



Hornsea Project Four

Applicant's Responses to Local Impact Report

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Glossary

Term	Definition
N/A	

Acronyms

Term	Definition
DCO	Development Consent Order
EBI	Energy Balancing infrastructure
ERLP SD	East Riding Local Plan Strategy Document
ERYC	East Riding of Yorkshire Council
ES	Environmental Statement
HDD	Horizontal Directional Drilling
IEMA	Institute of Environmental Management and Assessment
LVIA	Landscape and Visual Impact Assessment
LEP	Local Enterprise Partnership
LIR	Local Impact Report
MDS	Maximum Design Scenario
OnSS	Onshore Substation
oCTMP	Outline Construction Traffic Management Plan
PRoW	Public Right of Way
SoCG	Statement of Common Ground
SSSI	Site of Special Scientific Interest

1 Introduction

1.1.1.1 Following the submission of the Local Impact Report (LIR) by East Riding of Yorkshire Council (ERYC) at Deadline 1 ([REP1-074](#)), as per the Rule 8 letter ([PD-007](#)), Orsted Hornsea Project Four Limited (the Applicant) has provided comments on the LIR at Deadline 2. This is presented in [Section 2](#).

1.1.1.2 It is acknowledged that the LIR was unanimously passed at the ERYC planning committee on 17 March 2022. Comments provided by committee members regarding the benefits of Hornsea Four and the quality of the detailed consultation undertaken are welcomed. As a minor clarification, one committee member quoted Hornsea Four as powering '1.5 Beverley's'. The Applicant can confirm that Hornsea Four (based on a 2.6 GW capacity), could generate enough green electricity to power over 2.3 million UK homes each year. This is equivalent to powering all of the homes in East Riding of Yorkshire 12 times over¹.

2 Applicant Responses

Reference	Comment	Applicant's Response:
<i>1 Introduction</i>		
1.1	This report has been prepared by East Riding of Yorkshire Council in accordance with the advice and requirements set out in the Planning Act 2008 and Advice Note One: Local Impact Reports. It represents the Council's Local Impact Report (LIR) on the proposal. A LIR as defined in Section 60(3) of the 2008 Act is a 'report in writing giving details of the likely impact of the proposed development in the authority's area (or any part of that area). The content of the LIR is a matter for the Local Authority concerned as long as it falls within the statutory definition. The Council should cover any topics they consider relevant to the impact of the proposed development on their area, and should draw on existing local knowledge.	Noted.
1.2	This LIR is for the Hornsea Four Wind Farm Project. The windfarm itself would be sited approximately 69km off the coast of Flamborough Head and would consist of up to 180 wind turbine generators. The energy it would generate would be transmitted via up to 18 onshore export cables which would come onshore at Fraisethorpe. They would be buried in up to six trenches to an onshore substation and related energy balancing infrastructure approximately 39km away adjacent to the existing National Grid substation at Creyke Beck. The Local Planning Authority will be responsible for discharge of some requirements therefore comments are also made on these where appropriate	Noted.
1.3	The Council has engaged in constructive discussions with the application for a number of years prior to the submission of the application for development consent. A series of Statements of Common Ground are at various stages of development reflecting those discussions. This LIR represents the current position at the time of drafting and it is anticipated that any concerns or outstanding issues will	Noted. The Applicant thanks ERYC for early and sustained constructive input to Hornsea Four throughout the pre-application stage. The two parties are working on

¹ These statistics are based on an average household electricity consumption of 3.954MWh and five year average load factor for offshore wind of 40.17%. East Riding of Yorkshire currently has 182,079 dwellings, based on 2020 data.

Reference	Comment	Applicant's Response:
	be addressed through the completion of the statements of common ground.	additional positions in the SoCG and will submit and updated version at a future Deadline.
<i>2 Planning History</i>		
2.1	There is no planning history of direct relevance to this application.	Noted.
<i>3 Local Planning Policy</i>		
3.1	<p>The Development Plan (in relation to the onshore works) compromises the East Riding Local Plan Strategy Document (April 2016) and Allocations Document (July 2016).</p> <p>East Riding Local Plan Strategy Document (ERLP SD) (April 2016)</p> <p>Policy S1: Presumption in favour of sustainable development</p> <p>Policy S2: Addressing climate change</p> <p>Policy S3: Focusing development</p> <p>Policy S4: Supporting development in Villages and the Countryside</p> <p>Policy EC1: Supporting the growth and diversification of the East Riding economy</p> <p>Policy EC4: Enhancing sustainable transport</p> <p>Policy EC5: Supporting the energy sector</p> <p>Policy EC6: Protecting mineral resources</p> <p>Policy ENV1: Integrating high quality design</p> <p>Policy ENV2: Promoting a high quality landscape</p> <p>Policy ENV3: Valuing our heritage</p> <p>Policy ENV4: Conserving and enhancing biodiversity and geodiversity</p> <p>Policy ENV5: Strengthening green infrastructure</p> <p>Policy ENV6: Managing environmental hazards</p> <p>Policy C1: Providing infrastructure and facilities</p> <p>Policy A1: Beverley & Central sub area</p> <p>Policy A2: Bridlington Coastal sub area</p> <p>Policy A3: Driffield & Wolds sub area</p>	Noted.
3.2	A review of the Local Plan has commenced, however this remains at an early stage and no weight is being attached to it by the Council. It has not formed the basis of any part of this LIR.	Noted.
<i>4 Key Issues</i>		
4.0.1	<p>The key issues identified by East Riding of Yorkshire Council in relation to the onshore elements of this National Significant Infrastructure Project are:</p> <ul style="list-style-type: none"> • Local planning policy context • Landscape and visual impact • Biodiversity and ecology • Highways issues • Public rights of way and countryside access • Water resources and flood risk • Coastal erosion • Heritage assets 	Noted.

Reference	Comment	Applicant's Response:
	<ul style="list-style-type: none"> • Socio-economic issues • Residential amenity • Requirements 	
<i>4.1 Local Planning Policy Context</i>		
4.1.1	The Development Plan (in relation to the onshore works) compromises the East Riding Local Plan Strategy Document (April 2016) and Allocations Document (July 2016). A review of the Local Plan has commenced, however this remains at an early stage and no weight is being attached to it by the Council. It has not formed the basis of any part of this LIR. The red line for the application site is extensive as it covers 39km from Fraisethorpe to Creyke Beck for the cable corridor, and then a large area to provide for the onshore substation and energy balancing infrastructure.	Noted.
4.1.2	The principle policy issue in relation to this proposal is the siting of the converter stations in the open countryside. Policy S4 (D) of the Strategy Document also allows for certain types of development in the countryside, including at point 9 'Energy development and associated infrastructure, where a countryside location is required for operational reasons'. The proposal clearly meets this criteria set out in policy S4 (D). Further, policy EC5 supports energy developments including Gas Supply Infrastructure where any adverse impacts can be satisfactorily minimised and any residual harm is outweighed by public benefits	Noted. The Applicant has cited the OnSS close to existing energy uses, which form part of the characterisation of the surrounding landscape.
4.1.3	It is acknowledged that the cable run passes through some areas identified as Mineral Safeguarding Areas. It avoids areas that are currently being worked for minerals and the mineral resource within the authority is generally sand and gravel.	Noted.
4.1.4	The Statement of Common Ground reflects that the principles of this application, including the need for renewable energy and siting of the landfall and onsite substation are considered to be appropriate. In principle, this application is not contrary to the Development Plan. The following sections consider the more detailed elements of the proposal. Landscape and Visual Impact	Noted.
<i>4.2 Landscape and Visual Impact</i>		
4.2.1	An Onshore Landscape and Visual Impact Assessment (LVIA) has been submitted as part of the ES. It appears to have been prepared in an appropriate manner that is consistent with recognised best practice and guidance, notably the Landscape Institute/IEEMA's 'Guidelines for Landscape and Visual Impact Assessment' (Third Edition), as well as other associated published advice and technical guidance. It is clear and concise and appears to draw sound and reasonable conclusions regarding the likely landscape and visual impacts of this development in accordance with the guidance. It is therefore regarded to form a suitable basis upon which to assess the landscape and visual impacts of this proposal.	Noted. It is acknowledged that the methodology and scope of the assessment has been agreed with ERYC during the pre-application process.

Reference	Comment	Applicant's Response:
4.2.2	A series of viewpoints have been analysed as part of the assessment and these have been complemented by a collection of photomontages. This viewpoint analysis provides an important assessment of key and representative views from a range of locations at varying distances and aspects and adds value to the information provided in this chapter of the Environmental Statement.	Noted.
4.2.3	While the details of the layout of these works would be submitted as part of the requirements to the Council for approval, the parameters for these works are very broad. The sub-station could consist of two main buildings each measuring 240m x 80m with a height of 25m, with potentially a further 15 buildings with a total floorspace of 7000sq m. In addition to this, the energy balancing infrastructure could consist of up to four main buildings each measuring 100m x 25m with a height of 15m, with potentially a further 10 secondary buildings with a total floorspace of 17,300m. There would be further infrastructure and equipment in addition to the buildings.	<p>The Applicant would like to clarify that the OnSS MDS, as presented in Table 4.39 of A1.4: Project Description (APP-010, amended by AS-006) states that the maximum dimensions of the main building(s) will be:</p> <ul style="list-style-type: none"> • Length – 240 m if a single building, if multiple buildings then proportionately smaller (the length of multiple buildings would not be longer than 120 m); and • Width – 80 m if a single building, if multiple buildings then proportionately smaller. <p>As such, the OnSS will not comprise two buildings measuring 240 m x 80 m.</p>
4.2.4	Overall, it is accepted that the onshore substation and energy balancing infrastructure would be of an extremely significant scale and would inevitably irreversibly affect the character of the landscape in this area. There are a number of sensitive receptors in the immediate vicinity in the form of residential properties and the public rights of way network. There would be cumulative effects with other infrastructure in the area (some of which are notable detractors in landscape and visual impact terms) and this is assessed within the ES. However it is also accepted that this impact would be relatively localised. Substantial additional landscaping, including bunds is proposed which could help to mitigate the effects to a degree. Full details would be confirmed through the requirements process.	Noted.
4.3 Biodiversity and Ecology		
4.3.1	The Environmental Statement contains numerous chapters relating to onshore and offshore ecology. The administrative area of the Council includes the onshore area and the intertidal area. The assessments have been prepared in an appropriate manner that is consistent with	Noted.

Reference	Comment	Applicant's Response:
	recognised best practice and guidance. The information that is provided appears to be sufficiently detailed to enable a full appraisal of the potential impacts of the development.	
4.3.2	In relation to the onshore area, bespoke study areas were identified for varying nature conservation interests around the Order limits. An extensive suite of surveys were undertaken in support of the proposals, including surveys for habitats, wintering and migratory birds, breeding birds, great crested newts, water voles, otters, bats, and badgers	Noted.
4.3.3	The ES identifies known sites of ecological importance. The cable corridor crosses the River Hull Headwaters Site of Special Scientific Interest (SSSI), along with the impact risk zones for the River Hull Headwaters, the Byron Mills Field SSSI and the Burton Bushes SSSI.	Noted.
4.3.4	Important watercourses have been identified as being crossed using HDD techniques where feasible, and where this is not possible, additional controls are provided through DCO Requirement 17 for codes of construction practice.	Noted. The Applicant can confirm that the most sensitive watercourses (e.g. from an ecological and flood risk management perspective) would be crossed using trenchless techniques. Additional construction and reinstatement measures will be employed to prevent impact on watercourses where trenchless crossings are not feasible.
4.3.5	The ES identifies the worst case scenario for each individual impact for the purposes of the terrestrial ecology impact assessment. The ES highlights embedded mitigation where measures have been integrated into the proposals, leading to the conclusions on residual impacts. Individual commitments are also made through the Environmental Statement.	Noted.
4.3.6	It is acknowledged that there would be loss of trees and hedgerows. Information has been provided in the application through a Tree Preservation Order and Hedgerow Plan which identifies affected trees and hedgerows and their classification. Replacement would be secured through the requirements for code of construction practice and ecological management plan. It is considered that there is sufficient information for the Examining Authority to assess this issue.	Noted.
4.3.7	Subject to the implementation of the mitigation that is proposed in the ES and appropriate conditions as set out in the Draft DCO no concerns should be raised regarding the terrestrial aspects of the proposal. No comments are offered on matters concerning marine and coastal ecology including ornithology and marine mammals as this is not within the expertise of the Local Authority.	Noted.

Reference	Comment	Applicant's Response:
<i>4.4 Highways</i>		
4.4.1	The application demonstrates that 35 access points would be necessary to provide the appropriate access to the cable construction corridor and associated logistics compounds. 11 of these would require detailed road junction works and traffic management arrangements. These accesses would be installed at the start of the construction process. The ES submitted with the application assesses the effect of these on the road network, however the detailed design of the accesses would be agreed through the requirements stage.	Noted.
4.4.2	The Statement of Common Ground is at an advanced stage with regard to highways matters. The methodology and findings of the studies underpinning the ES have been agreed, as has the location of the onshore substation and its access from the A1079 along with the locations of the compounds along the cable route, including that at Lockington. It is also agreed that the impact of the proposal on the operation of the highway network would be acceptable.	Noted. The outline Construction Traffic Management Plan (which forms Appendix F of F2.2: Outline Code of Construction Practice (APP-237)) is agreed as a suitable framework for securing necessary mitigation measures to remove driver delay and cumulative traffic and transport impacts.
4.4.3	The Council has lodged a formal objection to the scheme with respect to how the onshore cable would cross the A164 and the potential for this to prevent the improvement scheme from being implemented. Discussions to resolve this issue are at an advanced stage and it is anticipated that agreement should be reached prior to the hearing stage which would allow the objection to be withdrawn.	Noted. The Applicant is in ongoing discussion with ERYC on this matter.
<i>4.5 Public Rights of Way (PRoW)</i>		
4.5.1	There are 36 locations when the works would intersect with the PROW network and the documentation submitted with the application illustrates where these are. An outline PROW management plan has been submitted. This identifies varying levels of disturbance to sections of the PROW network, and mechanisms to manage this. For the majority of the 36 locations, there would be short term temporary stopping up (quantified as no longer than 3 months at any one time or 6 months in total over the whole construction period). Varying levels of management measure have been identified and requirement 17 of the DCO requires a detailed management plan to be agreed prior to works commencing which would address those locations where further management may be necessary.	Noted.
4.5.2	At Barmston Footpath No.4 there would be a long-term temporary diversion while the landfall is constructed. Permanent diversions would be required at Skidby Footpath No.16 and Rowley Bridleway No.13. Rowley Footpath 12, Leconfield Footpath No.10 and Leconfield Bridleway No.6 all measures to avoid long-term impacts. These sites are	Noted.

Reference	Comment	Applicant's Response:
	all explored in more detail in the outline PROW management plan, as is the wider PROW network in the vicinity of the onshore sub-station.	
4.5.3	It is acknowledged there will be an impact on the PROW network which would be dispersed throughout the authority throughout the construction period. Full details of how this would be managed would be secured through requirement 17 of the DCO, which would also authorise the stopping up or diversion of the affects sections of the PROW. There would be permanent changes around the area of the onshore substation, however there is a robust network in that area.	Noted.
<i>4.6 Water Resources and Flood Risk</i>		
4.6.1	The application has been accompanied by detailed reports and assessments exploring the impact of the development on water resources and flood risk. The reports appear to have been carried out to accepted standards and methodologies.	Noted.
4.6.2	The majority of the application is located within Flood Risk Zone 1, however there are areas which fall within flood zones 2 and 3. This is to be expected in a site which covers as large a geographical area as this. The onshore substation site includes an area of flood zone 3. However the design parameters for the onshore substation allow for raised floor levels above anticipated flood levels for the lifetime of the development.	Noted. It is also acknowledged that no permanent OnSS or EBI infrastructure will be located within the small area of Flood Zone 3.
<i>4.7 Coastal Erosion</i>		
4.7.1	The ES includes a study of the effects of coastal erosion. This takes into account existing and approved schemes, including the landfall for the Dogger Bank export cables to the south of this site. It identifies that in this area of landfall, net annual longshore drift is effectively nil and notes that the landfall is a sandy intertidal beach. It is an undefended area of coast and is identified in the Shoreline Management Plan as remaining as such with no active intervention in the short, medium and long terms. Average annual cliff recessions are identified as 1.22m and 1.57m, although the annual maximums were 5.00m in 2005 and 6.54m in 2007. It identifies that the current best estimates of retreat distance over the lifetime of the proposal would be around 33m in the short term (0-20 years) and 82m in the medium term (20-50 years). The potential impact of climate change on coastal erosion is considered.	Noted.
4.7.2	The landfall would involve considerable works, including temporary access tracks and works compounds. The use of HDD will ensure the cliffs and beach are not unduly disturbed. The precise location of the HDD exit pit would be determined following site specific surveys and feasibility studies however it is likely that this would result in the need for cofferdams to enclose these pits. These could potentially be 18m wide and 50m long and would have the potential for localised effects, but this would be for a short period and would be fully reversible.	Noted.
4.7.3	The effect of changes to the waves and wave energy has also been considered and despite the high environmental value this has (arising	Noted.

Reference	Comment	Applicant's Response:
	from the sediment transfer along the east coast of England, as well as a medium value for other factors) the impact is considered to be negligible as there would be no measurable change in wave conditions. This assessment would apply to the operation and decommissioning stages of the development.	
4.7.4	Further work is being carried out by the applicant as part of the Examination process which the Council will be party to. As part of this, the Council would seek to require there to be regular monitoring of the beach in the vicinity of the temporary works. This is an issue that the Council are discussing with the applicant. However at this time, it is the view of the local authority that the principle of the application would not result in an unacceptable impact on coastal processes.	The scope of this analysis is presented in G1.46 Marine Processes Supplementary Works Scope of Works (REP1-068) which was submitted into Examination at Deadline 1. An update on this workstream is expected to be submitted into Examination by Deadline 3.
4.8 Heritage Assets		
4.8.1	The ES assesses the effect of the application on heritage assets. For the landfall works and onshore export cable corridor the study area was 500m for non-designated heritage assets and 1km for designated heritage asses. For the onshore substation, the study area was 1km for non-designated heritage assets (primarily archaeological) and 5km for designated heritage assets and built non-designated built heritage. The study used a range of data sources and methods which are considered to be appropriate. The Statement of Common Ground confirms that these issues have been properly considered.	Noted.
4.8.2	There are a total of 618 designated heritage assets within the study areas. These consist of 31 Scheduled Monuments, 557 Listed Buildings (most within Beverley), two Registered Parks and Gardens, 18 Conservation Areas and ten areas of Ancient Woodland. A total of 223 non-designated heritage assets, or HHER entries of potential non-designated assets, are located within the study areas (186 within the onshore ECC 500 m study area and 37 within the OnSS 1 km study area) as presented in the Historic Environment DBA. A large number of buildings of historic interest are also locally listed within the study areas; 12 are located within the onshore ECC 1 km study area and 668 within the OnSS 5 km study area (348 of which correlate with Listed Buildings).	Noted.
4.8.3	Only one designated heritage asset is located within the Hornsea Four Order Limits; HP4-56, Beverley Sanctuary Limit Stone, Bishop Burton which is a Scheduled Monument. The applicant has proposed measures to avoid direct physical effects including an exclusion zone around the Scheduled Monument and through the use of HDD techniques to avoid physical effects (and would be used in any event in this location due to its proximity to the main road network).	Noted.
4.8.4	An outline written scheme of investigation for archaeological remains has been submitted, with further controls provided at the requirements stage. There are comments from Humber Historic Environment Record	Noted.

Reference	Comment	Applicant's Response:
	regarding the outline onshore written scheme of investigation. This is being discussed with the applicant, but requirement 16 requires more specific written schemes of investigation to be submitted for the varying stages of the connection works, so these issues could be addressed at that stage if not resolved.	
4.8.5	The ES notes the particular concentration of below ground non-designated heritage assets at the site of the onshore substation. The potential for the application to affect World War II non-designated heritage assets, particularly the pill boxes and anti-tank blocks is considered and addressed through the requirements, however the potential for this to include moving the blocks is noted. They would be reinstated if that were agreed to be the most appropriate course of action. It is also highlighted that should be it be necessary, the concrete tracks at Lissett Airfield could be removed and then reinstated. This is considered to adequately meet the requirements of national policy with regard to non-designated heritage assets.	Noted.
<i>4.9 Socio-economic considerations</i>		
4.9.1	The submitted Environmental Statement also considers socio-economic issues in the former Humber LEP area, for construction, operational and decommissioning phases, relating to project expenditure and job creation. The baseline study highlights some of the economic weaknesses in the LEP area and as yet uncertain impacts of the Covid-19 pandemic and prospects for recovery.	Noted.
4.9.2	The contribution the project would make to economic activity and employment through construction, operation and maintenance was not considered in detail. Notwithstanding, the application includes an outline employment and skills plan which includes general measures to identify opportunities for companies in Yorkshire and the Humber to access the supply chain and to work with partners to seek to maximise the ability of local people to access associated employment opportunities. It is not proposed to secure this through any of the requirements. However, it is not disputed that there would be economic benefits arising from the application.	Noted. It is acknowledged that the production of a detailed Employment and Skills Plan is secured by Requirement 25 of the draft DCO.
4.9.3	The proposal could enhance the increasing focus on the region generally as the Energy Estuary and this could have other indirect effects such as educational value and putting the East Riding 'on the map' generating positive publicity. There is strong public interest in energy security and climate change at the present time.	Noted.
4.9.4	The effect of the project on tourism, pressure on services and infrastructure such as health and housing and cumulative impacts were all scoped out of the Environmental Statement. The Local Authority concurs that there would be no likely significant effect on these issues as a result of this application.	Noted.

Reference	Comment	Applicant's Response:
<i>4.10 Residential Amenity</i>		
4.10.1	The application is accompanied by studies assessing the impact of the development in terms of noise, vibration and air quality. All of the studies appear to have been carried out to recognised standards methodologies.	Noted.
4.10.2	The construction noise assessment had a geographic coverage of 500 m buffer around the onshore cable run; a 2 km buffer around the landfall and onshore substation and traffic routes subject to significant changes in traffic flows (and / or percentage HGV) associated with construction. Sensitive receptors are identified and the impact of the various stages of development on them explored. Further controls and mitigations, primarily through codes of construction practice, are secured through the requirements	Noted.
<i>5 Conclusion</i>		
5.1	Based on the information that has been submitted with the application, it appears that there is sufficient detail provided to allow the examining authority to make an appropriate decision in respect of the proposed development.	Noted.
5.2	The proposal would result in significant contributions to increased provision of renewable energy. The onshore works are largely temporary and below ground (landfall and cable run). The onshore substation and energy balancing infrastructure would be of an extremely significant scale and would inevitably have a negative effect on the existing landscape. The effect could be partly mitigated by appropriate landscaping, and appropriate design and use of materials.	Noted.
5.3	Impacts on highway safety, heritage assets, residential amenity, ecology and public rights of way can all be minimised through the proposed requirements as recommended. The Council has been fully involved in the scheme throughout the pre-application consultation process with Orsted and work will remain ongoing through the Examination process.	Noted.
5.4	Overall, the Council is satisfied that the submitted application provides sufficient information to demonstrate that the principle of the application is acceptable and the Council would not wish to make an in principle objection.	Noted.