

## Who are we?

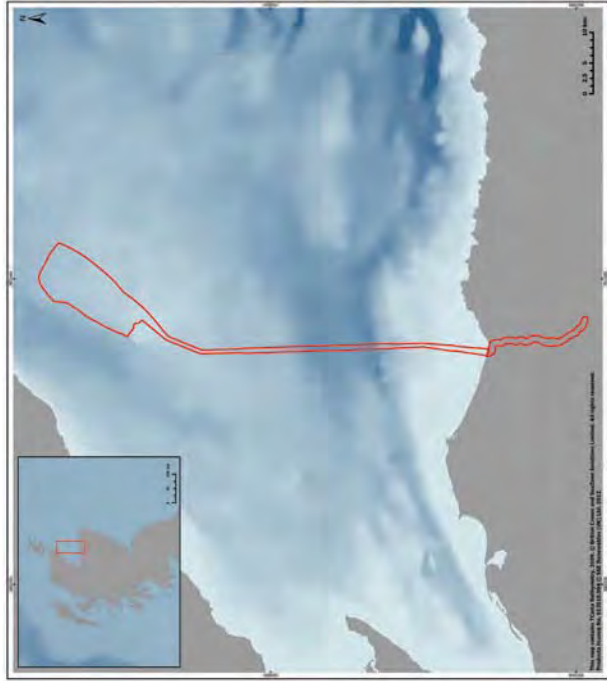


SSE Renewables is responsible for the development of SSE's renewable energy projects across Europe. SSE is the leading generator of renewable energy in the UK, with over 2,450 Megawatt (MW) of renewable energy projects consented.



Repsol Nuevas Energias UK (Repsol) was formed following Repsol's purchase of 100% of SeaEnergy Renewables Limited in June 2011. It has development rights for a total of 1,190 MW in the United Kingdom, equivalent to a third of the offshore wind capacity currently installed worldwide.

Building on the success of the Beatrice Demonstrator Project, we are proposing to develop an offshore Wind Farm which will generate up to 1,000 MW of renewable energy, enough to power over 796,000 homes.



Project Boundary

## Landfall

The subsea cable will come ashore, in an area known as the 'landfall', west of Portgordon. The figure below illustrates the area the landfall will be located within. Detailed ground investigation works will take place once consent has been granted. Once these investigations have taken place, the exact landfall point will be determined.



Cable landfall location map

## What is at the Landfall?

The cable landfall works will involve the pulling ashore of the offshore export cables. The offshore cables will be pulled ashore through ducts installed via a drilling process which commences at the launch site, which is onshore and will be approximately 70 – 100 metres (m) distance away from the shore. The landfall construction area will be approximately 120 m x 85 m. Within this area there will be buried transition bays where the offshore cables will be jointed into onshore cables.

Due to the beach to the west of Portgordon being designated as a Site of Special Scientific Interest (SSSI), the cable will come ashore via cable ducts underneath the beach installed using the technique of Horizontal Directional Drilling (HDD)

This involves drilling an arc between two defined points, the 'reception site' (offshore) and the 'drilling site' (agricultural land behind the beach). This will protect the integrity of the SSSI, minimising any environmental effects. The cable will then be pulled through the ducts created by the HDD to 'transition bays' where the offshore and onshore cables will be jointed together.

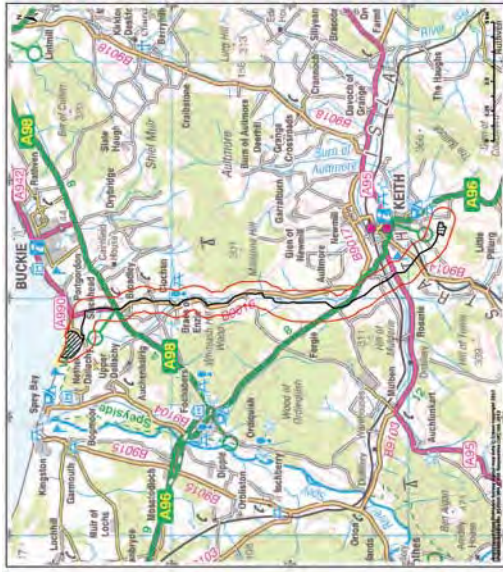
## Onshore Cable Route

### What is it?

The onshore cable route will consist of underground trenches containing transmission cables, exporting either AC or DC power from the Wind Farm; cable jointing bays and cable crossings. The route also allows space for working areas for construction access and equipment lay down.

### How long is the cable and where will it go?

The onshore cable follows a route which extends to some 20 km, it will be underground and for the majority of this route will pass under arable agricultural land. The exact route is yet to be finalised, and will be subject to detailed design and feasibility assessment, but will be within the 'corridor' shown in the figure below. The route will be the same for the AC or DC development options.



Onshore cable route

### How will it be laid?

Following site preparation the following will occur:

- Cable trenches will be excavated and material stored for reinstatement;
- Cables will be by installed in lengths up to 1,000 m by winches; and
- Cable trenches will be reinstated with subsoil and topsoil.

## Onshore Substation

### Why is it required?

In order to manage and export the electricity generated from the Wind Farm to the electricity transmission network a substation is required. A cable will then connect our substation with the adjacent Blackhillock substation, owned by Scottish Hydro Electric Transmission Limited (SHELTL). The Blackhillock substation will be upgraded by SHELTL, who have Planning Permission in Principle for the development.

### What will it do?

The final design of the substation will be dependent upon the current of the power exported (AC or DC). For AC, a transformer station will be required to step up the voltage. For DC, a converter station will be required to convert from DC to AC.

### Where will it be located?

Our substation will occupy an approximately 13 hectare (ha) site located at NGR 342925, 848632 on land between 180 m and 204 m elevation. This site is currently used for agricultural purposes.

### What will it look like?

Either option of substation design will be constructed upon a platform terraced over three levels to minimise landscape and visual impacts. Within the substation compound there will also be temporary construction, parking and laydown areas.

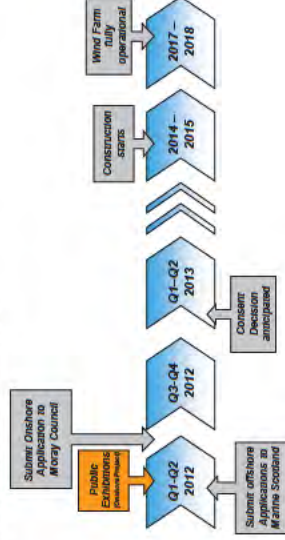


Example DC Substation

## Project Timeline

The project programme illustration below shows the main activities that BOWL has undertaken so far in the development of the Wind Farm and the offshore and onshore transmission works. It also indicates the expected timetable that will follow submission of the applications.

Consultation with decision makers, regulators, consultees and other interested parties has, and will continue to be, undertaken throughout the entire project programme. Consultation is a key tool in helping define the project design and agreeing the scope of the surveys and assessments to be undertaken.



## Your views and comments

Your views and opinions about the proposals are welcomed and valued. If you have any comments, queries or views you would like to share with BOWL please feel free to contact us at the address below.

Any comments you make to us now will not be representations to the planning application: there will be an opportunity to provide comments to the planning authority on the proposals (as may be revised following consultation) after the planning application has been submitted to The Moray Council.

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# Beatrice

## Offshore Windfarm Ltd

### Onshore Transmission Works

Beatrice Offshore Windfarm Limited (BOWL) is a joint venture partnership formed between SSE Renewables (75%) and Repsol Nuevas Energias UK (25%) (formerly SeaEnergy Renewables)

## Project Context

The Beatrice Offshore Wind Farm (the Wind Farm) site is located in the Outer Moray Firth on the north-western point of the Smith Bank. The site is adjacent to the world's first deep water wind farm development – the two-turbine (10 MW) Beatrice Demonstrator Project. The Beatrice Demonstrator turbines are owned and were developed by SSE and Talisman. The turbines have been operational since 2007.

We will be using a cable to connect the electricity generated by the wind farm to the existing electricity grid at Blackhillock, near Keith, Moray, known as the 'Transmission Works'.

The Transmission Works consist of two elements:

- Offshore Transmission Works – up to three offshore substation platforms and approximately 65 kilometres (km) of subsea cable to the landfall envelope, west of Portgordon; and
- Onshore Transmission Works - approximately 20 km of underground cable from the landfall envelope to the substation site and a new substation adjacent to the existing substation at Blackhillock.

This information leaflet relates to the Onshore Transmission Works



Example AC Substation