

Appendix 19-2: Intertidal Bird Survey and Onshore Bird Survey Reports





ORIEL WIND FARM PROJECT

**Environmental Impact Assessment Report
Appendix 19-2: Intertidal Bird Survey and
Onshore Bird Survey Reports**

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AQUAFACT

Intertidal Bird Survey for Proposed Landfall Dunany Point, Co. Louth

Produced by

AQUAFACT International Services Ltd

On behalf of

Parkwind

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Introduction

This report contains the results from a baseline intertidal bird survey carried out by AQUAFAC as commissioned by Oriel Windfarms Ltd to cover the landfall sites located to the north (point A) and south (Point B) of Dunany Point, Co. Louth. The counts at Point A took in a period covering two calendar years, December 2017 to December 2019, and one wintering season, September 2018 to March 2019. The survey area north of Dunany Point is located within Dundalk Bay SPA, one of the most important wintering waterfowl sites in the country and one of the few that regularly supports more than 20,000 waterbirds. The survey period for Dunany South began in July 2019 and as such has only six months of data available. This area is outside the Dundalk Bay SPA, see Appendix 4.

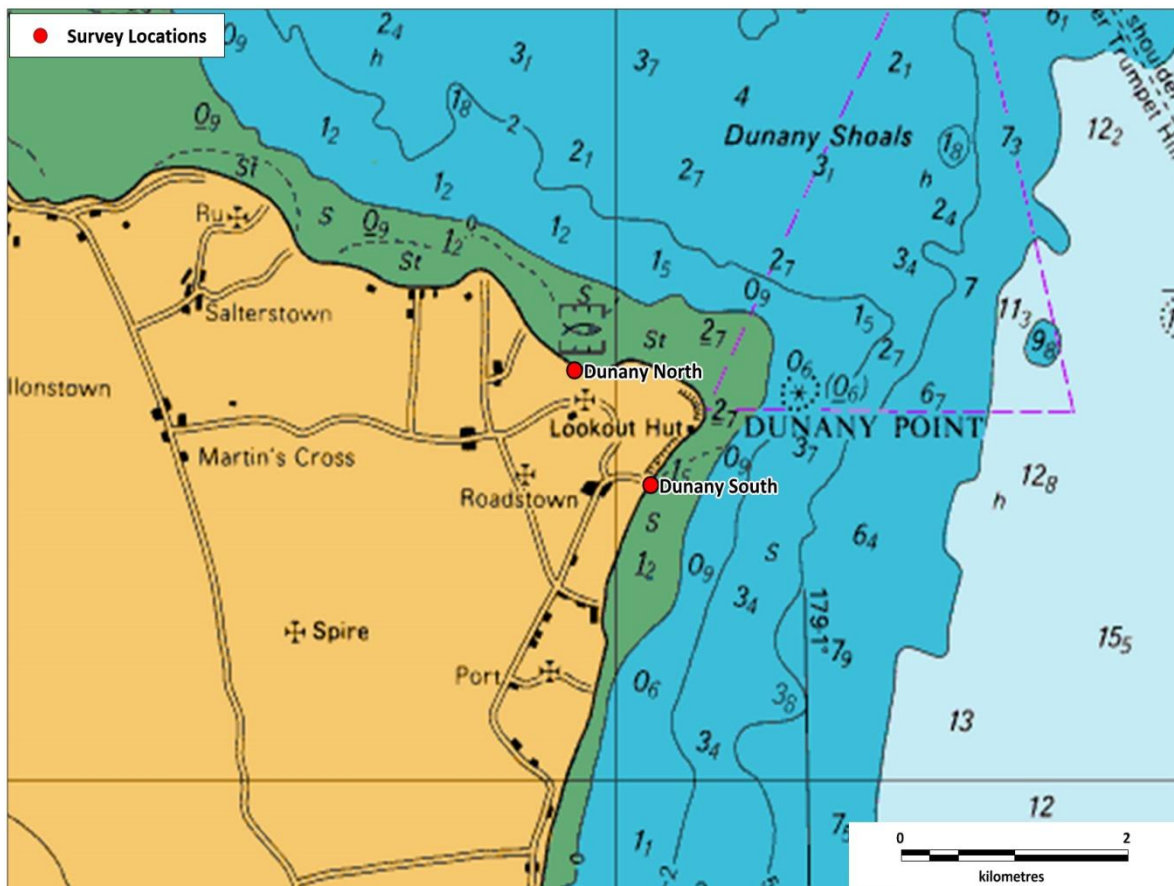


Figure 1: Site locations to north (Site A) and south (Site B) of Dunany Point.

Methodology

The area surveyed encompasses circa 100 metres to the East and 100 metres to the West of the proposed landfall points. A field to the East of the Point A (Dunany North) was also surveyed during the monthly visits as this was noted to be used by migrating birds and waders. The observation point was located in a field raised *ca* 1 metre above the high water mark at Point A and above the upper shore at the end of the road access onto the shoreline at Point B. Surveys are carried out over a six hour period to include 3 hours prior to and 3 hours post high tide (Lewis and Tierney, 2014). Surveys were also carried out to cover a 6 hour period in which low water occurred. Species behaviour, and location of birds are recorded using the designated habitats of subtidal, intertidal, supratidal and terrestrial (Lewis and Tierney 2014). Bird counts are made for a 10 minute period on each hour using both binoculars (10x42 HD) and a telescope. Seashore and seabird species are counted and their behaviour, e.g. foraging, roosting and flying through the site are noted. Environmental conditions such as wind direction, weather, sea state and a qualitative description of the level of turbidity, are recorded throughout. Site disturbances during the survey, i.e. humans, dogs, horses, and their effect on the seabirds are recorded. Disturbances in the survey area can lead to discrepancies in counts and problems in identifying favoured areas used for foraging and roosting through the tidal cycle. The presence of fishing vessels, mainly razor clam suction vessels, was also recorded. Records were also kept of any marine mammals observed during the survey.

Results

3. Dunany North (Point A)

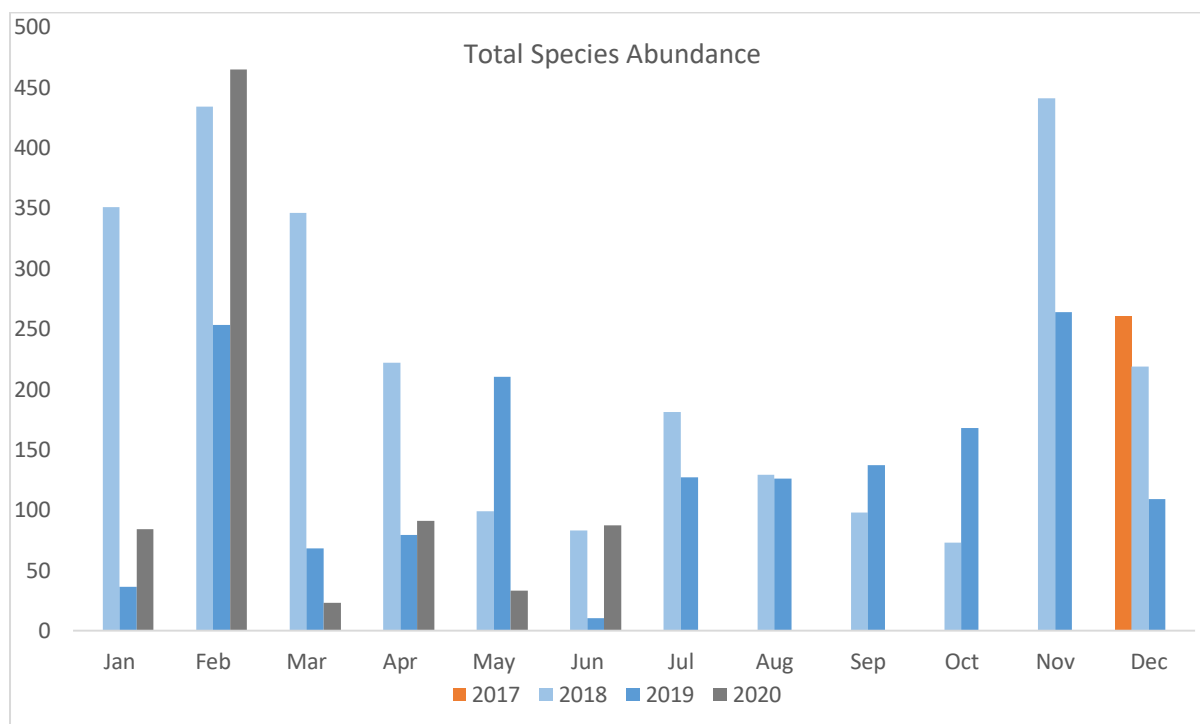
3.1 Abundance

3.1.1 Species of Conservation Interest

The intertidal survey yielded a total of 33 species comprising 4621 individuals. Dundalk Bay SPA has 23 bird species listed as Species of Conservation Interest (SCI), see Appendix 1. Four species occur in numbers of international importance, Light-Bellied Brent Goose, Knot, Bar-tailed Godwit and Black-tailed Godwit, and a further 19 species in numbers of national importance. Of these only Light-bellied Brent Geese and Bar-tailed Godwit were recorded. No counts were made of the SCI species of Greylag Goose, Teal, Pintail, Lapwing, Knot, Black-tailed Godwit and Golden Plover, see Table 1. The seasonal spread for total abundance is represented in Fig. 2.

Table 1. Peak Counts and Total Abundance of SCI species, Dunany North

Species	Peak Count	Total Abundance
Brent Goose	184	353
Shelduck	3	13
Mallard	20	62
Common Scoter	36	84
Red-breasted Merganser	93	326
Great Crested Grebe	1	4
Oystercatcher	300	1911
Ringed Plover	23	48
Grey Plover	6	9
Dunlin	11	17
Redshank	55	371
Bar-tailed Godwit	33	81
Curlew	27	134
Common Gull	16	41
Black Headed Gull	93	360
Herring Gull	81	385

**Fig. 2 Total Abundance of all species by month, Dunany North**

3.1.2 Waders

Species abundance was dominated by wading birds followed by gulls, see Appendix 1. Numbers of wading birds increase from the months of September through to March with the influx of overwintering species, see Fig. 3. Unfortunately poor weather conditions during these months have

affected some counts leading to undercounts at times. Most noticeable is the difference in the January counts of 2018 and 2019, this was as a result of poor visibility during the January 2019 count. In March of 2019 Oystercatcher were the only wading bird species recorded with all counts low on that occasion. The top wading birds are represented in Fig. 4.

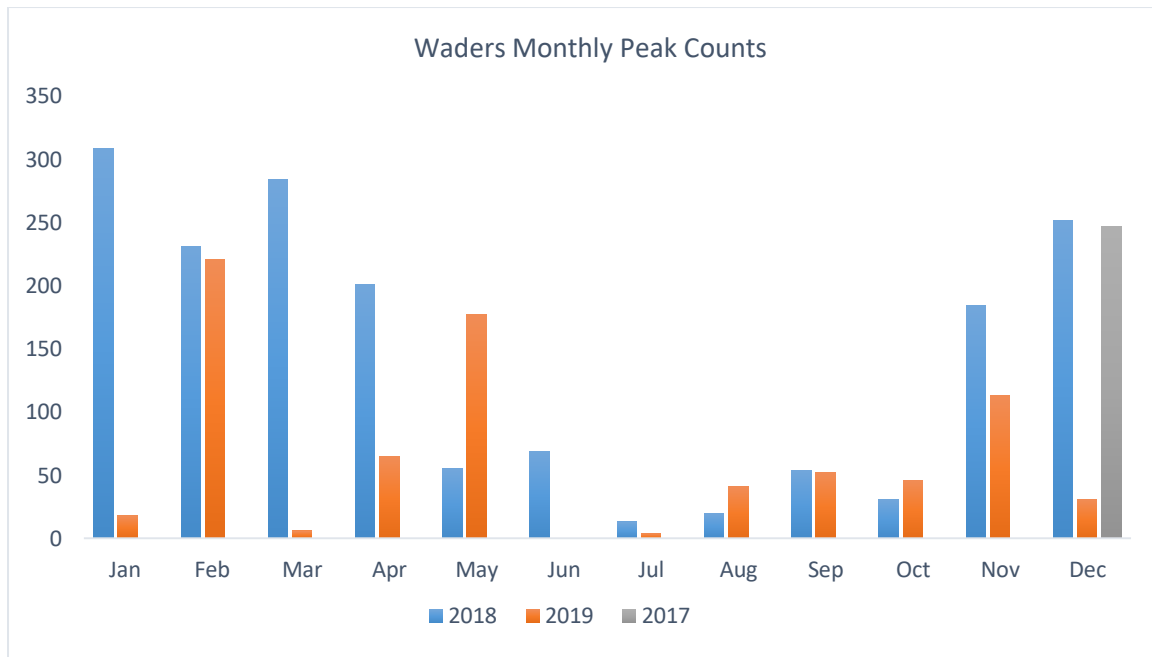


Fig. 3 Peak Counts of wading birds, Dunany North

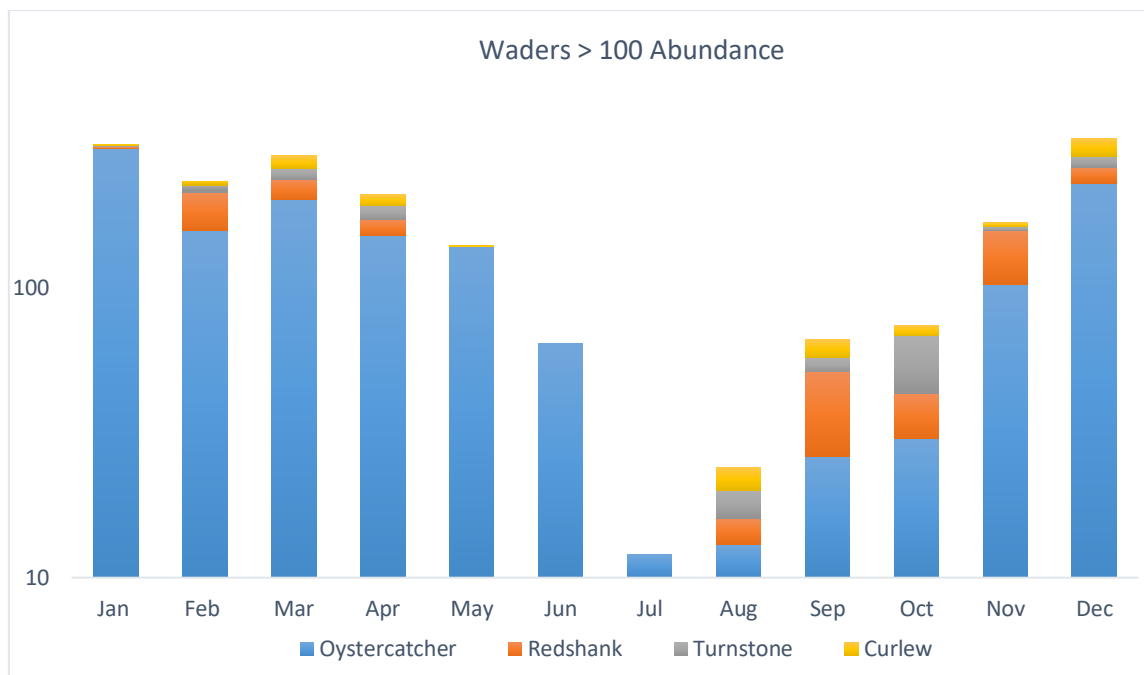


Fig. 4 Peak Counts of wading birds >100 total individuals, Dunany North

3.1.4 Gulls and Terns

Black-headed Gulls and Herring Gulls, both SCI species, dominated the survey counts particularly in the late summer to early winter months, see Fig 5. Low numbers of Common Gulls and Great and Lesser Black-backed Gulls were recorded throughout the survey period.

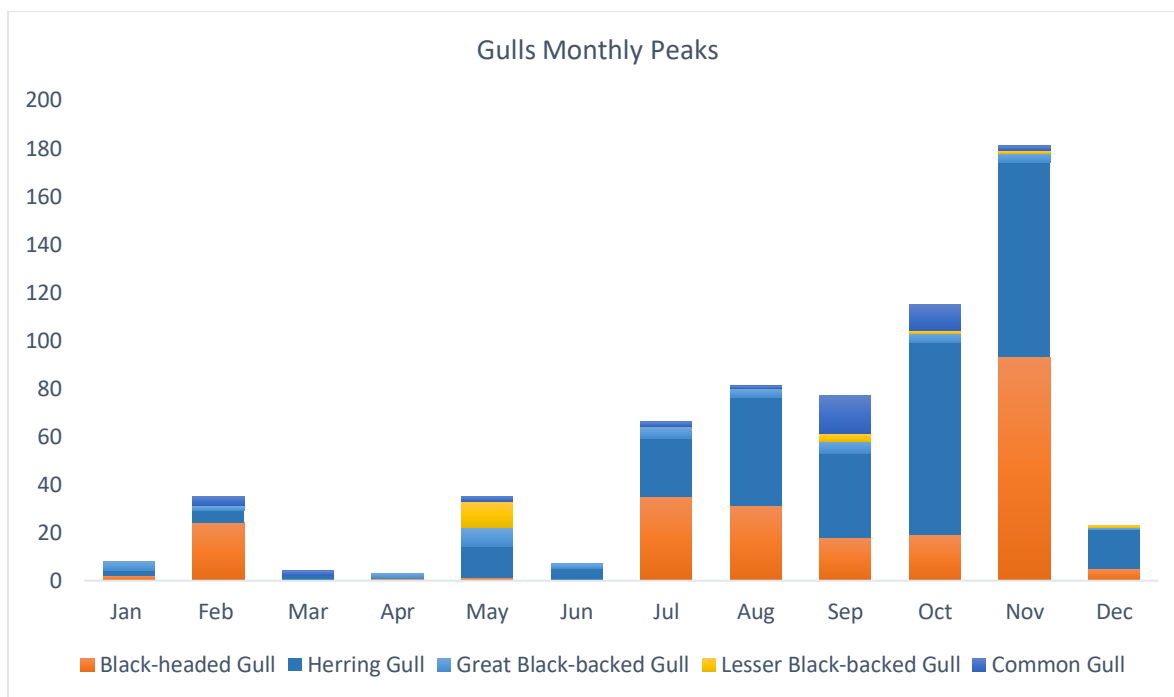


Fig. 5 Monthly peaks for Gull species, Dunany North

Three species of Terns, Common, Arctic and Sandwich were recorded during the summer months of May to September. Common Tern had a peak count of 3 in July 2019 while both other Tern species had peak counts of 2 during the summer months.

3.1.3 Wildfowl

The most abundant species of wildfowl recorded were Light-bellied Brent Geese (Peak: 184) and Red-breasted Merganser (Peak: 96), see Fig. 6. Numbers of Red-breasted Mergansers were boosted with three large counts in July 2018 (93), August 2018 (90) and July 2019 (96). After these three counts the next highest fell to 8 individuals in January 2019. Other SCI wildfowl species recorded occurred in very low numbers. Shelduck (Peak: 3), Mallard (Peak 20) and Common Scoter (Peak 36). The peak count of 36 (Nov 2018) for Common Scoter is followed next by 13 (Dec 2018), thereafter no peak count exceeds 5 individuals.

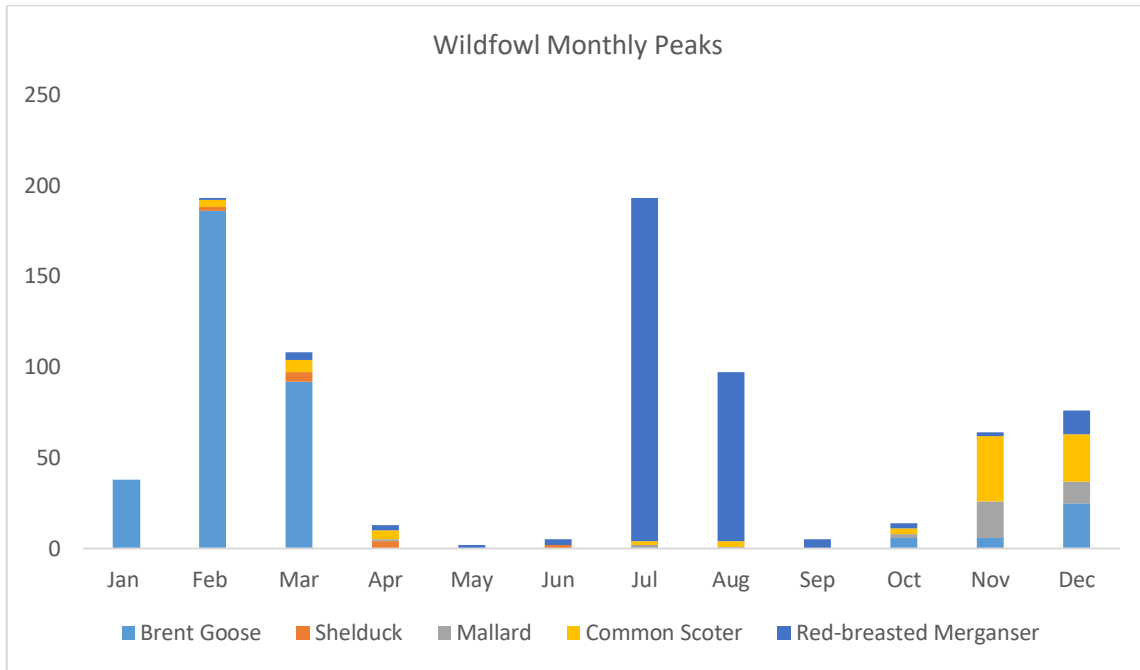


Fig. 6 Monthly peaks for Wildfowl species, Dunany North

3.1.5 Other Species

Other species were recorded in the survey flying through to a maximum distance of 1km from the observation point. Of the other species observed, see Fig. 7, only Cormorant, Heron and Little Egret were recorded intertidally. Cormorants were most abundant as they flew through the survey area before roosting on wooden posts to the west of the survey area. Herons and Little Egrets were observed foraging intertidally. Great Northern Divers were also observed regularly on nearly one in every two surveys (44%), although in low numbers.

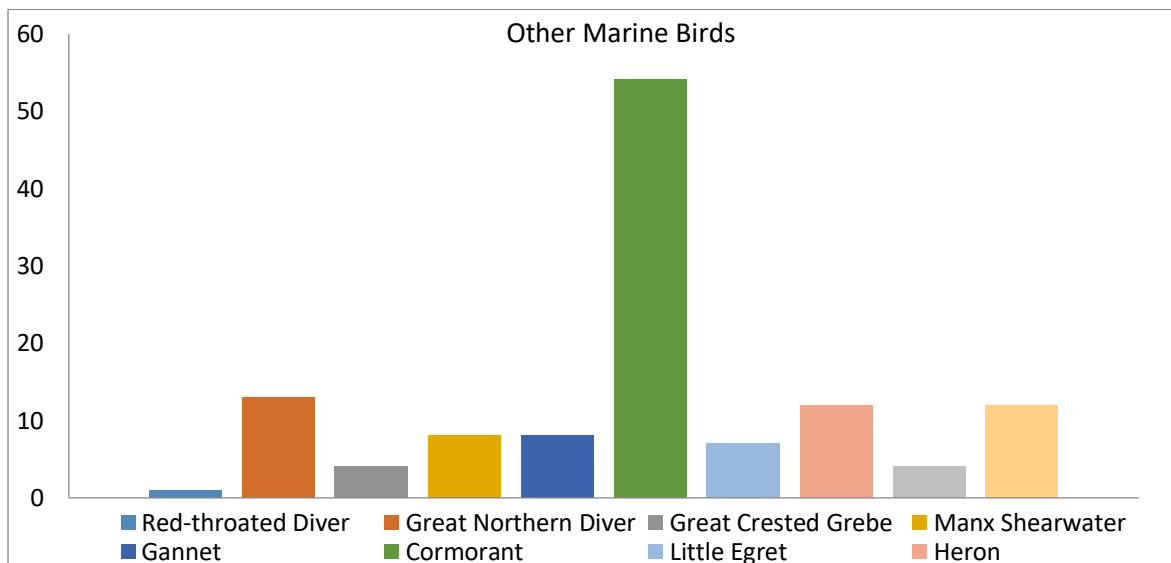


Fig. 7 Total abundance of other marine bird species recorded, Dunany North

3.2.6 Marine Mammals

Marine mammal sightings were recorded over the course of the surveys. A single Grey Seal was recorded during the January, May and July 2019 counts. A single observation of a Harbour Porpoise was recorded in January 2019.

3.2 Distribution and Behaviour

3.2.1 Roosting Sites

Two main supratidal roosting areas were recorded at high water both lying outside the landfall area. The field to the east of the observation point is the only terrestrial habitat used for roosting, see Appendix 3 for list of species and abundance. The main supratidal roosting area was a rocky headland circa 200 metres east of the observation point, see Fig. 8. This was used all year round and by large numbers of gulls and waders equally. This rocky substrate is dominated by gulls with small numbers of Oystercatchers observed foraging in the rocks on occasion. During low tide a small area of sandy substrate in front of the observation point at the upper end of the intertidal zone has been used by black headed gulls for roosting, see Fig. 8. Intertidal wooden posts located to the east of the landfall area are used by roosting cormorants.

November 2018 recorded the highest abundance of roosting birds within the field with 5 species numbering 356 in total peak counts, see Appendix 3. Black-headed Gulls, 152, Oystercatcher, 102, and Redshank, 55, dominated. There were no intertidal species recorded in the field during the Spring/Summer months of April – September. The presence of horses, which are absent in the Autumn/Winter months, along with the natural decrease in birds during the breeding season explain the absence of roosting birds.

Large flocks of Red-breasted Mergansers containing >90 individuals at peak counts, see Appendix 1, were recorded roosting subtidal between 50 and 100 meters from the shoreline.

3.2.2 Foraging Sites

Intertidal foraging is mainly concentrated on two areas circa 50 metres to the east and to the west of the observation point, see Fig. 8, The rocky sandy substrate to the north east of the observation point (B) is dominated by waders such as Oystercatcher, Redshank, Turnstone and Bar-tailed Godwit. The foraging area to the west (A) with the same rocky sandy substrate is dominated by gulls and

Oystercatchers. Curlews were observed foraging between both sites and along the shoreline at low water.

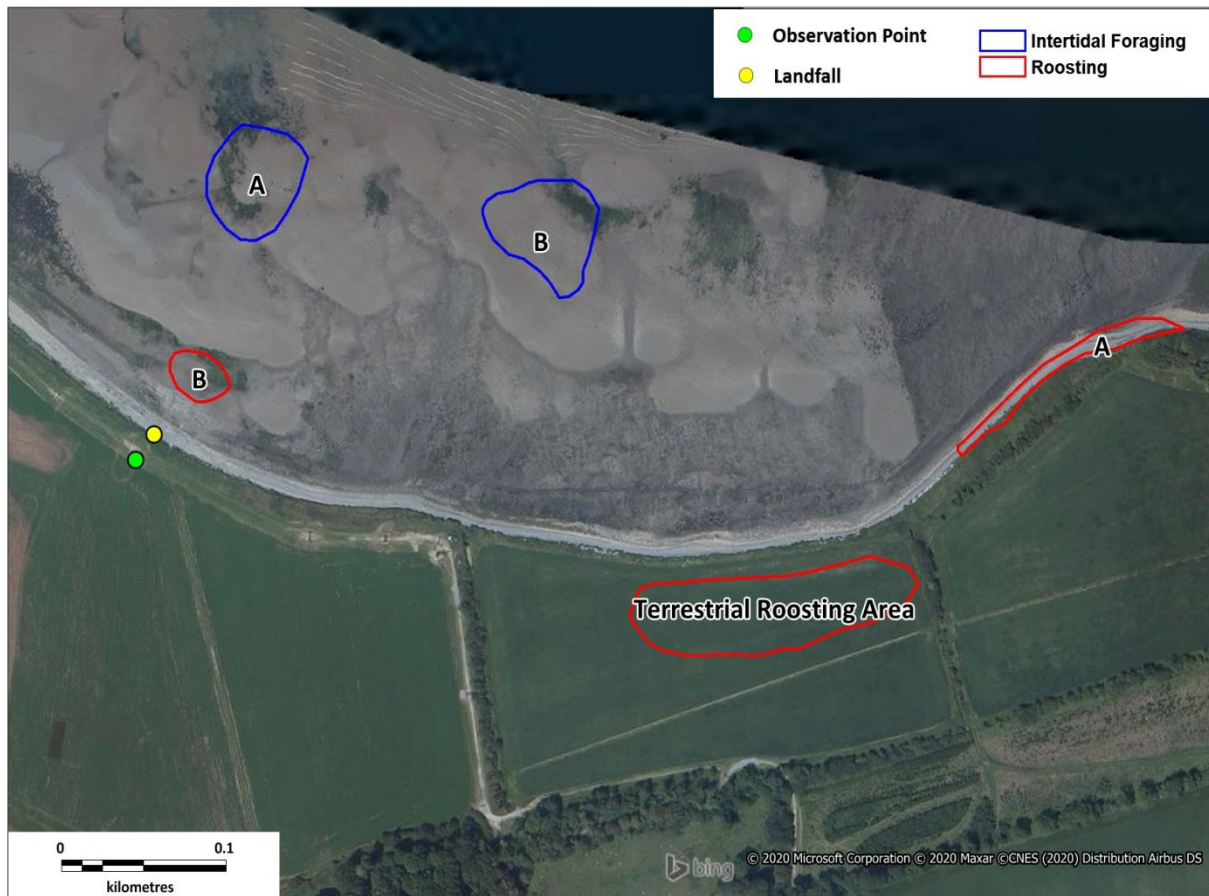


Fig. 8 Intertidal and terrestrial roosting and Foraging sites, Dunany North

4. Dunany South (Point B)

4.1 Abundance

4.1.1 All Species

Over the 12 month intertidal survey period a total of 718 individuals were counted constituting 23 different species. Total species seasonal spread represented in Fig. 9. The Dunany South landfall was dominated by gulls as opposed to waders unlike the Dunany North landfall.

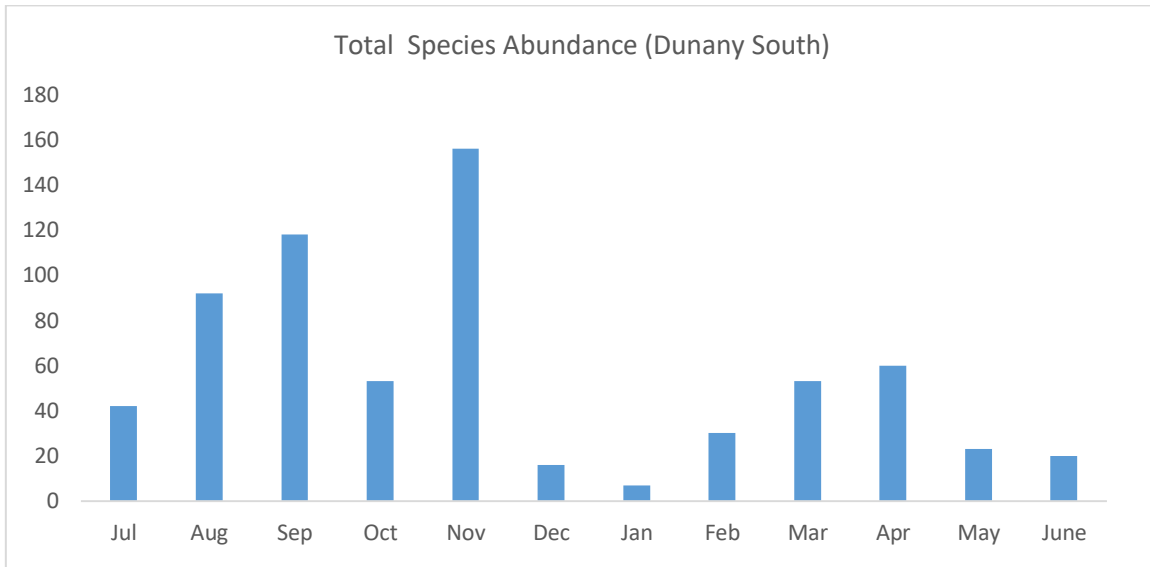


Fig. 9 Total Abundance of all species, Dunany South

4.1.2 Waders

As per Dunany North the Oystercatchers were the most abundant wading bird species with a total count of 93, see Fig. 10, and occur most frequently with only the July survey not recording their presence. Ringed plover, observed in July and September, are the second most abundant wading bird, 55 total individuals, but sit behind both Curlew and Redshank in terms of frequency of observations. A large flock of Ringed Plover, 50, were counted in September thus increasing its overall abundance. This number is far greater than the next largest count of 38 Oystercatcher, also in September. The November count was hampered by strong winds, heavy rain and poor visibility. This may have led to an undercount in small wading birds or their presence in a more sheltered area.

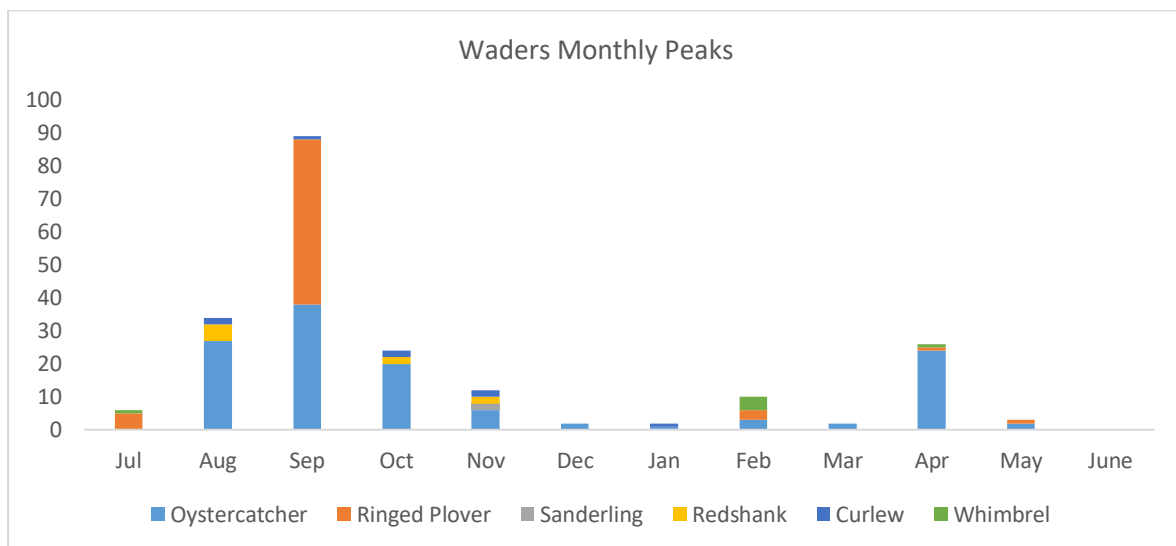


Fig. 10 Monthly peaks for Waders, Dunany South

4.1.3 Gulls and Terns

Dunany South counts have been to date dominated by gull species with an overall abundance of 323 individuals, see Fig. 11.

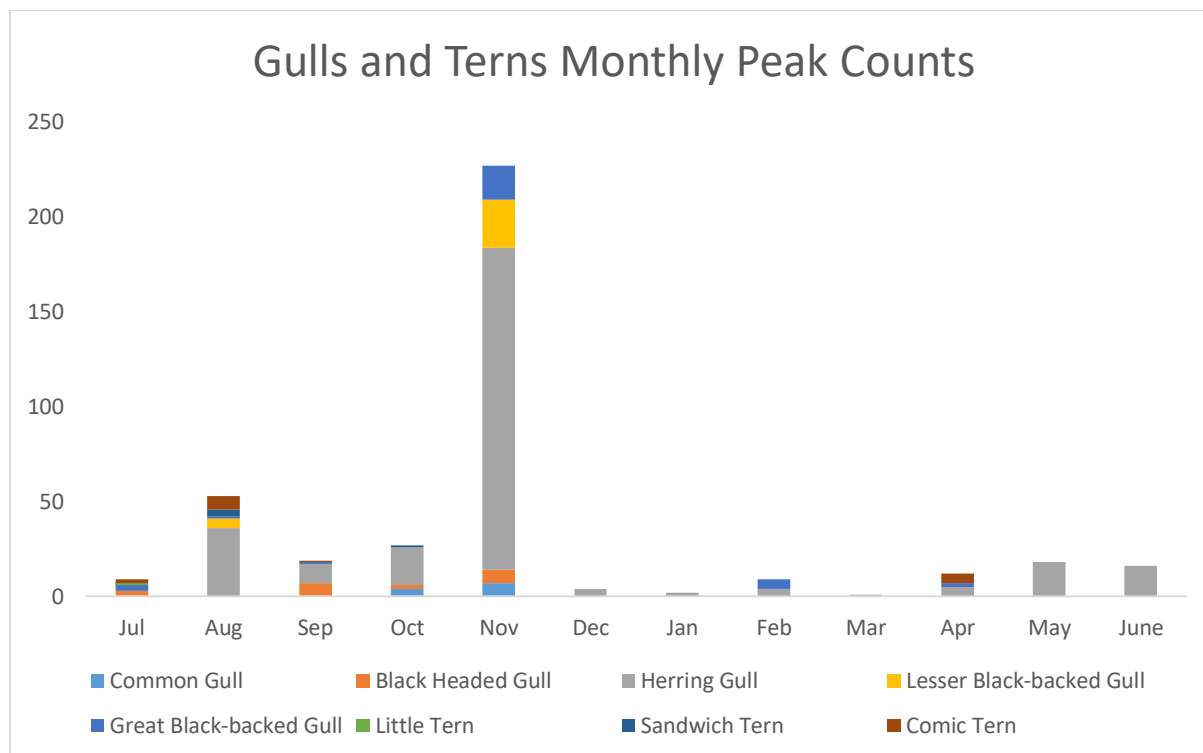


Fig. 11 Monthly peaks for Gulls, Dunany South

Herring gulls make up the greatest abundance with a total of 240 and were recorded on all but the July count. They also had a peak count in November of 170. Great Black-backed and Lesser Black-backed Gulls numbered 18 and 25 individuals respectively during the November survey.

Counts were also made of Little Terns, Sandwich Terns and a species recorded as Comic Terns (where not possible to distinguish between Arctic and Common Tern). These totals have not been graphed as there was only 3 species with a total combined count of 16 individuals, Little Tern; 1, Sandwich; 5 and Comic; 10.

4.1.4 Wildfowl

As with Tern species wildfowl numbers were low with only one count of Brent Geese recorded, 17 in November, and two counts of Red-breasted Merganser recorded, 2 in August and 8 in December.

4.1.5 Other Species

Of the remaining 7 species of birds recorded over the six month period July saw the most recordings with 4 different species, see Fig 12. Cormorants were the most frequently occurring of the remaining species and Manx Shearwater had the greatest abundance, 15, despite only being observed in July.

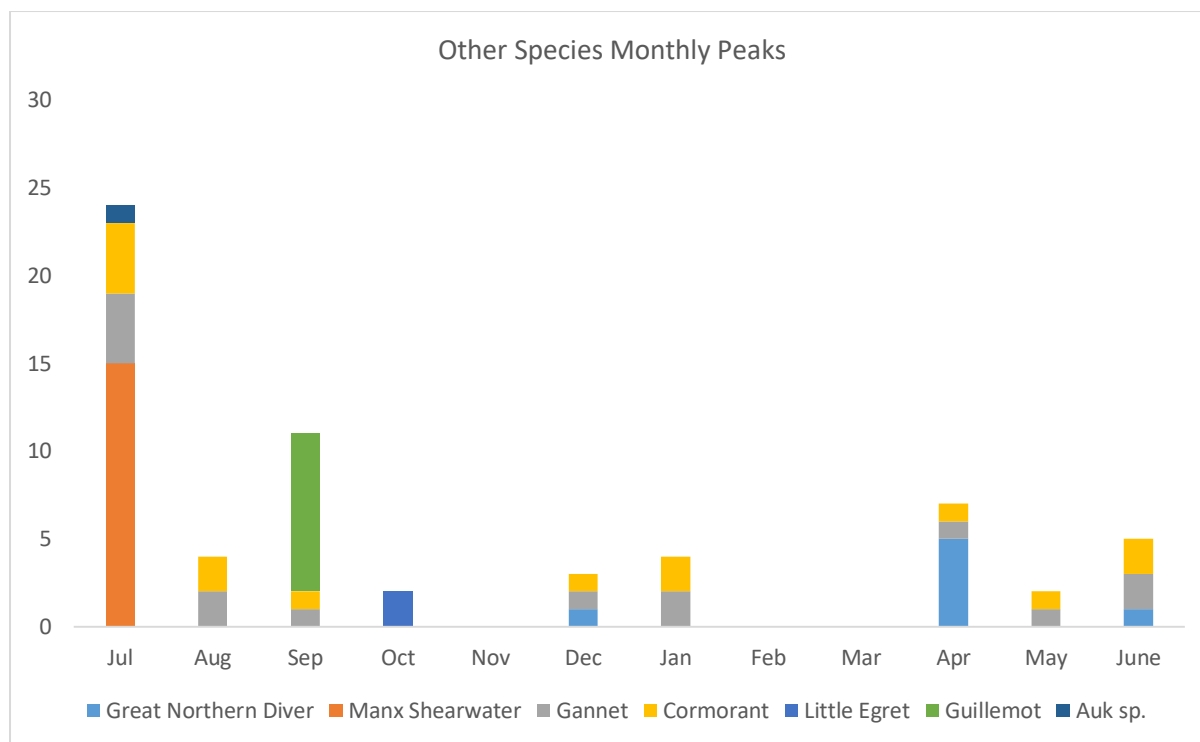


Fig. 12 Total monthly abundance of other marine birds recorded, Dunany South

4.1.6 Marine Mammals

Only one recording was made of a marine mammal during the survey period. On the July count 1 Grey Seal was observed inshore during a falling tide.

4.2 Distribution and Behaviour

The main roosting area lies circa 200m north of the observation point (A) with another area further north (B) on the southern side of Dunany Point, see Fig. 13. The area nearer to the observation point (A) was seen to support a majority of gulls while the area further north (B) also contained some roosting Cormorants.

Foraging behaviour in low numbers by waders, gulls and a flock of Brent geese has been observed at the water line and a rocky area circa 100 meters to the north of the observation point. The greatest

number of birds observed feeding in the area was a flock of 50 oystercatchers which had moved from down the southern end of the beach outside the landfall area due to the presence of dogs on the beach.



Fig. 13 Intertidal Foraging and Roosting sites, Dunany South

Discussion/Conclusions

Dunany North was surveyed over a two year period and as such the results herein can be taken to accurately reflect the population of seabirds at the location. The site referred to as Dunany South was surveyed over a 12 month period observing any breeding and winter migratory species present.

Seasonal populations follow the expected trends with an increase of waders during the wintering months and low numbers during the summer breeding months. At the Dunany North site the most abundant wading bird; Oystercatcher, increased greatly in numbers during the November to April months of 2018 and 2019. Both Herring Gull and Black-headed Gull numbers declined during the summer months suggesting there is no breeding area within the vicinity of the landfall site at Dunany North. Terns were recorded in small numbers during the summer months of May to September. One Little Tern was recorded at Dunany South in July. While the Little Tern colony at Baltray south of Clogherhead has failed in settling and breeding for a second successive year (source:

BirdWatch Ireland) it is also considered to be too distant from the landfall of either the northern or southern sites at Dunany Point. The tern colonies at Rockabill (Roseate Terns) and Carlingford (Sandwich and Common Terns) are also considered to be at too great a distance from the landfall sites to be effected by disturbances.

Light-bellied Brent Geese are an over-wintering species in Ireland and are also one of two species of international importance within Dundalk SPA. According to I-WeBS (Irish Wetland Bird Survey) data 2012 – 2017 the Salterstown subsite, see Appendix 5, which contains the survey area of Dunany North, only accounts for 2.8% of the total population of Brent Geese within Dundalk Bay. This makes it the least abundant subsite within the SPA in terms of Brent Geese. Greylag Geese are a qualifying interest in Dundalk SPA and the nearby Stabannan-Braganstown SPA. No Greylag Geese were recorded at either the northern or southern landfalls though the sites are both within their winter foraging distances, 15- 20km (Mitchell C., 2012). Red-breasted Mergansers, also an SCI species, were observed in large flocks roosting subtidal within the Dunany North survey area during the months of July and August. Normally occurring in only small numbers of individuals this significant increase during the breeding season supports the presence of a nearby breeding site.

Rare but noted observations are the large flock of *ca* 1000 Whimbrel recorded flying to the south of the landfall area and the presence of a Little Stint both recorded at Dunany North. Bar-tailed Godwit were recorded during 5 surveys at Dunany North for a total abundance of 81 individuals. While this number is low the I-WeBS data 2012 – 2017 (source: Birdwatch Ireland) has no record of any Bar-tailed Godwit observed at the Salterstown subsite. Almost the entire abundance was made up of two roosting flocks recorded in February (33 indiv.) and May (40 indiv.). Due to the fact that there have been no records of Bar-tailed Godwits in this area and that they were observed roosting in both intertidal and terrestrial sites within the landfall area it would be important to observe if this is a new trend in the use of this site by this species.

References

BirdWatch Ireland. 2017 Annual Report. BirdWatch Ireland, Kilcoole, Co. Wicklow

Birdwatch Ireland, Dundalk Bay I-WeBS site and subsites:

<https://bwi.maps.arcgis.com/apps/View/index.html?appid=1043ba01fcb74c78bc75e306eda48d3a>

Birdwatch Ireland I-WeBS data: "Data were supplied by the Irish Wetland Bird Survey (I-WeBS), a scheme that is funded by the National Parks and Wildlife Service of the Department of Culture, Heritage & the Gaeltacht and that is co-ordinated by BirdWatch Ireland".

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Appendix 1

Peak and Mean Counts for Dunany North (Point A) Landfall

Species	Dec '17	Jan '18	Feb '18	Mar '18	Apr '18	May '18	June '18	July '18	Aug '18	Sep '18
Brent Goose	6	38	184	42						
Shelduck			2	2	2		2			
Mallard								2		
Common Scoter	4			5	2				3	
Red-breasted Merganser			1	2	2		3	93	90	3
Red-throated Diver										
Great Northern Diver			1	2	2					
Great Crested Grebe			1	1	1					
Manx Shearwater										
Gannet						6	2		3	
Cormorant		1	6	8	5	1	1	2	1	5
Little Egret						1				
Heron	1				1	1				
Oystercatcher	150	300	156	200	150	37	64	12	13	26
Ringed Plover							2			
Grey Plover		1		1		6				
Turnstone	23	4	12	21	13					6
Dunlin						11	3			
Little stint										
Redshank	31	2	55	35	21				3	20
Bar-tailed Godwit										
Curlew	43	2	8	27	17	1			4	2
Whimbrel								1		
Common Gull						2		2		16
Black Headed Gull			3		1	1		35	2	
Herring Gull	2	2	3			13	4	24	3	14
Great Black-backed Gull		1	2		2	8	2	5	2	3
Lesser Black-backed Gull						11				
Sandwich Tern								2		
Common Tern									2	2
Arctic Tern									2	
Comic Tern					3			3		
Guillemot									1	1
Auk sp.										

Species	Oct '18	Nov '18	Dec '18	Jan '19	Feb '19	Mar '19	Apr '19	May '19	June '19	July '19
Brent Goose	6		4		2	50				
Shelduck						3	2			
Mallard		12	12				1			
Common Scoter	2	36	13		4	2	3			
Red-breasted Merganser	3	2	7	8		2	1	2		96
Red-throated Diver		1								
Great Northern Diver		1	1		2	1	1	1		
Great Crested Grebe					1					
Manx Shearwater							2			6
Gannet	1		1			1	1	3	3	1
Cormorant	2	5	2	3	2		1	3	1	2
Little Egret										3
Heron		1				1		1	1	
Oystercatcher	16	102	228	12	144	6	30	138		3
Ringed Plover		4					2			
Grey Plover										
Turnstone		18	2	2			20			
Dunlin										
Little stint							2			
Redshank	13	55	19	4	37		6			
Bar-tailed Godwit					40			33		
Curlew	2	5	3							
Whimbrel							5	6		1
Common Gull					4					
Black Headed Gull	19	152	5	2	24					8
Herring Gull	5	36	2	1	5	2		4	5	3
Great Black-backed Gull	4	15	1	4				15		1
Lesser Black-backed Gull			1					1		
Sandwich Tern								1		
Common Tern										3
Arctic Tern										
Comic Tern							2	2		
Guillemot										
Auk sp.										

Species	Aug '19	Sep '19	Oct '19	Nov '19	Dec '19	Jan '20	Feb '20	Mar '20	Apr '20	May '20	Jun '20	Species Abundance
Brent Goose				6	15	62	55	5	12			487
Shelduck						2		2	2			19
Mallard	1		2	20	12			4				66
Common Scoter			1		9			4				88
Red-breasted Merganser	3	2			6				2			328
Red-throated Diver												1
Great Northern Diver					1	1						14
Great Crested Grebe												4
Manx Shearwater												8
Gannet	1	1						1	1			26
Cormorant	1	1			1	1	1	2		2	1	61
Little Egret		1	1	1						1		8
Heron		4	1					1				13
Oystercatcher	7	16	30	56	15	6	78	1			2	1920
Ringed Plover	23				17					2	1	51
Grey Plover					1							9
Turnstone	4			25	5		24					179
Dunlin	3										66	83
Little stint												2
Redshank	1	25	10	27	7	2	47	1				405
Bar-tailed Godwit		2		5	1							81
Curlew	3	9	6		2	3				1		138
Whimbrel												13
Common Gull	1		11	5			28					69
Black Headed Gull	31	18	24	35			5					365
Herring Gull	45	35	80	81	16	5	226	2	37	25	14	694
Great Black-backed Gull	2	5	1	2	1	2	1		3	2	3	83
Lesser Black-backed Gull		3	1	1								18
Sandwich Tern		1										4
Common Tern												7
Arctic Tern												2
Comic Tern												10
Guillemot		2										4
Auk sp.		12										12

Appendix 2

Species recorded in Field East of Survey Site

Species	Jan-18	Feb '18	Mar '18	Oct '18	Nov '18	Dec '18	Feb '19	Mar '19	Oct '19	Jan '20	Feb '20	Apr '20
Herring Gull					36							
Black-headed Gull					152							
Great Black-backed Gull					11							
Oystercatcher					102	78	±130				78	
Redshank					55	15	12				47	
Shelduck		2	2					3		2		2
Mallard						12			2			
Bar-tailed Godwits							±40					
Turnstone												
Brent Goose	6	184	42	6		4	2	50		62	55	

Appendix 3

Peak and Mean Counts for Dunany South (Point B) Landfall

Species	July '19	Aug '19	Sep '19	Oct '19	Nov '19	Dec '19	Jan '20	Feb '20	Mar '20	Apr '20	May '20	Jun '20	Species Abundance
Brent Goose					17			11					28
Shelduck													0
Mallard													0
Common Scoter													0
Red Merganser		2				8	1						11
Red-throated Diver													0
Great Northern Diver						1				4		1	6
Great Crested Grebe													0
Manx Shearwater	15												15
Gannet	7								50	3		1	61
Cormorant	4	2	1			1	2			2	1	2	15
Little Egret				2									2
Heron											1		1
Oystercatcher		27	38	20	6	2	1	3	2		2		101
Ringed Plover	5		50					3			1		59
Grey Plover													0
Turnstone													0
Sanderling					2								2
Dunlin													0
Little stint													0
Redshank		5		2	2								9
Bar-tailed Godwit													0
Curlew		2	1	2	2		1	4					12
Whimbrel	1												1
Common Gull				4	7								11
Black Headed Gull	3		7	2	7								19
Herring Gull		36	10	20	170	4	2	4	1		18	16	281
Great Black-backed Gull	3	1	1		18			5					28
Little Tern	1												1
Lesser Black-backed gull		5			25								30
Sandwich Tern		4		1									5
Common Tern													0
Arctic Tern													0
Comic Tern	2	7	1										10
Razorbill													0
Guillemot			9										9
Auk sp.	1												1
Unidentified Wader					1								1

Appendix 4

Qualifying Interests for Dundalk Bay SPA

Species	QI
Great Crested Grebe	A005
Light-bellied Brent Goose	A043
Greylag Goose	A046
Shelduck	A048
Teal	A052
Mallard	A053
Pintail	A054
Common Scoter	A065
Red-breasted Merganser	A069
Oystercatcher	A130
Ringed Plover	A137
Golden Plover	A140
Grey Plover	A141
Lapwing	A142
Knot	A143
Dunlin	A149
Black -tailed Godwit	A156
Bar-tailed Godwit	A157
Curlew	A160
Redshank	A162
Black Headed Gull	A179
Common Gull	A182
Herring Gull	A184

Source: National Parks and Wildlife <https://www.npws.ie/protected-sites/spa/00402>

Appendix 5 I-WeBS Dundalk Bay and Subsites

Dundalk Bay I-WeBS subsites



January 6, 2020

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community.

Dundalk Bay; I-WeBS subsite Salterstown



November 4, 2019

★ Observation Point

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

Appendix 6

Brent Goose I-WeBS Counts for Dundalk Bay and Salterstown Subsite

Site	Species	2012/13	2013/14	2014/15	2015/16	2016/17	Mean	Overall peak
Dundalk Bay	Light-bellied Brent Goose	1861	1800	1462	2337	1856	1863	2337
Salterstown		-	161	2	82	14	52	161



AQUAFAC

Bird Survey for a Proposed Cable Route from Dunany Point to the Ardee 220Kv line, Co. Louth

Produced by

AQUAFAC International Services Ltd

On behalf of

Oriel Windfarm Limited

March 2021



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Report Approval Sheet

Client	Parkwind
Report Title	Bird Survey along cable route from Dunany Point to Ardee 220Kv cable line, Co. Louth.
Job Number	JN901
Issue Date	March 2021

Rev	Issue Date	Document File Name	Author (s)	Approved by:
1	March 2021	JN901 Bird Survey Dunany Point – Ardee	Tom Rea	Brendan O’Connor



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Methodology.....	2
Results.....	3
Discussion.....	14
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Introduction

Oriel Windfarms Ltd commissioned AQUAFAC to carry out a survey of birds along a proposed cable route from Dunany Point to the 220Kv ESB cable line, east of Ardee (see Figure 1 below). The route was surveyed on a monthly basis over the period October 2018 to December 2019. The route follows existing roadways along its entire length.

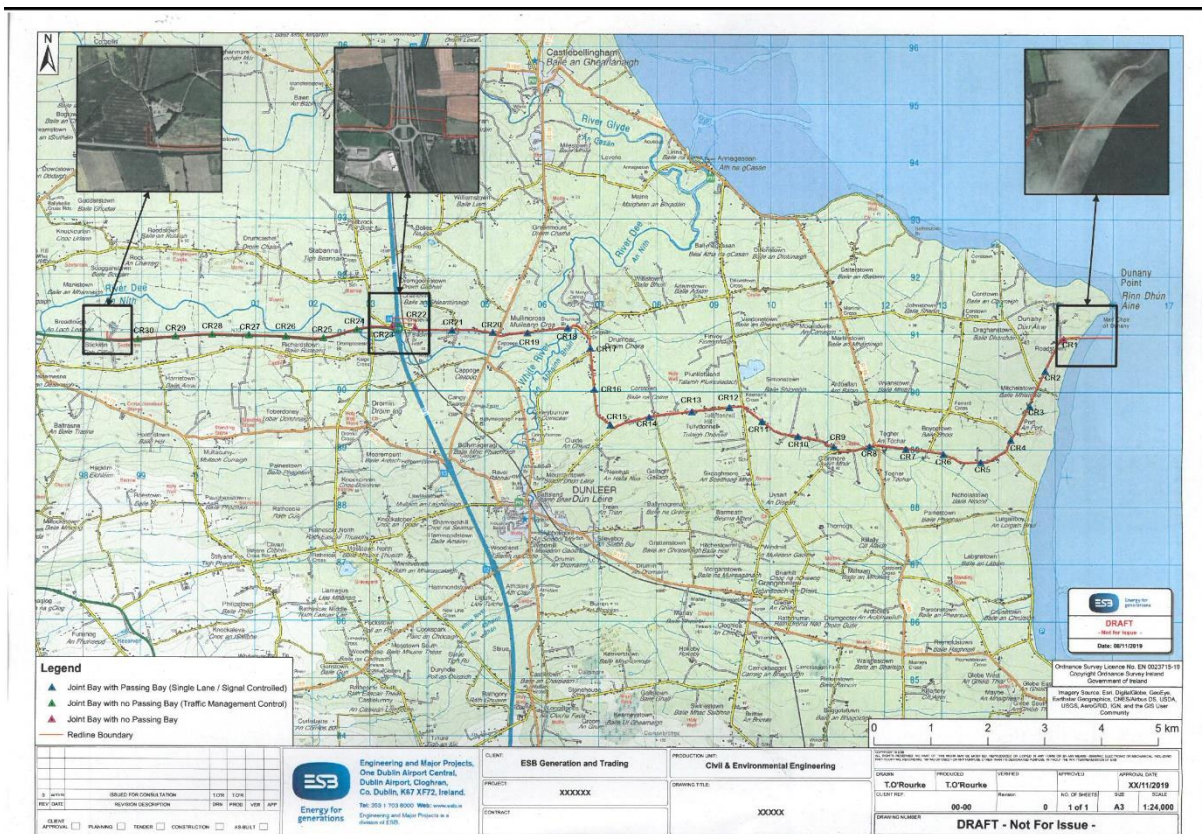


Figure 1: Proposed cable route from Dunany Point to the 220Kv ESB cable line east of Ardee.

As can be seen on Figure 1, the route starts just south of Dunany Point and runs in a southeasterly direction for ca 4 km before turning west and continuing for a further 14 km. It then turns north for ca 1.5 km and turns west again where it crosses the River Dee and continues west crossing the M1 and the River Dee again before terminating at the ESB 220Kv cable line ca 2.5 km east of Ardee.

There is one Special Protection Area (SPA) close the proposed route and that is the Stabannan-Braganstown SPA (site code 004091) which has just one Species of Conservation Interest which is the

Grey Lag Goose (*Anser anser*). This SPA site is *ca* 2 km to the north of the route and *ca* 2 km west of the M1.

Methodology

Except for one location (the site just west of the M1), the cable route was divided into 500m lengths and were labelled CR1 closest to Dunany Point to CR30 at the ESB220 Kv cable line.

At each location, the area was examined birds present within *ca* 10 m of either side of the road side whether in the air, on the ground or in trees were identified (either by eye or using 10 x 50 magnification binoculars).

Results

Habitat types along the cable route include non-irrigated arable land, pastureland and complex cultivation patterns (see Figure 2 below showing Corine habitats along the cable route).

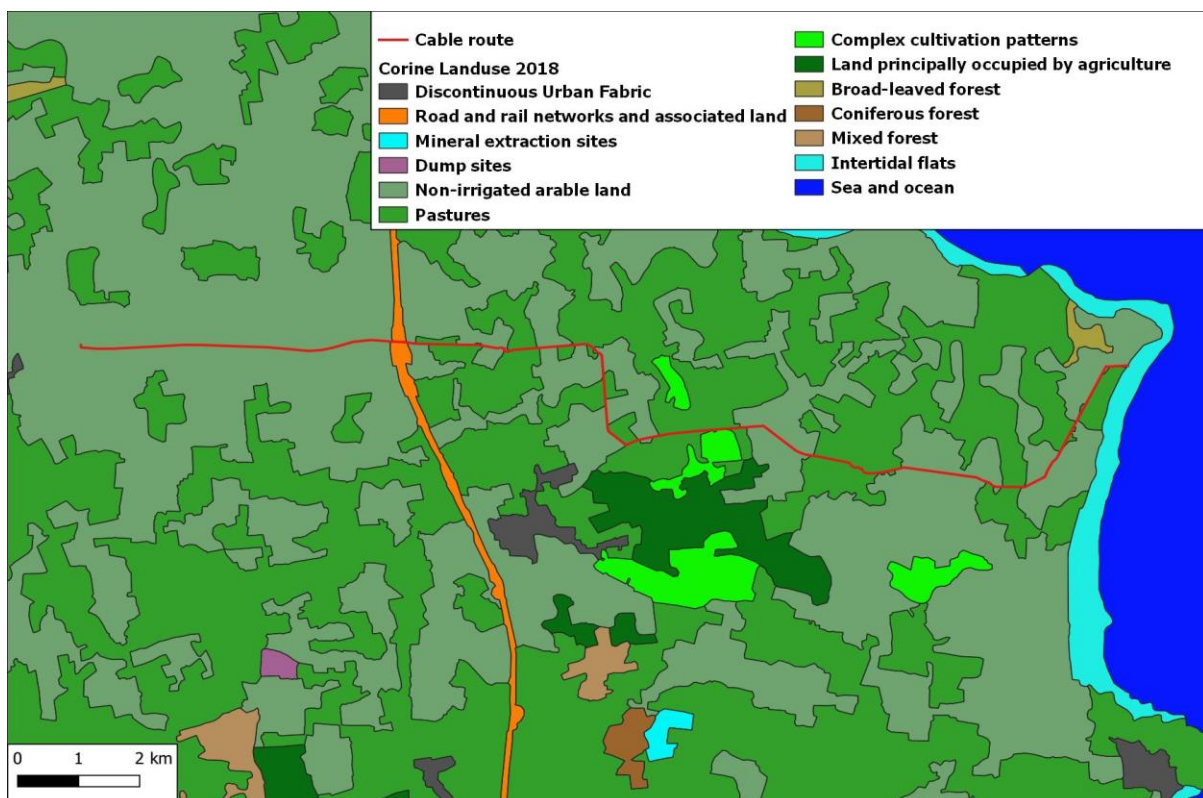


Figure 2. Corine habitats along the cable route.

Other habitats along the route include hedgerows and treelines, copses, rivers and private dwellings with gardens.

With regard to birds, the survey returned a total of 53 bird species and the records for each species is presented below.

Mute swan, *Cygnus olor*. Mute swan is a resident species in Ireland and two were seen overflying the cable route at CR12 from south to north in March 2019. It is presumed the birds were flying to the nearby Simonstown Lake.

Whooper swan, *Cygnus cygnus*. Whooper swan is a winter visitor to Ireland and flock of up to thirty five birds was regularly seen feeding on grassland in fields east of CR17 in the townland of Drumcar between the months of November 2018 to March 2019 and November and December of 2019. This area is *ca* 1km east of the cable route.

Mallard, *Anas platyrhynchos*. Mallard is a resident species in Ireland. A pair was seen overflying the cable route at CR10 (March 2019) and at CR19 (November 2018).

Pheasant, *Phasianus colchicus*. Pheasant is a resident species in Ireland. There were several sitings of single male birds: October 2018: CR5, CR14, CR19, CR27; March 2019: CR3, CR11, CR30; May 2019: CR2, CR8, CR21, CR27; July 2019: CR9, CR14, CR20, CR27; September 2019: CR1, CR4, CR16, CR20, CR25 and one siting of 2 males and 5 females in June 2019 at CR10.

Cormorant, *Phalacrocorax carbo*. Cormorant is a resident species in Ireland. There was one siting of a bird flying in a south easterly direction out to sea over the cable route at CR1.

Heron, *Ardea cinerea*. Heron is a resident species in Ireland. Single birds were recorded flying over the cable route on the following months and at the listed locations. November 2018: CR3, CR28; December 2018: CR18 and CR 24; March 2019: CR2, CR10, CR18, CR26; May 2019: CR1, CR11, CR19, CR24; July 2019: CR12, CR18, CR26; September, 2019: CR11, CR12, CR18 and CR22; November 2019: CR10, CR17, CR19, CR30. Some of these locations are close to the River Dee and it is speculated that the birds were making passage to or from the river.

Buzzard, *Buteo buteo*. Buzzard is a resident species in Ireland. Individual birds were observed flying over the cable route between CR1 and CR5 in April 2019 and in the same area in July 2019 and September 2019. Two birds were seen flying over the area between CR15 and CR17 in August 2019.

Sparrowhawk, *Accipiter nisus*. Sparrowhawk is a resident species in Ireland. Individual birds were recorded at CR6 and CR26 in October 2018, at CR11 in January 2019, at CR29 September 2019 and at CR19, December 2019.

Kestrel, *Falco tinnunculus*. Kestrel is a resident species in Ireland. Individuals were recorded flying/hovering in the vicinity of the cable route in January 2018 at CR7, in March 2019 at CR6, in May 2019 at CR20, and in September 2019 at CR14.

Lapwing, *Vanellus vanellus*. Lapwing is a resident species in Ireland. Single birds and small flocks (less than 10) were seen in December 2018 at CR14 and CR19, In January 2019 at CR6 and CR13, and in November, 2019 at CR15 and CR21.

Curlew, *Numenius arquata*. Curlew is a resident species in Ireland. One flock of 22 birds was recorded flying in a northwesterly direction over the cable route in November, 2018 at CR3. Another flock of 14 birds was recorded in February 2019 flying over the cable route at CR1 in the same direction and in October 2019, a flock of 19 birds was recorded flying over the cable route at CR4 in a southeasterly direction. It is presumed that the birds were making local migrations to/from Dundalk Bay.

Whimbrel, *Numenius phaeopus*. Whimbrel is a passage migrant northwards through Ireland in Spring on its migration to Iceland and other Arctic parts northern European countries. Large flocks (hundreds of birds) were recorded in May 2019 and June 2019 flying and calling over the cable route at CR 1 and CR2.

Woodcock, *Scolopax rusticola*. Woodcock is resident species in Ireland. Single birds were recorded in November 2018 at CR8 and CR28 and again in November 2019.

Snipe, *Gallinago gallinago*. Snipe is a resident species in Ireland. A single bird was set up at CR24 close to the River Dee on January 2019.

Black headed Gull, *Crocirocephalus ridibundus*. Black headed Gull is a resident species in Ireland. It was recorded commonly along in farm land adjacent to the cable route particularly during periods when slurry was being spread on fields.

Herring Gull, *Larus argentatus*. Herring Gull is a resident species in Ireland. Like the Black headed Gull, it was recorded commonly along in farm land adjacent to the cable route particularly during periods when slurry was being spread on fields.

Greater Black backed Gull, *Larus marinus*. Greater Black backed Gull is a resident species in Ireland. It was recorded in agricultural lands at CR1 – CR 4 in November and December 2018

Wood Pigeon, *Columba palumbus*. Wood Pigeon is a resident species in Ireland. Over the period of observation (October 2018 – December 2019), it was recorded either flying over the cable route or in fields on the ground or on trees adjacent to the cable route at all CR locations. Wood Pidgeon nests were recorded at the following locations: between CR1 and CR2, CR4 and CR18.

Collard Dove, *Streptopelia decaocto*. Collard Dove only relatively recently (*ca* 1959) became a resident species in Ireland. As for Wood Pigeon, Collard Dove was recorded either flying over the cable route or on the ground adjacent to the cable route at all CR locations.

Cuckoo, *Cuculus canorus*. Cuckoo is a Summer visitor to Ireland. Calling birds were heard In April and May, 2019 at CR3, CR6, CR13, CR17 and CR29.

Swift, *Apus apus*. Swift is a Summer visitor to Ireland. Birds were seen throughout the survey area from May to September, 2019.

Skylark, *Alauda arvensis*. Skylark is a resident species in Ireland. During the winter months October – March, records of Skylark along the cable route were scarce with only 4 records (November, 2018, CR26; February 2019, CR4, October 2019, CR17 and December, 2019, CR10) noted. However, in the Spring Summer months, March – September, records were more numerous with birds being recorded either flight over the cable route or calling in the air in each of these months along the extent of the cable route.

Swallow, *Hirundo rustica*. Swallow is a Summer visitor to Ireland. As for Swift, birds were seen throughout the survey area from May to September, 2019.

House Martin, *Delichon urbicum*. House Martin is a Summer visitor to Ireland. Birds were recorded between April and September throughout the area surveyed.

Meadow Pipit, *Anthus praetensis*. Meadow Pipit is a resident species in Ireland. Meadow Pipit was recorded either in flight over the cable route or in fields either side of it in November 2018 at CR11, CR 22 and CD29, in February 2019 at CR3, CR8, CR14, CR23 and CR30, in April 2019 at CR2, CR5, CR9, CR14, CR20 and CR25, in June 2019 at CR7, CR13, CR20 and CR29, in July 2019 at CR3 and CR4, CR7, CR11, CR15, CR20 and CR26, in August 2019 at CR2, CR7, CR13, CR21, CR25 and CR30 and in October 2019 at CR20 and CR27.

Pied Wagtail, *Motacilla alba*. Pied Wagtail is a resident species in Ireland. Pied Wagtail was recorded throughout the survey period at all sites either on the ground close to the cable route or flying over the route.

Hedge Sparrow, *Prunella modularis*, Hedge Sparrow is a resident species in Ireland. Throughout the survey period, Hedge Sparrow was recorded at every site along the route.

Robin, *Erithacus rebecula*. Robin is a resident species in Ireland. As for Hedge Sparrow, Robin was recorded throughout the survey period and at every site along the route. A robin nest was recorded at CR1 and CR17.

Song Thrush, *Turdus philomelos*. Song Thrush is a resident species in Ireland. As for Robin, Song Thrush was recorded in every month and at every location throughout the survey period. One Song Thrush

Redwing, *Turdus iliacus*. Redwing is a Winter visitor to Ireland. Redwing was recorded in January 2019 at CR9 and CR24 and in February 2019 at CR11 and CR28.

Mistle Thrush, *Turdus viscivorus*. Mistle Thrush is a resident species in Ireland. Mistle Thrush was recorded in November, 2018 at CR6, CR10, CR21 and CR29, in December 2018 at CR2, CR6, CR12, CR16, CR20 and CR26, in February 2019 at CR1, CR11, CR21 and CR30, in April 2019 at CR11, CR16, CR21, and CR27, in May 2019 at CR1, CR17 and CR26, in June 2019 at CR7, CR11, CR19 and CR29 and in July at CR23.

Fieldfare, *Turdus pilaris*. Fieldfare is a Winter visitor to Ireland. Fieldfare was recorded along with Redwing in January 2019 at CR9 and CR24 and In February 2019 at CR11 and CR28.

Blackbird, *Turdus merula*. Blackbird is a resident species in Ireland. Blackbird was recorded on every survey date and overall, at every survey location. Blackbird nests were recorded at CR1, CR7, CR14 and CR18.

Sedge Warbler, *Acrocephalus schoenobanus*. Sedge Warbler is a Summer visitor to Ireland. Sedge Warbler was heard calling in April and May 2019 at CR19 and CR24 and seen on July 2019 at CR30.

Willow Warbler, *Phylloscopus trochilus*. Willow Warbler is a Summer visitor to Ireland. Willow Warbler was recorded both visually and singing throughout the length of the cable route in the months of April – August, 2019.

Chiffchaff, *Phylloscopus collybita*. Chiffchaff is a Summer visitor to Ireland. Chiffchaff was recorded both visually and singing throughout the length of the cable route in the months of April – July, 2019.

Goldcrest, *Regulus regulus*. Goldcrest is a resident species in Ireland. Goldcrest was heard calling in April and May 2019 at CR19.

Wren, *Troglodytes troglodytes*. Wren is a resident species in Ireland. Wren was recorded in each month and throughout the length of the cable route.

Spotted Flycatcher, *Muscicapa striata*. Spotted Flycatcher is a Summer visitor to Ireland. One bird was recorded in May 2019 at CR19.

Great Tit, *Parus major*. Great Tit is a resident species in Ireland. Great Tit was recorded throughout the survey area and in every month.

Coal Tit, *Periparus ater*. Coal Tit is a resident species in Ireland. Coal Tit was recorded in March 2019 at CR18 and in August 2019 at CR1.

Blue Tit, *Cyanites caeruleus*. Blue Tit is a resident species in Ireland. Blue Tit was recorded throughout the survey area and in every month.

Long Tailed Tit, *Aegithalos caudatum*. Long tailed Tit is a resident species in Ireland. One troupe of 12 Long Tailed Tit was recorded at CR19 in August 2019.

Magpie, *Pica pica*. Magpie is a resident species in Ireland. Magpie was recorded throughout the survey area and in every month. A magpie nest was recorded at CR19

Jackdaw, *Corvus monedula*. Jackdaw is a resident species in Ireland. Jackdaw was recorded throughout the survey area and in every month.

Rook, *Corvus frugilegus*. Rook is a resident species in Ireland. Rook was recorded throughout the survey area and in every month. It was the commonest occurring species of all birds. Rookeries were recorded between CR3 and CR5 and between CR17 and CR19.

Hooded Crow, *Corvus cornix*. Hooded Crow is a resident species in Ireland. Hooded Crow was a regularly recorded bird throughout the survey period and cable route.

Starling, *Sturnus vulgaris*. Starling is a resident species in Ireland. Flocks (\pm 100 birds) of Starlings were recorded flying over the cable route in November 2018 at CR5 and CR27, in December 2018 at CR9 and CR16, in January 2019 at CR12, CR14 and CR25 in March 2019 at CR2, CR13, and CR20, in October 2019 at CR8, CR21 and CR30 and in December 2019 at CR10.

House Sparrow, *Passer domesticus*. House Sparrow is a resident species in Ireland. House Sparrow was recorded in October 2018 at CR1, CR4, CR14 and CR17, in November 2018 at CR1, CR8, CR15 and CR22, in December at CR1, CR7, CR10 and CR20, in February 2019 at CR1, CR5 and CR17, in April 2019 at CR1, CR3, CR8 and CR17, in May 2019 at CR1, CR3, CR14 and CR17, in June 2019 at CR1 and CR3, in July 2019 at CR1 and CR3, in September 2019 at CR1, CR4, CR8, CR14 and CR20, in October 2019 at CR1, CR3, CR7, CR14 and CR17 and in December 2019 at CR1 and CR17.

Chaffinch, *Fringilla coelebs*. Chaffinch is a resident species in Ireland. Chaffinch was recorded in October 2018 at CR5, CR13, CR19 and CR26, in November 2018 at CR20, in December 2018 at CR1, CR8 and CR29, in February 2019 at CR2, CR8, CR11 and CR18, in March 2019 at CR2, CR7, CR13, CR16, CR20 and CR28, in May 2019 at CR1, CR7, CR10, CR17, CR21 and CR25, in June 2019 at CR2, CR6, CR13, CR19, CR22 and CR26, in July 2019 at

CR1, CR3, CR8, CR12, CR16, CR21 and CR29, in August 2019 at CR2, CR6, CR11, CR15, CR18, CR24 and CR30, in September 2019 at CR1, CR4, CR8, CR12, CR14, CR17 and CR29, in November at CR1, CR5, CR10, CR14, CR20 and CR27 and in December 2019 at CR1, CR4 and CR21.

Linnet, *Carduelis cannabina*. Linnet is a resident species in Ireland. Linnets are recorded along the cable route in October 2018 at CR3 and CR27, in November 2018 at CR2 and CR16, in February 2019 at CR29, in April 2019 at CR2, CR9 and CR15, in June 2019 at CR7, CR21 and CR25, in July 2019 at CR3, in September at CR2, CR7, CR9 and CR22 and in November 2019 at CR1, CR6, CR10, CR22 and CR23.

Goldfinch, *Carduelis carduelis*. Goldfinch is a resident species in Ireland. Goldfinch was recorded in February 2019 at CR11, in April 2019 at CR1 and CR18 and in September 2019 at CR3, CR12 and CR23.

Bullfinch, *Pyrrhula pyrrhula*. Bullfinch is a resident species in Ireland. Bullfinch was recorded in April 2019 at CR6 and in August 2019 at CR2.

Discussion

Of the 53 bird species recorded, the following 41 are resident in Ireland: Mute Swan, Mallard, Cormorant, Heron, Pheasant, Buzzard, Sparrowhawk, Kestrel, Lapwing, Curlew, Woodcock, Snipe, Black headed Gull, Herring Gull, Greater black backed Gull, Wood Pigeon, Collard Dove, Meadow Pipit, Skylark, Hedge Sparrow, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coat Tit, Blue Tit, Long tailed Tit, Magpie, Jackdaw, Rook, Grey Crow, Starling, House Sparrow, Chaffinch, Linnet, Goldfinch and Bullfinch.

As some of these are more aquatic than terrestrial in occurrence e.g. Mute Swan, Mallard, Cormorant, Heron, Lapwing, Curlew, Snipe, Black headed Gull, Herring Gull and Greater Black backed Gull, in ecological terms, they are cannot be considered as hedgerow species. Similarly, Kestrel, Skylark and Meadow Pipit are associated with open field conditions and rather than with hedgerows.

The resident species that are most frequently found in hedgerows or on trees include Wood Pigeon, Hedge sparrow, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long tailed Tit, Magpie, Jackdaw, Rook, House Sparrow, Chaffinch, Goldfinch and Bullfinch.

None of the three Winter visitors *i.e.* Whooper Swan, Redwing and Fieldfare are associated with hedgerows while of the eight Summer visitors *i.e.* Cuckoo, Swift, Swallow, House Martin, Sedge Warbler, Willow Warbler, Chiffchaff and Spotted Flycatcher, the flowing species are associated with hedgerows and trees: Cuckoo, Sedge Warbler, Willow Warbler, Chiffchaff and Spotted Flycatcher.

The single Passage Migrant species, Whimbrel, is a wading bird and is not associated with hedgerows or trees.

The area that returned most species was CR1 (33 species) and that section of the route from CR1 to CR5 collectively had higher numbers of species than many other areas. There is a bias in these records however; this part of the route is clearly close to the sea and it was in this area of the route that a number of marine species were recorded. CR19 returned 32 species none of which are marine in occurrence.

In order to minimise the impact of cable laying on terrestrial birds, all such activities should take place outside the bird breeding season which is March 1st to August 31st.

References

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