

Norfolk Boreas Offshore Wind Farm Public Rights of Way Strategy

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Author: Royal HaskoningDHV

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Glossary of Acronyms

ALO	Agricultural Liaison Officer
CoCP	Code of Construction Practice
DCO	Development Consent Order
ES	Environmental Statement
PRoW	Public Rights of Way
VWPL	Vattenfall Wind Power Limited

Glossary of Terminology

Cable pulling	Installation of cables within pre-installed ducts from jointing pits located along the onshore cable route.
Ducts	A duct is a length of underground piping, which is used to house electrical and communication cables.
Jointing pit	Underground structures constructed at regular intervals along the cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
Landfall	Where the offshore cables come ashore at Happisburgh South.
Mobilisation area	Areas approx. 100 x 100m used as access points to the running track for duct installation. Required to store equipment and provide welfare facilities. Located adjacent to the onshore cable route, accessible from local highways network suitable for the delivery of heavy and oversized materials and equipment.
National Grid overhead line modifications	The works to be undertaken to complete the necessary modification to the existing 400kV overhead lines.
National Grid substation extension	The permanent footprint of the National Grid substation extension.
Necton National Grid substation	The grid connection location for Norfolk Boreas and Norfolk Vanguard
Onshore cables	The cables which take power and communications from landfall to the onshore project substation.
Onshore cable route	The up to 35m working width within a 45m wide corridor which will contain the buried export cables as well as the temporary running track, topsoil storage and excavated material during construction.
Onshore project area	The area of the onshore infrastructure (landfall, onshore cable route, accesses, trenchless crossing zones and mobilisation areas; onshore project substation and extension to the Necton National Grid substation and overhead line modifications).
Onshore project substation	A compound containing electrical equipment to enable connection to the National Grid. The substation will convert the exported power from HVDC to HVAC, to 400kV (grid voltage). This also contains equipment to help maintain stable grid voltage.
Running track	The track along the onshore cable route which the construction traffic would use to access workfronts.
The project	Norfolk Boreas Wind Farm including the onshore and offshore infrastructure.
Trenchless crossing compound	Pairs of compounds at each trenchless crossing zone to allow boring to take place from either side of the crossing.
Workfront	A length of onshore cable route within which duct installation works will occur, approximately 150m.

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1 INTRODUCTION

1.1 Purpose of this Document

1. This document describes the Public Rights of Way (PRoW) Strategy (herein ‘the strategy’) to be employed by Norfolk Boreas Limited and its contractors during the construction phase of the onshore infrastructure for the Norfolk Boreas Offshore Wind Farm (herein ‘the project’). This PRoW Strategy outlines the health and safety requirements associated with the interactions of PRoWs during construction works within the onshore project area, as well as the PRoW management methodologies that will be implemented.

1.2 Development Scenarios

2. Vattenfall Wind Power Limited (VWPL), the parent company of Norfolk Boreas Limited, is also developing Norfolk Vanguard, a ‘sister project’ to Norfolk Boreas. The Norfolk Vanguard project is approximately one year ahead of Norfolk Boreas in its development programme having submitted its Development Consent Order (DCO) in June 2018. In order to minimise impacts associated with onshore construction works for the two projects, Norfolk Vanguard are seeking consent to undertake duct installation and some enabling works for both projects at the same time. This is the preferred option and considered to be the most likely however, Norfolk Boreas needs to consider the possibility that Norfolk Vanguard may not proceed to construction.
3. In line with the Norfolk Boreas Environmental Statement (ES) (document reference 6.1), this PRoW strategy considers the following two alternative scenarios:
 - **Scenario 1** – Norfolk Vanguard proceeds to construction, and installs ducts and other shared enabling works for Norfolk Boreas.
 - **Scenario 2** – Norfolk Vanguard does not proceed to construction and Norfolk Boreas proceeds alone. Norfolk Boreas undertakes all works required as an independent project.
4. Under Scenario 1 Norfolk Vanguard proceeds to construction and would have undertaken the following to benefit Norfolk Boreas:
 - Installation of ducts to house Norfolk Boreas cables along the entirety of the onshore cable route from the landfall zone to the onshore project substation;
 - A47 junction works for both projects and installation of a shared access road up to the Norfolk Vanguard substation; and
 - Overhead line modifications at the Necton National Grid substation, which will accommodate both projects.

5. Under Scenario 1, the following onshore elements would be undertaken by the project:
 - Installation of ducts and cables at the landfall;
 - Cable pulling through pre-installed ducts, including reinstatement of up to approximately 12km of temporary running track;
 - Construction of onshore project substation, including extension of the access road from the A47 (installed by Norfolk Vanguard);
 - Extension of the Necton National Grid Substation in an easterly direction, with a footprint of approximately 135m by 150m; and
 - Landscape mitigation planting.
6. Under Scenario 2, the following onshore elements would be undertaken by the project:
 - Installation of ducts and cables at the landfall;
 - Duct installation via open trenching and trenchless crossings, including installation of 60km of temporary running track;
 - Installation of mobilisation areas and trenchless crossing compounds;
 - Cable pulling through pre-installed ducts, including re-erecting or reinstalling up to approximately 12km of temporary running track;
 - Construction of onshore project substation, including installation of new permanent access road from A47 and associated junction improvement works;
 - Extension of the Necton National Grid Substation in a westerly direction, with a footprint of approximately 200m by 150m;
 - Modifications to the existing National Grid overhead lines; and
 - Landscape mitigation planting.
7. Full details of the scenarios are presented in Chapter 5 Project Description of the ES (document reference 6.1.5), including a further detailed comparison provided in Appendix 5.1 (document reference 6.3.5.1).

1.3 Public Rights of Way

1.3.1 Baseline

8. The onshore project area interacts with PRoW and cycle routes at 46 locations (see ES Chapter 30 Tourism and Recreation, Figure 30.3 (document reference 6.2.30.3)). Key PRoW identified include Norfolk Coastal Path, Weavers Way and Paston Way long-distance trails, Marriott's Way, Wensum Way, three public bridleways, one restricted byway and cycle routes including Regional Cycle Route 30 and 33, and National Cycle Routes 1 and 13.

1.3.2 Scope of Strategy

9. No PRoWs are located at the onshore project substation or the National Grid substation extension, and no PRoWs will be impacted during the operation or decommissioning of Norfolk Boreas. Therefore, the scope of this strategy covers the temporary impacts associated with construction works at the landfall and onshore cable route only.
10. This PRoW strategy will be employed by the project under Scenario 1 in reference to the construction at landfall and the onshore cable route (cable pulling at jointing pits and associated access locations), and under Scenario 2 for the construction at landfall and the onshore cable route (duct installation and cable pulling at jointing pits location and associated access locations).
11. During the cable pulling works the cables will be pulled through the pre-installed ducts from jointing pits located along the onshore cable route. Access to and from the jointing pits would be required to facilitate the works. The exact location of the jointing pits and their interactions with PRoW will not be determined until post consent; however, this strategy will be applied to all relevant locations once identified.

2 HEALTH AND SAFETY

12. In the interest of safety, temporary fencing will be erected around each section of construction works being undertaken along the onshore cable route. Where a PRoW crosses the onshore cable route lockable gates will be installed within the fencing for the period of time in which the PRoW is closed.

13. Each PRoW that crosses the onshore cable route will be risk assessed prior to that section of construction works being undertaken and appropriate fencing will be specified to meet health and safety requirements of users and the security requirements of the site. The assessments will take into consideration the requirement to manage risks arising from the intersection of the PRoW and the running track (taking into account type and volume of users) during construction hours and maintaining security integrity out of hours. In addition, Norfolk Boreas Limited will ensure that all employees have undergone necessary health and safety training.

3 PUBLIC RIGHTS OF WAY MANAGEMENT METHODOLOGIES

14. Disruption to any PRoW will be managed by the Principal Contractor to ensure continued safe access along the PRoW for members of the public, and all efforts will be made to minimise PRoW closure durations. The exact management method will be agreed in advance with the relevant local authority and detailed within the final Code of Construction Practice (CoCP) for that stage of the works (secured through DCO Requirement 20). Methods available include:
 - Appropriately fenced (unmanned) crossing points;
 - Manned crossing points; and
 - Temporary alternative routes (assumed be required for approximately 1 week).
15. There will be no permanent closures of any PRoWs.
16. Soft management techniques will be employed where cycle routes intersect the onshore cable route. These methods will include (but not be limited to) the use of pilot vehicles and stop and go signs.
17. Safety measures will be implemented where the running track for site access cross a PRoW, including raising awareness of the PRoW to running track users and informing PRoW users of the hazards associated with the running track. Where a PRoW is used as part of a running track, an alternative route for the PRoW will be provided.
18. Following the cessation of construction works, all PRoWs will be reinstated to their original condition or otherwise as agreed with the relevant local authority.
19. For all temporary alternative routes required, the following measures will be followed:
 - A pre- and post-construction survey (including identification of surface condition and street furniture) of the PRoW affected will be undertaken. PRoW surveys will be undertaken by an experienced surveyor with scope of coverage and methodology to be agreed with the relevant local authority. A qualified Agricultural Liaison Officer (ALO) will be employed to ensure that information on existing land conditions is obtained, recorded and verified during the rights of way surveys;
 - Where impacted by the works, the surveyed PRoW will be restored to its original condition or otherwise as agreed with the relevant local authority. The ALO will act as the point of contact for the restoration of the PRoW;
 - Norfolk Boreas Limited will advertise all alternative routes following the local authority's standards for advertising temporary closures of PRoW. This will include:

- Provision of a map showing the extent of the temporary closure and an alternative route;
- Confirmation that the alternative route is to other PRoWs ,roads or on land in Norfolk Boreas Limited control;
- Confirmation that the alternative route across land in Norfolk Boreas Limited's control is safe and fit for public use.
- County, District and Parish Councils would be notified in advance of temporary closures;
- A notice describing the temporary closure would be published in the press (e.g. Eastern Daily Press) a minimum of two weeks in advance of closure. Consideration will also be given to publishing the temporary closures via additional alternative methods such as websites; and
- Advanced site notices (i.e. notices to members of the public warning of diversions ahead) would be posted at appropriate locations to minimise the likelihood of trespassing and to avoid aborted journeys:
 - These site notices would be erected in visible locations on site 1 – 2 weeks in advance of temporary closures;
 - The notices would describe the duration of temporary closure and the alternative route proposed.
- Whilst any extensions to the closure of a PRoW would be avoided where possible, if required, this would be discussed with the relevant local authority.