

Lesser Black Backed Gull Implementation and Monitoring Plan

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Revision Summary				
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1	31/05/2023	GoBe Consultants	Rachel Devine	Ian Mackay
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Abbreviations

AOE	Alde-Ore Estuary
AON	Apparently occupied nests
BEIS	Department for Business, Energy & Industrial Strategy
DESNZ	Department for Energy Security and Net Zero
LBBG	Lesser Black-Backed Gull
LBBCSG	Lesser Black-Backed Gull Compensation Steering Group
LBBIMP	Lesser Black-Backed Gull Implementation and Monitoring Plan
DCO	Development Consent Order
EIA	Environmental Impact Assessment
MMO	Marine Management Organisation
NE	Natural England
RSPB	Royal Society for the Protection of Birds
SoS	Secretary of State
SPA	Special Protection Area

1. INTRODUCTION

East Anglia TWO and East Anglia ONE North offshore windfarm projects are being developed by East Anglia TWO Limited and East Anglia ONE North Limited respectively as part of the ScottishPower Renewables project portfolio. Applications for development consent were submitted to the Planning Inspectorate in October 2019, with consents for both projects being awarded on 31st March 2022. East Anglia ONE North and TWO are discrete projects with individual Development Consent Orders (DCOs); however, they share a portion of the offshore cable corridor, have the same landfall location, and share an onshore cable route. East Anglia ONE North will comprise of up to 67 wind turbines and East Anglia TWO will be comprised of up to 75 wind turbines, with both East Anglia ONE North and TWO Projects located in the Southern North Sea approximately 36 km and 32 km (respectively) from the Suffolk coast.

Consents for East Anglia ONE North and TWO were granted on the basis of the projects delivering compensation for the Lesser Black-Backed Gull (LBBG) as a feature of the Alde-Ore Estuary (AOE) Special Protection Area (SPA).

This document sets out the LBBG Implementation and Monitoring Plan (LBBIMP) for the delivery of the East Anglia ONE North and TWO LBBG predator control compensation – hereafter referred to as the predator control LBBIMP. ScottishPower Renewables are working in collaboration with Vattenfall, who are developing the Norfolk Boreas and Norfolk Vanguard Offshore Windfarms (hereafter referred to as the “Norfolk Projects”) in the implementation of this compensation. Further details on the ScottishPower Renewables and Vattenfall collaboration are provided in Section 1.2.

1.1. Consent Requirements

This predator control LBBIMP has been prepared pursuant to Paragraph 3 of Schedule 18, Part 2 of the East Anglia ONE North DCO and Paragraph 3 of Schedule 18, Part 2 of the East Anglia TWO DCO; both hereafter referred to as the “compensation schedules”. This predator control LBBIMP aims to discharge the following requirements of the Projects compensation schedules summarised below:

Following consultation with the LBBCSG, the LBBIMP must be submitted to the Secretary of State for approval (in consultation with the MMO, the local planning authority for any land containing the predator control fencing, and the relevant statutory nature conservation body). The LBBCSG must be consulted further as required during the approval process. The LBBIMP must be based on the strategy for lesser black-backed gull compensation set out in the lesser black-backed gull compensation plan and include—

(a) details of the location where compensation measures will be deployed, why the location is appropriate ecologically and likely to support successful compensation, and details of agreements demonstrating how any land and/or rights will or have been secured to deliver the ecology objectives of the LBBIMP;

(b) details of designs of any predator control fencing including the type of fencing and area and location of enclosure, and details of any other habitats management measures;

(c) an implementation timetable for delivery of any predator control fencing and any other habitat management measures that ensures relevant compensation measures are in place to allow four full lesser black-backed gull breeding seasons prior to the operation of any wind turbine generator forming part of the authorised development;

(d) details of the proposed ongoing monitoring of the measures including: survey methods; survey programmes; success criteria; recording of LBBCSG consultations and project reviews; adaptive management measures and details of the factors used to trigger alternative compensation measures and/or adaptive management measures.; (e) details of the maintenance schedule for any predator proof fencing; and

(f) details of the work in respect of ornithological by-catch measures as set out in Appendix 7 of the Offshore Ornithology Without Prejudice Compensation Measures, that could support practical management measures to reduce ornithological by-catch¹, and which would be undertaken alongside or in place of the predator control fencing.

¹ East Anglia ONE North and TWO will be developing an updated Plan of Work and a second LBBIMP in respect of ornithological by-catch research project as set out in Appendix 7 of the Offshore Ornithology Without Prejudice Compensation Measures (thereafter referred to as ‘by-catch LBBIMP’).

As the intention is to deliver the compensation for both East Anglia ONE North and TWO projects together, a single predator control LBBIMP has been drafted to discharge the relevant conditions of the compensation schedules for both DCOs.

1.2. Collaborative Approach to Compensation

The Norfolk Projects are also required to deliver LBBG compensation. Vattenfall and ScottishPower Renewables have entered into a cooperation agreement and are working collaboratively to deliver a combined predator control solution to meet the LBBG compensation requirements for their respective projects. Due to the requirement for a greater level of compensation by Vattenfall to offset a greater loss of adult birds per annum (2.6 and 2.1 adult birds for Norfolk Vanguard and Boreas, respectively), Vattenfall have taken a secretarial lead role in the consultation and development of the predator control LBBIMP. The proposed compensation would provide sufficient capacity for all four of the ScottishPower Renewables and Vattenfall windfarms. ScottishPower Renewables has prepared this predator control LBBIMP in line with the approach developed by Vattenfall in their approved LBBIMP (approved by the Department for Business, Energy and Industrial Strategy (BEIS²), on 26 January 2023). However, LBBG predator control compensation for the Norfolk Projects (including any related monitoring and adaptive management measures) has been approved separately and this LBBIMP does not form part of that approval. Further details on consultation are provided in Section 1.3 and details of the development of the plan are provided in Section 1.4.

1.3. Consultation

Under the Norfolk Projects and East Anglia ONE North and TWO consents, there are requirements to set up LBBG Compensation Steering Groups (LBBCSG) to discuss and agree the predator control LBBIMP. A LBBCSG was set up by Vattenfall in which details of the Norfolk Projects predator control LBBIMP were discussed; East Anglia ONE North and TWO were in attendance for the third and fourth LBBCSG meetings (12th August 2022 and 5th October 2022, respectively). As noted above, the Norfolk Projects took a secretarial role in the LBBCSG and led in the consultation. It is important to note, that the LBBCSG agreed that any discussions and subsequent agreements on compensation that were made at the Norfolk Projects' meetings are applicable for East Anglia ONE North and TWO (agreed during meeting three, on 12th August, 2022, see Annex 1 and Plan of Works, EA1N-GEN-ENV-PLN-IBR-000002 and EA2N-GEN-ENV-PLN-IBR-000002 for East Anglia ONE North and TWO, respectively). Further details of this are provided in the Agreement Log of this predator control LBBIMP. Details of consultation can be found in the Norfolk Projects Consultation Report³ which can be found on the PINs website. The East Anglia ONE North and TWO projects' project specific Plan of Works has been approved by Department for Energy Security and Net Zero (ESNZ), thereby confirming that the consultation led by Vattenfall was applicable to East Anglia ONE North and TWO.

1.3.1. LBBCSG Members

The LBBCSG was comprised of representatives of East Anglia ONE North and TWO, the Norfolk Projects, Natural England (NE), the Marine Management Organisation (MMO), East Suffolk Council (ESC) and the Royal Society for the Protection of Birds (RSPB).

1.3.2. East Anglia ONE North and TWO Consultation

For ScottishPower Renewables to wholly discharge their conditions, an East Anglia ONE North and TWO project specific LBBCSG has been established (including the same members of the Norfolk Projects' LBBCSG). ScottishPower Renewables will liaise with this LBBCSG via email and allow members to review and comment on the East Anglia ONE North and TWO predator control LBBIMP and supporting documents prior to formal submission to the SoS. This process is to be followed as previously agreed with the LBBCSG.

² Note, as of February 2023, BEIS is no longer active and has been replaced by the Department for Energy Security and Net Zero. (DESNZ). However, since the approval of the Norfolk Projects' LBBIMP, the department was under still recognised as BEIS at the time. Therefore, in this instance, it has been referred to throughout this document under the title as the department name at the time of approval, then referenced as ESNZ throughout the rest of this document.

³ [EN010079-004562-The Norfolk Projects LBBGIMP Annex 1 Consultation report .pdf \(planninginspectorate.gov.uk\)](https://planninginspectorate.gov.uk/EN010079-004562-The%20Norfolk%20Projects%20LBBGIMP%20Annex%201%20Consultation%20report.pdf)

Terms of reference as agreed with the East Anglia ONE North and TWO LBBCSG members are detailed in the LBBG Steering Group Plan of Work (PoW, EA1N-GEN-ENV-PLN-IBR-000002, EA2-GEN-ENV-PLN-IBR-000002).

ScottishPower Renewables will utilise the Agreement Log as prepared by Vattenfall and will update it with any comments received specifically as part of the East Anglia ONE North and TWO consultation.

1.4. Document Development

This predator control LBBIMP, for discharging the relevant conditions of the East Anglia ONE North and TWO consents, has been based on the final iteration of the Norfolk Projects' predator control LBBIMP (PB5640.009.0005 Version 1F) which was reviewed by the LBBCSG and submitted to the SoS in October 2022, with approval provided in January 2023.

Version one of this East Anglia ONE North and TWO predator control LBBIMP has been submitted for review to the East Anglia ONE North and TWO LBBCSG prior to formal submission to the SoS.

1.5. Document Structure

Summarised below is the document structure and all the relevant Annexes that accompany the submission of this predator control LBBIMP.

Section	Title	Detail
1	Introduction	Section introduces the project, the purpose of the predator control LBBIMP including consent requirements and progress to date.
2	Summary of Proposed Compensation Measures	Outlines the proposed compensation measures.
3	Location of Compensation Measures	Details the area that the LBBG nesting structure will be constructed and why this location was considered.
4	Landowner Agreements	Outlines the option agreement for lease.
5	Compensation Measures	Provides the key aspects of the fence design.
6	Delivery Timetable	Outlines the programme for construction and implementation of compensation.
7	Maintenance Schedule	Details the maintenance plan of the nesting structure post construction.
8	Mammal Monitoring	Outlines the monitoring required to track mammal and predator activity around the compensation site.
9	Monitoring and Reporting	Outlines the ongoing monitoring and reporting aims.
10	Compensation Performance - Monitoring and Adaptive Management	Discusses the need for annual reporting and describes how the success of the compensation delivery is measured, as well as potential adaptive management measures.
11	LBBG Steering group minutes	Details of discussions with LBBG steering groups.
12	References	

1.5.1. The Final Submission Structure

The final iteration of the predator control LBBIMP for submission to the SoS will include an Agreement Log which reflects the topics of discussion between members of the LBBCSG and the Norfolk Projects and East Anglia ONE North and TWO. The Agreement Log outlines topic specific matters agreed, not agreed and any actions to resolve areas of disagreement. This has been provided to the LBBCSG for review prior to formal submission to the SoS;

Note, the Norfolk Projects also submitted the following Annexes alongside their LBBIMP which are applicable to the submission of the East Anglia ONE North and TWO predator control LBBIMP. These Annexes can be accessed via the Planning Inspectorate (PINS) website; hyperlinks have been provided in the footnotes.

- **Site Suitability Report:** Summary of a habitat survey carried out in June 2022 determining site suitability for LBBG nesting⁴.
- **Compensation plan:** Outlines specific details of LBBG compensation measures (e.g. location and design)⁵.
- **Consultation Report:** Reports on the consultation which has occurred to date in order to develop the LBBG compensation (led by the Norfolk Projects³).

2. SUMMARY OF PROPOSED COMPENSATION MEASURES

2.1. Predator Control Measures

The general approach to compensation was set out in the Offshore Ornithology Without Prejudice Compensation Measures documents. This confirmed that measures to control nest predation within the AOE SPA, and hence increase productivity within the SPA population, would be the most effective means of compensating for in-combination effects on LBBG populations.

Numbers of LBBG breeding at the AOE SPA have declined dramatically since 2000. Although part of that decline could be related to reductions in the availability of fisheries discards (Sherley et al. 2020), the primary cause of decline has been attributed to impacts of predation by foxes in the colony. At Orford Ness, in 2000, 75% of nests (in a colony of 23,000 pairs), failed due to fox predation (Mavor et al. 2001). Breeding numbers at Orford Ness fell from 24,000 pairs in 2001 to 6,500 pairs in 2002 due to fox activity at the colony because fox control was not carried out there in 2002 (Mavor et al. 2003). Numbers of LBBG breeding at Orford Ness dropped to a few tens of pairs, with, until recently, all of these nesting on the rooftops of buildings there, which further supports the hypothesis that this species has become unwilling to nest on the ground at Orford Ness because of the impact of mammal predators (notably foxes) on breeding success. The birds have started to nest at the southern end of Orford Ness in recent years, with approximately 200 pairs now present, although this colony is understood to be subject to human disturbance. These birds appear to have expanded from the adjacent Havergate Island colony, managed by the RSPB, which has averaged around 1,700 pairs over the last ten years. This colonisation began during the Covid-19 lockdown and the associated lack of human disturbance. This and reduced fox numbers at the southern end of Orford Ness is thought to have made colonisation a viable option. It may also be likely that non-predatory but disturbing species such as Chinese water deer are present in much lower numbers in this area owing to the much less suitable habitat (although this has not been confirmed).

Reduction in predation and disturbance from non-predatory mammals will be achieved through the creation of six hectares (ha) of fenced enclosure at Orford Ness. A predator exclusion fence will be installed to achieve effective exclusion of foxes, other mammalian predators and non-predatory but disturbance causing species (e.g. deer and hare). The predicted magnitude of collision mortality for which compensation is required by the East Anglia ONE North and TWO projects is small (the combined annual mortality will be in the order of 0.3 and 1.6 for East Anglia ONE North and TWO, respectively and 2.1 and 2.6 for Norfolk Boreas and Norfolk Vanguard respectively – see Table 2 1). In reality the proposed area which will be protected from mammals

⁴ [EN010087-003019-The Norfolk Projects LBBIMP Annex 2 Site Suitability Survey Report.pdf \(planninginspectorate.gov.uk\)](#)

⁵ [Section 4.6.2 of the Lesser Black-Backed Gull Compensation Plan \(planninginspectorate.gov.uk\)](#)

(6ha) will be capable of supporting a breeding colony which could produce many times more adult birds than required to offset the predicted losses of adult birds.

Table 2-1 LBBG compensation requirements for East Anglia ONE North and East Anglia TWO

Site	Predicted LBBG loss due to collision	3:1 ratio (required compensation)
East Anglia ONE North	0.3	0.9
East Anglia TWO	1.6	4.8
Norfolk Boreas	2.1	6.3
Norfolk Vanguard	2.6	7.8
Total	6.6	19.8

3. BY-CATCH RESEARCH PROJECT

East Anglia ONE North and TWO will be developing a standalone Plan of Work, including Terms of Reference, and a single Implementation and Monitoring Plan covering all species of concern in respect of the ornithological by-catch research project, in consultation with the by-catch Steering Group, to be submitted to the SoS in due course.

4. LOCATION OF COMPENSATION MEASURES

Potential location(s) for the proposed predator proof enclosure were presented at the first steering group meeting, to enable discussion and input to final site selection (as seen in Figure 4-1).

Following this, a site visit was conducted with the landowner and representatives of NE to discuss the proposed sites. It was agreed that the proposed location appeared to be appropriate but that a site suitability survey should be conducted, focused primarily on the physical structure of the vegetation, to confirm this. The survey scope was reviewed by NE and the RSPB and refined in line with the comments received. The survey was subsequently conducted in June 2022 and identified areas within the proposed site that are suitable for LBBG nesting with no intervention required, as well as areas where simple vegetation management would create suitable nesting conditions. To estimate possible nesting numbers a nest density of 0.04/m² has been used (Ross-Smith *et al.* 2015). Allowance has also been made for the fact that not all of the area within each suitability classification would be expected to be utilised. The survey report, including assumptions for estimating nest densities, is included in the Site Suitability Survey Report⁴ and the conclusions are summarised here:

- The habitat at the site was reported to be very similar to that used by breeding LBBG when the population was at its peak (in the early 2000s), comprising structured grassland which was a preferred habitat;
- Proximity of LBBG breeding on the roof of nearby buildings was noted and considered to be an important feature for rapid colonisation following fence installation;
- Approximately 0.7ha was estimated to be suitable for nesting with no modifications (which could accommodate up to 165 pairs);
- Approximately 1ha would require minimal management (cutting back small patches of grass to create short sward which could accommodate up to 230- 340 pairs); and
- Approximately 4ha would require moderate management (denser sward requiring more cutting to create short sward patches which could accommodate up to 1,000-1,500 pairs).

The minimal management areas are estimated to require no more than 2 days of grass cutting per year, using handheld trimmers. The moderate management areas are estimated to require up to approximately 20 days per year using handheld trimmers, which will include removal of cut material.

To improve the understanding of LBBG preferred nesting conditions it is proposed that in the first year, vegetation will be cut in one minimal management area (Figure 4-2, compartment 7) and one moderate

management area (Figure 4-2**Error! Reference source not found.**, compartment 11) to inform better understanding of LBBG preferred nesting conditions and future management. Compartment 7 would be trimmed to obtain a **patchwork of short (target ≤ 10 cm height)** and longer sward heights to complement the existing suitable habitat in adjacent compartment 10 (it is suggested that this should result in approximately equal areas of short and long sward). Area 11 would be divided into two approximately equal sections, with one half cut to around **20 cm** throughout and the other half trimmed to create a patchwork of short and long sward heights equivalent to those in compartment 7 (i.e., ≤ 10 cm height). The areas to be cut would be marked out in advance for the contractor, to ensure an **appropriate combination of sward heights is obtained**, providing adults with opportunities to nest against features (objects or patch edges) and for chicks to have stands of grass with a longer sward height to take cover in. A site visit in autumn 2022 was used to mark out management areas.

Following the first breeding season, and the results obtained, **cutting management will be reviewed**, and a cutting plan proposed for discussion with the LBBCSG.



Figure 4-1: Proposed LBBG compensation breeding site (yellow boundary) and access route (orange line)



Figure 4-2 Proposed LBBG compensation breeding site (red boundary) with sub compartments identified during site suitability survey. Compartments considered suitable with no management (2,10), within minimal management (7, 12) and moderate management (1,3,4,5,6,8,9).

5. LANDOWNER AGREEMENTS

On 29th July 2022 East Anglia ONE North Limited and East Anglia TWO Limited (along with Norfolk Vanguard Limited and Norfolk Boreas Limited) entered into a lease with Cobra Mist Limited in relation to the land (within the red line shown in Figure 4-2Error! Reference source not found.) lying to the South and East of the River Ore, Orford and Orfordness (forming part of the property registered at HM Land Registry under title number SK170668) (the "Property"). The lease is for a term of 40 years beginning on, and including 1st August 2022 and ending on, and including 31st July 2062.

The Permitted Use of the Property is for LBBG nesting as well as the erection, use, repair, renewal, replacement and removal of the Installations (as defined below) and the works of construction, maintenance and repair of the Installations. It also includes other measures and strategies as may be required pursuant to the LBBG Compensation Measures. These are defined as the measures and strategies to compensate for the predicted loss of LBBG as a result of the project DCOs and/or the LBBG implementation and monitoring plan or plans (including any modification, amendment or re submission thereof approved in writing by the SoS).

The lease gives East Anglia ONE North and TWO (in collaboration with the Norfolk Projects) the right to carry out the works of construction, maintenance and repair of the Installations on the Property, as well as to install, operate, maintain, repair, renew, remove, replace and use the Installations on the Property. Within the lease Installations are defined as the installations, equipment or erections detailed in or compliant with the Installations Specification. The Installations Specification includes a predator exclusion fence, mammal monitoring equipment, playback equipment, dummy birds, ditch-crossing structures, a small shed and a ground mounted or roof mounted (on shed) solar array of a scale commensurate with providing power to the above mentioned equipment. It also includes any other installations, equipment or erections required or to be used for the purpose of or ancillary to the Permitted Use on the Property and approved by the Landlord.

East Anglia ONE North and TWO are also granted a right of way over the access forming part of the Landlord's Retained Land, namely the property registered at HM Land Registry under title number SK170668, conditional on locking the gates immediately following use.

The lease gives East Anglia ONE North and TWO the right to construct and use temporary lay down areas and construction compounds on the Property for the purposes of carrying out the works and also the right to carry out tests and surveys for the purposes of assessing the suitability of the Property for the use for and as LBBG nesting.

East Anglia ONE North and TWO are also granted the right to construct, install, lay, repair, maintain, renew, replace and connect into service media on the Landlord's Retained Land and to use any such service media subject to causing as little damage as possible and making good all damage caused.

The lease additionally gives East Anglia ONE North and TWO the right to install, maintain and operate photovoltaic solar panels and all ancillary equipment for the purposes of powering monitoring equipment installed on the Property, should this ever be required.

With regards to use of vehicles and access, East Anglia ONE North and TWO are granted navigation rights for boats and other water-based vehicles through and across the River Ore and the right to park a single motor vehicle for use as a pool car within 175 metres of the slipway in an agreed location. The lease also grants East Anglia ONE North and TWO the right to land boats and other water-based vehicles on the slipway forming part of the Landlord's Retained Land and to use the slipway for loading and unloading of vehicles, equipment, machinery and people together with rights to pass and repass at all times.

The lease grants East Anglia ONE North and TWO the right to install, operate and maintain security and monitoring systems, fencing and signage and the right of support, shelter and protection from the Landlord's Retained Land. East Anglia ONE North and TWO are also granted the right to alter, redirect or manipulate any existing drainage channel or water course on the Property subject to the Landlord's consent.

6. COMPENSATION MEASURES

The fence design has been informed through discussions with the LBBCSG, and in particular, with reference to the RSPB guide on predator exclusion fencing (White and Hirons 2019). Furthermore, the appointed fencing contractor has undertaken fence installation for the same purposes (protection of ground nesting birds from mammalian predators) at other nature conservation reserves, including ones managed by the RSPB. ScottishPower Renewables therefore has very high confidence that the **fence is fit for purpose and has been installed with the necessary attention to detail** required.

The key aspects of the fence design include:

- a) A **height** between 1.8 m and 2.0 m;
- b) **Wire mesh with vertical wires** at 50 mm spacing and horizontal wires at 100 mm spacing and a gauge of at least 1 mm to prevent foxes chewing through it;
- c) The wire rolls have a total height of 2.4 m of which approximately 600 mm are buried horizontally at a depth of 100 – 150 mm;
- d) Material at the base is scraped back using a digger to a depth of 100 – 150 mm and width of no more than 1 m, into which the lower section of the fence has been laid, before being recovered with the scraped back material;
- e) Water crossings include **mesh to the base of the drainage channels** to prevent access by aquatic species (e.g. otter);
- f) Incorporation of a **'floppy' overhanging top** of 300-450 mm angled at approximately 45° to the outside, comprising less tightly strained wire which offers unsecure footholds to prevent foxes climbing;
- g) Metal strainer and support posts with a hollow cross section pushed (not hammered) into the ground using the arm of a digger, thereby reducing impact noise during installation and avoiding the need for excavation or use of concrete. The posts are resistant to salt water corrosion in case of flooding events; and
- h) Non-electrified (although this may be used as an adaptive measure if agreed with the LBBCSG).

Following approval of the Norfolk Projects' LBBIMP (as outlined in Section 1.2) the **fence has been installed** in line with the design details described above (see Figure 6-1).



Figure 6-1: A photograph of the completed LBBG compensation measure fence installation

7. DELIVERY TIMETABLE

The East Anglia ONE North and TWO DCOs state that “no operation of any turbine forming part of the authorised development may begin until **four full breeding seasons following the implementation of the measures set out in the LBBIMP have elapsed.** For the purposes of this paragraph each breeding season is assumed to have commenced on 1 March in each year and ended on 30 September.”

As noted above, **installation of the predator fence was completed in February 2023** prior to the commencement of the typical LBBG breeding season on the 1 March according to the DCOs and in April according to Waggitt *et al.* (2019). The installation of the fence prior to the start of the 2023 breeding season, allows for a minimum of four breeding seasons (defined as 1st March-30th September, as per the East Anglia ONE North and TWO DCOs) before the proposed first operation of turbines within East Anglia ONE North and TWO.

For completeness the following described the details of the award of relevant planning permissions and next steps regarding the delivery of the compensation.

Planning permission under the Town and Country Planning Act 1990 for the installation and maintenance of the fence was granted on 21st October 2022. The application was not considered to constitute an 'EIA development' under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) or the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as the “EIA Regulations”). The planning application and planning decision can be found on the ESC planning portal (planning reference DC/22/3447/FUL)⁶.

Site of Special Scientific Interest (SSSI) Assent from NE for the installation and maintenance of the fence was granted on 4th October 2022. This assent also covers the proposed vegetation management. A separate SSSI

⁶ <https://publicaccess.eastsuffolk.gov.uk/online-applications/>

assent for survey activities required to monitor the breeding birds will be sought once the precise nature of the survey activities has been confirmed with the SoS and the LBBCSG. Further SSSI Assents from NE may also be sought for site management proposals which differ from 'normal' site management activities should these arise in future.

Key milestones for the delivery of the proposed compensation measures included:

- Consultation with the LBBCSG between April and August 2022 to agree the location and design.
- Planning application submitted to ESC on 31st August 2022.
- SSSI Assent sought for fence installation, fence maintenance and vegetation control on 6th September 2022.
- SSSI Assent granted on 4th October 2022.
- Planning permission granted on 21st October 2022.
- SSSI Assent for monitoring of nesting birds sought on 21st November 2022.
- Fence installation commenced and completed between December 2022 – January 2023.
- Implementation for the purposes of the DCO completed by the end of February 2023 (with the fenced area available for LBBG to nest within).
- Post installation consultation with the LBBCSG to discuss any unforeseen aspects which occur as a result of installation and how these may be factored into any adaptive management required; and
- Annual ongoing reporting to the LBBCSG and SoS.

The projected delivery timetable for the LBBG compensation measures is summarised in Figure 7-1.

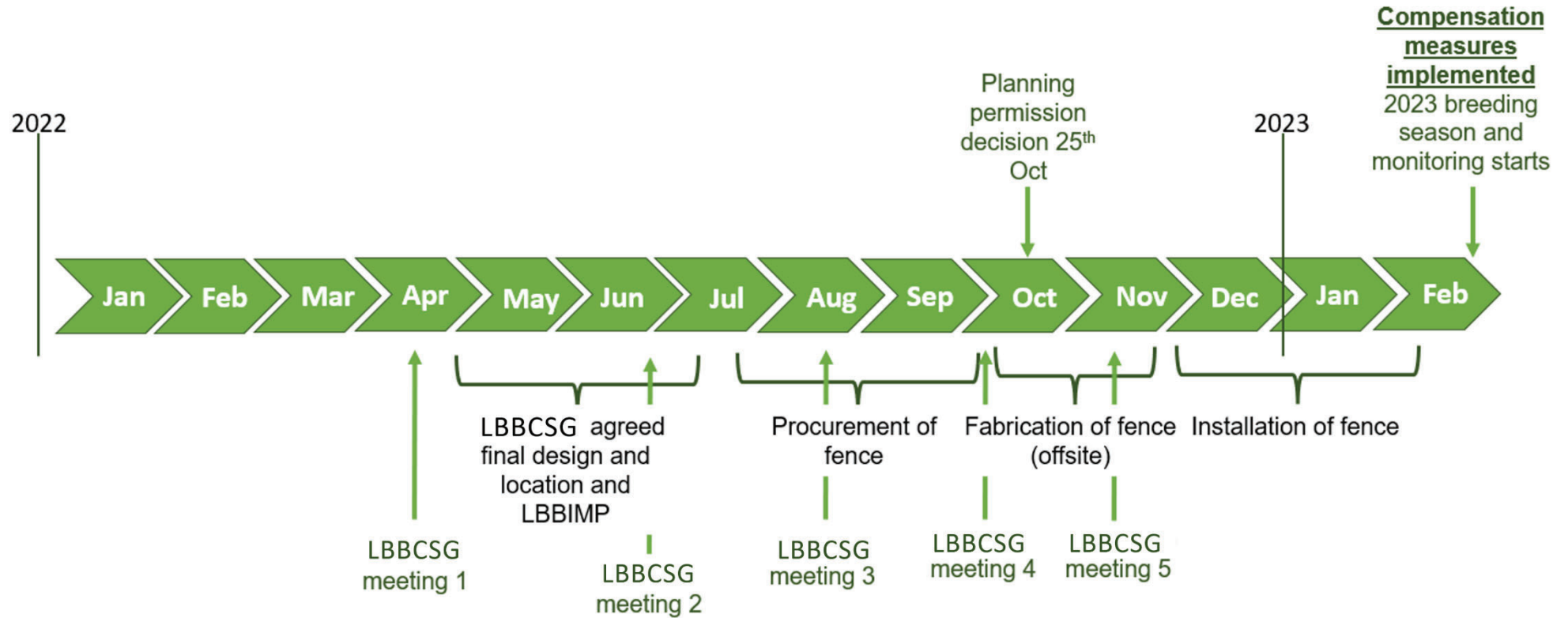


Figure 7-1: Implementation timetable for the delivery of the LBBG predator control compensation measures

8. MAINTENANCE SCHEDULE

8.1. Overview

The following section describes the details of the LBBG compensation maintenance schedule as agreed via the LBBCSG. Whilst a collaborative approach between Vattenfall and ScottishPower Renewables is being pursued, it is important to be cognisant of the fact that East Anglia ONE North and TWO and the Norfolk Projects are independent commercial entities and have their own individual consents. Therefore, in the very unlikely event that a collaborative approach cannot be delivered (and noting that there is no indication of such an outcome at the time of writing), ScottishPower Renewables would seek to discuss a proportionate monitoring approach that suitably reflects the level of compensation East Anglia ONE North and TWO are required to deliver. This is as applicable to and should be considered throughout Sections 9, 10 and 11 that follow.

8.2. LBBG Maintenance Schedule Approach

The critical feature of the LBBG compensation is that the fence continues to prevent entry by mammalian predators. Thus, it is critically important that the full length of the fence is inspected on a regular basis and any damaged or weak areas are rapidly repaired. The breeding season maintenance schedule will be:

- Inspected on a two-weekly basis (March to August) as per the recommendation in White and Hirons (2019); and
- Any damaged or weak areas will be rapidly repaired if essential to maintain integrity or if possible, to do so with minimal disturbance.

During the non-breeding season, the following maintenance schedule is proposed:

- Less regular inspections (e.g. 2-3 times per winter), but inspections will also take place following periods of severe weather;
- More substantive maintenance, such as replacing rusted sections of wire or weak posts will be undertaken at this time to avoid undue disturbance to the breeding birds; and
- Routine inspections will take place at such times to allow sufficient time for any substantive repairs to be completed prior to the return of LBBG to the SPA (i.e., before the end of February).

At any time, if a breach in the fence is found, careful monitoring will be conducted to check for the presence of mammals within the fenced area.

While the primary concern is predatory mammals, specifically fox, otter and badger, the presence of non-predatory species such as deer (Chinese water deer are present in large numbers in the SPA) and hare may also reduce the productivity of the LBBG through disturbance, which may offer opportunities for avian predators (other species of gull and corvids) to steal eggs and chicks. There are also potential welfare issues from trapping such species within the fence. Hence inspection will also consider signs of the presence of these species.

9. MAMMAL MONITORING

This section describes the approach to mammal monitoring and mammal removal. As stated within Section 7, in the very unlikely event that a collaborative approach cannot be delivered, ScottishPower Renewables would seek to discuss a proportionate monitoring and mammal removal approach that suitably reflects the level of compensation East Anglia ONE North and TWO are required to deliver.

9.1. Mammal Monitoring Approach

Immediately prior to completion of the fence installation, a thorough inspection of the enclosure area was undertaken to attempt as far as possible to ensure there were no large mammals present inside. This took the form of a group of personnel, walking a line across the site, in a manner which flushes any mammals in front and out through the last unfenced section of the enclosure. Several passes were conducted (over the course of a day) to increase confidence that all larger mammals had been flushed out.

Although there are no historical records of otter holts on the site and the ground conditions are considered unsuitable, if there are any holts within the enclosure the mammal flushing method may be ineffective.

Therefore, as a precaution a survey for the presence of holts was conducted prior to fence installation, with no holts found.

As well as regular fence inspections it is important that the presence of predators inside the fence, should they manage to penetrate, is detected rapidly. **Monitoring for predators during the breeding season will be combined with fence inspections.** A combination of monitoring options will be used:

- **Sand traps will be placed at intervals around the inside of the fence to help the detection of footprints.** These may also be placed on the outside of the fence to record the presence of foxes patrolling the fence;
- **Camera traps** located at corners and/or gateways, checked at least weekly, possibly twice per week; and
- **Weekly night vision surveys** from suitable vantage points.

During the non-breeding season, monitoring for predators will use the same methods as above, but at a **reduced frequency of once per month** (September to January). During February a concerted effort to ensure the enclosure is predator free will be undertaken, with twice weekly checks and night-time visits until such time as monitoring staff are confident no predators are present within the fence.

9.2. Mammal Removal Protocols

Should the presence of predators be detected inside the fenced enclosure it will be necessary to take steps to ensure their rapid and safe removal. The nature of these steps will depend on the species in question. Following consultation with the LBBCSG, **mammal removal protocols will be drafted and agreed.** It has been agreed with the LBBCSG that these will not be included in the predator control LBBIMP but instead produced as a **standalone guide for the monitoring staff.**

Removal protocols will be developed for fox, otter, badger, mink, hare and Chinese water deer.

The time of year when a mammal is detected (or suspected) inside the enclosure will determine the speed of response required. If the detection is between September and January, then there will be a slightly lower urgency than if the detection is between February and August. In the case of the latter there would be an immediate and concerted effort to address the situation.

Irrespective of when the mammal is detected, or which species, the **fence itself would be inspected in the first instance to determine the entry point and repairs quickly** effected to prevent any further ingress.

Following first detection, or indication that mammals may have gained entry to the enclosure it will be necessary to:

- a) Determine the species of mammal(s) inside the enclosure, by way of camera traps, footprints and scats;
- b) Determine, as far as possible if the mammal(s) are still within the enclosure; and
- c) Establish the remedial steps to be taken (if required) and refer to the appropriate mammal removal protocol(s).

The mammal removal protocols will consider statutory considerations, such as any licensing requirements. **Removal of species for which a license is required will adhere** to existing licensing requirements, such as those for removal of otters from fisheries. If it is considered feasible, **efforts will be made to flush out individuals** from within the enclosure, rather than attempting to trap and release animals. However, this course of action will only be attempted if it is permitted under relevant legislation (e.g. The Invasive Alien Species (Enforcement and Permitting) Order 2019), there are no welfare concerns (e.g. causing additional stress or a risk the animal will harm themselves by running at the fence) and the level of disturbance to nesting LBBG is considered to be low.

It is not anticipated that smaller mammal species, such as rats, will require control measures (for example rats are present in the LBBG nesting areas on Havergate Island and are not considered to have a detrimental effect on reproductive success, J. Miller pers. comm.). However, should it become apparent that **rats are causing reduced reproductive success in the compensation colony** (e.g. through direct observation or monitoring camera footage of rat predation of eggs or chicks) it may be necessary to undertake control efforts. **A rat control protocol will be developed should this occur**, noting that it will not be appropriate to use rodenticides for this purpose as this could result in secondary poisoning of non-target species, including LBBG.

All cases of mammal entry to the enclosure will be noted, communicated to an agreed management group and included in the annual reporting.

10. MONITORING AND REPORTING

This section describes the approach to monitoring LBBG within the compensation breeding site. As stated within Section 7, in the very unlikely event that a collaborative approach cannot be delivered, ScottishPower Renewables would seek to discuss a proportionate monitoring approach that suitably reflects the level of compensation East Anglia ONE North and TWO are required to deliver.

10.1. LBBG Monitoring Approach

The LBBG compensation has been developed with the aim of enabling increased productivity in the SPA population to offset a combined loss of 1.9 adults per annum from the AOE SPA population (0.3 for East Anglia ONE North and 1.6 for East Anglia TWO).

The following activities will form the core requirements for monitoring, undertaken annually following installation of the fence (i.e., first monitoring activity undertaken in 2023) and continue for the period the compensation is required, and is derived from Gilbert et al. (1998):

- Counts of the number of pairs (and/or apparently occupied nests, (AON)) in the enclosure. In the first three years following fence installation these would be undertaken in March, April, May (x2), June (x2), July (x2) and August (9 in total). Subject to agreement from the LBBCSG, the count frequency and total (per year) may be reduced in later years on the understanding that the quality of data collection is not compromised (this would be informed by review of the data collected to date).
- Alongside the AON counts (as outlined above), productivity will be estimated (number of eggs, chicks and fledged young/pair) for mapped pairs that can be reliably observed, until such time as chicks can no longer be associated with their nest. It is likely that not all nests will be observable so this will represent a minimum productivity estimate.
- Observations to obtain both counts and productivity will be made from outside the enclosure to minimise disturbance. Ideally observations will be made from within a vehicle as this will cause much less disturbance, although portable hides (e.g. fabric tent style) may also be useful for this. Vehicle observations will primarily be made from the access track which runs along the west and north of the site. If it is suitable, and access can be arranged, the shingle ridge that runs along the south of the site may also be used for vehicle based observations (it is not currently known if larger vehicles such as Land Rovers can use this track). Alternatively, hide based observations will be made from the shingle ridge.
- Because it is unlikely that all nests will be visible from any given location it will be necessary to map observed AON to cross-check between vantage points. This will also permit tracking of nest success over the course of the breeding season.
- Counts will be conducted during the daytime (0900-1600) and conditions of good visibility; poor weather (heavy rain, fog, high winds) will be avoided.
- Surveyors will also collect opportunistic observations, such as instances of predation by avian species (e.g. other large gull species and corvids), in particular if these appear to be related to disturbance events such as vehicle movements or animal activity outside the fenced area which may highlight the need for management changes or temporary movement restrictions.
- The above methods will be complemented with high resolution photography, to provide a permanent record of how the enclosure is being used. Consideration will be given to the use of drones to obtain aerial images across the site, but only if this is agreed with the landowner and can be done without causing disturbance (a review of best practice drone use indicates that nesting large gulls are highly intolerant of drones, so this option will be progressed with great caution and will only be undertaken if there is high degree of confidence that it will not have negative effects).
- If access is agreed with the owner, the roofs of the adjacent buildings will also be surveyed to collect the same data as above, although since the presence of people will cause disturbance to birds which nest on the buildings the number of visits will be minimised (no more than three per season).
- Any observations of avian predation (or suspected avian predation), for example egg stealing by corvids or other large gulls, will also be noted and included in the annual report.

Further details of the monitoring methods outlined above can be found in Gilbert et al. (1998).

In the first three years following installation of the fence, and subject to any restrictions on work within bird colonies due to avian influenza, the following additional monitoring will be undertaken:

- Ringing of chicks (BTO metal and colour rings), linked with resighting efforts (for birds colour-ringed as chicks) commencing four years after the first season of colour-ringing at sites within the regional population (primarily the SPA).
- Diet studies, through collection of pellets and/or regurgitated material during handling of birds for ringing (note this aspect will be opportunistic and it is not proposed that efforts to force regurgitation will be made).
- Ringing (BTO and colour rings) of chicks produced at other regional populations may also be undertaken, at a sample of locations where such work is considered feasible (e.g. Havergate). This will enable the origins of ringed birds which recruit to the compensation population to be determined.

Additional monitoring will be considered during the operation of the wind farm and thereafter whilst the fence remains in place, subject to discussions and agreement with the LBBCSG. This may include collection of blood and faecal samples (subject to appropriate licensing being obtained) to assist in monitoring of avian influenza.

All monitoring and bird handling will be undertaken by qualified and experienced ornithologists to ensure it is conducted to a high standard and causes the minimum of disturbance. In particular, all ringing efforts will be undertaken in a careful manner as disturbance in gull colonies can often result in chicks being predated. The Norfolk Projects will continue to take a secretarial lead and engage with other parties undertaking LBBG monitoring at the SPA, in collaboration with East Anglia ONE North and TWO in order to ensure consistency in methods and to avoid duplication of effort which would be both inefficient and also could result in unnecessary additional disturbance to breeding birds.

10.2. Timescales for Reporting

In accordance with Paragraph 7 of Schedule 18, Part 2 of the East Anglia ONE North and TWO DCOs, an annual report will be produced following the breeding season and provided to the LBBCSG and SoS as soon as is practical each year (with the aim of providing this by the end of November).

Following each year's monitoring at least one LBBCSG meeting will be organised to present the findings and discuss how these will be reported. The anticipated stages and the anticipated timing for producing the annual reports are provided in Figure 10-1.



Figure 10-1: Anticipated annual reporting timescales to the LBBCSG and SoS

Once the population has become established, the extent of monitoring may be reduced, but only following discussion with the LBBCSG and agreement in writing with the SoS.

11. COMPENSATION PERFORMANCE – MONITORING AND ADAPTIVE MANAGEMENT

The East Anglia ONE North and TWO DCOs state that the annual reporting: *'must include details of any finding that the measures have been ineffective in securing an increase in the number of adult lesser black backed gulls available to recruit to the SPA and, in such case, proposals to address this. Any proposals to address effectiveness must thereafter be implemented by the undertaker as approved in writing by the Secretary of State in consultation with the relevant statutory nature conservation body*

Productivity is considered to be the ultimate measure of success when reviewing the performance of the colony, however it will be critical that the reasons for any shortfall against expectations are recorded in order that appropriate remedial steps (if warranted) can be taken. Thus, while it is considered sensible to set targets for colony performance (the performance target for compensation for all four projects and agreed to in Meeting 4 of the LBBGCSG was at least 20 chicks fledged per year in at least 3 out of 5 years, from year 5 of the scheme onwards), these metrics are a guiding principle only and should be viewed in the context of the understanding of the wider population demographics.

Thus, the performance of the new colony should not be viewed in isolation but should be seen in the wider context of LBBG breeding success locally (i.e. within the SPA) and regionally (e.g. southern North Sea). Hence, poor breeding success at the compensation colony in a year when this is also seen at most other LBBG colonies locally or regionally would be indicative of wider issues (e.g. reduced prey stocks, adverse weather conditions or disease) and would not automatically trigger remedial action at the compensation colony. However, under these circumstances East Anglia ONE North and TWO (in collaboration with the Norfolk Projects) would look to understand the reasons for poor reproductive performance at the compensation colony, attempt to identify potential remedies and collaborate with relevant groups to understand the wider context in terms of other local or regional colony breeding success.

Conversely, if the compensation colony performs less well than other monitored sites, this would be a strong indicator that action is required to identify and address the causes.

During the initial years following installation of the fence (e.g. years one to five), monitoring is expected to be focussed on understanding the mechanisms for colonisation. For example, there may evidence that birds are not prospecting within the enclosure, or prospecting but not settling, or settling but abandoning during nest building, etc. and each of these would lead to a requirement for different remedial measures. Data will be collected with the aim of understanding the reasons for whichever of these may be occurring, such as the suitability of the vegetation or disturbance (e.g. mammal movements outside the fence or vehicle movements) and the most appropriate corresponding responses. Other factors which will be monitored if feasible (i.e. if focal nests can be identified and monitored without itself causing disturbance) will include nest attendance rates and foraging trip duration, as these will indicate the degree of effort required by the breeding adults and may indicate reasons for reproductive failure. As noted above, it will also be necessary to conduct similar monitoring at a sample of other locations to understand if any observed patterns are replicated elsewhere.

If colonisation does occur in the initial years (i.e. years one to five following fence construction) and initial recruits have good breeding success, but the rate of colony growth appears to be lower than would be needed for the colony to reach capacity (i.e. approx. 15 nests, allowing for approx. 1.5 fledglings/nest) within five years, then reasons for this will be investigated. This may highlight avoidance of particular areas of the enclosure (e.g. areas of less preferred vegetation, or the absence of sleepers, etc.), which could be targeted for modification or highlight that additional effort in attracting birds would be beneficial (e.g. use of decoys and broadcasting colony calls).

The monitoring and requirements for adaptive management will be conducted collaboratively with the Norfolk Projects on an annual basis at least until such time as it is agreed that the colony is self-sustaining and performing at least as well as other local colonies.

As discussed above the adaptive management measures to be considered will depend on the circumstances, however actions may include:

- Additional habitat management, conducted over winter and prior to LBBG arrival in spring, to enhance the attractiveness for LBBG, e.g. through closer sward mowing, more careful patchwork strimming, creation of additional bare ground (e.g. removal of the top layer of material), placement of old sleepers (or similar) to provide structures for birds to nest against;
- If avian predation is identified as resulting in a significant loss of eggs (e.g. corvids or other gull

species) then options for minimising this which are not detrimental either to other conservation objectives or have a risk to the LBBG themselves will be investigated;

- If initial recruitment to the enclosure is below the target level then colony call playback and placement of decoy birds within the enclosure will be undertaken (although it should be noted that decoys may also be used to encourage birds to colonise the enclosure from the first breeding season year following fence installation, in which case this would represent an enhancement of the compensation measure already delivered);
- If productivity is lower than would be anticipated for the estimated number of AON, supplementary feeding of chicks will be considered. This would need to be done in a manner that achieved the aim of improving chick health, whilst not encouraging other species such as rats and foxes which could be detrimental (e.g. elevated 'bird tables', although as these would also attract corvids this would need careful consideration). Furthermore, this option would require careful consideration to rule out other more systemic causes, such as collapse of prey stocks, that short-term feeding would be unable to make up for;
- If it is considered that vegetation cutting is not creating suitable ground conditions for LBBG to nest successfully, East Anglia ONE North and TWO will enter into discussions with the landowner to investigate the possibility of raising the water levels within the enclosure in order to modify the habitats (subject to all the agreements set out in the lease); and
- In the event that the above methods are undertaken, and the enclosure remains under-utilised or unused then careful consideration will be given to the potential of alternative or additional locations.

12. LBBG STEERING GROUP MINUTES

Minutes of the LBBCSG meetings (where approved by the group for publication) are included within the LBBCSG Consultation Report³.

13. REFERENCES

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