



Linden Homes

Bartons Road, Havant

**Reptile Presence / Likely Absence
Survey Report**

August 2014

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Executive Summary

Contents	Summary
Site Context	The site is located in Havant, Hampshire, just off Bartons Road. The site is centred on Ordnance Survey grid reference SU731080 and is approximately 1.5 ha. Habitats on site comprise a number of buildings surrounded by hardstanding, semi-improved grassland, scrub and mature scattered trees. The proposed development is for approximately 60 residential properties, with associated parking and access.
Previous Reports/Surveys	An extended Phase 1 habitat survey was completed at the site on 18 th April 2013 which identified the potential for reptiles on the site due to the presence of scrub and grassy field margins. There are also records of reptiles in the local area. As such a reptile presence / likely absence survey was recommended.
WYG Survey	WYG was commissioned to undertake presence / likely absence surveys for reptiles at the Bartons Road site. Surveys were completed between June and September 2013.
Results	Three species of reptile: slow worm, grass snake and common lizard were recorded on site. A maximum of one grass snake and one common lizard were recorded during any one visit indicating a 'low' population of these species. A maximum of two slow-worms were recorded on any one visit indicating that the slow worm population within the site is also 'low'.
Mitigation and Enhancement Recommendations	Reptiles are protected from killing and injury under the <i>Wildlife and Countryside Act 1981</i> (as amended). As reptiles are known to be present on the site, a translocation exercise will be required to move the reptiles away from the works area, to a suitable receptor site. The populations of reptiles within the site are classed as 'low' and as such a minimum of 60 days of capturing, using refugia at 50/ha will be required, following the recommended HGBI guidelines. It is recommended that reptiles are moved to a suitable receptor site which will be located within a retained buffer along the northern boundary of the site. This survey will remain valid for two years. If works have not commenced within this time, it is recommended that an up to date assessment of the site is completed.



1.0 Introduction

1.1 Background

WYG was commissioned by Linden Homes to complete a reptile presence / likely absence survey at Bartons Road, Havant (hereafter referred to as 'the site'), with the aim of identifying potential ecological constraints to development.

In April 2013, WYG completed an extended Phase 1 habitat survey at the site (WYG, 2013). A report was compiled which detailed the habitat components and their scope to support protected species (based on field signs and desk studies) and recommendations for further protected species surveys were made. A reptile presence / likely absence survey was recommended based on the presence of suitable reptile habitat (grassland and scrub), some of which will be directly impacted by the development proposals, and the occurrence of reptile records in the local area.

1.2 Site Location and Description

The site is located just off Bartons Road in Havant, Hampshire. The site is centred on Ordnance Survey grid reference SU731080 and comprises approximately 1.5 ha. Habitats on site comprise a number of buildings surrounded by hardstanding, semi-improved grassland, scrub and mature scattered trees.

To the north of the site lies Barton's Copse, to the east lies open fields which appear to be used for agricultural purposes. To the south of the site lies Bartons Road and Maidenhead Aquatics Garden Centre and to the west of the site is the railway line.

1.3 Proposed Work

The proposed development on site proposes the construction of approximately 60 residential properties with associated access, car parking and landscaping.

1.4 Survey Objectives

The preliminary ecological appraisal carried out by WYG in April 2013 identified the potential for reptiles to occur on site.



The aims of the reptile presence / likely absence survey work and the subsequent report presented herein are to:

- Determine the presence or likely absence of reptiles 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 affects 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.

1.5 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
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisement to buy or sell individual reptiles.



2.0 Methods

2.1 Desk Based Study

As part of the original extended Phase 1 habitat survey, site and species specific data was sourced through direct consultation with the Hampshire Biodiversity Information Centre (HBIC). The area of search was taken as 2km, which is the standard search area required by most local authorities. This provided the overall ecological context for the site and surrounding areas and potential basis for the reptile survey.

2.2 Site Survey

In accordance with the guidance outlined in the *Herpetofauna Workers' Manual* (Joint Nature Conservation Committee - JNCC, 2003), *Advice Sheet 10 – Reptile Survey* (Froglife, 1999) and the *Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring* (Hill *et al.*, 2005) surveys were undertaken to establish the presence or absence of reptile species. This involved seven site visits between June and September in suitable weather conditions.

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 1, Appendix C). The mats were placed in the areas of longer grassland, which were present around the field at the north western corner of the site and along the northern extent of the access track which runs north to south through the centre of the site. The mats were placed at a density of approximately 65 mats/ha within suitable habitat (26 mats/ha across the site as a whole). The refuges were then left undisturbed on the site for five weeks prior to survey to allow for reptiles on the site to find and utilize. During each visit, 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 9°C and 18°C. 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.



2.3 Limitations

Froglife Advice sheet 10 recommends that to establish presence, at least seven visits should be completed in suitable conditions at the appropriate time of year (Froglife, 1999). Reptile surveys should be completed during the active season (April – September). All surveys were completed during the active season for reptiles and under suitable weather conditions with the exception of the surveys completed during July. The temperature during the July surveys was 19°C which is slightly warmer than the recommended range for surveys (9 to 18°C) as recommended by Froglife (Froglife, 1999), however this is considered acceptable as reptiles were still recorded and are comparable with results from days when cooler temperatures were recorded.

Reptiles need to spend a greater proportion of time basking when the air temperature is low but the sun is shining, therefore April, May and September are the key survey months. During June, July and August, reptiles are active, but because the air temperature is higher, they do not need to spend as much time basking but move freely, often deep in the vegetation; this makes them more difficult to survey (JNCC, 2003). Reptiles were still recorded during the surveys in July when temperatures were one degree above the recommended survey temperatures.

The results of this survey will remain valid for two years. If works have not commenced within this time, it is recommended that a review of the site conditions is undertaken.



3.0 Results

3.1 Desk Based Study

HBIC provided information in relation to the presence of reptiles recorded as individual records e.g. sightings and evidence as well as records included in descriptions of designated sites and areas of particular regional, national or international importance.

Consultation with HBIC provided records for four species of reptile within 2km of the proposed development site including slow worm, grass snake, adder and common lizard (refer to Table 1 below). The closest records are for grass snake and adder, both of which have been found approximately 1km south of the site. Full results can be seen in Appendix B.

Table 1: Reptile information from HBIC

Reptile details	Date	Grid Ref	Distance (Km) and Direction from site.
Grass Snake	1999	SU719090	1.60 NW
Grass Snake	1999	SU726095	1.59 N
Grass Snake	1999	SU730070	1.00 S
Grass Snake	1999	SU746079	1.59 E
Adder	2010	SU716086	1.61 W
Adder	2006	SU716086	1.62 W
Adder	1999	SU730070	1.00 S



3.2 Survey Results

Refugia were placed on the site on the 22nd May 2013 and the first survey was completed on the 27th June 2013. Seven survey visits were completed between June and September 2013. Table 2 summarises the weather conditions during the survey dates.

3.2.1 Weather Conditions

These were all completed during with temperatures between 12 and 19°C, with no rainfall.

Table 2: Survey Weather Conditions

Survey	Date	Time	Air Temperature (°C)	Rain
1	27/06/2013	10.00	18	No
2	03/07/2013	09:00	19	No
3	29/07/2013	09:00	19	No
4	10/09/2013	09:20	12	No
5	13/09/2013	08:30	16	No
6	20/09/2013	10:30	12	No
7	26/09/2013	09:00	13	No

3.2.2 Survey Results

Three species of reptile were recorded during the surveys including slow worm, grass snake and common lizard. All the reptiles recorded were adults and no juveniles were found. A total of one grass snake, one common lizard and two slow worms were found on any one visit. Table 3 details the reptiles found.

Table 3: Site Survey Results

Survey	Date	Records			Mat No. and location
		Species	Adult	Juvenile	
1	27/06/2013	Slow worm	1AM	-	5 (north west corner of site in grassland)
2	03/07/2013	Grass snake	1A	-	29 (eastern boundary of semi-improved grassland)
		Slow worm	1AF	-	1 (north eastern corner of semi-improved grassland)



		Slow worm	1AM	-	2 (north eastern corner of semi-improved grassland)
3	29/07/2013	Slow worm	1AF	-	23 (southern extent of semi-improved grassland)
4	10/09/2013	Slow worm	1AM	-	15 (western boundary of semi-improved grassland, adjacent to bramble scrub)
5	13/09/2013	-	-	-	-
6	20/09/2013	Slow worm	1AM	-	15 (western boundary of semi-improved grassland, adjacent to bramble scrub)
		Common Lizard	1AF	-	15 (western boundary of semi-improved grassland, adjacent to bramble scrub)
		Slow worm	1AF, 2AM	-	9 (western boundary of semi-improved grassland)
7	26/09/2013	-	-	-	-

AF adult female; AM adult male; AU adult unsexed; JU juvenile unsexed



4.0 Ecological Constraints, Impacts and Recommendations

Three species of reptile were recorded within the site: slow worm, grass snake and common lizard.

Slow worms were recorded during five of the seven visits. The maximum count of individuals was two adults during the months of July and September. One individual grass snake was recorded in July and an individual common lizard was recorded in September.

Table 4: Calculating Populations (from Froglife 1999)

	Low population <i>Score 1</i>	Good population <i>Score 2</i>	Exceptional population <i>Score 3</i>
Adder	<5	5 – 10	>10
Grass snake	<5	5 – 10	>10
Common lizard	<5	5 – 20	>20
Slow worm	<5	5 – 20	>20

Figures in table refer to maximum number of adults seen by observation and / or under tins (places at a density of up to 10 per hectare), by one person in one day.

Based on the Froglife guidelines (1999) (Table 4) the population of slow worms on site is 'low' based on the number of adults seen during the survey visits. The populations of grass snake and common lizard are also 'low'.

The survey confirmed that reptiles are present on site within the construction footprint. As such in order to protect the reptiles present from killing/injury as a result of the works on site, these animals will need to be translocated from the proposed works area to a suitable receptor site in advance of any construction activities commencing.

4.1 Reptile Receptor Site

A suitable receptor site has been identified on site in the buffer which is being retained along the northern boundary of the site, slow worms were recorded in this area during the reptile presence / likely absence survey. There will be a 15m buffer along the northern boundary adjacent to the off site SINC's shown on the preliminary site layout (drawing number: SK23).



This area will be managed sensitively for reptiles i.e. tall grassland which is cut once a year during September and no shorter than 15cm.

Further enhancements for reptiles should be carried out by creating reptile hibernacula within this area and allowing the grass to grow longer. The proposed locations of the hibernacula can be seen in Figure 2, Appendix C.

4.2 Fence Installation

Temporary reptile-proof fencing will be installed surrounding the areas containing suitable reptile habitat to be affected by the development. This will be installed during the reptile's active season which runs from March to October to avoid injury to hibernating reptiles. The fencing will either be specifically made reptile fencing or posts with plastic fencing, as detailed below:

- Fence constructed from polythene or similar impermeable material.
- Supported by wooden posts dug at least 300mm into the ground and standing at least 600mm above ground.
- The plastic sheet will be dug 150mm into the ground with a 100mm horizontal 'lip' turning back away from the working area.
- The plastic will be buried with compacted backfill so that no gaps remain.
- The plastic will be nailed to the fence posts and folded over at the top, away from the working area, and stapled to form an overhang.
- The plastic must contain no holes and, at the meeting of two sheets, the join must be secured with 100mm waterproof tape.
- The fence must remain in place around the whole development area for the entire duration of the works phase.



- The areas where fencing is to be installed will be hand searched for reptiles by an Ecological Clerk of Works (ECow) prior to installation of the fence to ensure that no reptiles are harmed during this operation.
- An ECoW will also supervise the installation of the fence.

4.3 Reptile Exclusion & Translocation Programme

Due to the nature of the proposed development, it will be necessary to implement appropriate mitigation measures to allow the development to continue within the constraints of the *Wildlife and Countryside Act 1981* (as amended). The strategy should be agreed with the Local Planning Authority and should include:

- Enhancement of reptile receptor site, to ensure it provides suitable habitat and features to support the reptile population e.g. additional refugia and hibernacula, and an appropriate seeding / mowing regime;
- The installation of reptile proof-fencing around suitable habitat within the proposed works area as shown in Figure 2, Appendix C. The fencing should encircle the area in which reptiles were found and also separate the receptor area from the adjacent development footprint. The receptor area should not be totally encircled with fencing, but open along the northern and western boundaries to allow reptiles off site in to the adjacent wooded and railway habitat;
- The reptile populations are classed as 'low' and as per the Herpetofauna Groups of Britain and Ireland (HGBI) advice for translocation and mitigation, a minimum of 60 visits of capturing, using 50 refugia per hectare, will be required to remove the animals from the development footprint into the secure receptor area;
- **Reptile trapping can only be conducted during the animals' active period which runs from March until October.** Reptile capture may not take place between November and February, as reptiles are not active during this period. The suitable weather conditions may be less likely to occur frequently in July to August. Therefore it is important that the reptile translocation programme commences well before the habitat in which reptiles were found is due to be destroyed by development operations;



- A judgement on the conclusion of the capture stage of the translocation will be made by the Ecologist Project Manager, but is usually accepted after five consecutive visits to a site without encountering any animals;
- All reptiles caught will be recorded, sexed and aged before being released into the relocation area;
- Following the conclusion of the capture stage, a supervised destructive search will be carried out of the works area focusing on the areas where reptiles have been found and which will be impacted by the proposed development works. The Ecological Clerk of Works will supervise the removal of the topsoil by an 8 – 12 tonne excavator with a toothed bucket and hibernacula features such as rock piles and pieces of wood will be removed by hand and checked for reptiles.

4.4 Post-translocation

The fence will remain in place during the period of the works and will be monitored, and repaired if damaged. If any reptiles are found within development footprint during any stage of the works, works must cease and a suitably qualified ecologist must be contacted immediately.

Following completion of the development the reptile fence will be removed during the reptile active season (March to October) under the supervision of the Ecological Clerk of Works. This will allow animals within the receptor site access into the gardens to the south within the final development.

Monitoring of the reptile population within the receptor site is likely to be required in later years to determine the success of the translocation programme and to inform future habitat maintenance of the receptor site.



5.0 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.

Herpetofauna Groups of Britain and Ireland (1998). Evaluating local mitigation/translocation programmes: maintaining best practice and lawful standards. HGBI advisory notes for amphibian and reptile groups (ARGs). HGBI, c/o Froglife, Halesworth. Unpubl.

WYG (2013) Bartons Road, Havant. Extended Phase 1 Habitat Survey



Appendices



Appendix A – Report Conditions



Bartons Road, Havant: Reptile Presence / Likely Absence Report

Report Conditions **Bartons Road, Havant - Reptile Presence / Likely Absence**

This report is produced solely for the benefit of Linden Homes, 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.



Appendix B – Desk Based Study Information



Bartons Road, Havant: Reptile Presence / Likely Absence Report

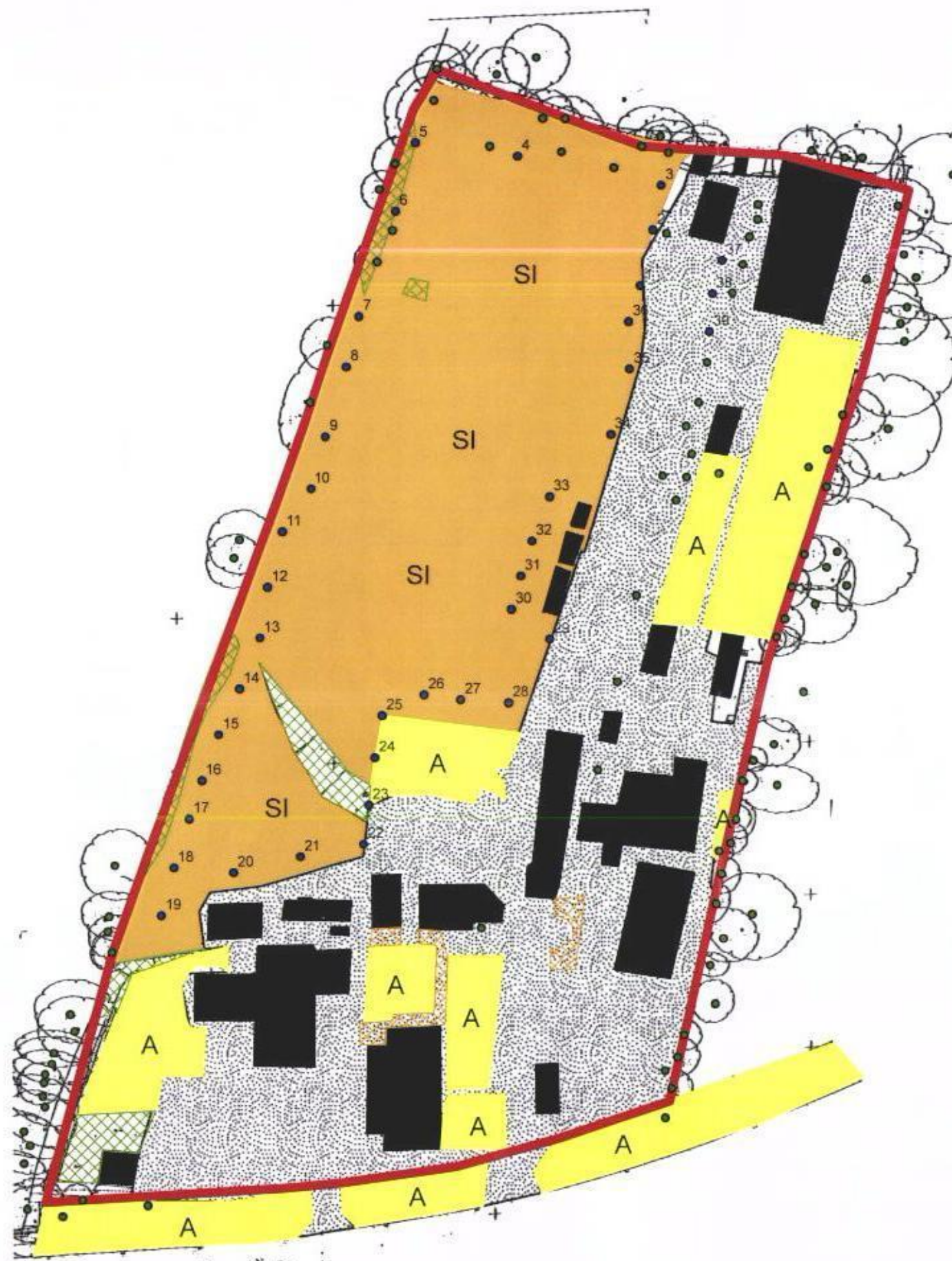
Taxon Name	Common Name	Status	Grid Ref.	Location	First Year	Last Year	No. of Records	Max Count
<i>Natrix natrix</i>	Grass Snake	UKBAP* WCA_s5s91 (t)**	SU719090 SU726095	North of Leigh Park Havant	1999	1999	1	1
				Durrants Road Rowlands Vastle	1999	1999	1	1

* UK Biodiversity Action Plan

** Schedule 5 Section 9 Part 1 (taking) of the *Wildlife and Countryside Act 1981* (as amended)

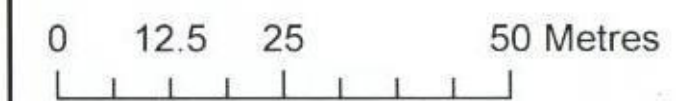


Appendix C – Figures



Legend

- Reptile refugia
- Broad leaved scattered trees
- Site boundary
- Introduced shrub
- Dense / continuous scrub
- A Amenity grassland
- Buildings
- Hardstanding
- SI Neutral semi-improved grassland



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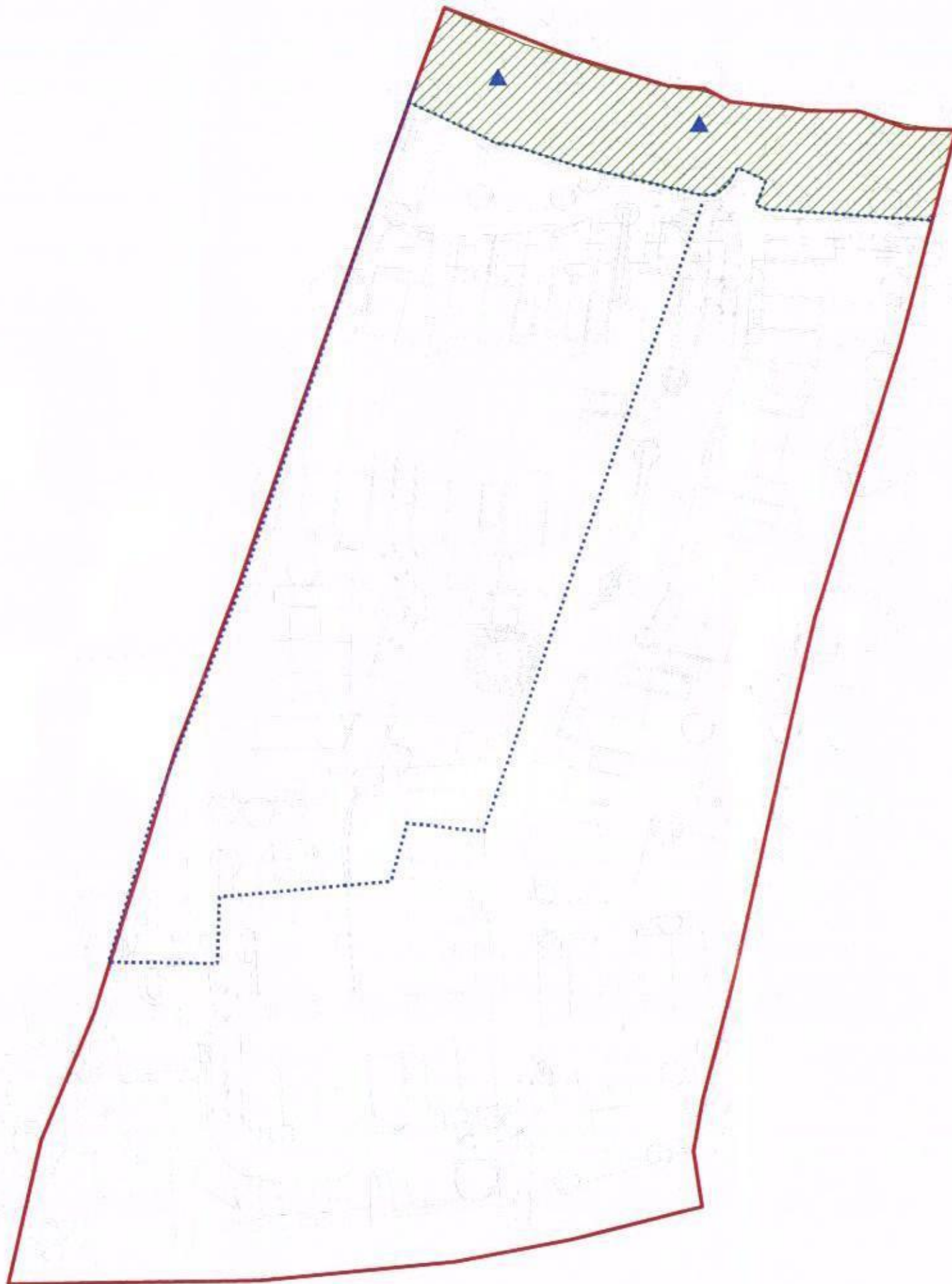
wyg

WYG Planning & Environment creative minds safe hands

Bartons Road, Havant

Locations of reptile refugia

Drawn by: Date:		Checked By: Date:		Approved By: Date:	
EH 10/03/14		ND 10/03/14		EB 12/03/14	
Project No:	Office	Type	Drawing No.	Revision	
A081595	45	94	Figure 1		
Base map provided by Hampshire Land Surveys Ltd					



Legend

-  Reptile hibernacula
-  Indicative reptile fencing location
-  Site boundary
-  Reptile receptor site

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WYG Planning & Environment

Bartons Road, Havant

Indicative reptile fencing and hibernacula locations

Not to scale	Drawn by: Date: EH 04/08/14	Checked By: Date: CM 04/08/14	Approved By: Date: CM 04/08/14
Project No: A081595	Office: 45	Type: 94	Drawing No: Figure 2
Base map provided by Bright Space Architects			