



## **BREEDING BIRD & BLACK GROUSE LEK LOCATION SURVEYS**

**PROPOSED UNDERGROUND CABLE**

---

**LOCH NA CATHRACH PUMPED HYDRO STORAGE SCHEME 275 KV  
GRID CONNECTION**

**INVERNESS**

---

**28.02.2025**

**VERSION 2**

---

# PREFACE

---

This document is a report for ecological services to be carried out by the company.

Direct Ecology Limited  
Unit 1, Block 2  
Duckburn Industrial Estate  
Dunblane  
FK15 0EW

Tel: +44 (0) 1786 826865  
Mob: +44 (0) 7803 587734

info@directecology.co.uk  
[www.directecology.co.uk](http://www.directecology.co.uk)

Company Number: SC343106

The Direct Ecology logo is a trademark of Direct Ecology Limited. All other trademarks and registered trademarks are the property of their respective owners.

Copyright © Direct Ecology Limited, 2022. All rights reserved.

## REVISION AND SIGN OFF

---

DATE	AUTHORS	CHECKED BY	SIGNED OFF	VERSION	COMMENTS
26.09.2022	Cróna McMonagle Sarah Moore	n/a	Beccy Osborn	1	Issued for client review
28.02.2025	Cróna McMonagle Sarah Moore	n/a	Beccy Osborn	2	Issued for client review

## EXECUTIVE SUMMARY

---

This report presents the results of a survey for breeding birds undertaken along the length of the LT325 Loch na Cathrach Pumped Hydro Storage Scheme 275 kV Grid Connection, where approximately 9km of 275kV underground cable is proposed between Loch na Cathrach 275kV Switching Station and the existing Knocknagael 275kV Substation.

The breeding bird assemblage reflects the local landscape, with species associated with mixed farmland, moorland, and conifer forestry present.

Most of these species have a wide distribution in the UK but a number have undergone a severe contraction in numbers and/or range and are subsequently listed as being of conservation concern, listed as priority species for biodiversity conservation in the Highlands or in Scotland and two legally protected species (crossbill and red kite) are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

The site is considered to host a newly established black grouse lek, supporting two male birds.

Key recommendations made in the report include:

- Works should be undertaken outwith the bird breeding season. If this is not possible, then habitats should be checked for nesting birds immediately prior to works commencing. If birds are found to be nesting, any works which may affect them should be delayed until the young have fledged, and the nest has been abandoned naturally.
- Additional specific survey may need to be undertaken prior to construction to identify any red kite nest sites and roost sites, and to confirm the location of curlew nest sites, within potential disturbance distance of the works, and to identify any changes to the location of lekking black grouse.
- Works should only proceed at a safe operating distance from lekking, roosting or nesting birds. The recommended buffer distance is dependent on the species, time of year, time of day and topography, and recommendations are based on recently published guidance.

# CONTENTS

---

1	PROJECT INFORMATION .....	6
1.1	SCOPE .....	6
1.2	SITE LOCATION AND DESCRIPTION .....	6
1.3	RELEVANT LEGAL FRAMEWORK AND POLICY .....	6
2	METHODOLOGY .....	7
2.1	DESK STUDY .....	7
2.2	BREEDING BIRD SURVEY .....	7
2.3	SURVEY PERSONNEL .....	8
2.4	SURVEY LIMITATIONS.....	8
3	RESULTS .....	9
3.1	CURRENT BASELINE .....	9
4	BASELINE ASSESSMENT AND RECOMMENDATIONS .....	21
5	BIBLIOGRAPHY AND REFERENCES.....	24
	APPENDIX 1 – RELEVANT LEGISLATION .....	25
	APPENDIX 2 – MAPS.....	26

# 1 PROJECT INFORMATION

---

## 1.1 SCOPE

This report presents the results of a survey for breeding birds, including specifically black grouse, undertaken to inform substation and routing selection as well as the Environmental Appraisal for the LT325 Loch na Cathrach Pumped Hydro Storage Scheme 275 kV Grid Connection between Loch na Cathrach 275kV Switching Station and the existing Knocknagael 275kV Substation (by approximately 9km of 275kV underground cable).

Desk study for existing bird records for the site was carried out by ERM with the results provided to DEL on 14.06.2022.

Survey work for the site included:

- Walkover survey for breeding birds
- Black grouse lek location survey

## 1.2 SITE LOCATION AND DESCRIPTION

The site is located near Dores, Highlands approximately 14 km south-west of Inverness (Figure 1, Appendix 2). Generic walkover survey for breeding birds extended 500 m beyond the proposed route of the underground cable. Survey for black grouse lek locations extended to 750 m beyond the proposed route.

## 1.3 RELEVANT LEGAL FRAMEWORK AND POLICY

This assessment has taken into account relevant legislation, guidance and policy including:

- EC Birds Directive (Directive 2009/147/EC)
- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)
- The Conservation (Natural Habitats, &c) Amendment Scotland Regulations 2007
- Wildlife and Countryside Act 1981 (as amended)
- Nature Conservation Scotland Act 2004 (as amended)
- The Wildlife and Natural Environment (Scotland) Act 2011
- Highland Nature Biodiversity Action Plan 2021 – 2026

Further details where relevant are provided in Appendix 1.

## 2 METHODOLOGY

---

### 2.1 DESK STUDY

Data for the site were supplied to ERM by the Royal Society for the Protection of Birds and are not reproduced here.

ERM made known the location of traditional osprey and red kite nesting locations in the local area. Both these locations were beyond the survey area and were not visited during the current survey.

### 2.2 BREEDING BIRD SURVEY

Survey was carried out to identify the breeding bird community of the site.

Three survey visits were carried out during the breeding season; three general survey visits and a specific black grouse lek location survey (Table 1).

#### General survey

The general survey involved a walkover method. The route covered all the habitats on site and paid particular attention to features/habitats which may be of potential ornithological importance, e.g. water bodies, woods, crags. Periodic scanning for birds and stops to listen for calls and songs were incorporated into the walk, and specifically field signs of black grouse activity, such as feathers and droppings, were searched for within appropriate habitats. The identity and activity of all birds encountered was mapped following standard BTO notation<sup>1</sup>. Three walkover survey visits were carried out during the breeding season and in weather conditions suitable for bird recording (avoiding heavy rain, strong winds, and poor visibility).

On completion of the three survey visits, field data was interpreted using BTO breeding evidence criteria<sup>2</sup> in order to assign birds into one of three categories of breeding status: confirmed, probable and possible. Breeding skylark and meadow pipit populations were defined by the highest recorded count of singing or calling birds from the three survey visits (BTO, 1997). The number and location of likely bird territories was estimated by grouping species registrations from different survey visits to produce a breeding bird territory map.

Birds flying over the site, species suspected to be on migration, or suspected to be summering non-breeders, were categorised as non-breeding<sup>2</sup>.

#### Black grouse lek location survey

Lekking black grouse may not be detected by the general survey method and therefore an additional species-specific survey was carried out to locate black grouse leks. The survey targeted suitable lek habitat scoped during earlier survey visits (Figure 5). The survey was carried out at dawn from vantage positions overlooking this area, following survey guidance in Gilbert *et al.* (1998)<sup>3</sup>.

---

<sup>1</sup> BTO Species Codes. Available at:

[https://www.bto.org/sites/default/files/u16/downloads/forms\\_instructions/bto\\_bird\\_species\\_codes.pdf](https://www.bto.org/sites/default/files/u16/downloads/forms_instructions/bto_bird_species_codes.pdf)

<sup>2</sup> BTO webpages on breeding evidence. Available at: <https://www.bto.org/our-science/projects/birdatlas/methods/breeding-evidence>

<sup>3</sup> *Bird Monitoring Methods: A Manual of Techniques for Key UK Species*, published by the RSPB, is a reference text for bird survey and monitoring techniques, and is part of CIEEM's Good Practice for birds.

## 2.3 SURVEY PERSONNEL

All survey work and reporting was overseen by Beccy Osborn, Principal Ecologist and Company Director. She is an experienced Ecologist and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) with over 20 years' ecological consultancy experience. She holds various protected species licences including a NatureScot bat licence and badger development licence.

Table 2: Survey details

Date	Surveyor	Survey Type	Start / Finish	Weather
25.04.2022- 26.04.2022	Gemma Grossart Cróna McMonagle	BBS Visit 1 & Black Grouse Lek Location Survey	13.00-17.00; 05.00-11.00	Temp=9/6; WS=2/2; CC=8/8; Rain=1/0.
13.06.2022- 14.06.2022	Gemma Grossart Cróna McMonagle	BBS Visit 2	13.30-16.45; 09.15-12.15	Temp=14/13; WS=2/2; CC=8/8; Rain=0/0
07.07.2022- 08.07.2022	Gemma Grossart Sarah Moore	BBS Visit 3	08.40-11.35	Temp=16/19; WS=3/4; CC=5/6; Rain=0/0
Key: Temp = Temperature (°C); WS = Wind speed - 0 (calm) 12 (hurricane); CC = Cloud cover (in eighths); Rain = 0-4 (0 = dry)				

## 2.4 SURVEY LIMITATIONS

The presence of livestock prevented surveyor access to some of the site on each of the survey visits, and some areas of pasture were not able to be visited at all. Additionally, access was prohibited by landowners to particular areas of farmland within the site. This is not considered to be a significant limitation to the bird survey, given the habitats present and that birds may be surveyed at a distance by their song, call and flight activity. It is considered that sufficient information was collected during the three-visit survey carried out over the breeding season to adequately describe the breeding bird community of the site.



### 3 RESULTS

---

The distribution of breeding birds encountered during the breeding bird survey is presented in the breeding bird territory map (Figure 2, Appendix 2).

Table 3 provides a summary of the species' presence, distribution, and likely breeding status within the survey area; their legal protection in the UK (listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)<sup>4</sup> (WCA)); if they are a species of principal importance for the conservation of biodiversity in Scotland (that is, included on the Scottish Biodiversity List<sup>5</sup> (SBL)); a local Biodiversity Action Plan<sup>6</sup> (LBAP) priority species; or a species of conservation concern in the UK (that is, red- or amber-listed on the most recent version of Birds of Conservation Concern<sup>7</sup> (BoCC)).

The breeding bird assemblage of the site includes forty nine species: forty three species are considered to probably breed at the site, with a further six species considered to use the site regularly for other essential activities (such as feeding) whilst nesting outside the site.

With respect to legal protection and conservation status, the breeding bird assemblage of the site includes:

- two legally protected species (crossbill and red kite) listed on Schedule 1 of the WCA
- red kite is additionally listed on Schedule 1A of the WCA
- fourteen priority species listed on the SBL (black grouse, bullfinch, curlew, house sparrow, lesser redpoll, linnet, reed bunting, red kite, siskin, skylark, song thrush, swift, tree pipit and yellowhammer)
- four priority species listed on the LBAP (black grouse, curlew, red kite and swift)
- eleven red-listed species on BoCC (black grouse, curlew, greenfinch, house sparrow, lesser redpoll, linnet, meadow thrush, skylark, swift, tree pipit and yellowhammer)
- twelve amber-listed species on BoCC (bullfinch, common gull, dunnoek, mallard, meadow pipit, reed bunting, snipe, song thrush, tawny owl, whitethroat, willow warbler and wood pigeon)

#### 3.1 CURRENT BASELINE

The breeding bird assemblage reflects the local landscape, with species associated with mixed farmland, moorland, and conifer forestry present.

---

<sup>4</sup> All wild birds in Great Britain are protected under the Wildlife and Countryside Act 1981 (as amended) . For any wild bird species, it is an offence to intentionally or recklessly: kill, injure or take a bird; take, damage, destroy or interfere with a nest of any bird while it is in use or being built; obstruct or prevent any bird from using its nest; or take or destroy an egg of any bird. Due to their rarity, vulnerability or sensitivity to disturbance, birds listed on Schedule 1 of the Act are afforded even greater protection. This includes an offence of intentionally or recklessly disturbing Schedule 1 species whilst they are building a nest or are in, on or near a nest containing eggs or young, or intentionally or recklessly disturbing the dependent young of such a bird. Birds listed on Schedule 1A receive additional protection which makes it an offence to intentionally or recklessly at any time harass any wild bird included in Schedule 1A.

<sup>5</sup> The Scottish Biodiversity List is a list of species and habitats of particular importance for the conservation of biodiversity in Scotland. As part of their Biodiversity Duty, public bodies in Scotland are required to further the conservation of biodiversity and in particular to consider those species on the Scottish Biodiversity List.

<sup>6</sup> The site falls within the Highland Local Biodiversity Plan (LBAP) area. An LBAP translates national biodiversity targets for species and habitats into effective action at the local level.

<sup>7</sup> Birds of Conservation Concern (Salis a review of the status of breeding, passage, and wintering populations of birds in the UK, where species are assigned to the red, amber or green lists of conservation concern, based mainly on survey results of the British Trust for Ornithology (BTO)/Joint Nature Conservation Committee (JNCC) Common Birds Census (CBC) and BTO/JNCC/Royal Society for the Protection of Birds (RSPB) Breeding Bird Survey (BBS). A number of breeding populations of birds in the UK are listed as red or amber, based on decline in population; decline in range; rarity; localised population; being of international importance.

Most of these species have a wide distribution in the UK but a number have undergone a severe contraction in numbers and/or range and are subsequently listed as being of conservation concern.

### **3.1.1 FARMLAND**

Arable and pastoral land, field margins, hedgerows, and mature single trees within the northern half of the site provide foraging and nesting sites for breeding populations of lowland farmland species including common gull, goldfinch, pied wagtail, and yellowhammer.

Yellowhammer is red-listed for the severe decline in its UK breeding population and moderate decline in its UK breeding range, and is listed as a priority species on the SBL. Common gull is amber-listed for the international importance of its UK wintering population.

### **3.1.2 WOODLAND**

Woodlands within the survey area support a typical breeding bird assemblage comprising of resident passerine species blackbird, blue tit, bullfinch, carrion crow, chaffinch, coal tit, crossbill, dunnock, goldcrest, great-spotted woodpecker, great tit, greenfinch, jackdaw, jay, lesser redpoll, long-tailed tit, magpie, mistle thrush, robin, siskin, song thrush, treecreeper, wood pigeon and wren; and migrant passerine species chiffchaff, tree pipit, whitethroat, and willow warbler.

Crossbill is listed on Schedule 1 of the WCA; bullfinch, lesser redpoll, siskin, song thrush, and tree pipit are all priority species listed on the SBL; greenfinch, lesser redpoll, mistle thrush, and tree pipit are all red-listed for the severe declines in their UK breeding populations; bullfinch, dunnock, song thrush, whitethroat, and willow warbler are amber-listed for their moderate breeding population declines, and wood pigeon is amber-listed for the significance of its UK population in a European context.

A couple of species of raptor and an owl species are associated with the local woodlands. Woodland south of Drumashie Farm in the north of the site supports a breeding territory of buzzard, and further north the block of woodland south of Achvraid supports a tawny owl breeding territory. Red kite is active on the site with regular hunting observed; red kite is a wide ranging species with a core foraging range from its nest site of 4 km (NatureScot, 2016) and the records made are considered to represent a bird from a breeding territory beyond the site boundary, hunting in woodland and open country within its home range. Red kite is listed on Schedule 1A of the WCA and is a priority species listed on both the SBL and LBAP.

### **3.1.3 MOORLAND**

Moorland habitats on site, with scrub and occasional trees, support nesting and foraging curlew, meadow pipit, red grouse, reed bunting, skylark, snipe and stonechat. Curlew and skylark are priority species listed on the SBL, with curlew additionally on the LBAP, and both red-listed for the severe decline in their UK breeding populations. Curlew in particular has seen some of the highest UK population declines of widespread birds in recent decades. Meadow pipit, reed bunting and snipe are amber-listed, meadow pipit and reed bunting for the moderate decline in their UK breeding populations and snipe for the moderate decline in its UK breeding range, reed bunting is also listed as a priority species on the SBL.

The site also supports two lekking black grouse on its eastern boundary, between General Wade's Military Road and Loch Ashie (Figure 3, Appendix 2). Black grouse is a priority species on both the SBL and LBAP, and red-listed for the severe decline in its UK breeding population and moderate decline in its UK breeding range.

### **3.1.4 STANDING FRESHWATER**

The site includes several small waterbodies: mallard is considered to be breeding on one of the waterbodies in the north of the site – this is the same waterbody beside which common gull are breeding.

### **3.1.5 BUILDINGS**

A breeding colony of house sparrow was recorded in buildings to the south of Essich Farm in the north of the site: house sparrow is a priority species on the SBL, and red-listed for the severe decline in its UK breeding population. The site is considered to support other buildings species swallow and swift, by providing foraging habitat to locally breeding birds. Swift is a priority species on both the SBL and LBAP, and red-listed for the severe decline in its UK breeding population.

Table 3: Bird species recorded during the survey for breeding birds (species considered part of the breeding bird assemblage of the site in bold)

Species	BTO Code	No. <b>confirmed/ probable</b> territories on site	Recorded on survey:			Notes	Legal protection / conservation Status
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
<b>Blackbird</b> <b>Turdus merula</b>	B.	4	✓	✓	✓	Four probable and five possible territories were recorded, the majority in the farmland in the north of the site.	Green
<b>Black grouse</b> <b>Tetrao tetrix</b>	BK	1	✓			Two lekking males were recorded near the south eastern boundary of the site, between General Wade's Military Road and Loch Ashie. The north of the site provides good foraging and breeding habitat for black grouse within the mix of habitats pine woodland and moorland with scattered trees. Farmland habitats in the north of the site are not suitable for this species.	SBL, LBAP, Red
<b>Blue tit</b> <b>Cyanistes caeruleus</b>	BT	0	✓	✓		Five possible territories were recorded. Woodland in the southern section of the site provides suitable breeding habitat for this species and it is considered part of the breeding bird assemblage of the site.	Green
<b>Bullfinch</b> <b>Pyrrhula pyrrula</b>	BF	2			✓	One confirmed and one probable territory were noted within scrub habitat on site.	SBL, Amber
<b>Buzzard</b> <b>Buteo buteo</b>	BZ	1	✓	✓		Buzzard were regularly observed in flight over the survey area and one probably breeding pair were recorded in woodland south of Drumashie Farm.	Green
<b>Carrion crow</b> <b>Corvus corone</b>	C.	2	✓	✓	✓	Two confirmed territories were noted in the north of the survey area with young fledglings observed. The woodland habitats throughout the site provide good breeding habitat. However, most of the records of this species were in flight over the survey area.	Green
<b>Chaffinch</b> <b>Fringilla coelebs</b>	CH	25	✓	✓	✓	This species was regularly observed within woodlands throughout the survey area with one confirmed, 23 probable and 14 possible territories recorded.	Green

Species	BTO Code	No. <u>confirmed/</u> <u>probable</u> territories on site	Recorded on survey:			Notes	Legal protection / conservation Status
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
<b>Chiffchaff</b> <b>Phylloscopus collybita</b>	CC	5	✓	✓	✓	This species was recorded on every visit with five probable and five possible territories noted, the majority within woodland and scrub habitats in the south of the site.	Green
<b>Coal tit</b> <b>Periparus ater</b>	CT	13	✓	✓	✓	The conifer forestry on site provides suitable breeding and foraging habitat for this species with thirteen probable and twenty two possible territories noted.	Green
<b>Common gull</b> <b>Larus canus</b>	CM	1		✓	✓	One confirmed territory was noted on a small pond in the north east of the site. Breeding was successful with one fledgling noted on the final visit.	Amber
Coot <i>Fulica atra</i>	CO	0		✓		One male bird was recorded on a small waterbody in the north of the site during the second survey visit; the species was not recorded again and is not considered to be breeding on the site.	Green
<b>Crossbill</b> <b>Loxia curvirostra</b>	CR	0	✓			Two possible territories were noted within the southern section of the site. This species breeds early in the year and therefore populations may be underestimated on the site. The conifer forestry and scattered trees over the moorland provide suitable breeding and foraging habitat for this species and it is considered part of the breeding bird assemblage.	Sch 1, Green
Cuckoo <i>Cuculus canorus</i>	CK	0	✓			Cuckoo was only noted on site during the first survey visit. The species was not recorded on subsequent visits and is not considered part of the breeding bird assemblage of the site.	SBL, Red
<b>Curlew</b> <b>Numenius Arquata</b>	CU	2	✓	✓	✓	Two territories were noted on moorland habitats within the site – at Drumashie, and near the electricity distribution site in the north of the survey area. Breeding behaviour recorded included agitation and alarming pairs – nest sites not located during survey and considered to be off site, with the site providing feeding areas for breeding birds.	SBL, LBAP, Red
<b>Dunnock</b> <b>Prunella modularis</b>	D.	0	✓	✓	✓	Dunnock was recorded regularly and throughout the site with eleven possible territories noted. The scrub habitats provide suitable breeding and foraging habitat for this species and it is considered part of the breeding bird assemblage of the site.	Amber

Species	BTO Code	No. <u>confirmed/ probable</u> territories on site	Recorded on survey:			Notes	Legal protection / conservation Status
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
<b>Goldcrest</b> <b>Regulus regulus</b>	GC	7	✓	✓	✓	The conifer woodland on site provides suitable foraging habitat for this species. Seven probable and 19 possible territories were noted.	Green
<b>Goldfinch</b> <b>Carduelis carduelis</b>	GO	1		✓	✓	This species was most commonly noted in flight over the arable habitat in the north of the site. Small areas of suitable breeding shrubby habitat are distributed throughout the site. One probable and two possible territories were noted.	Green
<b>Greater spotted woodpecker</b> <b>Dendrocopos major</b>	GS	1	✓	✓		One probable and one possible territory were noted in the southern section of the site: a male was heard drumming near the southern boundary and a pair were observed along the edge of the woodland here.	Green
<b>Great tit</b> <b>Parus major</b>	GT	4	✓	✓	✓	One confirmed, three probable and three possible territories were noted in the woodlands on site.	Green
<b>Greenfinch</b> <b>Carduelis chloris</b>	GR	1		✓	✓	One probable and three possible territories noted, mostly in woodland in the northern section of the site.	Red
Greylag goose Anser anser	GJ	0	✓			This species was noted in the flight over the site on the first survey visit. There is some suitable breeding habitat for this species on the open moorland but it is more likely to breed closer to Loch Ashie. Not considered part of the breeding bird assemblage of the site.	Amber
Herring gull Larus argentatus	HG	0	✓			Herring gull was recorded flying over the site only. Not considered part of the breeding bird assemblage of the site.	SBL, Red

Species	BTO Code	No. <u>confirmed/ probable</u> territories on site	Recorded on survey:			Notes	Legal protection / conservation Status
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
Hooded crow Corvus cornix	HC	0		✓	✓	Hooded crow was recorded flying over the site only. Not considered part of the breeding bird assemblage of the site.	Green
House sparrow Passer domesticus	HS	1		✓	✓	One confirmed breeding colony was noted in a building along the northern boundary of the site.	SBL, Red
Jackdaw Corvus monedula	JD	0		✓	✓	This species was regularly recorded around farmland in the north of the site, feeding in fields. Jackdaw are cavity breeders and may use buildings or trees for nest sites and it is considered that the site provides foraging for birds breeding locally. This species is therefore considered part of the breeding bird assemblage of the site.	Green
Kestrel Falco tinnunculus	K.	0			✓	Kestrel was recorded hunting over the site on the final survey visit. Behaviour to indicate breeding was not noted during the survey and it is considered unlikely that this species is nesting on site despite the woodlands providing suitable breeding habitat. The mixed farmland and moorland on site provide suitable hunting habitat for birds breeding locally but it is not considered part of the breeding bird assemblage because of the lack of evidence that the site is a preferred area for hunting.	SBL, Amber
Jay Garrulus glandarius	J.	0	✓			Jay was only recorded on the first survey visit with a couple of birds recorded in woodland habitat considered suitable for breeding in the east of the site. Jay is a relatively secretive species and therefore although confirmation of breeding was not obtained during survey, the species is considered possibly to be part of the breeding bird assemblage of the site.	Green
Lesser black-backed gull Larus fuscus	LB	0		✓	✓	Lesser black-backed gull was recorded flying over the site only. Not considered part of the breeding bird assemblage of the site.	Amber
Lesser redpoll Carduelis cabaret	LR	3	✓	✓	✓	Lesser redpoll were commonly recorded with three probable and seven possible territories noted. The pine woodland provides suitable habitat and they were also frequently recorded within the scattered trees along Drumashie Moor.	SBL, Red

Species	BTO Code	No. <u>confirmed/ probable</u> territories on site	Recorded on survey:			Notes	Legal protection / conservation Status
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
<b>Linnet</b> <b>Linaria cannabina</b>	LI	2	✓	✓	✓	Two probable and six possible territories were noted in the site. This species favours open habitats and will breed within sections of scrub which is plentiful throughout the site.	SBL, Red
<b>Long-tailed tit</b> <b>Aegithalos caudatus</b>	LT	0	✓			Two possible territories recorded in the south of the site where the scrub habitat with scattered young birch trees provides suitable breeding habitat. Considered part of the breeding bird assemblage of the site.	Green
<b>Magpie</b> <b>Pica pica</b>	MG	0		✓	✓	Up to three individuals were recorded on site over two of the survey visits; nests are obvious and were not observed but the site may provide feeding opportunities for birds nesting locally in the mixed farmland habitat. Considered part of the breeding bird assemblage of the site.	Green
<b>Mallard</b> <b>Anas platyrhynchos</b>	MA	1	✓	✓	✓	Mallards were recorded on every survey visit and one probable and one possible territory were noted. A pair was noted in the wetter northern area of Drumashie Moor, and there is also a suitable breeding pond located on farmland towards the northern end of the site.	Amber
<b>Meadow pipit*</b> <b>Anthus pratensis</b>	MP	21	✓	✓	✓	Good breeding habitat present especially in the moorland areas of the site. Twenty-one probable territories were recorded, and were largely concentrated around Drumashie Moor.	Amber
<b>Mistle thrush</b> <b>Turdus viscivorus</b>	M.	1	✓	✓	✓	One probable and two possible territories were noted within woodlands adjacent to moorland on site.	Red
Osprey Pandion haliaetus	OS	0			✓	Recorded flying over the southern half of site with food in talons, suggesting it is nesting nearby. The site lacks large waterbodies which are favoured by breeding osprey, however the nearby Loch Ashie provides good foraging opportunities. Not site is not considered to support nesting or foraging birds and this species is therefore not considered part of the breeding bird assemblage of the site.	Sch 1, SBL, Amber



Species	BTO Code	No. <u>confirmed/ probable</u> territories on site	Recorded on survey:			Notes	Legal protection / conservation Status
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
Oystercatcher <i>Haematopus ostralegus</i>	OC	0			✓	This species was noted in flight over the survey area and no breeding behaviours were recorded on site. They may use the farmland areas within the site for foraging. Not considered part of the breeding bird assemblage of the site.	LBAP, Amber
<b>Pheasant</b> <i>Phasianus colchicus</i>	PH	1	✓	✓	✓	Pheasant was noted on every survey visit with one probable and one possible territories recorded.	Introduced
<b>Pied wagtail</b> <i>Motacilla alba</i>	PW	1	✓	✓	✓	One probable and two possible territories recorded in farmland in the north of the site.	Green
Raven <i>Corvus corax</i>	RN	0		✓		Raven was recorded flying over the site only. Not considered part of the breeding bird assemblage of the site.	Green
<b>Red grouse</b> <i>Lagopus lagopus</i>	RG	1		✓	✓	One probable territory recorded on Drumashie Moor.	Green
<b>Reed bunting</b> <i>Emberiza schoeniclus</i>	RB	0			✓	Three individuals recorded singing in suitable breeding habitat along the eastern boundary of the site, on the third survey visit only. However, reed bunting can be double-brooded and these records may represent birds on their second brood: this species is therefore considered part of the breeding bird assemblage of the site.	SBL, Amber
<b>Red kite</b> <i>Milvus milvus</i>	KT	0		✓	✓	The site is considered to provide regular foraging habitat for locally breeding birds; therefore red kite is considered part of the breeding bird assemblage of the site.	Sch 1, SBL, LBAP, Green
<b>Robin</b> <i>Erithacus rubecula</i>	R.	17	✓	✓	✓	Two confirmed, fourteen probable and twenty one possible territories recorded throughout the site.	Green

Species	BTO Code	No. <u>confirmed/ probable</u> territories on site	Recorded on survey:			Notes	Legal protection / conservation Status
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
Rook <i>Corvus frugilegus</i>	RO	0			✓	Recorded feeding in farmland in the west of the site on the third survey visit only. Not considered to be part of the breeding bird assemblage of the site.	Amber
<b>Siskin</b> <b><i>Carduelis spinus</i></b>	SK	13	✓	✓	✓	Thirteen probable and ten possible territories recorded in woodlands on site. Frequently recorded in flight.	SBL, Green
<b>Skylark*</b> <b><i>Alauda arvensis</i></b>	S.	28	✓	✓	✓	Suitable breeding habitat present across much of the site. Up to twenty eight probable territories recorded.	SBL, Red
<b>Snipe</b> <b><i>Gallinago gallinago</i></b>	SN	4	✓	✓	✓	Four probable territories recorded, all within moorland habitat of Drumashie Moor.	LBAP, Amber
<b>Song thrush</b> <b><i>Turdus philomelos</i></b>	ST	3	✓	✓	✓	Two confirmed, one probable and eight possible territories recorded in woodland and scrub throughout the site.	SBL, Amber
Starling <i>Sturnus vulgaris</i>	SG	0			✓	Small flocks of birds observed along the eastern boundary of the site on the final visit. Not considered part of the breeding bird assemblage of the site.	SBL, Red
<b>Stonechat</b> <b><i>Saxicola rubicola</i></b>	SC	8	✓	✓	✓	Three confirmed and five probable territories recorded in the farmland and moorland habitats of the site.	Green
<b>Swallow</b> <b><i>Hirundo rustica</i></b>	SL	0		✓	✓	Recorded foraging regularly throughout the site; local buildings provide suitable nesting habitat. Considered part of the breeding bird assemblage of the site.	Green

Species	BTO Code	No. <u>confirmed/ probable</u> territories on site	Recorded on survey:			Notes	Legal protection / conservation Status
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
<b>Swift</b> <b>Apus apus</b>	SI	0		✓	✓	Recorded foraging regularly over farmland in the east of the site; local buildings provide suitable nesting habitat. Considered part of the breeding bird assemblage of the site.	SBL, LBAP, Red
<b>Tawny owl</b> <b>Strix aluco</b>	TO	1			✓	One probable territory in foresty south of Achcraid Farm in the north of the site.	Amber
Teal <i>Anas crecca</i>	T.	0			✓	Two birds recorded on a small waterbody on the eastern boundary of the site on the third survey visit only; likely post breeding birds that have departed from their breeding territories and not considered part of the breeding bird assemblage of the site.	Amber
<b>Treecreeper</b> <b>Certhia familiaris</b>	TC	1		✓	✓	One probable and one possible territory in woodlands adjacent to Drumashie Moor.	Green
<b>Tree pipit</b> <b>Anthus trivialis</b>	TP	2	✓	✓		Two probable and five possible territories, all within Clune Wood in the south of the site.	SBL, Red
<b>Whitethroat</b> <b>Curruca communis</b>	WH	1		✓	✓	One probable and one possible territory noted on site, the probable territory is within scrub at the electricity distribution site in the north of the site.	Amber
<b>Willow warbler</b> <b>Phylloscopus trochilus</b>	WW	28	✓	✓	✓	Twenty eight probable and twenty-one possible territories distributed throughout the woodlands on site.	Amber
<b>Woodpigeon</b> <b>Columba palumbus</b>	WP	7	✓	✓	✓	Seven probable and four possible territories distributed throughout the woodlands on site.	Amber

Species	BTO Code	No. <u>confirmed/ probable</u> territories on site	Recorded on survey:			Notes	Legal protection / conservation Status
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
<b>Wren</b> <b>Troglodytes troglodytes</b>	WR	28	✓	✓	✓	28 probable and 26 possible territories distributed throughout the site.	Green
<b>Yellowhammer</b> <b>Emberiza citrinella</b>	Y.	11	✓	✓	✓	Eleven probable and five possible territories distributed throughout the farmland in the north of the site.	SBL, Red
<p>Key:</p> <p>Sch 1: Schedule 1 of the Wildlife and Countryside Act (1981) as amended</p> <p>SBL: Priority species listed on the Scottish Biodiversity List</p> <p>LBAP: Priority species listed on the Highland Nature Biodiversity Action Plan 2021 - 2026</p> <p>BoCC: Birds of Conservation Concern 5 (Stansbury <i>et al.</i> 2021)</p> <p>*Maximum counts of singing/calling birds (visit)</p>							

## 4 BASELINE ASSESSMENT AND RECOMMENDATIONS

---

The main impact to the breeding bird assemblage of the site is considered to be displacement, where birds are excluded from areas that were suitable for them before the development. This may be permanent and caused by direct loss of habitat to accommodate the infrastructure, for example felling trees, or temporary and involve indirect loss of habitat due to disturbance during works.

Effects of the loss of foraging and nesting habitat from the site could be reduced breeding success to the populations of the species that comprise the site's breeding bird assemblage.

### **Green listed species**

The conservation status of UK populations of the majority of species in the breeding bird assemblage are of least concern (green-listed), and are supported by habitats (farmland, woodland, moorland, small waterbodies) typical of the local landscape<sup>8</sup>. Suitable and alternate habitat is available locally, and significant effects on the species' abundance and distribution are not considered likely.

### **Species of conservation concern and/or priorities for biodiversity conservation in Scotland**

Populations of species that are listed as being of conservation concern in the UK (red- or amber-listed) or are of importance for the conservation of biodiversity in the Highlands (LBAP-listed) or Scotland (SBL-listed), and for which the site is considered to contribute towards supporting their populations through providing foraging and nesting sites may be less resilient to impacts. However, it is considered that the availability of suitable and alternate habitat in the local area is sufficient to maintain the abundance and distribution of the populations of the majority of these species.

Exceptions include curlew and black grouse, which is listed as a priority species on both the LBAP and SBL and is red-listed for the severe decline in its UK breeding population and moderate decline in its UK breeding range, and for which the site is considered to support newly established lekking locations which may be particularly sensitive to the proposed works.

- Black grouse

Black grouse is listed as a priority species on both the LBAP and SBL and is red-listed for the severe decline in its UK breeding population and moderate decline in its UK breeding range.

The site supports two lekking black grouse at two locations on the south eastern boundary, between the north shore of Loch Ashie and General Wade's Military Road. Desk study did not return the presence of any lekking black grouse within 2 km of the site, and it is possible that this is a newly established lekking location, representing an expansion of the local distribution of this species and which may be particularly sensitive to disturbance.

The lekking sites are located approximately 500 m south of the proposed route of the cable, downslope from General Wade's Military Road towards Loch Ashie, and disturbance to this species can be minimised by avoiding activity overnight and within two hours of dusk and dawn and establishing a safe operating distance. Recent recommendations are for this distance to be up to 1000 m (Goodship and Furness, 2022), but is dependent on time of year, time of day, and topography. It is possible that the intervening road and the site being located downslope and out of

---

<sup>8</sup> The site lies on the boundary of Landscape Character Types Flat Moorland Plateau with Woodland, and Rolling Farmland and Woodland. Landscape Character Types describe the main physical landscape components of an area, and are available online at: <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/what-landscape-character-assessment>

view of the works may provide a buffering effect to disturbance from the works and reduce the safe operating distance.

In addition, the construction of new fencing to protect the works site should be minimised, and the fences removed as soon as possible. Fences should also be well marked to make them more visible to flying birds, thereby reducing the potential for collision.

Additional survey may need to be undertaken prior to construction to identify any changes to the location of the lek sites.

- Curlew

Curlew is listed as a priority species on both the LBAP and SBL and is red-listed for the severe decline in its UK breeding population and moderate decline in its non-breeding population, and for its UK breeding population being of international importance. It is considered one of the most pressing bird conservation priorities in the UK, with the bulk of the breeding population occurring in Scotland.

The site is considered to support two breeding territories of curlew, with nest sites assumed to be located beyond the site boundary, and the site providing feeding areas for the breeding birds. Breeding curlew are reported to be likely highly sensitive to disturbance and should works be scheduled for the breeding season, a buffer of 200 – 300 m from the nest site is recommended as a safe operating distance (Goodship and Furness, 2022). The exact location of nest sites off site was not confirmed during the survey, and since curlew are site faithful and will return to the same breeding grounds each year (Wernham *et al.*, 2002), additional survey may need to be undertaken prior to construction to identify these in order for the safe operating distance to be implemented.

### **Legally protected species**

The site supports breeding Schedule 1 species crossbill by providing nesting and foraging habitat, and red kite by providing foraging habitat. The UK populations of both these species are green-listed (Stanbury *et al.*, 2021) that is, the populations are not considered to be of conservation concern in the UK.

- Crossbill

The Scottish Highlands are an established breeding area for crossbill species, although the species occurs across Scotland where it associates with any of the main conifer species present, if they are cone-bearing and seeds are available (Forrester and Andrews, 2007). Crossbill is a highly mobile species in response to conifer seed production; the impact of loss of habitat is not expected to have a significant effect on its abundance or distribution, since the population is resilient to habitat change. Crossbill species may need to be taken into account in relation to species protection plans, with additional survey undertaken prior to construction after proposal consent (NatureScot, 2017)

- Red kite

The site currently provides foraging habitat for red kite, which prefers to forage over open ground, moorland areas, and marginal agricultural habitats (Forrester and Andrews, 2007). Red kite usually forage within 4 km, and occasionally up to 6 km, from the nest (NatureScot, 2016; Hardey *et al.*, 2013) and typically the total potential foraging area is very large. This suggests that any loss of foraging area provided by the proposals to the site is small, in comparison with the extent of the entire resource, and significant effects on the species' abundance and distribution are not considered likely.

The historical red kite nest site identified by the ERM is located approximately 325 m from the site; if works are scheduled whilst the nest is active, a buffer of 150 – 300 m is recommended as a safe

operating distance (Goodship and Furness, 2022), dependent on time of year, time of day, and topography. Additional survey may need to be undertaken prior to construction to identify any active nest sites within disturbance distance of works.

The additional legal protection conferred on red kite as a result of being listed on Schedule 1A means that the risk of harassment of roosting birds should be minimised, which can be achieved by avoiding works activity overnight and within two hours of dusk and dawn or working at a safe operating distance – a buffer of 150 – 300 m is recommended as a safe operating distance (Goodship and Furness, 2022). Survey for roost sites was not included in the current survey, and additional survey may need to be undertaken prior to construction to identify any roost sites within disturbance distance of works.

## 5 BIBLIOGRAPHY AND REFERENCES

---

**Forrester R.W., Andrews, I.J., McInerny, C.J., Murray, R.D., McGowan, R.Y, Zonfrillo, B., Betts, M.W., Jardine, D. C. and Grundy, D.S. (2007)** *The Birds of Scotland*. The Scottish Ornithological Club, Aberlady.

**Gilbert, G., Gibbons, D.W. and Evans, J. (1998)** *Bird Monitoring Methods – a manual of techniques for key UK species*. RSPB, Bedfordshire.

**Goodship, N.M. and Furness, R.W.** (MacArthur Green) Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species. NatureScot Research Report 1283. Available online at: <https://www.nature.scot/doc/naturescot-research-report-1283-disturbance-distances-review-updated-literature-review-disturbance>

**Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2013).** *Raptors: a field guide to survey and monitoring* (3rd Edition). The Stationery Office, Edinburgh.

**NatureScot (2021)** *SiteLink*. Available online at <https://sitelink.nature.scot/home> (Accessed May 2021)

**NatureScot (2016)** *Guidance: Assessing connectivity with Special Protection Areas (SPAs)*. Version 3. Available online at: <https://www.nature.scot/sites/default/files/2018-08/Assessing%20connectivity%20with%20special%20protection%20areas.pdf>

**NatureScot (2014).** *Guidance. Recommended bird survey methods to inform impact assessment of onshore wind farms*. May 2014. SNH, Battleby. Available online at: <https://www.nature.scot/sites/default/files/2018-06/Guidance%20Note%20-%20Recommended%20bird%20survey%20methods%20to%20inform%20impact%20assessment%20of%20onshore%20windfarms.pdf>

**Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021)** The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114, 723-747. Available online at: [https://britishbirds.co.uk/sites/default/files/BB\\_Dec21-BoCC5-IUCN2.pdf](https://britishbirds.co.uk/sites/default/files/BB_Dec21-BoCC5-IUCN2.pdf)

**Wernham, C.V., Toms, M.P., Marchant, J.H., Clark, J.A., Siriwardena, G.M. and Baillie, S.R.** (eds). 2002. *The Migration Atlas: movements of the birds of Britain and Ireland*. T. and A.D. Poyser, London.



# APPENDIX 1 – RELEVANT LEGISLATION

---

## WILDLIFE AND COUNTRYSIDE ACT 1981

The Wildlife and Countryside Act 1981 provides protection to species and habitats. The Nature Conservation (Scotland) Act 2004 amends the Wildlife and Countryside Act 1981 in Scotland.

### BIRDS

All wild birds receive general protection to their nest and eggs under the Wildlife and Countryside Act 1981, as amended by the Wildlife and Natural Environment (Scotland) Act 2011. Some species receive enhanced statutory protection due to their listing in schedule 1 of the Wildlife and Countryside Act 1981. It is an offence to disturb a Schedule 1 species while it is building a nest or is in, on, or near a nest containing eggs or young.

There are obligations within the Birds Directive 1979 relating both to protection of species and maintenance of habitats. Birds on Annex 1 to the Birds Directive, regularly occurring migratory species, and birds on Schedule 1 to the Wildlife & Countryside Act are recognised in statute as requiring special conservation measures.

A number of bird species have been highlighted in non-statutory lists as priorities of Conservation Concern in the United Kingdom. This includes those listed in Birds of Conservation Concern 4: and *Priority Species* listed in the UK *Biodiversity Action Plan*. Eaton *et al.* (2015) assigns all birds according to three categories:

- Red list species - those birds whose populations or range is rapidly declining (recently or historically), and those of global conservation concern;
- Amber list species - those birds whose populations are in moderate decline, rare breeders, internationally important and localised species and those of an unfavourable conservation status in Europe; and,
- Green list species - those other birds occurring in the united kingdom not included in the red or amber lists above. Further details of the appraisal can be found in Eaton *et al.* (2015).

### EU BIRDS DIRECTIVE

There are obligations within the Birds Directive 1979 relating both to protection of species and maintenance of habitats that birds rely on. Birds on Annex 1 of the Birds Directive, regularly occurring migratory species, and birds on Schedule 1 of the Wildlife & Countryside Act are recognised in statute as requiring special conservation measures.

## APPENDIX 2 – MAPS

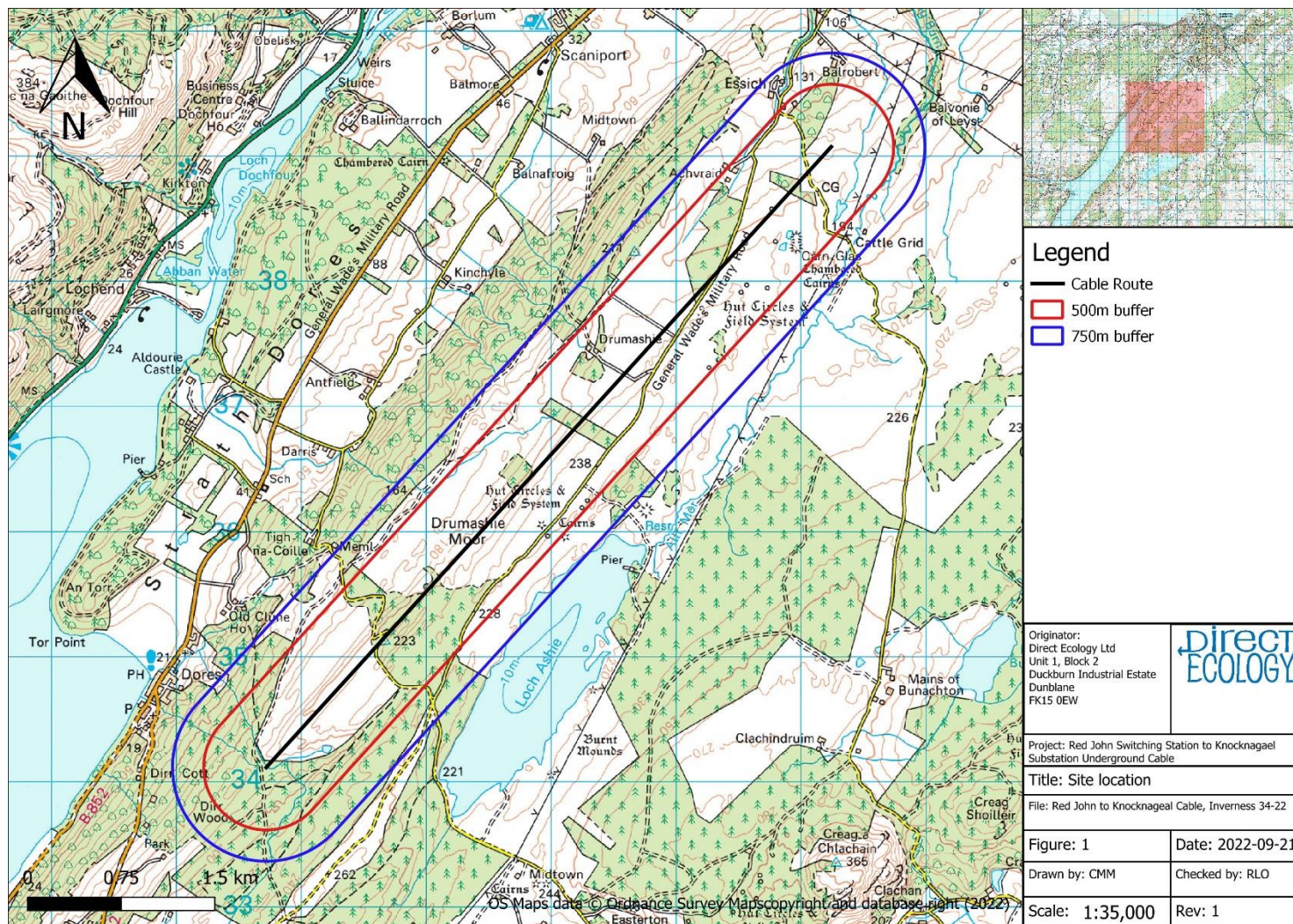
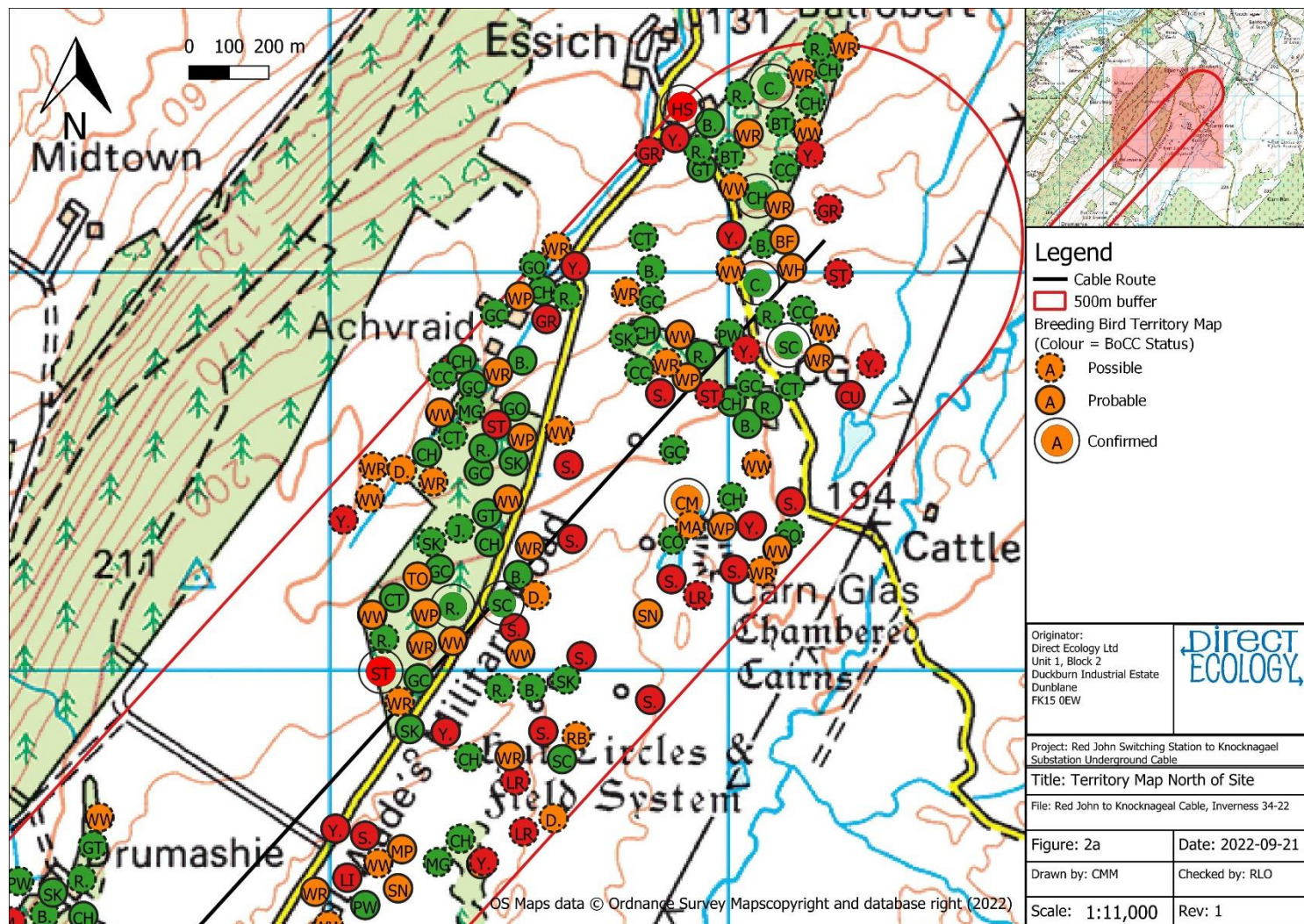


Figure 1: Site location.







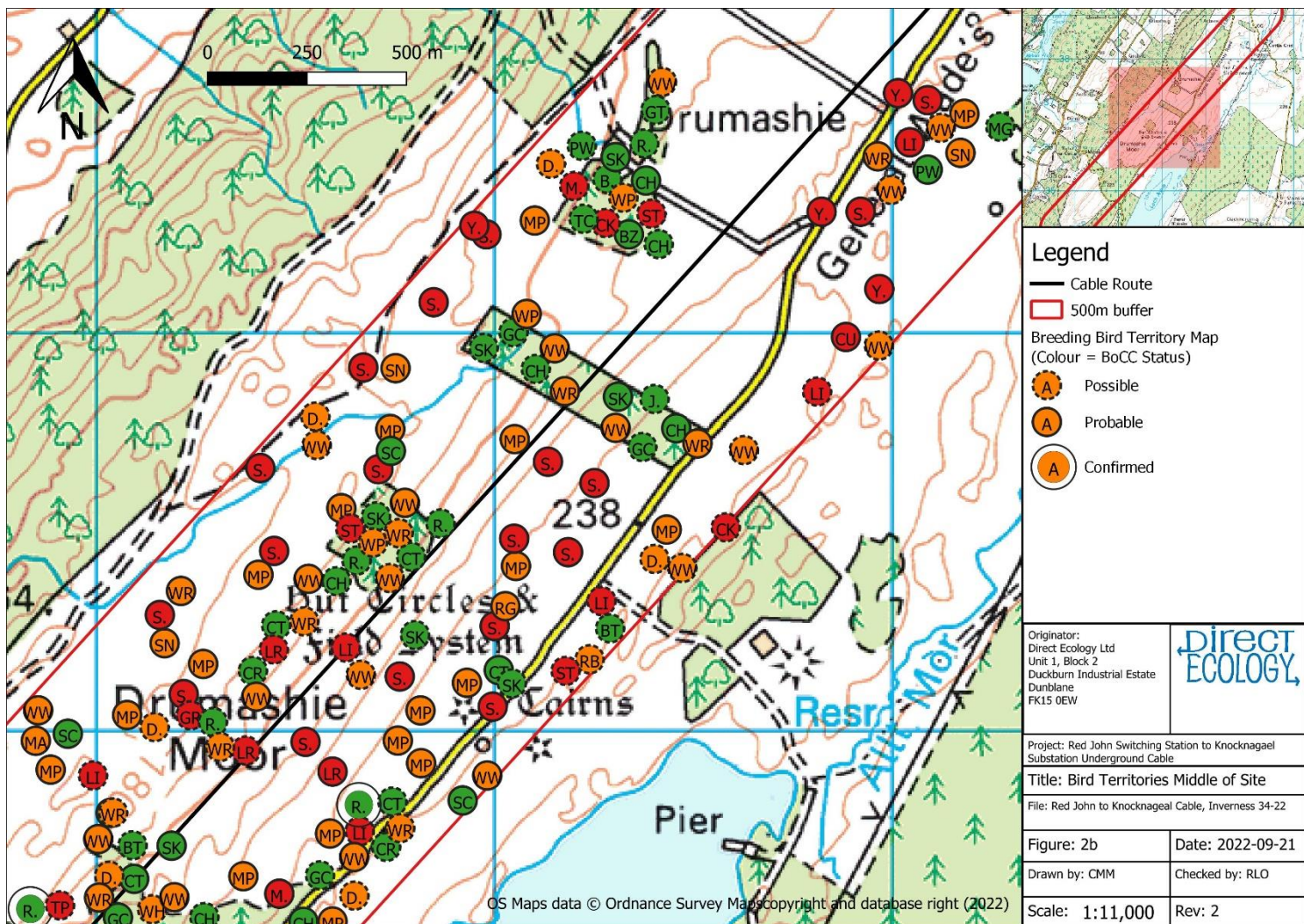


Figure 2b: Bird territories.



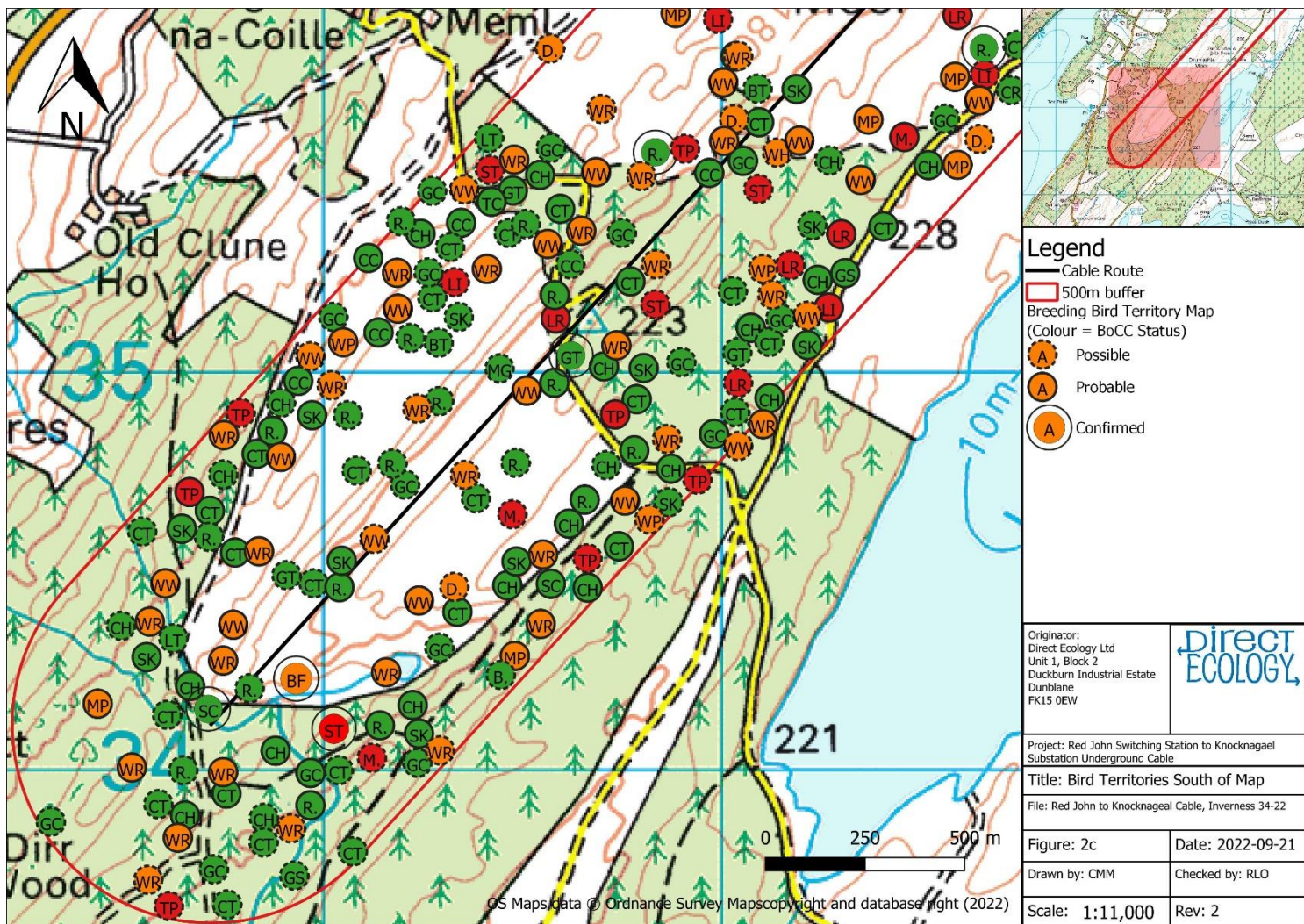


Figure 2c: Bird territories.



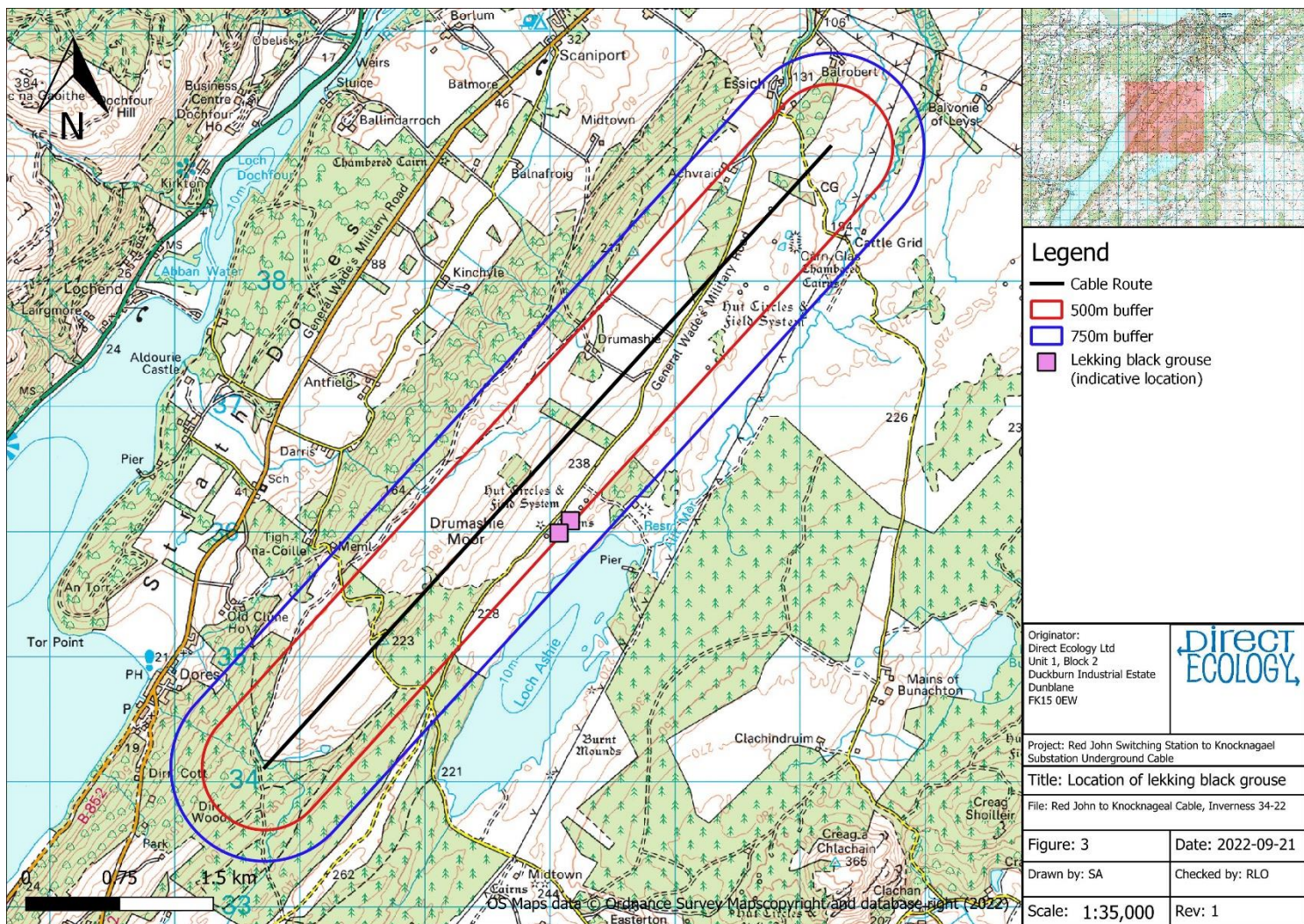


Figure 3: Black grouse lekking locations.

11 May 2023

## Red John to Knocknagael Cable, Essich, Inverness

### Introduction

Direct Ecology Ltd (DEL) was commissioned by Environmental Resource Management (ERM) to undertake a black grouse lek survey for a proposed underground cable route at Essich, Inverness, focussing on the area between General Wade's Military Road and Loch Ashie. This area had been identified during black grouse habitat suitability surveys in 2022 as being potentially suitable for lekking birds, and a follow-up lek survey in 2022 had recorded a single lekking black grouse, and a second male bird in flight. No previous records of birds lekking in this location had been found during consultation and records search<sup>1</sup>, and it was considered possible that the black grouse reported represented a newly established lekking location.

The current survey was therefore undertaken to confirm this area as regularly supporting lekking birds.

The 2023 lek survey was carried out on 10<sup>th</sup> May 2023. Survey followed NatureScot standard guidance methodology and was based on the single-species method for black grouse described in Gilbert *et al.*, (1998). Methodology comprised a watch carried out from one hour prior to sunrise to over one hour after sunrise from vantage positions overlooking the potential lek site and were positioned so that any birds should not be disturbed by the surveyors. If present, the maximum number of male and female black grouse would be counted.

Survey was undertaken in suitable weather conditions (i.e., avoiding high wind, precipitation, low cloud). Survey details are provided in Table 1.

### Results

No black grouse were heard or seen during the survey. Two dog walkers were observed towards the end of the survey period, walking across the area where the lekking black grouse had been observed the previous year. If this is a regular occurrence then it is considered possible that birds have abandoned lekking at this site due to disturbance from dog walkers.

Table 1: Survey details

Date	Surveyor	Survey Type	Start / Finish	Weather
10.05.23	Murray Gauld Gemma Grossart	Black grouse lek survey	04:15/06:50 h	Temp: 7; WS: 0; CC: 0; Rain: 0
Key: Temp = Temperature (°C); WS = Wind speed - 0 (calm) 12 (hurricane); CC = Cloud cover (in eighths); Rain = 0-4 (0 = dry)				

<sup>1</sup> Records search of NBN Atlas; Consultation with RSPB Scotland by client.