

ECOLOGICAL SURVEY FOR BIRDS

Magheralin Solar Farm



NI2702 Magheralin Solar
Farm
Ecological Survey for Birds
A02
October 2023

Document Status

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Approval for issue

James McCrory

2023-10-26

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SUMMARY

RPS was commissioned by Renewable Energy Systems Ltd (RES) (the Applicant), to undertake surveys for breeding birds at lands in Magheralin, Co. Down. This Ecological Survey for Birds (the Report) comprises an Appendix to an Ecological Impact Assessment (EclA), which in turn forms part of a planning application pack which seeks permission for the:

“Installation and operation of a 29.9MW solar farm including photovoltaic panels, mounting frames, transformer / inverter units, and on-site substation with associated ancillary development including security fencing, pole mounted CCTV, associated landscaping, internal access tracks, new site access, internal cabling and associated site works.” (The Proposed Development)

The aim of the Report is to provide a description of the bird survey methods used; to provide the detailed results of bird surveys; and to provide an interpretation of the results.

The surveys detailed in this report have been undertaken to establish the use of the site by breeding birds, to characterise the importance of the site for bird populations.

The site was subject to survey visits over the breeding bird season. Visits were undertaken by appropriately qualified ecologists in suitable weather conditions and during the relevant seasonal periods.

The site was recorded to support a range of bird species which utilise the site for the purposes of breeding. Notably areas within the site support high numbers of breeding Yellowhammer and a single Buzzard nest. Other notable breeding or potentially breeding species supported include Greenfinch, Goldfinch, House marten, Swallow and Starling in addition to a range of further common and widespread species.

Given the characteristics of the Proposed Development, it is considered that there are likely to be opportunities for the delivery of recommended mitigation – as well as enhancement - as part of a best practice approach to construction including:

- Undertaking clearance works outside the bird breeding season in so far as is reasonably practical;
- Utilising an Ecological Clerk of Works to undertake pre-clearance surveys in the event this is not possible;
- Management of grass sward heights across the site; and
- Sowing margins with wild bird seed mix and native wildflowers.

1 INTRODUCTION

RPS was commissioned by Renewable Energy Systems LtdTD (RES) (the Applicant) to undertake an Ecological Survey for Birds at Magheralin.

This Ecological Survey for Birds (the Report) comprises an Appendix to an Ecological Impact Assessment (EclA), which in turn forms part of a planning application pack which seeks permission for the:

“Installation and operation of a 29.9MW solar farm including photovoltaic panels, mounting frames, transformer / inverter units, and on-site substation with associated ancillary development including security fencing, pole mounted CCTV, associated landscaping, internal access tracks, new site access, internal cabling and associated site works.” (The Proposed Development)

The landholding upon which the development is proposed measures c. 64.43 hectares / 159.23 acres.

For ease of reference the site is described as being made up of four land parcels which from north to south comprise:

- Parcel 1 – Lands accessing onto Springhill Road, immediately northwest of No.22 Springhill Road, Lurgan and immediately to the rear and northeast of 66, 68 and 70-90 Inn Road, Dollingstown (c. 9.3 ha);
- Parcel 2 – Lands c.300m southeast of 15 Springhill Road, Lurgan, c.240m northwest of 117 New Forge Road, Magheralin, Lurgan, and c.400m east of 64 Dromore Road, Lurgan (c.33.3ha);
- Parcel 3 – Lands c 80m northeast of 102 Dromore Road, Waringstown, and immediately adjacent to and west of 108 Dromore Road (c.9.4ha); and
- Parcel 4 – Lands c.660m southeast of 105 Dromore Road, Donaghcloney and extending south/southeast to c.80m north/northeast of 67 Drumlin Road, Craigavon and c.70m to the rear and southwest of 119 Dromore Road, Donaghcloney. (c. 11.5 ha).

Parcels 2 and 3 will be connected via underground cables which will pass through agricultural fields utilising existing agricultural lanes where available. The northernmost land-parcel (Parcel 1) will be connected via an interconnection cable across Springhill Road and intervening agricultural lands and the second interconnection route proceeds northwards from the southern-most land parcel (Parcel 4) across Drumlin Road and through intervening agricultural lands. It is proposed to traverse the River Lagan via horizontal directional drill before crossing Dromore Road to the north, and entering Parcel 3 of the site. The purpose of the interconnecting cables is to transfer energy created from inverter stations to the on-site substation which is located in the centre of the site (Parcel 3). The interconnection cable areas comprise 0.93ha.

Please refer to Box 1 below.



Box 1: The Application Site (Source: Google Earth)

1.1 Ecological Survey for Birds

The Ecological Survey Report has been written in accordance with the Chartered Institute of Ecological and Environmental Management (CIEEM) *Guidelines for Ecological Report Writing* (CIEEM 2017). The aim of the report is to provide a description of the bird survey methods used; to provide the detailed results of bird surveys; and to provide an interpretation of the results.

1.2 Legislation

Birds are protected under the Wildlife (Northern Ireland) Order 1985 (as amended). Under the Order, it is an offence:

- To intentionally or recklessly kill or injure any wild bird;
- To capture or keep (alive or dead) any wild bird;
- To destroy, damage or take the nest of any wild bird while it is in use or being built;
- To destroy or take the egg of any wild bird;
- To disturb any wild bird whilst it is building a nest or is in, or near a nest containing eggs or young;
- To sell or advertise for sale any wild bird (except for woodpigeon) or its eggs.

Certain species return to their nest sites year after year. In order to help their long-term breeding success, statutory protection is now provided against damage and destruction to their nests all year round.

In addition, more than 60 species of bird are given additional protection either because they have a history of persecution or because they are particularly rare (see Appendix 1). These birds are protected in exactly

the same way as other species from any form of intentional or reckless disturbance when they are nesting or rearing dependant young.

The conservation status of bird species in the Northern Ireland can be assigned in relation to a species inclusion on various schedules or annexes of Northern Irish or British legislation or on relevant conservation lists. However, for the purposes of reporting and considering their conservation status, a species is considered to be of "conservation concern" if it is included on one or more of the following:

- The Conservation (Natural Habitats, etc.) Regulations 1995 (Northern Ireland) (as amended).
- Schedule 1 of the Wildlife (NI) Order 1985 (as amended);
- Northern Ireland Priority Species;
- Birds of Conservation Concern in Ireland (BoCCI) red list (Gilbert *et al.*, 2021); and
- BoCCI amber list (Gilbert *et al.*, 2021).

2 METHODOLOGY

2.1 Statement of Authority

The ornithological surveyor, Dr. Kez Armstrong, is an Ecologist with RPS and has a PhD in Avian Ecology, a MSc in Animal Behaviour and over 9 years of experience in conservation and ornithology. Kez has extensive experience in breeding bird surveys, vantage point surveys, wetland bird surveys, winter bird surveys and nesting bird surveys. She is the County Down regional representative for the British Trust for Ornithology (BTO), the President of Copeland Bird Observatory (CBO), an active member of the Northern Ireland Raptor Study Group (NIRSG), a member of the scientific committee for CBO, a licensed BTO bird ringer for over 9 years and a member of the Chartered Institute of Ecology & Environmental Management (CIEEM).

The report has been approved for issue by James McCrory, Technical Director of Ecology with RPS. James holds a BA (Hons) in Natural Sciences (Mod) Botany and a MSc in Habitat Creation and Management. James is a Chartered Environmentalist (CEnv), a Chartered Ecologist (CEcol), a Chartered Biologist (CBiol) and a full member of CIEEM and the Royal Society of Biology (MRSB). He is a former member of the CIEEM Irish Section Committee and CIEEM Policy Review Group in Ireland. He was also a member of the CIEEM technical working group updating the Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland. He currently sits on the CIEEM technical working group for EclA accreditation across the Institutes practitioner network. The information prepared and provided is true and accurate at the time of issue of this report and has been prepared and provided in accordance with the CIEEM Code of Professional Conduct (CIEEM 2022). We confirm that the professional judgement expressed herein is the true and bona fide opinion of our professional ecologists.

2.2 Consultation

Consultation with CEDAR identified three historical records of bird within 1km of the proposed project which included Red Kite *Milvus milvus* and Tree sparrow *Passer montanus*. Accordingly the Phase 1 Habitat Survey was extended to include further information on the potential of the proposed project to support bird species. Overall, the site contains the sward structure to be a suitable habitat for breeding waders. The boundary hedgerows and trees within the area of the proposed project have potential to provide nesting and foraging habitat for a range of passerine bird species.

2.3 Breeding Bird Survey

In order to assess the use of the proposed development by breeding birds, a breeding bird survey was conducted on terrestrial habitats within the site (Fig. 1.0).

The methodology employed was a scaled down version of the British Trust for Ornithology's (BTO) Common Bird Census (CBC) methodology (Bibby *et al.*, 2000 & Gilbert *et al.*, 1998), which is an accepted consultancy approach which has emerged through experience, practice and engagement on similar projects with statutory authorities and NIEA, and which aims to capture breeding bird activity within the survey area.

Four visits were made during the breeding season, one per month April - July. The ornithologist slowly walked transects through the survey area, stopping at regular intervals to scan with binoculars and to listen

for calls or song. Transects chosen ensured the observer passed within at least 75m of all parts of the survey area.

Survey visits were made in the early morning to coincide with the peak period of bird activity and all species seen or heard in the survey area and immediate environs were recorded, including those in flight. Visits were made during favourable weather conditions.

All species encountered during survey were mapped and coded using standard BTO species codes (Appendix 2) and activity recorded using the BTO codes for breeding evidence (Appendix 3). To minimise potential disturbance and ensure no offence under the Wildlife (NI) Order 1985 (as amended) was caused, no attempts were made to locate nests as such behaviours are sufficient to determine probable or confirmed breeding.

3 RESULTS

3.1 Breeding Bird Survey

Four visits were made to each survey area during the breeding season April to July 2023 (see Table 3.1 below) in order to monitor for breeding birds.

Table 3.1: Weather Conditions during BBS

Date	Location	Start	Survey conditions			
			Cloud	Wind	Visibility	Precipitation
25.04.2023	Magheralin	06:30 hrs	0	N1	>16km	0
25.05.2023	Magheralin	05:00 hrs	0	NW2	>16km	0
16.06.2023	Magheralin	05:00 hrs	1	ENE2	>16km	0
17.07.2023	Magheralin	05:30 hrs	2	NNW1	>16km	0

A total of 43 species were recorded within the survey area or flying over the survey area during field survey for breeding birds across the 2023 season (see Table 3.2 below).

Twenty-nine species were noted as probable or confirmed breeding, including thirteen species of conservation concern, NI priority species or Wildlife Order (locations of which are available in the Appendix):

- Buzzard *Buteo buteo* – young on site
- Goldcrest *Regulus regulus* – young on site
- Greenfinch *Chloris chloris* – young on site
- Grey heron *Ardea cinerea* – juvenile present on site
- House martin *Delichon urbicum* – young on site
- House sparrow *Passer domesticus* – young on site
- Linnet *Linaria cannabina* – young on site
- Mallard *Anas platyrhynchos* – potential pairs present
- Song thrush *Turdus philomelos* – recently fledged young.
- Starling *Sturnus vulgaris* – young on site
- Swallow *Hirundo rustica* – young on site
- Tree sparrow *Passer montanus* – young on site
- Yellowhammer *Emberiza citrinella* – young on site

Table 3.2: Results of Breeding Bird Survey

Species	Visit 1 25-Apr-23	Visit 2 25-May-23	Visit 3 16-Jun-23	Visit 4 19-Jul-23	Highest breeding evidence recorded	Breeding status	Conservation status
Blackbird	26	30	24	47	Recently fledged young	Confirmed	Green
Black-headed gull	60	0	0	0	Summering non-breeder	Non-breeding	Amber (B/W), NI
Blackcap	2	2	1	0	Singing male	Possible	Green
Blue tit	8	4	4	9	Recently fledged young	Confirmed	Green
Buzzard	4	3	3	2	Recently fledged young	Confirmed	WO, Green
Chaffinch	23	28	46	33	Recently fledged young	Confirmed	Green
Chiffchaff	1	0	0	0	Singing male	Possible	Green
Coal tit	2	1	1	0	Singing male	Possible	Green
Collared dove	2	0	0	0	Pair present	Possible	Green
Dunlin	1	0	0	0	In suitable habitat	Possible	Red (B/W), NI
Dunnock	6	0	0	16	Recently fledged young	Confirmed	Green
Goldcrest	0	0	13	7	Recently fledged young	Confirmed	Amber (B)
Goldfinch	4	0	10	9	Recently fledged young	Confirmed	Green
Greenfinch	0	0	2	12	Recently fledged young	Confirmed	Amber (B)
Great tit	7	3	2	10	Recently fledged young	Confirmed	Green
Grey heron	0	0	0	1	Recently fledged young	Probable	WO, Green
Herring gull	237	2	0	0	Summering non-breeder	Non-breeding	Amber (B/W), NI
Hooded crow	11	0	2	1	Territory presumed	Possible	Green
House martin	2	2	5	27	Recently fledged young	Confirmed	Amber (B)
House sparrow	11	15	10	35	Recently fledged young	Confirmed	Amber (B), NI
Jackdaw	23	74	26	63	Recently fledged young	Confirmed	Green
Lesser black-backed gull	0	2	0	1	Flying over	Non-breeding	Amber (B/W), NI
Linnet	0	0	0	16	Recently fledged young	Confirmed	Amber (B), NI
Magpie	2	4	12	15	Recently fledged young	Confirmed	Green
Mallard	0	4	0	0	Pairs observed	Probable	Amber (B/W)
Mistle thrush	0	1	0	0	Singing male	Possible	Green, NI

REPORT

Species	Visit 1 25-Apr-23	Visit 2 25-May-23	Visit 3 16-Jun-23	Visit 4 19-Jul-23	Highest breeding evidence recorded	Breeding status	Conservation status
Oystercatcher	1	0	0	0	Flying over	Non-breeder	Red (B/W), NI
Pheasant	0	1	4	0	In suitable habitat	Possible	Green
Pied wagtail	1	4	3	0	Recently fledged young	Confirmed	Green
Reed bunting	0	0	0	6	Recently fledged young	Confirmed	Green
Robin	26	4	4	4	Recently fledged young	Confirmed	Green
Rook	226	225	10	16	Recently fledged young	Confirmed	Green
Sparrowhawk	0	0	0	1	In suitable habitat	Possible	WO, Green
Song thrush	6	5	12	4	Recently fledged young	Confirmed	Green, NI
Starling	11	511	16	0	Recently fledged young	Confirmed	Amber (B), NI
Swallow	0	3	7	15	Recently fledged young	Confirmed	Amber (B)
Swift	0	0	0	1	In suitable habitat	Possible	Red (B), NI
Treecreeper	1	0	0	0	In suitable habitat	Possible	Green
Tree sparrow	0	0	5	0	In suitable habitat	Probable	Amber (B), NI
Willow warbler	13	8	12	0	Recently fledged young	Confirmed	Green
Wood pigeon	19	21	39	43	Recently fledged young	Confirmed	Green
Wren	50	67	70	56	Recently fledged young	Confirmed	Green
Yellowhammer	0	3	8	22	Recently fledged young	Confirmed	Red (B), NI

Key to Table 3.2

Annex 1 – Listed on Annex 1 of The Conservation (Natural Habitats, etc) Regulations 1995 (Northern Ireland) (as amended)

WO – Listed on Schedule 1 of the Wildlife (NI) Order 1985 (as amended)

NI – Northern Ireland Priority Species

Red – Red listed BoCCI species

Amber – Amber listed BoCCI species

B – BoCCI listed due to breeding population

W – BoCCI listed due to wintering population

Bold – probable or confirmed breeding BoCCI

4 DISCUSSION & ANALYSIS OF RESULTS

The vast majority of the site is comprised of improved grasslands with several fields of arable land which currently support cereal crops. The arable areas support significant feeding opportunities for Greenfinch, Goldfinch and Sparrows during the breeding and winter seasons.

The mature trees and hedgerows within and surrounding the site provide nesting opportunities for species such as Yellowhammer, Buzzard, Starling and Tree sparrow, with buildings within and around the site supporting House marten, House sparrow and Swallow. The proposed development does not include demolition of surrounding buildings or removal of hedgerows, so much of the habitat that supports breeding will be retained.

4.1 Buzzard

A Wildlife Order (NI) species, the mature trees onsite are suitable for nesting Buzzard, with recently fledged young observed in the mature trees (Figure 2.0).

4.2 Goldcrest

An amber-listed species of conservation concern in Ireland, (Figure 3.0), habitat onsite is suitable for nesting Goldcrest and adult birds were observed in a number of locations across the survey area, with recently fledged young observed (Figure 2.0).

4.3 Greenfinch

An amber-listed species of conservation concern in Ireland, (Figure 3.0), habitat onsite is suitable for nesting Greenfinch and adult birds were observed in a number of locations across the survey area, with recently fledged young observed (Figure 2.0).

4.4 Grey heron

A Wildlife Order (NI) species, an individual recently fledged young was observed in the mature trees (Figure 2.0).

4.5 House martin

An amber-listed species of conservation concern in Ireland, the buildings within and surrounding the site are suitable for nesting House martin, with recently fledged young observed feeding across the site (Figure 3.0).

4.6 House sparrow

An amber-listed species of conservation concern in Ireland and a Northern Ireland priority species, the habitat within the site is suitable for nesting House sparrow, with recently fledged young observed feeding across the site (Figure 2.0).

4.7 Linnet

An amber-listed species of conservation concern in Ireland and a Northern Ireland priority species, (Figure 2.0) the habitat within the site is suitable for nesting House sparrow, with recently fledged young observed feeding across the site (Figure 2.0).

4.8 Mallard

An amber-listed species of conservation concern in Ireland, (Figure 3.0).

4.9 Song Thrush

A Northern Ireland Priority Species, habitat onsite is suitable for nesting Song Thrush and adult birds were observed in a number of locations across the survey area, with recently fledged young observed (Figure 2.0).

4.10 Starling

An amber-listed species of conservation concern in Ireland and a Northern Ireland Priority Species, the habitat is suitable for nesting Starlings and although no Starling nests were observed within the survey area, recently fledged birds in large flocks were recorded across the site (Figure 2.0).

4.11 Swallow

An amber-listed species of conservation concern in Ireland. No Swallow nests were observed within the survey area, although recently fledged birds were recorded feeding over improved fields across the site (Figure 3.0).

4.12 Tree sparrow

An amber-listed species of conservation concern in Ireland and a Northern Ireland priority species. Yellowhammer adults and young were regularly observed singing and foraging across the site (Figure 2.0).

4.13 Yellowhammer

A red-listed species of conservation concern in Ireland and a Northern Ireland priority species. Yellowhammer adults and young were regularly observed singing and foraging across the site (Figure 2.0).

4.14 Other species

A range of green-listed species were recorded breeding onsite. As set out in Section 1.2 above, under Northern Ireland legislation; all wild birds, their eggs, young and nests are protected from intentional or reckless disturbance or destruction.

5 RECOMMENDATIONS

The site supports Red and Amber listed BoCCI including Yellowhammer, Greenfinch and Tree sparrow (Gilbert *et al.* 2021). Therefore, the following mitigation and enhancement measures are recommended:

1. Pre-construction site clearance works and removal of vegetation including agricultural crops, grassland, trees, scrub, hedgerows and shrubs will take place outside the bird breeding season which extends between 1st March and 31st August inclusive to ensure breeding birds are protected from harm.
2. If pre-construction site clearance and removal of vegetation is deemed necessary within the bird breeding season an ECoW will undertake a survey to check for breeding birds immediately prior to works and confirm that breeding birds will be protected from harm during works.
3. Varied grass sward height between and beneath arrays should be maintained between 5-30cm to encourage ground nesting breeding bird species. Margins should be sown with wild bird seed mix and native wildflowers.

REFERENCES

Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S.H. (2000) *Bird Census Techniques*. 2nd Edition. Academic Press: London.

CIEEM (2017) *Guidelines for Ecological Report Writing*, Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2019) *Code of Professional Conduct*, Chartered Institute of Ecology and Environmental Management, Winchester.

Gilbert, G., Gibbons, D.W. & Evans, J. (1998) *Bird Monitoring Methods - a Manual of Techniques for Key UK Species*. RSPB: Sandy.

Gilbert G, Stanbury A and Lewis L (2021), Birds of Conservation Concern in Ireland 2020–2026. *Irish Birds* 43: 1–22

Figures



Legend

Site Boundary

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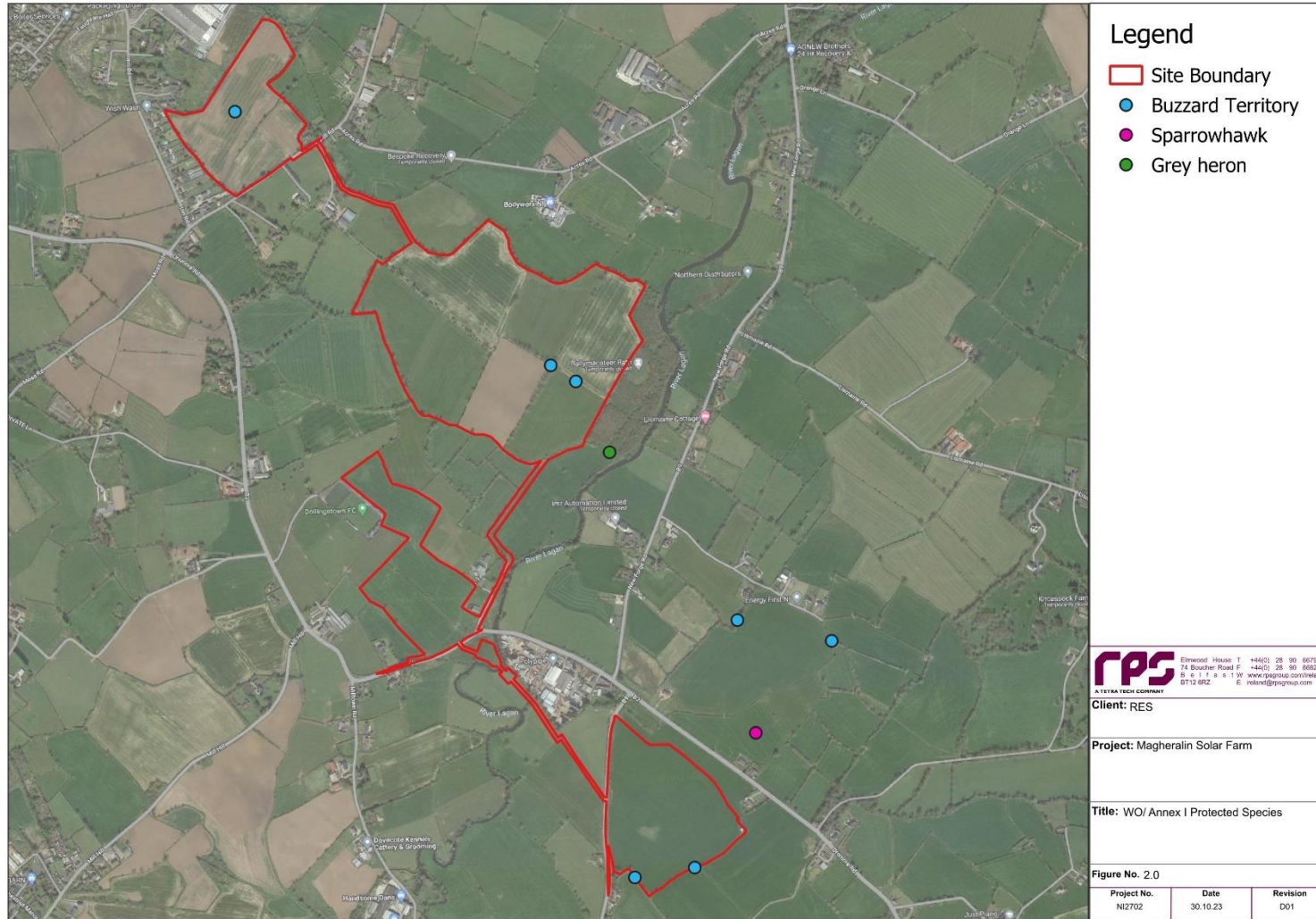
Client: RES

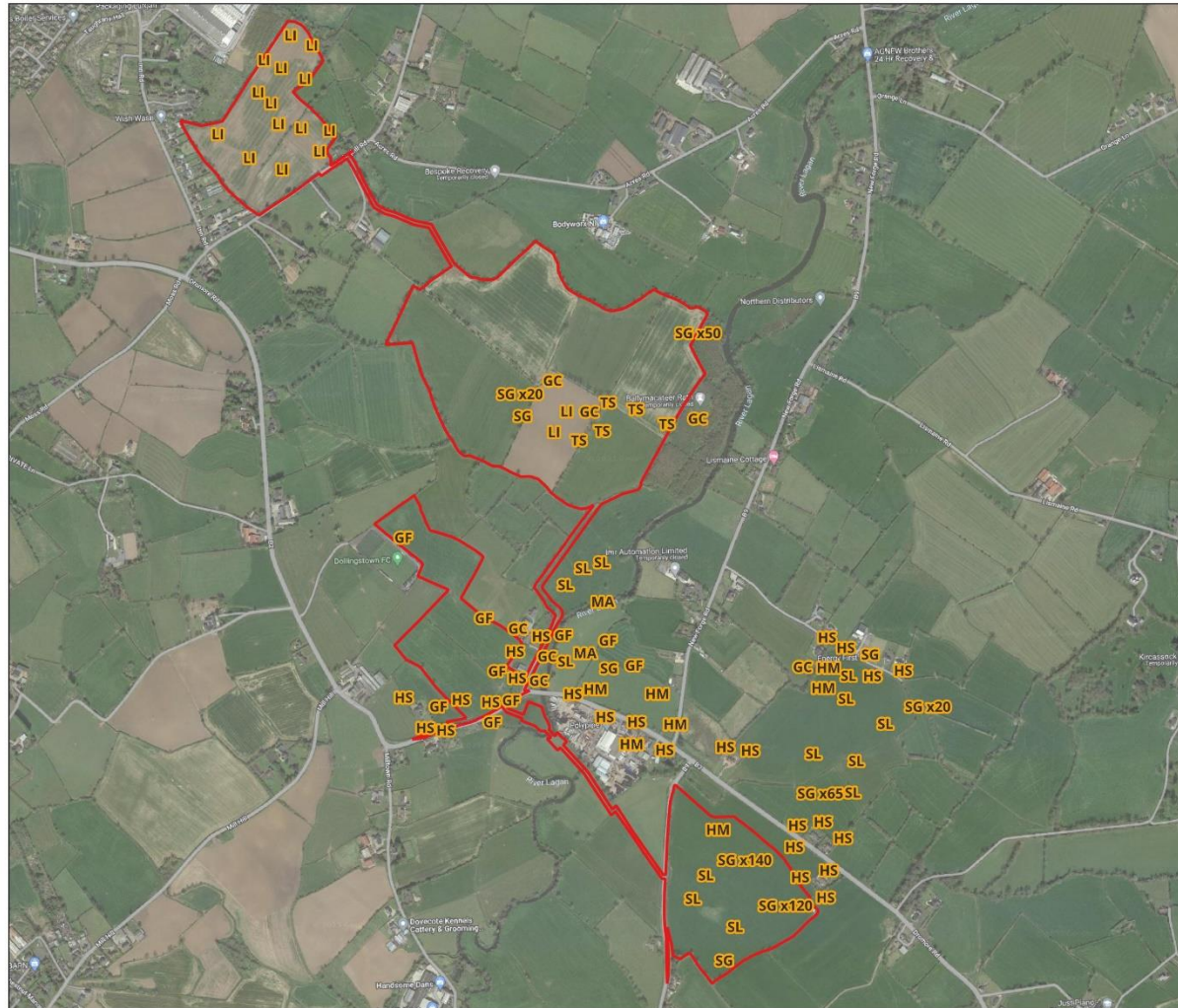
Project: Magheralin Solar Farm

Title: Site Location

Figure No. 1.0

Project No.	Date	Revision
NI2702	30.10.23	D01





Legend

Site Boundary

GC - Goldcrest

GF - Greenfinch

HM - House martin

HS - House sparrow

LI - Linnet

MA - Mallard

SG - Starling

SL - Swallow

TS - Tree sparrow

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Client: RES

Project: Magheralin Solar Farm

Title: BoCCI Amber Species

Figure No. 2.1

Project No.	Date	Revision
NI2702	30.10.23	D01




Legend

 Site Boundary

BH - Black-headed gull

HG - Herring gull

LB - Lesser black-backed gull



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Client: RES

Project: Magheralin Solar Farm

Title: BoCCI Amber Gulls

Figure No. 2.2

Project No.	Date	Revision
NI2702	30.10.23	D01



Legend


Site Boundary

DN - Dunlin

OC - Oystercatcher

SI - Swift

Y - Yellowhammer



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Client: RES

Project: Magheralin Solar Farm

Title: BoCCI Red Species

Figure No. 2.3

Project No.	Date	Revision
NI2702	30.10.23	D01

Appendices

DRAFT

Appendix 1 – Wildlife (NI) Order, 1985 (as amended) Schedule 1 Species (DAERA, 2016)

Schedule 1 Part 1 Birds which are protected by special penalties at all times		
Bittern	Stock Dove	Goosander
Corn bunting	Turtle Dove	Goshawk
Buzzard	Dunlin	Black-necked Grebe
Chough	Golden Eagle	Greenshank
Corncrake	White-tailed Eagle	Mediterranean Gull
Crossbill	Little Egret	Gyr Falcon
Cuckoo	Pied Flycatcher	Hen Harrier
Curlew	Spotted Flycatcher	Marsh Harrier
Red - throated Diver	Garganey	Sparrowhawk
Dotterel	Black - tailed Godwit	Heron
Hobby	Peregrine	Common Tern
Kestrel	Storm Petrel	Little Tern
Kingfisher	Pipit, Tree	Roseate Tern
Kite Red	Puffin	Sandwich Tern
Lapwing	Quail	Twite
Sand Martin	Redshank	Yellow Wagtail (all races)
Merlin	Redstart	Garden Warbler
Nightjar	Ruff	Reed Warbler
Osprey	Common Scoter	Wood Warbler
Ring Ousel	Manx Shearwater	Whimbrel
Barn owl	Tree Sparrow	Whinchat
Long-eared Owl	Bewick's Swan	Lesser Whitethroat
Short-eared Owl	Whopper Swan	Yellowhammer



Appendix 2 - BTO Species Codes

BTO SPECIES CODES

AC	Arctic Skua	GA	Gadwall	LE	Long-eared Owl	SM	Sand Martin
AE	Arctic Tern	GX	Gannet	LT	Long-tailed Tit	SS	Sanderling
AV	Avocet	GW	Garden Warbler	MG	Maggie	TE	Sandwich Tern
BO	Barn Owl	GY	Garganey	MA	Mallard	VI	Savi's Warbler
BY	Barnacle Goose	GC	Goldcrest	MN	Mandarin Duck	SQ	Scarlet Rosefinch
BA	Bar-tailed Godwit	EA	Golden Eagle	MX	Manx Shearwater	SP	Scaup
BR	Bearded Tit	OL	Golden Oriole	MR	Marsh Harrier	CY	Scottish Crossbill
BS	Berwick's Swan	GF	Golden Pheasant	MT	Marsh Tit	SW	Sedge Warbler
BI	Bittern	GP	Golden Plover	MW	Marsh Warbler	NS	Serin
BK	Black Grouse	GN	Goldeneye	MP	Meadow Pipit	SA	Shag
TY	Black Guillemot	GO	Goldfinch	MU	Mediterranean Gull	SU	Shelduck
BX	Black Redstart	GD	Goosander	ML	Merlin	SX	Shorelark
BJ	Black Tern	GI	Goshawk	M	Mistle Thrush	SE	Short-eared Owl
B.	Blackbird	GH	Grasshopper Warbler	MO	Montagu's Harrier	SV	Shoveler
BC	Blackcap	GB	Great Black-backed Gull	MH	Moorhen	SK	Siskin
BH	Black-headed Gull	GG	Great Crested Grebe	MS	Mute Swan	S.	Skylark
BN	Black-necked Grebe	ND	Great Northern Diver	N.	Nightingale	SZ	Slavonian Grebe
BW	Black-tailed Godwit	NX	Great Skua	NJ	Nightjar	SN	Snipe
BV	Black-throated Diver	GS	Great Spotted Woodpecker	NH	Nuthatch	SB	Snow Bunting
BT	Blue Tit	GT	Great Tit	OP	Osprey	ST	Song Thrush
BU	Bluethroat	GE	Green Sandpiper	OC	Oystercatcher	SH	Sparrowhawk
BL	Brambling	G.	Green Woodpecker	PX	Peafowl/Peacock	AK	Spotted Crake
BG	Brent Goose	GR	Greenfinch	PE	Peregrine	SF	Spotted Flycatcher
BF	Bullfinch	GK	Greenshank	PH	Pheasant	DR	Spotted Redshank
BZ	Buzzard	H.	Grey Heron	PF	Pied Flycatcher	SG	Starling
CG	Canada Goose	P.	Grey Partridge	PW	Pied Wagtail	SD	Stock Dove
CP	Capercaillie	GV	Grey Plover	PG	Pink-footed Goose	SC	Stonechat
C.	Carrion Crow	GL	Grey Wagtail	PT	Pintail	TN	Stone-curlew
CW	Cetti's Warbler	GJ	Greylag Goose	PO	Pochard	TM	Storm Petrel
CH	Chaffinch	GU	Guillemot	PM	Ptarmigan	SL	Swallow
CC	Chiffchaff	FW	Guineafowl (Helmeted)	PU	Puffin	SI	Swift
CF	Chough	HF	Hawfinch	PS	Purple Sandpiper	TO	Tawny Owl
CL	Cirl Bunting	HH	Hen Harrier	Q.	Quail	T.	Teal
CT	Coal Tit	HG	Herring Gull	RN	Raven	TK	Temminck's Stint
CD	Collared Dove	HY	Hobby	RA	Razorbill	TP	Tree Pipit
CM	Common Gull	HZ	Honey Buzzard	RG	Red Grouse	TS	Tree Sparrow
CS	Common Sandpiper	HC	Hooded Crow	KT	Red Kite	TC	Treecreeper
CX	Common Scoter	HP	Hoopoe	ED	Red-backed Shrike	TU	Tufted Duck
CN	Common Tern	HM	House Martin	RM	Red-breasted Merganser	TT	Turnstone
CO	Coot	HS	House Sparrow	RQ	Red-crested Pochard	TD	Turtle Dove
CA	Cormorant	JD	Jackdaw	FV	Red-footed Falcon	TW	Twite
CB	Corn Bunting	J.	Jay	RL	Red-legged Partridge	WA	Water Rail
CE	Corncrake	K.	Kestrel	NK	Red-necked Phalarope	W.	Wheatear
CI	Crested Tit	KF	Kingfisher	LR	Redpoll (Lesser)	WM	Whimbrel
CR	Crossbill (Common)	KI	Kittiwake	RK	Redshank	WC	Whinchat
CK	Cuckoo	KN	Knot	RT	Redstart	WG	White-fronted Goose
CU	Curlw	LM	Lady Amherst's Pheasant	RH	Red-throated Diver	WH	Whitethroat
DW	Dartford Warbler	LA	Lapland Bunting	RE	Redwing	WS	Whooper Swan
DI	Dipper	L.	Lapwing	RB	Reed Bunting	WN	Wigeon
DO	Dotterel	TL	Leach's Petrel	RW	Reed Warbler	WT	Willow Tit
DN	Dunlin	LB	Lesser Black-backed Gull	RZ	Ring Ouzel	WW	Willow Warbler
D.	Duncock	LS	Lesser Spotted Woodpecker	RP	Ringed Plover	OD	Wood Sandpiper
EG	Egyptian Goose	LW	Lesser Whitethroat	RI	Ring-necked Parakeet	WO	Wood Warbler
E.	Eider	LI	Linnet	R.	Robin	WK	Woodcock
FP	Feral Pigeon	ET	Little Egret	DV	Rock Dove (not feral)	WL	Woodlark
ZL	Feral/hybrid goose	LG	Little Grebe	RC	Rock Pipit	WP	Woodpigeon
ZF	Feral/hybrid mallard type	LU	Little Gull	RO	Rook	WR	Wren
FF	Fieldfare	LO	Little Owl	RS	Roseate Tern	WY	Wryneck
FC	Firecrest	LP	Little Ringed Plover	RY	Ruddy Duck	YW	Yellow Wagtail
F.	Fulmar	AF	Little Tern	RU	Ruff	Y.	Yellowhammer

Appendix 3 - BTO Breeding Status Codes

Breeding Status Codes

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