



codling
wind park



Environmental Impact Assessment Report

Volume 4

Appendix 10.8 Onshore
Ornithology Baseline
Characterisation Report



Table of contents

1	Introduction.....	6
2	Methodology	9
3	Results.....	13
4	Discussion.....	29
5	References	31

List of tables

Table 1 Data sources used to determine baseline characterisation of the onshore ornithological study area.	9
Table 2 BTO Breeding Status Codes.....	11
Table 3 Full species list of birds recorded within the onshore and Estuarine/Liffey study area during the breeding and wintering surveys between 2021 and 2023.	13
Table 4 Number of Arctic Tern nests per season since DBBP began (Boland <i>et al.</i> , 2022)	20
Table 5 Number of Common Tern nests per season since DBBP began (Boland <i>et al.</i> , 2022) ..	22
Table 6 Target species to be assessed further within.....	29

List of figures

Figure 1-1 Onshore Ornithology Study Area.....	7
Figure 1-2 Estuarine/Liffey ornithology study area	8
Figure 1-3 Breeding bird survey results 2021-2023 (<i>Sheet 1 of 2 and Sheet 2 of 2</i>)	23
Figure 1-4 Breeding bird status2021-2023 (<i>Sheet 1 of 2 and Sheet 2 of 2</i>)	25
Figure 1-5 Winter bird status2021-2023 (<i>Sheet 1 of 2 and Sheet 2 of 2</i>)	27

Abbreviations

Abbreviation	Term in Full
BoCCI	Bird of Conservation Concern Ireland
BTO	British trust for Ornithology
CDL	Coal Distributers Limited
CWP	Codling Wind Park
CWPL	Codling Wind Park Limited
DBBP	Dublin Bay Birds Project
EIAR	Environmental Impact Assessment Report
ESB	Electricity Supply Board
ESBN	ESB Networks
EU BD	European Union Birds Directive
MHWM	Mean high water mark
MHWS	Mean high water springs
NBDC	National Biodiversity Data Centre
pNHA	Proposed Natural Heritage Area
NPWS	National Parks and Wildlife Services
SPA	Special Protection Area
VP	Vantage Point
ZoI	Zone of influence

Definitions

Glossary	Meaning
Coal Distribution Ltd (CDL) Dolphin	A rectangular concrete mooring structure owned by Dublin Port Company. It is used by nesting Arctic and common tern During their breeding season.
ESB Dolphin	A rectangular structure, previously used for mooring ships, is now managed by ESB as a common tern nesting platform.

APPENDIX 10.8 ONSHORE BASELINE CHARACTERISATION REPORT

1 Introduction

1. Codling Wind Park Limited (hereafter 'the Applicant') is proposing to develop the Codling Wind Park (CWP) Project, which is located in the Irish sea approximately 13 - 22 km off the east coast of Ireland, at County Wicklow. This appendix forms part of **Chapter 10 Ornithology** of the Environmental Impact Assessment Report (EIAR) for the CWP Project. This EIAR appendix describes the baseline environment to determine potential impacts of the CWP Project's offshore and onshore Infrastructure on onshore ornithological receptors during the construction, operation and maintenance and decommissioning phases.

1.1 Study areas

1.1.1 Onshore (above the Mean High Water Mark [>MHW])

2. The study area for onshore ornithology is defined as the onshore infrastructure (above MHWS) focused on the landfall area (landward of the high water mark (HWM)), onshore substation, semi-natural areas, and access roads, located on the Poolbeg Peninsula in County Dublin. The study area also considers sensitive receptor sites within and around the Poolbeg Peninsula including the Poolbeg 220 kV substation (used by breeding Peregrine Falcon [*Falco peregrinus*]) the grassland immediately south of the Ringsend WWTP (known as 'Goose Green'), which forms part of the South Dublin Bay and River Tolka Estuary SPA and amenity areas such as Irishtown Nature Park and Sean Moore Park. The study area for onshore ornithology is shown in **Figure 1-1**.


1.1.2 Estuarine / Liffey– (Lower than the Mean Water High Spring [<MWHS] - river)

3. The study area for the Estuarine / Liffey is focused near the onshore substation including the adjacent rock armour and quay walls and extends into the river Liffey located on the north side Poolbeg Peninsula in County Dublin. The study area also considers sensitive receptor sites within the river Liffey including the CDL and ESB mooring dolphins (used by breeding common terns [*Sterna hirundo*] and Arctic terns [*Sterna paradisaea*]), which form part of the South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay pNHA. And also considers other jetties and piers extending into the river. The Estuarine / Liffey study area is shown on **Figure 1-2**.



Legend


- Planning application boundary
- Onshore substation boundary (operational)
- High water mark
- Onshore ornithology study area
- Peregrine Falcon survey vantage points

		Project: Codling Wind Park		Contractor: TOBIN Website: www.tobin.ie	
Appendix 10.8 Figure 1.1 Terrestrial ornithology study area					
CWP doc. number: CWP-TOB-ENG-08-01-MAP-1179					
Internal descriptive code: PB - PAB_SS_PP.PL - HWM_ORNTH_ONSH_PER.FALC. S.VANTAGE.POINTS - (EJAR_Vol.04_Ch.10_Ap.08.FIG.01.01)			Size: A3 Scale: 1:10,000		CRS: EPSG 2157
Rev.	Updates		Date	By	Chk'd App'd
00	Final for issue		2024/08/19	SP	DM/EA ES



Legend

- Planning application boundary
- Onshore substation boundary (operational)
- High water mark
- Estuarine/Liffey ornithology study area



Project:

Codling Wind Park

Contractor:

TOBIN

Website:

www.tobin.ie

Appendix 10.8

Figure 1.2

Estuarine/Liffey ornithology study area

CWP doc. number:

CWP-TOB-ENG-08-01-MAP-1180

Internal descriptive code:

PB - PAB_SS.PPPL - HWM_ORNTH_ESTU.LIFFEY -
(EIAR Vol.04 Ch.10 Ap.08.FIG.01.02)

Size: A3

Scale: 1:10,000

CRS:

EPSG 2157

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/19	SP	DM/EA	ES

2 Methodology

2.1 Desk study

4. A comprehensive desk-based review was undertaken to inform the baseline for onshore ornithology. Key data sources used to inform the assessment are set out below in **Table 1**.

Table 1 Data sources used to determine baseline characterisation of the onshore ornithological study area.

Source	Date	Summary	Coverage of study area
Contemporary site-specific baseline characterisation surveys			
Transect and Point count surveys	2021 – 2023	Sixteen surveys (ten during the breeding season and six during the winter seasons) using an adapted bird walkover methodology.	Within the onshore study area.
Raptor surveys	2022 and 2023	Seventeen surveys during the 2022 and 2023 breeding seasons to collect baseline data on the breeding behaviour and flight activity of Peregrine Falcon and other raptor species.	
Additional data sources			
National Biodiversity Data Centre (NBDC)	2007 – 2023	Review of all bird records held by the NBDC, which includes records from the most recent national bird atlas survey (Bird atlas 2007 – 2011 [Balmar <i>et al.</i> , 2013])	The two hectads (10 km squares) of O13 and O23, which overlap the onshore study area.
Dublin Bay Birds Project (BirdWatch Ireland)	2013 – 2022	Dublin Port Tern Conservation Project Report from 2022. Contains results of 2022 breeding season, but also includes productivity results from previous years, up to 2013	Four Tern colonies within Dublin port, including the CDL and SPA platform colonies which are closest in proximity to the proposed development
	2016/2017 – 2020/2021	Waterbird data request of peak counts for species located within	Within the Rivier Liffey channel from the East Link Bridge to the outflow

Source	Date	Summary	Coverage of study area
		the River Liffey channel subsite.	of the River Liffey along the great south wall.
Special Protection Areas (various). From the NPWS website and the protected site map viewer	2023	Conservation objectives and site synopsis of SPAs for nearby sites	South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA

2.2 Field study

2.2.1 Target species

5. Target species are generally those which are afforded a higher level of legislative protection, and also includes species which are more likely to be subject to impact from construction or disturbance as a result of the onshore infrastructure associated with the CWP Project. The target species defined had regard to bird species include those listed under the following:
 - Annex I of the Birds Directive;
 - Red and amber Listed Birds of Conservation Concern Ireland; and
 - Special Conservation Interests (SCIs) of SPAs within the Zol of the project.
 - Some Green Listed Birds of Conservation Concern Ireland more likely to be subject to impact from the CWP project.
6. 'Red-listed' species are those of highest conservation priority, being globally threatened, declining rapidly in abundance or range, or having undergone historic declines from which they have not recently recovered. 'amber-listed' species have an unfavourable status in Europe, have moderately declined in abundance or range, a very small population size, a localised distribution, or occur in internationally important numbers (Gilbert *et al.* 2021).

2.2.2 Transect and Point Count Surveys

7. Transect and point count surveys were undertaken during both the breeding and winter seasons. These surveys were undertaken to establish a baseline for breeding and wintering bird activity within the onshore study area. The objectives of the surveys were to detect the presence and density of breeding and wintering birds within the study area, to determine their habitat associations, and to identify any key species or bird habitats of conservation significance within the study area. Breeding bird surveys were carried out over one day in May 2021, three days between April and July 2022 and six days between April and June 2023. Winter bird surveys were carried out over two days between December 2021 and January 2022 and four days between December 2022 and March 2023.
8. Transect methodology was broadly based on those published by BirdWatch Ireland (2012) and Bibby *et al.* (1992), whereby the study areas were surveyed during daylight hours, to within 25 m of the project and closest defined boundary (e.g. a road or neighbouring property), or within 50 m of all other areas (e.g. open tidal habitat areas). Habitats used by bird species were classified according to Fossitt (2000).
9. All sites where access was granted or open to the public within the study area were surveyed once per visit. These surveys, during both the breeding and winter season, recorded presence and

abundances of all bird species within the study area with emphasis on target species (i.e., Birds of Conservation Concern in Ireland amber and red-listed bird species, all raptor, waders, gulls and other wetland associated birds). Other signs of bird usage were also noted including faeces / whitewash, prey remains, and feathers. Additionally, during the breeding bird season, bird species observed were given British Trust for Ornithology (BTO) breeding status codes (**Table 2**), detailing the highest level of breeding evidence detected for each species.

10. Surveys were conducted during daylight hours, in optimal weather conditions, i.e. dry weather, with winds of less than Beaufort scale 3. Birds in flight, that were apparently interacting with the study area (as determined by the surveyor), were also recorded and birds flying over but not directly interacting with the study area were recorded separately, as 'overflying' birds (as per BirdWatch Ireland, 2012).
11. Point counts were also carried out at regular intervals in several locations along the transects following the method published by Bibby *et al.* (1992). Surveyors stood and recorded presence and abundances of all bird species with emphasis on target species and noted any breeding behaviour (if any).

Table 2 BTO Breeding Status Codes

Breeding Status	Breeding Code	Breeding Code Dec
Non-breeding	F	Flying over
	M	Species observed but suspected to be still on M igration
	U	Species observed but suspected to be s U mmerring non-breeder
Possible Breeding	H	Species observed in breeding season in suitable nesting H abitat
	S	S inging male present (or breeding calls heard) in breeding season in suitable breeding habitat
Probable Breeding	P	P air observed in suitable nesting habitat in breeding season
	T	Permanent T erritory presumed through registration of territorial behaviour (song etc) on at least two different days a week or more part at the same place or many individuals on one day
	D	Courtship and D isplay (judged to be in or near potential breeding habitat; be cautious with wildfowl)
	N	Visiting probable N est site
	A	A gitated behaviour or anxiety calls from adults, suggesting probable presence of nest or young nearby
	I	Brood patch on adult examined in the hand, suggesting I ncubation
	B	Nest B uilding or excavating nest-hole
Confirmed Breeding	DD	D istractio n - D isplay or injury feigning
	UN	U sed N est or eggshells found (occupied or laid within period of survey)
	FL	Recently F ledged young (nidicolous species) or downy young (nidifugous species). Careful consideration should be given to the likely provenance of any fledged juvenile capable of significant geographical movement. Evidence of dependency on adults (e.g. feeding) is helpful. Be cautious, even if the record comes from suitable habitat.
	ON	Adults entering or leaving nest-site in circumstances indicating O ccupied N est (including high nests or nest holes, the contents of which cannot be seen) or adults seen incubating
	FF	Adult carrying F aecal sac or F ood for young

Breeding Status	Breeding Code	Breeding Code Dec
	NE	Nest containing Eggs
	NY	Nest with Young seen or heard

2.2.3 Raptor Surveys – Breeding Peregrine Falcon

12. Following a review of previous studies and information obtained during the desk study, Peregrine Falcon was found to nest and occur regularly on the Poolbeg Peninsula, largely around the now disused Poolbeg chimney stacks. A raptor survey was subsequently undertaken to collect baseline data on the breeding behaviour and flight activity of Peregrine Falcon, to determine how they utilise the onshore and estuarine / Liffey study areas, and to assess the potential for impacts upon this species. Incidental sightings of other raptor species were also recorded.
13. Surveys occurred over eight days between March and September 2022 and nine days between April and September 2023. The survey methodology, to determine signs of occupancy and evidence of breeding, followed that of Hardey *et al.* (2013). Two vantage points (VPs) were selected to give clear views over the study area and the Peregrine Falcon nest site at the Poolbeg chimney stacks (See **Figure 1-1**). Vantage points were conducted according to SNH (2017) guidance and occurred over a 3 to 4 hour period, as recommend by Hardey *et al.* (2013). Raptor species observed during VP surveys were recorded, noting species, abundance, activity, and a brief comment. Flightlines or locations were then mapped. Surveys were conducted during daylight hours, in optimal weather conditions, i.e., dry weather, with winds of less than Beaufort scale 3.

2.2.4 Tern Surveys

14. A study to examine the level of existing and potential disturbance on Terns breeding at the Poolbeg colonies was carried out in summer 2022 and spring 2023 by ALCnature. Field surveys were carried out on 18 dates between 31 May and 13 July 2022 and 5 dates in May 2023, to investigate existing levels of disturbance of Terns at the sites (background disturbance). The survey included vantage point watches by experienced personnel to examine and score disturbance response of terns to disturbance stimuli. Totals of 121.5 hours and 118.5 hour of vantage point survey time were completed at the 'Coal Distribution Limited' (CDL) Dolphin and ESB Dolphin respectively. This included three hours of nocturnal surveys at each site (between 2200h and 0100h on 16 June at CDL and 20 June at ESB).
15. A second period (three dates in July 2022 and 2 dates in May 2023) assessed the level of response of breeding terns to the application of simulated construction disturbance on the site (experimental disturbance) under NPWS licence.
16. These approaches provide site-specific assessment of disturbance response in order to inform assessment of potential impacts arising during construction.

2.2.5 Black Guillemot Survey

17. Black Guillemots occurring close to the onshore substation site were surveyed by ALCnature, for population size and nest site locations using two methods.

Population size

18. Population size was determined by applying standard methods, laid out by in the Seabird Monitoring Handbook (Walsh *et al.*, 1995). This entailed visiting the full extent of the survey area in early spring and counting all adult birds seen on water and on shore and structures, within the extent of the study area, on two visits in April 2023 at least one week apart and in fine weather.

Nest site distribution

19. Locations of crevices and holes suitable for nesting Black Guillemots were recorded using a walkover nest site search during the population surveys in April 2023, with an additional visit, in June 2023. Activity at potential nest sites were determined by a 3-hour watch of all likely sites from a key vantage point. Nest sites were recorded as occupied if visited and entered by adults and a probable or confirmed breeding status assigned. Timing and duration of this survey visited was planned to ensure likely visiting of all occupied nest sites by adults during the observation period, as fish delivery is known to be highest during the morning and evening (Shoji *et al.*, 2015), to avoid under recording of sites where foraging adults were absent (e.g. in early morning).

3 Results

20. Bird abundances and assemblages for onshore and estuarine / Liffey species were determined from the results of the site-specific surveys. A total of 43 species were recorded during the breeding and wintering bird surveys conducted within the onshore and estuarine / Liffey study areas between 2021 and 2023. Of this a total of 23 were target species. All recorded species, the season in which they were recorded, their breeding status, their protection, and their conservation status is provided in (Table 3). The locations and status of bird species are detailed in **Figure 1-3**, **Figure 1-4** and **Figure 1-5**. Species account of all target species recorded over the survey period are discussed below.

Table 3 Full species list of birds recorded within the onshore and Estuarine/Liffey study area during the breeding and wintering surveys between 2021 and 2023.

Species	Survey Season*		Protection and Conservation Status**
	Breeding	Wintering	
Target Species			
Arctic Tern (<i>Sterna paradisaea</i>)	Confirmed	-	WA, EU BD Annex I, BoCCI Amber List
Black-headed gull (<i>Chroicocephalus ridibundus</i>)	Non- Breeding	Present	WA, BoCCI Amber List
Black Guillemot (<i>Cepphus 13orqua</i>)	Confirmed	Present	BoCCI Amber List
Buzzard (<i>Buteo buteo</i>)	Confirmed	-	WA, BoCCI Green List
Common Sandpiper (<i>Actitis hypoleucos</i>)	Non- Breeding	-	WA, BoCCI Amber List
Common tern (<i>Sterna hirundo</i>)	Confirmed	-	WA, EU BD Annex I, BoCCI Amber List
Cormorant (<i>Phalacrocorax carbo</i>)	Non- Breeding	-	WA, BoCCI Amber List

Species	Survey Season*		Protection and Conservation Status**
	Breeding	Wintering	
Greenfinch (<i>Chloris chloris</i>)	Probable	-	WA, BoCCI Amber List
Grey wagtail (<i>Motacilla cinerea</i>)	Probable	-	WA, BoCCI Red List
Herring gull (<i>Larus argentatus</i>)	Possible	Present	WA, BoCCI Amber List
House Martin (<i>Delichon urbicum</i>)	Non- Breeding	-	WA, BoCCI Amber List
House Sparrow (<i>Passer domesticus</i>)	Possible	-	WA, BoCCI Amber List
Kestrel (<i>Falco tinnunculus</i>)	-	Present	WA, BoCCI Red List
Lesser black-backed gull (<i>Larus fuscus</i>)	Possible	-	WA, BoCCI Amber List
Light-Bellied Brent Goose (<i>Branta bernicla hrota</i>)	-	Present	WA, BoCCI Amber List
Linnet (<i>Carduelis cannabina</i>)	Probable	-	WA, BoCCI Amber List
Mallard (<i>Anas platyrhynchos</i>)	Possible	-	WA, BoCCI Amber List
Meadow Pipit (<i>Anthus pratensis</i>)	Possible	-	WA, BoCCI Red List
Peregrine Falcon (<i>Falco peregrinus</i>)	Probable	-	WA, EU BD Annex I, BoCCI Green List
Sand Martin (<i>Riparia riparia</i>)	Confirmed	-	WA, BoCCI Amber List
Starling (<i>Sturnus vulgaris</i>)	Confirmed	-	WA, BoCCI Amber List
Swallow (<i>Hirundo rustica</i>)	Non- Breeding	-	WA, BoCCI Amber List
Willow Warbler (<i>Phylloscopus trochilus</i>)	Possible	-	WA, BoCCI Amber List
Non-target Species			
Blackbird (<i>Turdus merula</i>)	Possible	-	WA, BoCCI Green List
Blackcap (<i>Sylvia atricapilla</i>)	Possible	-	WA, BoCCI Green List
Blue Tit (<i>Cyanistes caeruleus</i>)	Possible	-	WA, BoCCI Green List
Chaffinch (<i>Fringilla coelebs</i>)	Probable	-	WA, BoCCI Green List
Coal Tit (<i>Parus ater</i>)	Possible	-	WA, BoCCI Green List
Dunnock (<i>Prunella modularis</i>)	Possible	-	WA, BoCCI Green List
Feral Pigeon (<i>Columba livia f. Domestica</i>)	Non- Breeding	-	WA
Fieldfare (<i>Turdus pilaris</i>)	-	Present	WA, BoCCI Green List
Goldcrest (<i>Regulus regulus</i>)	Possible	-	WA, BoCCI Green List
Goldfinch (<i>Carduelis carduelis</i>)	Possible	-	WA, BoCCI Green List
Great Black-backed Gull (<i>Larus marinus</i>)	Non- Breeding	-	WA, BoCCI Green List
Grey Heron (<i>Ardea cinerea</i>)	-	Present	WA, BoCCI Green List
Hooded Crow (<i>Corvus cornix</i>)	Possible	-	WA, BoCCI Green List

Species	Survey Season*		Protection and Conservation Status**
	Breeding	Wintering	
Jackdaw (<i>Corvus monedula</i>)	Possible	-	WA, BoCCI Green List
Long-tailed Tit (<i>Aegithalos caudatus</i>)	Possible	-	WA, BoCCI Green List
Magpie (<i>Pica pica</i>)	Probable	-	WA, BoCCI Green List
Robin (<i>Erithacus rubecula</i>)	Possible	-	WA, BoCCI Green List
Stonechat (<i>Saxicola 15orquate</i>)	Confirmed	-	WA, BoCCI Green List
Wood Pigeon (<i>Columba palumbus</i>)	Probable	-	WA, BoCCI Green List
Wren (<i>Troglodytes troglodytes</i>)	Possible	-	WA, BoCCI Green List

3.1 Target Species Accounts – Onshore Study Area

21. The following sections provide a summary of the observations for each target species (red or amber listed species, Annex I species and SCIs, green listed species which may be subject to impacts) within the onshore study area with reference to the landfall, onshore and ESB network cables and onshore substation (where relevant).

3.1.1 Buzzard (BoCCI Green List)

22. Buzzard is a widespread breeding and wintering species around the island of Ireland. Buzzard was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer et al. 2013).
23. Buzzard were recorded within the onshore study area during the breeding seasons of 2022 and 2023 and during the winter season in 2023. A total of 26 observations were recorded over the survey period during the walkover bird surveys and breeding raptor surveys, the peak abundance being three birds in July 2023. The majority of these records related to non-breeding birds, but the species has been recorded as a confirmed breeder within the study area, as adults were observed near suitable breeding habitat (consisting of mature trees and treelines) and juveniles were observed later in the breeding season at this location. The exact location of a nest was not identified, however based on the records of adults and juveniles, a probable breeding area was identified within the onshore study area near the proposed grid connection route on ESB grounds.

3.1.2 Common Sandpiper (BoCCI Amber List)

24. Common Sandpiper are mainly found to the north and west of the country, where they breed near waterbodies such as lakes, rivers or coasts. Common Sandpiper was recorded wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer et al. 2013).
25. Common Sandpiper were recorded within the study area during the breeding survey season only, when two were recorded in April 2022. They were recorded foraging on rock armour, immediately north of the proposed onshore substation. There was no breeding activity noted and they were not

subsequently recorded (following the April 2022 sighting), indicating these individuals were on migration to breeding grounds elsewhere.

26. No Common Sandpiper were recorded over the winter season, which is as expected, as only small numbers winter in Ireland, mainly along the southern coast. The majority of the Irish population winters around the Mediterranean and western Africa.

3.1.3 Greenfinch (BoCCI Amber)

27. Greenfinch is a widespread breeding and wintering species around the island of Ireland. Greenfinch were recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
28. Greenfinch were recorded within the onshore study area in May 2021, between April and July 2022 and between April and July 2023. A total of 34 observations were recorded over the survey period, the peak abundance being five in April 2022. The majority of these records (32) related to possible breeding birds, which were adults observed in or near suitable breeding habitat (consisting of hedges, parks, and scrub) or males heard singing in suitable breeding habitat. Seven of these possible records were located within the footprint of the proposed onshore substation. There were three observations of probable breeding, where pairs were observed in courtship / display. One pair was located within the footprint of the proposed onshore substation and the other pair were located to the east of study area, approximately 320 m from the nearest proposed infrastructure (onshore substation); however, in subsequent visits no nest or breeding activity was confirmed. There was one confirmed record of breeding within Irishtown Nature Park, approximately 320 m from the nearest proposed infrastructure (grid connection route); where a pair was observed carrying nesting material.
29. Greenfinch was absent during the winter seasons within the onshore study area.

3.1.4 Grey Wagtail (BoCCI Red List)

30. Grey Wagtail is a widespread breeding and wintering species around the island of Ireland. Grey Wagtail was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
31. Grey Wagtail were recorded within the onshore study area on two occasions in April 2022 and June 2023. In April 2022 a pair were observed along the pier wall to the north of the study area. These individuals were recorded as a probable breeding pair, as both were recorded interacting with each other in and near suitable breeding habitat, during the breeding season. The pair was located approximately 150 m from the nearest proposed infrastructure (onshore substation); however, in subsequent visits, this pair was not recorded again, and no nest or breeding activity was confirmed.
32. Grey Wagtail were absent during the winter seasons within the onshore study area.

3.1.5 Herring Gull (BoCCI Amber List)

33. Herring Gull is a widespread breeding and wintering species around the Irish coastline. Herring Gull was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the BirdAtlas 2007-2011 surveys (Balmer *et al.* 2013).
34. Herring Gulls were recorded in April and May in 2021 and 2022 during the breeding season but no observations during the winter season. A total of 341 were recorded over the survey period, the peak abundance being 100 in April 2022. These records related entirely of non-breeding birds, who were

observed feeding, roosting or flying over the study area. The Herring Gull records were relatively scattered throughout the onshore study but was recorded roosting on the piers / jetties in the Liffey estuary. There was no evidence of breeding within the study area.

3.1.6 House Martin (BoCCI Amber List)

35. House Martin is a widespread breeding species around the island of Ireland. House Martin was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
36. House Martin were recorded within the onshore study area on one occasion in May 2021. There was no breeding activity observed and this individual was only recorded flying and foraging over the study area. There were no House Martins recorded in subsequent visits.
37. House Martin was absent during the winter seasons, which is as expected, as the species typically overwinters in tropical Africa.

3.1.7 Kestrel (BoCCI Red List)

38. Kestrel is a widespread breeding species around the island of Ireland. Kestrel was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the BirdAtlas 2007-2011 surveys (Balmer *et al.* 2013).
39. Kestrel was recorded within the onshore study area on one occasion in December 2022. The female bird was recorded flying and foraging over the study area and was not recorded in subsequent visits.

3.1.8 Lesser Black-backed Gull (BoCCI Amber List)

40. Lesser Black-backed Gull is a widespread breeding and wintering species around the Irish coastline, while there are also scattered inland breeding colonies. Lesser Black-backed Gull was recorded breeding and wintering in the hectads (10x10km squares) around the study area during the BirdAtlas 2007-2011 surveys (Balmer *et al.* 2013).
41. Lesser Black-backed Gulls were recorded within the onshore study area in April and May 2022. A total of two were recorded over the survey period. These records related entirely of non-breeding birds, who were observed resting within the study area. The species was not seen again in subsequent visits and was not recorded during the winter season.

3.1.9 Light-bellied Brent Goose (BoCCI Amber List)

42. Light-bellied Brent Goose, which is a special conservation interest species of the North Bull Island SPA and the South Dublin Bay and River Tolka Estuary SPA, is a widespread wintering species around the Irish coastlines. The species was recorded wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
43. Light-bellied Brent Goose were recorded within the study area on one occasion in January 2023. A total of 22 were recorded foraging on the amenity grassland / playing pitches in Sean Moore Park to the west of the study area. The species was not recorded again in subsequent visits and was not recorded during the breeding season.

3.1.10 Linnet (BoCCI Amber List)

44. Linnet is a widespread breeding and wintering species around the island of Ireland. Linnet was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
45. Linnets were recorded within the onshore study area in May 2021 and between April and July in 2022 and 2023. A total of 96 observations were recorded over the survey period, the peak abundance being six in April 2022. The majority of these records (58) related to possible breeding birds, who were adults observed in or near suitable breeding habitat (consisting of rough grassland or gorse scrub) or males heard singing in suitable breeding habitat. There were 18 observations of probable breeding, where a pair was observed in courtship / display or were observed building a nest. Six of these probable breeding records were located within the footprint of proposed infrastructure, five at the proposed substation and one at the landfall area. However, no nest or breeding activity was confirmed at these locations in subsequent visits. The remaining observations consisted of non-breeding birds flying over or feeding within the study area.
46. Linnets were absent during the winter seasons within the onshore study area. The species tends to form wintering flocks and it is possible the breeding population moved away from the study area to join a winter flock elsewhere.

3.1.11 Mallard (BoCCI Amber List)

47. Mallard is a widespread breeding and wintering species around the island of Ireland. Mallard was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
48. Mallards were recorded within the study area in April and May 2022 and April 2023. A total of eleven were recorded over the survey period. These records related entirely of non-breeding birds, who were observed resting within the study area. The species was not seen again in subsequent visits and was not recorded during the winter season.

3.1.12 Meadow Pipit (BoCCI Red List)

49. Meadow Pipit is a widespread breeding and wintering species around the island of Ireland. Meadow Pipit was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
50. Meadow Pipits were recorded within the onshore study area in April 2022 and February, March and April 2023. A total of ten observations were recorded over the survey period, the peak abundance being three. Of these records, three related to possible breeding birds, who were adults observed in or near suitable breeding habitat (consisting of rough grassland). These records were located to the east of study area / Poolbeg Peninsula, approximately 500 m from the nearest proposed infrastructure (onshore substation). No nest or breeding activity was confirmed in subsequent visits. The remaining observations related to flying or foraging non-breeding individuals.

3.1.13 Peregrine Falcon (BoCCI Green List, EU BD Annex I)

51. Peregrine is a widespread, but scarce breeding species in Ireland, nesting on coastal cliffs and inland quarries and buildings. It is widespread along the coastline but only has a scattered distribution inland.

Peregrine Falcon was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).

52. Peregrine Falcon was recorded within the onshore study area during raptor surveys only and was observed every survey between March to September in 2022 and 2023. The Raptor Survey recorded a pair of Peregrine Falcon holding a territory and attempting to breed at the disused Poolbeg chimneys. The pair were unsuccessful at breeding in 2022 and 2023 but were strongly territorial early in the breeding season. They made frequent visits to the nest box, remaining in it for various periods and returning to the nest box post-breeding season i.e. in September. The pair remained in the area for the remainder of the season and were seen actively hunting throughout the area.
53. The tiercel (male Peregrine Falcon) is the more active hunter of the pair. Large periods were spent perched on both chimneys, waiting to ambush feral pigeons returning to the disused buildings below. The pair were also recorded moving north of the study area to hunt the Tern colonies on the floating pontoons in Dublin Port and possibly to also hunt birds around Bull Island and the greater Dublin Bay area.
54. The pair were not regularly recorded making use of or hunting within the study area, with the only activity noted as flying over, and on one occasion a stoop hunt was observed on the land adjacent to the proposed onshore substation site.

3.1.14 Sand Martin (BoCCI Amber List)

55. Sand Martin are a widespread breeding species around the island of Ireland. Sand Martin was recorded breeding in the hectads (10x10 km squares) around the onshore study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
56. Sand Martin were recorded within the onshore study area in May 2021, April and July 2022 and from May to July 2023. A total of 50 were recorded over the survey period, the peak abundance being 29 in April 2022. Confirmed breeding activity for Sand Martin was recorded in 2023, when birds were recorded entering probable nest holes within a harbour quay wall within the footprint of the proposed substation over the survey period. A maximum of 12 birds were recorded flying around this area and a minimum of four nest holes / entrances. Copulation was also recorded on one occasion within the footprint of the onshore substation. All remaining records related to flying or foraging individuals.
57. Sand Martin was absent during the winter seasons, which is as expected, as the species typically overwinters in sub-Saharan Africa.

3.1.15 Starling (BoCCI Amber List)

58. Starlings are a widespread breeding and wintering species around the island of Ireland. Starling was recorded breeding and wintering in the hectads (10x10 km squares) around the onshore study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
59. Starlings were recorded within the onshore study area in May 2021, April, May, June July and December 2022. A total of 394 observations were recorded over the survey period, the peak abundance being 200 in December 2022. The majority of these records (382) related to non-breeding birds, who were observed feeding, roosting or flying. The species was recorded as possibly breeding in the area, due to adults being recorded in or near suitable breeding habitat (consisting of holes or crevasses in buildings or trees) during the breeding season. A total of 11 possible breeding records were noted. There was an instance of confirmed breeding in May 2021, when an adult was observed carrying a faecal sack. The exact location of the confirmed nest was not identified as the bird was seen

in flight over an area of scrub but shows the species can and does breed within the onshore study area.

3.1.16 Swallow (BoCCI Amber List)

60. Swallows are a widespread breeding species around the island of Ireland. Swallow were recorded breeding in the hectads (10x10 km squares) around the onshore study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
61. Swallows were recorded within the onshore study area in May 2021 and April and May 2022. A total of nine were recorded over the survey period, the peak abundance being seven in May 2021. There was no breeding activity noted for Swallows. All records related to flying or foraging individuals. No Swallows were recorded during the July surveys, indicating the species is not dependent on the project site and may only pass through the onshore study area, while on spring migration to breeding sites.
62. Swallow was absent during the winter seasons, which is as expected, as the species typically overwinters in southern Africa.

3.2 Target Species Accounts – Estuarine/Liffey Study Area

3.2.1 Arctic Tern (BoCCI Red List, EU BD Annex I)

63. Arctic Tern is a localised breeding species around the Irish coastline, with some inland breeding colonies on islands in lakes. The species is a summer visitor only and winters off the coast of south Africa and as far south as Antarctica. Arctic Tern was recorded breeding in the hectads (10x10 km squares) around the estuarine / Liffey study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
64. Arctic Tern has been recorded nesting within the estuarine / Liffey study area over a number of breeding seasons, where the population is monitored by the Dublin Bay Birds Project (DBBP) since 2013. Arctic Tern only breeds on the CDL dolphin, located approximately 25 m from the nearest proposed infrastructure (onshore substation). The most up to date available results show a total of 5 nests were recorded in 2022, which is lower than previous years (see **Table 4**).

Table 4 Number of Arctic Tern nests per season since DBBP began (Boland *et al.*, 2022)

Structure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CDL	25	76	50	0	24	105	97	58	43	5

65. During the 2022 and 2023 breeding season a target survey was undertaken by ALCNature on behalf of Codling Wind Park Limited to assess disturbance for the breeding Arctic Tern on the CDL dolphin. The results concluded that the terns within this study area have significantly habituated to high levels of background disturbance and show low levels of disturbance to several current forms of more severe sporadic disturbance events (boats, traffic, predators, humans and aircraft). Experimental disturbances tested (in the form of personnel, machinery, light and moderate noise) had minimal apparent disturbance effects on Arctic Terns on the CDL dolphin. More details on these results can be seen in **Appendix 10.9 Investigation of disturbance tolerance of terns breeding near proposed substation site**.

3.2.2 Black-headed Gull (BoCCI Amber List)

66. Black-headed Gull, a special conservation interest species of the North Bull Island SPA and the South Dublin Bay and River Tolka Estuary SPA, is a widespread breeding species around the Irish coastline and some scattered inland colonies. Black-headed Gull was recorded breeding and wintering in the hectads (10x10 km squares) around the estuarine / Liffey study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
67. Black-headed Gulls were recorded in July 2022 during the breeding season and during the winter season in the months December and January 2021 / 2022 and December, February and March 2022 / 2023. A total of 1,345 were recorded over the survey period, the peak abundance being 500 in December 2022. These records related entirely of non-breeding birds, who were observed feeding, roosting or flying over the study area. The majority of the Black-headed Gull records (1212) were located on the piers / jetties in the Liffey estuary, where they were often recorded roosting. There was no evidence of breeding within the study area.

3.2.3 Black Guillemot (BoCCI Amber List)

68. Black Guillemot is a widespread breeding species around the Irish coastline and does not generally breed inland. Its winter distribution is also largely restricted to the coastal fringes. Black Guillemot was recorded breeding and wintering in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
69. Black Guillemot were recorded within the estuarine/Liffey study area between April and July 2022 and April and June 2023. A total of 53 were recorded over the survey period, the peak abundance being eight in April 2022. The majority of these records (20) related to non-breeding birds, who were observed feeding, resting or on the water. The species was recorded breeding in the area, with adults being recorded in or near suitable breeding habitat (crevasses in manmade structures such as piers or harbour walls or under boulders and rocks) during the breeding season. A total of nine probable and confirmed breeding records were noted. These were located to the north of the study area/Poolbeg Peninsula, with the nearest confirmed nest being approximately 1 m from the nearest proposed infrastructure (onshore substation). More details on these results and their locations can be seen in **Appendix 10.10: Black Guillemot Survey 2023**.
70. Black Guillemot was absent during the winter seasons within the estuarine / Liffey study area, which is as expected, as this species typically overwinters on water near inshore areas.

3.2.4 Common Tern (BoCCI Amber List, EU BD Annex I)

71. Common Tern is a localised breeding species around the Irish coastline, with some inland breeding colonies on islands in lakes. The species is a summer visitor only and winters off the coast of west Africa. Common Tern was recorded breeding in the hectads (10x10 km squares) around the study area during the Bird Atlas 2007-2011 surveys (Balmer *et al.* 2013).
72. Common Tern has been recorded nesting within the study area over a number of breeding seasons, where the population is monitored by the Dublin Bay Birds Project (DBBP) since 2013. Common Tern breed on the ESB dolphin, located approximately 250 m from the nearest proposed infrastructure (onshore substation), the most up to date available results show a total of 138 nests were recorded in 2022, which is lower than previous years (see **Table 5**).

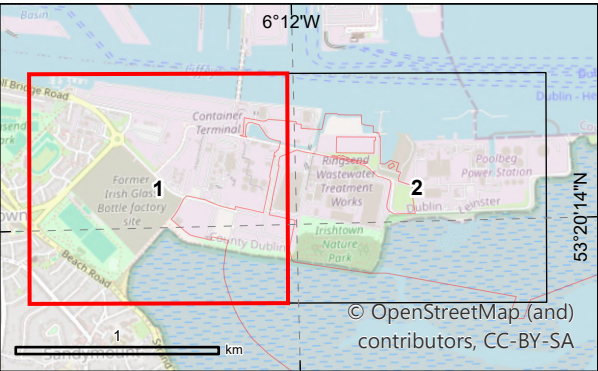
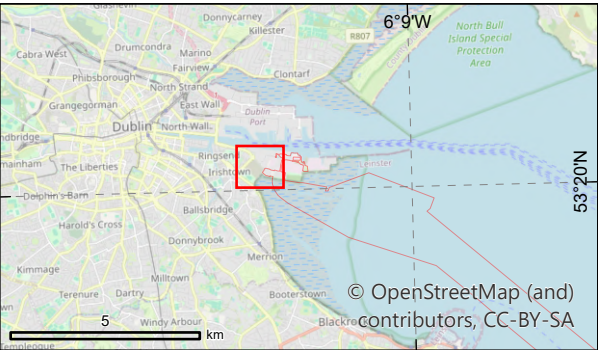
Table 5 Number of Common Tern nests per season since DBBP began (Boland *et al.*, 2022)

Structure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
SPA Platform (ESB Dolphin)	418	427	416	382 ¹	N/A ²	156	261	204	182	138

¹ Estimated due to partial count

² Platform replaced in 2017: no data gathered.

73. During the 2022 and 2023 breeding season an target survey was undertaken by ALCnature on behalf of Codling Wind Park Limited to assess disturbance for the breeding Common Tern on the ESB Dolphin. The results concluded that the terns within this study area have habituated to high levels of background disturbance and show low levels of disturbance to several current forms of more severe sporadic disturbance events (boats, traffic, predators, humans and aircraft). Experimental disturbances tested (in the form of personnel, machinery, light and moderate noise) had minimal apparent disturbance effects on Common Terns on the ESB dolphin (see **Appendix 10.9 Investigation of disturbance tolerance of terns breeding near proposed substation site**).




Legend

- Planning application boundary
- High water mark
- Onshore ornithology study area
- Estuarine/Liffey ornithology study area

Breeding Bird Species 2021-2023

Blackbird	House martin
Blackcap	Herring gull
Blue tit	Hooded crow
Chaffinch	House sparrow
Coal tit	Jackdaw
Dunnock	Linnet
Goldcrest	Magpie
Goldfinch	Mallard
Greenfinch	Robin
	Sand martin
	Starling
	Swallow
	Woodpigeon
	Wren



Project:

Coodling Wind Park

Contractor:

TOBIN

Website:

www.tobin.ie

Appendix 10.8

Figure 1.3

Breeding bird survey results 2021 – 2023

Page 1 of 2

CWP doc. number:

CWP-TOB-ENG-08-01-MAB-1181

Internal descriptive code:

PB - PAB_SS_PP_PL - HWM_ORNTH_ONSH..
ORNTH_ESTU_LIFFEY_S.BIRD_BREED -
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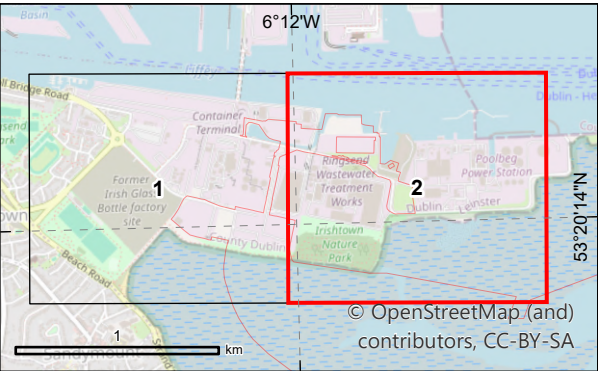
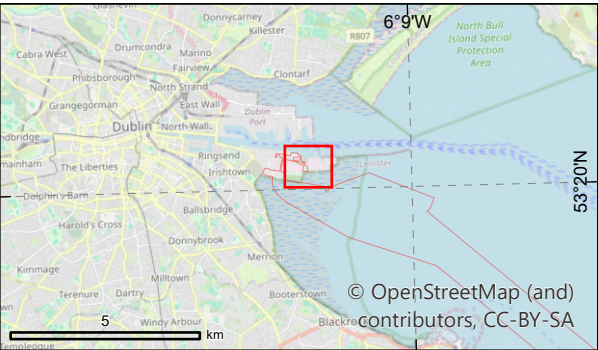
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Rev.	Updates	Date	By	Chk'd	App'd
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Legend	
 Planning application boundary	■ Grey wagtail
 Onshore substation boundary (operational)	■ Herring gull
 High water mark	■ Lesser black-backed gull
 Onshore ornithology study area	▲ Linnet
 Estuarine/Liffey ornithology study area	▲ Long-tailed tit
Breeding Bird Species 2021-2023	
● Black guillemot	▲ Magpie
● Black-headed gull	▲ Mallard
● Blackbird	▲ Meadow pipit
● Blackcap	▲ Robin
● Blue tit	▲ Sand martin
● Buzzard	▲ Starling
● Chaffinch	▲ Stonechat
● Common sandpiper	▲ Unknown gull
● Common tern	▲ Willow warbler
● Cormorant	◆ Woodpigeon
● Dunnock	◆ Wren
■ Feral pigeon	◆ Peregrine falcon
■ Goldcrest	◆ Arctic tern
■ Goldfinch	◆ Buzzard
■ Great black-backed gull	◆ Common tern
■ Greenfinch	



Project:

Codling Wind Park

Contractor:

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Appendix 10.8

Figure 1.3

Breeding bird survey results 2021 – 2023

Page 2 of 2

CWP doc. number:

CWP-TOB-ENG-08-01-MAB-1181

Internal descriptive code:
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ORNTH_ESTU_LIFFEY_S.BIRD_BREED -
(EIAR.Vol.04.Ch.10.Ap.08.FIG.01.03)

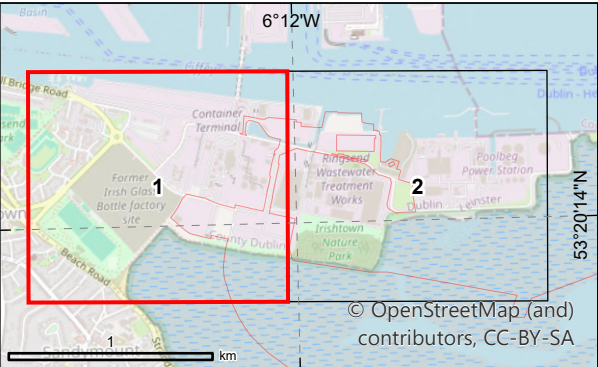
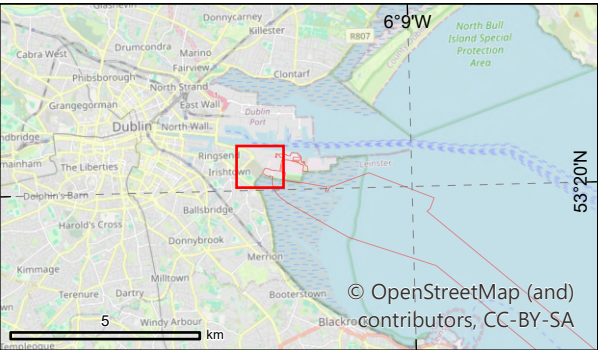
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Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/19	SP	DM/EA	ES



Legend

Planning application boundary

Onshore substitution boundary (operational)

High water mark

Onshore ornithology study area

Estuarine/Liffey ornithology study area

Confirmed breeding status

Probable breeding status

Possible breeding status


Unknown breeding status

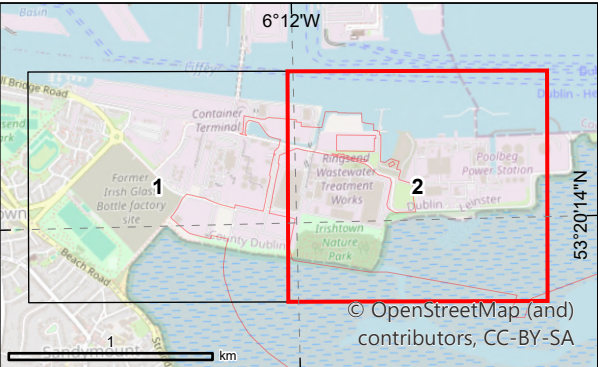
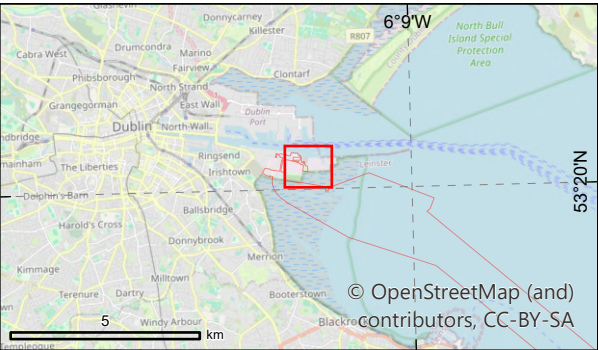
Confirmed breeding status

Probable breeding status

Possible breeding status

Unknown breeding status

		Project: Codling Wind Park		Contractor: TOBIN Website: www.tobin.ie			
Appendix 10.8							
Figure 1.4							
Breeding bird status 2021 – 2023							
Page 1 of 2							
CWP doc. number: CWP-TOB-ENG-08-01-MAB-1182							
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Legend

Planning application boundary

Onshore substation boundary (operational)

High water mark

Onshore ornithology study area

Estuarine/Liffey ornithology study area

Confirmed breeding status

Probable breeding status

Possible breeding status

Unknown breeding status

Greenfinch

Herring gull

House sparrow

Lesser black-backed gull

Linnet

Mallard

Meadow pipit

Starling

Willow warbler

Arctic tern

Black guillemot

Buzzard

Common tern

Peregrine falcon

Greenfinch

Grey wagtail

Linnet

Sand martin

Black guillemot

Common sandpiper

Cormorant

Grey wagtail

Herring gull


Linnet

Mallard

Sand martin

Starling

Swallow



Project:

Codling Wind Park

Contractor:

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Appendix 10.8

Figure 1.4

Breeding bird status 2021 – 2023

Page 2 of 2

CWP doc. number:

CWP-TOB-ENG-08-01-MAB-1182

Internal descriptive code:

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ORNTH_ONSH_ORNTH_ESTU_LIFFEY -
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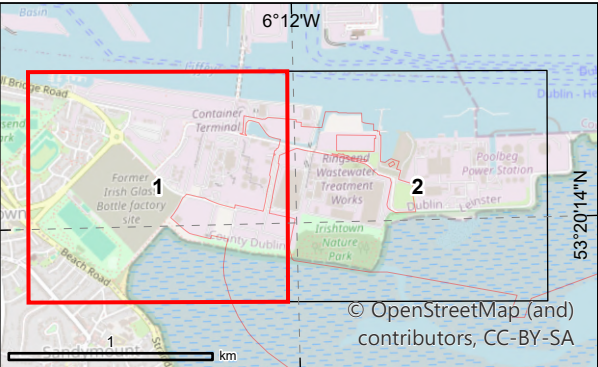
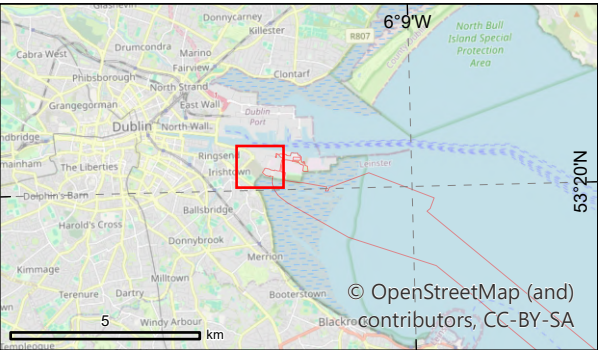
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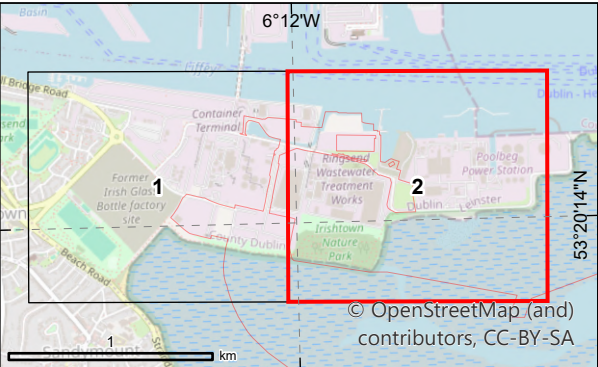
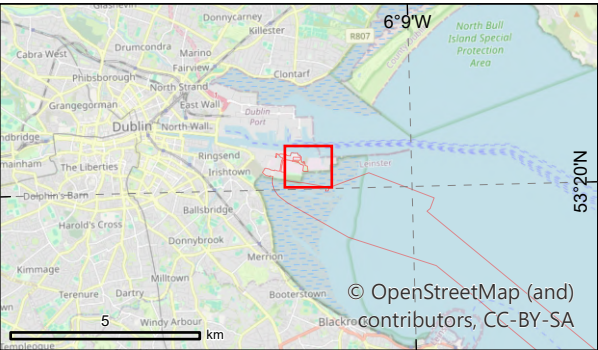
Legend

- Planning application boundary
- High water mark
- Onshore ornithology study area

Winter bird species 2021-2023

- Black-headed gull
- Blackbird
- Brent goose
- Fieldfare
- Oystercatcher

		Project: Codling Wind Park		Contractor: TOBIN Website: www.tobin.ie			
Appendix 10.8 Figure 1.5 Winter bird survey results 2021 – 2023 Page 1 of 2							
CWP doc. number: CWP-TOB-ENG-08-01-MAB-1700							
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Rev.	Updates			Date	By	Chk'd	App'd
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Legend

- Planning application boundary
- Onshore substation boundary (operational)
- High water mark
- Onshore ornithology study area
- Estuarine/Liffey ornithology study area

Winter bird species 2021-2023

- Black-headed gull
- Blackbird
- Buzzard
- Dunnock
- Feral pigeon
- Grey heron
- Kestrel
- Linnet
- Meadow pipit
- Robin
- Starling
- Woodpigeon

		Project: Codling Wind Park		Contractor: TOBIN Website: www.tobin.ie			
Appendix 10.8 Figure 1.5 Winter bird survey results 2021 – 2023 Page 2 of 2							
CWP doc. number: CWP-TOB-ENG-08-01-MAB-1700							
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Rev.	Updates			Date	By	Chk'd	App'd
00	Final for issue			2024/08/19	SP	DM/EA	ES

4 Discussion

74. Target species which will be assessed further for impacts, are those which were recorded during onshore and estuarine / Liffey surveys, and which are considered to be at potential risk due to their abundance and potential sensitivity to impacts. Species have been scoped into the assessment based on the target species criteria and the relative abundance and frequency they were recorded at over the survey period and any relevant designations. **Table 6** presents target species which have been identified for further assessment against identified impacts within **Chapter 10 Ornithology** of the EIAR.

Table 6 Target species to be assessed further within

Species	Justification
Terrestrial Species	
Light-Bellied Brent Goose	Light Bellied Brent Goose was an irregular occurring winter species within the onshore study area over the survey period. However, it is an SCI (non-breeding) of the South Dublin Bay and River Tolka Estuary SPA which is directly adjacent to the onshore project boundary (at the landfall) and is also a SCI of the North Bull Island SPA, which is located c.2.2 km from the onshore substation. It is Amber listed under BoCCI 4 (Gilbert <i>et al.</i> , 2021) and of Least Concern category with regard to IUCN Red List Criteria.
Peregrine Falcon	Peregrine Falcon was a regularly occurring breeding and non-breeding species which occurred in locally important numbers within the onshore study area with a nest site located approx. 300m from the nearest proposed onshore infrastructure is listed in Annex I of the Bird Directive, Green listed under BoCCI (Gilbert <i>et al.</i> , 2021) and of Least Concern category with regard to IUCN Red List Criteria.
Greenfinch Linnet Sand Martin	These species were found to be regularly occurring breeding and wintering species, which occur in locally important numbers within the onshore study area, over the survey period. They are not Annex I listed, or a Birds Directive Migratory species and not SCIs for any designated sites within the Zol of the onshore study area. But are Amber listed under BoCCI (Gilbert <i>et al.</i> , 2021) and Least Concern category with regard to IUCN Red List Criteria.
Grey Wagtail Meadow Pipit	Not included in further assessment. These BoCCI Red listed species were irregularly recorded and were not found in locally important numbers within the onshore study area over the survey period. They are not Annex I listed, or a Birds Directive Migratory species and not SCIs for any designated sites within the Zol of the onshore study area.
Common Sandpiper House Martin Lesser Black-backed Gull Mallard Starling Swallow	Not included in further assessment. These BoCCI Amber listed species were irregularly recorded and were not found in locally important numbers within the onshore study area over the survey period. They are not Annex I listed, or a Birds Directive Migratory species and not SCIs for any designated sites within the Zol of the onshore study area.
Blackbird Blackcap Blue Tit	Not included in further assessment. These BoCCI Green listed species were recorded within the onshore study area over the survey period but were not found in locally important numbers. They are not Annex I listed, or a Birds

Species	Justification
Buzzard Chaffinch Dunnock Feral Pigeon Goldcrest Goldfinch Hooded Crow House Sparrow Jackdaw Long-tailed Tit Magpie Robin Stonechat Wood Pigeon Wren	Directive Migratory species and no designated sites within the Zol of the onshore study area.
Estuarine / Liffey Species	
Arctic Tern	Arctic Tern was a regularly occurring breeding species within the estuarine / Liffey study area over the survey period. It is listed in Annex I of the Bird Directive and is an SCI (post-breeding aggregation) of the South Dublin Bay and River Tolka Estuary SPA. The SPA is directly adjacent to the onshore development boundary (at the landfall), there is also a regularly occurring breeding colony located c. 25 m north of the onshore substation at the CDL Dolphin. It is Amber listed under BoCCI (Gilbert <i>et al.</i> , 2021) and of Least Concern category with regard to IUCN Red List Criteria.
Black Guillemot	Black Guillemot was a regularly occurring breeding species within the estuarine / Liffey study area over the survey period. It is not designated as a SCI of any SPAs, however the number of breeding birds recorded are of local importance. It is Amber listed under BoCCI (Gilbert <i>et al.</i> , 2021) and of Least Concern category with regard to IUCN Red List Criteria.
Black-headed Gull	Black-headed Gull was a regularly occurring species within the estuarine / Liffey study area over the survey period. It is an SCI (non-breeding) of the South Dublin Bay and River Tolka Estuary SPA which is directly adjacent to the onshore development boundary (at the landfall) and the North Bull Island SPA, which is located c.2.2 km from the onshore substation. It is Amber listed under BoCCI (Gilbert <i>et al.</i> , 2021) and of Least Concern category with regard to IUCN Red List Criteria.
Common Tern	Common Tern was a regularly occurring breeding species within the estuarine / Liffey study area over the survey period. It is listed in Annex I of the Bird Directive and is an SCI of the South Dublin Bay and River Tolka Estuary SPA which is directly adjacent to the onshore development boundary (at the landfall), there is also a regularly occurring breeding colony located ca. 200 m northeast of the onshore substation at the ESB Dolphin. It is Amber listed under BoCCI (Gilbert <i>et al.</i> , 2021) and of Least Concern category with regard to IUCN Red List Criteria.

5 References

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