White Hill Wind Farm Electricity Substation & Electricity Line

Environmental Impact Assessment Report

Annex 5.2: Baseline Bird Survey Report

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Electricity Line & Substation Breeding Wader Report

White Hill Wind Farm

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1.0 Introduction

SLR Environmental Consulting (Ireland) Ltd (SLR) was commissioned by White Hill Wind Farm Ltd to carry out a breeding wader bird survey programme for the proposed White Hill Wind Farm electricity line and substation (hereafter 'the Project'), Co. Carlow / Co. Kilkenny during the breeding bird season 2024. The purpose of this report is to describe these surveys and the resulting ornithological baseline.

1.1 Background to the commission

No previous planning permission has been sought on the application site (hereafter 'the Project Site') for the development of a substation by White Hill Wind Farm Ltd or any other party.

1.2 Site Description

The substation and electricity line route is predominantly comprised of lower value, heavily grazed improved grassland, and agricultural wet grassland with patches of soft rush and gorse scrub. Hedgerows, treelines and scrub are also present, and coniferous and mixed woodlands are found within the wider landscape.

1.3 Purpose of the report

This report outlines the surveys undertaken and methods used. It then summarises the survey data obtained and provides descriptions of the legal and conservation status of the species recorded.

The assessment of impacts resulting from the Project and the development of mitigation measures, if required, are beyond the scope of this report and will be covered in a separate Environmental Impact Assessment (EIA) Report and Natura Impact Statement (NIS).

1.4 Relevant Legislation

Legislation relevant to this report includes the EC Birds Directives and the Wildlife Act (1976, as amended)[1]. Birds listed under Annex I of the Birds Directive are described in Section 5 and are afforded strict protection at the European and national level. All Irish birds are protected by the Wildlife Act.

[1] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0147 04/10/2024

2.0 Methodology

2.1 Scope of Work

The scope of survey work during the breeding season was based on knowledge of the Project Site acquired during the scoping survey, a desk-based review and access to lands within and surrounding the Project Site.

According to the guidelines presented by the Bird Survey & Assessment Steering Group[2], six survey visits is required for breeding bird surveys as a standard, with any deviation supported with detailed and robust justification. As mentioned in section 1.2, the habitats present at the Project Site are generally of lower value for birds, dominated by heavily grazed agricultural fields.

The habitats present were judged most likely to provide potential breeding habitat for wader species and to a lesser extent, passerine species. Therefore, breeding wader surveys were considered as most appropriate, and the level of survey effort was dictated by this species-specific methodology. This survey methodology is suitable for recording other birds that could be present, such as passerines, which typically require at two survey visits for a Breeding Bird Survey[7].

The details of the surveys are provided in section 2.3 and an overview given in **Table 2-1.**

Table 2-1: Scope of Ornithological Work April to August 2024

Survey Type	Summary Methodology
Breeding wader surveys (lowland)	Three surveys were carried out from April to June 2024 to search for any waders breeding within the Project Site.

2.2 Desk-based Review

The desk review collated any available information to date on the breeding bird populations and movements around, within and surrounding the Project Site boundary.

The websites of the National Parks and Wildlife Service (NPWS)[3], the UK and Ireland Bird Atlas 2007-2011[4] and the National Biodiversity Data Centre (NBDC)[5] were also accessed for information on sites designated for nature conservation in the vicinity of the Project Site.

2.3 Field Surveys

2.3.1 Breeding Wader Surveys

Lowland wader surveys were conducted between April and June 2024 following the methodology described in O'Brien and Smith (1992)[6] . The survey involved a walked transect which covered all habitat potentially suitable for lowland breeding waders within the Project Site. Transects sampled suitable habitats within the Project Site and 500 m buffer, including

[2] Bird Survey & Assessment Steering Group. (2024). Bird Survey Guidelines for assessing ecological impacts, https://birdsurveyguidelines.org *[20/09/2024]*

[3] www.npws.ie 04/10/2024

[4] https://app.bto.org/mapstore/StoreServlet 04/10/2024

[5] http://maps.biodiversityireland.ie/#/Map 04/10/2024

[6] O'Brien, M. and Smith, K. W. (1992) Changes in the status of waders breeding on wet lowland grasslands in England and Wales between 1982 and 1989, Bird Study, 39:3, 165-176.

wet grassland and improved agricultural grassland. Surveys were undertaken three hours before dusk and three hours after dawn.

The location, movement and behaviour of all wader species was recorded onto field maps using standard BTO species codes (had any waders been recorded). The following criteria were to be recorded for each species:

- Northern lapwing *Vanellus vanellus* – the total numbers of birds seen from the transect;
- Common snipe *Gallinago gallinago* – the number of drumming plus chipping birds heard or seen from the transect; and
- Other species – the number of pairs (where 'pairs' = (paired individuals/2), displaying birds, nests or broods and other single birds not in flocks).

The breeding status of waders recorded during surveys was evaluated against the criteria set out in Gilbert et al. (1998)[7] and BTO[8] for wader surveys.

Birds were confirmed breeding if:

- Nests, eggs, or young were located;
- Adults repeatedly alarm called;
- Distraction displays were seen; and
- Territorial disputes were observed.

Birds were probably breeding if:

- They were observed displaying or singing on more than one visit;
- A pair was seen in suitable nesting habitat in the breeding season;
- Courtship was seen in or near suitable breeding habitat;
- They were observed visiting a probable nest site;
- Agitated behaviour or anxiety calls were observed; and
- A pair of birds was observed in suitable habitat for nesting.

Birds were possibly breeding if:

- They were observed displaying or singing on one visit in suitable breeding habitat; and
- A single bird was observed in the breeding season in suitable nesting habitat.

Other records were considered to be of non-breeding birds, failed breeders, birds loafing, feeding or on passage to other areas.

All other species were recorded and the BTO breeding evidence framework (see **Appendix C**) was used to determine breeding status.

See **Appendix D**, **Figure 1.1** for survey area and **Appendix B** and **Appendix C** for metadata relating to these surveys.

[7] Gilbert et al. (1998). Bird Monitoring Methods. RSPB, UK.

[8] https://www.bto.org/our-science/projects/birdatlas/methods/breeding-evidence [Last Accessed 18/09/2024]

2.4 Survey Limitations

There were no limitations throughout the surveys.

2.5 Project Team: Evidence of Technical Competence and Experience

Details of the project team are described below

Jonathon Dunn (JD) – Project Manager and Lead Ornithologist

Jonathon is an Associate Ecologist with SLR and holds a BA (Hons) in Natural Sciences from the University of Cambridge, an MSc in Ecology Evolution and Conservation from Imperial College London and a PhD in Avian Ecology from Newcastle University. He is a Full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Jonathon is a highly skilled and experienced bird surveyor with ten years' post graduate experience as a professional consultant ecologist. Jonathon managed this project through liaison with the client, coordination of the survey team, supervision of the health and safety of the team, collating, quality controlling and assessing the survey data

Adrian Allen (AA) - Surveyor

Adrian is an experienced surveyor for a variety of renewable energy projects with a lifetime of birding experience. Adrian has carried out a wide variety of bird survey types including VPs, breeding raptor, breeding wader, woodcock *Scolopax rusticola*, feeding distribution and hen harrier *Circus cyaneus* roost surveys.

3.0 Results

3.1 Desk-based Review

3.1.1 Natura 2000 Sites

There is one SPA and three SACs within 20 km[9] of the Project Site. The River Nore SPA (004097) is located 12.9 km southwest of the Project Site and is designated for common kingfisher *Alcedo atthis.*

Although SACs are not designated for birds, the River Barrow and River Nore SAC (9.1km northwest of the substation) site synopsis mentions seven species likely present in the breeding season: common kingfisher, peregrine falcon *Falco peregrinus*, long-eared owl *Asio otus*, mallard *Anas platyrhynchos*, common snipe, water rail *Rallus aquaticus* and northern raven *Corvus corax.*

The Blackstairs Mountains SAC (14.8km southeast of the substation) site synopsis mentions red grouse *Lagopus scotica* using the area. Red grouse are highly sedentary and rarely disperse more than 4 km away from their natal territories[10].

3.1.2 Other Nature Conservation Sites

There is one NHA and 15 pNHAs present within 20 km of the Project Site.

Only two pNHA sites mention birds in their site synopses. Red Bog, Dungarvan pNHA mentions waterfowl are present in winter and therefore are absent in the breeding season

Details of the remaining site is provided below in **Table 3-1.** A focus has been given to species likely present in the breeding season.

Table 3-1: NHAs and pNHAs within 20 km of the Project Site and Bird Species Listed in the Site Synopses

Site Name	Site Code	Distance/direction from Site Boundary	Qualifying Interests (Relevant to the Breeding Season)
White Hall Quarry pNHA	000855	<1 km northeast from nearest point to electricity line route 1.5 km northwest of substation	• Raptors nesting in quarry cliffs (no species mentioned)

3.1.3 Species Records

The NBDC database was searched for records of relevant bird species (species of conservation concern or listed under Annex I of the Birds Directive[1]) from the 2 km grid squares S6064, S6264, S6560, S6561 and S6562 within which the Project Site is located. The results are listed below in **Table 3-2.**

[9] A 20 km search radius was used as this represents the maximum core foraging distance used by Qualifying Interest species of SPAs in the UK and Ireland

[10] Cummins, S., Bleasdale, A., Douglas, C., Newton, S., O'Halloran, J. & Wilson, H. J. (2010) The status of Red Grouse in Ireland and the effects of land use, habitat and habitat quality on their distribution. Irish Wildlife Manuals No. 50, National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

Table 3-2: Relevant Bird Species Recorded from the 2 Km Grid Squares within which The Project Site is Located

Grid Square	Species	Date of Last Record & Dataset	Designation
S6064	N/A	N/A	N/A
S6264	Long-eared owl	25/03/21 Birds of Ireland	BoCCI4 Green
S6560	N/A	N/A	N/A
S6561	N/A	N/A	N/A
S6562	N/A	N/A	N/A

The absence of records of species from the NBDC database does not necessarily imply that a species does not occur within the search area, rather that it has not formally been recorded as present.

3.2 Breeding Wader Surveys

There was one target species recorded during the breeding wader surveys: common snipe *Gallinago gallinago*. Several other non-target species were also recorded.

The results of the surveys can be seen in **Appendix D, Figures 1.2 to 1.6**, **Appendix C** and **Table 3-3.** Total observations include all observations made during a survey visit and includes multiple observations of the same individual. Peak count figures are the largest number of unique individuals recorded across any one survey visit.

Breeding status was evaluated against the criteria as set out in section 2.3.1 for snipe and **Appendix C** for all other species.

Table 3-3: Results from Breeding Wader Surveys April- June 2024

Species	Total Observations			Peak Count	Breeding Status
	Visit 1 April	Visit 2 May	Visit 3 June		
Common buzzard *Buteo buteo*	2	3	4	2	Possibly breeding
Common crossbill *Loxia curvirostra*	2	-	-	2	Non-breeding
Common kestrel *Falco tinnunculus*	-	1	1	1	Possibly breeding
Common linnet *Linaria cannabina*	4	16	30	18	Confirmed breeding
Common snipe	2	-	-	2	Possibly breeding
Common starling	4	-	39	27	Possibly breeding

Species	Total Observations			Peak Count	Breeding Status
	Visit 1 April	Visit 2 May	Visit 3 June		
Cuckoo *Cuculus canorus*	-	-	1	1	Possibly breeding
Eurasian sparrowhawk *Accipiter nisus*	-	1	-	1	Possibly breeding
Goldcrest *Regulus regulus*	2	-	-	2	Possibly breeding
Meadow pipit *Anthus pratensis*	1	7	7	1	Probable breeding
Northern raven *Corvus corax*	2	1	-	2	Possibly breeding
Willow warbler *Phylloscopus trochilus*	4	3	5	1	Possibly breeding

3.2.1 Common Buzzard

This species was recorded from April to June, mostly consisting of single birds with one pair seen in June. Common buzzard was evaluated as possibly breeding after being recorded in suitable habitat. This species was seen along the electricity line, circling in coniferous plantation c. 100 m south of the electricity line, circling c. 400 m west of the electricity line and flying southwest within the 500 m buffer zone. They were also seen perched in trees in the field adjacent to the electricity line and within the substation boundary.

3.2.2 Common Crossbill

This species was recorded once in April with a pair seen flying over fields c. 150 m adjacent to the electricity cable and were evaluated as non-breeding.

3.2.3 Common Kestrel

Common kestrel was recorded in May and June as single birds flying across the substation fields and flying in fields c. 350 m adjacent to the electricity cable. As it was suitable habitat for common kestrel, this species was evaluated as possibly breeding.

3.2.4 Common Linnet

This species was recorded from April to June in the breeding season seen along the electricity cable route and in the fields adjacent, mostly in wet grasslands, hedgerows and scrubby areas. The peak count of 18 birds was recorded in June. This species was evaluated as confirmed breeding as recently fledged birds were recorded with adults on multiple instances.

3.2.5 Common Snipe

Common snipe was recorded twice in April in suitable habitat and were flushed during the survey. This species was seen c. 125 m south of the electricity cable route and flew southeast and was also seen further south c. 50 m from the cable route and flew west. Common snipe was evaluated as possibly breeding after being recorded in suitable habitat, but no drumming or display behaviours were observed.

3.2.6 Common Starling

This species was recorded in April and June in the breeding season, observed flying over the electricity cable route in April and seen in a field c. 50 m southeast of the cable route before flying southeast. The peak count of 27 birds was recorded in June. Starling was evaluated as possibly breeding with birds observed in suitable habitat during the breeding season.

3.2.7 Cuckoo

A single cuckoo was observed singing in suitable habitat in June c. 125 m south of the electricity cable route and was evaluated as possibly breeding.

3.2.8 Eurasian Sparrowhawk

A single Eurasian sparrowhawk was recorded in May in fields c. 100 m adjacent to the electricity cable, circling over woodland. This species has been evaluated as possibly breeding as it was observed in suitable habitat in the breeding season.

3.2.9 Goldcrest

A pair of Goldcrest was recorded in April along the electricity grid route near a coniferous treeline. This species was recorded singing in suitable habitat and evaluated as possibly breeding.

3.2.10 Meadow Pipit

Single meadow pipits were observed from April to June in the breeding season along the electricity cable route and in the fields adjacent. This species was recorded on multiple occasions in agricultural grassland, wet grassland and scrub, exhibiting agitated behaviours; consequently, this species has been evaluated as probably breeding.

3.2.11 Northern Raven

This species was recorded twice in the breeding season in April with a pair seen c. 200 m west of the electricity cable and in May with a single bird observed c. 300 m northwest of the control centre over conifer plantation. This species was evaluated as possibly breeding due to observations in suitable habitat.

3.2.12 Willow Warbler

Single birds were recorded from April to June observed along the electricity cable route (typically within 50 m) and in the fields of the substation. Birds were observed singing on every occasion and were evaluated as possibly breeding.

4.0 Summary and Conclusions

Breeding wader surveys were carried out at the Project Site during the 2024 breeding bird season.

There were two observations of common snipe in suitable habitat during the breeding wader survey in April, which indicates that this species is possibly breeding within the 500 m buffer. Breeding snipe represent a constraint to the Project as they could be disturbed by construction activities if there is a breeding territory in the same location. However, no drumming or other display behaviours were observed and so there is no evidence of any breeding territories within vicinity of the Project.

The following incidental species that have not already been discussed were recorded during breeding wader surveys:

- Raptors: Common buzzard, common kestrel, Eurasian sparrowhawk;
- Northern raven; and
- Passerines: Meadow pipit, willow warbler, common crossbill, cuckoo, goldcrest, common linnet, common starling.

Common linnet was confirmed breeding within 500 m of the Project Site, and the remaining species were possibly breeding within the 500 m buffer surrounding the electricity cable route and substation. It would be prudent to undertake nest checks for these species prior to construction to avoid destruction of nests until breeding has finished.

5.0 Legal and Conservation Status of Target Species Recorded

Table 5-1 summarises the legal and conservation status of the target species recorded during the range of ornithology surveys mentioned above.

Table 5-1: Legal and Conservation Status of Target Species

Primary or secondary target	Species (BTO Code)	Legal & conservation status in Ireland
Primary	Common snipe (SN)	BoCCI4 Red
Incidental	Common buzzard (BZ)	BoCCI4 Green
	Common kestrel (K.)	BoCCI4 Red
	Eurasian sparrowhawk (SH)	BoCCI4 Green
	Northern raven (RN)	BoCCI4 Green
	Meadow pipit (MP)	BoCCI4 Red
	Common crossbill (CR)	BoCCI4 Green
	Willow warbler (WW)	BoCCI4 Amber
	Common linnet (LI)	BoCCI4 Amber
	Common starling (SG)	BoCCI4 Amber
	Goldcrest (GC)	BoCCI4 Amber
	Cuckoo (CK)	BoCCI4 Green

Appendix A Survey Times, Dates & Observations

Electricity Line & Substation Breeding Wader Report

White Hill Wind Farm

White Hill Wind Farm Ltd

SLR Project No.:501.065427.00001

4 October 2024

Table A-1: Time & Dates for Breeding Wader Surveys

Date	Surveyor	Start (hh:mm)	End (hh:mm)	Survey duration (hh:mm)
24/04/2024	AA	06:15	09:15	03:00
24/04/2024	AA	17:45	20:25	02:40
24/05/2024	AA	05:20	08:20	03:00
24/05/2024	AA	18:30	21:30	03:00
11/06/2024	AA	05:15	08:05	02:50
11/06/2024	AA	18:50	21:50	03:00
Total Hours				**17:30**

Appendix B Weather Data

Electricity Line & Substation Breeding Wader Report

White Hill Wind Farm

White Hill Wind Farm Ltd

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4 October 2024

Weather Data key:

- Wind speed: expressed in Beaufort scale
- Cloud cover: expressed in Oktas (n/8)
- Visibility:
  - Poor < 1km = 0
  - Moderate 1-3 km = 1
  - Good >3 km = 2
- Rain:
  - None = 0
  - Drizzle = 1
  - Light showers / snow = 2
  - Heavy showers / snow = 3
- Lying snow:
  - None = 0
  - On site = 1
  - On higher ground =2
- Frost:
  - None = 0
  - Ground = 1
  - All day = 2

Table B-1: Weather Data for Breeding Wader Surveys

Date	Start	End	Survey Hour	Wind Speed [11]	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
24/04/2024	06:15	09:15	1	2	N	0	7	2	2	0	0	5
24/04/2024	06:15	09:15	2	2	N	0	6	2	2	0	0	5
24/04/2024	06:15	09:15	3	2	N	0	6	2	2	0	0	6
24/04/2024	17:45	20:25	1	2	N	0	7	2	2	0	0	12
24/04/2024	17:45	20:25	2	1	N	0	8	2	2	0	0	12
24/04/2024	17:45	20:25	3	1	N	0	8	2	2	0	0	12
24/05/2024	05:20	08:20	1	2	W	0	7	2	2	0	0	8

Date	Start	End	Survey Hour	Wind Speed [11]	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
24/05/2024	05:20	08:20	2	3	W	0	8	2	2	0	0	9
24/05/2024	05:20	08:20	3	3	W	0	8	2	2	0	0	7
24/05/2024	18:30	21:30	1	2	SW	0	7	2	2	0	0	13
24/05/2024	18:30	21:30	2	3	SW	0	7	2	2	0	0	13
24/05/2024	18:30	21:30	3	2	SW	0	8	2	2	0	0	12
11/06/2024	05:15	08:05	1	2	NW	0	0	2	2	0	0	5
11/06/2024	05:15	08:05	2	2	NW	0	0	2	2	0	0	12
11/06/2024	05:15	08:05	3	2	NW	0	1	2	2	0	0	12
11/06/2024	18:50	21:50	1	3	NW	0	5	2	2	0	0	14
11/06/2024	18:50	21:50	2	3	NW	0	5	2	2	0	0	13
11/06/2024	18:50	21:50	3	2	NW	0	4	2	2	0	0	12

Appendix C Survey Data

Electricity Line & Substation Breeding Wader Report

White Hill Wind Farm

White Hill Wind Farm Ltd

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Breeding Status (Codes)

- Non-breeding: flying over (F), suspected to be on migration (M), suspected to be summering non-breeder (U)
- Possible breeding: observed in breeding season in suitable nesting habitat (H), singing or calling in breeding season in suitable breeding habitat on one visit (S)
- Probable breeding: pair in suitable habitat in breeding season (P), territorial behaviour seen on >1 survey visit (T), courtship/display (D), visiting probable nest site (N), agitated behaviour (A), nest building/excavation (B)
- Confirmed breeding: distraction display (DD), used nest / eggs found (UN), recently fledged young (FL), adults entering/leaving nest site or incubating (ON), adult carrying food for young or faecal sac (FF), nest with eggs (NE), nest with young (NY)

Table C-1: Data from Breeding Wader Surveys

Date	BTO code [12]	Target (Y/N)	No. seen	Time observed	Breeding status (see key above)	Notes
24/04/2024	RN	N	2	06:15	H	
24/04/2024	MP	N	1	06:56	S	
24/04/2024	CR	N	2	07:04	F	
24/04/2024	WW	N	1	07:54	S	
24/04/2024	LI	N	1	08:02	S	
24/04/2024	LI	N	1	08:06	S	
24/04/2024	SG	N	2	08:10	F	
24/04/2024	WW	N	1	08:28	S	
24/04/2024	BZ	N	1	08:30	H	
24/04/2024	WW	N	1	08:41	S	
24/04/2024	SN	Y	1	06:51	H	Flushed from fields + left area
24/04/2024	SN	Y	1	09:01	H	Flushed from fields + left area
24/04/2024	LI	N	2	17:50	S	
24/04/2024	SG	N	2	17:51	H	
24/04/2024	GC	N	2	18:36	S	
24/04/2024	BZ	N	1	20:02	H	
24/04/2024	WW	N	1	20:11	S	

[12] See section 5.0 for BTO

Date	BTO code [12]	Target (Y/N)	No. seen	Time observed	Breeding status (see key above)	Notes
25/05/2024	BZ	N	1	05:50	H	
25/05/2024	MP	N	1	06:22	A	
25/05/2024	LI	N	2	06:25	P	
25/05/2024	LI	N	2	06:31	P	
25/05/2024	MP	N	1	06:33	A	
25/05/2024	LI	N	6	06:38	F	
25/05/2024	MP	N	1	06:59	S	
25/05/2024	MP	N	1	07:15	S	
25/05/2024	WW	N	1	07:17	S	
25/05/2024	SH	N	1	07:18	H	
25/05/2024	LI	N	2	07:50	P	
25/05/2024	WW	N	1	08:13	S	
25/05/2024	LI	N	2	18:58	P	
25/05/2024	LI	N	1	18:59	H	
25/05/2024	LI	N	1	19:04	S	
25/05/2024	K.	N	1	19:12	H	
25/05/2024	BZ	N	1	19:17	H	
25/05/2024	WW	N	1	19:28	S	
25/05/2024	RN	N	1	19:58	H	
25/05/2024	MP	N	1	20:22	H	
25/05/2024	MP	N	1	20:25	A	
25/05/2024	MP	N	1	20:46	A	
25/05/2024	BZ	N	1	21:11	H	
11/06/2024	WW	N	1	05:16	S	
11/06/2024	WW	N	1	05:22	S	
11/06/2024	WW	N	1	05:26	S	
11/06/2024	WW	N	1	06:05	S	
11/06/2024	MP	N	1	06:19	S	
11/06/2024	CK	N	1	07:15	S	
11/06/2024	MP	N	1	07:19	S	
11/06/2024	LI	N	4	07:21	FL	
11/06/2024	SG	N	12	07:22	F	
11/06/2024	MP	N	1	07:25	S	

Date	BTO code [12]	Target (Y/N)	No. seen	Time observed	Breeding status (see key above)	Notes
11/06/2024	LI	N	2	07:30	F	
11/06/2024	MP	N	1	18:53	S	
11/06/2024	LI	N	6	18:55	FL	Ad +Juv
11/06/2024	SG	N	27	18:59	F	
11/06/2024	MP	N	1	19:03	S	
11/06/2024	BZ	N	1	19:09	H	
11/06/2024	WW	N	1	19:33	S	
11/06/2024	LI	N	18	20:16	FL	Ad +Juv
11/06/2024	BZ	N	2	20:21	H	
11/06/2024	MP	N	1	20:22	A	
11/06/2024	BZ	N	1	20:25	F	Flushed from tree
11/06/2024	MP	N	1	20:27	A	
11/06/2024	K.	N	1	21:11	F	Flushed from tree

Appendix D Figures

Electricity Line & Substation Breeding Wader Report

White Hill Wind Farm

White Hill Wind Farm Ltd

SLR Project No.:501.065427.00001

4 October 2024

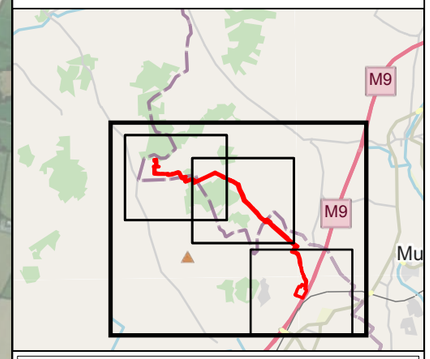
660000 661000 662000 663000 664000 665000 666000 667000

666000 665000 664000 663000 662000

N

LEGEND

- Proposed Electricity Line
- Proposed Electricity Line 500 m Buffer
- Grid Route Planning Outline
- Control Station
- Substation
- Transect Line



Behaviour Code
A - Agitated behaviour
F - Non-breeding: Flying over
FL - Recently fledged young
H - Observed in breeding season in suitable nesting habitat
P - Probable breeding: Pair in suitable habitat in breeding season
S - Non-breeding: Singing or calling in breeding season in suitable breeding habitat on one visit

0 0.5 1
Kilometres

White Hill Wind Farm

SLR

WHITE HILL SUBSTATION

BREEDING BIRD REPORT 2024

GRID ROUTE BREEDING WADER SURVEY - OVERVIEW

FIGURE 1.1

Scale 1:25,000 @ A3

Date OCTOBER 2024

501.065434.00001.0016.0 Grid Route Breeding Wader Survey

660000
661000
662000
663000
665000
664000

N

H
SN

Behaviour Code
A - Agitated behaviour
F - Non-breeding: Flying over
FL - Recently fledged young
H - Observed in breeding season in suitable nesting habitat
P - Probable breeding: Pair in suitable habitat in breeding season
S - Non-breeding: Singing or calling in breeding season in suitable breeding habitat on one visit

0
0.5
1
Kilometres

LEGEND

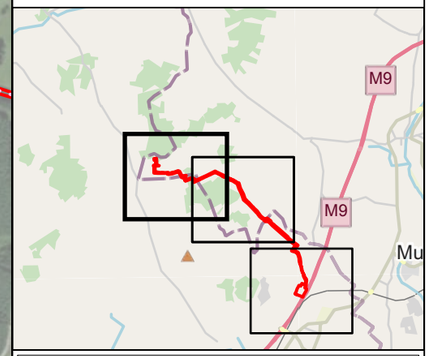
- Proposed Electricity Line
- Proposed Electricity Line 500 m Buffer
- Grid Route Planning Outline
- Control Station
- Transect Line

Species Point

- SN - Snipe

Species Flight Line

- SN - Snipe



White Hill Wind Farm

SLR

WHITE HILL SUBSTATION

BREEDING BIRD REPORT 2024

GRID ROUTE BREEDING WADER SURVEY - WADER SURVEY RESULTS

FIGURE 1.2

Scale 1:10,000 @ A3

Date OCTOBER 2024

501.065434.00001.0016.0 Grid Route Breeding Wader Survey

660000 661000 662000 663000

665000 664000

N

LEGEND

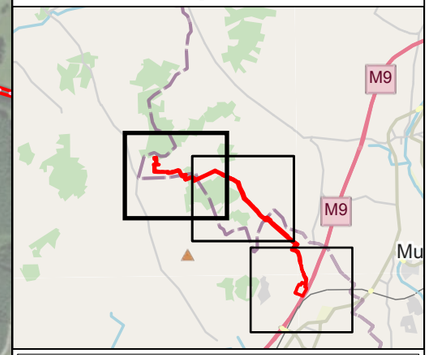
- Proposed Electricity Line
- Proposed Electricity Line 500 m Buffer
- Grid Route Planning Outline
- Control Station
- Transect Line

Species Point

- BZ - Buzzard
- CK - Cuckoo
- CR - Crossbill (Common)
- K. - Kestrel
- LI - Linnet
- MP - Meadow Pipit
- SG - Starling
- RN - Raven
- WW - Willow Warbler

Species Flight Line

- BZ - Buzzard
- K. - Kestrel
- LI - Linnet
- SG - Starling



Behaviour Code
A - Agitated behaviour
F - Non-breeding: Flying over
FL - Recently fledged young
H - Observed in breeding season in suitable nesting habitat
P - Probable breeding: Pair in suitable habitat in breeding season
S - Non-breeding: Singing or calling in breeding season in suitable breeding habitat on one visit

0 0.5 1
Kilometres

White Hill Wind Farm

SLR

WHITE HILL SUBSTATION

BREEDING BIRD REPORT 2024

GRID ROUTE BREEDING WADER SURVEY - INCIDENTAL SPECIES SURVEY RESULTS

FIGURE 1.3

Scale 1:10,000 @ A3

Date OCTOBER 2024

501.065434.00001.0016.0 Grid Route Breeding Wader Survey

663000
664000
665000
664000
663000

N

LEGEND

Proposed Electricity Line

Proposed Electricity Line 500 m Buffer

Grid Route Planning Outline

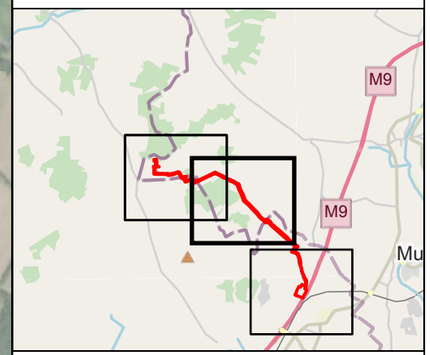
Transect Line

Species Point

SN - Snipe

Species Flight Line

SN - Snipe



Behaviour Code
A - Agitated behaviour
F - Non-breeding: Flying over
FL - Recently fledged young
H - Observed in breeding season in suitable nesting habitat
P - Probable breeding: Pair in suitable habitat in breeding season
S - Non-breeding: Singing or calling in breeding season in suitable breeding habitat on one visit

0 0.5 1
Kilometres

White Hill Wind Farm

SLR

WHITE HILL SUBSTATION

BREEDING BIRD REPORT 2024

GRID ROUTE BREEDING WADER SURVEY - WADER SURVEY RESULTS

FIGURE 1.4

Scale 1:10,000 @ A3

Date OCTOBER 2024

501.065434.00001.0016.0 Grid Route Breeding Wader Survey

663000 664000 665000

664000

N

LEGEND

Proposed Electricity Line

Proposed Electricity Line 500 m Buffer

Grid Route Planning Outline

Transect Line

Species Point

BZ - Buzzard

CK - Cuckoo

GC - Goldcrest

K. - Kestrel

LI - Linnet

MP - Meadow Pipit

SG - Starling

SH - Sparrowhawk

WW - Willow Warbler

Species Flight Line

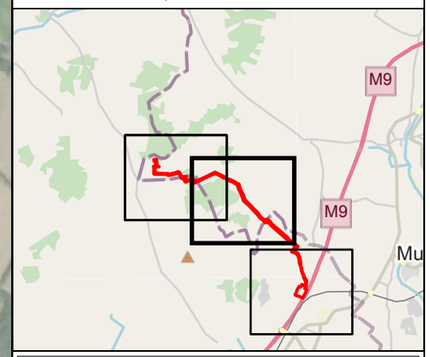
BZ - Buzzard

K. - Kestrel

LI - Linnet

SG - Starling

SH - Sparrowhawk



Behaviour Code
A - Agitated behaviour
F - Non-breeding: Flying over
FL - Recently fledged young
H - Observed in breeding season in suitable nesting habitat
P - Probable breeding: Pair in suitable habitat in breeding season
S - Non-breeding: Singing or calling in breeding season in suitable breeding habitat on one visit

0 0.5 1

Kilometres

White Hill Wind Farm

SLR

WHITE HILL SUBSTATION

BREEDING BIRD REPORT 2024

GRID ROUTE BREEDING WADER SURVEY - INCIDENTAL SPECIES SURVEY RESULTS

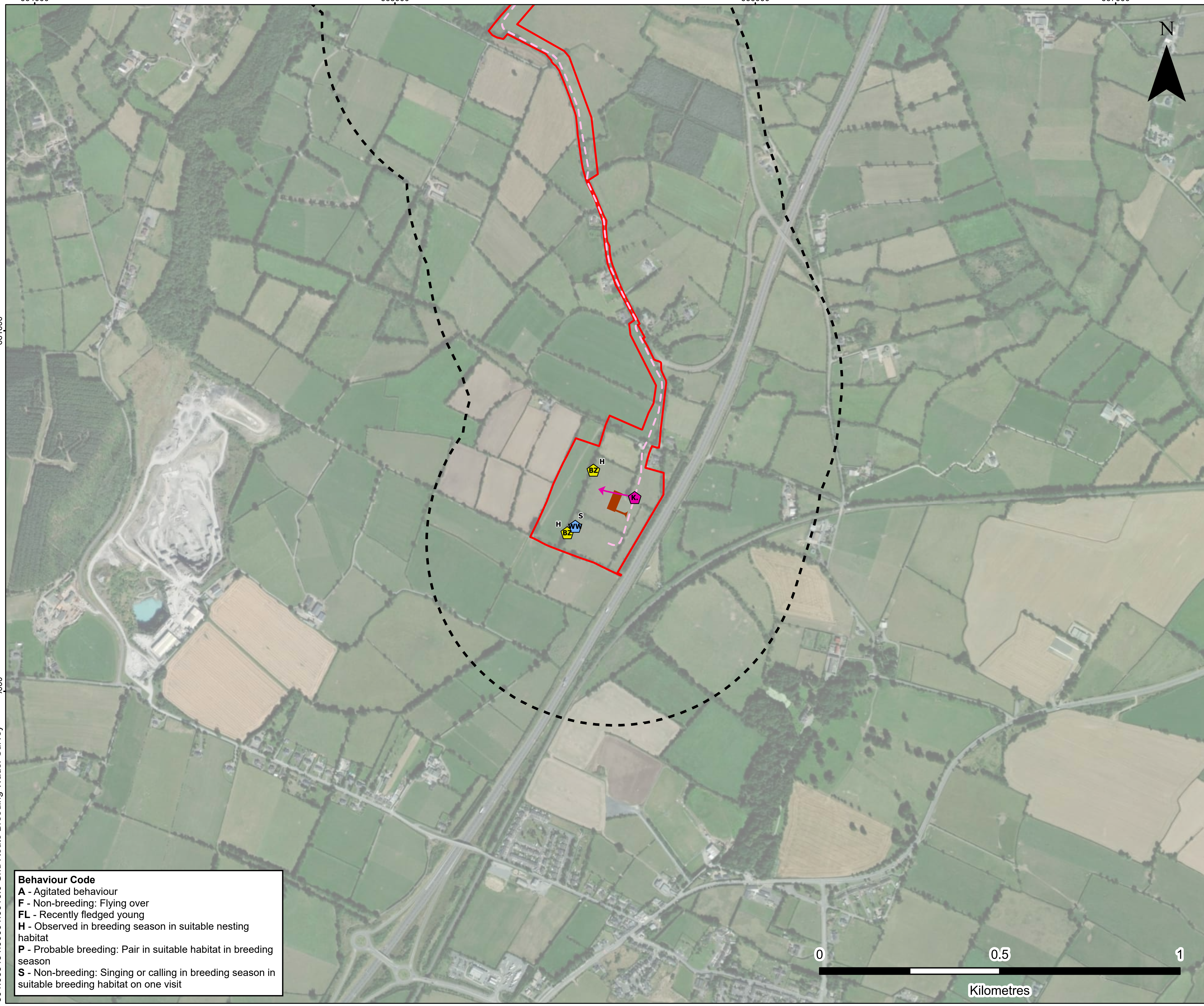
FIGURE 1.5

Scale 1:10,000 @ A3

Date OCTOBER 2024

663000

501.065434.00001.0016.0 Grid Route Breeding Wader Survey



Behaviour Code
A - Agitated behaviour
F - Non-breeding: Flying over
FL - Recently fledged young
H - Observed in breeding season in suitable nesting habitat
P - Probable breeding: Pair in suitable habitat in breeding season
S - Non-breeding: Singing or calling in breeding season in suitable breeding habitat on one visit

LEGEND

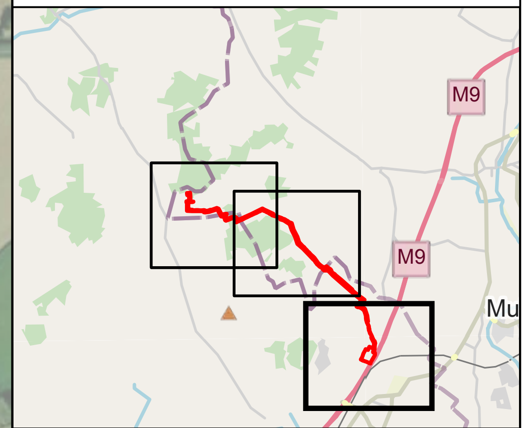
- Proposed Electricity Line
- Proposed Electricity Line 500 m Buffer
- Grid Route Planning Outline
- Substation

Species Point

- BZ - Buzzard
- K. - Kestrel
- WW - Willow Warbler

Species Flight Line

- K. - Kestrel



White Hill Wind Farm

SLR

WHITE HILL SUBSTATION

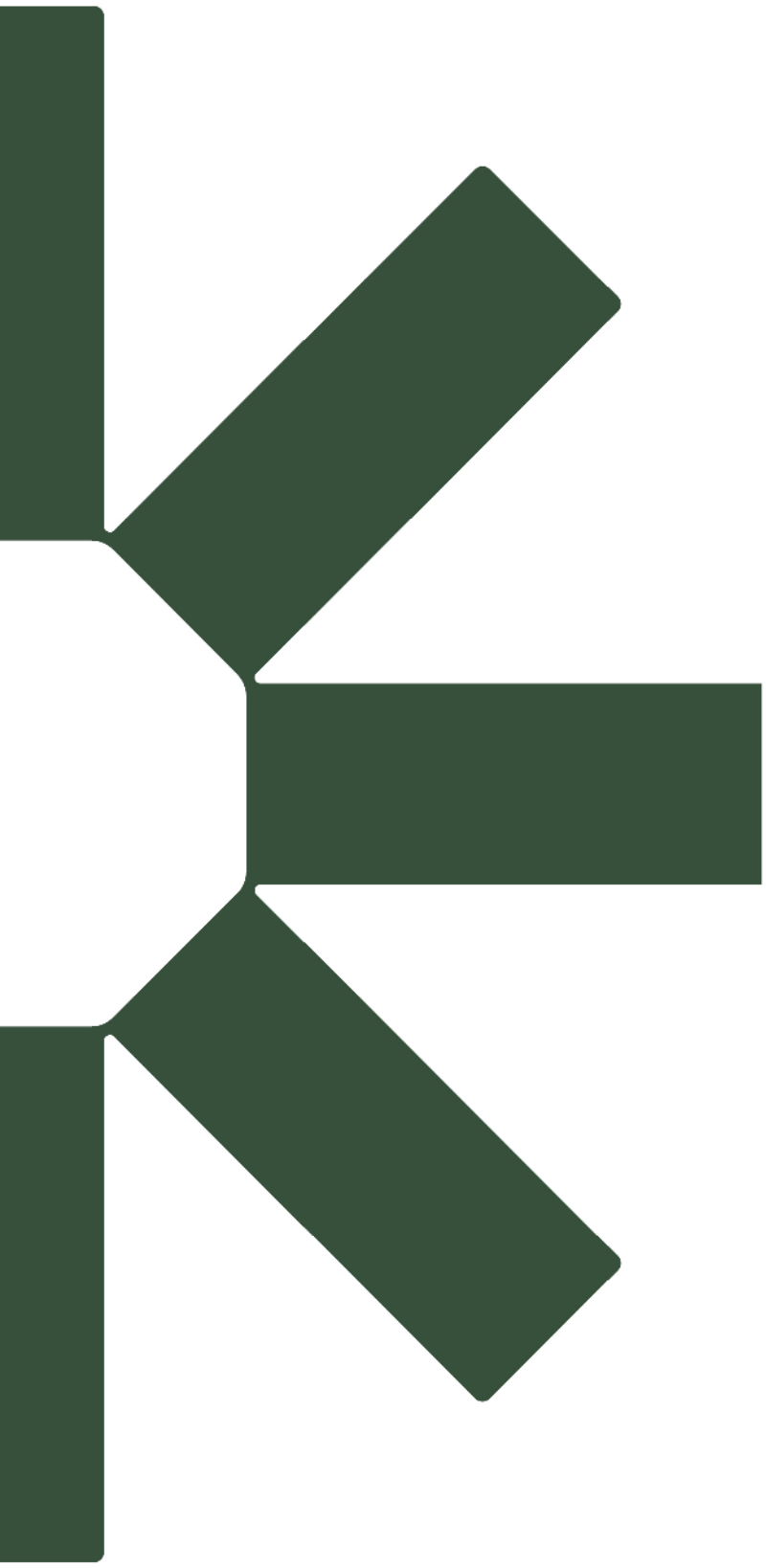
BREEDING BIRD REPORT 2024

GRID ROUTE BREEDING WADER SURVEY - INCIDENTAL SPECIES SURVEY RESULTS

FIGURE 1.6

Scale	Date
1:10,000 @ A3	OCTOBER 2024

501.065434.00001.0016.0 Grid Route Breeding Wader Survey



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