

## BREEDING BIRD SURVEY

# BALLYOUKAN FOREST



**DATE:** 23 JULY 2020

**CONTRACT REF:** SWD01.20.1988

**SITE LOCATION:** BALLYOUKAN, NEAR PITLOCHRY, PH16 5TB

**OS GRID REF:** NN 989 581

**CLIENT:** SCOTTISH WOODLANDS

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## Document Control

Version	Date	Prepared By	Approved By
1	23 July 2020	 Mingaile Anderson ACIEEM Ecologist	 Heather Simpson ACIEEM Principal Ecologist

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## Executive Summary

Ballyoukan Forest is a plantation forest located in Ballyoukan, near Pitlochry, PH16 5TB, (central) OS grid reference NN 989 581. It is the intention of Scottish Woodlands to upgrade the existing forestry track for timber haulage. In addition to this, the old farm track south of the A924 road is to be upgraded and connected to the forestry track from the north.

Echoes Ecology Ltd were contracted by Scottish Woodlands to carry out breeding black grouse (*Tetrao tetrix*) and raptor surveys of the proposed works areas within the site. Black grouse surveys were carried out on the open habitat along the old farm track to the north-west of the Ballyoukan Forest, near Loch Broom to the south-east, adjacent to the access road to the south-west of the plantation, as well as of the rides, tracks and open areas within the plantation. The raptor surveys were carried out along the old farm track north-west of the Ballyoukan Forest, to confirm any breeding hen harrier (*Circus cyaneus*), merlin (*Falco columbarius*), osprey (*Pandion haliaetus*) and short-eared owl (*Asio flammeus*).

Three lekking black grouse males were observed at one location over 500m north-east from the old farm track. No leks were observed in any other location. As such, the proposed works are not expected to impact upon the species.

Hen harrier and short-eared owl were observed flying over the survey area and hunting. No behaviour was observed from either species indicating that a nest is present within the survey area. As such, it is predicted that the species are possible breeders within the wider landscape, but only using the survey area as part of their hunting territories. Therefore, the proposed works are not expected to impact upon these species.

No evidence of merlin or osprey were observed during the surveys.

In addition to these target species, raven (*Corvus corax*), kestrel (*Falco tinnunculus*), song thrush (*Turdus philomelos*) and mistle thrush (*Turdus viscivorus*) were recorded within the survey area and are assessed as being possible breeders within the Ballyoukan Forest. Meadow pipits (*Anthus pratensis*), snipe (*Gallinago gallinago*) and red grouse (*Lagopus lagopus*) were recorded within the open habitat as possible breeders, with cuckoo (*Cuculus canorus*) potentially utilising the meadow pipit nests for breeding. The proposed track upgrade works are going to be carried out between October and February inclusive, which is outside the main breeding bird season (March to September inclusive), removing the potential for disturbance to nesting birds.

While the increased forestry traffic within the moorland and the Ballyoukan Forest may result in some of the birds nesting further away from the tracks, most bird species will eventually get accustomed to the new disturbance levels and will continue using these habitats. In addition to this, there are extensive areas of the plantation and open habitat where birds that are more sensitive to traffic may relocate. As such, the overall impact to the local bird populations is considered to be negligible.

If the works do not commence prior to 09.01.2022 further surveys may be required in order to confirm that the situation regarding breeding birds at the site has not changed since this report was produced.

All bird's nests are protected by law (the Wildlife and Countryside Act, 1981, as amended) whilst being built or in use. If any trees within Ballyoukan Forest are to be removed as part of the upgrade works, a nesting bird check is recommended to be carried out prior to felling occurring. The plantation within the site is a suitable habitat for species such as common crossbill (*Loxia curvirostra*), which may nest outside the main breeding season. As such, it is recommended that a nesting bird check is completed by a suitably qualified ecologist before any vegetation clearance takes place.

**If any works to the moorland habitat around the old farm track are to take place during the breeding season, a nesting bird check would be required prior to works commencing.**

**During the peak season of March to September, we advise that the results of nesting bird checks should only be regarded as valid for three days, after which further checks will be required to ensure that the situation with regards to nesting birds has not changed.**

## Section 1 - Introduction

### 1.1 Contract Overview

- 1.1.1 Ballyoukan Forest is located in Ballyoukan, near Pitlochry, PH16 5TB, central OS grid reference NN 989 581. The site consists of young coniferous plantation, surrounded by a mosaic of dry and wet heath, acid grassland and flushes.
- 1.1.2 It is the intention of Scottish Woodlands to upgrade the existing forestry track within Ballyoukan Forest up to Loch Broom to the south for timber haulage. In addition to this, the old farm track south of the A924 road is to be upgraded and connected to the forestry track from the north. For the plan of the site and the locations of the proposed works please refer to Appendix I.
- 1.1.3 Echoes Ecology Ltd was appointed by Scottish Woodlands to carry out breeding black grouse (*Tetrao tetrix*) and raptor surveys of the site.
- 1.1.4 The records of black grouse obtained from the RSPB were located within Ballyoukan Forest, as well as in the vicinity of the old farm track to the north-west. Thus, the black grouse surveys were carried out of suitable habitats within the site which would be impacted upon by the proposed works.
- 1.1.5 Black grouse is Annex I species, that requires to be the subject of special conservation measures concerning their habitat.
- 1.1.6 The old farm track that is proposed to be upgraded for timber haulage runs through Forest of Clunie Site of Special Scientific Interest and Special Protection Area, (SSSI/SPA), designated for breeding hen harrier (*Circus cyaneus*), merlin (*Falco columbarius*), osprey (*Pandion haliaetus*) and short-eared owl (*Asio flammeus*). Thus, these species may be breeding in the suitable habitats within the survey area, in the proximity of the farm track.
- 1.1.7 The old farm track also runs through Cairngorms Massif SPA, which is designated for breeding golden eagle (*Aquila chrysaetos*). However, the presence of this species was ruled out due to lack of suitable nesting habitat within 500m of the farm track.
- 1.1.8 Hen harrier, merlin and osprey are Schedule 1 species, and as such they are protected from disturbance during the breeding season. Short-eared owl is an Annex I species and Amber-listed species of conservation concern (Eaton *et.al.*, 2015).
- 1.1.9 The qualifications and competencies of the main author and lead surveyors are provided in Appendix II.
- 1.1.10 The following documents have been provided to Echoes Ecology Ltd in order to assist in carrying out this contract:
- Plans of the site with proposed works areas
  - Loch Broom Storage Scheme Ecological Surveys (EnviroCentre Ltd, 2014a)
  - Loch Broom Storage Scheme Ecological Impact Assessment (EnviroCentre Ltd, 2014b).

### 1.2 Survey Aims

- 1.2.1 The aims of the survey were:
- To carry out a black grouse surveys to determine the lekking locations and numbers of males within the site and the surrounding area of up to 500m
  - To carry out a walkover survey and daytime-crepuscular vantage point surveys to observe any hen harrier, merlin, osprey or short-eared owl breeding behaviour and locate any nests within 500m of the farm track
  - To assess the likely impact of the works on the bird species recorded
  - If necessary, to suggest mitigation and compensation to minimise the predicted impacts on breeding birds.

## Section 2 - Relevant Legislation and Policy

### 2.1 Legal Considerations

- 2.1.1 In Scotland birds are protected under the Wildlife and Countryside Act 1981, as amended.
- 2.1.2 All wild birds (defined as 'any species which is ordinarily resident in or is a visitor to the European Territory of any member state (of the EU)'), their nests and their eggs are protected by law unless an exception is specified in the legislation.
- 2.1.3 Basic protection afforded to wild birds makes it an offence, unless specifically excluded, to:
- Intentionally or recklessly kill, injure or take a wild bird
  - Intentionally or recklessly take, damage or destroy a nest whilst being built or in use
  - Intentionally or recklessly take or destroy an egg of a wild bird
  - Have in possession or control any wild bird, dead or alive, or any part of a wild bird taken in contravention to the Wildlife and Countryside Act 1981, as amended, or whilst the Protection of Wild Birds Act 1954 was in force
  - Have in possession any live bird of prey of any species in the world unless it is registered and ringed
  - Have in possession or control any bird of a species occurring on Schedule 4 of the Wildlife and Countryside Act 1981, as amended, unless registered and in most cases ringed (in accordance with the Secretary of State's regulations)
  - Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.
  - Use traps to kill, injure or take wild birds.
- 2.1.4 The 'Birds Directive' (Directive 2009/147/EC on the conservation of wild birds (codified version)) codifies the conservation of wild birds and their habitats across member states. Annex I of this Directive lists a number of species which are required to be the subject of special conservation measures concerning their habitat, and as such is the basis of the designation of UK Special Protection Areas (SPAs) for birds.

### 2.2 UK Birds of Conservation Concern (BoCC) lists

- 2.2.1 The Birds of Conservation Concern review (Eaton *et al.*, 2015) assesses the populations of British birds against a set of objective criteria (e.g., known population declines across the UK and/or EU). As a result, each species is placed on one of three lists – Green, Amber and Red – indicating an increasing level of conservation concern.

### 2.3 Scottish Biodiversity Strategy

- 2.3.1 The Nature Conservation (Scotland) Act 2004 places a 'Biodiversity Duty' on public bodies to further the conservation of biodiversity and it requires Scottish Ministers to designate one or more strategies for the conservation of biodiversity as the Scottish Biodiversity Strategy. 'Scotland's Biodiversity: It's in Your Hands - A strategy for the conservation and enhancement of biodiversity in Scotland' (Scottish Executive, 2004) and '2020 Challenge for Scotland's Biodiversity' (Scottish Government, 2013a) together form the Scottish Biodiversity Strategy.
- 2.3.2 'Scotland's Biodiversity: It's in Your Hands - A strategy for the conservation and enhancement of biodiversity in Scotland' sets out a 25-year strategy to assist government, the private and public sectors, non-governmental bodies and individual members of the public to conserve and enhance biodiversity in Scotland. The document '2020 Challenge for Scotland's Biodiversity' was published in response to the Aichi Targets set by the United Nations Convention on Biological Diversity (2010) and the European Union's Biodiversity Strategy for 2020 (2011).

## **2.4 Scottish Biodiversity List**

- 2.4.1 The Scottish Biodiversity List (SBL) was published in 2005 and last updated in 2012 (Scottish Government, 2013b). The aim of the list is to help public bodies carry out their 'Biodiversity Duty', as required by the Nature Conservation (Scotland) Act 2004, by identifying the species and habitats which are the highest priority for biodiversity conservation in Scotland. Black grouse, hen harrier, merlin, osprey and short-eared owl are listed within the SBL.

## **2.5 Local Biodiversity Action Plan**

- 2.5.1 Local Biodiversity Action Plan (LBAP) Partnerships were established in the UK following the ratification of the Convention on Biological Diversity in 1992. Each local partnership publishes biodiversity action plans which identify the habitats or species selected as priorities for targeted conservation work. The survey area lies within Perth and Kinross area for which the Tayside Biodiversity Partnership has published a list of priority species and habitats within the LBAP (Tayside Biodiversity Partnership, 2016).

## Section 3 - Survey Methodology

### 3.1 Desk Study Methods

- 3.1.1 A desk study was carried out to obtain baseline data of bird activity in or near to the study area. A search for designated sites was also carried out. This desk study allowed for data within a 2km radius of the site to be considered. The following resources were consulted:
- Tayside LBAP 2016 - 2026 (Tayside Biodiversity Partnership, 2016)
  - RSPB (black grouse records)
  - SiteLink (Scottish Natural Heritage, 2020).

### 3.2 Field Survey Methodology

- 3.2.1 The survey methods employed are adapted from
- Raptors. A Field Guide for Surveys and Monitoring (Hardey *et al.*, 2009)
  - Bird Monitoring Methods (Gilbert *et al.*, 1998).
- 3.2.2 The qualifications and competencies of the main author and surveyors are provided in Appendix II.
- 3.2.3 Equipment used during the surveys included a GPS (Garmin eTrex 10, GPSMAP 64S), binoculars (magnification 10x42), scope.
- 3.2.4 Details of the survey visits and survey weather data are presented in Appendix III.

### 3.3 Black Grouse Survey Methods

- 3.3.1 The survey area comprised of the whole forestry track to be upgraded plus a 500m buffer around adjacent open habitat located near Loch Broom to the south-east and the existing access track to the south-west, as well as the farm located to the north-west of Ballyoukan Forest plus a 500m buffer.
- 3.3.2 Two survey visits were completed on 22.04.2020 and 11.05.2020 by Laura Carter-Davis MCIEEM and Mingaile Anderson ACIEEM. The surveys consisted of driven transects and vantage point (VP) surveys in four locations (VP1 to VP4). The surveys started 1.5 hours before sunrise and lasted until 2.5 hours after, listening for black grouse calls and scanning the landscape for male leks using binoculars.
- 3.3.3 Any evidence of lekking males was also noted during the crepuscular raptor surveys.

### 3.4 Breeding Raptor Survey

- 3.4.1 The survey area consisted of the old farm track between Ballyoukan Forest and the A924 road to the north-west and a 500m buffer.
- 3.4.2 The site and the buffer were surveyed for evidence of use by short-eared owl, hen harrier, merlin and osprey (however, any incidental records within the 2km buffer zone were noted). The objective of the survey was to locate occupied home ranges and active nests and was carried out under a Scottish Natural Heritage (SNH) licence (Licence No. 128046).
- 3.4.3 Four visits combining walkovers and daytime-crepuscular vantage point surveys were carried out on 17.03.2020, 05.05.2020, 04.06.2020 and 09.07.2020 by Mingaile Anderson ACIEEM. An additional visit was carried out on 22.04.2020, inspecting the trees within the plantation edge and the buffer for potential osprey nests. After the initial walkover of the suitable nesting habitats on 17.03.2020, the subsequent visits were mainly restricted to crepuscular VP surveys and transecting of the moorland habitats was kept to a minimum to avoid potential disturbance to breeding ground-nesting raptors (i.e. hen harrier, short-eared owl) during the egg-laying and incubating periods. The VPs were located north-east and west of the point where the proposed

track enters Ballyoukan Forest. The surveys were carried out between four hours before sunset and up to 30mins after sunset. Raptors detected during surveys were noted and behaviour recorded.

3.4.4 Any evidence of raptors was also noted during the black grouse surveys.

### **3.5 Limitations to Survey Work**

3.5.1 No perceived limitations.

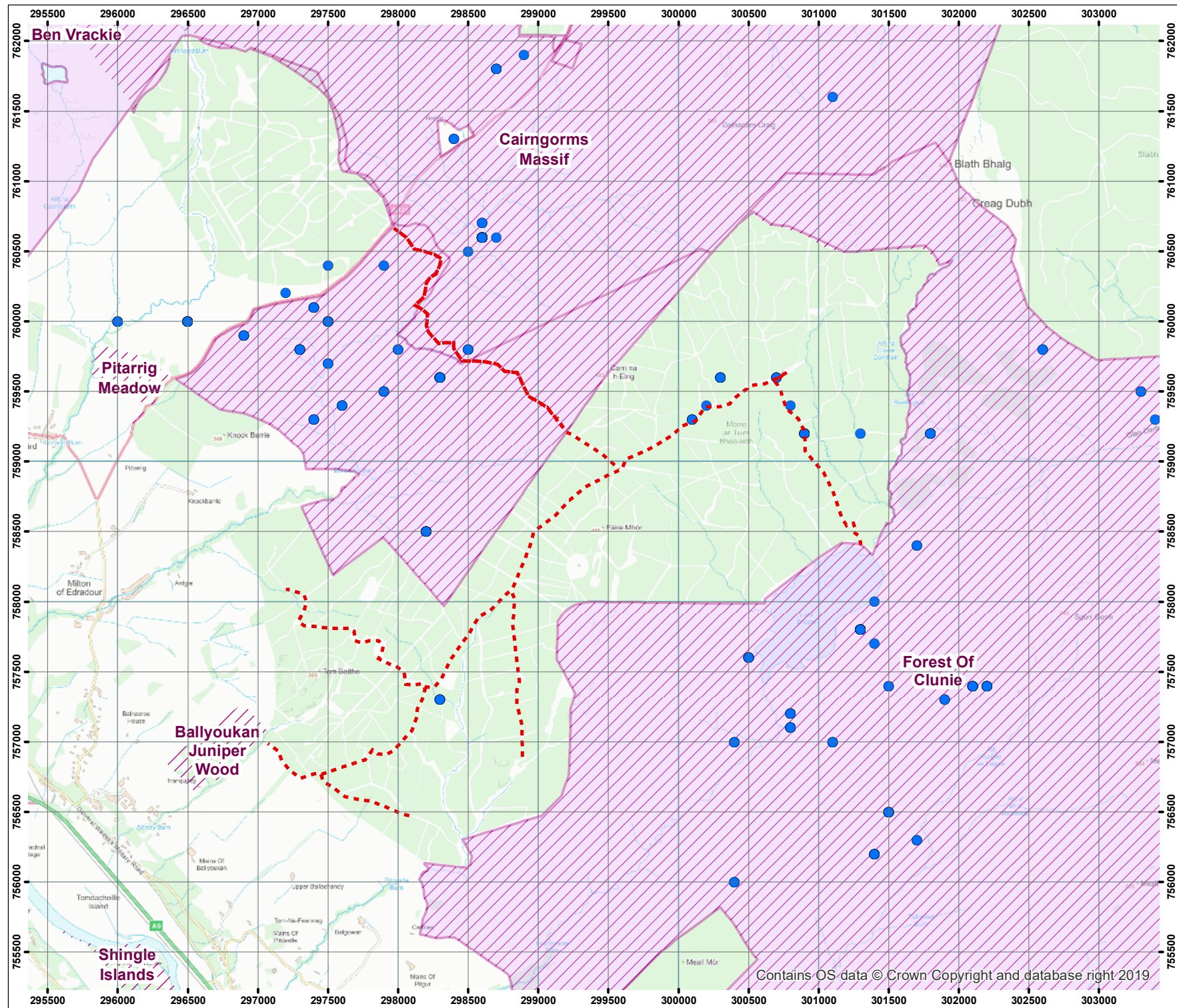
## Section 4 - Results

### 4.1 Desk Study Results

- 4.1.1 The black grouse and raptors are part of a monitoring action plan outlined within the Upland Ecosystems Actions Schedule of Tayside LBAP. Biannual surveys are carried out in Forest of Clunie SPA.
- 4.1.2 The upland habitats within the site lie within the Forest of Clunie Site of Special Scientific Interest (SSSI) and Special Protection Area (SPA). Forest of Clunie SSSI/SPA and neighbouring areas are highlighted as key areas of upland heath habitat within the LBAP. The site is designated for breeding hen harrier, osprey, short-eared owl and merlin.
- 4.1.3 The area between Ballyoukan Forest and the A924 road falls within Cairngorms Massif SPA, which is designated for breeding golden eagle (*Aquila chrysaetos*).
- 4.1.4 Ballyoukan Juniper Wood SSSI is located adjacent to the south-western edge of Ballyoukan Forest. It is designated for its juniper (*Juniperus communis*) scrub. Shingle Islands SSSI/ Special Area of Conservation (SAC) is located 1.7km south-west of the forest. The area is designated for its breeding bird assemblages, river shingle and alder woodland on floodplains habitats. Pittarrig Meadow SSSI is located 1.9km west of the old farm track. It is designated for its lowland dry heath, wet heath and spring habitats.
- 4.1.5 The map presented in Figure 4.1 shows the location of the track in relation to the designated sites.
- 4.1.6 A resource and database search for black grouse records was carried out in March 2020. The results are shown in Figure 4.1 below. Multiple historic records were found throughout the survey area.

*Figure 4.1 - Map showing the locations of designated sites and historic black grouse records*





**Key**

- - - Access track
- Black Grouse Records
- SPA
- SSSI

1:36,000@A4  
  
 0 350 700 Metres



Produced: HS  
Reviewed: MA

Ref: SWD01.20.1988    Revision: A

Date: 15/07/2020

**Desk Study Map**

**Ballyoukan Forest**

## 4.2 Overview of Field Survey Results

- 4.2.1 The maps showing black grouse and raptor survey results are presented in Figures IV.1 and IV.2 of Appendix IV.

## 4.3 Black Grouse

- 4.3.1 Male calls were heard east of Loch Broom from VP1, outwith the survey buffer during the survey on 22.04.2020. However, no males were observed lekking. No black grouse leks were heard or seen near Loch Broom during the survey on 11.05.2020.
- 4.3.2 No lekking males were heard from the vantage points located on the western edge of Ballyoukan Forest and in the east of the plantation (VPs 2 and 3) and along forestry tracks and rides during the driven transects.
- 4.3.3 Faint black grouse male calls were heard to the south-west of VP4, outwith the survey buffer during the survey on 22.04.2020. However, no males were observed lekking. During the survey on 11.05.2020 three lekking males were observed near the Edradour Burn over 500m north-east of the proposed track and faint calls were heard to the west. Three males were observed lekking during the breeding raptor survey at dusk on 04.06.2020 at the same location.

## 4.4 Hen Harrier

- 4.4.1 During the dusk vantage point survey on 17.03.2020, a male hen harrier was seen flying and hunting south-west to north-north-east across the site between the A924 and Ballyoukan Forest. No behaviour indicating presence of a nest or a female nearby was observed.
- 4.4.2 During the vantage point survey on 05.05.2020, a male hen harrier was observed flying south-east to north-west, to the north of the proposed track. No behaviour indicating presence of a nest or a female nearby was observed.
- 4.4.3 A female hen harrier was observed on 04.06.2020, flying north-east out of the survey area and briefly alarm calling just north of the VP. The area over which the female was flying whilst alarming was carefully approached and observed on 09.07.2020. However, no signs of nest, nesting female or chicks was recorded.
- 4.4.4 A male was seen flying in from north-east to south-west into the site on 09.07.2020, turning around and flying out of the site the same way. No behaviour indicating presence of a nest or a female nearby was observed.
- 4.4.5 No courtship displays, no food passes or adult carrying food were observed within the survey area throughout the survey period.

## 4.5 Short-eared Owl

- 4.5.1 No birds were observed during visits on 17.03.2020 or 05.05.2020. One adult individual was observed hunting, feeding and chasing a crow (*Corvus corone*) during the visit on 04.06.2020. The owl was present within the survey area throughout most of the duration of the survey, hunting over the area west and south-west and then to the north.
- 4.5.2 A short-eared owl was observed perching in two locations to the north and later hunting within the area to the west on 09.07.2020 before it flew off to the west of the survey area.
- 4.5.3 The bird was not observed making regular visits to same area, that would indicate presence of a nest, but rather covered large expanses of the moorland, while hunting, and perching on objects in several different locations. No courtship displays, food passes or calls were seen or heard during the survey period.

#### 4.6 Merlin

- 4.6.1 No observations or calls of merlin were recorded throughout the survey. There were no nests within the trees along the plantation edge that could be potentially used by nesting merlin.

#### 4.7 Osprey

- 4.7.1 No observations or calls of osprey were recorded throughout the survey. There were no nests within the trees along the plantation edge that could be potentially used by nesting osprey.

#### 4.8 Other Raptors

- 4.8.1 A kestrel (*Falco tinnunculus*) was seen flying over Ballyoukan Forest south-east to north-west during the black grouse survey on 22.04.2020.
- 4.8.2 A long-eared owl was observed hunting above heather moorland along the edge of plantation around the west-facing slope of Carn na h-Erlig on 05.05.2020. No behaviour indicating presence of a nest nearby was observed.
- 4.8.3 A pair of ravens (*Corvus corax*) were observed flying north to south over the open habitat and a tawny owl (*Strix aluco*) was heard calling in the coniferous plantation west of the A924 on 17.03.2020.

#### 4.9 Other Bird Species

- 4.9.1 Other notable bird species recorded during the surveys included red-listed BoCC such as cuckoo (*Cuculus canorus*), song thrush (*Turdus philomelos*), mistle thrush (*Turdus viscivorus*) and curlew (*Numenius arquata*). The amber-listed BoCC included snipe (*Gallinago gallinago*), red grouse (*Lagopus lagopus*), meadow pipit (*Anthus pratensis*) and willow warbler (*Phylloscopus trochilus*). Meadow pipit, snipe and red grouse are possible breeders within open moorland habitat on site, with cuckoo potentially exploiting the meadow pipit nests. Curlew calls were heard far away and most likely outside the survey area. Song thrush, mistle thrush and willow warbler are possible breeders within Ballyoukan Forest.

## Section 5 - Discussion

### 5.1 Overview

- 5.1.1 Multiple historic records of black grouse are present within the survey area around the proposed track to the north-west. No records were found in the open habitat to the south-west of the Ballyoukan Forest. Only a single confirmed lek with three males was observed during the survey period, located just outside the survey buffer north-east of the farm track, with other male calls heard outwith the survey area but no observations made. No confirmed lekking sites were recorded within the survey areas during the duration of the survey.
- 5.1.2 No confirmed breeding by any of the target raptor species was recorded. Despite hen harrier having been recorded during every crepuscular vantage point survey, there was no behaviour indicating presence of an active nest within the survey area. The alarm call from the female was most likely a response to the unexpected sighting of the surveyor, as no further evidence of a nest within the area was observed during that or the subsequent visits.
- 5.1.3 Although a short-eared owl was observed perching in multiple locations and hunting above the moorland within the survey area, no regular approaches to a single location were recorded, whereby a nest could be suspected.
- 5.1.4 While the two species are unlikely to be nesting within the survey area, they are considered to be probable breeders in the wider surrounding landscape.
- 5.1.5 No observations of merlin or osprey were recorded during the surveys.
- 5.1.6 Kestrel, long-eared owl and raven are possible breeders within Ballyoukan Forest. In addition to these species, song thrush and mistle thrush are also possible breeders within the plantation. Meadow pipit, snipe, red grouse and cuckoo are possible breeders associated with the open moorland habitat within the survey area.

### 5.2 Potential Development Impacts on Breeding Birds

- 5.2.1 There is not expected to be an impact on the black grouse, as the only active lek that was confirmed during the surveys was located over 500m from the old farm track. The track upgrade would not lead to habitat loss, only a short-term disturbance.
- 5.2.2 Due to lack of indicative breeding behaviour by hen harrier and short-eared owl within the survey area, no impact is expected on these species as a result of the proposed track upgrade works.
- 5.2.3 There is not expected to be an impact on species such as mistle thrush, song thrush, raven, kestrel and long-eared owl, as the proposed works will be mostly restricted to the open habitat and the forest rides, with no felling works planned.
- 5.2.4 Only a narrow strip of overgrown farm track will be affected as a result of the proposed upgrade works, and as such, there will be no significant habitat loss and the impact on ground nesting species such as meadow pipit, snipe and red grouse is considered negligible. In addition to this, the track upgrade works are expected to be carried out between October and February which is outside the main breeding bird season (March and September inclusive), thus reducing the likelihood of disturbance to nesting birds.
- 5.2.5 While the increased forestry traffic within the moorland and Ballyoukan Forest may result in some of the birds nesting further away from the tracks, most bird species will eventually get accustomed to the new disturbance levels and will continue using these habitats. In addition to this, there are extensive areas of the plantation and open habitat where birds that are more sensitive to traffic may relocate. As such, the overall impact to the local bird populations is considered to be negligible.

### **5.3 Mitigation**

- 5.3.1 All bird's nests are protected by law (the Wildlife and Countryside Act, 1981, as amended) whilst being built or in use. If any trees within Ballyoukan Forest are to be removed as part of the upgrade works, a nesting bird check is recommended to be carried out prior to felling occurring. The plantation within the site is a suitable habitat for species such as common crossbill (*Loxia curvirostra*), which may nest outside the main breeding season. As such, it is recommended that a nesting bird check is completed by a suitably qualified ecologist before any vegetation clearance takes place.
- 5.3.2 If any works to the moorland habitat around the old farm track are to take place during the breeding season, a nesting bird check would be required prior to works commencing.
- 5.3.3 During the peak season of March to September, we advise that the results of nesting bird checks should only be regarded as valid for three days, after which further checks will be required to ensure that the situation with regards to nesting birds has not changed.

### **5.4 Further Survey Requirements**

- 5.4.1 If the works do not commence prior to 09.01.2022 further surveys may be required in order to confirm that the situation regarding breeding birds at the site has not changed since this report was produced.



## Section 6 - Requirements and Recommendations

### 6.1 Ecological Constraints and Opportunities Plan

- 6.1.1 The following table (Table 6.1) summarises the ecological constraints and opportunities relating to the development at Ballyoukan Forest, for which Scottish Woodlands and appointed contractors are responsible for delivering.

Table 6.1 - Ecological Constraints and Opportunities Plan

Action Point	Ecological Constraints and Opportunities	Target Date
<b>Ecological Constraints</b>		
AP1	If the works do not commence prior to 09.01.2022 further surveys may be required in order to confirm that the situation regarding wintering birds at the site has not changed since this report was produced.	09.01.2022
AP2	All bird's nests are protected by law (the Wildlife and Countryside Act, 1981, as amended) whilst being built or in use. If any trees within the Ballyoukan Forest are to be removed as part of the upgrade works, a nesting bird check is recommended to be carried out prior to felling occurring. The plantation within the site is a suitable habitat for species such as common crossbill ( <i>Loxia curvirostra</i> ), which may nest outside the main breeding season. As such, it is recommended that a nesting bird check is completed by a suitably qualified ecologist before any vegetation clearance takes place. If any works to the moorland habitat around the old farm track are to take place during the breeding season, a nesting bird check would be required prior to works commencing. During the peak season of March to September, we advise that the results of nesting bird checks should only be regarded as valid for three days, after which further checks will be required to ensure that the situation with regards to nesting birds has not changed.	Prior to tree felling or vegetation removal

### 6.2 Disclaimer

- 6.2.1 By deeming a structure/tree/feature unsuitable or suitable for any proposed work or alteration or addition thereto, due to the possibility of use by protected species and/or making suggestions as to how species friendly features could be created, retained or enhanced, Echoes Ecology Ltd are not responsible for any damage caused thereafter to others if the structure/tree/feature or any part thereof remains in place in an unstable/unsafe manner. If a structure/tree/feature possibly could be utilised by protected species Echoes Ecology Ltd may at times make recommendations as to what aspect/portion of the structure/tree/feature should be retained or enhanced. If this is not practical or safe or legal, for whatever reason, then further advice should always be sought.
- 6.2.2 The ultimate decision to do/not do any work on any structure/tree/feature and any legal consequences of any action taken/not taken lies solely with yourselves and/or your employees/sub-contractors. Echoes Ecology Ltd accepts no liability or responsibility in any way for any actions taken/not taken by you and/or your employees and/or any other person/organisation engaged in carrying out/not carrying out any of the proposed work.

## Section 7 - References

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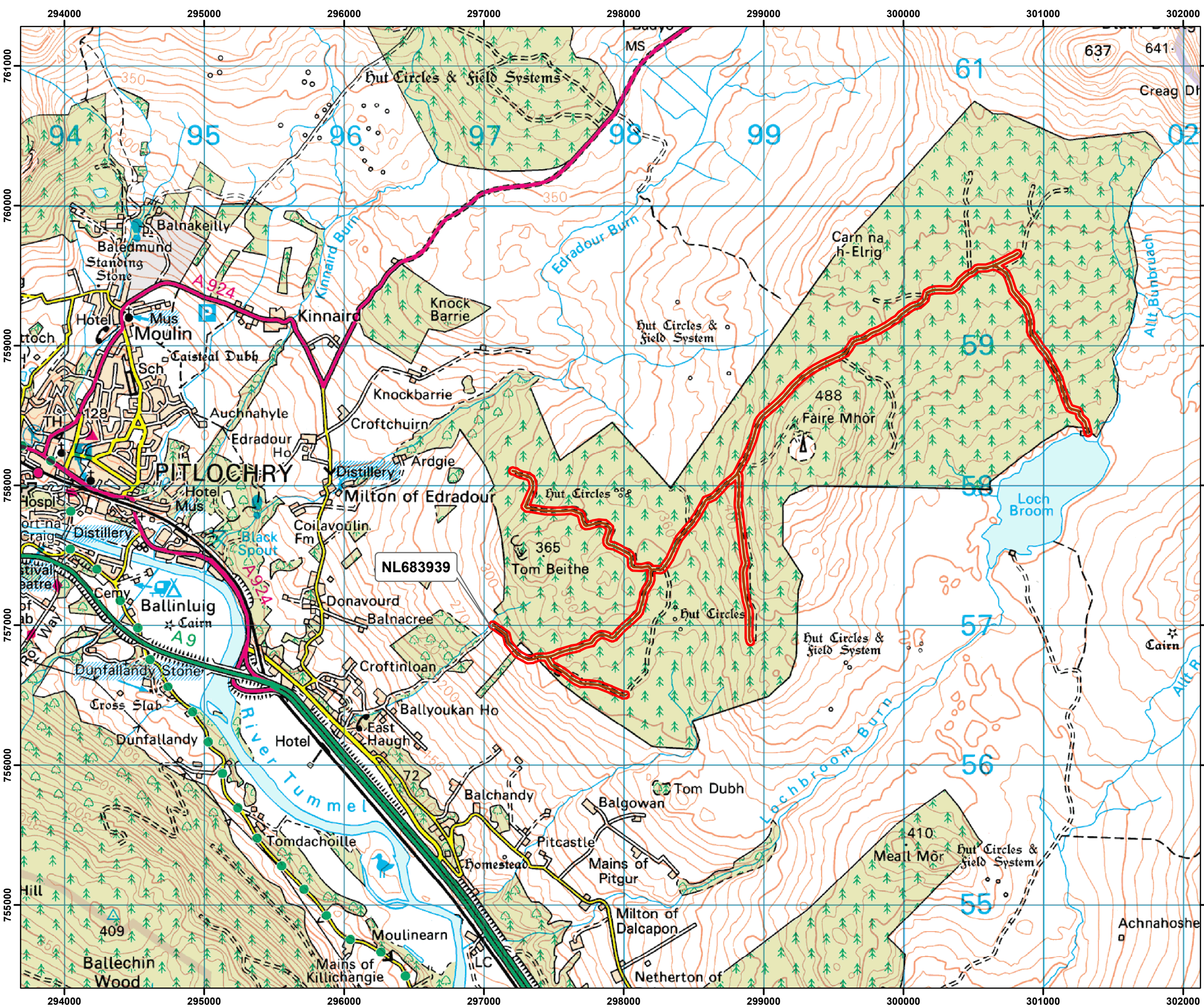
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## **Appendix I: Site Plan and Areas of Proposed Works**

*Figure I.1: Map showing the Ballyoukan Forest tracks to be upgraded*



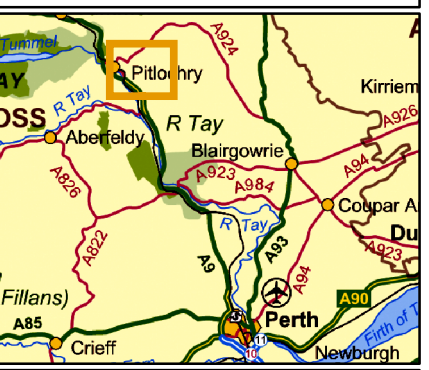


Ballyoukan

Prior Notification and EIA Determination

Created On: 19 December 2019

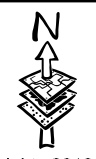
- Forest Road
- Project Boundary



Scottish Woodlands Ltd  
 Research Park, Riccarton  
 Edinburgh, EH14 4AP

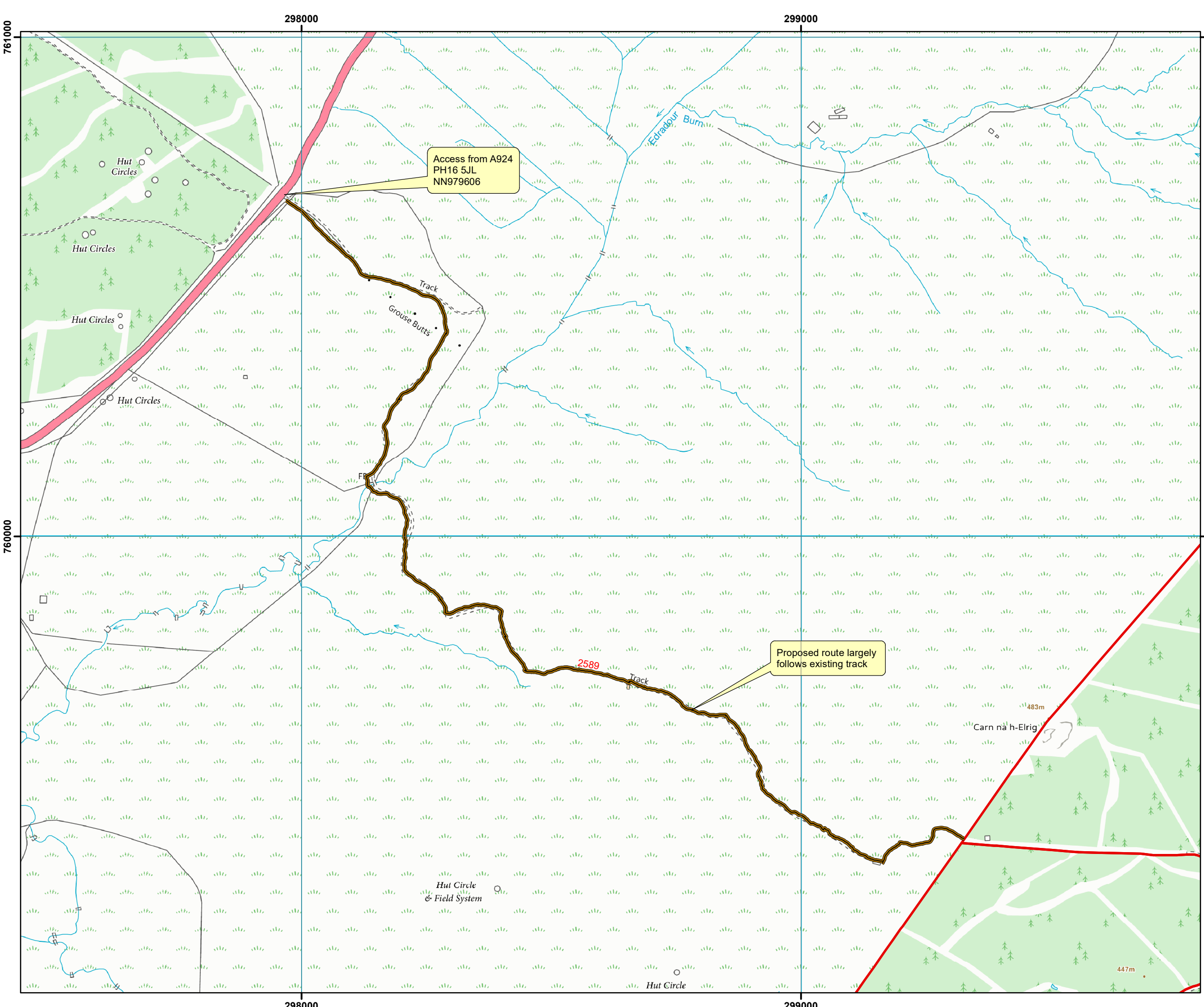
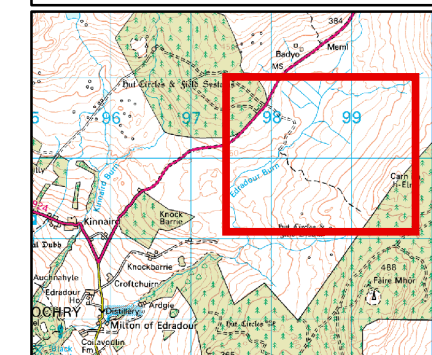
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*Figure 1.2: Map showing the location of the old farm track*



## Appendix II: Qualifications and Competencies of Surveyors

II.1.1 The table below contains surveyors present on site along with relevant qualifications, competencies and experience in relation to the survey work:

*Table II.2: Staff Qualifications and Competencies*

<b>Surveyor and Role</b>	<b>Qualifications</b>	<b>Relevant Protected Species Licence(s)</b>	<b>Relevant Experience</b>
Mingaile Anderson, Lead Surveyor and Main Author	BSc (Hons), MSc, ACIEEM	Named agent on SNH Schedule 1 Bird Licence No. 128046	Mingaile is an accomplished bird surveyor with over 4 years of experience in surveying for birds and reporting on surveys.
Laura Carter-Davis, Surveyor	BSc (Hons), MSc, MCIEEM	Named agent on SNH Schedule 1 Bird Licence No. 128046	Laura is an accomplished bird surveyor with over 6 years of experience in surveying for birds and reporting on surveys.

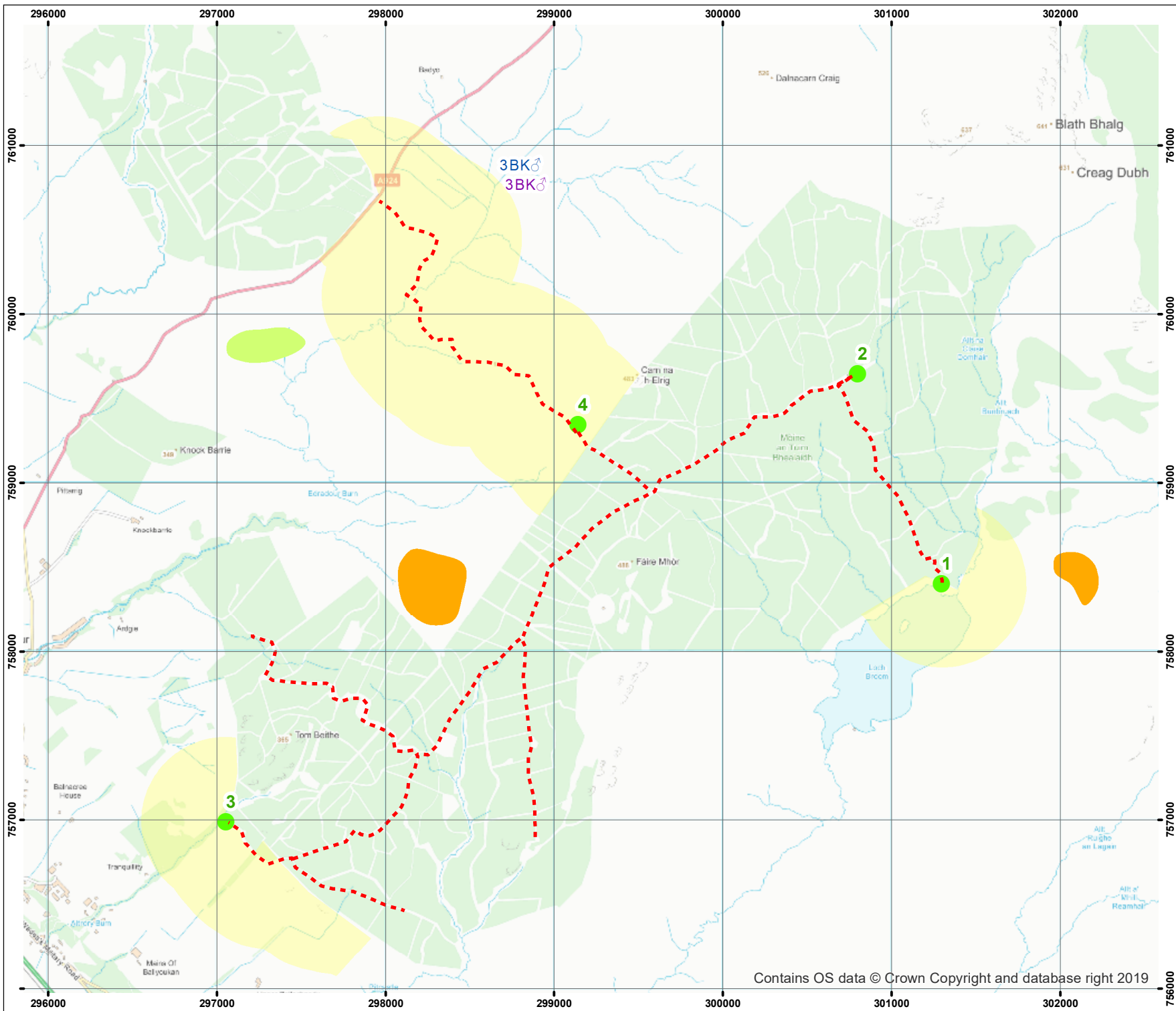
### Appendix III: Weather Data

Table II.1: Details of survey visits for each methodology

Method	Visit	Date	Survey Start and End Times	Weather Conditions
Black Grouse Survey	Visit 1 of 2	22.04.2020	04.30 - 08.15	Cloud Cover 30% Wind F2 Visibility Good > 2km Temp 1°C Sunrise 05.49 Sunset 20.39
	Visit 2 of 2	11.05.2020	03.35 - 07.30	Cloud Cover 80-20% Wind F1-2 Visibility Good >2km Temp 0°C Sunrise 05.05 Sunset 21.18
Breeding Raptor Survey	Visit 1 of 4	17.03.2020	14.36 - 19.05	Cloud Cover 100% Wind F3-4 Visibility Good > 2km Temp 4°C Sunrise 06.24 Sunset 18.23
	Visit 2 of 4	05.05.2020	17.00 - 21.17	Cloud Cover 20% Wind F2 Visibility Good > 2km Temp 11°C Sunrise 05.18 Sunset 21.06
	Visit 3 of 4	04.06.2020	18.00 - 22.00	Cloud Cover 95% Wind F2 Visibility Good > 2km Temp 9°C Sunrise 04.28 Sunset 21.59
	Visit 4 of 4	09.07.2020	18.03 - 22.03	Cloud Cover 100% Wind F2 Visibility Good > 2km Temp 13°C Sunrise 04.37 Sunset 22.03

## **Appendix IV: Survey Maps**

*Figure IV.1: Map showing results of black grouse survey*



**Key**

- - - Access Track
- 500m survey buffer
- Vantage points

**Leks**

- lekking males heard 22.04.20
- lekking males heard 12.05.20

**Breeding Raptor Surveys**

- V3 - 04.06.20

**Black Grouse Surveys**

- 12.05.20

**BTO Codes**

- BK Black Grouse
- ♂ Male

1:30,000@A4

0 300 600 Metres

N  
↑

Produced: HS  
Reviewed: MA

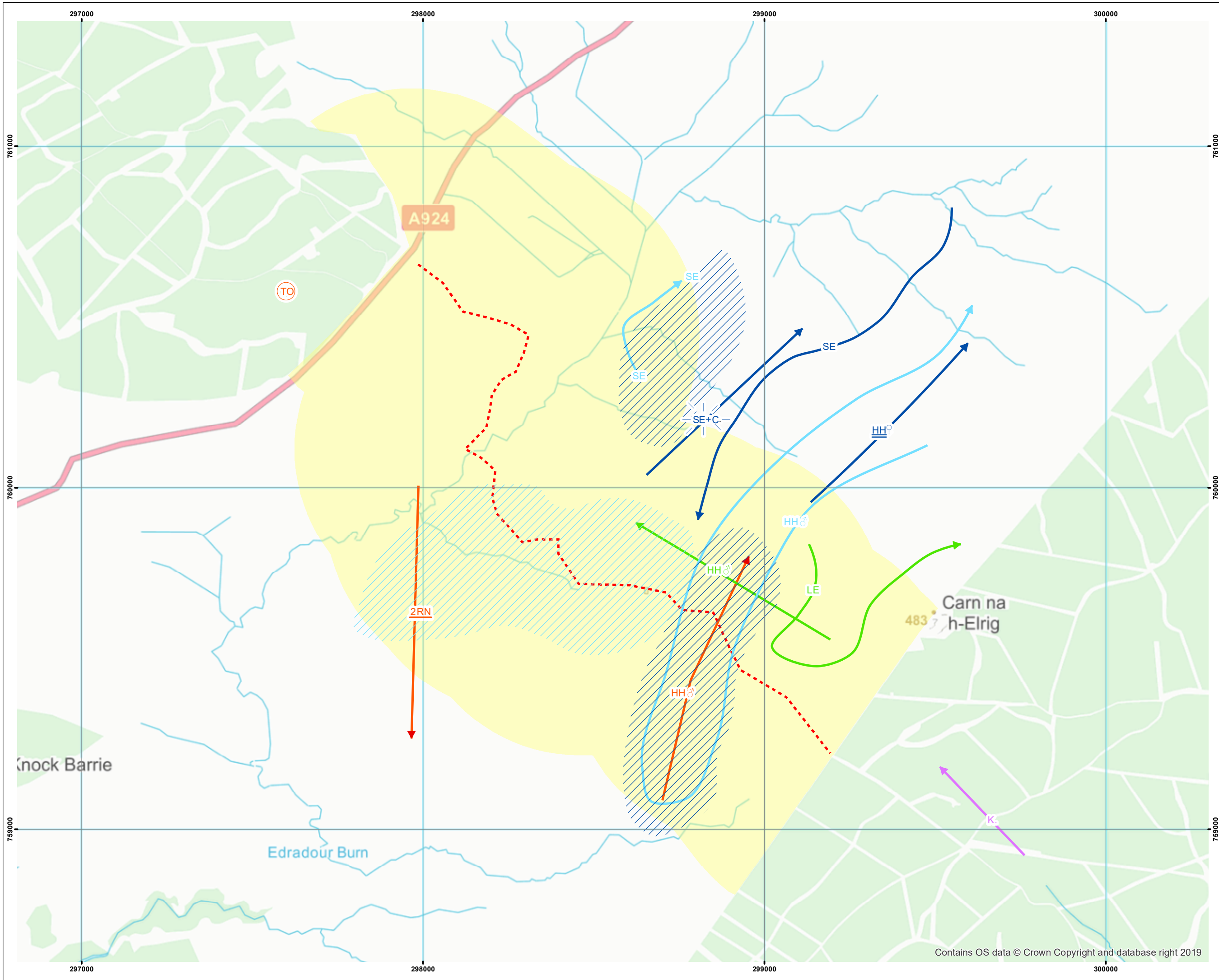
Ref: SWD01.20.1988	Revision: A
Date: 15/07/2020	

Black Grouse Survey

Ballyoukan Forest

*Figure IV.2: Map showing results of raptor survey*





**Key**

- Access Track
- Survey area

**Species codes**

- C Carrion crow
- HH Hen harrier
- K Kestrel
- LE Long-eared owl
- SE Short-eared owl
- TO Tawny owl
- RN Raven

**Behaviour**

- Singing
- ⊘ Aggressive encounter
- Flight
- ≡ Alarm calling
- Calling
- ♂ Male
- ♀ Female

**Breeding Raptor Surveys**

- V1 - 17.03.20
- V2 - 05.05.20
- V3 - 04.06.20
- V4 - 09.07.20

**Black Grouse Surveys**

- 22.04.20

**Short-eared Owl Foraging Areas**

- ▨ 04.06.20
- ▨ 09.07.20

1:10,000@ A3  
0 100 200 Metres

Produced: HS  
Reviewed: MA

Ref: SWD01.20.1988    Revision: A

Date: 15/07/2020

**Breeding Raptor Survey**

**Ballyoukan Forest**