



## Reptile Mitigation Strategy

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Sandrock, Exeter

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**Blackdown Environmental**

Unit A6, The Airfield

Dunkeswell, Honiton

Devon

EX14 4LE

t. 01404 891188

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AB = Adam Bratt BSc (Hons), MCIEEM – Senior Ecologist; KJ = Katie Jones BSc (Hons), MCIEEM – Senior Ecologist; SP = Sophia Priddle – Ecologist PgCert. BW = Bethan Withey MSc, gCIEEM

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## Executive Summary

This report details the reptile mitigation strategy prepared for an area of land known as Sandrock located adjacent to Gipsy Hill Lane in the Monkerton area of Exeter, Devon. The 2.2ha site comprises a mosaic of species-poor semi-improved grassland, bramble scrub, bracken, tall ruderal and ephemeral/short perennial vegetation and bare ground.

It is understood that a planning application will be made for residential development comprising approximately 57 dwellings, associated gardens and car parking. A layout and landscaping plan has been provided by Linden Homes.

This document has been prepared as a detailed method statement for the protection of reptiles before and during the site works, to include methods for site clearance, identification of receptor site and outline of post development monitoring strategy. The necessity for such a strategy was highlighted in the recommendations of the Extended Phase I Habitat Survey Report undertaken by Blackdown Environmental in 2017.

Habitat removal to aid dispersal would be undertaken if <10 slow worms or common lizards are recorded during any one reptile survey visit, as it is considered that the retained habitats surrounding the site and the proposed soft landscaping post construction will be of an appropriate size and quality to support low numbers of reptiles. If any greater numbers of reptiles are identified during the survey visits, trapping and translocation to an alternative receptor site will be required.

Mincinglake Valley Park which is approximately 35ha of grassland and woodland park owned and managed by Exeter City Council and located approximately 2.6km from the development site has been identified as a suitable receptor site. Specific management to optimise the site for reptiles will be undertaken to ensure that the area is of sufficient quality to support reptiles.

This summary is only an extract of the report. Please ensure the report is read in its entirety for further details on the mitigation recommendations.

## 1. Introduction

### 1.1. Project Introduction & Aims

Blackdown Environmental has been commissioned by Matt Stead of Linden Homes South West to produce a reptile mitigation strategy for the proposed development of a site referred to as Sandrock. The 2.2ha site is located within a suburb of Exeter known as Monkerton, to the east of the city centre, OS Grid Reference at approximate centre of site SX 966 936.

This document has been prepared as a detailed method statement for the protection of reptiles before and during the site works, to include methods for site clearance depending on population size and where necessary, identification of receptor site and outline of post development monitoring strategy. The necessity for such a strategy was highlighted in the recommendations of the Extended Phase I Habitat Survey Report undertaken by Blackdown Environmental in 2017, in line with the legislation pertaining to reptiles.

Widespread reptile species are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to kill or injure reptile species including common lizard, slow worm, grass snake and adder (see Appendix 1 for more details).

Natural England requires two main aims to be met when considering appropriate actions for reptile mitigation on development sites (English Nature, 2004):

- to protect reptiles from harm that might arise during development works
- ensure sufficient quality and connectivity of habitat is provided to accommodate the reptile population, either on site or at an alternative site, with no net loss of local reptile conservation status

Prior to commencement of works which could harm reptiles (e.g. ground works including scraping of the ground or movement of heavy plant or materials on habitat which is used by reptiles), a strategy to protect reptiles will be implemented which will ensure that measures are undertaken to safeguard reptiles before, during and post-construction works.

### 1.2. Background

Reptile surveys were undertaken in 2012, 2013 and 2014 (Sunflower Ecology); a peak count of three slow worms *Anguis fragilis* were recorded in 2014 on the south facing banks of the site, indicating a low population (Froglife, 1999) of this species. Juvenile slow worms were also recorded indicating that a breeding population is present.

Blackdown Environmental undertook a Preliminary Ecological Appraisal (PEA) of the site in April 2017 to update ecological surveys carried between 2012 - 2015 (Sunflower Ecology, 2012, 2013 & 2014 and WYG, 2014 & 2015). During the PEA, it was noted that in the period between the previous ecological surveys and the updated survey, extensive vegetation clearance had been undertaken on

site and areas surrounding the site boundary had been cleared for development. The removal of permanent vegetation on site had caused extensive early successional habitats to establish (such as tall ruderal vegetation, scrub and ephemeral/short perennial vegetation as well as brash piles). Therefore a larger proportion of the site was now potentially suitable for reptiles as opposed to merely the margins as identified in the 2012-2014 surveys. The development pressure surrounding the site may potentially have caused additional reptiles to disperse into the site.

A reptile presence/absence survey has been commissioned and is currently underway, however for the purposes of the mitigation strategy, an assumed presence approach has been taken. This is considered an acceptable approach on this site as it details the appropriate methodology required to protect reptiles from killing/injury based on population size and provides details of a receptor site as well as biodiversity enhancements on site post construction. It is anticipated, based on previous surveys and the habitats on site, that species present will comprise slow worm and common lizard *Lacerta vivipara*. Other reptile species have not been considered within this mitigation strategy.

### **1.3. Site Description**

The site comprises a mosaic of rabbit grazed species-poor semi-improved grassland, bracken, tall ruderal, ephemeral/short perennial vegetation and bare ground. Areas of the site are divided by earth banks colonised with grassland, scrub and tall ruderal vegetation. Site images are provided in Appendix 2.

### **1.4. Proposed Works**

It is proposed that the site will be developed to provide approximately 57 dwellings with associated gardens and car parking. A layout plan (Drawing reference Dunn Marino 14021\_GA\_02 dated December 2016) has been provided by Linden Homes and is presented in Appendix 3.

As part of the outline planning permission (Planning Permission No. 12/0854/01) for the site, Linden Homes South West were required to undertake a wildlife plan to satisfy Condition 23 of the planning permission. The wildlife plan was compiled to enhance the habitat on site for a variety of species including reptiles.

Proposed enhancement works suitable for reptiles include the retention and enhancement of the peripheral habitat corridors, retention of brash to form habitat piles, provision of areas of native shrub planting, wildflower grassland buffers and SUDS within the landscape scheme.

A summary of the biodiversity enhancements relevant to reptiles are outlined in Section 3 and the Landscape Proposals (Drawing No. LA.02) are presented in Appendix 4.

## 2. Reptile Mitigation Proposals

In order to protect the reptile population on site, a programme of habitat manipulation and/or trapping and translocation to an alternative receptor site will be required. The programme will use best practice guidelines for translocation and capture, where required (Gent & Gibson, 1998).

Proposed mitigation will depend on the actual number of reptiles found on site during the ongoing reptile survey and mitigation will not be commenced until population size on site has been classified (i.e. reptile survey completed). However, in consideration of the requirement to retain the hedgebanks surrounding the site as part of the dormouse mitigation and the proposals for public open space and habitat enhancements suitable for reptiles, it is considered over-prescriptive to undertake a full translocation should <10 slow worms or common lizards be recorded during any one survey visit. Mitigation will comprise one or a combination of the following proposals which are described in greater detail below:

### 2.1. Habitat Removal to aid Dispersal

This methodology alone will be undertaken if the reptile survey identifies <10 slow worms or common lizards present on any one survey visit.

All habitats would be mown or strimmed using hand tools to a sward height of 150mm between April and September on warm days when reptiles are active. The cut will be undertaken directionally from north and east towards the southern and western boundary to encourage natural dispersal of reptiles towards the retained hedgebanks.

All brash and log piles will be dismantled by hand with an ecologist present and removed from site, or if practicable retained and re-located to the site boundaries.

### 2.2. Trapping and Translocation

If >10 reptiles are identified within the site on any one survey visit it will be necessary to undertake trapping and translocation programme and relocate the reptiles off-site, as the retained habitats are unlikely to provide a suitable habitat of a sufficient size or quality to support higher numbers of reptiles.

#### 2.2.1. Identification of a Receptor Site

Mincinglake Valley Park is owned by Exeter City Council and located approximately 2.6km west of the development site. The valley park is approximately 35ha in size and comprises a mosaic of woodland and grassland managed through low intensity grazing.

The countryside ranger for Exeter City Council valley parks; Chris Moulton, is aware that reptiles have previously been re-located to this receptor site, however the northern extent of valley park has not been previously used as a receptor site and this area lies adjacent to open farmland which would allow dispersal of reptiles into the wider landscape.

Measures to improve habitat of the receptor site will take place prior to reptiles being re-located to the site. Habitat improvement measures may include alteration of cutting/ grazing regime and installation of habitat refuge piles (e.g. log piles).

### **2.3. Installation of reptile exclusion fencing**

Reptile exclusion fencing will be installed around the perimeter of the vegetated areas of the construction footprint, as shown on the Reptile Fencing Plan, Appendix 5, to ensure that no reptiles can re-enter the working footprint following the translocation and to provide a clear demarcation of the working area. The specification for reptile fencing is also presented in Appendix 5.

Prior to the installation of the fencing, an ecologist will check the proposed fence line and remove any refugia or overhanging vegetation to ensure reptiles are not harmed. The fencing contractor will be experienced in undertaking reptile fencing installation and an ecologist will be on site during the fencing installation.

The fencing will be checked daily throughout the trapping and relocation programme and weekly during the construction programme to ensure the fencing remains in good condition and reptiles are not able to re-enter the construction site.

#### **2.3.1. Installation of artificial refugia**

Artificial refugia comprising 500mm x 500m squares of bitumen roofing felt will be used as a tool to aid capture of reptiles. A minimum of 100 artificial refugia will be positioned across the site, in areas of habitat considered most likely to support reptiles. The number of refugia used is higher than the guidelines recommend to increase the likelihood of capturing reptiles (HGBI, 1998)

Any reptiles (e.g. slow worms) identified will be transferred in a suitable reptile carrying case to the identified receptor site and the translocation will be undertaken by experienced persons with experience in handling reptiles (including lizards).

Note: translocation of reptiles can only be undertaken during periods of the year (and weather conditions) when reptile species are active. The period of relocation is generally best undertaken in the period April to the end of September (although it should be noted that these periods can be extended into March and October if weather conditions are suitable).

The translocation programme would continue for 60-90 days depending on the population size (low: 60 days, medium: 70 days and high: 90 days), if no or only very small numbers of reptiles are recorded for 5 consecutive days, it will be assumed that site is clear of reptiles.

#### **2.3.2. Habitat Manipulation**

Habitat manipulation is a recognised methodology to accelerate capture rates, whereby blocks of vegetation are strimmed to ground level between April and September in warm weather. Thereby

rendering these areas unsuitable for reptiles and causing any remaining reptiles to disperse into smaller retained blocks of vegetation where they can be captured and translocated.

### **2.3.3. Destructive search**

Following 5 days of non-capture or only very low numbers, a destructive search for reptiles will be undertaken. This will comprise a mechanical digger with toothed bucket scraping the vegetation back under the supervision of an experienced ecologist. Any remaining reptiles identified in the process will be collected and relocated to the receptor site. Habitats of potentially high value (e.g. log and brash piles) will be dismantled by hand to collect any remaining reptiles.

A destructive search for reptiles can be undertaken during the period April to end of September during suitable weather conditions.

## **3. Biodiversity Enhancement for Reptiles**

WYG prepared a wildlife plan report (WYG, 2014) to satisfy Condition 23 of the outline planning permission (Planning Permission No. 12/0854/01), the landscape proposals plan which accompanies this report is presented in Appendix 4. A summary of biodiversity enhancements with benefit to reptiles are provided below.

### **3.1. Habitat Retention - Hedgebanks**

The majority of the hedgebanks which surround the site will be retained and protected using tree protection measures according to BS5837:2012 Trees in relation to design, demolition and construction. These areas will be used as foraging and basking habitat by low numbers of reptiles should habitat removal alone be utilised.

Hedgebanks will be managed in the short term by cutting every other year to promote nut and berry production and to produce a dense hedge structure. Cutting will take place between November and February when reptiles are hibernating in the ground and therefore will be unaffected by the works.

Long-term management will comprise laying the hedgebanks to further increase growth and structural diversity.

Retention of hedgebanks allows for a wildlife corridor suitable for reptiles to be maintained around the site and aid reptile dispersal both within the site and within the wider surrounding landscape.

### **3.2. Habitat Creation**

Post construction, additional native hedgerow shrubs will be planted in areas where the existing hedgerows are thin and species-poor to increase density and species diversity which in turn will improve the habitat corridors around the site.

Amenity grassland will be established to the north and south of the site which will be planted with a seed mix such as Emorsgate Seed EL1- Flowering Lawn Mixture which will provide foraging opportunities for reptiles. Longer wildflower grassland buffers of approximately 2m wide will be planted along the boundaries of the hedgerow and native shrub. These areas will be managed less intensively than the amenity grassland to allow a more structurally diverse sward to develop. This will provide further dispersal and foraging opportunities for reptiles.

All cuttings and arisings will be stored in compost piles on site to provide basking and hibernation opportunities for reptiles.

## 4. References

Blackdown Environmental (2017). *Preliminary Ecological Assessment – Sandrock, Exeter*. Blackdown Environmental, Dunkeswell

Edgar, P., Foster, J. and Baker, J. (2010). *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.

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

Herpetofauna Groups of Britain and Ireland (1998). *Evaluating local mitigation/translocation programmes: Maintaining best practice and lawful standards*. HGBI advisory notes for ARGs.

JNCC (2003). *Herpetofauna Worker's Manual*. Joint Nature Conservation Committee.

Pers comm. (2017) Chris Moulton, Exeter City Council

Sunflower Ecology (2012a) *Scoping Assessment and Extended Phase 1 Habitat Survey. Land at Sandrock, Sowton*

Sunflower Ecology (2012b) *Breeding bird, dormouse and reptile surveys. Land at Sandrock, Sowton*

WYG Planning and Environment (2014b). Condition 23, Wildlife Plan – Land at Sandrock, Exeter. WYG, Cardiff

## Appendix 1 Summary of Relevant Policies and Wildlife Legislation

This includes a brief summary of relevant policy and legislation relevant to reptiles. The original texts of the relevant legislation or specific legal advice should be consulted in individual cases where appropriate. This section does not constitute legal advice.

### National Planning Policy Framework

The National Planning Policy Framework (NPPF) published on the 27<sup>th</sup> March 2012 replaces and condenses many of the pre-existing Planning Policy Statements. With particular relevance to wildlife and biodiversity, the NPPF replaces PPS9; Planning Policy Statement 9: Biodiversity and Geological Conservation.

Sections of the NPPF with particular relevance to biological conservation include:

#### Paragraph 118:

*“When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:”* including...

- *“if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;”*
- *“proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site’s notified special interest feature is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;”*
- *“development proposals where the primary objective is to conserve or enhance biodiversity should be permitted”*
- *“Opportunities to incorporate biodiversity in and around developments should be encouraged;”*
- *“planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss;”*

Paragraph 125:

“by encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”

Paragraph 165:

*“Planning policies and decisions should be based on up-to-date information about the natural environment”.*

**Reptile Species**

Widespread reptile species (including common lizard, slow worm, adder and grass snake) are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) against intentional injuring, killing or selling.

Sand lizard and smooth snake are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended) and therefore receive the additional protection associated with European Protected Species above.

## Appendix 2 Site Images



**Plate 1.** Entrance to the site on the southern boundary



**Plate 2.** Rabbit grazed grassland in the centre of the site



**Plate 3.** Laid hedge with brash along the eastern boundary



**Plate 4.** Swathes of dense bracken on the southern boundary looking east



**Plate 5.** Tall ruderal and scrub looking towards Tithebarn Link Road (northern boundary)



**Plate 6.** Large pile of logs/brash. Potentially used by hibernating reptiles (TN1)

## **Appendix 3 Proposed Development Plan**



## Appendix 4 Landscaping Plan



## **Appendix 5 Reptile Fencing Plan & Fencing Specification**



