Non-technical Summary: Cable route

Introduction

This briefing note provides a summary of information about how the proposed cable route has been selected.

You can find more details of all of the routes which were considered and how we selected the proposed route in Chapter 4 Site Selection and Assessment of Alternatives in our Environmental Statement. Additional detail can be found within Appendix 4B and 4C of Chapter 4.

Site selection

The proposed site for the offshore wind farm was selected in 2021 using a process set out by the Crown Estate, which is in charge of the UK's seabed, up to 12 miles off coast, and the rights to explore and generate renewable power on the whole UK continental shelf. In the same year, the most appropriate site for connection to the National Grid – the existing substation at East Yelland - was also selected.

Based on the location of the wind farm and the grid connection site, twenty-two potential cable routes were investigated. After considering environmental, physical, technical, commercial, social and engineering feasibility two potential cable routes were taken forward for further assessment.

It has been suggested that the grid connection site and cable route should be considered alongside other windfarm developments in the Celtic Sea. At present, no other offshore windfarms make their grid connection in North Devon or Cornwall. All other current developments for floating offshore windfarms in the Celtic Sea make landfall in West Wales.

How the grid connection site was selected

We met with a number of stakeholders to discuss the substation location including:

- North Devon District Council
- Devon County Council
- Environment Agency
- Natural England

We also worked with National Grid to identify the most suitable point on their network. Due to the project's size (less than 100MW), we will need to connect to the electricity distribution network, which is the National Grid's final connection stage to consumers.

We looked at the two available grid connection site options – the existing substations at East Yelland and Alverdiscott. East Yelland was chosen for several reasons:

- It is adjacent to the shore and closer to the wind farm site. Connection to Alverdiscott would require a longer cable route and consequently result in a greater number of environmental, physical, technical, commercial and social challenges.
- The relatively small size of the project means it can use all the substation's spare capacity, something which few other energy developments would be able to do.
- Alverdiscott substation requires a number of technical upgrades, including new transformers, to make it a suitable connection site. Future planned upgrades at Alverdiscott will not be completed in time.

How the landfall site was selected

As well as the location of the windfarm and grid connection point, the site chosen to make landfall was dependent upon a number of other ecological, technical and commercial considerations. The presence of coastal settlements (housing and other buildings) and development was also a factor.

Three landfall zones along the coastline were considered:

- North Zone - Putsborough to Woolacombe (length of site: 2.5km)
- Mid Zone - Instow to Saunton Down (length of site: 7.6km)
- South Zone - Peppercombe to Rock Nose (length of site: 6.3km).

Transport and access issues, steep slopes and the presence of a sensitive archaeological site means the North Zone is unsuitable.

Because of its longer length and the nature of the landscape, temporary construction access and haul roads to the South Zone would need to be very extensive, creating more disruption and environmental impact.

Given the constraints for the other sites, the Mid Zone landfall site was found to be most suitable, although we know there are sensitivities around Braunton Burrows Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI).

However, our design and construction techniques, including the use of trenchless (i.e. no open trenching) technology under the Saunton Golf Club, will prevent any long-term impact on Braunton Burrows SAC and SSSI, and Taw-Torridge Estuary SSSI. The work will be supervised by an ecological clerk of works (ECOW) – a specially trained independent ecologist who has the power to stop works if they are concerned.

How the cable route was selected

In order to link the Mid Zone landfall site with the East Yelland grid connection site, we looked in further detail at two potential onshore cable corridors.

The proposed route, from Saunton Sands beach car park, was selected after detailed assessment. It takes into account a range of environmental, physical, technical, commercial, social and engineering feasibility issues.

When selecting this route, we also consulted with experts from the relevant statutory and non-statutory organisations including:

- Torridge District Council

- North Devon Council Planning
- Devon County Council
- Braunton Parish Council
- Georgeham Parish Council
- Christie Devon Estates
- Devon Wildlife Trust
- Natural England
- Royal Society for the Protection of Birds
- Joint Nature Conservation Committee
- Historic England
- National Trust
- Ministry of Defence
- Environment Agency

This route was selected because it can be developed while protecting the environment and because we can take steps to minimise disruption for people living nearby. We are mindful that Braunton Burrows is a sensitive location, but because we will be using trenchless technology to go underneath Saunton Golf Club we can work in a way which prevents any long-term impacts to the Special Area of Conservation.

The Taw Estuary

We have thoroughly considered laying the cable in the Taw Estuary. However, this option is not viable for a number of reasons. The estuary has a very large tidal range, which would make burying the cable extremely difficult. The cable would instead have to be laid on the estuary bed with rock protection covering it to a height of approximately 1.5 metres. This would present a danger to shipping and interfere with the way sediment moves along the estuary.

There are also environmental concerns about this route because the Taw-Torridge Estuary is a Site of Special Scientific Interest. The route we have selected does mean the cable will have to cross the estuary but because this involves a shorter distance between two pieces of land, the engineering challenges are far less complex. The entry and exit points will be on land away from the estuary, and the construction will ensure that the cable is buried at least 10m below the bed of the estuary. This will ensure it doesn't become exposed with the shifting sands or effect the Site of Special Scientific Interest.

This crossing can be achieved without interfering with shipping or causing any significant or lasting harm to the environment.