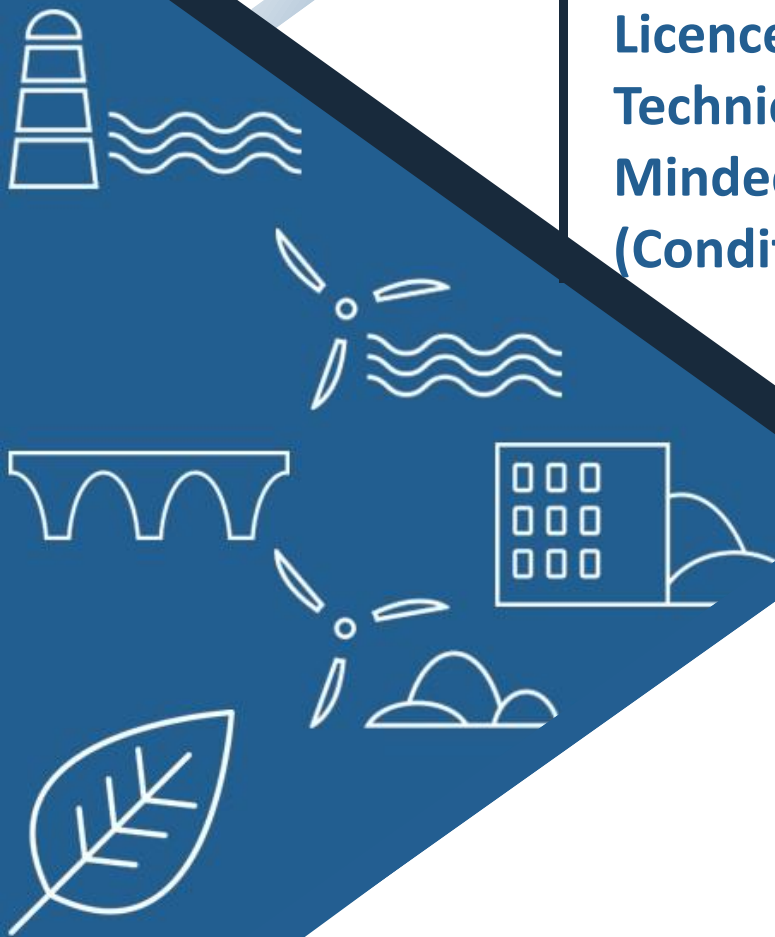


Bremore Port Maritime Usage Licence Technical Review of Ornithological Minded to Grant Conditions (Conditions 26 & 27)



Client

Bremore Ireland Port

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Project Title

Technical Review of Ornithological Minded to
Grant Conditions (Conditions 26 & 27)

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1 INTRODUCTION

1.1 PURPOSE OF THIS SUBMISSION

The report forms part of the submission constituting Bremore's response to Conditions 26 and 27 of the Minded to Grant Decision.

The purpose of this part of the submission is to set out the ecological, scientific and practical considerations relevant to these conditions, having regard to the project-specific environmental assessments, including the Natura Impact Statement (NIS), relevant ecological guidance and the published scientific literature.

Where appropriate, recommendations are provided regarding the review and revision of the conditions to ensure that they are evidence-based, proportionate and capable of consistent implementation while maintaining their intended environmental objectives.

In summary, Bremore supports the environmental objective underlying Condition 26 but considers that the condition, as currently drafted, should be amended to provide an evidence-based, proportionate and operationally practicable approach to the protection of seabirds during survey activities. The proposed amendments are important to ensure the condition can objectively be said to be necessary and appropriate.

In relation to Condition 27, Bremore considers that the project-specific assessment and available scientific evidence do not provide an ecological basis for the proposed 1 km seasonal exclusion and therefore requests that the condition be removed.

The spatial relationship between the Maritime Usage Licence (MUL) Application Area, the Potential Development Area and the surrounding Special Protection Areas (SPAs) considered within this report is shown in Figure 1-1.

1.2 SCOPE

This report is limited to the ornithological conditions contained within the MARA Minded to Grant Decision for the proposed Maritime Usage Licence.

Specifically, the report considers:

- **Condition 26 – Birds**

Where the Holder observes significant clusters of birds, actively fishing and/or diving, within 500 m of the survey vessel, in carrying out the Permitted Maritime Usage, the survey route shall be altered to maintain a 500 m buffer from the birds. Appropriate records must be retained by the Holder.

- **Condition 27 – Birds**

The Holder shall not undertake geotechnical and geophysical surveys within 1 km of the River Nanny Estuary and Shore SPA during the period October to February annually.

No other licence conditions have been assessed as part of this submission and we note that Bremore does not make any submission in relation to any other conditions.

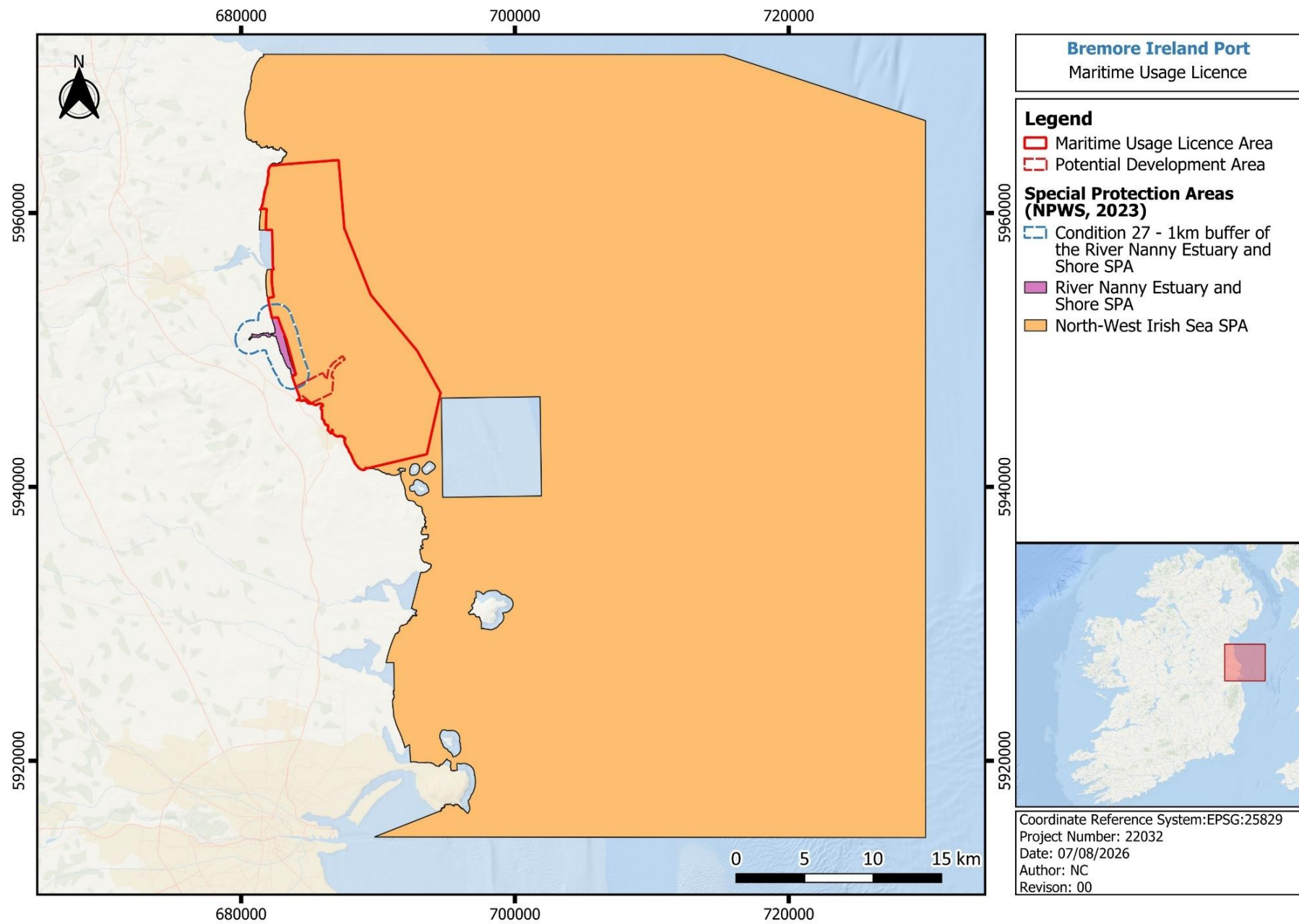


Figure 1-1 MUL Application Area, Potential Development Area and surrounding SPAs considered within this Technical Review

2 METHODOLOGY

2.1 ASSESSMENT APPROACH

The submission considers the scientific basis, ecological rationale and practical implementation of the ornithological conditions, having regard to the project-specific environmental assessments, the conservation objectives of the relevant European Sites, published scientific literature and established ecological assessment guidance. The submission has also considered whether the conditions are proportionate to the identified ecological impact pathways and capable of consistent and objective implementation.

2.2 DOCUMENTS AND SOURCES REVIEWED

The documents, guidance and scientific literature reviewed in preparing this submission are summarised in Table 2-1.

Table 2-1 Documents and sources used in review and relevance to review

Document or source	Relevance to the submission
MARA Minded to Grant decision letter and proposed Maritime Usage Licence conditions	Provides the wording and stated reasons for Conditions 26 and 27.
Supporting Information for Screening for Appropriate Assessment (SISAA)	Provides the Stage 1 Appropriate Assessment context and identifies the European Sites and potential impact pathways considered during screening.
Bremore Port Maritime Usage Licence Natura Impact Statement (Reference 22032-REP-006, dated 26 February 2026)	Provides the project-specific assessment of potential effects arising from the proposed surveys, including vessel presence, airborne noise and human disturbance.
NPWS Conservation Objectives and supporting documentation for the relevant European Sites	Defines the conservation objectives, attributes and targets applicable to the relevant Special Conservation Interests.
CIEEM, Guidelines for Ecological Impact Assessment in the UK and Ireland	Provides established principles for the development and evaluation of ecological mitigation, including effectiveness, proportionality and deliverability.
European Commission guidance on Appropriate Assessment and Article 6 of the Habitats Directive	Provides guidance on the assessment of effects on European Sites and the requirements for clear, effective and technically feasible mitigation.
Schwemmer <i>et al.</i> (2011)	Provides evidence on species-specific seabird responses to vessel disturbance, including the influence of flock size, vessel behaviour and habituation.
Jarrett <i>et al.</i> (2022)	Provides evidence on behavioural responses of non-breeding waterbirds to marine traffic and the influence of species, distance, flock size, sea state and season.
Scarton (2018a)	Provides empirical evidence on disturbance of non-breeding waders by boats and pedestrians and the derivation of species-specific setback distances from Flight Initiation Distance data.

Document or source	Relevance to the submission
Scarton (2018b)	Provides supporting evidence on species-specific responses of breeding waders to boat and pedestrian disturbance and the empirical derivation of setback distances.
Hart <i>et al.</i> (2026)	Provides evidence on the influence of vessel class, proximity and predictability on seabird responses to marine traffic.
Other relevant ornithological literature cited within Sections 3 and 4	Provides supporting evidence relating to species sensitivity, vessel disturbance, displacement, habituation and the practical design of ecological mitigation.

2.3 STATEMENT OF COMPETENCE

This technical assessment to support Bremore's submission was undertaken by Maggie Starr BSc (Hons) Marine Sciences, Senior Marine Ecologist and Ornithologist with GDG.

Maggie has over five years' professional experience in terrestrial, freshwater, coastal and offshore ecology. She is a trained Marine Mammal Observer (MMO) with experience in marine and terrestrial ornithological surveys, marine mammal surveys, habitat classification, Ecological Impact Assessment (EcIA), Appropriate Assessment (AA) and Environmental Impact Assessment (EIA). Her professional experience includes ecological surveying across terrestrial, freshwater (including White-clawed Crayfish, Freshwater Pearl Mussel and Q-value assessments) and marine environments, field survey coordination and management, Ecological Clerk of Works for offshore and intertidal site investigations, and the preparation of statutory environmental reports, including Appropriate Assessment Screening Reports, Natura Impact Statements (NISs), Ecological Impact Assessments (EcIAs), Environmental Impact Assessment Reports (EIARs) and Maritime Usage Licence (MUL) documentation.

This report was reviewed and approved by Jeannine Dunne, Marine Advisory Director with GDG.

Jeannine has over 19 years' experience in environmental policy, environmental assessment, regulatory compliance and legislative advisory services across the terrestrial and marine sectors, with particular expertise in European and Irish environmental legislation, including the Habitats Directive, Birds Directive and the Maritime Area Planning Act. She has extensive experience advising on Appropriate Assessment, Environmental Impact Assessment and marine consenting processes for major infrastructure and renewable energy projects. Her review and approval ensure that the technical assessment is consistent with current legislative requirements, established ecological assessment practice and the principles of Appropriate Assessment under Article 6(3) of the Habitats Directive.

3 REVIEW OF CONDITION 26

Condition 26 states:

“Where the Holder observes significant clusters of birds, actively fishing and/or diving, within 500m of the survey vessel, in carrying out the Permitted Maritime Usage, the survey route shall be altered to maintain a 500m buffer from the birds. Appropriate records must be retained by the Holder.

Reason: To ensure protection of the marine environment.”

Condition 26 has been reviewed with reference to the project-specific environmental assessments, relevant ecological guidance and the published scientific literature relating to seabird disturbance associated with vessel activity. The findings of this review are presented below.

3.1 OVERVIEW

Environmental mitigation should be developed in accordance with recognised principles of Ecological Impact Assessment (EclA), Environmental Impact Assessment (EIA) and Appropriate Assessment (AA). These principles require that mitigation measures are necessary, evidence-based, proportionate, effective, capable of implementation and capable of objective verification (CIEEM, 2018; European Commission, 2021; IAIA, 2018). Ecological mitigation should therefore address a clearly identified impact through measures that have a reasonable expectation of reducing that impact and whose effectiveness can be demonstrated. The applicable legislation requires that such conditions are necessary and appropriate (s.120 and Schedule 8 of the Maritime Area Planning Act 2021, as amended).

The CIEEM Guidelines for Ecological Impact Assessment state that mitigation should form part of an iterative design process, should be based on good practice and available evidence, and should provide the competent authority with as much certainty as possible regarding its likely effectiveness and deliverability (CIEEM, 2018). Similarly, European Commission guidance on Environmental Impact Assessment and Appropriate Assessment emphasises that mitigation measures must be sufficiently certain, technically feasible and demonstrably capable of avoiding or reducing adverse effects before they can properly be relied upon during the consent process (European Commission, 2021; European Commission, 2017).

Condition 26 does not fully accord with these accepted principles of ecological mitigation and environmental assessment. Condition 26 as currently drafted is not necessary and appropriate.

The objective of Condition 26, namely, to minimise disturbance to actively feeding birds during offshore survey activities, is fully supported. However, the condition, as currently drafted, is not considered to represent evidence-based, proportionate or practicable ecological mitigation. Contemporary offshore ornithological assessments recognise that behavioural responses of seabirds to vessel activity are influenced by multiple factors, including species ecology, behavioural state, vessel type, vessel speed, vessel predictability, proximity and the duration and frequency of disturbance, rather than a single universal separation distance. Consequently, mitigation measures

are typically developed on a species-specific and activity-specific basis, reflecting the ecology of the receptors concerned and the characteristics of the proposed activity.

Condition 26 instead applies a universal operational requirement to maintain a 500 m separation distance from all "significant clusters" of actively fishing and/or diving birds, irrespective of species, behaviour, vessel type or operational context. In the absence of a clear scientific justification for the application of a single avoidance distance across all qualifying bird species and survey methodologies, the condition is not considered to reflect current ecological understanding of seabird disturbance or accepted principles of ecological mitigation.

The available scientific literature consistently demonstrates that seabird responses to vessel activity are influenced by multiple interacting ecological and operational factors rather than a single separation distance. Table 3-1 summarises the principal determinants of seabird disturbance identified within the published literature and compares these with the factors explicitly considered within Condition 26.

Table 3-1 Factors known to influence seabird disturbance and their consideration within Condition 26

Factor influencing seabird disturbance	Supported by published literature	Explicitly considered by Condition 26	Addressed in Section
Species sensitivity	✓	X	3.2
Behavioural state	✓	Partially (actively feeding/diving only)	3.2, 3.4
Flock size	✓	X ("significant clusters" not defined)	3.4
Vessel class	✓	X	3.3
Vessel predictability	✓	X	3.3, 3.4, 3.5

Table 3-1 demonstrates that published evidence identifies multiple ecological and operational factors as influencing seabird behavioural responses to vessel activity.

Condition 26 is primarily based on a single spatial separation distance and does not explicitly account for the range of factors recognised within the scientific literature, including species-specific sensitivity, vessel behaviour, predictability of vessel movements or the cumulative duration of disturbance.

3.2 PROJECT-SPECIFIC ASSESSMENT AND MITIGATION

The potential for disturbance to seabirds arising from vessel-based survey activity has already been specifically considered within the project Natura Impact Statement (NIS) (Reference: 22032-REP-006-02 – *Bremore Ireland Port Maritime Usage Licence Application for Site Investigation Works Natura Impact Statement*, 26 February 2026). The NIS identified behavioural disturbance associated with the presence and movement of survey vessels as the principal plausible impact mechanism for SPA seabirds. In undertaking that assessment, survey vessels were characterised as low-speed, temporary and mobile, and disturbance associated with vessel activity was considered to be

behavioural, localised to the immediate vicinity of the vessel and reversible following cessation of activity.

Importantly, the NIS already incorporates specific mitigation for rafting and foraging seabirds within the North-West Irish Sea SPA (22032-REP-006-Bremore Port MUL NIS 20260226, Section 4.5.3.4). This requires the onboard MMO to have suitable ornithological competence to identify rafting and actively foraging seabirds; provides for vessel activity to be adapted, where practicable, where significant aggregations of seabirds occur in the vicinity of survey operations in order to reduce close approach and minimise repeated disturbance; requires survey vessels to maintain steady operational movement and avoid unnecessary manoeuvring that could lead to repeated flushing; and provides for extended stationary operations, where practicable, to avoid areas supporting persistent seabird aggregations.

The ecological effect that Condition 26 seeks to address has therefore already been identified and assessed within the project-specific NIS and is subject to an established mitigation framework. The measures are risk-based and responsive to observed seabird behaviour, while retaining the operational flexibility necessary to minimise disturbance in the circumstances encountered during individual survey operations. They do not rely upon a universal separation distance or require automatic deviation from planned survey lines solely on the basis of proximity.

The conclusions of the NIS were reached on the basis that vessel-related disturbance would remain temporary and localised, together with implementation of mitigation intended to minimise close approach, repeated disturbance and unnecessary vessel manoeuvring (22032-REP-006-Bremore Port MUL NIS 20260226, Section 4.5.3.5; Section 5). Following implementation of those measures, the NIS concluded that disturbance to breeding, rafting, foraging and wintering seabirds and waterbirds would be reduced to temporary and localised behavioural responses and would not result in adverse effects on the integrity of the relevant SPAs.

3.3 SPECIES-SPECIFIC RESPONSES TO VESSEL DISTURBANCE

The North Irish Sea SPA has been designated for twenty-one qualifying bird species encompassing divers, seaducks, gulls, terns, auks, cormorants, shag, fulmar and Manx shearwater. These taxa exhibit markedly different ecologies, foraging strategies, flight behaviour and documented sensitivities to vessel activity. For example, wintering divers and Common Scoter are widely recognised as being comparatively sensitive to vessel disturbance, whereas species such as fulmar and Manx shearwater frequently occur in association with offshore vessels and generally exhibit lower avoidance responses. Similarly, behavioural responses of gulls, terns and auks vary according to season, foraging behaviour, breeding status and the characteristics of the vessel involved.

Accordingly, contemporary offshore ornithological assessment does not treat "seabirds" as a single ecological receptor. Rather, disturbance is evaluated on a species-specific basis, recognising that the magnitude and significance of behavioural responses differ substantially between taxa and according to the nature of the activity. Application of a single operational restriction to all actively feeding birds, irrespective of their differing ecological characteristics and sensitivities, is therefore inconsistent with current ecological understanding of seabird disturbance.

The Special Conservation Interests (SCIs) of the North Irish Sea SPA include species with markedly different ecological requirements and documented sensitivities to vessel activity. For example, divers (*Gavia* spp.) and Common Scoter (*Melanitta nigra*) have consistently been identified as among the more disturbance-sensitive marine bird species, whereas species such as fulmar (*Fulmarus glacialis*), Manx shearwater (*Puffinus puffinus*) and several gull species exhibit comparatively different behavioural responses to vessel activity (Schwemmer *et al.*, 2011; Furness *et al.*, 2013; Bradbury *et al.*, 2014; Hart *et al.*, 2026). Consequently, application of a universal operational restriction to all actively feeding birds, irrespective of the species involved, does not reflect contemporary offshore ornithological assessment practice, whereby impacts are evaluated on a species-specific basis according to receptor sensitivity and the characteristics of the proposed activity.

To illustrate the variability in documented responses of seabirds to vessel disturbance, Table 3-2 summarises the relative sensitivity of each species group based on published literature.

Table 3-2 Published evidence describing the relative behavioural responses of seabirds to vessel disturbance

Qualifying Interest	Published evidence relating to vessel disturbance	Key literature
Red-throated Diver (<i>Gavia stellata</i>)	Consistently identified as one of the more disturbance-sensitive marine bird species; documented avoidance of vessel traffic and shipping lanes.	Schwemmer <i>et al.</i> (2011); Furness <i>et al.</i> (2013); Dierschke <i>et al.</i> (2016)
Great Northern Diver (<i>Gavia immer</i>)	Generally regarded as disturbance-sensitive, with behavioural responses comparable to other diver species.	Furness <i>et al.</i> (2013); Dierschke <i>et al.</i> (2016)
Fulmar (<i>Fulmarus glacialis</i>)	Comparatively low sensitivity to vessel activity; frequently associated with offshore vessels and generally exhibits limited avoidance behaviour.	Furness <i>et al.</i> (2013); Bradbury <i>et al.</i> (2014)
Manx Shearwater (<i>Puffinus puffinus</i>)	Behavioural responses generally differ from divers and sea ducks; lower displacement sensitivity reported in offshore assessments.	Furness <i>et al.</i> (2013); Dierschke <i>et al.</i> (2016)
Cormorant (<i>Phalacrocorax carbo</i>)	Behavioural response varies according to activity and location; generally considered of moderate sensitivity.	Furness <i>et al.</i> (2013)
Shag (<i>Phalacrocorax aristotelis</i>)	Behavioural response varies according to activity and location; generally considered of moderate sensitivity.	Furness <i>et al.</i> (2013)
Common Scoter (<i>Melanitta nigra</i>)	Consistently identified as one of the most disturbance-sensitive sea duck species; longest documented flush distances following vessel approach.	Schwemmer <i>et al.</i> (2011); Bradbury <i>et al.</i> (2014); Dierschke <i>et al.</i> (2016)
Black-headed, Common, Herring, Lesser Black-backed, Great Black-backed and Little Gull	Behavioural responses are variable and species-dependent; many gull species are comparatively tolerant of vessel activity relative to divers and sea ducks.	Furness <i>et al.</i> (2013); Bradbury <i>et al.</i> (2014)

Qualifying Interest	Published evidence relating to vessel disturbance	Key literature
Roseate, Common, Arctic and Little Tern	Behavioural responses depend strongly on breeding status, foraging behaviour and proximity to colonies; sensitivity varies by context.	Furness et al. (2013); Bradbury et al. (2014)
Guillemot, Razorbill and Puffin	Moderate and species-specific responses; sensitivity varies with season and behaviour.	Furness et al. (2013); Dierschke et al. (2016)

Table 3-2 demonstrates that the qualifying interests of the North Irish Sea SPA do not exhibit a uniform response to vessel activity. Rather, published evidence consistently demonstrates substantial interspecific variation in disturbance responses, with sensitivity influenced by species ecology, behaviour and operational characteristics of the vessel. Contemporary offshore ornithological assessments therefore evaluate disturbance on a species-specific basis rather than applying a single operational response to all seabird species (Furness & Wade, 2012; Furness et al., 2013; Bradbury et al., 2014; Dierschke et al., 2016).

3.4 VESSEL BEHAVIOUR AND PREDICTABILITY

Recent research has further demonstrated that seabird responses to maritime activity are influenced not only by species, but also by vessel class, vessel predictability and proximity. Hart et al. (2026) found that behavioural responses varied between vessel classes and concluded that vessel type, predictability of movement and proximity to birds are important determinants of disturbance, highlighting the importance of incorporating vessel characteristics and species-specific responses into marine spatial planning or mitigation. This is particularly relevant to Condition 26.

Condition 26 assumes that repeated alterations to vessel heading will reduce disturbance. However, the available scientific literature indicates that predictability of vessel movements is itself an important determinant of seabird behavioural responses.

Schwemmer et al. (2011) found indications that some species exhibited shorter flush distances in association with regular, channelled shipping traffic, whereas vessels operating with unpredictable movements were considered to have greater disturbance potential due to the reduced opportunity for birds to anticipate or habituate to their movements. More recently, Hart *et al.* (2026) similarly identified vessel predictability, vessel class and proximity as important determinants of seabird responses and recommended that these factors be incorporated into marine spatial planning and mitigation.

Survey vessels undertaking geophysical investigations typically operate along pre-planned acquisition lines at relatively constant speed and heading. Requiring repeated alterations to survey lines introduces a less predictable movement pattern and extends the duration of vessel activity. While the available evidence does not suggest that predictable vessel movements eliminate disturbance, it does indicate that vessel predictability is an important ecological consideration and should therefore be reflected in the design of mitigation measures.

Furthermore, the scientific literature demonstrates that interactions between seabirds and vessels are not uniformly negative. While disturbance and avoidance responses have been documented for

a number of species, other species are known to exhibit neutral or positive behavioural associations with vessels under certain circumstances. For example, fulmars, gulls and some shearwaters are frequently observed in association with offshore vessels, particularly where vessels provide foraging opportunities or where birds have habituated to predictable vessel movements (Furness *et al.*, 2013; Hart *et al.*, 2026). This further illustrates that behavioural responses to vessel activity are species-specific and context-dependent, reinforcing that a universal operational requirement is unlikely to represent the most appropriate ecological mitigation measure.

3.5 PRACTICAL IMPLEMENTATION

In addition to the ecological considerations discussed above, the practical implementation of Condition 26 presents significant challenges. A fundamental principle of effective ecological mitigation is that mitigation measures should be clearly defined, objectively measurable and capable of being implemented consistently in the field (CIEEM, 2018; European Commission, 2021).

In its current form, Condition 26 does not provide sufficient objective criteria to enable consistent application across different survey types, vessel operations or ecological contexts.

A particular concern is the use of the term "*significant clusters*" of birds, which is not defined within the condition. No ecological threshold is provided in relation to flock size, species composition, behaviour or density that would enable an observer to determine when the condition should be triggered. Consequently, implementation is dependent upon subjective judgement by the Marine Mammal Observer (MMO) or Ecological Clerk of Works (ECOW), creating the potential for considerable variation in interpretation between observers, projects and survey campaigns.

This issue is further compounded by the dynamic nature of feeding seabird aggregations. The size, composition and location of feeding flocks frequently change over relatively short temporal and spatial scales as birds respond to the movement of prey. Consequently, determining whether a "significant cluster" exists at any given moment is unlikely to be straightforward, particularly where multiple species exhibiting different ecological sensitivities are present simultaneously, and where the aggregation itself may change before an operational response can reasonably be implemented.

These practical challenges are reinforced by published evidence demonstrating that factors relevant to an observer's assessment—including species, flock size, sea state, vessel behaviour and prior exposure to vessel traffic—can materially influence seabird responses to an approaching vessel (Schwemmer *et al.*, 2011; Hart *et al.*, 2026). Schwemmer *et al.* (2011), for example, found substantial interspecific and intraspecific variation in flush distances and identified flock size as an important predictor of response in several sea duck species. Consequently, the mere presence of birds within 500 m does not provide a consistent indication that disturbance is occurring, nor does it demonstrate that an operational response will necessarily reduce ecological effects.

Implementation is further complicated by the mobile nature of feeding aggregations. The location, size, species composition and behaviour of a flock may change while the observer is identifying the birds, estimating their distance and communicating with the bridge. The condition does not specify how the buffer is to be applied to a moving aggregation, when an aggregation ceases to be

“significant”, or the criteria by which the vessel may resume its original survey line. Nor does it specify whether compliance should be based on the location of the birds at the time of first observation or their continually changing position throughout the manoeuvre.

From the perspective of an MMO or ECoW, the absence of objective decision-making criteria is likely to encourage a precautionary interpretation of the condition to ensure compliance with the Maritime Usage Licence. While such an approach is entirely understandable from a compliance perspective, it would be expected to result in more frequent survey interruptions, repeated alterations to vessel movements and greater variability in implementation between projects, as different observers may reasonably reach different conclusions when presented with the same ecological circumstances.

The condition also presents practical difficulties for certain survey methodologies. Geotechnical investigations, including boreholes and Cone Penetration Tests (CPTs), are undertaken at fixed locations and cannot reasonably alter their survey route once operations have commenced. In these circumstances, compliance with a requirement to alter the survey route may not be operationally achievable. Furthermore, where actively feeding birds remain in close proximity to a stationary survey vessel, this may indicate that the activity is not causing displacement sufficient to interrupt natural foraging behaviour, further illustrating that a universal operational response is unlikely to be appropriate across all survey activities. In such circumstances, requiring an alternative operational response solely on the basis of proximity is difficult to reconcile with the observed behaviour of the birds themselves, which indicates that normal foraging activity is continuing.

Geophysical surveys are intentionally designed to be undertaken along predictable, pre-planned acquisition lines that maximise coverage and data quality and ensure survey efficiency. Condition 26 would require these predictable vessel movements to be replaced by repeated unplanned manoeuvres, despite no published evidence being presented to demonstrate that such alterations provide a superior ecological outcome. Rather, published studies indicate that vessel predictability is itself an important determinant of seabird behavioural responses (Schwemmer *et al.*, 2011; Hart *et al.*, 2026).

Condition 26 may also create unintended interactions with the spatial and procedural controls established for the permitted surveys, in particular geophysical survey activities. Repeated unplanned course alterations to maintain a moving 500 m buffer may displace the vessel from the intended acquisition line, increase the area traversed during the survey and bring the vessel closer to (or outside) the boundary of the approved survey area. Any incomplete survey line may subsequently require repositioning, additional turning movements or repeat acquisition, thereby increasing the overall spatial and temporal footprint of vessel activity without evidence that these additional manoeuvres provide a corresponding ecological benefit.

Condition 26 also provides no guidance where compliance with the bird mitigation requirement may conflict with other aggregations of birds or other environmental mitigation measures. Altering course to avoid one feeding aggregation may result in the vessel approaching another aggregation, change the relationship between the vessel, nearby marine mammals and other ecological receptors, increase the overall area over which vessel movements occur, and require repeated

traverses of the same area to complete the survey. The condition therefore does not explain how the requirement to maintain a 500 m buffer should be reconciled with multiple aggregations of birds, concurrent marine mammal mitigation requirements or the ecological best practice to minimise the temporal impact of survey activities.

Furthermore, repeated alterations in vessel heading and speed may increase the frequency of vessel–wildlife interactions. Although this does not necessarily imply an increased risk of collision, additional manoeuvring has the potential to increase the frequency of vessel–wildlife interactions, including encounters with seabirds, marine mammals and marine reptiles, compared with a survey undertaken along a predictable, pre-planned route. The condition provides no assessment of these potential secondary effects, nor does it establish a hierarchy for resolving situations where compliance with one ecological mitigation measure may conflict with another.

A further practical difficulty relates to the requirement that "appropriate records must be retained by the Holder". While record-keeping is an important component of environmental compliance, Condition 26 does not specify the information that should be recorded or the standard against which compliance will subsequently be assessed. As currently drafted, there is no objective framework by which the MARA can determine whether the condition has been implemented correctly or consistently across different surveys or licence holders.

To enable objective verification, the condition would need to specify, as a minimum, the information required to demonstrate both the ecological trigger for implementation and the operational response undertaken. This would reasonably include the species (or species group) observed, estimated flock size, observed behaviour, geographic position, estimated distance from the vessel, vessel heading and speed at the time of observation, the operational response implemented, the duration of any deviation from the planned survey line, and the point at which the original survey track was resumed.

The absence of a defined recording protocol also creates uncertainty regarding the trigger for implementing the condition. For example, the condition does not specify whether records should demonstrate why a bird aggregation was considered "significant", how the 500 m separation distance was estimated, or how compliance should be assessed where bird aggregations are mobile and continue to move during vessel manoeuvring. Similarly, the condition provides no guidance on how compliance should be demonstrated where repeated deviations, incomplete survey lines or multiple interacting bird aggregations occur during a single survey operation.

From both a regulatory and ecological perspective, mitigation measures should be capable of objective implementation and independent verification. Without clearly defined recording requirements and measurable compliance criteria, Condition 26 cannot be applied or audited consistently, reducing confidence that it will achieve its intended ecological objective.

Accordingly, while the environmental objective of Condition 26 is fully supported, the condition is not considered to provide sufficiently clear, objective or operationally practicable criteria to ensure consistent implementation. In its current form, the condition requires ecological and operational decisions to be made using undefined thresholds, provides no standardised methodology for demonstrating compliance and cannot readily be audited or objectively verified. From both an

ecological and regulatory perspective, mitigation measures should provide certainty for regulators, licence holders and environmental observers alike.

Condition 26, as presently drafted, does not provide the level of certainty, consistency or objective verifiability expected of an ecological mitigation measure incorporated within a Maritime Usage Licence and is therefore not considered to accord with established principles of effective ecological mitigation and environmental assessment. The lack of certainty unfairly exposes Bremore to potential enforcement action, applications for injunctive relief and criminal sanction.

3.6 DURATION OF TEMPORARY DISTURBANCE

The objective of ecological mitigation is not solely to reduce the magnitude of individual disturbance events, but to minimise the overall magnitude of ecological effects through reducing, where practicable, the intensity, spatial extent and duration of disturbance. For temporary offshore activities, this requires consideration not only of the immediate behavioural response of ecological receptors but also of the cumulative period over which those receptors are exposed to vessel activity (CIEEM, 2018; IAIA, 2018; European Commission, 2021).

Published evidence demonstrates that behavioural responses to temporary offshore disturbance are frequently reversible following the cessation of the disturbing activity with recovery rates varying between species and taxa. Schwemmer *et al.* (2011) found that recovery following vessel disturbance differed between sea duck species, with Common Eiders and Long-tailed Ducks often returning to pre-disturbance abundance within one to two hours, whereas Common Scoters exhibited longer recovery periods, highlighting the importance of species-specific responses to disturbance. Similarly, Tougaard *et al.* (2009) documented the return of harbour porpoises following the cessation of pile-driving activities and Carroll *et al.* (2015) concluded that behavioural responses of fish to temporary offshore survey activities are generally short-term where no lasting habitat alteration occurs. Collectively, these studies indicate that temporary disturbance does not necessarily result in prolonged displacement once the source of disturbance has ceased, provided that appropriate mitigation measures are implemented and permanent habitat change does not occur.

This is particularly relevant where implementation of Condition 26 requires survey vessels that would otherwise operate along predictable, pre-planned acquisition lines to undertake repeated unplanned manoeuvres extending the overall duration of survey activities. This is despite published evidence identifying predictability as an important determinant of seabird behavioural responses (Hart *et al.*, 2026).

It follows that, where temporary disturbance cannot reasonably be avoided, ecological mitigation should seek to minimise the cumulative period over which receptors are exposed to the disturbing activity. Measures that unnecessarily prolong offshore survey activities would therefore increase the cumulative duration of temporary disturbance without a corresponding reduction in ecological effect.

In the context of Condition 26, repeated alterations to vessel heading, interruption of planned survey lines and recommencement of acquisition tracks would increase the overall duration of the survey programme. Depending on the operational requirements of the survey, this may result in vessels remaining within, or in proximity to, environmentally sensitive areas for longer than would otherwise be necessary. While the objective of reducing disturbance to actively feeding birds is fully supported, it is not evident that extending the duration of vessel presence through repeated operational interruptions would provide a demonstrable ecological benefit. Conversely, there is a reasonable ecological argument that completing temporary survey activities efficiently, using predictable vessel movements and appropriate mitigation, would minimise the cumulative duration of temporary disturbance more effectively than operational measures that extend vessel presence without clear evidence of a corresponding reduction in ecological impact.

This consideration is directly relevant to the project-specific NIS. The assessment of vessel-related disturbance was undertaken on the basis that survey activities would be temporary, mobile and spatially distributed, with associated behavioural disturbance expected to remain localised to the immediate vicinity of vessel activity and reversible following cessation (22032-REP-006-Bremore Port MUL NIS 20260226, Section 4.5.3.1; 4.5.3.2; 4.5.3.3). The mitigation incorporated within the NIS further requires survey vessels to maintain steady operational movement and to avoid unnecessary manoeuvring that could result in repeated flushing of birds (22032-REP-006-Bremore Port MUL NIS 20260226, Section 4.5.3.4).

Accordingly, implementation of Condition 26 has the potential not only to extend survey duration, but also to increase the spatial footprint of vessel activity through repeated deviations from planned acquisition lines, repositioning and, where necessary, repeat acquisition. Such an increase in the spatial and/or temporal footprint of survey activity would be contrary to the characteristics of the survey activities and mitigation approach upon which the assessment of temporary and localised disturbance within the NIS was based.

The mitigation measures assessed in the NIS (22032-REP-006-Bremore Port MUL NIS 20260226, Section 4.5.3.4) are listed below:

- The MMO onboard the survey vessel(s) will have suitable ornithological competence to identify rafting and actively foraging seabirds.
- Where significant aggregations of seabirds are observed in the vicinity of survey operations, vessel activity will be adapted, where practicable, to reduce close approach and minimise repeated disturbance.
- Survey vessel(s) will maintain steady operational movement and avoid unnecessary manoeuvring that could lead to repeated flushing of birds.
- Where extended stationary operations are required, these will, where practicable, avoid areas where persistent seabird aggregations are present.

These measures ensure that any disturbance to seabirds within the SPA remains short-term and does not alter forage spatial distribution, abundance or availability at site scale.

Following implementation of the mitigation measures identified within the NIS, the assessment concluded that disturbance to breeding, rafting, foraging and wintering seabirds and waterbirds would be reduced to temporary and localised behavioural responses and would not result in adverse effects on the integrity of the relevant SPAs (22032-REP-006-Bremore Port MUL NIS 20260226, Section 4.5.3.5). In this context, a further measure that has the potential to prolong vessel presence or increase the area over which survey activity occurs would not necessarily provide an additional ecological benefit and could, depending on the circumstances of its implementation, be inconsistent with the mitigation approach upon which the NIS conclusion was based.

Offshore mitigation strategies frequently seek to minimise the overall duration of temporary activities where appropriate, recognising that shorter operational periods reduce the time over which ecological receptors may be exposed to disturbance.

From an ecological perspective, where robust mitigation measures are implemented, completing temporary survey activities efficiently and returning the receiving environment to baseline conditions as quickly as practicable would provide greater ecological benefit than operational measures that inadvertently prolong vessel presence without demonstrable evidence of a corresponding reduction in disturbance.

3.7 CONCLUSION

Bremore fully supports the objective of minimising disturbance to seabirds during offshore survey activities and recognises the importance of protecting the qualifying interests of the North Irish Sea SPA. However, ecological mitigation measures should be scientifically justified, evidence-based, proportionate, operationally practicable and capable of objective implementation and verification.

The potential for disturbance to seabirds arising from vessel-based survey activity has already been specifically assessed within the project NIS, which includes mitigation for rafting and foraging seabirds (22032-REP-006-Bremore Port MUL NIS 20260226, Section 4.5.3.4). This mitigation provides for vessel activity to be adapted, where practicable, in the vicinity of significant seabird aggregations, while maintaining steady operational vessel movement and avoiding unnecessary manoeuvring that could result in repeated flushing. The NIS concluded that, with the identified mitigation measures implemented, disturbance would be limited to temporary and localised behavioural responses and would not result in adverse effects on the integrity of the relevant SPAs.

The evidence presented above demonstrates that behavioural responses of seabirds to vessel activity are influenced by numerous interacting ecological and operational factors, including species sensitivity, behavioural state, flock size, vessel class, vessel predictability, vessel speed, proximity and the duration of disturbance. Contemporary offshore ornithological assessment therefore evaluates disturbance using a species-specific, evidence-based approach rather than applying a single operational response to all actively feeding birds.

Furthermore, Condition 26 introduces significant practical and operational uncertainty. The undefined term "*significant clusters*", the absence of objective implementation criteria and recording requirements, the undefined obligations placed on MMOs or ECoWs and the operational

constraints associated with geophysical and geotechnical survey methodologies make consistent implementation and regulatory verification difficult. The condition also has the potential to increase survey duration, the spatial footprint of vessel activity and operational complexity without evidence that these consequences would provide a corresponding ecological benefit. Such an increase in the spatial and/or temporal footprint of survey activity could also be inconsistent with the temporary, mobile and localised nature of the survey activities, and the mitigation approach upon which the conclusions of the project-specific NIS were based.

Accordingly, while the environmental objective of Condition 26 is fully supported, Bremore considers that the condition, as presently drafted, does not accord with established principles of ecological mitigation or contemporary offshore ornithological assessment practice. It is therefore respectfully submitted that Condition 26 is not appropriate for inclusion in its current form and should be amended. The proposed amended wording should be evidence-based, proportionate, operationally practicable and capable of objective implementation and verification, while continuing to provide an appropriate level of protection for qualifying seabird species.

3.8 ILLUSTRATIVE REVISED WORDING FOR CONDITION 26

To assist MARA, we provide the following illustrative wording as an example of how the environmental objective of Condition 26 could be achieved through a measure that is considered to be more closely aligned with current ecological understanding, accepted offshore survey practice and the principles of effective ecological mitigation discussed above.

Bird Mitigation

The Holder shall plan and undertake vessel operations so as to minimise unnecessary disturbance to birds, having regard to prevailing environmental conditions, navigational safety, operational requirements and other environmental mitigation measures.

Where reasonably practicable, survey vessels shall maintain a steady speed and predictable course during survey operations. Deliberate approaches towards large or persistent aggregations of birds shall be avoided where this can reasonably be achieved without compromising survey objectives, navigational safety or other agreed environmental mitigation measures.

The MMO or ECoW shall record observations of bird aggregations considered to warrant avoidance measures, together with any reasonable avoidance measures implemented. These observations shall be included within the post-survey environmental report.

4 REVIEW OF CONDITION 27

Condition 27 states:

“The Holder shall not undertake geotechnical and geophysical surveys as follows:

i) within 1 km of the River Nanny SPA and the Shore SPA during the period October to February annually.

Reason: To ensure protection of the marine environment and protected species.”

Condition 27 has been reviewed with reference to the project-specific environmental assessments, relevant ecological guidance, the conservation objectives of the River Nanny Estuary and Shore SPA, and the published scientific literature relating to disturbance of wintering waterbirds associated with vessel activity. The findings of this review are presented below.

4.1 OVERVIEW

Bremore fully supports the protection of the SCIs of the River Nanny Estuary and Shore SPA during the wintering period. However, we have been unable to identify the ecological evidence or project-specific assessment supporting the application of Condition 27 in its current form.

Condition 27 imposes a blanket prohibition on all geotechnical and geophysical surveys within 1 km of the River Nanny Estuary and Shore SPA during the period October to February annually. The restriction applies irrespective of survey methodology, vessel type, vessel speed, activity duration, frequency of operations, proximity to supporting habitat or the species present at the time of survey.

The project-specific Natura Impact Statement (NIS) (Reference: 22032-REP-006-Bremore Port MUL NIS 20260226) considered the potential effects of airborne noise and vessel presence associated with the proposed offshore geophysical and geotechnical surveys on the SCIs of the River Nanny Estuary and Shore SPA.

The NIS identified that the Maritime Usage Licence Application Area lies approximately 0.14 km (140 m) from the SPA. It recognised that airborne noise from low-speed survey vessels operating offshore of the SPA boundary may be audible to wintering waterbirds using nearshore waters and that vessel presence may result in visual disturbance where birds occur close to the SPA boundary. It also recognised that wintering waterbirds may exhibit behavioural responses to vessel approaches, including alertness, flushing and short-range displacement.

However, the NIS concluded that any such responses would be temporary and confined to the immediate vicinity of vessel approach, taking account of the characteristics of the proposed surveys, including:

- vessels operating at low speeds of approximately 5 knots;
- the temporary and spatially distributed nature of the survey activities;
- the absence of prolonged stationary operations within estuarine waters;

- no entry of survey vessels into SPA channels or within the SPA boundary; and
- the absence of habitat modification.

The NIS further noted that the majority of vessel-based geophysical and geotechnical investigations would occur within the southern proposed development sampling area, spatially separated from the River Nanny Estuary and Shore SPA, which is located in the north-western part of the MUL Application Area. On this basis, the NIS concluded that there was no mechanism for sustained disturbance capable of causing a significant decrease in the range, timing or intensity of use of the SPA. Accordingly, vessel presence and associated airborne noise were not predicted to adversely affect the conservation objective attributes relating to population trend or site use.

In contrast, the disturbance pathway identified as requiring mitigation in relation to the River Nanny Estuary and Shore SPA was human presence associated with shoreline and intertidal survey activities. The mitigation measures proposed in the NIS therefore related specifically to ECoW supervision, avoidance of high-tide roosts and concentrated feeding areas, adaptation of survey progression where bird aggregations were present, and avoidance of prolonged presence in areas used by roosting or feeding birds.

Specifically, the mitigations considered for overwintering birds were:

- An Ecological Clerk of Works (ECoW) with appropriate ornithological expertise will be present during intertidal and shoreline surveys undertaken within the wintering period.
- The ECoW will oversee survey activities to avoid approaches to high-tide roosts and concentrated feeding areas where birds are present.
- Where aggregations of wintering waterbirds are observed in proximity to planned survey activity, survey progression will be adapted to minimise disturbance, where practicable.
- Survey personnel will avoid prolonged presence in areas where birds are actively roosting or feeding.

These measures are intended to prevent repeated disturbance capable of altering the range, timing or intensity of site use within the estuarine SPAs and are the mitigations upon which the outcome of the NIS was predicated.

Condition 27 therefore imposes a seasonal prohibition on offshore geophysical and geotechnical surveys despite the project-specific NIS concluding that vessel presence and associated airborne noise would not adversely affect the relevant conservation objective attributes. Bremore has therefore been unable to identify the ecological evidence or project-specific assessment explaining why a universal 1 km exclusion distance is required in addition to, and contrary to, the conclusions of the project-specific NIS.

The available scientific literature similarly demonstrates that disturbance responses of wintering waterbirds are influenced by multiple interacting ecological and operational factors rather than a single universal separation distance. Table 4-1 summarises the principal determinants of wintering waterbird disturbance identified in the published literature and compares these with the factors explicitly considered within Condition 27.

Table 4-1 Comparison of the principal factors influencing wintering waterbird disturbance identified in the published literature with those explicitly considered by Condition 27

Factor influencing wintering waterbird disturbance	Supported by published literature	Explicitly considered by Condition 26
Species-specific sensitivity	✓	X
Supporting habitat (feeding and roosting areas)	✓	X
Flock size	✓	X
Vessel characteristics (type, speed and behaviour)	✓	X
Distance from disturbance source	✓	✓ (1 km separation only)
Duration and frequency of disturbance	✓	X

Table 4-1 demonstrates that published evidence identifies multiple ecological and operational factors as influencing behavioural responses of wintering waterbirds to vessel activity.

Condition 27 is based primarily on a universal 1 km seasonal exclusion and does not explicitly account for species-specific sensitivity, supporting habitat, vessel characteristics, disturbance duration or the project-specific impact pathway identified within the Natura Impact Statement.

4.2 SPECIES-SPECIFIC ECOLOGY AND SCIENTIFIC BASIS OF THE 1 KM RESTRICTION

The River Nanny Estuary and Shore SPA has been designated for the following SCIs: Oystercatcher (*Haematopus ostralegus*), Ringed Plover (*Charadrius hiaticula*), Golden Plover (*Pluvialis apricaria*), Knot (*Calidris canutus*), Sanderling (*Calidris alba*), Herring Gull (*Larus argentatus*) and Wetlands & Waterbirds [A999].

The bird SCIs are predominantly wintering wader species associated with intertidal mudflats, sandflats and shallow estuarine habitats used for feeding and roosting during the non-breeding season. These species forage principally by probing, pecking and surface gleaning within exposed intertidal sediments and shallow waters. Their distribution is closely related to tidal state, prey availability and the availability of suitable feeding and high-tide roosting habitat.

Herring Gull, the only gull SCI, is predominantly an opportunistic surface-feeding species. It obtains prey through surface scavenging, intertidal foraging and shallow surface dipping rather than prolonged underwater pursuit. The Wetlands & Waterbirds SCI similarly relates to the estuarine and coastal waterbird assemblage supported by the intertidal and shallow estuarine habitats of the SPA.

Published evidence demonstrates that behavioural responses of waterbirds to vessels are not uniform and are influenced by multiple interacting factors, including species identity, body size, flock size, distance from the disturbance source, sea state, season, vessel characteristics and prior exposure to vessel traffic.

Scarton (2018) examined the responses of non-breeding waders to boats and pedestrians in the Venice Lagoon. Flight Initiation Distance varied significantly between species and increased with both body size and flock size. For the six species for which boat and pedestrian disturbance could be compared, boats did not produce significantly greater Flight Initiation Distances than pedestrians. The study proposed species-specific setback distances based on measured Flight Initiation Distance plus two standard deviations, with values ranging from 59 m for Common Snipe to 267 m for Eurasian Curlew. A distance of 270 m was recommended for large mixed-species winter roosts to accommodate the most sensitive species present.

The importance of this study is not that its proposed distances should be applied directly to the River Nanny Estuary and Shore SPA. Rather, it demonstrates that disturbance buffers should be derived transparently from empirical, species-specific behavioural data and should account for factors such as body size, flock size and ecological context. It does not support the application of a universal distance to all species and all activities.

Scarton (2018) reached a similar conclusion in a separate study of breeding waders. Responses varied significantly among species and between disturbance types, and the calculated setback distances ranged from 55 m to 102 m. The author again derived these buffers from measured Flight Initiation Distances using a precautionary mean plus two standard deviations methodology and emphasised that setback distances should be realistic, empirically based and capable of allowing birds to continue normal behaviour.

Jarrett *et al.* (2022) also demonstrated substantial interspecific variation in the responses of non-breeding waterbirds to vessel traffic. The study found that the likelihood and type of response varied between species and was influenced by distance from the vessel, flock size, sea state and time of year. The likelihood of an evasive response generally declined later in the wintering period, which the authors considered consistent with habituation to routine and predictable vessel traffic.

Although the Jarrett *et al.* study primarily examined divers, grebes and diving waterbirds rather than the wader SCIs of the River Nanny Estuary and Shore SPA, it reinforces the broader ecological principle that behavioural responses to vessel activity are species-specific and influenced by multiple ecological and operational variables. The authors also cautioned that short-term behavioural responses cannot, by themselves, be used to predict long-term demographic effects and should be interpreted alongside population status, prey availability, habitat availability and the energetic consequences of disturbance.

Taken together, the available scientific evidence supports a species-specific, activity-specific and evidence-based approach to disturbance assessment. Setback distances should be derived from the ecology and measured behavioural responses of the receptors concerned, together with the characteristics of the disturbance source and the availability of supporting habitat.

Condition 27 does not reflect this approach. It applies a universal 1 km seasonal exclusion to all geophysical and geotechnical surveys without distinguishing between individual SCIs, species sensitivity, flock size, survey methodology, vessel characteristics, activity duration or the location of feeding and roosting habitat. This is inconsistent with the conclusions of the project-specific NIS, which determined that vessel presence and associated airborne noise from the proposed offshore

surveys would not result in sustained disturbance capable of adversely affecting the conservation objective attributes of the River Nanny Estuary and Shore SPA.

In the absence of an identified disturbance pathway, we have been unable to identify the ecological basis for the application of a universal 1 km seasonal exclusion. Condition 27 is therefore not necessary or appropriate.

4.3 CONCLUSION

Bremore fully supports the objective of protecting the SCIs of the River Nanny Estuary and Shore SPA during the wintering period. However, for ecological mitigation to be effective, it should be evidence-based, proportionate, capable of implementation and clearly linked to an identified impact pathway.

The project-specific NIS, which was updated following completion of the AA Screening exercise undertaken by MARA, specifically assessed the potential effects of airborne noise and vessel presence associated with the proposed offshore geophysical and geotechnical surveys on the SCIs of the River Nanny Estuary and Shore SPA. While recognising that temporary behavioural responses such as increased vigilance, flushing and short-range displacement may occur in response to vessel approaches, the assessment concluded that these responses would be temporary, localised and reversible. Having considered the characteristics of the proposed surveys, including low vessel speeds, the temporary and spatially distributed nature of the activities, the absence of prolonged stationary operations within estuarine waters, the exclusion of survey vessels from the SPA and the absence of habitat modification, the NIS concluded that there was no mechanism by which vessel presence or potential associated airborne noise could result in sustained disturbance capable of causing a significant decrease in the range, timing or intensity of use of the SPA by its SCIs. Consequently, vessel presence and associated airborne noise were not predicted to adversely affect the relevant conservation objective attributes.

The wider scientific literature similarly demonstrates that behavioural responses of waterbirds to vessel activity are influenced by multiple interacting ecological and operational factors, including species identity, body size, flock size, vessel characteristics, distance, season and environmental conditions. Published studies consistently advocate a species-specific and evidence-based approach to disturbance assessment, with setback distances derived from measured behavioural responses and the ecology of the receptors concerned rather than through the application of universal exclusion distances.

Condition 27, however, applies a blanket 1 km seasonal exclusion to all geophysical and geotechnical surveys without distinguishing between the ecology of the SCIs, the characteristics of the proposed activities or the disturbance pathways identified within the NIS. Bremore has been unable to identify either a project-specific assessment or published scientific evidence demonstrating a credible disturbance pathway arising from the proposed offshore survey activities that would warrant the application of a universal 1 km exclusion distance.

Accordingly, while the environmental objective of Condition 27 is fully supported, we consider that the condition is unnecessary and inappropriate in its current form and ask that it be removed.

5 OVERALL CONCLUSION

This submission has considered the scientific basis, ecological rationale and practical implementation of Conditions 26 and 27 contained within the MARA Minded to Grant decision for the Bremore Port Maritime Usage Licence.

Bremore welcomes MARA's intention to grant the MUL and fully supports the environmental objectives underlying the protection of birds during offshore survey activities. However, ecological mitigation should be proportionate to the identified impact pathway, supported by the best available scientific evidence and capable of consistent and objective implementation.

In relation to Condition 26, the submission identified that the condition applies a universal operational response to seabird aggregations without defining the ecological thresholds by which the condition should be triggered or providing an objective framework for implementation or verification. The project-specific NIS specifically considered the potential for disturbance to rafting and foraging seabirds from vessel-based survey activity and incorporates mitigation intended to minimise close approach and repeated disturbance while maintaining steady operational vessel movement. The NIS concluded that, with these measures implemented, disturbance would remain temporary and localised and would not result in adverse effects on the integrity of the relevant SPAs. Condition 26 also has the potential to increase the spatial and/or temporal footprint of survey activity through additional vessel manoeuvring, interruption of planned survey lines and repeat acquisition.

In relation to Condition 27, the condition introduces a universal seasonal exclusion zone that is not readily reconciled with the conclusions of the project-specific Natura Impact Statement, which concluded that vessel presence and associated airborne noise from the proposed surveys would not adversely affect the conservation objective attributes of the River Nanny Estuary and Shore SPA.

Published scientific literature consistently demonstrates that behavioural responses of birds to vessel activity are species-specific and influenced by multiple interacting ecological and operational factors. The review did not identify evidence supporting the application of universal separation distances or operational restrictions irrespective of species ecology, vessel characteristics or the nature of the proposed activity.

Accordingly, Bremore respectfully requests that Condition 26 be amended in accordance with the evidence and considerations presented in this submission, with illustrative revised wording provided in Section 3.8. In relation to Condition 27, we respectfully request that the condition be removed, as no project-specific or scientific evidential basis has been identified for the application of the proposed universal 1 km seasonal exclusion.

Bremore considers that these amendments would retain appropriate protection for birds while ensuring that the conditions attached to the MUL are proportionate, evidence-based, operationally practicable and consistent with the project-specific environmental assessment.

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