14.0 Marine Mammals

Introduction

14.1 This chapter of the Environmental Impact Assessment Report (EIAR) assesses the potential effects of the proposed development on marine mammals.

14.2 The chapter describes the methods used to assess the baseline conditions currently existing at the site and surrounding area, the potential direct and indirect impacts arising from clearance, dredging, construction and operation of the proposed development, the mitigation measures required to prevent, reduce, or offset the impacts, the residual impacts and the potential for cumulative effects.

14.3 A full description of the project is set out in **Chapter 2** of the EIAR.

14.4 This chapter is accompanied by the following appendices, found in **Volume 2** of this EIAR:

- Marine Mammal Survey Report (March 2025) – **Appendix 14.1**
- Preliminary Ecological Appraisal (PEA) Report (March 2025) – **Appendix 15.1**;

Competency Statement

14.5 This chapter has been prepared by John Thompson of EcoNorth. John holds a degree in Environmental Science and a master's degree in Ecological assessment. John is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). John has a background in managing coastal designated sites and nature reserves / protected areas and has undertaken an extensive range of ecological assessment work on ports, harbours and other coastal infrastructure and operations throughout England, Scotland and Ireland. John is a trained marine mammal observer and has undertaken marine mammal surveys in the North Sea, Irish Sea, Atlantic coast of Ireland and English Channel as well as a range of inshore locations within harbours and estuaries. John has prepared and provided input to Environmental Impact Assessment (EIA) for projects where marine mammals have been identified as a receptor and has undertaken construction stage monitoring for inshore or coastal works where seals are a sensitive receptor.

Legislation, Guidance and Policy

Introduction

14.6 This section sets out the legislation and policy which has defined the scope of the assessment.

National Planning Policy Context

National Planning Framework 4 (NPF4)

14.7 Overarching planning policies for Scotland are contained within the 'National Planning Framework 4' (NPF4)[1]. The NPF4 aims for its strategy and policies "*to support development that helps to secure positive effects for biodiversity. The nature crisis, together with the global climate emergency, underpinned the spatial strategy as a whole. The action areas include proposals which protect and enhance the natural environment".*

14.8 Policy 1 of NPF4 gives significant weight to the nature crisis to ensure that it is recognised as a priority in all plans and decisions stating that "*When considering all development proposals significant weight will be given to the global climate and nature crises".*

14.9 Policy 4 looks to protect and enhance natural heritage.

14.10 Policy 3's intent is "to protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks". The policy outcome aims are that "*biodiversity is enhanced and better connected including through strengthened nature networks and nature-based solutions".*

Local Policy and Guidance

Dumfries and Galloway Council Local Development Plan 2 (LDP2)

14.11 The Dumfries and Galloway Local Development Plan 2 (adopted October 2019)[2] sets out a range of policies in relation to Nature Conservation relevant to the proposed development at Stranraer.

14.12 Policies NE 4, NE 5 and NE6 relate to the protection of statutory designated sites and protected species (which includes marine mammals). The statutory duty placed on the Council by the Nature Conservation (Scotland) Act 2004[3] to further the conservation of biodiversity is not restricted to sites, habitats or species that are subject to statutory protection. Policy NE 9 in the local development plan relates to the developed and undeveloped coast which prioritises development within the existing developed coast and seeks to maintain or improve the integrity and quality of the coastal environment.

[1] Scottish Government: National Planning Framework 4: February 2023
[2] Adopted Local Development Plan 2
[3] Nature Conservation (Scotland) Act 2004

14.13 The Dumfries and Galloway Biodiversity Action Plan BAP[4] includes a range of habitats and species which are relevant to the site and proposed development. These include sea and seashore habitats, coastal habitats and a range of marine mammal species with 2 species of seal recorded and up to 10 species of cetacean also recorded in waters surrounding Dumfries and Galloway.

Legislation

14.14 A summary of relevant wildlife legislation is included in **Table 14-1** below. Specific consideration of legislation related to statutory designated sites is included in subsequent text.

Table 14-1 Summary of Relevant Legislation

Legislation	Key Features
The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[5]	The Habitat Regulations transpose *Council Directive 79/409/EEC on the Protection of Wild Birds* (the EC Birds Directive 1979) and *Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna* (the EC Habitats Directive 1992) into UK law. The Birds Directive was amended in 2009, becoming Directive 2009/147/EC. The Habitat Regulations make it an offence (with certain exceptions) to deliberately capture, disturb, kill or trade in those animal species listed in Schedule 2, or to pick, cut, uproot, collect, destroy or trade in those plant species listed in Schedule 4. The EC Birds Directive requires member states to establish and monitor Special Protection Areas (SPAs) for all rare or vulnerable species included in Annex I, as well as for all regularly occurring migratory species, with key focus on wetlands of international importance. Annex I and II of the Habitats Directive respectively list those habitats and species for which a similar network of sites – Special Areas of Conservation (SACs) – must be established and monitored. Collectively, SPAs and SACs form a network of pan-European protected areas which are referred to as 'Natura 2000' sites or National Site Network Sites.
The Convention on the Conservation of European Wildlife and Natural Habitats 1979 (Bern Convention)[6]	The Bern Convention was adopted in 1979 and ratified by the UK Government in 1982. The principal aims of the Convention are to ensure the conservation and protection of all wild plant and animal species and their natural habitats (listed in Appendices I and II), to increase cooperation between contracting parties, and to afford special protection to the most vulnerable or threatened species (including migratory species). Members of the European Community meet their obligations via the Birds Directive and the Habitats Directive. These are transposed into UK law by the Wildlife and Countryside Act 1981 (as amended), Nature Conservation (Scotland) Act 2004 (as amended), Wildlife (Northern Ireland) Order 1985, and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985.

[4] Dumfries and Galloway Local Biodiversity Action Plan - Part 3 - SWSEIC
[5] The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[6] Bern Convention | JNCC - Adviser to Government on Nature Conservation

Legislation	Key Features
The Wildlife and Countryside Act 1981 (as amended)[7]	The Wildlife and Countryside Act consolidates and amends existing national legislation to implement the requirements of the Bern Convention and the Birds Directive throughout Great Britain. The Act is the primary UK mechanism for the designation of statutory ecological sites - Sites of Special Scientific Interest (SSSIs) - and the protection of individual species listed under Schedules 1, 2, 5, 6 and 8 of the Act, each of which is subject to varying levels of protection. Schedule 9 of the Act also lists those plant species which it is an offence to plant or otherwise cause to grow in the wild, while Schedule 14 prevents the release into the wild or sale of certain plant and animal species which may cause ecological, environmental or socio-economic harm.
Nature Conservation Scotland Act (2004)[8]	The Nature Conservation Scotland Act places a duty on public bodies to consider and conserve biodiversity through the exercise of their functions and includes a range of measures to strengthen the protection of both habitats and wildlife. Under the Act a series of priority habitats and species are identified under the Scottish Biodiversity list (SBL). The Act makes provision in respect of biodiversity, pesticides harmful to wildlife, protection of birds and invasive non-native species.
The Wild Mammals (Protection) Act 1996[9]	This Act provides protection for wild mammals from acts of cruelty. An offence is committed if any person mutilates, kicks, beats, nails, or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.
Conservation of Seals Act 1970[10]	This Act provide for the protection and conservation of seals in England and Wales and Scotland and in the adjacent territorial waters. Under the Act it is an offence to intentionally Kill, Injure or take a seal.

14.15 In Scotland, European Sites are defined as candidate Special Areas of Conservation (cSACs), designated Special Areas of Conservation (SACs) and classified Special Protection Areas (SPAs).

14.16 The Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "1994 Habitats Regulations") apply to European Sites. Where reserved matters (within the meaning of Schedule 5 of the Scotland Act 1998)1 are concerned, certain provisions of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (the "2019 Regulations") apply instead. Both sets of regulations require an equivalent process in relation to the assessment of plans and projects with the potential to affect European sites.

14.17 "The Regulations require that, "*where an authority concludes that a development proposal unconnected with the nature conservation management of a Natura 2000 site is likely to have a significant effect on*

[7] Wildlife and Countryside Act 1981
[8] Nature Conservation (Scotland) Act 2004
[9] Wild Mammals (Protection) Act 1996
[10] Conservation of Seals Act 1970

that site, it must undertake an appropriate assessment of the implications for the conservation interests for which the area has been designated."

14.18 Under regulation 48 of the 1994 Habitats Regulations (or regulation 63 of the 2019 Regulations in respect of reserved matters), this means that the competent authority has a duty to:

- determine whether the proposal is directly connected with or necessary to site management for conservation; and, if not,
- determine whether the proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; and, if so, then,
- make an appropriate assessment of the implications (of the proposal) for the site in view of that site's conservation objectives.

14.19 This consideration is commonly known as Habitats Regulations Appraisal (HRA) and extends where appropriate to plans or projects outwith the boundary of the site in order to determine their implications for the interests protected within the site.

14.20 If significant effects are unknown or likely, the competent authority can only agree to the proposal under regulation 48 (or regulation 63 of the 2019 Regulations in respect of reserved matters) after having ascertained by means of the appropriate assessment that it will not adversely affect the integrity of the site and having first consulted and had regard to any representations made by NatureScot.

14.21 If it is not possible to ascertain that the proposal will not adversely affect the integrity of the site and there are no alternative solutions, the proposal can only be allowed to proceed if there are imperative reasons of overriding public interest for doing so (and having obtained any necessary compensatory measures).

14.22 Where a priority habitat is affected, reasons of overriding public interest can relate only to human health, public safety, beneficial consequences of primary importance for the environment or other reasons subject to the opinion of the Scottish Ministers. Where no priority habitat is affected, imperative reasons of overriding public interest can include those of a social or economic nature.

14.23 If a competent authority proposes to approve a plan or project on the grounds of imperative reasons of overriding public interest, then regulation 49 of the Habitats Regulations states that the competent authority must inform Scottish Ministers (or the Secretary of State) and must not issue approval for a period of 21 days after receipt by Scottish Ministers (or the Secretary of State) unless notified otherwise.

14.24 If proposals are allowed to proceed in accordance with regulation 494 then it should be noted that regulation 536 requires that Scottish Ministers (or the Secretary of State) shall secure that any necessary compensatory measures are taken to ensure that the overall coherence of the UK site network is protected.

14.25 Sites of Special Scientific (SSSI) Interest are protected through the provisions of the Wildlife and Countryside Act (1981) as amended in Scotland.

Guidance

14.26 This chapter and notably mitigation considerations within the chapter relating to Marine Mammals takes into account Joint Nature Conservation Committee guidance relating to avoiding or minimising the risk of injury to marine mammals from piling noise[11].

[11] Joint Nature Conservation Committee (2010). Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise.

Methodology Used For Assessment

Introduction

14.27 The Ecological Impact Assessment (EcIA) of the proposed development upon identified ecological features has been undertaken with reference to the Ecological Impact Assessment Guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2024[12]). The EcIA seeks to:

- Establish a robust and accurate ecological baseline for the application site;
- Identify and evaluate the nature conservation/biodiversity interest present;
- Identify any potential effects arising from the proposed development (construction and operational stages);
- Establish the character and significance of those identified effects;
- Identify mitigation measures to address any significant effects;
- Assess any residual effects and the need for any compensation; and,
- Assess cumulative effects from other surrounding developments.

14.28 This section details the responses received to the EIA scoping opinion request which included an EcIA for the original scheme proposed at that time.

Consultation

14.29 An EIA Scoping Opinion (February 2023)[13] was received from Marine Scotland, which helped inform the scope of the EIA process, as discussed in this chapter. The Scoping Opinion stated that *"The Scottish Ministers advise that more detail on the distribution and abundance of marine mammals in the area of the Proposed Works must be presented in the desk-based study. Additionally, the Scottish Ministers advise that if piling is to be undertaken during the Proposed Works then noise assessment and a quantitative analysis of the species and number of individuals that could be affected must be undertaken. This must be presented in the EIA Report and be in line with NatureScot advice".*

14.30 NatureScot also provided the following consultation feedback in a letter dated November 2020 "*On the marina proposal more generally, there's a couple of things you will need to consider from a marine perspective.*

[12] CIEEM (2024) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.

[13] Marine Scotland: Scoping Opinion adopted by the Scottish Ministers under Part 4 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 Dumfries and Galloway Council Stranraer Marina Development: February 2023

Will there be any activities that are likely to produce underwater noise, such as piling (e.g. if they are installing sheet piles, or monopiles for the pontoons)? If so, they will need to consider marine mammals (seals and cetaceans) in the area".

Study Area

14.31 The study area encompasses the proposed development site plus an additional minimum buffer zone of 500m from the boundary which was used for the up-to-date desk-based assessment and where appropriate field surveys to identify any legally protected or notable sites, habitats or species which could be affected by the proposed development. This site and a 2km desk study buffer illustrated in Figure 1 presented within the Preliminary Ecological Appraisal and Marine Mammal Survey Report (**Appendix 15.1 and 14.1** - **Volume 2**).

14.32 Given the scale of the works and high mobility of species under consideration data from outside the 500m immediate zone of influence is considered within the assessment where appropriate. For example, a review of available information on marine mammal distribution has been undertaken using a range of data sources. In addition, statutory designated sites where marine mammals are a qualifying interest have been identified to a range of 30km from the red line planning boundary. These are presented on **Drawing 14.1, Volume 3**.

Baseline conditions

14.33 Baseline conditions for marine mammals have been collected through a combination of desk-based research and field surveys.

Desk Study

14.34 Contextual information was gathered as part of a desk study undertaken prior to the start of field surveys. Such information can identify protected or notable species which may occur on the proposed development site or in the local area, as well as identifying statutory and non-statutory ecological sites which may have the potential to be affected by the proposals. The location of statutory and non-statutory nature conservation sites designated due to the presence of marine mammals, which lie within 30km of the survey site were obtained from the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk), marine mammal records and information on Local Wildlife Sites within 2km were obtained from Southwest Scotland Environmental Information Centre (SWSEIC).

14.35 Datasets from the University of St Andrews were reviewed, which used aerial photography to calculate the at-sea population density of grey seal *Halichoerus grypus* and harbour seal *Phoca vitulina*. The data was analysed in QGIS and displayed in a graduated symbology to best display the changes in population density.

14.36 A second dataset was also analysed from the University of St Andrews, the SCANS-III[14] aerial and shipboard surveys. This data was also input and analysed in a graduated symbology within QGIS. The dataset displayed the density surface modelling for: harbour porpoise *Phocoena phocoena*, bottlenose dolphin *Tursiops truncatus*, white-beaked dolphin *Lagenorhynchus albirostris*, common dolphin *Delphinus delphis*, striped dolphin *Stenella coeruleoalba*, long-finned pilot whale *Globicephala melas*, all beaked whale species combined *Ziphiidae* sp., minke whale *Balaenoptera acutorostrata*, and fin whale *Balaenoptera physalus*.

14.37 MarLIN[15] was used to review known distribution data, accessing their marine mammal section within https://www.marlin.ac.uk/species/rank/1821/Chordata, and utilising their interactive map to identify marine mammals which had distributions overlapping Loch Ryan.

14.38 It should be noted that an absence of records is likely to reflect an absence of survey data and cannot be taken as confirmation that a particular species is not present in the site or surrounding area.

Field Survey

14.39 A total of >50 hours of observations of the marine environment including waters of the marina and those directly surrounding the existing marina were undertaken in combination with surveys for both overwintering and summer / breeding birds. Surveys were undertaken between November 2023 through to October 2024. With data recorded in 10 months across a 12-month period. The survey dates and times are presented in the Marine Mammal Survey Report (**Appendix 14.1**). Observations are included as a minimum at high and low tide periods in May – August and February, March and October additional observations were included through mid-tide periods.

Impact Assessment Methodology

14.40 Although development proposals may result in multiple potential impacts on an important ecological feature, the CIEEM approach requires that only those that are likely to occur and have significant impacts need be assessed, although a precautionary approach to scoping potential impacts is recommended. The following characteristics are used to describe impacts (not all may be relevant in all cases):

- Positive or negative;
- Extent;
- Magnitude;
- Duration;

[14] • Carter, M. and Russell, DJF. (2020). At-sea density maps for grey and harbour seals in the British Isles. University of St Andrews Research Portal. Available at: https://research-portal.st-andrews.ac.uk/en/datasets/at-sea-density-maps-for-grey-and-harbour-seals-in-the-british-isl [Accessed 15 Apr. 2025].

[15] https://www.marlin.ac.uk/species/rank/1821/Chordata

- Timing;
- Frequency; and
- Reversibility.

Significance Criteria

14.41 Once an impact has been described it is necessary to determine if the effect is ‘significant’. In the context of CIEEM EcIA guidance, a significant effect is one that either supports or undermines biodiversity conservation objectives for ‘important ecological features’. This can include impacts on the structure and function of sites and habitats or the conservation status of habitats and species (i.e. does the impact alter the extent, distribution or abundance of the feature)? The decision on significance is made irrespective of the geographical scale of importance of the feature; even if an effect is found not to be significant at the level at which the feature has been valued, it may be significant at a more local level. A significant negative effect is not necessarily one that would make the proposals unacceptable.

Construction Phase (Temporary)

14.42 Impacts considered within this assessment at construction stage will include the following:

- Temporary noise and vibration and the effect of such noise or vibration on marine mammals including underwater noise.
- Temporary visual disturbance as a result of people and plant being present during construction.
- Construction stage pollution risks, including chemical or hydrocarbon spills or leakages or mobilisation of sediment.
- Any temporary marine habitat loss considered necessary to construct the proposals as a result of the requirement for structures located in the marine environment

Operational Phase (Permanent)

14.43 Impacts at operational stage for the purposes of this assessment will relate to:

- Assessing the effects of permanent habitat loss as a result of the proposals; and
- The potential effect of increased vessel traffic on species which use the marina and the wider approach to the marina.
- Operational stage lighting and potential effects on marine mammal use of inshore waters

Sensitivity of Receptor

14.44 The CIEEM EcIA guidance (2024) confirms that detailed assessment of ecological features that are ‘widespread, unthreatened and resilient to project impacts’ is not necessary. It is therefore necessary to determine which ecological features are sufficiently important (and potentially affected by the Scheme). Decisions on relative importance will be outlined in the assessment and consider quality, extent, rarity (including local rarity) and threats or declines of a feature. Relevant statutory and non-statutory designations, legislation and policies will be taken account of, although not all populations of legally protected species show the same rarity, so contextual information is vital. Importance could also relate to the supportive function of the feature (i.e. providing a buffer, connections or opportunities for expansion / climate change resilience of a neighbouring feature). Examples of defining receptor sensitivity are included in **Table 14.2** below.

Table 14.2 Sensitivity of Ecological Receptors

Value/ Sensitivity	Examples
International - High	• An internationally designated site or candidate site (SPA, proposed SPA (pSPA), SAC, possible SAC, Ramsar site) or an area which meets the designation criteria for such sites. • Internationally significant and viable areas of a habitat type listed in Annex 1 of the Habitats Directive, or smaller areas of such habitat, which are essential to maintain the viability of a larger whole. • Any regularly occurring, globally threatened species. • A regularly occurring population of an internationally important species, which is threatened or rare in the UK, of uncertain conservation status • A regularly occurring, nationally significant population/number of any internationally important species.
National - High	• A nationally designated site (e.g. SSSI, National Nature Reserve (NNR)) or a discrete area which meets the published selection criteria for national designation (e.g. SSSI selection guidelines) irrespective of whether or not it has yet been notified. • A viable area of a UK BAP priority habitat, or smaller areas of such habitat which are essential to maintain the viability of a larger whole. • A regularly occurring significant number/population of a nationally important species e.g. listed on the Wildlife and Countryside Act 1981 (as amended). • A regularly occurring population of a nationally important species that is threatened or rare in the county or region. • A feature identified as being of critical importance in the UK BAP.
Regional/County - Medium	• Viable areas of key habitat identified in the Regional or County BAP or smaller areas of such a habitat, which are essential to maintain the viability of the larger whole. • Regional/county significant and viable areas of key habitat identified as being of regional value in the appropriate English Nature (now Natural England) Natural Area. • A regularly occurring significant population/number of any important species important at a regional/county level. • Any regularly occurring, locally significant population of a species which is listed in a Regional/County Red Data Book or BAP on account of its regional rarity or localisation.

Value/ Sensitivity	Examples
	• Sites of conservation importance that exceed the district selection criteria but that fall short of SSSI selection guidelines.
City/District/Borough - Medium	• Areas of habitat identified in a District/City/Borough BAP or in the relevant Natural Area profile. • Sites that the designating authority has determined meet the published ecological selection criteria for designation, including Local Nature Reserves selected on District/City/Borough ecological criteria. • Sites/features that are scarce within the District/City/Borough or which appreciably enrich the District/City/Borough habitat resource. • A diverse and/or ecologically valuable hedgerow network. • A population of a species that is listed in a District/City/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation. • A regularly occurring, locally significant number of a District/City/Borough important species during key phases of its life cycle.
Local - Low	• Areas identified in a Local BAP or the relevant natural area profile. • Sites/features which are scarce in the locality or which are considered to appreciably enrich the habitat resource within the local context, e.g. species-rich hedgerows. • Local Nature Reserves selected on Parish/Local ecological criteria. • Significant numbers/population of a locally important species e.g. one which is listed on the Local BAP. • Any species, populations or habitats of local importance.
Low	• Habitats of moderate to low diversity which support a range of locally and nationally common species, the loss of which can be easily mitigated.

Magnitude of Impact

14.45 Impact descriptors are identified as High, Medium, Low or Negligible, following the above impact characterisation approach. Descriptors of impact magnitude are included in Table 14.3 below.

Table 14.3 Impact Characterisation

Impact Descriptor	Impact Characterisation
High	An impact resulting in a permanent effect on the distribution and/ or abundance of a habitat, species assemblage/ community or population, in such a way as to alter the integrity of the feature and its conservation status. If adverse, this type of effect would reduce the integrity of the feature and its conservation status.

Impact Descriptor	Impact Characterisation
	If beneficial, it would result in an improvement to the conservation status of the feature.
Medium	An impact resulting in a long-term but reversible effect on the distribution and/ or abundance of a habitat, species assemblage/ community or population. If adverse, this type of effect would have neutral long-term implications for the integrity of the feature or its conservation status. If beneficial, it would not alter the long-term conservation status of the feature.
Low	An impact resulting in a short-term reversible effect on the distribution and/or abundance of a habitat, species assemblage/ community or population.
Negligible	No discernible impact on the distribution and/or abundance of a habitat, species assemblage/ community or population.

Significance of Effect

14.46 The overall significance of effects, detailed in **Table 14.4**, was determined taking into account sensitivity and magnitude, as set out below.

Table 14.4: EIA Matrix - Assigning significance of Effect

Sensitivity	Magnitude of Impact			
	High	**Medium**	**Low**	**Negligible**
High	Substantial	Moderate/ Substantial	Slight/ Moderate	Slight
Medium	Moderate/ Substantial	Moderate	Slight	Negligible/ Slight
Low	Moderate	Slight/ Moderate	Negligible/ Slight	Negligible

Limitations to Assessment

14.47 The assessment is based on survey data collected at a point in time in relation to a group of highly mobile ecological receptors (marine mammals). While survey effort has been applied, to capture all marine mammal activity in the vicinity of works would potentially require exhaustive survey effort and so the surveys completed represent a sample of activity. Similarly while observations were undertaken across the full survey area, not all areas were visible at one time due to the presence of the existing ferry terminal and marina infrastructure.

Baseline Conditions

Designated Sites

14.48 A single designated site was identified within 2km of the application site boundary, as shown on **Drawing 15.1 Volume 3** and as described within the Preliminary Ecological Appraisal (PEA) (**Appendix 15.1**)

Table 14.52 Designated Sites Within 2km of Site

Designated Site	Distance & Direction from Site	Reasons for Designation
Loch Ryan Important Bird Area (IBA)	Overlaps Site	A large, shallow sea loch at the western end of Dumfries and Galloway, which supports the only commercial native oyster beds in Scotland. The IBA supports important numbers of wintering waterbirds. See: https://datazone.birdlife.org/site/factsheet/loch-ryan-iba-united-kingdom

14.49 Give the marine nature of the site, a search for statutory designated sites related to marine mammals was extended to a minimum 30km buffer. Data collected from MAGIC shows that there are two Special Areas of Conservation (Marine Components GB) within 30km of the site. Of these only the North Channel SAC is designated for marine mammals.

14.50 The North Channel (Northern Ireland) is located approx. 25km west of the site, and approx. 50km if measured over water. The North Channel has been designated SAC for its important population of Harbour Porpoise *Phocoena phocoena*. While the search area for marine species can often extend to several hundred kilometres due to the extensive foraging ranges of some species, the search was contained to 30 km on a proportional basis given the very coastal nature of the proposed development.

14.51 The location of the North Channel SAC is illustrated on **Drawing 14.1 Volume 3**.

Species Records

14.52 Habitats Data collected from SWSEIC shows that in the last 10 years, no marine mammals have been officially reported within 2km of the site, however this seems more down to a lack of reporting than due to a lack of presence.

14.53 Extending the scope of the data search beyond the last 10 years, the most recent recording of a marine mammal was a common dolphin in 2014. Beyond that, records of bottle-nosed dolphin, common porpoise, grey seal, and harbour seal have all been recorded within 2km of the site. Further details are provided in **Appendix 14.1** Marine Mammal Report.

14.54 Data collected from the University of St Andrews suggests that, for the 10km^2 around the site, about 0.066% of the British Isles' at-sea grey seal population would be present – based upon the mean value of the dataset. However, the upper confidence limit of the dataset suggests a much larger percentage, at 6-8%. This large variation between the mean and upper confidence limit for the area would suggest a high level of uncertainty of the grey seal population density in the area.

14.55 The same dataset also displays the at-sea population density of harbour seals. The variation between the mean and upper 95% confidence limit is small, modelled as being 0.11 % and 0.47% of the British Isles' at-sea harbour seal population. This would suggest a much lower level of uncertainty than the data collected for grey seal, data on seal distribution has been sourced form data sets available from the University of St Andrews[16].

14.56 Data collected from MarLIN[17] shows that the distribution of short-beaked common dolphin, Risso's dolphin, Atlantic white-sided dolphin, white-beaked dolphin, harbour porpoise, common bottlenose dolphin, Northern bottlenose whale, minke whale, pygmy sperm whale, and grey seal all encompass Loch Ryan, and therefore potentially the site. While the desk study was focussed on Loch Ryan and the red line boundary of the application site the species assemblage discussed above are also highly likely to overlap with areas identified for disposal at sea of dredged material located to the west of the Mull of Galloway at Beaufort's Dyke. Given the more extensive water depth present at this location, which ranges between 200 – 312m, this species assemblage as well as a broader range of marine mammals often associated with deeper water are considered potentially present.

14.57 The data collected from SCANS-III aerial and shipboard surveys was of too low resolution to effectively inform this EIA, as to be effective it is viewed at a national scale. It can however be used to identify which species are recorded around south western Scotland as a whole, if not specifically within Loch Ryan.

14.58 In summary, although the records provided by SWSEIC are limited by age and likely underreporting, it does allow us to confirm the suitability and presence of common dolphin, bottle-nosed dolphin, common/ harbour porpoise and harbour seal historically, and grey seal more recently.

14.59 The other datasets reviewed are of too low resolution to be useful in definitely confirming the presence on or around the site, however they do provide evidence to support the ecological suitability of the site for the above species.

Habitat Assessment

14.60 Habitats within the scheme boundary were considered to be of limited quality for marine mammals with much of the existing marina comprising relatively limited water depth and / or is occupied by marina structures. The enclosed nature of the marina means that it is unlikely to be attractive to most marine mammals with the exception of seals and possibly Harbour porpoise. Loch Ryan provides a large, sheltered bay though is relatively shallow especially in the southern half close to the marina which is likely to make it less attractive to a range of larger cetaceans. The southern part of the Loch (based on information available on navigation charts) is typically <5m though a deeper channel is present along

[16] https://research-portal.st-andrews.ac.uk/en/datasets/at-sea-density-maps-for-grey-and-harbour-seals-in-the-british-isl

[17] Home - MarLIN - The Marine Life Information Network

the route formerly used by ferries and notably at the entrance to the marina entrance, admiralty charts displaying water depth at the Marina and its approaches are presented in **Chapter 8** Navigation and Safety. A notably shallow section of the Loch is present where a feature referred to as 'the spit' protrudes in a South Easterly direction across parts of the Loch. The presence of active foraging by bird species such as Gannet during the summer months and other fish-eating species such as grebes, Shag and Cormorant throughout the year (as presented in **Chapter 15** and **Appendix 15.2)** indicate that the whole Loch is likely to support prey items suitable for a range of marine mammals.

14.61 The limited water depth is likely to inhibit to some degree even cetacean species associated with shallower water such harbour porpoise which typically inhabit water ranging from 20 – 200m in depth.

14.62 Of the other marine mammal species recorded by SWSEIC, common dolphin are unlikely to be a regular visitor to Loch Ryan, being a more oceanic species associated with areas further offshore. Bottlenose Dolphin are perhaps more likely to occur with some populations being strongly associated with estuaries and harbours. Many estuarine populations are associated with areas of strong tidal currents which provide good hunting opportunities – such features are not known to be present surrounding the proposed development.

Field Survey

14.63 A single grey seal was recorded in October 2024 located offshore to the west of the marina. The location of this record is illustrated in Figure B6 within the accompanying Marine Mammal Survey Report (**Appendix 14.1)**. Anecdotal information regarding a 'seal pup' being observed to the west of the marina was also received while undertaking survey work.

14.64 Further anecdotal information was received regarding frequent use of the 'scour hole', an area of deep water at the entrance to the former ferry terminal where seals have been observed feeding by a resident fisherman.

14.65 No cetacean species of any kind were recorded during the marine mammal survey effort.

Future Baseline

14.66 In a do-nothing scenario there is no specific reason to anticipate significant change to the status of marine mammals or their habitats in the area. Marine mammal populations may however respond to populations and distribution of prey species which may be subject to change over the course of time.

Impact Assessment

Embedded mitigation and / or enhancement relevant to marine mammals which has been identified and incorporated throughout the design phase is set out below. Construction stage and operational stage impacts are discussed below.

Embedded Mitigation

Marine Mammals

14.67 The potential for increased boat traffic associated with the expansion of the capacity within the marina was identified early in the EIA process. As a result of this the provision for bespoke information for marina and boat users regarding the potential presence of marine mammals will be provided along with appropriate advice and guidance regarding boating operations around marine mammal species.

Potential Impacts During Construction Phase

Habitats

14.68 During the construction phase of the development small areas of marine habitat within the marina are likely to be occupied by marine plant. Given the absence of records or observations within the marina and limited suitability of the site, the impact of temporary loss of habitats which are considered to be of **low value** to marine mammals, over a construction phase of circa 2 years would be **negligible, adverse** and of **negligible significance** in EIA terms. Permanent habitat loss is considered in relation to the operational phase.

Construction Stage Disturbance / Injury

14.69 Baseline conditions recorded between December 2023 and October 2024 in relation to marine mammals accompanied by desk-based information indicate that marine mammal presence most likely through grey seal or common seal is possible. However regular presence of either seals or cetaceans of any species appears to be unlikely while the presence of species of cetacean associated with shallow coastal waters such as harbour porpoise or bottlenose dolphin is acknowledged. Marine mammals are likely to be affected by some level of behavioural disturbance at ranges greater than 4km as reported in **Chapter 20** as a result of impact piling operations while the range for Temporary Threshold Shift (TTS) (short term reduction in hearing following exposure to sound) extended to up to 1600m in absence of any mitigation for species such as Dolphins and Harbour porpoise. For species such as seals this value was <900m.

14.70 The projected potential for permanent injury to marine mammals is considered in technical detail within **Chapter 20 (**Underwater Noise**)** of this EIAR.

14.71 Piling operations at close range may cause injury or mortality as described within **Chapter 20** as (AUD/ INJ) impacts as described in **Chapter 20** to marine mammals with permanent auditory injury likely compromising an animal's ability to survive. A review of modelling at sites for proposed offshore wind farms (Grey Seal, Harbour Seal, Harbour Porpoise and Bottlenose Dolphin) indicates that injury may occur at distances of >40m.[18]

14.72 A review of all potential underwater noise and vibration sources associated with the project indicated that risk of injury to marine mammals outside of the harbour itself is minimal. This reflects the current infrastructure of piers and breakwaters acting as effective sound barriers for most of the coastline. It is however acknowledged that sound and vibration will likely project northwards through the existing opening to the Marina. Where impact piling noise does extend beyond the marina limits, the maximum range of this effect resulting in injury would be 880m for species such as porpoises or other Very High Freqency VHF species (those cetaceans with auditory centers >100Khz) while all other species effects would be exposed to AUD / INJ impacts at ranges <410m in absence of mitigation.

14.73 In the case of vibratory piling AUD / INJ effects are only expected to occur at ranges of 10m or less. While TTS risk ranges were typically <30m with the exception of species associated with VHF such as harbour porpoise where TTS risk ranges extend to 230m.

14.74 **Chapter 20** presents data which indicate that noises from dredging and associated deposition are likely to have potential behavioural disturbance effects at ranges >4km. TTS and AUD / INJ effects will only occur over very limited distances typically <10m.

14.75 In the event marine any of the mammals considered likely to be present (comprising grey seal, common seal, harbour porpoise and bottlenose dolphin) did utilise the available habitats in the surrounding area, then construction stage disturbance through underwater noise may result in a worst-case **high magnitude** of impact on a feature of **medium sensitivity** / **value** and would be of **moderate significance**.

14.76 While no detailed assessment is available in relation to the noise associated with disposal at sea in offshore areas based on the limited and very localised effects of dredging operations within the marina any disturbance to marine mammals associated with this operation at existing licenced sites is expected to be **low magnitude** on a feature of up to medium sensitivity and of **negligible significance** largely due to the very short term nature of the material depositing process.

[18]Protocol_for_mitigating_the_risk_of_instantaneous_death_or_injury_to_marine_mammals_durin g_piling_at_the_bowl_and_morl_wind_farms_.pdf

14.77 Visual disturbance pathways are likely to be **low magnitude** and **not significant** as works will be largely contained within the existing Marina area where existing infrastructure and vessels form part of the baseline information and marine mammals which venture into such inshore waters are likely to be able to tolerate visual presence of vessels and marine plant.

14.78 Construction stage injury or even mortality as a result of interaction / collision with vessels is considered unlikely based on the information available relating to marine mammal use of the study area and the location of operating plant within the marina which is unlikely to attract marine mammals. Furthermore, any operating plant is likely to disturb or displace marine mammals. Increased vessel traffic in the wider area as a result of the requirement to deposit dredged material to the offshore environment therefore the potential impact of collision with construction vessels or plant will comprise a **negligible magnitude** impact on a **medium sensitivity** receptor resulting in an effect of **negligible significance**.

Construction Stage Pollution

14.79 The proposed construction phase works may result in the mobilisation of volumes of sediment. This sediment mobilisation could potentially result in the following effects:

- Mobilisation of contaminated sediment in open water feeding areas; and
- Short term increase in turbidity in feeding area limiting feeding ability for marine mammals

14.80 Mobilising sediment may occur to a small degree during a range of construction operations such as piling and extending the breakwater feature. Dredging works create the most significant potential for mobilising sediment, primarily due to the proposed capital dredge operations. The sediment modelling presented in Stranraer Marina Dredge Plume Modelling TN03 (**Appendix 7.1** within **Volume 2** of the EIAR) illustrates that mobilised 'spilled' sediment resulting from dredging activities will primarily move northward out of the mouth of the existing Marina associated with tidal patterns and general water movement. This pattern of sediment movement extends to the deeper channel extending north from the marina. This deeper channel area represents an area where anecdotal information indicates is used by 'seals' for foraging. Locations where sediment will be deposited by the plume will be subtidal and outside the marina footprint in all scenarios considered. The most likely scenario understood to occur in terms of volume of material removed and relocated is that 52,203 m^2 of the dredged material will be moved directly to the land reclamation area. A further 80,688m^2 of dredged material will be transported and deposited at Beaufort's Dyke a deep-water trench located outside of Loch Ryan.

14.81 Mobilised sediment as assessed by Dredge Plume modelling will exist within the water column for a short period of time only; this is largely due to the types of sediments present: potential contaminants are mostly bound, being likely to settle moderately quickly and the low tidal currents present in the area create a limited zone of influence.

14.82 The level of contamination presented in **Appendix 21.1** and further assessed in **Chapter 11 Water Quality** describes that contaminant concentrations identify local exceedances of Action Level 1 (AL1) for a number of trace metals (namely Cadmium, Chromium, Copper and Zinc) and Polyaromatic

Hydrocarbons (PAHs), and consistent exceedances of AL1 for Nickel at all sampling locations. However, no exceedances of Action Level 2 (AL2) were identified for any tested contaminant – with all exceedances of AL1 remaining well below this second Action Level. These results indicate relatively low levels of contamination in the harbour sediments.

14.83 **Chapter 11** also sets out the projected short-term concentrations of heavy metal contaminants which would be present in the water column during dredging operations against relevant Environment Quality Standards (EQS) for coastal and transitional waters and demonstrates that for all metal contaminants, with the exception of Chromium, that contamination will be below the relevant EQS standards. In the case of Chromium this is within the 95th percentile which is considered likely low risk due to the very short-term duration and the localised extent of this effect.

14.84 These factors indicate a low ecotoxicological risk to both fish species as described in **Chapter 13** (Fish Ecology), and accordingly a low risk to piscivorous (fish-eating) marine mammals through bioaccumulation especially considering the very limited exposure time that material is suspended for with most contaminants considered to be bound to sediments. Considering the short-term nature of the increases in mobilised contaminated sediment and the limited levels of contamination reported in **Chapter 11** alongside the very localised extent of suspended solids, the **magnitude** of the impact on features of **medium sensitivity** subsequently been assessed as being **negligible** resulting in an effect of **Negligible significance** in relation to marine mammals.

14.85 While no detailed baseline data has been assessed in relation to the offshore disposal site, given the levels of contamination described above and the low risk described surrounding the dredge location due to the short-term nature of the sediment plume risks associated with sediment bound contaminants, pollution related risks (contamination and temporary suspended sediments) associated with deposition at the disposal site at Beaufort's Dyke are also considered to be low. On a precautionary basis, if it is assumed that the **sensitivity** of the receptor considered in this chapter (marine mammals) is considered to be **high** at Beaufort's Dyke (North Channel Disposal area MA010 / MA0150) the **magnitude** of the impact is considered to **low** and of **slight** / **negligible** significance. The consideration of disposl at sea is set out in detail in a Best Practicable Environmental Option Report Envirocenter 2025)[19]

14.86 The dredge plume modelling indicates that on a short-term basis the suspended solids arising from spillage during dredging will primarily affect the marina area where suspended solids are shown to exceed 100mg/l during dredging operations which comprises removal of dredged material to the land reclamation area and associated disposal at sea. The majority of the zone modelled as the dredge plume which extends beyond the marina limits displays a suspended solids concentration of <100mg / l for the nearest locations to the Marina rapidly dropping to concentrations of 50mg / l or below as the plume extends further north in a plume a few hundred meters in width. Given the limited modelled increase in suspended sediment over a relatively small area of the wider available foraging resource,

[19] Stranraer Marina; Best Practicable Environmental Option (BPEO) Report. Envirocentre July 2025.

the effects of sediment increase on marine mammal foraging both during the winter and summer periods is predicted to be **low magnitude** of impact on a feature of up to **medium value** resulting in an effect of **slight significance**.

14.87 Given the extensive requirement for working in, over and adjacent to water, the work presents a risk of accidental fuel, oil, cementitious materials or other construction chemicals entering the marine environment. The extent of this effect on marine mammals is very variable but at works would be short term and temporary and expected to affect a feature of **medium sensitivity** have a **medium** level of magnitude and comprise a **moderate significant effect** in absence of mitigation.

Potential Impacts During Operational Phase

Habitat loss

14.88 As set out within the baseline section to this report and within the PEA report (**Appendix 15.1 – Volume 2**), the scheme boundary comprises a mixture of marine habitats, which are considered separately in **Chapter 12** (Benthic Ecology) and a series of heavily managed or artificial habitat types. These habitats offer relatively limited opportunities for marine mammals as they are all located within the existing marina, the majority of permanent habitat loss is located within areas of very shallow water. No observations of marine mammals were recorded within the Marina during field survey effort.

14.89 Permanent habitat loss represents a **negligible magnitude** of impact on a feature of up to potentially regional / **medium sensitivity**, resulting in **negligible**/ **slight** adverse effect which will not be significant in relation to marine mammals.

Operational disturbance

14.90 The desk and field-based data do not show extensive information on which to draw conclusions regarding marine mammal impacts once the development is operational. There is inherently a great deal of variability in predicting effects based on vessel types, users, seasonality and distribution of marine mammals at different times. The potential for operational disturbance is however acknowledged on a precautionary basis.

14.91 The increase in marine traffic, which is likely to be more pronounced during the summer months when increases are expected for recreational vessels, has the potential to affect marine mammals which are a feature of **medium sensitivity** and on a precautionary basis may result in a **medium magnitude** of impact, resulting in **moderate** adverse effects in **absence** of mitigation**.**

14.92 During operation, maintenance dredging operations are likely to be required to maintain navigation for a larger number and potentially larger size of vessels using the marina. As described in relation to construction stage disturbance, the effect of dredging is unlikely to result in acute effects such as injury while dredging occurs although some level of effects on behaviour may occur over a very short-term period over a broader range >4km. Given the short term and very localised nature of this impact on a feature of **medium sensitivity,** the magnitude of the impact is expected to be **negligible** and of **negligible significance** in relation to marine mammals. The effect of maintenance dredging is unlikely to be significantly different from the baseline conditions as this will be a requirement for the marina in its existing form.

14.93 During operation the marina will be subject to additional / amended lighting arrangements to enable safe function of the marina and associated pontoon areas. The marina in its current form is subject to artificial light spill form adjacent car parking and existing marina infrastructure areas. Given the absence of records of marine mammals within the marina and limited suitability of the development area in its current and proposed form the impact of lighting proposals on a feature of **medium sensitivity** is expected to be **negligible magnitude** and be of **negligible significance** in relation to marine mammals.

Collision with vessels during operation

14.94 The increase in marine traffic, which is likely to be more pronounced during the summer months when increases are expected for recreational vessels, has the potential to result in direct collision with marine mammals which are a feature of **medium sensitivity.** A Global review of vessel collisions with Marine Traffic[20] confirms that the type of marine fauna likely to be present including grey and common seal, harbour porpoise and bottle nose dolphin have all been recorded as being struck by marine vessels and therefore could be at risk. On a precautionary basis may result in a **low magnitude** of impact, resulting in **negligible** / **slight** adverse effects in absence of mitigation**.** In real terms, the likelihood of this effect is very low given the limited presence of marine mammals within the immediate vicinity of the marina and the high manoeuvrability of species.

Operational Pollution

14.95 The proposed marina development has the potential to introduce additional sources of water pollution as described in **Chapter 11**.

Do-Nothing Scenario

14.96 In the do-nothing scenario, receptors would not be affected by impacts of habitat loss or construction and operational disturbance which comprise the main potential effects described above. Some maintenance activities such as dredging may be required periodically to maintain the harbour in its existing state. These are understood to be consented operations but may result in some level of disturbance to marine mammals locally. However, considering the potential noise and vibration discussed in **Chapter 20** relating to the proposed capital dredge, these are unlikely to result in injury or significant disturbance to marine mammals.

[20] Shoeman R.P, Patterson-Abrolat C, Plon S. (2020) A Global Review of Vessel Collisions With Marine Animals. Marine Conservation and Sustainability. Volume 7- 2020.

Mitigation, Monitoring and Residual Effects

14.97 Embedded mitigation is described in sections 14.67 above. These measures will be taken into account in the consideration of residual effects below. In addition to design-based mitigation included a series of measures related to working practices, are included to reduce or avoid the potential effects of the proposed development on marine mammals.

Construction stage disturbance

14.98 No specific seasonal restrictions have been identified in relation to in water works such as piling or dredging in relation to marine mammals however a series of seasonal restrictions and at some stages of the year tidal restrictions are in place which will limit certain periods when piling and dredging will take place. The relevant items below will be in place however at all times of the year when piling and dredging can occur to minimise risks to marine mammals.

14.99 Soft start methods will be applied to all over water piling operations. This method will allow a progressive response and for Fauna to move away from the source of noise over a period of time this will include marine mammals (bird species – as discussed in **Chapter 15**) and relevant prey species (fish) as discussed in **Chapter 10**. As described in **Chapter 20** the implementation of soft start methods over a 15-minute period will reduce the most significant impacts on Marine Mammals to a zone of influence of <250m. This zone of influence can be monitored by a Marine Mammal Observer as set out below and where marine mammals within a 500m study area works will be paused until such features have left the study area.

14.100 An ecological clerk of works (ECoW) / Marine Mammal Observer (MMO) will be appointed to monitor compliance with the requirements of the EIA and the final Construction Environmental Management Plan (CEMP) developed for the construction phase. The ECoW will monitor faunal use of the study area and any reactions to construction operations to monitor the effectiveness of construction stage mitigation.

Construction Stage Pollution

14.101 The construction phase of works will entail extensive over water work involving a range of marine plant. This inevitably introduces construction stage pollution risks, a framework CEMP has been developed and a final CEMP will be prepared to define parameters for biosecurity, pollution spill prevention, spill containment and emergency response.

Residual Effects

14.102 Table 14.6 below sets out the predicted residual effects following the implementation of additional mitigation measures where appropriate.

Table 14.6 Residual Effects

Effect	Receptor	Receptor Sensitivity	Impact Magnitude	Significance of Effect (prior to mitigation)	Additional Mitigation Measures	Residual Effects
Construction stage pollution – contaminated sediment mobilisation	Marine mammals	Medium	Negligible	Negligible	-	Negligible
Construction stage pollution – accidental spills	Marine mammals	Medium	Medium	Slight	CEMP	Negligible
Construction Stage Disturbance	Marine mammals	Medium	High	Moderate	Soft start to piling operations/ appointment of a suitably qualified ECoW / Marine Mammal Observer	Negligible
Permanent Habitat Loss/ degradation	Marine mammals	Medium	Negligible	Negligible	Negligible	Negligible
Temporary Habitat Loss	Marine mammals	Medium	Negligible	Negligible	-	Negligible
Operational disturbance	Marine mammals	Medium	Medium	Moderate	Provision of information for boat / Marina users	Negligible

Cumulative Effects

14.103 Table 14.7 Projects Considered in Relation to Cumulative effects below sets out a summary of the committed and reasonably foreseeable projects, which could potentially result in cumulative effects in relation to marine mammals, when considered alongside the proposed development.

Table 14.7 Projects Considered in Relation to Cumulative effects

Reference	Project	Description	Consideration of cumulative effects
23/0976/FUL	Land Between West Pier And Agnew Park, Stranraer Harbour, Stranraer	Erection of boat shelter with roof mounted solar panels; extension to boat yard including formation of hardstanding area, installation of pole mounted flood lights, erection of 2 metre high security fencing and formation of gated access; formation of instructor platform, equipment lay down area, open air showers, stepped access to the beach and erection of instructor shelter	Based on a review of the application details no specific ecological effects are identified as part of this application. The application does however fall within the wider red line boundary of the Marina scheme considered within this assessment and therefore relevant assessment and mitigation details remain relevant and no in combination effects are expected. The development does encroach onto the beach however no overwater works are required and therefore no cumulative effects are predicted in relation to marine mammals.
23/0970/FUL	Land To West Of Marina And Harbourmaster's Office Stranraer	Erection of Watersports centre and installation of roof mounted solar photovoltaic panels, formation of additional parking area with associated hard and soft landscaping and formation of footpath	Based on a review of the application details no specific ecological effects are identified as part of this application. The application does however fall within the wider red line boundary of the Marina scheme considered within this assessment and therefore relevant assessment and mitigation details remain relevant and no in combination effects are expected. The development does not appear to have any over water/ marine component and therefore no cumulative effects are predicted in relation to marine mammals.
22/0394/S36	Mid Moile Windfarm Cairnryan	Consent under section 36 of the Electricity Act 1989 and deemed planning permission under section 57(2) of the Town and Country Planning (Scotland) Act 1997 for construction and operation of mid moile wind farm within the planning	The application is located several kilometres away from the application site, and is generally separated from the coastal habitats and environment which is affected by the proposed Stranraer Marina project. On that basis no cumulative effects are expected as a result of this application.

Reference	Project	Description	Consideration of cumulative effects
		authority area of Dumfries and Galloway council	
24/2518/FUL	Site Adjacent To Springbank Road Stranraer DG9 0HS	Erection of 77 dwellinghouses with roof mounted solar panels and air source heat pumps, formation of access and internal road and footpath layout, 178 car parking spaces, landscaping, suds drainage pond and associated infrastructure	This scheme is separated from the Marina by much of the town and therefore effects such as habitat loss and construction disturbance or pollution are not expected to result in a cumulative effect. During operation additional residences may result in increased use of the marine environment however this has been considered in relation to the increased marina capacity separately and this was not identified as a potential effect on the PEA for the Spring bank Road Scheme. No in-combination effect is expected.
24/1407/FUL	Former Stena Port Port Rodie Stranraer	Change of use of part of former port to form haulage yard (class 6), siting of office, erection of 3 metre high security fencing and access gate and installation of security lighting columns (partially retrospective)	All works are retained on the terrestrial environment for this application and therefore no cumulative effects are expected in relation to marine mammals.
24/1534/FUL	Land To The West Of Loch Ryan And North Of Corsewall Burn At Corsewall Estate Kirkcolm Stranraer DG9 0NX	Formation of coastal habitat for seabirds including formation of inland pool with islands, water inlets and outlets from and into loch Ryan, screening bunds up to 2 metre high, 3 bird hides, access routes, upgrading bridge crossing of corsewall burn, landscaping and associated works including relocation of excavated earth to southern field	The project appears to be strategic mitigation for the effects of offshore wind development in other parts of the UK. While the scheme is designed as offsetting for breeding seabirds in other locations the scheme may have an overall beneficial effect on breeding waders and terns which could be affected by the Stranraer Marina scheme. Overall the in predicted cumulative effects are considered to be negligible.
25/1190/FUL	Application for a new Transport Hub	Erection of transport hub with roof mounted photovoltaic panels incorporating provision of secure bicycle locker storage for bicycles, e-bikes (electric bicycles) and acc bikes (accessible	No ecology report is available however the application is located on existing sealed surface and no effects on the marine environment or marine mammal receptors are anticipated.

Reference	Project	Description	Consideration of cumulative effects
		electric bicycles), bike wash/pump/repair station, public toilets, bus waiting area(s), internal general purpose space and external shelter with fixed benching and installation of 5no. bike stands and 4no. electric vehicle charging units.	
25/0778/FUL	Installation for permission of one 10 m high street works column.	Installation of one 10 metre high street works column, 3 antennas,1 network camera, 1 equipment cabinet and associated works.	The works are close to Loch Ryan however are small scale and construction work is expected to be very short term and temporary. All works are located outside the marine environment and therefore no effects on marine mammals are expected.
00008983 (Marine Scotland)	Stranraer harbour - main basin, marina and approaches	Maintenance Dredging and sea deposit - Use of plough dredger to move material from the dredging area into the deep void situated off the old Stena Line terminal between the East Pier and Ross Pier. Water injection will be used to liquefy and move any material under the marina pontoons which are inaccessible to the plough dredger. This material will then also be moved by plough dredging.	Stranraer Marina has a history of maintenance dredging with materials moved from the Marina to other features within Loch Ryan. Depending on the timing of implementing maintenance dredging this has the potential to increase construction stage disturbance both through increased duration and scale of works. Similarly if the maintenance dredge associated with this coincided with the capital dredging required for the Marina, then increased risk of sediment may occur. Based on historic maintenance and the results of sediment modelling undertaken for the Marina redevelopment the cumulative effect of this is unlikely to increase in significance. Pollution risks are not considered likely to change given the nature of the sediment analysis presented for the maintenance dredge application and for the Marina development project. Given the nature of the two projects it is considered highly unlikely that they would be planned simultaneously or in immediate succession and therefore cumulative increases in construction stage disturbance are not predicted.
07059 (Marine Scotland)	Loch Ryan, Dumfries and Galloway	Deposit of Oyster Shells - Marine Licence Application	No in-combination effects are considered relevant to the application to deposit oyster shells with an aim to enhance oyster beds in Loch Ryan.

Reference	Project	Description	Consideration of cumulative effects
00009930 (Marine Scotland)	Loch Ryan Port approach channel, berth pocket and swinging area	Capital Dredging and Sea Disposal - Loch Ryan Port, Cairnryan	This capital dredge licence is valid between December 2022 and December 2025. Given that the Marina works are expected to take place form 2026 onwards there is not considered to be a risk of construction and dredging operations coinciding and therefore no cumulative effects are predicted.
00010825 (Marine Scotland)	Stranraer Marina, Agnew Park, Stranraer	Construction of: Platform for instructor shelter. Removal of: 2 no. redundant sewer outfall pipes & debris, unlit beacon, removal of boulders, beach clearance	This marine licence relates to planning application 23/0970/FUL considered above and accordingly no in cumulative effects are expected.
00010841 (Marine Scotland)	Stranraer Marina, Stranraer	Marine Construction & Pontoon Deposit - 8 (pontoons) + 3 (racing markers). Moorings are for offshore pontoons as opposed to vessels. Small craft (e.g. SUP, dinghies) will dock against the pontoons temporarily as rest stations. No vessels will be moored to the racing markers.	Proposals entail relatively minor works within the marine environment for the installation of pontoons and racing markers and associated removal of former sewage pipes. The timescales for delivery are not clear however given the location of the features presented they are unlikely to result in a cumulative construction stage disturbance effect. No cumulative effects are expected.
00010772 (Marine Scotland)	Stranraer Marina, Stranraer	Marine Licence Application – 18 Moorings	Proposals entail relatively minor works within the marine environment for the installation of rowing moorings. The timescales for delivery are not clear (potential start in June 2024) however given the location of the features presented they are unlikely to result in a cumulative construction stage disturbance effect. No cumulative effects are expected.

Summary and Conclusions

14.104 Baseline data collected through desk-based review and field observations indicates that marine mammals have the potential to be present with grey seal and common seal being most likely to be regularly present. The shallow water depths within Loch Ryan are likely to restrict the range and abundance of marine mammals present to some degree however the potential presence is acknowledged within this assessment.

14.105 The assessment has identified the potential for construction stage disturbance or direct injury / mortality, construction stage pollution, operational disturbance or direct injury / mortality and operational pollution.

14.106 The highest risk of significant effects on marine mammals is identified during the construction phase of the project where impact piling may result in injury and possible mortality to animals in close proximity. Such injury would however likely be restricted to any mammals present within the marina which is considered relatively unlikely.

14.107 During construction and operation potential pollution is identified as a potential impact. While the potential effect is likely to be relatively limited, a range of construction stage and operational stage mitigation measures are embedded or later identified to minimise risk of pollution to a range of receptors including marine mammals.

14.108 During operation the increase in marine vessels has been identified as a potential adverse effect on marine mammals at an early stage with the inclusion of information to influence vessel owners and operators identified early in project development as embedded mitigation.

14.109 Following the application of mitigation measures, residual effects are considered to be negligible. While in most cases this assessment can be made with a high degree of confidence, operational disturbance will rely on boat operators and owners operating in a responsible manner and so the confidence in this assessment is more limited.