



ecosupport

Land off Burndell Road,
Yapton

Reptile Survey & Mitigation
Proposals

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Client:
Driftstone Developments

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Report	Reptile Mitigation Strategy
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CONTENTS

1.0 INTRODUCTION.....	3
1.1 SUMMARY.....	3
1.2 SITE DESCRIPTION.....	3
1.3 BRIEF DESCRIPTION OF THE PROPOSALS.....	3
1.4 RELEVANT LEGISLATION AND POLICY.....	4
1.4.1 Nature conservation legislation.....	4
1.4.2 Policy.....	4
2.0 METHODOLOGY.....	5
2.1 SURVEY METHODOLOGY.....	5
3.0 BASELINE CONDITIONS.....	7
3.1 DESKTOP SURVEY.....	7
3.2 FIELD SURVEY.....	7
3.2.1 Evaluation.....	9
4.0 ASSESSMENT OF IMPACTS IN THE ABSENCE OF MITIGATION.....	10
4.1 INTRODUCTION.....	10
4.2 SITE PREPARATION AND CONSTRUCTION ACTIVITIES.....	10
4.3 SITE OPERATION ACTIVITIES.....	10
5.0 MITIGATION STRATEGY.....	11
5.1 INTRODUCTION.....	11
5.2 MITIGATION STRATEGY OVERVIEW.....	11
5.3 RECEPTOR SITE.....	11
5.3.1 Location and description.....	11
5.4 HABITAT CREATION AND ENHANCEMENT.....	12
5.5 CAPTURE AND EXCLUSION.....	13
5.5.1 Capture and Translocation.....	13
5.5.2 Effort and Timing.....	13
5.5.3 Destructive Search.....	14
5.6 PROTECTION OF RECEPTOR & MANAGEMENT.....	14
5.7 POST-COMPLETION MONITORING.....	14
6.0 REFERENCES.....	15

1.0 INTRODUCTION

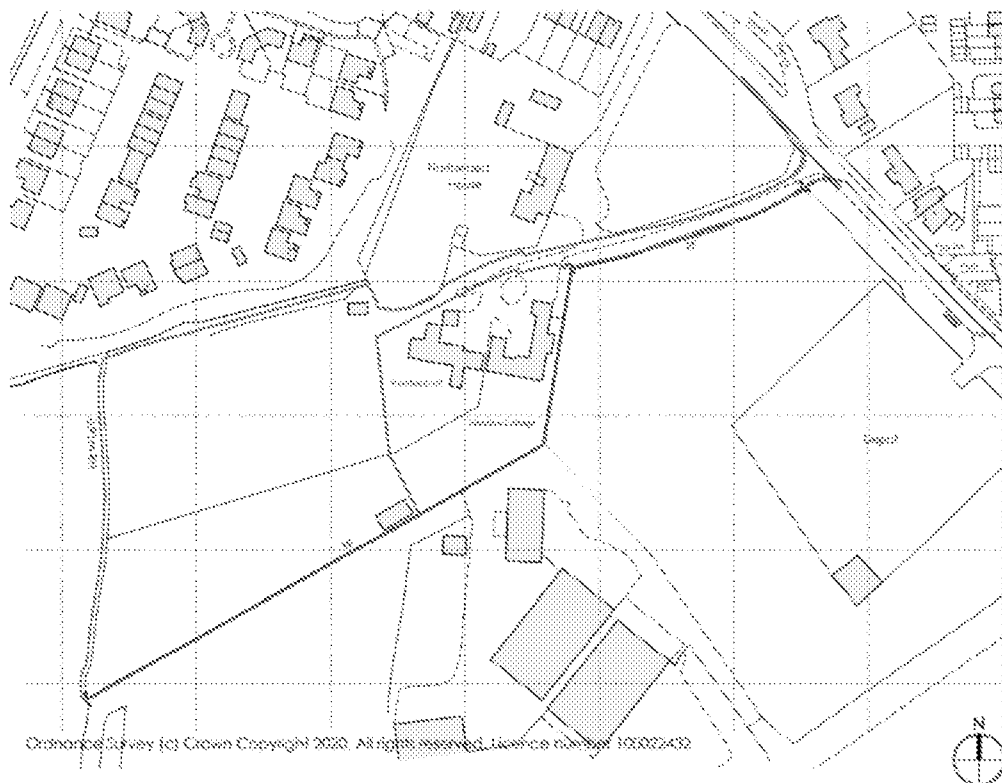
1.1 Summary

The site known as Land off Burndell Road (hereafter referred to as 'the site') has been subject to a suite of ecological survey work in support of an application of a new residential development. As part of this work, a reptile survey was undertaken by Ecosupport 2020 which identified a '**Low**' population of Slow Worms (*Anguis fragilis*) on site. As reptiles are legally protected in the UK and their presence is a material consideration when assessing a planning application, it is necessary to ensure they are not harmed as a result of development-related activities. This mitigation strategy details the measures which will be undertaken to avoid harm to reptiles during the development and maintain their conservation status within the local area.

1.2 Site Description

The site comprises the land located to the rear of the 2 dwellings located to the west of Burndell Road, Yapton, BN18 0HR (centred on OS grid reference SU985027) (Fig 1). The eastern boundary of the site is marked by 2 cottage dwellings and associated garden areas with an access track leading to Burndell Road beyond, the north of the site by a new residential development the west by an arable field and the southern by a recycling centre.

Figure 1. Redline location plan of the site.



1.3 Brief Description of the Proposals

At this stage it is understood the proposals will entail a new residential development with access via Burndell Road.

1.4 Relevant Legislation and Policy

1.4.1 Nature conservation legislation

All of Britain's reptile species are legally protected to some degree. The four "widespread" reptile species (Viviparous Lizard, Slow Worm, Grass Snake and Adder) are protected from killing, injury and sale (including offering/advertising/transporting for sale), including parts or derivatives under the Wildlife & Countryside Act 1981 (as amended). The Countryside and Rights of Way Act (CROW) 2000 strengthened the Wildlife and Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is a likelihood of a protected species being present.

1.4.2 Policy

Due to their legal protection, Planning Policy also seeks to ensure that reptiles are not harmed as a result of development. National government guidance is provided by National Planning Policy Framework (NPPF) which places an onus on development to conserve and enhance biodiversity with a requirement for positive biodiversity outcomes wherever possible from the overall development process.

The following policy is considered relevant to this document as provided within the Arun Local Plan 2011 – 2031 (July 2018)

Policy ENV DM5 Development and biodiversity

"Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement. Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person. All developments shall have regard to Natural England's standing advice for protected species."

2.0 METHODOLOGY

2.1 Survey Methodology

2.1.1 Desktop Survey

A data request submitted to the Sussex Biological Records Centre (SxBRC) by Ecosupport as part of the work undertaken for the Preliminary Ecological Appraisal (2020) using a 1km search radius.

2.1.2 Field Survey (development site)

The surveys undertaken by Ecosupport were carried out in accordance with best practice guidelines as stated in various resources (Froglife 1999) (Gent & Gibson 1998) in September 2020. Artificial refugia comprising of bitumen roofing felt were distributed throughout the suitable reptile habitats on site. The distribution of 30 pieces of refugia throughout the identified suitable habitat on site. Seven visits to the site were subsequently undertaken during suitable weather conditions during which all the refugia were checked for the presence of reptiles in combination with a visual observation transect.

This survey is considered sufficient to identify the presence or likely absence of reptiles on the site. It does not provide sufficient information to allow an accurate assessment of population sizes, however, it does allow inferences to be made as to population size class in combination with other considerations such as the extent and quality of the habitat.

Figure 2. The approximate locations of reptile mats (numbered 1-30) set out on site (Blue = reptiles present, red = reptiles absent)



3.0 BASELINE CONDITIONS

3.1 Desktop Survey

SxBRC returned 303 records for Slow Worms (*Anguis fragilis*) (301 of which were from the development plot on the site's northern boundary, 2 records of Grass Snake (*Natrix natrix*) and 87 records of Common Lizard (*Zootoca vivipara*) (all of which were also from the development site on the northern boundary).

3.2 Field Survey

The results of the reptile presence / likely absence survey are presented below in **Table 1** with the survey refugia distribution and numberings provided in **Fig 2**.

Table 1. Results of the reptile surveys undertaken by Ecosupport during September 2020. AF = Adult Female, AM = Adult Male, SA = Sub Adult, J = Juvenile and SW = Slow Worm (refer to **Fig 2** for refugia numbers).

Date	Start Time	Air Temp (°C)	Wind (Beaufort)	Cloud cover (%)	Slow Worms				Total (all SW)	Total (excluding SA and J)	Refugia No
					AF	AM	SA	J			
09/09/2020	10:00	18	0	0	-	1	1	-	2	1	6, 10
11/09/2020	12:00	18	3	90	0	2	2	0	4	2	4, 6, 15, 17
15/09/2020	11:30	24	2	20	0	1	3	0	4	1	4, 9, 10, 15
18/09/2020	09:45	17	3	0	-	1	-	-	1	1	6
22/09/2020	09:00	16	1	10	-	1	-	-	1	1	9
25/09/2020	12:50	13	4	30	-	1	-	-	1	1	4
29/09/2020	13:50	17	0	20		3	-	1	4	3	4, 6, 10, 17

3.2.1 Evaluation

Given the size of the suitable areas of habitat, the number of refugia deployed and the maximum count of adults (which was 3 during the final check), a '**Low**' population of Slow Worms (as defined by the Froglife guidance 1999) is present. Slow Worms are however relatively widespread in West Sussex and as such the site it is considered to be **Local Value** for reptiles.

4.0 ASSESSMENT OF IMPACTS IN THE ABSENCE OF MITIGATION

4.1 Introduction

This chapter considers the likely ecological impacts (both positive and negative) of the proposals in the absence of mitigation. In many cases, whilst a potential negative impact is identified at this stage, mitigation can be implemented to ensure no residual negative impacts. Correctly identifying the impacts of the development will ensure appropriate and proportionate mitigation to be designed and implemented.

4.2 Site Preparation and Construction Activities

Site clearance works would result in the loss of reptile habitat. Subsequent construction of the residential development would ensure this loss is permanent. Should reptiles be present during the clearance of these areas, this could result in their death and/or injury. As all reptile species are protected, this would constitute an offence under the Wildlife & Countryside Act (1981). Given the size of the suitable habitat on site, the low numbers recorded during the surveys and the status of Slow Worms in west sussex, loss of habitat and individual animals of these species would be significant (in terms of their conservation status) within the *local* area.

4.3 Site Operation Activities

The development will result in an increased level of human activity within areas surrounding the site, which would also be used by reptiles. This is likely to result in increased disturbance of reptiles remaining within these areas and may reduce their ability to bask and forage. It may also increase their vulnerability to killing by humans and cats.

5.0 MITIGATION STRATEGY

5.1 Introduction

Due to the legal protection relating to reptiles, it is necessary to implement mitigation to ensure these animals are not harmed as a result of the impending construction works and to ensure that there is no net reduction in the conservation status of reptiles in the local area. Therefore, this mitigation strategy has been produced in accordance with best practice guidelines relating to reptiles and development, published by Gent & Gibson (1998) and the HGBI (1998).

The desirable approach is to avoid development within the areas used by reptiles. If this is not possible, reptiles should be moved to areas within the site that are to be retained, enhanced and managed to provide suitable habitat (relocation). The steps in the mitigation strategy for reptiles are as follows:

- Step 1:** Identification of suitable release area. If a separate site is to be used, it may be necessary to undertake a reptile survey of any potential receptor site to establish the status of existing reptile populations on the site;
- Step 2:** Production and agreement of mitigation strategy;
- Step 3:** Habitat creation, enhancement and/or management of receptor site area (if required);
- Step 4:** Set up of development site with appropriate numbers of artificial refugia and reptile exclusion fencing;
- Step 5:** Capture of reptiles on site and translocation/relocation. This stage must take place between March and September, in order to include the optimal period for reptile capture;
- Step 6:** Destructive search of suitable natural reptile refuges;
- Step 7:** Production of completion report;
- Step 8:** Monitoring success of mitigation.

5.2 Mitigation Strategy Overview

The overall aim of the mitigation strategy for this development will be the identification of a suitable receptor area off site, the subsequent management of this area to maintain and increase its suitability for reptiles and then capture and relocate any reptiles within the wider site into this area.

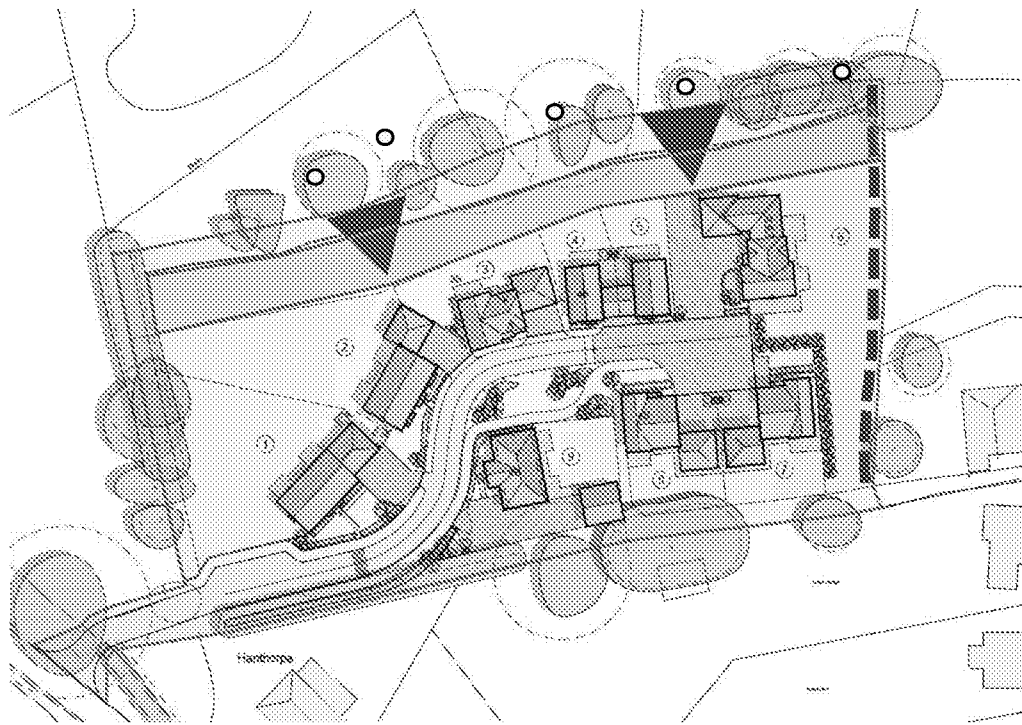
5.3 Receptor Site

5.3.1 Location and description

Under the current proposals there is no provision for the retention of an area of suitable reptile habitat and therefore an offsite reptile receptor area is required. A suitable reptile receptor area (**Fig 3**) has been identified at Sunny Corner, Sunny Copse, Walberton (Application Number WA/75/17/PL) which is also under the ownership of Driftstone Homes. This area was used as a receptor area for the development at Sunny Corner and is therefore known to have a 'good population' of slow worms present (based on the initial survey carried out by the Ecology co-op in 2017 and the reptile capture undertaken by Ecosupport in 2019). Given the known existing population size present at the sunny copse receptor area

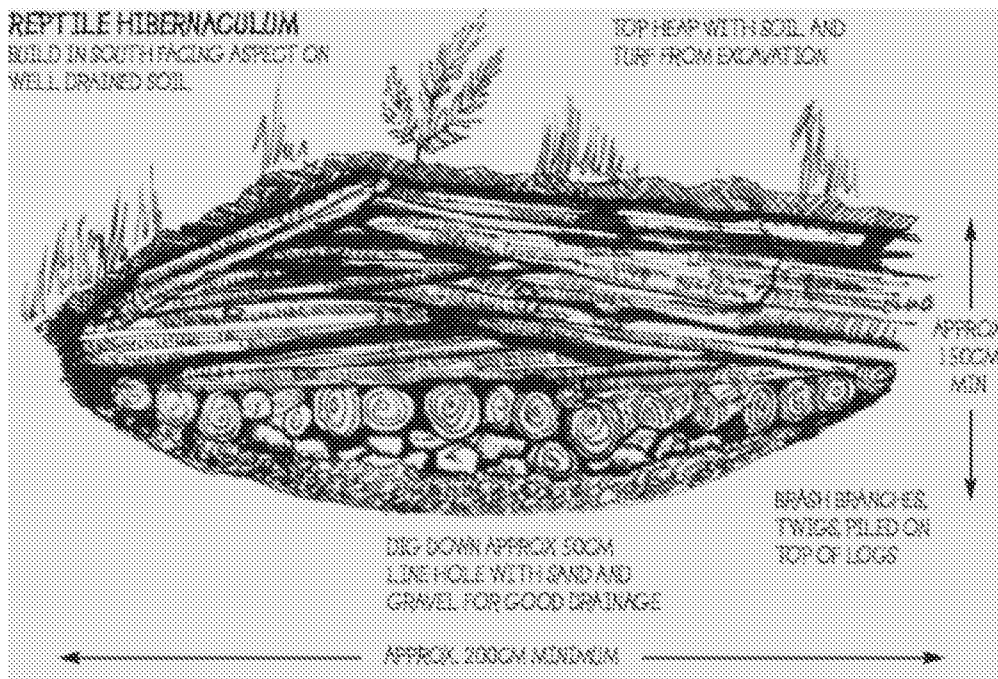
and the low number of slow worms identified at Land off Burndell road, it is considered that the proposed receptor site would be an ideal choice as a receptor for this proposed development. Additionally the receptor site is located just 2.5 miles from the site so would allow for the retention of Slow Worms within the local area. Given that the proposed receptor area is already managed for reptiles, it is considered that the habitat is already suitable and will not require any further enhancements to improve its suitability.

Figure 3. Approximate area of the proposed receptor area at Sunny Corner, Sunny Copse, Walberton - Application Number WA/75/17/PL (highlighted in red) to be used as the reptile receptor (approximately 0.10 ha in size).



5.4 Habitat Creation and Enhancement

Based on the nature of the existing habitats within the receptor (i.e. areas of poor semi improved grassland with bordering scrub), and its existing management regime for reptiles, the only potential enhancement anticipated would be the creation of an additional hibernacula to provide reptiles with a suitable area to hibernate within. This will be created following the specification outlined within Reptile Habitat Management: Guidelines for Landowners (HART, 2009) (Fig 4).

Figure 4. Reptile hibernaculum design as provided in HART (2009).

5.5 Capture and Exclusion

5.5.1 Capture and Translocation

Reptile relocation entails the capture of reptiles from the construction area (donor site) and release into the on-site site receptor area. The relocation would be carried out in accordance with guidance published by the HGBI (1998). The methodology used for capture of reptiles is the same as that used during survey. Artificial refugia made from materials such as roofing felt or corrugated metal allow reptiles to be detected and captured relatively easily. These artificial refugia warm up faster and retain heat for longer than the ground or surrounding vegetation, reptiles, being exothermic will shelter under the refuges in order for their bodies to reach the temperature required for activity. The reptiles can then be captured by experienced field ecologists who regularly visit each refuge during suitable weather conditions.

The construction area and receptor area would be set up with reptile exclusion fencing where necessary to prevent the movement of reptiles from / to adjacent areas. In accordance with the HGBI guidelines (1998), artificial refugia should be distributed across the site at a minimum density of 50/ha although a considerably higher density of refugia would be used in order to maximise the catching potential, particularly in areas where the density of reptiles recorded during the survey was found to be higher. Captured Slow Worms and Common Lizards would then be transported to the receptor area in appropriate containers such as buckets with perforated lids.

5.5.2 Effort and Timing

The survey indicates that there is a '**LOW**' population of Slow Worm present on site. The HGBI (1998) and Natural England (2011) guidelines recommend a minimum of 60 capture effort days are to be expended (**Table 3**) however 30 days trapping would be considered to

be a more proportionate capture effort given the small area of suitable habitat and the number of reptiles recorded on site. Reptile mats will be deployed at an increased density of >100 / ha to increase capture rate and help reduce the number of capture days required. The capture effort will be reviewed on an *ad hoc* basis during the translocation (i.e. when 5 consecutive visits have been carried out in ideal weather conditions¹ where no reptiles are captured (or seen), it is considered that the relocation can come to an end).

Table 3. The minimum capture effort for common reptile species based on HGBI (1998). The figures relevant to this scheme are emboldened and italicised.

Species	Population Size (adult density)	Refugia Density / ha	Minimum No of Trapping Days in Good Weather
Slow Worm	<i>High (> 100 / ha)</i>	100	<i>All suitable days between March and September (min 90 suitable days)</i>
	Medium (> 50 / ha)	100	All suitable days between march and September (min 70 suitable days)
	Low (< 50 / ha)	50	60 Suitable days

5.5.3 Destructive Search

Following the conclusion of the relocation, a destructive search of the site may be necessary. This would entail the sensitive stripping of vegetation on site using a toothed bucket where habitat is suitable for reptiles and can be focused on areas where reptile numbers were highest.

5.6 Protection of Receptor & Management

Given that the site is already being used as a receptor area, it is undergoing a suitable management regime and is listed within the S106 (or similar such as a restrictive covenant) as protected reptile habitat along with the installation of a wooden knee rail along the boundary and an interpretation board to ensure its protection.

5.7 Post-completion Monitoring

Given the low population of slow worms present on site, it is not considered necessary to conduct any monitoring post completion.

¹ Suitable weather conditions are generally considered to be between 10 and 18°C with intermittent sunshine and little or no wind and rain (see Froglife 1999).

6.0 REFERENCES

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