

## Appendix 7.5: Sallachy Wind Farm Reptile Survey

---



Alba Ecology Ltd.

*Donald Shields MCIEEM*

April 2020 (update February 2021)

Registered Office: Colintra House, High Street, Grantown on Spey, Moray, PH26 3EN, Tel: [REDACTED] [REDACTED]  
[REDACTED]

## Summary

Alba Ecology Ltd. was commissioned by WKN GmbH to conduct a reptile survey within the Site boundary of the proposed Sallachy Wind Farm, near Loch Shin, between Lairg and Laxford Bridge, Sutherland.

Reptile surveys consisted of the use of refugia (in the form of felt mats and corrugated sheets) placed within the Study Area, which was an early iteration of the Site boundary (termed '*indicative Site boundary*') plus 250 m buffer. Three groups of ca. 50 refugia were placed within the Study Area in representative habitats. The refugia were surveyed six times in April and May 2019, with an additional survey in August 2019. During surveys the top of the refugia were inspected when approaching and they were also lifted in-situ and the underneath inspected. Incidental records during walkovers of the Study Area were also recorded.

Surveys recorded the presence of low numbers of common lizard spread across the Study Area. Small numbers of adder were recorded during walkovers in the north of the Study Area. A single record of slow worm was recorded during walkover surveys.

## Introduction

Alba Ecology Ltd. was commissioned by WKN GmbH to undertake a reptile survey within the Site boundary for the proposed Sallachy Wind Farm, near Loch Shin, between Lairg and Laxford Bridge, Sutherland. This work involved assessing the likelihood of the presence of common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*) and adder (*Vipera berus*) within an early iteration of the Site boundary plus a 250 m buffer which together form the Study Area (Figure 1).

The Study Area is an upland area of undulating hill terrain on a north-eastern facing slope which drops in height from the south to north. It is made up largely of blanket bog, heath and grassland. The primary land-use is deer stalking. At the northern edge of the Study Area, within the buffer zone, there is a large area of immature native plantation forestry. There is a patch of mature broadleaved woodland at the western end of this area. There are several small and medium-sized burns within the Study Area, including Allt na Crionaiche Moire, Allt na Crionaiche Bige, Allt na h-Uraid, Allt na Creiche, and An Garbh-Allt. Several watercourses also present within the Study Area are unnamed.

A natural heritage information desk study (Technical Appendix 7.1: Natural Heritage Desk Study Report) was undertaken which identified records of common lizard within 2 km of the Study Area.

This document reports the findings of the reptile survey of the Study Area that was undertaken by Alba Ecology Ltd. between March and August 2019.

## Methods

Standard methodology as described in Froglife (1999) recommends that refugia should be put out in a quantity of 10 per hectare (ha), though the more refugia placed, the higher the likelihood of recording individuals. Herpetofauna Groups of Britain and Ireland (1998) advises a minimum of 50 refuges (or 'tins' as they are described) per hectare. Given the size of the Study Area (ca. 1,210 ha), it was considered that these approaches, across the whole Study Area, would be impractical.

Therefore, the guidance for this large, upland setting was modified by using representative sample areas of appropriate habitats, within the Study Area. Three areas were selected which were considered to be representative of the main habitat types found within the Study Area (mixes of dry heath, wet heath, blanket bog and acid grassland) (Figure 1). The spread of the refugia meant that each representative area covered more than one habitat type. One of these representative areas was close to a location where an adder had been recorded during walkovers thus was known to be suitable for reptiles.

Each representative area was approximately 0.5-1 ha in size. Approximately 50 (47, 49 & 53) refugia were placed in each representative area. Each refugia mat was approximately 1x1 m

in size. For logistical reasons, the majority of the refugia were felt sheets, with around 10 corrugated mats placed at each representative area. This was due to the rolls of felt sheeting (from which the mats were cut) being more portable when being taken to the location on the open hill. This was also the reason the number of refugia were not exactly 50 at each representative area.

Refugia were placed by experienced ecologists Donald Shields, MCIEEM and Dr Dawn Anderson, ACIEEM in early April 2019 (Photo 1). The location of the refugia groups in the representative areas were centred at:

- NC 384 219;
- NC 395 208 and;
- NC 403 200.

A total of six checks of the refugia, at each representative area, were made between April and May 2019. On each visit, the three areas were walked at a slow pace, looking at the top of each of the refuges on approach for any basking reptiles. Then each refuge was carefully lifted and checked underneath. The northerly latitude combined with the upland setting guided the timings of the survey period. Indeed, a survey attempt in early April had to be abandoned due to the mats being invisible under a layer of snow. An additional check of the refugia was completed in August 2019 using the same method.



*Photo 1: Putting out reptile mats in early April 2019.*

In addition to the dedicated reptile surveys, any signs of reptiles were recorded whilst surveyors were within the Study Area e.g. during breeding bird walkover surveys.

## **Legal Protections and Species Information**

### **Common lizard, slow worm and adder**

Three species of reptile are known to have a range extending to Sutherland; common lizard,

slow worm and adder. These three species all appear on schedule 5 of the Wildlife and countryside act (1981) as amended (SNH, 2019). These species are protected against:

- Intentional or reckless killing and injury; and
- Trade – i.e. sale, barter, exchange, transport for sale, or advertise for sale or to buy.

Note, it is not an offence to possess or move these reptile species.

### **Common Lizard (*Zootoca vivipara*)**

The most abundant reptile in the UK, the common lizard is widespread across the country. They are found in a variety of habitats, including heathland, moorland, grassland and stone walls (McInnery & Minting, 2016). They feed largely on insects and spiders.

### **Adder (*Vipera berus*)**

The adder, the UK's only native venomous snake, is widespread across the whole of mainland Britain, as well as some islands such as the Isle of Skye. It has, however, seen recent declines in population across much of its range and efforts to quantify this have been ongoing, particularly in England (Gleed-Owen & Langham, 2012). Adders can be found in open habitats such as heathland, moorland, open woodland and sea cliffs.

### **Slow worm (*Anguis fragilis*)**

A legless lizard, the slow worm is widespread across the whole of mainland Britain, as well as some islands such as the Isle of Skye. Slow worms do not tend to bask in the open like other reptiles, rather hiding under warm objects or in compost heaps or dead wood.

## **Results**

The reptile refugia surveys conducted in 2019 recorded the presence of one species of reptile within the Study Area; common lizard (Photo 2). A total of five common lizards were recorded during refugia surveys at:

- NC 384 219 (a total of three lizards) and;
- NC 395 208 (a total of two lizards).

Low number of common lizard was also recorded widely during walkovers of the Study Area. Adders were recorded on two occasions at NC 398 215 and NC 399 227 (Photo 3; Figure 1).



**Photo 2:** *Common lizard.*



**Photo 3:** *Adder.*

A single sighting of a slow worm was recorded during walkovers of the Study Area at NC 403 196. Locations of the adder and slow worm records are displayed in Figure 1 along with the locations of the refugia groups.

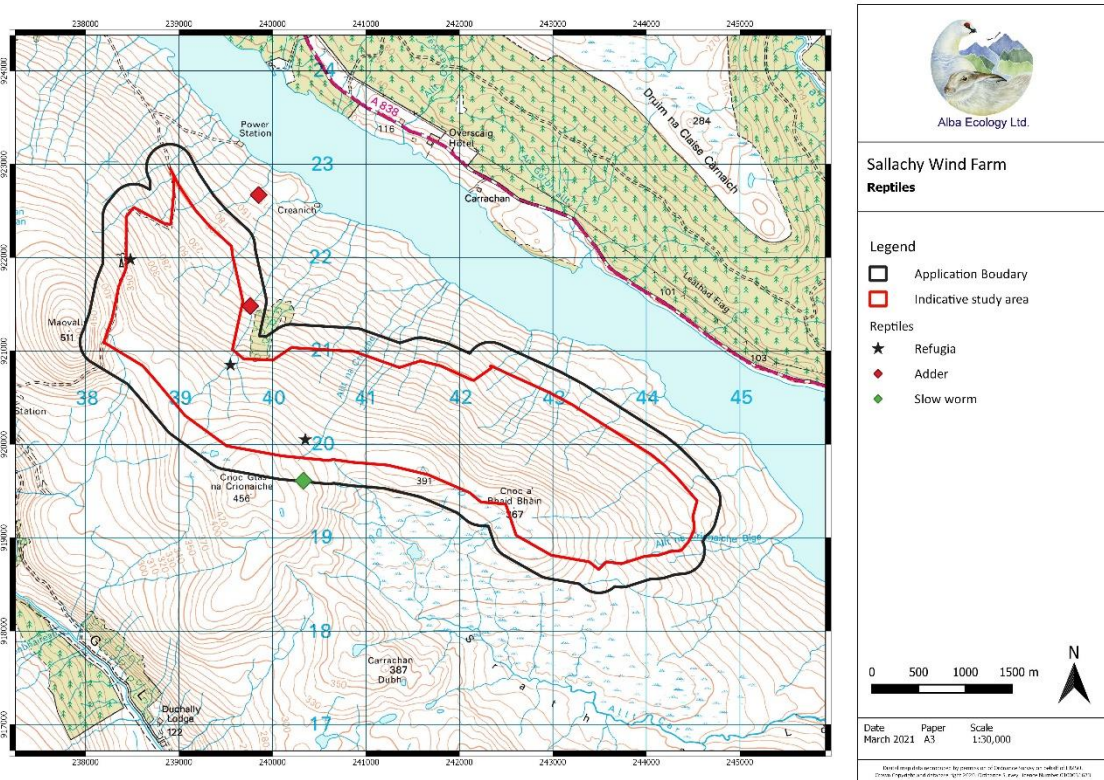


Figure 1: Locations of refugia groups and sightings of slow worm and adder.

## Discussion

Three species of reptile were recorded during reptile surveys: common lizard, slow worm and adder.

Common lizard was recorded widely, but at low densities across the Study Area. This was not surprising as common lizards are relatively common in suitable heath habitats across Highland.

Adders were recorded twice during walkover surveys. A single slow worm was also recorded within the Study Area.

Based on these findings, the Study Area is not considered of particular importance for reptiles. However, common lizards, adders and slow worms, are legally protected species. Therefore, it is recommended that Species Protection Plans are developed prior to construction and a walkover pre-construction survey is conducted by the Ecological Clerk of Works prior to construction commencing.

## References

Froglife, (1999) *Reptile survey: an introduction to planning, conducting and interpreting surveys of snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

Gleed-Owen, C & Langham, S (2012) *The Adder Status Project: A conservation condition assessment of the adder (Vipera berus) in England, with recommendations for future monitoring and conservation policy*. Report to Amphibian and Reptile Conservation. ARC, Bournemouth, UK.

Herpetofauna Groups of Britain and Ireland, (1998) *Evaluating local mitigation / translocation programmes: maintaining best practice and lawful standards*.

McInnery, C & Minting, P. (2016) *The Amphibians and Reptiles of Scotland*. Glasgow Natural History Society.

[SNH. 2019. https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/protected-species-z-guide/protected-species-amphibians-and-reptiles](https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/protected-species-z-guide/protected-species-amphibians-and-reptiles). (Accessed March 2019).