



Pre-Application Consultation Report

Dounreay Trì Floating Wind Demonstration Project

Dounreay Trì Limited
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Prepared RES Offshore

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Contents

	Executive Summary.....	
1	Introduction	1
2	Background	2
3	Legislative Context and Regulatory Requirements.....	5
4	Pre- Application Consultation	6
	4.1 Stakeholder engagement.....	6
	4.2 Scoping.....	9
	4.3 Stakeholder drop-in session.....	10
	4.4 Public Event.....	11
	4.5 Project webpage	13
5	Conclusion.....	14
	Annex A – Stakeholder List	
	Annex B – Feedback from Stakeholder Drop-in Session.....	
	Annex C – Public Event Boards	
	Annex D – Feedback from Public Event	

List of Figures

Figure 2-1	Offshore site, export cable corridor and onshore study area	2
Figure 2-2	Onshore study area - including indicative landfall options, substation options and cable corridors	4
Figure 4-1	Stakeholder drop-in session, Thurso. February 2016.....	10
Figure 4-2	Public Notice	12
Figure 4-3	Public Event, Thurso. April 2016.....	13

List of Tables

Table 2-1	Offshore Site Coordinates.....	3
Table 4-1	Meetings and engagement to date.....	6

Executive Summary

As part of the Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013 a formal pre-application submission is required for those activities with the potential to have significant impacts upon the environment, local communities and other legitimate uses of the sea. The purpose is to allow local communities, environmental groups and other interested parties to comment upon proposed marine developments at an early stage, before a formal application is made to Marine Scotland Licensing Operations Team (MS-LOT).

To meet these regulations Dounreay Trì Limited has undertaken a number of pre-application consultation events during the preparation of the application for the Dounreay Trì Floating Wind Demonstration Project and associated environmental assessment. Pre-application consultation has included the following:

- Ongoing stakeholder engagement from site selection in September 2014 to the present day;
- Scoping consultation with 57 stakeholders which commenced on the 18th January 2016;
- A stakeholder drop-in session, held on the 9th February 2016 in Thurso, Caithness;
- A public event, held on the 9th April 2016 in Thurso; and
- Maintenance of a Dounreay Trì web page and associated project e-mail account.

The data provided at the public event fulfilled the pre-application regulations by providing the following information:

- Boards with the relevant project information;
- A description of the Dounreay Trì Floating Wind Demonstration Project; and
- A presentation of the possible visual impacts of the site from key landscape locations (Identified following consultation with MS LOT, Scottish Natural Heritage (SNH), and The Highland Council).

Key statutory consultees were informed of the public meeting and the reason for the marine license application six weeks prior to the consultation event being held.

1 Introduction

- 1.1 As part of the Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013 a formal pre-application submission is now required for those activities with the potential to have significant impacts upon the environment, local communities and other legitimate uses of the sea. The purpose is to allow local communities, environmental groups and other interested parties to comment upon proposed marine developments at an early stage, before a formal application is submitted to Marine Scotland Licensing Operations Team (MS-LOT).
- 1.2 This Pre-Application Consultation Report has been prepared by Dounreay Tri Limited ("the Applicant") to set out, in detail, the consultation programme undertaken by Dounreay Tri Limited on its proposals to build the Dounreay Tri Floating Wind Demonstration Project ("the Project"). The objective of the pre-application consultation (PAC) with local communities was to keep the public informed of the development of the Project from an early stage and to provide opportunities to comment on the proposed design. The process has aimed to improve the quality of the planning application by understanding the local views, mitigating negative impacts from an early stage, where possible, and by addressing any misunderstandings and issues prior to application.
- 1.3 Dounreay Tri Limited places a great deal of importance on open and transparent consultation, and thus has sought to involve local stakeholders and the local community from a very early stage of the Project. Consultation will continue as the Project progresses.
- 1.4 In line with current practice and guidance, this report details the methods behind the pre-application consultation, relevant stakeholders that have been consulted, the feedback that has been received and how it has been incorporated into the final application, to provide evidence of the PAC carried out.

2 Background

- 2.1 Hexicon AB is a Swedish design and engineering company that has developed a semi-submersible foundation for offshore wind power that hosts two Wind Turbine Generators (WTGs). Hexicon wishes to demonstrate this technology off Dounreay, Caithness.
- 2.2 In order to be eligible for 3.5 Renewable Obligation Certificates (ROCs) the Project must be commissioned and connected to the grid before 1st October 2018. Accordingly, Hexicon has created a Special Purpose Vehicle (SPV) called “Dounreay Tri Limited” for the sole purpose of developing, financing, constructing and demonstrating this technology within a site approximately 6km off Dounreay, Caithness (“the Site”) (Figure 2-1).
- 2.3 Dounreay Tri Limited (“the Applicant”) is proposing the Dounreay Tri Floating Wind Demonstration (“the Project”) which shall consist of:
- A two turbine offshore wind farm with an installed capacity of between 8 to 12 megawatts (MW), subject to final approval of The Crown Estate, at least 6 km off the coast at Dounreay, Caithness;
 - A single export cable to bring the power to shore immediately to the west of the Dounreay Restoration Site fence line; and
 - Subject to a Connection Offer from Scottish and Southern Energy Power Distribution (SSEPD), the associated onshore electrical infrastructure to connect the Project at, or near, the existing Dounreay 132/33/11kV substation.

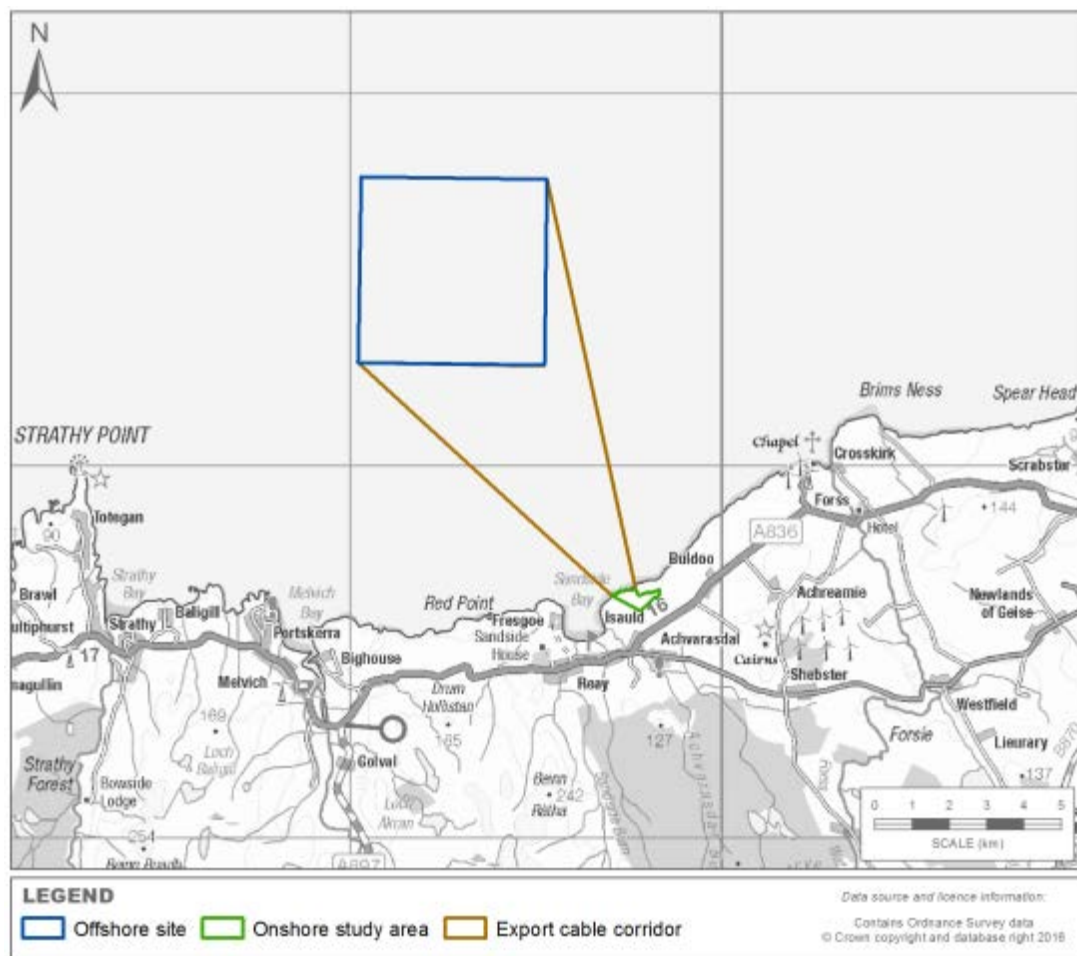


Figure 2-1 Offshore site, export cable corridor and onshore study area

- 2.4 Figure 2-1 depicts the Offshore Site, the export cable corridor and the onshore study area. Coordinates for the four corners of the Offshore Site are provided in Table 2-1.

Table 2-1 Offshore Site Coordinates

Corner	Northing	Westing
NW	58°40'25.6"	3°53'36.0"
NE	58°40'27.7"	3°48'25.7"
SE	58°37'46.0"	3°48'22.0"
SW	58°37'44.0"	3°53'31.9"

- 2.5 Figure 2-2 depicts the onshore study area which includes two cable landfall options, two potential locations for the onshore substation and indicative onshore cable corridors to connect the landfall and substation options. The exact location of the onshore infrastructure will be agreed with Scottish Ministers, in consultation with The Highland Council, once an onshore construction contractor is appointed. The onshore construction contractor would not be appointed until, and unless, deemed planning is granted by Scottish Ministers. Nevertheless it is possible to identify suitable cable landfall options and substation options to engage with stakeholders and the public.

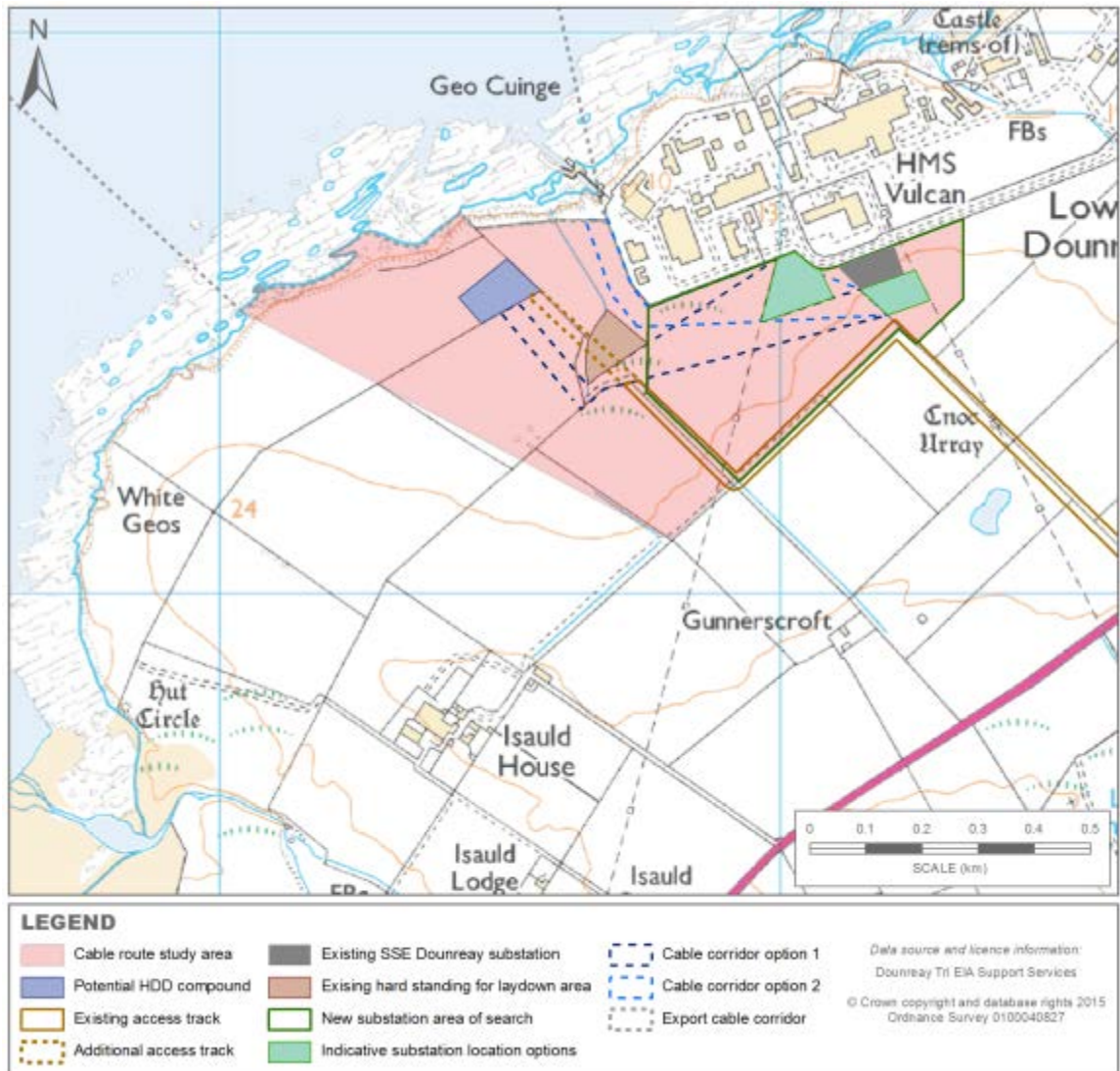


Figure 2-2 Onshore study area - including indicative landfall options, substation options and cable corridors

3 Legislative Context and Regulatory Requirements

- 3.1 Under Sections (22, 23 and 24) of the Marine (Scotland) Act 2010, Scottish Ministers may prescribe through regulations that certain classes or descriptions of licensable activity are subject to a pre-application consultation procedure and together with the Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013, set out what that process entails.
- 3.2 The Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013 ("the Regulations") were laid before the Scottish Parliament on 10th October 2013. They prescribe the marine licensable activities that are subject to pre-application consultation and, in combination with the Marine (Scotland) Act 2010, set out the nature of the pre-application process.
- 3.3 From 6th April 2014, the pre-application consultation report has been required as a pre-requisite the submittal of all relevant marine licence applications to MS-LOT.
- 3.4 If pre-application consultation is required, applicants must submit a Proposal of Application Notice at least 12 weeks prior to the submission of the planning application. The Notice must detail the consultation process the applicant will undertake including when, how and with whom. The planning authority will respond to the notice within 21 days stating whether the proposed consultation is sufficient or whether any additional consultation is required.
- 3.5 These requirements apply in respect of relevant applications in the Scottish Inshore Region from Mean High Water Springs (MHWS) to 12 nautical miles.

4 Pre- Application Consultation

- 4.1 The pre-application consultation process is intended to make for more open, positive working relationships between developers, stakeholder and local communities. Pre-applicant consultation provides, where possible, opportunities for the views of the community and stakeholders to be reflected in the development moving forwards.
- 4.2 This chapter sets out a record of the pre-application consultation which has been completed by the Applicant with regards to the proposed Dounreay Trì Floating Wind Demonstration Project, along with a summary of the outcomes or responses.

4.1 Stakeholder engagement

- 4.3 Table 4-1 sets out the key meetings and dialogue the Applicant has had to date with key stakeholders. A full stakeholder list is available at Annex A.

Table 4-1 Meetings and engagement to date

Meeting	Date	Purpose
2014		
Marine Scotland (Policy)	22 nd September	To discuss the selection of a demonstration site for a multi-turbine, floating wind project, in Scottish Waters. A key attraction is remaining eligible for 3.5 ROCs.
The Crown Estate	22 nd September	
Site Selection Workshop (a number of key stakeholders representing the human, physical and biological environment)	10 th October	To discuss: The selection of a demonstration site for a multi-turbine, floating wind project, in Scottish Waters. The data available/survey requirements for each site. Potential environmental impacts.
Marine Scotland (Science)	23 rd October	To discuss the survey data available and future survey plans for potential sites identified in NE Aberdeen site and the North Coast.
Scottish Fishermen's Federation	23 rd October	To discuss the fishing activity at both the NE Aberdeen site and the North Coast site, with a view to avoiding high value fisheries, where possible.
The Crown Estate	27 th November	To confirm Hexicon had selected the Dounreay site and to enquire about the leasing process and likely timescales.
SSEPD	19 th December	To discuss connecting at, or near, Dounreay substation.
2015		
Highlands & Islands	14 th January	To confirm that Hexicon had selected the Dounreay site and to discuss HIEs

Meeting	Date	Purpose
Enterprise (HIE)		ambition for a floating wind demonstration centre.
The Crown Estate	20 th January	To discuss the technology plan.
The Crown Estate	2 nd April	To discuss the development, technology and financing plans. To discuss leasing timescales and content.
SSEPD	7 th April	Call to discuss connection options and voltages at, or near, Dounreay Substation.
Landowners	16 th April	To introduce the Project and discuss access for onshore surveys.
Nuclear Decommissioning Authority (NDA)	16 th April	To confirm that Hexicon had selected the Dounreay site and to enquire about radiological contamination, existing offshore data sets and the NDA's work with local stakeholder groups.
The Highland Council	17 th April	To introduce the Project and discuss the development programme.
SSEPD	6 th May	To discuss grid connection application routes and timescales for Dounreay.
HIE	6 th May	To discuss a Memorandum of Understanding (MOU) regarding, grid capacity and sharing survey data.
Marine Scotland (MS-LOT) and SNH	12 th May	To introduce the Project and discuss the development programme. To set out the aerial and onshore ecological survey methods.
The Highland Council, SNH, SEPA, MS-LOT	10 th June	Highland Council Pre-Application Committee which discussed the proposal, consenting strategy and key environmental sensitivities.
Scottish Development International (SDI)	24 th June	Call with SDI to discuss the Scottish supply chain.
Landowners	14 th July	Meeting to discuss construction access.
HIE	15 th July	Meeting to discuss grid, MOU contents and highland ports.
Marine Scotland (MS-LOT)	17 th July	Review of complete development programme, consent determination period and consenting strategy.
Scottish Development International	4 th August	Call to arrange meetings with both Global Energy Group (Nigg) and the Port of Ardersier.

Meeting	Date	Purpose
Harland & Wolff	17 th August	Call to discuss availability and potential constraints both with the dry dock and Belfast Harbour.
Port of Ardersier	21 st August	Call with SDI, HIE and others to discuss potentially fabricating the platform at the Port of Ardersier, Nairn.
Global Energy Group	24 th August	Call with SDI, HIE and Global Energy Group to discuss potentially fabricating the platform at Nigg Energy Park.
UK Trade & Investment (UKTI)	10 th September	Call to discuss supply chain contacts.
UKTI	11 th September	Call to discuss project financing.
HIE	15 th September	Meeting to discuss progress with MOU.
The Crown Estate	13th November	To discuss a new leasing route.
2016		
Marine Scotland (MS-LOT)	18 th January	Scoping Request. 57 consultees were contacted and total of 26 responses were received, as specified and directed by MS-LOT.
Marine Scotland (MS-LOT)	29 th January	To discuss the aerial survey results and outline the approach to Habitats Regulations Assessment.
Stakeholder drop-in session	2 nd February	Key stakeholders were invited to a drop-in session at Thurso to ensure that the proposals took account of the importance of the area for tourism and recreation, commercial fisheries and local industry and community interests.
Global Energy Group	12 th February	Tour of Nigg Energy Park.
NDA	2 nd March	Call to discuss land ownership and access at Dounreay.
The Highland Council	3 rd March	To discuss programme and potential planning conditions.
RSPB	9 th March	To discuss the aerial survey results and outline the approach to Habitats Regulations Assessment.
The Highland Council	8 th March	To introduce the Project to local councillors.
HIE	24th March	Call to discuss decision to not take forward the Dounreay Demonstration Centre
Pre-Application Event	9 th April	Public consultation event in Thurso.

Meeting	Date	Purpose
The Highland Council	17 th May	Onshore site walkover with THC case officer.
Marine Scotland (MS-LOT) (MS-LOT)	20 th May	Gate check. Four external stakeholders consulted and external consultant advice requested, as specified and directed by MS-LOT.
Scottish Government, HIE and SDI	21 st June	Project update.
The Highland Council	6 th July	Visited key viewpoints along Caithness with THC case officer and landscape officer.

4.2 Scoping

4.4 Dounreay Tri Ltd requested a Scoping Opinion from Marine Scotland on the 3rd December 2015. On receipt of the Scoping Opinion request, the Scottish Ministers initiated a consultation on the contents of the Scoping Report. This commenced on 18th January 2016 and requests for consultations were sent to Scottish Natural Heritage (“SNH”), Scottish Environment Protection Agency (“SEPA”), the Northern Lighthouse Board (“NLB”), the Maritime and Coastguard Agency (“MCA”), The Highland Council (“THC”), the Orkney Islands Council (“OIC”) and various other bodies whom the Scottish Ministers considered likely to have an interest in the proposed application. Not including individual departments within bodies whom were consulted, 57 consultees were contacted and total of 26 responses were received. The scoping responses are outlined and addressed at the start of each chapter within the Environmental Statement.

4.5 The Scoping Report (2015) identified a potential landfall option which would have involved trenching across the east of Sandside Bay. This alternative has since been excluded because:

- A cable landfall at on the eastern flank of Sandside Bay would be complicated by the orientation of the proposed landfall site (facing across as opposed to straight out the bay) and presence of exposed rock in the foreshore area;
- Storm events are known to periodically expose the bedrock at Sandside Bay and could therefor expose/damage the export cable (*pers comm.* 2016);
- Access to beach is limited (narrow access track at far western end of the bay) and thus it is likely that a temporary access track would need to be established to allow vehicle access;
- There appear to be features of archaeological interest immediately to the east of Sandside Bay;
- Sandside Bay and the land to the east above MHWS is a Site of Special Scientific Interest (SSSI). Part of the SSSI includes the foreshore and the banks of the Burn of Isauld – i.e. the land immediately to the east of Sandside Bay. Consequently, SNH (2016) stated a preference for either the HDD or pinning options rather than trenching; and
- Historic radioactive particles have been found on the beach at Sandside Bay. Works within this area could unearth additional particles. Whilst the probability

of coming into contact with a relevant particle at Sandside Bay is one in 80 million (DSRL, 2016). It seemed unnecessary to continue with an option which was already technically and environmentally unfavourable (see points above).

4.3 Stakeholder drop-in session

- 4.6 A stakeholder drop-in session was held on the 2nd February 2016 between 10am and 8pm at Caithness Horizons, Thurso (Figure 4-1).
- 4.7 57 stakeholders representing tourism and recreation, commercial fisheries, local industry and community interests were invited to the drop-in session. Seven stakeholders attended the event and one responded afterwards, via email.



Figure 4-1 Stakeholder drop-in session, Thurso. February 2016

(RES, 2016)

- 4.8 Those whom attended or responded noted:
- The monitoring and clean-up of particles at Sandside Bay and offshore;
 - The “no take” fishing zone around the Dounreay cooling water outfall;
 - Project timescales, including the selection of any operations and maintenance facilities;
 - Possible sites of archaeological interest on the eastern flank of Sandside Bay;
 - Sea kayaking routes, which tend to “hug” the coast, start at Sandside Bay and head west; and
 - Yachting routes, which presented no concern but cautioned that vessels used during construction might want to avoid the waters just off Dounreay during large swell and at low tide as the seabed is saw toothed and larger vessels could become trapped.
- 4.9 Feedback from the stakeholder drop-in session is presented in Annex B.

4.4 Public Event

- 4.10 A pre-application, public consultation event was held on the 9th April 2016. The event was a drop in style event held between 10:00 and 17:00 at:

Caithness Horizons Museum
High Street
Thurso
KW14 8DD

Caithness Horizons Museum has step free access from the high street.

- 4.11 An advert was produced (Figure 4-2) and advertised in the following places:

- John O’Groats Journal – Friday 26th February 2016; and
- Caithness Courier – Wednesday 24th February 2016.

The advert briefly details the proposed project, where further information can be found, details of the time and place of the event.

Public Notices

DOUNREAY TRI LIMITED

MARINE (SCOTLAND) ACT 2010 THE MARINE LICENSING (PRE-APPLICATION CONSULTATION) (SCOTLAND) REGULATIONS 2013

NB – DATE CHANGED TO 9TH OF APRIL

Notice is hereby given that Dounreay Tri Limited, (company registration No. SC515140, Östgötagatan 100, 11664 Stockholm, Sweden) plans to hold a pre-application consultation event regarding the proposed floating offshore wind demonstration project located within a site approximately 6 km off Dounreay, Caithness.

Dounreay Tri Limited is proposing to demonstrate a floating offshore wind platform that hosts two wind turbines. The project shall consist of:

- A single floating platform that hosts two wind turbines with a combined capacity of between 8 to 12 megawatts;
- A single marine power cable, to be buried in or on the seabed, to bring the electricity to shore at, or near, Sandside Bay, Caithness; and
- A single onshore cable and associated onshore electrical infrastructure to connect the Project to the grid at, or near, the existing electrical infrastructure at Dounreay.

OFFSHORE SITE COORDINATES

CORNER	NORTHING	WESTING
NW	58040'25.6"	3053'36.0"
NE	58040'27.7"	3048'25.7"
SE	58037'46.0"	3048'22.0"
SW	58037'44.0"	3053'31.9"

Further information, can be obtained concerning the proposed project from:

www.hexicon.eu/projects/dounreaytri

The pre-application consultation event will be held from 10am to 5pm on Saturday the 9th of April (09/04/2016) at:

**Caithness Horizons Museum
High Street
Thurso KW14 8DD**

Persons wishing to provide comments on the proposed offshore wind farm and the associated onshore electrical infrastructure can do so by e-mail or writing to Marcus Thor (Project Director) at:

Email: Dounreay@hexicon.eu
Or by post to: C/O RES Offshore
Forsyth House
93 George Street
Edinburgh, EH2 3ES (not later than 30/05/2016)

Comments should be dated and should clearly state the name (in block capitals) and full return email or postal address of those making comment.

Comments made to the prospective applicant are not representations to the Scottish Ministers. If Dounreay Tri Limited submits an application for a marine licence to the Scottish Ministers, an opportunity will be given for representations to be made to the Scottish Ministers on the application.

Figure 4-2 Public Notice

- 4.12 The public event displayed details of the proposed development through a series of display boards throughout the room, including projections of the visual aspects of the offshore and onshore infrastructure from key locations. The slides presented are available at Annex C. Photographs of the public event are shown in Figure 4-3.



Figure 4-3 Public Event, Thurso, April 2016

(RES, 2016)

- 4.13 Three representatives from Dounreay Tri Ltd were present to answer specific questions about the development.
- 4.14 There were only two attendees and there have been no subsequent emails to the Dounreay inbox (as of 12th July 2016).
- 4.15 The first attendee was a student from Toronto. They asked how the platform is tethered and how it operates.
- 4.16 The second attendee was from Caithness and noted that the demonstrator would fit in well with the local heritage given the first fast breeder reactor was demonstrated at Dounreay in the 1950s. Locating the onshore electrical infrastructure adjacent to the existing industrial landscape at the Dounreay Site was considered positive.

4.5 Project webpage

- 4.17 A project webpage is maintained to provide updates and links to key documents: www.hexicon.eu/projects/dounreaytri

5 Conclusion

- 5.1 In accordance with the current and correct legislation and guidance, set out in Chapter 3, Dounreay Trì Limited has fulfilled the statutory consultation activity and documented it within this report.
- 5.2 The Scoping Report (2015) identified a potential landfall option which would have involved trenching across the east of Sandside Bay. This option has since been excluded from the as a result of dialogue with SNH and stakeholders identified this route as being technically and environmentally challenging.
- 5.3 No further specific comments on the Project design have been received from stakeholders or the public during the pre-application consultation, therefore there have not been any further alterations to the proposals for the Dounreay Trì Floating Wind Demonstration Project.

Annex A – Stakeholder List

- Brims Tidal Array
- British Telecom (Radio Network Protection Team)
- Caithness Chamber of Commerce
- Caithness District Salmon Fishery Board
- Chamber of Shipping
- Civil Aviation Authority (CAA)
- Crown Estate (Offshore wind)
- Defence Infrastructure Organisation (DIO)
- Department of Energy & Climate Change (DECC)
- Dounreay Site Restoration Limited (DSRL)
- Dounreay Stakeholder Working Group
- Durness Development Group
- Highlands and Islands Airports
- Highlands and Islands Enterprise
- Historic Environment Scotland
- Inshore Fisheries Group
- Joint Nature Conservation Committee (JNCC)
- Joint Radio Company
- Marine and Coastguard Agency (MCA)
- Marine Scotland – Licensing and Operations Team
- Marine Scotland – Science
- MeyGen
- National Grid
- National Inshore Fishery Groups
- NATS
- North Shore Surf Club
- Northern District Salmon Fishery Board
- Northern Lighthouse Board (NLB)
- Nuclear Decommissioning Authority (NDA)
- Oil & Gas UK
- Oil and Pipelines Agency
- OpenHydro
- Orkney ferries

- Orkney Fisheries Association
- Orkney Island Council
- Orkney Islands Council Marine Services
- Orkney Islands Sea Angling Association
- Orkney Sailing Club
- Pentland Canoe Club
- Pentland Firth Yacht Club
- Reay Golf Course
- RNLI (Lochinver)
- RNLI (Thurso)
- Royal Society for the Protection of Birds (RSPB)
- Royal Yachting Association (RYA) Scotland
- Scottish Creel Fishermen's Federation
- Scottish Environmental Protection Agency (SEPA)
- Scottish Fishermen's Federation
- Scottish Government – Planning & Architecture Division
- Scottish Natural Heritage (SNH)
- Scottish Pelagic Fishermen's Association
- Scottish Sea Farms
- Scottish Sub Aqua Club
- Scottish Water
- Scottish Wildlife Trust
- Scrabster Harbour Trust
- Seafish
- Sport Scotland
- SSE
- The Highland Council
- Transport Scotland
- UK Hydrographic Office (UKHO)
- Vulcan
- Whale & Dolphin Society (WDS)
- Wick Harbour Authority

Annex B – Feedback from Stakeholder Drop-in Session

Dounreay Trì Floating Wind Demonstration Project Stakeholder Consultation Feedback – 2nd February 2016

Introduction

Dounreay Trì Limited is proposing to demonstrate a floating offshore wind farm consisting of two turbines, located on a single semi-submersible floating platform, with an installed capacity of between 8 to 12 megawatts (MW) at least 6 km off Dounreay, Caithness. It is proposed that a single export cable will bring the power to shore at, or near, Sandside Bay and will connect to an onshore substation and associated electrical infrastructure near Dounreay Substation.

Purpose

Dounreay Trì Limited hosted a drop-in session to meet with key stakeholders and ensure that the proposals take account of the importance of the area for tourism and recreation, commercial fisheries, local industry and community interests. A drop-in session was held on:

Date	Time	Location
2 nd February 2016	10:00 – 20:00	Caithness Horizons Old Town Hall, Thurso

Summary of stakeholder feedback

Stakeholder	Comments
<div style="background-color: black; width: 100px; height: 15px; margin-bottom: 5px;"></div> DSRL	<p>Confirmed monitoring and survey activity:</p> <ul style="list-style-type: none"> • Carry out beach surveys at Sandside Bay approximately every two weeks per month throughout the year (surface driven with detectors, no ploughing undertaken) • Seabed monitoring has ceased • Monitoring of Dounreay foreshore which includes sediment sampling and water sampling several times per month • Monitoring activity is restricted during bird breeding season • Noted that the depth of sand at Sandside Bay varies significantly to the extent that storms can expose bedrock.
	<p>Confirmed that creel fishing occurs up to the boundary of the fishing exclusion zone (2 km buffer from effluent pipe). It is</p>

Stakeholder	Comments
	known that the exclusion zone acts as a 'nursery site' for target species.
██████████ Caithness Renewables	Keen to know what ports will be used for servicing the project and made suggested base at Loch Eriboll Harbour, which Durness Development Group are looking to develop to increase capacity for larger vessels. Capital works would be required to bring Durness into use.
██████████ Caithness Chamber of Commerce.	Interested to find out any economic activity the project could generate, highlighted Scrabster as a potential O & M port. She asked if construction could take place in Caithness. No decision has been made. Whilst the fabrication of the platform would occur in a large dry dock the fabrication of other components, such as anchors, could occur in Caithness, subject to agreeing commercial terms. Would like presentation sent to her for distribution to members.
██████████ Forss Technology Park	Explained that her boss ██████████ was unable to attend but would be interested to discuss options to supply office and storage space close to onshore site. He will attend public meeting on the 12 March.
██████████ Caithness West Community Council and Dounreay Stakeholder Working Group.	Could not see any immediate issues that would cause people to object. He has not had any representations so far. He has seen a build-up of resistance to onshore wind projects. There are some archaeology interests in the corner of Sandside bay that might need to be investigated. Suggested speaking to ██████████, the present landowner's grandfather.
██████████ Pentland Canoe Club	Too far offshore for any issues as kayakers tended to hug the coast. The main kayaking routes in the area tend to start at Sandside Bay and tended to head west. He opined that the area immediately to the east of Sandside Bay was not a particularly interesting area for kayaking. Would like to ensure kept informed about cable laying activities so they can avoid area. Confirmed that the canoe club are included on the circulation list for Notice to Mariners in Caithness.
Councillor ██████████	Thought the project could be good for area, interested in planning issues and timescales, thought there could be some interest from Scrabster Harbour for the O & M base.
██████████ Pentland Firth Yacht Club [Response via email, 08/02/2016]	I was unavailable for the open day in Thurso but the Pentland Firth Yacht Club has been approached as a stakeholder as part of the consultation processes and our members have not expressed any concern. Generally the Club supports renewable energy projects. We would warn about the seas

Stakeholder	Comments
	just off Dounreay for larger boats diverting close in-shore as the sea bed is saw toothed here and in a big swell and low water a larger craft can get trapped between the saw teeth.

Annex C – Public Event Boards

Pre-Application Consultation

DounreayTri

OFFSHORE WIND FARM

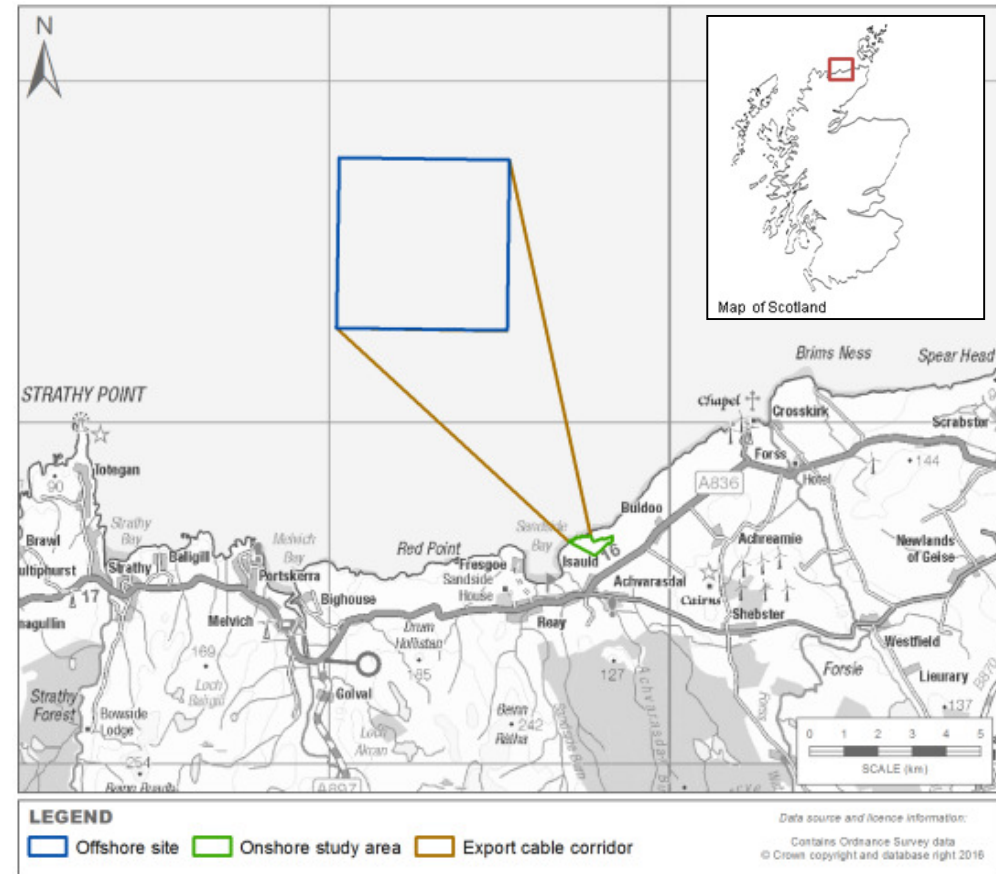


The Dounreay Trì Project



Dounreay Trì Limited ("the Applicant") is proposing to demonstrate a single floating offshore platform called Dounreay Trì ("the Project") which shall consist of:

- A two turbine offshore wind farm with an installed capacity between 8 and 12MW, at least 6km off Dounreay, Caithness, Scotland
- A single export cable to bring the power to shore
- The associated onshore electrical infrastructure to connect to the grid at, or near, Dounreay.



Dounreay Trì Limited



Hexicon AB is a Swedish design and engineering company.

Hexicon has developed a semi-submersible foundation for offshore wind power that hosts two wind turbines.

Hexicon wishes to demonstrate this technology at Dounreay because Scotland offers the right policies and support for floating offshore wind projects.

Hexicon has created a company called “Dounreay Trì Limited” for the sole purpose of developing, financing, constructing and demonstrating this technology off Dounreay.



Why Dounreay?

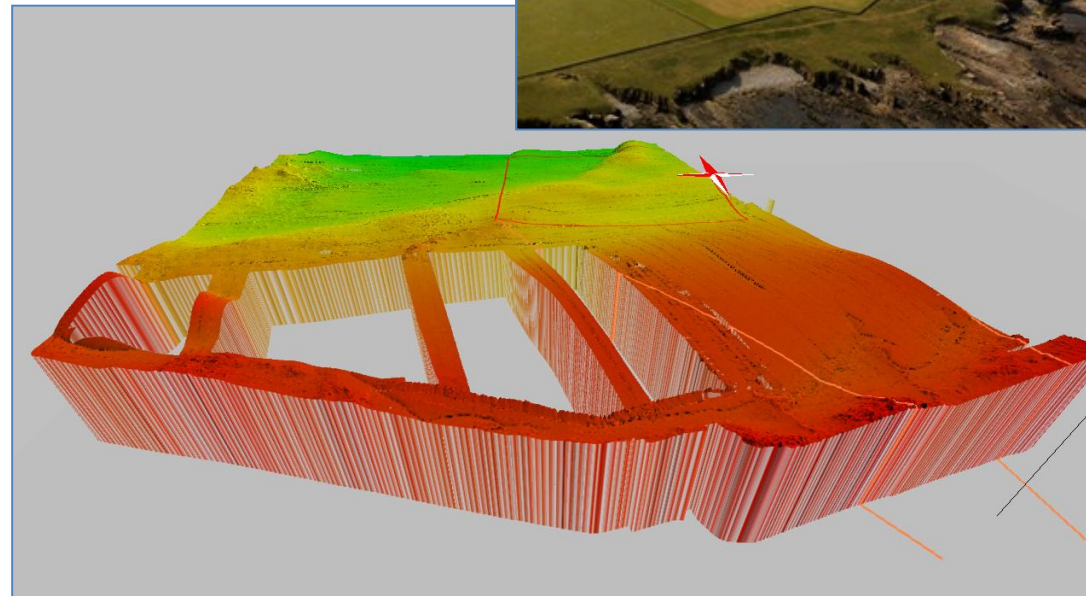


The Dounreay Site was identified by the Scottish Government as being potentially suitable for floating offshore wind in 2013.

The site offers deep water, close to shore so there is no need to install an offshore substation or wind measurement mast.



The sea bed is mostly gravel and sand, according to a seabed survey by Marine Scotland Science (2014).



The planning process

The Project requires 3 planning approvals – which shall be sought simultaneously.

- 1. Section 36 of the Electricity Act:** To construct and operate an electricity generating station, such as a wind farm, with a capacity greater than 1 MW in Scottish Territorial Waters, consent is required from the Scottish Ministers under Section 36 of the Electricity Act 1989. This application shall be made to the Marine Scotland - Licensing Operations Team (MS-LOT).
- 2. Marine Licence:** a marine licence is required to construct, alter or improve any works, or deposit any object in or over the sea, or on or under the seabed. Applications to install the platform, mooring system and cable shall also be made to MS-LOT.
- 3. Onshore planning permission:** The Growth and Infrastructure Act 2013 allows for MS-LOT to 'deem' planning permission for onshore elements of offshore electricity generation schemes granted consent under Section 36 of the Electricity Act, which is the intention for this Project. So, a separate onshore planning application shall not be submitted to the Highland Council, rather deemed consent for the associated onshore infrastructure shall be sought as part of the Section 36 application. The Highland Council will thus advise MS-LOT.

Programme



Dounreay Trì Limited hopes to be ready to submit an application for a Marine Licence to the Scottish Government in June 2016.

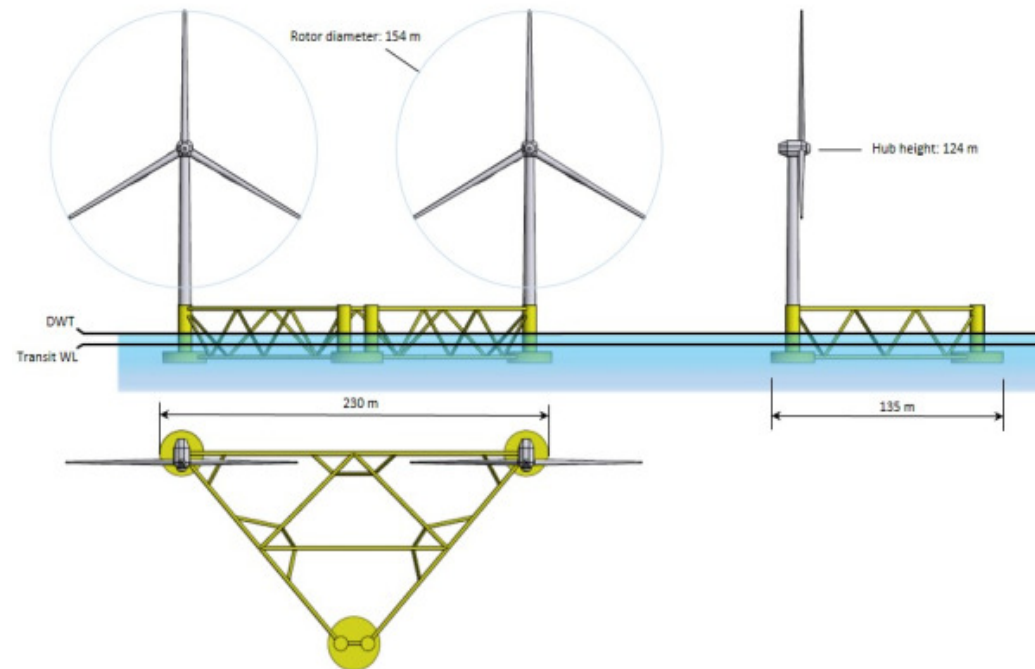
If consented, Dounreay Trì Limited would then seek to build the platform in a dry dock and then tow the platform to Dounreay in the summer of 2018 for final installation and commissioning.

	2017			2018			2018-2042	2043
	Q2	Q3	Q4	Q1	Q2	Q3		
Platform fabricated off-site in a dry dock								
Onshore substation construction								
Onshore cable installation								
Install mooring system								
Install export cable								
Hook up platform with WTG pre-installed								
Install scour and cable protection, if necessary								
Final commissioning								
Operation								
Decommissioning								

Offshore infrastructure

The main offshore components are:

- Two offshore wind turbines of between 4-6MW
- A semi-submersible foundation
- Mooring lines or chains which are fed through weight suspended beneath the platform
- Drag-embedment anchors
- One cable, buried, to bring the renewable electricity ashore
- Scour protection for anchors and the export cable, where necessary



NB: This figure shows the **largest** possible dimensions for the platform.

Turbine Envelope

The turbine envelope sets maximum and minimum turbine dimensions against which the environmental impacts of this Project have been assessed.

These minimum and maximum dimensions used to define the turbine envelope are based on current offshore wind turbine technology.

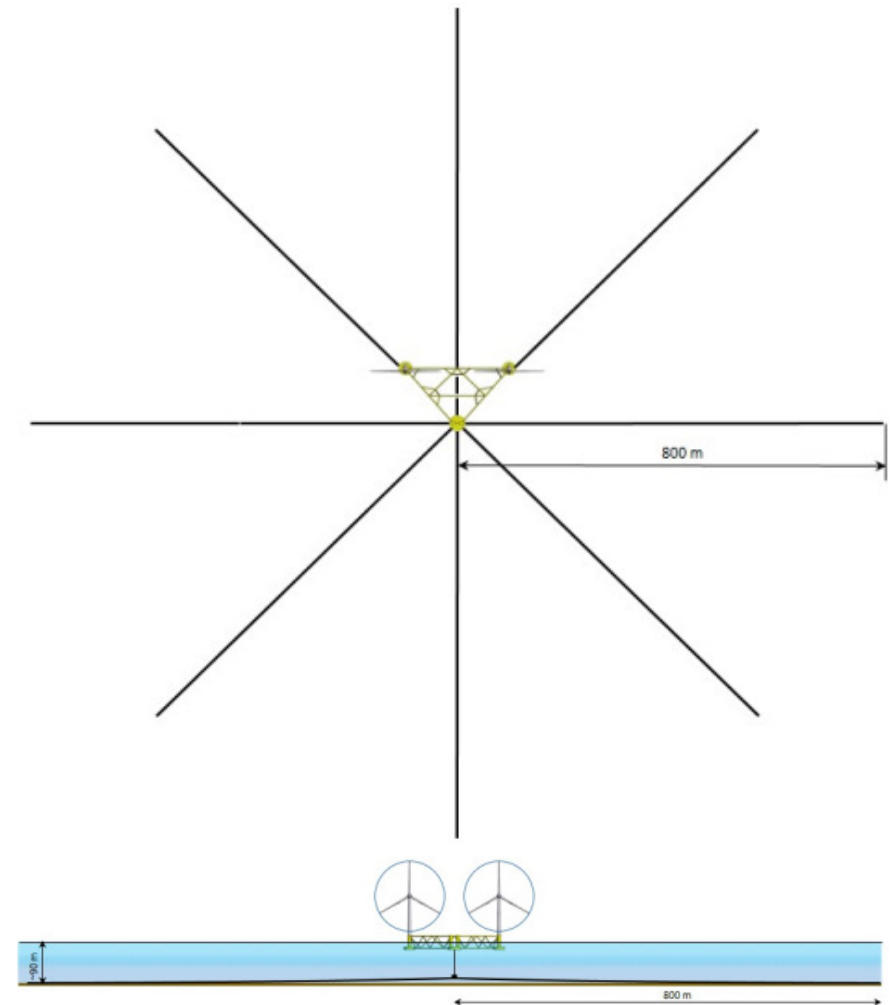
Nominal rating	Maximum rotor tip height (above MHWS)	Maximum number of turbines	Maximum rotor diameter	Maximum hub height (above MHWS)	Minimum air draft (above MHWS)
4 MW	185m	2	130m	120m	22m
5 MW	186m	2	132m	120m	22m
6 MW	201m	2	154m	124m	22m

Mooring System

The platform must rotate in order to reduce wake effects (i.e. turbulence) between the turbines. Wake effects occur when one turbine is down wind of the other.

The platform will use a passive mooring system which aligns with the prevailing tidal, wind and wave conditions – the same way a boat swings at anchor.

The Project will satisfy the safety requirements of the Maritime and Coastguard Agency (MCA), the Civil Aviation Authority (CAA) and the Northern Lighthouse Board (NLB).



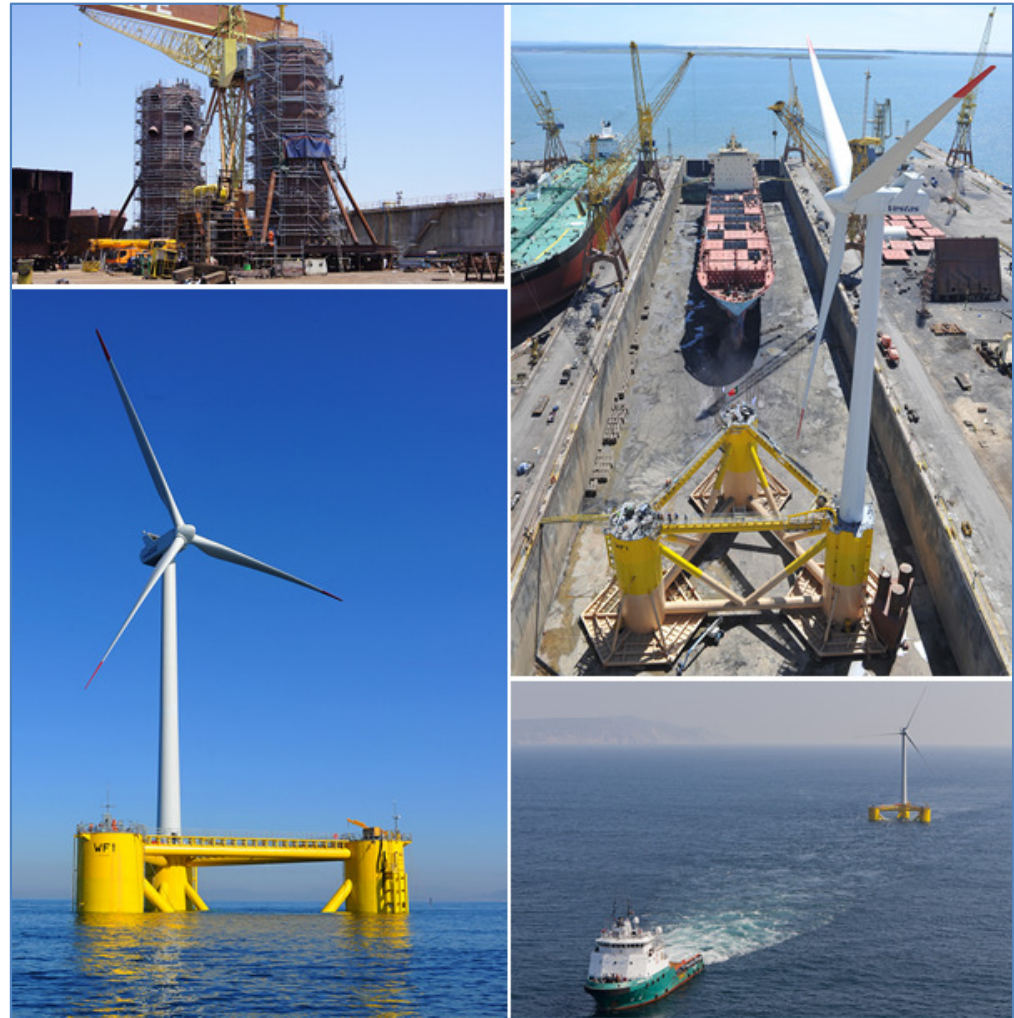
Fabrication and installation

Approximate durations for construction:

Fabrication and turbine installation may take approximately 12 months. The platform shall be fabricated in a dry dock, offsite.

Subsea cable, anchors and mooring lines would be installed at the Dounreay site, as will the anchors and mooring lines. This would take 2 - 3 months, subject to weather.

The overall construction programme would be 12 months as the fabrication of the platform and installation of the cable, anchors and moorings could occur in parallel.

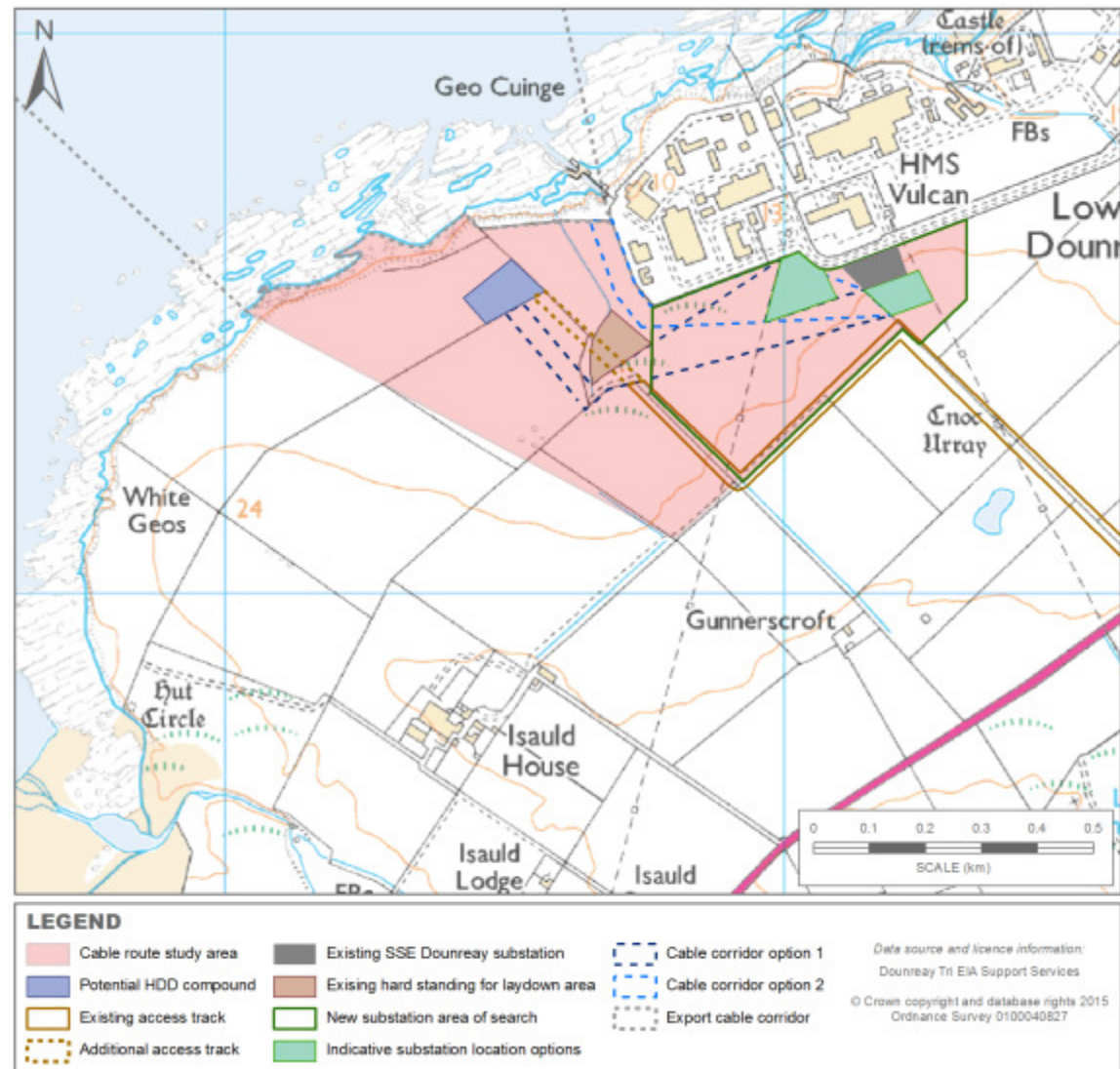


Images courtesy of edpr

Onshore infrastructure

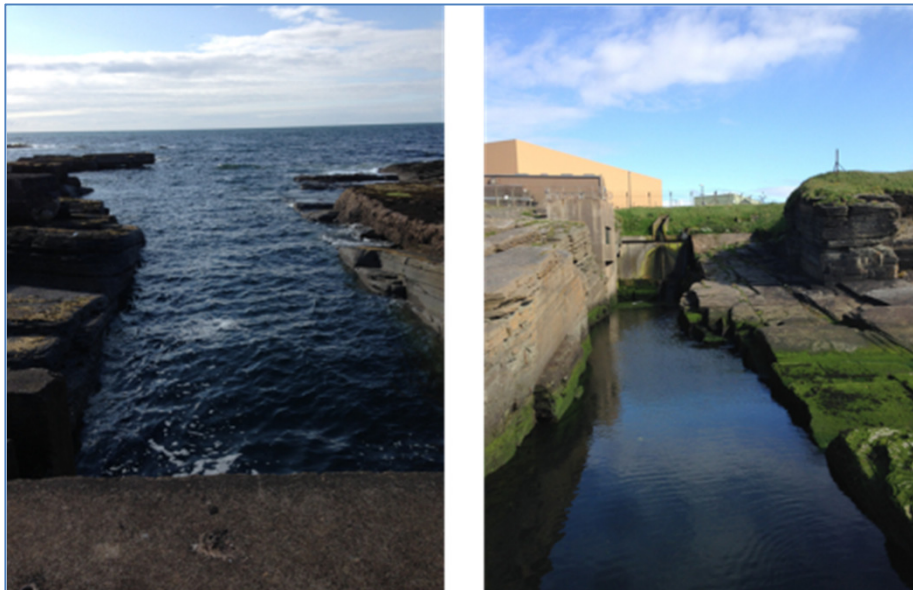
The onshore infrastructure shall comprise of:

- A cable landfall, west of the Dounreay facility
- The onshore cable shall be buried to a depth of approximately 1 m, subject to ground conditions
- A substation or switchgear to transfer power to the grid, at, or near, the existing Dounreay 132/33/11KV Substation.



Cable landfall options

Horizontal Directional Drilling (HDD) – HDD involves drilling a small pilot hole from the landward side to a point offshore. The hole is widened to accommodate a duct through which the cable is pulled. Once installed the HDD compound (shown here) would be removed and the site restored.



Pinning - to the existing cooling water intake channel for the Dounreay Nuclear power station. This channel was cut through the rock circa. 1968. A cable duct could be pinned or screwed to the rock wall at low tide and the cable pulled through the duct.

Onshore infrastructure



Dounreay offers the most logical connection point.

In 2013, two new substations were built at Dounreay, specifically for renewables.



Existing Dounreay 132/33/11kV substation.

The new substation would be no larger than this and built nearby.

Environmental Statement



An Environmental Statement (ES) shall be prepared alongside the consent applications.

The ES shall comprising of 3 Volumes:

Volume 1: Introduction and background

Volume 2: Offshore Environment

Volume 3: Onshore Environment

Technical Appendices.

Chapter	Title
	Non-Technical Summary
Part 1: Introduction and Background	
1	Introduction
2	Legislative Context and Regulatory Requirements
3	Site selection, consideration of alternatives and stakeholder engagement
4	Project Description
5	Environmental Impact Assessment Methodology
Part 2: Offshore Environment	
6	Physical and Coastal Processes
7	Intertidal Ecology
8	Benthic and Shellfish Ecology
9	Fish Ecology
10	Marine Mammals
11	Marine Ornithology
12	Commercial Fisheries
13	Shipping and Navigation
14	Aviation and Radar
15	Seascape, Landscape and Visual Amenity
16	Archaeology and Cultural Heritage
17	Other Users of the Marine Environment
18	Socio-economics, Recreation and Tourism
19	Mitigation Summary and Residual Impacts - Offshore
20	Offshore References

Chapter	Title
Part 3: Onshore Environment	
21	Geology and Hydrology
22	Land Use, Agriculture and Soils
23	Terrestrial Ornithology
24	Terrestrial Ecology
25	Onshore Archaeology and Cultural Heritage
26	Air Quality
27	Landscape and Visual Effects
28	Mitigation Summary and Residual Impacts - Onshore
29	Onshore References
Technical Appendices	

Comments welcome



Please ask a member of the team if you have any questions or comments.

If you would rather comment in writing then you can do so by e-mail or writing to Marcus Thor (Project Director) at:

Email: Dounreay@hexicon.eu

Or by post to: C/O RES Offshore
Forsyth House,
93 George Street
Edinburgh,
EH2 3ES (**not later than 30/05/2016**)

Comments should be dated and should clearly state the name (in block capitals) and full return email or postal address of those making comment.

Comments made to the prospective applicant are not representations to the Scottish Ministers. **When Dounreay Trì Limited submits an application for a marine licence to the Scottish Ministers, an opportunity will be given for representations to be made to the Scottish Ministers on the application.**

Next steps

1. **Reflect** - Dounreay Trì Limited will consider all points raised today and any written responses received by the 30th of May 2016;
2. **Apply** - Dounreay Trì Limited hopes to be ready to submit an application for a Marine Licence to the Scottish Government in June 2016. The public will be invited to respond directly to Scottish Ministers at this time;
3. **If successful... Build** - Dounreay Trì Limited would then seek to build the platform in a dry dock and then tow the platform to Dounreay in the summer of 2018 for final installation and commissioning.

To keep up to date on our progress please visit www.hexicon.eu/projects/dounreaytri

Photomontage



The following photomontage illustrates what the platform would look like if the largest turbines were used and the platform was closest to shore – i.e. the worst case scenario in terms of visual impact.

The photos also illustrate what the substation would look in the context of Dounreay.

Viewing instructions:

1. The photos should be viewed with **both eyes open**; and
2. The natural viewing distance for A3 photos is **approximately 50cm** which is a comfortable **arm's length**.

A wide-angle photograph of a coastal landscape. In the foreground, there are tall, dry, golden-brown grasses on a dune. Beyond the dunes is a sandy beach that meets the sea. The water is a deep blue-grey color with white foam from the waves. In the background, a green hill rises, and on top of it, a large industrial facility with several tall chimneys and a white dome is visible. The sky is a clear, pale blue with a few wispy clouds.

THANK YOU!

Sandside Bay, Dounreay, Scotland

Annex D – Feedback from Public Event

Dounreay Trì Floating Wind Demonstration Project Public Event – 9th April 2016

Introduction

Dounreay Trì Limited is proposing to demonstrate a floating offshore wind farm consisting of two turbines, located on a single semi-submersible floating platform, with an installed capacity of between 8 to 12 megawatts (MW) at least 6 km off Dounreay, Caithness. It is proposed that a single export cable will bring the power to shore at, or near, Sandside Bay and will connect to an onshore substation and associated electrical infrastructure near Dounreay Substation.

Purpose

The purpose of the public event is to keep the public informed and to provide opportunities to comment on the design of the proposed wind farm. To this effect, Dounreay Trì Limited hosted a public event to ensure that the proposals take account of the importance of the area for tourism and recreation, commercial fisheries, local industry and community interests. A drop-in session was held on:

Date	Time	Location
9 th April 2016	10:00 – 17:00	Caithness Horizons Old Town Hall, Thurso

Summary of public feedback

Person	Comments
Student, Toronto	Waiting out of the rain for the Ferry to Orkney. Interested in how the platform is tethered to the seabed and how the platform operates.
Caithness resident	Noted that the demonstrator would fit in well with Dounreay's heritage given the first prototype reactor was built here in the 1950's. Noted that the substation location, set against the Dounreay Site, was positive.