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Reptile Presence/Absence Survey Report

**Land northeast of 15 Billett Avenue,
Waterlooville**

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Report Summary

1. A reptile presence/absence survey was carried out between 6th April and 11th May 2017 on land at 15 Billett Avenue, Waterloooville, to ascertain what, if any, reptile species are present on the site as there is a proposal to construct four residential properties. This is being completed further to a Preliminary Ecological Appraisal carried out by The Ecology Co-op in September 2016, which identified suitable habitat at the site for reptiles.
2. These surveys were undertaken by Briony Hill, a graduate member of the Chartered Institute for Ecology and Environmental Management (CIEEM).
3. The site is situated in the urban setting of Waterloooville surrounded by residential streets with the A3 about 1 km to the east and a large parcel of ancient woodland approximately 195m to the north. A culvert runs underneath the site from north to south.
4. The survey was carried out by placing 10 artificial refugia in suitable grassland and scrub across the site. A total of seven surveys were undertaken and the highest count of reptiles from these visits used to estimate the population of each reptile species on the site as low, medium or exceptional.
5. During the seven surveys a peak count of 1 slow worm was recorded, indicating that the site supports a low population of slow worms.
6. A peak count of one slow worm was recorded within the site during the survey and under Froglife guidelines, this suggests a low population of slow worms are present. Under current proposals there is not enough available habitat that could be retained as an on-site receptor area which means that the small number of slow worm present will need to be translocated to a receptor site nearby.
7. Three potential receptor sites were identified – a primary school, a golf course and an allotment all within 4 miles of the site.

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1 INTRODUCTION

1.1 Purpose of the Report

This report gives details of a reptile presence / absence survey carried out by Briony Hill, a Graduate member of the Chartered Institute of Ecology and Environmental Management, on land northeast of 15 Billett Avenue. The grid reference for this site is SU SU688099.

The objective of the survey is to identify the presence or likely absence of reptile species at the Billett Avenue site, determine approximate populations and provide mitigation advice should it be necessary.

This survey and report was carried out and produced at the request of Peter Ernest Homes Ltd.

1.2 Background

The Ecology Co-operation was commissioned to undertake a reptile survey after potential habitat was identified during a Preliminary Ecological Appraisal undertaken by The Ecology Co-operation in September 2016 and from biodiversity records requested from Hampshire Biodiversity Records Centre. Two records for slow worms were identified in the HBIC data search, with the most recent record from 2011 located approximately 500m from the site.

The assessment was carried out further to a proposal to construct four residential properties on the land northeast of Billett Avenue, Waterlooville.

1.3 Site Description

The site is situated in the urban setting of Waterlooville surrounded by residential streets with the A3 about 1 km to the east and a large parcel of ancient woodland approximately 195m to the north. A culvert runs underneath the site running from north to south.

The centre of the site is composed of species-poor semi-improved grassland which has become overgrown and is dominated by false-oat grass (*Arrhenatherum elatius*) and Yorkshire fog (*Holcus lanatus*), with common ragwort (*Jacobaea vulgaris*), bird's foot trefoil (*Lotus corniculatus*), creeping buttercup (*Ranunculus repens*), rough hawkbit (*Leontodon hispidus*) and common sorrel (*Rumex acetosa*) also present.

There are thin strips of woodland along the east and south boundaries which link up to dense scrub habitat along the north boundary. The south boundary woodland strip is mostly bare underfoot with patches of nettles (*Urtica dioica*) or brambles (*Rubus fruticosus*) in places. The tree composition consists of scots pine (*Pinus sylvestris*), holly (*Ilex aquifolium*), ash (*Fraxinus excelsior*), weeping willow (*Salix babylonica*), hazel (*Corylus avellana*), elder (*sambucus nigra*) and oak (*Quercus robur*). Along the east boundary, the woodland has several rubbish piles with patches of ivy, nettle and bramble. The woodland contains hazel, oak, scots pine, laurel (*Laurus nobilis*), sycamore (*Acer pseudoplatanus*) and beech (*Fagus sylvatica*).

A thin species rich hedgerow runs along the west boundary composed of ash, buddleia (*Buddleja spp.*),



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bramble, cypress (*Cupressus sempervirens*), hazel and laurel. There is a mature fruit tree covered in ivy at the north end. In the southeast corner of the grassland field in front of the woodland strip to the south, there is a small section of vegetation that differs from the main grassland field in the centre and is dominated by creeping thistle (*Cirsium arvense*), timothy grass (*Phleum pratense*), common bind weed (*Convolvulus arvensis*), bramble, common ragwort, common flea bane (*Pulicaria dysenterica*) and pendulous sedge (*Carex pendula*).

In the southeast corner, a small strip of land extends out to the southeast which is the existing footpath that leads to the site which is bordered by hedgerow on both sides consisting of hazel, ash, bramble, oak, box (*Buxus sempervirens*), hornbeam (*Carpinus betulus*), scots pine, common bind weed and holly.



Figure 1. An aerial image showing the location of the site. The approximate site boundary is outlined in red.



Figure 2. Long, rough grass throughout the centre of the site.

2 LEGAL PROTECTION

This section briefly describes the legal protection afforded to reptiles. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation, but summarises the salient points.

Common lizard (*Lacerta vivipara*), grass snake (*Natrix natrix*), slow-worm (*Anguis fragilis*), and adder (*Vipera berus*) are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), in respect of Section 9 (5) and part of Section 9(1). This protection was extended by the Countryside and Rights of Way (CROW) Act 2000. Under the legislation it is an offence to:

- Intentionally or deliberately kill or injure any individual of these species; or
- Sell or attempt to sell any part of these species either alive or dead.

3 METHODOLOGY

The survey was carried out by placing artificial refugia around the site, in areas of suitable habitat for reptiles, which heat up in the sun and provide cover. 10 roofing felt sheets were used and placed in the long vegetation and scrub. Reptiles are attracted to these refugia to warm up in the mornings and late afternoon to regulate their temperature and a suitably qualified surveyor is able to count the number and in some cases the sex of each species present.



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A total of seven surveys are undertaken and the highest count of reptiles from these visits is used to estimate the population of each reptile species on the site as low, medium or exceptional.

The survey refugia were placed around the site, focusing on the areas of long vegetation and scrub where they would warm up in the morning or afternoon sun. The coverage of the survey sheets was spaced evenly around the site where possible avoiding areas that would be constantly shaded by trees.

4 RESULTS

A total of 10 survey sheets were placed across the land northeast of 15 Billett Avenue on the 23rd March 2017 and left for a minimum of ten days to 'bed in' before the commencement of the survey process.

Table 1: Results of reptile survey undertaken at 35 Tilmore Road, Petersfield. SW – Slow worm, GS – Grass snake, CL – Common Lizard, Juv – Juvenile, SA – Sub adult, F- Female, M – Male.

Date	Start Time of Survey	Air Temp/ Refugia Temp °C	Weather Notes, cc = Cloud cover	Species Total
06/04/2017	11:00	14/20.5	20% cc, light breeze	1 x F SW
10/04/2017	15:30	15.5/19	50% cc, light breeze	1 x M SW
13/04/2017	10:25	11/19	70% cc, light breeze	1 x F SW
21/04/2017	16:05	14.5/16.5	100% cc, still	None
28/04/2017	16:40	14/17.5	90% cc, still	1 x Juv SW
04/05/2017	10:20	11.5/17.5	100% cc, still	1 x Juv SW
11/05/2017	15:15	16.5/24	80% cc, still	1 X Juv SW

4.1 Constraints/Limitations

All surveys were completed within the allocated temperature range stated in the national guidelines (9-18°C) and without the influence of rain. All surveys were therefore deemed to be suitable.

5 DISCUSSION AND RECOMMENDATIONS

A peak count of one slow worm was recorded within the site during the survey and under Froglife guidelines, this suggests a low population of slow worms are present.

Under current proposals there is not enough available habitat that could be retained as an on-site receptor area which means that the small number of slow worm present will need to be translocated to a receptor site nearby.

This involves erecting reptile proof fencing around the grassland habitat within the site followed by at least 30 trapping checks to catch and relocate any slow worms found on site. Once 10 consecutive days of no catches has been achieved the site can be said to be clear of reptiles.

5.1 Reptile Fencing Installation

The grassland section of the proposed construction zone, following the boundaries will be fenced with



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reptile-proof fencing. A temporary fencing material will be installed to a depth of not less than 20cm below ground and supported by stakes every 2.5 metres fixed with clout nails and washers (Fig. 3). The fencing will be backfilled with earth and tightly compacted to make sure that it acts as an impassable barrier.



Figure 3 – an example of the temporary fencing material that will be used.

The reptile fencing would be required to make a continuous fence line to envelop all of the site construction area and would need to remain in-situ until all construction work deemed a risk to reptiles has been completed – i.e. earthworks and associated landscaping. This will prevent any animals from the surrounding areas to migrate onto the site during works. Figure 4 below shows the proposed route of the reptile fence upon the Billett Avenue development site. Along the south boundary the fence will tie into the road outside the boundary acting as an impassable barrier.

Construction method:

1. At least 24 hours prior to the construction of the reptile fence, the fence route would be trimmed (using brush-cutters where necessary) of vegetation to a height of not more than 5cm and a two metre width, with all cuttings raked off and removed. This will ensure that reptiles are discouraged from the fencing construction zone. The trimming process will be completed in two passes, with the grass cut to a height of 10-15cm on the first pass, to reduce the risk of harming reptiles during the trimming process. The trimming process will be overseen by a suitably qualified ecologist who will also conduct a thorough hand search prior to trimming to check for any evidence of ground-nesting birds. If nesting birds are found then trimming will have to wait until the nesting birds and chicks have fledged and moved on.



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2. The managed construction zone will not be allowed to grow taller than 5cm prior to the construction of the fence and materials will not be stored along the fencing route, which could otherwise attract reptiles to them as refugia.
3. The entire length of the fence will first be established by excavating a 20cm wide and 20cm deep trench, overseen under watching brief by a suitably qualified ecologist. Excavated earth will be piled on the outside edge of the trench so that it is easily backfilled once the fence has been installed.
4. Excavation work for the fencing trench will be carried out by an excavator not larger than 0.8 tons in weight to minimize ground disturbance.
5. Fence stakes will be positioned every 2.5 metres and will be sunk into the ground to a depth of at least 30cm to ensure that they are secure.
6. The fencing material will be rolled out along the outside edge of the trench and will be lifted into place when each full roll has been unraveled or cut into manageable sections.
7. The fencing sheet will be attached to the stakes using 2 clout nails and plastic washers at the top and 15cm from the bottom of each stake.
8. Once fixed the excavated earth will be backfilled along the trench and trodden in to ensure that it is lightly compacted to prevent animals from digging into it.
9. After establishment, reptile fence checks would be undertaken every week to look for any signs of damage. Once construction has commenced, the fence checks and maintenance will become the responsibility of the works contractor.

In order to prevent reptiles from migrating around the entrance to the site, the fence will have 'cut backs' on each of its ends (see figure 5). This is where the fence loops back on itself, so that any animals travelling along the edge of the fence are guided away from the site entrance. In addition to this, the grassy cover around the edge of the fencing will be monitored regularly to ensure that it is kept short and unsuitable for reptiles to deter them away naturally where necessary. The hardstanding on the south of the site will be used as an effective 'impassable barrier' to reptiles, by tying off the fencing at the edges of this hard surfacing and creating the cut backs to deter any reptiles from trying to travel around the edge of the fence, as shown below in figure 4.



Figure 4 – The proposed reptile fencing route in purple, bordering the site boundary in red. Note the fence in purple tying to the hardstanding on the south boundary to allow for future machine access and to act as a physical barrier.



Figure 5 – ‘Cut backs’ used to guide animals away from the site entrance and where the boundary fencing meets the hard standing of the adjacent Main road.

5.2 Reptile Translocation Strategy

Given the size of the population present and the size of the site, it has been considered appropriate to have a target total of 30 translocation visits, which would be made from no earlier than mid-March with ‘tins’ (in this case bitumen sheets) placed at a density of 100 per hectare in line with national guidelines (Gent and Gibson, 1998). Translocation visits will be undertaken as long as the air temperature is between 9 degrees and 18 degrees in the morning or mid-afternoon in the absence of wet or very windy weather. Multiple visits can be made during suitable weather conditions on a single day, as long as



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they are spaced apart by at least 45 minutes. All captured reptiles will be placed into a large smooth-sided bucket with some green hay at the bottom and then released within one hour to the receptor site.

All translocation data will be presented within a report to both the council and the owners of the receptor site.

The translocation process will have a target of 30 trapping visits, though the translocation effort will only be ceased once at least 10 visits in suitable weather conditions are made without identifying any reptile presence within the construction zone. Whilst the construction zone will be declared free of reptiles following 10 clear consecutive visits, an ecologist would still be present during the initial construction phases to undertake a 'watching brief' of all initial ground works. This watching brief would be carried out to ensure that stripping of surface vegetation is undertaken carefully and under observation with construction halted if any reptiles are identified within the construction zone. Site staff would be briefed prior to the commencement of construction on the importance of protecting the reptile fencing and contacting an ecologist in the event that any reptiles or other wildlife is identified within the construction zone.

5.3 Receptor Sites

Three potential receptor sites have been identified within 4 miles of the Billett Avenue site that could be used as an off-site receptor area. Contact with these sites will not be made until planning has been approved.

Site 1: Waterloo Golf Course – Situated approximately 1 mile northeast of the site. Golf courses are ideal habitats for a variety of wildlife including reptiles due to the mosaic of habitats that create a golf course including rough grassland, water features, woodland edges and hedgerows.

Site 2: Queen's Inclosure Primary School – Located approximately 0.4 miles to the northeast of the site. Primary Schools often have areas within their grounds that are specifically allocated for wildlife or are looking for ways to encourage their children to interact with wildlife more. The addition of a small population of slow worms to a primary school with the added option of learning to create reptile enhancements such as hibernacula could be a great opportunity for a school to create or enhance their wildlife areas at no cost to them.

Site 3: Forest End Allotments – Situated on the west side of the Forest End estate approximately 0.9 miles to the southwest of the site. This allotment would be capable of taking a small slow worm population. The slow worm is a great help in gardens as they prey on the slugs and snails that are commonly found eating garden plants.

Further options are available but the three areas mentioned above are believed to be the best options at this time. Details of enhancements for these sites to increase their ability to support a small population of slow worms can be outlined as part of a planning condition.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.