

Reptile Survey Report

for

Forest Lodge Lane, Cwmafan



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1 Summary

1.1 Proposed Development

- 1.1.1 The Applicant intends to submit a planning application to Neath Port Talbot Council for the construction of four dwelling houses together with associated infrastructure including driveways and garages on land at Forest Lodge Lane in Cwmafan.
- 1.1.2 Reptile surveys were recommended within a previously produced Ecological Assessment report (David Clements Ecology Limited, June 2020), which should be read in conjunction with this report.

1.2 Surveys and Assessment

- 1.2.1 Reptile surveys were completed by Koru Ecology Associates during suitable weather conditions in August and September 2020. Populations of common lizard, slow worm and grass snake were found.
- 1.2.2 The planning application proposals will result in complete loss of habitat suitable for reptiles on this site, and without appropriate mitigation would result in the killing/injury of this species group.

1.3 Recommendations

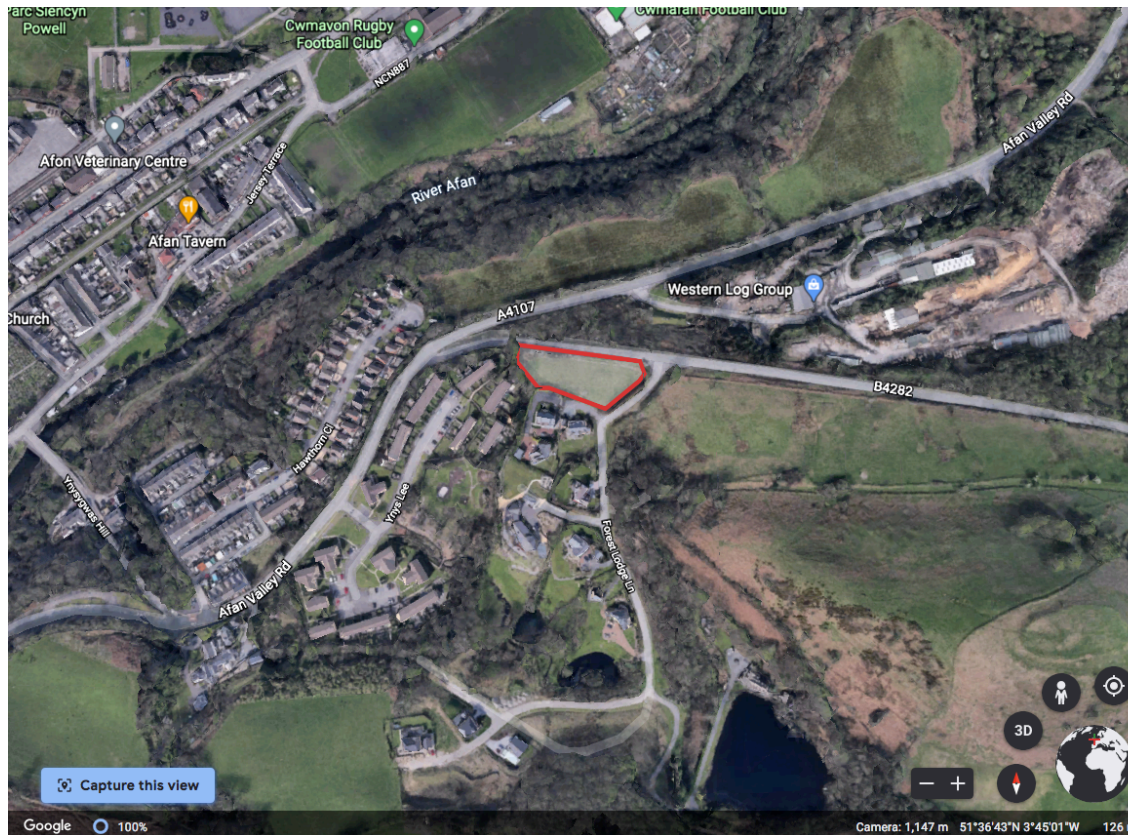
- 1.3.1 It is recommended that an appropriate mitigation strategy be put together with regards to reptiles, which must include a) survey of receptor site to confirm its suitability, b) appropriate preparation/enhancement of receptor site, c) translocation of reptiles to receptor site using appropriate effort, and d) implementation of appropriate aftercare/management plan for receptor site.
- 1.3.2 Repeat surveys of the proposed development site are recommended if a period of more than two years elapses between the date of these surveys and commencement of the works.

2 Introduction

2.1 The Proposed Development

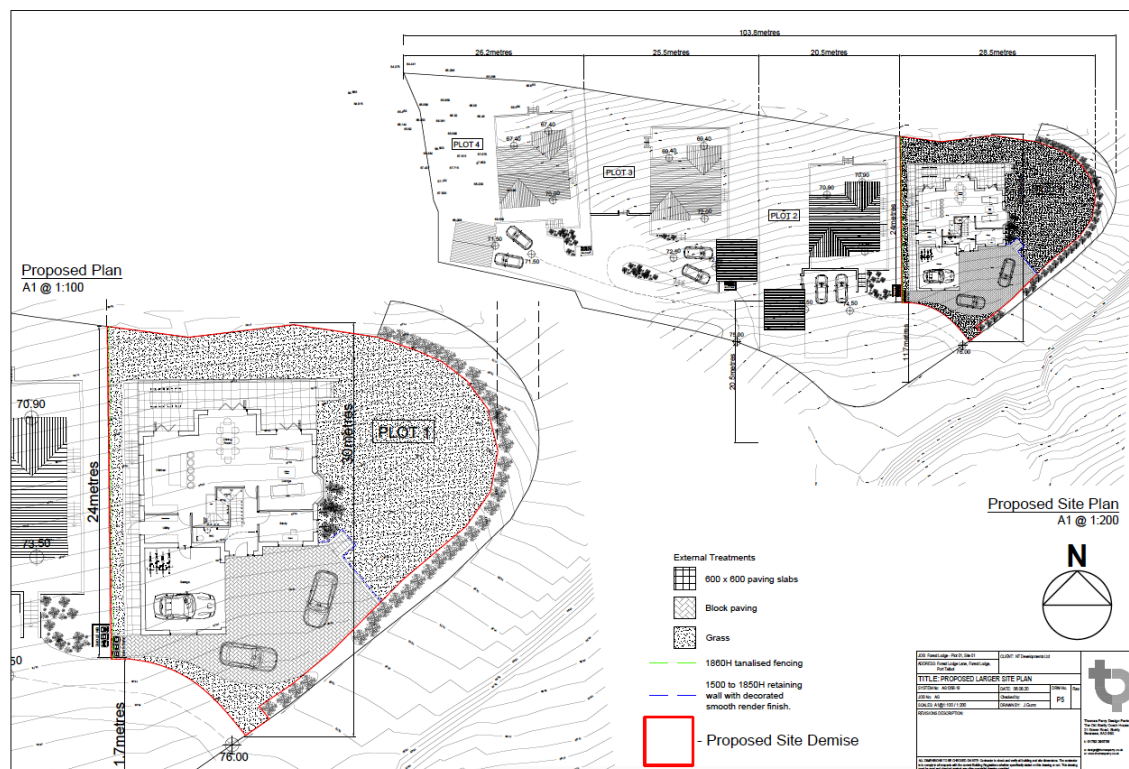
- 2.1.1 Koru Ecology Associates was commissioned in July 2020 by J James (“the Applicant”) via R Bowen (“the Agent”) to complete reptile surveys on land off Forest Lodge Lane in Cwmafan (the Site”). The Site is centred on approximate National Grid Reference SS 78508 91940 and its location is shown in Figure 1 below.

Figure 1. Site Location (red line).



- 2.1.2 This report has been prepared as part of a planning application to Neath Port Talbot Council for the construction of four dwelling houses, together with associated infrastructure including access drives, garages and gardens.
- 2.1.3 The current Proposed Site Plan (dated 06/08/2020, labelled Drawing P5) is shown in Figure 2 below.

Figure 2. Proposed Site Plan.



2.2 Study Aims

- 2.2.1 An Ecological Assessment of the Site was completed in 2020 (David Clements Ecology Limited, 2020), which noted *‘the present survey has indicated that the site may potentially support common reptiles. An artificial refugia survey should be carried out to determine likely presence/absence of reptiles on the site’*.
- 2.2.2 This report therefore details the results of our reptile surveys and assesses the likely impact of the development on reptiles. It takes into account both evidence given within the David Clements Ecology Limited report, and that found following completion of our own surveys.
- 2.2.3 Where appropriate, advice and recommendations are given. If followed correctly, this advice will ensure that the development complies with current nature conservation policy and legislation, as well as ensuring minimal impact on this species group.

3 Methodology

3.1 Study Scope

3.1.5 Koru Ecology Associates was commissioned by the Applicant to complete the following works in relation to the Site:

1. Review of the existing report by David Clements Ecology Limited.
2. Consultation with Neath Port Talbot with regards to survey methodology.
3. Completion of one site visit to deploy artificial refugia.
4. Completion of eight visits to check the artificial refugia for the presence of reptiles.
5. Production of a report detailing survey methodology, results and assessment of likely development impacts on reptiles, together with any appropriate recommendations.

3.2 Surveyor Qualifications and Experience

3.2.1 Diana Clark MSc MCIEEM lead all survey work for this project, and wrote this report. Diana has worked as a consultant ecologist since 2003 and holds two degrees in related disciplines. She is also a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and Koru Ecology Associates is a CIEEM Registered Practice.

3.2.2 Diana was assisted with the reptile survey visits by Siân Musgrave BSc MCIEEM. Siân has worked as a consultant ecologist since 2012 and has extensive experience surveying for reptiles, both as a consultant and previously during her time working with the National Trust.

3.2.3 This report has been subject to technical review by Steve Hancock CEnv MCIEEM. Steve has worked as a consultant ecologist since 2009 and holds two degrees in related disciplines. Steve is a Chartered Environmentalist and a full member of CIEEM.

3.3 Study Limitations

- 3.3.1 Every effort was made during field visits to complete comprehensive surveys and produce a detailed description of the Site. However, no investigation can ensure the complete characterisation and prediction of the environment 100% of the time. Natural and semi-natural habitats change over time, and thus results given in this report may become less reliable in the future. Repeat surveys are usually recommended if a significant period of time elapses between when surveys were completed and when works commence. Further details are given in Section 6 of this report.
- 3.3.2 No significant constraints were noted in relation to this project. Where minor constraints occurred, these are described within the relevant methodology and/or results sections of this report.

3.4 Report Review

- 3.4.1 The Ecological Assessment Report by David Clements Ecology Limited was reviewed as part of this survey work, and the results/recommendations made within it were taken into account.

3.5 Survey Method

- 3.5.1 No single standard survey method for reptiles exists, however the most commonly referred to survey guidance is Froglife's *Advice Sheet 10: Reptile Survey – an Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation* (Froglife, 1999). In addition, reference may be made to *Survey Protocols for the British Herpetofauna* (Sewell *et al*, March 2013), *The Herpetofauna Worker's Manual* (Gent and Gibson, 2003) and Natural England's (NE's) *Technical Information Note (TIN) 102 Reptile Mitigation Guidelines* (NE, 2011 – an England-based publication that has now been withdrawn).
- 3.5.2 In terms of the number of visits required, Laura Palmer (Neath Port Talbot Council Ecologist) initially advised that seven visits would be sufficient (i.e. in line with *Froglife* 1999). However, once it became clear that there were several different reptile species on the Site, some in significant numbers, an additional visit was requested, thereby taking the total number of mat checks to eight, in line with *NE 2011*.

3.5.3 Taking the above into account whilst applying professional judgement and experience, the following approach and methods were used:

1. Eight survey visits were completed during August and September 2020, plus an initial visit prior to this in July to deploy refugia.
2. All survey visits completed when temperatures were between 10 and 20°C.
3. All survey visits completed when wind speed was between 0 and 3 (inclusive) on the Beaufort Scale.
4. All survey visits were completed during sunny weather (either full sun or with recent sunny spells so refugia were still warm) or if cloudy/light rain, when the temperature was at the higher end of the acceptable scale, and/or sunny weather had prevailed immediately prior to this.
5. Artificial refugia laid consisted of mats made from bitumen roofing felt, all of which were at least 0.5m x 0.5m in size.
6. Artificial refugia were laid out in areas of habitat on the Site that were suitable for reptiles to bask in (i.e. not in the middle of scrub or bramble, though often close to the edge of such habitat), approximately 10m apart.
7. Vegetation around the mats was flattened down as low as possible, in order to keep shade over the mats to a minimum – particularly important when site visits were conducted early in the day when the sun was lower in the sky. Also important later in the season, when rough grassland areas have often developed into tall vegetation.
8. A total of 32 artificial refugia were left *in situ* for several weeks following initial deployment, in order to allow them to 'bed in' to the Site. The approximate location of these refugia is given in Figure 2 below.
9. Any reptiles observed during each subsequent survey visit were recorded together with details of species and age (adult or juvenile).

Figure 2. Approximate Location of Reptile Refugia (blue lines).



3.5.4 Full metadata for each reptile check are given in Table 1 below.

Table 1. Metadata for Reptile Checks.

Visit number (surveyor)	Date (time)	Weather conditions
Deployment (DC)	22/07/20	-
1 (DC)	26/08/20 (09:45hrs)	16°C, wind = 1 – 2, cloudy with bright spells, dry.
2 (DC)	27/08/20 (16:55hrs)	17 – 18°C, wind = 1 – 2, dry, sunny intervals.
3 (DC)	29/08/20 (16:40hrs)	16°C, wind = 2, cloud = 80%, dry, sunny intervals.
4 (DC)	30/08/20 (16:00hrs)	18°C, wind = 2, cloud = 20%, dry, sunny.
5 (DC)	03/09/20 (14:30hrs)	18°C, wind = 2 – 3, cloud = 30%, sunny intervals, dry.
6 (SM)	09/09/20 (14:30hrs)	18°C, wind = 2, cloud = 60% (hazy), sunny spells, dry.
7 (SM)	10/09/20 (14:45hrs)	18.5°C, sunny intervals
8 (SM)	15/09/20 (10:00hrs)	19.5°C, overcast / sunny intervals
Key: DC = Diana Clark SM = Siân Musgrave		

4 Results

4.1 Review of Existing Report

- 4.1.1 The report produced by David Clements Ecology Ltd was found to give an accurate representation of the Site. Koru Ecology Associates agreed with the assessment of the site having potential for common lizard, slow-worm and grass snake, and that therefore targeted reptile surveys were required.

4.2 Reptile surveys

- 4.2.1 A population of common lizards, slow worms and grass snakes was found on the Site during the surveys. In addition, toads, field mice and shrews were confirmed as present. Ant colonies were noted under several of the artificial refugia; where infestation was significant, mats affected were adjusted slightly to an adjacent location.
- 4.2.2 Full results including numbers of each species are given in Table 2 below.

Table 2. Results.

Check	Slow worm (adult)	Slow worm (juvenile)	Grass snake	Common lizard	Amphibians	Mammals
1	3	2	-	-	1 toad	1 shrew 1 field mouse
2	3	2	2	1	1 toad	1 field mouse
3	6	10	2	5	-	-
4	2	5	1	2	-	-
5	4	1	2	-	1 toad	1 field mouse
6	1	4	1	1	-	-
7	1	3	2	5	-	-
8	5	3	-	-	-	-

- 4.2.3 The highest count for each species during a single visit was 16 (slow worms), 5 (common lizards) and 2 (grass snake). The majority of individuals found were towards the western end of the Site, and along the northern boundary with the B4282.

5 Assessment

5.1 Legislation

- 5.1.1 All British reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). Grass snake *Natrix helvetica*, slow worm *Anguis fragilis*, common lizard *Zootoca vivipara* and adder *Vipera berus* are protected against intentional killing or injury and against sale, but there is no specific protection afforded to the habitat in which they live. However, Sites of Importance for Nature Conservation (SINCs) may be designated due to the presence of reptile populations, and given some level of protection via planning policy (see Section 5.2 below).
- 5.1.2 Other species, including sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* are given additional protection by the Habitats Regulations 2017 (as amended), but neither species is likely to be present on this Site due to geographic location; smooth snake is absent in Wales, and sand lizard populations in Wales are confined to localised reintroduction areas, a long way from the Site.
- 5.1.3 The Environment Act (Wales) 2016 requires public authorities to seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales. In complying with this duty, public authorities must have regard to a list of living organisms and types of habitat which in their opinion are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. This list must be prepared and published by the Welsh Ministers under Section 7 (1) of the same Act.
- 5.1.4 Until this list has been published, the list of Habitats and Species of Principal Importance previously published under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006, should be used. Five species of reptile are on this list, including slow-worm, sand lizard, common lizard, grass snake and adder.

5.2 Assessment of Reptile Population

- 5.2.1 The publication *Wildlife Sites Guidance Wales: A Guide to Develop Local Wildlife Systems in Wales* (Wales Biodiversity Partnership, 2008) states in relation to the reptile species found on the Site that '*the recording of several (i.e. two or more) individuals of a species on half or more of the survey occasions should be taken to indicate the presence of a 'good'*

population. Recording of several individuals on every survey occasion (or nearly every occasion) may be indicative of an exceptional population'.

- 5.2.2 It also states that *'the following should be considered for selection: a) sites supporting three or more reptile species, and b) sites supporting good populations of any reptile species'*. Essentially this means that the Site meets SINC criteria.
- 5.2.3 The Key Reptile Sites Register criteria (Froglife, 1999) indicate that that site has a low population of grass snake (< 5 seen during any one visit), a good population of common lizard and a good population of slow worm (both 5 – 20 seen during any one visit).
- 5.2.4 The Reptile Mitigation Guidelines (NE, 2011) indicate that the Site has a small population size class of grass snake (< 5 seen during any one visit) and a medium population size class of slow worm (10 – 40 seen during any one visit) and common lizard (5 – 20 seen during any one visit).

5.3 Assessment of Likely Impacts on Reptiles

- 5.3.1 Within the Local Development Plan, Policy EN6 (Important Biodiversity and Geodiversity Sites) states *'development proposals that would affect Regionally Important Geodiversity Sites (RIGS), Local Nature Reserves (LNRs), Sites of Importance for Nature Conservation (SINCs), sites meeting SINC criteria or sites supporting Local Biodiversity Action Plan (LBAP) or S42(6) habitats or species will only be permitted where:*
- 1. They conserve and where possible enhance the natural heritage importance of the site; or*
 - 2. The development could not reasonably be located elsewhere, and the benefits of the development outweigh the natural heritage importance of the site.*

Mitigation and/or compensation measures will need to be agreed where adverse effects are unavoidable'.

- 5.3.2 The current development proposals as shown in Figure 2 will result in the loss of all reptile habitat present on the Site, and in the absence of any precautions, killing and injury to the reptile populations will occur. Such adverse effects would be unavoidable and would be considered an offence under the Wildlife and Countryside Act. In addition, as the Site meets the SINC criteria, more broadly this would also go against local planning policy EN6.

- 5.3.3 As a result, appropriate mitigation to address the presence of reptiles is required and is outlined in Section 6 of this report.

6 Recommendations

6.1 Mitigation Strategy

6.1.1 A Mitigation Strategy for Reptiles should be developed and in principle the following steps should be included:

1. **Identification of receptor site.** The receptor site should be as close as possible to the proposed development site (or as agreed with the Neath Port Talbot Council (NPTC) ecologist) and should comprise suitable habitat for reptiles, both in terms of quality, size and connectivity. The receptor site should be checked for reptile potential and – if potential is identified – surveyed for reptiles prior to being confirmed as a suitable receptor site, in order to determine the presence/likely absence of an existing population. If full reptile surveys are required, these should be completed between April and September using appropriate methods and during suitable weather conditions.
2. **Preparation/enhancement of receptor site.** If necessary, the receptor site may require some degree of enhancement and/or initial management to either increase its carrying capacity for reptiles (if reptiles are already present) and/or to improve the site generally for the translocated individuals. This may include things like construction of hibernacula/artificial refugia etc, as well as habitat enhancement, and should be carried out prior to any translocation taking place.
3. **Trap and translocate.** An appropriate trap and translocate methodology should be developed in discussion with NPTC ecologists. This is likely to include a) habitat manipulation, b) deployment of artificial refugia, and c) repeat visits checking refugia and removing individuals to the receptor site during April – September in suitable conditions. Note that this may require at least 30 visits, followed by five days clear, as per Natural England guidance (*NE 2011*). Due to the isolated nature of the development Site, the requirement for reptile fencing is considered to be unlikely.
4. **Management plan for receptor site.** A management plan for the receptor site should be drawn up to ensure its ongoing suitability for reptiles, and should be

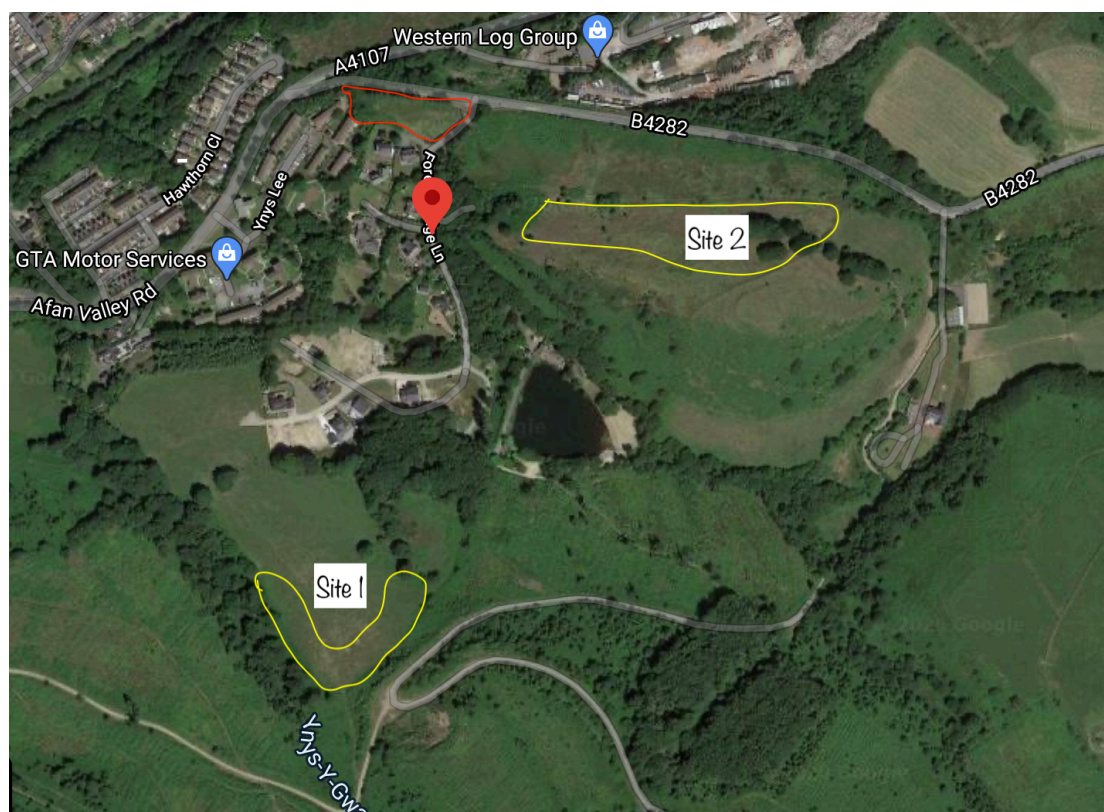
carried out as stated. The length of time this will be required for should be agreed with NPTC ecologists, likely to be at least 10 years.

5. **Monitoring scheme for receptor site.** The receptor site reptile population should be monitored for a suitable time period, the length of which should be decided with the NPTC ecologist, but likely to at least include years 1, 3 and 5 after the translocation has been completed.

6.1.2 Following a site meeting between the Applicant and R Bowen (the planning consultant) on 28th October, two potential translocation sites were identified within the Applicant's landholding (see Figure 3 below). The sites are located within approximately 400m (site 1) and 100m (site 2) of the proposed development site, and have both been grazed by livestock – either currently (site 1) or in the recent past (site 2).

6.1.3 Both sites will be surveyed in spring 2021 to check for suitability for reptiles. This will include a) a walkover survey to assess habitat quality and connectivity, and b) presence/likely absence survey for reptiles. Assuming one or both of the sites is/are suitable, a Mitigation Strategy for reptiles will be prepared. If neither site is suitable, further areas within the Applicant's landholding will be surveyed.

Figure 3. Location of two potential receptor sites.



6.2 Repeat Surveys

- 6.2.1 In order to provide robust and up-to-date data for impact assessment, it is generally considered good practice to repeat surveys should a period of two years lapse between a survey being completed and the works commencing. This should be addressed even if planning permission has been granted, since reptiles are protected by legislation entirely outside the planning system.

7 References

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