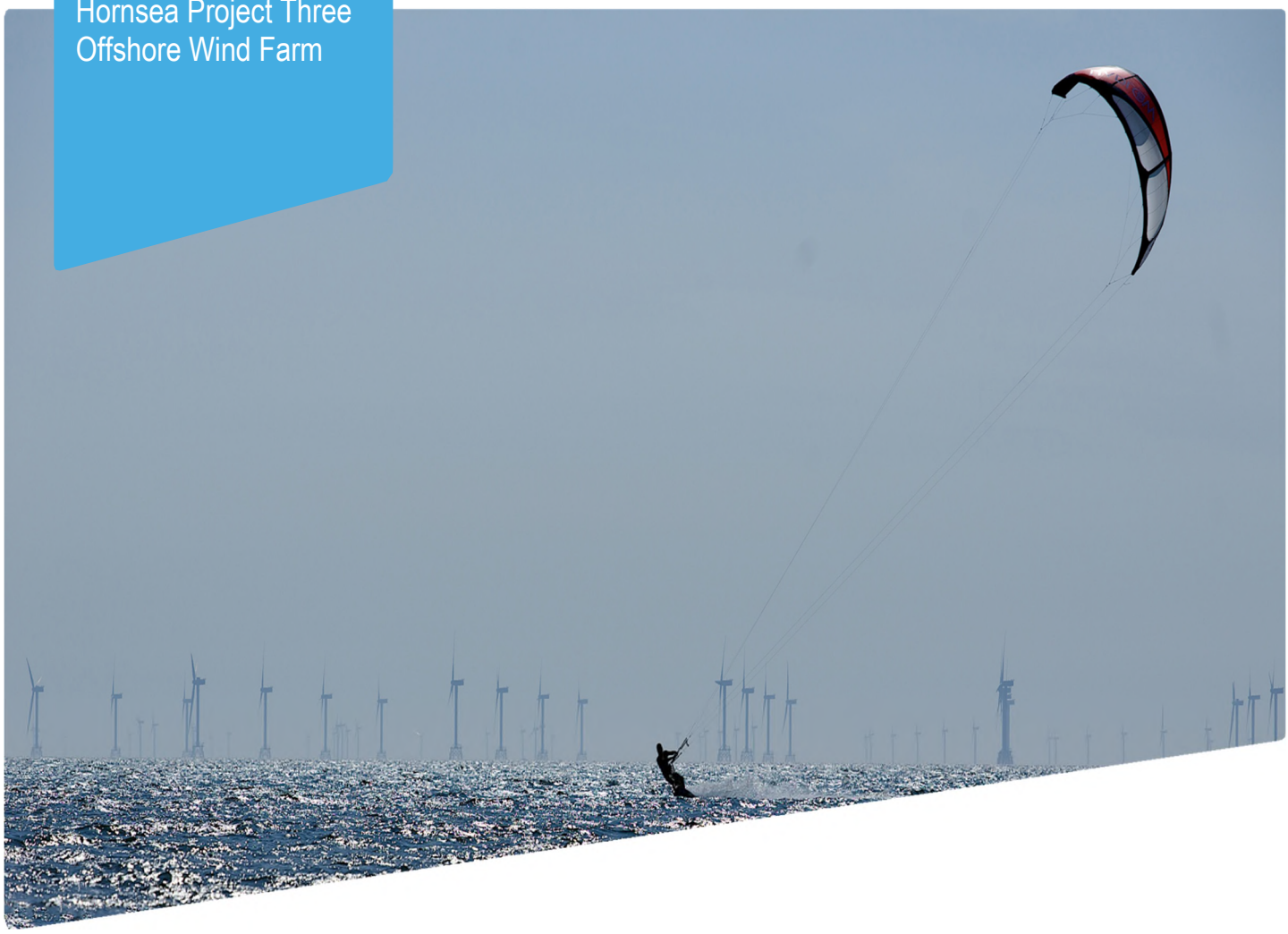
Hornsea Project Three
Offshore Wind Farm



Hornsea Project Three

Offshore Wind Farm

Response to the Secretary of State's Minded to Approve Letter Annex 3 to Appendix 2: Kittiwake Artificial Nest Provisioning: Site Selection and the Pathway to Securement

Date: September 2020

Hornsea 3
Offshore Wind Farm

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Appendix 2: Kittiwake Compensation Plan

Annex 3: Kittiwake Artificial Nest Provisioning: Site Selection and the Pathway to Securement

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Front cover picture: Kite surfer near a UK offshore wind farm © Ørsted Hornsea Project Three (UK) Ltd., 2018.

Table of contents

List of Tables

List of Figures

Acronyms

Acronyms	Description
AEoI	Adverse Effect on Integrity
Defra	Department for Environment, Food and Rural Affairs
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
FFC SPA	Flamborough and Filey Coast Special Protection Area
ICES	International Council for the Exploration of the Sea
KCP	Kittiwake Compensation Plan
LPA	Local Planning Authority
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MMO	Marine Management Organisation
OOEG	Offshore Ornithology Engagement Group
RSPB	Royal Society for the Protection of Birds
SoS	Secretary of State
SPA	Special Protection Area
TCE	The Crown Estate

1. Background and purpose

1.1 Hornsea Project Three Offshore Wind Farm (hereafter 'Hornsea Three') is a proposed offshore wind farm located within the southern North Sea being promoted by Orsted Hornsea Project Three (UK) Limited ("the Applicant"). The Secretary of State (SoS) for Business, Energy and Industrial Strategy issued a "Minded to Approve" letter and draft Habitats Regulations Assessment for Hornsea Three wind farm on 1 July 2020.

1.2 Within the "Minded to Approve" letter the SoS identified that an adverse effect on integrity (AEoI) cannot be ruled out, in-combination, on the black-legged kittiwake *Rissa trydactyla* (kittiwake) feature of the FFC SPA, given consideration of the SoS' upper estimate of potential impact contribution by Hornsea Three wind farm on this feature (namely, a potential annual collision mortality rate of 65-73 birds). The SoS requested "sufficient evidence that…compensatory measures have been secured" in relation to this impact, including "an approach for securing agreements for land access".

1.3 This document sets out the Applicant's approach to site selection and consideration of alternatives for kittiwake artificial nesting structures, the rationale for which is provided in the Kittiwake Compensation Plan (KCP) (Appendix 2 to Hornsea Three's Response to the SoS' Minded to Approve Letter) and Ecological Evidence report (Annex 2 to the KCP). This document demonstrates to the SoS how the necessary land/seabed and consenting rights will be secured and concludes that the Applicant's compensation proposal is feasible from a planning and land acquisition perspective and can be secured.

2. The structure of this report

2.1 This document provides an account of and rationale for the site selection and consideration of alternatives process, along with a summary of the legal considerations for securing the necessary land, seabed and consenting rights for the development of any artificial nesting structures to be used to compensate for the impact on black-legged kittiwake by the Hornsea Three wind farm. It further outlines considerations for future detailed site selection. This document is structured as follows:

1) Site Selection and Consideration of Alternatives (Sections 3 and 4):

   - The site selection process and rationale for the identification of preferred search zones for artificial nesting structures, within which specific sites and eventually artificial nesting structures are proposed to be developed, using new and/or existing structures; and
   - Consideration of alternative search zones and locations (Section 4), including the identification of any areas within the identified search zones which are likely to be less optimal for the development of the proposed artificial nesting structures.

2) Design (Section 5):

   - Consideration of aspects of the detailed design within the site selection process.

3) Decommissioning (Section 6):

   - Consideration of the decommissioning options available for the artificial nesting structures.

4) Securing the necessary land/seabed rights and consenting requirements (Section 7)

- A strategy for legally securing the necessary land/ seabed rights; and
- A strategy for securing all necessary consents.

3. Site Selection

3.1 The site selection process has been based on the available ecological evidence around kittiwake and existing artificial nesting sites, as well as expert professional judgement. This process has given significant weight to the evidence presented in Annex 2 to the KCP (Kittiwake Artificial Nest Provisioning: Ecological Evidence). It has been developed in consultation with Natural England as the relevant statutory nature conservation body. The site selection process has focused on the English southern North Sea coast in response to stakeholder feedback. Full details of key consultation activities undertaken in relation to artificial nesting can be found in Annex 1 in Section 0. Further information on relevant consultation undertaken to date is provided in Appendix 5 to the Applicant's response to the SoS' Minded to Approve letter: Record of Consultation.

Stage 1: Identification of preliminary constraints and primary drivers

3.2 The first stage of the site selection process involved the identification of the primary ecological drivers for attracting and maintaining breeding kittiwakes based on the evidence provided in Annex 2 to the KCP: Ecological Evidence report. These primary ecological drivers feed into ecological requirements for site selection outlined in paragraph 3.3 below.

3.3 The primary ecological drivers to enable effective artificial nesting structures for kittiwake are identified as follows:

1. Kittiwake philopatry:

a) The majority of birds which are not philopatric (23% philopatry is considered to be a reasonable 'worst case' for UK colonies; Coulson, 2011) choose a nesting site within a neighbouring colony (<100 km). Therefore, areas within 100 km of an existing colony are preferred.

2. Colonisation potential:

a) Kittiwakes are seabirds which naturally nest on vertical rocky sea cliffs. A new artificial nesting structure should be near (within 100m) or overlooking water in a coastal location. Locations where there are evident opportunities to develop a new structure or adapt an existing structure (in a non-residential location) are preferred.
b) Sites where there is evidence of existing breeding behaviour (preferably a smaller colony to prevent competition) demonstrate that kittiwake will be able to locate the structure. Within visible range (approximately 1km depending on geography) is preferred.
c) Sites where connectivity already exists to the southern North Sea regional population (where kittiwakes are known to follow trawlers for fish discards into fish quays, and have been attracted to power station inflow and outflow seawater pipes) will facilitate initial colonisation by prospective breeders as kittiwake will already frequent the area. This is not necessary if kittiwake are already present at the site.

3. Prey availability:

    a) Foraging ranges - On average, kittiwakes forage within 54.7 km of their breeding colony, but can travel up to 156.1 km to find food (Woodward et al. 2019). Shorter foraging trips are generally linked to higher breeding success (Lewis et al. 2001). Therefore, while tagging data is not available for many kittiwake colonies, it is likely that birds at colonies with sustainable populations will be foraging within 54.7 km and locating a structure within range of this food source is likely to increase effectiveness. Where kittiwakes are breeding in unsuitable habitat (for example the ground nesting kittiwakes at RSPB Minsmere in Suffolk) this also demonstrates that food resources are likely to be locally available. Equally, if nesting locations appear to be unutilised this indicates that there is some other limitation, for example, prey availability.
    b) Productivity and population growth – Existing colonies which are known to have growing populations (which indicate good productivity) indicate that prey availability is not likely to be a constraint locally. Increasing population size can be used where productivity data may not be available. For example, in East Anglia, there is a regional increasing trend which has led to this area being suggested as a favourable location for artificial nesting structures (McArthur Green 2013; McArthur Green 2020). In the north east, there are some locations where colonies are expanding, but the regional picture is more mixed. In the north east this therefore increases the importance of proximity to existing colonies with evidence of expanding populations.

4. Constraints in existing habitat:

    a) Existing nesting habitat limitations - Artificial nesting structures can only be of benefit to the kittiwake population where there is a lack of existing breeding habitat. Kittiwakes readily breed on natural cliffs and man-made structures with appropriate features (for example, narrow ledges with reasonable shelter from the sun, waves and wind etc.). The FFC SPA colony is the largest kittiwake colony in the UK, and exceptionally large colonies occur only where there is little or no suitable habitat elsewhere within the foraging range of seabirds from that colony (MacArthur Green, 2020). There is a lack of suitable habitat along much of the south-eastern coast of England.

3.4 Where the ecological requirements can be clearly defined and categorised, they have been included in the 'Ecological (Species-Specific)' section of the Black Red Amber Green (BRAG) criteria provided in Table 3.1. In addition to the ecological criteria, other environmental and technical high-level criteria for site selection have been identified.

3.5 Table 3.1 includes consideration of designated and non-designated nature conservation sites. Following a request for clarification from the Applicant on the suitability of designated sites for placing structures, Natural England advised the Applicant that placing artificial nesting structures in an SPA would not be considered a constraint unless the site is already designated for kittiwakes. Where a location which interacts with a designated or non-designated site is taken forward all the relevant procedures and consultation will take place.

3.6 Offshore wind farms have been identified as a potential constraint (see Section 7 of Annex 2 (Ecological Evidence) to the Kittiwake Compensation Plan) as the positioning of any new artificial nesting structures should avoid or minimise further collision risk primarily related to operational and consented offshore wind farms, but also those which are in planning.

3.7 Lastly, it has been identified that although access for monitoring and maintenance is possible in offshore and onshore environments, it is less preferable in offshore environments and more preferable in onshore environments. This is also reflected in Table 3.1.

Table 3.1: Stage 1 high-level BRAG criteria for artificial nest site selection.

Type of constraint	Category	Black	Red	Amber	Green
Ecological (Species-Specific)	***Local prey availability (productivity and population growth as a proxy)***	Not applicable	0 – 54.7 km (i.e. within average foraging range of an existing colony with declining productivity (e.g. FFC SPA)	Not applicable	0 – 54.7 km (i.e. within average foraging range of existing colonies with stable or increasing productivity and evidence of expanding population.
	Colonisation potential	Inland locations without connectivity (as per **2b**)	More than 100 km from any existing kittiwake breeding colony	1 - 100 km of any existing kittiwake colony	0 – 1 km (i.e. within visible range) of a feature known to attract kittiwake (e.g. fish quay) or an existing kittiwake breeding colony (noting this buffer should only apply to colonies passing the local prey availability test)

Type of constraint	Category	Black	Red	Amber	Green
Environmental/ Consenting	***Nature Conservation – Designated and non-designated sites***	Not applicable.	Within statutory designated site designated for benthic features - e.g. MCZs; SACs	Not applicable.	Within statutory designated and non-designated sites (not including those designated for benthic features) - e.g. SPAs, SACs, Local Wildlife Sites; Local Nature Reserves; Heritage Coastlines
	Other infrastructure and development – Offshore wind farms	Within an offshore wind farm array which is in planning, consented or built.	Not applicable.	Not applicable.	Outside an offshore wind farm array which is in planning, consented or built.
Technical	***Accessibility (i.e. marine/ terrestrial) (for monitoring, maintenance, health and safety)***	Not applicable.	A site or sites located in the offshore environment.	A site or sites located in the intertidal or nearshore environment.	A site or sites located in the onshore environment.
* Foraging ranges are based on the evidence provided in Section 3.4, Annex 2 to the KCP: Kittiwake Artificial Nest Provisioning: Ecological Evidence.					

3.8 The broad-scale ecological, environmental and technical criteria have been mapped in Figure 3.1. It shows large areas in the north east of England, the North Sea, as well as in East Anglia, as being potentially suitable for the creation of new artificial nesting structures. As stated previously, the population dynamics in the north east in particular are mixed and therefore focus on the local context is considered further in the following sections of this report. Also shown on the plan are the sandeel habitats as provided by Jensen et al. (2011), which can be used as a proxy for prey availability in the southern North Sea, relative to coastal and offshore areas which have the potential to be used to develop artificial nesting structures. However, it is also acknowledged that kittiwakes are not necessarily dependent on sandeel as a single major prey resource (paragraph 7.4 of Annex 2 to the KCP). Productivity and population trajectory have instead been used as the main proxy for prey resource.

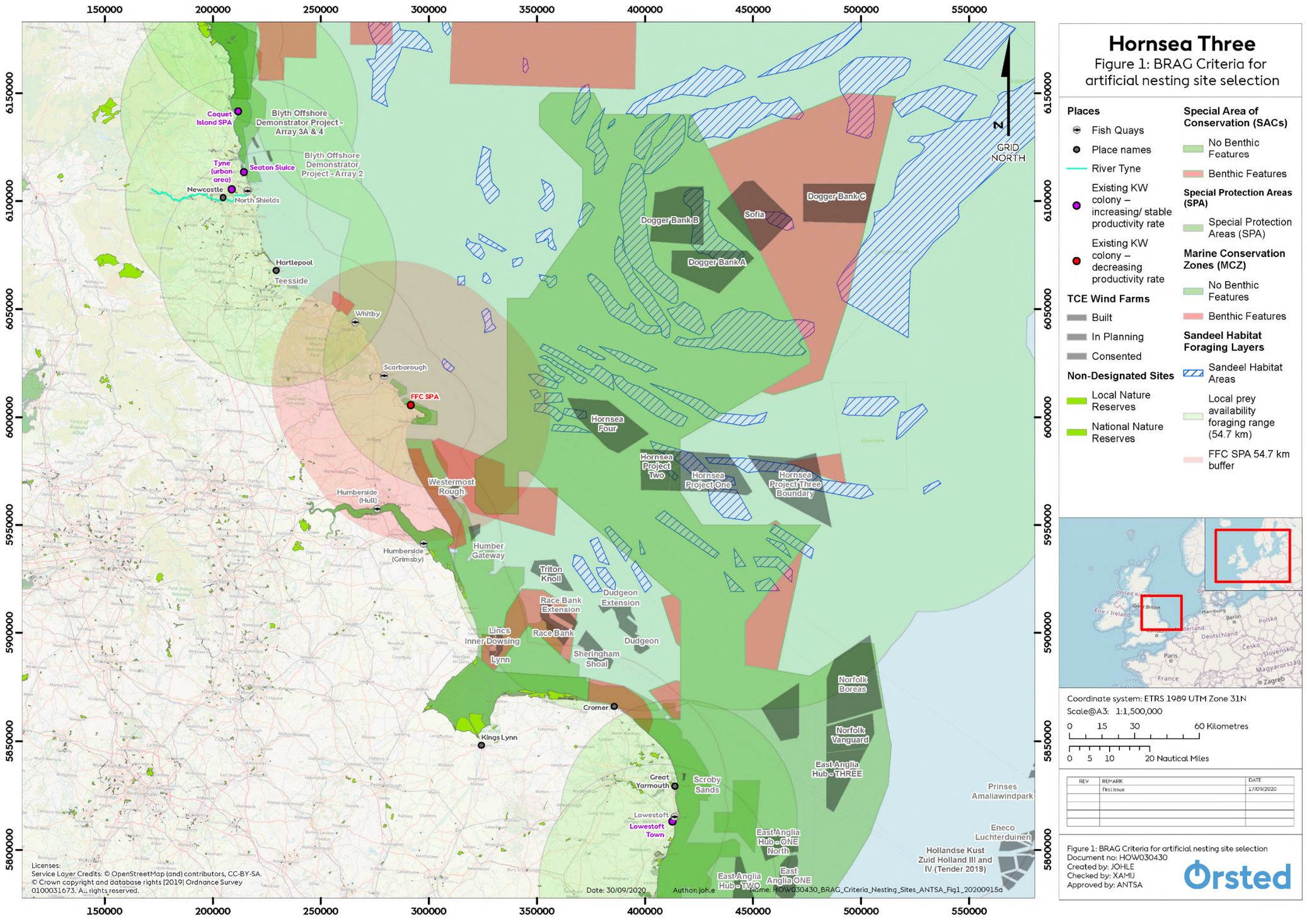

Figure 3.1: BRAG Criteria for artificial nesting site selection

Stage 2: Comparative appraisal

3.9 The second stage of the site selection process involved undertaking further desktop investigations including contacting local stakeholders (to understand the factors influencing local kittiwake colonies) and carrying out site visits to some locations in order to refine the search to search zones. As the primary criteria for site selection are ecological, the detail of this work is presented in Annex 2: Ecological Evidence. Site visits were undertaken at locations where desktop data was insufficient to characterise their potential for artificial nesting structures, for example at Seaham a site visit was undertaken to assess whether kittiwake were breeding in the area and whether available habitat was a likely constraint on the local population.

3.10 As identified in Stage 1: Identification of preliminary constraints and primary drivers, access for monitoring and management both in the near and long term is practicable in offshore, onshore and intertidal environments (see Table 3.1). However, access is logistically preferable in the onshore environment, with intertidal and nearshore environments (i.e. below MLWS but within close proximity of the shoreline) being slightly less preferable (unless access is facilitated by a pier type structure). Structures in the offshore environment are more challenging to access on a routine basis. Therefore, only onshore, intertidal and nearshore locations have been considered further for the development of the Applicant's compensation measure. Stakeholders were aligned with this approach as discussed at a workshop held on 11 August 2020 (Appendix 5 to the Applicant's: Record of Consultation).

3.11 Sites which have been recommended in Table 6.1 of Annex 2: Ecological Evidence, as well as sites broadly representative of the geographic diversity of the English East Coast, including areas where kittiwake are known to breed, have been comparatively appraised in Table 3.2. This appraisal was based on the criteria and requirements outlined in Stage 1 and Stage 2 of this process. It is important to note that where a town or city name has been given this refers to suitable areas (i.e. waterfront) in the vicinity of the named location.

3.12 For a location to be considered to have a good prospect of hosting an effective artificial nesting structure, all of the four main criteria established in Stage 1 (1a philopatry, 2a-c colonisation potential, 3a-b prey availability and 4a nesting habitat limitations) must be passed. The additional desktop and site visits carried out have also contributed to this analysis. For the 'colonisation potential' category, 2a is necessary but likely to be confirmed later in the process so has limited weight at this stage. One of 2b and 2c must be met at this stage. For the 'prey availability' category, 3a must be met and 3b must not show that the colony is declining. Existing nesting habitat limitation is determined by expert ornithologist judgement (see Annex 2 to the KCP: Ecological Evidence document for more narrative around this). Where there are question marks in the table it indicates that there isn't enough evidence at this stage to satisfy that test (as per the Applicant's initial analysis).

3.13 All potential locations are identified in Figure 3.1.

Table 3.2: Comparative appraisal of potential locations for the siting of artificial nesting structures (cells shaded blue indicate criteria has been met).

Sites considered (North to South)	Philopatry (1a)	Colonisation potential (2)			Prey availability (3)		Existing nesting habitat limitations (4a)
		(2a)	*(2b)*	*(2c)*	*(3a)*	*(3b)*	
Newcastle (Tyne)							?
Sunderland			No	No		No current kittiwake	No
Seaham				N/A		No data	No
Hartlepool				N/A			
Tees Estuary				N/A			
Scarborough		?					?
Grimsby			No			No current kittiwake	?
Cromer			No		Within foraging range of sandeel habitat	No current kittiwake	?
Kings Lynn	No	?	No	N/A	No	No current kittiwake	?
Great Yarmouth		?	No	N/A		No current kittiwake	?
Lowestoft							
Sizewell						No data	

3.14 The comparative appraisal in Table 3.2 shows the Tees Estuary, Hartlepool, Lowestoft and Sizewell as preferred locations. The remaining sites either need further research (Newcastle, Scarborough, Grimsby, Cromer and Great Yarmouth) or are concluded to be not appropriate for siting artificial nesting structures (Sunderland, Seaham, Kings Lynn).

3.15 As a result of the comparative appraisal in Table 3.2 the following two preferred zones have been identified:

- Zone 1 (East Anglia; Figure 3.2)– This area extends along the shoreline from Aldeburgh to Lowestoft (inclusive).; and
- Zone 2 (North East; Figure 3.3) – This area extends from just south of Seaham to just west of Redcar, encompassing Hartlepool and Teesmouth.

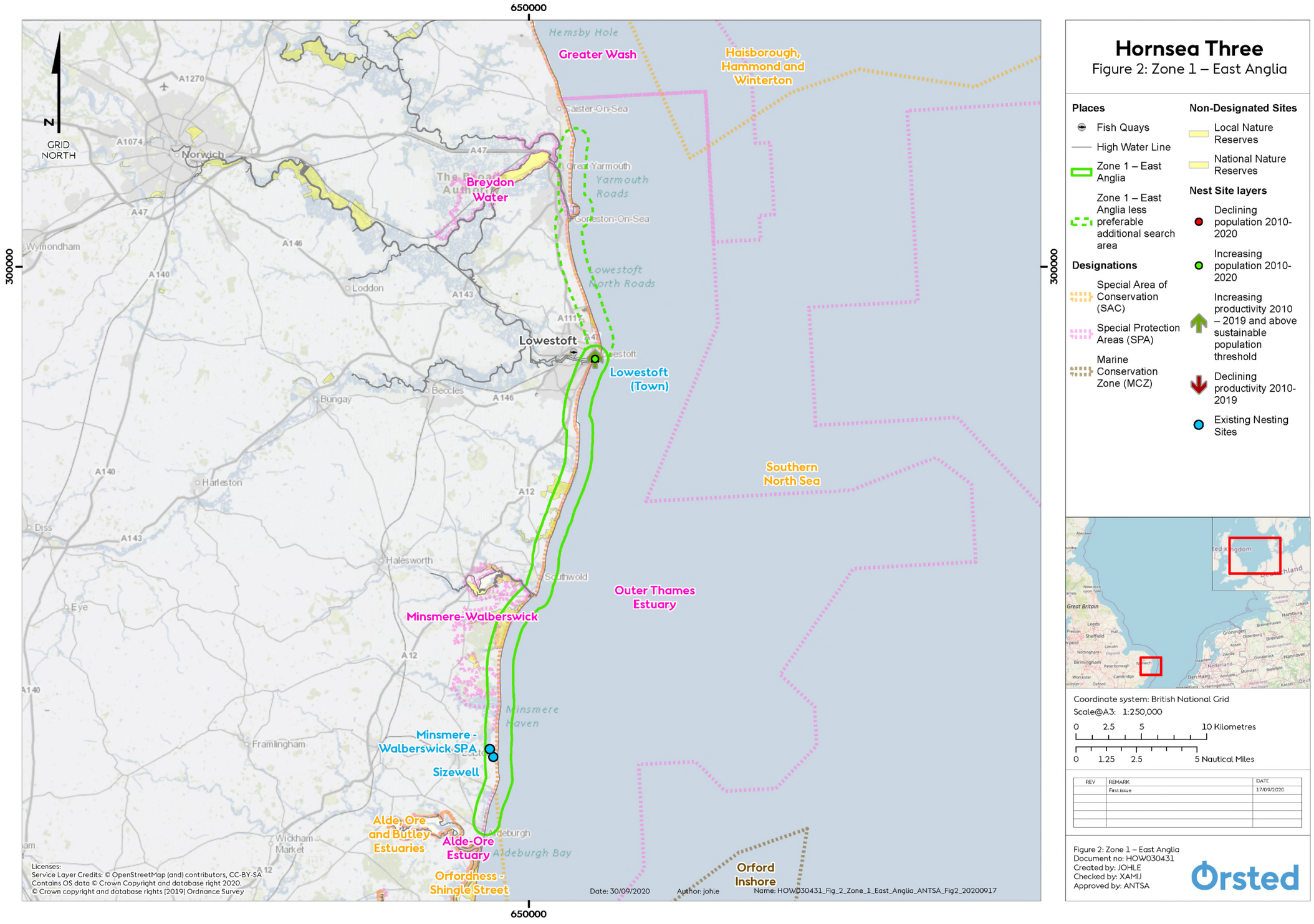

Figure 3.2: Zone 1 – East Anglia

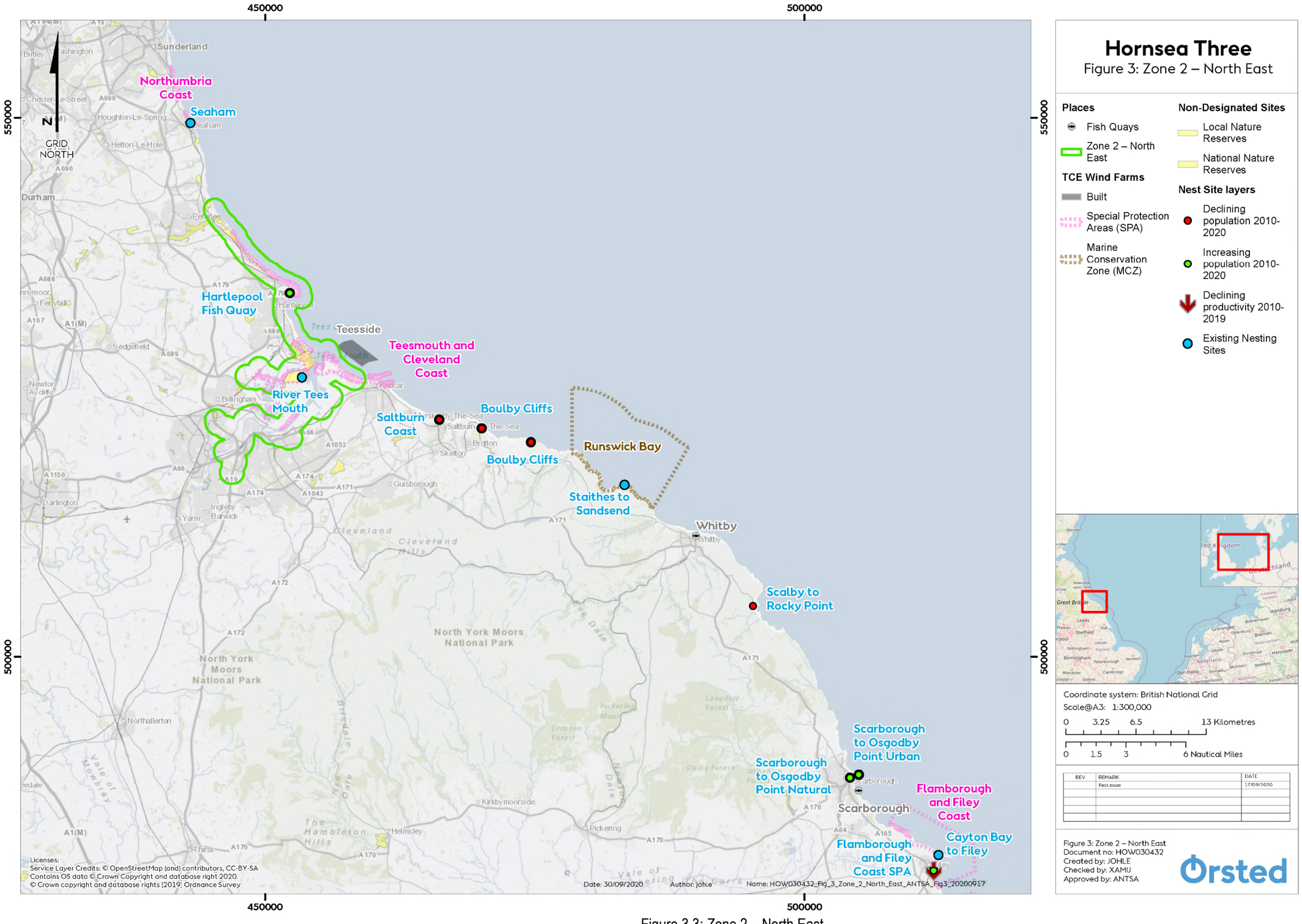

Figure 3.3: Zone 2 – North East

Discounted and less preferable areas

3.16 In their advice note (Reference: SLA/325516, see Annex 1 to Appendix 5: Record of Consultation) Natural England suggested that the areas of Scarborough, Great Yarmouth and Seaham be investigated further. In response to this, a site visit to Seaham, and further investigation and a desk-based analysis of Scarborough were carried out. The aim of the site visit was to understand the potential suitability of these locations for a kittiwake artificial nesting structure. As set out below, Seaham has been discounted based on the presence of existing suitable breeding habitat. Natural England agreed to this approach at a workshop on 21 September 2020. Scarborough is included on Figure 3.3 and will be taken forward as a less preferable area for the reasons set out below.

Newcastle (Tyne)

3.17 Newcastle was mentioned as potential site by the RSPB at a workshop on 25 August 2020. The Applicant has considered the potential for siting an artificial structure here, however, it considers that there is too much uncertainty based on its analysis so far that the kittiwake population at that location is constrained by lack of nesting space. Further to this the intention of previous artificial nesting structures established in the Tyne area was to displace kittiwake from existing structures, not to boost the population. This location merits further investigation but for the purposes of the Applicant's site selection process it has not been taken forward as a preferred site.

Seaham and Sunderland

3.18 Although approximately 50 nests were found to be on the cliffs at Seaham, there appeared to be unused suitable nest space on the cliffs and on the marina. Areas at the dockyard and along the cliffs from Nose Point, which have the potential to provide nesting opportunities were also unpopulated by nests. This indicates that the kittiwakes at Seaham are not constrained by nest space, and therefore there is likely to be some other limiting factor (for example, prey availability). As such it is considered that installing artificial nesting structures is not likely to result to a regional benefit to the kittiwake population at this location.

3.19 The site visit also explored the Sunderland area north of Seaham. No evidence of kittiwake were seen in the area. The cliffs appear to be unstable and potentially not high or steep enough. A few ledges were apparent on the harbour walls and around the dockyard. Located in the dockyard were what appeared to be disused buildings which looked to have the potential to provide suitable nesting habitat. However, no evidence of kittiwake or nests were found. Given the lack of utilised habitat, it is unlikely that kittiwakes are present in this area, therefore this location has not been considered further in the site selection process at this time.

Scarborough

3.20 Desktop analysis showed that the Scarborough area is largely residential with limited opportunities for placing a nesting structure and that there are a number of existing management measures aimed at displacing kittiwakes from buildings. There is potential for artificial nesting structures to displace rather than add to the population. As it is fairly close to the exceptionally large FFC SPA population (approximately 30 km; see Stage 1 (4a)), there is also a risk that competition for prey will be high.

3.21 Further to this, and after consulting with Scarborough Borough Council (see Appendix A) it has come to light that there are currently plans to deter kittiwakes from nesting in populated areas such as residential areas and the town centre, as they are considered a nuisance. Further to the desk study initial consultation has not yet identified a suitable area within Scarborough. However, it will continue to be investigated further as a less preferable area, as shown on Figure 3.3.

Great Yarmouth

3.22 Natural England advised the Applicant on 21 June 2020 that in addition to the two preferred search zones, Zone 1 - East Anglia could be extended to the north to include Great Yarmouth for the development of artificial nesting structures. This area is delineated by Figure 3.2 and is being taken forward as a less preferable area as there is stronger evidence to support the Sizewell to Lowestoft section of Zone 1.

Stage 3: Identification of site specific requirements and constraints

Requirements

3.23 Work on this third stage will be completed post-award of a DCO. Both new sites and potentially appropriate existing infrastructure are being considered for the development of kittiwake artificial nesting sites. Existing infrastructure includes structures which may already have a suitable design or those which have the potential for their design to be updated and retrofitted making them suitable for kittiwake to nest on. Continued consideration will be given to ensuring that access for any monitoring and [adaptive] management is adequately facilitated through the detailed site selection process. With this in mind, the following additional ecological requirements based on the evidence provided in Annex 2 to the KCP: Ecological Evidence report, have been identified for refining site selection within Zone 1 and Zone 2.

Ecological (species-specific)

- Proximity to open water – preferred sites should ideally over-hang or be at least within 100 m of the open-water. For example, ports, jetties and piers are likely to provide suitable existing infrastructure where such opportunities exist;
- Protection from adverse weather conditions – primarily from the sun, wind and waves. Generally, sites where it is possible to provide multiple faces at different aspects would be more adept at providing potential nesters with protection; and
- Proximity to existing breeding sites – As outlined in Paragraph 3.3 and Table 3.1, potential sites within 1 km (i.e. within visible range) will be further weighted and preferred in order to increase the likelihood of new breeders finding and nesting on the structures developed as compensation.

Constraints

3.24 Additional constraints which may need to be considered during this stage have been outlined below. This work will continue to be undertaken post-award of a DCO. Further site-specific constraints may come to light as a result of further consultation with local planning authorities (LPAs), conservation groups and landowners, for example. These will be comprehensively evaluated and considered as they arise, and where necessary in consultation with the relevant stakeholder through the Hornsea Three Offshore Ornithology Engagement Group (see Section 1.2, of Appendix 2: Kittiwake Compensation Plan). Following initial consultation with LPAs and relevant local organisations, no significant barriers to the development of artificial nesting sites in the preferred locations have been identified at this time.

Environmental / Consenting

- Evolution of the coastline – As the proposed kittiwake artificial nesting site for Hornsea Three wind farm will be located in the onshore (preferably be located within 100 m of open water, see Constraints) to nearshore environment due consideration has and will continue to be given to the likely future evolution of the coastline. For example, shoreline management plans, erosion rates and new coastal development which might affect future coastal trends are being examined, and will be incorporated into the detailed site selection in consultation with LPAs;
- Statutory and non-statutory designated sites – As outlined in Table 3.1, although no showstoppers have been identified for statutory and non-statutory designated sites, any development of an artificial nesting site within such areas will be developed in consultation with the relevant responsible stakeholders, will be subject to a Habitat Regulations Assessment, and will be in harmony with current and reasonably foreseeable conservation plans and ecosystem connectivity;
- Planned future development – For example, local plans and sites in planning will be considered in consultation with the relevant parties such as the LPA and land interests; and
- Proximity to people / populated areas – structures should not be located in close proximity to residential and urban areas, where they might be considered a nuisance or undesirable and/or be disturbed.

4. Consideration of Alternatives

4.1 This section provides a consideration of alternative locations within the context of the UK and North Sea which have not been considered further for the development of artificial nesting structures. These are primarily based on ecological evidence, the advice of statutory nature conservation bodies, logistical challenges and commercial and legal challenges as set out below.

4.2 Artificial nesting structures which would contribute to the southern North Sea kittiwake population (Annex 2 to the KCP: Ecological Evidence) are preferred. Zones and sites on the west coast of the UK have not been considered for the development of artificial nesting structures as there is a lack of evidence suggesting that kittiwake are constrained by nest availability in this region. Zones and sites on the south coast of the UK have not been considered due to evidence of climate change related prey challenges to the existing kittiwake colonies located here, although limitations around the availability of data on productivity, dietary information and adult survival is acknowledged (McMurdo et al. 2016).

Offshore

4.3 There is evidence of kittiwakes nesting offshore, primarily on oil and gas platforms off the coastline of the Netherlands, Norway and the UK (McArthur Green, 2020). As such, this evidence suggests that developing a new structure, or re-purposing existing infrastructure (for example, decommissioned oil and gas platforms and meteorology masts) is likely to have success (Annex 2 to the KCP: Ecological Evidence report).

4.4 A considerable amount of work would need to be undertaken with stakeholders, such as the Oil and Gas Authority and the Crown Estate, to determine how an offshore asset such as an existing oil and gas platform could be transferred outside of the industry for which it was commissioned. The ongoing liabilities associated with any such platform, inclusive of decommissioning liabilities also requires further investigation and are likely to be a significant feasibility consideration. Due to the legal and commercial challenges relating to the transfer of existing offshore infrastructure and in light of timescales prescribed by the SoS for providing a kittiwake compensation plan, plus the existence of evidenced and feasible onshore locations with strong monitoring and research benefits, the Applicant does not propose to explore utilising existing offshore structures further at this stage.

4.5 As outlined in Stage 2: Comparative appraisal, logistical access to offshore sites for monitoring and management purposes is considerably more challenging than for an onshore structure. Siting artificial structures in the onshore to nearshore environment where they are more accessible for monitoring and management has clear advantages for the scope of the monitoring and management proposed in the Monitoring and Adaptive Management sections of the KCP. A preference for onshore/coastal locations has also been expressed by Natural England (in a workshop on 11 August 2020 – see Annex 1 of Appendix 5: Record of Consultation) in relation to potential artificial nesting sites for Hornsea Three wind farm and so offshore areas have not been considered further in the Applicant's site selection process.

5. Design Considerations

5.1 The final design of any artificial nesting structure, whether a new structure or adaption of an existing building or structure, will be developed alongside the detailed site selection process as it will be location specific. This will be an iterative process and will consider health and safety, as well as potential impacts related to landscape and visual impacts, historic environment, land use and marine/coastal processes. Where two structures are placed within one search zone, the intention is to use two different design concepts (see Design in Annex 2 to the KCP: Ecological Evidence) to maximise potential for colonisation (this is in line with advice received from Natural England – see Annex 1 of Appendix 5: Record of Consultation). The designs will be developed in consultation with the LPA, landowners and other relevant consultees where required. Design considerations will also form part of any Environment Impact Assessment if it is deemed necessary that the Applicant should need to provide an environmental statement to support a planning application for the development of any artificial nesting structures (see Section 7 for land and consenting rights).

6. Decommissioning

6.1 Any artificial nesting structures developed as compensation for the Hornsea Three wind farm are required to be in place for the duration of the operation of the offshore wind farm, as the impact which is being compensated for is operational. The decommissioning of artificial nesting structures will therefore be considered as part of the planning and consents process in consultation with the relevant planning authority. At this stage, options broadly consist of removing the structures outside the breeding season or leaving them in place with management responsibilities handed over to a responsible organisation. The details of the decommissioning will be finalised at a later stage, prior to decommissioning works commencing.

6.2 The decommissioning of these structures will accord with the latest available guidance and legislation and will be undertaken in consultation with the relevant stakeholders for example landowners, LPAs, statutory nature conservation bodies and local nature conservation groups, where appropriate.

7. Land Acquisition Strategy and securing necessary key consents

Securing land rights - onshore

7.1 The Applicant intends to secure voluntary agreements with landowners to purchase a freehold title or long leasehold interest for the land required for the artificial nesting sites, together with associated rights. It is the Applicant's intention to enter multiple option agreements, if considered appropriate in order to ensure maximum flexibility in determining the final site(s). If the Applicant fails to secure land rights by way of voluntary agreement then compulsory acquisition powers are available as outlined in Compulsory Purchase below.

7.2 The land acquisition strategy can be summarised as a two phased approach as outlined by Figure 7.1:

Phase One:

Phase Two:

Figure 7.1: Phases of the Hornsea Three land acquisition strategy.

7.3 The identification of existing successful artificial nesting sites (1a, Figure 7.1) and search zones (1b, Figure 7.1) has been undertaken using the process outlined in Section 3. Following these steps, chartered surveyors Dalcour Maclaren were commissioned to commence desktop and site investigations to assess the availability and suitability of specific sites within the preferred search zones (Figure 3.2 and Figure 3.3).

7.4 The key features in the suitability criteria described in Section 3 were applied with the objective of finding sites that would be appropriate in size for a minimum of two artificial nesting structures. Diligent enquiry has also been initiated at this early stage, prior to contacting landowners and occupiers at the next stage, using:

- Desktop investigations – to identify suitable geographical features and accessible areas free from development and other constraints;
- Preliminary site visits by public access (see paragraph 7.6); and
- Land Registry enquiries for information on the scale of ownership in possible location which would be suitable for development.

Phase 1(c): Land Referencing

7.5 Applying the suitability criteria and the site selection processes outlined in Section 3, the Applicant has identified a total of 760 registered freehold interests and 316 registered leasehold interests in the two search zones. This base information has been reviewed and 15 landowners have been shortlisted based on the size of their ownership in the two search zones, as this is likely to widen the scope of opportunity to explore multiples suitable locations within a landholding for a minimum of two artificial nesting structures. The Applicant intends to make initial contact with these parties to commence commercial discussions and to understand the status of the land in the holdings in the coming weeks, while it continues to shortlist preferred locations.

7.6 During August and September 2020, the Applicant carried out site visits to a number of the shortlisted sites within both search zones in order to investigate ground conditions, geographical constraints and general suitability. This was achieved by visiting locations accessible to the general public.

7.7 At a UK wide level, Ørsted has ongoing and constructive dialogues on a range of commercial projects with relevant stakeholders (for example, Associated British Ports as harbour authority for the Port of Lowestoft, Able, PD Ports, South Tees Development Corporation, Hartlepool Borough Council and East Suffolk Borough Council). It is the Applicant's intention to meet with such relevant parties to investigate further the suitability of specific sites for artificial nesting structures should these be within appropriate locations fulfilling the ecological criteria.

7.8 The Applicant has further instructed chartered surveyors and solicitors to represent it in negotiations and to engage with landowners and occupiers (as described in Phase 1(d): Shortlisting sites below) in the coming months. When it commences, this engagement will continue to run in parallel with the detailed site selection process (Stage 3 above).

Phase 1(d): Shortlisting sites

7.9 As a part of the ongoing detailed site selection process (as set out in Stage 3) diligent enquiry is being undertaken with the aim of enabling the Applicant to contact and consult with relevant landowners and occupiers to arrive at a shortlist of suitable sites. The purpose of this engagement will be to:

- Establish the availability and suitability of the land forming part of their holding;
- Engage on the design of the artificial nesting structures and the creation of rights and restrictive covenants for the protection of the proposed structures;
- Discuss commercial terms and land value; and
- Identify any practical barriers to the development of an artificial nesting site, identified through local knowledge.

7.10 The Applicant would only seek to progress with sites that are suitable not only according to the site selection criteria outlined in Section 3 but also taking into account any relevant "on the ground" information provided by landowners and occupiers which might give rise to concerns about the potential viability of a nesting structure on the site in question. For example, individual landowners may have a view on which particular areas of their estate might be suitable for nesting structures or knowledge about the potential presence of predators.

7.11 It is also possible that through this engagement process additional land may be identified as suitable or potentially viable for the siting of artificial nesting structures. It is important to recognise that the overall site selection and land acquisition process, directed in the first instance by desktop investigation, will be an iterative process that is focused on the desired outcome of providing effective compensation.

Voluntary Agreements

7.12 The Applicant's primary approach to securing any site(s) shortlisted as a part of the selection process (see Section 3) will be to enter into voluntary agreements with landowners and occupiers. The detailed terms of such agreements will be determined by the outcome of commercial negotiations between the parties in question. Generally, the Applicant will be seeking:

- An initial option agreement that grants the Applicant exclusivity over a specified area of land for a set period with the ability to call on the land transactions to permit the installation and maintenance of the artificial nesting structures;
- Either the freehold purchase of land and/or the grant of a long leasehold interest;
- Rights of access and to install service media to permit initial construction and ongoing maintenance, repair and monitoring of each structure;
- Restrictive covenants to protect the bird population on each structure, including restrictions on development and disturbance on the adjoining land; and
- Collaboration with landowners and occupiers in respect of predator deterrents/control measures on each artificial nesting site and adjoining land.

7.13 The Applicant will secure a term or option duration that secures the land for the operational lifetime of the offshore wind farm and will seek to secure the maximum flexibility to deliver the sites in a timely manner and for the duration required by the conditions of the DCO.

Compulsory Purchase

7.14 The Applicant has obtained legal advice confirming that if necessary, compulsory acquisition powers can be obtained for the acquisition of the artificial nesting sites. In order to be successful in applying for these powers, the Applicant will need to satisfy the compulsory acquisition tests i.e. there must be a compelling case in the public interest and the rights sought must be necessary and proportionate. It will also be necessary to demonstrate that alternatives to compulsory acquisition have been considered and reasonable attempts to secure the necessary land rights by way of voluntary agreement have been exhausted.

7.15 The Applicant holds a Generation Licence pursuant to Section 6 of the Electricity Act 1989 ('the 1989 Act') and can therefore promote a compulsory purchase order under the 1989 Act. If that were pursued it would be necessary to demonstrate that the delivery of compensatory measures is a purpose connected with activities related to electricity generation. This is the case as the delivery of the artificial nests will be required by the DCO as a compensation measure for Hornsea Three's impact to the FFC SPA.

7.16 The Applicant may also be able to work with the LPA using the latter's powers of acquisition under the Town and Country Planning Act 1990, but this is not currently the preferred route. The 1989 Act is considered the most expedient route for the Applicant should it have to rely on compulsory powers instead of voluntary agreements, or a combination of both.

Securing key consenting rights - onshore

Town and Country Planning Act (1990) (the '1990 Act')

7.17 In parallel with securing the requisite land rights the Applicant will assess whether it is necessary to submit a planning application for the carrying out of development (under Section 57(1) of the 1990 Act). If an environmental statement is required, then the time period for granting permission is sixteen weeks. The Applicant will engage with the LPA(s) using their pre-application advisory service before finalising a location in order to assess the likelihood of success of a proposed application in light of local planning policy. The Applicant's preliminary view is that although the development will be screened, it is likely that an environmental statement will not be required. If that is the case, the time period for granting any requisite permission would be eight weeks. It is acknowledged that additional consents may also be required, such as listed building consent if the intention is to build or adapt an existing structure in the vicinity of a listed building.

Securing land/ seabed rights - intertidal

Voluntary agreement

7.18 The Crown Estate (TCE) owns and is therefore responsible for around half of the foreshore around England, Wales and Northern Ireland. It is in this capacity TCE has the right to lease and licence these areas for a wide range of uses. In other cases where the foreshore is not registered to TCE, it is likely to be in TCE ownership but not registered or held in private ownership. Private rights not associated with TCE would be secured via the processes outlined in Securing land rights - onshore.

7.19 It is understood that should the Applicant wish to locate a structure in the foreshore owned by TCE, a lease would be required from TCE. The Applicant has begun initial engagement (Appendix A of this document) and will continue to engage with TCE in order to negotiate an Agreement for Lease with the ability to exercise the option prior to construction. Engagement undertaken with TCE to date has suggested they are receptive to the Applicant seeking such rights and would welcome further consultation with information on the specific sites and more detailed design.

Securing key consenting rights – intertidal and nearshore

Marine and Coastal Access Act 2009 ('the 2009 Act')

7.20 Part 4 of the 2009 Act states that a person may only carry on a licensable activity (or cause or permit any other person to carry on a similar activity) in accordance with a marine licence granted. It is unlikely that an exemption will apply to the requirement for a licence and the Applicant therefore will apply for a marine licence as soon as a suitable location is identified if within the foreshore. It is understood that the MMO aim to decide applications within thirteen weeks of validation of the application post submission.

Coastal Concordat

7.21 Marine plans extend from the land based MHWS to the furthest extent of the UK's marine jurisdiction. The boundaries of LPAs extend to MLWS. This results in a physical overlap of the marine with the terrestrial planning system in the area between the MHWS and MLWS. For marine and terrestrial planning to be integrated the respective authorities needed to work together to ensure consistency. In November 2014 a Coastal Concordat for England was published to ensure a single regulator is identified to oversee the co-ordination of licencing and permitting for new coastal projects. If a nesting structure is planned for the nearshore overlap area, the Applicant will engage at an early stage with both the MMO and the relevant LPA to ensure that all parties concerns are addressed and a consistent approach to granting the key consents is achieved. It is acknowledged that there is a possibility that a consent pursuant to the 1990 Act and the 2009 Act may be needed. The Applicant has received reassurance from the MMO that they would work with the LPA to ensure any additional legislative requirements relating to the environment or habitats would not require the Applicant to duplicate documents. In addition, the MMO has provided reassurance that the terms of any consents would be consistent.

Phase 2: The next steps for land acquisition

7.22 The Applicant has commenced the second phase of its land acquisition strategy (see Voluntary Agreements, and Figure 7.1). It has identified the two search zones based on the site selection process and once initial contact with some key stakeholders is made in the coming months, the Applicant is confident it can establish a meaningful and constructive dialogue with third party landowners and occupiers to deliver artificial nesting sites. The next stage will be to make contact with all shortlisted landowners and occupiers to start detailed discussions regarding the Applicant's requirements for artificial nesting sites, and to negotiate commercial agreements. The short list of sites within the search zones may evolve over time, as discussions progress with stakeholders such as statutory nature conservations bodies, interested parties, LPAs and local groups, as further local knowledge and information comes to light.

7.23 Ørsted, the Applicant's parent company, has an established track record of reaching agreement with landowners and securing the land required for its offshore wind farm projects. The Applicant has voluntarily completed 69 option agreements for the onshore export cable route, representing 91% of the land required. This includes the land required for the onshore substation and the landfall.

7.24 On the basis of progress to date, and the existing strong commercial relationships Ørsted has with key stakeholders and landowners, the Applicant is confident that it will be able to secure all the land and rights required to establish suitable kittiwake artificial nesting sites either by entering into voluntary agreements or exercising the compulsory powers available to it.

8. Funding

8.1 The Applicant has identified the costs associated with the development, construction, operation and decommissioning of the proposed compensation measure. These costs have been included within a detailed Funding Statement (Appendix 4 to the Applicant's Response to the Secretary of State's Minded to Approve Letter). This statement is supplemental to the Funding Statement from May 2018 submitted as part of the suite of Application documents. The Funding Statement(s) outline the overall project cost based on the capital expenditure and operational expenditure assumptions in the "Review of Renewable Electricity Generation Cost and Technical Assumptions" (DECC, 2016). The Funding Statement(s) also detail the corporate structure and a robust explanation to allow the SoS to conclude that the necessary funding to deliver the compensation measure can be secured.

8.2 In relation specifically to the land acquisition, the Applicant has instructed and received expert valuation advice from chartered surveyors Dalcour Maclaren on the costs associated with land acquisition and potential claims for compensation arising from the installation of onshore artificial nesting sites. As part of their assessment, the Applicant's valuers have appraised the value of land in the two search zones by reference to recent comparable purchases and an average land value assessment. The Applicant's valuers have also assessed the cost of any potential claims under the compensation code (should compulsory acquisition powers be needed) as a result of the impact of construction and operation of the installations proposed, without having detailed design information at this stage. It is their advice that in respect of claims for compensation, whilst they think it is unlikely that third party claims for disturbance would succeed, they propose a modest contingency be put aside by the Applicant in addition to the value of land acquisition for the structures themselves and the associated rights.

9. Summary and Conclusions

9.1 This document outlines the site selection process including constraints and requirements for the location of effective artificial nesting structures as compensation for the Hornsea Three wind farm.

9.2 Natural England have advised the Applicant that they are broadly satisfied with the two identified zones (Zone 1 – East Anglia and Zone 2 – North East), and broadly aligned with the principles used to narrow the search zones to specific locations. These zones are supported by ecological evidence (Annex 2 to the KCP: Ecological Evidence report) and are suitable search areas for artificial nesting platforms. Detailed site selection and design will continue to be developed with the intention of siting two structures within each zone. Both installing a new structure and adapting existing infrastructure has and will continue to be considered in the detailed site selection process to come. Further site selection work will continue to be developed in consultation with the Offshore Ornithology Engagement Group (OOEG) as well as landowners, LPAs and local nature conservation groups.

9.3 The work undertaken to date implementing the land acquisition strategy has been outlined, along with the next steps and a pathway for securing the necessary land and consenting rights. The Applicant has clearly demonstrated to the SoS that it is capable of securing the necessary land and consenting rights which are likely to be necessary to construct artificial nesting structures, whilst also outlining the next steps should Hornsea Three wind farm be granted development consent.

10. References

Coulson, J.C. (2011) The Kittiwake. T. & A.D. Poyser, London.

Coulson (2017) Productivity of the Black-legged Kittiwake Rissa tridactyla required to maintain numbers, Bird Study, DOI: 10.1080/00063657.2016.1274286.

DECC (2016) Review of Renewable Electricity Generation Cost and Technical Assumptions; Study Report, June 2016, Department of Energy and Climate Change.

Jensen, H., Rindorf, A., Wright, P. J., and Mosegaard, H. (2011) Inferring the location and scale of mixing between habitat areas of lesser sandeel through information from the fishery. – ICES Journal of Marine Science, 68: 43–51.

Lewis, S., Wanless, S., Wright, P.J., Harris, M.P., Bull, J. & Elston, D.A. (2001). Diet and breeding performance of black-legged kittiwakes Rissa tridactyla at a North Sea colony. Marine Ecology Progress Series, 221, 277–284.

MacArthur Green (2013) Evidence review to support the identification of potential conservation measures for selected species of seabirds. Published 30 June 2013.

MacArthur Green (2020) Norfolk Vanguard Offshore Wind Farm Habitats Regulations Derogation, Provision of Evidence. Appendix 1 – Flamborough and Filey Coast Special Protection Area (SPA) - In Principle Compensation Measures for Kittiwake. Norfolk Vanguard Limited. Document Reference: ExA; IROPI; 11.D10.3.App1.

McMurdo Hamilton, T., Brown, A. and Lock, L. (2016). Kittiwake declines in southern England. British Birds 109, 199-210.

Annex 1– Summary of relevant consultation

Table A.1 provides a summary of the consultation undertaken in relation to site selection and the acquisition of land/seabed rights for artificial nesting sites. Further information on relevant consultation undertaken to date is provided in Appendix 5: Record of Consultation.

Table A.1: Summary of consultation undertaken in relation to site selection and land/seabed acquisition for kittiwake compensation for Hornsea Three wind farm.

Stakeholder	Date	Type	Meeting Summary
TCE	21 July 2020	Call	Initial meeting to discuss licencing and leasing requirements for any artificial nesting structures within and outwith 12 nm under the Energy Act (2004). TCE confirmed provision of letter of comfort, if required, to demonstrate that they are able to provide rights within 12 nm.
MMO	28 August 2020 and 16 September 2020	Email / Call	MMO confirmed that the jurisdictional divide is MLWS, below which the MMO alone has jurisdiction. The Coastal Concordat is intended as a cross-jurisdictional collaboration tool, were a structure to fall both above and below MHWS. A coastal structure may trigger a jurisdictional overlap between LPAs and the MMO, where the MMO may invoke a Coastal Concordat with the relevant LPA. For example, for structures such as piers, seas walls and jetties. The MMO expressed that were an artificial nesting structure to fall under their own jurisdiction their preference would for it to sit under a separate marine licence. The MMOs initial advice is that the development will be screened out for EIA purposes.
OGA	28 July 2020	Call	Initial meeting to discuss the anticipated requirements for accessing and transferring the ownership of end-of-life offshore platforms for re-purposing as artificial nesting habitats. Although operators are generally open to discussing the re-purposing of structures, there are health and safety considerations which need to be addressed, especially should the structures need to be accessed for monitoring or maintenance. Much work would also need to be undertaken, in consultation with specific operators, to understand the current state of repair, as well as modelling the likely future deterioration of such structures should they need to be reinforced and retrofitted.

Stakeholder	Date	Type	Meeting Summary
Natural England, Defra, RSPB, MMO	11 August	Call	Initial workshop to discuss compensatory measures for Hornsea Three.
Natural England, Defra, RSPB, MMO	25 August	Call	Workshop to discuss progress on compensatory measures for Hornsea Three.
Stockton-on-Tees Borough Council	7 September 2020	Email	Initial consultation on the potential for kittiwake artificial nesting locations in the Tees Estuary. Stockton advised the Applicant to contact the Industry Nature Conservation Partnership who would be able to identify opportunities for habitat improvement in this area.
East Suffolk Council	4 September 2020	Email/call	Initial discussion on planning and ecological constraints in the Lowestoft and Sizewell area. East Suffolk noted that there were no major barriers to the delivery of artificial nesting structures in this area. East Suffolk provided initial advice on siting a structure and the relevant planning considerations (AONB considerations, shoreline management plan, potential for unauthorised access).
Hartlepool Council	9 September 2020	Email/call	Initial conversation to discuss the potential for kittiwake artificial nesting structures in the Tees Estuary or in the vicinity of Steetley Pier. Hartlepool Council were supportive and provided advice on location (10 September 2020), and further advised the Applicant to contact the Industry Nature Conservation Association.
Scarborough Borough Council	22 September 2020	Call	Initial call to discuss current and future plans for kittiwakes that are known to be nesting in Scarborough. Information on current council funded plans to deter kittiwake from nesting in populated areas was given, which fit in to a wider public health related initiative being driven by feedback from residents.
Industry Nature Conservation Association	17 September 2020	Call	Initial conversation to discuss the potential suitability for kittiwake artificial nesting in the Tees Estuary. Advice from an ornithologist with local knowledge of the area was given on specific locations and contacts were provided.