

Updates to Chapter 8 Biodiversity

October | 2023

(nasa)



Tionscadal Éireann Project Ireland 2040







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Table of Contents

1.	INTRODCUTION	2
2.	GUIDANCE DOCUMENTS	3
3.	THE NORTH-WEST IRISH SEA CSPA	4
4.	OTTER SURVEY BETWEEN THE M50 AND KILCOCK	7
5.	AIR QUALITY	9





1. INTRODCUTION

The sections within this 'Updates to Chapter 8 Biodiversity' report contain additional information relating to the EIAR Chapter 8 Biodiversity, which have come about since the planning application was lodged in July 2022. This report should be read in conjunction with the EIAR.





2. GUIDANCE DOCUMENTS

The following guidance documents and legislation have been published since the submission of the railway order application:

- Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.
- Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

These guidance documents have been reviewed and their contents do not affect the conclusions of the impact assessment of Bats in the EIAR Chapter 8 Biodiversity.

• Institution of Lighting Professionals (2023) *Bats and Artificial Lightings at Night.* Guidance Note 08/23. Institution of lighting professionals, Regent House, Regent Place, Rugby, Warwickshire, UK.

Section 8.9.2.1, page 8/81 of the EIAR Chapter 8 Biodiversity contains the mitigation measures for the design of outdoor lighting. In line with the updated guidance on lighting (ILP, 2023), all outside lighting will be a warm-white colour of 2700K or less, rather than '3000K or less' as was stated in the EIAR.

• Flora (Protection) Order 2022. S.I. 235 of 2022.

There are three species noted in the EIAR Chapter 8 Biodiversity which were listed on the Flora (Protection) Order 2015: Opposite Leaved Pondweed (*Groenlandia densa*), Hairy Violet (*Viola hirta*) and Hairy St. John's Wort (*Hypericum hirsutum*). These species are listed on the Flora (Protection) Order 2022. No additional species recorded in the desk study or field surveys are listed on the Flora (Protection) Order 2022. Therefore, this piece of legislation does not change the conclusions of the impact assessment in the EIAR Chapter 8 Biodiversity.





3. THE NORTH-WEST IRISH SEA CSPA

The EIAR submitted with the planning application was finalised in July 2022. In July 2023, in accordance with Regulation 16 of the European Communities (Birds and Natural Habitats) Regulations 2011 as amended (S.I. No.477 of 2011), the Minister for Heritage and Electoral Reform published a notice of intention to designate the North-West Irish Sea cSPA. In anticipation of the formal designation of this European site, the North-West Irish Sea cSPA is included in this Updates to Chapter 8 Biodiversity Report.

Table 1 below describes the pathways for effects between the proposed development and the North-West Irish Sea cSPA. This Table follows the same layout as Table 8-5, page 8/22 of the EIAR Chapter 8 Biodiversity.

Table 1 Designated sites within the Zone of Influence

Designated Site	Distance from the Proposed Development					
European Designated Sites						
North-West Irish Sea cSPA [004236]	Yes. The shortest absolute distance from the proposed development to this site is 5.8km east. The shortest distance from the proposed development to the site via a hydrological connection is 6 km east, through the Royal Canal, River Liffey and Dublin Bay, which is within the zone of influence.					

The description of the North-West Irish Sea cSPA is based on the Site Synopsis (NPWS, 2023¹) for the site.

Qualifying Interests of the Site

[A065]	Common Scoter (<i>Melanitta nigra</i>)
[A001]	Red-throated Diver (Gavia stellata)
[A003]	Great Northern Diver (Gavia immer)
[A009]	Fulmar (<i>Fulmarus glacialis</i>)
[A013]	Manx Shearwater (Puffinus puffinus)
[A018]	Shag (Phalacrocorax aristotelis)
[A017]	Cormorant (Phalacrocorax carbo)
[A117]	Little Gull (Larus minutus)
[A188]	Kittiwake (Rissa tridactyla)
[A179]	Black-headed Gull (Chroicocephalus ridibundus)
[A183]	Common Gull (Larus fuscus)
[A183]	Lesser Black-backed Gull (Larus marinus)
[A184]	Herring Gull (Larus argentatus)
[A187]	Great Black-backed Gull (Larus marinus)

¹ NPWS (2023) *Site Synopsis for the North-West Irish Sea cSPA [004236].* Published 17/07/23. National Parks & Wildlife Service, Department of Housing, Local Government and Heritage.





- [A195] Little Tern (*Sterna albifrons*)
- [A192] Roseate Tern (*Sterna dougalii*)
- [A193] Common Tern (Sterna hirundo)
- [A194] Artic Tern (Sterna paradisaea)
- [A204] Puffin (*Fratercula arctica*)
- [A200] Razorbill (Alca torda)
- [A199] Guillemot (*Uria aalge*)

Site Overview

The North-West Irish Sea cSPA constitutes an important resource for marine birds. The estuaries and bays that open into it along with connecting coastal stretches of intertidal and shallow subtidal habitats, provide safe feeding and roosting habitats for waterbirds throughout the winter and migration periods.

These areas, along with more pelagic marine waters further offshore, provide additional supporting habitats (for foraging and other maintenance behaviours) for those seabirds that breed at colonies on the north-west Irish Sea's islands and coastal headlands. These marine areas are also important for seabirds outside the breeding period.

This SPA extends offshore along the coasts of counties Louth, Meath and Dublin, and is approximately 2,333km² in area. This SPA is ecologically connected to several existing SPAs in this area.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Common Scoter, Red-throated Diver, Great Northern Diver, Fulmar, Manx Shearwater, Shag, Cormorant, Little Gull, Kittiwake, Black-headed Gull, Common Gull, Lesser Black-backed Gull, Herring Gull, Great Black-backed Gull, Little Tern, Roseate Tern, Common Tern, Arctic Tern, Puffin, Razorbill and Guillemot.

The breeding seabird species listed for those SPAs, which abut the North-West Irish Sea cSPA are: Fulmar (Lambay Island SPA); Cormorant (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Shag (Skerries Island SPA; Lambay Island SPA); Lesser Black-backed Gull (Lambay Island SPA); Herring Gull (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Kittiwake (Lambay Island SPA); Ireland's Eye SPA; Howth Head SPA); Roseate Tern (Rockabill SPA); Common Tern (Rockabill SPA;); Arctic Tern (Rockabill SPA); Little Tern (Boyne Estuary SPA); Guillemot (Lambay Island SPA, Ireland's Eye SPA; Ireland's Eye SPA, Ireland's Eye SPA); and Puffin (Lambay Island SPA). The Common Tern population that is listed for the nearby South Dublin Bay and River Tolka Estuary SPA is also likely to use this SPA as a foraging resource.

Informed by two surveys of the western Irish Sea region in 2016 an estimated 120,232 and 34,626 individual marine birds occurred in this SPA during autumn and winter respectively. Those marine bird species whose estimated abundances equalled or exceeded 1% of the total estimated size of the winter assemblage are: Red-throated Diver (538), Fulmar (506), Little Gull (391), Kittiwake (944), Black-headed Gull (508), Common Gull (2,866), Herring Gull (6,893), Great Black-backed Gull (2,096), Razorbill (4,638) and Guillemot (13,914).

The estimated 2016 summer abundance of Manx Shearwater in the North-West Irish Sea cSPA is 13,010 and is of international importance. The estimated 2016 autumn and winter abundances of Great Northern Diver in the North-West Irish Sea cSPA is 248 and 230 respectively and are of international importance. The estimated abundances of Common Scoter over parts of this SPA can reach significant numbers (e.g. 14,567 in December 2018) which is also of international importance.





Assessment

Section 8.8.1 of the EIAR Chapter 8 Biodiversity describes the potential impacts of the proposed development on the European sites in the Zone of Influence. This is relevant to the North-West Irish Sea cSPA where the potential effects are limited to water quality impacts, and collision risk to birds. Section 8.8.1 is transcribed below.

"The Zone of Influence overlaps with six European sites; the Rye Water Valley/ Carton SAC, the South Dublin Bay and River Tolka Estuary SPA, the North Bull Island SPA, the North Dublin Bay SAC the Malahide Estuary SAC and the Malahide Estuary SPA. As likely significant effects could not be excluded at the screening stage, a Natura Impact Statement (NIS) was prepared. The NIS presents all of the predicted effects on these sites and their Qualifying Interests and also provides a detailed analysis and evaluation of these effects in the context of the relevant Conservation Objectives. The NIS also prescribes mitigation measures to address any negative effects identified. As such, there is some overlap between this chapter of the EIAR and the NIS for the proposed development. However, both the EIAR and NIS for the proposed development are standalone documents which do not rely on each other. Impacts on the relevant European sites are dealt with under Key Ecological Receptor 6 'Watercourses' and Key Ecological Receptor 5 'Birds'."





4. OTTER SURVEY BETWEEN THE M50 AND KILCOCK

In response to the submission received from NPWS, a boat-based Otter survey was undertaken in the winter 2022-2023, from the M50 to Kilcock. The 2022/23 boat-based otter survey identified one active and four potential holts, and three couches between the M50 and Kilcock, in addition to eight holts and four couches previously identified between Spencer Dock and Ashtown, which are presented in the EIAR Vol 2 Chapter 8 Biodiversity, Section 8.9.3.2.

Mitigation measures are presented in the EIAR Vol 2 Chapter 8 Biodiversity, Section 8.9.3.4. The mitigation measures relating to the positioning and type of catenary poles will apply to the active holt at Bond Bridge and the three couches identified in the 2023 survey. The spacing between catenary poles is 40m-50m, and up to a maximum of 65m. A photograph of a catenary pole foundation is presented in EIAR Vol 2 Chapter 8 Biodiversity, Figure 8-4. The positioning of catenary poles to maximise the distance from holts and couches, and the fact that 400m of catenary poles will be constructed in each shift, will mean that the construction of catenary poles will not significantly affect Otter.

Table 2 below presents the Otter Holts and Couches recorded between Spencer Dock and Kilcock.

Ref.	Description	Distance from proposed development
Holt 1	Active holt in north quay wall of the River Liffey at the MV Cill Airne floating restaurant. There was a spraint at entrance and nearby. This holt is located 190 m from the proposed development and will not be disturbed.	190 m
Holt 2	Active holt on south bank of canal under rail platform with well eroded entrance. There was a slide to canal and single spraint. This holt is near Broombridge Station. This holt is located between the Royal Canal and the railway line and could be disturbed during the construction of the catenary poles.	<10 m
Holt 3	Active holt on south bank of canal under cotoneaster bush adjacent to bridge with two entrances. There were slides to canal on steep open slope and well eroded paths into scrub and to water. This holt is near Ratoath Road Bridge. This holt is near Broombridge Station. This holt is located between the Royal Canal and the railway line and could be disturbed during the construction of the catenary poles.	<10 m
Holt 4	Inactive holt on south bank of canal under new R805 bridge at bank top. The entrance has partially collapsed. This holt is at Ashtown. This holt is near Broombridge Station. This holt is located between the Royal Canal and the railway line and could be disturbed during the construction of the catenary poles.	<10 m
Holt 5	Inactive holt on south bank of canal with old slide to canal. There is excavation in clay under rail line with indiscernible claw marks. The entrance has partially collapsed. This holt is near Ashtown. This holt is located between the Royal Canal and the railway line and could be disturbed during the construction of the catenary poles.	<10 m
Holt 6	Inactive holt under big dead oak on north bank of canal, 10 m from canal. There were slides in near canal. This holt is between the 10 th and 11 th locks. This inactive holt is located within the footprint of the project next to where the canal will be dewatered to accommodate the construction of a new underbridge at Ashtown. There was no evidence of current use by otter.	<10 m
Holt 7	Active holt measuring 30x25 cm under beech tree stump in 12 m wide woodland buffer/treeline, 6 m from canal bank top. There was a fresh spraint nearby. This holt is between the 10 th and 11 th locks. This holt is located on the opposite side of the canal to the railway line.	70 m
Holt 8	Inactive holt north of canal in beech woodland under sycamore adjacent to Coolmine Rugby pitch. 25x25 cm. Well-worn trails to canal but old and not recently used, leaves accumulated in holt entrance. This holt is located on the opposite side of the canal to the railway line.	70 m
Holt 9	Potential holt identified in 2023. Potential holt in dry drainage ditch on the north side of the canal opposite the railway. Uncharacteristic shaped entrance (bank collapse) with more circular tunnel internally. Possibly old badger sett.	30m

Table 2Otter Records





C3 Projects

Ref.	Description	Distance from proposed development
Holt 10	Potential holt identified in 2023. Potential holt Potential holt in dry drainage ditch on the north side of the canal opposite the railway. No signs of recent activity. Cobwebs in entrance.	30m
Holt 11	Potential holt identified in 2023. Potential holt Potential holt in dry drainage ditch on the north side of the canal opposite the railway. No signs of recent activity. Cobwebs in entrance.	30m
Holt 12	Potential holt identified in 2023. Potential holt in large dry drainage ditch in scrub woodland opposite Confey Slipway.	<10m
Holt 13	Active holt identified in 2023. Active holt along rail line in reed canary grass and bulrush. Recent activity and lots of spraint next to it on old willow root system.	<10m
Couch 1	Couch on south bank of the canal with and trails to canal with potential holt buried in scrub. This couch is near Broombridge. This holt is located between the Royal Canal and the railway line and could be disturbed during the construction of the catenary poles.	<10 m
Couch 2	Couch on south bank of canal with slide and regular spraint site under bramble scrub. This couch is near Broombridge. This holt is located between the Royal Canal and the railway line and could be disturbed during the construction of the catenary poles.	<10 m
Couch 3	Couch north of canal under beech tree on bank top with very regular spraint site. This couch is between the 10 th and 11 th locks. This holt is located on the opposite side of the canal to the railway line.	70 m
Couch 4	Couch north of canal with roll patches and slide. There was a regular spraint site which contained perch scales. This holt is located on the opposite side of the canal to the railway line.	70 m
Couch 5	Couch identified in 2023. Couch with fresh spraint and anal jelly on small boulder at entrance to culvert under rail bank.	<10m
Couch 6	Couch identified in 2023. Couch under isolated willow tree.	<10m
Couch 7	Couch identified in 2023. Couch with highly regular spraint site under discarded sheet of metal.	<10m





5. AIR QUALITY

Habitat degradation could occur during the construction and operational phases of the proposed development due to the increase in noise, vibration, lighting and air pollution. Elevated nitrous oxide deposition, originating from traffic, has the potential to lead to eutrophication and acidification of watercourses.

In December 2022 Transport Infrastructure Ireland (TII) published new guidance documents and standards for the EIAR with respect to Air Quality:

- PE-ENV-01106: Air Quality Assessment of Specified Infrastructure Projects (TII 2022a);
- PE-ENV-01107: Air Quality Assessment Standard for Proposed National Roads (TII 2022b).

An assessment of the impacts on air quality was prepared by the DART+ West team and has incorporated the new guidance documents into the assessment. The assessment concluded that the construction and operational phase road traffic impacts on sensitive human and ecology receptors, in accordance with the new TII Guidance (2022a), are overall *not significant* in EIA terms. This is consistent with the impacts reported in Section 12.5.2 of the EIAR.