

**From:** [Mulbarton Parish](#)  
**To:** [Hornsea Project Three](#)  
**Subject:** Hornsea Project three Off shore Wind Farm (EN010080)  
**Date:** 11 December 2018 19:34:29  
**Attachments:** [Hornsea Project Three Offshore Wind Farm ref EN010080 - MPC.pdf](#)

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Good evening,

Our ref: 20010562

Further to last week's hearings and a request for the Parish Council to submit comments in writing, please find attached said comments.

Kind regards

Anne

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# MULBARTON PARISH COUNCIL

## Onshore HVDC/AC converter substation

### 1. Introduction

These comments reflect information made available for this week's public hearing (3rd–7th December) in connection with the Hornsea Three project timescales, and the selection of AC or DC transmission. From these discussions, it seems quite likely that DC transmission may well be the preferred choice.

It also appears that the project is now looking to the 2021 Contract for Difference round, rather than May 2019, and will therefore run a year or two later than was previously expected. This would seem to increase the likelihood of DC transmission being adopted; it also implies that time is still available to consider alternative sites for the onshore converter substation.

Further, it is widely expected that more wind farm projects will come forward off the coast of Norfolk in the near future, and some of these projects may also require access at Norwich Main. It seems quite likely that an expansion of the Norwich Main site may be required in the foreseeable future.

### 2. Site selection criteria

The use of DC transmission would lead to a larger structure for the onshore converter substation than for AC, with a building height of up to 25m. Effective mitigations are therefore even more important.

The best mitigation is to choose the correct site.

The site selection criteria for the converter substation should include:

- close proximity to Norwich Main;
- easy access from the trunk road network;
- a brownfield site with minimum impact on crop yield, environment, and heritage.

These criteria would not lead to the selection of the proposed site in Swardeston, which has rather the opposite characteristics, being a greenfield site; in agricultural use; on rising ground; and with access only from the B1113, as Highways England have ruled out any form of access from the nearby A47.

### 3. Impact and mitigations

If the visual impact of the converter substation is to be eliminated by tree planting, then this needs to be assessed against a building height of 25m, and must also take account of the rising ground level.

The B1113 rises from a spot height of about 33m on leaving the village of Mulbarton, to about 37m at the A47 flyover at Swardeston. The proposed site is on rising ground approaching the 40m level. This adds an additional 3 to 5m to the effective building height as seen from surrounding areas. (In earlier public consultations, there was discussion of partial excavation of the site to reduce the effective height of the building, but this form of mitigation does not seem to appear in the present documentation.)

Trees grow at an average rate of 0.5m per year, depending upon many factors. To add 25m of height to an initial 2m high planting could take 50 years, depending upon species. Tree spacing is also a pertinent consideration. Crown space and root spread aspects suggest a spacing of 15m to 20m for trees of this size. Effective screening would therefore require much larger areas of planting than currently proposed.

It has also become clear that road access into the converter substation site will need to allow for 28-axle low-loader vehicles, up to 93.5m long and up to 5.0m wide, necessitating the removal of 430 meters of well-established mature roadside hedgerow and a number of mature trees to provide safe access.<sup>1</sup>

It is difficult to see how full re-instatement of the roadside hedgerow can begin until construction of the converter substation has been completed, possibly eight to ten years after the start of work on site.

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<sup>1</sup> Appendix 2 to Deadline 2 submission – Addendum to Appendix 29 (REP1-171): Permanent Access Note for HVDC converter/HVAC substation, Annex A, Drawing No. JNY8772-72 Rev B.

#### **4. Traffic flows**

Within the proposed period of construction of the HVDC/AC converter substation, traffic movements along the B1113 are likely to be affected by the construction of a new industrial estate at its junction with the A140, recently approved (planning ref. 2016/0764). There are also plans in progress for large numbers of additional houses within the local area. (See for example, the current GNLP Regulation 18 consultation). If only a small proportion of these housing proposals go ahead within the next ten years, traffic volumes on the B1113 are likely to be higher than those so far identified in the documentation.

Given that most of the heavy vehicle traffic for the construction of the substation is likely to be arriving from Felixstowe, it will of necessity use the A140 trunk road. Direct access from this road would be an advantage, and would minimise the environmental impact and disruption to local communities; it is not obvious that there is any other viable route for the very large size of vehicle now identified.

#### **5. Alternative sites**

Within the timeframe now being proposed for Hornsea Three, other locations for the substation may be available, and preferable, and may require less extensive mitigations. One such site was identified in our representation, RR-049<sup>2</sup>. This is the location of a partly-worked-out gravel pit, close to Norwich Main, and with direct access from the trunk road network already in place to and from the A140.

Local knowledge suggests that the gravel pit may wish to extend southward in the direction of Norwich Main, thus releasing a worked-out brownfield site for other purposes. Negotiations with the owners of the pit are presumably required in any event to secure the route of the buried cable access into Norwich Main. This suggests the possibility of a mutually beneficial outcome for all of the relevant parties.

An alternative scenario is that the potential expansion of the Norwich Main site itself may allow for the incorporation of the HVDC/AC converter substation within its own site boundaries in this timeframe.

#### **6. Applicant's response**

The Examining Authority summarised the representation RR-049 in Question Q1.1.14. The Applicant's Response directs the reader to the answer to an unrelated question (RR-001), which does not respond to the above points, other than somewhat indirectly.<sup>3</sup>

In our view, the Applicant's response on this issue is insufficient, and alternative sites with direct access from the trunk road network should be explored as a matter of urgency.

7th December 2018

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<sup>2</sup> Applicant's Comments on Relevant Representations submitted to Deadline 1, p74 and also p10.

<sup>3</sup> Applicant Responses to the ExA's First Written Questions, Deadline 1, p21.