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10.11 GUILLEMOT AND RAZORBILL - SURVEY REPORTS

Application Reference	EN010115
Application Document Number	10.11
Revision	A
Pursuant to	Deadline 1
Ecodoc Number	005396974-01
Date	October 2024

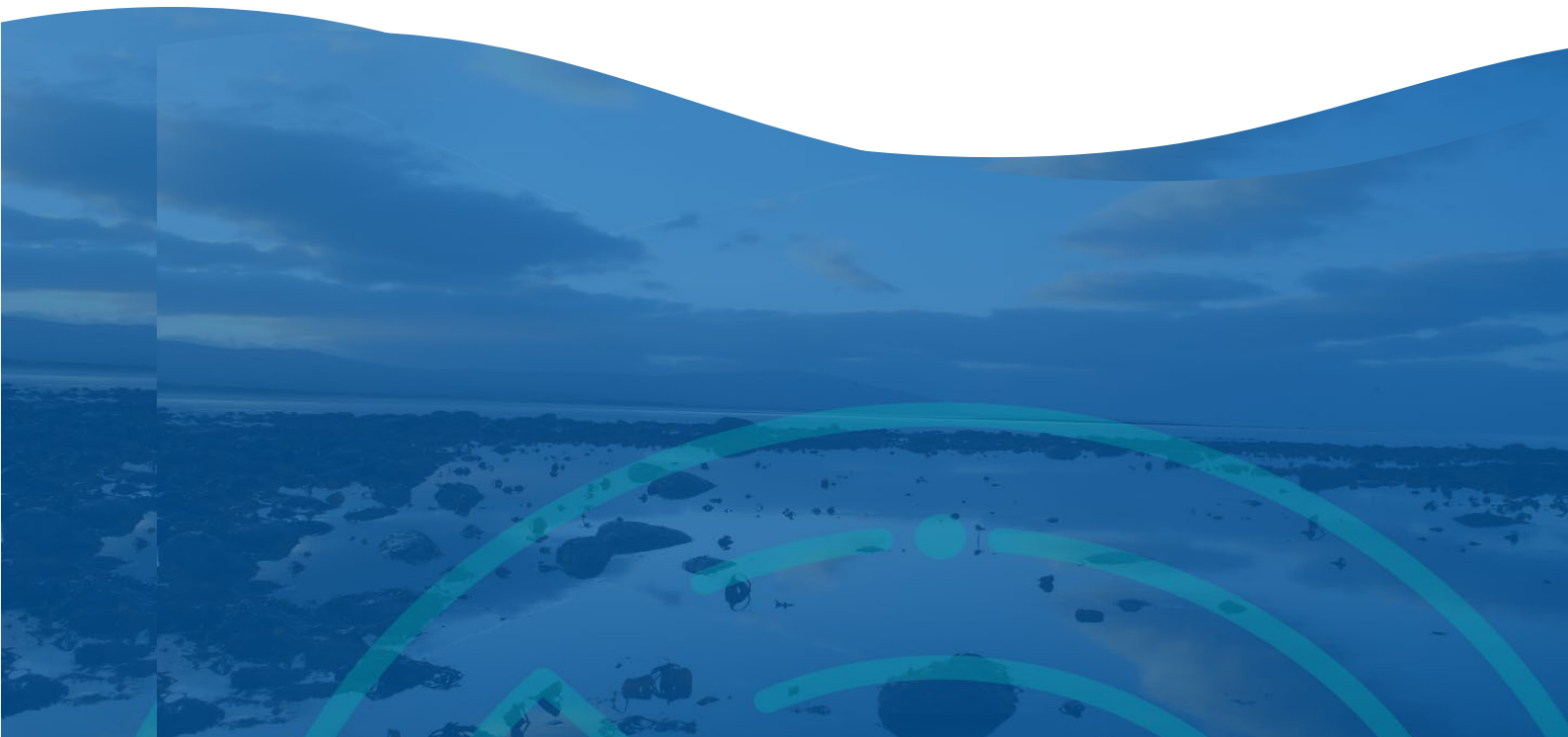
In preparation of this document Five Estuaries Wind Farm Ltd has made reasonable efforts to ensure that the content is accurate, up to date and complete for purpose.

Revision	Date	Status/Reason for Issue	Originator	Checked	Approved
A	Oct-24	Deadline 1	GoBe	VE OWF	VE OWF

Five Estuaries Offshore Wind Farm Limited

Five Estuaries Compensation Site Investigation Report

Ryan Irvine



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Project reference: **P00015428**

Date of issue: **July 2024**

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Report should be cited as:

APEM & GoBe Consultants Ltd (2024). Five Estuaries Compensation Site Investigation Report P00015428. Five Estuaries Offshore Windfarm Ltd

Revision and Amendment Register

Version Number	Date	Section(s)	Page(s)	Summary of Changes	Approved by
1.0	Oct-24	-	-	Final	VE OWFL

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1. Introduction

This report presents a summary of the key findings from site visits to guillemot and razorbill colonies in north Cornwall and north Devon (Figure 1) in May and June 2024. The aim of these site visits was to determine the suitability of potential compensatory measures for breeding common guillemot (*Uria aalge*, hereafter 'guillemot') and razorbill (*Alca torda*) at the ten sites.

1.1 Background

Five Estuaries Offshore Wind Farm (VE) is a proposed extension to the operational Galloper Offshore Wind Farm (OWF). VE would be located approximately 37 kilometres (km) off the coast of Suffolk, England (at its closest point).

As part of the Development Consent Order (DCO) application, Five Estuaries Offshore Wind Farm Ltd (VE OWFL – hereafter referred to as 'the Applicant') is required to produce a Report to Inform Appropriate Assessment (RIAA) to provide the information required by the Competent Authority in order to undertake its Habitats Regulation Assessment (HRA) and Appropriate Assessment. If the HRA process concludes that Adverse Effects on Integrity (AEoI) cannot be excluded, a derogation process is followed. In the event that no alternative solutions can be found, and if there are imperative reasons of overriding public interest (IROPI), the final stage of the derogation process is to secure measures to compensate for adverse effects on a UK National Site Network (NSN) site. The measures proposed for guillemot and razorbill are on a 'without prejudice' basis and the Applicants conclusions is that AEoI for both species can be ruled out.

This report has been prepared to identify guillemot and razorbill colonies for potential compensation measures. Following consultation with Natural England it was advised a without prejudice case for guillemot and razorbill should be prepared, due to in-combination impacts to the feature at Flamborough and Filey Coast (FFC) Special Protection Area (SPA). Due to the low level of impact on guillemot and razorbill by VE, it has been agreed with Natural England that a proportionate compensation measure would be the management/reduction of disturbance events at small scale breeding colonies (<100 pairs) in southwest England. Natural England also support a collaborative and strategic approach to compensation, with these surveys being carried out in collaboration with Rampion 2. Ten sites were identified from the Seabird Monitoring Programme (SMP) database (BTO, 2024) as having potential for appropriate scale compensation given the minimal impact predictions and were summarised in **Volume 5, Report 5.5: Guillemot and Razorbill Compensation – Evidence, Site Selection & Roadmap [APP-051]**. This report highlights the suitability of each site and outlines the key sites to be taken forward for potential compensatory measures.

Guillemots are one of the most abundant seabirds in the northern hemisphere, breeding on temperate and sub-Arctic cliffs in the Atlantic and Pacific oceans. Guillemots are gregarious, colonial breeders with colonies containing up to tens of thousands of birds. Birds breed on

sheer cliffs, offshore stacks, and occasionally boulder-fields. A single large egg is laid on the bare rock of ledges where birds can be densely packed up to 20 pairs / m^2 (JNCC, 2021a).

Razorbills breed in the temperate North Atlantic and small parts of the Arctic Ocean. Razorbills mainly breed on small ledges, cracks in rocky cliffs, and scree/boulder-fields. Razorbill colonies are often associated with colonies of kittiwakes and guillemots, usually scattered through larger concentrations of these species (JNCC, 2021b).

The wider threats facing guillemot and razorbill are broadly similar with climate change (Sandvik et al., 2005), declines in the availability of prey, like sand eels (*Ammodytes marinus*; Wanless et al., 2018), and recent mass outbreaks of highly pathogenic avian influenza (HPAI; Tremlett et al., 2024) considered the leading causes of UK seabird declines.

1.2 Potential compensation measures selection process

Stakeholder engagement with Natural England, RSPB and Defra has taken place throughout the derogation and HRA process, primarily through the Section 42 comments and the subsequent ETG in September 2023. The full list of meetings/feedback can be found in the **Volume 5, Report 5.5: Guillemot and Razorbill Compensation – Evidence, Site Selection & Roadmap [APP-051]**.

Following discussion between the Applicant and Natural England the potential compensation measures were refined into a short-list of the more appropriate measures to be taken forward.

The short-listed compensation measures are:

- Strategic – Strategic measures through the Marine Recovery Fund;
- Reduced anthropogenic impacts – Disturbance reduction at guillemot and razorbill colonies in the southwest of England.

1.3 Site Investigation works

All ten sites identified in the **Volume 5, Report 5.5: Guillemot and Razorbill Compensation – Evidence, Site Selection & Roadmap** and depicted within **Figure 1**, were surveyed between May 21st and June 1st 2024 following the methods detailed in **Section 2**. A summary of key information for each site is provided below.

1.3.1 Carvannet to Portreath 3

The Carvannet to Portreath 3 site is part of the Godrevy Point to St Agnes SSSI and has a relatively stable population of guillemot and razorbill. Neither species are a designated feature of the SSSI. The site is within the Cornwall National Landscape and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021.

1.3.2 Bawden Rocks

The guillemot population at Bawden Rocks is decreasing while the razorbill population is increasing. The site is within the Cornwall National Landscape and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021.

1.3.3 Carter's Rock

The guillemot and razorbill populations at Carters Rock have seen recent declines but this could be part of natural cyclical variation. The site is within the Cornwall National Landscape and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021, and there is also a National Trust property adjacent to this site.

1.3.4 North Cornwall 2

The guillemot population at this site has historically increased and is now decreasing. However, there is not enough razorbill data to determine trends at this site. The site is within the Cornwall National Landscape and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021.

1.3.5 Tresungers Point

The guillemot population at Tresungers Point is decreasing, but the razorbill population is increasing. The site is within the Cornwall National Landscape and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021.

1.3.6 Lye Rock

Though guillemot have previously increased at this site, they have shown signs of recent decline. The razorbill population is also in decline. The site is within the Cornwall National Landscape and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021.

1.3.7 Grower Rock

While the guillemot population at Grower Rock has shown previous increases, this colony is now in decline. The razorbill population, however, is increasing. This site is part of Tintagel Cliffs SSSI; however, guillemot and razorbill are not a designated feature of this SSSI. The site is within the Cornwall National Landscape and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021.

1.3.8 Treyarnon to Merope (Trevose Head)

The guillemot and razorbill populations at Treyarnon - Merope have been decreasing in recent years. The site is within the Cornwall National Landscape and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021.

1.3.9 Highveer Point

This site is part of the West Exmoor Coast and Woods SSSI for which guillemot and razorbill are a designated feature. However, the guillemot and razorbill populations at Highveer Point are decreasing. The site is within the Exmoor National Park and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021.

1.3.10 Lynton 1 and 2

This site is part of the West Exmoor Coast and Woods SSSI, for which guillemot and razorbill are a designated feature. The guillemot and razorbill populations at this site are decreasing. The site is within the Exmoor National Park and the relevant marine policy documents are the South West Inshore and South West Offshore Marine Plan 2021.

Figure 1: The locations of the guillemot and razorbill colonies that were surveyed in May and June 2024.

2. Methods

2.1 Site visit timeframes

The timings and survey conditions of each site visit can be found in **Table 2.1** and the surveys were conducted by APEM Ltd.'s/GoBe's in-house specialist ornithologists, Ryan Irvine and Matt Doyle. Both surveyors have combined over 25 years' experience of ornithological data recording and seabird monitoring.

2.1.1 Equipment

For each site, the surveyor undertook a walkover survey, equipped with binoculars, spotting telescope and a digital camera which were used to identify and record any visible pressures that could impact breeding auk species, such as disturbance events resulting from recreational activities, which relate to the proposed short-listed compensation measures presented within the Guillemot and Razorbill Compensation – Evidence, Site Selection and Roadmap (VEOWFL, 2024) document. Additional pressures such as adjacent land use, coastal erosion, surrounding habitat, and the presence of any predator or Invasive Non-Native Species (INNS) were recorded to inform the potential for additional compensation measures not currently included on the short list. All data was recorded using a digital tablet, including spatial data on the QField application.

2.1.2 Colony Size Estimation

The site visits also involved identifying the locations of auk nesting sites, the extent and relative distributions of auk species within colonies, and the classification of the colony habitat with respect to nesting space. Estimate counts of colony size were completed for the visible number of guillemot and razorbill at each site. As noted in **Section 3**, for some locations the site was only partly visible from land and therefore estimation of colony size was not possible.

2.1.3 Disturbance Recording

During the site visits, any disturbance events to the auk colonies were recorded during both the walkover surveys and the colony counts, classified using the APEM Group's established approach to monitoring disturbance adapted from Briggs (2007). All disturbance events and potential disturbance stimuli were recorded on a proforma sheet which included fields for a unique identifier (UID), time, stimulus type, species involved, level of effect, time away from the nest site, duration of exposure to stimulus, and distance from stimulus (if known). If a disturbance event affected multiple species, a separate entry with a different UID was used with a comment to clarify.

Disturbance stimuli were divided into the following categories:

FB – fishing boat

SC – sailing craft

KK – kayak

SP - stand-up paddleboard

OW – other watercraft

W. – walker

WD – walker with dog

UD – uncontrolled dog

BW – birdwatcher

V. – vehicle

UN – unknown

RP – raptor

C. – Corvid

BI - other avian aggression[1]

MA – mammal

WE – weather

Oth – other (describe)

[1] For instances of between species aggressive interactions that cause disturbance to study species.

For each potentially disturbing stimulus, a level of effect was recorded as follows:

1 – no effect;

2 – Alert: head(s) up by bird(s) at nest sites;

3 – small movement on cliff (<10m; not flying);

4 – flushed off cliffs for <30 seconds; and

5 – flushed off cliffs for >30 seconds.

In addition, walkover surveys identified features of the landscape that may influence potential disturbance stimuli at sites, such as the presence and proximity of advisory signage, footpaths, and fencing near the colonies.

Table 2.1: Weather conditions and timings of site visits.

Date	Site	Temp (°C)	Wind (Beaufort scale)	Visibility	Precipitation	Cloud Cover (x/8)	Start Time	End Time	Comments
East Caithness Cliffs SPA									
21/05/2024	Carvannet – Portreath 3	16 - 19	F1 Var	Excellent	One 40 minute light shower	2	07:50	16:25	Excellent conditions bar the short shower
22/05/2024	Bawden Rocks	14 - 15	F5 NW	Good	Dry	8	07:40	10:00	Strong northerly wind
22/05/2024	Carter's Rock	16 - 17	F4 NW	Good	Dry	6	11:05	16:30	Conditions improving through the afternoon
25/05/2024	North Cornwall 2	13 -16	F3-4 SE	Excellent	Dry (light showers after 15:00)	6	07:50	16:10	Excellent conditions until 15:00 when cloud came in and light showers
27/05/2024	Tresungers Point	11 - 14	F3 WSW	Excellent	Dry	4	08:20	15:45	Left at 15:45 as rain started
29/05/2024	Lye Rock	14 - 18	F3 NW	Excellent	Dry	5	07:35	15:30	Excellent conditions
31/05/2024	Grower Rock	13 - 18	F3 NW	Excellent	Dry	1	07:50	15:40	Excellent conditions
01/06/2024	Treyarnon to Merope (Trevose Head)	14 - 19	F4 NNE	Excellent	Dry	6	08:00	16:00	Wind picked up in the afternoon

2.2 Objectives

The main objective of the site visits was to collect information on the colonies and any potential issues to inform and refine the proposed sites and without prejudice compensation measures to be taken forward by the Applicant should compensation be required.

The following data was recorded during site visits:

- The presence of anthropogenic disturbance stimuli near colonies and any resulting disturbance events;
- The current extent of breeding activity of the target species;
- Any pressures resulting from the state of surrounding habitat and land use;
- The presence of avian and mammalian predators near to colonies, including signs of invasive non-native species (INNS).

2.3 Limitations

There were some limitations to the data collected during the site visits. Firstly, the visits were conducted as a snapshot on one day, so assessing disturbance and predation was difficult. Despite the surveys taking place at peak breeding season there were also other factors that limited the amount of information that could be collected. The weather, while generally suitable conditions for surveys, was influenced by northerly winds, which is unusual for the area. This meant the resulting sea swell may have limited water sport activities on the north coast of Cornwall at the time survey visits were undertaken.

Due to time limitations only a few sites were surveyed during peak times (weekends and bank holidays) and there was a noticeable difference in footfall and water based traffic during these days.

3. Results – Pressure Identification

3.1 Site suitability

3.1.1 Carvannet – Portreath 3

As presented in **Figure 1**,the site is to the west of Portreath, which is known to be a popular visitor destination due to its beach. The colony is split into several small colonies along the coast and on coastal islands, however much of the colonies are not visible from land and would require a boat to survey the entire colony and monitor productivity. The most recent colony counts in 2016 found 205 guillemots and four razorbills at the site in 2016 (BTO, 2024). During the survey a total of 36 guillemots and 21 razorbills were recorded breeding on the mainland cliffs. The main colony visible from land is located on the islands off Carvannel Downs (**Figure 2**), with the outer most island holding the majority of birds. In total 36 guillemot and 12 razorbills were recorded on the islands, although the seaward cliff face of the outer most island was not visible, and many birds were observed flying onto it. This equated to a total of 72 breeding guillemots and 33 breeding razorbills recorded at the site, though as previously noted visibility of the entire colony was restricted. Additionally, 97 guillemot and 16 razorbills were recorded loafing on the sea just off the islands also.

A further nine razorbills were recorded on the mainland cliffs next to a colony of kittiwakes (**Figure 3**) at Ralph's Cupboard. More birds were recorded flying into the cliffs between these two sites but not visible form the land.

3.1.1.1 Disturbance

During the survey only three sea kayakers were recorded in the area, who remained more than 250m+ distant from the colonies with no disturbance responses noted from birds observed on the cliffs/ islands, however flushing response was observed from loafing birds on the sea. The lack of human activity may have been due to cool temperatures and survey being completed mid-week. Portreath is a very popular beach and there is a surf shop that hires out kayaks in the village, potential for disturbance could be high later in the season as the colonies would be easily reached from Portreath beach by kayak.

3.1.1.2 Habitat and land use

The site comprises of steep cliffs with some vegetation on the higher parts of the cliff. The auks are limited to the lower parts of the cliff. Large parts of the cliff on the mainland have been impacted by erosion (**Figure 4**), mainly where the cliff tops are a clay type material, however below the kittiwake colony there was significant amount of rock fall as well. There was no visible impact from land use, with the surrounding area comprising of farmland.

3.1.1.3 Predation

Evidence of any impacts from predation was not recorded during the survey, however Herring gull (Larus argentatus), lesser black-backed gulls (Larus fuscus), raven (Corvus corax) and carrion crow (Corvus corone) were recorded at the site, which have all known to be nest

predators of seabirds (Veitch et al., 2016, Hof et al, 2018, Gaston et al, 1996, Schauer et al, 1996).

Figure 2 The islands off Carvannel Downs (50.255404, -5.31337) with the location of the main colony circled.

Figure 3 Kittiwake colony (green circle) and small razorbill colony (red circle) to the right at Ralph's Cupboard (50.258958, -5.305924).

Figure 4 Cliff face of the Carvannet to Portreath 3 site, evidence of erosion on the cliff top above the guillemot and razorbill colony not visible from land.

3.1.2 Bawden Rocks

Bawden Rocks is situated approximately 2km off the coast of St Agnes Head, north Cornwall and is part of the Chapel Porth to Perranporth site on the SMP database and most recent counts in 2018 estimated there were 70 razorbill and 20 guillemots on the island (BTO, 2024). Auks were recorded on the sea around the island and flying on to the cliffs at the back of the island out of view, but it was too distant to identify to species with any certainty. No auks were visible from land on the island itself, the colony breeds solely on the north side of the island.

3.1.2.1 Disturbance

During the survey there were no disturbance events recorded, the weather was not suitable for any sea activities with a strong north westerly wind causing unsuitable sea conditions for recreational waters sports. The island is located between the popular Chapel Porth beach and the coves at St Agnes and there is a known point of interest for kayak tours, so there is potential for disturbance later in the season or in better weather conditions.

3.1.2.2 Habitat and land use

The island is completely isolated from land use pressures. There is some vegetation on the slopes where herring gulls nest, however the steep cliffs where guillemot and razorbill breed were not visible, and so it was not possible to examine if there was any limiting factors to

breeding due to current environmental conditions such as vegetation encroachment or erosion etc.

3.1.2.3 Predation

Evidence of any impacts from predation was not recorded during the survey. Herring gulls were recorded nesting on the south facing slope of the island and are known to predate the nests of guillemot and razorbill (Veitch et al., 2016).

3.1.3 Carter's Rock

Carter's Rock is situated close to shore off Holywell Beach (**Figure 5**), north Cornwall and is part of the Ligger Point to Porth site on the SMP database. The most recent counts in 2017 found four guillemots on the island, down from a site high count of 47 guillemots in 2015 (BTO, 2024). During the survey there were no auks visible on the island from land, however up to four razorbill and two guillemots were observed flying into the seaward side of the island not viewable from land. There were no birds recorded loafing on the sea, indicating the colony is still very small.

Further around the coast a small colony of 16 razorbills was found near to Penhale Point (**Figure 6**).

3.1.3.1 Disturbance

During the survey there was no disturbance recorded, however the north westerly winds created a relatively large swell, not conducive to water sports. Holywell beach is a very popular beach for surfing. Surfing should have minimal impact on the colony despite the close proximity of the island to the beach but the island is easily accessible for paddleboarders and kayakers from the beach.

3.1.3.2 Habitat and land use

The island and surrounding cliffs are a mix of steep rocky cliffs and gentle vegetated slopes. The razorbills observed breeding were all found in the lower part of the cliffs where there was no vegetation. The surrounding area adjacent to the islands and at Penhale Point is military property and limited land use impacts. There was no evidence of any significant erosion on the island or mainland cliffs.

3.1.3.3 Predation

Evidence of any impacts from predation was not recorded during the survey. Herring and lesser black-backed gulls were recorded breeding on the site or on nearby cliffs. Both herring and lesser black-backed gulls are nest predators of guillemots, and razorbills (Veitch et al., 2016). Ravens, carrion crows and peregrine falcon (*Falco peregrinus*) were also recorded at the site, which are also known to pose predation threat to auks (Hof et al, 2018, Gaston et al, 1996, Schauer et al, 1996).

Figure 5 Carter's Rock and Holywell beach in close proximity

Figure 6 Location of the razorbill colony, circled, near to Penhale Point

3.1.4 North Cornwall 2

The North Cornwall 2 site is part of the North Cornwall Coast master site on the SMP database and is approximately 3km north of Padstow. The colony is split into two distinct areas on the same cliff (**Figure 7**), with 151 guillemots and 42 razorbills were recorded during the survey on the cliffs presumed to be on nests, an increase from the last count in 2017 of 38 guillemot and 34 razorbill (BTO, 2024).

3.1.4.1 Disturbance

During the survey disturbance was recorded on four occasions (**Table 3.1**). A sightseeing Rigid Inflatable Boat (RIB) was observed approaching to within 100m of the colony at 11:16 in the morning (**Figure 8**). One guillemot flew off the nest ledge before returning after 60 seconds and a razorbill was observed flying off for less than 30 seconds before returning. A further 10+ guillemots were alert to the disturbance, heads up and watching the boat but did not fly off. No other birds were affected during this disturbance event.

The second disturbance event occurred at 12:52 when a sightseeing boat visited the colony (**Figure 9**). The boat lingered for approximately six minutes and approached to less than 50m from the colony causing 20+ guillemots and razorbills to be alert to the danger and heads were up and watching the boat but did not fly off. Six razorbills, that were nesting in the lower part of the cliff, flew off due to the disturbance but returned to the nest within 30 seconds.

The third and fourth disturbance events were again caused by sightseeing boats. At 13:19 one RIB arrived and approached to within 100m of the colony causing five razorbill to fly off for less than 30 seconds, a further 10+ guillemot and razorbill were alert and watching the RIB. A second RIB arrived at 13:23 (**Figure 10**) and then approached to within approximately 50m from the colony (**Figure 11**). This event flushed three razorbill off their nest, although they returned within 30 seconds.

The coastal footpath above the colony was very busy with heavy footfall throughout the day but the colony is not easily viewable form the path and any disturbance form land is therefore unlikely.

Recreational disturbance appears to be a potential issue at this site, if disturbance is a daily event, then this may lead to productivity consequences or abandonment of nests.

3.1.4.2 Habitat and land use

The colonies are concentrated on the steepest, barest parts of the cliff while the gentler sloped areas covered in vegetation and are therefore not occupied by guillemots or razorbills. As evidenced in **Figure 12**, water run-off was recorded from the cliff top on to the nesting areas, although quite wet, it did not appear to deter the guillemots from using the ledges. Further surveys later in the breeding season would be required to determine whether this may have an impact on productivity if birds chose to nest in the same location. There was evidence of erosion in the past but no fresh signs of erosion on the cliff tops.

3.1.4.3 Predation

Evidence of any impacts from predation was not recorded during the survey. Herring and lesser black-backed gulls were recorded breeding on the site or on nearby cliffs. Both herring and lesser black-backed gulls are nest predators of guillemots, and razorbills (Veitch et al., 2016). Ravens and carrion crows were also recorded at the site (Hof et al, 2018, Gaston et al, 1996, Schauer et al, 1996).

Table 3.1 Disturbances recorded at North Cornwall 2

ID	Time	Species	Stimuli type	Multiple birds reacted (no.)	Level of effect[2]	Time away from nest (secs)	Length of exposure to stimuli (secs)	Disturbance of Stimuli from nest (m)	Comments
1a	11:16	Razorbill	OW- RIB	1	4	<30	180	50-100	Tourist sightseeing RIB visiting the colony
1b	11:16	Guillemot	OW- RIB	1	5	60	180	50-100	
1c	11:16	Guillemot	OW- RIB	10+	2	-	180	50-100	
2a	12:52	Razorbill & guillemot	OW - Cruise boat	20+	2	-	360	<50	Sightseeing boat sailed up to the cliff
2b	12:52	Razorbill	OW - Cruise boat	6	4	<30	360	<50	
3a	13:19	Razorbill	OW- RIB	5	4	<30	180	100	Tourist sightseeing RIB visiting the colony
3b	13:19	Razorbill & guillemot	OW- RIB	10+	2	-	180	100	

[2] Level of effect: 1 = No effect; 2 = Alert: head(s) up by bird(s) at nest sites; 3 = small movement on cliff (<10m, not flying); 4 = Flushed off cliffs for <30 secs; 5 = flushed off cliffs for >30 secs

ID	Time	Species	Stimuli type	Multiple birds reacted (no.)	Level of effect[2]	Time away from nest (secs)	Length of exposure to stimuli (secs)	Disturbance of Stimuli from nest (m)	Comments
4a	13:23	Razorbill	OW- RIB	3	4	<30	200	50	A second Tourist sightseeing RIB joined the first one
4b	13:23	Razorbill & guillemot	OW- RIB	10+	2	-	200	50	

Figure 7 Overview of the colony, the majority of the birds concentrated around the caves on the left hand side of the photo and near the right hand side, both circled.

Figure 8 Tourist RIB visiting the colony in the morning

Figure 9 Cruise boat visiting the colony in the early afternoon

Figure 10 Two tourist RIBs visiting the colony at the same time in the afternoon

Figure 11 The tourist RIB close to the colony in the afternoon

Figure 12 Evidence of water run off down the cliff onto the guillemot colony

3.1.5 Tresungers Point

Tresungers Point is located 1km east of Port Issac and 750m northeast of Port Gaverne on the north Cornwall coast (**Figure 13**). The most recent counts on the SMP database recorded 38 guillemots and 70 razorbills in the colony (BTO, 2024). During this survey 125 guillemots and 67 razorbills were recorded on nest ledges. These were found in two distinct separate colonies, one closer to Port Gaverne with 30 guillemot and 17 razorbill and the colony at Tresunger Point itself with 95 guillemot and 50 razorbill (**Figure 14**).

3.1.5.1 Disturbance

During the survey there was no disturbance recorded, the recent persistent northerly winds building up a swell into the cliffs perhaps deterring any kayaking or paddleboarding, despite the calm south-westerly conditions on the day. The Port Gaverne area is known for offering coasteering, sea kayaking and paddleboarding experiences and due to the close proximity, combined with the majority of the nests being relatively low on the cliffs, it is possible that disturbance from these activities could cause disturbance during the season in better conditions. This assumption is backed up with data on Strava (www.strava.com) which suggests there is significant activity from water sports in the area.

3.1.5.2 Habitat and land use

The suitable habitat for breeding guillemot and razorbill is mostly limited to the lower parts of the cliff. As shown in **Figure 13**, there is high levels of vegetation on much of the cliffs, mainly due to the slightly gentler slope than the sheer cliffs near the bottom. In **Figure 14** guillemots are recorded breeding on the bare rock with vegetation encroaching near to the nesting ledges. Vegetation clearance of surrounding areas may help expand the amount of suitable habitat, although accessing the areas may be an issue.

Fishing gear was recorded in the sea area surrounding the colony, often in the same areas of the loafing birds near to the colony (**Figure 15**). On several occasions birds were observed swimming over the fishing gear, risking entanglement.

3.1.5.3 Predation

Evidence of any impacts from predation was not recorded during the survey. Herring gulls and lesser black-backed gull were recorded nesting on the south facing slope of the island and are known to predate the nests of guillemot and razorbill (Veitch et al., 2016). A peregrine falcon was also noted flying past and this species is known to predate seabirds.

Figure 13 Overview of the location of the main colony, limited to the rocky lower slopes of the cliff (circled)

Figure 14 A closer view of the main colony at Tresungers Point

Figure 15 The sea surrounding the colony had many fishing nets/buoys close to shore and often in areas where guillemots and razorbills loafed

3.1.6 Lye Rock

Lye Rock is located in Bossiney Haven (**Figure 16**), near to Tintagel. It is a small colony in amongst larger colonies in the same bay, namely The Sisters, Long and Short Island. The most recent counts in 2017 found no guillemot or razorbill nesting on Lye Rock (BTO, 2024). During this survey 51 razorbills (**Figure 17**) were recorded on nests on the island but no guillemots were on nests. Up to 75 guillemots were found roosting at the bottom of the cliff on the island (**Figure 16**) and were found just below suitable cliff ledges for breeding (**Figure 18**). This ledge was quite low down and significantly lower than any of the breeding razorbills, who were using suitable habitat high up on the island.

3.1.6.1 Disturbance

A single disturbance event was recorded during the day, although it did not involve any nesting birds. A group of 12+ people coasteering were using the coast around Bossiney Cove (**Figure 20**) and were moving west towards Lye Rock. Although they never got within 150m of the island, when they approached to the closest point, the noise created by the participants flushed the majority of the roosting guillemots off the bottom of the cliff into the water (**Table 3.2**). The neighbouring colony at The Sisters (800+ pairs) also has the majority of pairs nesting high up on the islands. No kayaking or paddleboarding was observed on the day of the survey, but again there was a bit of a swell from recent northerly winds which made conditions unsuitable for such activities. The access point at Bossiney Cove is less than 500m from the island so disturbance from these activities is certainly possible.

3.1.6.2 Habitat and land use

The habitat on the island is suitable for more guillemots and razorbills with many empty ledges. There is significant amount of vegetation on the island but generally on the gentler slopes and these vegetated areas would likely not be suitable for nesting guillemots or razorbills if the vegetation was to be removed. The adjacent mainland also has plenty of appropriate steep, bare cliff faces with no guillemot and razorbill breeding on them. The island is separated from any mainland land use issues, with just a small bit of rock fall connecting it to the mainland and there was little evidence of much fishing activity around the island.

3.1.6.3 Predation

Evidence of any impacts from predation was not recorded during the survey. Herring gulls and lesser black-backed gull were recorded nesting nearby and are known to predate the nests of guillemot and razorbill (Veitch et al., 2016). A pair of peregrine falcons and ravens were also noted flying past and these species is known to pose predation threat to auks.

Table 3.2 Disturbances recorded at Lye Rock

ID	Time	Species	Stimuli type	Multiple birds reacted (no.)	Level of effect[3]	Time away from nest (secs)	Length of exposure to stimuli (secs)	Disturbance of Stimuli from nest (m)	Comments
1	10:30	Guillemot	Oth	75	5	<30	600	100-200	A group of coasteerers (12+) moved to within 200m of roosting guillemots sat on the cliff and the noise flushed the guillemots off the rocks into the water

[3] Level of effect: 1 = No effect; 2 = Alert: head(s) up by bird(s) at nest sites; 3 = small movement on cliff (<10m, not flying); 4 = Flushed off cliffs for <30 secs; 5 = flushed off cliffs for >30 secs

Figure 16 Lye Rock, just to the west of Bossiney Haven

Figure 17 Non-breeding guillemots at the bottom of the cliff on Lye Rock

Figure 18 Location of several razorbill nests, high up on Lye Rock

Figure 19 Empty ledge on Lye Rock, just above the guillemots in Figure 16

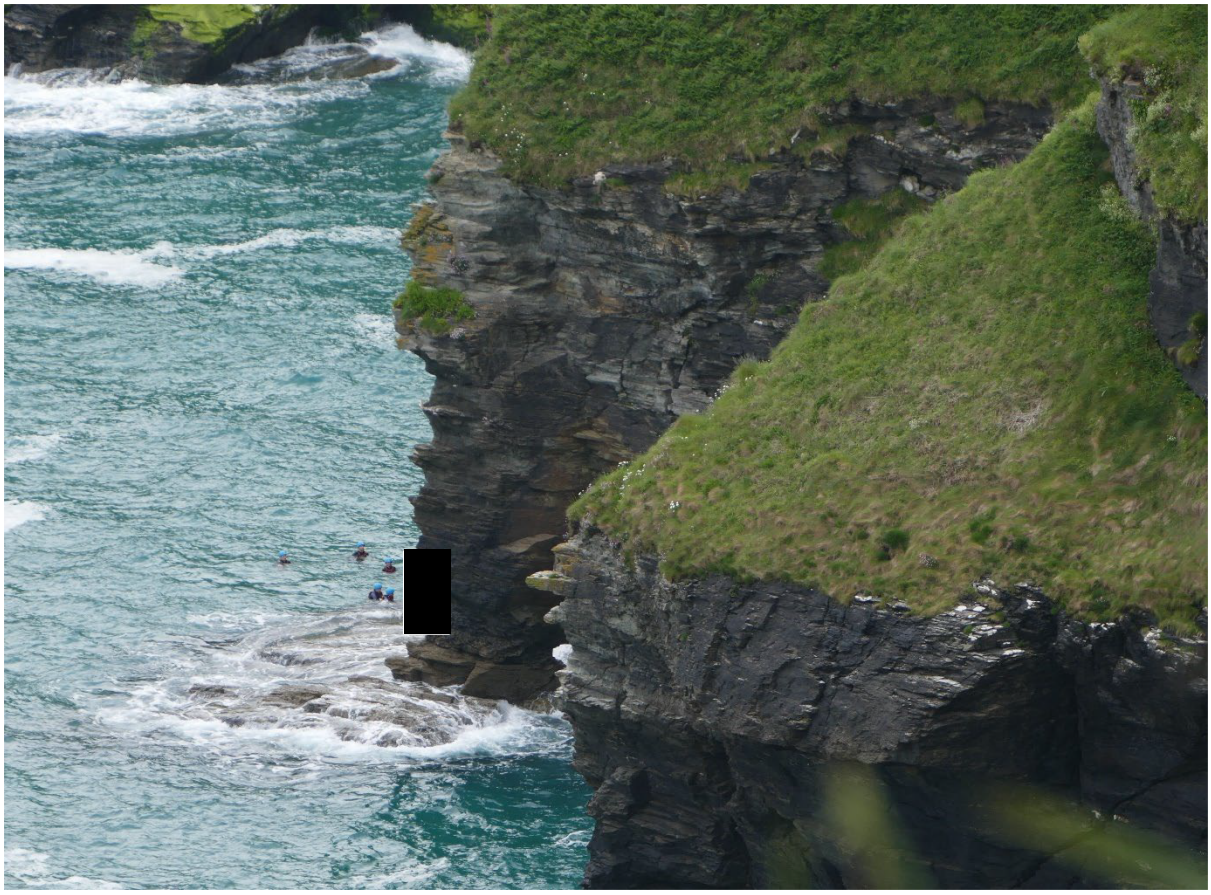

Figure 20 A group of 12 coasteerers close to Lye Rock

3.1.7 Grower Rock

Grower Rock is located approximately 1.5km west of Boscastle in North Cornwall. The most recent colony counts in 2015 found 151 razorbill and 41 guillemot breeding on the island. As shown in **Figure 21**, the south facing slope with no breeding birds and the visible part of the colony on the east side of the island. A close up view of the visible part of the colony is depicted in **Figure 22** , with a count of 53 razorbill and 14 guillemot only viewable from land. To appropriately survey the entire colony a boat would be required.

3.1.7.1 Disturbance

During the survey there no disturbance events were recorded, however the persistent northerly winds created a relatively large swell, not conducive to water sports. There is potential from disturbance from kayaking and paddleboarding as the island is easily accessible, with Boscastle harbour approximately 1km away.

3.1.7.2 Habitat and land use

The island is a mix of steep rocky cliffs and more gentle vegetated slopes. The guillemots and razorbills observed breeding were all found on the steep lower part of the cliffs where there was no vegetation. There was limited or no fishing activities in close proximity of the island.

3.1.7.3 Predation

Evidence of any impacts from predation was not recorded during the survey. Herring and lesser black-backed gulls were recorded breeding on the site or on nearby cliffs. Both herring and lesser black-backed gulls are nest predators of guillemots, and razorbills (Veitch et al., 2016). Ravens and carrion crows were also recorded at the site which pose predation threat to auks (Hof et al, 2018, Gaston et al, 1996, Schauer et al, 1996).

Figure 21 Grower Rock, a small section of the colony can be seen on the right had side (circled) but the majority of birds are on the seaward side out of view

Figure 22 A closer view of the visible part of the colony from the mainland

3.1.8 Treyarnon to Merope (Trevose Head)

The colony at Treyarnon to Merope site on the SMP database can be found on the eastern side of Trevose Head. The colony cannot be fully seen from land and the section of the colony in **Figure 23** can only be viewed from one point on the mainland. The most recent colony count on the SMP database is from 2024, with 17 guillemots and six razorbills recorded. During this survey 23 guillemots and seven razorbills were recorded at the site, with more birds flying into the cliffs that are not visible form land.

3.1.8.1 Disturbance

During the survey there was no disturbance recorded, however the site is very close to several popular beaches at Constantine Bay, Harlyn Bay and Long Cove beach which are all next to holiday parks so the potential for disturbance from recreational water users. The colony is well away from the public footpaths and it is highly unlikely that disturbance will be caused on land.

3.1.8.2 Habitat and landuse

The cliff faces were mainly rocky and clear of vegetation, although suitable nesting ledges are limited on the parts of the cliff that was visible. The land is owned by the National Trust and the Trevose Head area is left as wild areas or non-intensive farmland so there is limited pressures from land use. On the sea there were several fishing nets and buoys set close to the colony, although no loafing birds were observed near these.

3.1.8.3 Predation

Evidence of any impacts from predation was not recorded during the survey. A family of ravens (with two recently fledged young) were in the immediate area, flying over the colony

regularly (Hof *et al*, 2018, Gaston *et al*, 1996, Schauer *et al*, 1996) and herring gulls nest on the cliffs nearby.

Figure 23 The main colony at Trevose Head that is visible from land

Figure 24 A close up of the main guillemot colony at Trevose Head that is visible from land

3.1.9 Highveer Point

Highveer Point is located approximately 6km west of Lynton in North Devon. The most recent colony counts in 2023 found 21 guillemot and 23 razorbill, however this is down from 53 guillemot and 178 razorbill in 2016 (BTO, 2024). During the survey a total of 79 guillemot and 24 razorbill were recorded on the cliffs, however it is unlikely that this represents the whole of the colony due to the restricted view available from the coast path (**Figure 25**).

3.1.9.1 Disturbance

No disturbance was recorded during the visit. A single fishing boat was observed throughout the entire site visit, but it never approached more than approximately 2 km from the colony. The nearest accessible locations for kayakers and paddleboarders are a considerable distance away. Numerous people were recorded walking the South West Coast Path, even in inclement weather, however the footpath is set approximately 150 m from the colony (**Figure 26**). Therefore, the scope for disturbance mitigation at this site is considered minimal.

3.1.9.2 Habitat and landuse

The cliffs at Highveer Point were well vegetated, with only the lower faces devoid of vegetation and reducing the number of available suitable ledge for breeding auks. Highveer Point is within the West Exmoor Coast and Woods SSSI and the clifftop vegetation is

dominated by gorse (*Ulex gallii*) and heather species (predominately *Calluna vulgaris* and *Erica cinerea*) so there is little pressure from landuse.

3.1.9.3 Predation

No evidence of predation was recorded during the site visit to Highveer Point, although a single great black-backed gull and several herring gulls were recorded loafing on flatter rock plateaus at the top of the colony.

Figure 25 The main colony at Highveer Point that is visible from land

Figure 26 The location of the main colony at Highveer Point (circled in red) relative to the South West Coast Path (red line)

3.1.10 Lynton 1 and 2

The Lynton 1 and 2 site on the SMP database is located in the Valley of the Rocks in North Devon. The latest counts in 2023 found 240 guillemot and 34 razorbill breeding at the site. This visit found the site is not viewable from land, so no counts were possible. The probable location of the colony was identified by the rafting auks observed flying to and from a section of cliff, but this could not be viewed from the coast path (**Figure 27**).

3.1.10.1 Disturbance

The area is adjacent to 'The Valley of the Rocks' that is very popular with tourists, but much like Highveer Point no disturbance was recorded during the site visit. The footpath is sufficiently set back to make any disturbance from hikers unlikely. A pair of RIBs being operated by a local sea safari company were observed stopping at multiple locations along the wider coastline to show guests seabird colonies along the North Devon coast (**Figure 28**). The site is located about 1 km west of Lynton and Lynmouth, thus potential disturbance kayakers or stand-up paddleboarders is possible, however none were observed during the site visit.

3.1.10.2 Predation

No evidence of predation was observed at Lynton 1 and 2, but numerous great black-backed and herring gulls were observed utilising the area. A single male kestrel (*Falco tinnunculus*)

was observed foraging along the coast path. This is species is not a common nest predator of seabirds, but is known to opportunistically take nestlings (Smart and Amar, 2018). A stoat (*Mustela erminea*) was seen hunting along the footpath and could potentially predate seabird nests.

Figure 27 A raft of auks beneath the probable colony location at Lynton 1 and 2.

Figure 28 Two sea safari tour boats were seen at multiple locations from Lynton 1 and 2 to Woody Bay

4. Discussion

4.1 Site suitability for compensation

4.1.1 North Cornwall sites

Of the eight sites surveyed, the following three were concluded as having low potential for compensation measures targeted at reducing recreational disturbance:

- Bawden Rocks due to being too distant, to appropriately survey from land and additionally assumed to limit the potential for disturbance ;
- Carter's Rock due to the absence of any guillemot and razorbill breeding at the site; and
- Grower Rock due to restricted view of the colony making monitoring difficult and potential for disturbance sources assumed to be limited based on distance.

North Cornwall 2 was the site whereby the most disturbance events were recorded during the visits, suggesting suitability for the Applicants proposed compensation measures, as would other sites around Padstow. Tresungers Point was also concluded as potentially suitable for further investigation, due to easy access for kayakers and paddleboarders, nests

low on the cliff and local outdoor adventure businesses nearby. Lye Rock is the other site where it was concluded there is potential for disturbance events to occur, and it appeared as though guillemots were reluctant to nest low on the cliffs despite suitable nesting ledges. Disturbance was witnessed here, and within the whole bay. The Sisters and Long and Short Island are found in the bay and have auk colonies breeding on them and therefore the whole bay has potential for a greater collaborative approach. Given the amount of recreational activities in the bay area, these three sites have high potential for compensation measures targeted at reducing recreational disturbance.

Trevose Head and Carvannet to Portreath 3 both have potential for compensation measures but perhaps not as much as the previous three sites. Both have potential for disturbance due to locality to busy tourist areas and local outdoor pursuits businesses but both colonies are hard to view, so productivity monitoring may be difficult. These two sites have moderate potential for compensation measures targeted at reducing recreational disturbance.

4.1.2 North Devon sites

Both sites in North Devon were difficult or impossible to view from land so it would be difficult to monitor productivity accurately without the use of a vessel. Additionally, Highveer Point seems an unlikely location for high levels of disturbance and Lynton 1 and 2 may have potential for more disturbance but not to the same degree as the North Cornwall sites.

5. Conclusions and recommendations

The site investigation works highlighted the disturbance issues or potential disturbance issues at the sites. Of the ten sites surveyed five have low potential, 2 have moderate potential and three have high potential for compensatory measures to work. It is recommended that further surveys and subsequent baseline monitoring is completed in the next breeding season to characterise the baseline levels of disturbance and any influence on colony productivity, especially at the sites with high and moderate potential. **Table 5.1** ranks the suitability of each site for future compensation measures and **Figure 29** shows the locations of the selected sites.

Table 5.1 Site rankings based on the site surveys

Site	Carrying forward (Y or N)	Reasons
North Cornwall 2	Y	High levels of recreational disturbance recorded during the survey
Lye Rock	Y	Recreational disturbance recorded during the survey
Tresungers Point	Y	High potential for recreational disturbance to be an issue

Carvannet – Portreath 3	N	Only a small part of the colony visible from land, difficult to monitor
Treyarnon to Merope	N	Only a small part of the colony visible from land, difficult to monitor
Grower Rock	N	Only a small part of the colony visible from land, difficult to monitor
Highveer Point	N	Only a small part of the colony visible from land, difficult to monitor
Lynton 1 & 2	N	Colony not visible from land
Carter's Rock	N	No birds recorded on the island
Bawden Rocks	N	Very distant and extremely difficult to monitor

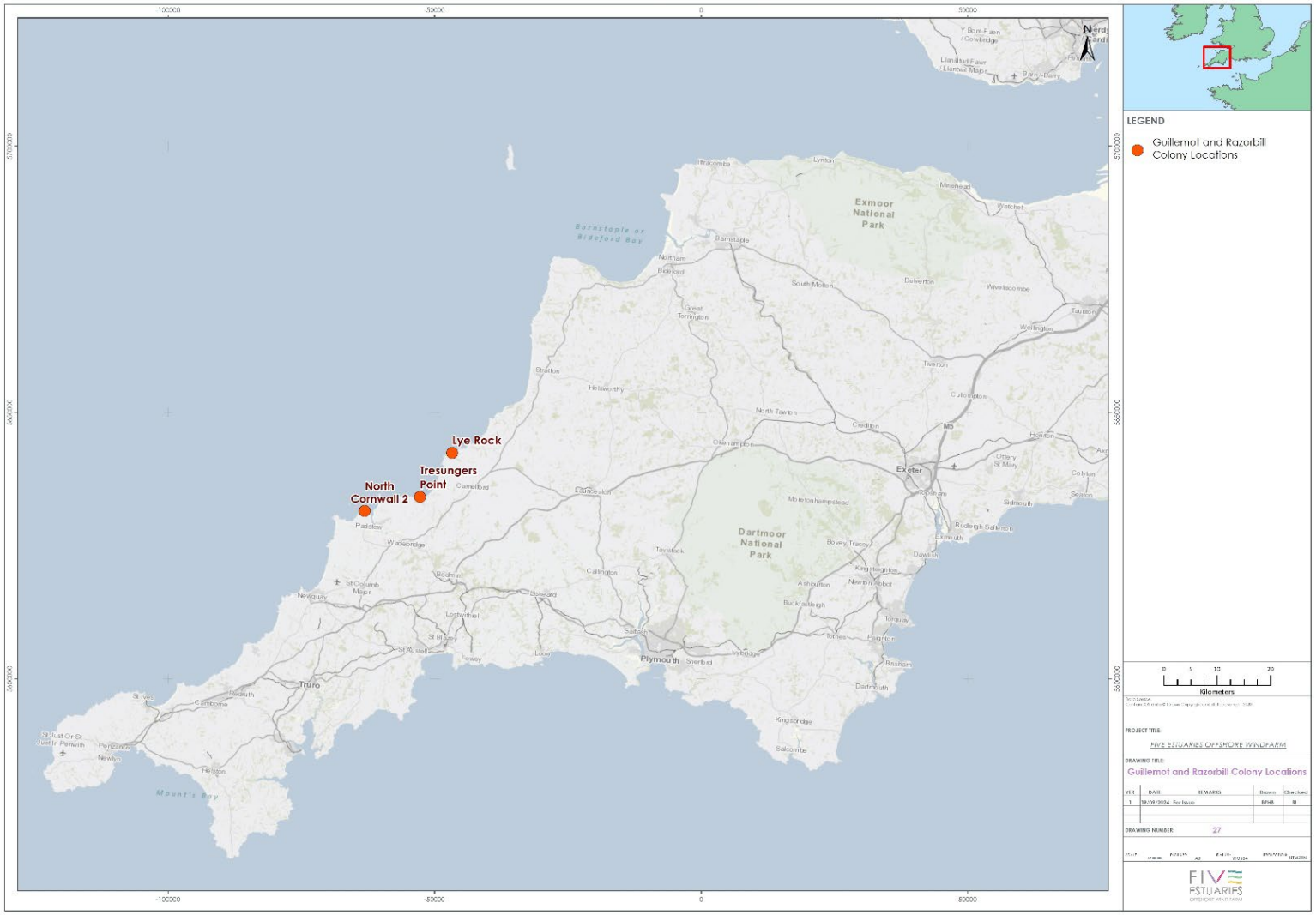

Figure 29 The locations of the guillemot and razorbill colonies to be taken forward for compensation measures

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