[redacted]

Kelvin MacDonald
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2, The Square
Bristol, BS1 6PN

My Ref: TKES-S57017
Your Ref: EN020019
Date: 1st January 2016

Dear Sir,

It has become increasingly apparent that many of the more unpalatable aspects of this development, namely the excessive easement width, the number of trenches and cables, the presence, frequency and location of ground level link boxes, the duration of the construction period and the reluctance of the applicant to agree to reasonable clearances for private drainage assets, could have been reduced or avoided had the applicant opted to use HVDC technology. The sole justification for this choice appears to be the applicant's oral evidence at the socio-economics hearing on the 19th of November 2015 [EV-029] (01hr:09min:05sec) in response to the Examining Authority's questions.

Mr Baker's assertion that “the DC converter stations tend to be significantly larger than an AC substation” is not supported by the information available on the National Infrastructure Planning website in relation to the onshore elements of proposed projects that intend to use, or have an option to use, HVDC technology. The Hornsea Project 1 OWF (1200MW), which has an option to use either technology, proposes an onshore substation/converter footprint of 3.22 hectares in either eventuality and the Hornsey Project 2 (1800MW), an indicated area of 6 hectares on the same basis. The Forewind Consortium, in which both RWE and Statkraft have stakes, propose to develop four 1200MW wind farms on the Dogger Bank each connected by HVDC cables with an indicated individual onshore converter station occupying up to 5 hectares. The Dogger Bank projects also appear to have a total absence of link boxes.
At 1.7ha for the Orby IEC and 6.9-8.6ha for the Bicker substation Triton Knoll OWF seems to need a disproportionately large onshore footprint to transmit 900MW by HVAC.

I don't doubt that it is a “significant engineering challenge” to place a converter station offshore, however, it would only have to be done once; we shall be negotiating their link boxes several times a year for the foreseeable future.

I would have thought that, on a project of approximately 90 km, the savings in materials, time and the lack of an IEC would have gone a long way towards covering the converter costs, even if they are of “an order of magnitude different”.

Mr Baker's statement on HVDC: “at this stage that isn't a proven technology for the application of offshore wind in the UK” raises the question: 'is it successfully in use elsewhere in the world?'
RWE and Statkraft clearly think it is suitable for the Dogger Bank projects.

Digging one or two trenches rather than six and not constructing hundreds of link boxes would surely cut the construction time to something rather more reasonable than the 4.5 years planned by the applicant for the scheme as currently envisaged. If reliable HVDC technology will be available shortly, it seems to me that Triton Knoll could be put back until it is. The reduced construction time would hopefully ensure that the scheme would be producing power as quickly as if HVAC were used, but with less effect on East Lincolnshire It would also allow National Grid Viking Link time to decide exactly what they want to do, possibly allowing some cooperation between the two projects.

By not including an HVDC option as part of this DCO I would suggest that the applicant has failed to show that powers being sought are proportionate, nor can I see that it is in the general interest for any one development to take up more of any available route than is absolutely necessary.

I would like to draw your attention to the applicants written summary of the socio-economic hearing [REP3-041], paragraphs 1.64 to 1.68. The figure of 0.0003% of agricultural land in the East Midlands being affected seems to originate at paragraph 5.70 of document [APP-046] (6.2.3.5) Land Use and Soils of the Environmental Statement using the sum of the figures at paragraph 5.31 as a total. This figure has allegedly been checked, agreed to be accurate at paragraph 4.101 of the Statement of Common Ground with Natural England [REP-035], used to assess the effect on agriculture, recited in oral evidence and repeated in the above summary, despite appearing to be incorrect. Surely the calculation should be: 442ha/1,450,895ha x100=0.03%

Comments on questions:

Eon 2.8
The cables will pass under a private dyke of ours near its outfall to the Bellwater Drain which carries the water from approximately 240 acres of land, most of it having a peaty topsoil and some of it lying below sea level. I fail to see why it should receive less clearance than IDB sewers.

SE2.9
When assessing cable depth I think an assessment needs to be made of the probable behaviour of peaty soils over the long term, since the infrastructure is likely to be left in place permanently, so that we do not leave future generations a considerable problem. Within the East Fen (Steeping River to A16) there are both naturally occurring pockets of deeper peat and man made features known locally as “clay dykes”. These are the result of a 19th Century practice called “claying” which involved digging trenches into the mineral subsoils to mix with the surface peat to give it “body”. These were then backfilled with peat which is still there. I would think that the organic matter in these soils will continue to oxidise until they become mainly mineral. Since the resulting soils will be similar to others in the district I imagine that they will continue to be farmed until either the sea level rises to such an extent that drainage becomes uneconomic or the current interglacial period comes to an end. I would therefore suggest that the cables ought to be a sensible depth below the lower horizon of any peat which is contiguous with a peaty topsoil.

Yours faithfully,

Brian Ward