North Falls

Factsheet for landowners

This factsheet has been prepared to answer questions specific to landowners and those with an interest in the land who may be impacted by the project during its development, construction and operation, assuming it proceeds with an onshore grid connection. It includes the key relevant facts and figures about the project and answers some of the questions asked to date. There are contact details on the back page if further information is required.

Project description

The route the onshore cables will take from landfall at the coast to the project substation will be approximately 24km. The cables will be buried to minimise visual and environmental impact.

During construction a temporary construction corridor will be needed to accommodate the works, including where horizontal directional drilling (HDD) is required when crossing certain features such as railway lines, main roads or large hedgerows. Additional areas for temporary construction compounds and site accesses will also be needed. Generally, these temporary areas will be adjacent to the cable corridor.

North Falls will mitigate its impacts as far as practicable, however there will be some temporary disruption during construction.

Following construction, the project will reinstate the surface of the affected land to a condition similar to that which existed prior to entry being taken, and as evidenced by a pre-entry schedule of condition.

Where the cable route crosses features such as roads, water-courses and ecologically sensitive areas, the aim will be to cross them using HDD to avoid impacts on these features.

CABLE CORRIDOR

How is the route being defined?

The project has undertaken ecological surveys along with engineering assessments and ongoing consultation, including the statutory consultation completed in July 2023, to help define its route. In addition to statutory consultation, wider engagement meetings with landowners will continue.

Where will the electricity cables be brought onshore?

After careful examination of environmental assessments, consideration of consultation feedback, and various factors like engineering feasibility, nature reserves, land use, historic sites, and technical feasibility, North Falls has chosen an area near Kirby Brook called landfall where is cables will be brought ashore. This location was chosen to avoid direct interference with the Holland Haven Marshes, Frinton Golf Club, and an area designated as a Site of Special Scientific Interest.

Will North Falls share the same landfall location as Five Estuaries?

To bring the cables onshore, a method called HDD will be used. This technique helps reduce impacts on the coast and seawall. By selecting this particular location, North Falls is aligning itself with Five Estuaries Offshore Wind Farm, providing a better opportunity for the projects to coordinate their construction work at the landfall site.

Are you sharing the same cable corridor as Five Estuaries?

The cable corridor for both projects is now almost fully aligned along its length, with planning work ongoing around both the route and the future construction activity. The projects have signed a 'good neighbour agreement' which enables greater cooperation, coordination and transparency as they head towards submission of their development consent order applications.

How many cable circuits will the project use?

Previously the project had considered that up to four trenches would be required to accommodate up to four cable circuits, each containing individual cables and fibre optics to enable communications between the wind farm and the control system. However, this has recently been revised by both North Falls and Five Estuaries, with both projects now only requiring two cable circuits each. The decision from both projects will considerably reduce the width of the combined cable corridor.

Why do the cables need to be spaced apart?

The cable circuits must be spaced out to minimise the mutual heating effect. This spacing enables the cables to effectively carry the large power volumes required without overheating and damaging the cables.

The exact location and width of each trench will be finalised closer to the construction phase (see indicative figures on p3).

CABLE CORRIDOR

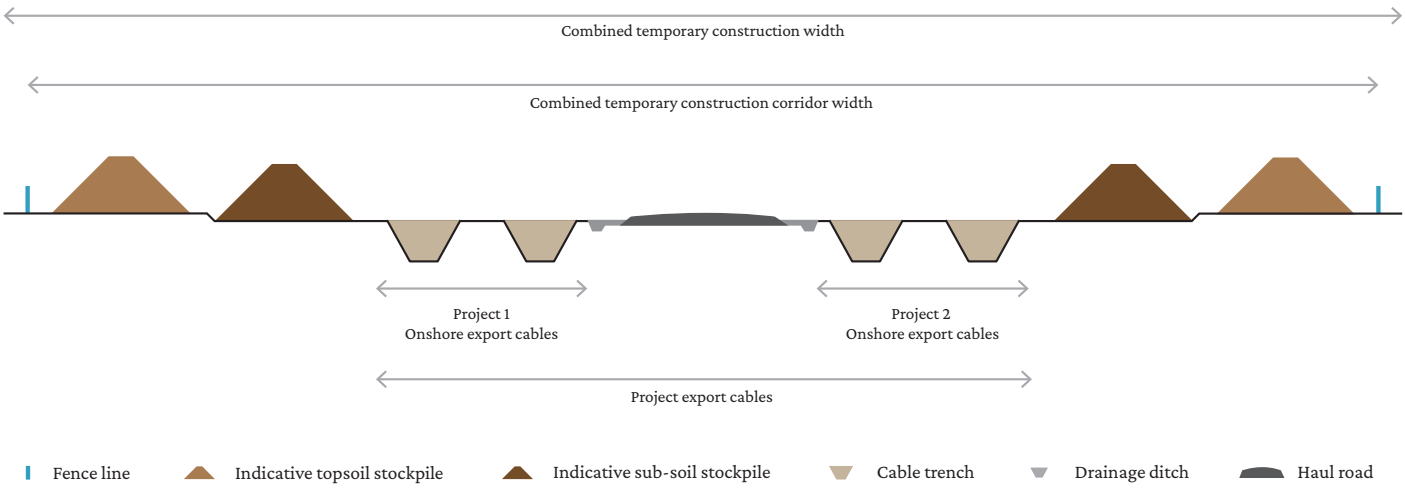
How wide will the combined North Falls and Five Estuaries construction cable corridor be?

Both North Falls and Five Estuaries have reduced the number of export cable circuits from a maximum of four per project to two per project. This decision has enabled a reduction in the width of the proposed combined onshore cable corridor during construction, which will predominantly be 90 metres rather than the 200-250 metres which would have been required for eight cable circuits.

This allows for soil storage, internal haul roads and possible micro-siting plus the flexibility to use HDD under constraints such as roads.

Diagram showing an indicative cross-section of a construction cable corridor for two projects with two cable circuits each

(for illustrative purposes)



CONSTRUCTION

Will North Falls have a Code of Construction Practice in the planning application?

North Falls will produce an outline version of this document for the project's development consent order application.

The outline will cover a large range of topics including how the effects from dust, noise, light, air quality, water/pollutant management and waste will be mitigated. It will be publicly available and will include details of how to raise a query regarding non-compliance of any of the contactors during construction.

How will the land required be fenced off?

Accommodation works will be agreed, including the location and type of fencing required for the construction period. If needed, crossing points can be put in place where suitable to allow for continued access.

CONSTRUCTION

What methods are available to lay the cables?

Typically, the onshore cables will be installed into ducts that will be laid in a mechanically excavated trench using an open cut method. The ducts are placed in trenches initially and then the cables pulled through after the trenches have been backfilled. A layer of stabilised backfill material is generally used to ensure a consistent structural and thermal environment for the cables.

If trenching is not suitable, for example if there are ecological or other features to avoid, an alternative method will be implemented. This may include HDD, which is a steerable trenchless method of installing underground cables over relatively short distances with minimal or no impact on the surface above.

Backfilling a trench with cable ducts laid (Sofia Offshore Wind Farm)

How will the cables be laid out during construction?

During construction there will be one trench per cable circuit, and each trench could be up to 3.5m wide at the surface reducing to 1.2m at the bottom. An area is taken on either side of the permanent cable corridor for subsoil and topsoil storage.

How deep will the cables be buried?

The cables will generally be buried on land at a depth not shallower than 1.2m below ground level depending on ground conditions. Where necessary, for example if there is rock, concrete or another obstacle close to the surface, the cables may need to be laid at a shallower depth, with warning tape or tiles placed not less than 0.9m below the surface.

What are jointing bays and link boxes?

Jointing bays are underground structures constructed at regular intervals along the cable corridor to join sections of cables together. Link boxes allow the cables to be bonded to earth to maximise cable ratings and are located close to the onshore export cables at jointing bay locations.

Link boxes are not required at all jointing bay locations, but as a worst-case scenario could be required at a frequency of one every 500m. The number and placement of the link boxes would be determined as part of the detailed design. Where possible, the link boxes would be located adjacent to field boundaries and in accessible locations. The only above ground infrastructure would be similar to a manhole cover to allow for maintenance. Where necessary, manholes will be demarked using marker posts to ensure protection of the asset.

Post construction, technicians require periodic access for inspection and testing.

CONSTRUCTION

How will the cables interact with existing utilities on my land?

Statutory undertakers will be consulted to agree preferred methods of crossing existing utilities on land. Typically, HDD will be used under utilities, but where appropriate clearances (through consultation with other utilities) are available and the minimum depth of 1.2m can be achieved, the cables may be laid over other utilities.

What will happen to existing hedgerows and trees?

All efforts will be made to minimise the extent of hedgerow disturbance by utilising existing gaps in field boundaries. Additionally, trees which have been identified for retention will be worked around using techniques to safeguard the root protection zone.

Wherever a hedgerow crossing is unavoidable and the hedgerow requires removal, this work will be undertaken prior to topsoil removal. The width of the hedgerow removed will be limited where practicable. All removed hedgerows and trees will be replaced with locally appropriate native species. Plans identifying the extent of the required hedgerow and tree removal will be included within the development consent order application.

What is a site compound?

A site compound is a secure, fenced, temporary area along the cable route which will help to facilitate construction. The area will be hard standing for suitable storage of materials, vehicles and welfare units. The areas will be fully reinstated following completion of construction.

Example of a main site construction compound (Constructed for Sofia and Dogger Bank C Offshore Wind Farms)

CONSTRUCTION

How will soils be managed to ensure functionality of existing drainage systems?

A Schedule of Condition will be undertaken prior to entry to assess the soil composition and depth of topsoil. Prior to construction, a soil management plan will be prepared along with a soil survey. This information will be used during reinstatement to ensure the soils are returned to their former condition suitable for previous use. Subsoil and topsoil will be extracted and stored separately to prevent contamination.

Contractors will abide by DEFRA's 2009 Construction Code of Practice for the Sustainable Use of Soils on Construction Sites PB13298 or latest relevant available guidance, ensuring the working area will be reinstated to its pre-existing condition as far as reasonably practical.

Drainage systems will be maintained before, during and post construction by appointing a drainage consultant to undertake an assessment of the existing drainage system in place. If alterations are to be made to the existing drainage system, the crainage consultant will prepare a design and scheme for the required drainage works on the land affected by the construction works and subsequent restoration.

Can I access my land during onshore construction works?

Access will be maintained to severed areas through the provision of gateways and fencing as agreed with landowners following in depth consultation. Access will not be permitted to the works corridor area during construction, with strict protocols in place to safeguard and meet health and safety requirements.

How long will the onshore construction works last?

The installation of the onshore export cable is a linear construction project with an expected overall construction duration of between 18 to 24 months. As the construction works are comprised of a variety of activities, the duration of each activity at any location will be dependent on the construction activity being undertaken.

Who should I speak to if there are issues during construction?

An Agricultural Liaison Officer (ALO) will be appointed to liaise with landowners and occupiers throughout the construction works. They will be a point of contact to highlight and address any concerns.

How much ducting for the cables can be laid per day?

The rate at which ducting for electricity cables can be laid each day can vary based on several factors, including soil conditions, equipment used, and site constraints. In general, the installation speed depends on the construction method employed, whether it's open cut trenching or trenchless methods such as HDD.

For open cut trenching, the installation rate could be in the range of several hundred meters per week, depending on conditions and the nature of the terrain. On the other hand, HDD can be slower but offers advantages in terms of minimising surface disruption.

CONSTRUCTION

Once the ducting is in place, between 500m and 1000m of cable can be pulled through the pre-installed ducts per day. This process is repeated for all cables required for the two circuits (six power cables and two fibre cables). All cables will then need to be jointed to each other to form a continuous cable to take power from the wind turbines offshore to the National Grid substation. The jointing process typically takes place at a later date.

How long will construction last at HDD locations?

The duration for HDD construction depends on a number of factors including ground conditions and length of drill. For most HDDs, we expect to be completed within two to four weeks, with some additional time for mobilisation/demobilisation and preparation/reinstatement works for the activity. More complex HDDs, such as going under a railway line, or the main landfall HDD, will likely take longer.

How has the project's grid connection location been selected?

National Grid is responsible for operating the electricity transmission network in England and Wales.

The Connection and Infrastructure Options Note (CION) process is the mechanism used by National Grid to evaluate potential transmission options for generation projects to identify a suitable connection point, in line with their obligation to develop and maintain an efficient, coordinated and economic electricity transmission network.

As a result of this assessment, National Grid has offered North Falls a connection located on the Tendring peninsula as part of the Norwich to Tilbury Project.

If there is an onshore grid connection will North Falls and Five Estuaries be at the same location?

National Grid has offered both North Falls and Five Estuaries the same onshore connection option. Following Five Estuaries' consultation its preferred substation search area has been refined to an area west of Little Bromley. This area also coincides with North Falls' chosen substation area of search.

This overlap creates valuable opportunities for effective coordination and collaboration between the two projects and is expected to enhance coordination not only during the planning and construction phases but also in the long-term operational and maintenance phases of the projects.

POST-CONSTRUCTION

What happens once the construction works are complete?

On completion of the main activities, the cable corridor will be reinstated and handed back to the landowner. Such activities will include but not be limited to the removal of haul roads, installation of post-construction drainage, reinstatement of topsoil and removal of fencing and temporary access arrangements in place. Reinstatement works are weather dependent and will only be carried out where the weather permits.

Following reinstatement, it will be possible for landowners to continue to farm crops and/or graze animals as carried out prior to construction. However, it will not be possible to place any type of construction (buildings) or plant deep-rooted plant species on land above the final cable easement or where it could have an adverse impact on the cables. This is to ensure both your safety and the integrity of the cables and allow maintenance to be performed on the cables if required.

Cable route before/during reinstatement and after (Rampion Offshore Wind Farm)

Before cable construction started, during and after (Triton Knoll Offshore Wind Farm)

POST-CONSTRUCTION

What will you do about drainage?

North Falls will appoint a land drainage consultant to record details of existing drainage arrangements and develop pre-construction drainage plans.

The purpose of pre-construction drainage is to ensure the existing field and retained land is kept as dry as possible during construction and to prevent severed field drains and surface water draining into the cable trench.

The land drainage consultant will also develop post-construction drainage plans, the purpose of which is to assist in restoring the soil structure and drainage status following the conclusion of the cable installation and reinstatement of the works corridor. For further information please see Chapter 22 Land Use and Agriculture of the PEIR: *www.northfallsoffshore.com/peir/*

If you have not already done so, we would be grateful if landowners could provide detailed drainage plans for their respective land holdings. This will assist the project in identifying existing drains accurately and mitigate potential impacts during construction.

How is the trench reinstated following cable installation?

Once the cable has been laid, the remainder of the trench is backfilled with the excavated material. Hard protective tiles and marker tape are also installed in the cable trenches to ensure the cable is not damaged by any third party.

Once the cables are installed and the trenches backfilled, the stored subsoil and topsoil will be replaced, and the land reinstated to its previous use.

Will North Falls require any land permanently?

An onshore substation site will be needed with the freehold acquisition required to secure future access and any maintenance. The project will also be acquiring permanent rights in land for the cables and access for maintenance. To mitigate the visual impact of the substation on any surrounding land, the substation will be sympathetically designed and screened with appropriate planting and fencing.

What is the thermal impact of having cables buried on my land?

When electricity is transmitted through cables, a small amount of energy is lost as heat, with the exterior of the cable slightly warm to the touch. The onshore cable system will be designed in a way to minimise these losses.

Where there is a potential for heat to build up, cables will be encased in cement bound sand (CBS). This will help dissipate the heat away from the area, preventing any damage to the cables and to the surrounding land.

The onshore cables will result in no change in the soil temperature at ground level or first 50mm of soil where the principal root growth zone is accepted to be. For more detailed information, please refer to Chapter 22 Land Use and Agriculture within the PEIR: *www.northfallsoffshore.com/peir/*

POST-CONSTRUCTION

Will the cables and substation produce electromagnetic fields (EMFs) and what will be the impact?

EMFs are present everywhere in our environment and occur because of moving electric charges. They occur both naturally, for example the earth's natural magnetic field and human-made, for example wherever electricity is generated or transmitted. While the underground cables and substation will produce EMFs those generated are often referred to as extremely low frequency and have been assessed to have no likely significant population health effects. Put in context, the magnetic field of a buried AC system has a strength of 20 – 24 μT when standing directly over it. This is equivalent to approximately half of what is expected from a TV, washing machine or bedside clock at the same distance. For further information please refer to Chapter 28 Human Health within the PEIR: *www.northfallsoffshore.com/peir/*

Example of revegetation underway at converter station site (Sofia and Dogger Bank C Offshore Wind Farms)

PROCESS

Will you pay for any professional fees I incur?

Fair and reasonable land agency fees incurred in connection with the negotiation of the Heads of Terms, the formalisation of the easement documentation and for the negotiation and settlement of any compensation claims will be paid. Likewise, fair and reasonable legal fees incurred to complete legal agreements will also be paid.

PROCESS

How will the necessary rights be acquired?

North Falls will look to acquire underground cable and surface rights through voluntary agreements which will permit the construction, operation and maintenance of assets through an easement in perpetuity.

The terms and conditions of the rights North Falls wishes to acquire will be detailed in Heads of Terms. The Heads of Terms detail the obligations between both parties and note any stipulations which help to draft an option agreement. An option agreement is entered into between the landowner and North Falls for the ability to start construction works during a specified period in return for an option fee. A further payment will be made upon taking entry for construction and a final payment made once the easement has been granted.

Landowners who are directly affected by the cable route through their land will be compensated in two elements. A consideration will be payable for the easement to be granted and disturbance compensation will also be paid for any reasonable and substantiated losses arising as a result of construction works. Reasonable losses incurred by tenant occupiers as a result of the construction works will also be compensated. All compensation will be assessed on a case-by-case basis subject to the production of evidence and proof of loss. Where a voluntary agreement cannot be reached, compulsory acquisition powers are afforded within the DCO application so that we can acquire any necessary land rights for the project to be developed.

GENERAL QUESTIONS

Will you be making any payments to landowners for time spent interacting with the project?

The project has committed to reimbursing landowners' time at £40 per hour when completing voluntary agreements. Detailed timesheets substantiating any claim will need to be submitted and agreed with the project.

How will private water supplies be dealt with?

As part of the project's environmental impact assessment, a hydrogeological risk assessment will be undertaken to identify any private water supplies potentially at risk during the project's construction. This work may also be supplemented by the undertaking of boreholes at strategic locations. Once they have been identified, mitigation measures will be developed and presented within the North Falls Environmental Statement submitted with the project's development consent order application.

My land is in an environmental scheme. What are the implications?

Whilst there is still uncertainty around payments for different environmental schemes which will arise from the transition out of the Basic Payment Scheme (BPS), it is expected the process for derogating land will be similar as under BPS arrangements. In that instance, you will need to inform the Rural Payments Agency that your land cannot meet the requirements of the scheme. This loss of payment would form part of any compensation claim you may seek to settle following construction.

GENERAL QUESTIONS

How will the project implement the 10% biodiversity net gain?

North Falls is exploring opportunities to deliver at least 10% biodiversity net gain across the onshore area, which will lead to an overall increase in habitats through the project's lifetime. North Falls' biodiversity net gain proposals will tie in with Essex County Council's Green Infrastructure Strategy. They will be secured through an Ecological Management Plan and Biodiversity Net Gain strategy that is now being prepared.

What will happen to footpath and bridleways during construction?

Where practicable, footpaths and bridleways will be maintained to minimise disruption to users. Where the project intersects with a footpath or bridleway, a suitable temporary diversion will be created while works are taking place. A full list of temporary diversions will be included within a PROW Management Plan, which will be approved by the local planning authority. Information on duration and proposed alternative routes will be circulated publicly through site notices and local media.

What about the impacts this project could have on mental health due to stress?

We understand that the development process and proposed construction of the project can create uncertainty which can be stressful or raise concerns. We fully acknowledge these concerns and take our responsibilities as a considerate developer seriously. Our aim is to work collaboratively with stakeholders throughout.

As a practical step, North Falls has committed to pay reasonable fees for land agents to give independent support to alleviate anxiety as they will be familiar with the process and can guide landowners where they may be unsure or feeling stressed about particular issues. North Falls will remain committed to exploring and implementing mitigation measures where possible to minimise any adverse effects on mental health.

CONTACT

For land-related queries, please contact the project's land agent Dalcour Maclaren:

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Email: northfalls@dalcourmaclaren.com

Telephone: 01622 623025

To sign up for future newsletters or email updates please email your details to **contact@northfallsoffshore.com**; call (24/7) **0800 254 5340** or post to: **Freepost North Falls**, indicating your preference for electronic or printed copy.

For more information about North Falls visit the project website: www.northfallsoffshore.com