# First Wessex

# 4-5 Maple Square

## Reptile Presence / Likely Absence Survey

## May 2016

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## Executive Summary

| Contents | Summary |
|---|---|
| **Site Location and Proposals** | The site is located in Eastleigh, Hampshire, centred on OS grid reference SU44393 18341. It covers an area of approximately 0.07 ha and comprises two residential gardens. One garden is maintained whilst the other has become overgrown due to a lack of management. The site is surrounded on all sides by residential properties and associated land.<br><br>The proposed application is for two residential units with associated access infrastructure including parking and garden space. |
| **Previous Reports / Surveys** | An extended Phase 1 habitat survey was completed at the site in January 2016 which identified high potential for reptiles on the site due to the majority of the site comprising semi-improved grassland and scrub, with grassland and scrub margins offering potential shelter and foraging habitat (WYG, 2016). |
| **This Survey(s)** | WYG was commissioned to undertake presence/likely absence surveys for reptiles on the site. Surveys were completed between 5th April and 28th April 2016. |
| **Results** | In total, one juvenile slow worm was recorded on site. |
| **Recommendations** | As a low population of reptiles has been recorded during the surveys, coupled with the fact that the site is small in size with suitable surrounding habitat, it is recommended a reptile displacement strategy is put in place. This will involved implementing a stage cut of the vegetation towards the northern boundary of the site.<br><br>Enhancement measures should seek to incorporate areas of grassland and dense bordering vegetation into residential gardens in order to promote suitable foraging and basking habitat for reptiles. The inclusion of more dense vegetation may also provide potential hibernacula. |

# 1.0 Introduction

## 1.1 Background

WYG was commissioned by First Wessex in March 2016 to complete a reptile presence / likely absence survey at of a proposed development site in 4-5 Maple Square, Eastleigh (hereafter referred to as 'the site'). Following the completion of an extended Phase 1 habitat survey (WYG, 2016) reptile presence / likely absence surveys were recommended within areas of suitable habitat. The site layout is shown in Figure 1, Appendix A.

## 1.2 Site Location

The site is located in Eastleigh, Hampshire on Maple Square, a residential road. Centred on OS Grid Reference SU 44393 18341, the site covers an area of approximately 0.07 hectares and is comprised of two residential gardens. One garden is currently maintained, whilst the other has become overgrown through a lack of management. The site is surrounded by residential properties and their associated gardens.

Fleming Park is located 80m west of the closest site boundary the Monks Brook river flows through the centre of this park. In the wider area, additional residential properties are located to the south, along with Lakeside Country Park beyond these. Barton Peveril Sixth Form College is located 0.1km east of the closest site boundary, whilst further residential areas are located to the north.

## 1.3 Development Proposals

The proposed application is for the construction of two residential properties with associated access, parking infrastructure and garden space. In line with the proposals, the two residential buildings associated with the gardens are to be retained, and will not be impacted by the development.

## 1.4 Survey & Reporting Objectives

The aims of the survey work and the subsequent report presented herein were to:

- Determine if reptiles continue to be present at the site;
- Determine the population size class of reptiles if confirmed to be present;
- Provide an appraisal of the implications created by the potential presence of reptiles at the site;

- Establish if any potential effects on reptiles resulting from the development are permissible;
- Ensure that the required level of survey work and information is present to inform a method statement, should one be necessary; and
- Provide preliminary advice on mitigation strategies against any adverse affects on local reptile population(s) which may arise as a result of the proposed development.

# 2.0 Planning Policy & Legislation

## 2.1 Local Planning Policy

Policy 24.NC of the Eastleigh Borough Adopted Local Plan Review Document (2001-2011) states that a development proposal will not be permitted where is would ***adversely affect species or habitats which are protected by legislation, unless appropriate measures are proposed which would acceptably mitigate the impact on those species.***

In addition to this, Policy 25.NC goes on to state that development will not be permitted where it would ***adversely affect a habitat or feature of importance for wild fauna and flora… unless it can be demonstrated to the satisfaction of the council that:***

***(i)*** ***The benefits of development outweigh the adverse impacts;***

***(ii)*** ***The adverse impacts are unavoidable and;***

***(iii)*** ***Appropriate measures are taken which would mitigate of compensate for any adverse impact.***

There is a requirement for developers to ***include measures to enhance the value of features and habitats of nature conservation importance where reasonable opportunities exist in connection with the development*** (Policy 26.NC).

## 2.2 Legislation

All six species of reptiles native to the UK are protected under the Wildlife and Countryside Act 1981 (as amended) and benefit from various levels of protection. The adder (*Vipera berus*), grass snake (*Natrix natrix*), slow-worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*) receive partial or full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to:

- Intentionally or recklessly kill or injure these animals; and
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisement to buy or sell individual reptiles.

The smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are listed in Annex IVa of the EC Habitat and Species Directive and in Annex II of the Bern Convention. They are also listed in Schedule 5 of Section 9 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of the Conservation Regulations 2010 (as amended). As a result it is an offence to:

- Intentionally or recklessly kill or injure these animals;
- Deliberately disturb these animals;
- Take or destroy their eggs;
- Damage, destroy or disturb or impede access to breeding or shelter sites used by these species; and/or
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisement to buy or sell individual reptiles.

# 3.0 Methodology

## 3.1 Desk Study

Information was gathered from the Hampshire Biodiversity Records Centre (HBIC), the ecological records centre for Hampshire, regarding the presence of nature conservation designations and protected and notable species within 2 km of the boundary of the proposed development site. In addition, a search for designations was made using the Multi Agency Geographic Information for the Countryside database (MAGIC).

### 3.1.1 Local Records Centre

HBIC provided all data for reptile presence for this site.

## 3.2 Field Surveys

In accordance with the guidance outlined in the Herpetofauna Workers' Manual (Joint Nature Conservation Committee - JNCC, 2003), Advice Sheet 10 – Reptile Survey (Froglife, 1999) surveys were undertaken to establish the presence or likely absence of reptile species. This involved seven visits from 5th April – 28th April 2016 in suitable weather conditions.

20 clearly numbered artificial refugia (sections of bituminised roofing felt) were placed across the site in areas considered to have habitat suitable for reptiles (see Figure 2). The refuges were then left undisturbed on the site for two weeks prior to survey; to allow for reptiles on the site to find and utilize. Each refuge was then first checked for basking individuals from a distance before being slowly approached and searched for sheltering reptiles. Terrestrial habitat between artificial refugia was also searched for reptile species on each visit. The location of each reptile sighting was then recorded to allow for analysis of population distributions across the site.

As a guideline it is recommended that the optimal time to survey reptiles is between 8:30am to 11:00am and between 16:00pm and 18:30pm and when air temperature is between 9ºC and 18ºC. Strong rain and wind are deemed unsuitable (Froglife, 1999). As reptile activity is heavily dependent on weather conditions the following conditions were recorded during each survey: air temperature, wind levels, rain levels, and the cloud cover.

# 4.0 Baseline Conditions

## 4.1 Desk Based Study

The data provided by DERC included 281 records of reptile, including numerous records of slow-worm (*Anguis fragilis*); common lizard (*Zootoca vivipara*); grass snake (*Natrix natrix*) and adder (*Viper berus*) within 500m of the site. The closest record returned was of slow-worm, from approximately 0.15km to the north-east of the nearest site boundary.

## 4.2 Site Survey

### 4.2.1 Weather Conditions

**Table 1:** Survey Weather Conditions

| Survey | Date | Time | Air Temperature (ºC) | Rain | Wind Speed | Cloud Cover (%) |
|---|---|---|---|---|---|---|
| 1 | 05.04.2916 | 13.00 | 16.5 | None | 0 | 50 |
| 2 | 09.05.2016 | 12.30 | 11.5 | None | 0 | 100 |
| 3 | 12.04.2016 | 17.00 | 14 | None | 0 | 80 |
| 4 | 18.04.2016 | 16.20 | 11.8 | None | 0 | 40 |
| 5 | 20.04.2016 | 16.50 | 15 | None | 0 | 70 |
| 6 | 25.04.2016 | 14.00 | 12.4 | None | 2-3 | 100 |
| 7 | 28.04.2016 | 11:00 | 11.8 | None | 2 | 40 |

## 4.3 Survey Results

**Table 2:** Site Survey Results

| Survey | Date | Records | | | |
|---|---|---|---|---|---|
| | | Species | Adult | Juvenile | Mat No. |
| 1 | 05.04.2916 | None | N/A | N/A | N/A |
| 2 | 09.05.2016 | None | N/A | N/A | N/A |
| 3 | 12.04.2016 | None | N/A | N/A | N/A |
| 4 | 18.04.2016 | None | N/A | N/A | N/A |
| 5 | 20.04.2016 | Slow Worm | 0 | 1 | 5 |
| 6 | 25.04.2016 | None | N/A | N/A | N/A |
| 7 | 28.04.2016 | None | N/A | N/A | N/A |

## 5.0 Constraints & Opportunities

One juvenile slow worm was recorded during the surveys indicating that slow worms may be breeding onsite

Analysis of the results follows the guidelines set out in the Froglife (1999) document and in Table 3 below. This enables a broad assessment of the size of the reptile population at 4-5 Maple Square.

**Table 3:** Reptile Population Estimate

| Species | Low population Score 1 | Good population Score 2 | Exceptional population Score 3 |
|---|---|---|---|
| Adder | < 5 | 5 - 10 | > 10 |
| Grass snake | < 5 | 5 - 10 | > 10 |
| Common Lizard | < 5 | 5 - 20 | > 20 |
| Slow worm | < 5 | 5 - 20 | > 20 |

NB. Figures in the table refer to maximum number of adults seen by observation and/or under mats, placed at a density of 10 per hectare, by one person in one day.

Froglife guidelines (1999) (Table 4 above) suggest that at present the site has a **low** population of slow-worms (a maximum of 0 adults and 1 juveniles found in a single visit). As this species is protected from killing and injury under the Wildlife and Countryside Act 1981, mitigation will be required prior to construction commencing to protect reptiles.

### 5.1 Avoidance

As only one individual slow worm was recorded on site (along the northern boundary) a reptile exclusion and translocation is not deemed necessary. It is recommended that a reptile displacement strategy is implemented. This will involve a phased cut of vegetation from the south to northern boundary. Any slow worms present will then be encouraged to move to suitable habitat in adjacent gardens in the surrounding landscape. The reptile displacement strategy will involve the removal grassland or ruderal vegetation under a watching brief by a suitably experienced ecologist.

This can be achieved by following a two stage cutting regime during the period when reptiles are known to be active (**April to September).**

- Grassland and or scrub/garden vegetation (which may be cleared as part of the proposals) should be cut, using a hand held strimmer to a height of 30cm. This should be undertaken in a single direction working from the south to the north;

- After a minimum of 24hrs from the initial cut, the remaining habitat should be cut to ground level and maintained at this level until the development is complete.

The cut vegetation should be removed off-site so that piles of vegetation do not encourage reptiles to move back onto the site.

## 5.2 Enhancement

It is recommended that the development proposals incorporate a landscaping plan featuring areas of grassland (e.g. turfed residential gardens and public areas) and borders of more dense vegetation in order to provide foraging and basking habitat for reptiles. It is considered that taking these steps as part of the landscape plans will maintain the suitability of the site for reptiles and in some areas will increase the resource provision for them.

## 5.3 Survey Constraints

The results of this survey will remain valid for three years (i.e. until April 2019). If works have not commenced within this time frame then it is recommended that an update survey is completed as the habitats on site may have become more suitable for reptiles or reptiles may have moved onto the site.

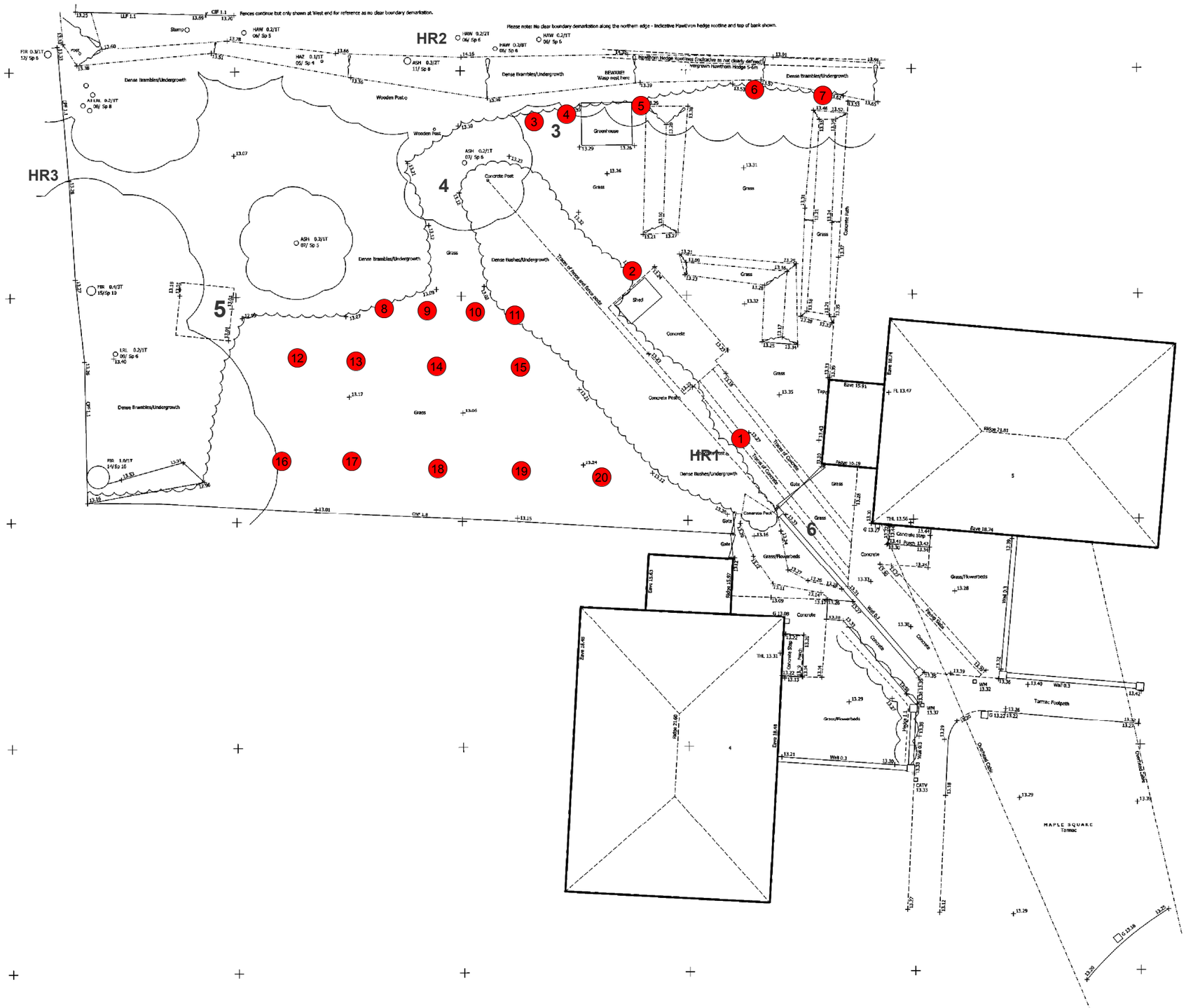
## 6.0 References


- Eds. Hill, D.A., Fasham, M., Tucker, G., Shewry, M. & Shaw, P. (2005) Handbook of Survey Methods: Survey, Evaluation and Monitoring. Cambridge University Press, UK.
- Froglife (1999) Advice Sheet 10: Reptile Survey
- Gent, T. & Gibson, S. (2003) Herpetofauna Workers' Manual. JNCC.
- WYG (2016) 4-5 Maple Square: Extended Phase 1 Habitat Survey Report

# FIGURES

## Figure 1 – Site Location Plan

## Figure 2 – Reptile Mat Location Plan


HR1
HR2
HR3
Please note: No clear boundary demarkation along the northern edge - Indicative Hawthorn hedge routine and top of bank shown.
Fences continue but only shown at West end for reference as no clear boundary demarkation.
Hawthorn Hedge 'Rootless' (Indicative as not clearly defined)
Hedgerow Hawthorn Hedge 5-6m
Dense Brambles/Undergrowth
Wooden Post o
Wooden Post
Greenhouse
Concrete Post
Grass
Dense Rushes/Undergrowth
Tarmac of Tennis and Mini Soccer
Shed
Concrete
Concrete Posts
Gate
Grass/Flowerbeds
Tarmac Footpath
MAPLE SQUARE
Tarmac
Eave 15.91
Ridge 21.83
Eave 16.74
Ridge 15.67
Eave 16.40
Ridge 21.00
Eave 16.49
Ridge 15.67
Eave 16.74
Ridge 15.67
Wall 0.3
Wall 0.2
Wall 0.1
Wall 0.4
Concrete Kerb
Concrete Slab
Concrete Path
Concrete Step
Concrete Ramp
Concrete Plinth
Concrete Post
Concrete Path
Concrete Slab
Concrete Kerb




N

## Legend

Site Location


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WYG Planning & Environment

creative minds safe hands


# 4-5 Maple Square, Eastleigh

## Figure 1: Site Location Plan

| | Drawn by: Date: | Checked By: Date: | Approved By: Date: |
|---|---|---|---|
| | MW 17/05/16 | JS 17/05/16 | DW 17/05/16 |

| Project No: | Office | Type | Drawing No. | Revision |
|---|---|---|---|---|
| A095791-1 | 45 | 94 | 1 | |


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# APPENDIX A – Report Conditions

**Report Conditions**
**4-5 Maple Square - Reptile Presence / Likely Absence**

This report is produced solely for the benefit of First Wessex, and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to WYG Environment. In time improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of WYG using due skill and care in the preparation of the report.

This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented as the best obtained within the scope for this report.

Reliance has been placed on the documents and information supplied to WYG Environment by others but no independent verification of these has been made and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.

Whilst skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather related conditions.

Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties. The performance of environmental protection measures, e.g. of buildings and other structures in relation to acoustics, vibration, noise mitigation, and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.