

Hornsea Project Three
Offshore Wind Farm



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Offshore Wind Farm

Preliminary Environmental Information Report:
Chapter 4 - Landscape and Visual Resources (Part 1)

Date: July 2017

Environmental Impact Assessment

Preliminary Environmental Information Report

Volume 3

Chapter 4: Landscape and Visual Resources

Liability

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Report Number: P6.3.4

Version: Final

Date: July 2017

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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 effects	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 perceptual 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 Seascapes 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.

Term	Definition
Susceptibility	The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.
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.

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
JB	Joint Bay

Unit	Description
LB	Link Box
LCA	Local Landscape Character Area
LCT	Landscape Character Type
LDF	Local development framework
LSMP	Landscape Scheme and Management Plan
LVIA	Landscape and Visual Impact Assessment
MHWS	Mean High Water Spring
MLWS	Mean Low Water Spring
NCA	National Landscape Character Area
NE	Natural England
NP	National Park
NPS	National Policy Statement
NSBLPZ	Norwich Southern Bypass Landscape Protection Zone
NSCA	National Seascapes 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
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)

4. Landscape and Visual Resources

4.1 Introduction

- 4.1.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents the preliminary environmental information. This document will be followed up by the Environmental Impact Assessment (EIA) which will present a full assessment of the potential impacts of the Hornsea Project Three offshore wind farm (hereafter referred to as Hornsea Three) on landscape and visual resources. Specifically, this chapter considers the potential impact of Hornsea Three landward of Mean Low Water Springs (MLWS) during its construction, operation and maintenance, and decommissioning phases. This assessment is accompanied by annexes 4.1: Landscape and Visual Methodology, 4.2: Key Characteristics of National Seascapes Character Areas and National Landscape Character Areas, 4.3: Key Characteristics of Landscape Character Areas, 4.4: Key Characteristics of Designated Landscapes, 4.5: Visual Receptors for the Onshore Infrastructure, 4.6: Cumulative Effects Assessment, 4.7: Onshore HVAC Booster Station and HVDC converter/HVAC Substation Baseline Photography and Wirelines, contained in volume 4 and 4.8: Effects on Landscape and Visual Resources and Receptors.
- 4.1.1.2 The effects of the offshore components of Hornsea Three are considered in volume 2, chapter 10: Seascapes and Visual Resources.

4.2 Purpose of this chapter

- 4.2.1.1 The primary purpose of the Environmental Statement is to support the Development Consent Order (DCO) application for Hornsea Three under the Planning Act 2008 (the 2008 Act). This PEIR constitutes the Preliminary Environmental Information for Hornsea Three and sets out the findings of the EIA to date to support pre-application consultation activities required under the 2008 Act. The EIA will be finalised following completion of pre-application consultation and the Environmental Statement will accompany the application to the Secretary of State for Development Consent.
- 4.2.1.2 The PEIR will form the basis for Phase 2 Consultation which will commence on 27 July and conclude on 20 September 2017. At this point, comments received on the PEIR will be reviewed and incorporated (where appropriate) into the Environmental Statement, which will be submitted in support of the application for Development Consent scheduled for the second quarter of 2018. In particular, this PEIR chapter:
- Present the existing baseline established from desk studies, dedicated surveys and consultation;
 - Present the potential effects on landscape and visual receptors arising from Hornsea Three, based on the information gathered and the analysis and assessments undertaken to date;
 - Identify any assumptions and limitations encountered in compiling the environmental information; and

- Highlight any necessary monitoring and/or mitigation measures which could prevent, minimise, reduce or offset the possible landscape and visual effects identified at the relevant stage in the EIA process.

4.2.1.3 The landscape and visual resources that are likely to be affected by the three phases of development that make up the onshore element of the Hornsea Three are considered in the following order throughout this chapter:

- The onshore cable corridor, including the intertidal area, the two options immediately landward of the beach. The onshore cable corridor between the onshore HVDC converter/HVAC substation and Norwich Main Substation;
- The main construction compounds;
- The onshore HVAC booster station; and
- The onshore HVDC converter/HVAC substation.

4.3 Study area

4.3.1.1 The study area for the onshore cable corridor and the three main construction compounds has been determined by the width of the construction area plus 1 km. This study area was established in order to focus the assessment upon the likely significant effects, taking into account the receiving landscape character, existing development types, value and the likely visibility of the construction activities. The study area for the onshore cable corridor and the three main compounds is shown on Figure 4.1

4.3.1.2 In deriving the study areas for the onshore HVAC booster station and the onshore HVDC converter/HVAC substation, receptors have been considered against four buffers, according to the guidance set out in Guidelines on the Environmental Impacts of Windfarms and Small Scale Hydroelectric Schemes (SNH, 2000). The buffers are described below:

- Up to 2 km (very close views) – May be seen as a dominant focus although the entire development or activity may not be completely visible due to obscuring by landform and because visibility may also be screened or deflected by foreground features such as trees and buildings.
- Between 2-5 km (close views) - Likely to be seen as one of the key elements of the landscape rather than the dominant feature and a larger section of the development or activity is likely to be visible at this distance.
- Between 5-15 km (mid distant views) – Unlikely to be prominent even in clear visibility conditions and is seen as part of the wider landscape composition.
- Between 15-25 km (distant views) - Only likely to be seen in very clear visibility conditions and where a viewer deliberately searches for the feature, the weather conditions are such that the development or activity is highlighted against its surroundings, or views are orientated to face the turbine as a focus. Development or activity from this distance is usually seen as a minor element of a wide landscape composition and is generally unclear.

- 4.3.1.3 In an effort to focus the assessment on the likely significant effects that may arise as a result of the proposed development, and prevent these from being diluted by a high number of effects that are not determined to be significant, the wider buffers have not been included within the study areas for the onshore HVAC booster station and the onshore HVDC converter/HVAC substation. Additionally, as the booster station and substation buildings are much smaller than the wind turbines dealt with in this guidance and having considered the receiving landscape character, existing development types, landscape value and the likely visibility for the proposed development, the 2 km inner buffer has been reduced to 1 km for the purpose of this assessment which leaves a 1 km inner buffer and a 1-5 km outer buffer as shown on Figure 4.2 and Figure 4.3.
- 4.3.1.4 This method for establishing the study areas aligns with the guidance set out in Assessing the Impact of Small-scale Wind Energy Proposals on the natural heritage (SNH, 2016), which suggests that an appropriate study area should be identified on a case-by-case basis, based on a clear rationale derived from a Zone of Theoretical Visibility (ZTV) map. Although this guidance refers specifically to wind turbines, it is considered appropriate to apply the principles in the case of the onshore infrastructure proposed for Hornsea Three.
- 4.3.1.5 As a result of this approach and consultation at the scoping stage with PINS, offshore elements of Hornsea Three have been scoped out of this onshore assessment (see Table 4.6). Effects of the offshore infrastructure have been dealt with at chapter 10, volume 2: Seascape and Visual Resources.
- 4.3.1.6 At the PEIR stage detailed assessment of potential impacts on receptors from the construction of the onshore cable route has not been carried out. Hornsea Three will refine the onshore cable corridor following the PEIR consultation, and develop further the plans for onshore construction including the location of temporary construction compounds along the onshore cable route. Hornsea Three will have regard to potential temporary landscape and visual impacts when refining the onshore cable route, and will identify appropriate viewpoints for further assessment as the plans develop, in consultation with the relevant local planning authorities.

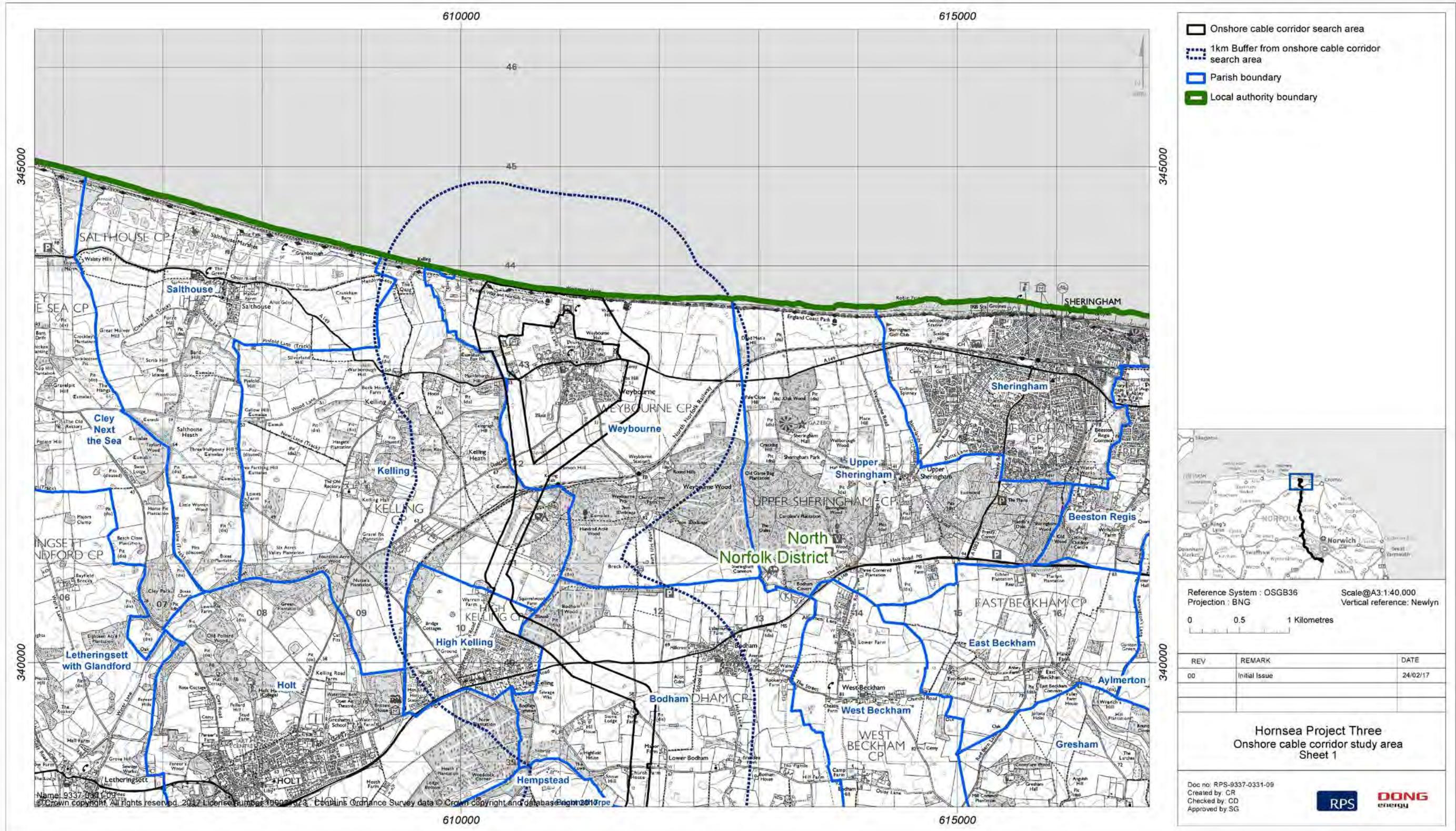


Figure 4.1: Onshore Cable Corridor Study Area Sheet 1 of 8.

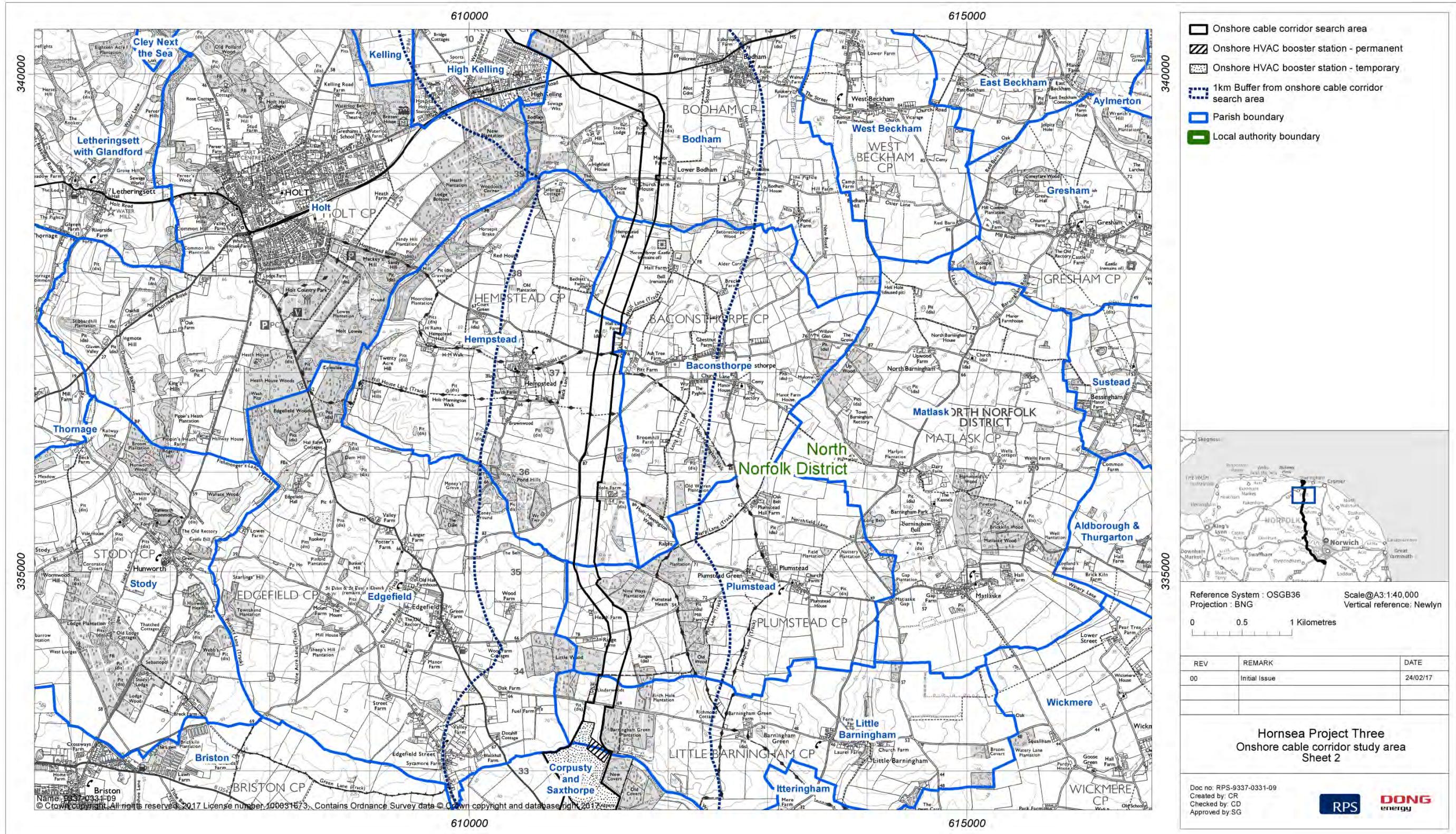


Figure 4.1: Onshore Cable Corridor Study Area Sheet 2 of 8.

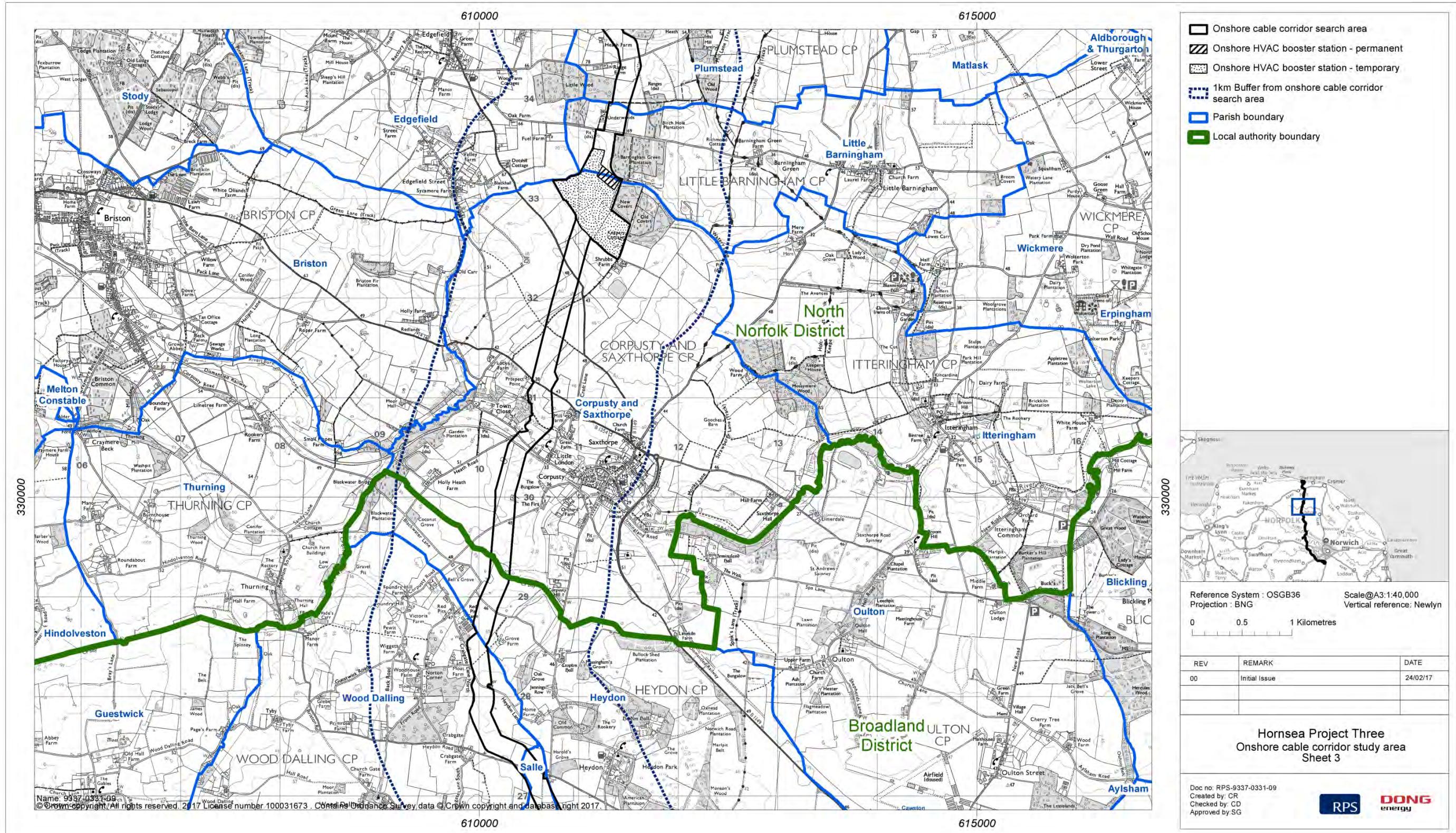


Figure 4.1: Onshore Cable Corridor Study Area Sheet 3 of 8.

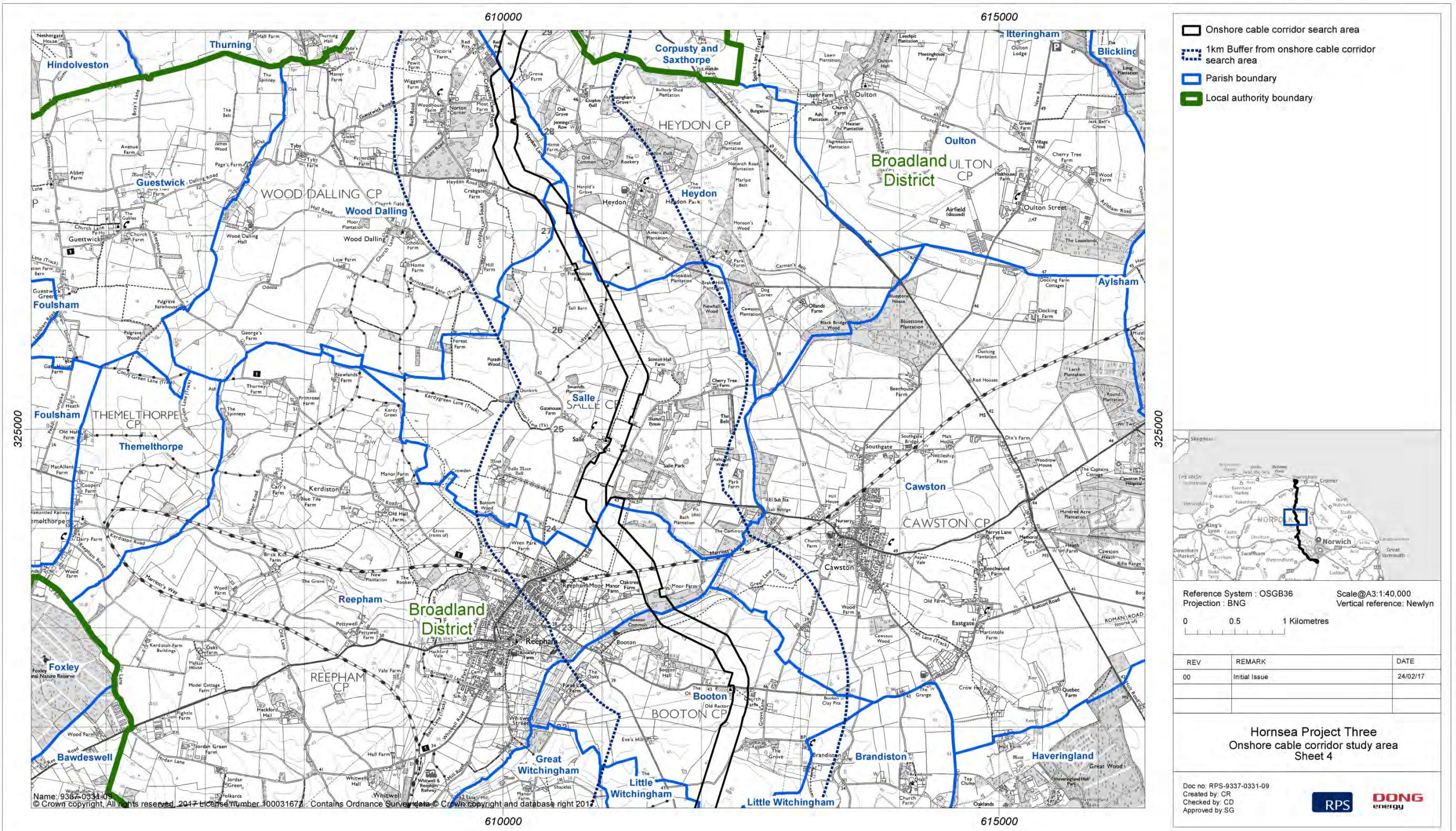


Figure 4.1: Onshore Cable Corridor Study Area Sheet 4 of 8.

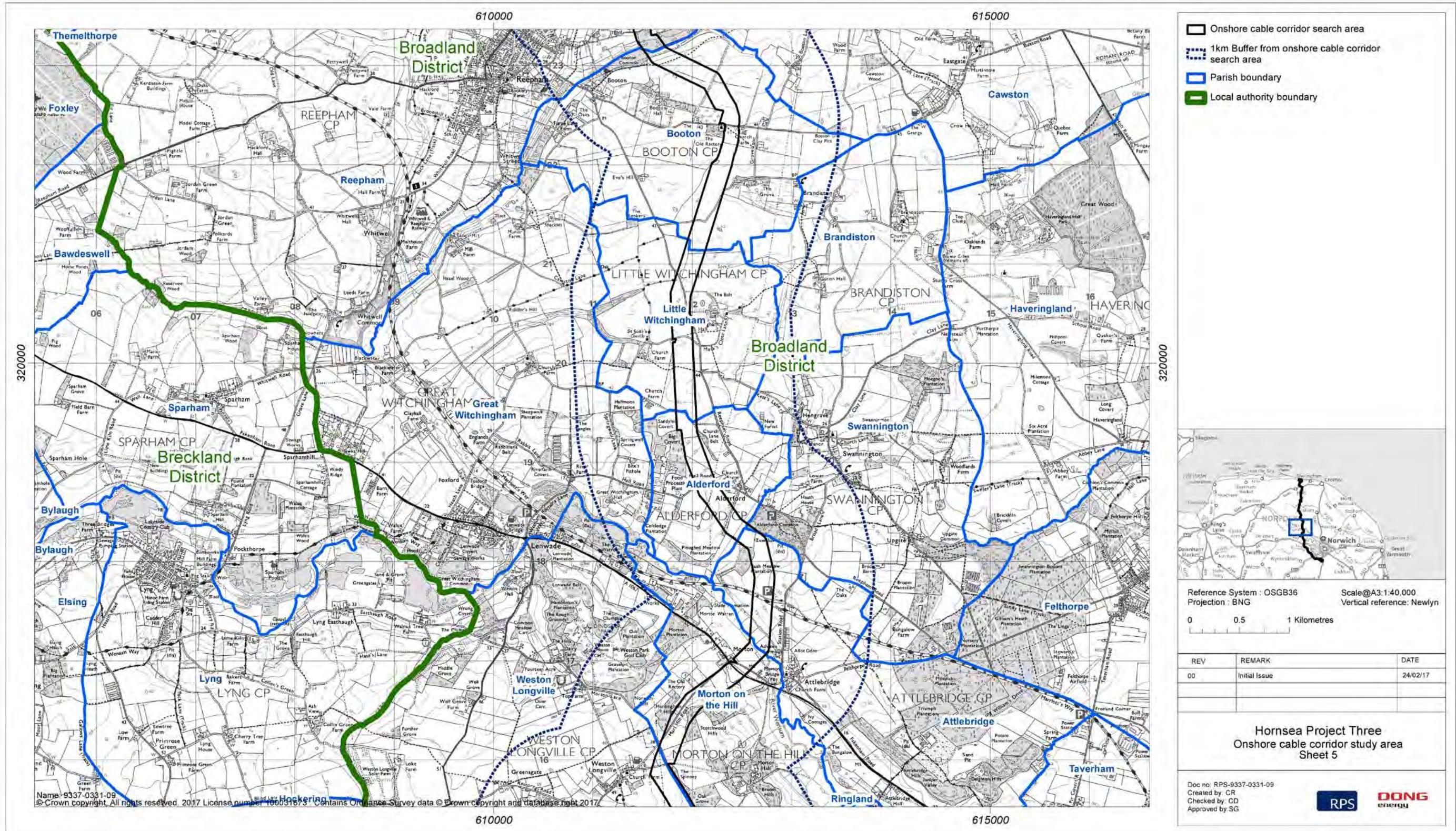


Figure 4.1: Onshore Cable Corridor Study Area Sheet 5 of 8.

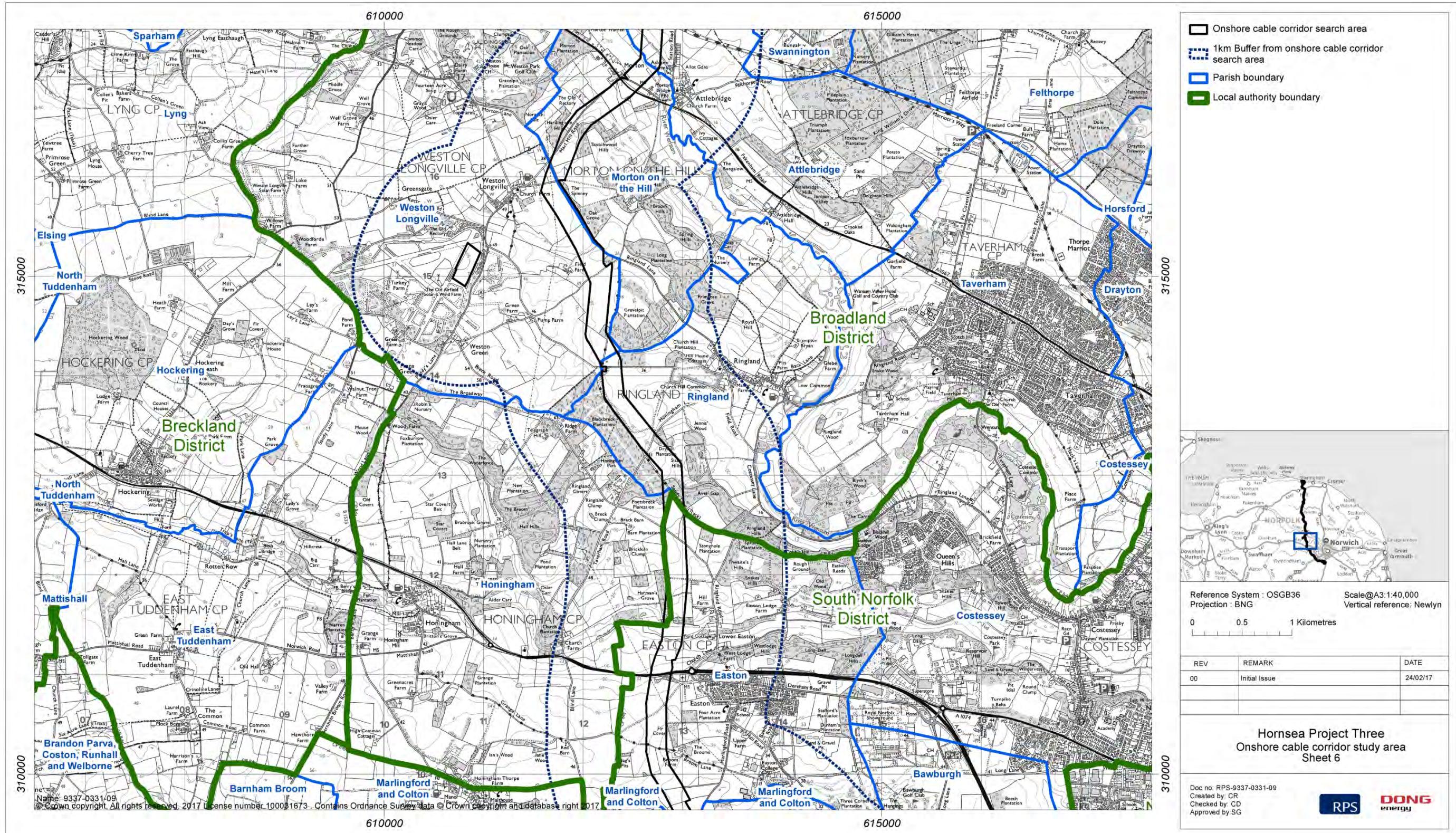


Figure 4.1: Onshore Cable Corridor Study Area Sheet 6 of 8.

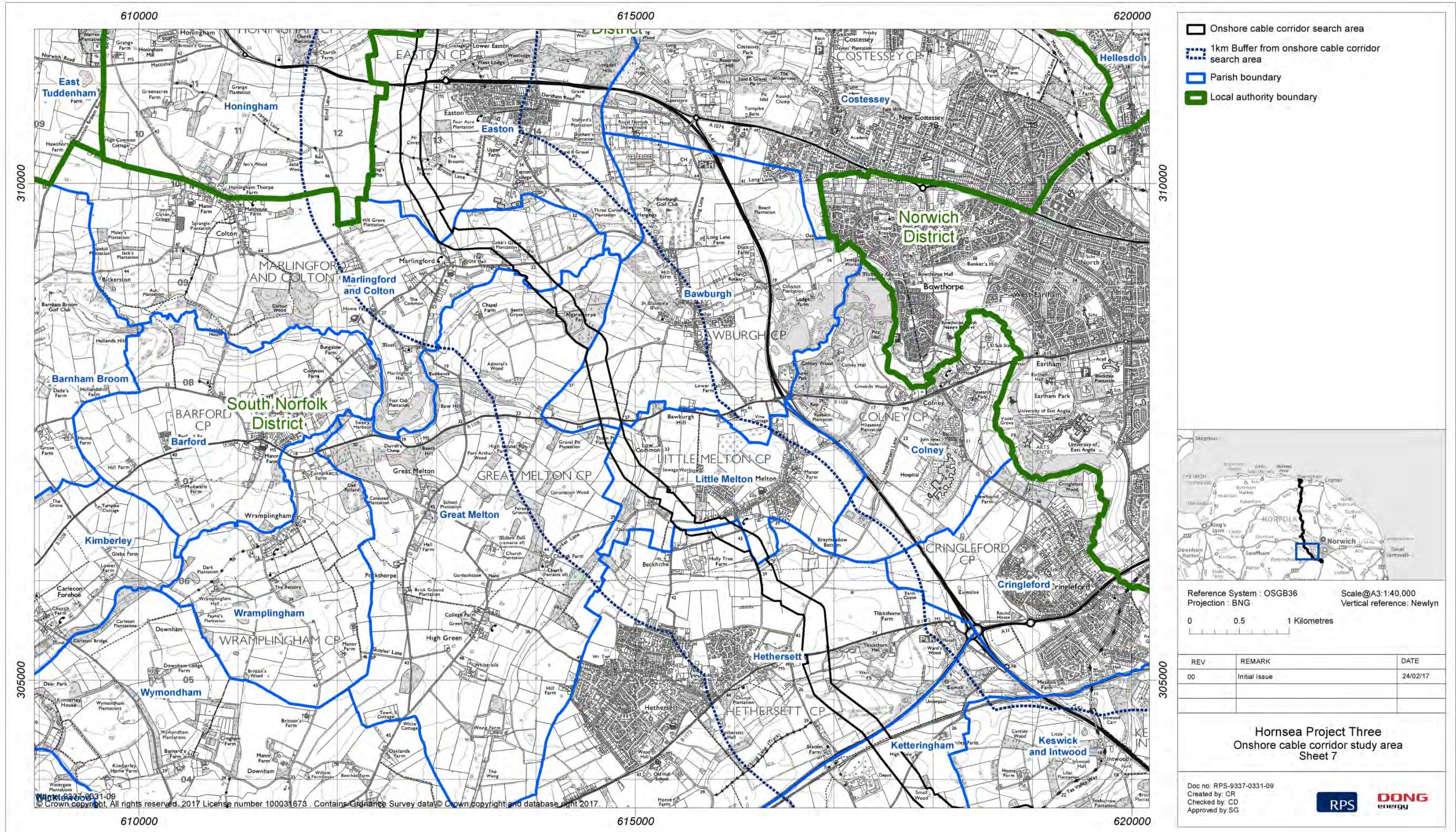


Figure 4.1: Onshore Cable Corridor Study Area Sheet 7 of 8.

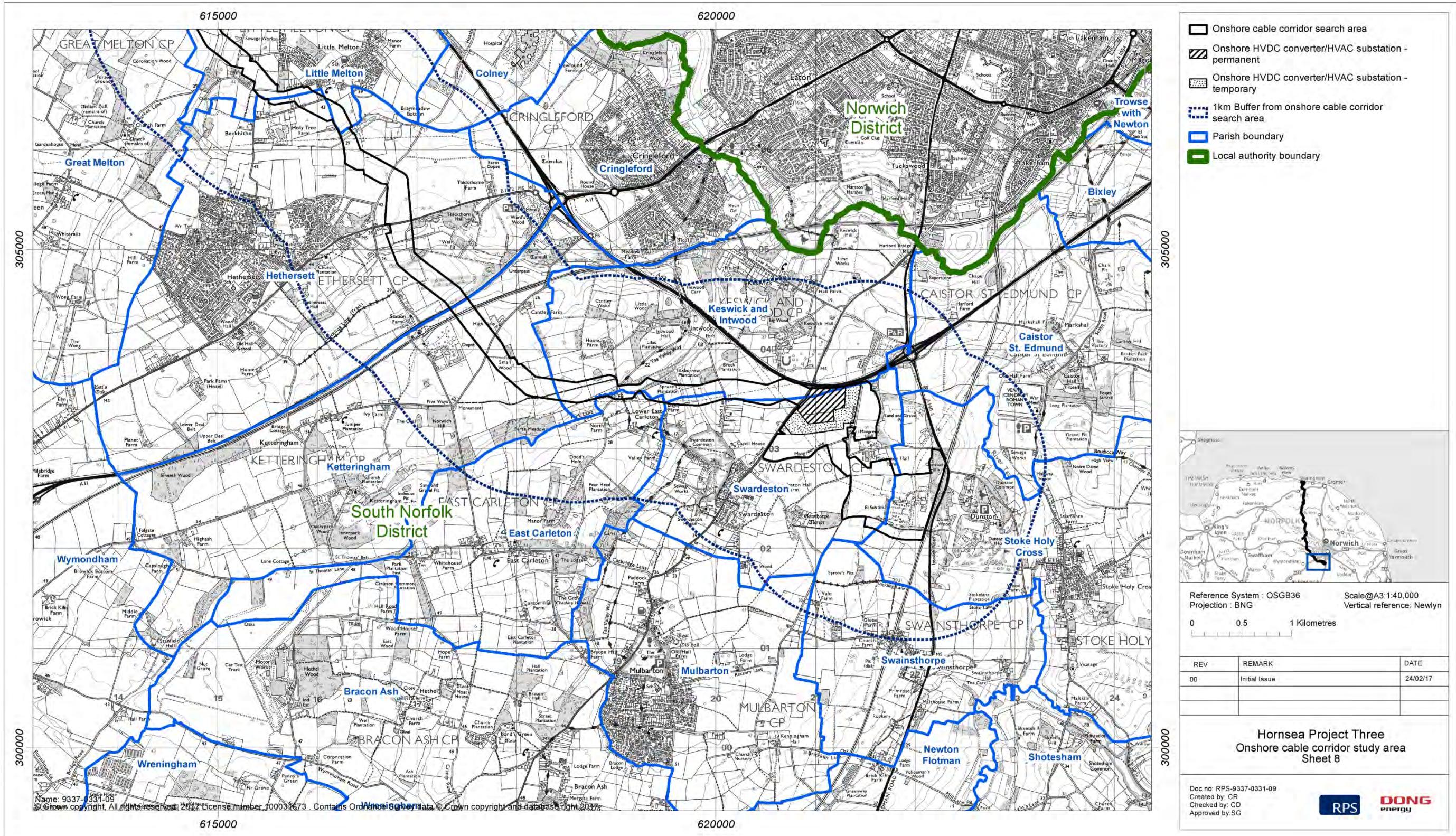


Figure 4.1: Onshore Cable Corridor Study Area Sheet 8 of 8.

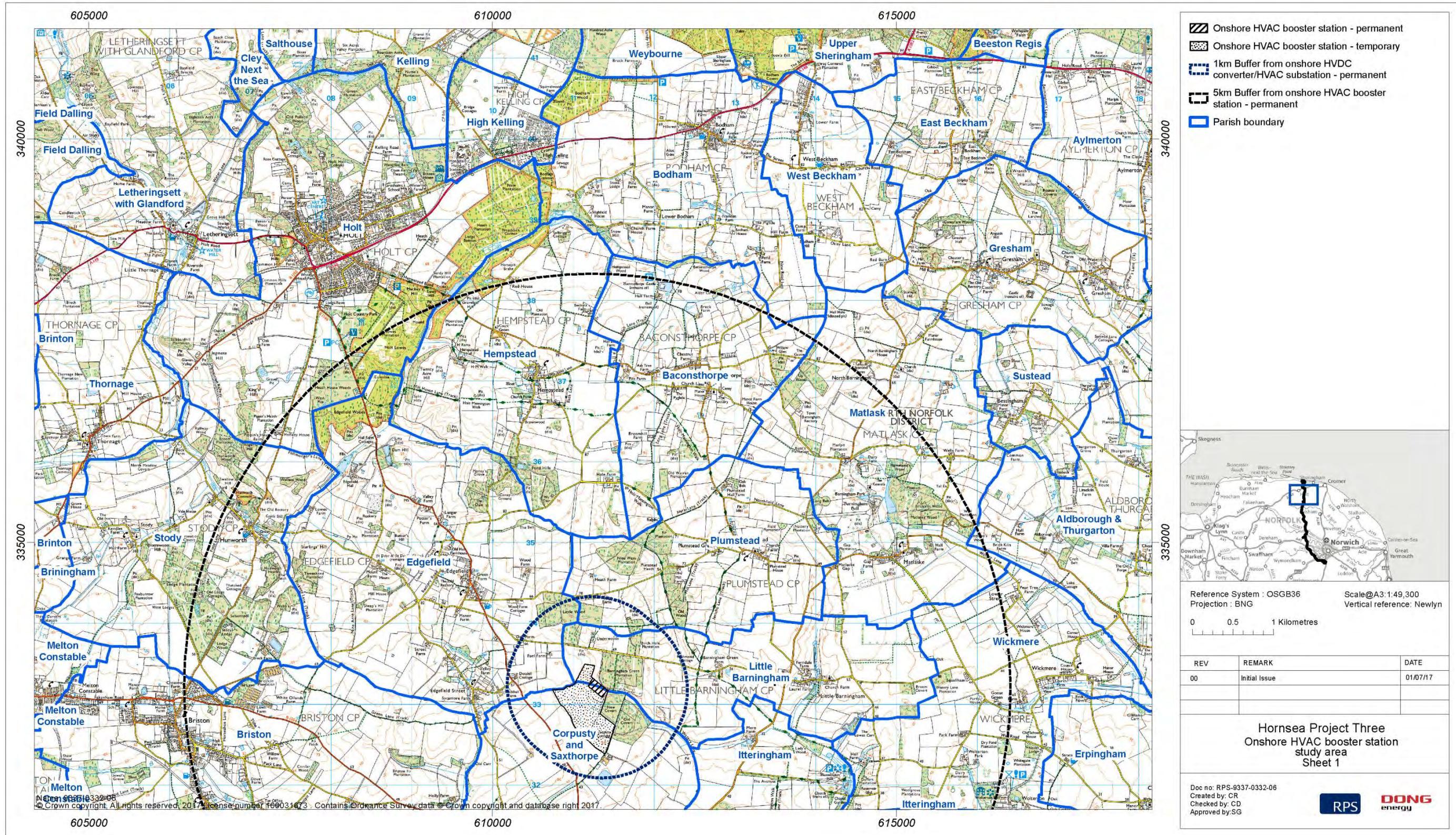


Figure 4.2: Onshore HVAC Booster Station Study Area Sheet 1 of 2.

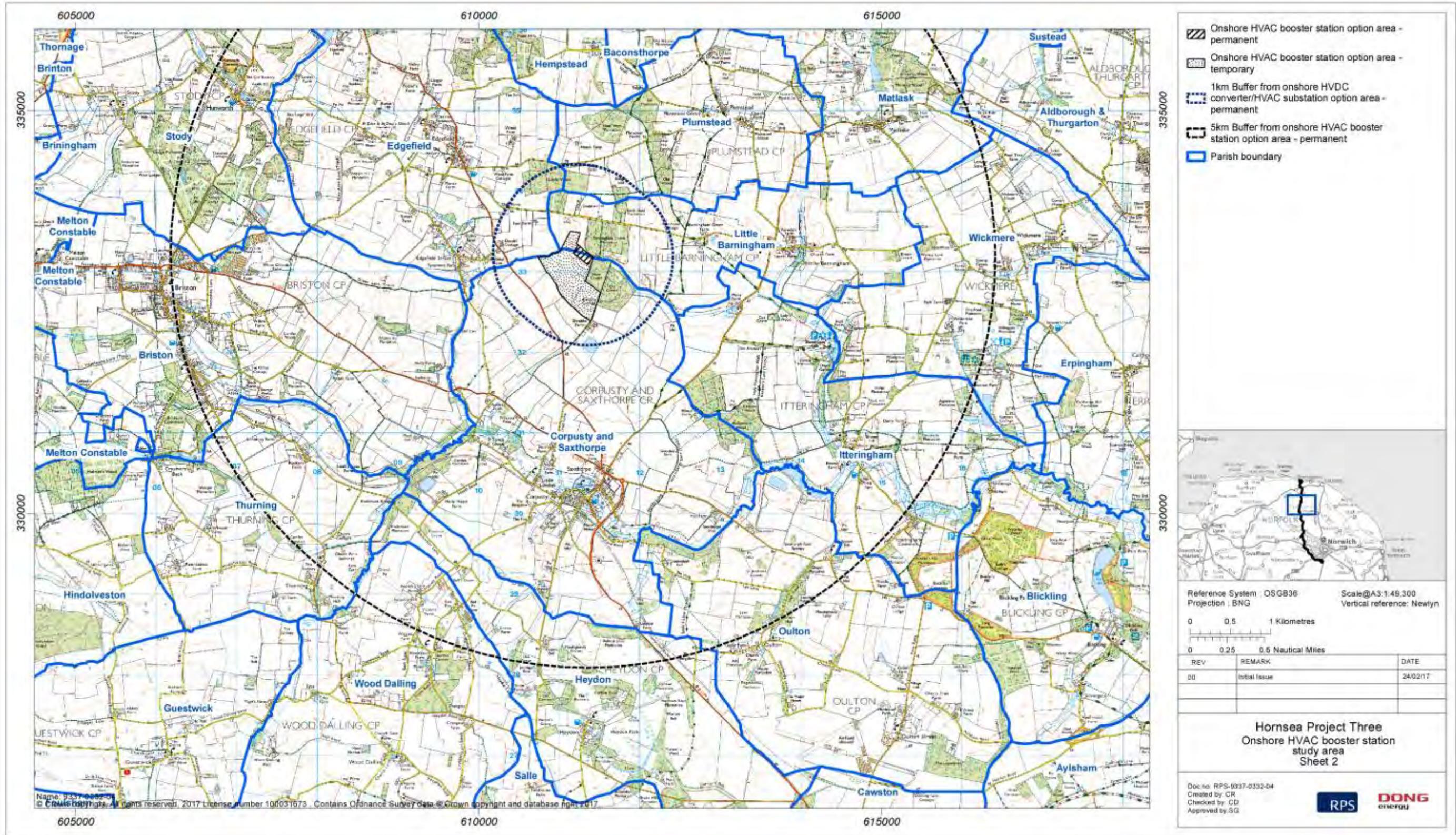


Figure 4.2: Onshore HVAC Booster Station Study Area Sheet 2 of 2.



Figure 4.3: Onshore HVDC Converter/HVAC Substation Study Area Sheet 1 of 2.

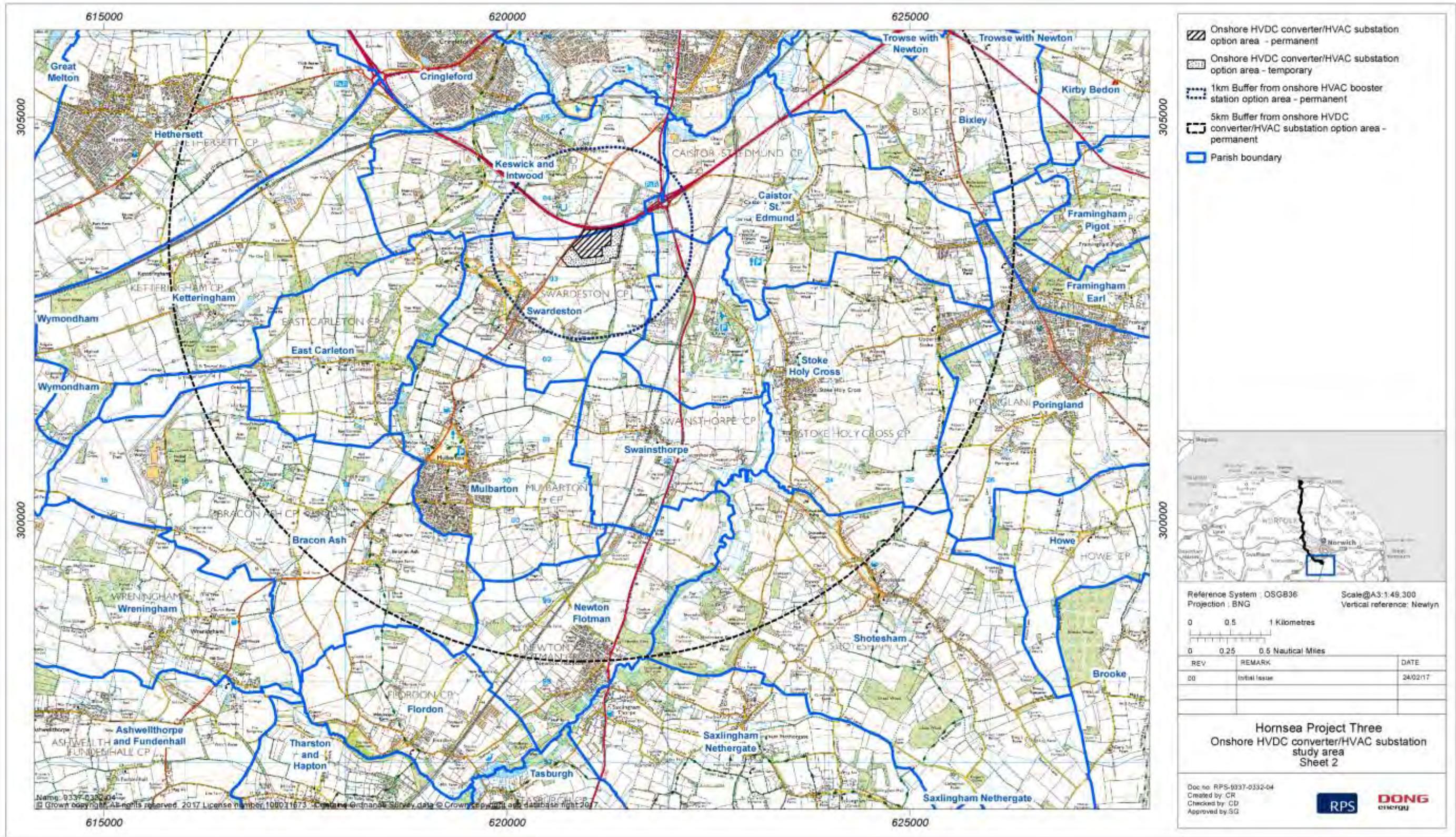


Figure 4.3: Onshore HVDC Converter/HVAC Substation Study Area Sheet 2 of 2.

4.4 Planning policy context

4.4.1.1 This section reviews the various levels of planning policy that is determined to be relevant to the landscape and visual resources that are likely to be affected by the onshore elements of Hornsea Three

4.4.2 National Planning Policy

National Policy Statements

4.4.2.1 Planning policy on offshore renewable energy Nationally Significant Infrastructure Projects (NSIPs), specifically in relation to landscape and visual resources, is contained in the Overarching National Policy Statement (NPS) for Energy (EN-1) (Department of Energy and Climate Change (DECC), 2011a), the NPS for Renewable Energy Infrastructure (EN-3) (DECC, 2011b) and the NPS for Electricity Networks Infrastructure (EN-5) (DECC, 2011c).

4.4.2.2 NPS EN-1, NPS EN-3 and NPS EN-5 include guidance on those matters to be considered in the assessment. These are summarised in Table 4.1 below.

Table 4.1: Summary of NPS EN-1, EN-3 and EN-5 provisions relevant to this chapter.

Summary of NPS EN-1, NPS EN-3 and NPS EN-5 provision	How and where considered in the PEIR
Summary of NPS EN-1 policy relevant to the assessment of Landscape and Visual Resources	
The assessment should make reference to existing landscape character assessments and related studies (paragraph 5.9.5).	The existing published landscape character assessments are referred to in Section 4.7.
The assessment should make reference to relevant planning policies (paragraph 5.9.5).	Relevant planning policy is referred to in Section 4.4 and national policy summarised in this table.
The assessment should include the effects on landscape character and individual landscape elements during construction and operation (paragraph 5.9.6).	Assessment of effects on the landscape and landscape elements are assessed in Section 4.10.
The assessment should include the visibility and conspicuousness of the project and potential impacts on views and visual amenity during construction and operation, including light pollution effects (paragraph 5.9.7) and nature conservation.	Assessments of effects on visual resources including night time effects are assessed in Section 4.10 to 4.13. The details of the lighting during construction, operation and decommissioning are not certain at this stage, but assumptions have been made, based on experience of similar projects and good working practice during the construction, operation and decommissioning phases.
Summary of NPS EN-3 policy relevant to the assessment of Landscape and Visual Resources	
There is a requirement that "proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity" (paragraph 2.4.2).	Details of the landscape proposals for the onshore cable corridor, onshore HVAC booster station and onshore HVDC converter/HVAC substation are set out in section 4.10, summarised in Table 4.10, and will be detailed in the Outline LSMP, to be submitted with the Environmental Statement.

Summary of NPS EN-1, NPS EN-3 and NPS EN-5 provision	How and where considered in the PEIR
The NPS notes that " <i>In sites with nationally recognised designations, consent for renewable energy projects should only be granted where it can be demonstrated that the objectives of designation of the area would not be compromised by the development, and any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by the environmental, social and economic benefits</i> " (paragraph 2.5.33)	Assessments of effects on national designations are discussed in section 4.11 to 4.13.
Seascape and visual effects are considered within the NPS. The inter-visibility between land and sea is noted, as is the importance of the seascape as a resource, economic, tourism and recreational asset (paragraph 2.6.201 – 2.6.206).	While this reference is for seascape effects, visual effects are considered in Section 4.10. The effects of the development on the existing socio-economic situation are assessed in chapter 10: Socio-economics. The effects of the offshore infrastructure on seascape and visual resources are considered in volume 2, chapter 10: Seascape and Visual Resources. The effects on tourism/recreation are considered in chapter 6: Land Use, Agriculture and Recreation. The visual effects on tourism and recreation receptors are considered within this chapter at Section 4.10.
Summary of NPS EN-5 policy relevant to the assessment of Landscape and Visual Resources	
An alternative put forward is to put electricity lines underground (paragraph 1.7.3). This alternative to overhead lines was considered to have long term positive effects on landscape and visual resources (paragraph 1.7.5).	Details of the underground onshore cable corridor are set out in volume 1, chapter 3: Project Description.
Paragraph 2.2.5 comments that there would usually be some flexibility around the location of the substation, so that micro-siting and screening might be possible.	Details of the landscape proposals for the onshore cable corridor, onshore HVAC booster station and onshore HVDC converter/HVAC substation are set out in the chapter in section 4.10, summarised in Table 4.10, and will be detailed in the Outline LSMP, to be submitted with the Environmental Statement.
Developers have a duty, under Schedule 9 of the Electricity Act 1989, to " <i>have regard to the desirability of preserving natural beauty...</i> " when formulating proposals for new electricity infrastructure works (paragraph 2.2.6).	The cables will be buried underground. The onshore HVAC booster station is located within the parish of Corpusty and Saxthorpe, to the east of Edgefield Street. The onshore HVDC converter /HVAC substation is located in both the parish of Keswick and Intwood and Swardeston, to the south of the A47, Norwich Southern Bypass. Designed-in mitigation planting is proposed and the colour of the building will be chosen so as to reduce visual impact. Details of the landscape proposals and the façade treatment of the onshore HVAC booster station and the onshore HVDC converter/HVAC substation will be set out in the Outline LSMP, to be submitted with the Environmental Statement.
Paragraph 2.6.1 of NPS EN-5 notes that " <i>when considering impacts for electricity networks infrastructure, all of the generic impacts covered in NPS EN-1 are likely to be relevant, even if they only apply during one phase of the development (such as construction)...</i> ".	Refer to Section 4.10 for the consideration of the potential effects on landscape and visual resources during construction, operation and decommissioning.

Summary of NPS EN-1, NPS EN-3 and NPS EN-5 provision	How and where considered in the PEIR
Paragraph 2.8.2 comments that "new substations, sealing end compounds and other above ground installations that form connection, switching and voltage transformation points on the electricity networks can also give rise to landscape and visual impacts."	The onshore assessment considers the potential effects on the landscape and visual resources of all onshore components of Hornsea Project Three, from landfall in the intertidal area to the connection to the Norwich Main Substation.

4.4.2.3 NPS EN-1 and NPS EN-3 also highlight a number of points relating to the determination of an application and in relation to mitigation. These are summarised in Table 4.2 below.

Table 4.2: Summary of NPS EN-1, and NPS EN-3 policy on decision making relevant to this chapter.

Summary of NPS EN-1 and NPS EN-3 policy on decision making (and mitigation)	How and where considered in the PEIR
<i>Summary of NPS EN-1 policy on decision making and mitigation relevant to the assessment of Landscape and Visual Resources</i>	
Has the chapter considered the existing landscape character (paragraph 5.9.8).	Section 4.7 describes the existing landscape character.
Virtually all nationally significant energy infrastructure projects would have an effect on the landscape (paragraph 5.9.8).	Potential effects on landscape and visual resources from Hornsea Project Three have been assessed in Section 4.10.
Having regard to siting, operational and other relevant constraints, does the project minimise harm to the landscape (paragraph 5.9.8).	Details of the landscape proposals for the onshore cable corridor, onshore HVAC booster station and onshore HVDC converter/HVAC substation are set out in the chapter in section 4.10, summarised in Table 1.12 and will be detailed in the Outline LSMP, to be submitted with the Environmental Statement.
Does the project provide reasonable landscape mitigation where possible and appropriate (paragraph 5.9.8).	Details of the landscape mitigation are found in section 4.10 and are summarised in Table 4.10. These mitigation measures will be detailed in the Outline LSMP, which will be submitted with the Environmental Statement.
Does the proposal compromise the purpose of a nationally designated area (paragraph 5.9.12).	Consideration for nationally designated areas has been included in the assessment in Section 4.10.
The fact that a proposed project would be visible from within a designated area should not in itself be a reason for refusing consent (paragraph 5.9.13).	The potential significance of effects on designated landscapes is assessed in sections 4.11 to 4.13. Photomontages from Norfolk Coast Area of Outstanding Natural Beauty (AONB) where views to the onshore HVAC booster station will be included in the Environmental Statement.
The scale of nationally significant infrastructure projects will mean that they would often be visible within many miles of the site of the proposed infrastructure. The decision maker should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project (paragraph 5.9.15).	The effects of the project on landscape and visual resources are assessed (Section 4.10).

Summary of NPS EN-1 and NPS EN-3 policy on decision making (and mitigation)	How and where considered in the PEIR
In reaching a judgement, the decision maker should consider whether any adverse impact is temporary, such as during construction and /or whether any adverse impact on the landscape would be capable of being reversed in a timescale that the decision maker considers reasonable (paragraph 5.9.16).	The potential effects of the temporary and permanent elements of the project on the landscape are assessed (Section 4.10).
The decision maker would have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local areas, outweigh the benefits of the project (paragraph 5.9.18).	The potential effects of the temporary and permanent elements of the project on the visual resources in the surrounding area are assessed (Section 4.10).
Examples of existing permitted infrastructure with a similar magnitude of impact on visual receptors may assist the decision maker in judging the weight it should give to assessed visual impacts of the proposed development (paragraph 5.9.19).	Permitted schemes were identified prior to the preparation of the PEIR and informed the baseline (Section 4.7) or cumulative impact assessment (Section 4.16) as appropriate
Does the project provide reasonable visual mitigation where possible and appropriate (paragraphs 5.9.21, 5.9.22 and 5.9.23).	Details of the landscape proposals for the onshore cable corridor, onshore HVAC booster station and onshore HVDC converter/HVAC substation will be detailed in the Outline LSMP, which will be submitted with the Environmental Statement.
The decision maker should not refuse to grant consent for a development solely on the ground of an adverse effect on the landscape/seascape or visual amenity if any alternative is not economically viable or the benefits of the scheme outweigh any harmful effects on sensitive receptors (paragraph 2.6.208).	The potential effects of the project on landscape and visual resources are assessed (Section 4.10).
The decision maker should make a judgement on potential adverse impacts, during construction and operation, taking into account the duration and reversibility of the proposal (paragraph 2.6.209).	Potential effects are assessed taking into account of the duration of the effects (Sections 4.10 to 4.13). The scheme is determined to be fully reversible as a result of the decommissioning phase
Do the landscape and visual benefits of undergrounding the line outweigh the environmental and archaeological consequences of disturbing a swathe of ground up to 40 m across (paragraph 2.8.9).	The potential temporary effects of the construction of the onshore cable corridor are assessed (Section 4.10). The effects on the Historic Environment are assessed in chapter 5: Historic Environment.

4.4.2.4 Further advice, specifically in relation to the Hornsea Three, has been sought through consultation with the statutory authorities and from the PINS scoping opinion in December 2016 (Table 4.3).

National Planning Policy Framework (2012)

4.4.2.5 The Department for Communities and Local Government (DCLG) published the National Planning Policy Framework (NPPF) in March 2012 (DCLG, 2012). The NPPF sets out the national planning policies for England and the Government's desire to enable sustainable development.. Local development plan policies may be relevant to determining local impacts.

- 4.4.2.6 With regard to Nationally Significant Infrastructure Projects (NSIPs), the NPPF states that it "does not contain specific policies for nationally significant infrastructure projects for which particular considerations apply. These are determined in accordance with the decision-making framework set out in the Planning Act 2008 and relevant national policy statements for major infrastructure, as well as any other matters that are considered both important and relevant (which may include the National Planning Policy Framework). National policy statements forms part of the overall framework of national planning policy, and are a material consideration in decisions on planning applications" (paragraph 3).
- 4.4.2.7 With regard to renewable energy developments, the NPPF states that local planning authorities should "design their policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts" (paragraph 97).
- 4.4.2.8 Paragraph 109 has regard to conserving and enhancing the natural environment. This policy states "the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes."
- 4.4.2.9 Paragraph 113 also states that "Local authorities should set criteria bases policies against which proposals for any development on or affecting protected...landscape areas would be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and give appropriate weight to their importance and the contribution that they make to wider ecological networks".
- 4.4.2.10 The NPPF gives great weight to "conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty" (paragraph 115).
- Planning Practice Guidance (2014)**
- 4.4.2.11 On 06 March 2014 DCLG launched the Planning Practice Guidance (PPG) as a web-based resource. The PPG notes include guidance on renewable energy generation and the natural environment.
- 4.4.2.12 Guidance is given to local planning authorities on the development of policies for renewable and low carbon energy generation proposals. The guidance identifies planning considerations for wind energy development.
- 4.4.2.13 The PPG suggests criteria to be included within local plans and to be used in considering planning applications. The PPG notes that the need for renewables does not automatically override environmental protection. It identifies that the cumulative impacts of wind turbines requires careful consideration, especially the effects on landscape resources and local visual amenity. It requires that due regard should be paid to topography. Great weight is given to nationally designated landscapes and to areas close to such landscapes where there is a potential for a development to have an adverse impact on the protected area. The effect on local amenity is also an important consideration in planning decisions.
- 4.4.2.14 Within the Natural Environment planning guidance section, it states in Paragraph 1 that "*planning should recognise the intrinsic character and beauty of the countryside*". The guidance advises that local plans should include strategic policies for the conservation of the natural environment including landscape (designated landscapes and the wider countryside). It reinforces the need for landscape character assessments to aid the understanding of the character and local distinctiveness. Landscape character assessments also identify the features, elements and characteristics that give a particular landscape a sense of place. Landscape character assessments can also help inform local and neighbourhood plans.
- 4.4.2.15 Paragraph 3 sets out the legal duties of local planning authorities in relation to National Parks (NP) and AONBs. It is the planning authorities' duty to consider "*development proposals that are situated outside National Park or Area of Outstanding Natural Beauty boundaries which might have an impact on the setting of, and implementation of, the statutory purposes of these protected areas*".
- 4.4.2.16 Paragraph 4 explains that planning policies and decisions should be based on the natural environment and other characteristics of the area. It requires local planning authorities and neighbourhood planning bodies to have due regard of NPs and AONB management plans, as these identify the special qualities of each designated area. A management plan may be a material consideration in a planning decision.

4.4.3 Local Planning Policy

Overview

The onshore cable corridor lies within the districts of North Norfolk, Broadland and South Norfolk. The proposed onshore HVAC booster station site lies within North Norfolk District and the onshore HVDC converter/HVAC substation site is located in South Norfolk District. The onshore cable corridor is also located within the Norfolk Coast AONB.

4.4.3.2 The Local Development Framework varies between councils, and is summarised below:

- The current Local Plan (LDF) for North Norfolk District (adopted 2008) - the adopted Core Strategy and Development Management Policies Development Plan Documents (DPDs), the proposals map, Site Allocations plan DPD and relevant Supplementary Planning Documents (SPD);
- The emerging North Norfolk LDF is currently under preparation. The draft emerging Local Plan is anticipated to be published in late 2017, examination of the plan is anticipated to commence in spring 2018;
- The LDF for Broadland District - the adopted Joint Core Strategy DPD (adopted 2014) (covering Broadland District, Norwich City and South Norfolk District), the Broadland District Development Management DPD, Site Allocations DPD and relevant Area Action Plans (AAPs); and
- The LDF for South Norfolk District - the adopted Joint Core Strategy (adopted 2011) (covering Broadland District, Norwich City and South Norfolk District), in addition to the South Norfolk Development Management Policies Document Site Specific Allocations and Policies Documents, relevant AAPs and relevant SPD.

4.4.3.3 A full summary of the relevant Statutory Development Plan documents in all Local Authority areas affected by the proposed onshore infrastructure for Hornsea Three is provided in the Planning Statement which accompanies the PEIR. Particular considerations relevant to the assessment of landscape and visual resources are identified in the paragraphs below.

4.4.3.4 Although they have a close relationship with landscape matters and are often combined within the same planning policies, policies regarding the historic environment and historic landscapes are discussed within chapter 5: Historic Environment and policies regarding the ecological environment and habitats are discussed within chapter 3: Ecology and Nature Conservation.

Local Development Frameworks

North Norfolk District

4.4.3.5 The current LDF for North Norfolk District comprises the adopted Core Strategy and Development Management Policies DPDs, the proposals map, and Site Allocations DPD.

4.4.3.6 Core Aim 2 of the Core Strategy includes an aim to mitigate the effects of climate change, by "encouraging renewable energy production". Core Aim 3 is to "*protect the built and natural environment and local distinctive identity of North Norfolk..*" by, amongst other means, protecting, restoring and enhancing the district's landscape.

4.4.3.7 Core Strategy Policy SS4 Environment seeks to ensure that development proposals protect and enhance natural and built environmental assets. It states that "*renewable energy developments would be supported where impacts on amenity, wildlife and landscape are acceptable.*"

4.4.3.8 The Core Strategy notes that the district has a "*distinctive architectural heritage and attractive rural landscape and the Council wishes to preserve and enhance these features wherever possible*" (paragraph 3.1.4).

4.4.3.9 With regard to the Norfolk Coast AONB, the Core Strategy refers to the AONB Management Plan as providing guidance for the conservation and enhancement of the special qualities and explains that the guidance should be taken into consideration in all development proposals that could affect the area (paragraph 3.3.2). With regard to The Broads, the Core Strategy explains that policies within the Broads LDF apply there, but that development in North Norfolk can affect the Broads Area. Core Strategy Policy EN1 Norfolk Coast Area of Outstanding Natural Beauty and the Broads, explains that the individual and cumulative effects on these designated landscapes and their settings would be carefully assessed. Development proposals that would be significantly detrimental to these areas and their settings would not be permitted.

4.4.3.10 With regard to Protection and enhancement of landscape and settlement character, the Core Strategy comments that "*the visual character of North Norfolk's landscapes, seascapes and townscapes*" ... "*is highly valued by residents and visitors*" and that "*high priority is given to the protection, conservation and enhancement of this landscape character and new development should be well-designed and help sustain and/or create landscapes and townscapes with a strong sense of place and local identity*" (paragraph 3.3.6). Amongst other documents, the North Norfolk landscape character assessment should be used "*to ensure development proposals reflect the distinctive character qualities and sensitivities of the area*" (paragraph 3.3.7). Core Strategy Policy EN2 Protection and Enhancement of Landscape and Settlement Character explains that development proposals should demonstrate that their location, scale, design and materials would protect, conserve and, where possible, enhance, amongst other things: The special qualities and local distinctiveness of the area; gaps between settlements and landscape setting of settlements; the pattern of distinctive landscape features, such as water courses, woodland, trees and field boundaries; visually sensitive skylines, hillsides, seascapes, valley sides and geological features; and nocturnal character.

4.4.3.11 The nature and development pressures on the Undeveloped Coast are discussed in paragraphs 3.3.9 and 3.3.10 of the Core Strategy. The aim of the designation is to minimise the wider impact of general development, this is controlled by Core Strategy Policy EN3 Undeveloped Coast.

4.4.3.12 The quality and local distinctiveness of the built environment is controlled by Core Strategy Policy EN4 Design, which requires all development to be designed to a high quality and to reinforce local distinctiveness. The Policy explains that "*design which fails to have regard to local context and does not preserve or enhance the character and quality of an area would not be acceptable.*" To assist in achieving high quality design and retention of local distinctiveness buildings should amongst other matters: "*Be appropriately designed for the context in which they are set; retain existing important landscaping and natural features; and include landscape enhancement schemes that are compatible with the Landscape Character Assessment and ecological network mapping.*" The Policy requires that "*proposals should not have a significantly detrimental effect on the residential amenity of nearby occupiers...*".

4.4.3.13 Core Strategy Policy EN7 Renewable Energy states that renewable energy proposals, including associated infrastructure, would be permitted where "*individually, or cumulatively there are no significant effects on: The surrounding landscape, townscape and historical features/areas; residential amenity..*".

Broadland District

4.4.3.14 The LDF for Broadland District comprises the adopted Joint Core Strategy DPD (covering Broadland District, Norwich City and South Norfolk District), the Development Management DPD, Site Allocations DPD and relevant AAPs.

- 4.4.3.15 The Joint Core Strategy for Broadland, Norwich and South Norfolk (Greater Norwich Development Partnership, 2014) states that development in the area would where possible aim to: *“..maximise the use of decentralised and renewable or low-carbon energy sources and sustainable construction technologies”.*
- 4.4.3.16 Objective 9 of the Joint Core Strategy is *“to protect, manage and enhance the natural, built and historic environment, including key landscapes...”*. Where development is required on greenfield sites it *“must provide environmental gains through green infrastructure”* and that *“locally distinctive landscapes would be protected and enhanced.”*
- 4.4.3.17 Area-wide Policy 2: Promoting Good Design requires that *“all development would be designed to the highest possible standards”* ... *“in particular development proposals would respect local distinctiveness including as appropriate”* including: *“landscape character and historic environment, taking account of conservation appraisals and including the wider countryside and the Broads area; the need to development to avoid harmful impacts on key environmental assets.”*
- 4.4.3.18 The Joint Core Strategy notes that *“the Norwich area is of unusual landscape complexity where five distinct countryside character areas converge”* ... *“the urban edge is particularly sensitive”* (paragraph 5.10). Paragraph 5.11, explains that developers *“have to take account of local evidence when preparing Design and Access Statements, including Landscape Character Assessments and Conservation Appraisals as appropriate.”*
- 4.4.3.19 The Broadland District Council Development Management DPD was published in 2015 (Broadlands District Council, 2015). Policy GC4 – Design expects development to achieve a high standard of design and avoid any significant detrimental impact. Proposals should pay adequate regard to, amongst other things: the environment, character and appearance of an area; reinforcing local distinctiveness through the appearance of new development, the scale of new development and landscaping; considering the impact upon the amenity of existing properties. The accompanying text explains that development proposals should seek to reinforce local distinctiveness through considering scale, massing, height, landscape layout, materials and access in relation to neighbouring buildings and the local area more generally (paragraph 2.17).
- 4.4.3.20 While supporting renewable energy projects, the explanatory text to Policy CG5 – Renewable Energy notes that it is important to ensure sufficient protection for the particularly distinctive landscape areas of the District (paragraph 2.28).
- 4.4.3.21 The Development Management DPD places considerable emphasis on the need to safeguard and enhance the environmental assets of the District, of which the landscape character is one (paragraph 3.4). Policy EN2 – Landscape seeks to protect the landscape character of the District and requires development proposals to *“have regard to the Landscape Character Assessment SPD and, in particular, consider any impact upon as well as seek to protect and enhance where appropriate:*
- “Gaps between settlements:*
 - Visually sensitive skylines, hillsides and valley sides and important views including the setting of the Broads Area;*
 - Nocturnal character;*
 - Conservation Areas;*
 - Scheduled Ancient Monuments;*
 - Historic Parks and Gardens; and*
 - Green spaces including natural and semi-natural features as well as geological/geomorphological features which make a significant contribution towards defining the character of an area.”*
- 4.4.3.22 The text accompanying the policy, at paragraph 3.14, explains that development proposals should reflect the distinctive character, qualities and sensitivities of the area in which they are proposed and that the natural and semi-natural features referred to include trees and hedgerows. Paragraph 3.16 explains that the policy seeks to protect the inherent visual qualities and distinctive character of the area in which the development is proposed and states that *“development would only be permitted where it does not result in any significant detrimental impact upon the character, scenic quality or visual benefit of the area.”* With regard to nocturnal character, paragraph 3.17 expects that good design and planning should limit the impact of light pollution, from external lighting proposals, on local amenity and intrinsically dark landscapes, particularly in the countryside.
- South Norfolk District
- 4.4.3.23 The LDF for South Norfolk District also comprises the adopted Joint Core Strategy (covering Broadland District, Norwich City and South Norfolk District), in addition to the South Norfolk Development Management Policies Document Site Specific Allocations and Policies Documents, and relevant AAPs.
- 4.4.3.24 The relevant Joint Core Strategy policies are discussed under the Broadland District section above.
- 4.4.3.25 The South Norfolk LDF was adopted in 2015. There are a number of policies that are relevant to the landscape and visual resources of the locations being considered for the onshore elements of Hornsea Three.
- 4.4.3.26 Policy DM 1.4 Environmental quality and local distinctiveness requires that development achieves *“high quality and positive environmental improvement”*. It explains that all development *“must demonstrate an understanding and evaluation of the important environmental assets including locally distinctive characteristics, and justify the design approach.”* The Council would always seek environmental improvement and where environmental harm cannot be avoided adequate mitigation must be proposed to compensate. Proposed development should also take reasonable opportunities to, amongst other matters: *“Make a positive contribution to local character and distinctiveness;”* and *“work with the characteristics of the location to ensure that the necessary mitigation measures are not disproportionate to the benefits of the scale of development proposed.”*

- 4.4.3.27 Policy DM 3.8 Design Principles applying to all development requires that development achieves a high quality of design and protects and enhances the environment and existing locally distinctive character. It also states that planning permission would be granted where the development respects adjoining local landscapes. The criteria for achieving this includes: the development having a scale, height, massing, form and appearance to successfully integrate with its surroundings; the development having a high standard of design, which should either reflect local building traditions or, where this is not appropriate, be of innovative contemporary design reflecting local context or reinforcing or creating local distinctiveness; having visually attractive frontages and soft boundary treatments; and, a landscape design that would retain important existing natural features and reflect the surrounding landscape characteristics.
- 4.4.3.28 Policy DM 4.5 Landscape Character and River Valleys, requires that all development "*should respect, conserve and where possible, enhance the landscape character of its immediate and wider environment.*" The policy continues "*development proposals that would cause significant adverse impact on the distinctive landscape characteristics of an area would be refused.*" The policy expects all proposals to demonstrate that they have taken the key characteristics, assets, sensitivities and vulnerabilities (amongst other matters) into account. Proposed developments are required to have particular regard to protecting the distinctive characteristics, special qualities of the River Valley and Valley Urban Fringe Landscape Character Types (LCTs).
- 4.4.3.29 The landscape setting of Norwich is discussed in section 4.6 of the LDF. The Southern Bypass is recognised to have been well-designed to fit into the landscape through which it passes. A Landscape Zone has been identified where there is a high level of visual accessibility to and from the road to a predominantly open rural area that positively enhances the setting of Norwich (paragraph 4.54) known as the Norwich Southern Bypass Landscape Protection Zone (NSBLPZ). This was recently reviewed by Chris Blandford Associates and the updated NSBLPZ is illustrated on the current LDF Proposals Map (paragraph 4.57). Any development permitted within the NSBLPZ should have regard to protecting the openness of it and where possible enhance it, through wildflower planting and management regimes (paragraph 4.58).
- 4.4.3.30 Key Views are also discussed in section 4.6 of the LDF. Areas in the Settled Plateau Farmland LCT to the south-east and south-west of Norwich have 'important' views of the City. Broad Key View cones are identified on the Proposals Map.
- 4.4.3.31 The protection of both the NBLPZ and the View Cones is set out in Policy DM 4.6 Landscape Setting of Norwich. It adds that development should not obstruct the long distance views to the City.
- 4.4.3.32 Policy DM 4.8 Promotion of Trees and Hedgerows seeks to promote the retention and conservation of significant trees and woodlands, including orchards. The explanatory text notes that this is to preserve landscape character (paragraph 4.68). With regard to hedgerows, it is noted that they are distinctive features in the countryside and are often indicators of historic field patterns, as well as being of ecological importance. Under the Hedgerow Regulations, 1997, 'Important' hedgerows are to be retained, unless the need for the development outweighs the loss (paragraph 4.72). The Council seeks to "*promote the planting of trees, woodlands and hedgerows as part of new developments and to complement existing features*" (paragraph 4.73).
- 4.4.3.33 Good quality landscape proposals should be an integral part of, and contribute to, good design. All new development should respect local landscape character and distinctiveness (paragraphs 4.74 and 4.78). The importance of good quality landscape proposals is set out in Policy DM 4.9 Incorporating landscape into design, which also provides policy on land modelling.
- 4.4.3.34 As well as the landscape character assessment South Norfolk District Council has produced a number of SPDs. Section 3 of the South Norfolk Place-Making Guide (2012) sets out place-making and design principles, from site location and setting to character of the building and architectural detailing.
- Norfolk Coast AONB Management Plan**
- 4.4.3.35 The Norfolk AONB Partnership (2014), a statutory consultee for planning applications which are likely to affect the AONB designation, sets out themes, objectives and policies for the AONB within the Norfolk Coast Area of Outstanding Natural Beauty Management Plan 2014-19.
- 4.4.3.36 The Management Plan Strategy sets out the Special Qualities of the AONB in Section 3. These are listed below and detailed in volume 6, annex 4.4: Key Characteristics of Designated Landscapes. The Special Qualities are:
- i. *Dynamic character and geomorphology of the coast;*
 - ii. *Strong and distinctive links between land and sea;*
 - iii. *Diversity and integrity of landscape and settlement character;*
 - iv. *Exceptionally important, varied and distinctive biodiversity, based on locally distinctive habitats;*
 - v. *Nationally and internationally important geology;*
 - vi. *Sense of remoteness, tranquillity and wildness; and*
 - vii. *Richness of archaeological heritage and historic environment, particularly that relating to the coast and its character."*
- 4.4.3.37 The condition of the seven key qualities of natural beauty (QNB) is detailed in an appendix to the Management Plan.

- 4.4.3.38 There are five themes covering aspects of management of the AONB set out in the Management Plan. The Vision, Objectives and Policies for landscape, biodiversity and geodiversity are described in Section 4.1. Objective OL1 Landscape states "*the integrity and diversity of the area's landscapes and seascapes would have been maintained and preferably enhanced, assessed with reference to the Integrated Landscape guidance for the AONB.*" Policies PL1 to PL5 are the most relevant policies to landscape and visual resources, referring to the need to use the AONB's Integrated Landscape Character Guidance to guide decision making, promote understanding of the key qualities, improve understanding of the changes to landscape due to climate change, work for resilience to change for key habitats and species through creation of ecological networks etc. and reduce and manage adverse impacts on the QNB.

4.5 Consultation

- 4.5.1.1 The Consultation Report (which will be submitted as part of the final DCO application) will outline the consultation activities which have been undertaken in respect of Hornsea Three. In addition, a summary of the key issues raised during consultation specific to landscape and visual resources is outlined below, together with how these issues have been considered in the production of this PEIR.

4.5.2 Hornsea Three Consultation

- 4.5.2.1 Table 4.3 summarises the issues raised relevant to landscape and visual resources which have been identified during consultation activities undertaken to date.
- 4.5.2.2 Table 4.3 also indicates either how these issues have been addressed within this PEIR or how the Applicant has had regard to them.

Table 4.3: Summary of key consultation issues raised during consultation activities undertaken for Hornsea Three relevant to landscape and visual resources..

Date	Consultee and type of response	Issues raised	Response to issue raised and/or where considered in this chapter
December 2016	PINs – Scoping Report	Table 12.1 notes that there are eight national 'landscape designations' identified within the onshore ECR corridor (Table 2.1). The table identifies a further 22 landscape designations within 12 km of the onshore ECR corridor.	All identified landscape designations are included in the baseline assessment and carried through to the assessment stage.
		Table 12.3 of the Scoping Report proposes scoping out any indirect impacts that fall outside the influence of the Zone of Theoretical Visibility (ZTV) for all phases of the development. Visual impacts from the offshore HVAC booster stations are scoped out on the grounds that they are too far offshore to have any significant visual impacts onshore. Impacts of the onshore ECR corridor are scoped out for the operational stage on the grounds that there will be no significant changes to landscape character or visual amenity as the cable will be buried underground. The Secretary of State agrees that the matters identified in Table 12.3 can be scoped out of the landscape and visual impact assessment (LVIA).	These items have been scoped out and justification for doing so is set out in Table 4.6
December 2016	PINs – Scoping Report	The Secretary of State recognises that the proposed study area for the landscape and visual resources assessment is broad at this stage and welcomes that the study area, including the locations of the substation and HVAC booster station (if required), will be refined by making use of the Scottish Natural Heritage 2014 guidance and the application of a ZTV. The Environmental Statement should describe the ZTV model used, and provide information on the area covered, the timing of any survey work, and the methodology used. The Secretary of State welcomes that the locations of viewpoints will be agreed with the local authorities.	The study areas presented for the various elements of this assessment are identified at section 4.3. The study areas have been identified based on Scottish Natural Heritage 2014 guidance and a review of the ZTVs from viewpoints agreed with NNDC and SNDC. The ZTVs are presented at Figure 4.10 and Figure 4.11. The methodology is described at volume 6, annex 4.1: Landscape and Visual Impact Assessment Methodology. The field work undertaken is discussed in section 4.6.will
		The Secretary of State notes that Figure 12.1 of the Scoping Report identifies a number of relevant designations that lie outside but in proximity to the study area (defined as land within the onshore ECR corridor search area above MLWS), such as, for example, The Broads, which is in the vicinity of the potential location of the electrical connection point. However, paragraph 12.1.10 and the accompanying Table 12.1 suggest that features outside the study area, such as Registered Parks and Gardens (also considered in the Historic Environment section), will be considered in the assessment, although The Broads is not listed. The Secretary of State recommends that consideration is given to such features when defining the study area, and that the study area is described clearly and consistently in the Environmental Statement. The Applicant's attention is drawn to the comments of NE in their scoping response in respect of the Norfolk Coast AONB.	The study areas for the onshore cable corridor, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation are illustrated on Figure 4.1, Figure 4.2 and Figure 4.3. The effects upon all landscape designations within the study areas, including The Broads and Norfolk Coast AONB, as well as Registered Parks and Gardens, are considered within this assessment.
		The Secretary of State welcomes the proposal to use photomontages, wirelines and annotated Viewpoints to illustrate the outcomes of the field surveys.	Wirelines that show the worst case scenario have been included in the PEIR but will be replaced with photomontages in the Environmental Statement
		The Secretary of State notes and welcomes the reference to the application of the guidance on cumulative assessments contained in the 'Guidelines for Landscape and Visual Impact Assessment'.	Cumulative methodology is presented at section 4.14 and the cumulative assessment is presented at section 4.15
December 2016	PINs – Scoping Report	Cross-reference should be made from this topic chapter of the Environmental Statement to the Historic Environment and Ecology and Nature Conservation Environmental Statement chapters.	Cross references have been made to all relevant chapters within the PEIR.
		The Secretary of State recommends that draft versions of the CoCP and WSI and landscape planting proposals are submitted with the DCO application and agreed with relevant statutory consultees.	An outline LSMP will be submitted with the Environmental Statement and agreed with North Norfolk District Council, Broadland District Council, South Norfolk District Council and Norfolk County Council.
		The Secretary of State recommends that the physical scope of the study areas should be identified for each of the environmental topics and should be sufficiently robust in order to undertake the assessment. This should include at least the whole of the application site, and include all offsite works. For certain topics, such as landscape and transport, the study area will need to be wider. The extent of the study areas should be on the basis of recognised professional guidance and best practice, whenever this is available, and determined by establishing the physical extent of the likely impacts. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the Environmental Statement and a reasoned justification given.	The study areas for the onshore cable corridor, the onshore HVAC booster station and the onshore HVDC converter/HVAC substation are illustrated on Figure 4.1, Figure 4.2 and Figure 4.3. The study areas have been identified based on Scottish Natural Heritage 2014 guidance and a review of the ZTVs from viewpoints agreed with NNDC and SNDC.
		The assessment should consider: <ul style="list-style-type: none"> • Environmental impacts during construction works; • Environmental impacts on completion/operation of the proposed development; • Where appropriate, environmental impacts a suitable number of years after completion of the proposed development (for example, in order to allow for traffic growth or maturing of any landscape proposals); and • Environmental impacts during decommissioning. 	The assessment of landscape and visual impacts has been undertaken at construction, at Year 1 of the operation and maintenance phase and during decommissioning to present a worst case scenario. A separate, second assessment for a later date during the operation and maintenance phase has not been undertaken as the effects during this period will be lesser than those considered under the worst case scenario of Year 1 when vegetation has not fully regrown, but the assessment that has been done considers the impacts of maintenance visits and possible repairs as well as the effects of maturing landscape proposals, in section 4.10.

Date	Consultee and type of response	Issues raised	Response to issue raised and/or where considered in this chapter
November 2016 (within Scoping Report dated December 2016)	Historic England – in appendix of Scoping Report	A new HVAC/HVDC substation will be required in order to connect Hornsea Three to the Norwich Main Substation. The final location of the new onshore HVAC/HVDC substation is still to be determined but will be constructed within the onshore ECR corridor search area. It will be located as close as practicable to the existing 400 kV Norwich Main Substation site to minimise the potential landscape and visual impact	The proposed locations of the onshore HVAC booster station and HVDC converter/HVAC substation are included within the PEIR assessment.
November 2016 (within Scoping Report dated December 2016)	Historic England – in appendix of Scoping Report	With regard to setting of historic assets: For the visual assessment photomontages, wireframe models and/or similar techniques should be used to illustrate and assess the impact from elements such as the booster station and substation.	For the PEIR three wirelines have been prepared for the onshore HVAC booster station and the onshore HVDC converter/HVAC substation respectively. Photomontages will be included in the Environmental Statement.
November 2016 (within Scoping Report dated December 2016)	Historic England – in appendix of Scoping Report	We note that registered parks & gardens are considered as landscape designations within the Landscape and Visual Impact chapter. We will highlight that these are designated heritage assets (as defined and identified within the NPPF) and should therefore also be considered within the historic environment chapter (with regard and reference to the LVIA) and in-line with the relevant criteria and methodology as set out above.	The setting of Registered Parks and Gardens, as heritage assets are considered within chapter 5: Historic Environment. They are assessed within this chapter as landscapes of high value, similar to AONBs and NPs. Views that might be gained from them are also considered within this chapter.
November 2016 (within Scoping Report dated December 2016)	Natural England – in appendix of Scoping Report	Natural England is the statutory adviser to Government on nature conservation in England and promotes the conservation of England's wildlife and natural features. With regards to landscape and visual impacts we only advise where highly sensitive visual receptors are located within a designated landscape and are undertaking 'countryside recreations activities' (walking, riding bikes etc.), where the appreciation of the visual amenity provided by the designated landscape is an important aspect of their experience.	Designated landscape and high sensitivity visual receptors have all been considered in the PEIR assessment
November 2016 (within Scoping Report dated December 2016)	Natural England – in appendix of Scoping Report	As infrastructure associated with the proposed wind farm is evidently near the Norfolk Coast Area of Outstanding Natural Beauty (AONB), consideration should be given to the direct and indirect effects upon this designated landscape. In particular consideration should be given to the effect upon its purpose for designation, as well as the content of its management plan.	The effects of the proposals on the Special Qualities of the AONB and on its LCAs are considered in section 4.10.
November 2016 (within Scoping Report dated December 2016)	Natural England – in appendix of Scoping Report	The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies. We encourage the use of Landscape Character assessment (LCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character, as detailed proposals are developed. Natural England supports the publication Guidelines for Landscape and Visual Impact Assessment, produced by the Landscape Institute and the Institute of Environmental Assessment and Management in 2013 (3rd edition). The methodology set out is almost universally used for LVIA.	A full landscape and visual impact assessment has been undertaken following the Guidelines for Landscape and Visual Assessment: Third Edition. The assessment is set out in section 4.10 of this chapter.
November 2016 (within Scoping Report dated December 2016)	Norfolk County Council – in appendix of Scoping Report	The County Council welcomes reference on pages 309 (Ecology) and 322 (landscape) to the need to take into account the onshore cumulative impacts arising from this and other proposals/developments. The EIA should consider the opportunities for any potential synergy with other planned/proposed wind farms (i.e. the Vanguard and Boreas Wind Farm Proposals) particularly in relation to the possibility of sharing onshore infrastructure such as cable corridors; relay stations and substation connection points.	An assessment of potential cumulative impacts is included at section 4.15

Date	Consultee and type of response	Issues raised	Response to issue raised and/or where considered in this chapter
November 2016 (within Scoping Report dated December 2016)	Norfolk County Council – in appendix of Scoping Report	<p>For both offshore and any associated onshore development/infrastructure (e.g. work compound, sub-station; relay stations etc.) the EIA/PEIR will need to provide:</p> <ul style="list-style-type: none"> An assessment of the impact of the development on the landscape and seascape character (where visible from onshore), including landscape in neighbouring counties where they fall within the zone of visual influence; An assessment of the visual intrusion caused by the development which should include the preparation of a Zone of Visual Intrusion plan/map; Photomontages illustrating the impact of the development (See also Grid Connection Issues below); An assessment of the cumulative impact of this development taken together with the other (a) operational wind farms, (b) permitted wind farms in the area and (c) development proposals likely to come forward; and An assessment of the impact of the development on the heritage landscape. 	<p>ZTVs have been generated for both the onshore HVAC booster station and the onshore HVDC converter/HVAC substation and are presented at Figure 4.10 and Figure 4.11 of this chapter.</p> <p>For the PEIR three wirelines each have been undertaken for the onshore HVAC booster station and the onshore HVDC converter/HVAC substation. Photomontages will be included in the Environmental Statement.</p> <p>The cumulative effects assessment is set out in sections 4.14 and 4.15 of this chapter. The cumulative projects that are considered within this chapter are illustrated on Figure 4.14.</p> <p>The effects of the historic landscape have been assessed in chapter 5: Historic Environment.</p>
		<p>The EIA/PEIR will need to evaluate the impact on the landscape of upgrading existing roads and creating new access routes in the construction and operational phase of the project (including enhanced signage) as all of this can sub-urbanise a rural landscape. It will also need to consider how these should be mitigated, perhaps through removal and reinstatement at the end of the project. Please also refer to Highway - Traffic and Access section.</p>	<p>The impact of road improvements has been assessed at a high level within the PEIR as details of the project have not been finalised. A more extensive assessment of these elements of the project will be undertaken for the Environmental Statement.</p>
		<p>The EIA/PEIR will need to address the impact of the wind farm on tourism, including tourism occurring in neighbouring counties, which may be affected if the natural landscape is altered sufficiently.</p>	<p>Tourist receptors are considered within this chapter in section 4.10. It is not anticipated that neighbouring counties will be affected by the changes proposed.</p>
November 2016 (within Scoping Report dated December 2016)	Norfolk County Council – in appendix of Scoping Report	<p>The EIA/PEIR will need to address whether the existing overhead lines and substation are sufficient to be able to cope with the Wind Farm, or whether there will need to be any upgrading of any existing overhead power lines. The EIA/PEIR should also address the cumulative impact on the Grid Network arising from any existing or proposed Wind Farm in the area.</p> <p>In the event that new power lines are needed (or existing power lines up-graded) or any other infrastructure needs up-grading (e.g. sub-station) there will need to be a description of the route(s) including plans at an appropriate scale incorporating, for example:</p> <ul style="list-style-type: none"> an assessment of their impact (e.g. photomontages etc.) details of temporary construction compounds identification of any sensitive features along the route <p>The EIA/PEIR should consider the possibility of putting over-head power lines underground in order to minimise their impact.</p>	<p>No new overhead lines are proposed as part of Hornsea Three.</p>
March 2017	Norfolk County Council	<p>Discuss and agree LVIA methodology including study area and any amendments with stakeholders to ensure cohesive approach to the LVIA.</p> <p>Discuss viewpoint locations within the Norfolk Coast AONB.</p> <p>Discuss viewpoint locations for the onshore ECR corridor study area, including the onshore HVAC booster station and onshore HVDC converter/HVAC substation.</p>	<p>Methodology issued to Norfolk County Council for review and comment.</p>
March 2017	North Norfolk District Council	<p>Discuss and agree LVIA methodology including study area and any amendments with stakeholders to ensure cohesive approach to the LVIA.</p> <p>Discuss and agree viewpoint locations.</p> <p>Presentation of visualisations – agreement on the type, number and format.</p>	<p>Discussions regarding visual impacts of the HVAC booster station options at meeting on 07.02.2017 and viewpoints for HVAC Booster Station and HVDC converter/HVAC substation agreed.</p>
March 2017	South Norfolk District Council	<p>Discuss and agree LVIA methodology, including study area and any amendments with stakeholders to ensure cohesive approach to the LVIA.</p> <p>Discuss and agree viewpoint locations for the onshore ECR corridor study area, including the onshore HVDC converter/HVAC substation.</p> <p>Presentation of visualisations – agreement on the type, number and format.</p> <p>Discuss and agree planting specifications.</p>	<p>Viewpoints discussed and revisions proposed 17.01.2017. Revised material issued to SNDC for comment 10.02.17.</p>