interference and if a transposer site is built, RTÉ undertakes to facilitate access to the installation in question for the purposes of carrying out any such inspection and/or tests necessary.
- 5.7 The Developer will indemnify RTÉ fully in respect of damage to the person or property of any such engineer or inspector as retained by the Developer, or any other agent or licensee of the Developer involved in or associated with such inspection and/or tests. The Developer will ensure that competent personnel only are deployed onto RTÉ property under the terms of this Clause and hereby indemnifies RTÉ in respect of any damage to RTÉ's property or personnel caused by the negligence of such engineer, inspector or other agent or licensee.

Interference with RTÉ installations (to include transmitter stations, transposers and, if applicable, link stations).

6. Where RTÉ detects interference with the reception of a Receive and/or transmission signal at a transposer site, RTÉ will investigate the cause of the interference and report in writing to the Developer if RTÉ determines that the interference is attributable in whole or in part to the Development.
 - 6.1 The Developer shall be entitled to retain its own engineer to inspect and report on the source of interference and RTÉ undertakes to facilitate access to the installation in question for the purposes of carrying out any such inspection and/or tests necessary.
 - 6.2 The Developer will indemnify RTÉ fully in respect of damage to the person or property of any such engineer or inspector as retained by the Developer, or any other agent or licensee of the Developer involved in or associated with such inspection and/or tests. The Developer will ensure that competent personnel only are deployed onto RTÉ property under the terms of this Clause and hereby indemnifies RTÉ in respect of any damage to RTÉ's property or personnel caused by the negligence or such engineer, inspector or other agent or licensee.
 - 6.3 Engineers representing both RTÉ and (if applicable) the Developer, will agree on remedial works (e.g. reorientation of reception antennae) and the cost of same. RTÉ shall carry out the necessary remedial works and the cost of same shall be discharged/reimbursed to RTE by the Developer (subject to the provisions of Clause 7 below).
- 7 In the following paragraph, the term "installation" shall mean one or more installation sites if applicable.
 - 7.1 In the event that an additional or alternative installation is required in order to overcome Reception or Transmission problems caused exclusively or partially by the Development, RTÉ shall identify a new location for such installation.
 - 7.2 The Developer shall be responsible for all costs associated with the development of the new installation (e.g. repeat broadcasting station), where the new installation is necessitated exclusively by interference caused by the Development, up to a maximum of €125,000 (such figure to be index linked – upwards only – by reference to the Consumer Price Index published by the Central Statistics Office, calculated on the basis of the average increase over the 12 month period preceding demand for reimbursement by RTÉ). The projected costs are to be submitted to and agreed with the Developer prior to development of the new installation.
 - 7.3 Where the likely costs of such additional or alternative installation exceed €125,000 (as adjusted), or if the interference is to a link site, or where the additional or alternative installation is necessitated only partially by interference caused by the Development RTÉ and the Developer shall negotiate and determine between them how the costs of this new development might most

equitably be met. Both parties note that the primary liability to discharge such additional costs whether less than or more than €125,000 (as adjusted) shall rest with the Developer under this Protocol.

- 7.4 Where the acquisition and development of a transposer site is additional to the transposer(s) serving the locality prior to the operation of the Development, the Developer shall be liable to reimburse to RTÉ the ongoing operational costs of the said additional transposer for so long as same shall be necessary to counteract the interference with Viewers' reception caused by the Development, up to a maximum of €12,500 per annum (such figure to be index linked – upwards only – by reference to the Consumer Price Index published by the Central Statistics Office, calculated on the basis of the average increase over the 12 month period preceding demand for reimbursement by RTÉ.
- 7.5 Developer will be entitled to see copies of operational costs to the extent that company confidentially is not breached.
- 8 In the event of RTÉ and the Developer failing to come to agreement on any of the matters referred to above, both RTÉ and the Developer agree to jointly retain the services of a suitable conciliator (to be nominated by the President for the time being of the Institution of Engineers of Ireland in default of agreement between RTÉ and the Developer on this point) to assess the issues and assist them in, if possible, arriving at a satisfactory conclusion to their negotiations on the disputed point.
- 8.1 RTÉ and the Developer shall jointly share the costs incurred in such a conciliation process, up to a maximum of €2,500 (excluding VAT) each. In the event that the total costs of a conciliation process shall exceed €5,000 (excluding VAT), then the costs of the conciliation shall also be a matter to be discussed and agreed by both parties with the assistance of the conciliator, if necessary.
- 9 Both RTÉ and the Developer agree that neither of them will resort to legal proceedings unless and until such time as this conciliation process shall have been undertaken by both of them, save in the event of a particular emergency where injunctive relief is sought by either party.

Dated this 7th day of November ~~2008~~ 2011

Signed for and on
behalf of RTÉ

E. Sheahan

(authorized signatory)

Signed for and on behalf
of the Developer

Michael Barry (DIRECTOR)

(authorized signatory)



An Roinn Ealaíon, Oidhreachta agus Gaeltachta

Department of Arts, Heritage and the Gaeltacht

*7 Ely Place
Dublin 2*

Tel 01 888 3295

Mr Gene McGillicuddy
Saorgus Energy Ltd
Enterprise House
Kerry Technology Park
Listowel Road
Tralee

17th October 2011

Re FOI Request FOI/AHG/2011/12

Dear Mr McGillicuddy

I refer to your request under the FOI Acts.

I have been unable to find any reports held by this Department relating to your request .

Yours sincerely

Ciaran O'Keeffe
National Parks and Wildlife Service



ecoserve
Ecological Consultancy Services

B23 KCR Industrial Estate
Ravensdale Park, Kimmage
Dublin 12, Ireland.
Tel: +353 (0)1 5079670
E-mail: info@ecoserve.ie
Web: www.ecoserve.ie

Development Applications Unit,
Built Heritage and Architectural Policy,
Department of Arts, Heritage and the Gaeltacht,
Newton Road,
Wexford

11th August 2011

Dear Sir/Madam,

I am writing to you in relation to a proposed offshore wind energy project (the Dublin Array project - Saorgus Energy Ltd.) in order to provide you with further information on the proposed wind farm which has been in the permitting process since 2005. We would like to give the National Parks and Wildlife Service the opportunity to feed into the process at this stage and make comment

The proposed project on the Kish Bank and the Bray Bank would be developed over two construction seasons and would consist of up to 145 wind turbines, each with a capacity of at least 3.6 MW, leading to a minimum total installed capacity of 522 MW. This project is one of two offshore wind farms off the east coast to have received a grid connection offer from Eirgrid under the "Gate 3" round of offers designed to meet Ireland's 2020 renewable energy targets.

The wind turbines would be the generic three-bladed type that consists of a horizontal nacelle located on top of a tubular tower. At present, wind turbines having a capacity of up to 6 MW are being designed. The capacity of turbines to be used on any given phase of the project would depend on the capacity of turbines that is commercially available at that time. The distance from mean sea level (MSL) to the axis of rotation of the blades would be up to 100 m, and the rotor diameter would be up to 120 m in diameter, resulting in a maximum tip height above sea level of 160 m. The resulting minimum distance from mean sea level to the blade tips would be 40 m.

The turbines would be finished in a mid grey colour with a semi-matt finish, in compliance with best practice recommended by wind turbine manufacturers. The base of each turbine would be painted with yellow markings to aid sea navigation, as recommended by the Commissioners of Irish Lights. In addition, turbines would be fitted with marine navigation lights and aviation lights, as specified by the Commissioners of Irish Lights and the Irish Aviation Authority.

The wind turbines would be arranged in a row pattern, four to five deep, running north-south along the banks. Turbines within a row would be placed approximately 500 m apart, with rows also being separated by 500 m. This layout arrangement would result in a uniform appearance when viewed from land in that, from most viewpoints, avenues of turbines would be seen along the horizon.

The total area of the proposed lease area is approximately 54 km². A meteorological monitoring mast with a height of up to 100 m above mean sea level would be located within this area to record meteorological data from the offshore wind farm site.

So you are aware, Saorgus Energy Ltd. commissioned and carried out extensive baseline surveys on the study area including archaeology and marine ecology. While the original surveys were carried out in 2000-2001, these have been repeated in recent years, the latest of which were the seabird and marine

mammal surveys in 2010-2011. These will provide the most up-to-date relevant information in the updated EIS and AA to allow an informed decision on the application for a foreshore lease.

At this stage we are simply looking to ascertain your general views and any concerns which we would hope to address within the updated EIS and AA. There will be further opportunities to comment on the project once it goes out to public consultation.

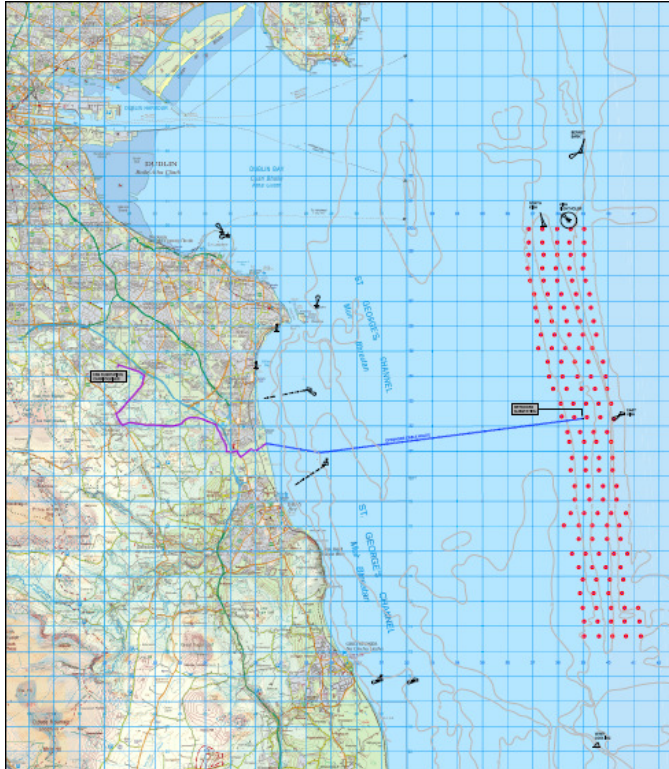


Figure 2. Proposed site layout and cable route for the Dublin Array project

I would be grateful to receive any comments you may have at this stage. If you have any queries please do not hesitate to get in touch.

Best Regards

Dr Róisín Nash
Managing Director
roisin@ecoserve.ie
(01) 5079670



An Roinn
Ealaíon, Oidhreachta agus Gaeltachta

Department of
Arts, Heritage and the Gaeltacht

20th September 2011

Dr Roisin Nash,
Managing Director,
Ecoserve Ecological Consultancy Services,
B23 KCR Industrial Estate,
Ravensdale Park, Kimmage
Dublin 12, Ireland.

Our Ref: G Pre 00057/2011

Re: Proposed Offshore Windfarm Development at Kish Bank and Bray Bank

Dear Dr. Nash,

I refer to your letter of 11th August seeking observations on the above proposed development. Please find below the nature conservation recommendations of the Department of Arts, Heritage and the Gaeltacht.

With regard to any EIS for this proposed development an ecological survey should be carried out on the proposed development site to survey the habitats and species present. Such surveys should be carried out by suitably qualified persons at an appropriate time of the year depending on the species being surveyed for. The EIS should include the results of the surveys. With regard to any existing records the data of the National Parks and Wildlife Service (NPWS) should be consulted at www.npws.ie and the data of the National Biodiversity Data Centre should be consulted at <http://www.biodiversityireland.ie/>. The EIS should also address the issue of invasive alien species such as Japanese Knotweed and detail the methods required to ensure they are not accidentally introduced or spread during construction of the onshore parts of this project.

The impact of the proposed development on the flora, fauna and habitats present should be assessed. In particular the impact of the proposed development should be assessed with regard to:

- Natura 2000 sites, i.e. Special Areas of Conservation (SAC) designed under the EC Habitats Directive (Council Directive 92/42/EEC) and Special Protection Areas designated under the EC Birds Directive (Council Directive 79/409 EEC),
- Other designated sites, or sites proposed for designation, such as Natural Heritage Areas, Nature Reserves and Refuges for Fauna or Flora designated under the Wildlife Acts of 1976 and 2000,
- Habitats listed on annex I of the Habitats Directive,
- Species listed on Annexes II and IV of the Habitats Directive,
- Habitats important for birds,
- Birds listed on Annex I of the Birds Directive,
- The impact on any flight paths of bird and bat species,
- Species protected under the Wildlife Acts including protected flora,
- Habitats that can be considered to be corridors or stepping stones for the purpose of article 10 of the Habitats Directive,
- Red data book species,
- and biodiversity in general.

Where negative impacts are identified suitable mitigation measures must be detailed if appropriate.

With regard to the marine portion of the project please consult our marine guidelines at <http://www.npws.ie/marine/bestpracticeguidelines>. Should the survey work show that the wind turbines would impact on bird flight paths, such as migratory routes, there will be a need for further consultation with the National Parks and Wildlife Service of this Dept.

The project should be screened for appropriate assessment (AA) and if necessary subject to appropriate assessment. The EIS and AA should also assess cumulative impacts with other plans or projects if applicable.

In addition we refer you to the documents listed below which may be of use to you.

The final draft EU Guidance on Wind Energy Developments and Natura 2000 which can be downloaded from

http://circa.europa.eu/Public/irc/env/wind_nature/library?l=/final_draft_guide/guide_march_2010doc/EN_1.0_&a=d

The Departmental Wind Energy Planning Guidelines which can be downloaded from <http://www.environ.ie/en/Publications/DevelopmentandHousing/Planning/FileDownload.1633.en.pdf>

Best Practice guidance for Habitat Survey and Mapping by George F Smith, Paul O'Donoghue, Katie O'Hora and Eamon Delaney, 2011, The Heritage Council, which can be downloaded from their website at <http://www.heritagecouncil.ie/wildlife/publications/>.

The Departmental guidance document on Appropriate Assessment available on the NPWS web site www.npws.ie at

<http://www.npws.ie/media/npws/publications/codesofpractice/AA%20Guidance%2010-12-09.pdf>.

The EU Commission guidance entitled "Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC" which can be downloaded from

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf.

Kindly forward any further information received; or in the event of a decision being made a copy of same should be forwarded to the following address as soon as it issues:

The Manager,
Development Applications Unit,
Department of Arts, Heritage and the Gaeltacht,
Newtown Road,
Wexford.

Alternatively, documentation associated with the above can be referred electronically to the DAU at the following address:

manager.dau@ahg.gov.ie

In addition, please acknowledge receipt of these observations by return.

Is mise le meas,

A handwritten signature in black ink, appearing to read 'David Tuohy', is positioned above a solid horizontal line.

David Tuohy,
Development Applications Unit
Tel: (053) 911 7380
E-mail: david.tuohy@ahg.gov.ie

Mr Damien Courtney
Saorgus Energy Ltd
Kerry Technology Park
Listowel Road
Tralee
Co Kerry

14 July 2010

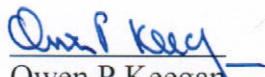
Dublin Array - Onshore Cable Works

Dear Mr Courtney

I refer to our recent telephone conversation in relation to the above matter. I am pleased to confirm that it is Council policy to facilitate major energy infrastructure projects.

In this regard I wish to advise you the Council is agreeable in principle to issue your firm with the required road opening licences and wayleaves to allow you install the necessary ducting and cabling between the landfall site and the ESB Sub Station in Carrickmines, subject to agreement on the route and compliance by your firm with the Council's standard terms and conditions for road opening licences and wayleaves.

Yours sincerely


Owen P Keegan
County Manager

