



Applied Ecology Ireland

Adare Flood Relief Scheme

Bird Survey Report – Winter 2021/2022



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Basis of Report

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Table of Contents

1	INTRODUCTION.....	1
1.1	Proposed Project Description.....	1
1.2	Purpose of the Report.....	1
2	METHODOLOGY	2
2.1	Field Surveys.....	2
2.1.1	Survey Effort and Weather	2
2.1.2	Survey Method	2
2.2	Statement of Authority	3
3	RESULTS	4
4	SUMMARY	6
5	REFERENCES.....	7

Document References

Tables

Table 2.1: Survey effort undertaken during the Adare FRS winter bird survey 2021/2022..... 2

Table 3.1: Frequency and abundance of target species, and their respective conservation status, recorded during winter bird surveys at the Adare FRS – November 2021 – March 2022. 5

1 INTRODUCTION

Applied Ecology Ireland was commissioned by Ryan Hanley, on behalf of Limerick County Council, to carry out winter bird surveys on the proposed Adare Flood Relief Scheme (FRS), Adare, Co. Limerick during the winter of 2021/2022.

1.1 Proposed Project Description

The viable Flood Relief Scheme option for Adare, as identified for the CFRAM assessment, is summarised as follows:

- Construction of new flood defence walls and new flood defence embankments.
- A demountable flood gate will be required across the old railway line and should be tied into the new flood defence wall and embankment.
- The parapet wall on the upstream face of Adare Bridge will need to be able to provide a flood defence function up to the required design standard.
- Existing arterial drainage maintenance scheme will need to be maintained as part of this option.
- Installation of a simple flood forecasting system, including an addition of telemetry to an existing hydrometric gauge to send warning messages when water level reaches a specified trigger point.

1.2 Purpose of the Report

The purpose of this report is to provide a brief description of baseline ornithological survey data for the winter period 2021/22 along the rivers Maigue and Greanagh, both of which flow to the northwest of Adare town. These data will be used to inform a separate ecological impact assessment and appropriate assessment for the proposed FRS. The assessment of potential impacts is beyond the scope of this report.

2 METHODOLOGY

2.1 Field Surveys

2.1.1 Survey Effort and Weather

Bird surveys were conducted monthly between November 2021 and March 2022. A total of 25 hours and 45 minutes of survey effort was undertaken. The survey effort undertaken during the winter of 2021/22 is given below in Table 2.1.

Table 2.1: Survey effort undertaken during the Adare FRS winter bird survey 2021/2022

Date	Time (start-end)	Survey Effort (hours:mins)
25/11/2021	11:00 - 16:00	5:00
14/12/2021	09:15 - 15:00	5:45
14/01/2022	10:15 - 15:15	5:00
11/02/2022	09:30 - 14:30	5:00
04/03/2022	10:00 - 15:00	5:00
Total hrs		25:45

Weather conditions during each survey period were optimal for bird surveying throughout the survey season.

Please refer to Appendix I for data table showing survey effort and weather conditions throughout each survey period.

2.1.2 Survey Method

The winter transect methodology is adapted from breeding bird survey methodologies for use during the winter months, because SNH (2017) does not prescribe a specific winter methodology. As such, an adapted O'Brien and Smith methodology (O'Brien and Smith, 1992, Gilbert *et al.*, 1998), which targets lowland waders, other waterbirds and raptors was employed. All species of the following taxa were considered target species:

- Swans geese and ducks;
- Cormorant, shag, divers and grebes;
- Gulls;
- Herons, egrets and crane;
- Rails and crakes;
- Waders and;
- Kingfisher.

This survey method involved the following:

- The length of the River Maigue and Greanagh River within the Zone of Influence (Zoi), as specified by the CFRAM options layout, was surveyed as a transect;

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- The surveyor walked the transect route along each river within the Zol, recording all water bird and raptor species encountered;
 - When a target species was detected, the location was plotted on a map and assigned a map reference number;
 - The following details were provided for each map reference number:
 - Date;
 - Location;
 - Species;
 - Number of birds;
 - Details of activity/behaviour;
 - Primary habitat used (and secondary and tertiary habitat if applicable) and;
 - Any other notes of interest.
 - Non-waterbird target species (i.e. raptors and groundfowl) were recorded as incidental records.

2.2 Statement of Authority

Sarah Jorgensen (SJ) – Project Manager and Lead Ornithologist

Ms Sarah Jorgensen is Principal Ecologist and Company Director of Applied Ecology Ireland Ltd. Sarah holds a BSc in Zoology from Anglia Ruskin University, Cambridge, UK and an MSc in Biodiversity and Conservation from Trinity College Dublin. She is an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Sarah is a highly skilled and experienced ornithologist with 13 years' post graduate experience as a professional consultant ecologist/ornithologist.

Sarah managed this project through liaison with the client, coordination of and undertaking the surveys, collating, quality controlling and assessing the survey data and writing this report.

3 RESULTS

A total of 18 bird species, comprising 15 water bird species and three raptor species, were recorded within the study area between November 2021 and March 2022. There were three Annex I species recorded throughout the season, namely kingfisher (*Alcedo atthis*), whooper swan (*Cygnus cygnus*) and peregrine falcon (*Falco peregrinus*). Furthermore, one species which is red listed under the Birds of Conservation Concern in Ireland 4: 2020–2026 (BOCCI4; Gilbert *et al*, 2021) was recorded, namely snipe (*Gallinago gallinago*).

Kingfisher was observed eight times over the course of the season, with no observations in February. Although observed twice in November and four times in December, the short time intervals and close locations between the observations infer that it is likely that these were multiple sightings of the same bird during each month. As such, the peak number of birds observed throughout the season was one.

Single flocks of whooper swan were recorded in December (n=10) and February (n=14) grazing in the same field just to the north of the confluence of the Greanagh River and the Maigue. Given the similarity in flock size and the location of grazing, it is possible that this was the same flock observed during these two months.

The two sightings of peregrine falcon were observed flying over Adare Golf Club course, once in January and again in February.

There were 12 records of snipe throughout the season i.e. during December, January and February. The peak count was 14 which occurred in December. The majority of records were observed being flushed from the reed beds along the Maigue.

Black-headed gull (*Larus ridibundus*) was the most abundant species recorded throughout the season (n=173), followed by mallard (*Anas platyrhynchos*) (n=103). The next most abundant species observed was teal (*Anas crecca*) (n=78), however, teal were only observed five times over the course of the season i.e. in January (three times; n=73) and in February (twice; n=5).

Little egret (*Egretta garzetta*) was the most frequently observed species throughout the season being recorded 28 times, followed again by mallard, which was recorded on 24 occasions across the season. A total of 22 grey heron (*Ardea cinerea*) were recorded on 18 occasions, while redshank (*Tringa totanus*) and greenshank (*Tringa nebularia*) were observed 12 (n=26) and 10 (n=24) times respectively.

There were seven species observed within the study area on less than 10 occasions throughout the survey season, namely, mute swan (*Cygnus olor*), little grebe (*Tachybaptus ruficollis*), cormorant (*Phalacrocorax carbo*), coot (*Fulica atra*), grey wagtail (*Motacilla cinerea*), buzzard (*Buteo buteo*) and sparrowhawk (*Accipiter nisus*).

Table 3.1 summarises the frequency and abundance of each species throughout the winter survey season, in addition to the conservation status of each species.

Table 3.1: Frequency and abundance of target species, and their respective conservation status, recorded during winter bird surveys at the Adare FRS – November 2021 – March 2022.

Species	Number of sightings and birds per month*					Total no. of sightings (Frequency)	Total no. of birds (Abundance)
	Nov	Dec	Jan	Feb	Mar		
Kingfisher ** ^β	2 (1)	4 (1)	1 (1)	0	1 (1)	8	1
Whooper Swan ** ^β	1 (1)	1 (10)	0	1 (14)	0	3	25
Mute Swan ^β	3 (4)	1 (5)	2 (2)	0	2 (15)	8	26
Redshank ^β	2 (2)	4 (12)	4 (7)	1 (4)	1 (1)	12	26
Greenshank	1 (1)	3 (8)	4 (5)	0	2 (10)	10	24
Snipe ∞	0	2 (20)	7 (16)	3 (3)	0	12	39
Grey Heron	3 (3)	5 (8)	5 (6)	1 (1)	4 (4)	18	22
Little Egret	4 (4)	5 (6)	10 (10)	3 (7)	6 (6)	28	33
Black-headed Gull ^β	2 (49)	2 (11)	2 (15)	1 (2)	4 (95)	11	172
Mallard ^β	5 (52)	4 (11)	8 (22)	5 (12)	2 (6)	24	103
Teal ^β	0	0	0	3 (73)	2 (5)	5	78
Little Grebe	2 (5)	1 (1)	1 (1)	1 (2)	0	5	9
Cormorant ^β	1 (1)	1 (1)	1 (2)	2 (2)	1 (1)	6	7
Coot ^β	1 (2)	0	1 (4)	0	1 (1)	3	7
Grey Wagtail ^β	0	0	2 (2)	0	0	2	2
Peregrine Falcon **	0	0	1 (1)	1 (1)	0	2	2
Buzzard	1 (1)	0	0	0	1 (1)	2	2
Sparrowhawk	0	0	0	0	1 (1)	1	1
Total	29 (128)	33 (97)	49 (94)	22 (121)	29 (147)	160	582

* Numbers in parentheses represent the total number of birds observed per month

** Annex I species under the EU Birds Directive

∞ Red listed species under the Birds of Conservation Concern in Ireland 4: 2020–2026

^β Amber listed species under the Birds of Conservation Concern in Ireland 4: 2020–2026

4 SUMMARY

The main findings throughout the season are as follows:

- The results of this winter bird survey show that both the River Maigue and Greanagh River are important aquatic and productive ecosystems for water birds, with a mean monthly frequency of 32.4 sightings and a mean monthly abundance count of 117.4 birds.
- Kingfisher was recorded each month except February flying to the west (downstream) of Adare Bridge, and also near Adare Manor Hotel. This result indicates that this section of the River Maigue is within an active winter foraging territory of this Annex I species and thus, it will be important to assess the breeding status of kingfisher along this stretch of river during the 2022 breeding season.
- A peregrine falcon was observed flying/hunting over Adare Golf Club course in January and February. There are a number of stone ruins which are the remains of an abbey on the grounds of the adjacent Adare Golf Club. It would be prudent to keep an eye on these ruins over the coming bird breeding season to see if there is any evidence of peregrine nesting in these buildings.

5 REFERENCES

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