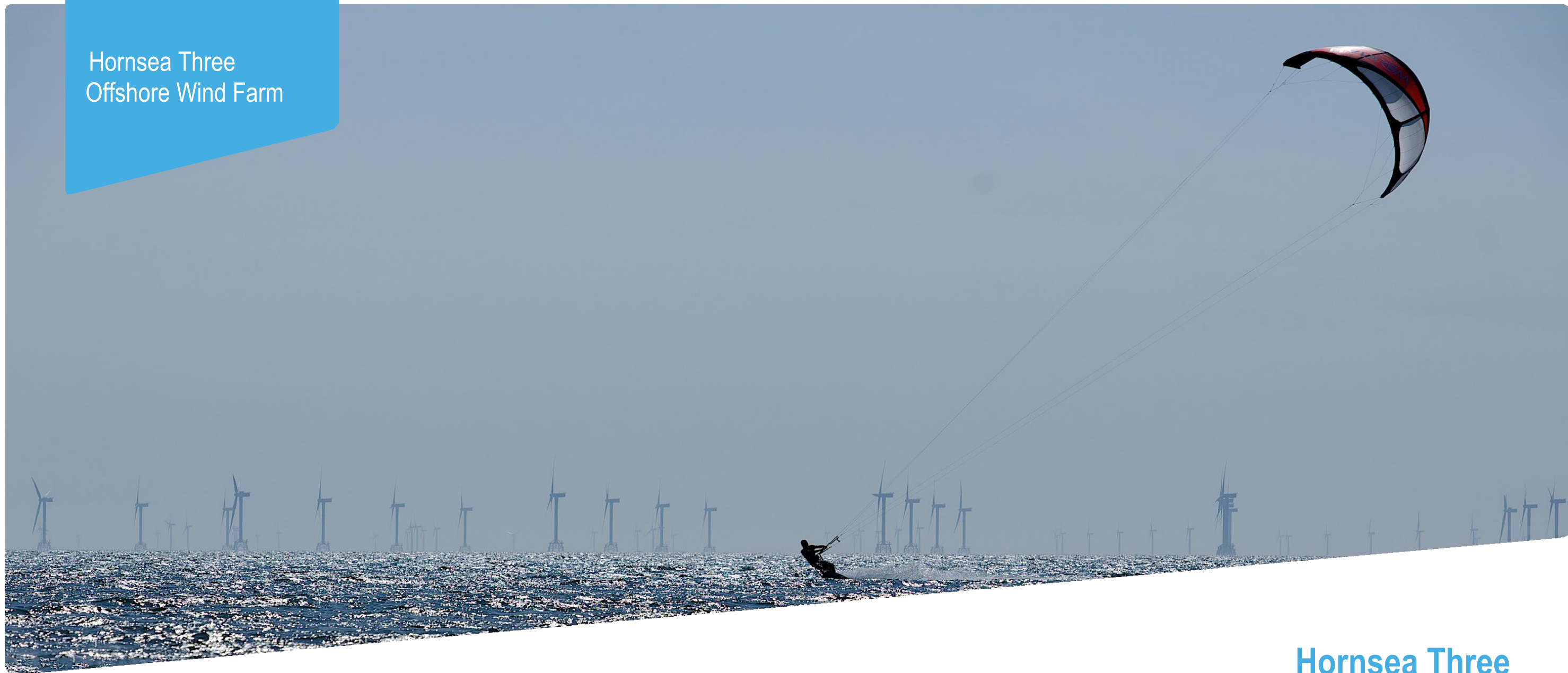


Hornsea Three
Offshore Wind Farm



Hornsea Three Offshore Wind Farm

Preliminary Environmental Information Report:
Annex 4.6 – Cumulative Effects Assessment

Date: July 2017


Hornsea 3
Offshore Wind Farm

DONG
energy

**Environmental Impact Assessment
Preliminary Environmental Information Report**

**Volume 6
Annex 4.6 - Cumulative Effects Assessment**

Liability

This report has been prepared by RPS, with all reasonable skill, care and diligence within the terms of their contracts with DONG Energy Power (UK) Ltd.

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This report is also downloadable from the Hornsea Three offshore wind farm website at:

www.dongenergy.co.uk/hornseaproject3

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Glossary

Term	Definition
Characteristics	Elements, or combinations of elements, which make a contribution to distinctive landscape character.
Designated landscape	Areas of landscape identified as being of importance at international, national or local levels, either defined by statute or identified in development plans or other documents.
Development	Any proposal that results in a change to the landscape and/or visual environment.
Elements	Individual parts which make up the landscape, such as, for example, trees, hedges and buildings.
Feature	Particularly prominent or eye-catching elements in the landscape, such as tree clumps, church towers or wooded skylines.
Green Infrastructure	Networks of green spaces and watercourses and water bodies that connect rural areas, villages, towns and cities.
Heritage	The historic environment and especially valued assets and qualities, such as historic buildings and cultural traditions.
Historic Landscape Characterisation	Historic characterisation is the identification and interpretation of the historic dimension of the present-day landscape or townscape within a given area.
Indirect impacts	Effects that result indirectly from the proposed project as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects.
Key characteristics	Those combinations of elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.
Land cover	The surface cover of the land, usually expressed in terms of vegetation cover, or lack of it. Related to, but not the same as land use.
Land use	What land is used for, based on broad categories of functional land cover, such as urban and industrial use and the different types of agriculture and forestry.
Landform	The shape and form of the land surface which has resulted from combinations of geology, geomorphology, slope, elevation and physical processes.
Landscape	An area, as perceived by people, the character of which is a result of the action and interaction of natural and/or human factors.
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
Landscape Character Areas (LCAs)	These are single unique areas which are the discrete geographical areas of a particular landscape type.
Landscape Character Assessment	The process of identifying and describing variation in the character of the landscape, and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscape distinctive. The process results in the production of a Landscape Character Assessment.

Term	Definition
Landscape Character Types /Landscape typology (LCTs)	These are distinct types of landscape that are relatively homogenous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement pattern, and indirect and aesthetic attributes.
Landscape classification	A process of sorting the landscape into different types using selected criteria, but without attaching relative values to different sorts of landscape.
Landscape effects	Effects on the landscape as a resource in its own right.
Landscape quality (condition)	A measure of physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements.
Landscape receptors	Defined aspects of the landscape resource that have the potential to be affected by the proposal.
Landscape strategy	The overall vision and objectives for what the landscape should be like in the future, and what is thought to be desirable for a particular landscape type or area as a whole, usually expressed in formally adopted plans and programmes or related documents.
Landscape Value	The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons
Magnitude (of effect)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.
National Landscape Character Areas (NCA)	Broad character areas of the land as defined by Natural England.
National Seascape Character Areas (NSCA)	Broad character areas of the sea, as defined by Natural England and the Marine Management Organisation
Perception	Combines the sensory (that we receive through our senses) with the cognitive (our knowledge and understanding gained from many sources and experiences).
Photomontage	A visualisation which superimposes an image of a proposed development upon a Viewpoint or series of Viewpoints.
Seascape	Landscapes with views of the coast or seas, and coasts and adjacent marine environments with cultural, historical and archaeological links with each other.
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type or change or development proposed and the value related to that receptor.
Significance	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.
Statement of Environmental Opportunity	A statement identifying the environmental qualities, including landscape characteristics, which should be maintained and/or enhanced. It can include education about an area.
Susceptibility	The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.

Term	Definition
Time depth	Historical layering – the idea of the landscape as a 'palimpsest', a much written-over manuscript.
Townscape	The character and composition of the built environment including the buildings and the relationships between them, the different types of urban open space, including green spaces, and the relationship between buildings and open spaces.
Tranquillity	A state of calm and quietude associated with peace, considered to be a significant asset in the landscape.
Visual amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.
Visual effects	Effects on specific views and on general visual amenity experienced by people.
Visual Receptors	Individuals and/or defined groups of people who have the potential to be affected by a proposal.
Visualisation	A computer simulation, photomontage or other technique illustrating the predicted appearance of a development.
Zone of Theoretical Visibility (ZTV)	A map, usually digitally produced, showing areas of land within which a development is theoretically visible.

Unit	Description
JB	Joint Bay
LB	Link Box
LCA	Local Landscape Character Area
LCT	Landscape Character Type
LDF	Local Plan
LSMP	Landscape Scheme and Management Plan
LVIA	Landscape and Visual Impact Assessment
MHWS	Mean High Water Spring
MLWS	Mean Low Water Spring
NCA	National Character Area
NE	Natural England
NP	National Park
NPS	National Policy Statement
NSBLPZ	Norwich Southern Bypass Landscape Protection Zone
NSCA	National Seascape Character Area
NSIP	Nationally Significant Infrastructure Project
PEIR	Preliminary Environmental Information Report
PPG	Planning Policy Guidance
PPS	Planning Policy Statements
PRoW	Public Right of Way
QNB	Qualities of Natural Beauty
RHA	Rolling Heath and Arable
RPaG	Registered Park and Garden
RPP	Regional Planning Policies
RSS	Regional Spatial Strategies
SMP	Shoreline Management Plan
SPD	Supplementary Planning Document

Acronyms

Unit	Description
AAP	Area Action Plan
AONB	Area of Outstanding Natural Beauty
CTV	Coastal Towns and Villages
DCLG	Department for Communities and Local Government
DCM	Drained Coastal Marshes
DCO	Development Consent Order
DECC	Department of Energy & Climate Change
DPD	Development Plan Document
EIA	Environmental Impact Assessment
GLVIA3	Guidelines for Landscape and Visual Impact Assessment
GOEE	Government Office for the East of England
HDD	Horizontal Directional Drilling

Unit	Description
TJB	Transition Joint Bay
ZTV	Zone of Theoretical Visibility

Units

Unit	Description
°C	Degrees Celsius
cm	Centimetre
GW	Gigawatt (power)
km	Kilometre
m	Metre
m ²	Metres squared
mm	Millimetre
MW	Megawatt (power)

1. Cumulative Effects Assessment

1.1.1.1 This annex sets out in full the cumulative effects assessment. This is an assessment of the potential cumulative landscape and visual effects of the proposed Hornsea Three development in association with cumulative schemes listed within volume 3, chapter 4: Landscape and Visual Resources, Table 4.11. The potential significance of cumulative effects is detailed for three phases of development (where data is available); the construction phase (overlap with Hornsea Three construction), the operation and maintenance phase (during winter one year after completion of Hornsea Three) and the decommissioning Phase (estimated timeframes). Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and incorporated into the assessment for the full ES stage.

1.1.2 Construction Phase

1.1.2.1 The likely construction impacts of the Hornsea Three onshore infrastructure are set out volume 3, Chapter 4: Landscape and visual Resources, section 4.11.

1.1.2.2 During the construction phase there would be localised direct impacts on landscape and visual resources and receptors that cannot be mitigated. However, many of these, sometimes significant, impacts are temporary.

1.1.2.3 This annex sets out the detailed assessment of the cumulative effects of the construction of the Hornsea Three infrastructure on landscape and visual resources and receptors. A summary of the significant effects is set out in volume 3, chapter 4: Landscape and Visual Resources, section 4.16 Cumulative Effects Assessment.

1.2 Cumulative Effects of the construction of Hornsea Three onshore infrastructure on landscape and visual resources and receptors

1.2.1.1 The likely construction impacts of the Hornsea Three onshore infrastructure are set out section 4.11 of volume 3, chapter 4: Landscape and Visual Resources.

1.2.1.2 During the construction phase there would be localised direct impacts on landscape and visual resources and receptors that cannot be mitigated. However, many of these, sometimes significant, impacts are temporary.

Cumulative impacts of Tier 1 projects during the construction of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/ HVAC substation may affect designated landscapes and landscapes noted within planning policy

Sheringham Hall RPaG

Magnitude of Impact

1.2.1.3 The proposed Hornsea Three Cable Corridor and nearest approved schemes (PF/13/1026) lie approximately 1.5 km west of the Sheringham Hall Registered Park and Garden. There would therefore be no direct cumulative effects on the fabric of the RPaG. There would however be a direct effect on the setting of the RPaG as derived from the local plan. Construction works would have a temporary impact on elements of the RPaG setting but due to the overall distance from the RPaG this effect is thought to be **moderate**.

Sensitivity of Receptor

1.2.1.4 Sheringham Hall RPaG has a high susceptibility. The proposals are reversible in the long term and the RPaG has a high value as a nationally important landscape designation. As such it is considered to be of high value and have a **high** sensitivity to works of the type proposed.

Significance of Effect

1.2.1.5 Overall, it is predicted that the sensitivity of the receptor would be **high** and the magnitude is deemed to be **moderate**. Therefore, the effect will be **moderate** adverse, which is not considered to be significant in EIA terms.

1.2.1.6 The Hornsea Three Onshore HVAC booster station and HVDC Converter/Onshore HVDC converter/HVAC substation would have no significant cumulative effects upon the Sheringham Hall RPaG.

Voewood RPaG

Magnitude of Impact

1.2.1.7 The gardens and pleasure grounds at Voewood lie to the north of the A147 to the west of High Kelling. The grounds are relatively compact and are bounded to the south and east by a dense tree belt. There would be indirect cumulative effects upon Voewood RPaG during construction, associated with the Hornsea Three Onshore cable route and a number of approved schemes that lie within 0.5 km to the south west and east of the RPaG (including PM/16/1511). With construction traffic (particularly) using the A147 immediately to the south of Voewood RPaG which may be visible, it is thought that the resultant impact would be **negligible to minor**.

Sensitivity of receptor

1.2.1.8 The value and sensitivity of Voewood RPaG is **high**, as it is a nationally designated landscape.

Significance of the effect

- 1.2.1.9 Overall, it is predicted that the sensitivity of the receptor would be **high** and the magnitude is deemed to be **negligible to minor** therefore, the effect may be a **minor** adverse significance of effect, due to the increased construction traffic on the A147, which is not considered to be significant in EIA terms.

Intwood Hall RPaG

Magnitude of Impact

- 1.2.1.10 Hornsea Three onshore HVDC converter/HVAC substation lies approximately 2 km east of Intwood Hall RPaG and with the Mangreen Quarry (application C/7/2014/7030) and vehicles working in and around the quarry has the potential to be a significant cumulative effect on the RPaG. The impact is predicted to be of local spatial extent, long term duration, continuous and not reversible, during the lifetime of the quarry. It is predicted that the impact will affect views from the RPaG directly. The magnitude is therefore, considered to be **major**.

Sensitivity of Receptor

- 1.2.1.11 The RPaG has a high susceptibility. The proposals are reversible in the long term (the restoration of the quarry) and the RPaG has a high value. Therefore, the sensitivity of the Intwood Hall is considered to be **high**.

Significance of Effect

- 1.2.1.12 Overall, it is predicted that the sensitivity of the receptor would be **high** and the magnitude is deemed to be **major**. Therefore, the effect will be **major** adverse, which is significant in EIA terms.

Cumulative impacts of Tier 2 projects during the construction of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect designated landscapes and landscapes noted within planning policy

Salle Park RPaG

Magnitude of impact

- 1.2.1.13 Salle Park lies less than 0.5 km to the east of the Hornsea Three onshore cable route and two proposed construction compounds along with one proposed scheme, Norfolk Vanguard West (EN010079) directly to the south. The house and gardens lie to the east of a track between the Manor House and the B1145. The Salle Park RPaG is almost entirely surrounded by woodland plantations. However, the change in the character of the landscape surrounding the Park would temporarily change, a change which is likely to be seen from the RPaG, including the increase in construction vehicles. In addition there are likely to be direct cumulative effects upon the RPaG with part of EN010079 shown as passing through the south east corner. The impact is predicted to be of local spatial extent, short term duration, continuous and is reversible. It is predicted that the impact will affect views from the receptor directly. Therefore, the magnitude is considered to be **moderate**.

Sensitivity of Receptor

- 1.2.1.14 As a nationally designated landscape, Salle Park RPaG is of high susceptibility, the impact is of medium reversibility and the RPaG of high value. Therefore, the sensitivity of the park is considered to be **high**.

Significance of the effect

- 1.2.1.15 Overall, it is predicted that the sensitivity of the receptor is considered to be **high** and the magnitude is deemed to be **moderate**. The effect will, therefore, be of **major** adverse significance, which is significant in EIA terms. Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and will be assessed at the full ES stage.

Cumulative impacts of Tier 1 and Tier 2 projects during the construction of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect NSCAs and NCAs

- 1.2.1.16 The NSCAs and the NCAs that the Hornsea Three onshore infrastructure is situated in, or adjacent to, are: NSCA 7: East Midlands Coastal Waters; NSCA 9: Norfolk Coastal Waters; NCA 77: North Norfolk Coast; NCA78: Central North Norfolk; NCA 84 Mid Norfolk; and, NCA 83: South Norfolk and High Suffolk Claylands.
- 1.2.1.17 There would be no significant cumulative effects on NSCAs and NCAs during the construction phase of Hornsea Three, as the NSCAs and NSAs cover large areas and the developments, in relation to these areas' key characteristics, are a minor component.

Cumulative impacts of Tier 1 projects during the construction of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect LCAs

1.2.1.18 The assessment of potential landscape and visual cumulative effects during construction phase is based on projects which have a temporal construction overlap with that of Hornsea Three (2021-2027).

North Norfolk LCA TF3: Hempstead, Bodham, Aylmerton and Wickmere Area

Magnitude of Impact – Residential Development

1.2.1.19 Land off Rectory Road and Holt Road, Edgefield (PF/15/1223) Land to the south of, Eagle Road, Erpingham (PF/15/1587) and Land off Eagle Road, Erpingham (PF/15/1461) are residential projects located within the LCA, There will be an overlap with the construction period for Hornsea Three.

1.2.1.20 If approved, the construction activity for 'Land off Rectory Road and Holt Road' would have direct effects upon LCA TF3: Hempstead, Bodham, Aylmerton and Wickmere Area. Key characteristics of LCA TF3 that might be affected by the construction works include: Water courses, small fields and hedgerow vegetation.

1.2.1.21 When considering the potential loss of characteristic features, particularly small fields and hedgerow vegetation, as outlined above within a small part of this LCA it is considered that this would result in a **moderate** impact. As the area effected is only a small part of a much larger character area any temporary effects are not thought to be significant within the wider LCA, any potential cumulative effects would be most obvious at a local level on the edge of existing settlement.

1.2.1.22 The construction of small scale residential development would not be out of keeping with the key characteristics of this LCA where dispersed settlement is an existing feature. Two stretches of the onshore cable route and temporary works for the onshore HVDC converter/HVAC substation would also have direct effects upon this LCA. There would be an increase in construction traffic within this LCA and in local villages.

Sensitivity of Receptor

1.2.1.23 As local landscapes, these LCAs are of medium susceptibility, the proposed residential development is not reversible, the LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.1.24 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **moderate**. Therefore, the effect would be of **moderate** adverse significance, which is not considered to be significant in EIA terms.

Magnitude of Impact – Anaerobic Digestion Facility LCA TF3: Hempstead, Bodham, Aylmerton and Wickmere Area by the Anaerobic Digestion Facility. Two stretches of the onshore cable route and temporary works for the onshore HVAC booster station would also have direct effects upon this LCA during construction. Key characteristics of LCA TF3 that might be affected by the construction works include: Water courses; settlements and farms; large estates; and, small fields and hedgerow vegetation.

1.2.1.25 The scale of the development at from the Anaerobic Digestion Facility would not constitute to a fundamental change of landscape character to this LCA during the construction period. This would result in a **minor** impact when considering these developments in combination.

Sensitivity of Receptor

1.2.1.26 As local landscapes LCAs are of medium susceptibility, the proposed development is of medium reversibility, the LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.1.27 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **minor**. Therefore, the effect would be of **minor** adverse significance, which is not considered to be significant in EIA terms.

1.2.1.28 Land adjacent to Edgefield Landfill Site, Edgefield, Melton Constable (C/1/2010/1005) is an industrial development located to the north-west of the village of Edgefield. It is currently not possible to accurately estimate construction duration based on information currently available at this time.

North Norfolk LCA WP2: Holt to Cromer

1.2.1.29 Land to the north of Hempstead Road, Heath Farm, Holt (PM/16/1204) and (PO/16/0253) are medium to large scale residential projects located within the eastern side of Holt. Land South of Cromer Road and East of Grove Lane, Holt (PO/14/0283) are medium scale approved residential project located within the north-eastern side of Holt. If approved, the construction of these projects may overlap with the construction of Hornsea Three.

The development would have direct effects upon LCT Wooded with Parkland (WP) LCA WP2: Holt to Cromer, in which the town of Holt is located, and would equate to a moderate extension to the town in combination with the other residential developments in the local area (namely PO/14/0283 detailed below). Construction of a short stretch of the onshore cable route passes through this LCA and would involve to part removal of an area of Forestry Commission plantations (a key characteristic of this area).

1.2.1.30 Other key characteristics that may be affected by construction works include: Mature woodlands, arable fields and pastures.

Magnitude of Impact

- 1.2.1.31 Although the loss of key characteristics outlined, particularly arable fields and pastures, above would potentially be significant at a local level, it is thought that, when looking at the LCA as a whole, this loss would result in a **minor** impact on this LCA.

Sensitivity of Receptor

- 1.2.1.32 As local landscapes, these LCAs are of medium susceptibility, the proposed residential development is not reversible, the LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.1.33 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **moderate**. Therefore, the effect would be of **minor** adverse significance, which is significant in EIA terms.

South Norfolk LCA A2: Yare/Tiffey Rural River Valley

Magnitude of Impact – Residential Development

- 1.2.1.34 Land South of Village Hall, Stocks Hill, Bawburgh (2015/2082) is a small scale approved housing development located to the south of Bawburgh, west of Norwich. The construction period of this development spans from 2021 to 2022 which would result in a potential two year overlap with the Hornsea Three.
- 1.2.1.35 This proposal is located within LCA C1: Yare Tributary Farmland with Parkland, immediately abutting LCA A2: Yare/Tiffey Rural River Valley. This small scale residential development is located closest to the onshore cable route; there would therefore be a potential direct cumulative construction impact on a small part of LCA C1 and indirect impacts on a very small part of LCA A2. These impacts would only be temporary and due to the scale of development it is not thought that the impacts would be significant. The Hornsea Three onshore cable route would have a greater temporary impact on a larger area of LCA C1. Key characteristics within the LCA that may be affected include: Arable and Pastoral farmland; small woodlands; sparse hedges and trees.
- 1.2.1.36 The resultant impact as a consequence of any loss of key characteristic features within the LCA is thought to be **moderate**. The Hornsea Three onshore cable route is likely to course a greater contribution (albeit temporary) to any perceived cumulative impact as it covers a larger area. Additionally an urban extension of this type is entirely at odds with the sparsely settled landscape characteristic within the LCA.

Sensitivity of Receptor

- 1.2.1.37 As local landscapes, these LCAs are of medium susceptibility, the proposed residential development is not reversible, the LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.1.38 Overall, it is predicted that the sensitivity of the receptor is considered to be medium and the magnitude is deemed to be moderate. Therefore, the effect would be of **moderate** adverse significance, which is significant in EIA terms.

South Norfolk LCA B1: Tas Tributary Farmland

Magnitude of Impact – Quarry Development

- 1.2.1.39 Mangreen Quarry (C/7/2014/7030) is located within LCA B1: Tas Tributary Farmland, the same LCA as the onshore HVDC converter/HVAC substation. The quarry is a large scale industrial project located to the north-east of the village of Swardeston and immediately east of the Hornsea Three onshore HVDC converter/HVAC substation. Construction (and operation) is scheduled to begin in 2019 and continue to 2024 and so has a four year overlap with the construction of Hornsea Three.
- 1.2.1.40 There would be direct characterising effects upon this LCA by the construction of the two projects. Key characteristics of LCA B1 that may be affected by construction works might include loss of: Large open arable fields; framed open views across the countryside; scattered remnant hedgerow trees, lining roads or marking former, denuded, field boundaries; and transportation corridors including main connecting roads.
- 1.2.1.41 Both developments due to their scale, and close proximity within the LCA, are considered to cause potentially significant cumulative landscape impacts during construction upon LCA B1. The impact is predicted to be of local spatial extent, short term (onshore cable route) to long term (onshore HVDC converter/HVAC substation) duration, continuous and is both reversible (onshore cable route) and irreversible (onshore HVDC converter/HVAC substation). It is predicted that the impact will affect the LCA directly. Therefore, the magnitude is considered to be **major**.

Sensitivity of Receptor

- 1.2.1.42 As local landscapes, these LCAs are of medium susceptibility, high reversibility and medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.1.43 Overall, it is predicted that the sensitivity of the receptor is considered to be **major** and the magnitude is deemed to be **medium**. Therefore, the effect would be of **major** adverse significance, which is significant in EIA terms. Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and will be assessed at the full ES stage.

Magnitude of Impact – Solar Farm Development

- 1.2.1.44 There are two medium to large scale solar farm developments, one is located to the south-east of Mulbarton, south of Norwich (Land South of Brick Kiln Lane Mulbarton (2015/1221)) and the other is Land South of Hall Farm Bungay Road Tasburgh (2014/0562). Construction for the schemes is 2017 there would therefore be no potential overlap with Hornsea Three at construction.
- 1.2.1.45 Sitting within LCA B1: Tas Tributary Farmland and LCA D1: Wymondham Settled Plateau Farmland they are both within the same LCA as a large part of the onshore HVDC converter/HVAC substation. There would therefore be direct cumulative effects on a small part of LCA B1. Key characteristics of LCA B1 that might be affected by the construction works might include: Large open arable fields; framed open views across the countryside; scattered remnant hedgerow trees, lining roads or marking former, denuded, field boundaries; and transportation corridors including main connecting roads.
- 1.2.1.46 At a distance of greater than 3 km appreciation of both schemes in combination would be limited and therefore any direct cumulative impacts upon LCA B1 are thought to be of a **moderate** impact. There would be no significant direct or indirect characterising effects on LCA D1.

Sensitivity of Receptor

- 1.2.1.47 As local landscapes, these LCAs are of medium susceptibility, high reversibility and medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.1.48 Overall, it is predicted that the sensitivity of the receptor is considered to be **moderate** and the magnitude is deemed to be **medium**. Therefore, the effect would be of **moderate** adverse significance, which is not considered to be significant in EIA terms.

Magnitude of Impact – Residential Development

- 1.2.1.49 There are a number of planned housing developments within the same area, on the eastern edge of Stoke Holy Cross, south east of Norwich (Land off Broomfield Road Broomfield Road Stoke Holy Cross (2016/2153); Land North of Long Lane Stoke Holy Cross (2015/1422 & 2013/0828) and Land East of Hillcrest Long Lane Stoke Holy Cross (2012/2034)).

- 1.2.1.50 The projects sit partly within LCA B1: Tas Tributary Farmland, LCA D2: Poringland Settled Plateau Farmland and LCA E1: Ashwell Thorpe Plateau Farmland. Therefore the schemes largely sit within different character areas to that of the Hornsea Three onshore HVDC converter/HVAC substation and onshore cable route. 2016/2153 predominantly sits within LCA B1 and is therefore within the same LCA as the onshore HVDC converter/HVAC substation and a small part of the onshore cable route. There would therefore be a direct cumulative effect on a small part of LCA B1 as a result of Hornsea Three in combination with 2016/2153. Key characteristics of LCA B1 that might be affected by the construction works might include: Large open arable fields; framed open views across the countryside; scattered remnant hedgerow trees, lining roads or marking former, denuded, field boundaries; and transportation corridors including main connecting roads.

- 1.2.1.51 Another group of residential projects (Land West of Rightup Lane Wymondham (2015/2168); Land to the East and West of Rightup Lane Wymondham (2012/0371); Barkers Mill Rightup Lane Wymondham (2016/2286); Land North Of the A11 Silfield Road Wymondham (2015/2380, 2015/1760 & 2014/1649); and Barkers Mill Rightup Lane Wymondham (2012/1716 & 2012/1250) are located on the southern edge of Wymondham, south west of Norwich. They combine to form a large scale development. The majority of the projects have no overlap during construction with Hornsea Three, with the exception of 2012/0371 which has a construction period of 2018 to 2026 resulting in a potential six year overlap with Hornsea Three. All the developments sit within the same LCAs as part of the onshore cable route, LCA D1: Wymondham Settled Plateau Farmland, with part of 2012/0371 lying within LCA B1: Tas Tributary Farmland, the same as the onshore HVDC converter/HVAC substation. There would therefore be a direct effect on these character areas as a result of these developments and Hornsea Three. However, only 2012/0371 would have a potential cumulative effect in combination with Hornsea Three. Key characteristics of LCA B1 that might be affected by the construction works might include: Large open arable fields; framed open views across the countryside; scattered remnant hedgerow trees, lining roads or marking former, denuded, field boundaries; and transportation corridors including main connecting roads. Key characteristics of LCA D1 that might be affected by the construction works include: loss of arable fields, small woodland blocks and clipped hedgerows.

- 1.2.1.52 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Sensitivity of Receptor

- 1.2.1.53 As local landscapes, these LCAs are of medium susceptibility, low reversibility and medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.1.54 Overall, it is predicted that the sensitivity of the receptor is considered to be minor and the magnitude is deemed to be medium. Therefore, the effect would be of **moderate** adverse significance, which is not considered to be significant in EIA terms.

South Norfolk LCA C1: Yare Tributary Farmland with Parkland.

Magnitude of Impact – Residential Development

- 1.2.1.55 Land South of Village Hall, Stocks Hill, Bawburgh (2015/2082) is a small scale approved housing development located to the south of Bawburgh, west of Norwich. The construction period of this development spans from 2021 to 2022 which would result in a potential two year overlap with the construction of Hornsea Three. This proposal is located within LCA C1: Yare Tributary Farmland with Parkland, immediately abutting LCA A2: Yare/Tiffey Rural River Valley. There would therefore be a potential direct cumulative construction impact with the onshore cable route in a small part of LCA C1 and indirect impacts on a very small part of LCA A2. These **moderate** impacts would only be temporary and due to the scale of development it is not thought that the impacts would be significant. Key characteristics within the LCA that may be effected include: Arable and Pastoral farmland; small woodlands; sparse hedges and trees. An urban extension of this type is at odds with the sparsely settled landscape characteristic within the LCA.
- 1.2.1.56 Land South-west of Newfound Farm (2013/1793) is a large scale residential development located to the north of Cringleford, south west of Norwich. With a construction period of 2019 to 2028 there is the potential for a seven year overlap with the Hornsea Three. This development sits within LCA C1: Yare Tributary Farmland with Parkland and is therefore within the same LCA as a large part of the onshore cable route and a small part of the onshore HVDC converter/HVAC substation. This would result in a direct (temporary) **moderate** cumulative impact upon this LCA and characteristic features there in. Key characteristics within the LCA that may be effected include: Arable and pastoral farmland; small woodlands; sparse hedges and trees.
- 1.2.1.57 Land South of Ringwood Close Little Melton (2013/0092) is a small scale residential development on the western edge of Little Melton to the south west of Norwich. A construction period between 2020 and 2021 would result in a potential one year overlap with Hornsea Three. The project sits within 2 LCAs (D1: Wymondham Settled Plateau and Farmland and C1: Yare Tributary Farmland with Parkland) along with the Hornsea Three onshore cable route. Therefore, there would be direct temporary cumulative effects within these character areas. Due to the scale of the housing development and the relative size of the character areas this potential effect would be on a very small party of each character area at a local level. The resultant cumulative impact when considering 2013/0092 in combination with Hornsea Three is thought to be **minor** adverse.

Sensitivity of Receptor

- 1.2.1.58 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.1.59 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **minor to moderate**. Therefore, the effects would be **minor to moderate** adverse significance, which is not considered to be significant in EIA terms.

Magnitude of Impact – Commercial Development

- 1.2.1.60 Land West of Ipswich Road Keswick (2016/0764) is a medium to large scale commercial development to the south of Norwich. With a construction period of 2021 to 2023 there is a potential three year overlap with the construction of Hornsea Three.
- 1.2.1.61 Land West of Ipswich Road. Keswick sits within LCA C1: Yare Tributary Farmland with Parkland, the same LCA as part of both the onshore HVDC converter/HVAC substation and onshore cable route which would result in a direct cumulative impact upon this LCA and characteristic features therein. The Hornsea Three onshore cable route covers a larger area within the LCA and would therefore be a greater contributor to any significant temporary cumulative effect during construction. Key characteristics of LCA C1 that might be affected by the construction works include: loss of arable and pastoral farmland, sparse hedge and hedgerow trees and occasional mature/veteran oaks.
- 1.2.1.62 The potential loss of key features outlined above, albeit within a very small part of the overall LCA, would result in a **moderate** impact. Although not within LCA B1: Tas Tributary Farmland, where the majority of the onshore HVDC converter/HVAC substation lies, due to the close proximity and scale of the respective projects there may be a significant indirect cumulative effect on this LCA.

Sensitivity of Receptor

- 1.2.1.63 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.1.64 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **moderate**. Therefore, the effect would be of **moderate** adverse significance, which is not considered to be significant in EIA terms.

South Norfolk LCA D1:Wymondham Settled Plateau Farmland

Magnitude of impact – Residential Developments

- 1.2.1.65 Land to East of Norwich Road (2016/0713) is a small to medium scale residential on the western edge of Bracon Ash, south-west of Norwich. With the construction period for the project being 2021 to 2023 there would be a three year construction overlap with Hornsea Three. Located within LCA D1: Wymondham Settled Plateau Farmland, the project is therefore not located within the same LCA as the Onshore HVDC converter/HVAC substation but is within the same LCA as part of the onshore cable route, albeit some 6 km at the nearest point the onshore cable route passes through LCA D1. Key characteristics of LCA D1 that might be affected by the construction works include: Loss of arable fields, small woodland blocks and clipped hedgerows. The impact is thought to be **negligible**.
- 1.2.1.66 Phase A1-A Land North of Heathersett Village Centre Little Melton Road Heathersett (2015/1594) and Land North of Heathersett Village Centre Little Melton Road Heathersett (2015/1681) make up a medium scale housing development to the north east of Heathersett, west of Norwich. The construction period for both related schemes is 2018 to 2029 and there would therefore be the potential for a seven year overlap with the construction phase of Hornsea Three. The projects lie within the same LCA (LCA D1: Wymondham Settled Plateau Farmland) as part of the onshore cable route. As a result there would be direct cumulative effects on a small part of this character area during construction of the onshore cable route and these housing developments. Key characteristics of LCA D1 that might be affected by the construction works include: Loss of arable fields, small woodland blocks and clipped hedgerows. When considering the potential loss of characteristic features within a small part of the LCA it is considered that this would result in a **negligible** impact.
- 1.2.1.67 Land South of Ringwood Close Little Melton (2013/0092) is a small scale residential development on the western edge of Little Melton to the south west of Norwich. Construction is due to be between 2020 and 2021 and so would have a potential one year overlap with Hornsea Three. The project sits within two LCAs (D1: Wymondham Settled Plateau and Farmland and C1: Yare Tributary Farmland with Parkland) along with the Hornsea Three onshore cable route. Therefore, there would be direct temporary cumulative effects within these character areas. Key characteristics of LCA D1 that might be affected by the construction works include: Loss of arable fields, small woodland blocks and clipped hedgerows. The impact is considered to be **minor**.
- 1.2.1.68 Land East of Long Lane Mulbarton (2011/2093) is a medium to large scale residential development located on the south eastern edge of Mulbarton. Construction for this scheme would be 2017 to 2021 resulting in a potential one year overlap with Hornsea Three resulting in a potential cumulative effect at construction. As the project sits with LCA D1: Wymondham Settled Plateau Farmland, it is not within the same LCA as either the onshore HVDC converter/HVAC substation or onshore cable route. There would therefore be no direct cumulative effects upon landscape character as a result of these projects. Key characteristics of LCA D1 that might be affected by the construction works include: Loss of arable fields, small woodland blocks and clipped hedgerows. There would be a cumulative impact on a small part of LCA D1 and C1, however, this is thought to be a **minor** impact.
- 1.2.1.69 Land off Broomfield Road Broomfield Road Stoke Holy Cross (2016/2153); Land North of Long Lane Stoke Holy Cross (2015/1422 & 2013/0828) and Land East of Hillcrest Long Lane Stoke Holy Cross (2012/2034) are small to medium scale housing developments within the same area, on the eastern edge of Stoke Holy Cross, to the south-east of Norwich. It is considered that the resultant possible cumulative impact is considered to be **negligible**.
- 1.2.1.70 Land West of Rightup Lane Wymondham (2015/2168); Land to the East and West of Rightup Lane Wymondham (2012/0371); Barkers Mill Rightup Lane Wymondham (2016/2286); Land North Of the A11 Silfield Road Wymondham (2015/2380, 2015/1760 & 2014/1649); Barkers Mill Rightup Lane Wymondham (2012/1716 & 2012/1250) form a group of development located on the southern edge of Wymondham, south-west of Norwich. They are all residential developments combining to form a large scale development. The majority of the projects have no overlap during construction with Hornsea Three, with the exception of 2012/0371 which has a construction period of 2018 to 2026 resulting in a potential six year overlap with Hornsea Three. All the developments sit within the same LCA as part of the onshore cable route, LCA D1: Wymondham Settled Plateau Farmland, with part of 2012/0371 lying within LCA B1: Tas Tributary Farmland, the same as the onshore HVDC converter/HVAC substation. There would therefore be a direct effect on these character areas as a result of these developments and Hornsea Three. However, only 2012/0371 would have a potential cumulative effect in combination with Hornsea Three. Key characteristics of LCA D1 that might be affected by the construction works include: loss of arable fields, small woodland blocks and clipped hedgerows. Any potential cumulative effect would occur on a small part of a much larger LCA (D1 and B1). It is considered that the resultant possible cumulative impact is considered to be **minor**.

1.2.1.71 Land between the A11 Spinks Lane and Norwich Road Wymondham (2012/1385 & 2014/2042) is a large scale residential development located on the north-eastern edge of Wymondham, south-west of Norwich. A construction period of 2017 to 2021 would result in a potential one year overlap with Hornsea Three. The project sits within the same LCA (D1: Wymondham Settled Plateau Farmland) as part of the onshore cable route. There would therefore be a potential cumulative characterising effect on a small part of this LCA. Key characteristics of LCA D1 that might be affected by the construction works include: Loss of arable fields, small woodland blocks and clipped hedgerows. Due to the distance from the scheme from the Hornsea Three onshore cable route, it is unlikely that both projects would be perceived in combination at any one time. Rather they would only be experienced in isolation at a local level. It is considered that any resultant potential cumulative effect would be **minor**.

Sensitivity of receptor

1.2.1.72 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

1.2.1.73 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be minor to **negligible**. Therefore, the effects would be of **minor to negligible** adverse significance, which is not considered to be significant in EIA terms.

Magnitude of Impact – Energy Developments

1.2.1.74 Land South of Brick Kiln Lane Mulbarton (2015/1221) is a medium to large scale solar farm development located to the south-east of Mulbarton, south of Norwich. Construction for the scheme is 2017 there would therefore be no potential overlap with Hornsea Three at construction. It lies partly within LCA D1: Wymondham Settled Plateau Farmland. There would be only **negligible** impacts on the LCA.

1.2.1.75 Oil Storage Depot Stanfield Road Wymondham (2015/2913) is a commercial/industrial development located to the south east of Wymondham, south west of Norwich. There would be a potential one year overlap with the Hornsea Three, during the construction phase (2020 to 2021). The project is located within the same LCA (D1: Wymondham Settled Plateau Farmland) as part of the Hornsea Three onshore cable route. As a result there would be a direct characterising effect as a result of these projects. Any potential effects would be most obvious at a local level. A significant cumulative impact would be unlikely, due to the relative distance from the onshore cable route meaning that the projects are unlikely to be perceived in combination. This would result in a **moderate** impact. Key characteristics of LCA D1 that might be affected by the construction works include: Loss of arable fields, small woodland blocks and clipped hedgerows.

Sensitivity of receptor

1.2.1.76 As local landscapes, these LCAs are of medium susceptibility, the development type is reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

1.2.1.77 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be moderate to **negligible to moderate**. Therefore, the effect would be of **moderate to negligible** adverse significance, which is not considered to be significant in EIA terms.

Magnitude of Impact – Industrial Development

1.2.1.78 Land at Hall Farm, Stanfield Road, Wymondham (C/7/2013/7014) is a large scale industrial development located to the south west of the town of Wymondham, which includes mineral extraction. The project is scheduled to begin in 2017 and be operational until 2045. There is a five year overlap with Hornsea Three. Located in the same LCA as part of the onshore cable route (D1: Wymondham Settled Plateau Farmland) there would be a direct characterising effect on a small part of this medium to large LCA. Key characteristics of LCA D1 that might be affected by the construction works include: Loss of arable fields, small woodland blocks and clipped hedgerows. Due to the relative distance from the onshore cable route however it is unlikely that any landscape effects would be perceived in combination. The impact would be **minor**.

Sensitivity of receptor

1.2.1.79 As local landscapes, these LCAs are of medium susceptibility, the development type is reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

1.2.1.80 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **minor**. Therefore, the effect would be of **moderate to minor** adverse significance, which is not considered to be significant in EIA terms.

South Norfolk LCA D2: Poringland Settled Farmland

1.2.1.81 Land West of Octagon Farm (2015/2326 & 2012/0405) is a small to medium scale mixed use development for 60 residential properties and commercial buildings, located on the northern outskirts of the village of Poringland, south-east of Norwich. The construction period for this project spans from 2018 to 2020, so would have no overlap with Hornsea Three. The project is located 4.4 km from the onshore HVDC converter/HVAC substation site and greater than 1 km (3.6 km) from the onshore cable route. The project is located within LCA D2: Poringland Settled Plateau Farmland, and is therefore not located within the same LCA as the onshore HVDC converter/HVAC substation or onshore cable route. As a result, there would be no cumulative impacts on the LCA(s) as a result of these developments. Key characteristics within the LCA that may be affected as a result of these developments (but not Hornsea Three) include: Large scale arable fields, poor hedgerows, woodland blocks and recreational route ways. For reasons set out above the potential for any cumulative effect when considered with Hornsea Three is thought to be **no change**.

1.2.1.82 Land North of Stoke Road Poringland (2016/2388); Land to the West of Norwich Road and North of Stoke Road Poringland (2013/0505) and Land West of Norwich Road and South of Caistor Lane Poringland (2014/0732 & 2013/1986) are medium to large scale housing developments located within close proximity of each other. Construction for these projects is at differing timescales, the total construction for the schemes is 2017 to 2023, resulting in the potential of up to three years overlap with the Hornsea Three. All the schemes lie within the same LCA, LCA D2: Poringland Settled Plateau Farmland. They therefore do not sit within the same LCA as that of either the onshore HVDC converter/HVAC substation or onshore cable route. This would result in no direct cumulative characterising effects as a result of these schemes. Owing to the relative distance from the Hornsea Three even from the very limit of the LCA it is unlikely that these schemes would be perceived in combination. Any cumulative effects would not be direct it is therefore considered that there would be limited characterising effect when considering Hornsea Three in combination with these approved schemes. The resultant impact is thought to be **minor**.

1.2.1.83 Land North of Shotesham Road Poringland (2014/0393) and Land North of Shotesham Road (Area D) Poringland (2014/0319) is a small to medium scale residential development on the southern edge of Poringland, to the south-east of Norwich. With a construction period of 2017 to 2024 there would a potential four year overlap with Hornsea Three. Due to distance it is considered that any potential cumulative effects would be limited. Lying within LCA D2: Poringland Settled Plateau Farmland, they are not within the same LCA as either the substation or onshore cable route. There would therefore be no direct cumulative characterising effects upon the LCA. Any cumulative effects would not be direct it is therefore considered that there would be limited characterising effect when considering Hornsea Three in combination with these approved schemes. The resultant impact is thought to be **minor**.

Sensitivity of receptor

1.2.1.84 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

1.2.1.85 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be no change to **minor**. Therefore, the effect would be of **negligible to minor** adverse significance, which is not considered significant in EIA terms.

South Norfolk LCA E1: Ashwell Thorpe Plateau Farmland

Magnitude of Impact – Residential Development

1.2.1.86 Land off Broomfield Road Broomfield Road Stoke Holy Cross (2016/2153); Land North of Long Lane Stoke Holy Cross (2015/1422 & 2013/0828) and Land East of Hillcrest Long Lane Stoke Holy Cross (2012/2034) are small to medium scale housing developments within the same area, on the eastern edge of Stoke Holy Cross, south east of Norwich. The projects sit within three LCAs; LCA B1: Tas Tributary Farmland, LCA D2: Poringland Settled Plateau Farmland and LCA E1: Ashwell Thorpe Plateau Farmland. Therefore the schemes largely sit within different character areas to that of the Hornsea Three onshore HVDC converter/HVAC substation and onshore cable route. It is considered that the potential magnitude of cumulative effect would be **minor**.

Sensitivity of receptor

1.2.1.87 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

1.2.1.88 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **minor**. Therefore, the effect would be of **minor** adverse significance, which is not considered significant in EIA terms.

South Norfolk LCA F1: Yare Valley Urban Fringe

Magnitude of Impact – Residential Development

1.2.1.89 Lodge Farm Phase 2 Development (2013/0567) is a large scale residential development located to the north of Bawburgh, to the west of Norwich. With a construction period of 2018 to 2027, there is the potential for a six to seven year overlap with the construction of Hornsea Three. The Lodge Farm Phase 2 development is located within LCA G1: Easton Fringe Farmland and a small part of LCA F1: Yare Valley Urban Fringe. This project is located within the same LCA (F1) as the onshore cable route and there would therefore be a direct cumulative impact on a part of this small character area. Key characteristics of LCA G1 that may be affected during construction include: temporary diversion/loss of PRowS effecting recreational uses, the permanent loss of arable and pastoral farmland and wooded areas. Cumulative impacts are considered to cause a **minor** impact to a small part of the LCA already heavily influenced by built form.

1.2.1.90 Land South of Devon Way and Hudson Avenue Trowse (2014/0981) and Land off White Horse Lane Trowse (2016/0803) are small to medium scale residential developments located on the south eastern fringes of Norwich. With a construction period of 2019 to 2023 there is the potential for a three year overlap with Hornsea Three. The sites are located within LCA F1: Yare Valley Urban Fringe. The construction of these small to medium scale residential development would be out of keeping with the key characteristics of this LCA where there is a perceived absence of settlement within the valley, providing a green buffer and comprehensible development edge to the city of Norwich. Key characteristics of LCA F1 which could potentially be indirectly effected include: Open fields, strongly influenced by modern transportation corridors, in particular the Norwich Southern Bypass, arable and pastoral farmland, hedge and hedgerow trees, large scale arable fields, poor hedgerows, woodland blocks and recreational route ways. Hornsea Three is not located within the same LCA as this development and as such there would only be potential indirect impacts upon this LCA from the construction of the onshore cable route and the onshore HVDC converter/HVAC substation. The magnitude of impact is considered to be **minor**.

Sensitivity of receptor

1.2.1.91 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

1.2.1.92 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **minor**. Therefore, the effect would be of **minor** adverse significance, which is not considered significant in EIA terms.

Magnitude of Impact – Commercial/Industrial Development

1.2.1.93 Norwich Research Park (2012/1477) is a medium to large scale commercial/industrial (research) development, located on the western edge of Norwich. With a construction period between 2017 and 2026 there would be the potential for a six year overlap with the Hornsea Three. The Norwich Research Park is located within LCA F1: Yare Valley Urban Fringe and is therefore not located within the same LCA as the Onshore HVDC converter/HVAC substation or onshore cable route. This would result in no direct cumulative impacts on the LCA(s) as a result of this project. Key characteristics within LCA F1, C1 and D2 that may be have indirect cumulative effects are: Key characteristics of LCA F1 that might be affected by the construction works include: Open fields, strongly influenced by modern transportation corridors, in particular the Norwich Southern Bypass, arable and pastoral farmland, hedge and hedgerow trees, large scale arable fields, poor hedgerows, woodland blocks and recreational route ways. Any potential indirect cumulative impacts upon and loss of key characteristics would be temporary and the resultant research park would not be out of character for the area. It is therefore considered that any cumulative impact on a small part of the LCA(s) would be **negligible**.

Sensitivity of receptor

1.2.1.94 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

1.2.1.95 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible**. Therefore, the effect would be of **negligible** adverse significance, which is not considered significant in EIA terms.

Magnitude of Impact – Sports Development

1.2.1.96 UEA Sports Facility (2016/0233) is a large scale recreational development, located on the western edge of Norwich. With a construction period of 2019 to 2021 there is a potential overlap with the Hornsea Three of one year. The project is located 3.8 km from the onshore HVDC converter/HVAC substation and greater than 1 km (2.1 km) from the onshore cable route. The facility would be located within LCA F1: Yare Valley Urban Fringe and is therefore not within the same LCA as the onshore cable route nor substation. As a result there would be no direct cumulative impact upon the LCA as a result of these developments. There would be a possible indirect cumulative effect upon key characteristics within neighbouring LCAs as well as LCA F1. Key characteristics within LCA F1, C1 and D2 that may experience indirect cumulative impacts are: Key characteristics of LCA F1 that might be affected by the construction works include: Open fields, strongly influenced by modern transportation corridors, in particular the Norwich Southern Bypass, arable and pastoral farmland, hedge and hedgerow trees, large scale arable fields, poor hedgerows, woodland blocks and recreational route ways. The magnitude of impact is thought to be **negligible**.

Sensitivity of receptor

1.2.1.97 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

1.2.1.98 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible**. Therefore, the effect would be of **negligible** adverse significance, which is not considered significant in EIA terms.

Magnitude of Impact – Mixed Use Development

- 1.2.1.99 Three Score Site, Land South of Clover Hill Road, Norwich (12/00703/O) is a large scale mixed-use development within the eastern side of the city of Norwich. The construction period has begun for this large scale development on the 'Three Score Site', and would be for the total construction period for Hornsea Three. The development is located within 4 km of the onshore cable route and 5.7 km to the north-west of the onshore HVDC converter/HVAC substation. The development is outside of the confines of the district level Landscape Character Assessments within the study area, but is located in close proximity to LCT F: Valley Urban Fringe, LCA F1: Yare Valley Urban Fringe. The development would extend the settlement into an area which is mostly undeveloped at present. There would be significant effects upon the local landscape within which the large scale mixed use development is to be developed. However, there would be indirect impacts only upon the character of the landscape by Hornsea Three. The closest LCA to this large-scale development that would be directly affected by Hornsea Three is LCA C1 Yare Tributary Farmland with Parkland. Key characteristics of LCA C1 that might be affected by the construction works include: loss of arable and pastoral farmland, sparse hedge and hedgerow trees and occasional mature/veteran oaks. The impact is considered to be **minor**.
- 1.2.1.100 Deal Ground, Bracondale, Norwich (12/00875/O) is a large scale mixed-use development to the immediate south-east on the outskirts of the city of Norwich. Construction is scheduled to start in 2024 and would continue beyond the timescale for the construction of Hornsea Three, allowing for a four year overlap. The 'Deal Ground' site is located outside the confines of the South Norfolk Landscape Character Assessment, but adjoins LCA F1: Yare Valley Urban Fringe to the south-east and the city edge of Norwich to the north-west. It is considered that the site shares some key characteristics of LCA F1 including: Large meandering river and a green buffer and comprehensible development edge to the city of Norwich. A local level townscape assessment was also completed by 'Serruys Property Company Limited' as part of the planning application process for this project. There would be no significant cumulative landscape or visual effects on national or local landscape designations as a result of these schemes. Due to the relative distance between Deal Ground, Bracondale, Norwich (12/00875/O) and Hornsea Three infrastructure it is considered that there would be a **moderate** impact.

Sensitivity of receptor

- 1.2.1.101 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

- 1.2.1.102 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **moderate**. Therefore, the effect would be of **moderate** adverse significance, which is not considered significant in EIA terms.

South Norfolk LCA G1: Easton Fringe Farmland

Magnitude of Impact – Residential Development

- 1.2.1.103 Land North and South of Dereham Road, Easton (2014/2611) is a large scale residential development to the south of Easton, west of Norwich. It is situated in close proximity to the Hornsea Three onshore cable route, within the same LCA. The impact is predicted to be of local spatial extent, short term duration, continuous and is reversible. It is predicted that the impact will affect the LCA directly. Therefore, the magnitude is considered to be **major**.
- 1.2.1.104 Land North of Farmland Road (2016/2430) is a small to medium scale residential development located on the north-west edge of Norwich. The construction period for this development is 2021 to 2024 resulting in a potential four year overlap with the Hornsea Three. Located within LCA G1: Easton Fringe Farmland, the project is located within the same LCA as part of the onshore cable route. There would therefore be a **negligible** direct cumulative impact on parts of this LCA. Key characteristics of LCA G1 that may be affected during construction include: temporary diversion/loss of PROWs affecting recreational uses, the permanent loss of arable and pastoral farmland and wooded areas.

Sensitivity of receptor

- 1.2.1.105 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

- 1.2.1.106 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible to major**. Therefore, the effect would be of **negligible to moderate** adverse significance, which is not considered significant in EIA terms.

Broadland District LCA B1: Horsford Woodland Heath Mosaic

Magnitude of Impact – Residential Development

- 1.2.1.107 1-4 Station Road, Swannington (20151644) is a small scale residential development located to the south and outside of the village of Swannington. The construction phase spans from 2022 to 2023, allowing for a potential construction overlap of two years with Hornsea Three.
- 1.2.1.108 This small scale residential development is located within the western most extent of the landscape character of LCA B1: Horsford Woodland Heath Mosaic. There would be direct effects by the residential development but Hornsea Three itself would not directly affect this LCA. Key characteristics of LCA B1 that might be affected by the construction works include: Large rectangular fields of arable farmland; individual properties on straight roads; views contained by woodland; network of footpaths including the Marriott's Way. There would be the potential for **minor** indirect impacts only during the construction phase due to the proximity to the onshore cable route.

Sensitivity of receptor

- 1.2.1.109 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

- 1.2.1.110 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **minor**. Therefore, the effect would be **of minor** adverse effects, which is not considered significant in EIA terms.

Broadland District LCA E2: Marsham and Hainford Wooded Estatelands

- 1.2.1.111 Land North of Sir Wouldiams Lane, Aylsham (20140298) is a large scale mixed use development located on the eastern side of Aylsham. The construction period spans from 2017 to 2022, allowing for a two year construction overlap with Hornsea Three. There would be direct impacts upon LCT E: Wooded Estates, LCA E2: Marsham and Hainford Wooded Estatelands. Key characteristics of LCA E2 that might be affected by the construction works include: Arable cultivation; estate parkland; intact hedgerows; substantial blocks and belts of woodland; historic character, strong sense of place; and views across farmland to churches. Due to the distance from Hornsea Three, there would be a very limited potential for any indirect impacts upon this LCA. There would be no cumulative landscape impacts upon this LCA during the construction period. The resultant impact would be **minor**.

Sensitivity of receptor

- 1.2.1.112 As local landscapes, these LCAs are of medium susceptibility, the development type is not reversible and LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of effect

- 1.2.1.113 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **minor**. Therefore, the effects would be **of minor** adverse effects, which is not considered significant in EIA terms.

Cumulative impacts of Tier 2 projects during the construction of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect LCAs resources and receptors

Broadland District LCAs C1 and D1

Magnitude of Impact – Energy Infrastructure Development

- 1.2.1.114 The Norfolk Vanguard West onshore cable route (EN010079) is part of a large scale NSIP, which crosses the Broadland district, to the north of Norwich. With a proposed construction period of 2020 to 2024 there is a potential four year overlap with that of the Hornsea Three development. The proposed route for the onshore cable crosses that of Hornsea Three to the north-east of Reepham. The scheme passes through several LCAs within the district, including LCA D1: Tributary Farmland, where it would cross the Hornsea Three onshore cable route.

- 1.2.1.115 The impact is predicted to be of local spatial extent, short term duration, continuous and would be reversible. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be **major**.

Sensitivity of Receptor

- 1.2.1.116 Local LCAs C1 and D1 are of medium susceptibility, high reversibility and medium value. Therefore, the sensitivity of the LCAs is considered to be **medium**.

Significance of Effect

- 1.2.1.117 Overall, it is predicted that the sensitivity of the LCA is considered to be **medium** and the magnitude is deemed to be **major**. Therefore, the effect will be of **major** adverse significance, which is significant in EIA terms. Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and will be assessed at the full ES stage.

Cumulative impacts of Tier 1 projects during the construction of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect visual resources and receptors

All visual effects in North Norfolk

- 1.2.1.118 Land off Rectory Road and Holt Road, Edgefield (PF/15/1223) is a residential development. Residential and dynamic visual receptors, particularly travelling along the B1149, would not only have views of the construction activities, receptors would also be affected by the increase in construction traffic. Receptors traveling along Plumstead Road could sequentially view both developments during construction, although there are substantial hedgerows which would restrict available views to see both developments within the same view. There would only be a potential overlap of two years during construction and the scale of the development would not result in significant visual cumulative effects during construction, despite its proximity to the onshore HVAC booster station.

1.2.1.119 Due to the distance from the proposed Hornsea Three and the small scale and height of Land to the south of, Eagle Road, Erpingham (PF/15/1587) and Land off Eagle Road, Erpingham (PF/15/1461) (residential schemes) it is considered that there would be no cumulative visual effects.

1.2.1.120 The construction of both sites (and with PO/14/0283) would be experienced in transient views sequentially from Cromer Road (medium sensitivity) which passes over the onshore cable route and adjacent to this residential development. Also users on the 'Holt-Mannington Walk' recreational route (high sensitivity) would also experience views of both construction sites in sequence potentially for the five years there is an overlap. This recreation route also passes within 1 km of the Onshore HVAC booster station but intervening plantation woodland would partly restrict potential inter-visibility at this point. Although there would be a noticeable change and potential adverse effects to these views cumulatively, due to the nature of the residential development being viewed within an existing town context, it is considered that there would be no significant cumulative effects experienced by visual receptors.

1.2.1.121 Effects upon cumulative views during construction of Land South of Cromer Road and East of Grove Lane, Holt (PO/14/0283) would be comparable to those described above within Land to the north of Hempstead Road, Heath Farm, and Holt (PM/16/1204). Potential adverse effects upon views during construction would not be considered to be significant. The potential for cumulative effects upon views from 'Holt-Mannington Walk' recreational route would be reduced due to the increase distance of this housing development. It is considered that there would be no significant cumulative effects experienced by visual receptors.

South Norfolk

Onshore cable corridor

1.2.1.122 Land North and South of Dereham Road, Easton (2014/2611) is a large scale residential development to the south of Easton, west of Norwich (east of the onshore cable route). It is situated in close proximity to the Hornsea Three onshore cable route, as is Land off Church Lane, Honingham (20170052) a retail development to the west of the onshore cable route. During the construction phase residents, users of PRoWs and people using local roads as well as the A47 would have views of all three schemes, both in combination and sequentially.

1.2.1.123 Land South of Ringwood Close Little Melton (2013/0092) is a small scale residential development on the western edge of Little Melton. A construction period of 2020 to 2021 would result in a potential one year overlap with Hornsea Three. The project is almost adjacent to the Hornsea Three onshore cable route.

1.2.1.124 The impact is predicted to be of local spatial extent, short term duration, continuous and is not reversible. It is predicted that the impact will affect visual receptors directly. Therefore, the magnitude is considered to be **major**.

Sensitivity of Receptor

1.2.1.125 The residents and users of the PRoWs are of a high susceptibility, high reversibility and high value. Therefore, the sensitivity of the receptors is considered to be **high**.

Significance of Effect

1.2.1.126 Overall, it is predicted that the sensitivity of the receptor is considered to be **high** and the magnitude is deemed to be **major**. Therefore, the effect would be of **major** adverse significance, which is significant in EIA terms. Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and will be assessed at the full ES stage.

Onshore HVDC converter/HVAC substation

1.2.1.127 Due to the scale of Mangreen Quarry and close proximity to the Hornsea Three it is considered that there would be a cumulative impact upon views within the local area. In particular, from the extensive PRoW network around Swardeston, many of which are likely to be removed and/or diverted as a result of the schemes. Swardeston FP7 is the closest PRoW, to the south of Hornsea Three and west of the quarry. There are likely to be significant cumulative effects upon views along the length of this PRoW, with views of all schemes in combination possible heading away from Swardeston. Residential properties and farmsteads, particular to the east of Swardeston would have views of both developments. Users of the Tas Valley Way Recreational Route, to the west of Swardeston, would have views of the construction of the Hornsea Three onshore cable route, the onshore HVDC converter/HVAC substation and quarry in combination.

1.2.1.128 The impact is predicted to be of local spatial extent, short term duration, continuous and is reversible. It is predicted that the impact will affect visual receptors directly. Therefore, the magnitude is considered to be **major**.

Sensitivity of Receptor

1.2.1.129 The residents and users of the PRoWs are of a high susceptibility, high reversibility and high value. Therefore, the sensitivity of the receptors is considered to be **high**.

Significance of Effect

1.2.1.130 Overall, it is predicted that the sensitivity of the receptor is considered to be **high** and the magnitude is deemed to be **major**. Therefore, the effect would be of **major** adverse significance, which is significant in EIA terms. Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and will be assessed at the full ES stage.

All other visual effects in South Norfolk

- 1.2.1.131 The construction phase of the residential development at Land South of Village Hall, Stocks Hill, Bawburgh (2015/2082) is likely to be experienced in transient sequential views from PRow Bawburgh FP1 to the south-west of Bawburgh, along with transient views from Bawburgh Road which passes under 1km from the onshore cable. Although any changes would be noticed resulting in potential adverse effects on views cumulatively, due to the scale and nature of the residential development being viewed in the context of the existing urban edge of Bawburgh, along with views being transient in nature, it is considered that any potential cumulative effect on views would not be significant in EIA terms.
- 1.2.1.132 The solar farms (Land South of Brick Kiln Lane Mulbarton (2015/1221) and Land South of Hall Farm Bungay Road Tasburgh (2014/0562)) are likely to have a visual impact at a very local level. However, due to the nature of the development and likely low height of the solar panels it is thought intervening existing vegetation and landform is very likely to screen many views. As a result, in addition to the distance from the Hornsea Three it is considered that there would be no significant cumulative visual effects from this development. Visual effects from any construction activities and/or traffic are likely to have a more significant effect on views locally but are also unlikely to have a significant cumulative visual effect.
- 1.2.1.133 Land off Broomfield Road Broomfield Road Stoke Holy Cross (2016/2153) Land North of Long Lane Stoke Holy Cross (2015/1422 & 2013/0828) and Land East of Hillcrest Long Lane Stoke Holy Cross (2012/2034) are located on the edge of existing urban development and given the nature of these developments any transient sequential views from the extensive network of PRowS, local roads and existing residential properties is likely to be seen in the context of the existing village. Cumulatively, with a distance of up to 2 km any views in combination with Hornsea Three are not likely to be significant from PRowS to the west of Stoke Holy Cross (e.g. Swainsthorpe FP1) as views to these developments would be over existing built form. In contrast, PRow and local roads to the north and on the approach to Stoke Holy Cross would likely have glimpsed transient, mid distance, views of these and the Hornsea Three onshore HVDC converter/HVAC substation (for example Swainsthorpe BOAT6, BR2 and Norwich Road). Any transient views would not always be direct depending on the direction of travel. As a result it is unlikely that all schemes would be viewed at the same time and would not therefore cause a significant cumulative visual effect.
- 1.2.1.134 Land South of Hall Farm Bungay Road Tasburgh (2014/0562). Due to the distance from the proposed Hornsea Three and height of this solar farm, it is thought that any cumulative visual effects would not be significant.
- 1.2.1.135 Due to the distance from Hornsea Three and height of the residential schemes of Land West of Rightup Lane Wymondham (2015/2168); Land to the East and West of Rightup Lane Wymondham (2012/0371); Barkers Mill Rightup Lane Wymondham (2016/2286); Land North Of the A11 Silfield Road Wymondham (2015/2380, 2015/1760 & 2014/1649); and Barkers Mill Rightup Lane Wymondham (2012/1716 & 2012/1250) which are located on the southern edge of Wymondham, south west of Norwich, it is thought that any cumulative visual effects would not be significant.
- 1.2.1.136 The construction phase of Land South of Village Hall, Stocks Hill, Bawburgh (2015/2082) along with that of Hornsea Three is likely to be experienced in transient sequential views from PRow Bawburgh FP1 to the south-west of Bawburgh, along with transient views from Bawburgh Road which passes over the onshore cable route 759 m from this residential development. Although any changes would be noticed resulting in potential adverse effects on views cumulatively, due to the scale and nature of the residential development being viewed in the context of the existing urban edge of Bawburgh, along with views being transient in nature, it is considered that any potential cumulative effect on views would not be significant in EIA terms.
- 1.2.1.137 PRowS are limited within the vicinity of the development at Land South-west of Newfound Farm (2013/1793). The nearest potential sequential cumulative effect coming from Cringleford FP1 approximately 0.5 km south east at its nearest point. As a result the majority of high sensitivity receptor would be those of residential properties, particularly Cringleford. At a distance of greater than 1 km from the Hornsea Three onshore cable route it is thought that the viewer's perception of both developments at any one time may be limited and owing to the scale of 2013/1793, this would have a greater influence on views and therefore any cumulative effect is thought to be not significant. It is not thought likely that there would be any significant cumulative effects on views with the onshore HVDC converter/HVAC substation as this is located at more than 3 km and with intervening urban development it is thought that any possible view of the development would be seen in the context of the existing built form.
- 1.2.1.138 Land West of Ipswich Road Keswick (2016/0764) is located on the southern outskirts of Norwich, in an area where PRowS are limited. However, there are a number within 1 km of the application site with potential sequential cumulative views of 2016/0764 and the Hornsea Three. This is due the relative closeness of the scheme and the scale of the Land West of Ipswich Rd Keswick. The nearest PRowS with potential direct and indirect sequential views are Keswick FP2 and Keswick BR7, along with high sensitivity residential receptors or Keswick. Due to the close proximity it is likely that there would be temporary, cumulative impacts during construction as a result of this scheme in combination with Hornsea.
- 1.2.1.139 Land South of Ringwood Close Little Melton (2013/0092) is a small scale residential development on the western edge of Little Melton to the south west of Norwich. Due to the relative distance from the Hornsea Three it is thought that there would be no significant cumulative effect on views, as it is unlikely that the schemes would be viewed at the same time.

- 1.2.1.140 There are several PRoWs within the vicinity of Land to East of Norwich Road (2016/0713) consequently there are likely to be several transient indirect and direct views to the site during construction. PRoW, considered being of high sensitivity, including Bracon Ash FP5, FP6, FP13 (following part of the Tas Valley Way recreational route), FP12, FP14, FP16 and FP17, are located within 1 km of the site. Due to the distance from the Hornsea Three onshore HVDC converter/HVAC substation and onshore cable route it is considered that the developments are unlikely to be seen together. As a result it is thought that would be no significant cumulative effect upon views from either the PRoW network or minor roads in the area considered to be of medium sensitivity. Any local views would be transient in nature a predominantly seen in the context of the existing Bracon Ash urban area.
- 1.2.1.141 Located on the outskirts of Heathersett village, there are a number of PRoWs with potential sequential views of Phase A1-A Land North of Heathersett Village Centre Little Melton Road Heathersett (2015/1594) and Land North Of Heathersett Village Centre Little Melton Road Heathersett (2015/1681) and Hornsea Three onshore cable route and this residential development, the closest being Heathersett FP5 to the south of Norwich Road. With intervening housing views from this PRoW may be limited as well as any cumulative views with the Hornsea Three onshore cable route. There are a number of local roads with potential sequential transient views of the onshore cable route and these two housing developments, including Burnthouse Lane which passes immediately adjacent to the onshore cable route. Although views from PRoWs and local roads would be transient in nature, and possibly indirect, due to the close proximity of the Hornsea Three onshore cable route it is considered that there would be a temporary effect upon views at a local level. Located at greater than 5 km from the onshore HVDC converter/HVAC substation views of all developments in combination is unlikely and there would therefore be no significant cumulative effect with the Hornsea Three onshore HVDC converter/HVAC substation and these two residential developments.
- 1.2.1.142 Due to the relative distance from the Hornsea Three it is thought that there would be no significant cumulative effect on views with Land South of Ringwood Close Little Melton (2013/0092) as it is unlikely that the schemes would be perceived in combination.
- 1.2.1.143 Land South of Brick Kiln Lane Mulbarton (2015/1221) is a medium to large scale solar farm. Due to the nature of the development and height from ground level it is thought intervening existing vegetation and landform is very likely to screen many views. As a result, in addition to the distance from the Hornsea Three it is considered that there would be no significant cumulative visual effects from this development when considered with Hornsea Three. Visual effects from any construction activities and/or traffic are likely to have a more significant effect on views locally but are also unlikely to have a significant cumulative visual effect.
- 1.2.1.144 Visually Land East of Long Lane Mulbarton (2011/2093) is thought to have no significant cumulative visual effects. There is a substantial PRoW network within the local area, in between the schemes, users of this network are likely to have sequential views of Hornsea Three and/or 2011/2093. With many of these views being indirect and the apparent direction of travel meaning seeing all schemes in combination it is thought that any potential views would not be significant. In addition, many views to 2011/2093 are likely to be seen over the existing built form of Mulbarton and would therefore not be entirely uncharacteristic of the baseline views.
- 1.2.1.145 At a distance of greater than 5 km from the Hornsea Three onshore HVDC converter/HVAC substation and onshore cable route it is thought unlikely that the Oil Storage Depot Stanfield Road Wymondham (2015/2913) would be seen in combination with Hornsea Three. As such, any possible long distance, glimpsed views are not considered to be significant. With individual projects causing potentially more significant visual effects at a local level.
- 1.2.1.146 Due to the distance from the proposed Hornsea Three and height of these residential schemes (Land West of Rightup Lane Wymondham (2015/2168); Land to the East and West of Rightup Lane Wymondham (2012/0371); Barkers Mill Rightup Lane Wymondham (2016/2286); Land North Of the A11 Silfield Road Wymondham (2015/2380, 2015/1760 & 2014/1649); Barkers Mill Rightup Lane Wymondham (2012/1716 & 2012/1250)) it is thought that any cumulative visual effects would not be significant.
- 1.2.1.147 Land West of Rightup Lane Wymondham (2015/2168); Land to the East and West of Rightup Lane Wymondham (2012/0371); Barkers Mill Rightup Lane Wymondham (2016/2286); Land North Of the A11 Silfield Road Wymondham (2015/2380, 2015/1760 & 2014/1649); Barkers Mill Rightup Lane Wymondham (2012/1716 & 2012/1250). Due to the distance from the proposed Hornsea Three and height of these residential schemes, it is thought that any cumulative visual effects would not be significant.
- 1.2.1.148 Due to the distance of Land between the A11 Spinks Lane and Norwich Road Wymondham (2012/1385 & 2014/2042) a large scale residential development located on the north eastern edge of Wymondham, south-west of Norwich, and the proposed Hornsea Three and height of these residential schemes, it is thought that any cumulative visual effects would not be significant.
- 1.2.1.149 Owing to the distance from the Hornsea Three it is thought that the viewer's perception of Land at Hall Farm, Stanfield Road, Wymondham (C/7/2013/7014) is a large scale industrial development located to the south-west of the town of Wymondham, which includes mineral extraction, in combination would likely be very limited and therefore it is considered that there would be no significant cumulative effects on views.

- 1.2.1.150 There are no PRoW in close proximity to the Land West of Octagon Farm (2015/2326 & 2012/0405) is a small to medium scale mixed use development. The nearest being Caistor St. Edmund FP3/FP5 and Bixley FP5 (high sensitivity) located approximately 1.1 km west at the nearest point. It is possible that there would mid to long distant transient views from users along the length of this PRoW network. Due to the scale and nature of the development it is likely that any indirect views to the development may be seen in the context of existing urban development. Due to the distance from the onshore HVDC converter/HVAC substation and in particular the onshore cable route it is thought that any potential long distant views would be barely discernible within the views, and it is not likely that Hornsea Three along with this development would be perceived in combination resulting in no significant cumulative effects on views.
- 1.2.1.151 In combination, Land North of Stoke Road Poringland (2016/2388); Land to the West of Norwich Road and North of Stoke Road Poringland (2013/0505) and Land West of Norwich Road and South of Caistor Lane Poringland (2014/0732 & 2013/1986) are considered likely to have a significant visual effect at a local level. However, when considered in combination with the Hornsea Three it is thought that these schemes would not be a significant feature within views, and would likely be seen in the context of the existing Poringland development. This is due to the distance between these residential developments and their relative scale within any views. There are a number of PRoW in the local area, including Boudicca Way Recreational Route, which would likely have transient indirect views to these and Hornsea Three developments. However, due to direction of travel it is unlikely that the schemes would be seen in combination within the same views. As a result it is thought that any potential cumulative impacts are considered to be not significant.
- 1.2.1.152 Due to the relative distance between Land North of Shotesham Road Poringland (2014/0393) and Land North of Shotesham Road (Area D) Poringland (2014/0319) both small to medium scale residential developments on the southern edge of Poringland, to the south-east of Norwich, these schemes and that of Hornsea Three, along with potential intervening vegetation, landform and existing urban development, it is considered that there would be no significant cumulative visual effect upon receptors. Construction traffic from each scheme in isolation is likely to cause more visual effect at a local level.
- 1.2.1.153 On the edge of existing urban development and given the nature of the Land North of Shotesham Road Poringland (2014/0393) and Land North of Shotesham Road (Area D) Poringland (2014/0319) make up a small to medium scale residential development on the southern edge of Poringland, to the south-east of Norwich developments, any transient sequential views from the extensive network of PRoWs, local roads and existing residential properties is likely to be seen in the context of the existing village. Cumulatively, with a distance of up to 2 km any views in combination with Hornsea Three are not likely to be significant from PRoWs to the west of Stoke Holy Cross (for example Swainsthorpe FP1) as views to these developments would be over existing built form. In contrast, PRoWs and local roads to the north and on the approach to Stoke Holy Cross would likely have glimpsed transient, mid distance, views of these and the Hornsea Three onshore HVDC converter/HVAC substation (for example Swainsthorpe BOAT6, BR2 and Norwich Road). Any transient views would not always be direct depending on the direction of travel. As a result it is unlikely that all schemes would be viewed at the same time and would not therefore cause a significant cumulative visual effect.
- 1.2.1.154 On the edge of existing urban development Land off Broomfield Road Broomfield Road Stoke Holy Cross (2016/2153); Land North of Long Lane Stoke Holy Cross (2015/1422 & 2013/0828) and Land East of Hillcrest Long Lane Stoke Holy Cross (2012/2034) are small to medium scale housing developments within the same area, on the eastern edge of Stoke Holy Cross, south-east of Norwich. Any transient sequential views from the extensive network of PRoWs, local roads and existing residential properties are likely to be seen in the context of the existing village. Cumulatively, with a distance of up to 2 km any views in combination with Hornsea Three are not likely to be significant from PRoWs to the west of Stoke Holy Cross (for example Swainsthorpe FP1) as views to these developments would be over existing built form. In contrast, PRoWs and local roads to the north and on the approach to Stoke Holy Cross would likely have glimpsed transient, mid distance, views of these and the Hornsea Three onshore HVDC converter/HVAC substation (for example Swainsthorpe BOAT6, BR2 and Norwich Road). Any transient views would not always be direct depending on the direction of travel. As a result it is unlikely that all schemes would be viewed at the same time and therefore would not cause a significant cumulative visual effect.
- 1.2.1.155 PRoWs are limited surrounding Norwich Research Park (2012/1477) on the western edge of Norwich. The nearest, Norwich FP3, to the north of the development joining Costessey BR3, passes largely through an urban environment. There would likely be indirect and direct transient views from this PRoW towards the development. At some distance from the Hornsea Three onshore HVDC converter/HVAC substation, cumulative construction views with this development are thought to be unlikely resulting in no significant cumulative effects. User's views of both developments in combination within transient views from the PRoW and local road network (such as School Lane, Little Melton) are not likely to be significant. With any potential views, particularly of 2012/1477, likely to be seen in the context of existing development which is of a similar scale.

- 1.2.1.156 High sensitivity receptors within 1 km of the UEA Sports Facility (2016/0233) are thought to be primarily private residential properties, such as those located in Cringleford. While views would be static, it is likely that they would be indirect/oblique depending on the properties orientation. With a number of intervening developments (such as 2013/1793) due for completion prior to this, and the low lying nature of the development, it is considered that this would not significantly affect views when considered in combination with other development. Due to the developments relative distance from the Hornsea Three onshore cable route and onshore HVDC converter/HVAC substation it is thought there would be no significant cumulative effect when considered in combination.
- 1.2.1.157 There are no PRowS within the vicinity of Lodge Farm Phase 2 Development (2013/0567) with receptors located in adjacent residential properties in New Costessey on the outskirts of Norwich. There would be no intervisibility with the Hornsea Three onshore HVDC converter/HVAC substation and therefore no significant cumulative effect upon views, with any possible combined glimpsed views seen in the context of existing development.
- 1.2.1.158 At a distance of greater than 4 km it is considered that Land South of Devon Way and Hudson Avenue Trowse (2014/0981) and Land off White Horse Lane Trowse (2016/0803) would have no significant cumulative effects on views when considered in combination with Hornsea Three.
- 1.2.1.159 The Three Score Site, Land South of Clover Hill Road, Norwich (12/00703/O) development would likely have effects on views within the local landscape, and due to the scale, 1000 units, it is thought likely that the development would be seen within views in combination with the Hornsea Three onshore cable route. These views would be primarily from existing residential properties with the closest PRow being Norwich FP3/BR3 running north to south within 0.5 km west of the site. Due to the distance from the onshore cable route (4 km) the perception of both schemes within the same view may be limited and with intervening existing development it is thought that any potential views would not be significant.
- 1.2.1.160 Due to distance and intervening urban development, it is considered that there would be no significant cumulative effects as a result of Land North of Farmland Road (2016/2430) and the Hornsea Three development. Highly sensitive receptors are largely limited to those of existing residential properties.

Broadland

- 1.2.1.161 1-4 Station Road, Swannington (20151644) is a small scale residential development located to the south and outside of the village of Swannington. There would be an increase in construction traffic and potential inter-visibility with both sites. There would be no significant cumulative effects upon residential or transient views (Station Road/Reepham Road) during construction period. Any temporary effects upon local visual receptors would not be significant despite the proximity to the Hornsea Three onshore cable route.

- 1.2.1.162 Due to the location of the Land North of Sir Wouldiams Lane, Aylsham (20140298) the large scale mixed use development located on the eastern side of Aylsham and the distance from the onshore cable route and onshore HVAC booster station, any potential inter-visibility with both sites in combination during construction would be extremely limited.

Cumulative impacts of Tier 2 projects during the construction of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect visual resources and receptors

Broadland District LCAs C1 and D1

- 1.2.1.163 The Norfolk Vanguard West onshore cable route (EN010079) is part of a large scale NSIP, which crosses the Broadland district, to the north of Norwich. With a proposed construction period of 2020 to 2024 there is a potential four year overlap with that of the Hornsea Three development. The proposed route for the onshore cable crosses that of Hornsea Three to the north east of Reepham.

Magnitude of Impact

- 1.2.1.164 Due to the scale and close proximity to the Hornsea Three Onshore cable route it is considered that there would be a cumulative impact upon views within the local area. Particularly sequential views from the extensive PRow network to the north of Reepham. Many of the PRowS are likely to be diverted (temporarily) during the construction phase of both projects, e.g., footpath Salle FP8. Many residential properties and farmsteads, particular to the north and east of Reepham would likely have direct views of both developments. The impact is predicted to be of local spatial extent, short term duration, continuous and would be reversible. It is predicted that the impact would affect the receptor directly. Therefore, the magnitude is considered to be **moderate**.

Sensitivity of Receptor

- 1.2.1.165 People using the PRow network and residential receptors are of high susceptibility, high reversibility and high value. Therefore, the sensitivity of the LCAs is considered to be **high**.

Significance of Effect

- 1.2.1.166 There would be direct cumulative effects upon visual receptors as a result of the construction of the Hornsea Three onshore cable route and the construction of the Norfolk Vanguard West onshore cable route. Overall, it is predicted that the sensitivity of the receptor is considered to be high and the magnitude is deemed to be moderate. Therefore, the effect would be of **major** adverse significance, which is significant in EIA terms. Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and will be assessed at the full ES stage.

1.2.2 Operation and Maintenance Phase

Cumulative impacts of Tier 1 projects during the operation and maintenance phase of the onshore cable route, onshore HVAC booster station and onshore HVDC converter/HVAC substation may affect designated landscapes

1.2.2.1 The assessment of potential landscape and visual cumulative effects upon nationally important designated landscapes during the construction phase is based on projects which have a temporal construction overlap with the Hornsea Three (2021-2027) (see volume 3, chapter 4: Landscape and Visual Resources, Table 4.11).

Intwood Hall RPaG

Magnitude of Impact

1.2.2.2 Hornsea Three onshore HVDC converter/HVAC substation lies approximately 2 km east of Intwood Hall RPaG and with the Mangreen Quarry (application C/7/2014/7030) and vehicles working in and around the quarry has the potential to be a significant cumulative effect on the RPaG. The impact is predicted to be of local spatial extent, long term duration, continuous and not reversible, during the lifetime of the quarry. It is predicted that the impact will affect views from the RPaG directly. The magnitude is therefore, considered to be **major**.

Sensitivity of Receptor

1.2.2.3 The RPaG has a high susceptibility. The proposals are reversible in the long term (the restoration of the quarry) and The RPaG has a high value. Therefore, the sensitivity of the Intwood Hall is considered to be **high**.

Significance of Effect

1.2.2.4 Overall, it is predicted that the sensitivity of the receptor is considered to be high and the magnitude is deemed to be major. Therefore, the effect will be of **major** adverse, until the restoration of the quarry is complete, which is significant in EIA terms. Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and will be assessed at the full ES stage.

Norwich Southern Bypass Landscape Protection Zone

1.2.2.5 There are a number of schemes either side of the A47 that in combination might contribute to a significant cumulative effect on the NSBLPZ, e.g., 2014/2611 (a group of five projects) 2013/0567; a cluster of development of which 2016/2382 is one; 2016/0764; and 2014/2380. The presence of the onshore HVDC converter/HVAC substation would add to the significance, but would not result in a significant effect.

Cumulative impacts of Tier 2 projects during the operation and maintenance phase of the onshore cable route, onshore HVAC booster station and onshore HVDC converter/HVAC substation may affect designated landscapes

1.2.2.6 There would be no cumulative impacts with Tier 2 projects during the operation and maintenance phase, as the Norfolk Vanguard West project would have been completed.

Cumulative impacts of Tier 1 and Tier 2 projects during the operation and maintenance phase of the onshore cable route, onshore HVAC booster station and onshore HVDC converter/HVAC substation may affect NSCAs and NCAs

1.2.2.7 There would be no significant cumulative effects on NSCAs and NCAs during the operation and maintenance phase of Hornsea Three, as the NSCAs and NSAs cover large areas and the developments, in relation to these areas' key characteristics, are a minor component.

Cumulative impacts during the operation and maintenance phase of the onshore cable route, onshore HVAC booster station and onshore HVDC converter/HVAC substation may affect LCAs

1.2.2.8 There would be no significant cumulative effects on LCAs during the operation and maintenance phase of Hornsea Three, as while the LCAs don't cover such as large areas as the NSCAs and the NSAs, they are still large areas and the developments in relation to these areas' key characteristics are a minor component.

North Norfolk LCA TF3: Hempstead, Bodham, Aylmerton and Wickmere Area

Magnitude of Impact – Residential Developments

1.2.2.9 Land off Rectory Road and Holt Road, Edgefield (PF/15/1223) is a residential project located within the village of Edgefield and would be in operation from 2022, five years before any potential cumulative operational effects with Hornsea Three. There would be direct effects upon LCA TF3: Hempstead, Bodham, Aylmerton and Wickmere Area. This small scale residential development once in operation would not be out of keeping with the key characteristics of this LCA where dispersed settlement is an existing feature. Any mitigation within this proposed scheme would have five years to establish before the Hornsea Three is complete. Key characteristics of LCA TF3 that might be affected by the operation and maintenance activities include: Water courses, small fields and hedgerow vegetation. There would be limited operational effects upon the landscape due to the two stretches of the onshore cable route as, although works are underground, the removal of any field boundary vegetation and disturbance of the ground would remain a locally noticeable change at winter year 1 from parts of this LCA. The temporary works for the onshore HVAC booster station would also be complete. As with construction effects, the scale of this completed residential development would not constitute to a fundamental change of landscape character to this LCA when experienced in combination with the Hornsea Three operation and maintenance activities. There would be no significant landscape cumulative effects at operation. Any resultant cumulative impact with the onshore HVAC booster station is thought to be **negligible**.

1.2.2.10 Land to the south of, Eagle Road, Erpingham (PF/15/1587) (Approved) & Land off Eagle Road, Erpingham (PF/15/1461) are located within LCT Tributary Farmland (TF) LCA TF3: Hempstead, Bodham, Aylmerton and Wickmere Area. Due to the relative distance from the Hornsea Three onshore HVAC booster station and with the onshore cable route being returned to existing, it is thought that and possible cumulative effects would result in an impact of **no change to negligible**.

Sensitivity of Receptor

1.2.2.11 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The developments are not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.12 Overall, it is predicted that the sensitivity of the receptor is considered to be medium and the magnitude is deemed to be negligible. Therefore, the effect would be of **negligible** adverse significance, which is not significant in EIA terms.

North Norfolk LCA WP2: Holt to Cromer

Magnitude of Impacts – Residential Developments

1.2.2.13 Land South of Cromer Road and West of Grove Lane (PM/16/1511) and (PO/14/0284) are small scale residential projects located within the north-eastern side of Holt. The residential development would have direct effects upon LCA WP2: Holt to Cromer. Holt itself is located within this LCA and this small residential extension on the edge of the town would be in keeping with the overall characteristics of the wider LCA. During operation winter year 1, the short stretch of the onshore cable route which passes through this LCA and which involved the part removal of an area of Forestry Commission plantations (a key characteristic of this area) would be complete and result in a locally noticeable change. Evidence of onshore cable route would remain a feature at winter Year 1 upon this LCA; however awareness of this in combination with the residential extension would be limited due to intervening woodland and built development at High Kelling and further new development on the outskirts of Holt (PM/16/1204 & PO/14/0283). Further, with this small scale residential extension being in-keeping with the key characteristics of the LCA, there would be a **negligible** cumulative impact during operation.

1.2.2.14 Land to the north of Hempstead Road, Heath Farm, Holt (PM/16/1204) and (PO/16/0253) is a medium to large scale residential project currently waiting decision as of 21/01/2017. The project is scheduled for completion in 2026 and therefore would be in operation for two years before the completion of Hornsea Three. There would be direct effects upon LCA WP2: Holt to Cromer, in which the town of Holt is located, and would equate to a moderate extension to the town in combination with the other residential developments in the local area (namely PO/14/0283 & PM/16/1511). During operation at winter Year 1 evidence of the onshore cable route would remain a feature and local change to this LCA. There would be a **negligible** cumulative impact during operation

1.2.2.15 Land South of Cromer Road and East of Grove Lane, Holt (PO/14/0283) is a medium scale approved residential project located within the north-eastern side of Holt. The project is scheduled for completion in 2023 and therefore would be in operation for five years before the completion of Hornsea Three. In combination with 'Land to the north of Hempstead Road', this development would result in a moderate extension to the town of Holt and would cause locally noticeable change to LCA WP2: Holt to Cromer. Key characteristics of LCA WP2 that may be affected by the operation and maintenance activities include: Wide mix of woodland types forming cohesive area along ridge line; woodland including parkland, older mixed woodland, coniferous plantations and natural woodland colonisation of heath; arable areas interspersed with woodland; settlements including settlements set within woodland; long landward views; and, good access. The path of the onshore cable route would be a noticeable change to this LCA at winter Year 1 due to the removal of a large section of plantation woodland. There would be cumulative adverse landscape effects upon this LCA by the combined change afforded by Hornsea Three onshore cable route and this increased residential development in Holt at winter Year 1, however the effect is not considered to be significant. It is thought that the resultant impact during operation would be **minor**.

Sensitivity of Receptor

1.2.2.16 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The developments are not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.17 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible to minor**. Therefore, the effect would be of **negligible to minor** adverse significance, which is not significant in EIA terms.

North Norfolk LCA RHA2: Salthouse and Kelling Area

Magnitude of Impact – Tourist and Recreation Development

1.2.2.18 Kelling Heath Holiday Park, Sandy Hill Lane, Weybourne, Holt (PF/13/1026) is a small scale leisure development located to the south of the town of Weybourne. The project is scheduled for completion in 2019 and it would be complete and have been operational for nine years before the completion of Hornsea Three and is located with 1 km of, and with part of the site overlapping, the onshore cable route. Once built there will be **negligible** impact from the operation and maintenance activities of either the onshore cable route, or the onshore HVAC booster station. There would be a locally noticeable change to the landscape by the implementation of the onshore cable route at operation Year 1 which would be greater contributor to any potential effects upon RHA2.

Sensitivity of Receptor

- 1.2.2.19 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is of medium reversibility. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.2.20 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible**. Therefore, the effect would be of **negligible** adverse significance, which is not significant in EIA terms.

South Norfolk LCA A1: Yare Tributary Valley

Magnitude of Impact – Commercial Development

- 1.2.2.21 Land West of Ipswich Road Keswick (2016/0764) is a medium to large scale commercial development to the south of Norwich. The project is scheduled for completion in 2023 there is potentially four years operation of this project prior to the completion of the Hornsea Three. At 865 m from the onshore HVDC converter/HVAC substation and 735 m from the onshore cable route there is a cumulative impact of **minor to moderate**.

Sensitivity of Receptor

- 1.2.2.22 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The developments are not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.2.23 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible to minor**. Therefore, the effect would be of **negligible to moderate** adverse significance, which is not significant in EIA terms.

South Norfolk LCA A2: Yare/Tiffey Rural River Valley and LCA C1: Yare Tributary Farmland with Parkland

Magnitude of Impact – Residential Development

- 1.2.2.24 Land South of Village Hall, Stocks Hill, Bawburgh (2015/2082) is a small scale approved housing development located to the south of Bawburgh, west of Norwich. The project is scheduled to be operational for five years before the completion of Hornsea Three. This proposal is located within LCA C1: Yare Tributary Farmland with Parkland, immediately abutting LCA A2: Yare/Tiffey Rural River Valley. This small scale residential development is located closest to the onshore cable route; there would therefore be a potential direct cumulative operational impacts on a small part of LCA C1 and indirect impacts on a very small part of LCA A2. The proposed residential development would be complete and be seen as a small extension to the village of Bawburgh and therefore not be entirely out of character within the landscape. It is therefore considered that there would be a **negligible** impact.
- 1.2.2.25 Land adjacent to Norfolk and Norwich University Hospital (2016/2382) and Norfolk and Norwich University Hospital (2013/0554) are small scale commercial developments, located on the western edge of Norwich. The projects are scheduled for completion in 2026 and 2029 respectively, 2016/2382 would be operational for a period of one year prior to the completion of Hornsea Three. In contrast 2013/0554 would not be completed before the completion of Hornsea Three. Located in LCA C1: Yare Tributary Farmland with Parkland, they are within the same LCA as the onshore cable route and there would therefore be a direct **no change to negligible** cumulative impact on this LCA during operation.
- 1.2.2.26 Land South-west of Newfound Farm (2013/1793) is a large scale residential development located to the north of Cringleford, south west of Norwich. The development is scheduled for completion one year after Hornsea Three. This development sits within LCA C1: Yare Tributary Farmland with Parkland and is therefore within the same LCA as a large part of the onshore cable route and a small part of the onshore HVDC converter/HVAC substation. This would result in a direct **negligible to minor** cumulative impact upon this LCA and characteristic features there in during operation which would be permanent effects.

1.2.2.27 Land South of Ringwood Close Little Melton (2013/0092) is a small scale residential development on the western edge of Little Melton to the south west of Norwich. The project is scheduled for completion in 2021 which would result in the scheme being operational for a period of six years prior to the completion of Hornsea Three. The project is over 6 km from the onshore HVDC converter/HVAC substation and under 1 km from the onshore cable route. At greater than 5 km from the onshore HVDC converter/HVAC substation it is considered that there would be a no change to minor cumulative impact as a result of this scheme and the substation. The project sits within two LCAs (D1: Wymondham Settled Plateau and Farmland and C1: Yare Tributary Farmland with Parkland) along with the Hornsea Three onshore cable route. Therefore direct cumulative effects within these character areas would remain during operation, albeit new housing would be seen in the context of the existing development of Little Melton and would therefore not contribute greatly to any cumulative impact. Due to the scale of the housing development and the relative size of the character areas any potential cumulative effects would be on a very small party of each character area at a local level, and in both cases the onshore cable route covers a greater area within the LCAs and would therefore have a greater potential effect on the LCAs. Overall, with housing being seen as part of the existing built form of Little Melton and the onshore cable route corridor being largely returned to the baseline conditions, with the exception of possible vegetation removal at a local level, it is considered that any potential cumulative impact would be **no change to negligible**. Similarly owing to distance there would be no cumulative effects with the onshore HVDC converter/HVAC substation.

Sensitivity of Receptor

1.2.2.28 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.29 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to range from **no change to minor**. Therefore, the effect would be of **negligible to minor** adverse significance, which is not significant in EIA terms.

South Norfolk LCA B1: Tas Tributary Farmland

Magnitude of Impact – Energy Development

1.2.2.30 Land South of Brick Kiln Lane Mulbarton (2015/1221) is a medium to large scale solar farm development located to the south east of Mulbarton, south of Norwich. The project is scheduled for completion in 2017 resulting in a potential operational period of ten years before the scheduled completion of construction of Hornsea Three. The project is 3.3 km from the onshore HVDC converter/HVAC substation and 1.4 km from the onshore cable route. Located within LCA B1: Tas Tributary Farmland and LCA D1: Wymondham Settled Plateau Farmland it is within the same LCA (B1) as a large part of the onshore HVDC converter/HVAC substation. Therefore direct cumulative impacts on a small part of LCA B1 would remain in operation. At a distance of greater than 3 km it is thought that perception of both schemes in combination would be limited and therefore any direct cumulative impacts are thought to be **negligible**, particularly as the Hornsea Three onshore cable route corridor would have been returned to the existing baseline situation so far as possible. It is considered that there would be no significant direct or indirect characterising effects on LCA D1.

1.2.2.31 Land South of Hall Farm Bungay Road Tasburgh (2014/0562) is a medium to large scale solar farm development located to the south of Tasburgh, south of Norwich. Construction for this scheme due for completion in; there would therefore be a potential ten year operational period prior to Hornsea Three becoming operational and any potential cumulative operational effects. With the solar farm sitting within the same LCA as Hornsea Three, LCA B1: Tas Tributary Farmland, there would be a potential direct cumulative effect on a small part of the character area. However, at a distance of greater than 5 km it is unlikely that the projects would be perceived in combination and any potential cumulative impact upon the character area would be **negligible**.

Sensitivity of Receptor

1.2.2.32 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.33 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible**. Therefore, the effect would be of **negligible to minor** adverse significance, which is not significant in EIA terms.

Magnitude of Impact – Residential Development

1.2.2.34 Land off Broomfield Road Broomfield Road Stoke Holy Cross (2016/2153); Land North of Long Lane Stoke Holy Cross (2015/1422 & 2013/0828) and Land East of Hillcrest Long Lane Stoke Holy Cross (2012/2034) are small to medium scale housing developments within the same area, on the eastern edge of Stoke Holy Cross, south east of Norwich. The projects are scheduled to be entirely operational prior to the construction phase of Hornsea Three. As with construction the projects sit within three LCAs; LCA B1: Tas Tributary Farmland, LCA D2: Poringland Settled Plateau Farmland and LCA E1: Ashwell Thorpe Plateau Farmland. Therefore the schemes largely sit within different character areas to that of the Hornsea Three onshore HVDC converter/HVAC substation and onshore cable route. 2016/2153 predominantly sits within LCA B1 and is therefore within the same LCA as the onshore HVDC converter/HVAC substation and a small part of the onshore cable route. There would therefore be a direct **negligible** cumulative impact on a small part of LCA B1 as a result of the Hornsea Three in combination with 2016/2153. At greater than 2 km, at the nearest point within the LCA, the perception of the projects is likely to remain not significant, particularly with the onshore cable route corridor being returned to the baseline situation and would therefore not contribute greatly to any direct cumulative impacts.

Sensitivity of Receptor

1.2.2.35 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.36 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible**. Therefore, the effect would be of **negligible to minor** adverse significance, which is not significant in EIA terms.

LCA F1: Yare Valley Urban Fringe

Magnitude of Impact – Residential Development

1.2.2.37 Lodge Farm Phase 2 Development (2013/0567) is a large scale residential development located to the north of Bawburgh, west of Norwich. The project is scheduled to be complete in 2027 which would result in no operational period prior to the completion of Hornsea Three as they are scheduled to be operational at the same time. The project is located 7.8 km from the onshore HVDC converter/HVAC substation and 1.9 km from the onshore cable route. There would be a direct characterising cumulative effect during operation on a part of this small character area (LCA F1). With a distance of nearly 2 km from the onshore cable route, and the onshore cable route corridor being returned to existing, the user's perception of both developments at any one time would be limited. However, due to the scale of the development it is likely that the cumulative impact would be **no change to negligible**.

Sensitivity of Receptor

1.2.2.38 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.39 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **no change to negligible**. Therefore, the effect would be of **negligible** adverse significance, which is not significant in EIA terms.

Magnitude of Impact – Sport and Recreation Development

1.2.2.40 The UEA Sports Facility (2016/0233) is a large scale recreational development, located on the western edge of Norwich. The project is due to be completed in 2021 and there would be a period of six years operation before the scheduled completion of Hornsea Three. It is located within LCA F1: Yare Valley Urban Fringe and is therefore not within the same LCA as the onshore cable route nor substation. As a result there would be no direct cumulative impacts upon the LCA as a result of these developments during operation. Given the nature of the developments, it is unlikely that both would be perceived by the user at any one time as the onshore cable route corridor would be returned to existing so far as possible and the nature of the UEA development would mean that adjacent developments would likely have a greater characterising effect upon the LCA. Therefore any direct or indirect cumulative impacts during operation would be **no change to negligible**.

Sensitivity of Receptor

1.2.2.41 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.42 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **no change to negligible**. Therefore, the effect would be of **negligible** adverse significance, which is not significant in EIA terms.

Magnitude of Impact – Energy Development

1.2.2.43 Land East of White Horse Lane (2014/2380) is a large scale solar farm development on land on the south eastern edge of Norwich. The project is due to be completed in 2017 and there would therefore be no construction overlap with the Hornsea Three. The site is located within LCA F1: Yare Valley Urban Fringe. The construction of this large-scale development would be out of keeping with the key characteristics of this LCA where there is a perceived absence of settlement within the valley, providing a green buffer and comprehensible development edge to the city of Norwich. Hornsea Three is not located within the same LCA as this development and as such there would only be potential indirect impacts upon this LCA from the construction of the onshore cable route and the onshore HVDC converter/HVAC substation. It is considered that there might be **no change to negligible** cumulative impacts upon this LCA. Due to the nature of the solar farm development and scale of built form it can be reasonably assumed that, as with construction, intervening vegetation and landform would largely prevent views of this development in combination with Hornsea Three. Therefore, it is thought that there would not be a significant cumulative effect upon views during operation as a result.

Sensitivity of Receptor

1.2.2.44 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.45 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **no change to negligible**. Therefore, the effect would be of **negligible** adverse significance, which is not significant in EIA terms.

Magnitude of Impact – Commercial/Industrial Development

1.2.2.46 Norwich Research Park (2012/1477) is a medium to large scale commercial/industrial (research) development, located on the western edge of Norwich. The project is scheduled to be completed in 2026 there would be an operational period of one year prior to the completion of the Hornsea Three. Upon completion the Norwich Research Park would 'fill in' and surround and existing development of a similar nature and therefore any characterising effects upon LCA F1 are not thought to be significant. It would also remain out with the same LCA as that of Hornsea Three meaning there would be no direct characterising cumulative effects upon the LCA and features therein. However, it should be noted that this development is one of several approved schemes within the same character area and when considered in combination they might have **minor to moderate** cumulative impacts upon the LCA during operation as the area would become increasingly developed with these developments having a greater effect upon the LCA than that of the Hornsea Three onshore cable route.

Sensitivity of Receptor

1.2.2.47 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.48 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **minor to moderate**. Therefore, the effect would be of **minor to moderate** adverse significance, which is not significant in EIA terms.

South Norfolk LCA D2: Poringland Settled Plateau Farmland

Magnitude of Impact – Residential Development

1.2.2.49 Land West of Octagon Farm (2015/2326 & 2012/0405) is a small to medium scale mixed use development, located on the northern outskirts of the village of Poringland, south-east of Norwich. The project is scheduled to be in operation for seven years before the completion of Hornsea Three. The project is located within LCA D2: Poringland Settled Plateau Farmland, and is therefore not located within the same LCA as the onshore HVDC converter/HVAC substation or onshore cable route. As a result there would be **no change to negligible** cumulative impacts on the LCA(s) as a result of these developments. With any characterising effects thought to be limited to a local level when considering the projects individually.

1.2.2.50 Land North Of Stoke Road Poringland (2016/2388); Land To The West Of Norwich Road And North Of Stoke Road Poringland (2013/0505) and Land West Of Norwich Road And South Of Caistor Lane Poringland (2014/0732 & 2013/1986) is a medium to large scale housing developments located within close proximity of each and also relating to the same development (2016/2388 and 2013/0505; 2013/1986 and 2014/0732). The construction for the schemes is programmed to be between 2017 and 2023, this would result in a potential operational period of four years prior to the scheduled completion of Hornsea Three. All the schemes would remain within the same LCA, LCA D2: Poringland Settled Plateau Farmland. They therefore do not sit within the same LCA as that of either the onshore HVDC converter/HVAC substation or onshore cable route. Therefore, the scenario at construction would remain. As such there would be no direct cumulative characterising effects. Owing to the relative distance from the Hornsea Three even from the very limit of the LCA it is unlikely that these schemes would be perceived in combination. The magnitude of impact is considered to be **no change to negligible**.

1.2.2.51 Land North Of Shotesham Road Poringland (2014/0393) and Land North of Shotesham Road (Area D) Poringland (2014/0319) is a small to medium scale residential development on the southern edge of Poringland, south east of Norwich. The scheme is due to be complete in 2024 there would a potential three year operational period before the scheduled completion of Hornsea Three in 2027. At a distance of greater than 4 km from the onshore HVDC converter/HVAC substation and onshore cable route it is considered that any potential cumulative effects would be limited. Lying within LCA D2: Poringland Settled Plateau Farmland, they are not within the same LCA as either the substation or onshore cable route. Therefore no direct cumulative characterising impacts upon the LCA(s) would remain. Due to the relative distance it is unlikely that the projects would be perceived in combination, therefore there would remain no significant cumulative impacts upon landscape character as a result of these schemes and that of the Hornsea Three during operation. The magnitude of impact is considered to be **no change to negligible**.

Sensitivity of Receptor

1.2.2.52 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.53 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **no change to negligible**. Therefore, the effect would be of **negligible** adverse significance, which is not significant in EIA terms.

South Norfolk LCA D1: Wymondham Settled Plateau Farmland

Magnitude of Impact – Residential Receptors

1.2.2.54 Land to East of Norwich Road (2016/0713) is a small to medium scale residential development on the western edge of Bracon Ash, south west of Norwich. The project is scheduled for completion in 2023 and would therefore be operational for four years prior to completion of Hornsea Three. Located within LCA D1: Wymondham Settled Plateau Farmland, the project is therefore not located within the same LCA as the onshore HVDC converter/HVAC substation but is within the same LCA as part of the onshore cable route there would be direct impacts during operation on parts of LCA D1, However, due to the distance between the schemes it is considered that any possible cumulative impacts would remain not significant as both schemes at any one time would not be visible, particular with the Hornsea Three onshore cable route being returned to existing conditions and 2016/0713 being seen in the context of the existing urban form of Bracon Ash and therefore not entirely out of context. Although there would be the potential for a cumulative impact during operation it is thought that the impact would be **no change to negligible**.

1.2.2.55 Phase A1-A Land North of Heathersett Village Centre Little Melton Road Heathersett (2015/1594) and Land North of Heathersett Village Centre Little Melton Road Heathersett (2015/1681) form a medium scale housing development to the north east of Heathersett, west of Norwich. The scheduled completion of construction for this project is 2029 and there would therefore be no operational phases prior to the completion of the Hornsea Three. The projects lie within the same LCA (LCA D1: Wymondham Settled Plateau Farmland) as part of the onshore cable route. As a result there would be direct cumulative effects on a small part of this character area during operation of these housing developments. However, as the onshore cable route corridor would be returned to the existing baseline so far as possible it is thought that this would not contribute to any significant characterising affect, with the exception a localised effects as a result of any vegetation clearance. Any cumulative impacts would therefore remain **no change to negligible** in respect of the local landscape.

1.2.2.56 Land East of Long Lane Mulbarton (2011/2093) is a medium to large scale residential development located on the south eastern edge of Mulbarton. The project is due for completion in 2021 this project would be operational for potentially six years prior to the scheduled completion of Hornsea Three. The project sits with LCA D1: Wymondham Settled Plateau Farmland, and is therefore not within the same LCA as either the onshore HVDC converter/HVAC substation or onshore cable route. This would result in a continuation of there being no direct cumulative impacts upon landscape character as a result of these projects during operation. At 1.4 km from the onshore cable route it could be reasonably argued that both schemes may be perceptible at the same time, this may result in an indirect cumulative impact on a small part of LCA D1 and C1, however, with the onshore cable route corridor being returned to that of the baseline situation, with the exception of any vegetation removed, it is considered that any potential perception of both schemes would be very limited meaning any potential cumulative impact would be **negligible**.

Sensitivity of Receptor

1.2.2.57 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.58 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **no change to negligible**. Therefore, the effect would be of **negligible** adverse significance, which is not significant in EIA terms

South Norfolk LCA G1: Easton Fringe Farmland

Magnitude of Impact – Residential Development

- 1.2.2.59 Land North of Farmland Road (2016/2430) is a small to medium scale residential development located on the north-west edge of Norwich. The project is scheduled for completion in 2024 resulting in an operational period of three years before the scheduled completion of Hornsea Three. Located within LCA G1: Easton Fringe Farmland, the project is located within the same LCA as part of the onshore cable route. There would therefore be a direct cumulative impact on parts of this LCA. Due to distance it is unlikely that this project would be perceived in combination with the onshore cable route corridor that would have been returned to existing so far as possible further limiting any potential characterising effects upon the LCA, it is therefore considered that and potential cumulative impact would have a **no change to negligible** impact.
- 1.2.2.60 Land North and South of Dereham Road, Easton (2014/2611) is a large scale residential development to the south of Easton, west of Norwich. The development is scheduled for completion one year after Hornsea Three. The distance from the onshore HVDC converter/HVAC substation is some 9.5 km, with part of the development immediately to the east of the onshore cable route. This development sits within the same LCA as part of the onshore cable route, LCA G1: Easton Fringe Farmland. It is thought that potential cumulative effects at operation would be **minor to moderate**.

Sensitivity of Receptor

- 1.2.2.61 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.2.62 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be no change to **moderate**. Therefore, the effect would be of **negligible to moderate** adverse significance, which is not significant in EIA terms.

Broadland LCA B1: Horsford Woodland Heath Mosaic

Magnitude of Impact – Residential Receptors

- 1.2.2.63 1-4 Station Road, Swannington (20151644) is a small scale residential development located to the south and outside of the village of Swannington. The project is scheduled for completion in 2023 and would be in operation for four years before the completion of Hornsea Three. The development is located 1 km from the onshore cable route of the Hornsea Three, but over 15 km from the onshore HVAC booster station and onshore HVDC converter/HVAC substation. This small scale residential development is located within the western most extent of the landscape character of LCA B1: Horsford Woodland Heath Mosaic. Change by the proposed development would be in-keeping with the LCAs key characteristics of; “*Coherent, small-scale settlement density and pattern*”. Indirect impacts of Hornsea Three upon this LCA would be restricted to the barely discernible land disturbance and any vegetation removal of the onshore cable route at winter Year 1, located out with this LCA itself. There would be a **negligible to minor** cumulative landscape impact during the operation phase.

Sensitivity of Receptor

- 1.2.2.64 As an LCA the landscape resource and receptors are of a medium susceptibility, the development is not reversible. The LCA is of medium value. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.2.65 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible to minor**. Therefore, the effect would be of **negligible to minor** adverse significance, which is not significant in EIA terms.

Broadland LCA D2: Weston Green Tributary Farmland

- 1.2.2.66 Land off Church Lane, Honingham (20170052) is a retail development located to the east of Easton. The project would be in operation for seven years before the completion of Hornsea Three. Project is located 253 m to the west of the onshore cable route and 11 km to the north-west of the onshore HVDC converter /Onshore HVDC converter/HVAC substation. There would be direct effects LCA D2: Weston Green Tributary Farmland by both the project on Land of Church Lane and the onshore cable route of Hornsea Three. The new retail facility would be within a part of the LCA which was previously undeveloped land. At operation winter Year 1, the path of the onshore cable route would cause locally noticeable loss of landscape elements. It is thought that there would be **moderate to minor** cumulative impact upon this LCA at operation phase due to the scale of the area affected by the onshore cable route and enterprise development, however they are not considered to be significant.

Waveney District

1.2.2.67 During the screening process, no potential developments authorised by Waveney District Council were carried forward in this assessment of cumulative effects (see volume 3, chapter 4: Landscape and Visual Resources, Table 4.29).

Norwich City

Magnitude of Impact – Mixed Use Development

1.2.2.68 Three Score Site, Land South of Clover Hill Road, Norwich (12/00703/O) is a large scale mixed-use development within the eastern side of the city of Norwich. The development is located within 4 km of the onshore cable route and 5.7 km to the north-west of the onshore HVDC converter/ Onshore HVDC converter/HVAC substation. This project would still be in construction when the operation stage of Hornsea Three is due to commence.

1.2.2.69 The closest LCA to this large-scale development that would be directly affected by Hornsea Three is LCA C1 Yare Tributary Farmland with Parkland. The onshore cable route runs through much of this LCA, and the onshore HVDC converter/HVAC substation immediately adjoins this LCA causing potential indirect and experiential effects. Key characteristics of LCA C1 that might be affected by the construction works include: loss of arable and pastoral farmland, sparse hedge and hedgerow trees and occasional mature/veteran oaks. The mixed-use proposal on Three Score is of a substantial scale but would only have indirect impacts upon the character of LCA C1. Further it would be experienced within the context of the existing residential edge of Norfolk. The potential impact upon key characteristics of the LCA, as set out above, is considered to be **no change to negligible**.

1.2.2.70 Deal Ground, Bracondale, Norwich (12/00875/O) is a large scale mixed-use development to the immediate south-east on the outskirts of the city of Norwich. Construction for this scheme would continue beyond the operational phase of Hornsea Three. The development is located north-east of the onshore HVDC converter/HVAC substation. By the time this project is fully operational, the Deal Ground site would be the greater contributor to any potential landscape effects upon the immediate local landscape. The 'Deal Ground' site is located outside the confines of the South Norfolk Landscape Character Assessment, but adjoins LCT F: Valley Urban Fringe, LCA F1: Yare Valley Urban Fringe to the south-east and the city edge of Norwich to the north-west. It is considered that the site shares some key characteristics of LCA F1 including; large meandering river and a green buffer and comprehensible development edge to the city of Norwich. Hornsea Three is not located within the same LCA as this development and due to intervening built development of Norwich, is unlikely to be experienced within this LCA in combination with the Deal Ground development. There would be limited opportunity for cumulative landscape effects during operation phase. This would result in a potential cumulative impact of **no change to negligible**.

Sensitivity of Receptor

1.2.2.71 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.72 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **no change to negligible**. Therefore, the effect would be of **negligible to minor** adverse significance, which is not significant in EIA terms.

Magnitude of Impact – Industrial Development

1.2.2.73 Land adjacent to Edgefield Landfill Site, Edgefield, Melton Constable (C/1/2010/1005) is an industrial development located to the north-west of the village of Edgefield. It is currently not feasible to estimate operation duration based on information currently available at this time and so an assumption has been made that the Landfill Site and Hornsea Three would be operational at the same time. The proposed industrial development is located within 4 km from the onshore cable route and 3.4 km to the north-west of the onshore HVAC booster station. There would be direct effects upon LCT Tributary Farmland (TF) LCA TF3: Hempstead, Bodham, Aylmerton and Wickmere Area by the anaerobic digestion facility. Two stretches of the onshore cable route would remain locally discernible changes this LCA. Key characteristics of LCA TF3 that might be affected by the operation and maintenance activities include: Water courses; settlements and farms; large estates; and, small fields and hedgerow vegetation. The scale of the development at the anaerobic digestion facility would not cause a fundamental change of landscape character to this LCA when experienced in combination with the Hornsea Three during operation. Any cumulative effects are not considered being significant, resulting in a potential cumulative impact upon characteristic features within the LCA, as derived above, of **no change to negligible**.

Sensitivity of Receptor

1.2.2.74 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

1.2.2.75 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **no change to negligible**. Therefore, the effect would be of **negligible to minor** adverse significance, which is not significant in EIA terms.

Norfolk County

Magnitude of Impact

- 1.2.2.76 A47 at Postwick, east of Norwich, to the A1067 Fakenham Road north of Taverham (TR010015) is a road scheme further than 2 km from the Hornsea Three onshore cable route and with the onshore cable route corridor being returned, so far as possible, to existing it is considered that there would be **negligible** cumulative impacts with this project during operation. In addition TR010015, a road scheme, although of a large scale would not significantly alter the characteristics of the LCA with other similar scale road developments in close proximity.

Sensitivity of Receptor

- 1.2.2.77 As a local LCA this receptor is of a medium susceptibility and the LCA is of medium value. The development is not reversible. Therefore, the sensitivity of the LCA is considered to be **medium**.

Significance of Effect

- 1.2.2.78 Overall, it is predicted that the sensitivity of the receptor is considered to be **medium** and the magnitude is deemed to be **negligible**. Therefore, the effect would be of **negligible to minor** adverse significance, which is not significant in EIA terms.

Cumulative night time impacts of Tier 1 and Tier 2 projects during the operation and maintenance phase of the onshore cable route, onshore HVAC booster station and onshore HVDC converter/HVAC substation may affect landscape resources

- 1.2.2.79 Lighting during the construction phase would be controlled by a construction lighting plan, as part of the CoCP. Therefore, there would be no significant cumulative night time effects during the operation and maintenance phase of Hornsea Three.

Cumulative impacts of Tier 1 projects during the operation and maintenance phase of the onshore cable route, onshore HVAC booster station and onshore HVDC converter/HVAC substation may affect visual resources

- 1.2.2.80 The assessment of potential landscape and visual cumulative effects, for the operation and maintenance phase, is based on that of the opening year during winter year 1.
- 1.2.2.81 There are a number of schemes either side of the A47 (NSBLPZ) that could potentially be seen sequentially by people travelling along the road, these include, e.g., 2014/2611 (a group of five projects) 2013/0567; a cluster of development of which 2016/2382 is one; 2016/0764; and 2014/2380. The onshore HVDC converter/HVAC substation would be an additional element in a journey, and would add to the significance, but would not result in a significant effect.

North Norfolk

- 1.2.2.82 Although within approximately 1.5 km of the Hornsea Three Onshore cable route, due to the nature and scale of the development of Land off Rectory Road and Holt Road, Edgefield (PF/15/1223) it is likely that any views would be seen in the context of the existing development and not be a significant change in the baseline view. In addition, with the Hornsea Three Onshore cable route in situ and the landscape largely returned to existing it is likely that there would be no significant cumulative effects on views.

- 1.2.2.83 Due to the distance from the proposed Hornsea Three and the small scale and height of the Land to the south of, Eagle Road, Erpingham (PF/15/1587) (Approved) & Land off Eagle Road, Erpingham (PF/15/1461) residential schemes, there would be no cumulative visual effects during the operation phase.

South Norfolk

- 1.2.2.84 As with construction there are no PRowS within the vicinity of Lodge Farm Phase 2 Development (2013/0567) this large scale housing development, with high sensitivity receptors located in adjacent residential properties in New Costessey on the outskirts of Norwich. At 7.4 km from the Hornsea Three onshore HVDC converter/HVAC substation there would be no intervisibility and therefore no significant cumulative effect upon views during operation, with any possible combined glimpsed views seen in the context of existing development. At 1.9 km from the Hornsea Three onshore cable route, while intervisibility may be possible it is thought that the viewer's perception of both developments would be limited and potentially indirect, particularly as the onshore cable route corridor would have been returned to existing so far as possible with any views likely to be had from a very local level and therefore limiting views in combination with 2013/0567. As a result, the potential cumulative effects on views with Hornsea Three are thought to remain not significant.

- 1.2.2.85 High sensitivity receptors within 1 km of the UEA Sports Facility (2016/0233) would remain as at construction. With a number of intervening developments (such as 2013/1793) due for completion prior to this, and the low-lying nature of the development, it is considered that this would not significantly affect views when considered in combination with other development. Due to the developments relative distance from the Hornsea Three onshore cable route and onshore HVDC converter/HVAC substation it is thought there would be no significant cumulative effect when considered in combination. 2016/0233, along with adjacent developments would have a greater cumulative effect than that of Hornsea Three.

- 1.2.2.86 Located on the southern outskirts of Norwich, PRoWs are limited. However, there are a number within 1 km of the application site with potential sequential cumulative views of Land West of Ipswich Road Keswick 2016/0764 and the Hornsea Three. This is due the relative closeness of the scheme and the scale of the Land West of Ipswich Rd Keswick. The nearest PRoWs with potential direct and indirect sequential views are Keswick FP2 and Keswick BR7, along with high sensitivity residential receptors or Keswick. Due to the close proximity it is likely that there would be cumulative effects during operation as a result of this scheme in combination with the Hornsea Three onshore HVDC converter/HVAC substation. With the onshore cable route largely returned to existing it is likely that this would no longer contribute to any significant cumulative effects.
- 1.2.2.87 Although Land South of Ringwood Close Little Melton 2013/0092 is immediately adjacent to the onshore cable route it is thought that there would be no significant cumulative effect on views, as the onshore cable route would be returned to existing so far as possible. There would continue to be no significant cumulative effects with the Hornsea Three onshore HVDC converter/HVAC substation.
- 1.2.2.88 Located adjacent to development 2012/1477, cumulative visual effects are likely to be similar. With an overlap in construction and therefore the schemes being operational at roughly the same time, with many of the adjacent development it is thought that this in combination with 2012/1477, 1269, 1145 and 2016/0233 would have a greater cumulative effect upon views when considered in combination with the Hornsea Three onshore cable route. Particularly when considering views to the onshore cable route would largely be screened from view by intervening vegetation and landform and views would not be dissimilar to the baseline.
- 1.2.2.89 As with construction any potential transient cumulative views (for example from Bawburgh FP1) are thought to be not significant, particularly as when complete Land South of Village Hall, Stocks Hill, Bawburgh (2015/2082) the small scale residential development, would likely be seen in the context of the existing village and not be out of character with the existing views. Although the onshore cable route would likely to be still evident, causing a potential adverse effect on views, the overall cumulative effect would remain not significant.
- 1.2.2.90 With the onshore cable route corridor being returned to the baseline conditions so far as possible, although 1 km from Land South-west of Newfound Farm (2013/1793), it is thought that views would be limited by intervening vegetation and landform with any significant effects being limited to a very local area. As a result the perception of these developments in combination, during operation, would likely be lessened. The Hornsea Three onshore cable route would continue to cover a larger area within the LCA and would therefore be a greater contributor to any potential cumulative effect during operation.
- 1.2.2.91 As with construction PRoW are limited within the vicinity of Land South-west of Newfound Farm (2013/1793), the nearest potential sequential cumulative effect coming from Cringleford FP1 approximately 0.5 km south east at its nearest point. As a result the majority of High sensitivity receptor would remain those of residential properties, particularly Cringleford. At a distance of greater than 1 km from the Hornsea Three Onshore cable route and with the scar being likely visible only locally it is thought that the viewer's perception of both developments at any one time would be further limited and owing to the scale of 2013/1793, this would have a greater influence on views and therefore any cumulative effect is thought to remain not significant during operation. It is not thought likely that there would be any significant cumulative effects on views with the onshore HVDC converter/HVAC substation as this is located at more than 3 km and with intervening urban development remaining any possible view of the development would likely be seen in the context of the existing built form.
- 1.2.2.92 Land off Broomfield Road Broomfield Road Stoke Holy Cross (2016/2153); Land North of Long Lane Stoke Holy Cross (2015/1422 & 2013/0828) and Land East of Hillcrest Long Lane Stoke Holy Cross (2012/2034) On completion, any transient sequential views from the extensive network of PRoW (High sensitivity), local roads (Medium sensitivity) and existing residential properties (High sensitivity) is likely to continue to be seen in the context of the existing village. Cumulatively, with a distance of up to 2 km any views in combination with Hornsea Three are not likely to be significant from PRoWs to the west of Stoke Holy Cross (for example Swainsthorpe FP1) as views to these developments would be overexisting built form. In contrast, PRoW and local roads to the north and on the approach to Stoke Holy Cross would likely have glimpsed transient, mid distance, views of these and the Hornsea Three onshore HVDC converter/HVAC substation (for example Swainsthorpe BOAT6, BR2 and Norwich Road). Any transient views would not always be direct depending on the direction of travel. As a result it is unlikely that all schemes would be viewed at the same time and would not therefore cause a significant cumulative visual effect and similarly to the potential characterising effects the onshore cable route corridor would no longer contribute greatly to any potential cumulative effects as it would be largely returned to that of the existing views.
- 1.2.2.93 Land South of Brick Kiln Lane Mulbarton (2015/1221) the large scale solar farm is likely to cause a significant adverse visual effect at a very local level. However, due to the nature of the development and scale of built form it is thought intervening existing vegetation, landform and mitigation planting (although not yet at its full design function) is very likely to screen many views. As a result, in addition to the distance from the Hornsea Three it is considered that there would be no significant operational cumulative visual effects when considered with Hornsea Three.
- 1.2.2.94 Due to the distance from the proposed Hornsea Three and height of the solar farm development, it is thought that any cumulative visual effects would also remain not significant as views would be largely screened by intervening vegetation and landform, with only potentially significant effects locally from the projects when considered in isolation.

- 1.2.2.95 The Norwich Research Park would be largely seen in the context of existing development on completion. With limited PRowS, highly sensitive receptors are largely limited to residential properties which may not have direct views of both the research facility and onshore cable route. In addition, at winter Year 1 the onshore cable route corridor would have been returned to baseline so far as possible, albeit that evidence of the route would remain. As a result it is thought that there would be no change to negligible cumulative visual impacts.
- 1.2.2.96 Due to the relative distance between Land North of Shotesham Road Poringland (2014/0393) and Land North of Shotesham Road (Area D) Poringland (2014/0319) and that of Hornsea Three, along with potential intervening vegetation, landform and existing urban development, it is considered that no significant cumulative visual effects upon receptors would remain at operation.
- 1.2.2.97 In combination Land North Of Stoke Road Poringland (2016/2388); Land to the West of Norwich Road and North of Stoke Road Poringland (2013/0505) and Land West of Norwich Road and South of Caistor Lane Poringland (2014/0732 & 2013/1986) are likely to have a significant visual effect at a local level. However, when considered with the Hornsea Three it is thought that these schemes would not be a significant feature within views, and once completed would likely be seen in the context of the existing Poringland development, due to the distance between these residential developments and their relative scale within any views. There are a number of PRowS in the local area, including Boudicca Way Recreational Route, which would likely have transient indirect views to these and Hornsea Three developments. However, due to direction of travel it is unlikely that the schemes would be seen in combination within the same view. As a result any potential cumulative impacts would remain not significant.
- 1.2.2.98 Land West of Octagon Farm (2015/2326 & 2012/0405) is a small to medium scale mixed use development There would remain no PRowS in close proximity to this mixed use development, with the nearest being Caistor St Edmund FP3/FP5 and Bixley FP5 (high sensitivity) located approximately 1.1 km west at the nearest point. It is possible that there would mid to long distant transient views from users along the length of this PRowS network. On completion, due to the scale and nature of the development it is likely that any indirect views to the development would be seen in the context of existing urban development. Due to the distance from the onshore HVDC converter/HVAC substation and in particular the onshore cable route, which would have been returned to existing although the route would likely remain at winter Year 1, it is thought that any potential long distant views would be barely discernible within the views, and it is not likely that Hornsea Three along with this development would be perceived in combination, resulting in no significant cumulative effects on views during operation.
- 1.2.2.99 Visually, Land East of Long Lane Mulbarton 2011/2093, when considered in combination with Hornsea Three and taking into account the distance between them, is thought to have no significant cumulative visual effects. There would remain a substantial PRowS network within the local area, in between the schemes; users of this network are likely to have sequential views of Hornsea Three and/or 2011/2093. With many of these views being indirect and the apparent direction of travel meaning seeing all schemes in combination in addition to the onshore cable route corridor being largely returned to the baseline situation, it is thought that any potential views would not be significant. In addition, many views to 2011/2093 are likely to be seen over the existing built form of Mulbarton and would therefore not be entirely uncharacteristic of present views.
- 1.2.2.100 Being located on the outskirts of the village of Heathersett, it is thought that Phase A1-A Land North of Heathersett Village Centre Little Melton Road Heathersett (2015/1594) and Land North of Heathersett Village Centre Little Melton Road Heathersett (2015/1681) on completion would be seen in the context of the existing built form. Therefore, not being entirely out of context within views. Upon completion the Hornsea Three onshore cable route corridor would have been restored so far as possible to the existing scenario it is therefore considered that there would no longer be a significant cumulative effect as a result of the Hornsea Three development in combination with 2015/1594 and 2015/1681.
- 1.2.2.101 As with construction there is a significant network of PRowS and local roads with potential transient views to Land to East of Norwich Road (2016/0713). However, Land to East of Norwich Road (2016/0713) when considered in combination with Hornsea Three, due to distance from the onshore cable route and onshore HVDC converter/HVAC substation it is thought that there would be no significant cumulative operational effects on views, particularly as any potential views of the remaining onshore cable route would be prevented by intervening vegetation and landform with likely views only at a very local level.
- 1.2.2.102 Due to distance, intervening urban development and particularly with the onshore cable route corridor returned to existing, it is considered that there would continue to be no significant cumulative effects as a result of Land North of Farmland Road (2016/2430) and the Hornsea Three developments. Highly sensitive receptors are largely limited to those of existing residential properties and would therefore have limited direct views dependant on the orientation of the properties.
- 1.2.2.103 Land North and South of Dereham Road, Easton (2014/2611) is one of the most sizable developments carried forward to the assessment, located at Easton in close proximity to the Hornsea Three onshore cable route. Although PRowS are limited within this area there are a number of high sensitivity receptors within Easton that are likely to have direct views to the new housing development during operation. With views to the onshore cable route corridor lessened due to it being returned to the existing baseline scenario, it is thought there would not be a significant cumulative effect upon views as a result of this and the Hornsea Three developments, with 2014/2611 having a greater effect upon views within the local area.

Broadland

- 1.2.2.104 With the removal of construction activities any perceived increase in potential inter-visibility with both sites would be greatly reduced during operation. There would continue to be no significant cumulative effects upon residential or transient views (station Road/Reepham Road) during construction period. The greater contributor to any very limited cumulative visual effects would likely be 20151644 during operation as the Hornsea Three onshore cable route would have been predominantly returned to the existing baseline situation. With the exception of some potentially significant local views due the removal of vegetation and its replacement not yet reached its design function.
- 1.2.2.105 As per construction effects, due to the location of the mixed use development on the eastern side of the town of Aylsham and the distance from the onshore cable route and onshore HVAC booster station, any potential intervisibility with both sites in combination during operation would be extremely limited. The greater contributor to any visual or landscape operation effects would be from the mixed use development as opposed to Hornsea Three.
- 1.2.2.106 Although within 0.5 km of the Hornsea Three onshore cable route, the potential for a cumulative visual effect when considered in combination is thought to be limited. Due to the onshore cable route corridor being returned to the existing situation. It is possible that any vegetation removed during construction along with visual evidence of the onshore cable route in combination with 20170052, but any possible glimpsed views are not thought to be significant.

Norwich City

- 1.2.2.107 Due to the Three Score Site, Land South of Clover Hill Road, Norwich (12/00703/O) relative distance from the Hornsea Three onshore cable route, along with intervening development (south Norwich) largely preventing views, it is considered that there would be no significant cumulative visual effects with the onshore cable route during operation. At 4.6 km from the onshore HVDC converter/HVAC substation, the perception of both developments in combination would be limited and likely seen in the context of, and indeed limited by, existing built edge of Norwich. As a result it is thought that any limited perception of both developments would not have a significant cumulative visual effect at the operational stage.
- 1.2.2.108 At greater than 3 km from the onshore HVAC booster station and onshore cable Land adjacent to Edgefield Landfill Site, Edgefield, Melton Constable (C/1/2010/1005) is an industrial development located to the north-west of the village of Edgefield this development when considered in combination with Hornsea Three would not have a significant cumulative effect upon views during operation.

Cumulative impacts of Tier 2 projects during the operation and maintenance phase of the onshore cable route, onshore HVAC booster station and onshore HVDC converter/HVAC substation may affect visual resources

- 1.2.2.109 The Tier 2 project, Norfolk Vanguard West (EN010079) onshore cable route, would be complete and would not be visible above ground. Therefore there would be no significant effects resulting from Tier 2 projects during the operation and maintenance phase of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation.

Cumulative night time impacts of Tier 1 and Tier 2 projects during the operation and maintenance phase of the onshore cable route, onshore HVAC booster station and onshore HVDC converter/HVAC substation may affect visual receptors

- 1.2.2.110 There would be no lighting of the onshore cable route during the operation and maintenance phase. The lighting of the onshore HVAC booster station and the onshore HVDC converter/HVAC substation would be controlled by an agreed lighting strategy. Therefore, there would be no significant cumulative night time effects.

1.2.3 Decommissioning Phase

- 1.2.3.1 Many project types will not be decommissioned. However, some energy projects may be. Due to the unavailability of data regarding the length of time before decommissioning, the following offshore wind farms have been selected as there is the potential that the onshore infrastructure of these projects might be decommissioned at the same time as that of Hornsea Three:

- PF/14/0177 - Agricultural Land at Weybourne Hope (Dudgeon Offshore Wind Farm) (Tier 1): and
- EN010079 - Norfolk Vanguard Offshore Wind Farm (Tier 2).

Cumulative impacts of Tier 1 projects during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect designated landscapes

Norfolk Coast Area of Outstanding Natural Beauty (AONB)

Magnitude of Impact

- 1.2.3.2 Within the AONB the decommissioning of the Hornsea Three onshore infrastructure, if onshore cables are removed and that work is undertaken at the same time as the decommissioning of the Dudgeon onshore cable could involve double the amount of decommissioning vehicles/machinery in a small area. The impact is predicted to be of local spatial extent, short term duration, continuous and is reversible. It is predicted that the impact will affect the receptor directly. Therefore, the magnitude is considered to be **major**.

Sensitivity of Receptor

- 1.2.3.3 The qualities of the AONB that have the potential to be affected by the decommissioning works are: Strong and distinctive links between land and sea; integrity of the landscape and the seascape; and, sense of remoteness, tranquillity and wildness.
- 1.2.3.4 The onshore cable corridor crosses a number of the AONB LCAs, as derived in The Integrated Landscape Character Guidance. The key characteristics of LCA DCM7 that would be affected by the decommissioning works are: The shingle ridge; and some pools, ditches and wet pasture. The key characteristics of LCA CTV1 that would be affected are: Views of Sheringham Park and landscape setting of the parkland; small fields, hedgerows and woodland; landscape setting of Weybourne; and, coastal views. Key characteristics of LCA RHA2 that would be affected by the decommissioning works are: Long views to sea; rolling hillocks and hills: and undeveloped character.
- 1.2.3.5 As a nationally designated landscape the Norfolk Coast AONB is deemed to be of high susceptibility, of high reversibility and high value. Therefore, the sensitivity of the receptor is considered to be **high**.

Significance of Effect

- 1.2.3.6 Overall, it is predicted that the sensitivity of the receptor is considered to be **high** and the magnitude is deemed to be **major**. Therefore, the effect will be of **major** adverse significance, which is significant in EIA terms. Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and will be assessed at the full ES stage.
- 1.2.3.7 However, potential mitigation could include liaison with the owner/operator of Dudgeon Offshore Wind Farm to ensure that the programme of decommissioning does not overlap with that of Hornsea Three and this would reduce the effect to **moderate** adverse significance, which is not significant in EIA terms.

Cumulative impacts of Tier 2 projects during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect designated landscapes

- 1.2.3.8 As with the Hornsea Three onshore cable route, the Norfolk Vanguard West onshore cable route would be left in situ. Therefore, there would be no Tier 2 projects that would give rise to any cumulative effects on these resources during the decommissioning phase of the Hornsea Three.

Cumulative impacts of Tier 1 projects during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect NSCAs and NCAs

- 1.2.3.9 There would be no significant cumulative effects on NSCAs and NCAs during the decommissioning of the Hornsea Three infrastructure, as the NSCAs and NSAs cover large areas and the development, in relation to these areas' key characteristics, are a minor component.

Cumulative impacts of Tier 2 projects during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect NSCAs and NCAs

- 1.2.3.10 As with the Hornsea Three onshore cable route, the Norfolk Vanguard West onshore cable route would be left in situ. Therefore, there would be no Tier 2 projects that would give rise to any cumulative effects on these resources during the decommissioning phase of the Hornsea Three.

Cumulative impacts of Tier 1 projects during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect LCAs

North Norfolk LCAs Drained Coastal Marshes (DCM2) Coastal Towns and Villages (CTV1) and Rolling Heath and Arable (RHA2)

- 1.2.3.11 The proposed decommissioning works of PF/14/0177 Agricultural Land at Weybourne Hope (Dudgeon onshore cable route) and would directly affect three LCAs, Drained Coastal Marshes (DCM2) Coastal Towns and Villages (CTV1) and Rolling Heath and Arable (RHA2). They all have aspects that relate to the shingle bank, views of and proximity to the sea. The decommissioning works if undertaken at the same time would have a direct and/or indirect **major** impact on some of these aspects of local character. These LCAs are of a **medium** sensitivity to the proposed cumulative impact and would experience a **major** adverse effect, which is not significant in EIA terms.

- 1.2.3.12 However, with careful programming of decommissioning of the two projects, the impact could be reduced to **moderate**. This would have a **moderate** adverse effect, which is also not significant in EIA terms.

- 1.2.3.13 Cumulative impacts at night during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect landscape resources and receptors

- 1.2.3.14 There is no proposed night time lighting of the decommissioning of the Hornsea Three onshore cable route. Lighting of the onshore HVAC booster station, onshore HVDC converter/HVAC substation would be controlled by an agreed decommissioning lighting strategy and no significant cumulative impacts are anticipated.

Cumulative impacts of Tier 2 projects during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect LCAs

- 1.2.3.15 As with the Hornsea Three onshore cable route, the Norfolk Vanguard West onshore cable route would be left in situ. Therefore, there would be no Tier 2 projects that would give rise to any cumulative effects on these resources during the decommissioning phase of the Hornsea Three.

Cumulative impacts of Tier 1 and Tier 2 projects at night during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect landscape resources and receptors

- 1.2.3.16 There is no proposed night time lighting of the decommissioning of the Hornsea Three onshore cable route. Lighting of the onshore HVAC booster station, onshore HVDC converter/HVAC substation would be controlled by an agreed decommissioning lighting strategy and no significant cumulative impacts are anticipated.

Cumulative impacts of Tier 1 projects during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect visual receptors

Intertidal area and landfall

- 1.2.3.17 Cumulative scheme PF/14/0177 - Agricultural Land at Weybourne Hope, is the landfall transition pit and buried electrical cable system of the landfall of the Dudgeon Offshore Wind Farm. The Hornsea Three onshore cable route would be located in the same location. A length of the onshore cable route of the Dudgeon Offshore Wind Farm would also cross the Hornsea Three onshore cable corridor in the parish of Weybourne. Marine-based receptors and people using the beach at Weybourne will have views of both schemes if decommissioning of both projects took place at the same time. Residents located in the north of Weybourne will also have views of the decommissioning of both schemes, if the TJBs were removed.
- 1.2.3.18 The impact is predicted to be of local spatial extent, short term duration, continuous and is reversible. It is predicted that the impact will affect views from the receptors directly. Therefore, the magnitude is considered to be **major**.
- Sensitivity of Receptor*
- 1.2.3.19 As residents and users of the beach and PRoWs, these receptors are of a high susceptibility, high reversibility and high value. Therefore, the sensitivity of the park is considered to be **high**.
- Significance of Effect*
- 1.2.3.20 Overall, it is predicted that the sensitivity of the receptor is considered to be high and the magnitude is deemed to be major. Therefore, the effect would be of **major** adverse significance, which is significant in EIA terms. If the TJBs are not removed for Hornsea Three, there would be no cumulative effects. Once the onshore elements of Hornsea Project Three have been defined, appropriate mitigation measures can be identified and will be assessed at the full ES stage.

Cumulative impacts of Tier 2 projects during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect visual receptors

- 1.2.3.21 As with the Hornsea Three onshore cable route, the Norfolk Vanguard West onshore cable route would be left in situ. Therefore, there would be no Tier 1 or Tier 2 projects that would give rise to any night time cumulative effects on visual receptors during the decommissioning phase of the Hornsea Three.

Cumulative impacts of Tier 1 and Tier 2 projects at night during the decommissioning of the onshore cable route, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation may affect visual receptors

- 1.2.3.22 There is no proposed night time lighting of the decommissioning of the Hornsea Three onshore cable route. Lighting of the onshore HVAC booster station, onshore HVDC converter/HVAC substation would be controlled by an agreed decommissioning lighting strategy and no significant cumulative impacts are anticipated.