



Galloper Wind Farm Project
Safety Zone Statement
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Galloper Wind Farm Limited



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Drafted by	Kate Harvey, Laura Fuller	
Checked by	Kate Harvey	
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1 SUMMARY

- 1.1.1 This Statement addresses the requirements of Section 95 of the Energy Act 2004 (Safety zones around renewable energy installations). It explains that it is Galloper Wind Farm Limited's (GWFL) intention to apply for a safety zone scheme during the construction and operational phases of the project.

2 INTRODUCTION

- 2.1.1 This statement is submitted on behalf of GWFL pursuant to Regulation 6(1)(b)(ii) of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (APFP Regulations). It accompanies an application (Application) to the Infrastructure Planning Commission (IPC) for two linked Nationally Significant Infrastructure Projects (NSIPs) namely:
- an offshore generating station of up to 504MW and new overhead lines of 400kv, together with associated development which includes offshore substations platform, accommodation platform and/or collection platform; and
 - a grid connection between and from those substation to a new onshore substation, which in turn connects via cables to an existing 400kv overhead grid connection using two new sealing end compounds next to those pylons and the new overhead lines.
- 2.1.2 This offshore wind farm is known as the Galloper Wind Farm (GWF).
- 2.1.3 GWF would be located approximately 27 kilometres (km) off the coast of Suffolk. The majority of the wind turbine generators (WTGs) will be located on the seaward side of the Greater Gabbard Offshore Wind Farm (GGOWF), which is currently under construction.
- 2.1.4 It is necessary to apply to the IPC for development consent to construct and operate GWF as the proposal is for an offshore wind farm of more than 100MW, thereby making it a Nationally Significant Infrastructure Project under sections 14(1)(a) and 15(3) of the Planning Act 2008.
- 2.1.5 This Statement addresses the requirements of Section 95 of the Energy Act 2004 (Safety zones around renewable energy installations). It explains that it is GWFL's intention to apply for a safety zone scheme during the construction and operational phases of the project.
- 2.1.6 If, following consultation with the Department of Energy and Climate Change (DECC) and other relevant bodies such as the Maritime and Coastguard Agency (MCA), a safety zone is required for the decommissioning of GWF, a further safety zone application will be made at the relevant time.

3 SAFETY ZONE STATEMENT

3.1.1 Regulation 6(1)(b)(ii) of the APFP Regulations requires the applicant for a development consent order (DCO) for the construction of an offshore generating station to provide a statement as to whether applications will be made for safety zones in respect of that offshore generating station.

3.1.2 It is GWFL's intention to make an application for a safety zone scheme in the event the DCO is granted. It is estimated that the application would be made in 2014 and last for the construction and operational period of the offshore wind farm.

3.1.3 GGOWF applied for, and was granted, a safety zone scheme in 2009. The details of the scheme are as follows:

Construction

- 500m radius around wind turbine foundation structures and the offshore substation platform within the construction zone during while installation activities are on-going; and
- 50m radius around all wind turbines, met masts, offshore substation platforms and associated foundation structures installed, complete or incomplete.

Operation & Maintenance

- 50m radius around all wind turbines, wind turbine foundation structures, offshore substation platforms and met masts for all non-project related traffic; and
- 500m safety zone around all 'major maintenance' being undertaken around wind turbines, wind turbine foundation structures, offshore substation platforms and met masts (major maintenance here is defined as any activity involving the large vessels (jack-up barge, floating barge, heavy lift vessel, DP/anchorage cable lay barge etc.)

3.1.4 Whilst the construction of GGOWF and GWF will not coincide (GGOWF construction is due to be completed in 2012), there is the potential for the GGOWL and proposed GWF safety zones to overlap. This would occur if maintenance was being undertaken near to the boundary of GGOWF site or cable corridor.

3.1.5 The purpose of the GWFL safety zone scheme would be to manage the interaction between vessels and the wind farm in order to protect life, property and the environment. The fundamental principle is that vessels would be kept at a safe distance from construction, commissioning and operational activities related to the wind farm in order to avoid collisions.

3.1.6 The safety zone scheme would be monitored and controlled by GWFL with the support of a Marine Control Centre.

3.1.7 Prior to the expiry of any consent granted for GWF, consultation with DECC and any other relevant bodies, including the MCA, would be carried out to

determine whether a safety zone will be required for the decommissioning of GWF. A further application will be submitted for the decommissioning works if required at the relevant time.

- 3.1.8 A description of GWF and its proposed location and dimensions are included in **Section 4**. Up to three export cables are required to transfer the wind farm output to shore. Inter and intra-array cables will collect and transfer power generated in WTG to the offshore substation platform/s (OSP). The cables connect the WTG together into strings, with the maximum number of WTG connected together depending on WTG size and cable rating. The strings of turbines would then in turn be connected to the offshore platform, possibly via a collection station. The principal purpose of the OSP is to house the transformers required to increase the distribution voltage (typically 66kV or above) of the inter and intra-array cables to a higher export voltage (132kV) for the export cables.
- 3.1.9 The WTGs, transition pieces (TP), up to one accommodation platform, up to one collection platform and up to three meteorology masts will be visible above the water line.
- 3.1.10 All elements of the offshore GWF project would be designed to operate unmanned, with the systems monitored and instructions issued from a central location 24 hours a day.
- 3.1.11 The wind farm and associated plant and apparatus would be controlled and monitored centrally using Supervisory Control and Data Acquisition (SCADA) systems, most likely located within the TP. The SCADA systems are the means by which the monitoring is undertaken and commands relayed to the equipment.
- 3.1.12 The wind farm and associated plant and apparatus would be controlled and monitored centrally using Supervisory Control and Data Acquisition (SCADA) systems, most likely located within the TP. The SCADA systems are the means by which the monitoring is undertaken and commands relayed to the equipment.
- 3.1.13 GWFL will at or near GWF during the whole period of the construction, operation, alteration, replacement or decommissioning exhibit such lights, marks, sounds, signals and other aids to navigation as Trinity House, in consultation with the MCA, may from time to time direct.
- 3.1.14 GWFL intend to apply for a standard safety zone of 500m during construction and 50m during operation apart from when major maintenance works are being carried out and the zone is likely to extend to 500m.
- 3.1.15 Monitoring will be carried out by the construction vessels (during the construction phase) and CCTV (where it is in place at completed WTGs/OSPs). A detailed Monitoring and Policing procedure will be developed as part of the Active Safety Management System (ASMS).

4 SCOPE OF GWF APPLICATION

- 4.1.1 Part 1 of Schedule 1 of the draft DCO describes the works for which development consent is being sought.

Offshore works - from WTG array to mean low water

- 4.1.2 Work No. 1 comprises of an offshore wind turbine generating station with a gross electrical output capacity of up to 504MW comprising up to 140 wind turbine generators each fixed to the seabed by one of four foundation types (namely, monopile foundation, space frame foundation, suction monopod foundation or gravity base foundation), fitted with rotating blades. The inter and intra-array cables also form part of the Generating Station NSIP set out within Work No 1. Up to three offshore substation platforms comprise Work No. 2 and the cable connections between the offshore substation platforms and the export cables seaward of mean low water comprise Work no. 3A. Works numbered 2 and 3A are considered to be "associated development" to the Generating Station NSIP within section 115 of the Planning Act 2008, in that they are not an aim in themselves but are required to export the electricity generated by the turbines.

Onshore connection works - from mean low water to GWF electricity substation

- 4.1.3 GWFL has also included its onshore works from mean low water to the electricity substation as "associated development" within its DCO application to the IPC. The export cables from mean low water to the transition bays comprise Work No. 3B, the transition cable jointing bays south of the Sizewell Gap comprise Work No. 4, the underground cables running from the transition bays to GWFL's onshore substation comprise Work No. 5, and the GWF onshore substation including screening works comprises Work Nos. 6 – 8.

Onshore transmission works - from transmission compound to grid

- 4.1.4 The Electric Line NSIP is described in Work Nos. 9A and 9B and consists of the overhead lines and new sealing end compounds connecting into the national electricity transmission network. The electrical transmission compound at Sizewell Wents comprises Work No 11 and the underground grid connection cables between the sealing end compounds and the transmission compound comprise Work Nos 10A and 10B. Work No. 12 comprises the underground cables between the transmission compound and the existing NGET underground cable corridor to Sizewell. Work Nos 10A, 10B, 11 and 12 are considered "associated development" to the Electric Line NSIP.

5 SAFETY ZONE APPLICATION

5.1.1 Regulation 3 of The Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007 requires that the following information should be included within a written application for safety zones in respect of an offshore generating station. This information would be provided by GWFL in the event that an application for a safety zone scheme is made.

- a map showing:
 - (i) the place where the relevant renewable energy installation is to be, or is being, constructed, extended, operated or decommissioned; and
 - (ii) the waters in relation to which any declaration applied for will establish a safety zone;
- a description of the installation and its proposed or existing location and dimensions (including an explanation of how much of it is (or is expected to be) visible above the water line and how much below it), supported by drawings;
- a description of how the installation operates (or is to operate);
- a description of the location (or proposed location) of:
 - (iii) any electric line used (or proposed to be used) for the conveyance of electricity to or from the installation;
 - (iv) any connection to such an electric line;
 - (v) a description of the location (or proposed location) of any offshore sub-station housing connection equipment;
 - (vi) where the zone is sought in respect of more than one relevant renewable energy installation, the proposed or existing distances between such installations; and
 - (vii) details of any navigational marking that has been specified for use with an installation of the description in question by a general lighthouse authority;
- whether the zone relates to the construction, extension, operation or decommissioning of the relevant renewable energy installation;

- whether the applicant seeks the declaration of a standard safety zone¹, or if not, what dimensions are sought for the zone;
- a description of those works or operations in respect of which the zone is being applied for and their estimated date and duration;
- whether the applicant proposes that the area of the zone will vary and any factors or determinations by reference to which the applicant proposes that such variation may take place;
- whether the zone relates to major maintenance works in respect of a relevant renewable energy installation which has become operational;
- a statement setting out what steps, if any, the applicant proposes to take to monitor vessels and activities within the zone;
- except where the Secretary of State has notified the applicant that it is not required, an up to date shipping traffic survey for the waters comprising the zone; and
- an assessment of the extent to which navigation might be possible or should be restricted, and whether restrictions would cause navigational problems, within or near waters where the relevant renewable energy installation is to be, or is being, constructed, extended, operated or decommissioned, as the case may be.

5.1.2 GWFL's safety zone application will contain the information required by Regulation 3. The application will be for the standard safety zones comprising:

- In relation to proposed or ongoing construction, [extension or decommissioning] of a wind turbine, or of major maintenance works² in respect of such installation, a radius of 500 metres measured from the outer edge at sea level of the proposed or existing wind turbine tower; and
- In relation to proposed or ongoing operation of a wind turbine, a radius of 50 metre measured from the outer edge at sea level of the proposed or existing wind turbine tower.

¹ A standard safety zone is defined as 500m during construction and 50m during operation of the works.

² Defined by Regulation 2 of the 2007 Regulations as:

"works relating to any renewable energy installation which has become operational, requiring the attachment to, or anchoring next to, such an installation of a self-elevating platform, jack-up barge, crane barge or other maintenance vessel"

- 5.1.3 Where a safety zone relates to a NSIP, the appropriate decision maker for safety zones is the Secretary of State, who has delegated that function to DECC. The safety zone application will therefore be made to DECC, which may, if it is considered to appropriate to do so, issue a notice declaring that such areas as are specified or described in the notice are to be safety zones.
- 5.1.4 Pursuant to section 95(2) of the Energy Act 2004, the purposes for which the Marine Management Organisation may consider it appropriate to issue such a notice are for the purposes of securing the safety of:
- the renewable energy installation or its construction, extension or decommissioning;
 - other installations in the vicinity of the installation or the place where it is to be constructed or extended;
 - individuals in or on the installation or other installations in that vicinity; or
 - vessels in that vicinity or individuals on such vessels.
- 5.1.5 The safety zone application will be made to DECC prior to construction commencing at GWF.