

Winter Bird Survey Report 2020/2021

NDFA Bird Surveys, Finisklin, Co. Sligo





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Table of Contents

1.	INTRODUCTION.....	4
1.1	Statement of Authority	4
2.	DESK STUDY	5
2.1	Desk Study Methods	5
2.2	Desk Study Results	5
2.2.1	Identification of Designated Sites within the Likely Zone of Influence	5
2.2.2	Irish Wetland Bird Survey (IWeBS) Records	9
2.2.3	Method of Identification of Target Species.....	10
3.	FIELD SURVEYS.....	11
3.1	Field Survey Methods.....	11
3.1.1	Initial Site Assessment	11
3.1.2	Vantage Point Surveys	11
3.1.3	Walkover and Habitat Surveys	11
3.1.4	Survey Justification	12
3.2	Field survey results.....	13
3.2.1	Survey Effort	13
3.2.2	Vantage Point Survey Results.....	16
3.2.3	Walkover and Habitat Survey Results	18
3.2.4	Other Observations.....	18
4.	DISCUSSION	19
5.	CONCLUSION	20
	BIBLIOGRAPHY	21

TABLE OF TABLES

<i>Table 2-1 Designated sites within likely zone of influence.....</i>	6
<i>Table 2-2 I-WeBS data for Sligo Harbour.....</i>	9
<i>Table 3-1 Survey Effort.....</i>	13
<i>Table 3-2 Total number of each species recorded commuting over the proposed development site during surveys (Peak Counts for each species are presented in bold)</i>	16
<i>Table 3-3 Total number of each species recorded on, or within 500m of, the proposed development site (i.e. observed foraging/roosting) (Peak Counts for each species are presented in bold).....</i>	17
<i>Table 3-4 Habitat quality and composition of walked transects within the proposed development. Also included is the abundance of brent geese droppings observed on transects.....</i>	18

1.

INTRODUCTION

McCarthy Keville O'Sullivan (MKO) was appointed to carry out bird survey works at Finisklin, County Sligo during the period from January 2021 to March 2021 inclusive. The proposed development scheme consists of a semi-natural agricultural grassland. The site is approximately 3.4 ha in area and is located west of the Garvoe River and south of Cummen Strand (Grid reference: 54.280608, -8.500790). Figure 1 (Appendix 2) provides a map of the location of the proposed development boundary.

This report describes the ornithological survey methods employed and survey data collected at Finisklin, County Sligo for the period from January 2021 to March 2021 inclusive. This report also contains information compiled during the desktop study. Particular attention has been paid to species of conservation importance and identified target species.

The report is supported by Technical Appendix 1 which contains the raw data from the winter bird surveys in 2020/2021. This includes detail on survey times, weather conditions, surveyors, survey results and other additional information. Maps containing flight data and significant flocks observed during surveys are shown in Appendix 2.

The report is structured as follows:

- An introduction describing the background and statement of authority regarding ornithological works.
- A description of the desktop study carried out with regard to the site.
- A comprehensive description of survey methods.
- A full description of results for all ornithological surveys conducted.
- A discussion of the potential impacts.

The following defines terms used in this report:

- “Zones of Influence” (ZOI) for potential ornithological receptors refers to the zone within which potential effects are anticipated. ZOIs were assigned following the best available guidance (SNH 2016 and McGuinness et.al 2015).

1.1

Statement of Authority

This report has been prepared by Kathryn Sheridan (M.Sc.), an Ornithologist with MKO, Niall McHugh (B.Sc.), an Ornithologist with MKO and Dervla O'Dowd, Project Director (B.Sc.). The field surveys were undertaken in the 2021 winter season by Niall McHugh, a competent expert in bird surveying.

CVs for the authors of this report and all personnel who carried out survey work are provided in Appendix 3.

2. DESK STUDY

2.1 Desk Study Methods

A comprehensive desk study was undertaken prior to surveys in winter 2021 to search for any relevant information on species of conservation concern which may potentially make use of the study area. The assessment included a thorough review of the available ornithological data including:

- Review of online web-mappers: National Parks and Wildlife Service (NPWS), National Biodiversity Data Centre (NBDC), Irish Wetland Bird Survey I-WeBS.
- Review of Birds of Conservation Concern (BoCCI) in Ireland 2020-2026 (Gilbert, et al. 2021)
- Review of Special Protection Areas: including site synopsis, SCI species and conservation objectives.

2.2 Desk Study Results

2.2.1 Identification of Designated Sites within the Likely Zone of Influence

In the absence of any specific European or Irish guidance on the core foraging range, the Scottish Natural Heritage (SNH) Guidance, 'Assessing Connectivity with Special Protection Areas (SPA)' (2016) was consulted. This document provides guidance concerning the identification of connectivity between proposed development proposals and Special Protection Areas. The guidance takes into consideration the distances some species may travel beyond the boundary of their SPAs and outlines information on dispersal and foraging ranges of bird species which are frequently encountered when considering plans and projects. Using GIS software, SPAs within a potential 15km ZOI of the proposed development were identified.




The nearest SPA, Cummeen Strand SPA is located to the north of the proposed development opposite the Far Finisklin Road. The SPA is located 87m from the proposed development area (within the 500m buffer) and comprises a shallow bay stretching from Sligo town to Coney Island. The intertidal area of the SPA is an important foraging site for waterfowl, while the salt marsh at the edge of the bay supports roosting wildfowl at high tide. This SPA supports internationally important numbers of Light-bellied Brent Goose.

Designated sites located within the Likely Zone of Influence are listed below in Table 2-1 and illustrated in Appendix 2, Figure 2.

Table 2-1 Designated sites within likely zone of influence

Designated site and code	Distance from proposed development (km)	Qualifying Interests/Special Conservation Interests for which the European Site has been designated (https://www.npws.ie , last viewed 13/04/2021)	Conservation Objectives
Cummeen Strand SPA (004035)	87m north of the proposed development site	<ul style="list-style-type: none"> ➤ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] ➤ Oystercatcher (<i>Haematopus ostralegus</i>) [A130] ➤ Redshank (<i>Tringa totanus</i>) [A162] ➤ Wetland and Waterbirds [A999] 	<p>This site has detailed conservation objectives for each species listed as Qualifying Interests of the SPA:</p> <p>“To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests of this SPA.”</p> <p>This site also has a second conservation objective:</p> <p>“To maintain the favourable conservation condition of the wetland habitat in Cummeen Strand SPA as a resource for the regularly occurring migratory waterbirds that utilise it.”</p> <p>NPWS (2013) Conservation Objectives: Cummeen Strand SPA 004035. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>
Drumcliff Bay SPA (004013)	3.8 km to the northwest of the proposed development site	<ul style="list-style-type: none"> ➤ Sanderling (<i>Calidris alba</i>) [A144] ➤ Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] ➤ Wetland and Waterbirds [A999] 	<p>This site has detailed conservation objectives for each species listed as Qualifying Interests of the SPA:</p> <p>“To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests of this SPA.”</p> <p>This site also has a second conservation objective:</p> <p>“To maintain the favourable conservation condition of the wetland habitat in Drumcliff Bay SPA as a resource for the regularly occurring migratory waterbirds that utilise it”</p>

Designated site and code	Distance from proposed development (km)	Qualifying Interests/Special Conservation Interests for which the European Site has been designated (https://www.npws.ie , last viewed 13/04/2021)	Conservation Objectives
			NPWS (2013) Conservation Objectives: Drumcliff Bay SPA 004013. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Ballysadare Bay SPA (004129)	5.8 km southwest of the proposed development site	<ul style="list-style-type: none"> ➤ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] ➤ Grey Plover (<i>Pluvialis squatarola</i>) [A141] ➤ Dunlin (<i>Calidris alpina</i>) [A149] ➤ Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] ➤ Redshank (<i>Tringa totanus</i>) [A162] ➤ Wetland and Waterbirds [A999] 	<p>This site has detailed conservation objectives for each species listed as Qualifying Interests of the SPA:</p> <p>“To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests of this SPA.”</p> <p>This site also has a second conservation objective:</p> <p>“To maintain the favourable conservation condition of the wetland habitat in Ballysadare Bay SPA as a resource for the regularly occurring migratory waterbirds that utilise it”</p> <p>NPWS (2013) Conservation Objectives: Ballysadare Bay SPA 004129. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>
Sligo/Leitrim Uplands SPA (004187)	6.3 km northeast of the proposed development site	<ul style="list-style-type: none"> ➤ Peregrine (<i>Falco peregrinus</i>) [A103] ➤ Chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346] 	<p>This site has detailed conservation objectives for each species listed as Qualifying Interests of the SPA:</p> <p>“To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA”</p> <p>NPWS (2021) Conservation objectives for Sligo/Leitrim Uplands SPA [004187]. Generic Version 8.0. Department of Housing, Local Government and Heritage.</p>

Designated site and code	Distance from proposed development (km)	Qualifying Interests/Special Conservation Interests for which the European Site has been designated (https://www.npws.ie , last viewed 13/04/2021)	Conservation Objectives
Ballintemple and Ballygilgan SPA (004234)	7 km northwest of the proposed development site	 Barnacle Goose (<i>Branta leucopsis</i>) [A045]	<p>This site has detailed conservation objectives for each species listed as Qualifying Interests of the SPA:</p> <p>“To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA”</p> <p>NPWS (2021) Conservation objectives for Ballintemple and Ballygilgan SPA [004234]. Generic Version 8.0. Department of Housing, Local Government and Heritage.</p>
Ardboline Island and Horse Island SPA (004135)	12.9 km northwest of the proposed development site	 Cormorant (<i>Phalacrocorax carbo</i>) [A017]  Barnacle Goose (<i>Branta leucopsis</i>) [A045]	<p>This site has detailed conservation objectives for each species listed as Qualifying Interests of the SPA:</p> <p>“To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA”</p> <p>NPWS (2021) Conservation objectives for Ardboline Island and Horse Island SPA [004135]. Generic Version 8.0. Department of Housing, Local Government and Heritage.</p>

2.2.2 Irish Wetland Bird Survey (IWeBS) Records

The dataset for Sligo Harbour (which incorporates the Cummeen Strand SPA) was downloaded from www.birdwatchireland.ie and reviewed. Data from this I-WeBS site has been used to estimate the population of waterbirds in the area surrounding the proposed development area. The most recent 5-season period and mean counts for this period are presented in Table 2-2.

Table 2-2 I-WeBS data for Sligo Harbour

SPECIES	2013/14	2014/15	2015/16	2016/17	2017/18	MEAN
Mute Swan	11	7	5	11	2	7
Whooper Swan	-	-	-	4	-	1
Light-bellied Brent Goose	572	597	477	613	300	512
Shelduck	34	54	84	127	112	82
Wigeon	190	48	41	120	70	94
Teal	61	22	122	183	65	91
Mallard	182	88	154	173	195	158
Feral/hybrid Mallard type	-	-	3	-	-	1
Pintail	2	-	-	1	-	1
Eider	7	6	2	2	8	5
Common Scoter	-	-	-	-	40	8
Goldeneye	4	3	-	-	-	1
Red-breasted Merganser	32	37	23	30	26	30
Red-throated Diver	1	2	1	1	4	2
Great Northern Diver	12	17	8	13	15	13
Little Grebe	7	7	1	6	4	5
Great Crested Grebe	6	3	3	6	15	7
Cormorant	26	39	35	99	134	67
Shag	13	6	16	20	30	17
Little Egret	13	16	19	18	21	17
Cattle Egret	-	-	-	6	-	1
Grey Heron	22	20	26	25	17	22
Oystercatcher	810	809	828	685	614	749
Ringed Plover	101	74	100	72	148	99
Golden Plover	352	347	18	135	65	183
Grey Plover	-	16	2	13	32	13
Lapwing	198	228	279	131	136	194

SPECIES	2013/14	2014/15	2015/16	2016/17	2017/18	MEAN
Knot	260	111	278	240	148	207
Sanderling	102	64	133	92	120	102
Dunlin	152	483	413	256	993	459
Snipe	5	5	-	13	3	5
Bar-tailed Godwit	150	260	303	133	261	221
Curlew	577	256	366	393	434	405
Greenshank	18	16	25	21	29	22
Redshank	309	695	184	699	407	459
Turnstone	73	62	25	131	80	74
Black-headed Gull	425	278	400	457	347	381
Common Gull	218	143	147	589	222	264
Lesser Black-backed Gull	-	2	2	5	2	2
Herring Gull	252	383	210	491	312	330
Iceland Gull	-	-	1	6	-	1
Great Black-backed Gull	14	11	27	32	12	19

As previously discussed, data from I-WeBS sites in County Sligo has been used to estimate County populations of wintering waterbirds discussed in this report. Datasets for the following sites were downloaded from www.birdwatchireland.ie and reviewed:

Sligo IWeBS Sites

- Balysadare Bay
- Drumcliff Bay Estuary
- Garvogue River
- Inishmurray
- Lough Arrow
- Lough Gara
- Lough Gill
- Sligo harbour

2.2.3 Method of Identification of Target Species

Following a comprehensive desk study by MKO, initial site visit and consultation, a list of “Target species” likely to occur at the site was compiled. The survey work carried out on the site was specifically designed to survey for these identified target species. The target species list was drawn from:

- Annex I of the Birds Directive,
- Special Conservation Interests (SCI) of Special Protection Areas (SPA) within the zone of likely significant effects,
- Red listed birds of Conservation Concern in Ireland,
- Species with the potential to be impacted by this type of development.

All species within these categories were considered as target species for the purpose of these surveys.

3. FIELD SURVEYS

3.1 Field Survey Methods

This section of the report describes the various field survey methods employed. Field surveys were undertaken from January 2021 – March 2021 inclusive. Field survey methodologies have been devised to survey for the bird species composition and assemblages that occur within the study area.

3.1.1 Initial Site Assessment

Based on the results of the desk study, the likely importance of the study area for bird species was determined. Based on the collated information available from the above preliminary assessment and adopting a precautionary approach, a site-specific scope for the ornithological surveys was developed.

3.1.2 Vantage Point Surveys

Vantage Point surveys were undertaken to determine the presence of bird species of high conservation concern within areas of potentially suitable habitat in the study area. These surveys were undertaken in the form of a vantage point watch overlooking the proposed development boundary. Due to the number of buildings within the proposed development site which partially obscured the view, three vantage points within the development site were required to provide good coverage of all amenity grassland habitats within the proposed development site.

The survey was undertaken (onsite) over two three-hour periods (morning and afternoon), which included the two hours on either side of high tide, as this is the period when birds from the nearby SPAs are most likely to make use of terrestrial habitats, such as those present within the proposed development site. The main aim of the survey was to identify if SCIs from the nearby SPAs were utilising areas onsite for foraging or roosting. Along with target species, all additional species observed were recorded to inform the evaluation of supporting habitat.

Survey effort, including details of survey duration and weather condition, is presented in Appendix 1, Table 1-1. Figure 1 in Appendix 1 shows the survey study area.

3.1.3 Walkover and Habitat Surveys

Transect routes were walked during each survey to assess the quality and composition of habitats at various points (10 maximum) within the proposed development boundary. Transect routes were devised to ensure coverage of different habitat complexes within the study area, during each survey visit. At each point grass sward height, percentage of grass, percentage of forb species and percentage of bare ground was recorded. The abundance of droppings present at each transect point was also recorded during these surveys. Results of these habitat transects are presented in Table 3-4 below.

A further consideration during the walkover was to identify signs (e.g. droppings) of bird species of high conservation concern within areas of potentially suitable habitat in the study area. The walkover survey was undertaken within the redline boundary.

The survey was undertaken (onsite) within two hours of high tide, as this is the period when birds from the nearby SPAs are most likely to make use of terrestrial habitats, such as those present within the proposed development area. The main aim of the survey was to identify if SCIs from the adjacent SPA were utilising areas onsite for foraging or roosting. Along with target species, all additional species observed were recorded to inform the evaluation of supporting habitat.

Survey effort, including details of survey duration and weather condition, is presented in Appendix 1, Table 1-1. Figure 1 in Appendix 1 shows the survey study area.

3.1.4

Survey Justification

A comprehensive suite of bird surveys was undertaken at the site between January 2021 and March 2021, as detailed in this report.

The surveys undertaken provide the information necessary to allow a complete, comprehensive and robust assessment of the potential impacts of the proposed development on avian receptors.

3.2 Field survey results

3.2.1 Survey Effort

Surveys were undertaken between the 27th of January 2021 and the 31st of March 2021. Two visits a month were undertaken during this period, with six surveys carried out in total. Table 3-1 shows the survey effort for the 2021 winter season.

Table 3-1 Survey Effort

Date	Survey	Duration (h)	Weather Conditions	Comments	Surveyor
27/01/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 11:15	Visibility: good; Wind speed and direction: gentle breeze S; Cloud cover and height: 95% 150-500m; Rain: none; Frost: none; Snow: none	4-7°C, infrequent drizzle for first 3hrs. High tide (15:47pm) - <i>methodology stated that survey duration should cover both sides of high tide in order to view any birds which may roost or feed on site during this duration. Methods also stated a multi - VP method covering all areas of the site (inconspicuously to birds) combined with a habitat condition transect / visit.</i> Sunset - 17:04	NM
27/01/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 14:45	Visibility: good; Wind speed and direction: moderate breeze S; Cloud cover and height: 95% 150-500m; Rain: light showers; Frost: none; Snow: none	Temperature remained the same but increasingly consistent rain started towards sunset.	NM
09/02/2021 (January Survey)	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 11:45	Visibility: good; Wind speed and direction: fresh breeze NE; Cloud cover and height: 30% >500m; Rain: none; Frost: light; Snow: none	Very cold, crisp and fresh -> -1 - 3°C. Snow was forecast but stayed clear with occasional very light flurries of light snow. Clear and sunny. Lots of gull calls coming from SE outside 500m buffer. Large flock of HC around NE corner and foraging in groups on N field. Methods followed previous surveys - multiple VP's around the site giving an accurate coverage of any flyovers or birds using the site during the hours on either side of high tide, habitat condition transect also. High Tide: 16:29 Incidentals mostly observed on intertidal sediments of inner shallow bay and estuary including Cummeen Strand SPA - during visits before survey and during interval. January Survey carried over. Minimum 2 weeks between surveys (if possible), 2 per month	NM

Date	Survey	Duration (h)	Weather Conditions	Comments	Surveyor
09/02/2021 (January Survey)	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 15:15	Visibility: good; Wind speed and direction: strong breeze NEE; Cloud cover and height: 15% >500m; Rain: none; Frost: none; Snow: none	Remained cold and bright throughout the day. Beautiful sunny winters day with very little cloud cover and cirrus clouds racing across the sky. It was noticed that the fields in the S, W and centre (beside the house) were much more grazed than the previous survey -> due to horses being given access to these areas resulting in a shorter sward and disturbed ground. The N and E fields remained grazed and severely disturbed as before. Local knowledge suggested that house and sheds on site were previously listed as heritage buildings - but have been severely ransacked and vandalised in the meantime. It was mentioned that antisocial and homeless activity occurs on site on occasion - noted. Lots of gulls flying W over estuary / Rosses Point to the N of site (CM, HG, LB, GB) - outside 500m buffer.	NM
12/02/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 12:15	Visibility: good; Wind speed and direction: strong breeze S; Cloud cover and height: 30% >500m; Rain: none; Frost: none; Snow: none	Fresh and cold S wind -> 1 - 4 °C, blustery day with lots of noise from trees on site, largely clear sky with racing clouds, some humps and summits of mountains to the NE with patches of snow, occasional sunny spells early in the day. High activity within dense brambles and tree thickets on site - BT, GT, CH, BF, LT, CT, GC, B. High tide: 17:59	NM
12/02/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:05 starting at 15:40	Visibility: good; Wind speed and direction: strong breeze SE; Cloud cover and height: 80% >500m; Rain: none; Frost: none; Snow: none	Continued to be wild and fresh with quite strong gusts of wind, element of wind chill, became darker and overcast, gulls were observed soaring high on the wind to the N and S of the site (outside 500m buffer). BH, GB, RK, OC, CU, WN, TT, BG - foraging on intertidal sediments and along sediment banks of estuary to N of site (~15:30).	NM
24/02/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 12:00	Visibility: good; Wind speed and direction: light breeze SW; Cloud cover and height: 55% 150-500m; Rain: light showers; Frost: none; Snow: none	8 - 11°C. Very little breeze. Patches of very infrequent light drizzle and showers but mainly clear with overcast skies, but clearing towards mid afternoon with some patches of hazy sunshine. Lots of gull flying activity	NM

Date	Survey	Duration (h)	Weather Conditions	Comments	Surveyor
				beyond all boundaries (majority were heard and not seen). High tide - 16:24pm	
24/02/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:30 starting at 15:30	Visibility: good; Wind speed and direction: gentle breeze SW; Cloud cover and height: 80% >500m; Rain: drizzle; Frost: none; Snow: none	Light breeze with occasional moderate SW gusts. Almost no rain but turning considerably more drear and grey towards late afternoon. Temperature dropped and wind picked up when darkness was falling. <i>Lots of HC, MP, GO, B, PW, CH, ST, M foraging on N & E fields and S triangular field of the site. Lots of BH activity over MW2 to the S at ~17:45</i>	NM
09/03/2021	Winter Wildfowl - Ndfa Finisklin, Sligo	3:00 starting at 12:00	Visibility: moderate; Wind speed and direction: moderate breeze SSE; Cloud cover and height: 85% 150-500m; Rain: light showers; Frost: none; Snow: none	Mild (8 - 11°C) but very wet. Consistently grey and overcast with constant light showers. Low clouds (~300m. Mountains in distance were completely covered (including Knocknarea). Gentle SSE breeze. No clearing in rain at al bar the occasional clearance for a few minutes earlier in the day. HT: 15:32	NM
09/03/2021	Winter Wildfowl - Ndfa Finisklin, Sligo	3:15 starting at 15:15	Visibility: poor; Wind speed and direction: strong breeze SE; Cloud cover and height: 92% <150m; Rain: heavy showers; Frost: none; Snow: none	Mild temperature continued but the rain got worse - consistent heavy showers with no break. Wind increased and caused sheets of rain to blow across the site. Visibility greatly reduced.	NM
31/03/2021	Winter Wildfowl - Ndfa Finisklin, Sligo	6:55 starting at 06:45	Visibility: moderate; Wind speed and direction: gentle breeze NW; Cloud cover and height: 100% 150-500m; Rain: light showers; Frost: none; Snow: none	Mild with light NW breeze - > 10kph, 8 - 11 °C. Grey dark and overcast with low clouds throughout survey. Light consistent rain with occasional clearances (but remained grey and overcast even during those). Visibility was average but sufficient for size of site. Consistent light rain continued until noon when longer dry but cloudy spells emerged. Started to brighten after lunch (after survey). HT: 08:29	NM

3.2.2 Vantage Point Survey Results

As previously discussed, surveys were undertaken at the proposed development between January 2021 and March 2021 inclusive. Summary results from the vantage point surveys are presented below in Table 3-2 and Table 3-3 and discussed in further detail in Section 4 of this report. Figure numbers refer to figures provided in Appendix 2.

Table 3-2 Total number of each species recorded commuting over the proposed development site during surveys (Peak Counts for each species are presented in bold)

Species	Conservation Status	January	February				March		Figure No.
		27 th	9 th	12 th	24 th	9 th	31 st		
Black-headed Gull	BoCCI Red Listed (Breeding Populations)	-	15	7	23	12	9	Figure 1.1	
Common Gull	BoCCI Amber Listed (Breeding Populations)	8	4	1	2	-	-	Figure 1.2	
Cormorant	BoCCI Amber Listed	-	-	-	-	-	1	Figure 1.3	
Curlew	BoCCI Red Listed	5		1	3	1		Figure 1.4	
Great Black-backed Gull	BoCCI Amber Listed (Breeding Populations)	-	3	-	-	1	-	Figure 1.5	
Grey Heron	BoCCI Green Listed	-	-	1	1	-	1	Figure 1.6	
Herring Gull	BoCCI Red Listed (Breeding Populations)	32	44	26	59	53	56	Figure 1.7 Figure 1.7.2	
Lesser Black-backed Gull	BoCCI Amber Listed (Breeding Populations)	3	2	5	2	-	-	Figure 1.8	
Mallard	BoCCI Amber Listed	-	-	-	-	2	3	Figure 1.9	
Oystercatcher	BoCCI Red Listed	-	-	-	-	-	7	Figure 1.10	
Shag	BoCCI Amber Listed	-	-	-	-	1	-	Figure 1.11	
Wigeon	BoCCI Amber Listed	-	-	-	-	-	3	Figure 1.12	

Table 3-3 Total number of each species recorded on, or within 500m of, the proposed development site (i.e. observed foraging/roosting) (Peak Counts for each species are presented in bold)

Species	Conservation Status	January	February				March		Figure No.
		27 th	9 th	12 th	24 th	9 th	31 st		
Black-headed Gull	BoCCI Red Listed (Breeding Populations)	-	-	-	71	-	-	Figure 1.7.2	
Common Gull	BoCCI Amber Listed (Breeding Populations)	-	-	-	34	-	-	Figure 1.7.2	
Great Black-backed Gull	BoCCI Amber Listed (Breeding Populations)	-	-	-	17	-	-	Figure 1.7.2	
Herring Gull	BoCCI Red Listed (Breeding Populations)	6	-	-	54	-	15	Figure 1.7.2	
Lesser Black-backed Gull	BoCCI Amber Listed (Breeding Populations)	-	-	-	3	-	3	Figure 1.7.2	
Mallard	BoCCI Amber Listed	-	-	-	-	-	8	Figure 1.9	



3.2.3 Walkover and Habitat Survey Results

Habitat quality and composition were recorded along walked transects within the proposed development were assessed at visits between January and March inclusive. The monthly range and averages of habitat compositions are detailed in Table 3-4 below. Also included are average monthly sward heights and the abundance of brent goose droppings.

Table 3-4 Habitat quality and composition of walked transects within the proposed development. Also included is the abundance of brent geese droppings observed on transects.

Month	Sward Height (cm)	Grass (%)		Forbs (%)		Bare Ground (%)		Number of Droppings
		Range	Average	Range	Average	Range	Average	
January	15.5	45-92	78	4-45	17	0-30	5.4	0
February	11	40-100	80	0-55	16	0-15	4.5	0
March	11.7	40-85	62.6	0-58	24.4	0-30	12.3	0

3.2.4 Other Observations

A number of observations of non-target species were recorded during the survey period. The most significant of these observations are detailed in Table 3- below and discussed in further detail in Section 4 of this report.

Table 3-4 Other observations during surveys

Species	Survey Type	Observations recorded during surveys	Activity of note
Buzzard	Walkover Survey	1	Soaring high above fields and tree clusters NEE of site

4.

DISCUSSION

The following provides a synopsis of the findings of the surveys undertaken between January 2021 and March 2021.

Within the proposed development site and/or within 500m of the site, the following key observations were noted:

- Curlew were observed travelling through a corridor over the proposed development site and several occasions.
- Herring gull, lesser black-backed gull and mallard were observed using the proposed development site for foraging.
- Black-headed gull, herring gull, common gull and lesser black-backed gull were observed regularly commuting over the proposed development.

Key potential impacts that could result from the proposed development on local avian receptors include habitat loss, disturbance/displacement and water pollution.

The proposed development site comprises areas of agricultural grassland combined with rough, semi-natural grasslands. The site is not managed through mowing practices, however many areas are grazed heavily by horses, with high levels of trampling and disturbance to the grasslands. Several partially flooded, muddy areas, and areas with high forbe coverage within the proposed development were noted, in which foraging herring gull, lesser black-backed gull and mallard were observed.

Of the SCI species listed for the SPAs within the ZOI, oystercatcher and cormorant were observed on, or within 500m of, the proposed development. However, both SCI species were observed on a single occasion and any predicted impacts are unlikely to be ecologically significant given how few birds were recorded throughout the winter season of surveys.

Black-headed gull flocks of county importance (>6 birds; 1% of the county population), common gull flocks of county importance (>8 birds; 1% of the county population), lesser black-backed gull flocks of county importance (>1 birds; 1% of the county population) and herring gull flocks of county importance (>7 birds; 1% of the county population) were observed regularly commuting over the proposed development site. Great black-backed gull flocks of county importance (>1 birds; 1% of the county population) were observed commuting over the proposed development site on two occasions. Herring gull and lesser black-backed gull flocks of county importance for both species were observed on one occasion foraging on wet grasslands within the proposed development site.

Curlew flocks were also observed commuting over the site repeatedly using a repeated flight path, indicating a potential commuting corridor for wintering curlew over the proposed development site. However, the numbers of curlew observed commuting over the site did not exceed that of county importance (>13 birds; 1% of the county population) and any predicted impacts are unlikely to be ecologically significant.

The potential for birds commuting over the site to be impacted by construction activities is considered to be limited. There is the potential for disturbance/displacement and habitat loss for species observed utilising habitats within the proposed development site during the construction phase. Disturbance/displacement impacts can be avoided or reduced by including suitable design measures and construction practices such as seasonal limitations to construction activities.

5.

CONCLUSION

There are six SPAs within the ZOI, the nearest SPA to the proposed development is Cummeen Strand SPA (87m to the north). Of the SCI species listed for the SPAs within the ZOI, oystercatcher and cormorant were the only species recorded commuting over, or within 500m of, the proposed development.

The proposed development site is not within a SPA, however, given the proximity of Cummeen Strand and several other SPAs, there may be some potential for impacts to result during construction and operational phases of the proposed development on birds that are associated with these SPAs. Potential impacts could include:

- Loss of potential foraging/roosting habitat within the proposed development site.
- Disturbance/displacement during construction works and the operational phase, including through movement of machinery, personnel, noise, vibration and/or noise associated with domestic dwellings.
- Water pollution of downstream SPAs.

The maximum likely distance at which disturbance will impact SCIs from a SPA is 300m (Cutts et al., 2013) from the proposed development boundary. Given the proximity of the proposed development site to the nearest SPA, potential disturbance impacts within SPAs cannot be ruled out. However, given the low level of activity of SCI species at the development site, it is unlikely that there will be any significant disturbance/displacement SCI species at the proposed development site, given the lack of evidence that the site is used with any regularity.

When built, the proposed housing scheme may result in disturbance of SCIs of the SPAs within the likely ZOI of the proposed development site. However, habituation is likely to occur to this new source of disturbance given that the SCIs of the SPA are already accustomed to the disturbance associated with Sligo town and existing surrounding developments.

A wide range of environmental factors are required to support water bird species including good water quality and clarity and a good supply of food resources. Thus, water quality impacts resulting from the proposed development (i.e. during the construction and operational phases) could result in a reduction in the availability of suitable habitat for water bird species at downstream wetland sites. The effect of such a reduction in water quality has the potential to be ecologically significant. However, it is likely that best practice design and construction best practice measures can be implemented that would avoid or reduce such impacts.

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APPENDIX 1

TECHNICAL APPENDIX



Table of Contents

TABLE OF TABLES

<i>Table 1 Survey Effort.....</i>	<i>2</i>
<i>Table 2 Winter Bird Survey Flight Data</i>	<i>6</i>
<i>Table 3: Winter Bird Survey Flock Data</i>	<i>35</i>
<i>Table 4 Habitat Survey Results</i>	<i>36</i>

Table 1 Survey Effort

Date	Survey	Duration (h)	Weather Conditions	Comments	Surveyor
27/01/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 11:15	Visibility: good; Wind speed and direction: gentle breeze S; Cloud cover and height: 95% 150-500m; Rain: none; Frost: none; Snow: none	4-7°C, infrequent drizzle for first 3hrs. High tide (15:47pm) - <i>methodology stated that survey duration should cover both sides of high tide in order to view any birds which may roost or feed on site during this duration. Methods also stated a multi - VP method covering all areas of the site (inconspicuously to birds) combined with a habitat condition transect / visit.</i> Sunset - 17:04	NM
27/01/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 14:45	Visibility: good; Wind speed and direction: moderate breeze S; Cloud cover and height: 95% 150-500m; Rain: light showers; Frost: none; Snow: none	Temperature remained the same but increasingly consistent rain started towards sunset.	NM
09/02/2021 (January Survey)	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 11:45	Visibility: good; Wind speed and direction: fresh breeze NE; Cloud cover and height: 30% >500m; Rain: none; Frost: light; Snow: none	Very cold, crisp and fresh -> -1 - 3°C. Snow was forecast but stayed clear with occasional very light flurries of light snow. Clear and sunny. Lots of gull calls coming from SE outside 500m buffer. Large flock of HC around NE corner and foraging in groups on N field. Methods followed previous surveys - multiple VP's around the site giving an accurate coverage of any flyovers or birds using the site during the hours on either side of high tide, habitat condition transect also. High Tide: 16:29 Incidentals mostly observed on intertidal sediments of inner shallow bay and estuary including Cummeen Strand SPA - during visits before survey and during interval. January Survey carried over. Minimum 2 weeks between surveys (if possible), 2 per month	NM

Date	Survey	Duration (h)	Weather Conditions	Comments	Surveyor
09/02/2021 (January Survey)	Winter Wildfowl - Ndafa Sligo, Finisklin	3:00 starting at 15:15	Visibility: good; Wind speed and direction: strong breeze NEE; Cloud cover and height: 15% >500m; Rain: none; Frost: none; Snow: none	Remained cold and bright throughout the day. Beautiful sunny winters day with very little cloud cover and cirrus clouds racing across the sky. It was noticed that the fields in the S, W and centre (beside the house) were much more grazed than the previous survey -> due to horses being given access to these areas resulting in a shorter sward and disturbed ground. The N and E fields remained grazed and severely disturbed as before. Local knowledge suggested that house and sheds on site were previously listed as heritage buildings - but have been severely ransacked and vandalised in the meantime. It was mentioned that antisocial and homeless activity occurs on site on occasion - noted. Lots of gulls flying W over estuary / Rosses Point to the N of site (CM, HG, LB, GB) - outside 500m buffer.	NM
12/02/2021	Winter Wildfowl - Ndafa Sligo, Finisklin	3:00 starting at 12:15	Visibility: good; Wind speed and direction: strong breeze S; Cloud cover and height: 30% >500m; Rain: none; Frost: none; Snow: none	Fresh and cold S wind -> 1 - 4 °C, blustery day with lots of noise from trees on site, largely clear sky with racing clouds, some humps and summits of mountains to the NE with patches of snow, occasional sunny spells early in the day. High activity within dense brambles and tree thickets on site - BT, GT, CH, BF, LT, CT, GC, B. High tide: 17:59	NM
12/02/2021	Winter Wildfowl - Ndafa Sligo, Finisklin	3:05 starting at 15:40	Visibility: good; Wind speed and direction: strong breeze SE; Cloud cover and height: 80% >500m; Rain: none; Frost: none; Snow: none	Continued to be wild and fresh with quite strong gusts of wind, element of wind chill, became darker and overcast, gulls were observed soaring high on the wind to the N and S of the site (outside 500m buffer). BH, GB, RK, OC, CU, WN, TT, BG - foraging on intertidal sediments and along sediment banks of estuary to N of site (~15:30).	NM

Date	Survey	Duration (h)	Weather Conditions	Comments	Surveyor
24/02/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:00 starting at 12:00	Visibility: good; Wind speed and direction: light breeze SW; Cloud cover and height: 55% 150-500m; Rain: light showers; Frost: none; Snow: none	8 - 11°C. Very little breeze. Patches of very infrequent light drizzle and showers but mainly clear with overcast skies, but clearing towards mid-afternoon with some patches of hazy sunshine. Lots of gull flying activity beyond all boundaries (majority were heard and not seen). High tide - 16:24pm	NM
24/02/2021	Winter Wildfowl - Ndfa Sligo, Finisklin	3:30 starting at 15:30	Visibility: good; Wind speed and direction: gentle breeze SW; Cloud cover and height: 80% >500m; Rain: drizzle; Frost: none; Snow: none	Light breeze with occasional moderate SW gusts. Almost no rain but turning considerably more drear and grey towards late afternoon. Temperature dropped and wind picked up when darkness was falling. <i>Lots of HC, MP, GO, B, PW, CH, ST, M foraging on N & E fields and S triangular field of the site. Lots of BH activity over MW2 to the S at ~17:45</i>	NM
09/03/2021	Winter Wildfowl - Ndfa Finisklin, Sligo	3:00 starting at 12:00	Visibility: moderate; Wind speed and direction: moderate breeze SSE; Cloud cover and height: 85% 150-500m; Rain: light showers; Frost: none; Snow: none	Mild (8 - 11°C) but very wet. Consistently grey and overcast with constant light showers. Low clouds (~300m). Mountains in distance were completely covered (including Knocknarea). Gentle SSE breeze. No clearing in rain at all but the occasional clearance for a few minutes earlier in the day. HT: 15:32	NM

Date	Survey	Duration (h)	Weather Conditions	Comments	Surveyor
09/03/2021	Winter Wildfowl - Ndfa Finisklin, Sligo	3:15 starting at 15:15	Visibility: poor; Wind speed and direction: strong breeze SE; Cloud cover and height: 92% <150m; Rain: heavy showers; Frost: none; Snow: none	Mild temperature continued but the rain got worse - consistent heavy showers with no break. Wind increased and caused sheets of rain to blow across the site. Visibility greatly reduced.	NM
31/03/2021	Winter Wildfowl - Ndfa Finisklin, Sligo	6:55 starting at 06:45	Visibility: moderate; Wind speed and direction: gentle breeze NW; Cloud cover and height: 100% 150-500m; Rain: light showers; Frost: none; Snow: none	Mild with light NW breeze -> 10kph, 8 - 11 °C. Grey dark and overcast with low clouds throughout survey. Light consistent rain with occasional clearances (but remained grey and overcast even during those). Visibility was average but sufficient for size of site. Consistent light rain continued until noon when longer dry but cloudy spells emerged. Started to brighten after lunch (after survey). HT: 08:29	NM

Table 2 Winter Bird Survey Flight Data

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG2701.1	1, flock HG	27/01/2021	11:19	Herring Gull	3	40	0	35	5	0	scrub and treelines; flying nw along n boundary of site	NM
HG2701.2	2, flock HG	27/01/2021	11:20	Herring Gull	1	30	30	0	0	0	improved agricultural grassland and treelines; flying sw across site	NM
HG2701.3	3, flock HG	27/01/2021	11:29	Herring Gull	2	20	20	0	0	0	improved agricultural grassland; flying s across site	NM
HG2701.4	4, flock HG	27/01/2021	12:12	Herring Gull	5	19	5	14	0	0	wet willow-alder-ash woodland and scrub; flying nw across site, towards intertidal flats	NM
HG2701.5	5, flock HG	27/01/2021	12:14	Herring Gull	3	20	0	20	0	0	improved agricultural grassland and treelines; flying e, directly across site	NM
HG2701.6	6, flock HG	27/01/2021	13:10	Herring Gull	2	15	0	15	0	0	treelines; flying across site	NM
HG2701.7	7, flock HG	27/01/2021	13:34	Herring Gull	1	35	35	0	0	0	improved agricultural grassland and treelines; flying e across site	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG2701.8	8, flock HG	27/01/2021	13:42	Herring Gull	1	25	0	25	0	0	treelines and buildings and artificial surfaces; flying nw across s of site, calling	NM
HG2701.9	9, flock HG	27/01/2021	13:54	Herring Gull	4	45	0	45	0	0	scattered tress and parkland; flying nw over site, towards flats and spa	NM
HG2701.10	10, flock HG	27/01/2021	14:40	Herring Gull	3	25	25	0	0	0	mixed sediment shores and scrub; flying e along coast (just n of site)	NM
HG2701.11	11, flock HG	27/01/2021	15:10	Herring Gull	4	30	0	10	25	0	mixed sediment shores; flying w along coast to n of site	NM
HG2701.12	12, flock HG	27/01/2021	15:20	Herring Gull	2	15	0	15	0	0	improved agricultural grassland and treelines; circling over se corner, calling	NM
HG2701.13	13, flock HG	27/01/2021	15:21	Herring Gull	1	30	10	20	0	0	scrub, improved agricultural grassland and treelines; flying sw across site	NM
HG2701.14	14, flock HG	27/01/2021	15:31	Herring Gull	1	50	0	0	50	0	improved agricultural grassland and scrub; flying e over n of site	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG2701.15	15, flock HG	27/01/2021	15:41	Herring Gull	2	34	0	34	0	0	improved agricultural grassland, scrub and mixed sediment shores; flying nw across site	NM
HG2701.16	16, flock HG	27/01/2021	16:43	Herring Gull	2	55	45	10	0	0	scrub, treelines and improved agricultural grassland; flying se over n boundary of site	NM
HG2701.17	17, flock HG	27/01/2021	17:08	Herring Gull	11	110	0	0	110	0	improved agricultural grassland and treelines; flying across entire site, not in one big group, flew across in two and threes over a period of 2mins	NM
HG0902.1	NDFA Sligo, flock 1	09/02/2021	11:59	Herring Gull	2	130	0	0	130	0	buildings and artificial surfaces and improved agricultural grassland; flying high, riding wind, heading e	NM
HG0902.2	NDFA Sligo, flock 2	09/02/2021	12:16	Herring Gull	1	95	30	65	0	0	improved agricultural grassland, buildings and artificial surfaces and scrub; flying across n of site	NM
HG0902.3	NDFA Sligo, flock 3	09/02/2021	12:31	Herring Gull	2	50	0	50	0	0	mixed sediment shores, improved agricultural grassland and scrub; flying roughly w along coast	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG0902.4	NDFA Sligo, flock 4	09/02/2021	13:30	Herring Gull	7	500	100	250	160	50	improved agricultural grassland, scrub and buildings and artificial surfaces; flying and circling, soaring and circling just outside se boundary of site for a long period, calling	NM
CM0902.1	NDFA Sligo, flock 5	09/02/2021	13:55	Common Gull	4	65	0	50	15	0	scrub and improved agricultural grassland; flying e along coast / scrub	NM
HG0902.5	NDFA Sligo, flock 6	09/02/2021	14:34	Herring Gull	1	55	0	55	0	0	#N/A	NM
GB0902.1	NDFA sligo, flock 7	09/02/2021	14:40	Great Black-backed Gull	3	200	0	0	40	160	improved agricultural grassland and treelines; flying w and n across n boundary of site, soaring high as they moved nw, heading out over bay	NM
HG0902.6	NDFA Sligo, flock 8	09/02/2021	15:28	Herring Gull	2	70	0	0	70	0	straits and sounds and scrub; flying w along coast	NM
HG0902.7	NDFA Sligo, flock 9	09/02/2021	15:35	Herring Gull	6	85	0	55	10	0	improved agricultural grassland and hedgerows; flying s along e boundary of site	NM
HG0902.8	NDFA Sligo, flock 10	09/02/2021	15:34	Herring Gull	2	95	0	40	20	10	improved agricultural grassland and treelines; flying and circling over site	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG0902.9	NDFA Sligo, flock 11	09/02/2021	15:46	Herring Gull	8	160	0	10	30	120	improved agricultural grassland, treelines and buildings and artificial surfaces; soaring high and circling high over site before moving s and e	NM
LB0902.1	NDFA Sligo, flock 12	09/02/2021	16:02	Lesser Black-backed Gull	2	150	0	0	45	105	#N/A	NM
HG0902.10	NDFA Sligo, flock 13	09/02/2021	17:11	Herring Gull	5	90	0	15	75	0	improved agricultural grassland and scrub; flying over site	NM
BH0902.1	NDFA Sligo, flock 14	09/02/2021	17:13	Black-headed Gull	15	200	0	160	40	0	improved agricultural grassland and hedgerows; flying across ne boundary, not a single flock, individuals sporadically flying over corner at irregular intervals, all heading roughly the same direction however	NM
HG0902.11	NDFA Sligo, flock 15	09/02/2021	18:02	Herring Gull	8	75	0	10	65	0	improved agricultural grassland and treelines; flying nw across w part of site	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
H1202.1	NDFA Sligo, flock 1	12/02/2021	12:18	Grey Heron	1	50	50	0	0	0	improved agricultural grassland and hedgerows; flying low just outside ne boundary	NM
HG1202.1	NDFA Sligo, flock 2	12/02/2021	12:45	Herring Gull	1	98	0	50	48	0	improved agricultural grassland, wet grassland and buildings and artificial surfaces; flying and soaring over s biundary	NM
HG1202.2	NDFA Sligo, flock 3	12/02/2021	12:49	Herring Gull	3	45	0	0	45	0	improved agricultural grassland and buildings and artificial surfaces; flying high across s small field, soaring on wind, 2 mature, 1 juvenile	NM
LB1202.1	NDFA Sligo, flock 4	12/02/2021	12:54	Lesser Black-backed Gull	5	70	0	70	0	0	improved agricultural grassland; flying across n field of site	NM
BH1202.1	NDFA Sligo, flock 5	12/02/2021	12:55	Black-headed Gull	2	85	10	70	5	0	improved agricultural grassland, scattered tress and parkland and treelines; flying across site and calling, heading roughly se	NM
HG1202.3	NDFA Sligo, flock 6	12/02/2021	13:28	Herring Gull	4	40	0	40	0	0	improved agricultural grassland, buildings and artificial surfaces and wet grassland; swirling and soaring in circles on wind just outside e and s boundaries	NM
HG1202.4	NDFA Sligo, flock 7	12/02/2021	14:22	Herring Gull	2	65	0	65	0	0	#N/A	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
CM1202.1	NDFA Sligo, flock 8	12/02/2021	14:56	Common Gull	1	50	10	40	0	0	improved agricultural grassland, scrub and hedgerows; flying s and e across ne site	NM
	NDFA Sligo, flock 9	12/02/2021	15:27	Pheasant	1	0	0	0	0	0	scrub and scattered tress and parkland; calling in thick undergrowth and tree cluster	NM
BH1202.2	NDFA Sligo, flock 10	12/02/2021	17:16	Black-headed Gull	5	65	0	65	0	0	mixed sediment shores, scrub and treelines; flying w along coastline	NM
CU1202.1	NDFA Sligo, flock 11	12/02/2021	17:29	Curlew	1	50	0	0	50	0	conifer plantation and improved agricultural grassland; flying sw across site, in straight line	NM
HG1202.5	NDFA Sligo, flock 12	12/02/2021	18:16	Herring Gull	16	240	0	40	180	20	improved agricultural grassland and hedgerows; flying e across n of site, flying towards lights of sligo town, moving across in groups over 270s period (not one single group)	NM
CU2402.1	NDFA Sligo, flock 1	24/02/2021	12:04	Curlew	1	155	140	15	0	0	improved agricultural grassland, hedgerows and buildings and artificial surfaces; flying low across e field and hedgerows (just outside rlb) and across n of site, calling	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG2402.1	NDFA Sligo, flock 2	24/02/2021	12:06	Herring Gull	2	75	0	0	75	0	treelines and scattered tress and parkland; flying and high and soaring across s of site	NM
HG2402.2	NDFA Sligo, flock 3	24/02/2021	12:18	Herring Gull	1	20	0	0	20	0	treelines, improved agricultural grassland and scrub; flying rapidly ne across n of site	NM
HG2402.3	NDFA Sligo, flock 4	24/02/2021	12:20	Herring Gull	2	15	0	0	15	0	improved agricultural grassland and treelines; flying rapidly se just outside ne of site	NM
HG2402.4	NDFA Sligo, flock 5	24/02/2021	12:39	Herring Gull	7	40	0	15	25	0	buildings and artificial surfaces, improved agricultural grassland and hedgerows; flying beyond s boundary	NM
HG2402.5	NDFA Sligo, flock 6	24/02/2021	13:43	Herring Gull	5	65	0	40	25	0	buildings and artificial surfaces and treelines; swirling around in circles and calling just beyond s boundary	NM
CM2402.1	NDFA Sligo, flock 7	24/02/2021	13:56	Common Gull	2	45	45	0	0	0	improved agricultural grassland and hedgerows; flying low in pair across ne of site, heading nw	NM
HG2402.6	NDFA Sligo, flock 8	24/02/2021	14:20	Herring Gull	1	40	0	40	0	0	improved agricultural grassland, hedgerows and scattered tress and parkland; flying sw across site	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG2402.7	NDFA Sligo, flock 9	24/02/2021	14:27	Herring Gull	12	300	0	0	0	300	improved agricultural grassland, scattered trees and parkland and buildings and artificial surfaces; soaring and circling high across s and e of site, group consisted of 11-12 gulls wheeling high above in random circles, separate	NM
HG2402.8	NDFA Sligo, flock 10	24/02/2021	14:40	Herring Gull	1	55	0	55	0	0	improved agricultural grassland, treelines and scattered trees and parkland; flying nw across site	NM
HG2402.9	NDFA Sligo, flock 11	24/02/2021	14:43	Herring Gull	4	70	0	0	0	70	improved agricultural grassland, hedgerows and buildings and artificial surfaces; soaring high across s of site	NM
HG2402.10	NDFA Sligo, flock 12	24/02/2021	15:07	Herring Gull	5	40	0	0	40	0	improved agricultural grassland, buildings and artificial surfaces and hedgerows; circling high over s of site briefly before heading sw again	NM
HG2402.11	NDFA Sligo, flock 13	24/02/2021	15:36	Herring Gull	1	30	30	0	0	0	improved agricultural grassland, buildings and artificial surfaces and hedgerows; flying along w boundary	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG2402.12	NDFA Sligo, flock 14	24/02/2021	15:43	Herring Gull	11	245	0	0	50	195	improved agricultural grassland and buildings and artificial surfaces; soaring high and wheeling over s of site	NM
HG2402.13	NDFA Sligo, flock 15	24/02/2021	15:49	Herring Gull	3	60	0	60	0	0	improved agricultural grassland, hedgerows and buildings and artificial surfaces; flying over e of site	NM
LB2402.1	NDFA Sligo, flock 16	24/02/2021	15:55	Lesser Black-backed Gull	2	75	0	0	75	0	improved agricultural grassland, scattered tress and parkland and treelines; flying nw across centre of site	NM
HG2402.14	NDFA Sligo, flock 17	24/02/2021	16:59	Herring Gull	2	30	0	30	0	0	improved agricultural grassland and hedgerows; flying nw beyond w boundary	NM
HG2402.15	NDFA Sligo, flock 18	24/02/2021	17:08	Herring Gull	2	40	0	40	0	0	buildings and artificial surfaces, improved agricultural grassland and wet grassland; flying sw outside s of site	NM
H2402.1	NDFA Sligo, flock 19	24/02/2021	17:21	Grey Heron	1	40	40	0	0	0	improved agricultural grassland and hedgerows; flying nw across n of site, landing in wet scrubby willow woodland on coast	NM
BH2402.1	NDFA Sligo, flock 20	24/02/2021	17:44	Black-headed Gull	23	250	0	250	0	0	sea inlets and bays; flying w along coast, not in one big group, staggered flybys in 5's and 6's over 150s	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
CU2402.2	NDFA Sligo, flock 21	24/02/2021	18:36	Curlew	2	45	45	0	0	0	improved agricultural grassland and hedgerows; flying low across site, heading nw	NM
HG0903.1	1, flock HG	09/03/2021	NDFA Sligo	Herring Gull	2	40	15	25	0	0	improved agricultural grassland and hedgerows; flying low over ne boundary hedgerow	NM
CU0903.1	2, flock CU	09/03/2021	NDFA Sligo	Curlew	1	60	60	0	0	0	improved agricultural grassland and hedgerows; flying low across n of site, looping towards coast	NM
HG0903.2	3, flock HG	09/03/2021	NDFA Sligo	Herring Gull	18	560	0	30	190	270	improved agricultural grassland, buildings and artificial surfaces and hedgerows; soaring and circling high over s of site and over land beyond, a number of birds continued to call and circle, cycling individuals	NM
BH0903.1	4, flock BH	09/03/2021	NDFA Sligo	Black-headed Gull	7	50	0	50	0	0	improved agricultural grassland, treelines and scattered tress and parkland; flying ne across site	NM
HG0903.3	5, flock HG	09/03/2021	NDFA Sligo	Herring Gull	1	30	0	25	5	0	improved agricultural grassland, scattered tress and parkland and buildings and artificial surfaces; flying across s of site	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG0903.4	6, flock HG	09/03/2021	NDFA Sligo	Herring Gull	3	50	0	50	0	0	improved agricultural grassland and treelines; flying sw across site	NM
BH0903.2	7, flock BH	09/03/2021	NDFA Sligo	Black-headed Gull	2	45	0	40	5	0	scattered tress and parkland and buildings and artificial surfaces; flying sw across site	NM
MA0903.1	8, flock MA	09/03/2021	NDFA Sligo	Mallard	2	40	0	40	0	0	improved agricultural grassland and hedgerows; flying frantically across n of site and fields directly adjacent to e, looping towards coast, pair (m + f)	NM
HG0903.5	9, flock HG	09/03/2021	NDFA Sligo	Herring Gull	5	65	0	0	55	10	improved agricultural grassland, treelines and scattered tress and parkland; flying high across site, heading n	NM
HG0903.6	10, flock HG	09/03/2021	NDFA Sligo	Herring Gull	3	40	40	0	0	0	improved agricultural grassland and scattered tress and parkland; flying w across s of site	NM
SA0903.1	11, flock SA	09/03/2021	NDFA Sligo	Shag	1	13	13	0	0	0	mixed sediment shores, sea inlets and bays and scrub; flying along coast, heading w	NM
BZ0903.1	12, flock BZ	09/03/2021	NDFA Sligo	Buzzard	1	120	0	0	40	80	improved agricultural grassland, hedgerows and scrub; soaring high above fields and tree clusters nec of site	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG0903.7	13, flock HG	09/03/2021	NDFA Sligo	Herring Gull	3	46	0	46	0	0	improved agricultural grassland, treelines and scattered tress and parkland; flying n across site	NM
GB0903.1	14, flock GB	09/03/2021	NDFA Sligo	Great Black-backed Gull	1	62	0	10	10	42	improved agricultural grassland, scrub and sea inlets and bays; circling and weaving high along n boundary and along coast	NM
BH0903.3	15, flock BH	09/03/2021	NDFA Sligo	Black-headed Gull	3	35	30	5	0	0	scattered tress and parkland and improved agricultural grassland; flying e across site	NM
HG0903.8	16, flock HG	09/03/2021	NDFA Sligo	Herring Gull	5	70	10	15	45	0	scattered tress and parkland, treelines and improved agricultural grassland; flying along sw boundary before climbing and circling high over s boundary and beyond	NM
HG0903.9	17, flock HG	09/03/2021	NDFA Sligo	Herring Gull	13	150	0	0	0	150	improved agricultural grassland, hedgerows and buildings and artificial surfaces; circling and soaring high over s boundary	NM
HG3103.1	1, flock HG	31/03/2021	NDFA Sligo	Herring Gull	8	60	0	0	60	0	improved agricultural grassland, scattered tress and parkland and hedgerows; flying ne across site	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
H3103.1	2, flock H	31/03/2021	NDFA Sligo	Grey Heron	1	40	40	0	0	0	improved agricultural grassland and scattered tress and parkland; flying sw low across w of site	NM
WN3103.1	3, flock WN	31/03/2021	NDFA Sligo	Wigeon	3	20	0	20	0	0	improved agricultural grassland and hedgerows; flying e across site	NM
HG3103.2	4, flock HG	31/03/2021	NDFA Sligo	Herring Gull	2	55	0	0	45	10	improved agricultural grassland and scattered tress and parkland; soaring high over sire, heading ne	NM
HG3103.3	5, flock HG	31/03/2021	NDFA Sligo	Herring Gull	3	25	0	25	0	0	improved agricultural grassland and hedgerows; flying e over n of site	NM
MA3103.1	6, flock MA	31/03/2021	NDFA Sligo	Mallard	1	20	15	5	0	0	improved agricultural grassland; flushed from wet ground on s triangular field, flew away n, female	NM
BH3103.1	7, flock BH	31/03/2021	NDFA Sligo	Black-headed Gull	2	75	20	55	0	0	immature woodland, improved agricultural grassland and hedgerows; flying across n boundary	NM
OC3103.1	8, flock OC	31/03/2021	NDFA Sligo	Oystercatcher	7	45	0	45	0	0	improved agricultural grassland and hedgerows; flying rapidly across site, s - n., bending away ne when beyond towards estuary	NM
CA3103.1	9, flock CA	31/03/2021	NDFA Sligo	Cormorant	1	55	45	10	0	0	sea inlets and bays and immature woodland; flying ne along coast	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG3103.4	10, flock HG	31/03/2021	NDFA Sligo	Herring Gull	1	65	0	65	0	0	immature woodland, improved agricultural grassland and sea inlets and bays; flying along n boundary and adjacent willow scrubby woodland	NM
HG3103.5	11, flock HG	31/03/2021	NDFA Sligo	Herring Gull	1	40	20	20	0	0	improved agricultural grassland and hedgerows; flying ne along e boundary	NM
HG3103.6	12, flock HG	31/03/2021	NDFA Sligo	Herring Gull	3	85	0	75	10	0	improved agricultural grassland and scattered tress and parkland; flying across site	NM
HG3103.7	13, flock HG	31/03/2021	NDFA Sligo	Herring Gull	2	40	0	40	0	0	improved agricultural grassland, scattered tress and parkland and hedgerows; flying se across site	NM
HG3103.8	14, flock HG	31/03/2021	NDFA Sligo	Herring Gull	1	65	0	0	65	0	improved agricultural grassland and hedgerows; flying se across n of site	NM
HG3103.9	15, flock HG	31/03/2021	NDFA Sligo	Herring Gull	9	70	0	0	70	0	improved agricultural grassland and scattered tress and parkland; flying n over entire site towards coast	NM
HG3103.10	16, flock HG	31/03/2021	NDFA Sligo	Herring Gull	14	165	0	0	80	85	improved agricultural grassland, buildings and artificial surfaces and hedgerows; swirling and soaring over s of site and beyond s boundary, calling constantly	NM

Map Ref.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG3103.11	17, flock HG	31/03/2021	NDFA Sligo	Herring Gull	3	45	0	45	0	0	improved agricultural grassland and scattered tress and parkland; flying sw across site	NM
HG3103.12	18, flock HG	31/03/2021	NDFA Sligo	Herring Gull	1	65	0	0	0	45	improved agricultural grassland and scattered tress and parkland; flying e and n across site	NM
HG3103.13	19, flock HG	31/03/2021	NDFA Sligo	Herring Gull	5	75	0	0	65	10	improved agricultural grassland, hedgerows and buildings and artificial surfaces; swirling and circling over s of site	NM
MA3103.2	20, flock MA	31/03/2021	NDFA Sligo	Mallard	2	30	30	0	0	0	improved agricultural grassland and hedgerows; flying low and nnw across site	NM
HG3103.14	21, flock HG	31/03/2021	NDFA Sligo	Herring Gull	3	55	0	0	55	0	improved agricultural grassland and hedgerows; flying n across site	NM
BH3103.2	22, flock BH	31/03/2021	NDFA Sligo	Black-headed Gull	7	120	0	0	0	120	buildings and artificial surfaces, scrub and improved agricultural grassland; flying w across n of site	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG0902.1	NDFA Sligo, flock 1	09/02/2021	11:59	Herring Gull	2	130	0	0	130	0	buildings and artificial surfaces and improved agricultural grassland; flying high, riding wind, heading e	NM
HG0902.2	NDFA Sligo, flock 2	09/02/2021	12:16	Herring Gull	1	95	30	65	0	0	improved agricultural grassland, buildings and artificial surfaces and scrub; flying across n of site	NM
HG0902.3	NDFA Sligo, flock 3	09/02/2021	12:31	Herring Gull	2	50	0	50	0	0	mixed sediment shores, improved agricultural grassland and scrub; flying roughly w along coast	NM
HG0902.4	NDFA Sligo, flock 4	09/02/2021	13:30	Herring Gull	7	500	100	250	160	50	improved agricultural grassland, scrub and buildings and artificial surfaces; flying and circling, soaring and circling just outside se boundary of site for a long period, calling	NM
CM0902.1	NDFA Sligo, flock 5	09/02/2021	13:55	Common Gull	4	65	0	50	15	0	scrub and improved agricultural grassland; flying e along coast / scrub	NM
HG0902.5	NDFA Sligo, flock 6	09/02/2021	14:34	Herring Gull	1	55	0	55	0	0	#N/A	NM
GB0902.1	NDFA sligo, flock 7	09/02/2021	14:40	Great Black-backed Gull	3	200	0	0	40	160	improved agricultural grassland and treelines; flying w and n across n boundary of site, soaring high as they moved nw, heading out over bay	NM
HG0902.6	NDFA Sligo, flock 8	09/02/2021	15:28	Herring Gull	2	70	0	0	70	0	straits and sounds and scrub; flying w along coast	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG0902.7	NDFA Sligo, flock 9	09/02/2021	15:35	Herring Gull	6	85	0	55	10	0	improved agricultural grassland and hedgerows; flying s along e boundary of site	NM
HG0902.8	NDFA Sligo, flock 10	09/02/2021	15:34	Herring Gull	2	95	0	40	20	10	improved agricultural grassland and treelines; flying and circling over site	NM
HG0902.9	NDFA Sligo, flock 11	09/02/2021	15:46	Herring Gull	8	160	0	10	30	120	improved agricultural grassland, treelines and buildings and artificial surfaces; soaring high and circling high over site before moving s and e	NM
LB0902.1	NDFA Sligo, flock 12	09/02/2021	16:02	Lesser Black-backed Gull	2	150	0	0	45	105	#N/A	NM
HG0902.10	NDFA Sligo, flock 13	09/02/2021	17:11	Herring Gull	5	90	0	15	75	0	improved agricultural grassland and scrub; flying over site	NM
BH0902.1	NDFA Sligo, flock 14	09/02/2021	17:13	Black-headed Gull	15	200	0	160	40	0	improved agricultural grassland and hedgerows; flying across ne boundary, not a single flock, individuals sporadically flying over corner at irregular intervals, all heading roughly the same direction however	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG0902.11	NDFA Sligo, flock 15	09/02/2021	18:02	Herring Gull	8	75	0	10	65	0	improved agricultural grassland and treelines; flying nw across w part of site	NM
H1202.1	NDFA Sligo, flock 1	12/02/2021	12:18	Grey Heron	1	50	50	0	0	0	improved agricultural grassland and hedgerows; flying low just outside ne boundary	NM
HG1202.1	NDFA Sligo, flock 2	12/02/2021	12:45	Herring Gull	1	98	0	50	48	0	improved agricultural grassland, wet grassland and buildings and artificial surfaces; flying and soaring over s boundary	NM
HG1202.2	NDFA Sligo, flock 3	12/02/2021	12:49	Herring Gull	3	45	0	0	45	0	improved agricultural grassland and buildings and artificial surfaces; flying high across s small field, soaring on wind, 2 mature, 1 juvenile	NM
LB1202.1	NDFA Sligo, flock 4	12/02/2021	12:54	Lesser Black-backed Gull	5	70	0	70	0	0	improved agricultural grassland; flying across n field of site	NM
BH1202.1	NDFA Sligo, flock 5	12/02/2021	12:55	Black-headed Gull	2	85	10	70	5	0	improved agricultural grassland, scattered tress and parkland and treelines; flying across site and calling, heading roughly se	NM
HG1202.3	NDFA Sligo, flock 6	12/02/2021	13:28	Herring Gull	4	40	0	40	0	0	improved agricultural grassland, buildings and artificial surfaces and wet grassland; swirling and soaring in circles on wind just outside e and s boundaries	NM
HG1202.4	NDFA Sligo, flock 7	12/02/2021	14:22	Herring Gull	2	65	0	65	0	0	#N/A	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
CM1202.1	NDFA Sligo, flock 8	12/02/2021	14:56	Common Gull	1	50	10	40	0	0	improved agricultural grassland, scrub and hedgerows; flying s and e across ne site	NM
	NDFA Sligo, flock 9	12/02/2021	15:27	Pheasant	1	0	0	0	0	0	scrub and scattered tress and parkland; calling in thick undergrowth and tree cluster	NM
BH1202.2	NDFA Sligo, flock 10	12/02/2021	17:16	Black-headed Gull	5	65	0	65	0	0	mixed sediment shores, scrub and treelines; flying w along coastline	NM
CU1202.1	NDFA Sligo, flock 11	12/02/2021	17:29	Curlew	1	50	0	0	50	0	conifer plantation and improved agricultural grassland; flying sw across site, in straight line	NM
HG1202.5	NDFA Sligo, flock 12	12/02/2021	18:16	Herring Gull	16	240	0	40	180	20	improved agricultural grassland and hedgerows; flying e across n of site, flying towards lights of sligo town, moving across in groups over 270s period (not one single group)	NM
CU2402.1	NDFA Sligo, flock 1	24/02/2021	12:04	Curlew	1	155	140	15	0	0	improved agricultural grassland, hedgerows and buildings and artificial surfaces; flying low across e field and hedgerows (just outside rlb) and across n of site, calling	NM
HG2402.1	NDFA Sligo, flock 2	24/02/2021	12:06	Herring Gull	2	75	0	0	75	0	treelines and scattered tress and parkland; flying and high and soaring across s of site	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG2402.2	NDFA Sligo, flock 3	24/02/2021	12:18	Herring Gull	1	20	0	0	20	0	treelines, improved agricultural grassland and scrub; flying rapidly ne across n of site	NM
HG2402.3	NDFA Sligo, flock 4	24/02/2021	12:20	Herring Gull	2	15	0	0	15	0	improved agricultural grassland and treelines; flying rapidly se just outside ne of site	NM
HG2402.4	NDFA Sligo, flock 5	24/02/2021	12:39	Herring Gull	7	40	0	15	25	0	buildings and artificial surfaces, improved agricultural grassland and hedgerows; flying beyond s boundary	NM
HG2402.5	NDFA Sligo, flock 6	24/02/2021	13:43	Herring Gull	5	65	0	40	25	0	buildings and artificial surfaces and treelines; swirling around in circles and calling just beyond s boundary	NM
CM2402.1	NDFA Sligo, flock 7	24/02/2021	13:56	Common Gull	2	45	45	0	0	0	improved agricultural grassland and hedgerows; flying low in pair across ne of site, heading nw	NM
HG2402.6	NDFA Sligo, flock 8	24/02/2021	14:20	Herring Gull	1	40	0	40	0	0	improved agricultural grassland, hedgerows and scattered tress and parkland; flying sw across site	NM
HG2402.7	NDFA Sligo, flock 9	24/02/2021	14:27	Herring Gull	12	300	0	0	0	300	improved agricultural grassland, scattered tress and parkland and buildings and artificial surfaces; soaring and circling high across s and e of site, group consisted of 11-12 gulls wheeling high above in random circles, separate	NM
HG2402.8	NDFA Sligo, flock 10	24/02/2021	14:40	Herring Gull	1	55	0	55	0	0	improved agricultural grassland, treelines and scattered tress and parkland; flying nw across site	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG2402.9	NDFA Sligo, flock 11	24/02/2021	14:43	Herring Gull	4	70	0	0	0	70	improved agricultural grassland, hedgerows and buildings and artificial surfaces; soaring high across s of site	NM
HG2402.10	NDFA Sligo, flock 12	24/02/2021	15:07	Herring Gull	5	40	0	0	40	0	improved agricultural grassland, buildings and artificial surfaces and hedgerows; circling high over s of site briefly before heading sw again	NM
HG2402.11	NDFA Sligo, flock 13	24/02/2021	15:36	Herring Gull	1	30	30	0	0	0	improved agricultural grassland, buildings and artificial surfaces and hedgerows; flying along w boundary	NM
HG2402.12	NDFA Sligo, flock 14	24/02/2021	15:43	Herring Gull	11	245	0	0	50	195	improved agricultural grassland and buildings and artificial surfaces; soaring high and wheeling over s of site	NM
HG2402.13	NDFA Sligo, flock 15	24/02/2021	15:49	Herring Gull	3	60	0	60	0	0	improved agricultural grassland, hedgerows and buildings and artificial surfaces; flying over e of site	NM
LB2402.1	NDFA Sligo, flock 16	24/02/2021	15:55	Lesser Black-backed Gull	2	75	0	0	75	0	improved agricultural grassland, scattered tress and parkland and treelines; flying nw across centre of site	NM
HG2402.14	NDFA Sligo, flock 17	24/02/2021	16:59	Herring Gull	2	30	0	30	0	0	improved agricultural grassland and hedgerows; flying nw beyond w boundary	NM
HG2402.15	NDFA Sligo, flock 18	24/02/2021	17:08	Herring Gull	2	40	0	40	0	0	buildings and artificial surfaces, improved agricultural grassland and wet grassland; flying sw outside s of site	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
H2402.1	NDFA Sligo, flock 19	24/02/2021	17:21	Grey Heron	1	40	40	0	0	0	improved agricultural grassland and hedgerows; flying nw across n of site, landing in wet scrubby willow woodland on coast	NM
BH2402.1	NDFA Sligo, flock 20	24/02/2021	17:44	Black-headed Gull	23	250	0	250	0	0	sea inlets and bays; flying w along coast, not in one big group, staggered flybys in 5's and 6's over 150s	NM
CU2402.2	NDFA Sligo, flock 21	24/02/2021	18:36	Curlew	2	45	45	0	0	0	improved agricultural grassland and hedgerows; flying low across site, heading nw	NM
HG0903.1	1, flock HG	09/03/2021	NDFA Sligo	Herring Gull	2	40	15	25	0	0	improved agricultural grassland and hedgerows; flying low over ne boundary hedgerow	NM
CU0903.1	2, flock CU	09/03/2021	NDFA Sligo	Curlew	1	60	60	0	0	0	improved agricultural grassland and hedgerows; flying low across n of site, looping towards coast	NM
HG0903.2	3, flock HG	09/03/2021	NDFA Sligo	Herring Gull	18	560	0	30	190	270	improved agricultural grassland, buildings and artificial surfaces and hedgerows; soaring and circling high over s of site and over land beyond, a number of birds continued to call and circle, cycling individuals	NM
BH0903.1	4, flock BH	09/03/2021	NDFA Sligo	Black-headed Gull	7	50	0	50	0	0	improved agricultural grassland, treelines and scattered tress and parkland; flying ne across site	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG0903.3	5, flock HG	09/03/2021	NDFA Sligo	Herring Gull	1	30	0	25	5	0	improved agricultural grassland, scattered tress and parkland and buildings and artificial surfaces; flying across s of site	NM
HG0903.4	6, flock HG	09/03/2021	NDFA Sligo	Herring Gull	3	50	0	50	0	0	improved agricultural grassland and treelines; flying sw across site	NM
BH0903.2	7, flock BH	09/03/2021	NDFA Sligo	Black-headed Gull	2	45	0	40	5	0	scattered tress and parkland and buildings and artificial surfaces; flying sw across site	NM
MA0903.1	8, flock MA	09/03/2021	NDFA Sligo	Mallard	2	40	0	40	0	0	improved agricultural grassland and hedgerows; flying frantically across n of site and fields directly adjacent to e, looping towards coast, pair (m + f)	NM
HG0903.5	9, flock HG	09/03/2021	NDFA Sligo	Herring Gull	5	65	0	0	55	10	improved agricultural grassland, treelines and scattered tress and parkland; flying high across site, heading n	NM
HG0903.6	10, flock HG	09/03/2021	NDFA Sligo	Herring Gull	3	40	40	0	0	0	improved agricultural grassland and scattered tress and parkland; flying w across s of site	NM
SA0903.1	11, flock SA	09/03/2021	NDFA Sligo	Shag	1	13	13	0	0	0	mixed sediment shores, sea inlets and bays and scrub; flying along coast, heading w	NM
BZ0903.1	12, flock BZ	09/03/2021	NDFA Sligo	Buzzard	1	120	0	0	40	80	improved agricultural grassland, hedgerows and scrub; soaring high above fields and tree clusters nce of site	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG0903.7	13, flock HG	09/03/2021	NDFA Sligo	Herring Gull	3	46	0	46	0	0	improved agricultural grassland, treelines and scattered tress and parkland; flying n across site	NM
GB0903.1	14, flock GB	09/03/2021	NDFA Sligo	Great Black-backed Gull	1	62	0	10	10	42	improved agricultural grassland, scrub and sea inlets and bays; circling and weaving high along n boundary and along coast	NM
BH0903.3	15, flock BH	09/03/2021	NDFA Sligo	Black-headed Gull	3	35	30	5	0	0	scattered tress and parkland and improved agricultural grassland; flying e across site	NM
HG0903.8	16, flock HG	09/03/2021	NDFA Sligo	Herring Gull	5	70	10	15	45	0	scattered tress and parkland, treelines and improved agricultural grassland; flying along sw boundary before climbing and circling high over s boundary and beyond	NM
HG0903.9	17, flock HG	09/03/2021	NDFA Sligo	Herring Gull	13	150	0	0	0	150	improved agricultural grassland, hedgerows and buildings and artificial surfaces; circling and soaring high over s boundary	NM
HG3103.1	1, flock HG	31/03/2021	NDFA Sligo	Herring Gull	8	60	0	0	60	0	improved agricultural grassland, scattered tress and parkland and hedgerows; flying ne across site	NM
H3103.1	2, flock H	31/03/2021	NDFA Sligo	Grey Heron	1	40	40	0	0	0	improved agricultural grassland and scattered tress and parkland; flying sw low across w of site	NM
WN3103.1	3, flock WN	31/03/2021	NDFA Sligo	Wigeon	3	20	0	20	0	0	improved agricultural grassland and hedgerows; flying e across site	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG3103.2	4, flock HG	31/03/2021	NDFA Sligo	Herring Gull	2	55	0	0	45	10	improved agricultural grassland and scattered trees and parkland; soaring high over site, heading ne	NM
HG3103.3	5, flock HG	31/03/2021	NDFA Sligo	Herring Gull	3	25	0	25	0	0	improved agricultural grassland and hedgerows; flying e over n of site	NM
MA3103.1	6, flock MA	31/03/2021	NDFA Sligo	Mallard	1	20	15	5	0	0	improved agricultural grassland; flushed from wet ground on s triangular field, flew away n, female	NM
BH3103.1	7, flock BH	31/03/2021	NDFA Sligo	Black-headed Gull	2	75	20	55	0	0	immature woodland, improved agricultural grassland and hedgerows; flying across n boundary	NM
OC3103.1	8, flock OC	31/03/2021	NDFA Sligo	Oystercatcher	7	45	0	45	0	0	improved agricultural grassland and hedgerows; flying rapidly across site, s - n., bending away ne when beyond towards estuary	NM
CA3103.1	9, flock CA	31/03/2021	NDFA Sligo	Cormorant	1	55	45	10	0	0	sea inlets and bays and immature woodland; flying ne along coast	NM
HG3103.4	10, flock HG	31/03/2021	NDFA Sligo	Herring Gull	1	65	0	65	0	0	immature woodland, improved agricultural grassland and sea inlets and bays; flying along n boundary and adjacent willow scrubby woodland	NM
HG3103.5	11, flock HG	31/03/2021	NDFA Sligo	Herring Gull	1	40	20	20	0	0	improved agricultural grassland and hedgerows; flying ne along e boundary	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG3103.6	12, flock HG	31/03/2021	NDFA Sligo	Herring Gull	3	85	0	75	10	0	improved agricultural grassland and scattered tress and parkland; flying across site	NM
HG3103.7	13, flock HG	31/03/2021	NDFA Sligo	Herring Gull	2	40	0	40	0	0	improved agricultural grassland, scattered tress and parkland and hedgerows; flying se across site	NM
HG3103.8	14, flock HG	31/03/2021	NDFA Sligo	Herring Gull	1	65	0	0	65	0	improved agricultural grassland and hedgerows; flying se across n of site	NM
HG3103.9	15, flock HG	31/03/2021	NDFA Sligo	Herring Gull	9	70	0	0	70	0	improved agricultural grassland and scattered tress and parkland; flying n over entire site towards coast	NM
HG3103.10	16, flock HG	31/03/2021	NDFA Sligo	Herring Gull	14	165	0	0	80	85	improved agricultural grassland, buildings and artificial surfaces and hedgerows; swirling and soaring over s of site and beyond s boundary, calling constantly	NM
HG3103.11	17, flock HG	31/03/2021	NDFA Sligo	Herring Gull	3	45	0	45	0	0	improved agricultural grassland and scattered tress and parkland; flying sw across site	NM
HG3103.12	18, flock HG	31/03/2021	NDFA Sligo	Herring Gull	1	65	0	0	0	45	improved agricultural grassland and scattered tress and parkland; flying e and n across site	NM
HG3103.13	19, flock HG	31/03/2021	NDFA Sligo	Herring Gull	5	75	0	0	65	10	improved agricultural grassland, hedgerows and buildings and artificial surfaces; swirling and circling over s of site	NM
MA3103.2	20, flock MA	31/03/2021	NDFA Sligo	Mallard	2	30	30	0	0	0	improved agricultural grassland and hedgerows; flying low and nnw across site	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
HG3103.14	21, flock HG	31/03/2021	NDFA Sligo	Herring Gull	3	55	0	0	55	0	improved agricultural grassland and hedgerows; flying n across site	NM
BH3103.2	22, flock BH	31/03/2021	NDFA Sligo	Black-headed Gull	7	120	0	0	0	120	buildings and artificial surfaces, scrub and improved agricultural grassland; flying w across n of site	NM
HG2701.1	NDFA Sligo WB, flock 1	27/01/2021	11:19	Herring Gull	3	40	0	35	5	0	scrub and treelines; flying nw along n boundary of site	NM
HG2701.2	NDFA Sligo WB, flock 2	27/01/2021	11:20	Herring Gull	1	30	30	0	0	0	improved agricultural grassland and treelines; flying sw across site	NM
LB2701.1	NDFA Sligo WB, flock 3	27/01/2021	11:29	Lesser Black-backed Gull	2	20	20	0	0	0	improved agricultural grassland; flying s across site	NM
HG2701.3	NDFA Sligo WB, flock 4	27/01/2021	12:12	Herring Gull	5	19	5	14	0	0	wet willow-alder-ash woodland and scrub; flying nw across site, towards intertidal flats	NM
HG2701.4	NDFA Sligo WB, flock 5	27/01/2021	12:14	Herring Gull	3	20	0	20	0	0	improved agricultural grassland and treelines; flying e, directly across site	NM
HG2701.5	NDFA Sligo WB, flock 6	27/01/2021	13:10	Herring Gull	2	15	0	15	0	0	treelines; flying across site	NM
HG2701.6	NDFA Sligo WB, flock 7	27/01/2021	13:34	Herring Gull	1	35	35	0	0	0	improved agricultural grassland and treelines; flying e across site	NM
HG2701.7	NDFA Sligo WB, flock 8	27/01/2021	13:42	Herring Gull	1	25	0	25	0	0	treelines and buildings and artificial surfaces; flying nw across s of site, calling	NM
CM2701.1	NDFA Sligo WB, flock 9	27/01/2021	13:54	Common Gull	4	45	0	45	0	0	scattered tress and parkland; flying nw over site, towards flats and spa	NM
CU2701.1	NDFA Sligo WB, flock 10	27/01/2021	14:40	Curlew	3	25	25	0	0	0	mixed sediment shores and scrub; flying e along coast (just n of site)	NM

Observation No.	Flock	Date	Time	Species	Number of birds	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-20m)	Band 3 (20-30m)	Band 4 (>30m)	Habitat and activity	Surveyor
CM2701.2	NDFA Sligo WB, flock 11	27/01/2021	15:10	Common Gull	4	30	0	10	25	0	mixed sediment shores; flying w along coast to n of site	NM
HG2701.8	NDFA Sligo WB, flock 12	27/01/2021	15:20	Herring Gull	2	15	0	15	0	0	improved agricultural grassland and treelines; circling over se corner, calling	NM
LB2701.2	NDFA Sligo WB, flock 13	27/01/2021	15:21	Lesser Black-backed Gull	1	30	10	20	0	0	scrub, improved agricultural grassland and treelines; flying sw across site	NM
HG2701.9	NDFA Sligo WB, flock 14	27/01/2021	15:31	Herring Gull	1	50	0	0	50	0	improved agricultural grassland and scrub; flying e over n of site	NM
HG2701.10	NDFA Sligo WB, flock 15	27/01/2021	15:41	Herring Gull	2	34	0	34	0	0	improved agricultural grassland, scrub and mixed sediment shores; flying nw across site	NM
CU2701.2	NDFA Sligo WB, flock 16	27/01/2021	16:43	Curlew	2	55	45	10	0	0	scrub, treelines and improved agricultural grassland; flying se over n boundary of site	NM
HG2701.11	NDFA Sligo WB, flock 17	27/01/2021	17:08	Herring Gull	11	110	0	0	110	0	improved agricultural grassland and treelines; flying across entire site, not in one big group, flew across in two and threes over a period of 2mins	NM

Table 3: Winter Bird Survey Flock Data

Map ref.	Date	Time	Location	Flock composition	Habitat and activity	Surveyor
HG2701.A	27/01/2021	15:03	Ndfa Sligo Wb, flock 1	6 Herring Gull		NM
HG2402.A	24/02/2021	16:01	Ndfa Sligo, flock 1	9 Herring Gull and 3 Lesser Black-backed Gull	improved agricultural grassland; foraging on c field	NM
HG2402.B	24/02/2021	10:49	Ndfa Sligo, flock 2	45 Herring Gull, 71 Black-headed Gull, 17 Great Black-backed Gull and 34 Common Gull	mixed sediment shores and tidal rivers; foraging in and around sediment rivulet in corner of bay, flying erratically and chasing one another above, courting behaviour, some juveniles present, distance may have hampered accurate id	NM
HG3103.A	31/03/2021	07:12	Ndfa Sligo, flock 1	15 Herring Gull and 3 Lesser Black-backed Gull	improved agricultural grassland and reed and large sedge swamps; foraging on wet muddy and marshy area (partially flooded), in n corner	NM
MA3103.A	31/03/2021	09:14	Ndfa Sligo, flock 2	5 Mallard	improved agricultural grassland and reed and large sedge swamps; wading in flooded swamp area in wet n corner of site	NM
MA3103.B	31/03/2021	12:24	Ndfa Sligo, flock 3	3 Mallard	improved agricultural grassland; grazing in forb filled puddles on s enclosed field (see picture)	NM

Table 4 Habitat Survey Results

Map Ref.	Date	Time	Sample Point	Habitat Structure	Notes	Surveyor
	27/01/2021	13:03	Ndfa Sligo Wb 36892 (650m), point 1	Sward height of 10cm; 92% grass, 5% forbs and 3% bare ground	0 brent goose droppings, trampled pastoral field with rank grass spp, horses grazing, immediately adjacent to wet marsh area, potential for grazing	NM
	27/01/2021	13:12	Ndfa Sligo Wb 36892 (650m), point 2	Sward height of 12cm; 96% grass, 4% forbs and 0% bare ground	0 brent goose droppings, open ne corner, agri grassland. just outside rlb but judged to have potential and therefore to be of importance	NM
	27/01/2021	13:17	Ndfa Sligo Wb 36892 (650m), point 3	Sward height of 14cm; 90% grass, 10% forbs and 0% bare ground	0 brent goose droppings	NM
	27/01/2021	13:23	Ndfa Sligo Wb 36892 (650m), point 4	Sward height of 9cm; 60% grass, 10% forbs and 30% bare ground	0 brent goose droppings, highly trampled and disturbed, patches of dead rumex spp	NM
	27/01/2021	13:26	Ndfa Sligo Wb 36892 (650m), point 5	Sward height of 29cm; 80% grass, 20% forbs and 0% bare ground	0 brent goose droppings, overgrown rough old garden enclosed by thick tangled hedgerows and treelines	NM
	27/01/2021	13:32	Ndfa Sligo Wb 36892 (650m), point 6	Sward height of 11cm; 89% grass, 5% forbs and 6% bare ground	0 brent goose droppings, open ga1 just to e of site, just outside rlb	NM
	27/01/2021	13:40	Ndfa Sligo Wb 36892 (650m), point 7	Sward height of 15cm; 85% grass, 15% forbs and 0% bare ground	0 brent goose droppings, small field (ga1) - just large enough to have some suitability	NM
	27/01/2021	13:45	Ndfa Sligo Wb 36892 (650m), point 8	Sward height of 30cm; 90% grass, 10% forbs and 0% bare ground	0 brent goose droppings, enclosed rough grassland	NM
	27/01/2021	13:48	Ndfa Sligo Wb 36892 (650m), point 9	Sward height of 11cm; 50% grass, 45% forbs and 5% bare ground	0 brent goose droppings, disturbed ground in places with evidence of hoof prints. scattered trees may explain higher forb cover (shading during growing season). large mature treeline on s boundary	NM
	27/01/2021	13:52	Ndfa Sligo Wb 36892 (650m), point 10	Sward height of 14cm; 45% grass, 45% forbs and 10% bare ground	0 brent goose droppings, disturbed tight ga1, highly enclosed by treelines along road and overgrown house and associated trees and shrubs	NM
2021-02- 09T16:26:02.503	09/02/2021	14:00	Ndfa Sligo 2 (675m), point 1	Sward height of 8cm; 40% grass, 55% forbs and 5% bare ground	0 brent goose droppings, w scattered trees and parkland, adjacent to road, degree of overhanging and cover from large mature scattered trees	NM
2021-02- 09T16:29:53.449	09/02/2021	14:08		Sward height of 9cm; 70% grass, 20% forbs and 5% bare ground	0 brent goose droppings, sw part of site, still with overhanging and nearby mature scattered trees, enclosed and close boundary structures	NM

Map Ref.	Date	Time	Sample Point	Habitat Structure	Notes	Surveyor
2021-02-09T16:34:22.767	09/02/2021	14:13		Sward height of 12cm; 65% grass, 35% forbs and 0% bare ground	0 brent goose droppings, s triangular field with a mosaic of grass, forbs, moss and cropped rushes. enclosed on all sides by hedgerows, grazed	NM
2021-02-09T16:42:10.726	09/02/2021	14:21		Sward height of 20cm; 80% grass, 16% forbs and 4% bare ground	0 brent goose droppings, enclosed overgrown lawn beside house with scattered hummocks of rough grass, horse dung, much shorter than previous survey due to recent horse grazing but still unsuitable due to nature and location	NM
2021-02-09T16:46:34.622	09/02/2021	14:26		Sward height of 15cm; 80% grass, 20% forbs and 0% bare ground	0 brent goose droppings, strip of ga1 wedged between dense brambles and tangled scrub /hedgerows, low potential	NM
2021-02-09T16:48:30.716	09/02/2021	14:30		Sward height of 7cm; 85% grass, 10% forbs and 5% bare ground	0 brent goose droppings, open field to immediate e of site just outside rlb, potential due to expanse but unsure if presence of horses may hamper?	NM
2021-02-09T16:57:23.342	09/02/2021	14:38		Sward height of 9cm; 75% grass, 10% forbs and 15% bare ground	0 brent goose droppings, highly disturbed ground and shaded by nearby trees	NM
2021-02-09T16:58:30.091	09/02/2021	14:43		Sward height of 8cm; 80% grass, 14% forbs and 6% bare ground	0 brent goose droppings, open lower (n) field (marsh / swamp / pool in extreme n corner), potential due to open nature and proximity to shore	NM
2021-02-09T17:00:48.440	09/02/2021	14:48		Sward height of 10cm; 85% grass, 12% forbs and 3% bare ground	0 brent goose droppings, open area of ga1 with evidence of high grazing by horses	NM
2021-02-09T17:02:23.715	09/02/2021	14:53		Sward height of 11cm; 85% grass, 10% forbs and 5% bare ground	0 brent goose droppings, high suitability	NM
2021-02-12T13:14:18.598	12/02/2021	13:14	Ndfa Sligo 3 (775m), point 1	Sward height of 10cm; 95% grass, 5% forbs and 0% bare ground	0 brent goose droppings, n corner, open grazed field with yellow and pale weary grass (half dead), open grassland with some suitability, flooding occurs along nw corner boundary	NM
2021-02-12T13:22:08.551	12/02/2021	13:22		Sward height of 13cm; 95% grass, 3% forbs and 2% bare ground	0 brent goose droppings, open grassland field with yellow rank grass but with dots of lush green sprigs. field surface consisted of numerous tussocks of grass flattened by grazing. small groups of hc and li foraging on this area	NM
2021-02-12T13:32:19.927	12/02/2021	13:32		Sward height of 13cm; 95% grass, 5% forbs and 0% bare ground	0 brent goose droppings, open grassland ga1, grazed heavily by horses with dung and prints everywhere, just e outside rlb but within 500m buffer and having potential	NM
2021-02-12T13:35:44.465	12/02/2021	13:33		Sward height of 9cm; 100% grass, 0% forbs and 8% bare ground	0 brent goose droppings, open grassland ga1, grazed heavily by horses with dung and prints everywhere, just e outside rlb but within 500m buffer and having potential, any development (or construction) may disturb birds if they one day decided to use it	NM

Map Ref.	Date	Time	Sample Point	Habitat Structure	Notes	Surveyor
2021-02-12T13:42:57.692	12/02/2021	13:42		Sward height of 8cm; 90% grass, 0% forbs and 10% bare ground	0 brent goose droppings, relatively open agri grassland field, disturbed with rank and yellow flattened tussocks of grass	NM
2021-02-12T13:51:26.145	12/02/2021	13:51		Sward height of 13cm; 90% grass, 10% forbs and 0% bare ground	0 brent goose droppings, enclosed wild lawn of house surrounded on all sides (by the house, treelines and tangled brambles and scrub	NM
2021-02-12T13:57:18.366	12/02/2021	13:57		Sward height of 13cm; 90% grass, 10% forbs and 2% bare ground	0 brent goose droppings, narrow strip of grey dry grass and dead vegetation debris, near to old orchard, enclosed and surrounded closely by brambles and trees	NM
2021-02-12T14:06:28.085	12/02/2021	14:06		Sward height of 8cm; 80% grass, 15% forbs and 5% bare ground	0 brent goose droppings, small enclosed field with heavily grazed flattened pale grass and patches of lush greener grass, perhaps too enclosed for wildfowl but hc actively foraging	NM
2021-02-12T14:11:19.798	12/02/2021	14:11		Sward height of 8cm; 45% grass, 45% forbs and 10% bare ground	0 brent goose droppings, heavily influenced by nearby lines of mature trees, grazed and disturbed but with lush patches of grass and forbs	NM
2021-02-12T14:15:33.509	12/02/2021	14:15		Sward height of 12cm; 75% grass, 25% forbs and 5% bare ground	0 brent goose droppings, lush tufts of grass, scattered mature trees heavily influenced w field, close environment due to high degree of overhanging branches	NM
2021-02-24T14:31:23.705	24/02/2021	14:00	Ndfa Sligo 4 (775m), point 1	Sward height of 9cm; 85% grass, 2% forbs and 13% bare ground	0 brent goose droppings, open n corner of n field, damp and with yellow and flattened rank grass, very wet and pocketed with prints, wet and flooded swamp area just behind	NM
2021-02-24T14:35:53.082	24/02/2021	14:05		Sward height of 9cm; 90% grass, 5% forbs and 5% bare ground	0 brent goose droppings, patches of dung and bare hoof prints, open field with potential for grazing, much drier	NM
2021-02-24T14:48:41.340	24/02/2021	14:13		Sward height of 12cm; 85% grass, 10% forbs and 5% bare ground	0 brent goose droppings, flattened and heavily grazed grass but open field which had potential for grazing, outside rlb but surveyed due to some potential	NM
2021-02-24T14:54:53.074	24/02/2021	14:18		Sward height of 9cm; 75% grass, 5% forbs and 20% bare ground	0 brent goose droppings, severely disturbed area heavy with hoof prints and bare ground, clumps of weedy rumex spp but open area regardless, electric cables running through this area, lots of hc foraging present	NM
2021-02-24T15:02:11.092	24/02/2021	14:24		Sward height of 11cm; 10% grass, 80% forbs and 10% bare ground	0 brent goose droppings, very wet herbaceous area with patches of weeds and brambles, close with overhanging mature trees, no potential for grazing	NM
2021-02-24T15:11:10.916	24/02/2021	14:28		Sward height of 15cm; 50% grass, 45% forbs and 5% bare ground	0 brent goose droppings, heavily grazed area with odd clumps of weedy rumex spp. enclosed by mature trees	NM

Map Ref.	Date	Time	Sample Point	Habitat Structure	Notes	Surveyor
2021-02-24T15:14:05.142	24/02/2021	14:31		Sward height of 9cm; 65% grass, 20% forbs and 15% bare ground	0 brent goose droppings, heavily grazed area with lots of bare hoof prints, influenced by nearby mature trees	NM
2021-02-24T15:19:18.312	24/02/2021	14:36		Sward height of 12cm; 55% grass, 35% forbs and 10% bare ground	0 brent goose droppings, s triangular field dotted with wet patches and puddles, heavily grazed and with flattened grass	NM
2021-02-24T15:24:50.240	24/02/2021	14:37		Sward height of 15cm; 80% grass, 20% forbs and 0% bare ground	0 brent goose droppings, rank and dead flattened grass with orchard area, surrounded by thick bramble scrub and lichen covered fruit trees, close and small area, dotted with clumps of rumex spp and some grassy hummocks	NM
2021-02-24T15:30:42.981	24/02/2021	14:41		Sward height of 13cm; 85% grass, 10% forbs and 5% bare ground	0 brent goose droppings, rank and dead flattened strip of yellow grass surrounded by thick bramble scrub, trees and hedgerows, close and small area, dotted with clumps of rumex spp, stem debris and some grassy hummocks	NM
2021-02-24T15:35:02.884	24/02/2021	14:46		Sward height of 12cm; 95% grass, 5% forbs and 0% bare ground	0 brent goose droppings, old garden of house surrounded by walls of tree clusters, potential but likely to be too enclosed and too close by vegetation	NM
2021-03-10T08:53:07.499	09/03/2021	13:03	Ndfa Sligo 5 (675m), point 1	Sward height of 9cm; 75% grass, 5% forbs and 20% bare ground	Open lower (N) field (marsh / flooded swamp area nearby), very wet, damp and muddy with evidence of trampling and grazing (flattened rank grass and bare ground), N field in general had potential for WB grazing due to open nature and proximity to shore	NM
2021-03-10T08:57:20.804	09/03/2021	13:09		Sward height of 11cm; 87% grass, 0% forbs and 13% bare ground	0 brent goose droppings, open area of gal with evidence of grazing by horses, trampled rank grass (interesting to see what it would look like in summer), potential for wb grazing	NM
2021-03-10T08:59:14.170	09/03/2021	13:15		Sward height of 7cm; 55% grass, 0% forbs and 45% bare ground	0 brent goose droppings, highly disturbed, wet muddy area riddled with hoof prints	NM
2021-03-10T09:00:46.787	09/03/2021	13:18		Sward height of 8cm; 75% grass, 5% forbs and 20% bare ground	0 brent goose droppings, highly disturbed ground and shaded by nearby trees, high hc numbers foraging on n field throughout survey	NM
2021-03-10T09:02:48.737	09/03/2021	13:23		Sward height of 18cm; 85% grass, 5% forbs and 10% bare ground	Enclosed overgrown lawn beside house with scattered hummocks of rough grass and dead high weeds, and evidence of grazing and disturbance by horses, quite unsuitable for WB grazing due to location with closed area surrounded by close boundaries	NM
2021-03-10T09:06:34.397	09/03/2021	13:27		Sward height of 16cm; 80% grass, 15% forbs and 5% bare ground	0 brent goose droppings, strip of gal wedged between brambles and tangled scrub / hedgerows (just inside se boundary), low suitability	NM
2021-03-10T09:08:57.966	09/03/2021	13:35		Sward height of 10cm; 85% grass, 7% forbs and 8% bare ground	0 brent goose droppings, open field (gal) immediately to e of site, outside rlb but included due to proximity and potential	NM

Map Ref.	Date	Time	Sample Point	Habitat Structure	Notes	Surveyor
2021-03-10T09:11:13.466	09/03/2021	13:42		Sward height of 12cm; 70% grass, 28% forbs and 2% bare ground	0 brent goose droppings, s triangular small field with mosaic of grass and forbs spp., numerous small puddles of water in centre, enclosed on all sides by hedgerows and bl3, disturbed in places	NM
2021-03-10T09:14:02.082	09/03/2021	13:46		Sward height of 11cm; 60% grass, 30% forbs and 10% bare ground	0 brent goose droppings, w part of site with scattered large mature trees which heavily influence area (overhanging branches), enclosed and close boundaries mean that it is largely unsuitable for wb grazing	NM
2021-03-10T09:16:29.616	09/03/2021	13:53		Sward height of 7cm; 40% grass, 55% forbs and 5% bare ground	0 brent goose droppings, w scattered trees and parkland, adjacent to road, the degree of overhanging and cover from trees means it would be unsuitable for wb foraging (except for gulls)	NM
2021-03-31T11:30:54.306	31/03/2021	11:30	Ndfa Sligo 6 (875m), point 1	Sward height of 12cm; 70% grass, 25% forbs and 0% bare ground	0 brent goose droppings, wet section of n field pot marked with hoof prints full of water and spots of bare muddy ground, grassy and noticeably greener and beginning to grow and lengthen, wet marsh / flooded area very close with ris beginning to erupt	NM
2021-03-31T11:35:49.028	31/03/2021	11:35		Sward height of 12cm; 50% grass, 40% forbs and 10% bare ground	0 brent goose droppings, open area of n field, drier underfoot than lower field but still quite wet, just outside rlb but still suitable for grazing by wb, visibly higher number of forbs	NM
2021-03-31T11:45:08.659	31/03/2021	11:45		Sward height of 13cm; 55% grass, 35% forbs and 10% bare ground	0 brent goose droppings, open e field, just outside rlb but included due suitability and proximity to site, wet and muddy in patches and heavily grazed and trampled by horses, occasional tufts of rumex spp and daffodil	NM
2021-03-31T11:53:18.046	31/03/2021	11:53		Sward height of 13cm; 65% grass, 15% forbs and 20% bare ground	0 brent goose droppings, open n ga1 field, heavily grazed by horses, ground consisted mostly of a mosaic of hoof prints and pot marks filled with water, bare ground and vegetation	NM
2021-03-31T11:58:55.234	31/03/2021	11:58		Sward height of 18cm; 80% grass, 17% forbs and 3% bare ground	0 brent goose droppings, enclosed old garden of house, enclosed by thick brambles and hedgerows, grass growing and lush places, yellow spots disappearing, tufts of higher forbs i.e rumex, dandelion, unsuitable for wb	NM
2021-03-31T12:04:10.855	31/03/2021	12:04		Sward height of 13cm; 45% grass, 53% forbs and 2% bare ground	0 brent goose droppings, narrow strip of open grassland area, between thick brambles of e field boundary and orchard, this area displayed lots of up and coming forbs i.e. buttercup, nettles, plantain	NM
2021-03-31T12:11:53.911	31/03/2021	12:11		Sward height of 17cm; 40% grass, 58% forbs and 2% bare ground	0 brent goose droppings, enclosed old walled garden, small and with close thick trees and vegetation and ivy coated walls, unsuitable for wb, dominated by forbs	NM
2021-03-31T12:21:47.811	31/03/2021	12:21		Sward height of 9cm; 60% grass, 10% forbs and 30% bare ground	S triangular field, surrounded by scattered mature trees, treelines and dense brambles, very wet with mosaics of wet patches and scattered puddles, heavily grazed and disturbed by horses, MA in field numerous times during survey (grazing in GA1 puddles)	NM
2021-03-31T12:33:49.317	31/03/2021	12:33		Sward height of 7cm; 35% grass, 45% forbs and 20% bare ground	0 brent goose droppings, open area of w grassland, heavily influenced by nearby mature overhanging trees and treelines	NM



Map Ref.	Date	Time	Sample Point	Habitat Structure	Notes	Surveyor
2021-03-31T12:37:14.213	31/03/2021	12:37		Sward height of 10cm; 40% grass, 40% forbs and 10% bare ground	0 brent goose droppings, scattered mature trees and wet disturbed gal, numerous wet patches and small semi submerged forbs depressions	NM





APPENDIX 2

FIGURES



Map Legend

-  Proposed Development Site
-  500m Survey Radius



Drawing Title

Proposed Development Site

Project Title

NDA Finisklin

Drawn By	Checked By
K. Sheridan	D. O'Dowd
Project No.	Drawing No.
201231	Fig. 1
Scale	Date
1:7000	18.05.21



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Map Legend

- Proposed Development Site
- 500m Survey Radius
- Flights



Drawing Title:
**Black-headed Gull Observations
Vantage Point Surveys**

Project Title:
NDFA Finisklin

Drawn By K. Sheridan	Checked By D. O'Dowd
Project No. 201231	Drawing No. Fig. 1.1
Scale 1:7000	Date 18.05.21

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Map Legend

- Proposed Development Site
- 500m Survey Radius
- Flights



Drawing Title

Common Gull Observations
Vantage Point Surveys

Project Title

NDFA Finisklin

Drawn By

K. Sheridan

Checked By

D. O'Dowd

Project No.

201231

Drawing No.

Fig. 1.2

Scale

1:7000

Date

18.05.21



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Map Legend

- Proposed Development Site
- 500m Survey Radius
- Flights



Drawing Title

**Cormorant Observations
Vantage Point Surveys**

Project Title

NDFA Finisklin

Drawn By

K. Sheridan

Checked By

D. O'Dowd

Project No.

201231

Drawing No.

Fig. 1.3

Scale

1:7000

Date

18.05.21



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Map Legend

- Proposed Development Site
- 500m Survey Radius
- Flights



Drawing Title

Curlew Observations
Vantage Point Surveys

Project Title

NDFA Finisklin

Drawn By

K. Sheridan

Checked By

D. O'Dowd

Project No.

201231

Drawing No.

Fig. 1.4

Scale

1:7000

Date

18.05.21



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Map Legend

- ▭ Proposed Development Site
- ▭ 500m Survey Radius
- Flights



Drawing Title:
Great Black-backed Gull Observations
Vantage Point Surveys

Project Title:
NDFA Finisklin

Drawn By: K. Sheridan	Checked By: D. O'Dowd
Project No.: 201231	Drawing No.: Fig. 1.5
Scale: 1:7000	Date: 18.05.21

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Map Legend

- ▭ Proposed Development Site
- ▭ 500m Survey Radius
- ➔ Flights



Drawing Title

Grey Heron Observations
Vantage Point Surveys

Project Title

NDFA Finisklin

Drawn By

K. Sheridan

Checked By

D. O'Dowd

Project No.

201231

Drawing No.

Fig. 1.6

Scale

1:7000

Date

18.05.21



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Map Legend

- Proposed Development Site
- 500m Survey Radius
- Flights

Drawing Title: Herring Gull Observations Vantage Point Surveys	
Project Title: NDA Finisklin	
Drawn By: K. Sheridan	Checked By: D. O'Dowd
Project No.: 201231	Drawing No.: Fig. 1.7
Scale: 1:7000	Date: 18.05.21

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Map Legend

- ▭ Proposed Development Site
- 500m Survey Radius
- ▭ Flocks



Drawing Title
Herring Gull Observations
Vantage Point Surveys

Project Title NDFA Finisklin	
Drawn By K. Sheridan	Checked By D. O'Dowd
Project No. 201231	Drawing No. Fig. 1.7.2
Scale 1:10000	Date 18.05.21

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Map Legend

-  Proposed Development Site
-  500m Survey Radius
-  Flights



Drawing Title:
Lesser Black-backed Gull Observations
Vantage Point Surveys

Project Title:
NDFA Finisklin

Drawn By: K. Sheridan	Checked By: D. O'Dowd
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Project No.: 201231	Drawing No.: Fig. 1.8
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Scale: 1:7000	Date: 18.05.21
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Map Legend

-  Proposed Development Site
-  500m Survey Radius
-  Flights



Drawing Title

Oystercatcher Observations
Vantage Point Surveys

Project Title

NDFA Finisklin

Drawn By

K. Sheridan

Checked By

D. O'Dowd

Project No.

201231

Drawing No.

Fig. 1.9

Scale

1:7000

Date

18.05.21



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Map Legend

- Proposed Development Site
- 500m Survey Radius
- Flights
- Flocks



Drawing Title

Mallard Observations
Vantage Point Surveys

Project Title

NDFA Finisklin

Drawn By

K. Sheridan

Checked By

D. O'Dowd

Project No.

201231

Drawing No.

Fig. 1.10

Scale

1:7000

Date

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Map Legend

- Proposed Development Site
- 500m Survey Radius
- Flights



Drawing Title

Shag Observations
Vantage Point Surveys

Project Title

NDFA Finisklin

Drawn By

K. Sheridan

Checked By

D. O'Dowd

Project No.

201231

Drawing No.

Fig. 1.11

Scale

1:7000

Date

18.05.21



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Map Legend

-  Proposed Development Site
-  500m Survey Radius
-  Flights



Drawing Title

Wigeon Observations
Vantage Point Surveys

Project Title

NDFA Finisklin

Drawn By

K. Sheridan

Checked By

D. O'Dowd

Project No.

201231

Drawing No.

Fig. 1.12

Scale

1:7000

Date

18.05.21



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Map Legend

-  Proposed Development Site
-  500m Survey Radius
-  Flights



Drawing Title

**Buzzard Observations
Vantage Point Surveys**

Project Title

NDFA Finisklin

Drawn By

K. Sheridan

Checked By

D. O'Dowd

Project No.

201231

Drawing No.

Fig. 1.13

Scale

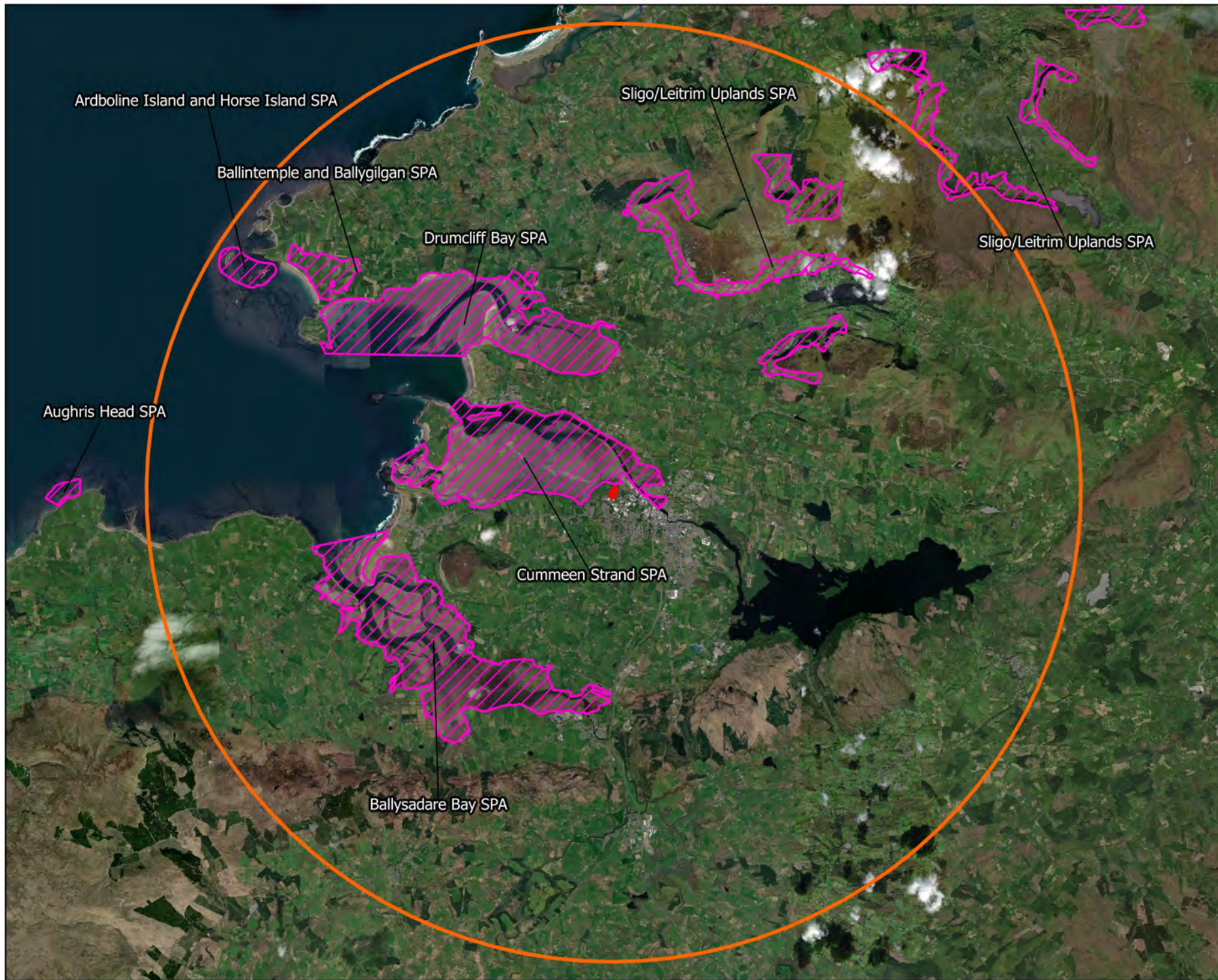
1:7000

Date

18.05.21



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Map Legend

- Proposed Development Site
- 15km Zone of Influence
- Special Protection Area

Drawing Title
SPAs within the ZOI of the Proposed Development Site

Project Title
NDFA Finisklin

Drawn By K. Sheridan	Checked By D. O'Dowd
Project No. 201231	Drawing No. Fig. 2
Scale 1:160000	Date 18.05.21

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APPENDIX 3

CURRICULUM VITAE



CURRICULUM VITAE

Dervla O'Dowd is Project Director with MKO's Ornithology Team with sixteen years of experience in environmental consultancy as a Senior Ecologist and Project Manager. Dervla graduated with a first-class honours B.Sc. in Environmental Science from NUI, Galway in 2005 and joined Keville O'Sullivan Associates in the same year. Dervla has gained extensive experience in the project management and ecological assessment of the impacts of various infrastructural projects including wind energy projects, water supply schemes, road schemes and housing developments nationwide and has also been involved in the compilation of Environmental Impact Reports and acted as EIAR co-ordinator on many of these projects. Dervla has also extensive experience in the provision of ecological site supervision for infrastructural works within designated conservations areas, in particular within aquatic habitats, and has also been involved in the development of environmental/ecological educational resource materials. Currently, Dervla is responsible for the management of MKO's dedicated Ornithology Team coordinating MKO's portfolio of bird survey and assessment work required on major infrastructural projects, with emphasis on wind energy projects. Dervla's key strengths and areas of expertise are in project management, project strategy, business development and survey co-ordination to ensure the efficient operation of the Ornithology team's field survey schedule. Dervla holds full membership of the Chartered Institute of Ecology and Environmental Management and current Safe Pass card.

Current Role	Project Director (Ornithology)
Qualifications	<ul style="list-style-type: none"> ➤ B.A. (Archaeology & German) (1996), H. Dip. (Education) (1999) ➤ B.Sc. (Environmental Science) (2005) National University of Ireland, Galway
Years of Experience	➤ 16 years post graduate experience in environmental consultancy.
Relevant Experience	<ul style="list-style-type: none"> ➤ Currently responsible for the management of a team of approximately 25 inhouse field surveyors undertaking bird surveys nationwide at the sites of c.50 renewable energy projects at various stages of their project life cycle and the delivery of compiled, processed bird survey data to clients based on highest industry standards. ➤ Co-ordination of the ecological component of over 25 Wind Farm projects nationwide at various stages including pre-planning, EISs, appeals, pre-commencement and condition compliance, construction and post-construction stages. Defining the scope of the ecological works required at each stage of projects, scheduling all works, coordinating and managing a team of up to twenty field staff/sub-consultants and overseeing the ecological inputs into all stages of these projects (2014-2016). ➤ Project Manager, Article 6(3) Screening Review of entire OPW Drainage Maintenance Programme 2011. Compilation of 31 screening reports on arterial drainage scheme catchment basis nationwide. ➤ Senior Ecologist on habitat mapping projects for Waterways Ireland on the Royal Canal and Barrow Navigation (2010-2013). ➤ Senior Ecologist; OPW Channel Maintenance Assessments 2009/2010. Co-ordination and completion of assessment of impacts of channel maintenance works within designated sites throughout Ireland. ➤ Project Manager and Senior Ecologist, N59 Moycullen Bypass Preliminary Ecological Assessment/Appropriate Assessments, responsible for all ecological surveying including aquatic and bat survey and habitat mapping. ➤ Project Co-ordinator and Senior Ecologist and; N17 Tuam Bypass; 2009; Design/pre-planning stage; Environmental Report. Responsible for ecological issues including survey requirements, habitat mapping and Appropriate Assessment Screening. ➤ Senior Ecologist; Group Water Scheme Bundles (Galway, Mayo, Roscommon, Clare); 2005 to 2010; Preliminary design through to construction sign off; Assessment of over 75 sites; liaison with statutory consultees, development of approved working methods and



	<p>construction supervision in most sensitive sites. Most were within or adjacent to SACs/SPAs/NHAs with significant constraints.</p> <ul style="list-style-type: none"> ➤ Senior Ecologist; Appropriate Assessment for Wastewater Treatment Plant Discharge Licence Applications in Co.s Galway and Limerick. Responsible for consultation, surveys, including detailed aquatic surveys, report preparation and appropriate assessment for sites within/adjacent to SACs/SPAs/NHAs with significant ecological constraints. ➤ Project Ecologist on various development-led projects. Responsible for consultation, appropriate assessment, site surveys, report preparation, appropriate assessment and construction site mitigation planning/supervision.
Practical Skills & Aptitudes	<ul style="list-style-type: none"> ➤ Team management. ➤ Business Development ➤ Project management. ➤ Co-ordination of complex field survey schedules/projects. ➤ Project strategy. ➤ Report-writing. ➤ Ecological surveys including botanical surveys, habitat assessments, aquatic surveys (Stage 1 and 2 Freshwater Pearl Mussel survey licence holder, Crayfish surveys, freshwater invertebrate surveys), mammal surveys, bat surveys etc. ➤ GIS
Management/ Supervision	<ul style="list-style-type: none"> ➤ Responsible for the management of MKO Ornithology team of c. 25 in-house ornithologists and panel of regular sub-contractors. ➤ Management and coordination of ecological inputs for EISs, FI responses and Grounds of Appeal for c. 20 wind farm projects nationwide (2014-2016) ➤ Project Coordinator for EISs and Environmental Reports for a range of infrastructural and residential developments. ➤ Project manager and senior ecologist on large scale ecological projects. ➤ Extensive experience of ecological assessment and mitigation management of development sites nationwide over past 14 years. ➤ Accustomed to working effectively as part of larger multidisciplinary project design teams.
Interpersonal & Communication Skills	<ul style="list-style-type: none"> ➤ Experience of coordinating large team of field staff and sub-consultants for ecological works at over 50 wind farm sites currently throughout the country. ➤ Experience co-ordinating project teams for EISs and Environmental reports for projects such as wind energy developments, solar energy projects, road and residential developments. ➤ Extensive experience in successful dealings with statutory ecological consultees including NPWS and IFI, usually regarding sensitive ecological sites. ➤ Significant experience co-ordinating approach to sensitive ecological sites between client and ecological consultees and contractors, etc. ➤ Development of technical working methodologies on behalf of contractors requiring understanding of both proposed works and sensitivities of site ➤ Experience in environmental education presentations and training for contractors, clients and the general public.
Licenses Held	<ul style="list-style-type: none"> ➤ Wildlife Act Section 22 & 23 Crayfish ➤ Wildlife Act Section 22 & 23 Pearl Mussel ➤ Current Safe Pass holder. ➤ Full member of the Chartered Institute of Ecology & Environmental Management (CIEEM).



CURRICULUM VITAE

Padraig Cregg is employed as a Senior Ornithologist with MKO. Padraig has over seven years' experience working in both the UK and Ireland in designing, executing and project managing ecological and ornithological assessments, primarily of development proposals within the renewables sector. Padraig has worked on wind and solar projects in both Ireland and the UK. Padraig joined MKO in 2018.

Current Role	Senior Ornithologist
Qualifications	<ul style="list-style-type: none"> ➤ M.Sc Evolutionary and Behavioural Ecology (University of Exeter, 2008). ➤ B.Sc Zoology (National University of Ireland, Galway, 2007).
Years of Experience	<ul style="list-style-type: none"> ➤ Padraig has over eight years' experience working in both the UK and Ireland in designing, executing and project managing ecological/ornithological assessments, primarily for the renewables sector.
Relevant Experience	<ul style="list-style-type: none"> ➤ Padraig has worked on over 60 wind farm projects in both Ireland and the UK. From his time working in the UK, Padraig provides expert experience in interpreting and implementing Scottish ornithological guidance documents (SNH, 2017) for the surveying of wind farms in an Irish context. Padraig's key responsibilities included: managing and coordinating the in-house team and sub-consultants, directly liaising with the client, landowners and other stakeholders, consulting with Planning Departments and the Development Applications Unit (DAU), writing sections of and reviewing Environmental Impact Assessment Reports and Appropriate Assessment (AA) Screening and Natura Impact Statements (NIS) Reports (as appropriate), reviewing GIS mapping and Planning Application drawings. ➤ He has acted as Senior Ecologist and Project Manager for several Solar Farm Planning Applications. ➤ He has acted as Senior Ornithologist for several large infrastructure projects, e.g. Water Supply Project Eastern and Midlands Region (Irish Water). ➤ Padraig was the Natura Impact Statement Expert Witness at Boliden Tara Mines Oral Hearing for a tailings extension and integrated constructed wetland
Key Strengths & Areas of Expertise	<ul style="list-style-type: none"> ➤ Padraig has a strong technical background in ornithological and ecological surveying and in writing Natura Impact Statements (NIS) and the Biodiversity chapters of Environmental Impact Assessment Reports (EIAR) to accompany planning applications.
Practical Skills & Aptitudes	<p>Field Skills:</p> <ul style="list-style-type: none"> ➤ Padraig's ornithological experience has involved carrying out a diverse catalogue of bird surveys throughout Ireland including multi-year studies (breeding, migratory and winter) for various environmental projects. In Scotland he spent two and a half years implementing bird surveys using Scottish Natural Heritage guidance documents to complete his survey work to best scientific practice. Many of his studies involved designing surveys to capture the seasonal change in avian communities at a site. Examples of this include; Breeding Raptor Surveys (following SNH & Hardey methods for species including Hen Harrier, Merlin, Peregrine, Barn Owl, White-tailed Eagle & Golden Eagle), Breeding Wader Surveys (following SNH, Brown & Shepherd and O'Brien & Smith for species including Golden Plover, Curlew, Lapwing, Dunlin & Snipe), Breeding Woodcock (following Gilbert methods), Migratory/Wintering Waterfowl (Following SNH and I-WeBS methods for species including (but not limited to) Whooper Swan, Greenland White-fronted Goose and wintering waders), Red Grouse Tape Lure Survey (following NPWS & BWI methods) Breeding diver species (following SNH & Gilbert methods) Woodland and Coastal species (following SNH and Gilbert methods).



CURRICULUM VITAE – NIAL MCHUGH

Niall is an Ornithologist with MKO who took up his position in January 2021. Niall graduated with an Honours Degree in Freshwater and Marine Biology from Galway-Mayo Institute of Technology in 2019. Niall has a wide range of ecological experience including botanical and habitat classification, freshwater surveys and bat surveys. Particularly passionate about ornithology, with his undergraduate thesis incorporating the distribution and habitat preference of red grouse in upland heath habitats. Niall has very good communication skills, has a high attention to detail and is competent in I.T. Niall has gained experience in report writing throughout his undergraduate degree and previous employments.

Current Role	Ornithologist
Qualifications	<ul style="list-style-type: none"> ➤ BSc. (Hons), Applied Freshwater and Marine Biology, First Class Honours, Galway – Mayo Institute of Technology
Memberships	<ul style="list-style-type: none"> ➤ BTO ➤ BSBI ➤ Mountaineering Ireland
Years of Experience	<ul style="list-style-type: none"> ➤ 3 years
Relevant Experience	<ul style="list-style-type: none"> ➤ Extensive bird surveys carrying out a range of bird survey methodologies such as wintering wildfowl surveys, breeding birds (including breeding raptors) and vantage point surveys. ➤ Actively carrying out BTO monitoring surveys in Northern Ireland including for breeding birds (terrestrial and wetland) and seabird monitoring.
Practical Skills & Aptitudes	<ul style="list-style-type: none"> ➤ Bird Identification and knowledge of their ecology and habitat preference. ➤ Habitat & botanical surveys including vegetation relevés and quadrat sampling. ➤ Bat surveys. ➤ Crayfish surveys. ➤ Terrestrial mammal surveys including badger and red squirrel surveys. ➤ Aquatic sampling and identification. ➤ I.T. Skills i.e., competent in the use of Word, Excel and Q-GIS. ➤ The carrying out of extensive surveys and writing and contributing to reports has made me acutely aware of potential effects large scale developments have on the environment and on fauna and flora species, and of mitigation, restoration and rehabilitation measures. ➤ Passionate about everything in the natural world.
Interpersonal & Communication Skills	<ul style="list-style-type: none"> ➤ Experience communicating with landowners and with members the public for the allowance of site access and acquiring certain local knowledge and sightings. ➤ Team-working skills and experience in working as part of a multi-disciplinary team with many moving parts and deadlines.
Licenses Held	<ul style="list-style-type: none"> ➤ Full, clean driving licence. ➤ Holder of a current Safe Pass