Marine Mammals Desk Study

Harbour Seal (Phoca vitulina)

Desk Study

Harbour seal (*Phoca vitulina*) was previously identified in the original NIS and subsequent Addendum/Errata documents as a Qualifying Interest of Galway Bay Complex SAC (formerly cSAC). A marine mammal risk assessment was carried out by Kelp Marine Research Ltd. The risk assessment concluded the following in relation to harbour seal:

'*Potentially strong variation in diving behaviour, habitat use, ranging patterns, diet and foraging strategies between age- and sex classes exists, and may render certain individuals more sensitive to disturbance, or to changes in their habitat. In addition, these differences between age- and sex-classes generally vary between areas, for example depending on prey availability or habitat-type. Most studies show large individual variation, which reduces the extent to which individual behaviour can be used to predict population level effects. With the exception of mothers with nursing calves, it is therefore not possible to conclude which part of the population in the Galway Bay cSAC may be more or less vulnerable to the proposed construction activities. Nursing calves may accompany their mothers on foraging trips and are often nursed in the water. Ranging patterns during pupping, and of nursing mothers and calves, are more limited than those of the other life stages in the population, restricted to the areas more proximate to haulouts. This spatial restriction will render them more vulnerable to disturbance from the marine construction activities associated to the Galway Harbour Extension. Information on the aquatic habitat use of harbour seals in Ireland remains limited. However, the proximity to harbour seal haul-outs, the presence of water depths preferred for foraging (10 – 100 m), and of suitable habitat types and prey species in the area, in combination with observations of foraging harbour seals, suggest that the area can be used for foraging. In addition, it is furthermore likely that areas in proximity to the haul-outs are used for mating, nursing and during breeding, or as a travelling corridor by individuals in the Galway Bay cSAC*.'

To provide further background to the assessment conducted by Kelp Marine Research ltd. The National Biodiversity Data Centre and National Parks and Wildlife records were incorporated into this assessment.

The National Biodiversity Data Centre (NBDC) map viewer[1] was consulted on the 27/06/2024 to check if there were any recent records of harbour seal sightings in the vicinity of the Proposed Development area within the last 5 years. Table 1 details all records of the species in the last 5 years.

[1] National Biodiversity Data Centre- Map Viewer https://maps.biodiversityireland.ie/Map Accessed on 28/06/2024

Table 1- NBDC records of Harbour seal *Phoca vitulina* in the vicinity of the Proposed Development area within the last 5 years.

Type of Sighting	Number of Individuals	Date	Location
Live sighting	1	11/03/2020	Lough Atalia
Live sighting	1	23/01/2019	Lough Atalia
Live sighting	1	01/02/2020	Lough Atalia
n/a	n/a	19/05/2020	Nimmo's Pier
Live sighting	1	21/10/2019	Claddagh

Additionally, the Aerial Thermal-Imaging Survey of Seals in Ireland 2017/2018[2] was reviewed to inform this assessment. The report detailed that a total of 4,007 harbour seals were counted during this survey, with harbour seals status relatively stable in Ireland. Numbers of harbour seals recorded were greatest in the west of Ireland with counts higher in the 2017/2018 survey than previously recorded in the 2011/2012, and 2003 surveys. The report noted 421 individuals present within Galway Bay Complex SAC in 2017/2018.

Grey Seal Halichoerus grypus

Desk Study

Grey seal *Halichoerus grypus* were previously identified in the original NIS and subsequent Addendum/Errata documents as a Qualifying Interest of Galway Bay Complex SAC (formerly cSAC). A marine mammal risk assessment was carried out by Kelp Marine Research Ltd. The following details are key points noted in relation to grey seal:

'*Grey seals occur infrequently in the area (O'Brien 2009). Grey seals generally conduct large offshore movements and individuals tagged on the Blasket Islands, Co. Kerry, did not utilize the inner Galway Bay, despite individuals travelling multiple times up and down the west coast passing Galway Bay (Jessops et al. 2013). Hence, it is therefore unlikely the developed area comprises important habitat for the species.*

Since very low numbers of grey seals are sighted in the proposed area, disturbance due to the construction activities is unlikely to impact a specific section of the population.

In two consecutive monitoring periods, only 8 grey seals were recorded in the vicinity of Galway harbour (Duck & Morris 2013a,b). Since the monitoring study was not focussing specifically on grey

[2] C.D. Morris & C.D. Duck (2019) Aerial thermal-imaging survey of seals in Ireland, 2017 to 2018. Irish Wildlife Manuals, No. 111 National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland

seals, this can be an underestimation. However, considering this low density, it is unlikely that a substantial number of individuals will be affected by the procedures.

Since grey seals only occasionally occur in the Galway Bay cSAC, secondary impact due to displacement or removal of prey species is unlikely to have an effect.

Grey seals rarely occur in the vicinity of the harbour and therefore the likelihood for this species to be injured by collision is considered small.'

To provide further background to the assessment conducted by Kelp Marine Research ltd. The National Biodiversity Data Centre and National Parks and Wildlife records were incorporated into this assessment.

The National Biodiversity Data Centre (NBDC) map viewer[3] was consulted on the 28/06/2024 to check if there were any recent records of grey seal sightings in the vicinity of the Proposed Development area within the last 5 years. Table 2 details all records of the species in the last 5 years.

Table Error! No text of specified style in document.**- NBDC records of Grey seal *Halichoerus grypus* in the vicinity of the Proposed Development area within the last 5 years.**

Type of Sighting	Number of Individuals	Date	Location
Live sighting	1	01/11/2019	Off Nimmo's pier
Live sighting	1	01/10/2019	Galway
Live sighting	1	21/10/2019	Galway
Live sighting	1	21/10/2019	Claddagh

Additionally, the Aerial Thermal-Imaging Survey of Seals in Ireland 2017/2018[4] was reviewed to inform this assessment. The report detailed a total of 3,698 Grey Seals were counted in 2017/2018 compared with 2,964 counted in 2011/2012 and 1,309 counted in 2003, with large groups of Grey Seals were generally located on more exposed shorelines, rocky skerries and offshore islands. The report also noted that the numbers of grey seal are increasing at a significantly higher rate than that of harbour seal, with estimations that there are 2.5 to 3.5 times more grey seals than harbour seals in Ireland.

Bottlenose Dolphin Tursiops truncatus

Desk Study

A number of Special Areas of Conservation (SAC) list Bottlenose dolphin *Tursiops truncatus* as a Qualifying Interest, with the QI a new addition to Duvillaun Islands SAC 000496, West Connacht Coast

[3] National Biodiversity Data Centre- Map Viewer https://maps.biodiversityireland.ie/Map Accessed on 28/06/2024

[4] C.D. Morris & C.D. Duck (2019) Aerial thermal-imaging survey of seals in Ireland, 2017 to 2018. Irish Wildlife Manuals, No. 111 National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland

SAC 002998, and Slyne Head Islands SAC 000328 (since the original NIS submission & subsequent Addendum/Errata documents).

A marine mammal risk assessment was carried out by Kelp Marine Research Ltd. The following details are key points noted from the summary of the report in relation to bottlenose dolphin:

'*Marine mammals either are unlikely to be affected at a population level (grey seal, minke whale, common dolphin, bottlenose dolphin), or are likely to recover from any impacts of the construction activities (harbour seal, harbour porpoise). Here, the probability and speed of recovery will depend on the relative importance of the area for the species, behavioural characteristics and area quality post-construction. Proposed mitigation measures are likely to minimise strong and direct effects in close proximity to the construction activities for all marine mammals*.'

To provide further background to the assessment conducted by Kelp Marine Research ltd. The National Biodiversity Data Centre and National Parks and Wildlife records were incorporated into this assessment.

The National Biodiversity Data Centre (NBDC) map viewer[5] was consulted on the 28/06/2024 to check if there were any recent records of bottlenose dolphin sightings in the vicinity of the Proposed Development area within the last 5 years. Table 3 details all records of the species in the last 5 years.

Table 3**- NBDC records of Bottlenose dolphin *Tursiops truncatus* in the vicinity of the Proposed Development area within the last 5 years.**

Type of Sighting	Number of Individuals	Date	Location
Live sighting	1	01/03/2019	Nimmo's Pier Galway Docks
Live sighting	1	30/05/2020	Galway City
Live sighting	1	19/05/2020	Nimmo's Pier
Live sighting	1	29/06/2020	Nimmo's Pier Galway Docks
Live sighting	1	23/07/2020	Nimmo's Pier Galway Docks
Live sighting	1	13/03/2020	Nimmo's Pier Galway Docks
Live sighting	1	20/05/2020	Nimmo's Pier Galway Docks

[5] National Biodiversity Data Centre- Map Viewer https://maps.biodiversityireland.ie/Map Accessed on 28/06/2024

Live sighting	1	22/04/2020	Nimmo's Pier Galway Docks
Live sighting	1	16/04/2020	Nimmo's Pier Galway Docks
Live sighting	1	25/03/2019	Nimmo's Pier Galway Docks
Live sighting	1	11/06/2020	Nimmo's Pier Galway Docks
Live sighting	1	24/05/2020	Nimmo's Pier Galway Docks
Live sighting	1	30/05/2020	Nimmo's Pier Galway Docks
Live sighting	1	29/05/2020	Nimmo's Pier Galway Docks
Live sighting	1	28/05/2020	Nimmo's Pier Galway Docks
Live sighting	1	05/04/2019	Nimmo's Pier Galway Docks
Live sighting	1	18/03/2019	Nimmo's Pier Galway Docks
Live sighting	1	06/07/2020	Nimmo's Pier Galway Docks
Live sighting	1	17/03/2019	Nimmo's Pier Galway Docks
Live sighting	1	27/05/2020	Nimmo's Pier Galway Docks
Live sighting	1	13/07/2020	Nimmo's Pier Galway Docks
Live sighting	1	25/06/2020	Hare Island Galway Harbour - Co. Galway

Additionally, the Abundance, distribution and habitat use of Bottlenose dolphins in the west and north-west of Ireland [6] was reviewed to inform this assessment. During surveys in 2013, eight bottlenose dolphin schools were encountered in Connemara while in 2014, six dolphin schools were encountered in Connemara. The study showed that dolphins in Ireland have a degree of site-fidelity in the west and north-west and the species are wide-ranging along the coast.

Harbour Porpoise Phocoena phocoena

Desk Study

A number of Special Areas of Conservation (SAC) list Harbour porpoise *Phocoena phocoena* as a Qualifying Interest, with the QI a new addition to Duvillaun Islands SAC 000496, West Connacht Coast SAC 002998, and Slyne Head Islands SAC 000328 (since the original NIS submission & subsequent Addendum/Errata documents).

[6] Nykanen, Ingram, and Rogan (2015) Abundance, distribution and habitat use of Bottlenose dolphins in the west and north-west of Ireland, Final Report to the National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Ireland.

A marine mammal risk assessment was carried out by Kelp Marine Research Ltd. The following details are key points noted from the report in relation to harbour porpoise :

'*Shipping noise was modelled to have little impact on the population level of harbour porpoise in Danish waters (Nabe-Nielsen et al. 2014). Using a precautionary approach, it should be considered likely that dredging for the Galway Harbour Extension project may result in behavioural disturbance (e.g. temporal area avoidance) of bottlenose dolphins, common dolphins and harbour porpoises present in the area during these activities.*

Overall, pile driving can be considered to trigger strong short-term (avoidance) responses, which may change behaviour for multiple hours after sound exposure. Driving of multiple piles could therefore result in a carry-over effect, and deter harbour porpoises for longer periods of time, resulting in temporal loss of habitat during the period of construction. Close proximity to the pile driving activities could result in injury (TTS or PTS), but this risk is likely reduced by the tendency of harbour porpoises to avoid the area with pile driving activities. Mitigation actions, including 30 min pre construction watches and soft-start protocols will effectively reduce the likelihood of direct impact on harbour porpoise, but behavioural changes remain likely to occur.

Very little conclusive information is available on the response of harbour porpoises to boat noise. The fact that harbour porpoises can currently be found in the Galway Bay cSAC suggests that current sound levels can be tolerated.

Similar to the harbour seal, the impact of acoustic disturbance on harbour porpoise foraging success will therefore largely depend upon the relative abundance of different prey species, accessibility/proximity of alternative foraging locations, and preferred diet in the Galway Bay cSAC.

Harbour porpoises are currently the most frequently recorded cetacean species in the Galway Bay cSAC (O'Brien 2009). Given the general lack of knowledge on the fine-scale habitat use including foraging and mating/breeding areas, currently insufficient information exists to conclude whether construction activities would result in displacement from key functional areas.

Galway Bay is currently an urbanised but relatively undisturbed marine area, and harbour porpoise sightings are common. The probability and speed of recovery after the construction period will therefore depend on the relationship between the relative importance of the area for harbour porpoises and area quality postconstruction.'

To provide further background to the assessment conducted by Kelp Marine Research ltd. The National Biodiversity Data Centre and National Parks and Wildlife records were incorporated into this assessment.

The National Biodiversity Data Centre (NBDC) map viewer[7] was consulted on the 28/06/2024 to check if there were any recent records of harbour porpoise sightings in the vicinity of the Proposed Development area within the last 5 years. There were no records of harbour porpoise on the National Biodiversity Data Centre map viewer from within the last 5 years.

Additionally, the Density estimates of harbour porpoises *Phocoena phocoena* at eight coastal sites in Ireland[8] was reviewed to inform this assessment. The report detailed that six surveys were carried out in Galway Bay, with 62 sightings of a total of 134 individuals. Harbour porpoises were present throughout the study area of Galway Bay with concentrations off Black Head Co. Clare and towards the middle of the bay.

[7] National Biodiversity Data Centre- Map Viewer https://maps.biodiversityireland.ie/Map Accessed on 28/06/2024

[8] Berrow, S., Hickey, R., O'Connor, I. And McGrath, D. 2014 Density estimates of harbour *porpoises Phocoena phocoena* at eight coastal sites in Ireland. Biology and Environment: Proceedings of the Royal Irish Academy 2014. DOI: 10.3318/ BIOE.2014.03