NORTH FALLS

Offshore Wind Farm

HABITATS REGULATIONS ASSESSMENT

Appendix 5 Guillemot and Razorbill Compensation Document (Clean)

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NORTH FALLS
Offshore Wind Farm

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2	June 2025	Deadline 6	RHDHV	NFOW	NFOW

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Glossary of Acronyms

AD	Alert Distance
AEoI	Adverse Effect on Integrity
ANS	Artificial Nesting Site
AON	Apparently occupied nests
CIMP	Compensation Implementation and Monitoring Plan
DCO	Development Consent Order
Defra	Department for Environment, Food & Rural Affairs
DEP	Dudgeon Extension project
DESNZ	Department for Energy Security and Net Zero
EPP	Evidence Plan Process
ETG	Expert Topic Group
FFC	Flamborough and Filey Coast
FI	Farne Islands
FID	Flight Initiation Distance
GCSG	Guillemot Compensation Steering Group
GGOW	Greater Gabbard Offshore Wind Farm
GRCSG	Guillemot and Razorbill Compensation Steering Group
HRA	Habitats regulations Assessment
HP3	Hornsea Project Three
HP4	Hornsea Project Four
Km	Kilometre
MAD	Minimum Approach Distance
MRF	Marine Recovery Fund
NFOW	North Falls Offshore Wind Farm
NSN	National Site Network
OWF	Offshore wind farm
OWIC	Offshore Wind Industry Council
RAG	Red, Amber, Green
RIAA	Report to Inform Appropriate Assessment
RSPB	Royal Society for the Protection of Birds
RWE	Renewables UK Swindon Limited
SAC	Special Area of Conservation
SACO	Supplementary advice on the conservation objectives
SEP	Sheringham Shoal Extension Project
SMP	Seabird Monitoring Programme
SNCB	Statutory Nature Conservation Body
SoS	Secretary of State
SPA	Special Protection Area
SSER	SSE Renewables Offshore Windfarm Holdings Limited

SSSI	Sites of special scientific interest
UCL	Upper confidence limit
UK	United Kingdom

Glossary of Terminology

European site	Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 for the purpose of those regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant marine sites.
Habitats Regulations	Refers to both the Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017
The Applicant	North Falls Offshore Wind Farm Limited (NFOW)
The Project Or 'North Falls'	North Falls Offshore Wind Farm, including all onshore and offshore infrastructure.

1 Revision 2 Updates at Deadline 6

1. This document has been updated at Deadline 6 to provide updates on the scale of compensation and additional ecological evidence in response to Natural England's Deadline 4 Guillemot and Razorbill Compensation Advice on the Applicant's Deadline 1 and 2 Document [REP4-061].
2. In addition, detail regarding the delivery of the compensatory measures has been included in the Outline Guillemot and Razorbill Compensation Implementation and Monitoring Plan (CIMP) [**Document Reference 7.2.5.1, Rev 2**].

2 Introduction

2.1 Background

3. The North Falls Offshore Wind Farm (OWF) (hereafter 'North Falls' or 'the Project') is an extension to the existing Greater Gabbard Offshore Wind Farm (GGOW), located approximately 40 kilometres (km) off the East Anglian coast in England. When operational, North Falls would have the potential to generate renewable power for approximately 400,000 United Kingdom (UK) homes from up to 57 wind turbines.
4. The Applicant, NFOW, is a consortium between Scottish and Southern Energy Renewables (SSER) Ltd and RWE Renewables UK Ltd (RWE), both of which are highly experienced developers.
5. As part of the Development Consent Order (DCO) application, the Applicant must provide information to support the Habitats Regulations Assessment (HRA) to be completed by the Competent Authority, the Secretary of State for the Department for Energy Security and Net Zero (DESNZ).

2.2 Purpose of document

6. This Guillemot and Razorbill Compensation Document is produced in response to consultation with the Statutory Nature Conservation Body (SNCB). For razorbill it is produced without prejudice to the Applicant's conclusion in the Report to Inform Appropriate Assessment (RIAA) Part 4 Offshore Ornithology **(Document Reference: 7.1.4 [APP-178])** that there is no adverse effect on integrity (AEoI) for the razorbill feature of the Flamborough and Filey Coast (FFC) Special Protection Area (SPA) from North Falls alone or in-combination with other plans and projects.
7. For guillemot, it is noted that in consenting Rampion 2 (R2), the Secretary of State concluded that an Adverse Effect on Integrity (AEoI) could not be ruled out beyond reasonable scientific doubt for in-combination effects on guillemot at Flamborough and FFC SPA and the Farne Islands SPA. Noting that the effects of R2 are similar to North Falls for this species from the FFC and Farne Islands SPA, the Applicant accepts that the Competent Authority is likely to consider the contribution of North Falls to be material also. Thus, for guillemot the Applicant has developed compensatory measures to fully compensate for the predicted effects at both SPAs. For FFC SPA, the effects are summarised in Section 4 and detailed in the RIAA Part 4 **(Document Reference 7.1.4** [**APP-**

178]), and for the Farne Islands, in the shadow appropriate assessment for guillemot submitted at Deadline 1 (**Document Reference 9.13 [REP1-056]).**

8. In the event that the Secretary of State (SoS) concludes an AEoI in the Appropriate Assessment for razorbill, the Applicant has developed a compensatory measure that could be applied to provide compensation for the predicted effects on this species at the FFC SPA, summarised in Section 4 of this document and detailed in the RIAA Part 4 **(Document Reference: 7.1.4** [**APP-178**]).

9. This document demonstrates how the proposed compensatory measure can be delivered to ensure that the overall coherence of the National Site Network is protected, in accordance with Regulation 68 of the Conservation of Habitats and Species Regulations 2017 and Regulation 36 of the Conservation of Offshore Marine Habitats and Species Regulations 2017 (both sets of regulations together referred to as the "Habitats Regulations") and provides evidence that an appropriate measure has been selected which will be ecologically effective.

10. A CIMP (as required) will be produced by the Applicant and approved by the SoS post-consent, in accordance with the Outline Guillemot and Razorbill CIMP **(Document Reference: [7.2.5.1, Rev 2]**). Amendments to or variations of the Guillemot and Razorbill CIMP would be in accordance with the principles and evidence base set out in this Compensation Document or informed by new evidence which may emerge. This would be discussed with the Guillemot and Razorbill Compensation Steering Group (GRCSG) and agreed with the SoS.

11. Depending on the conclusions of the Appropriate Assessment, the CIMP would include guillemot and razorbill, guillemot alone or razorbill alone.

12. The guillemot CIMP is legally secured through the draft DCO **[Document Reference 6.1, Rev 7],** and, if required, razorbill compensation can also be secured through the DCO in accordance with the Without prejudice HRA DCO Schedules [**Document Reference 9.72, Rev 1**].

2.3 The Guillemot and Razorbill Features of the Flamborough and Filey Coast SPA

2.3.1 Conservation Objectives

13. The conservation objectives of the FFC SPA are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The populations of each of the qualifying features; and
- The distribution of qualifying features within the site.

2.3.2 Supplementary Advice on Conservation Objectives for Guillemot and Razorbill

14. The Supplementary Advice on Conservation Objectives (SACOs) (Natural England, 2023a) has targets to

- *Maintain the size of the guillemot breeding population at a level which is above 41,607 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent; and*
- *Maintain the size of the razorbill breeding population at a level which is above 10,570 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.*

15. While there is no specified status on the Natural England website (Natural England, undated) regarding the condition of the qualifying features of the FCC SPA, it is stated in the SACOs that *'there is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities*'.

2.4 The Guillemot Feature of the Farne Islands SPA

16. The conservation objectives of the Farne Islands SPA are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The populations of each of the qualifying features; and
- The distribution of qualifying features within the site.

17. The SACOs (Natural England, 2023a) has a target to:

- Maintain the size of the guillemot breeding population at a level which is above 41,607 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.

3 Development of Compensatory Measures – Methodology

3.1 General Approach

18. The approach taken by the Applicant to identify and refine potential compensatory measures and for considering their suitability considers the policy and guidance described in the Compensatory Measures Overview **(Document Reference: 7.2.1, Rev 2**) and was as follows:

- Review of compensatory measures discussed in Furness et al. (2013);
- Consultation with relevant stakeholders including:

- Natural England and Royal Society for the Protection of Birds (RSPB) to develop proposals through the Offshore Ornithology Expert Topic Group (ETG) as part of the Project's Evidence Plan Process (EPP);
- Other OWF developers, directly and through RWE and SSER's involvement in the Offshore Wind Industry Council (OWIC) Derogation Subgroup; and
- National Trust as local experts and landowner of potential compensation sites;

- Ongoing review of other OWF applications for which compensatory measures have been developed, including those accepted as appropriate in the determination (i.e. Hornsea Project Four (HP4), Sheringham Shoal OWF Extension Project (SEP), Dudgeon OWF Extension Project (DEP) and R2 for guillemot; there are no examples for razorbill as at the time of writing, no OWFs have been consented subject to compensation for this species).

19. Project-led, collaborative and strategic compensatory measures that have been considered are described in Section 6.

3.2 Consultation

20. The Applicant has regularly consulted with relevant stakeholders throughout the pre-application process as discussed in the Compensatory Measures Overview **(Document Reference:** [**7.2.1, Rev 2**]). Feedback from the stakeholders has informed the development of the compensatory measure and is detailed in Annex 1A Compensation Consultation [**APP-185**].

21. In particular it is noted that in their initial review of compensation measures for guillemot and razorbill, Natural England advised, '*considering the scale of impact and issues around the compensatory measures identified, Natural England recommends the development of a compensatory measure to investigate the status of smaller guillemot colonies (such as those in Devon and Cornwall) that have generally been subject to historical declines. If pressures are identified that could be driving declines or suppressing breeding success at those colonies, then appropriate remedial actions (e.g. habitat management, disturbance reduction, targeted predator control) could be undertaken to facilitate recovery of those populations where possible and deliver the required level of compensatory benefits. We highlight the potential benefit of delivering this measure collaboratively with other projects seeking to develop compensatory measures for relatively small impacts to auks and can confirm that we have advised Five Estuaries, Rampion 2, and Outer Dowsing Offshore Wind Farm projects regarding our views on this approach*'.

22. Consultation with relevant stakeholders will continue throughout the application and post consent phases of compensation development and delivery. Details of proposed future engagements during post consent development of the compensatory measure will be set out in the CIMP, in accordance with the Outline CIMP [**7.2.5.1, Rev 2**].

3.3 Potential Collaboration with other Projects

23. Reduction of recreational disturbance at small breeding colonies in the southwest of England is also being considered by other OWF projects (e.g. Five Estuaries, Outer Dowsing; and R2 has recently been consented subject to this compensation for guillemot). Work is ongoing to identify potential collaboration opportunities between North Falls and these projects.

24. Collaboration with other projects may be delivered in the following ways:

- Shared monitoring, deployment and maintenance of measures across an appropriate number of shared sites, in an approach similar to that outlined in this document and the Outline CIMP [**7.2.5.1, Rev 2**] for the project alone measure(s);
- Development of separate sites for each project with a shared monitoring programme; or
- A broader, regional, compensation package led by a delivery partner and funded in collaboration with other developers.

4 Quantification of Effect for Guillemot and Razorbill

25. This section provides a summary of the Project's impacts on the guillemot and razorbill at FFC SPA and guillemot at the Farne Islands SPA and outlines the context for the proposed compensatory measure. The SoS will determine the level of effect based on the Appropriate Assessment conclusions for North Falls on the breeding adult birds associated with the FFC and Farne Islands SPAs, and whether North Falls contributes to the in-combination adverse effect on the integrity of guillemot at the FFC or Farne Islands, or razorbill at the FFC.

26. The RIAA Part 4 Offshore Ornithology **(Document Reference: 7.1.4** [**APP-178**]) presents an assessment of predicted mortality from operational displacement / barrier effect affecting guillemot and razorbill from FFC SPA, and the Shadow Appropriate Assessment for Guillemot at the Farne Islands SPA **(Document Reference 9.13 [REP1-056**]

27. Table 4.1 presents the predicted year-round North Falls mean, lower, and upper 95% CLs for guillemot and razorbill mortalities based on a range of displacement and mortality rates set out below:

- Applicant's preferred appropriately precautionary rates (50%, 1%); and
- HP4 consented rates (70%, 2%).

28. The Applicant recognises that in the case of consented projects, the SoS has determined that the displacement and mortality scenario for HP4 be used in quantifying the number of guillemots required for compensation, yet they may accept alternative parameters in future cases. To quote the SEP and DEP HRA (DESNZ, 2024):

29. '*The Secretary of State considers that central values of displacement and mortality for the assessment of displacement impacts on guillemot of 70% and 2% are, at the current time and based on current evidence, suitably precautionary for an assessment to be made, but notes that this does not preclude her from accepting alternative parameters for future cases*.'

30. However, North Falls continues to present a compensation case for guillemots and (without prejudice) for razorbills based on the mean values at 50% displacement and 1% mortality, as this is considered the most appropriate precautionary scenario based on the available evidence and expert judgement. For HP4, SEP and DEP, and R2, it is understood that the consent decision was based on 70% displacement and 2% mortality. If similar displacement and mortality rates were applied for North Falls, the compensation would be scalable to fully compensate these effects.

31. The mean values of predicted mortality due to displacement apportioned to the FFC and Farne Islands (guillemot only) are used to calculate compensation scale. It is acknowledged that in their Deadline 4 advice, Natural England has advised [REP4-060] that the scale of implementation of seabird compensatory measures should be sufficient to address the 95% upper confidence limit (UCL) predicted impact value, however for guillemot and razorbill this is considered by the Applicant to be overly precautionary, given the small predicted effects of North Falls. It is also understood that in consenting R2, the SoS based the compensation quantum for guillemot on the mean predicted impact value (DESNZ, 2025a).

Table 4.1 Predicted annual mortalities of guillemot and razorbill from North Falls at the FFC SPA, and guillemot at the Farne Islands SPA based on varying displacement and mortality rates. 50% / 1% are the Applicants preferred rates which are considered appropriately precautionary, represented by bold text.

SPA	Scenario	Mortalities	
		50% displacement, 1% mortality	70% displacement, 2% mortality
Flamborough and Filey Coast	**Guillemot**		
	Mean	**1.2**	3.3
	Lower 95% CL	0.2	0.5
	Upper 95% CL	3.2	9.0
	Razorbill		
	Mean	**0.6**	1.6
	Lower 95% CL	0.2	0.7
	Upper 95% CL	1.3	3.6
Farne Islands	**Guillemot**		
	Mean	1.0	2.8
	Lower 95% CL	0.2	0.5
	Upper 95% CL	2.7	7.8

5 Scale of Compensation

32. The applicant has followed the HP4 approach (APEM, 2022) to calculate the required number of fledglings per year to produce sufficient birds that survive to breeding age to replace the predicted annual mortality to breeding adults at FFC SPA (taking into account available information on age-specific survival).

33. The number of breeding pairs required is derived from the number of fledglings, based on the productivity rate. The calculations are set out below, and incorporate species specific demographic data from Horswill and Robinson (2015) to derive the number of breeding pairs required to produce the necessary number of new recruits into the population:

Equation One[1]:

$$N_{Fledglings\ required} = \left(\frac{N_{New\ breeding\ recruits\ required}}{\prod_{Age\ =\ 0}^{Age\ =\ i} Survival_{Age}} \right)$$

Equation Two:

$$N_{Breeding\ pairs\ required} = \frac{N_{Fledglings\ required}}{Productivity}$$

34. Table 5.1 details the demographic parameters used for both guillemot and razorbill compensation scale calculations.

35. Sections 5.1 and 5.2 give detail on the calculated compensation numbers for guillemot and razorbill, respectively. The number of breeding pairs required is given at compensation ratios 1:1, 2:1 and 3:1 as requested by Natural England. It is the Applicant's position that a 2:1 ratio is appropriate.

36. In their Relevant Representations, Natural England advised that the method for calculating required compensation numbers developed for kittiwake by Hornsea Project Three (HP3) should be used, given their concerns about the high level of uncertainty around the success of the proposed measures [RR-243, para 2.1.6]. As explained below, for guillemot and razorbill, the HP4 method has been used with additional consideration given to philopatry / natal dispersal – i.e. whether chicks fledged from the compensation site colony or colonies, that survive to breeding age, would return to breed at their natal colony, or breed at a different colony. In their Deadline 4 comments [REP4-060], Natural England

[1] *N(New breeding recruits required)* is equivalent to the number of mortalities from North Falls; *i* represents the age of recruitment (6six years in Guillemot; 5five years in Razorbill).

noted that they have tested the HP3 method for guillemot and razorbill and concluded that it may produce unrealistic and disproportionate requirements for scaling compensation measures; and it is not clear that some of the necessary demographic information is well evidenced, which can introduce significant uncertainty. Given this, Natural England advised, for North Falls, that it is appropriate for the Hornsea Project 4 (HP4) method to be used for guillemot and razorbill, with additional consideration to philopatry in some circumstances.

Compensation numbers are given below at a range of ratios, from 1:1 to 3:1. The rationale for this is that due to uncertainties in the predictions of required compensation numbers, the predicted number of breeding pairs should be scaled up on a precautionary basis to ensure adequate compensation. In the case of guillemot and razorbill, Natural England advise [RR-243, G4] that a compensation ratio of 1:1 is not appropriate. However, Natural England has stated: '*we do believe that given the nature of the measure proposed, the difficulties of quantifying benefits (as well as potential for subsidiary benefits to non-target species) and the small scale of predicted impacts, a pragmatic approach to scaling the measure is appropriate*' [Natural England Relevant Representations [RR-243], comment G4). The Applicant's view is that a 2:1 ratio is appropriate, applied to compensation numbers calculated from the mean predicted mortality for guillemot and razorbill and FFC SPA. In this context it is noted that in consenting R2, the SoS applied a 2:1 compensation ratio (DESNZ, 2025a).

Table 5.1 Demographic parameters used in the auk compensation calculations

Demographic parameter		Value
Guillemot		
Age of recruitment		6
Productivity rate	**'West' region**	0.823
	National average	0.672
Juvenile survival (0 – 1 year)		0.560
Immature survival (1 – 2 years)		0.792
Immature survival (2 – 3 years)		0.917
Adult survival (≥4 years)		0.939
Natal dispersal rates	**Coulson, 2016**	0.42
	Horswill and Robinson, 2015	0.58
Razorbill		
Age of recruitment		5
Productivity rate	**'West' region**	0.642
	National average	0.570
Juvenile/Immature survival (0-2 years)		0.792
Adult survival (≥3 years)		0.939
Natal dispersal rates	**Horswill and Robinson, 2015**	0.088
	Lavers *et al.*, 2007	0.17

5.1 Guillemot

37. As displayed in Table 4.1 (Section 4), at displacement and mortality rates of 50% and 1%, respectively, which the Applicant considers to be appropriately precautionary, it is predicted that the mean annual mortality of SPA guillemots due to displacement and barrier effects from North Falls would be 1.2 birds, equivalent to a 0.01% increase in population mortality rate. At rates of 70% displacement and 2% mortality, the predicted mean annual mortality would be 3.3 birds, equivalent to an 0.04% increase in baseline mortality rate.

38. As explained above, the calculations of required compensation numbers involve two stages, the first stage calculates the number of fledglings required in a given year to produce breeding adult birds (in six years' time – the average age of recruitment for guillemot (Horswill and Robinson, 2015)), taking into account survival of chicks from their hatching to the age of six years (Table 5.1). The second stage calculates how many breeding pairs would be required to produce this number of fledglings, based on a given productivity rate (see Table 5.1).

39. As an example of how the equation works in practice, the equations below work through the Applicant's preferred approach of a 50% / 1% displacement / mortality scenario at a 2:1 compensation ratio, using the 'West' region productivity:

Equation One:

$$N_{Fledglings\ required} = \left(\frac{1.2}{0.560 \times 0.792 \times 0.917 \times 0.939 \times 0.939 \times 0.939}\right) = 3.6$$

At a 2:1 ratio: $3.6 \times 2 = 7.1$

Equation Two:

$$N_{Breeding\ pairs\ required} = \frac{7.1}{0.823} = 8.7$$

40. Following calculation of compensation numbers using the range of displacement / mortality scenarios displayed in Table 4.1, and the differing productivity rates in Table 5.1, at the Applicant's preferred scenario of 50% displacement and 1% mortality, the numbers of pairs required based on West region productivity would be five (4.3 rounded up) at a 1:1 compensation ratio, and 9 (8.7 rounded up) at a 2:1 ratio (Table 5.2). No productivity data are available for the guillemot colonies shortlisted as compensation sites (Section 8 below), so a more precautionary approach would be to use the national average productivity, requiring, at 50%/1%, an estimated 6 (5.3 rounded up) pairs at a 1:1 ratio, and 11 (10.6 rounded up) at 2:1. In their Deadline 4 comments on guillemot and razorbill compensation [REP4-061], Natural England advised that due to considerable uncertainty in likely productivity rates of colonies in Devon and Cornwall, the more precautionary 'national average' productivity rate is most appropriate for the calculation of compensation quantum.

41. The full range of displacement / mortality scenarios and compensation ratios are displayed below in Table 5.2.

Table 5.2 Calculated guillemot fledging and breeding pair requirements for compensation at varying displacement / mortality and compensation ratios. Values in bold/red represent the Applicant's position on the appropriate scale of compensation

SPA	Scenario (Displacement / Mortality Mean Values)	Number of Mortalities	Breeding pairs required at given compensation ratios			Required fledglings produced to replace adult mortalities		
			1:1	2:1	3:1	1:1	2:1	3:1
FFC	**'West' region productivity: 0.823**							
	50% / 1%	1.2	4.3	8.7	13.0	3.6	7.1	10.7
	70% / 2%	3.3	11.9	23.8	35.7	9.8	19.6	29.4
	National average productivity: 0.672							
	50% / 1%	**1.2**	5.3	**10.6**	15.9	3.6	**7.1**	10.7
	70% / 2%	3.3	14.6	29.2	43.8	9.8	19.6	29.4
Farne Islands (FI)	**'West' region productivity: 0.823**							
	50% / 1%	1.0	3.6	7.2	10.8	3.0	5.9	8.9
	70% / 2%	2.8	10.1	20.2	30.3	8.3	16.6	24.9
	National average productivity: 0.672							
	50% / 1%	**1.0**	4.4	**8.8**	13.3	3.0	**5.9**	8.9
	70% / 2%	2.8	12.4	24.7	37.1	8.3	16.6	24.9
Total for FFC and FI SPAs	**'West' region productivity: 0.823**							

SPA	Scenario (Displacement / Mortality Mean Values)	Number of Mortalities	Breeding pairs required at given compensation ratios			Required fledglings produced to replace adult mortalities		
			1:1	2:1	3:1	1:1	2:1	3:1
	50% / 1%	2.2	7.9	15.9	23.8	6.5	13.1	19.6
	70% / 2%	6.1	22.0	44.0	66.0	18.1	36.2	54.3
	National average productivity: 0.672							
	50% / 1%	**2.2**	9.7	**19.4**	29.2	6.5	**13.1**	19.6
	70% / 2%	6.1	27.0	53.9	80.9	18.1	36.2	54.3

42. Consideration has also been given to philopatry / natal dispersal. In this context, philopatry refers to nestlings that fledge from a given colony, survive to breeding age, and then nest (i.e. recruit into the breeding population) at the same colony; fledglings that survive to breeding age and recruit into the breeding population at a different colony are said to have dispersed away from the natal site. Based on available estimates of natal dispersal rates in guillemot (and razorbill), it is possible to predict the proportion of fledglings (produced by the additional breeding pairs calculated to be required in compensation) that reach adult breeding age that are likely to recruit at their natal colony (i.e. the compensation site(s)) and the proportion likely to disperse elsewhere (Table 5.2).

43. Applying an appropriate ratio to the compensation predictions from the HP4 methodology is anticipated to increase the breeding populations at the compensation sites and also produce birds which disperse to recruit in breeding colonies elsewhere, which may be SPA colonies (e.g., Isles of Scilly SPA or Skomer, Skokholm and the Seas of Pembrokeshire SPA).

44. The number of fledglings that survive to breeding age that are expected to recruit at the natal colony and the number predicted to recruit at a different colony can be calculated by using philopatry rates given in literature (more usually a natal dispersal rate is given, from which philopatry can be back calculated as follows):

$$1.00 - rate\ of\ natal\ dispersal = rate\ of\ philopatry$$

45. Thus, it can be predicted how many of the fledglings produced / required at a given ratio that survive to breed and recruit in the natal colony, and how many will disperse elsewhere. For example, with reference to Table 5.2 at a 2:1 ratio, the applicants preferred approach of a 50% / 1% displacement / mortality scenario would aim to produce 2.4 adult birds (1.2 x 2) on average from each generation of fledglings to compensate for losses at Flamborough and Filey Coast SPA. Using a natal dispersal rate of 0.58, this would look like:

$$2.4 \times 0.58 = 1.4\ birds\ disperse$$

46. With 1.4 birds expected to disperse on average, there remains 1.0 bird expected to recruit into the natal colony.

47. Table 5.3 below shows full detail of the expected numbers of produced recruits that either disperse or remain at the natal colony, at the different displacement / mortality scenarios, compensation ratios and different natal dispersal / philopatry rates given in the literature.

    In summary, with the Applicant's approach of using a 50% / 1% displacement / mortality scenario, at a philopatry rate of 0.42 (equivalent to Horswill and Robinson (2015) natal dispersal rate of 0.58), a 2:1 compensation ratio would be predicted to produce on average 0.9breeding age birds per year that survive to recruit to the natal colony, whilst on average another 1.3 breeding age birds disperse away, which offers potential contributions to the national site network.

Table 5.3 Numbers of breeding age guillemots produced from colony compensation measures expected to remain at the natal colony and those that are expected to disperse and recruit in other colonies. Values in red/bold represent the Applicant's position on the appropriate scale of compensation

SPA	Scenario (Displacement / Mortality Mean Values)	Target fledgling production	Philopatry rate[1]	Birds produced expected to recruit into natal colony (philopatry)			Birds produced expected to disperse away from natal colony (natal dispersal)		
				1:1	2:1	3:1	1:1	2:1	3:1
Flamborough and Filey Coast (FFC)	**50% / 1%**	**1.2**	0.42 – 0.58	0.5 – 0.7	**1.0 – 1.4**	1.5 – 2.1	0.7 – 0.5	**1.4 – 1.0**	2.1 – 1.5
	70% / 2%	3.3		1.4 – 1.9	2.8 – 3.8	4.2 – 5.7	1.9 – 1.4	3.8 – 2.8	5.7 – 4.2
Farne Islands (FI)	50% / 1%	**1.0**		0.4 – 0.6	**0.8 – 1.2**	1.3 – 1.7	0.6 – 0.4	**1.2 – 0.8**	1.7 – 1.3
	70% / 2%	2.8		1.2 – 1.6	2.4 – 3.2	3.5 – 4.9	1.6 – 1.2	3.2 – 2.4	4.9 – 3.5
Total for FFC and FI SPAs	50% / 1%	**2.2**		0.9 – 1.3	**1.8 – 2.6**	2.8 – 3.8	2.6 – 1.8	**1.3 – 0.9**	3.8 – 2.8
	70% / 2%	6.1		2.6 – 3.5	5.1 – 7.1	7.7 – 10.6	7.1 – 5.1	3.5 – 2.6	10.6 – 7.7

[1] Range of philopatry rates derived from literature: 0.42 in Coulson (2016) (as in Natural England relevant representations RR-243 comment G2) and 0.58 in Horswill and Robinson (2015). Note: the philopatry rate range given from the two sources are incidentally directly inverse to each other in this case, the ranges of philopatric birds in relation those birds that disperse mirror each other e.g. for 1.2 mortalities at a 2:1 ratio and 0.42 philopatry – if 1.0 bird remains, 1.4 birds are expected to disperse; then at 0.58 philopatry, 1.4 birds are expected to remain, with 1.0 dispersing away.

5.2 Razorbill

48. As displayed in Table 4.1 (Section 4), at displacement and mortality rates of 50% and 1%, respectively, which the Applicant considers to be appropriately precautionary, it is predicted that the annual mortality of SPA razorbills due to displacement and barrier effects from North Falls would be 0.6 birds, equivalent to a 0.01% increase in population mortality rate. At rates of 70% displacement and 2% mortality, the predicted mean annual mortality would be 1.6 birds, equivalent to an 0.03% increase in baseline mortality rate.

49. Using the HP4 approach, the equations detailed in Section 5.1 are employed again here to calculate the scale of compensation required for razorbill, with a key change that is the average age of recruitment for razorbill being five (Horswill and Robinson, 2015) instead of the six in the previous equations, and therefore the number of fledglings required is calculated by dividing the number of mortalities (at a given compensation ratio) by the product of survival rates (Table 5.1) from the birds first year, to its fifth. At the preferred approach of 50% / 1% displacement / mortality, a 2:1 compensation ratio and using the 'West' region productivity rate, the equations look like:

Equation One:

$$N_{Fledglings\ required} = \left(\frac{0.6}{0.792 \times 0.792 \times 0.939 \times 0.939 \times 0.939}\right) = 1.2$$

At a 2:1 ratio: $1.2 \times 2 = 2.4$

Equation Two:

$$N_{Breeding\ pairs\ required} = \frac{2.4}{0.642} = 3.6$$

50. Following calculation of compensation numbers using the range of displacement / mortality scenarios displayed in Table 4.1, and the differing productivity rates in Table 5.1, at the Applicant's preferred scenario of 50% displacement and 1% mortality, and the West region productivity, the numbers of pairs required would be four (3.6 rounded up) at a 2:1 compensation ratio. No productivity data are available for the razorbill colonies shortlisted as compensation sites (Section 8 below), so a more precautionary approach would be to use the national average productivity, requiring, at 50%/1%, an estimated 2 pairs at a 1:1 ratio, and 5 (4.1 rounded up) at 2:1. In their Deadline 4 comments on guillemot and razorbill compensation [REP4-061], Natural England advised that due to considerable uncertainty in likely productivity rates of colonies in Devon and Cornwall, the more precautionary 'national average' productivity rate is most appropriate for the calculation of compensation quantum.

51. The full range of displacement / mortality scenarios and compensation ratios are displayed below in Table 5.4.

Table 5.4 Calculated razorbill breeding pair requirements for compensation at varying displacement / mortality / productivity and compensation ratios. Values in red/bold represent the Applicant's position on the appropriate scale of compensation

Scenario (Displacement / Mortality Mean Values)	Number of Mortalities	Breeding pairs required at given compensation ratios			Required fledglings produced from additional breeding pairs		
		1:1	2:1	3:1	1:1	2:1	3:1
'West' region productivity: 0.642							
50% / 1%	0.6	1.8	3.6	5.4	1.2	2.3	3.5
70% / 2%	1.6	4.8	9.6	14.4	3.1	6.2	9.2
National average productivity: 0.570							
50% / 1%	**0.6**	2.0	**4.1**	6.1	1.2	**2.3**	3.5
70% / 2%	1.6	5.4	10.8	16.2	3.1	6.2	9.2

52. From results shown above in Table 5.4, it is possible to estimate the proportion of fledglings (produced by the additional breeding pairs required in compensation) that reach adult breeding age that are likely to recruit at their natal colony or disperse elsewhere. As for guillemot, birds may disperse to other colonies which may include SPA sites (e.g. Isles of Scilly SPA or Skomer, Skokholm and the Seas of Pembrokeshire SPA).

53. This can be calculated by using natal dispersal / philopatry rates given in literature (more usually a natal dispersal rate is given, from which philopatry can be calculated as shown below):

$$1.00 - rate\ of\ natal\ dispersal = rate\ of\ philopatry$$

54. At the applicants preferred approach of a 50% / 1% displacement / mortality scenario and a 2:1 ratio, the compensation requirement is calculated as 1.2 (2 x 0.6) adult birds on average from each generation of fledglings. Using a natal rate of 0.17 (Table 5.1; available estimates indicate that the proportion of razorbills which disperse to recruit in other colonies is considerably lower than for guillemot) , this would look like:

$$1.2 \times 0.17 = 0.2\ birds\ disperse$$

55. With on average 0.2 birds expected to disperse, there remains 1.0 birds expected to recruit into the natal colony.

56. Table 5.5 below shows full detail of the expected numbers of produced recruits that either disperse or remain at the natal colony, at the different displacement / mortality scenarios, compensation ratios and different dispersal / philopatry rates given in the literature.

57. In summary, with the applicants approach of using a 50% / 1% displacement / mortality scenario, at a natal dispersal rate of 0.17 (Lavers *et al.,* 2007), a 2:1 compensation ratio would produce on average 1.0 breeding age birds per year that recruit to the natal colony, whilst on average another 0.2 breeding age birds disperse away, which offers potential contributions to the national site network.

Table 5.5 Numbers of breeding age razorbills produced from colony compensation measures expected to remain at the natal colony and those that are expected to disperse and recruit in other colonies. Values in red/bold belong to the Applicant's preferred approach

Scenario (Displacement / Mortality Mean Values)	Target fledgling production	Philopatry rate[1]	Birds produced expected to recruit into natal colony (philopatry)			Birds produced expected to disperse away from natal colony (natal dispersal)		
			1:1	2:1	3:1	1:1	2:1	3:1
50% / 1%	**0.6**	0.830 – 0.912	0.5 – 0.6	**1.0 – 1.1**	1.5 – 1.6	0.1 – 0.1	**0.2 – 0.1**	0.3 – 0.2
70% / 2%	1.6		1.3 – 1.5	2.7 – 2.9	4.0 – 4.4	0.3 – 0.1	0.5 – 0.3	0.8 – 0.4

[1] Range of philopatry rates derived from literature: 0.83 in Lavers *et al.* (2007) (as in Natural England relevant representations RR-243 comment G2) and 0.912 in Horswill and Robinson (2015) (back calculated from the natal dispersal rate of 0.088)

5.3 Summary of compensation scale

58. With reference to Table 5.2 above, for guillemot the Applicant's proposed compensation requirement is 11 (10.6) pairs for the FFC SPA, and 9 (8.8) pairs for the Farne Islands SPA, a total of 20 pairs (19.4) based on 50% displacement and 1% mortality of displaced birds, the more precautionary national average productivity, and a 2:1 ratio. At 70% displacement and 2% mortality, the equivalent numbers for FFC are 30 (29.2) pairs and for the Farne Islands 25 (24.7) pairs, a total of 54 (53.9 pairs).

59. For Razorbill, with reference to Table 5.4, the Applicant's proposed compensation requirement is 5 (4.1) pairs for the FFC SPA, based on 50% displacement and 1% mortality of displaced birds, the more precautionary national average productivity, and a 2:1 ratio. At 70% displacement and 2% mortality, the equivalent would be 11 (10.8 pairs).

5.4 Scale of management interventions

60. Section 8 below describes a desk-study of guillemot and razorbill breeding colonies in Devon and Cornwall, based on which a short-list of twelve potential compensation sites has been identified [REP4-061]. The number of locations where the compensatory measure would be delivered would be determined by the numbers of birds required for compensation described above; the compensation potential of shortlisted sites (Table 5.6); and whether this measure is done collaboratively with other developers, or if it is a North Falls alone measure.

61. The indicative compensation potential (Table 5.6) is the difference between the historic peak count and the most recent count (based on data from the Seabird Monitoring Programme database, see Table 8.1 and Table 8.5 below), expressed as individuals and pairs. The number of breeding pairs is calculated by applying a 0.67 correction factor to the number of individuals (JNCC, 2021) (noting Natural England's comments at Deadline 4 [REP4-061, Table 1, NE ref 4], it is acknowledged that this correction factor is based on detailed counts at specific breeding sites, and should be applied with caution to other sites).

62. The potential compensation capacity would be considered further during final site selection, informed by surveys and stakeholder consultation. If suitable nesting habitat is available, it may be possible that at some colonies the historic peak counts could be exceeded if this was also reflective of pressures such as disturbance at the colony.

Table 5.6 Potential scale of benefit at breeding sites (see also Table 8.5).

Colony	Guillemot				Razorbill			
	Historic peak counts (IND)	Recent counts (IND)	Indicative Compensation Potential		Historic peak counts	Recent counts	Indicative Compensation Potential	
			Individuals	Pairs			Individuals	Pairs
Carters Rocks	47	8	39	26	8	0	8	5
Cow and Calf	1308	760	548	367	181	103	78	52
Gull Rock (Falmouth)	309	298	11	7	31	17	14	9
Gulland Rock	1176	580	596	399	82	52	30	20
Highveer Point	53	21	32	21	178	23	155	103
Lynton 1 and 2	361	240	121	81	117	34	83	55
North Cliffs 1	154	102	52	34	46	1	45	30
North Cornwall 2	134	38	96	64	49	34	15	10
North Cornwall 3	112	102	10	6	86	58	28	18
Rillage Point to Ramsay Beach	N/A	N/A	N/A	N/A	41	10	31	20
Seal Hole to Trevaunance Cove	122	24	98	65	70	7	63	42
St. Agnes Head to Newdowns Head	N/A	10	Unknown	Unknown	60	1	59	39
Wringapeak	912	530	382	255	208	61	147	98

6 Selection of Compensatory Measure

64. The process for identifying potential guillemot and razorbill compensatory measures considered the ecology and existing pressures on guillemot and razorbill to identify measures which would aim to reduce mortality from other causes, increase survival through other means and/or increase productivity to offset the displacement effects described in Section 4.

65. Potential compensatory measures for guillemot and razorbill were considered in an 'Initial Review of Compensatory Measures for Guillemot and Razorbill'

which was shared with the Ornithology ETG as part of the EPP and is summarised below. This was intended as a discussion document.

66. Measures considered in the review were:

- Predator eradication from a breeding colony;
- Fishery bycatch prevention; and
- ANS.

67. Following consultation with the Ornithology ETG (11 April 2024) reduction of recreational disturbance at one or more small breeding colonies in the southwest of England was included. In addition, contribution to a strategic measure or fund (Section 11) is also included as an option to deliver compensation, if required.

68. A summary of the considered compensation measures and conclusions reached in consultation with Natural England and RSPB in included in Table 6.1, with the compensation options taken forward in bold.

Table 6.1 Screening of compensation measures for guillemot and razorbill (selected options in bold)

Measure	Conclusions
Reduction of recreational disturbance at a breeding colony	**This measure was recommended by Natural England (2024a) in their comments on the initial review of compensatory measures for guillemot and razorbill. It was suggested by Natural England that small colonies with historical declines be considered, particularly those where pressures have been identified as suppressing the breeding success of the population, and where remedial action can be taken to facilitate recovery of these colonies.**
Predator management (mink, feral cat, rat) / exclusion (foxes, great skuas)	Natural England (2024a) advised that this measure is potentially out of proportion to the scale of predicted impact of North Falls on razorbill and guillemot. They also commented that there are limited options for sites that could be delivered. This option is not considered further by the Applicant. However, should this become available as a strategic option (Section 11), the Applicant may give this further consideration.
Provision of additional nesting habitat – artificial structure	In their comments on the initial review of compensation measures for guillemot and razorbill (see Annex 1A), Natural England advised that provision of ANS for auks remains highly experimental with no clear evidence to inform the potential scale of delivery. This option is not considered further by the Applicant. However, should this become available as a strategic option, the Applicant may give this further consideration.
Fishery bycatch prevention	It is recognised that this compensation measure has been formally adopted for HP4 and SEP/DEP. This measure is not taken forward for North Falls as Natural England (2024) advised against pursuing this option, stating that some efforts to address bycatch by technological means may have exacerbated overall bycatch risk due to unintended consequences (see Annex 1A).
Contribution to a strategic fund	**In accordance with the SEP&DEP DCO, which enables compensation to be delivered through contribution to a Strategic Compensation Fund, this option is included for North Falls.**

7 Ecological Evidence

7.1 Reduction of Recreational Disturbance at a Breeding Colony

7.1.1 Overview

69. Following consultation (Annex 1A Compensation Consultation **(Document Reference: 7.2.1.1))** on an initial review of compensatory measures for guillemot and razorbill, reduction of recreational disturbance at a small breeding colony is a measure recommended by Natural England. This involves implementing methods of reducing the impact of human disturbance e.g. wardens, fencing and signage. It was suggested by Natural England that small colonies in the southwest of England with historical declines be considered, particularly those where pressures have been identified as suppressing the breeding success of the population, and where remedial action can be taken to facilitate recovery of these colonies.

7.1.2 Evidence for adverse effects of recreational disturbance on guillemot and razorbill

70. Evidence for the effects of recreational disturbance on breeding guillemot and razorbill, or potential for effects based on evidence regarding similar species, is a key focus of the reviews completed by GoBe Consultants (2024a-d). A synopsis of the findings of these reviews is provided here, followed by findings from additional sources.

71. In response to recreational disturbance sources, guillemot first show a range of non-escape behaviours which are indicative of distress or discomfort, for example head-bobbing. Non-escape responses are likely to be indicators of stress responses with the potential to ultimately affect breeding success via reduced fitness or increased adult investment in their own survival over reproduction. Seabird body temperature, heart rate, levels of the stress hormone corticosterone and time spent vigilant for threats have all shown changes in response to disturbance when measured in the field. A study of nesting guillemots at St Abbs Head in southeast Scotland found a negative correlation between human visitor rate and breeding success (Beale & Monaghan 2004, Beale 2004). This was due to non-escape behaviours as visitors did not flush birds from nests.

72. The escalated disturbance response of cliff-nesting seabirds is to flush from the nest location, which has been observed in multiple species to result in eggs or chicks being exposed to predators such as gulls, and the elements. Eggs or young have been observed to fall from the nesting ledge during flushing responses, and seabirds nesting at high density on ledges (as with guillemot and razorbill) are more vulnerable to crushing of eggs or young during flushing events.

73. As well as disturbance effects at the colony, recreational activity (particularly involving boats and aircraft) is identified to potentially cause disturbance flights or dives in ‘rafting’ aggregations of birds on the sea (with energetic and potential survival consequences), or disturbance or displacement of birds which are foraging (with food intake and survival consequences). Above a threshold of

boat traffic in a marine protected area, foraging dives by European shags *Gulosus aristotelis* reduced ten-fold (Velando & Munilla 2011).

74. There is indication, either via studies of guillemot or razorbill or from studies of species of similar nesting ecology, that guillemot and razorbill survival or breeding success are affected by the following recreational sources of disturbance:

- Walking (in the case of guillemot and razorbill walking access is commonly only achievable to the cliff tops above colonies);
- Rock climbing and coasteering;
- Birdwatching (for guillemot and razorbill at their colony this presents as an extension of disturbance posed by walking wherein birds are subject to more prolonged and intensive viewing and/or photography, presenting a more focused and predator-like stimulus from humans);
- Boats, motorised watercraft and kayaks/canoes; and
- Aircraft (including drones).

75. Additional sources compiled as part of this evidence review provide direct evidence for effects on guillemot which were previously indicated by studies of cliff-nesting auks or other seabirds in the above review.

76. Studies of guillemot breeding colonies in California observed premature departure and presumed mortality of guillemot chicks, loss of all chicks, loss of eggs, and abandonment of a colony due to (fishing) vessels (Rojek et al. 2007). Loss of eggs and chicks occurred “when boats spent extended periods of time close to nesting areas.” As cited by Rojek et al. (2007), Harris and Wanless (1984) indicate that disturbance to guillemot chicks can result in vacating the nest at lower body mass with clear implications for survival.

77. Guillemots ‘loafing’ on the sea at colonies have also shown disturbance responses to recreational sources. Rafting guillemots at Berry Head, South Devon showed head-bobbing and flushing responses to 84 of 121 boats or watercraft. In the case of fishing boats, 50% of responses were more energetically costly flush responses, and in the case of both ‘motor boats’ and canoes more than 50% were flush responses (Hughes 2013 as reported in Mannaerts et al. 2014). It is notable that many such encounters between boats and rafting guillemots involved craft which had crossed into an Area of Special Protection around the colony intended to exclude seabirds from such disturbance during the breeding season. Flush responses are considered to inevitably carry a daily energy budget cost, and therefore potential survival effect, as more energy is required to undertake additional flights or dives. At St Abb’s Head, boat presence in coves significantly reduced the number of loafing guillemots, and escaping birds took distinct routes which were inferred to carry high energetic cost (Diele & White 2018 as reported in Goodship & Furness 2019).

78. Further to the above evidence for effects of recreational disturbance, guillemot and razorbill colonies have several of the characteristics outlined by Reynolds & Braithwaite (2001) which make them an attractive tourism resource in the

region, as was also concluded for grey seals *Halichoerus grypus* in South Devon by Curtin et al. (2009). These attributes are:

- Predictable in activity or location,
- Approachable,
- Readily viewable (open habitats);
- Apparently tolerant of human intrusion (for at least part of the year); and/or
- Possess elements of rarity or local abundance.

79. Guillemot and razorbill colonies are therefore, by their nature, considered to be inviting of targeted recreational activity via boats or onshore vantage points.

7.1.3 Evidence for threshold distances for disturbance of guillemot and razorbill

80. Commonly defined distance variables of interest in the study of disturbance include:

- Alert distance (AD)
- Flight initiation distance (FID)
- Minimum approach distance (MAD)

81. However, in their review of disturbance distances of marine and coastal birds, Goodship and Furness (2019) report no available quantitative data for the above variables for guillemot or razorbill. The current review of guillemot and razorbill disturbance in relation to distance has identified distance data which does not refer to the above definitions or terms, and which originate largely from observational rather than experimental studies.

82. Percentage of boat passes eliciting a disturbance response (ranging from head-bobbing to flushing) in rafting guillemot at Berry Head showed marked step-changes, from 0% when boats were over 200m away, to 30% for each distance band from 50 to 200m, to 75-80% for each of the (three) distance bands within 50m (Hughes 2013, as reported by Mannaerts et al. 2014). However, these responses were a mix of alert and flight responses, and there was also variation in predominant type of disturbance response between the different types of boat and watercraft involved. Data for birds in the colony at Berry Head are not reported by Mannaerts et al. 2014.

83. Rojek et al. (2007) reported that all flushing events from guillemot study colonies in California in response to boats occurred when boats were within 75m (with 78% of events occurring when boats approached within 50m of a colony or subcolony). Notably, the study remarked that on two occasions head-bobbing was recorded when vessel approach was within a wider 200m, and vessel with an exceptionally loud engine triggered head-bobbing at approximately 800m distance. This highlights that factors beyond simple presence or movement which would not be controlled by a blanket setback distance (here noise level but also vessel size) are indicated to be important in potential to cause disturbance, as is also noted by Batey (2013).

84. A study of escape behaviour and distances of various non-breeding seabirds and waterbirds in response to the research vessel in the German North Sea

and Baltic Sea reported a mean escape distance of 127m for individual guillemots (minimum 15m, maximum 500m) and 395m for individual razorbills (min 30m and max 900m). This may not be a readily comparable study given its focus outside the breeding season and away from coastal breeding habitats of these species.

85. Existence of multiple conflicting setback distances, presented within a single 'recreation zone' (whether a geographic locality or type of recreational activity) is highlighted by Turner et al. (2021) as a potential pitfall to messaging and uptake of this management measure. Therefore, it may also be valuable to consider whether adoption of existing setback distances for marine wildlife (where these are already in use within a locality or recreational industry or community) may be appropriate for guillemot and razorbill. This review notes that the British Canoeing Awarding body (2024) and the WiSe Scheme (2018) already advise a 50m setback distance from cliffs with breeding seabirds, while Curtin et al. (2009) reported a prescribed code of conduct for seal watching in South Devon that included a minimum 25m distance of boats from grey seal haul-outs. Within Natural England's Relevant Representation to Five Estuaries (Natural England, 2024b), it was noted that a minimum approach distance of 100m for boats and 200m for kayaks at Berry Head, South Devon was recommended in an unpublished MSc thesis from Plymouth University. Slater (2006) advises 100 yards (91.4m) setback distance for observing seabird colonies from boats, and similarly highlights that non-motorised boats may require additional care or restriction as they can inadvertently 'sneak up' on birds, signalling their presence at much later notice and closer distance, causing greater disruption.

7.1.4 Conclusion

86. Key findings of this review are that there is evidence of an effect of human disturbance on the breeding success of guillemot, and that both guillemot and razorbill show disturbance behaviour in response to the presence of boats.

87. An appropriate set back distance for the North Falls compensatory measure (if required) would be informed by surveys and consultation with stakeholders.

8 Site Selection

8.1 Initial search and screening

88. Upon the recommendation of Natural England (2024a), the initial search for potential target colonies focused on those located in Devon and Cornwall. Breeding colony count data for these sites were obtained from the Seabird Monitoring Programme (SMP) Database (SMP, 2024) for both guillemot and razorbill.

89. Any sites with zero values for both species were discounted and a long list of sites (shown in Table 8.1 and a-f) was produced from the remaining data.

90. For each colony, counts were included to identify population trends and size. Colonies with historically larger breeding populations were considered, as this would indicate there is potential nesting space for a larger population than was

most recently recorded (see Table 8.1). Subsequently, interventions for these colonies could be more beneficial as there is space for them to increase back to their historical sizes, or potentially to increase beyond the maximum recorded count.

Table 8.1 Long List of Auk Colonies in Devon and Cornwall that Could be Considered for Small Colony Intervention Compensation. Rows highlighted in the darker blue indicate those taken through to the shortlist for consideration based on population trend and size.

Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
Armed Knight	N/A	2007 – 0 2017 – 80 2023 – 402	Increasing	NO	2007 – 34 2017 – 23 2023 – 23	Stable, with potential to increase. Historic numbers older than 2000: 1987 – 2 1999 – 10	**YES**
Backways Cove	Tintagel Cliffs Sites of Special Scientific Interest (SSSI)	N/A	N/A	N/A	2015 – 7	Only one count taken	NO
Bawden Rocks	N/A	2000 – 83 2007 – 5 2016 – 4 2017 – 10 2018 – 20	Historically higher than current, but current is slowly increasing	**YES**	2000 – 52 2007 – 12 2016 – 35 2017 – 40 2018 – 70	Increasing	NO
Beeny Sisters	N/A	N/A	N/A	N/A	2000 – 10 2018 – 0	Decreased to zero	NO
Berry Head 1	Berry Head to Sharkham Point SSSI	2000 – 1029 2001 – 953 2002 – 858 2003 – 649 2004 – 986 2005 – 1053 2007 – 884	Fluctuates but generally stable, has potential to increase by a few hundred birds.	**YES**	N/A	N/A	N/A

Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
		2008 – 2392 (1196 apparently occupied nests (aon)) 2009 – 1129 2010 – 1378 2011 – 1464 2012 – 927 2013 – 704 2014 – 1029 2015 – 823 2016 – 930 2017 – 1145 2018 – 877 2019 – 1053 2020 – 712 2021 – 891 2022 – 739 2023 – 943					
Bounds Cliff	N/A	2017 – 20	Only one count taken	NO	2017 – 48	Only one count taken	NO
Buckator	N/A	N/A	N/A	N/A	2000 – 10 2018 – 55	Increasing	NO
Carnweather Point	N/A	N/A	N/A	N/A	2017 – 2	Only one count taken	NO

Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
Carters Rocks	N/A	2000 – 0 2007 – 20 2015 – 47 2017 – 8	Fluctuates, potential for improvement	**YES**	2000 – 0 2007 – 8 2017 – 0	Decreased to zero	NO
Carvannet – Portreath 1	Godrevy Head to St Agnes SSSI	2007 – 3 2017 – 0	Decreased to zero	NO	N/A	N/A	N/A
Carvannet – Portreath 2	N/A	2000 – 150 2007 – 31 2014 – 105 2016 – 240	Increasing	NO	2000 – 14 2007 – 21 2016 – 6	Decreasing, has potential to increase	**YES**
Carvannet – Portreath 3	Godrevy Head to St Agnes SSSI	2013 – 124 2014 – 108 2016 – 205	Increasing	NO	2000 – 5 2016 – 4	stable	NO
Carvannet – Portreath 5	N/A	2000 – 39 2013 – 68 2014 – 78 2016 – 76	Stable	NO	N/A	N/A	N/A
Cow and Calf	West Exmoor Coast and Woods SSSI	2001 – 224 2008 – 540 2016 – 1308 2018 – 1165 2023 – 760	Decreasing	**YES**	2001 – 18 2008 – 168 2016 – 181 2018 – 110 2023 – 103	Decreasing but has potential to increase	**YES**
Dunderhole Point	N/A	N/A	N/A	N/A	2009 – 3 2015 – 9	Increasing – historically in 1999 there were zero	NO

Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
Elwill Bay	West Exmoor Coast and Woods SSSI	2023 – 160	Only one count taken	NO	2001 – 12 2008 – 7 2016 – 33 2023 – 25	Decreasing slightly, potential for small increase	**YES**
Glebe	Tintagel Cliffs SSSI	N/A	N/A	N/A	2009 – 8 2015 – 14	Increasing, historically in 1999 there were zero	NO
Godrevy	Godrevy Head to St Agnes SSSI	2000 – 20 2013 – 31 2014 – 13 2016 – 40	Fluctuates	NO	2000 – 12 2016 – 9	Decreasing with potential for small increase	**YES**
Grower Rock (Plymouth – Falmouth)	Tintagel Cliffs SSSI	2009 – 81 2015 – 41	Decreasing, potential for increase	**YES**	2009 – 4 2015 – 151	Increasing	NO
Gull Rock	N/A	2000 – 148 2007 – 143 2016 – 309 2017 – 300 2023 – 298	Decreasing	**YES**	2000 – 1 2007 – 12 2016 – 31 2017 – 18 2023 – 17	Decreasing, potential for increase	**YES**
Gull Rock – North Cornwall	N/A	2015 – 2	Only one count taken	NO	2009 – 48 2015 – 40	Decreasing slightly	NO
Gulland Rock	N/A	2007 – 45 2015 – 1019 2016 – 1176 2017 – 580	Decreased most recently, has potential to increase by a few hundred birds	**YES**	2007 – 15 2015 – 82 2016 – 52	Decreasing with potential to increase again	**YES**

Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
Highveer Point	West Exmoor Coast and Woods SSSI	2016 – 53 2023 – 21	Decreasing, historically higher so potential for increasing pop	**YES**	2008 – 7 2016 – 178 2023 – 23	Decreasing, potential for big boost to historic population	**YES**
Ligger Point – Holywell	N/A	N/A	N/A	N/A	2000 – 6 2017 – 11	Increasing slightly	NO
Long and Short Island	Tintagel Cliffs SSSI	2009 – 637 2015 – 895	increasing	NO	2000 – 122 2015 – 264	Increasing	NO
Long Island Coast	N/A	N/A	N/A	N/A	2009 – 27 2015 – 10	Decreasing, potential for increase	**YES**
Lundy	N/A	2000 – 2348 2004 – 2321 2008 – 3302 2013 – 4114 2017 – 6198 2021 – 9880 2023 – 9912	increasing	NO	2000 – 950 2004 – 841 2008 – 1045 2013 – 1324 2017 – 1735 2021 – 3533 2023 – 3785	Increasing	NO
Lye Rock	N/A	2009 – 124 2015 – 0	Decreased to zero	NO	2009 – 14 2015 – 0	Decreased to zero	NO
Lynton 1 and 2	West Exmoor Coast and Woods SSSI	2008 – 160 2016 – 361 2023 – 240	Decreasing, potential to increase again	**YES**	2008 – 117 2016 – 58 2023 – 34	Decreasing, potential to increase	**YES**

Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
Meachard	N/A	2015 – 8	Only one count taken	NO	2015 – 97	Only one count taken	NO
Morvah 1	N/A	2017 – 3 (SEA)	Only one count taken – different count type used	NO	2017 – 1	Only one count taken	NO
Morvah 3	N/A	2017 – 10	Only one count taken	NO	2017 – 7	Historic count in 1999 was 6 so pop has remained small but stable	NO
Mullion to Predannack Cliff NNR	Mullion Cliff to Predannack Cliff SSSI Mullion to Predannack Cliff NNR	2007 – 1 2008 – 5 2016 – 10	Increasing but very low numbers Historic number older than 2000: 1985 – 14 1999 – 8	**YES**	2007 – 0 2008 – 1 2015 – 3	Very small population increasing slowly. Historic counts: 1985 – 10 1999 – 2	**YES**
Newdowns Head to Seal Hole (Limit of SSSI)	Godrevy Head to St Agnes SSSI	N/A	N/A	N/A	2023 – 3	Only one count taken	NO
Newland Island	N/A	N/A	N/A	N/A	2007 – 8 2017 – 0	Decreased to zero	NO
North Cliffs 1	Godrevy Head to St Agnes SSSI	2000 – 151 2013 – 139 2014 – 154 2016 – 150 2020 – 102	Slight decrease, potential for maybe 50 more birds	**YES**	2000 – 46 2016 – 0 2020 – 1	Decreased possibly started to go up again, could have potential	**YES**

Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
North Cliffs 3	Godrevy Head to St Agnes SSSI	2016 – 172	Only one count taken	NO	2000 – 5 2016 – 11	Increasing	NO
North Cliffs 5	Godrevy Head to St Agnes SSSI Godrevy Head to St Agnes SSSI	2016 – 3	Only one count taken	NO	2016 – 4	Only one count taken	NO
North Cornwall 1	N/A	N/A	N/A	N/A	2017 – 6	Only one count taken	NO
North Cornwall 2	N/A	2000 – 13 2015 – 134 2016 – 108 2017 – 84 2017 – 38	Slowly decreasing from peak. Two counts taken in 2017 a couple weeks apart	**YES**	2017 – 49 2017 – 34	Two counts taken a few weeks apart	NO
North Cornwall 3	N/A	2015 – 88 2016 – 87 2017 – 54 2017 – 40 2018 – 64 2019 – 59 2020 – 81 2021 – 77 2022 – 112 2023 – 102	Overall increase. Two counts taken in 2017 a couple weeks apart	NO	2000 – 5 2015 – 67 2017 – 59 2018 – 45 2019 – 64 2020 – 79 2021 – 86 2022 – 86 2023 – 58	Started to decrease after a period of increase. Potential for increase to peak count again.	**YES**

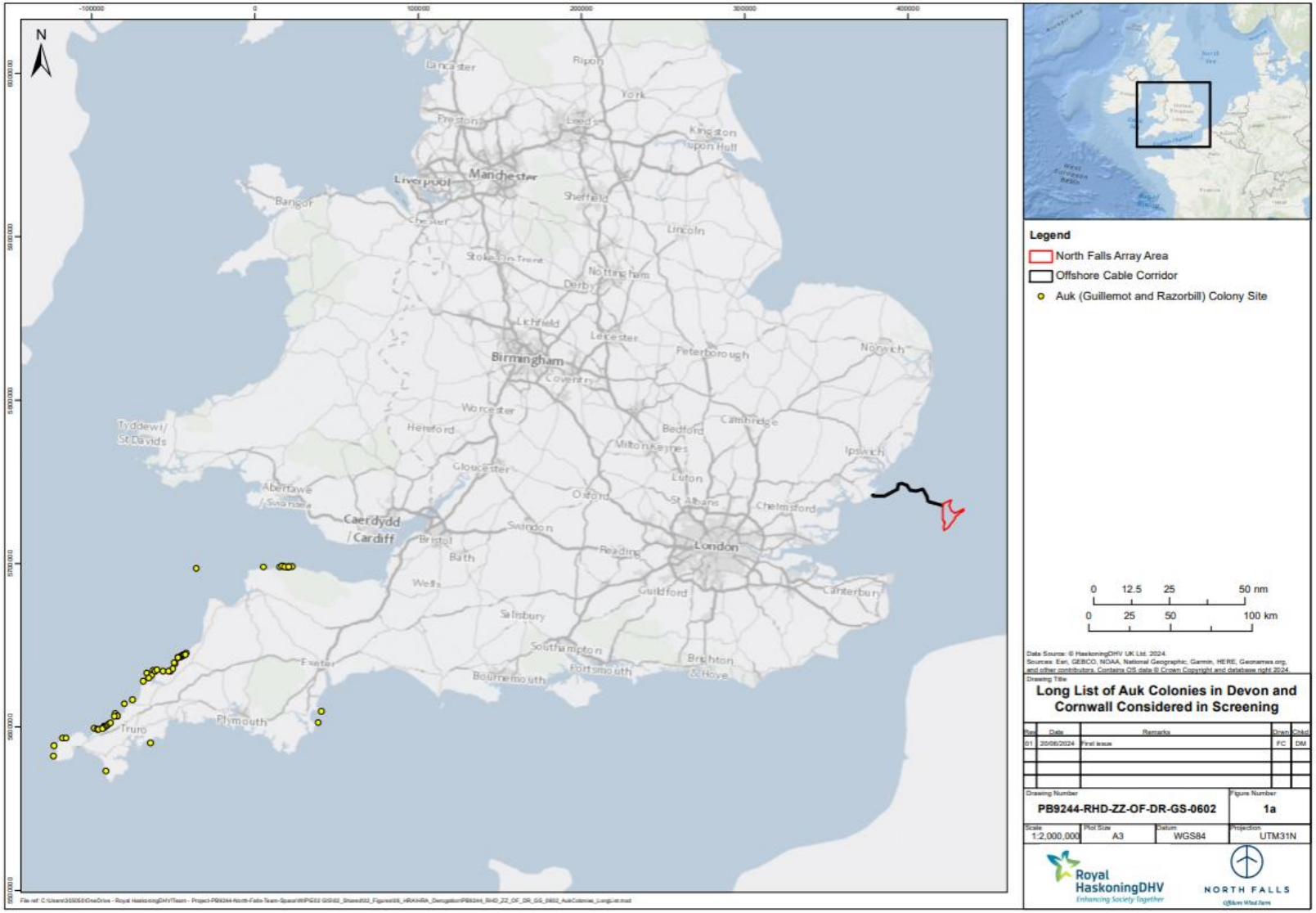
Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
Ore Stone	N/A	2001 – 5 2007 – 168 2017 – 339 2021 – 300 2021 – 25 2022 – 90	Two counts taken in the breeding season of 2021. 2022 count taken in April which is early compared to the other years counts so could account for the lower number?	**YES**	2001 – 0 2007 – 4 2017 – 25	Increasing	NO
Penally	N/A	2000 – 75 2018 – 0	Decreased to zero	NO	2000 – 16 2018 – 10	Decreasing	NO
Pentargon	N/A	2018 – 9	Only one count taken	NO	2000 – 8 2018 – 31	Increasing	NO
Pentargon Cove	N/A	2018 – 67	Only one count taken	NO	2018 – 11	Only one count taken	NO
Portreath – Porthtowan 1	Godrevy Head to St Agnes SSSI	N/A	N/A	N/A	2016 – 6	Only one count taken	NO
Portreath – Porthtowan 2	Godrevy Head to St Agnes SSSI	2000 – 95 2013 – 17 2014 – 15 2016 – 49	Increasing	NO	2000 – 52 2016 – 65	Increasing	NO
Portreath – Porthtowan 3	Godrevy Head to St Agnes SSSI	2000 – 4 2007 – 9 2016 – 0	Decreased to zero	NO	2000 – 41 2016 – 0	Decreased to zero	NO

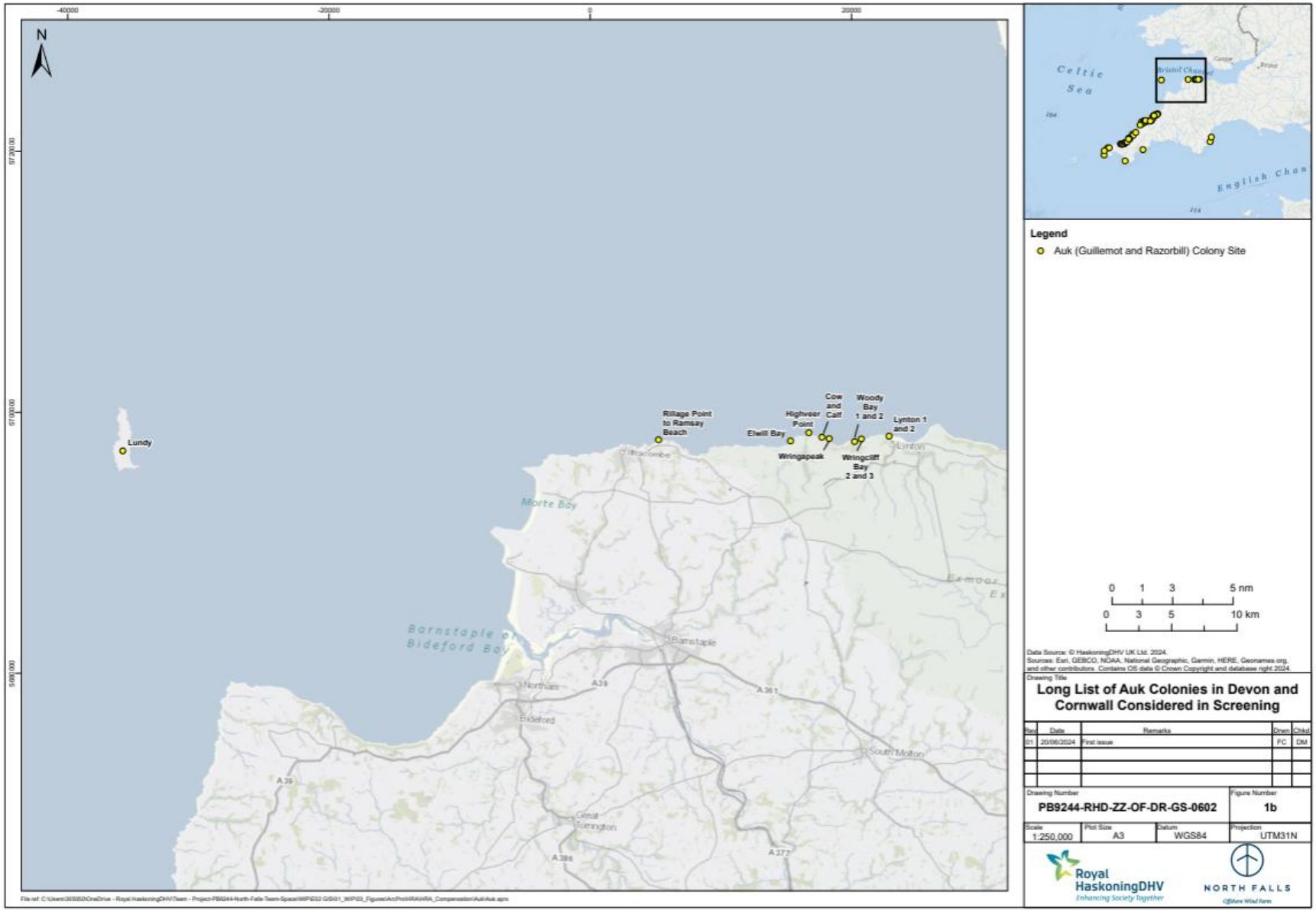
Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
Portreath – Porthtowan 4	Godrevy Head to St Agnes SSSI	2000 – 27 2016 – 0	Decreased to zero	NO	2000 – 2 2016 – 8	Increasing	NO
Reedy Cliff	N/A	N/A	N/A	N/A	2017 – 10	Only one count taken	NO
Rillage Point to Ramsay Beach	N/A	N/A	N/A	N/A	2008 – 41 2018 – 10	Decreasing maybe potential to increase	**YES**
Round Hill	N/A	N/A	N/A	N/A	2007 – 8 2018 – 0	Decreased to zero	NO
Seal Hole to Trevaunance Cove	N/A	2000 – 63 2015 – 122 2017 – 122 2018 – 89 2023 – 24	Decreasing, potential to improve?	**YES**	2000 – 7 2017 – 70 2018 – 38 2023 – 7	Decreased, maybe potential to increase again	**YES**
St. Agnes Head to Newdowns Head	N/A	N/A	N/A	N/A	2000 – 5 2016 – 5 2017 – 43 2018 – 60 2023 – 1	Decreased, potential to increase?	**YES**
The Brisons	N/A	2007 – 21 2016 – 350 2023 – 348	Stable	NO	2007 – 33 2016 – 500 2023 – 68	Decreasing, potential to increase	**YES**

Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
The Mouls	N/A	2007 – 120 2015 – 732 2015 – 292 2016 – 678	Increasing	NO	2007 – 34 2015 – 30 2015 – 68 2016 – 16	Decreasing Two counts taken in 2015 Potential to increase	**YES**
The Sisters	N/A	2009 – 173 2015 – 870	Increasing	NO	2009 – 26 2015 – 58	Increasing	NO
Trerubies Cove	N/A	N/A	N/A	N/A	2017 – 13	Only one count taken	NO
Towan Head	N/A	2024 – 4	Count taken in February may not be accurate	NO	N/A	N/A	N/A
Tresungers Point	N/A	2017 – 38	Historical count: 1999 – 67 Potential to increase back up to this	**YES**	2017 – 70	Historic count 1999 – 8 Suggests increasing	NO
Treyarnon – Merope	N/A	2000 – 31 2000 – 5 2016 – 31 2018 – 25 2018 – 19 2020 – 22	Two counts taken in both 2000 and 2018. No clear trend, potential to increase?	**YES**	2000 – 5 2000 – 18 2000 – 12 2018 – 6 2018 – 6 2020 – 6	Stable population but low in comparison to 2000. 2000's counts all taken on same day, so were the 2018 counts.	**YES**
Willapark	Tintagel Cliffs SSSI	2015 – 174 (87 AON)	Only one count taken	NO	2015 – 100 (AON 50)	Only one count taken	NO

Site	Designation	SMP Data Guillemot Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Guillemot	SMP Data Razorbill Population (IND) 2000-present	Colony trend (breeding pop)	Potentially for shortlist Razorbill
Woody Bay 1 and 2	West Exmoor Coast and Woods SSSI	2001 – 204 2008 – 126 2016 – 130 2023 – 90	Decreasing Potential to help increase	**YES**	2001 – 142 2008 – 124 2016 – 57 2023 – 66	Starting to increase again, potential to help this increase further	**YES**
Wringapeak	West Exmoor Coast and Woods SSSI	2001 – 434 2008 – 265 2016 – 854 2018 – 912 2023 – 530	Increased up to 2018 and then decreased.	**YES**	2001 – 15 2008 – 208 2016 – 216 2018 – 115 2023 – 61	Decreasing	**YES**
Wringcliff Bay 2 and 3	West Exmoor Coast and Woods SSSI	2023 – 2	Only one count taken	NO	2016 – 3 2023 – 28	Increasing	NO

Figure 1a-f Long List of Auk Colonies in Devon and Cornwall Considered in Screening:




N
Lundy
Rillage Point to Ramsay Beach
Highveer Point
Cow and Calf
Woody Bay 1 and 2
Lynton 1 and 2
Ehelll Bay
Wringapeak
Wringcliff Bay 2 and 3
Lynton
Morte Bay
Barnstaple Bay
Bideford Bay
Barnstaple
Northam
Bideford
South Molton
Great Torrington
A39
A361
A377
A386
Celtic Sea
English Chan
Legend
Auk (Guillemot and Razorbill) Colony Site
0 1 3 5 nm
0 3 5 10 km
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Long List of Auk Colonies in Devon and Cornwall Considered in Screening
Rev 01 Date 20/06/2024 Remarks First issue Drwn FC Chkd DM
Drawing Number PB9244-RHD-ZZ-OF-DR-GS-0602
Figure Number 1b
Scale 1:250,000
Plot Size A3
Datum WGS84
Projection UTM31N
Royal HaskoningDHV
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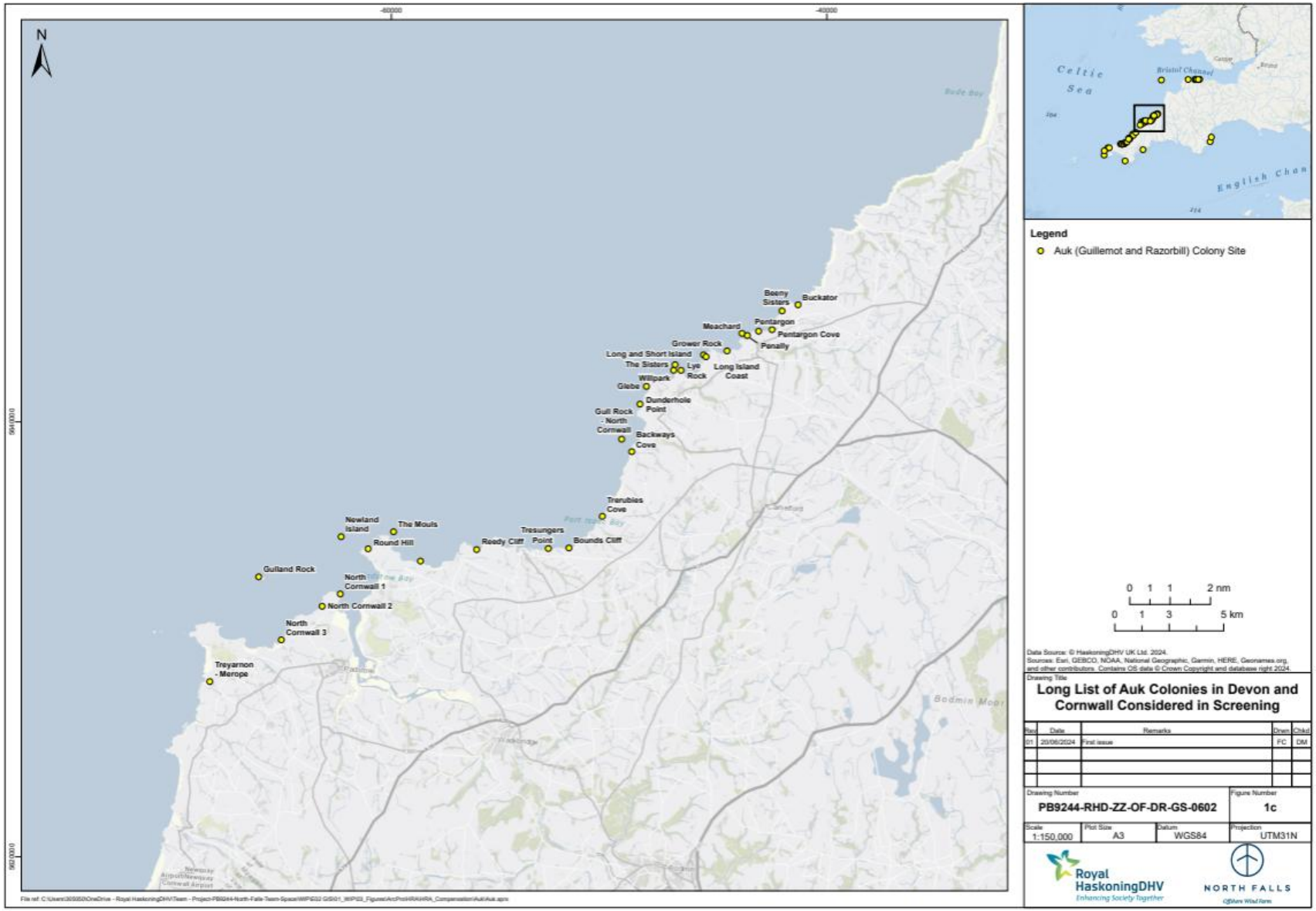
NORTH FALLS


N
Beeny Sisters
Buckator
Pentargon
Meachard
Pentargon Cove
Penally
Grower Rock
Long and Short Island
The Sisters
Lye Rock
Long Island Coast
Willpark
Glebe
Dunderhole Point
Gull Rock - North Cornwall
Backways Cove
Trenubies Cove
Newland Island
The Mouls
Round Hill
Reedy Cliff
Tresungers Point
Bounds Cliff
Gulland Rock
North Cornwall 1
North Cornwall 2
North Cornwall 3
Treyarnon - Merope
Celtic Sea
Bristol Channel
English Chan
Legend
Auk (Guillemot and Razorbill) Colony Site
0 1 1 2 nm
0 1 3 5 km
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01 | 20/06/2024 | First issue | PC | DM
Drawing Number
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Royal HaskoningDHV
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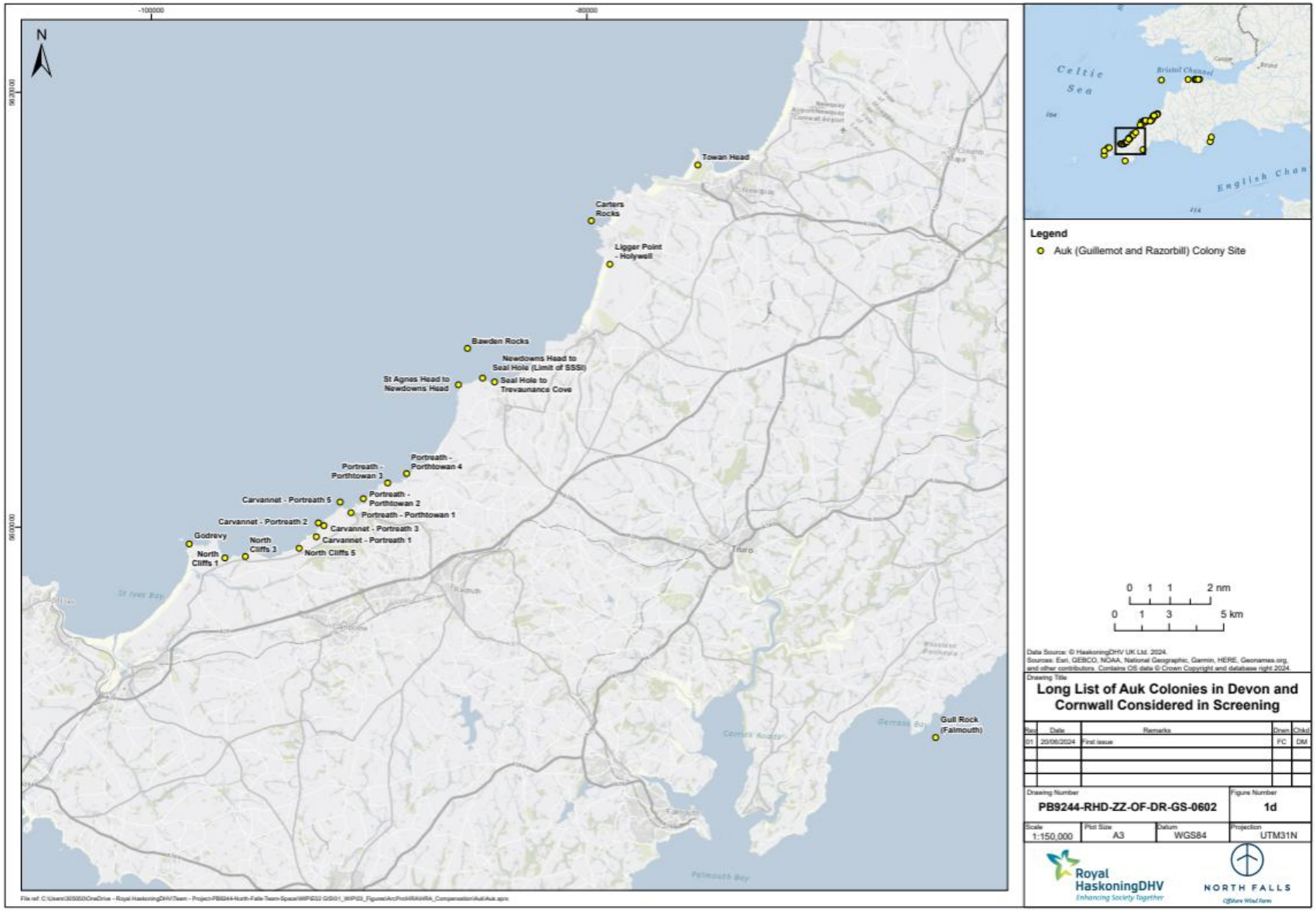
N
Towan Head
Carters Rocks
Ligger Point - Holywell
Bawden Rocks
Newdowns Head to Seal Hole (Limit of SSSI)
St Agnes Head to Newdowns Head
Seal Hole to Trevaunance Cove
Portreath - Porthtowan 4
Portreath - Porthtowan 3
Portreath - Porthtowan 2
Carvannet - Portreath 5
Portreath - Porthtowan 1
Carvannet - Portreath 2
Carvannet - Portreath 3
Carvannet - Portreath 1
Godrevy
North Cliffs 3
North Cliffs 1
North Cliffs 5
Truro
Gull Rock (Falmouth)
Celtic Sea
Bristol Channel
English Chan
Legend
Auk (Guillemot and Razorbill) Colony Site
0 1 1 2 nm
0 1 3 5 km
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Figure Number 1d
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Plot Size A3
Datum WGS84
Projection UTM31N
Royal HaskoningDHV
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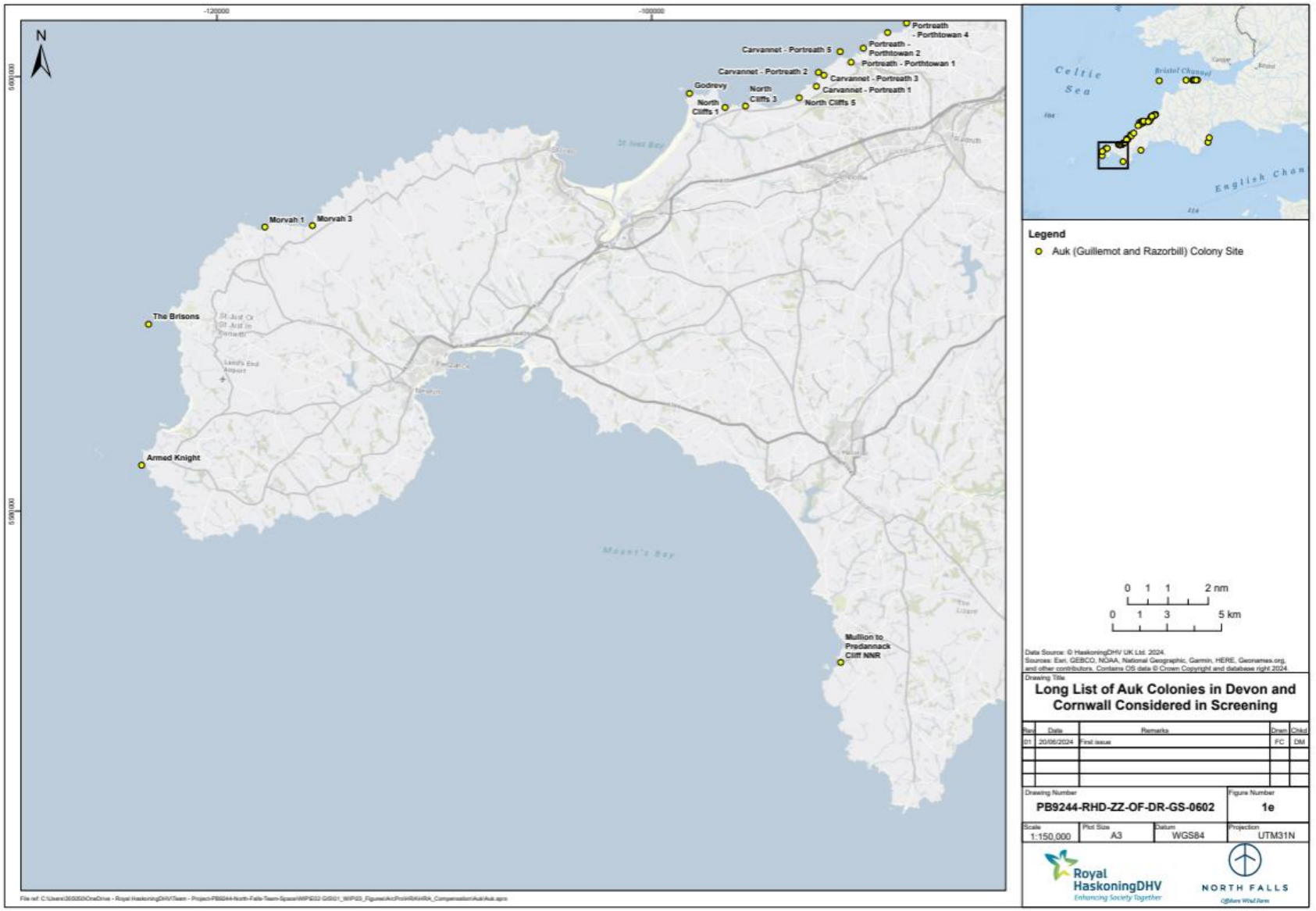
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Portreath - Porthtowan 4
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Portreath - Porthtowan 2
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Carvannet - Portreath 2
Carvannet - Portreath 3
Godrevy
North Cliffs 3
Carvannet - Portreath 1
North Cliffs 1
North Cliffs 5
Morvah 1
Morvah 3
The Brisons
Armed Knight
Mullion to Predannack Cliff NNR
Celtic Sea
Bristol Channel
English Chan
Legend
Auk (Guillemot and Razorbill) Colony Site
0 1 1 2 nm
0 1 3 5 km
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Drawing Number
PB9244-RHD-ZZ-OF-DR-GS-0602
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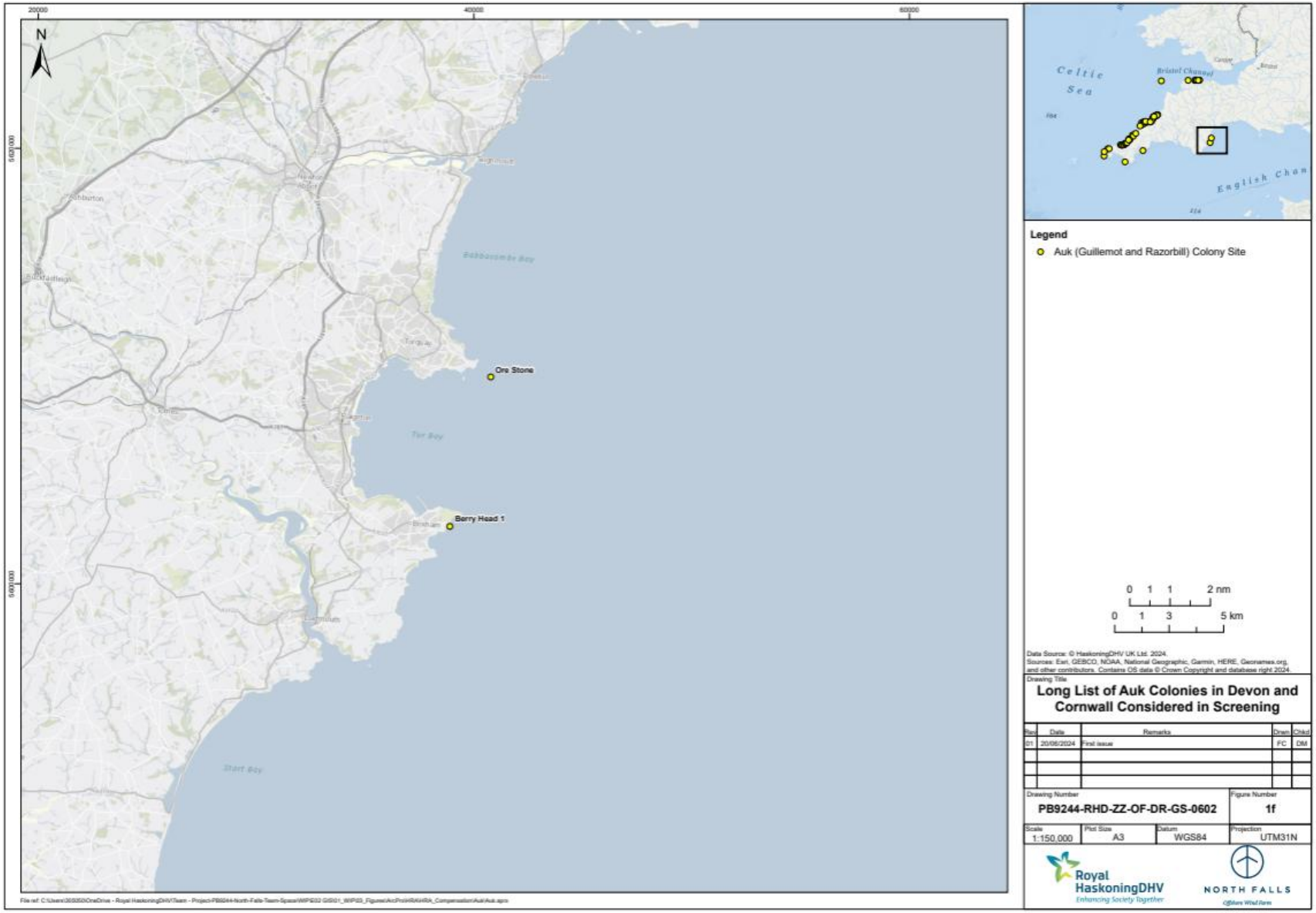
Offshore Wind Farm


20000
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60000
N
Ore Stone
Berry Head 1
Babbacombe Bay
Tor Bay
Start Bay
Celtic Sea
Bristol Channel
English Chan
Legend
Auk (Guillemot and Razorbill) Colony Site
0 1 1 2 nm
0 1 3 5 km
Data Source: © HaskoningDHV UK Ltd. 2024.
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8.2 Colony Short-listing Process

91. Once the initial screening was complete, a desk study of the likelihood of human disturbance was undertaken, as this is understood to be a key pressure which may be limiting guillemot and razorbill numbers and/or a causal factor in declines, observed at these colonies. Level of disturbance was determined based on the criteria detailed in Table 8.2 below. This was based on the outcomes of desk-based research on factors such as proximity to coastal paths, nearest settlement, and levels of recreational activity in the area, conducted for each colony (Table 8.4). Sites with an overall high disturbance score (as detailed below) were carried forward to the final short-list.

92. As sites did not always score the same level for each of the disturbance criteria, the following system was applied to determine the overall level of disturbance. By applying a score of 1-3 for low-high disturbance levels for each criterion, an average overall score could be calculated. Overall scores in many cases are decimals not integers and so they were rounded up or down as appropriate (rounded up if above x.5 or rounded down if below x.5) to fit into one of the three categories. For example, where two criteria were rated as high disturbance and one as medium disturbance, the overall level of disturbance would be determined as being high ((3+3+2)/3=2.67, rounded up is 3 = high). The same principle applies if two criteria were low disturbance and one medium, then the overall rating would be low ((1+1+2)/3=1.33, rounded down is 1 = low). For sites such as Gull Rock, where there were two low criteria and one high, the overall rating was medium disturbance ((1+1+3)/3=1.67, rounded up is 2 = medium). In cases where each criteria had a different disturbance level (i.e. low, medium and high), the overall rating would be medium.

93. Sources of information to identify the levels of human disturbance included searching on eBird (2024) for birdwatching hotspots close to the colonies in question. Proximity to coastal paths was linked to this as birdwatchers, along with walkers, would be the most frequent users of these paths. Strava (2024) was a helpful tool in determining the intensity of foot traffic along the coast. Due to the natural draw of people, either local or tourists to settlements, these were used as points of search for recreational businesses from which people may partake in coastal activities. This included kayaking, paddleboarding, coasteering, boating, climbing etc. Intensity of water sport activities around the colonies were determined by looking at heat maps on Strava (2024). The UK Climbing (2024) website was also used to determine whether there were any known and popular climbing routes close to the colonies that may result in disturbance.

Table 8.2 Criteria for levels of disturbance to seabird colonies

Criteria	Disturbance Score		
	Low (1)	Medium (2)	High (3)
Number of different sources of disturbance (e.g. walkers, climbers, watercraft etc.)	1-2	3	4-5
Distance to nearest settlement	>5km	1-5km	<1km

Criteria	Disturbance Score		
	Low (1)	Medium (2)	High (3)
Potential proximity of recreational activity	>100m	50-100m	<50m

94. Each site has been given a Red, Amber, Green (RAG) classification (see Table 8.4) and only Green sites have been carried forward to the shortlist, at this stage. The criteria defining these classifications are detailed in Table 8.3.

Table 8.3 Definitions of site categories for shortlisting

Shortlisting category	Definition
Green (G)	Both guillemot and razorbill populations decreasing and have a medium/high disturbance level. Good potential for delivering compensation.
Amber (A)	One species decreasing or stable (with higher historical count) and medium/high disturbance. OR Both species decreasing and low disturbance. OR Both species increasing but with higher historical counts and medium/high disturbance.
Red (R)	One species decreasing and low disturbance. OR Both species stable/increasing and low disturbance.

Table 8.4 Details of anthropogenic pressures on Guillemot and Razorbill colonies that meet the population trend criteria.

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
Armed Knight	N/A	Offshore Islet (~150m)	Land's End Theme Park and adjacent southwest coastal path (0.30km)	Walkers/Tourists Birdwatchers; eBird hotspot at Land's End, although colony offshore Watercraft (local blogs describing kayak routes through; but a difficult area to paddle so may not be frequent numbers); small number of kayak routes on Strava Coasteering advertised around Land's End Aircraft (Land's End airport for Isles of Scilly ~5.5km; flight paths sometimes pass directly overhead)	Number of disturbance sources	3	High	A
					Distance to nearest settlement	3		
					Proximity to recreational activity	2		
Bawden Rocks	N/A	Offshore Islets (1.53km)	St Agnes, Cornwall (3.12km)	Potentially kayakers but not generic tourists, local kayak hire stick to the coastline, islets are probably too far offshore for generic kayakers; no evidence on Strava.	Number of disturbance sources	1	Low	R
					Distance to nearest settlement	2		
					Proximity to recreational activity	1		
Berry Head 1	Berry Head to Sharkham Point SSSI	Mainland Cliff	Directly below an NNR and recreational area with café, including clifftop coastal paths; Landscove holiday park (0.35km)	Walkers/Tourists Birdwatchers; eBird hotspot at Berry Head Watercraft (local companies offering paddle tours past Berry Head Guillemot colony Climbers (marked as a climbing site but with seasonal restriction for breeding birds) Aircraft (South Hams Flying club airstrip ~15km)	Number of disturbance sources	3	High	A
					Distance to nearest settlement	3		
					Proximity to recreational activity	2		

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
Carters Rocks	N/A	Offshore Islet (~210m)	Holywell and Holywell beach (~0.87km) attracts summer-time tourism; Coastal path passes ~0.5km; Perranporth to south ~5km; Newquay to NE ~5km	Watercraft (Holywell popular tourism spot for surfers; paddle sports Aircraft; Newquay airport ~13km to northeast; Perranporth airfield 3.36km to east Climbers – climbing routes on the rocks list on UK Climbing	Number of disturbance sources	2	High	G
					Distance to nearest settlement	3		
					Proximity to recreational activity	3		
Carvannet – Portreath 2	N/A	Offshore Islet (~180m)	Within 250-300m of Southwest coastal path; Nearest settlement 1.74km, Portreath a popular summertime destination, but small	Walkers on mainland will pass close by to islets Watercraft, some kayaking tours mention Portreath area, such as nearby “Ralph’s Cupboard”	Number of disturbance sources	1	Low	R
					Distance to nearest settlement	2		
					Proximity to recreational activity	1		
Cow and Calf	West Exmoor Coast and Woods SSSI	Mainland Cliffs/Rocky shore	Nearest site of ‘activity’ is Heddon National Trust, ~2km away in a valley, no direct connection; nearest settlement that will have high activity levels Lynton/Lynmouth, east ~5km	Walkers will pass along the coastal path above, <100m the area directly above the colony is lightly wooded Heddons mouth mentioned as part of a kayaking day trip on page of recommended paddles, but very remote area	Number of disturbance sources	1	Medium	G
					Distance to nearest settlement	2		
					Proximity to recreational activity	2		
Elwill Bay	West Exmoor Coast and Woods SSSI	Mainland Cliffs/Rocky shore	Nearest site of ‘activity’ is Heddon National Trust, ~2km away in a valley, no direct connection; nearest	Walkers will pass along clifftop paths, but very inaccessible cliffs	Number of disturbance sources	1	Low	R

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
			settlement that will have high activity levels Lynton, east~8km; Combe Martin to southwest ~6km	Heddons Mouth mentioned as part of a kayaking day trip from Combe Martin on page of recommended paddles, but very remote area	Distance to nearest settlement	2		
					Proximity to recreational activity	1		
Godrevy	Godrevy Head to St Agnes SSSI	Mainland cliffs	The Godrevy colony is located on National Trust land, attracting visitors to the clifftops, and along the coastal path; car park <500m; Godrevy beach and St Ives Bay is a very popular area for surfing; St Ives is an extremely busy seaside resort ~6.72km to the west across the bay	Walkers, there will be visitors on the clifftops and along the coastal path, there is a viewing area along the cliffs for the Godrevy seal colony Birdwatchers; eBird hotspot at Godrevy point Watercraft, Godrevy being a very popular surf spot, there will be plenty of water users on surf and stand-up paddle boards; there are routes on Strava of water sports out and around the point and Godrevy Island; a number of Kayak blogs mention Godrevy headland and Island as good places to paddle Rock climbing, there is a large number of climbing routes listed for Godrevy Headland	Number of disturbance sources	3	High	A
					Distance to nearest settlement	3		
					Proximity to recreational activity	3		
Grower Rock	Tintagel Cliffs SSSI	Offshore rock/stack (~50m)	Located between Boscastle (1.5km) and Tintagel (4km), north Cornwall. This is a popular stretch of the coastline with tourists, with both towns being tourist destinations. Grower rock is marked online as a landmark, and is only ~125m from the southwest coastal path.	Walkers; tourists along the coastal path will pass through here hiking/walking between Boscastle and Tintagel. There are a number of landmarks along this stretch of coast attracting people to the clifftops Watercrafts; Strava shows frequently used watersport routes particularly on the south east side of the rock	Number of disturbance sources	1	Medium	A
					Distance to nearest settlement	2		
					Proximity to recreational activity	3		

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
Gull Rock (Plymouth – Falmouth)	N/A	Offshore Islet (~600m)	Gull rock is located off of the Roseland Peninsula, near Falmouth, Cornwall. It is a little more of an isolated area but the southwest coastal path here is popular; with multiple beaches nearby likely sources of seasonal anthropogenic activity; Falmouth is ~12.5km to the west.	Watercraft; the area has a lot of tourist activity in the summer, with multiple sources online showing kayaking trips out to Gull rock; Falmouth is a very popular boating hotspot, with sail and motor boats passing out of the Carrick roads and going up and down the coast and coming into small coves, Wildlife trips also run out to Gull rock Climbers; there are routes listed on UK Climbing for Gull rock and also Nare head directly adjacent	Number of disturbance sources	1	Medium	G
					Distance to nearest settlement	1		
					Proximity to recreational activity	3		
Gulland Rock	N/A	Offshore Islet (~2.25km)	Gulland rock is located out of Padstow Bay and Padstow Town is ~5km distant (overland), an extremely popular holiday resort, with high densities of anthropogenic activity in the summer, as well as a local fishing port	Watercraft; the islet is too far offshore to be disturbed by anyone on foot, but is likely approached by watercraft often (Google Maps satellite imagery shows three small watercraft only ~50m from the Rock, perhaps Padstow sea life safaris	Number of disturbance sources	1	Medium	G
					Distance to nearest settlement	2		
					Proximity to recreational activity	2		
Highveer Point	West Exmoor Coast and Woods SSSI	Mainland cliffs	Nearest site of 'activity' is Heddon National Trust, ~2km away in a valley, no direct connection; nearest settlement that will have high activity levels Lynton/Lynmouth, east ~5km	Walkers will pass along clifftop paths, but very inaccessible cliffs, the point quite isolated from the paths Heddons Mouth mentioned as part of a kayaking day trip from Combe Martin on page of recommended paddles	Number of disturbance sources	1	Medium	G
					Distance to nearest settlement	2		
					Proximity to recreational activity	2		

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
Long Island Coast	N/A	Mainland Cliffs and Islet (~40m from mainland)	Boscastle 2.25km to east; caravan/camping park 800m to south; Tintagel castle ~2.9km to the southwest; Popular tourist destination in the summer	Walkers pass along coastal path on clifftops <140m away; multiple historical landmarks in area make it a likely busy stretch of coast Birdwatchers; minor eBird hotspot at location Watercraft; activity heatmap on Strava shows a lot of routes out of Boscastle around Long Island and the surrounding cliffs Climbers; climbing routes listed on multiple points along this stretch of coast	Number of disturbance sources	3	High	A
					Distance to nearest settlement	3		
					Proximity to recreational activity	3		
Lynton 1 and 2	West Exmoor Coast and Woods SSSI	Mainland cliffs	~670m from Lynton/Lynmouth, popular tourist destinations on the Exmoor coast; Beach access here at low tide along base of cliffs	Walkers likely access the beaches (Strava shows activity) at low tide and can access bottom of cliffs; coastal path above ~75m distant Birdwatchers; eBird hotspot on Lynmouth beach, another on clifftops above (in trees) Climbers; multiple routes flagged on UK Climbing along these cliffs Watercraft; surfer activity in Lynmouth Bay; boat trip company in Lynmouth; kayaking routes from Combe Martin to Lynmouth commonly mentioned online	Number of disturbance sources	3	High	G
					Distance to nearest settlement	3		
					Proximity to recreational activity	3		
Mullion to Predannack Cliff NNR	Mullion Cliff to Predannack Cliff SSSI	Mainland Cliffs (possibly Island too?)	Centre of stretch of cliffs ~ 775m from Mullion Cove; small tourist destination on the Lizard, Hotel and B&Bs in Mullion Cove; with more in Mullion town not much further north;	Walkers; coastal path passes within 150m of cliff edges, with the Lizard being a popular hiking destination in the summer Birdwatchers; minor eBird hotspot at Mullion Cove	Number of disturbance sources	3	High	A
					Distance to nearest settlement	3		

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
	Mullion to Predannack Cliff NNR		Multiple campsites in surrounding vicinity	Watercraft; a lot of water sports activity out of Mullion cove; with multiple online sources toting it as a kayaking destination Aircraft; active airfield of RNAS Culdrose ~8.35km to the north; military jets and other aircraft; Predannack airfield ~2km to the southeast, also a Naval operated airfield Climbers; some climbing routes on the far end of the cliff line (south)	Proximity to recreational activity	3		
North Cliffs 1	Godrevy Head to St Agnes SSSI	Mainland cliffs	The Godrevy colony is located on National Trust land, attracting visitors to the clifftops, and along the coastal path; Godrevy beach and St Ives Bay is a very popular area for surfing; St Ives is an extremely busy seaside resort ~6.72km to the west across the bay	Walkers, there will be visitors on the clifftops and along the coastal path, there is a viewing area along the cliffs for the Godrevy seal colony Birdwatchers; eBird hotspot at Godrevy point Watercraft, Godrevy being a very popular surf spot, there will be plenty of water users on surf and stand-up paddle boards; there are routes on Strava of water sports out and around the point and Godrevy Island; a number of kayak blogs mention Godrevy headland and Island as good places to paddle	Number of disturbance sources	2	High	G
					Distance to nearest settlement	3		
					Proximity to recreational activity	3		
North Cornwall 2	N/A	Mainland cliffs	Mainland colony situated very close to popular seaside resort of Padstow, ~2.75km	Walkers; the southwest coastal path runs ~50m from the clifftops Birdwatchers; minor eBird hotspot on Stepper Point Watercraft; Padstow has a lot of watercraft activity in an out of the camel estuary and around the local coast Climbers; Butter Hole a listed climbing spot on UK Climbing	Number of disturbance sources	3	High	G
					Distance to nearest settlement	2		
					Proximity to recreational activity	3		

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
North Cornwall 3	N/A	Mainland cliffs	Mainland colony situated between Harlyn Bay and Padstow (~500m from Trevone), two popular holiday and water sports hotspots;	Walkers; southwest coastal past runs 10-15m from cliff edge Watercraft; a lot of water sports activity and tracks out of Trevone Bay and Harlyn Bay along coast around Roundhole Point Climbers/Coasteering; there is a climbing route listed on Trevone head, and a coasteering company operating out of Harlyn bay; and out of Trevone Bay	Number of disturbance sources	2	High	G
					Distance to nearest settlement	3		
					Proximity to recreational activity	3		
Ore Stone	N/A	Offshore Islet (~880m)	Small Island just off the north end of Torbay near Torquay (2.8km); a very busy bay area with three large holiday towns; Brixham fishing port and two marinas	Watercraft; with two marinas and a fishing port this area is guaranteed; a lot of activity on Strava also for water sports	Number of disturbance sources	1	Medium	A
					Distance to nearest settlement	2		
					Proximity to recreational activity	3		
Portreath – Porthtowan 2	Godrevy Head to St Agnes SSSI	Mainland cliffs	Small cliff colony ~650m north of Portreath; ~ 3.8km southwest of Porthtowan, both small tourist hotspots	Walkers; coastal path passes within 200m of colony location; with activity on Strava showing approaches to within very edge of clifftop above colony Watercraft; plenty of watersports activity out of Portreath and Gooden Heane Cove out and around the point where the colony resides	Number of disturbance sources	1	Medium	A
					Distance to nearest settlement	3		
					Proximity to recreational activity	3		
Rillage Point to Ramsay Beach	N/A	Mainland cliffs	Cliffs/rocky crags on small point along coastal path between Ilfracombe (2km west) Watermouth		Number of disturbance sources	2	Medium	G

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
			(1.3km east) and Combe Martin (3.36km east), two very popular tourist destinations	Walkers; ~60m from Southwest coastal path; in a very popular stretch of coastline for tourism	Distance to nearest settlement	2		
				Birdwatchers; minor eBird hotspot on Hele Bay	Proximity to recreational activity	3		
				Watercraft; adjacent to a beach accessible to small watercraft, a lot of Strava activity showing watersports in the area, along popular kayaking route between Ilfracombe and Combe Martin				
Seal Hole to Trevaunance Cove	N/A	Mainland cliffs	Cliff section between Trevaunance cove and Newdowns Head, popular area for tourists and surfers; central St Agnes ~1.1km from colony; Porthtowan ~4.25km to the south	Walkers; the southwest coastal path comes within ~50m of the cliff edges here, again another popular holidaying area for outdoors enthusiasts	Number of disturbance sources	2	Medium	G
				Birdwatchers; minor eBird hotspot on St Agnes head	Distance to nearest settlement	2		
				Watercraft; some activity on Strava showing logged routes pass the cliffs	Proximity to recreational activity	2		
				Aircraft; ~2.5km from Perranporth Airfield				
St. Agnes Head to Newdowns Head	N/A	Mainland cliffs	Cliff section between St Agnes Head and Newdowns head; popular area for tourists and surfers; central St Agnes ~1.8km from colony; Porthtowan ~3.8km to the south	Walkers; southwest coastal path passes within 100m of cliff edges	Number of disturbance sources	3	Medium	G
				Birdwatchers; minor eBird hotspot on St Agnes head	Distance to nearest settlement	2		
				Watercraft; some activity on Strava showing water sports activities passing by the cliffs	Proximity to recreational activity	2		
				Aircraft; ~3km from Perranporth Airfield				
The Brisons	N/A	Offshore Islet (~1km)	Small islet approximately 1km off of the mainland; the nearest significant settlements being St Just, inland	Watercraft; there could be some watercraft activity here since it is not far off the mainland, but the seas are renowned to be	Number of disturbance sources	1	Low	R

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
			about 2.75km east, and Sennen Cove ~5km to the south; this area is popular for tourists but in a remote part of Cornwall	rough in this exposed coastline, so may not be a huge amount of activity away from sheltered bays; Strava heat maps are restricted to Sennen Cove to the south, likely mainly surfers Aircraft; Land's End airport is ~4km southeast, with flights out to the Scilly Isles, unlikely to fly far north enough to pass over though	Distance to nearest settlement	2		
					Proximity to recreational activity	1		
The Mouls	N/A	Offshore Islet (~300m)	Small island ~300m off the mainland, closest popular town of Polzeath ~2.5km to the south over a headland	Watercraft; some activity on Strava showing watersports passing nearby; also likely is passing small inshore craft from either sea safari companies or fishing vessels out of Padstow; on OpenStreetMap a 'Puffin Island Pleasure Boat Trip' route is listed circling The Mouls Climbers; some climbing routes logged on The Mouls on UK Climbing	Number of disturbance sources	1	Medium	A
					Distance to nearest settlement	2		
					Proximity to recreational activity	3		
Tresungers Point	N/A	Mainland cliffs	Small point on cliffs along coast from Port Gaverne (~0.7km) and Port Isaac (1.25km), small fishing villages and popular tourist destinations	Walkers; the southwest coastal path passes within 100m of the colony location, and the proximity to the two villages nearby will mean likely a lot of foot traffic in the summer Watercraft; A fair amount of watersports activity logged out of Port Gaverne and Port Isaac, with some tracks reaching out to Tresungers Point; there are also small inshore fishing fleets, certainly at Port Isaac that may pass the colony at points Coasteering; Coasteering company that runs tours out of Port Gaverne	Number of disturbance sources	2	Medium	A
					Distance to nearest settlement	3		
					Proximity to recreational activity	2		

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
Treyarnon – Merope	N/A	Mainland cliffs	Located on the Trevose Headland, a national trust site with car park, the colony is situated on a popular stretch of cast with tourists; Constantine Bay resort town is ~2.5km to the southeast, with Harlyn bay ~2.75 to the east	Walkers; the coastal path passes within ~100m of the cliff edges round the headland, with two landmarks of Dinas Head and Trevose Head Lighthouse for people to visit en route Birdwatchers; minor eBird hotspot on Trevose Head Watercraft; there is a good deal of watersports activity logged out of Constantine up the west side of the headland along the base of the cliffs; likewise on the east side out of Harlyn and Trevose Climbers/Coasteering; A number of climbing routes are mapped around the headland and Trevone Bay Adventures offer coasteering in the area, they are situated ~3km east	Number of disturbance sources	3	Medium	A
					Distance to nearest settlement	2		
					Proximity to recreational activity	2		
Woody Bay 1 and 2	West Exmoor Coast and Woods SSSI	Mainland cliffs	Located on a remote bay in Exmoor, the nearest major settlements are Lynton/Lynmouth ~4km to the east, with the Heddon Valley National Trust ~2.5km to the southwest. A small handful of campsites nearby, and some private homes in the bay, this is a generally quieter area	Walkers; the beach is accessible at mid-low tides and walkers can scramble over rocks at the cliff bases, there is also a swimming pool cut into the rocks at the east end of the bay; the southwest coastal path runs ~20m at places from the cliff edges in this area Birdwatchers; minor eBird hotspot on Woody Bay Climbers; there are a small number of climbing routes logged in the adjacent Lee Bay (~500m), so people may venture round to Woody Bay Watercraft; Woody bay touted as desirable location to paddle to from other towns such as Combe Martin nearby	Number of disturbance sources	3	Medium	A
					Distance to nearest settlement	2		
					Proximity to recreational activity	2		

Site	Designation	Site Type (Offshore/ Mainland)	Nearest Settlement	Likely Sources of Anthropogenic Disturbance	Disturbance scores		Overall Level of Disturbance	RAG category
					Factor	Score		
				There is little to no activity logged on Strava in this area				
Wringapeak	West Exmoor Coast and Woods SSSI	Mainland cliffs	More secluded than the other woody bay sites, but set out of the low tide area and down away from the coastal path which runs through forested cliff tops in this part of the bay	Birdwatchers; eBird hotspot for Lynton cliffs Watercraft; Woody bay touted as desirable location to paddle to from other towns such as Combe Martin nearby	Number of disturbance sources	1	Medium	G
					Distance to nearest settlement	3		
					Proximity to recreational activity	2		

Table 8.5 Final guillemot and razorbill colony shortlist for small colony intervention compensation

Site	Level of Disturbance	Guillemot Population Trend	Guillemot Population Size (IND)	Razorbill Population Trend	Razorbill Population Size (IND)
Carters Rocks	High	decreasing	2000 – 0 2007 – 20 2015 – 47 2017 – 8	decreased to zero	2000 – 0 2007 – 8 2017 – 0
Cow and Calf	Medium	decreasing	2001 – 224 2008 – 540 2016 – 1308 2018 – 1165 2023 – 760	decreasing	2001 – 18 2008 – 168 2016 – 181 2018 – 110 2023 – 103
Gull Rock (Falmouth)	Medium	decreasing	2000 – 148 2007 – 143 2016 – 309 2017 – 300 2023 – 298	decreasing	2000 – 1 2007 – 12 2016 – 31 2017 – 18 2023 – 17
Gulland Rock	Medium	decreasing	2007 – 45 2015 – 1019 2016 – 1176 2017 – 580	decreasing	2007 – 15 2015 – 82 2016 – 52
Highveer Point	Medium	decreasing	2016 – 53 2023 – 21	decreasing	2008 – 7 2016 – 178 2023 – 23
Lynton 1 and 2	High	decreasing	2008 – 160 2016 – 361 2023 – 240	decreasing	2008 – 117 2016 – 58 2023 – 34
North Cliffs 1	High	decreasing	2000 – 151 2013 – 139 2014 – 154 2016 – 150 2020 – 102	decreased to zero now at 1	2000 – 46 2016 – 0 2020 – 1

Site	Level of Disturbance	Guillemot Population Trend	Guillemot Population Size (IND)	Razorbill Population Trend	Razorbill Population Size (IND)
North Cornwall 2	High	decreasing	2000 – 13 2015 – 134 2016 – 108 2017 – 84 2017 – 38	only one year of data	2017 – 49 2017 – 34
North Cornwall 3	High	overall increase but decrease from previous year	2015 – 88 2016 – 87 2017 – 54 2017 – 40 2018 – 64 2019 – 59 2020 – 81 2021 – 77 2022 – 112 2023 – 102	decreasing after period of stable	2000 – 5 2015 – 67 2017 – 59 2018 – 45 2019 – 64 2020 – 79 2021 – 86 2022 – 86 2023 – 58
Rillage Point to Ramsay Beach	Medium	N/A	N/A	decreasing	2008 – 41 2018 – 10
Seal Hole to Trevaunance Cove	Medium	decreasing	2000 – 63 2015 – 122 2017 – 122 2018 – 89 2023 – 24	decreasing	2000 – 7 2017 – 70 2018 – 38 2023 – 7
St. Agnes Head to Newdowns Head	Medium	N/A	N/A	decreasing	2000 – 5 2016 – 5 2017 – 43 2018 – 60 2023 – 1
Wringapeak	Medium	decreasing	2001 – 434 2008 – 265 2016 – 854 2018 – 912 2023 – 530	decreasing	2001 – 15 2008 – 208 2016 – 216 2018 – 115 2023 – 61

95. The Applicant's short-listed sites are (shown in Figure 2 and Figure 3):

- Carters Rocks
- Cow and Calf
- Gull Rock (Falmouth)
- Gulland Rock
- Highveer Point
- Lynton 1 & 2
- North Cliffs 1
- North Cornwall 3
- Rillage Point to Ramsay Beach
- Seal Hole to Trevaunance
- St Agnes Head to Newdowns Head
- Wringapeak

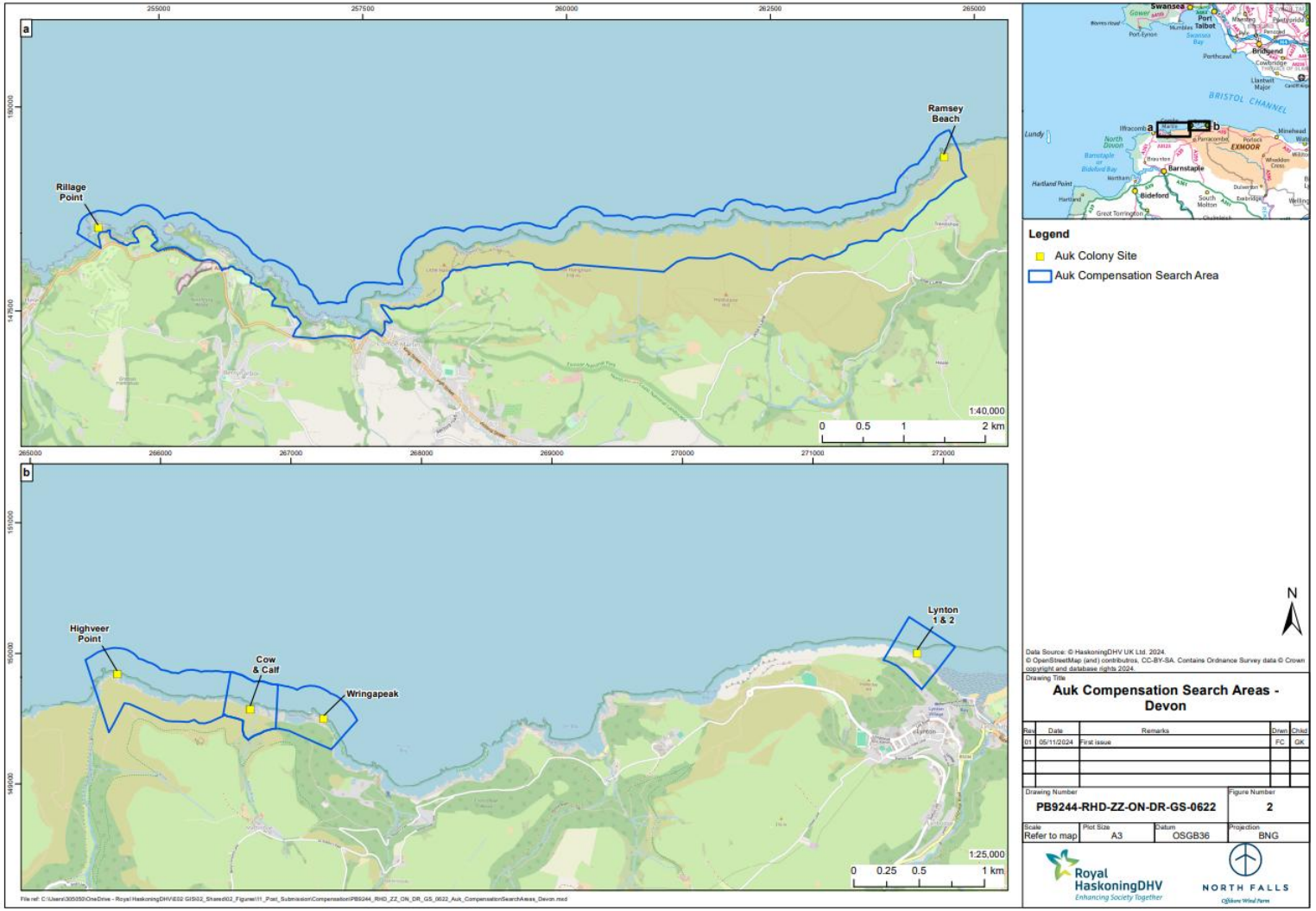

Figure 2 Search Areas Devon

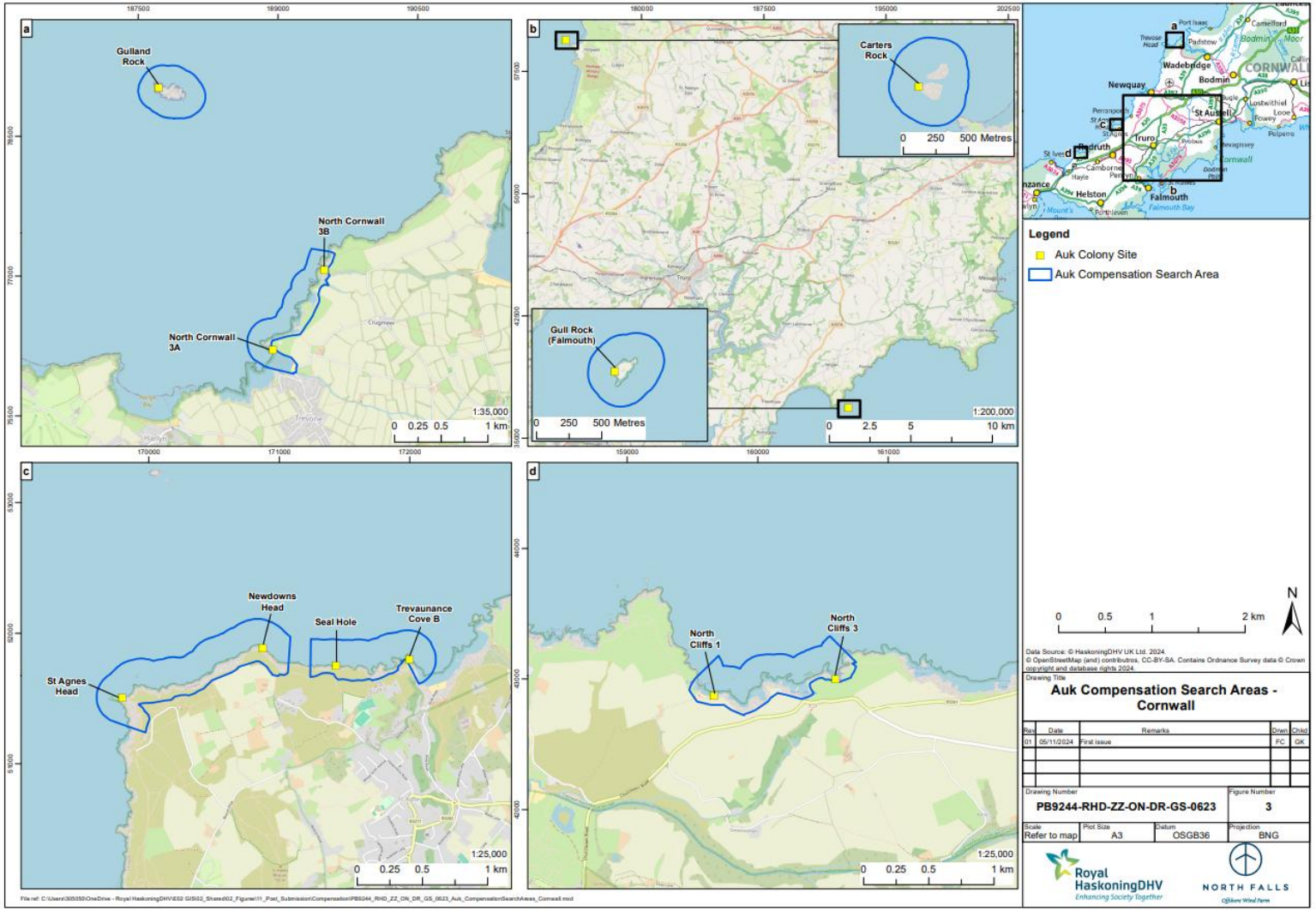

Figure 3 Search Areas - Cornwall

8.3 Final Site Selection

96. The final site selection will be completed post consent as part of the development of the final CIMP. This process will be informed by ongoing stakeholder consultation, surveys of breeding colonies and studies into levels of potential disturbance.

97. In relation to site selection, Natural England has commented that it is not appropriate to assume that every auk colony in Devon and Cornwall that is declining is doing so due to the impacts of recreational disturbance, and that other factors such as food availability and predation pressure may be involved. The Applicant acknowledges this possibility, nevertheless there is evidence that recreational disturbance can reduce productivity in auk breeding colonies (see Section 7.1 above), and of potentially disturbing recreational activity at breeding colonies in Devon and Cornwall (GoBe, 2024c). The approach taken in the desk-study to identify a shortlist of potential compensation sites for guillemot and razorbill ([REP1-027], Section 8) is considered robust and systematic based on the available colony count data and relevant information on recreational activity. For the 2025 breeding season, the Applicant has commissioned surveys at a number of sites, with the aim of collecting baseline data on disturbance as well as the numbers and productivity of razorbill and guillemot and responses of birds to disturbance. The intention would be to continue these surveys at potential compensation site(s) in future years (either by the Project alone, or in collaboration with other OWF developers), as the compensation measure to reduce disturbance is introduced, to gather a time series of data on disturbance levels, productivity and population size of colonies, to facilitate the investigation of links.

98. The number of sites required will be determined by both the scale of required compensation and the compensation potential of shortlisted sites (Section 5), taking into account, the practicalities of the site(s) and potential for success. Where appropriate, any site (including those not currently short-listed) may be considered further, subject to evidence of ecological effectiveness.

99. Given the number of potential sites identified and small scale of compensation required for North Falls alone or in collaboration with other offshore wind farms, the Applicant is confident that a sufficient site(s) can be secured. In the unlikely event that this is not possible, the Applicant would deliver adaptive management as described in the Guillemot and Razorbill CIMP [**7.2.5.1, Rev 2**].

9 Implementation and Delivery Roadmap

9.1 Overview

100. Whether the compensatory measure is for one species or two (guillemot and/or razorbill) the same steps would need to be taken (described in the Outline CIMP [**7.2.5.1, Rev 2**]):

- Site selection informed by surveys and consultation, taking into account;

- Existing pressures at the site(s);
- Existing management measures;

- Identification of appropriate measure(s) and detailed design of the measure(s);
  - Where measures which involve working with recreational stakeholders are selected, consultation would be undertaken with relevant stakeholders to gauge support for proposed measures and seek further feedback;
- Secure necessary permits;
- Development of the CIMP in accordance with this document and in consultation with the GRCSG/Guillemot Compensation Steering Group (GCSG);
- Deploy the measures in accordance with the CIMP;
- Undertake inspections and maintenance where relevant (e.g. signs and noticeboards);
- The compensatory measures will be monitored and the results reported to stakeholders; and
- Adaptive management measures would be adopted should the measure(s) be unsuccessful. Consultation will be undertaken with the GRCSG/GCSG to help determine the most appropriate course of action.

9.2 Delivery Mechanism

101. Reduction of recreational disturbance at a breeding colony could include one or more management intervention such as:

- Onsite interventions
  - Wardens/guides could be employed to influence visitor behaviour;
  - Fencing or buoyage can be used to enforce set back distances from sensitive areas;
  - Signs can be used to raise awareness of visitors to the presence of the breeding colony and include information on appropriate behaviour around seabirds (including set back distances). Signage could be extended into the sea to cover water sports by using buoys; and
  - Time or seasonal restrictions – the above could be implemented for sensitive times or seasons e.g. inhibiting approach to the colony within a certain distance by people during the breeding season.
- Working with stakeholders
  - Codes of practice could be developed with activity or equipment hire businesses and recreational activities. This could apply both onshore and offshore. This could be a mechanism to educate visitors on best practice and could be delivered as part of a site / activity briefing. This could be linked to broader visitor access statements which would be

available through websites or signs / interpretation boards but be an active rather than passive communication tool.

102. Not all of the above would be practical or feasible at each site. The Applicant would engage with local stakeholders at each site to confirm the nature of any disturbance and plan the feasible interventions.

103. Delivery of this compensatory measure could be by the Project alone or in collaboration with other OWFs.

104. Alternatively, the Applicant may consider strategic compensation, as described in Section 11.

9.3 Timing of compensation delivery

105. The average age of recruitment for guillemot and razorbill is six years and five years, respectively (Horswill and Robinson, 2015), however in order to avoid delays to the Project and to meet the Project objectives detailed in the Habitats Regulations Provision of Evidence [**APP-183**], the compensatory measure would be deployed 3 breeding seasons prior to operation of North Falls. The measure would be deployed by March prior to the first breeding season, with timing informed by data where possible.

106. Given the low predicted annual mortality of 1.2 (95%CL 0.2-3.2) guillemot and 0.6 (95%CL 0.2-1.3) razorbill, this would accrue as mortality debt. As the planned compensation measures will be in place over the long-term (c.33 years), a delay of a few years would have a de minimis impact on the overall success of these measures.

107. This would be considered during monitoring and should a material mortality debt be deemed to be accrued, the need for additional measures/ adaptive management would be considered in consultation with the steering group.

10 Impact of Proposed Compensatory Measure

108. The management measures proposed would largely be designed to change visitor behaviour and therefore not have any physical effect upon the sites or ecological features associated with them.

109. Where a chosen site is located within a designated site, reference would be made to any Special Area of Conservation (SAC) or SPA Conservation Objectives, Supplementary Advice and Management Plans, Site Improvement Plans etc. If fencing or signage were to be installed this would be undertaken in line with any required policies such as SSSI consent. The design would consider effects on other receptors, including heritage, landscape, geomorphology and hydrology. In each case, the compensation design would be required to ensure that significant adverse effects on sensitive receptors were avoided.

110. Consideration has been given to potential impacts that might arise from the implementation of reduction of recreational disturbance at a breeding colony.

The potential impacts identified are described in Table 10.1 together with details, where relevant, of how these would be avoided, reduced or mitigated.

Table 10.1 Potential impact of proposed compensation measures

Potential impacts	Details	Measures required to avoid, reduce or mitigate	Effect significance
Impacts on other protected areas and features	The proposed compensation may be located within, or in proximity to, sites designated for nature conservation. Potential impacts associated with the installation of fencing/signage are: A small amount of temporary habitat modification/loss (scraped back vegetation and topsoil along the fence line); Potential disturbance of qualifying species at the fence site due to construction activities; Potential disturbance of qualifying species from the transport of materials, machinery and personnel to site; and Potential disturbance of qualifying species at the fence site due to ongoing maintenance / management activities.	Construction of the fence to take place outside of bird nesting season; Speed limits for vehicles associated with construction and management/maintenance; and Habitat management and fence maintenance to take place outside of nesting season.	With the implementation of mitigation measures, there would be no likely significant effect on protected areas or features.
Visual impact of interventions (e.g. fencing, signage or buoys)	The long list of options included locations within the Cornwall and Devon National Landscapes (previously Areas of Outstanding Natural Beauty) and Exmoor National Park. While this would typically denote a high value, the sensitivity of this landscape to the effects of compensation such as a fence would be moderated by the modern land use practices in this area and across the wider National Landscape. There are unlikely to be any settlements or roads close to the selected location. Therefore, those experiencing views (i.e walkers) in this area is limited.	Use of sensitive colours on the fence, signage and/or buoys to allow it blend in with surroundings, and limiting the height would mitigate the visual impact.	With the implementation of the mitigation measures, there would be no likely significant effect on landscape and visual receptors
Impact on cultural heritage assets	The proposed compensation e.g. fencing could have an impact on cultural heritage assets depending on its location. However, no impacts to the setting of heritage assets are expected given the predicted lack of landscape and visual related effects.	The site selection process for the location of the fencing, signage and/or buoys would include principles setting out the avoidance of statutory heritage designations.	There would be no likely significant effect on cultural heritage receptors.
Impacts on tourism and recreation	Onsite interventions to reduce recreational disturbance would represent highly localised disturbance to tourism and	Where practicable, diversions or alternative routes would be established, if fencing/set back	There would be no likely significant effect

Potential impacts	Details	Measures required to avoid, reduce or mitigate	Effect significance
	recreation, such as minor displacement.	distances block public rights of way. Where a measure could disrupt users, implementation of the measure would be limited to the breeding season.	on tourism and recreation.

11 Strategic Compensation and Marine Recovery Fund

111. It is recognised that discussions are ongoing in Government and with industry regarding strategic compensation measures, with predator reduction and artificial nesting platforms on the Department for Environment, Food & Rural Affairs (Defra) (2024) list of approved measures which are suitable for strategic compensation. These measures would be suitable for guillemot and razorbill and should this (or any other strategic measure) become available, the Applicant may give this further consideration.

112. In accordance with DESNZ (2025b), contribution to the Marine Recovery Fund (MRF) could be implemented wholly in substitution of the project led/collaborative compensatory measure, at a level proportionate to the effects described in Section 4; or partly in substitution, in the unlikely event the proposed reduction of recreational disturbance was not able to deliver the full compensation requirement.

113. DESNZ's intention to establish the MRF (as confirmed in DESNZ, 2025b) and the consent award for SEP and DEP should give decision-makers confidence that, if required a strategic solution can be put in place to support North Falls and can therefore be relied upon by the SoS in their decision to grant the Project's development consent, should the Appropriate Assessment conclude that an AEoI as a result of North Falls cannot be ruled out. Notwithstanding, the Applicant has proposed project specific compensation which can be relied upon.

12 Summary

114. A range of compensatory measures for guillemot and razorbill have been considered by the Applicant and developed through a process of pre-application consultation with stakeholders. These measures are secured through the draft DCO for guillemot at FFC SPA and the Farne Islands SPA, and without prejudice to the Applicant's conclusion in the RIAA Part 4 Offshore Ornithology **(Document Reference: 7.1.4 [APP-178])** that there is no AEoI for the razorbill feature of the Flamborough and Filey Coast (FFC) SPA from North Falls alone or in-combination with other plans and projects (see Section 2.2 above).

115. Based on advice from Natural England, the Applicant's preferred compensation measure is the reduction of recreational disturbance at a colony or colonies for guillemot and/or razorbill in the southwest of England. This could be taken forward as part of a project alone or collaborative delivery model with one or

more other OWF developers, in the event that an AEoI is concluded in the Appropriate Assessment.

116. Alternatively, the Applicant considers that strategic compensation (such as the MRF) for guillemot and razorbill is a measure that could be wholly or partly substituted in place of the Applicant's proposed measure or as an adaptive management measure, if required.

117. The information provided demonstrates the ecological evidence for the measure, how the measure can be secured and that the mechanism for delivery can be implemented.

118. There are no likely significant effects associated with the compensatory measure.

119. The CIMP will set out the detailed delivery proposals for the agreed compensatory measure based on those set out in this Guillemot and Razorbill Compensation Document and in accordance with the Annex 5A Outline Guillemot and Razorbill CIMP **(Document Reference: [7.2.5.1, Rev 2]).** The CIMP will be produced by the Applicant (if required) and approved by the SoS prior to the start of construction. Depending on the conclusions of the Appropriate Assessment the CIMP would include guillemot and razorbill, guillemot alone or razorbill alone.

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