

DEVELOPMENT CONTROL COMMITTEE

25 JANUARY 2011

REPORT OF THE INTERIM HEAD OF PLANNING

A.3 GUNFLEET SANDS 3 OFFSHORE WINDFARM – DEMONSTRATION PROJECT

APPLICATION TO INSTALL UP TO TWO DEMONSTRATION TURBINES IN THE NORTHERN THAMES ESTUARY AT THE SITE OF GUNFLEET SANDS OFFSHORE WINDFARM.

Members will be aware of the DONG Energy offshore windfarm, sited off the Clacton coast at Gunfleet Sands. The existing development comprises two consented schemes “Gunfleet Sands 1” (GFS1) and “Gunfleet Sands 2” (GFS2), installed concurrently and totalling 48 wind turbines, operational since 2010. The total number of turbines consented was 52 (30 at GFS1 and 22 at GFS2). However, due to limitations on output capacity, four wind turbines were not installed as part of the GFS2 ‘extension’.

In August 2010, DONG Energy Gunfleet Sands Demo (UK) Ltd, a wholly owned subsidiary of DONG Energy A/S (DONG), was awarded a demonstration lease site to the south-west of the constructed GFS 2 array. DONG Energy Gunfleet Sands Demo (UK) Ltd has been established as a Special Purpose Company with the aim of developing, constructing and operating the Gunfleet Sands 3 - Demonstration Project (GFS 3). The proposed GFS 3 involves the construction, operation and decommissioning of up to two demonstration wind turbines and associated inter-array cable infrastructure. The development will be connected via GFS 1 and GFS 2 offshore infrastructure via the offshore transformer and the offshore export cable. The GFS 3 project will then utilise the existing onshore electricity connection. The Demonstration Project will have a total electrical capacity of up to 20 megawatts and will be sited approximately 8.5 km/5.3 miles off shore.

DONG Energy Gunfleet Sands Demo (UK) Ltd has now applied to the Marine Management Organisation (MMO) for consent for the development. The site of the proposed new wind turbine(s) equates approximately to that consented for the four wind turbines which have not been installed. The structures would be larger than those which exist and the new turbine(s) output would be greater. The project will allow recent improvements in wind turbine technology to be tested and monitored. By way of comparison, the maximum overall height of the existing wind turbines is 135m (MHWS) whilst the maximum height of the proposed wind turbines would be up to 180m (MHWS). In terms of comparative hub heights, these are existing maximum 80m (MHWS) and proposed maximum 130m (MHWS). In terms of comparative rotor diameters, these are existing maximum 107m and proposed maximum 150m. The proposed demonstration wind turbines would be of a three blade design, similar to the existing wind turbines. Each existing wind turbine can generate up to 3.6 MW, whilst the combined generating capacity of two larger wind turbines as proposed would be up to 20MW. It is intended that GFS3 would be constructed during 2011/2012.

An Environmental Impact Assessment (EIA) is required to support the application for consent and an Environmental Statement (ES) has been prepared. A considerable amount of data is available as a result of the GFS1 & GFS2 assessments. Your officers consider that the main issue in terms of impact is in relation to the seascape and visual impact of the proposal.

As part of the scoping process, the GFS1 and GFS2 visual assessment viewpoints were reviewed and an additional viewpoint (Dovercourt Bay) added, having regard to the extent to which the existing windfarm can be seen from this area on a clear day.

Although the proposed new wind turbines will be larger than those currently at Gunfleet Sands, they will be seen in context with the existing windfarm. The ES considers that the seascape and visual impacts of the development will be negligible. Your officers consider that the increased height and rotor diameters of the proposed new wind turbine(s) sited adjacent to the existing

windfarm will result in limited additional visual impact, having regard to their distance from the shore.

The ES also considers the potential environmental impacts in terms of the following: coastal processes; water and sediment quality; nature conservation; benthic ecology; fish and shellfish resources; marine mammals; ornithology; commercial fisheries; shipping and navigation; historic environment; other marine users; air traffic; and socio-economic effects and tourism. The ES considers that the impact of the proposal upon these aspects will range from no impact to minor significance. Where there is the potential for minor adverse effects, appropriate mitigation measures may be required. In two cases (commercial fisheries and socio-economic effects and tourism) the effects could include minor beneficial effects, viewed as positive.

As construction times are dictated particularly by the tides and weather conditions, works might have to take place at night and atmospheric conditions can result in construction noise (mainly from piling) travelling on-shore. However, any disturbance which might occur will be temporary and as a maximum of two turbines will be constructed, this will be limited in duration and impact. The Council's Environmental Health Officer monitored noise resulting from the construction of GFS1 & GFS2 and has no objections to the proposed GFS3.

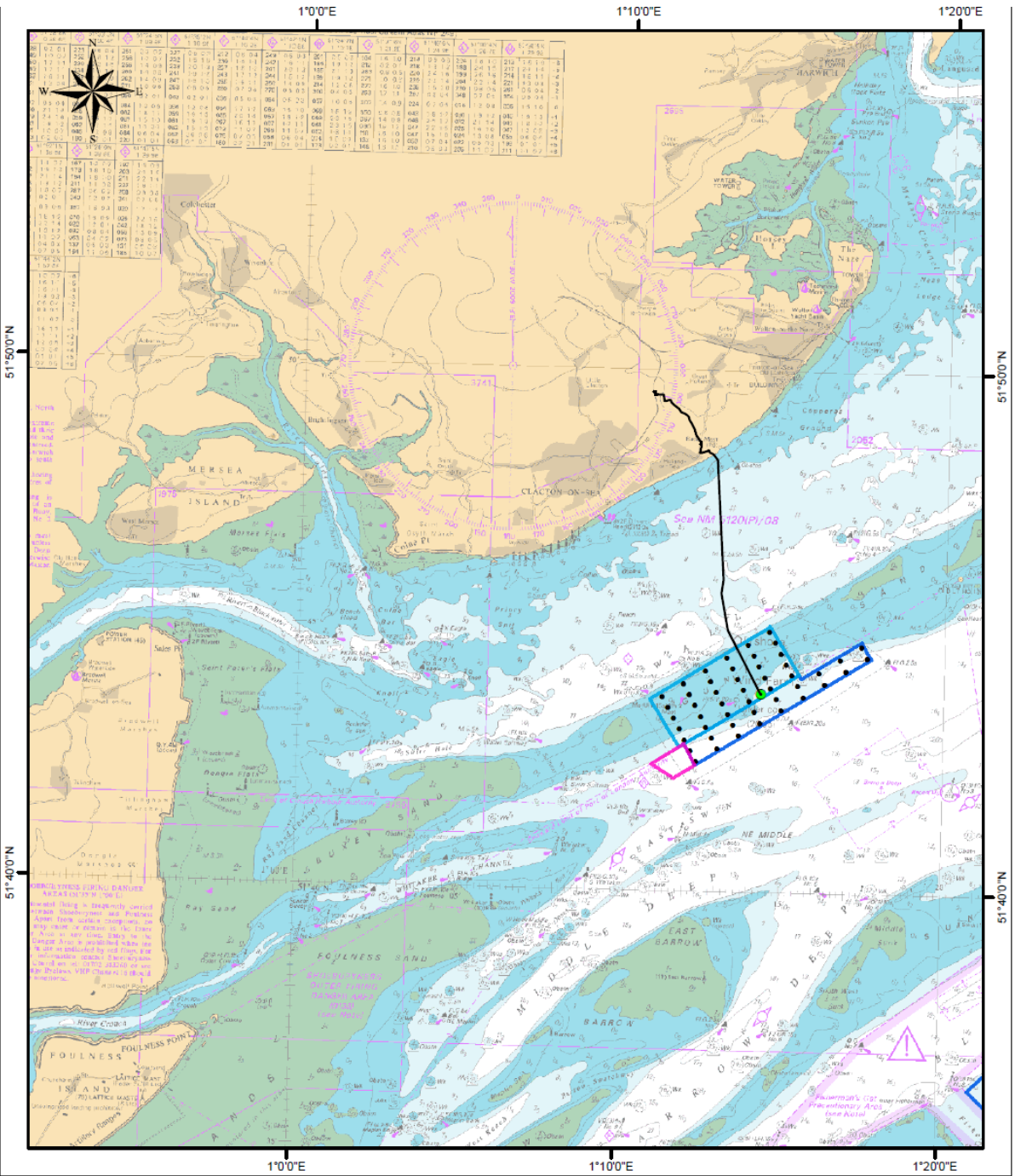
The proposal is not one for which the Council has any powers of determination. However, it is able to make representations if it so wishes.

RECOMMENDED:

- i) That Members note the above application for consent made to the MMO; and,
- ii) that the Council raises no objection to the proposed demonstration project.

Background Papers

Gunfleet Sands 3 Offshore Windfarm – Demonstration Project – Environmental Statement
Non-technical Summary December 2010



Legend

- GFS Export Cable
- GFS Offshore Substation
- GFS Turbines (as built)
- GFS 1 Site Boundary
- GFS 2 Site Boundary
- GFS 3 Site Boundary

0 4 8 Kilometres

0 1 2 Nautical Miles

Scale 1:200,000 Coordinate System: WGS UTM 31N

**Gunfleet Sands 3 - Demonstration Project
Figure 1.1**

Data Sources and Copyright:

UK Offshore Windfarms (Round 1 and 2):
The Crown Estate, 2009.

Background Map: UKHO Chart no. 1183
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DONG Energy Power (UK) Ltd
33 Grosvenor Place
Belgrave
London
SW1X 7HY
UK

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