



LIFE13 BIO / UK / 000428

**Fannyside Muir Construction Method Statement:
Reptile Mitigation**

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1 Introduction

This method statement describes the approach to protecting reptiles at Fannyside Muir during the proposed bog restoration. The majority of the habitat within the Project Area is heathland of poor age structure and floral diversity that is unsuitable for reptiles, however the habitat within the area to be cross-tracked (Figure 1) is more favourable due to the variation in vegetation structure. The area to be cross-tracked is known to support common lizard and may potentially support populations of adder and slow-worm. In addition to the vegetative habitat there is an old railway bund remaining from historic peat extraction (Figure 1). The hard-core of the bund is above the water table and the structure is excellent for reptile hibernacula. This bund was present within the area to be cross-tracked, although plans have been adjusted to avoid this (Figure 1).

The majority of restoration methods to be used at Fannyside Muir will be low impact, and are unlikely to result in any significant negative effects. However, cross-tracking could result in a high level of impact, albeit over a short-term. Ditch blocking using excavators to create peat dams also has the potential have negative effects. Therefore, these have been considered in greater detail.

Excavators will be used to create peat dams so as to block ditches. This will involve the machine tracking over the bog, and excavating peat from a borrow pit before using this to block ditches, with the aim of increasing the water table.

A method known as 'cross-tracking' or 'low intervention ground-smoothing' will be used to adjust the micro-topography of the bog to encourage the growth of sphagnum and other bog species (Scottish Power Renewables, no date). A ridge and furrow system is present within the area to be cross-tracked, which results in the ridges becoming dry and vulnerable to colonisation by heather and conifers. This topography is likely to be the result of previous commercial forestry at the north of the Project Area, and the peat milling process used to harvest this resource elsewhere, including the area to be cross-tracked. 'Cross-tracking' involves the use of a heavy, low ground pressure, tracked vehicle rolling over the ridges and furrows in one direction before tracking over again in the perpendicular. This levels the ground so that the water table is equally high, waterlogging the area.

Both ditch blocking and cross-tracking aim raise the water table. This waterlogging provides the anaerobic conditions which, when combined with low-nutrient levels and acidity, allow bog vegetation to thrive.

Despite the short-term negative impacts, the works will create a mosaic of vegetation structure, characteristic of natural bog vegetation, which will be of great benefit to local reptile populations by increasing the area of optimal habitat available. Therefore it can be reported that the restoration works will ultimately have significant positive benefits for reptiles present in the area in the medium and long term.

This document provides the following information:

- Legal protection;
- General species protection protocol; and
- Procedure for injury or fatality of any reptile.

In addition, the Ecological Clerk of Works (ECoW) will include reptiles and their mitigation in Toolbox Talks for machine operators and staff onsite.

2 Legal Protection

All reptiles are protected by law under the Wildlife and Countryside Act 1981 as amended. It is an offence to intentionally or recklessly:

- Kill, injure or take any wild reptile.

Anyone found guilty of an offence is liable to a fine of up to £5000 and/or six months imprisonment.

3 General Species Protection Protocol

This method statement provides recommendations regarding appropriate mitigation options for reptiles when undertaking ditch blocking with excavators or cross-tracking. However, if alternative restoration methods involving machinery are to be used an additional detailed mitigation method statement must be prepared specifying the approach to those particular plans.

As with survey methods, there are no strict guidelines for reptile mitigation, and the Natural England guidance was withdrawn shortly after publication (Natural England 2011). The approach developed here is based on available literature and expert opinion.

3.1 Mitigation protocol

The general mitigation protocol is described in detail below, and must be completed and/or overseen by a suitably qualified and experienced ECoW.

- No activities involving tracking over ground in heaving machinery, devegetation or ground breaking works may take place on potentially suitable reptile habitat (as shown in Figure 1 or as identified onsite by the ECoW) until the area has been cleared for works by the ECoW following the procedures described below:
 - A combination of hand searches and the use of a high density of artificial refugia (50cm x 30cm roofing felt tiles at a minimum density of one tile per 20m²) should be completed by the ECoW (Gent and Gibson 2003). Refugia should be placed one week prior to the first checks. Checks will be completed three times a day under appropriate conditions, including immediately prior to any works and while works are taking place. Any reptiles found will be removed from the area scheduled for works¹;
 - If a reptile is found at any time works must be halted within 30m, and can only resume after the ECoW has removed it and placed it safely outside the area scheduled for works.
- Potential hibernacula features have been identified during ecological surveys completed by Caledonian Conservation Ltd (Norris *et al.* 2015). A railway bund was found to offer excellent hibernacula habitat, and is shown in Figure 1. Works must avoid this feature if at all possible. If it is not possible to avoid this hibernacula feature, a detailed mitigation method statement must be produced. This will include specific mitigation to avoid harm to reptiles. Furthermore, the cross-tracking method to be employed will not increase the water table at the hibernacula, but should another method be used potential effects must be considered and a new mitigation method statement produced. Examples of measures to be included in a specific mitigation document include but are not restricted to:

¹ The cross-tracking activity will take place within a very small area for only a very short period of time before moving on to new locations. Therefore, the use of reptile exclusion fencing would not significantly reduce the risk of harm to reptiles after other recommended mitigation has been implemented. Even if reptiles are not disturbed by the works, by the time a reptile can return to an area it has been removed from the cross-tracking activity will have been completed. As such, the use of reptile exclusion fencing has not been recommended in this case.

- Ensuring works are scheduled to avoid any impact on these during the hibernation season (September to April); and
- Creation of artificial hibernacula features as compensation. If possible, the original hibernaculum should be translocated to a receptor site nearby with similar microhabitat and aspect. If this is not possible, material from the existing hibernaculum should be used in the creation of a new feature, as adders may locate this by scent. If both of these options are not practicable, the new hibernaculum should be created using appropriate local materials. Hibernacula should be designed with reference to best practice documents (e.g. Stebbings 2000; Showler *et al.* 2005; Baker 2010; Edgar *et al.* 2010; Whiting and Booth 2012).
- As reptiles are fragile animals, incorrect handling can cause injury or fatalities. It is therefore essential that any reptiles found are only handled by the ECoW or suitably experienced individual. If a reptile is found by other site staff, they must bring this to the attention of the ECoW as soon as it is safe to do so, so that they can deal with the animal appropriately.
- The ECoW must be present during ditch blocking using excavators or cross-tracking works. Works must follow agreed detailed mitigation method statements.
- A watching brief will be maintained throughout the site during construction. If a reptile is found during works when the ECoW is not present onsite, works must stop as soon as it is safe to do so. Advice must then be sought from the ECoW and an approach agreed prior to works recommencing.

4 Procedures for Injury or Fatality of Any Reptile

In the unlikely event of any reptile being injured or suffering fatality the ECoW will be contacted as soon as it is safe to do so. The ECoW will make the decision on how best to deal with the situation, taking into account the level of legislative protection afforded to the species concerned. The ECoW will attend the site and make a written and photographic record, which will record the time, location, personnel involved and details of the incident. This information will be supplied within 24 hours to the relevant authority and to Buglife.





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APPENDIX 1: FIGURES



Key

-  Railway bund
-  Suitable reptile habitat
-  Area to be cross-tracked
-  Project area

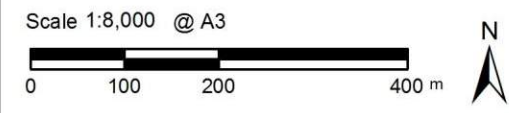


Figure 1
Suitable Reptile Habitat
Fannyside Muir
Reptile Construction
Method Statement

