

# Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

The Applicant's Comments on Post-Hearing Submissions

**Revision A** March 2023

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The Applicant's Comments on Post-Hearing

Submissions Rev. no. A

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## **Glossary of Acronyms**

CIA	Cumulative Impact Assessment
DCO	Development Consent Order
dDCO	Draft Development Consent Order
DEP	Dudgeon Extension Limited
DEP	Dudgeon Offshore Wind Farm Extension Project
EAG	East Anglia Green
EIA	Environmental Impact Assessment
ES	Environmental Statement
ESC	East Suffolk Council
ETG	Expert Topic Group
ExA	Examining Authority
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
NGET	National Grid Electricity Transmission
NNDC	North Norfolk District Council
NSIP	Nationally Significant Infrastructure Project
OCTMP	Outline Construction Traffic Management Plan
SEL	Scira Extension Limited
SEP	Sheringham Shoal Offshore Wind Farm Extension Project



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## **Glossary of Terms**

Dudgeon Offshore Wind Farm Extension Project (DEP)	The Dudgeon Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
DEP onshore site	The Dudgeon Offshore Wind Farm Extension onshore area consisting of the DEP onshore substation site, onshore cable corridor, construction compounds, temporary working areas and onshore landfall area.
Expert Topic Group (ETG)	A forum for targeted engagement with regulators and interested stakeholders through the EPP.
Grid option	Mechanism by which SEP and DEP will connect to the existing electricity network. This may either be an integrated grid option providing transmission infrastructure which serves both of the wind farms, or a separated grid option, which allows SEP and DEP to transmit electricity entirely separately.
Horizontal directional drilling (HDD) zones	The areas within the onshore cable route which would house HDD entry or exit points.
Integrated Grid Option	Transmission infrastructure which serves both extension projects.
Jointing bays	Underground structures constructed at regular intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
Landfall	The point at the coastline at which the offshore export cables are brought onshore, connecting to the onshore cables at the transition joint bay above mean high water
Onshore cable corridor	The area between the landfall and the onshore substation sites, within which the onshore cable circuits will be installed along with other temporary works for construction.
Onshore export cables	The cables which would bring electricity from the landfall to the onshore substation. 220 – 230kV.
Onshore Substation	Compound containing electrical equipment to enable connection to the National Grid.
Order Limits	The area subject to the application for development consent, including all permanent and temporary works for SEP and DEP.
Separated Grid Option	Transmission infrastructure which allows each project to transmit electricity entirely separately.



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Sheringham Shoal Offshore Wind Farm Extension Project (SEP)	The Sheringham Shoal Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
SEP onshore site	The Sheringham Shoal Wind Farm Extension onshore area consisting of the SEP onshore substation site, onshore cable corridor, construction compounds, temporary working areas and onshore landfall area.
Study area	Area where potential impacts from the project could occur, as defined for each individual Environmental Impact Assessment (EIA) topic.
The Applicant	Equinor New Energy Limited. As the owners of SEP and DEP, Scira Extension Limited and Dudgeon Extension Limited are the named undertakers that have the benefit of the DCO. References in this document to obligations on, or commitments by, 'the Applicant' are given on behalf of SEL and DEL as the undertakers of SEP and DEP.



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## 1 The Applicant's Comments on Oral Submissions

1. Following the publication of the Summaries of Oral Submissions by the Examining Authority (ExA), the Applicant has chosen to comment on the responses provided by Interested Parties, detailed in the Sections below.

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## 1.1 Corpusty and Saxthorpe Parish Council

Table 1-1 The Applicant's Comments on Corpusty and Saxthorpe Parish Council's Oral Submissions

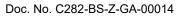
ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
1	This intervention falls under the notice of 13 December 2022 Planning Act 2008 (PA2008) –Section (s) 88 and 89 and The Infrastructure Planning (Examination Procedure) Rules 2010 –Rules 4, 6, 9, 10 and 13 and deals with matters of concern to Corpusty and Saxthorpe Parish Council. However, it also has broader relevance to the data, principles, methodology and methods upon which the Application rests. It is therefore applicable across the very large region of England affected by this proposed development.	Following the publication of the Summaries of Oral Submissions by the Examining Authority (ExA), the Applicant notes the comments made by Professor Barnett, the representative for Corpusty and Saxthorpe Parish Council, during OFH1 [transcript from 01:15 to 01:32, EV-009 and EV-010] and in REP1-073. The Applicant thanks Corpusty and Saxthorpe Parish Council for its detailed submission. The Applicant also thanks Corpusty and Saxthorpe Parish Council for its support of sustainable power generation through wind power [REP1-073, paragraph 2].
2	By way of introduction, the ExA is invited to note that Corpusty & Saxthorpe Parish Council wholeheartedly welcomes the development of sustainable power generation through wind-power1. Also by way of introduction, we invite the ExA to consider seriously what should already be apparent: the manner in which the vast quantities of project documentation, composed of many volumes, appendices, sub-appendices and indeed "libraries" could be intended, and are experienced by local communities such as parish councils, as cynical attempts to overwhelm the capabilities of such voluntary community organisation to engage with the overwhelming power of large corporate entities and government and quasi-government agencies as well as, indeed, the Crown Estates.	REP1-073 is focussed on the methodology and data used in the assessments of human health within ES Chapter 28 – Health [APP-114] and ES Chapter 27 – Socio-economic and Tourism [APP-113]. It also includes a number of points addressed to the ExA.  REP1-073 (paragraph 8) states that the project assessments are not a 'serious consideration of the Project's effects on the health and well-being of the affected populations' and sets out its argument along three themes. These are given as:  a. the way the problem has been framed; b. the types of data deployed;
3	Our emphasis here is on how we should understand the effects of the proposed on-shore wind farm transmission technology on the health and well-being of the affected populations across a large swathe of the east of England, in the process using some local examples which apply to Corpusty and Saxthorpe and the adjacent areas of Norfolk, but not restricted to these.	c. absence of appropriate expertise in making the analyses.  The following paragraphs respond to these three themes in turn. The Applicant also includes additional points made by Glasson et al (2022) to complement the quotation provided in REP1-073.  The Applicant wishes to make clear from the outset of this response that it considers all work by its employees and consultants has been undertaken in a professional manner and in good faith. It is committed to building strong partnerships with its suppliers and peers, with the industry, regulators and society (Equinor, 2023). The critique of the assessment that
4	In discussing this understanding, we point to the inadequate compensatory arrangements consequent upon poorly designed research on the health and well- being effects of the proposed project.	



ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
5	Our comments relate mainly to the following documents but are not restricted to these documents alone:	is set out by Corpusty and Saxthorpe Parish Council [REP1-073] is welcomed but the Applicant does not accept that cynicism plays any part in
	a. Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects Environmental Statement Volume 1 Chapter 27 - Socio- Economics and Tourism August 2022 Document Reference: 6.1.27	the work conducted [REP1-073, paragraph 2] nor that the assessments present a limited, biased or skewed analysis [REP1-073, page 4]. Corpusty and Saxthorpe Parish Council [REP1-073] raises questions about economic and social effects and the link with human health and well-being.
	b. Annex C: Initial Assessment of Planning Issues S. 21. Socio-economic effects, Inter-related effects on human health and community well-being.	The Applicant has examined these impacts through the Environmental Impact Assessment (EIA) proportionately, consistently and transparently,
	c. Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects Environmental Statement Volume 1 Chapter 28 – Health, August 2022, Document Reference 61.28	that the component parts of the EIA have been discussed and agreed with local stakeholders and that the approaches taken in the assessments align with national and international good practice.
6	Annex C is very welcome because of its express mention of "Socioeconomic effects, Inter-related effects on human health and community well-being". This statement stands in contrast to the exclusion of these matters from proper consideration in the examination of other submissions regarding wind power developments affecting this region, namely those originated by Vattenfall and Ørsted.	The Applicant is committed to close work with communities throughout all stages of this project and as part of this, commitments are in place to ensure that local communities are able to contribute to the planning of the Project and, when necessary, to raise complaints. Please see below for references to the Outline Code of Construction Practice (Revision B) [REP1-023] and the Outline Project Environmental Management Plan (Revision B) [REP1-017].
7	However, we note - with some disappointment - that despite this aspiration, on examination the ways in which these issues have been approached have marked methodological shortcomings. The extent of these shortcomings is such as to lead to the conclusion that the supposedly extensive "evidence" is inadequate to any proper consideration of the "socio-economic effects, inter-related effects on human health and community well-being". These shortcomings should be of concern to the ExA in their considerations. Our reasons for coming to this conclusion are explained in the next paragraphs.	
8	We respectfully advise the ExA to note that while the multi-volume documentation accompanying the proposed scheme is replete with allusions to evidence, very little of this "evidence" is indicative of serious consideration of the project's effects on the health and well-being of the affected populations. This is so in the following three respects:  a. the way the problem has been framed;	



ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
	b. the types of data deployed;	
	c. absence of appropriate expertise in making the analyses.	
9	We shall deal with each of these aspects in turn.	
The wa	ay the problem has been framed	REP1-073 (page 2) states how its critique is informed by an
10	At its simplest, consideration of any project from an economic/project planning perspective should concern itself with the key economic issue, of what economists describe by using the concept of "externalities".  Simply put this concept concerns the ways in which action in one place or in relation to a specific project or activity generates effects/impacts which constitute "costs" in another place outside of the project. This approach is central to properly conceived cost-benefit analysis where such externalities are thought of as generating "costs". The effects on the health and well-being of the population affected by the Equinor project is an example of a fairly straightforward conceptualisation designed to take proper account of externalities associated with the on-shore transmission and other associated works generated by the project.	economic/project planning perspective. This is noted but the assessment of human health [APP-114] has not been approached from an economic/project planning perspective. It has been approached through the requirements of UK legislation, policy and guidance as set out in Section 28.4.1 Policy, Legislation and Guidance, <b>ES Chapter 28 of the–Health</b> [APP-114]. In response to themes (a) and (b) on the framing of the assessment and the data that is used, the methods used to carry out the assessment on Health impacts within <b>ES Chapter 28 – Health</b> [APP-114] align with international and national good practice. These have been published by the Institute of Public Health (IPH) (2021) and the International Association (IAIA/EUPHA) (2020). Public Health England (PHE) (2020) cites the
11	At its simplest, the chain of reasoning linking the origin of such externalities within the project involves steps such as (a) identifying the externalised costs (b) specification of such effects/costs" (c) considering the time period over which such costs are to be considered to have an effect and (d) estimating the quanta of such costs with a view to balancing these costs by calculating methods of compensation using a range of market and non-market proxies as appropriate.	IAIA/EUPHA document as good practice. The World Health Organization (2022) cites both IPH and IAIA/EUPHA as good practice. The approach set out in <b>ES Chapter 28 – Health</b> [APP-114], Section 28.4.3 (Impact Assessment Methodology) also aligns with the more recent guidance from the Institute of Environmental Management and Assessment (IEMA) (2022).  The Applicant notes that before the assessment [APP-114] was conducted
12	To clarify the latter point, a crude market proxy technique might ask people how much they would pay to have the noise of drilling/traffic/or other similar project disturbances removed from their village and then compensating them by that amount. This is a crude and somewhat dated approach. A more sophisticated approach would use hedonic costing, examining the loss of enjoyment which people experience because of project activities. This latter can be seen as a partial measure of "wellbeing" which could be combined with considerations of positive and	it was discussed at a meeting on 6 <sup>th</sup> April 2022 with the Public Health tea at Norfolk County Council to agree the methodology and the approach to assessment. Norfolk County Council acknowledges this engagement and states that the methodology for the Health Impact Assessment is appropriate and based on best practice [REP1-064]. Norfolk County Council also states that it agrees with <b>ES Chapter - Health</b> [APP-114], Section 28.6 (Potential Impacts), that there are unlikely to be any





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	negative effects on people's health during and after the construction phase of the project.	significant, long term adverse health impacts from the proposal compared to baseline conditions [RR-064, paragraph 10.1].
13	Such approaches as those we have describe are curiously absent from the approach adopted by Equinor which is heavily dependent upon a schematic conceptualisation which they describe as "the 'wider determinants of health' model" (Doc. No. C282-RH- Z-GA-00045 6.1.28, Rev no.1, para 61, Plate 28.1) first developed by Dahlgren and Whitehead in their 1991Lancet paper (Whitehead & Dahlgren, 1991). This approach, which the authors have recently reviewed (Dahlgren & Whitehead, 2021), was never intended to be used for such purposes, indeed the authors say in their recent paper: "The model conceptualises the main determinants of health for the whole population, which may differ from the most significant determinants of the social inequalities in health observed in that same population." (Dahlgren & Whitehead, 2021, p. 21). In other words, use of this model as it is deployed in the proposal documents is an example of what is known to logicians as the ecological fallacy.	Table 28.1 of <b>ES Chapter - Health</b> [APP-114] shows that Public Health England, in its Section 42 response to the Project, defined the determinants of health and wellbeing as access, traffic and transport, socioeconomic, and land use. These themes were taken into consideration in <b>ES Chapter 28 - Health</b> [APP-114], Section 28.6 (Potential Impacts).
14	The significance of this comment is that while the diagram presented in Plate 28.1 above presents a general account of determinants of health, it does not deal with specific situations, and the externalities generated by a project such as that being proposed here, requires significant detailed analysis of the cost of such externalities as they are imposed on local communities if they are to be understood with a view to proper appreciation of their quanta and thus of correct criteria for compensatory action.	
15	It is curious to note that nowhere in their discussion of their methodological framing of the problem of health and well-being, do the Equinor documents refer to either the readily available project planning guidance available in HM Government's Green Book, in particular the recently updated 2022 edition (Fujiwara & Campbell, 2011; Treasury, 2022) which give useful advice as to how to deal with project related externalities or to the extensive literature and methods discussed in relation to project planning associated with either Quality of life and capabilities theory (Naz, 2020; Nussbaum & Sen, 1993) or with Public Goods theory (Besley & Ghatak,	



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	1999; Cornes & Sandler, 1996; Inge Kaul, Conceicao, Le Goulven, & Mendoza, 2003). Nor, in relation to hedonic costing specifically do they refer to the extensive literature on happiness economics (Diener & Oishi, 2000; B. Frey, 2008; B Frey & Stutzer, 2002; Layard, 2005; Oswald, 1997). The latter omission is important because when people speak and write about their worries concerning construction-associated disruption to their daily lives, or to worries associated with their feelings of powerlessness in the face of these interferences and – as a germane example – the effects on their well- being of being asked to wade through vast libraries of project documents, or when Ms Alison Shaw from Oulton Street described in her verbal presentation to the ExA at the public session in Norwich on the afternoon of 17 January 2023, the stress she has experienced in trying, as a parish councillor, to engage with these process, she is describing hedonic costs imposed by the project experienced by one person. Such costs should be taken into consideration in costing project generated externalities.	
16	All these methdological omissions are apparent in the many pages of what (as it turns out) are very poorly formulated discussions of, for example, "Impact Assessment Methodology" (see 28.4.3) to be found in Doc. No. C282-RH-Z-GA-00045 6.1.28, Rev. no.1.	
17	Because of these conceptual and theoretical shortcomings, the resulting date assembly methods presented in Table 28-6 should be considered as limited, biased and inadequate to the task of understanding the health and well-being effects of the project.	
18	In the light of these remarks the ExA might want to consider and bring into the focus of its considerations the distinct possibility that Equinor's entire submission in relation to health and well-being skews the way in which this project is being appraised. Indeed it is presented to the ExA and to HM Government in a way that fails to take proper account of the understanding and estimation of the project-associated costs being imposed upon local communities over a long period.	



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19	These shortcomings invalidate and impose serious limitations on appraisal of the entire proposal as it has been presented in Equinor's voluminous documentation. This point is examined in more detail in the next section.	
The typ	es of data deployed	
20	Without exception, the "data" that Equinor present as "evidence" in relation to health and well-being effects are secondary data, often at the wrong scale for the task in hand and also frequently dated. However, even more serious than this is that their choice of "data" is biased because it is selective in its approach, exhibiting confirmatory bias toward what they intend to achieve rather than adopting an approach which tries to understand and assess the effects of the project on well-being, in other words following a logical identification of "costs" and their quantification as we have described above. One example of many will illustrate this point.	
21	In Doc. No. C282-RH-Z-GA-00045 6.1.28, Rev. no.1, Table 28-6 NPS Assessment Requirements, while Row 2, Column 3 claims that "well-being is considered throughout this chapter", well-being is not defined and consequently appropriate parameters for its measurement are not presented. In many cases the approach which Equinor has adopted is to refer only to very broad policy documents as described in Table 28-7. Once again, these criteria are so broad as to be inappropriate to understanding the well-being effects on the diverse local communities across the very large area affected by the project. An interesting choice of language speaks volumes of the implicit/unconscious biases which frame the way that data are used and presented, viz Doc. No. C282-RH-Z-GA-00045 6.1.28, Rev. no.1paras. 82 and 83, pages 51 and 52 (there are many other examples):  "82. The assessment provides reasoned conclusions for the professional judgement as to whether in EIA terms an effect is significant, or not. Where	
	appropriate, variation expressed in each evidence source has been reported. This approach is considered proportionate and in line with best practice for the consideration of human health in EIA.	



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	83. For the purposes of the EIA, major and moderate effects are considered to be significant. In addition, whilst minor effects are not significant in their own right, it is important to distinguish these from other non-significant effects as they may contribute to significant cumulative effects."	
	These two paragraphs are phrased in a way (the phrases "is considered", "are not considered" stand as examples) which suggests that these are widely held and uncontested and conclusive pieces of information/judgement. We say that they are not and that this kind of presentation of "evidence" skates over important omissions, namely the absence of detailed evidence drawn from carefully designed consultations about well-being derived from interactions with individuals, households, and communities rather than from reference to highly generalised policy documents or from consultations with local government officials and local government policy documents as is evident in para 91 where the following is stated:	
	"Secondly, the inter-project cumulative effects are considered. As with other chapters, projects are screened for assessment based on a list agreed with local authorities. Then projects are considered for cumulative effect at different locations and for different vulnerable populations listed above." (italics added for emphasis).	
22	A little objective consideration shows that the entire approach in this documentation which claims to deal in "evidence" is really making claims about what is known about very large populations in ways which are derived from high level policy documents or are concerned with very local design issues, for example choice of precise drilling routes. They fail singularly to drill down into specifics.	
23	The ExA might want to consider whether these inadequate approaches, whether by intention, omission, or simple unconscious bias, result in failure to properly consider questions of health and well-being. We believe this to be the case and the next section shows in one important detail why this might be so.	



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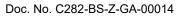
ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
Expert	ise in making the analyses	In response to the concern surrounding the expertise of the personnel
24	Here we draw to the attention of the ExA the document Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects: Environmental Statement. Volume 1, Chapter 27 - Socio-Economics and Tourism, dated August 2022, Document reference 6.1.27 APFP Regulation 5 (2) (a).	involved in the assessment, the Applicant states that it places a premium on having a highly skilled workforce and that the competence of its personnel and the quality of their work is of utmost importance. <b>ES</b> Chapter 5 (EIA Methodology) [APP-091] describes the methodology used to carry out the Environmental Impact Assessment. Section 5.4
25	The results of, and indeed, the total sum of their consultation results are largely summarised as "Socio-economics and Tourism" in Table 27.1 on page 11 of this volume. Here we raise the important question of the professional competence deployed in this critical study. The ExA should note that this volume was approved on 22 August 2022 by <redacted> is an Earth Scientist whose publications3 do not suggest any expertise in the social sciences or experience of making such studies, nor, in particular, do they suggest any expertise in questions of health and welfare of populations. <redacted> main publications while at the University of Uppsala suggest an expertise in questions of seismology and seismological topography. This may explain why PINS Document # 6.1.27 purporting to deal with questions of "Socio-economics and Tourism" does not achieve what its title proclaims in a way that any competent and properly qualified social scientist would recognise. This is not an ad hominem criticism of <redacted>; it is a marker of the apparent failure of Equinor to deploy proper expertise in examining the questions of health and well-being.</redacted></redacted></redacted>	to carry out the Environmental Impact Assessment. Section 5.4 (Requirement for Competent Experts) confirms that in order to ensure that the ES is complete, of a high quality and compliant with the IEIA Regulations, experienced and competent EIA consultants were appointed ES Chapter 28 – Health [APP-114] was prepared by RHDHV and reviewed by an impact assessment professional who is qualified in public health and competent to write and review health chapters in EIAs.  ES Chapter 27 – Socio-economics and Tourism [APP-113] was prepared by the Urban Solutions team (formerly Regeneris) within Hatch, specialist economic development consultancy which has assessed the economic and/or social impacts of over 50 energy investments in the UK and around the world. The Chapter was reviewed by an impact assessment professional who is qualified in socio-economics and competent to write and review socio-economic chapters in EIAs.
26	Similarly, the document Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects Environmental Statement, Volume 1, Chapter 28 - Health dated August 2022, Document Reference: 6.1.28, APFP Regulation: 5(2)(a) was signed off by <redacted>, the Consent Manager (a moment's reflection might suggest that is a strangely ambiguous, even revealing, term).</redacted>	
27	<redacted> is a graduate in Environmental Sciences from the University of Reading4. She wrote her undergraduate dissertation about The Immobilisation and Biodegradation of Pyralid Herbicides. She does not appear to have any post-graduate degrees. While her undergraduate dissertation was awarded an undoubtedly merited first, <redacted></redacted></redacted>	



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	does not appear to have any formal expertise in social sciences or in questions to do with the health and well-being of populations.	
28	Once again, we emphasise that this is not an ad feminam attack on <redacted> but rather a note of concern as to the apparent failure of Equinor to deploy proper expertise in examining these questions of health and well-being.</redacted>	
29	In the light of the foregoing we respectfully encourage the ExA to take note of all these shortcomings of analysis, method, implicit and explicit biases. In taking such note, the ExA is advised to consider that Equinor's entire submission with regard to health and well-being and the quantification of the project's externalities imposed upon local communities are such as to weaken this key aspect of the the Applicant's voluminous documentation	
30	In this latter connection, we note that Doc. No. C282-CC-Z-GA-00010 Statement of Community Consultation while published in accordance with Section 47 (1) of the Planning Act 2008, is inadequate in relation to understanding issues of the impact of the project on health and well-being in the geographical areas affected by the proposed project. While the structure of the public consultation appears to indicate very wide consultation, the consultative method fails to engage properly with questions of health and well-being, framing the problem inadequately (as has been indicated above). Hence the ambiguity of the role of the "Consent Manager" to which attention has been drawn above, is revealed for what it is.	
31	While claiming wide coverage (as per Doc. No. C282-CC-Z-GA-00010, p. 13) the consultative method has been passive rather than actively investigative and exploratory in its quest for information, failing to engage properly with these very important aspects necessary for understanding project impact and externalities as discussed above. This judgement is not unique to this report, it has also been remarked by Professor John Glasson5, a consultant to another offshore windfarm project, Vattenfall (John Glasson, Bridget Durning, Tokunbo Olorundami, & Welch, 2020). In	REP1-073 (page 7) includes a quotation from page 5 of Glasson et al (2022) to support its contention about the examination of social effects in the assessment of Offshore Windfarms. The Applicant agrees with REP1-073 that Glasson et al find that economic effects tend to be more completely assessed than social effects within project EIAs of offshore windfarms (page 5). In the case of SEP and DEP, the Applicant notes that

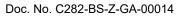


ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
	a very recent paper, published in 2022, concerning assessment of impact of offshore wind farms (OFWs), Professor Glasson comments as follows:	the EIA has been carried out with regard to both economic and social impacts.
	The coverage of social impacts in ESs for OWFs is disappointing, with many having little coverage at all. Some briefly mention social impacts, especially potential construction workforce impacts on housing and local services. A few go further with content on demography, housing and local services, and on local quality of life. However, even in such cases there is normally little depth with respect to specific issues; for example impacts of projects on cost of housing, community wellbeing (noise, increased vehicular movements, diversions etc), and community concern about potential housing price devaluation associated with visible projects (Alem et al., 2020). Overall, there appears to be a general assumption by developers and their consultants, across small and large, and older and recent projects, that social impacts are not important. As such, EIA scoping exercises generally underplay them. The recent scoping exercise for the major Hornsea 4 project provides a clear example of limited coverage of social impacts (Orsted, 2018b). Assessment methodology for social impacts is largely descriptive and qualitative, building on baseline studies of local demographics and economic conditions, with a predominant use of professional judgement and comparative studies. In several studies, there is little evidence of the role of public participation to assess social impacts; yet this is important for socio-economic issues and a requirement under the English national infrastructure regime (DECC 2011). This can marginalise community input, and may in part explain the limited social content.(Glasson, Durning, Welch, & Olorundami, 2022).	The Applicant notes other points made in Glasson et al that support the approach that it is taking with this Project. When considering the actual effects of Offshore Windfarm projects, Glasson et al give weight to the community engagement strategies of the developers, for example employing a Local Community Liaison Officer (page 7). As noted above, the Applicant is committed to working closely with communities throughout all stages of this Project and as part of this the <b>Outline Code of Construction Practice (Revision B)</b> [REP1-023], secured through Requirement 19 of the <b>draft Development Control Order (DCO)</b> (Revision D) [document reference 3.1], specifies that a Local Community Liaison Officer will be employed. This is discussed further below. Glasson et al give weight to commitments to monitor actual impacts (p10). Glasson et al also state that the provision of a Community Benefits Fund leads to environmental and socio-economic initiatives (p10). As noted in its response to RR-064, the Applicant is keen to continue to work with the local community to deliver benefits to the area. <b>Outline Skills and Employment Plan</b> (APP-310), Section 1.1 (Project Background) shows that the Applicant is a long-term partner in Norfolk and the East of England and has been an active member of the community for over a decade through its Sheringham Shoal and Dudgeon Offshore Wind Farms that it operates off the Norfolk coast (paragraph 5). Both existing wind farms have established well-utilised and appreciated community funds. Each existing offshore wind farm allocates £100,000 of funds per year to Norfolk community groups including schools and non-governmental organisations
32	In the light of such expert opinion, the ExA should not form the opinion that this document prepared by Corpusty & Saxthorpe Parish Council and the judgements made within it regarding the inadequacies of Equinor's assessment of health and well- being aspects of their proposed project are partial. They are not. Professor Glasson's comments show that they are based on a proper understanding of the problem of arriving at	seeking financial assistance for projects or initiatives that focus on renewable energy, marine environment and safety, sustainability or education (paragraph 7).  Community input to the planning of the Project and the complaint process  The Outline Code of Construction Practice (Revision B) [REP1-023],
	quantification of project associated externalities.	secured by Requirement 19 of the <b>draft DCO</b> (Revision D) [document reference 3.1] will include a Stakeholder Communications Plan to ensure



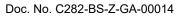


ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
		effective and open communication with local residents and businesses that may be affected by the construction works (para 26). The Outline Project Environmental Management Plan (Revision B) (REP1-017), sets out requirements for regular environmental meetings and debriefs held local to the site where representatives from the Project Team, the Principal Contractor, and key sub-contractors will consider matters such as the status of outstanding items, reports of environmental incidents or complaints and stakeholder engagement (para 68).
		With regards to complaints, the Outline Code of Construction Practice (Revision B) [REP1-023] specifies that a Local Community Liaison Officer will respond to any public concerns, queries or complaints in a professional and diligent manner as set out by a project community and public relations procedure which will be submitted for comment to the relevant planning authority (paragraph 27); and the Outline Project Environmental Management Plan (Revision B) [REP1-017] states that the final PEMP will detail the procedure in place to report public complaints in relation to offshore works (paragraph 72).
33	At the Public Examination in Norwich on 17 January 2023, the chair of the ExA, Ms Menaka Sahai, having heard our preliminary verbal presentation, invited submission of this more comprehensive report and requested in particular that we submit detailed questions which the ExA might address to Equinor in completing its deliberations. These questions appear below.	REP1-073 (paragraph 11) submits a list of questions as requested by Ms Menaka Sahai, at the Public Examination in Norwich on 17 January 2023. The Applicant notes that these comments are directed to the ExA for consideration.
	A. How has Equinor's exploration of the direct and indirect health and well-being costs considered as externalities to the project used a methodological framework and appropriate methods to capture both financial and hedonic costs to the local communities across the region affected by the project?	





ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
34	B. How does Equinor respond to the detailed critique of their approaches outlined in the preceding?	
35	C. What population fractions, differentiated by standard socio-economic indicators, have the project related community consultations engaged?	
36	D. With regard to disruption of traffic movements associated with project traffic movements along the B1149 and B1145 roads:	
	I. What is the assessment of the increased 100 metre particulate emission plumes along both sides of the B1149 and B1145 during the project's life and over the following 30 years taking account of:	
	the particular susceptibility of the ageing population characteristic of the area;	
	2. the child population in the area;	
	3. the effects of this additional traffic on ambulance response times in North Norfolk during the construction period once again taking into consideration the ageing population in this area and its special needs in relation to emergency responses as between the coast and the Norfolk and Norwich Hospital;	
37	E. The impact of additional traffic generated by the extensive housing developments planned over the next several years at Corpusty and Saxthorpe on project-related and other traffic movements including that generated from the many additional homes recently constructed in Holt, some for people who commute to Norwich daily and whose movements have already increased the burden of traffic on a narrow country road? The	





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	following screen shot shows the key choke points which will be affected and the ExA might want to request of Equinor updates as to the most recent assessment of the effects, over the life of the project, of their work programme on the choke points indicated in Figure 1.	
	[See Figure 1 in Corpusty and Saxthorpe Parish Council Post-Hearing Submission]	
38	F. The impact of project related traffic on transport to and from the proposed broiler farm at Edgefield (NNDC planning application PF/22/1753) and the proposed layer farm at Lime Kiln Farm, Oulton (NNDC planning application PF/21/0317)?	
39	G. How many social scientists and/or public health scientists were employed by Equinor, and for how long, and what was the total budget line allocated to their work in the preparation of this report on health and well-being aspects of the proposal?	
40	H. Who were the social / public health scientists who were employed on this proposal, and may we have sight of their (if necessary, anonymised) curricula vitae?	
41	I. What total budget was allocated to exploring the impact of the proposed project in preparation of each of the volumes of evidence prepared by Equinor?	



ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
42	J. More specifically, what size budget was allocated to understanding the health and welfare impacts of the project and what was the size of the budget allocated to understanding the impact of the project on non-human animals and birds?	
43	K. In Table 28-6: NPS Assessment Requirements, Row 2 column 3, the following statement appears "Employment is considered within this chapter, as well as Chapter 27 Socio-Economics and Tourism. Well-being is considered throughout this chapter." It would be very helpful if Equinor could provide a clear definition of what they mean by well-being, how they have derived this definition from the literature, and what conceptual and in particular operational definitions have they deployed in understanding the impacts of their proposed work on well-being.	
44	L. In the same table, row 2, column 1, Equinor point to NPS requirements that they are to consider "the potential effects, including benefits, of a proposal for a project, the Infrastructure Planning Commission (IPC) will find it helpful if the applicant sets out information on the likely significant social and economic effects of the development, and shows how any likely significant negative effects would be avoided or mitigated. This information could include matters such as employment, equality, community cohesion and well-being." In these connections, is Equinor able to provide clear definitions of what they mean by equality, community cohesion and well-being and help us to understand the conceptual and operational definitions they have deployed to understand and measure these concepts in relation to the impact of their proposed work?	



ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
45	M. Equinor have allocated a budget to compensate communities in the region impacted by their project. It would be very helpful if Equinor could tell us the total size of this budget together with the purpose of line items within it and to elucidate the size of their total budgets and their modus operandi for calculating each of the following items:	
	i. total compensation to all landowners affected by the project.	
	ii. mitigation of adverse impacts on non-human populations such as birds and animals.	
	iii. mitigation of adverse traffic impacts on affected through routes, particularly but not exclusively the B1149 and the B1145?	
46	N. Why has Equinor adopted a market-based compensation framework for landowners affected by the project but in stark contrast has adopted what might be described as a "largesse" framework (sometimes referred to as a "community benefit fund") whereby communities are invited to compete with each other for local communities' compensatory funding?	
47	It seems that Equinor has no knowledge of the theory of public goods (Barnett & Sorenson, 2011; Besley & Ghatak, 1999; Bruno S. Frey, Simon Luechinger, & Alois Stutzer, 2004; Cornes & Sandler, 1996; Inge Kaul et al., 2003; I. Kaul & Faust, 2001).	
48	Such knowledge would have re-framed the problem of compensation in a more balanced and less biased and more equitable way. The result would be that rather than the "largesse" approach they have adopted for compensating communities, Equinor would have realised that a more just and correctly costed approach would have resulted in an offer recognising the true quantum of compensatory payments to impacted communities over time. For example, such an arrangement might have resulted in all present and future households in the affected region benefitting from reduced price electricity for the life of the project. This approach could come near to applying costing compensation correctly.	



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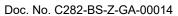
ID	Corpusty & Saxthorpe Parish Council Oral Submission	Applicant's Comment
49	The ExA is encouraged to enquire of Equinor why they have neglected to consider adopting this technique by completing a proper cost-benefit analysis, thus arriving at a satisfactory and informed recognition of the impact of the proposed project on the health and well-being of the population of this region over the life of the project. This would enable them (and all interested parties) to make estimates of the proper quantum required for compensation, applying a social license to operate approach as recommended by Professor Glasson and his team??	
50	We hope that these comments and questions will be of assistance to the ExA in its deliberations.	



### 1.2 Oulton Parish Council

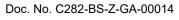
Table 1-2 The Applicant's Comments on Oulton Parish Council's Oral Submissions

ID	Oulton Parish Council Oral Submission	Applicant's Comment
51	Oulton Parish Council (OPC) have actively participated in three offshore wind farm projects. We have attended Hearings and submitted written responses as and when information was requested.	The Applicant acknowledges this comment.
	Parish Councillors are volunteers, we have had to become well informed over these past years and we certainly do not take on these examinations lightly. We make sure we provide reasoned arguments, detailed and relevant information.	
	However, project by project we are seeing more complex cumulative issues. It is fair to say we are all a little battle weary.	
	Damage limitation has been our eventual remit for our communities. There has to come a point where burdening the same areas with multiple infrastructure projects, breaks communities and with it its volunteers.	
52	Yet here we are again with the Sheringham and Dudgeon Extension Project.	The Applicant acknowledges this comment.
	Equinor were keen to point out, that they are going to share a cable route and infrastructure, therefore they claim it fits in with the coordinated approach as part of the Offshore Transmission Network (OTN).	
	This project however will still in effect be another point to point construction. This goes against the conclusions from the Offshore Transmission Network Review (OTNR), which stated that a more coordinated offshore approach to the Grid would lessen the impact from point to point projects on local communities onshore.	
	It should be noted that East Anglia was scoped out of the OTNR, why?	
53	Oulton is currently about to be impacted this year by Hornsea Three's Main Construction Compound, with its associated traffic, for the entire duration of the cable route construction.	The Applicant acknowledges this comment.





ID	Oulton Parish Council Oral Submission	Applicant's Comment
	This will be Followed later in the year by Norfolk Vanguard & Boreas, with their onshore cable route and cable logistics area.	
	Oulton also has a consented solar farm, which is about to be constructed on the same site where Sheringham and Dudgeon propose to run their cable route.	
54	For one property, cumulative impacts will be a daily occurrence over several years.	Cumulative traffic noise impacts are assessed in the ES Volume 3 Appendix 23.2 (Road Traffic Noise Assessment) [APP-265]. Section
	They have yet to see whether mitigations carried out to lessen the impact of 214 daily HGVs from consented projects will be adequate, or whether additional traffic and construction from Sheringham and Dudgeon will have further impacts.	23.7.3.3 (Cumulative Impact 3: Construction Phase Road Traffic Noise) of the ES Noise and Vibration Chapter [Document APP-109] concludes that, with mitigation (as specified in the Outline Construction Traffic Management Plan (Revision B) [REP1-021]), residual cumulative construction traffic noise impacts are not significant.
	For another property the cable route proposed for Sheringham and Dudgeon will run beside their property, along with the impact of proposed Horizontal Directional Drilling (HDD) going under the solar farm next to their property, at a depth yet to be agreed, along with the only access to their property crossed by a cable route.	Cumulative traffic impacts are discussed further in the response to ID9 and ID10.
	These scenario are replicated across Norfolk from this project and other already consented projects.	In terms of noise impacts on individual properties, the Outline Code of Construction Practice (Revision B) [REP1-023], identifies the process that will be followed in developing the Construction Noise (and vibration) Management Plan (CNMP). Paragraph 158 states "The CNMP will apply throughout that stage of construction and will detail standard measures (best practicable means) and where applicable, mitigation measures. The CNMP will be developed based on the confirmed list of plant and equipment proposed by the appointed Principal Contractor for that phase of the works, i.e. confirming the actual expected noise levels and location of works during construction activities." Paragraph 159 of APP-109 states "After implementation of the specific noise control measures agreed through the CNMP, residual construction noise impacts will be further minimised and are considered not significant." The Outline Code of





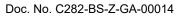
ID	Oulton Parish Council Oral Submission	Applicant's Comment
		Construction Practice (Revision B) [REP1-023], is secured by Requirement 19 of the draft DCO (Revision D) [document reference 3.1].
55	Communities will experience Localised delays on the road network from cumulative traffic over several years.	ES Chapter 19 Land Use, Agriculture and Recreation (Revision B) [document reference 6.1.19] assesses the impacts to agriculture land take
	I question then, The implications of multiple projects on agricultural land take and disruption from these projects on agri-businesses and other commercial enterprises.	and agri-businesses and concludes that following mitigation, there would be a moderate adverse impact arising from the temporary loss of land for agriculture. As set out within the <b>Outline Code of Construction Practice</b> ( <b>Revision B</b> ) [REP1-023], a Stakeholder Communications Plan will be
	The supply chains ability to deliver to multiple projects and the environmental impact of supplying the materials needed.	prepared to help ensure effective and open communication with local residents and businesses.
	As well as the cumulative impact from large volumes of traffic from this project and consented projects, on local communities	ES Chapter 24 Traffic and Transport [APP-110] assesses the cumulative traffic impacts Annex A of the Outline Construction Transport Management Plan (Revision B) [REP1-021] outlines that caps on HGV movements could be required along some links to manage the potential for cumulative impacts with the Norfolk Projects and Hornsea Project 3. The CTMP is secured by Requirement 15 of the draft DCO (Revision D) [document reference 3.1].
		With respect to ability of the supply chain to deliver multiple projects and the local impact generated, the following response was provided in WQ 1.23.6.3 [REP1-036]:
		Local Supply Chain
		The Transport Assessment [APP-268] adopts a worst case that assumes all material deliveries are new trips and sourced from the wider ports of Lowestoft, Great Yarmouth or Kings Lynn, rather than local suppliers. Many materials (e.g. sand and stone) could be partially sourced from local suppliers within the traffic and transport study area. materials sourced from local supply chains, could reduce the overall distance vehicles need to be transported and may constitute reassignment of existing traffic, rather than additional new trips. For example, many HGVs would already be on the local network serving existing construction projects and may reassign to serve SEP and DEP when their existing contracts are complete.



ID	Oulton Parish Council Oral Submission	Applicant's Comment
56	Consented offshore wind projects will be generating power which will go into a grid which has not been upgraded, and cannot use all of its generated capacity.	The following response was provided within WQ 1.9.1.5(a) in The Applicant's Responses to the Examining Authority's First Written Questions [REP1-036]:
	On very windy days projects will be asked to stop generating, because of overcapacity, and will receive constraint payments.  These payments are paid for by the UK energy consumer. This is the 'Cart before the horse' scenario.  National Grid (NG) are proposing to upgrade the grid with the East Anglia Green (EAG) project, But that project has yet to be examined or determined. Given the proposed output from consented projects, being greater than the current NG capacity, then it would appear to conveniently predict the final outcome for EAG. I would also question the reasoning behind bringing power 60km onshore and then moving that power out of Norfolk by 180km of pylons to London. Cumulative impact will need to feature heavily in this examination.	In terms of the relationship between the East Anglia Green (EAG) project and SEP and DEP, the two projects are being developed by separate promotors, on different timelines, and are not linked, other than the fact that both projects will connect into the existing Norwich Main substation. It is understood from the EAG Scoping Opinion that the EAG project is likely to seek to use the same access arrangements to Norwich Main substation as proposed by the Applicant for SEP and DEP.  The Applicant's conclusion, based on NGET's public statements, is that the need for the EAG project is not triggered by the connection of SEP and DEP to the Norwich Main substation, but rather by significant expected growth in both generation and demand in the area and the need for reinforcement. The Scoping Report for EAG does make reference to the dependency of specified offshore wind farms (Five Estuaries and North Falls) on its development, but these do not include SEP and DEP. The grid connection offer for SEP and DEP that was signed in 2019 is not conditional upon the delivery of the EAG project.
57	Development Scenarios  Oulton Parish Council (OPC) note that the applicants had always stated that their project would be a 'Pathfinder Project' as part of the Offshore Transmission network (OTN) and therefore they proposed a coordinated approach to the project by coordinating the Sheringham & Dudgeon Extension Project by sharing a cable route and infrastructure.  However during the ISH 2 it became clear that the project may not be as coordinated as promoted.  The four scenarios gives the applicant the flexibility to constructed over a very protracted period. Only one scenario, to construct concurrently, is the coordinated approach, the other scenarios may prolong the construction period beyond 7+ years.	The following response was provided in RR-122 in The Applicant's Comments to Relevant Representations - Part 1 and Part 2 [REP1-033 & REP1-034]:  As set out in Section 7 of the Scenarios Statement [APP-314] the preferred option is a development scenario with an integrated transmission system, providing transmission infrastructure which serves both of the wind farms, where both Projects are built concurrently, and the onshore infrastructure is integrated (i.e. scenario 4). The Applicant recognises that a concurrent development is beneficial for communities, the environment, and for the ultimate economics of the Project, in addition to the benefits this has for consumers.  Given the different commercial ownerships of each Project, and the current limitation that prevent the projects to apply to CfD together alternative

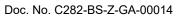


ID	Oulton Parish Council Oral Submission	Applicant's Comment
	The applicants also seemed to suggest that pre ducting during the first project for the second, would not be considered. OPC would have concerns that this would have environmental impacts.  To local communities who are already experiencing the start of three offshore wind projects, it is unacceptable to be further disrupted over a longer time period.	development scenarios such as a separated grid option (i.e. transmission infrastructure which allows each Project to transmit electricity entirely separately) will allow SEP and DEP to be constructed in a phased approach, if necessary. Therefore, the DCO application seeks to consent a range of development scenarios in the same overall corridors to allow for separate development if required, and to accommodate either sequential or concurrent build of the two Projects.
		Potential solutions to avoid staged development include either Anticipatory Investment (AI) or combined Contract for Difference (CfD) bids. The principle of AI has been decided, with details still being discussed. Regarding opportunities for combined CfD bids, the Applicant is still awaiting an outcome from BEIS on whether the regulatory regime will be changed to make this possible. The Applicant is continuing to work with the relevant authorities, including OFGEM and BEIS, to overcome barriers and enable a concurrent construction scenario.
		In addition to the RR-12 response, the Applicant can confirm that the Environmental Statement assess all development scenarios by applying a realistic worst case scenario approach which each specialist sets out as appropriate to their environmental topic area.
58	Construction effects  Oulton have several Horizontal Directional Drilling(HDD) operations proposed, two of which OPC would consider major works:-  i) HDD under the River Bure CCR15B/CCR15/CCR15A Crossing schedule (Noise & Vibration APP-133) / (APP-178) Crossing ref: RVX001 / unique ID: EA-RVX-MV-001)  ii) HDD under the Solar FarmCCR16B/CCR16C (Noise & Vibration APP-133) Crossing Schedule (APP-178) (crossing ref: INF001 / unique ID: SE-INF-SLP-001)	<ul> <li>i) The potential for night works in these two locations has been included in the eventuality that the HDD bore may collapse during construction. Night time working is secured via Requirement 20 of the draft DCO (Revision D) [document reference 3.1].</li> <li>ii) The length of the drills will be confirmed during detailed design although currently the River Bure Crossing is anticipated as approximately 300m and the solar farm HDD ranges from between one drill of approximately 550m length and two drills of approximately 185m and 405m.</li> </ul>
	OPC seek clarification on the following relating to HDD works:-  i) Whether these HDD areas will require night-time works?	iii) The Outline Code of Construction Practice (Revision B) [REP1-023], paragraphs 157 and 158 state:





ID	Oulto	n Parish Council Oral Submission	Applicant's Comment
	ii) iii)	Length of proposed works?  Whether Noise & Vibration assessments at locations documented as sensitive receptors are not just desk based assessments and will further assessments be carried out?	"A Construction Noise (and vibration) Management Plan (CNMP) will be included in the CoCP. A study area for the CNMP has been identified which is 300m from the construction works.
	iv)	Will mitigation work be carried out to lessen the impact of Noise & Vibration?	The CNMP will apply throughout that stage of construction and will detail standard measures (best practicable means) and where applicable, mitigation measures. The CNMP will be developed based on the confirmed list of plant and equipment proposed by
	v)	What are the traffic movements for these locations and whether these will involve night-time movements?	the appointed Principal Contractor for that phase of the works, i.e. confirming the actual expected noise levels and location of works
	vi)	Clarification on the proposed depth of the HDD under the solar farm, is it between 10m-20m in depth as stated by Lighthouse Development Consulting in their Relevant Representation?	during construction activities."  This demonstrates that further desk-based assessments will be included in the CNMP, being undertaken post consent, during
	vii)	If the depth of HDD under the solar farm is not agreed, OPC are concerned that the cable route may be relocated further to the	Detailed Design.
	North, this would still impact the Old Railway Gatehouse (CCR16C) as well as moving it closer to Oulton Street.  viii) It was OPC's understanding that structures could not be built on top of the cable route, how will the HDD under a solar farm be possible, is there conflict with both infrastructures, cables/solar panels?	(Revision B) [REP1-023] outlines the standard noise and vibration mitigation measures that will be adopted to demonstrate implementation of 'Best Practicable Means'. Paragraph 160 details the enhanced noise and vibration mitigation measures that will also be implemented where required and practicable, these are:	
		parieis :	<ul> <li>increased separation distance of noisy plant to receptors;</li> <li>works scheduling to avoid high noise levels at receptors for more than 10 days in any 15 consecutive days, or 40 days in any 6 consecutive months; and</li> <li>the use of temporary noise barriers.</li> </ul>
			As mentioned above in the response to iii), the Outline Code of Construction Practice (Revision B) [REP1-023] includes a CNMP. The Outline Code of Construction Practice (Revision B) [REP1-023] is secured by Requirement 19 of the draft DCO (Revision D) [document reference 3.1].
			v) Annex A of the Outline Construction Traffic Management Plar (Revision B) [REP1-021] outlines the forecast peak daily vehicle movements that could occur on all links within the Traffic and





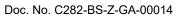
ID	Oulto	n Parish Council Oral Submission	Applic	cant's Comment
				Transport Study Area (TTSA). Section 2.3.2 and 3.2.2 of the <b>Outline Construction Traffic Management Plan (Revision B)</b> [REP1-021] outline the working hours during which construction related traffic movements can take place.
			vi) & v	rii) The depth of the HDDs is likely to be between 10m – 20m.
			viii)	The installation of infrastructure for a solar array will typically use a mounting system with pules to a depth of 1.4-1.8m. The depth of the HDD at this location would be 10-20m and therefore there is no potential interaction between the infrastructure for each project.
59	Noise	and Vibration	i.	Both options to HDD beneath the Solar Park are feasible and will
	i)	OPC have highlighted their concerns relating to HDD in section 4. Construction effects. However OPC would seek clarification on whether the HDD is by single or double drilling as suggested during ISH 2, and its impact on residents near to the proposed		be determined during detailed design stage. The Environmental Statement assesses Realistic Worst Case Scenarios in relation to onshore HDD setting out parameters for whether SEP & DEP are built in isolation, concurrently or sequentially.
		works.	ii.	Hornsea Project Three has started enabling works and the Norfolk Vanguard and Boreas Projects estimated starting time is also
	ii) OPC have concerns about further cumulative impacts from additional construction traffic. if SEP/DEP are constructed at the same time as Vattenfall Vanguard or Boreas(NV/B). This however seems to be dependent on which scenario SEP/DEP brings forward.		2023. Consequently, both projects will be significantly advanced at the estimated time of SEP and/or DEP construction and their traffic peaks will have likely already passed. Cumulative impacts will therefore likely be either avoided or reduced at the time of SEP and/or DEP construction. In the event that there is an overlap the,	
	iii)	OPC would like assurances that no HGVs or other vehicles associated with the project travel North through Oulton Street. This was secured in the DCO for Hornsea Three, Norfolk Vanguard and Boreas, and OPC would seek the same requirement from Equinor.		Outline Construction Traffic Management Plan (Revision B) [REP1-021] outlines the Applicants commitment to adhere to established caps on HGV movements required on discrete links to manage the potential for cumulative impacts with the Norfolk
	iv)	OPC would seek to be reassured that there is no possibility of HGV numbers will exceed those already agreed with Hornsea Three/Norfolk Vanguard/Boreas and set out with NCC.		Projects and Hornsea Project 3, including the B1145, B1149 and the Street. The Outline Construction Traffic Management Plan (Revision B) [REP1-021] is secured by Requirement 15 of the draft DCO (Revision D) [document reference 3.1].
			iii.	The Applicant clarifies that the Outline Construction Traffic Management Plan (Revision B) [REP1-021] secured via Requirement 15 of the draft DCO (Revision D) [document



ID	Oulton Parish Council Oral Submission	Applicant's Comment
		reference 3.1] includes commitments to not route SEP and/or DEP HGV traffic via Oulton. Section 2.3 of the Outline Construction Traffic Management Plan (Revision B) [REP1-021] sets out how the routeing of HGVs will be controlled.
		iv. Please refer to the Applicants response as point ii.
60	i. OPC note that in the outline Construction Traffic management Plan (CTMP) APP-301 cumulative impacts has been looked at for Oultor with SEP/DEP and Hornsea Three(HP3), but not for Norfolk Vanguard & Boreas. It is further noted that Equinor have stated tha	Vanguard. With regards to potential timings the Applicant refers OPC to its response to ID9 (part ii).
	the majority of HP3 construction work will be complete ahead of SEP/DEP construction, earliest start date of 2025. HP3 Main Construction Compound will be in-situ for the whole of the cable route construction, therefore the traffic numbers will remain consistent.  ii. For one property there will be the added cumulative impacts of not only traffic but the addition of HDD along side their property(CCR16C APP-133). The other effected *property will be experiencing HDD/and temporary loss of access to their property. Due to the proposed access to the cable route and HDD (APP-014 ACC25b/ACEW42) (APP-133 CCR16B). OPC would query whether the resident of this property has been consulted.	<ul><li>ii. With regard to the potential noise impacts on the property at CCR16C, the Applicant would direct OPC to its response to point 4.</li></ul>
		With regard the property at CCR16B the Applicant clarifies that there would be no loss of access to the property. To maintain access, temporary traffic signals at access ACC25b will be used as a means of safely controlling traffic at this location. Detail of the proposed traffic management measures at this access are included within Annex 30 of the <b>Transport Assessment</b> [APP-269].
		iii. <b>ES Chapter 24 Traffic and Transport</b> [APP-110] identifies that link 57 is forecast to experience a change in peak daily traffic flows below screening thresholds and is therefore assessed to
	iii. It is further noted that in the Traffic and Transport Chapter 24 figures, Link 57 has been classified as having no cumulative impacts. Norfolk Vanguard will be using the same link road as SEP/DEP, * see below Norfolk Vanguard Link 75 will be used during the construction of their cable route, Link 75 which starts at Saxthorpe roundabout from B1149 along B1354/Blickling Rd).	experience negligible impacts. Consequently, as outlined within section 24.7.1 the link is not taken forward for further assessment of cumulative impacts as only potential impacts assessed as greater than negligible are included within the cumulative impact assessment. (i.e. SEP and/or DEP increase in traffic via link 57 is negligible and therefore by definition could not materially contribute to cumulative impacts.)
	iv. It is noted that for Links 54/56 there may be a requirement for mitigation due to cumulative traffic impacts from other projects.	iv. Please refer to the Applicants response to iii) above.
	OPC, as previously mentioned note the applicants have omitted Link 57 as a cumulative impact in the traffic & transport (Link 75 for	v. Please refer to the Applicants response to points i) to iii) above.



ID	Oulton Parish Council Oral Submission	Applicant's Comment
	Norfolk Vanguard/Boreas), however in the cumulative traffic flows it is noted. (APP-272) This is causing confusion.	
	v. Therefore SEP/DEP and Norfolk Vanguard traffic numbers for Link 57 should be considered as cumulative. It is noted that on Link 131 'The Street', traffic numbers will be 54 HGVs + 88 All project traffic for SEP or DEP in isolation or 54 HGVs + 100 other project traffic for SEP and DEP It is also noted that the numbers have been highlighted as cumulative and mitigation may be required. These numbers need to be looked at cumulatively with Vattenfall NV/B(link 68) / HP3 (Link 208) who will also be using Link 131 OPC note that there are three access points along B1149(*see below). The B1149 will have cumulative traffic from HP3/Norfolk Vanguard/Boreas. *(APP-014) ACEW41B1149, (APP-014) *ACC25, (APP-014) *ACC25b/ACEW42. Residential properties with cumulative impacts from SEP/DEP / HP3 / NV/B / Solar farm (residential properties in yellow) Appendix 1:- (Open map) HDD (APP-133) CCR16B-CCR16C ACC25b (APP-014)	
61	In relation to Item 3: Principal Issues  1. As this is the fourth Offshore Wind Farm project affecting Norfolk,	Each of the topics assessed within the Environmental Statement include a cumulative impact assessment. Of note, with respect to the principal issues identified:
	cumulative impacts of this project, taken in-combination with the construction of all the other consented projects, will have to be considered during the examination of every relevant issue.	- Chapter 20 Onshore Ecology and Ornithology (Revision B) includes a cumulative impact assessment in Section 20.7 [document
	Examples of such issues are in sections: 1, 5, 8, 12, 15, 19, 21 and 22.	reference 6.1.20];
	We would be grateful for clarification as to whether the ExA is intending to include such consideration of cumulative impacts of other consented DCOs in this examination.	- Chapter 19, Land Use, Agriculture and Recreation (Revision B) includes a cumulative impact assessment in Section 19.8 [document reference 6.1.19];
	2. In Principal Issue 1, we seek clarification on whether "viability of the grid connection" will include consideration of an alternative connection point e.g. at Walpole? Oulton PC and the Norfolk Parishes Movement have urged Equinor for well over 2 years to re-negotiate their grid connection –	- Chapter 23 Noise and Vibration includes a cumulative impact assessment in Section 23.7 [APP-109];
		- Chapter 27 Socio-Economics and Tourism includes a cumulative impact assessment in Section 27.7 [APP-113]; and
	before they submitted for a DCO - to a less damaging site, closer to the	- Chapter 24 Traffic and Transport includes a cumulative impact assessment in Section 24.7 [APP-10].





ID	Oulton Parish Council Oral Submission	Applicant's Comment
	coast, such as Walpole. But they have refused to consider this, without providing any compelling reason.  3. Further to the above, we believe it to be imperative now, in the interests of transparency, to compel National Grid to engage publicly with this NSIP process, to attend hearings and to be asked to explain, in open forum, why such a grid allocation cannot be re-negotiated, in the light of current circumstances, with the agreement of both sides. The stakes are too high now for local communities along a third 60 km cable trench, for this avenue not to be explored. It is the least these communities deserve.	2. The construction effects – onshore impacts are also covered within individual topic chapters. The Outline Code of Construction Practice (Revision B) [REP1-023] also sets out mitigation that will be applied during the construction phase to reduce impact. The OCoCP is secured by Requirement 19 of the draft DCO (Revision D) [document reference 3.1]. The Applicant refers to the response provided to WQ1.2.2.1 in The Applicant's Responses to the Examining Authority's First Written Questions [REP1-036], which outlines the site selection process and refers to the Connection and Infrastructure Options Note (CION) process which National Grid use to determine connection points.



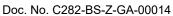
#### 1.3 National Farmers Union

Table 1-3 The Applicant's comments on National Farmers Union's oral submissions

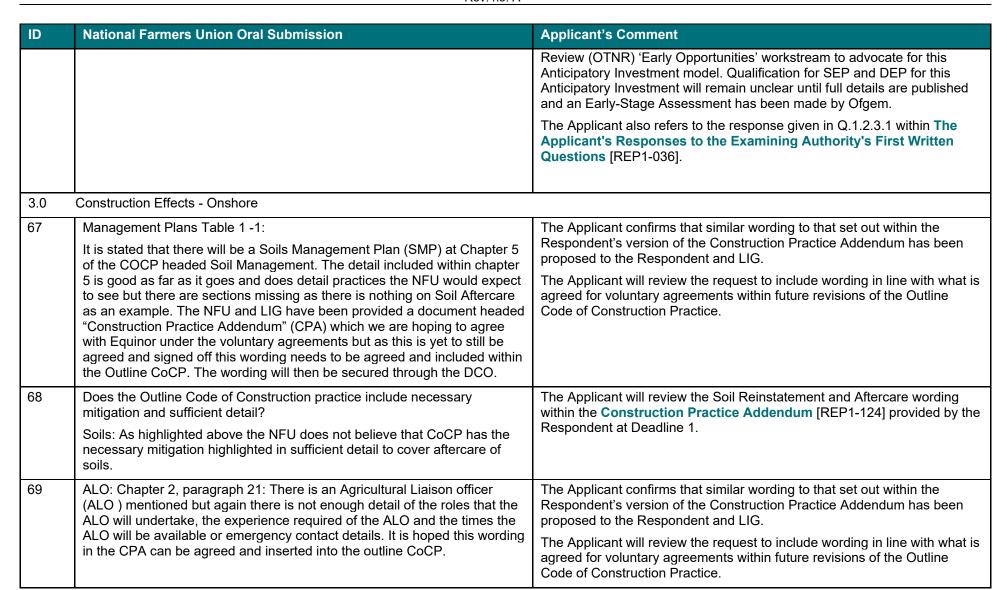
ID	National Farmers Union Oral Submission	Applicant's Comment
1.0	Introduction	
62	Submissions on behalf of the National Farmers Union ("NFU") and the Land Interest Group (LIG) in respect of the application for a Development Consent Order (DCO) by Equinor for the Sheringham Shoal and Dudgeon Offshore Wind Farm projects. The NFU is making a case on behalf of its members and LIG on behalf of its clients who are affected by the DCO. This submission is submitted to highlight issues of concern which have been raised by NFU on behalf of NFU members and landowners represented by LIG who will be affected by this project and where raised at the issue specific hearing on 20th January 2023.	The Respondent's comment is noted.
63	The agents represented in LIG are Savills, Strutt & Parker, Bidwells, Irelands, Brown & Co, Cruso & Wilkin and Clarke & Simpson. The NFU and LIG are representing over 60 landowners and farmers affected by this proposed scheme.	The Respondent's comment is noted.
2.0	Development Scenarios.	
64	How is the preferred scenario decided:  The NFU understands that Sheringham Shoal and Dudgeon are separate projects and have separate ownership other then Equinor has an interest in both projects. We also understand that Equinor is doing something different by the application for the DCO being for both projects. Equinor at the hearing stated that they need all scenarios applied for within the application. The NFU believe that the best case scenario must be taken forward by Equinor which would reduce the construction time so reduce the impact on landowners and farmers. Therefore it is really important that measures are included within the DCO that will make sure and compel Equinor to take the preferred scenario forward which has a single construction phase.	As set out in the <b>Scenarios Statement</b> [APP-314] all of the scenarios set out in the <b>draft DCO</b> ( <b>Revision D</b> ) [document reference 3.1] are required for the development of SEP and DEP. As explained in the Applicant's response to Q1.6.1.1 in <b>The Applicant's Responses to the Examining Authority's First Written Questions</b> [REP1-036], the final chosen development scenario is dependent on a number of factors, some of which are outside of the Applicant's direct control, such as the need for changes to the regulatory regime around CfD and Anticipatory Investment to enable an integrated grid connection to be delivered. These factors will be considered post consent when there will be further certainty as to the regulatory position that will apply at that stage and therefore flexibility within the <b>draft DCO</b> ( <b>Revision D</b> ) [document reference 3.1] with regards to all the specified scenarios must be maintained.

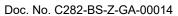


ID	National Farmers Union Oral Submission	Applicant's Comment
65	Completion Times of Projects:  It was stated by Equinor that there is a possibility for the first project to be completed, for there then to be a gap before the second project is started. Further that the haul road and the compounds could be set up and reinstated after the first project and then constructed and set out again for the second project. It was stated that it might be possible to finish the first project and still be uncertain that the second project may start. The NFU is concerned that there are too many variables, and a question was raised could both projects take up to 11 years to build if the sequential scenario is followed. A construction phase of 11 years is too long and the impact on landowners and occupiers will be far too great.  It is stated in the Environmental Statement, Volume 1, Chapter19, paragraph 19.3.2.2.that the maximum period during which construction could take place is eight years as each project will take four years to build. The offset between the start of construction of the first project and the start of construction of the second project may vary from two to four years. The	The Applicant refers to <b>ES Chapter 4 Project Description</b> [APP-090, Section 4.7.2] which details the onshore construction programme for the different scenarios.  Plate 4-25 (Indicative Construction Programme – SEP and DEP built sequentially with up to a 4-year gap between construction start dates) illustrates an 8 year timeframe for this scenario which has been assessed within the Environmental Impact Assessment.
66	NFU would like confirmation that the maximum construction period can only be eight years? The NFU actually believes that this construction period is too long and not necessary.  Pathfinder Process: Equinor are promoted as having 'pathfinder' status company under the OTNR (Offshore Transmission Network Review) and as such have only submitted one DCO application for both projects. But OTNR have stated that Equinor have a proposal for shared transmission infrastructure between Sheringham Shoal and Dudgeon extension projects. The way the construction phasing is set out and the requirements in the draft DCO they are actually requesting a scenario to be able to actually build both projects completely independently with no sharing. The NFU believes very strongly that this scenario within the DCO should not be granted. The NFU would like to see ducts being laid in trenches when the first project is constructed which would then allow the cables to be pulled through the ducting for the second project this will reduce the length of the construction time and the impact on farmers day to day operations.	SEP and DEP are promoted as having 'pathfinder' status under the OTNR (Offshore Transmission Network Review) as a result of the proposal for shared transmission infrastructure between the Sheringham Shoal and Dudgeon extension projects. As set out within the <b>Scenarios Statement</b> [APP-314], due to current Contracts for Difference (CfD) regulations there is no guarantee that both SEP and DEP may be awarded a CfD in the same allocation round. This creates a barrier to ensuring that SEP and DEP can be developed concurrently and results in the potential of a sequential construction to which the Respondent refers.  Anticipatory Investment, as set out within the <b>Scenarios Statement</b> [APP-314], is relevant to the potential sequential construction whereby the second project requires pre-investment by the first. The Applicant, as stated, has undertaken extensive engagement with Ofgem, BEIS and National Grid ESO directly and via the Offshore Transmission Network

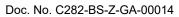








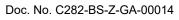
ID	National Farmers Union Oral Submission	Applicant's Comment
70	Field Drainage: Chapter 2, paragraph 21 and Chapter 6, paragraphs 110 and 114.: Pre and post drainage plans are mentioned and it is stated that plans will be drawn up by a specialist. The NFU has wording under the CPA that it would like to see outlined in the CoCP which covers what it expects to be carried out in regard to field drainage. This wording needs to be agreed and signed off now so it can be included in the outline CoCP. Landowners and farmers will then be able to understand what Equinor's obligations are in regard to field drainage.	The Applicant confirms that similar wording to that set out within the Respondent's version of the Construction Practice Addendum has been proposed to the Respondent and LIG. The Applicant will continue to engage with LIG and the NFU on Field Drainage.  The Applicant will review the request to include wording in line with what is agreed for voluntary agreements within future revisions of the Outline Code of Construction Practice.
71	Water Supplies: Chapter 2, paragraph 21: It is stated that a drainage specialist will record existing water supplies. The NFU thinks that this could actually be carried out by the ALO and includes water supplies for irrigation. Again, specific wording to cover how interference with water supplies should be dealt with is highlighted in the CPA and again this wording needs to be agreed and included in the outline CoCP. The wording that the NFU and LIG are asking Equinor to agree to for soils, field drainage, water supplies, irrigation, bio-security has been agreed on other	The Applicant confirms that similar wording to that set out within the Respondent's version of the Construction Practice Addendum has been proposed to the Respondent and LIG.  The Applicant will review the request to include wording in line with what is agreed for voluntary agreements within future revisions of the Outline Code of Construction Practice.
	schemes and included in the outline CoCP or the outline Environmental Management Plan.	
72	Justification for cable corridor width for trenched and trenchless Crossings NFU and LIG would like the cable corridor to be kept as narrow as possible.	The Respondent's comment is noted.
4.0	Land Use	
73	Impact on Agri environment Schemes:  The NFU and LIG understand from the hearing that the construction of the scheme will affect countryside stewardship schemes along with entry level and higher level environment schemes which are in place on farms. If as requested a 28 day notice as a minimum can be given before any surveys are under taken or the land is taken on a temporary basis then a derogation to the RPA can be applied for which will reduce the impact on environmental schemes on holdings. Further landowners and farmers will	As set out by the Applicant at ISH 2, the inclusion of at least 14 days' notice within Article 16(2) of the <b>draft DCO</b> ( <b>Revision D</b> ) [document reference 3.1] is well precedented and in line with other offshore wind farms and DCOs. This drafting is not novel in the context and is in line with the equivalent statutory powers under sections 172 to 197 of the Housing and Planning Act 2016 and section 53 of Planning Act 2008.





ID	National Farmers Union Oral Submission	Applicant's Comment
	need to be able to enter into ELMs in the future so construction impacts and notices of work are very important.	
74	Landowner Agreements:  A question was set out in the hearing agenda for the hearing on the 20th January 2023 at 5.1 Land Use asking 'what work has been done to reach landowner agreements'? The NFU and LIG can report that the majority of landowners have signed heads of terms but some of these are heavily caveated. Some have not been signed as nothing has been agreed for occupiers. The NFU and LIG are still in discussions trying to agree an option and easement. Due to voluntary agreements not being signed it is really important that the wording to cover practical issues under the Outline CoCP is agreed and binding.	The Applicant will continue to engage with LIG to complete landowner agreements. Once the Construction Practice Addendum is agreed between the Applicant and LIG/NFU it will be annexed to completed voluntary agreements.  The Applicant will review the request to include agreed Construction Practice Addendum wording within future revisions of the Outline Code of Construction Practice.
5.0	Draft Development Consent Order	,
75	5.1. Article 16: Surveys  Article 16: 14 day notice: This refers to Surveys and the NFU is happy to accept a 14 day written notice if it is agreed that a minimum notice of 28 days is given where the land in question is in a environmental scheme and a derogation is required from the RPA. This notification could be given by the ALO and detailed under their responsibilities in the CPA.	The Applicant recognises the potential requirement for a landowner to apply for a derogation from the Rural Payments Agency and that it is therefore good practice to advise them of upcoming survey works to enable them to do so.  The Applicant refers to the response provided to ID 12 in respect of the well precedented 14-day notice period but will consider how the Respondent's comments can be built into future processes when planning survey works.
76	5.1. Article 16: Surveys  The NFU asked for clarification as to what the following wording meant at 16 (1) "or which may be affected by the authorised project".	The ability to enter land 'which may be affected by the authorised project' is to allow the undertaker to enter land outside of the Order land for example where entry is needed for the purposes of understanding the potential impacts of the development on ecology or drainage features. The undertaker requires this power in order to undertake surveys in connection with the management plans secured through the Requirements (see the draft DCO (Revision D) [document reference 3.1]). As set out in the Applicant's response to Q1.11.3.6 in The Applicant's Responses to the

Status: Final





ID	National Farmers Union Oral Submission	Applicant's Comment
		<b>Examining Authority's First Written Questions</b> [REP1-036], the drafting is also well precedented in other DCOs.
77	<ul> <li>5.1. Article 16: Surveys</li> <li>The NFU would like to see the following wording added under Article 16 and to become number (3) 'The Notice under paragraph (2) must indicate the nature of the survey and/or investigation the developer intends to carry out'. This wording has been agreed on other DCOs. The NFU believes that Article 16 at 16(3) should also state that the notice must indicate the following: <ul> <li>Who will be taking entry</li> <li>The date of entry and for how long</li> <li>The type of equipment if any will be used.</li> </ul> </li> <li>The NFU believes strongly that it is only right that a landowner should know who is coming on to his land to be able to comply with their Health &amp; Safety policies, how long they will be on the land for carrying out the survey and the vehicles and equipment that will be brought on to the land.</li> </ul>	Following requests made by interested parties, the <b>draft DCO</b> ( <b>Revision D</b> ) [document reference 3.1] was updated (at Deadline 1) to include a requirement to provide details of activities in the notice to landowners where activities involve searching, boring or excavating; leaving apparatus on the land; or taking samples. The Applicant notes this is a request for additional information beyond what was stated in the hearing and will be further considered by the Applicant. This information would, in any event, typically form part of the notice to be served on landowners.
78	5.1. Article 16: Surveys  A question was raised over the wording at (5) any apparatus must be removed as soon as practicable'. The NFU would like further clarification on this as farmers will not want apparatus/equipment being left on farm which interferes with day to day operations.	Once survey works are completed and there are no ongoing monitoring requirements, apparatus will be removed as soon as practicable. Where there is an ongoing requirement to monitor, the apparatus will remain in place until such monitoring is completed after which the apparatus will be removed as soon as practicable.
79	5.2 Article 26. Temporary use of land for carrying out the authorised project.  Article 26 (2): It states 'Not less than 14 days before entering on and taking temporary possession of land the undertaker must serve notice' The NFU's experience from working on other NSIP schemes is that a 14 day notice is not enough. The NFU requests that this notice period is increased to 28 days as a minimum. Reducing the notice period to 28 days should not reduce the flexibility on Equinor and their contractors, and NFU would like to see Equinor providing 2 months prior notification in advance of the	Please see the Applicant's response to Q1.11.3.9 in The Applicant's Responses to the Examining Authority's First Written Questions [REP1-036].





ID	National Farmers Union Oral Submission	Applicant's Comment
	statutory notice being served. It is thought that the ALO and agents acting for Equinor can provide this prior notification and this could be listed as one of the roles to be undertaken by the ALO so that it is secured within the DCO.	
80	5.3 Schedule 2: Part 1: Requirements	The Applicant refers to the <b>Explanatory Memorandum (Revision D)</b> [document reference 3.2] (para. 86) which sets out the justification for
	Time Limits: The NFU does not believe that there is a case to extend time limits to seven years from five years which is the normal practice. Giving a time limit of seven years is just delaying the start date of both projects and this delay will again impact all famers directly impacted by the underground cables.	1 - ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '
6.0	Link Boxes	
81	It is understood that link boxes will be required. The NFU and LIG have been seeking clarification on how many there are likely to be, the location and configuration of the link boxes. Link boxes do stand proud above ground level and so greatly interfere with agricultural operations and are a hazard to farm machinery. It is extremely important to have further design information on link boxes and the siting of them. The preference is that all link boxes are located within field boundaries.	The Applicant refers to <b>ES Chapter 4 Project Description</b> [APP-090, Section 4.6.1.3.7] which provides details on the dimensions and approach to locating link boxes.
		The number and placement of link boxes would be determined as part of the detailed design post consent, but where possible the link boxes will be located close to field boundaries and in accessible locations.



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Rev. no. A

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