

Landcare NorthEast



# **Ecological Survey & Wildlife Assessment**

Winter Wonderland Illuminations  
Torphins Wood, Aberdeenshire

February 2021

# Ecological Survey & Wildlife Assessment

## Winter Wonderland Illuminations Torphins Wood

For:  
Torphins Path Group



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## Summary

- An ecological walkover survey was conducted across a section of Torphins Woods on the outskirts of Torphins village on 24 February 2021.
- The survey was requested by the Torphins Paths Group in order to provide an assessment of ecological impacts arising from temporary winter illuminations along existing footpath routes.
- An extended Phase I Habitat survey was undertaken, consisting of the recording and mapping of habitat types as well as preliminary surveying for signs of protected mammal species likely to utilise the area: badger *Meles meles*, red squirrel *Sciurus vulgaris*, pine marten *Martes martes*, otter *Lutra lutra*, water vole *Arvicola amphibius*, and wood ants on the site. The survey area was also assessed for bat habitat suitability and general wildlife potential.
- The survey area comprised the section of path used for Winter Wonderland in 2020 as well additional existing path sections under consideration for extending the winter attraction, plus a 30m buffer on each side.
- In terms of habitats present, the site predominantly comprised broadleaf and coniferous plantation woodland.
- Red squirrel feed signs were noted within coniferous plantation.
- No other field signs of protected mammal species or wood ants were recorded.
- Bat foraging potential within the woodland was assessed as good, although trees lacked features suitable for roosting bats.
- No significant impact on woodland wildlife is anticipated from proposals to repeat and potentially expand the Christmas illuminations.



## 1.0 Introduction

1.1 Torphins Paths Group ran a popular Christmas illumination project in Torphins Woods in December 2020 and is considering a repeat installation, potentially on an extended route, for December 2021. The project is located in Torphins Woods on the outskirts of the village Torphins, Aberdeenshire, OS grid ref. NJ 6268 0189 (see Fig 1).

1.2 An ecological survey was commissioned to inform the project development. The survey aim was to establish habitat types, presence (potential or actual) of protected species (badger, red squirrel, pine marten, otter, water vole, wood ants) and provide an assessment of habitat suitability for bats on the site. The survey area was also assessed for general wildlife potential.

1.3 Badgers are protected from being disturbed, killed, injured or taken and their setts are protected from obstruction, damage and destruction by the Protection of Badgers Act 1992, as amended by the Nature Conservation Act 2004.

1.4 For red squirrels it is illegal to "intentionally kill, injure or take" or "damage, destroy or obstruct" access to any structure or place used for shelter or protection, or to disturb any animal while it is in a drey.

1.5 Pine martens are protected under the Wildlife and Countryside Act 1981 (as amended) making it an offence to kill, injure an animal or damage, destroy or obstruct its shelter.

1.6 The Eurasian otter is protected by national and international legislation which makes it an offence to disturb, kill, trap or harm the species as well as damaging and/or disturbing its resting or breeding sites.

1.7 The water vole is afforded legal protection, meaning it is an offence to intentionally or recklessly damage, destroy or obstruct access to anywhere water voles are using for shelter or protection, or to disturb water voles while they are using such a place.

1.8 Wood ants play a keystone role in forest ecosystems in Scotland. There are four species of wood ant in Scotland: *Formica exsecta*, *F. sanguinea*, *F. aquilonia* and *F. lugubris*. *F. exsecta* is particularly rare and is a UK BAP species.

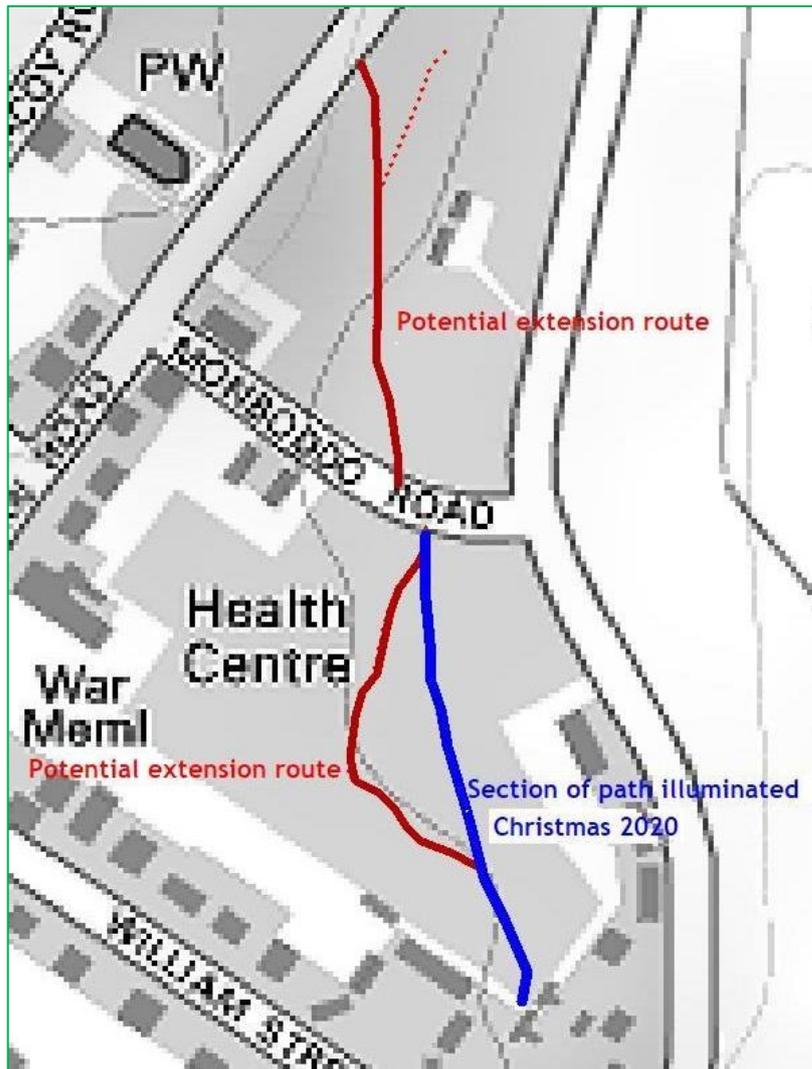
1.9 All bat species found in Scotland are classed as European protected species and are fully protected under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). This lists a number of offences in relation to bats and the places in which they live, which includes protection against harming and disturbing bats as well as protecting their resting and breeding sites, i.e. bat roosts, throughout the seasons.

1.10 The survey was carried out by Flora Grigor-Taylor and Steff Ferguson of Landcare NorthEast, both experienced wildlife surveyors and chartered environmentalists.

1.11 The site was surveyed on 24 February 2021, a cool (6-8°C) bright day. Ground conditions were suitable for identifying recent footprints.



Fig 1: Site Plan



## 2.0 Aims and Objectives

The objectives for this survey and report are:

- To categorise, map and describe Phase 1 Habitats across the site, including the identification of any particularly important habitats and species.
- To assess the suitability of the site for supporting protected species badger, red squirrel, pine marten, otter, water vole, wood ants and bats.
- To assess potential impact of the current and proposed illumination project on the wildlife present in the woods.



### 3.0 Desk Study & Existing Data

Prior to the survey, a review of data held on the National Biodiversity Network (NBN) Atlas was undertaken to ascertain whether surveyed species have been recorded on the site of proposed works. Species records were obtained for a 5km radius around which the survey site is located.

A record search to gather information on designated sites within a 5km radius of the proposed development was also carried out prior to the survey. Information was gathered in relation to the Ancient Woodland Inventory.

#### 3.1 Data search results

NBN atlas records for surveyed protected mammal species are as follows:

Species	NBN closest record	Location
Red squirrel	Within site	Torphins Wood
Otter	600m N	Gownie Burn, Torphins Woods
Water vole	1km E	Craigmyle House
Badger	1.2km SE	Church Wood
Pine marten	2.4km W	Woodland along Beltie Burn
Common pipistrelle	50m W	Torphins Woods
Soprano pipistrelle	50m W	Torphins Woods
Pipistrelle sp	50m W	Torphins Woods
Daubenton's bat	50m W	Torphins Woods
Brown long-eared bat	1km W	Woodland S of Torphins Golf Club
Natterers' bat	4.2km SE	Glassel
Wood ant spp.	No records	n/a

NB: *The Data Provider, Original Recorder and the NBN Trust bear no responsibility for any further analysis or interpretation of the above data and information*

#### 3.2 Designated sites

There are 2 designated sites within a 5km radius of the survey location:

Site Name	Designation(s)*	Feature(s)	Distance from Site	Potential Impact
River Dee	SAC	Atlantic salmon Freshwater pearl mussel Otter	150m E (Learney Burn)	No
Potarch	SSSI	Lowland neutral grassland Oligotrophic river/stream	4.2km SW	No

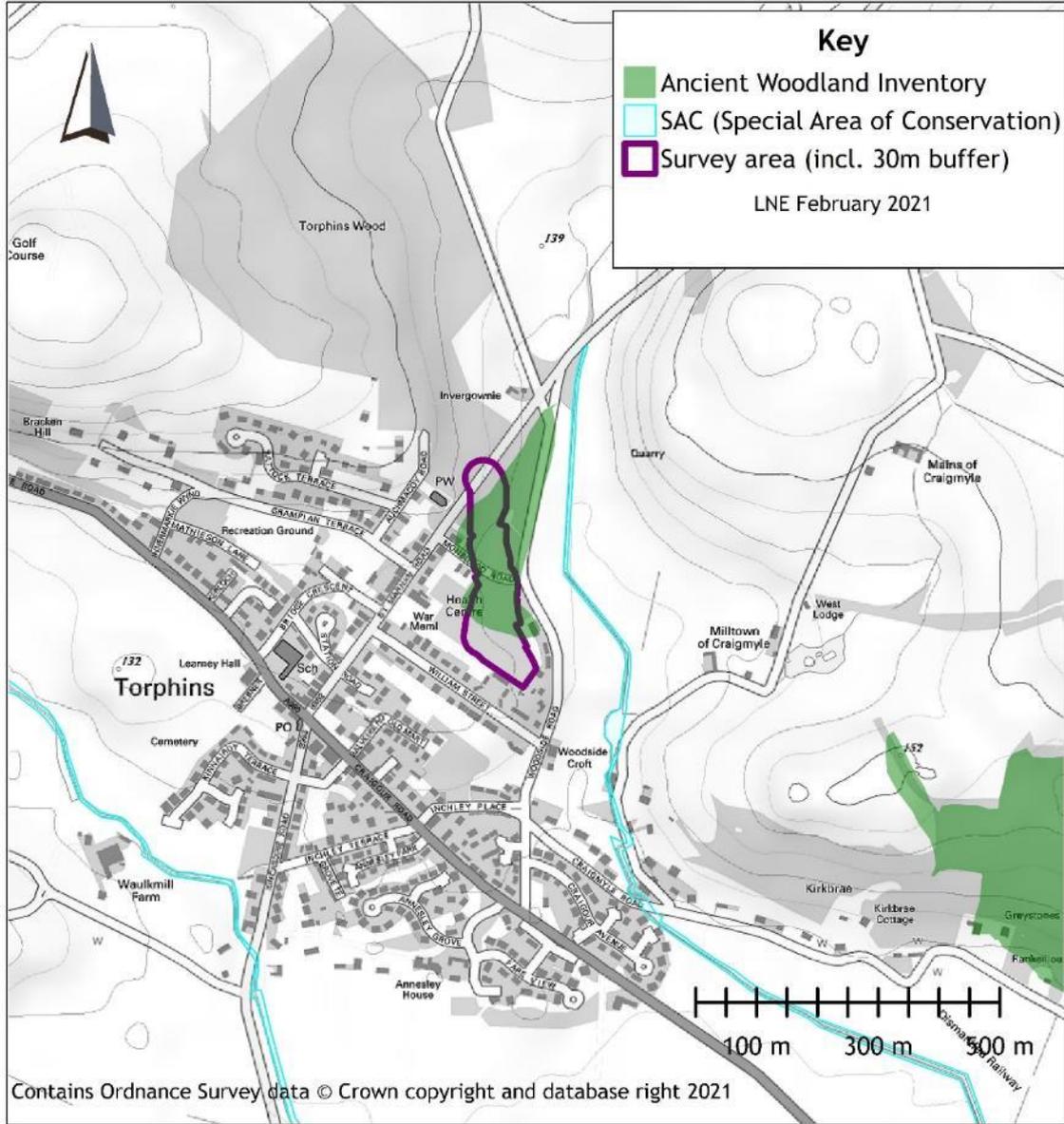
\*SAC – Special Area of Conservation, SSSI – Site of Special Scientific Interest

#### 3.3 Ancient Woodland

The majority of Torphins Wood lying to the east of St Marnan Rd is classified under the Ancient Woodland Inventory as “Long established (of plantation origin) 2b”, as shown on maps from 1860 (see Fig 2 below).



Fig 2: Designated sites within ~1km radius of site



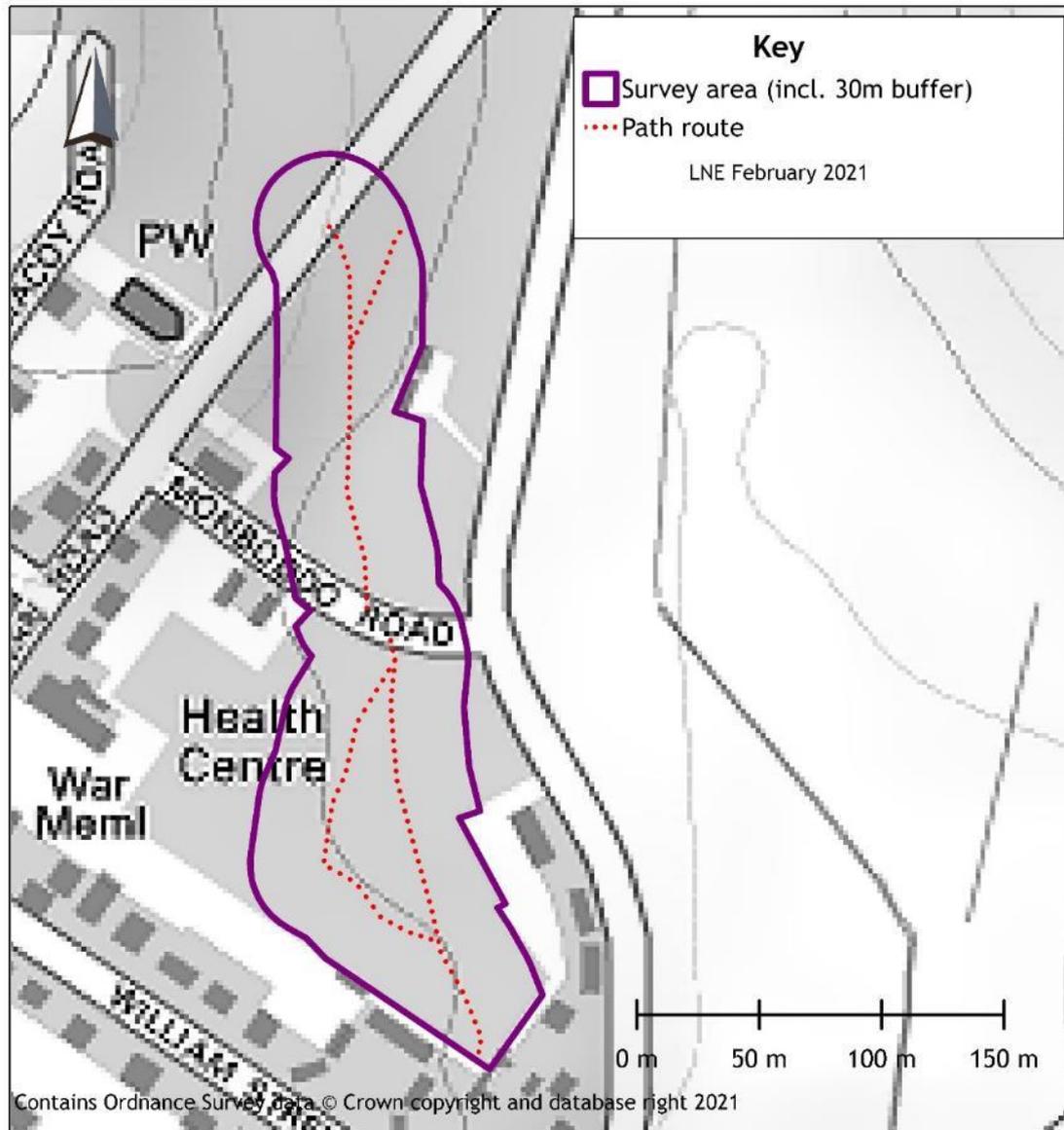
## 4.0 Survey Methodology

### 4.1 Survey area

The survey area comprised a ~550m stretch of existing footpath path through Torphins Wood, plus a 30m buffer on all sides. Residential gardens were excluded from the survey area.

In total, the survey area covered approximately 2.5ha.

*Fig. 3: Phase 1 habitat survey area*





## 4.2 Phase 1 Habitat Survey

Phase 1 Habitat Surveys (JNCC 1990; revised 2003) are a standard national classification scheme of broad habitat types and are based on plant species presence and some abiotic indicators such as peat depth.

Standard Phase 1 methodology was used, including detailed target notes of notable habitats and plant species (those of conservation concern; also those listed on the Northeast Scotland LBAP list of priority species).

The entire site was walked at a slow pace to accurately map all the habitats present. Plant species were identified and habitat types assigned and mapped in the field (see Fig. 4 below).

Common species names and scientific names (Stace C (1997) *New Flora of the British Isles. Second Ed.* Cambridge University Press.) are given in the text below.

## 4.3 Badger Field Signs

Boundaries, areas of trees, etc. were scrutinised for signs of badger presence in the area. Characteristic signs of this species include:

- Setts – ranging from isolated single holes to main setts consisting of several entrances and linked tunnels underground
- Runs/paths connecting setts, leading to foraging areas etc.
- Faeces – often found in small excavated pits (latrines), used to mark range boundaries
- Footprints
- Hair, often stuck to the bottom wire of fences, particularly barbed wire
- Scratching marks at the base of tree trunks
- Live sightings

## 4.4 Water Vole Field Signs

- |   |              |
|---|--------------|
| • Latrines  | • Nest holes |
| • Droppings   | • Runs       |
| • Feeding stations/   | • Lawns      |
| • Paw prints  |              |
| • Sounds (distinct ‘plop’ when entering water upon disturbance) |              |

## 4.5 Otter Field Signs

The survey area was scrutinised for signs of otter presence. Characteristic signs of this species include:

- |                   |                                  |
|-------------------|----------------------------------|
| • Spraint sites   | • Slides/Runs through vegetation |
| • Footprints      | • Resting sites or “couches”     |
| • Feeding remains | • Holts                          |

Otters utilise different resting sites and where possible, these are categorised (e.g. natal holt used to rear young, holt used for shelter/protection or couch used for commuting, feeding or temporary resting during foraging).



#### 4.6 Red Squirrel Field Signs

The survey site and buffer were visually assessed for suitable habitat and signs of squirrel (e.g. chewed pine cone and other feeding signs) presence during the systematic walkover.

#### 4.7 Pine Marten Field Signs

The survey area was scrutinised for signs of pine marten presence. Characteristic signs of this species include:

- Scats
- Footprints
- Den sites

#### 4.8 Wood Ant Field Signs

The survey corridor was inspected for general habitat and signs of wood ants. Wood ant nests typically consist of a characteristic dome-shaped pile of pine needles up to 1-1.5 metre high and 2 metres in diameter at base.

For any nest encountered, the following was recorded:

- Nest mound size class (small= $\leq$ 50cm; medium 50-150cm; large= $\geq$ 150cm)
- Whether nest is part of a connected cluster or is isolated

#### 4.9 Bat Habitat Potential

An assessment was made of habitats and landscape features with bat foraging or roosting potential.

#### 4.10 General Wildlife

Habitats present were assessed for potential use by other wildlife, including woodland birds such as tawny owl *Strix aluco*.

#### 4.11 Limitations

The Phase 1 Habitat maps in this report are indicative of the habitat boundaries of the site: in the field, there may not always be a distinct boundary between vegetation types, but rather a more gradual transition between two habitat categories. The recommended time to undertake Phase 1 habitat surveys is April-September, as the optimal period for identifying growing plants.

In relation to species-specific survey, all reasonable effort was taken to ensure an accurate assessment of the situation at the time of survey. However, the absence of recorded signs should not be taken as an absolute guarantee that the site was not being used by a particular species. There is also no guarantee that any particular species will not use the site at any time in the future. Survey results may be weather or seasonally dependant.

Where conditions are considered unsafe and/or vegetation is impenetrable, the surveyor reserves the right to exclude these areas from survey.

## 5.0 Survey Results

The site was surveyed on 24 February 2021, a cool and bright day. Conditions underfoot were suitable for observing recent field signs.

### 5.1 Site Description

The area surveyed comprised wooded ground on the outskirts of Torphins. The surveyed section is flanked by St Marnan Rd to the west, Woodside Rd to the east, and bisected by Monboddoo Rd towards the southern end of the area.

Due to its location immediately adjacent to residential areas, the woods are well used by the local community. A variety of recreational users were noted during the survey including a number of dog walkers, joggers, and parents and children walking and cycling. In addition, signs of likely community group projects such as squirrel and bird nest boxes and feeders, planted daffodil bulbs, 'fairy doors' and den-making.

The footpaths were well sign-posted and surfaced and in good condition.

The path routes traverse mainly broadleaf plantation woodland, with a small area of coniferous plantation woodland to the southwest.

Evidence of rabbit and roe deer was noted throughout the survey area.

### 5.2 Phase 1 Habitats

In total, 5 linear and non-linear habitats were recorded in the survey area. Public roads were not mapped as habitats. Refer to *Fig 4: Phase 1 habitat survey* at the end of this sub-chapter.

Protected species field signs are covered in section 5.3-5.6 below and presented as Phase 1 Habitat survey target points in Appendix 2.

*Table 1: Phase 1 Habitat types within survey area (proposed path route + 30m buffer)*

Habitat	Area (ha)	% of survey area
A1.1.2 Broad-leaved plantation woodland	1.86	74%
A1.2.2 Coniferous plantation woodland	0.52	21%
Public road	~0.12	5%
Linear features (G2 open running water J2.4 fence; J2.5 wall)	<0.1	<1
	<b>~2.5ha</b>	<b>100%</b>



### A1.1.2 Broadleaved plantation woodland

The majority of the survey area comprised mature broadleaf plantation woodland. Dominant species were beech *Fagus sylvatica*, with silver birch *Betula pendula*, as well as occasional holly *Ilex aquifolium*, sycamore *Acer pseudoplatanus*, rowan *Sorbus aucuparia*, spruce and cypress species.

The woodland had a diverse structure, with self-seeded saplings and seedlings of birch, holly, beech and occasional sycamore and oak noted, as well as standing and lying deadwood and brash. Thick leaf litter covered much of the ground, particularly beneath the beech. Noted species in the sparse ground layer were variegated ground ivy *Glechoma hederacea*, raspberry *Rubus idaeus*, bramble *Rubus fruticosus*, honeysuckle *Lonicera periclymenum*, wood sorrel *Oxalis acetosella*, wood avens *Geum urbanum*, wood anemone *Anemone nemorosa*, ferns and bryophytes, particularly on boulders, which were a feature throughout the woodland. In wetter areas, tufted hairgrass *Deschampsia cespitosa*, soft rush *Juncus effusus* and angelica *Angelica archangelica* were noted. Within the centre of the wood's southern section, low-lying wet conditions gave rise to some standing water.

A small area of recently planted broadleaf woodland was recorded in the southeast corner of the survey area, comprising 80+ birch, beech and oak *Quercus spp.* in 1.2m guards.

Along the footpath edges, occasional tufts of daffodil *Narcissus pseudonarcissus* were observed, likely to have been planted. Garden waste spoil and escapees such as snowdrop and honesty were noted near to residential garden walls.

Occasional roe deer droppings and hoof prints were noted throughout.



*Photo 1: Broadleaf plantation woodland with path, northern section of survey area*



*Photo 2: Broadleaf plantation woodland with path, south section of survey area*



*Photo 3: Wetter section of broadleaf woodland with small pool of standing water*

#### A1.2.2 Coniferous plantation woodland

Towards the south west of the survey area, tracts of coniferous plantation were present, comprising a large stand of mature Scots pine *Pinus sylvestris* west of the foot paths, as well as a small dense group of spruce *Picea* sp to the east, bordering residential gardens.

Understorey was generally sparse, with deep leaf litter and occasional holly. Small stands of rhododendron *Rhododendron ponticum* were recorded within, and at the edge of, the Scots pine stand.

In addition to installed and well-used squirrel feeders, squirrel feed signs of chewed cones were noted on the forest floor in this area - see section 5.4 for details.

This area of woodland was noted to contain a rookery, with a number of nests observed high in the canopy, as well as a flock of corvids circling above.



*Photo 3: Pine woodland*



*Photo 4: Squirrel feeder in coniferous woodland*

#### G2 Open Running water

A shallow drainage ditch was noted traversing the northern part of the survey area. Presence of running water within this ditch may be seasonal, as it was very shallow with occasional stretches of open water visible, draining from Monboddo Road eastwards.



*Photo 5: Drainage ditch*

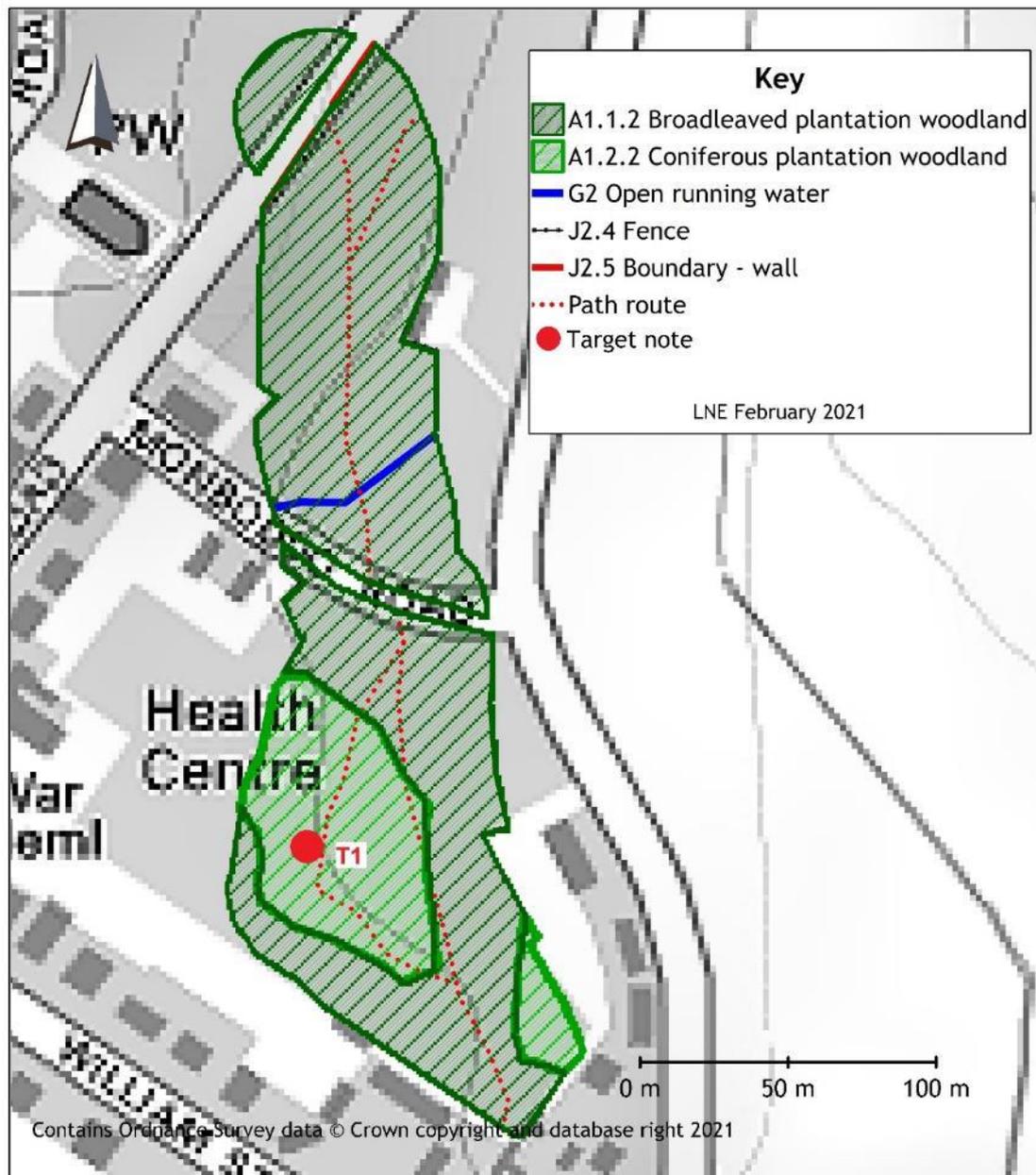
#### J2.4 Fence

A variety of fence types was noted demarking the boundary to residential areas, as well as safety fences where paths exit on to a public road.

#### J2.5 Wall

A moss-covered old stone dyke demarks the woodland edge along St. Marnan Rd.

Fig. 4: Phase 1 habitat survey



### 5.3 Protected Species Badger, Pine Marten, Otter, Water Vole and Wood Ant

No field signs of these protected species were observed. The small watercourse recorded crossing the footpath is unlikely to offer suitable habitat for otter or water vole.

### 5.4 Protected Species Red Squirrel

Signs of feeding squirrel were recorded in the conifer woodland area. Squirrel feeders installed here appear well used. In addition, feed signs comprising accumulations of chewed cones and scattered scales were observed in several locations. No likely squirrel dreys were noted.



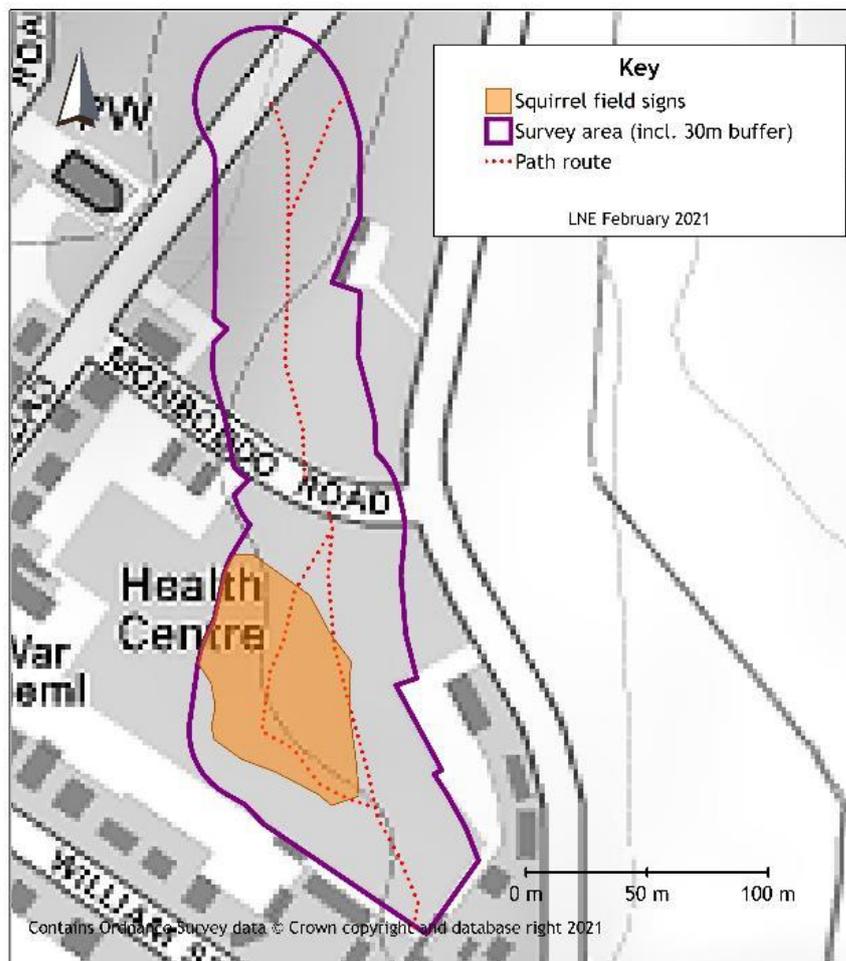
Photo 6: Squirrel feed signs

### 5.5 Bat Habitat Potential

The site offers very limited potential roosting opportunities for bats: mature tree species present are predominantly beech and birch, which typically lack suitable crevices such as rot holes and lifted bark.

Foraging habitat is good for bat species due to the open nature of the woodland and surrounding wider landscape of mixed woodland and watercourses.

Fig. 5: Protected species field signs





## 5.6 General Wildlife

A large number of corvids were observed displaying territorial behaviour above the canopy of mature Scots pines. Signs were indicative of early nesting preparations.

A range of other passerines were observed and heard calling throughout the wood, including great tit, robin, blue tit, chaffinch and woodpecker (at distance). Numerous possible nest structures, presumably from previous breeding seasons, were noted within mature and semi-mature broadleaved trees.

The woodlands have potential to be part of the foraging territory of tawny owl, although individuals are unlikely to nest within the survey area due to a scarcity of trees with suitable cavities, and the high level of disturbance by recreational users throughout the year.

## 6.0 Evaluation & Assessment

### 6.1 Habitats

The surveyed footpaths traverse a small section of the Torphins Woods. Woodland types present on site are not of particularly high conservation status or concern, nor are they considered priority woodland types in terms of biodiversity.

None of the habitats or species present appear on the UK Biodiversity Action Plan list for priority habitats or the Scottish Biodiversity List, a list of animals, plants and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland.

However, in the context of an improved agricultural landscape where semi-natural wooded habitats are uncommon, these types of plantation woodlands - which are being managed to enhance variety in composition and age structure - are of relative ecological significance.

These parts of Torphins woodlands, which border and link up residential areas, appear to be frequently and regularly used for recreation by dog walkers, joggers, older members of the community and young families passing through. Vegetation along footpath edges displayed some wear and tear from this footfall. Wildlife is likely to be habituated to the level of disturbance.

- It is not anticipated that the proposed installation will impact the composition or structures of the woodland habitat, as it will follow existing and well-established routes.

### 6.2 Protected Species Red Squirrel

Feed remains and species records indicate that red squirrel are active in this area of Torphins Woods, particularly within the stand of coniferous woodland. The well-stocked squirrel feeders are likely to increase the attraction of this small area of squirrel habitat for the species in terms of use for foraging.

The presence of a large number of nesting crows and high levels of human activity (presumably throughout the year) are likely to reduce the potential of the area for breeding squirrel, and no dreys were noted within the survey area.

- The main red squirrel breeding season is February to September (inclusive). Hence, as long as the temporary illuminations are dismantled before the end of January, they would not have potential to impact breeding squirrels.



### 6.3 Bats

Bat roosting potential within the site is very limited due to the species of trees present. When the Winter Wonderland is operating in December and January, bats will typically be hibernating, and are unlikely to be using the woods for foraging.

- It is therefore anticipated that the continued use of paths and woodland for the illumination project, as well as the proposed extension, will have no significant potential impact on bats.

### 6.4 General Wildlife

Tawny owl may use the woodland for occasional foraging. The home range is typically established in late autumn and defended throughout the winter until the spring when breeding commences. The main nesting period in Scotland is mid-Feb to mid-July, and therefore outwith the festive season when illuminations would be in operation.

Tawny owl territories range between 12 and 20 hectares depending on the amount of suitable habitat available. There is ample good foraging habitat in the vicinity of Torphins Wood, hence the relatively small area of habitat affected by the illuminations is unlikely to compromise foraging opportunities for local tawny owl populations significantly.

A number of woodland birds were noted during the survey. However, as the illuminations are timed outside the nesting season, no significant impact on this sensitive time period for birds is anticipated.

The footprint of the illuminations is relatively small, and follows the route of the existing, well-used footpaths.

- It is therefore not expected that the Winter Wonderland project in its current or proposed extended form will have a significant impact on local bird populations in general.



## 7.0 References

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Rose, Francis. (2006). *The Wildflower Key*. Revised Edition.

Scottish Biodiversity List <http://www.gov.scot/Topics/Environment/Wildlife-Habitats/16118/Biodiversitylist/SBL>

NatureScot sitelink: <https://sitelink.nature.scot/home>

UK BAP List of Priority Habitats <http://jncc.defra.gov.uk/page-5706>

<https://www.barnowltrust.org.uk/barn-owl-facts/uk-owl-species/tawny-owl-facts>

### Disclaimer

All reasonable effort was taken to ensure an accurate assessment of the situation at the time of survey. However, the absence of recorded signs should not be taken as an absolute guarantee that the site was not being used by a particular species. There is also no guarantee that any particular species will not use the site at any time in the future. Survey results may be weather or seasonally dependant.

### Data sharing

The species record data gathered under this contract will be made available for conservation, planning and research purposes after the completion of the contract, in accordance with the CIEEM code of conduct. Records will be noted as a grid reference, date and species observed. No personal information such as addresses or names will be disclosed.

Example record: 01/06/2017 - Soprano pipistrelle - live specimen - Migvie - NJ43370667

## Appendix 1 : Phase 1 Habitats within Survey Area

Phase 1 Code	Description
A1.1.2	Plantation broadleaved woodland
A1.2.2	Plantation coniferous woodland
G2	Open running water
J2.4	Boundaries – fence
J2.5	Boundaries - wall



---

## Appendix 2 : Target Notes

### **T1 NJ 62650 01902**

Squirrel feed signs scattered across conifer plantation forest floor in several locations. Well used squirrel feeders.