A83 Rest and Be Thankful

LTS EIAR VOLUME 4, APPENDIX 11.10 - RED SQUIRREL REPORT

Transport Scotland

A83AAB-AWJ-EAC-LTS_GEN-RP-LE-000266

11-10. Red Squirrel Report

11-10.1. Introduction

Terms of Reference

A11-10.1.1. AtkinsRéalis WSP Joint Venture (AWJV) were commissioned by Transport Scotland as part of the A83 Rest and Be Thankful Project (hereafter referred to as the Proposed Scheme), to prepare a red squirrel *Sciurus vulgaris* baseline report.

A11-10.1.2. The baseline survey results of the Proposed Scheme Natural Capital (NC) and Biodiversity Net Gain (BNG) enhancement areas are considered within Appendix 11.16: Enhancement Site Survey Report. The findings for the enhancement sites are not discussed within this report. The Proposed Scheme, excluding the NC and BNG enhancement areas, will be referred to as the Proposed Scheme (excl. NC & BNG) hereafter.

11-10.2. Purpose of Report

A11-10.2.1. This report is intended to provide baseline information regarding red squirrel to inform the Environmental Impact Assessment (EIA) Report for the Proposed Scheme.

A11-10.2.2. The report presents ecological information obtained during the following:

- a review of Jacobs AECOM Joint Venture (2022): Access to Argyll and Bute (A83) Medium Term Solution Protected and Notable Mammals Report
- a desk-study involving the review of data available online undertaken in February 2023 and November 2023
- initial scoping surveys conducted during March and April 2023 and
- targeted presence/likely absence surveys conducted during July, August and September 2023.

11-10.3. Legislation

A11-10.3.1. See Appendix 11.2: Biodiversity Legislation, Policy and Guidance for a summary of key relevant legislation.

11-10.4. Methodology

Desk Study

A11-10.4.1. The geographical area for obtaining ecological data through desk studies has been determined using CIEEM Guidelines for Biodiversity Data, CIEEM Guidelines for Preliminary Ecological Appraisal and professional judgement. Desk study data has been gathered through a data request and using online resources. In January 2023, a request for red squirrel records was submitted to the Argyll Biological Records Centre (ABReC) for a 2km buffer of the Proposed Scheme (excl. NC & BNG). Due to staff illness, ABReC were not able to provide a full data search report. ABReC confirmed their records could be downloaded from National Biodiversity Network (NBN) Atlas and used in any reports relating to the search (see Volume 2, Chapter 11 Biodiversity for details of communication with ABReC). The records were downloaded and reviewed in February and in November 2023 from the NBN Atlas for a 2km buffer of the Proposed Scheme (excl. NC & BNG). Only records within the last 10 years were considered.

Data Review

A11-10.4.2. A desk-based review of the 2021 and 2022 data (Jacobs AECOM Joint Venture (2022): Access to Argyll and Bute (A83) Medium Term Solution Protected and Notable Mammals Report) was undertaken for red squirrel. This included a data review of commercially available records from the NBN Atlas between 2004 and 2020, records from the Scottish Wildlife Trust (SWT), the British Trust of Ornithology (BTO), and ABReC.

Field Survey

A11-10.4.3. The red squirrel survey area was defined as the Proposed Scheme (excl. NC & BNG) plus a 100m buffer, illustrated in Volume 3, Figure 11.10a: Red Squirrel Survey Area. This was to include the 50m outlined by NatureScot

Standing Advice for Red Squirrel along with an extra 50m to account for any potential design iteration changes. Data outside of the survey area was collected at the time the preferred option was under consideration in 2023, this data is included to provide contextual information on presence and distribution of this species in relation to the Proposed Scheme.

A11-10.4.4. Scoping surveys were undertaken during March and April 2023. The surveys involved suitably experienced surveyors walking along existing forestry tracks to identify woodland blocks suitable for red squirrel. The surveys also recorded any incidental sightings of squirrels and identified safe access routes into and through woodland areas for the planning of targeted presence/likely absence surveys (detailed below). The surveys, which could be conducted at any time of the year, were undertaken in line with survey guidelines (Practical Techniques for Surveying and Monitoring Squirrels and UK BAP Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation).

A11-10.4.5. Targeted presence/likely absence surveys were conducted within suitable woodland blocks (as identified during the scoping surveys) between July and September 2023. Surveyors walked slowly through woodland blocks and along treelines (where safely accessible), stopping periodically to look up for dreys, red squirrels and other field signs. Any sightings or evidence of red squirrels was recorded using Arc-GIS Fieldmaps as geo-referenced target notes.

A11-10.4.6. The presence/likely absence surveys were carried out following current guidance (Practical Techniques for Surveying and Monitoring Squirrels) and in accordance with survey guidance for initial non-intrusive visual surveys UK BAP Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation, and NatureScot Standing Advice for Red Squirrel.

A11-10.4.7. The following red squirrel field signs were recorded:

- visual sightings
- prints

- foraging signs, including chewed or stripped cones with top section remaining untouched, which are often discarded on prominent features at feeding stations and
- nest sites, also known as dreys, within trees (can be conifer or broadleaf species) and comprising of spherical collections (c. 0.3m) of twigs and leaves and usually located at least 3m up, in the fork of branches close to the trunk of the tree.

Survey Limitations

A11-10.4.8. As a highly mobile species, red squirrels can travel freely throughout the survey area and surrounding area at any time. As such, the data presented in this report provides a 'snapshot' of the baseline at the time of survey but does not guarantee that additional features (such as dreys) will not appear after the date of the most recent survey in September 2023.

A11-10.4.9. Due to the presence of non-native invasive grey squirrels *Sciurus carolinensis* in the wider area alongside native red squirrels, evidence of squirrels (except for direct sightings) cannot be relied on to distinguish between red or grey squirrels (NatureScot Standing Advice for Red Squirrel). As such, without observational evidence any dreys found during surveys have the potential to belong to red squirrel and will be presumed so for the purposes of the assessment.

A11-10.4.10. Access to the survey area was limited due to health safety constraints associated with felling operations within plantation woodland, wind throw, steep slopes and woodland having been recently felled. Therefore, some parts of the red squirrel survey area could not be safely accessed, therefore presence or likely absence of red squirrel in these areas cannot be confirmed. The areas which could not be accessed during the survey are illustrated in Volume 3, Figure 11.10a: Red Squirrel Survey Area.

A11-10.4.11. Minor edits were made to the scheme boundary during finalisation of the EIAR (totalling less than 0.25 ha collectively), but these have not been taken into account in area calculations. These areas have been checked against species records to confirm that they would not make any changes to

requirements for licences or other mitigation. This is not considered to create any significant limitations on the assessment.

11-10.5. Results

Desk Study

A11-10.5.1. The desk study identified 256 records of red squirrel from within the last 10 years within the surrounding 2km area. Most results are present within woodland near Ardgarten which is situated south of the Proposed Scheme extending to Ardgarten and along the western banks of the Croe Water (outwith the red squirrel survey area), but 58 records are within the woodland at the entrance to the Ardgarten Forest adjacent to Glen Croe (approximately 45m west of the Proposed Scheme (excl. NC & BNG)).

Data Review

A11-10.5.2. The data review concluded that red squirrel density in conifer plantation within the red squirrel survey area, which is dominated by Sitka spruce, can be expected to be low (Sitka spruce is the least favourable coniferous woodland type for red squirrel, owing to factors such as small seed size (pine-dominated woodland is the most favourable), and red squirrel density is lowest in Sitka spruce-dominated plantation (Harris, S., Yalden D.W. (2008). Mammals of the British Isles: Handbook (4th Edition); Forestry Commission Information Note: Habitat use by red and grey squirrels - results of two recent studies and implications for management (forestresearch.gov.uk); Lurz, P.W.W., Garson, P.J., Rushton, S.P. (1995). The Ecology of Squirrels in Spruce Dominated Plantations: Implications for Forest Management. Forest Ecology and Management).

A11-10.5.3. Incidental survey records from 2022 also returned one record of squirrel feeding remains, located under a pine tree within conifer plantation 136m west of the Proposed Scheme (excl. NC & BNG), RS7 shown on Volume 3, Figure 11.10b: Red Squirrel Survey Results.

Field Survey

A11-10.5.4. The Proposed Scheme (excl. NC & BNG) contains suitable habitat for foraging and commuting red squirrel consisting of areas of scrub adjacent to the existing OMR and A83. A small area of conifer plantation below the A83 at the southern extent of the Proposed Scheme (excl. NC & BNG) offers suitable habitat for drey building. The wider red squirrel survey area holds habitat of greater suitability than the Proposed Scheme (excl. NC & BNG) area; primarily to the west within Ardgartan Forest and within a pocket of plantation woodland to the south east. The habitat here is suitable to support foraging, commuting and drey construction. Within the wider area the suitability remains equally high with connective continuous woodland to the south east and west heading south consisting of mature plantation forestry which is part of the Ardgartan Forest.

A11-10.5.5. All field survey target notes, identifiers and descriptions are provided in Table A11-10.1 in Annex 11.10.A; and illustrated in Volume 3, Figure 11.10a: Red Squirrel Survey Area.

A11-10.5.6. The majority of potential red squirrel records relevant to the Proposed Scheme (excl. NC & BNG) (with exception of one, RS6 which was found east of the A83) were located on the western side of the Croe Water.

A11-10.5.7. One potential red squirrel drey (RS6) was located at approximately 126m east of the Proposed Scheme (excl. NC & BNG), above the A83. One dead conifer with chewed holes within the main stem suitable for use by red squirrels (RS8) was located 120m of the Proposed Scheme (excl. NC & BNG).

A11-10.5.8. Four squirrel feeding station (feeder boxes) were found adjacent to the Proposed Scheme (excl. NC & BNG). These included RS1 (at 46m), RS2 (at 71m), RS3 (at 75m), and RS5 (at 79m) from the Proposed Scheme (excl. NC & BNG). The feeder boxes are used to monitor the presence of red and grey squirrels in the area and each box had a label denoting that they belong to Saving Scotland's Red Squirrels (part of Scottish Wildlife Trust). The last

records from the boxes were in 2019 and it is unknown if they are currently actively used.

A11-10.5.9. Two separate instances of feeding signs were found (at RS3 and RS4) within 75m and 89m respectively of the Proposed Scheme (excl. NC & BNG). These were recognisable as squirrel feeding signs from the characteristic chew marks and demonstrates presence of squirrels in the area. No visual observations of red or grey squirrels were made during any of the surveys. Without observational evidence any dreys found have the potential to belong to red squirrel.

A11-10.5.10. No red squirrel dreys were recorded within 50m of either of the Receptor Sites. However, Receptor 1 offers suitable habitat for drey creation and commuting.

11-10.6. Discussion and Conclusion

A11-10.6.1. No red squirrel dreys or sightings were recorded. However, the Proposed Scheme (excl. NC & BNG) contains habitat of limited drey building suitability, except for two small conifer blocks located below the A83 but is considered suitable for foraging and commuting for red squirrel. Suitable habitat is limited to areas of scrub adjacent to the A83 and the Old Military Road (OMR) and along small watercourses.

A11-10.6.2. Outside of the Proposed Scheme (excl. NC & BNG), the survey area offers suitable habitat for this species; primarily to the west (along the River Croe banks) and south within Ardgartan Forest, and within a pocket of plantation woodland to the south east above the A83. The habitat within the survey area is suitable to support foraging, commuting and drey construction.

A11-10.6.3. Outside of the Proposed Scheme the habitat remains suitable with woodland and mature plantation forestry to the south east and west extending south, part of the Ardgartan Forest. A potential red squirrel drey (RS6) and dead conifer with chewed holes suitable for red squirrel (RS8) was located in the wider area; 126m east and 120m west, respectively. Historic red squirrel

presence is known from the desk study results. The locations of the potential red squirrel evidence are illustrated in Volume 3, Figure 11.10b: Red Squirrel Survey Results.

A11-10.6.4. Based on the information gathered, it is assumed that red squirrel are present within low densities within the Proposed Scheme and wider area.

11-10.7. Report Validity

A11-10.7.1. The survey results in this baseline report are valid for 18 months post survey (September 2023) in line with CIEEM lifespan of reports guidance. Surveys are recommended to be repeated should the time between survey and work commencing reach beyond this 18-month period (i.e. beyond March 2025).

Annexes

Annex 11.10.A Target Notes

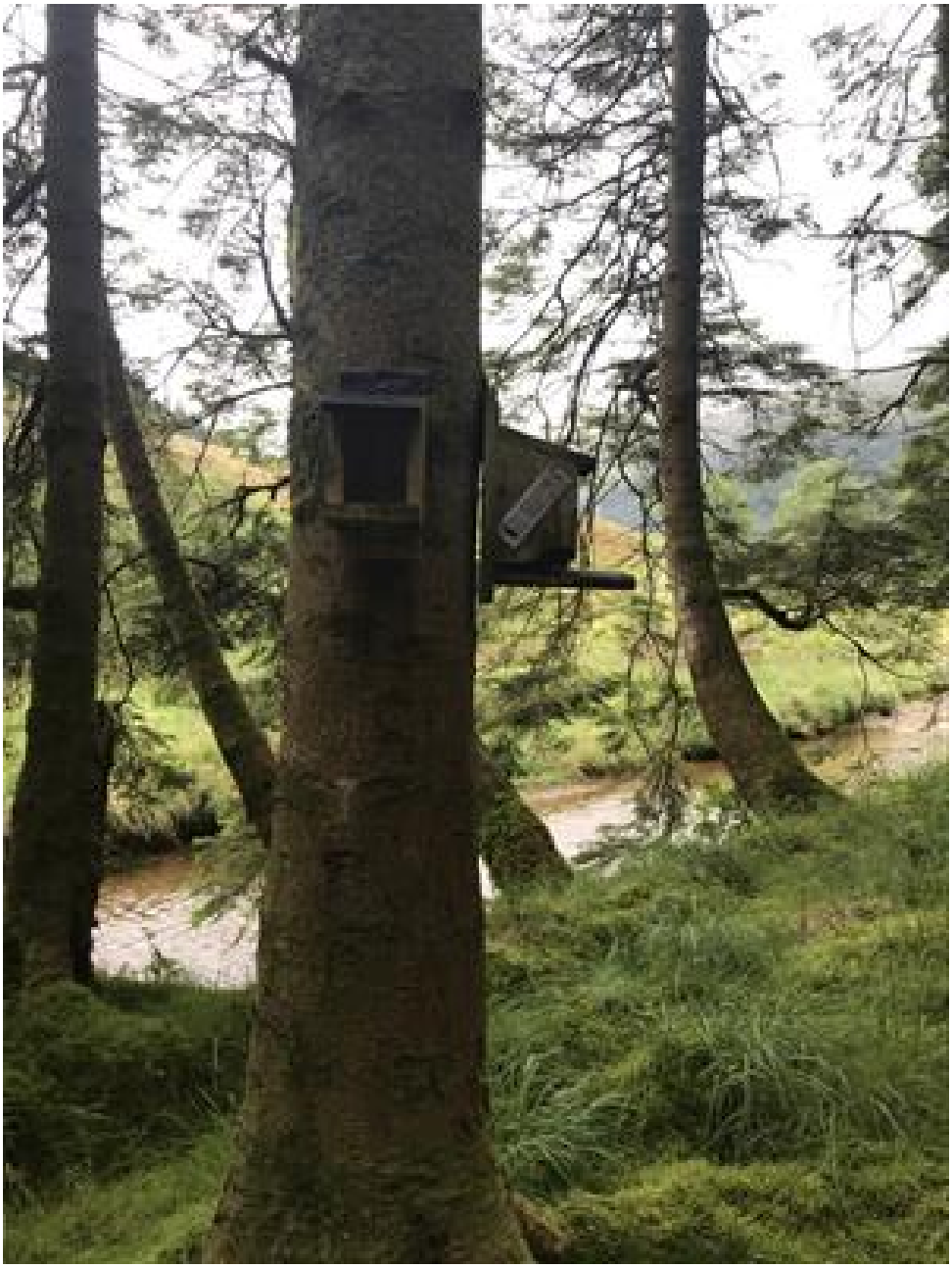
Table A11-10.1 - Red Squirrel Target Notes

Target note ID	Description	Distance and direction from Proposed Scheme (excl. NC & BNG).	Photos
RS1	Saving Scotland's Red Squirrels/Scottish Wildlife Trust Feeding station	Within	Refer to Photograph 1, Annex 11.10.B.
RS2	Saving Scotland's Red Squirrels/Scottish Wildlife Trust Feeding station	16m west	Refer to Photograph 2, Annex 11.10.B.
RS3	Foraging signs present: piles of chewed cones present on moss hummocks beneath large conifer trees. It was too dense to see into canopy.	18m west	Refer to Photograph 3, Annex 11.10.B.
RS4	Foraging signs present: chewed	33m west	Refer to Photograph 4, Annex 11.10.B.

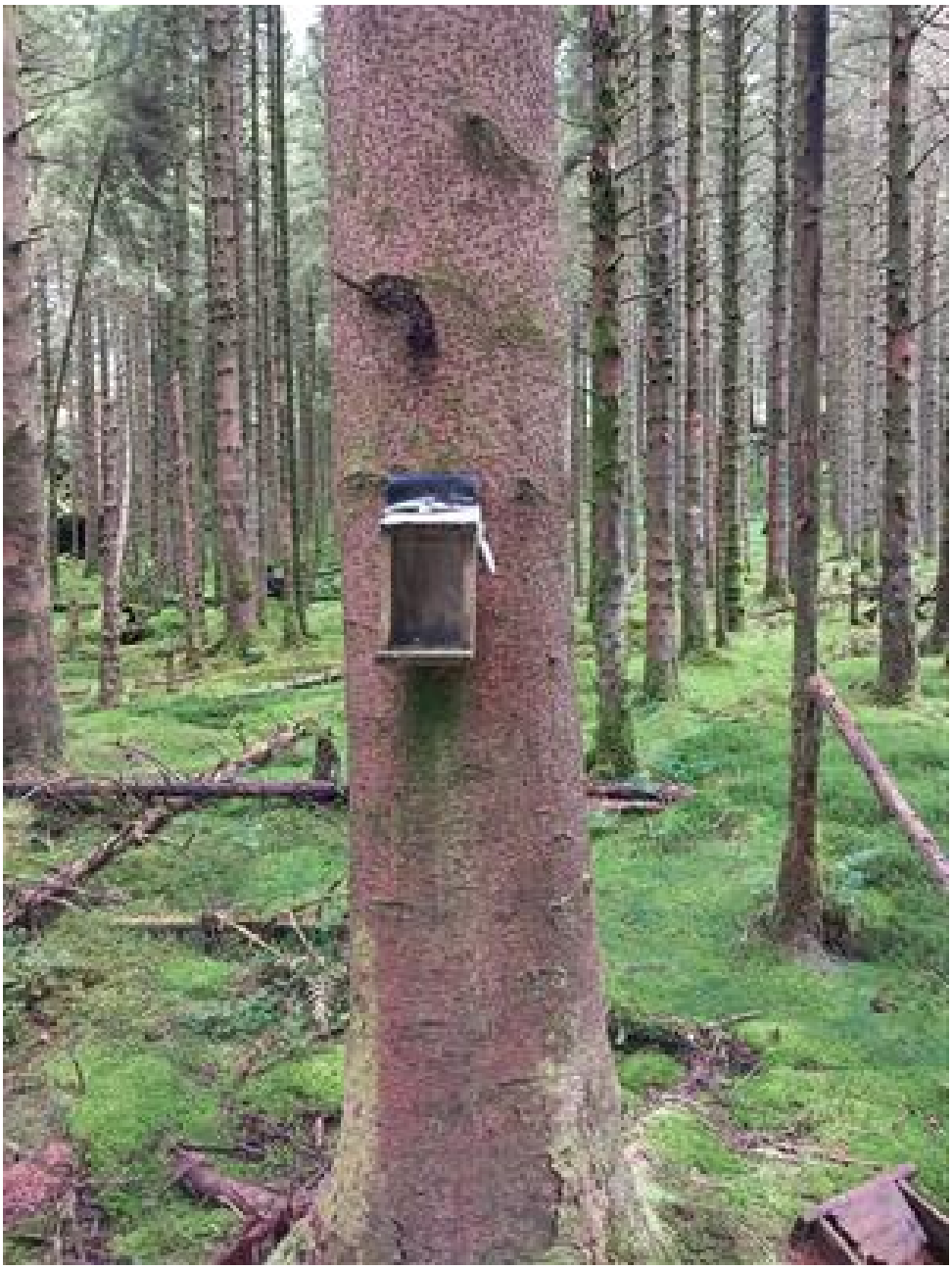
Target note ID	Description	Distance and direction from Proposed Scheme (excl. NC & BNG).	Photos
	cones present within woodland.		
RS5	Saving Scotland's Red Squirrels/Scottish Wildlife Trust Feeding station	14m west	Refer to Photograph 5, Annex 11.10.B.
RS6	Potential red squirrel drey.	126m east	n/a
RS7	Foraging signs present: chewed cones present under conifer tree adjacent a forestry track.	81m west	n/a
RS8	Dead conifer with chewed holes suitable for pine marten or red squirrel leading into larger decay cavities.	90m west	n/a

Annex 11.10.B. Photographs

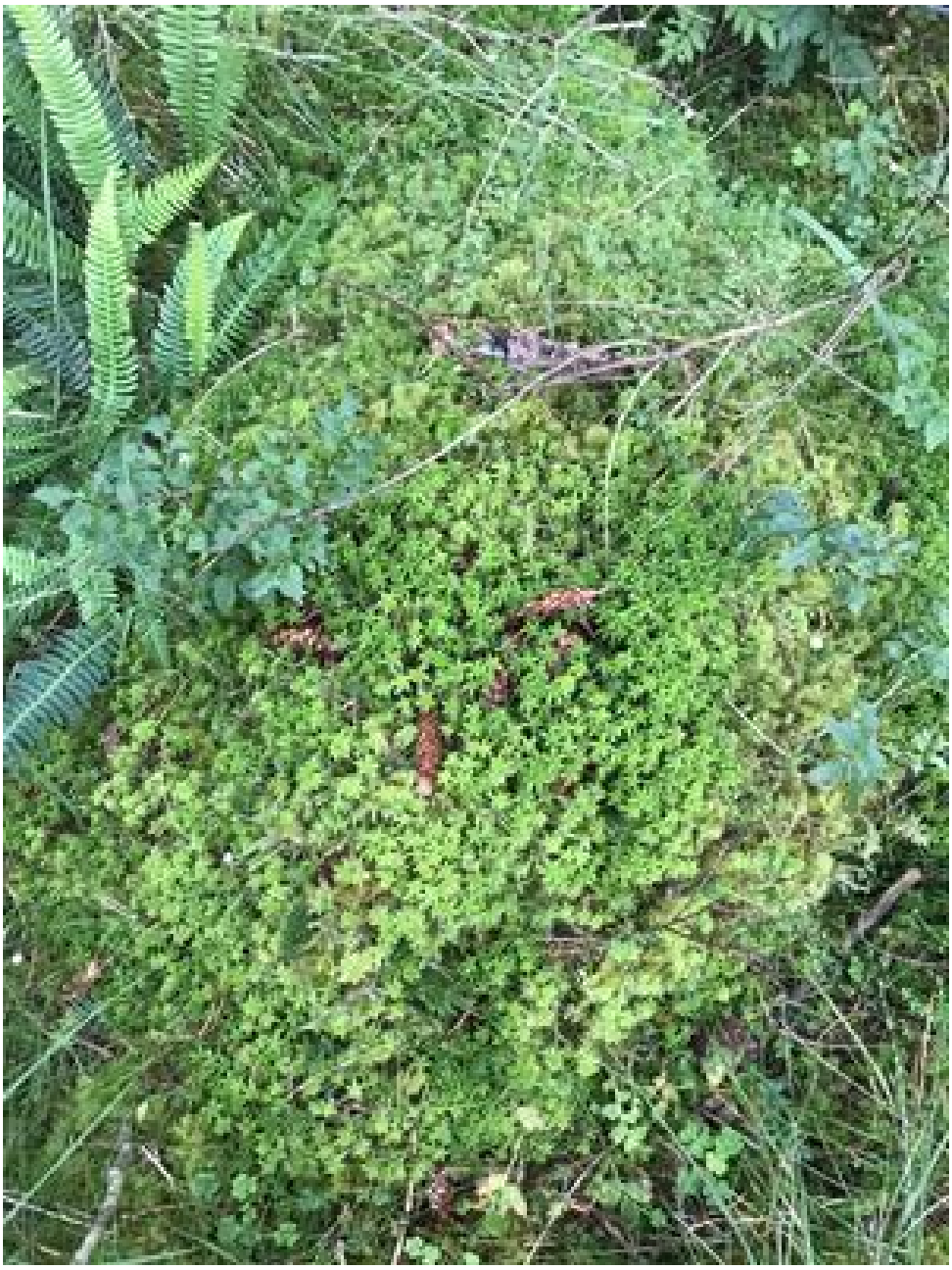
Photograph 1: Target note ID - RS1, a Saving Scotland's Red Squirrels/Scottish Wildlife Trust Feeding station.



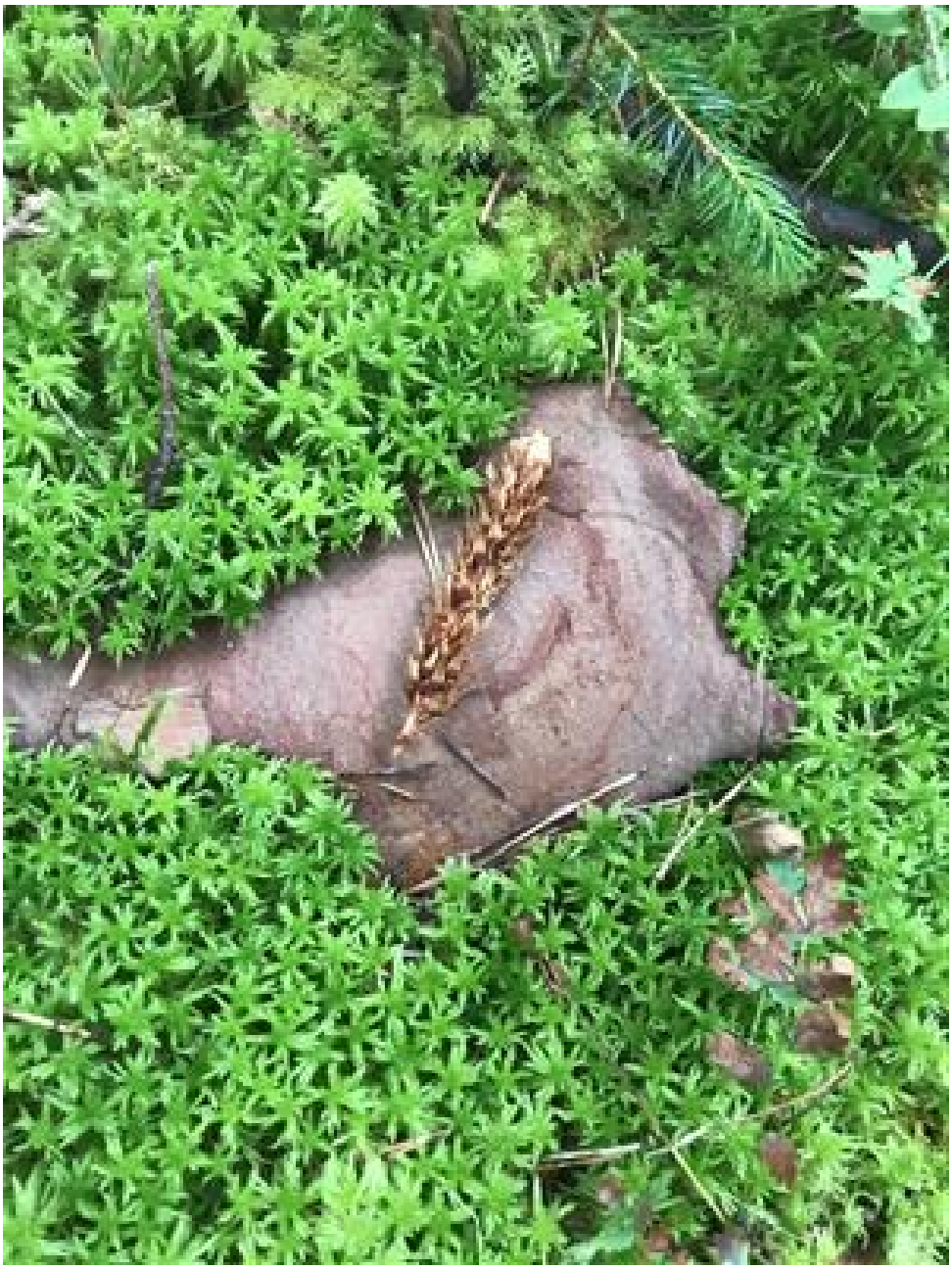
Photograph 2: Target note ID - RS2, a Saving Scotland's Red Squirrels/Scottish Wildlife Trust Feeding station.



Photograph 3: Target note ID - RS3, piles of chewed cones (foraging signs) present on moss hummocks beneath large conifer trees. It was too dense to see into canopy.



Photograph 4: Target note ID - RS4, chewed cones (foraging signs) present within woodland.



Photograph 5: Target note ID - RS5, a Saving Scotland's Red Squirrels/Scottish Wildlife Trust Feeding station.