



Barratt Homes

Land at Havant Road, Emsworth

**Reptile Presence/ Likely Absence Survey
Report**

21 July 2016

The Pavilion, 1st Floor, Botleigh Grange Office Campus, Hedge End, Southampton, Hampshire, SO30 2AF

Tel: 02382 022 800

Email: ecology@wyg.com



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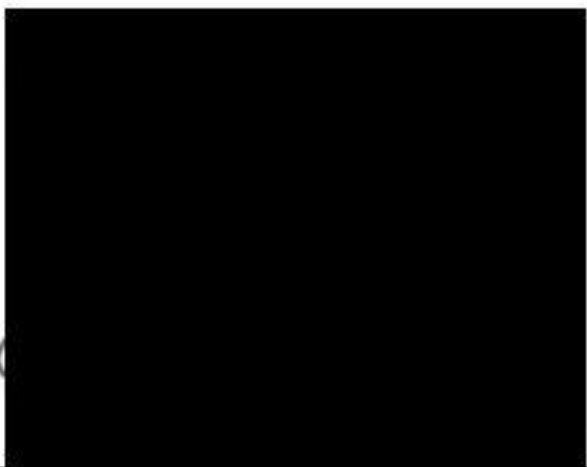
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Prepared by:	Emmanuelle Amiral Assistant Ecologist	Signed:	
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Checked by:	Emily Hare Consultant Ecologist	Signed:	
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Verified by:	Clare May CEnv MCIEEM Associate Ecologist	Signed:	
On behalf of:	Claire Wilmer Director of Ecology		

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Executive Summary

Contents	Summary
Site location	The site covers approximately 6.23 hectares, located to the east of Havant in Hampshire, centred on Ordnance Survey grid reference SU734062. The site is bordered to the north west by the A27, residential development to the east and to the south by the A259.
Previous reports/surveys	Aluco Ecology completed a reptile presence/likely absence survey at the site between 6th August 2011 and 29th September 2011 completing a total of nine survey visits. During these surveys, one species of reptile was recorded which was the slow worm with a maximum of four adults recorded on any one visit. An updated extended Phase 1 habitat survey was carried out by WYG on the 1st July 2014. The survey confirmed that the habitats at the site continued to hold potential to support reptiles.
WYG Survey	WYG was commissioned to undertake a presence / likely absence survey for reptiles at the Havant Road, Warblington.
Results	One species of reptile; slow worm was recorded at the site between 5 th September to 6 th October 2014. The survey indicates a 'low' population of slow worms present at the site given that a maximum of one adult slow worm was recorded.
Mitigation and Enhancement Recommendations	The northern area of the site will be retained as a reptile receptor site within the development. There will also be a 7-10m grassland buffer running along the north western boundary of the site adjacent to the A27. The ecological receptor will be enhanced by installing three hibernacula prior to works. Installation of one-way reptile proof fencing along the north western, eastern and south eastern boundaries prior to works commencing on site will allow exclusion of reptiles from works areas. It is recommended that 20 days trapping to translocate reptiles out of works area into the receptor site along the north western and eastern boundary of the site. Following the reptile translocation, a supervised destructive search will be carried within the site.



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1.0 Introduction

1.1 Background

Aluco Ecology completed a reptile presence/likely absence survey at the site between 6th August 2011 and 29th September 2011 completing a total of nine survey visits. During these surveys, one species of reptile was recorded which was the slow worm with a maximum of four adults recorded on any one visit. A breeding slow worm population at the site was confirmed with a maximum of four sub adults recorded.

Barratt Homes commissioned an updated extended Phase 1 habitat survey in July 2014. The survey confirmed that the habitats at the site continued to hold potential to support reptiles. Given the uncertainty of when the planning application would be submitted, it was recommended that an update suite of reptile presence / likely absence surveys were undertaken at the site to provide an up to date picture of the reptile population.

1.2 Site Location

The site covers approximately 6.23 hectares, located to the east of Havant in Hampshire, centred on Ordnance Survey grid reference SU734062. The site is bordered to the North West by the A27, residential development to the east and to the south by the A259. The site comprises very short, cattle grazed improved grassland, areas of bare ground, scattered scrub and trees, bramble and defunct hedgerows. Along the north western boundary adjacent to the A27 is young tree belt plantation mainly comprising field maple and hawthorn. The eastern boundary comprises back garden fencing with planted shrubs with scrub and tall ruderal becoming established. To the south of the site is a hedgerow adjacent to the footway of the A259 comprising mainly sycamore. Scrub dominates the north eastern extent of the site and two defunct hedgerows run north to south separating the fields from one another.

1.3 Development Proposals

It is proposed to develop the site for approximately 192 residential properties, with associated parking, access, landscaping, and surface water drainage, pumping station and sub station. An area of open space will be retained within the north east of the site which will be managed as tall grassland with scattered trees, there will also be public open space within the south east corner of the site.



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1.4 Survey Objectives

Aluco Ecology (2013) confirmed the presence of slow worms on the site between 6th August and 29th September 2011. A maximum of four adult slow worms and four sub-adults were recorded during any one visit. An extended Phase 1 habitat survey was carried out by WYG in July 2014 which confirmed the habitats at the site continued to hold potential for reptiles. 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.

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 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



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Section 9 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of the Conservation of Habitats and Species Regulations 2012. 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.



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2.0 Methods

2.1 Desk Based Study

Records are used to inform field surveys about the possible presence of a species in a particular area at an early stage of the investigation. The existence of records indicates that a particular species has at least been present at a particular location; however, absence of records or low incidence of records cannot be interpreted as a species' absence at a location of interest.

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) surveys were undertaken to establish the presence or likely absence of reptile species. This involved seven visits from 5th September 2014 to 6th October 2014 in suitable weather conditions.

40 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 B). The only suitable habitat for reptiles comprises the boundary vegetation which comprises approximately 0.3ha and hence 40 mats were placed around the site which is significantly above the recommended 10 mats per hectare. The refuges were then left undisturbed on the site for four 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 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.



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3.0 Results

3.1 Desk Based Study

HBIC returned seven records of reptiles from within 2 km of the site, comprising slow worm (*Anguis fragilis*); adder (*Vipera berus*) and grass snake (*Natrix natrix*). The closest record for the site is for adder which lies approximately 0.89 km north west of the site.

Table 1: Reptile information from HBIC

Year	Reptile Details	Grid Ref	Distance (km) and Direction from site.
2009	Slow Worm (<i>Anguis fragilis</i>)	SU721053	1.58 south west
1999	Grass Snake (<i>Natrix natrix</i>)	SU746079	2.08 north east
1999	Grass Snake (<i>Natrix natrix</i>)	SU748059	1.43 east
1999	Grass Snake (<i>Natrix natrix</i>)	SU748059	1.43 east
2010	Grass Snake (<i>Natrix natrix</i>)	SU752062	1.80 east
1999	Adder (<i>Vipera berus</i>)	SU730070	0.89 north west

3.2 Site Survey

One species of reptile, slow worm was recorded at the site between 5th September 2014 and 6th October 2014. A maximum of two adult slow worms were recorded during the reptile presence / likely absence survey on any one visit and one juvenile slow worm was recorded only on one of the seven visits. Full survey results are provided in Table 2 and Table 3 below.



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3.2.1 Weather Conditions

Table 2: Survey Weather Conditions

Survey	Date	Time	Air Temperature (°C)	Rain	Wind Speed	Cloud Cover (%)
1	05/09/14	08:05	17.2	None	Light breeze	100
2	08/09/14	08:15	15.0	None	Light breeze	0
3	12/09/14	08:14	15.7	None	Slight	15
4	23/09/14	10:00	13.0	None	Slight	10
5	26/09/14	09:00	17.6	None	Light breeze	100
6	29/09/14	08:30	17.4	None	None	100
7	06/10/14	15:50	14.7	None	None	100

3.3 Survey Results

Table 3: Site Survey Results

Survey	Date	Species	Records			Mat No.
			Adult	Sub Adult	Juvenile	
1	05/09/14	Slow worm	1 AF			23
2	08/09/14	-	-	-	-	-
3	12/09/14	Slow worm Slow worm	1 AF 1 AM			1 1
4	23/09/14	Slow worm	-	-	1 JU	12
5	26/09/14	-	-	-	-	-
6	29/09/14	-	-	-	-	-
7	06/10/14	-	-	-	-	-

Key –

AF: Adult Female

AM: Adult Male

JU: Juvenile unsexed



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4.0 Ecological Constraints, Impacts and Mitigation Advice

4.1 Summary of Findings

Adult and juvenile slow worms were recorded during the reptile presence / likely absence survey. Slow worms were recorded on three survey of the seven survey occasions, with a maximum count of 2 adults recorded on 12th September 2014. A breeding population was also confirmed as one juvenile slow worm was recorded during one of the seven survey visits.

Analysis of the results follows the guidelines set out in the Froglife (1999) document and in Table 4 below. This enables a broad assessment of the size of the reptile population at Havant Road, Warblington.

Table 4: 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 tins/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. The previous reptile surveys by Aluco Ecology in 2011, did find higher number of slow worms, however the reduced number of reptiles is likely to be as the site is heavily cattle grazed and hence there are areas of bare ground with no suitable reptile habitat which is regularly disturbed. As these species are protected from killing and injury under the Wildlife and Countryside Act 1981, mitigation will be required prior to construction commencing to protect reptiles.



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4.2 Reptile Receptor Site

0.6ha of the northern area of the site will be retained as open space, the grass within this area will be left to grow tall and be created and enhanced as a receptor site for reptiles. In addition there will be a grassland buffer of 7-10 metres wide running along the north western boundary adjacent to the tree belt running along the A27 which will connect with the ecological receptor area providing a continuous boundary for reptiles to commute. This habitat will be managed sensitively for reptiles which will involve cutting grass once a year during September to a minimum height of 6 inches. Areas where public access will be permitted will be demarcated through strimmed footpaths.

4.3 Fence Installation

Temporary reptile-proof fencing will be installed surrounding the boundaries of the site (Appendix B, Figure 2), this will protect the grassland buffer along the north western boundary and around the receptor site preventing reptiles re-entering the works area. This will be completed under the supervision of an Ecological Clerk of Works. 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.
- It should be either purpose made 'one-way reptile fencing', or plastic sheeting placed at an angle of between 45° and 40°, so that in the unlikely event that reptiles are present within the unsuitable habitat of the arable field, they will be able to commute into the field boundaries, but will not be able to return to the centre of the field.
- 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.



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- 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 ecologist prior to installation of the fence to ensure that no reptiles are harmed during this operation.

The fence will remain in place during the period of the works and will be monitored, and repaired if damaged. It is the responsibility of the client to make sure someone checks the fence on a daily basis and ensures repairs are made when necessary.

4.4 Reptile Exclusion & Translocation Programme

The slow worm population on site has been recorded as 'low'. Usually 30 days translocation would be considered appropriate to re-locate reptiles from the development footprint to the retained habitat, but given only a maximum of 2 adult and one juvenile slow worms were recorded it is considered that 20 days would be more appropriate to allow the development to continue within the constraints of the *Wildlife and Countryside Act 1981* (as amended). This will be undertaken during the reptile active season which runs from March / April to September. This mitigation strategy will include;

- Enhancement of reptile receptor areas by installing three reptile hibernacula within the ecological receptor area and grassland buffer on site prior to works commencing; (Appendix B, Figure 2),
- **Reptile trapping can only be undertaken during the animals' active period which runs from March until October.** Reptile capture cannot take place between November and February, as reptiles are not active during this period. Suitable weather conditions may be less likely to occur frequently between July and September. Therefore it is important that the reptile translocation programme to the receptor site commences well before the habitat is due to be destroyed within the development sites;
- It is recommended that 20 day translocation will be undertaken however a judgment 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.



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- The fence will remain in place during the period of the works and will be monitored, and repaired if damaged. It is the responsibility of the client to make sure someone checks the fence on a daily basis and ensures repairs are made when necessary. If any reptiles are found within the site during any stage of the works, works must cease and a suitably qualified ecologist must be contacted immediately.

4.4 Post Translocation Programme

Following the reptile translocation, a supervised destructive search will be carried out within the site. This will involve two parts, a hand search and a mechanical search, completed to the following specifications:

- A suitably qualified ecologist will supervise all aspects of the destructive search
- Hand searches will be conducted, including the removal of debris on the ground in order to remove potential refuges;
- Using a medium sized excavator (approximately 8-10 tonnes) with a toothed bucket carry out a gradual scrape of the top one to two inches (25 - 50mm) of top soil;
- Both the areas from where soil is removed and the subsequent spoil heaps should be checked for reptiles and amphibians;
- Carry out deeper scrapes where necessary, such as beneath root systems, buried material, cracks or holes in the ground;
- The excavated spoil will be stored as directed by the ECOW in consultation with the developers and in an area identified as unsuitable as reptile habitat.

Following the destructive search construction can proceed however, if any reptiles are found within the site during any stage of the works, works must cease and a suitably qualified ecologist be contacted immediately.



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References

Aluco Ecology (2013) Ecological Assessment: Land North of Havant Road, Emsworth

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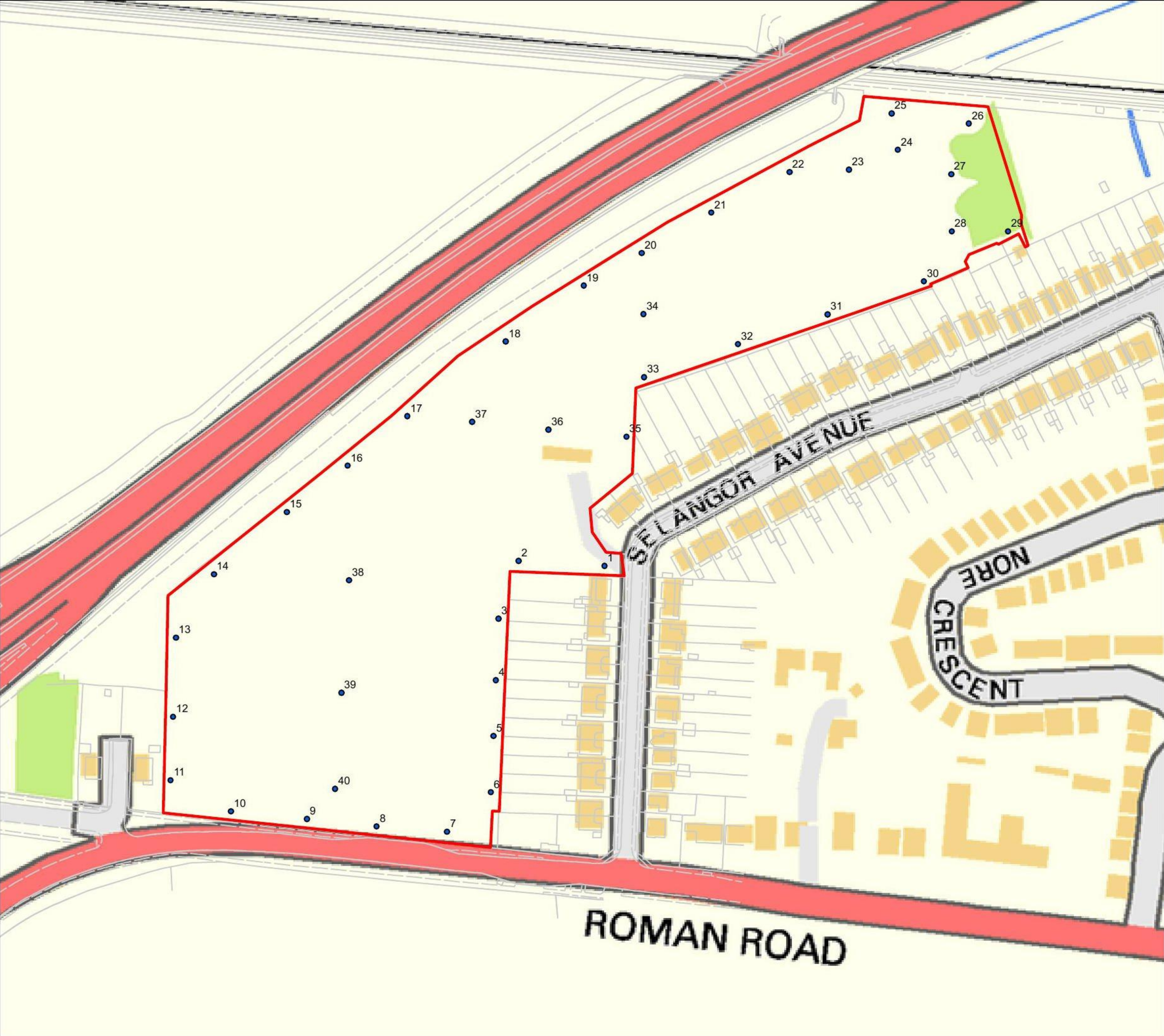
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Appendix A – Figures



Legend

- Site Boundary
- Reptile mat location



The Pavillion, 1st Floor
Botleigh Grange Office Campus
Hedge End
Southampton
Hants
SO30 2AF

Tel: 02382 022800
email: ecology@wyg.com

WYG Planning & Environment

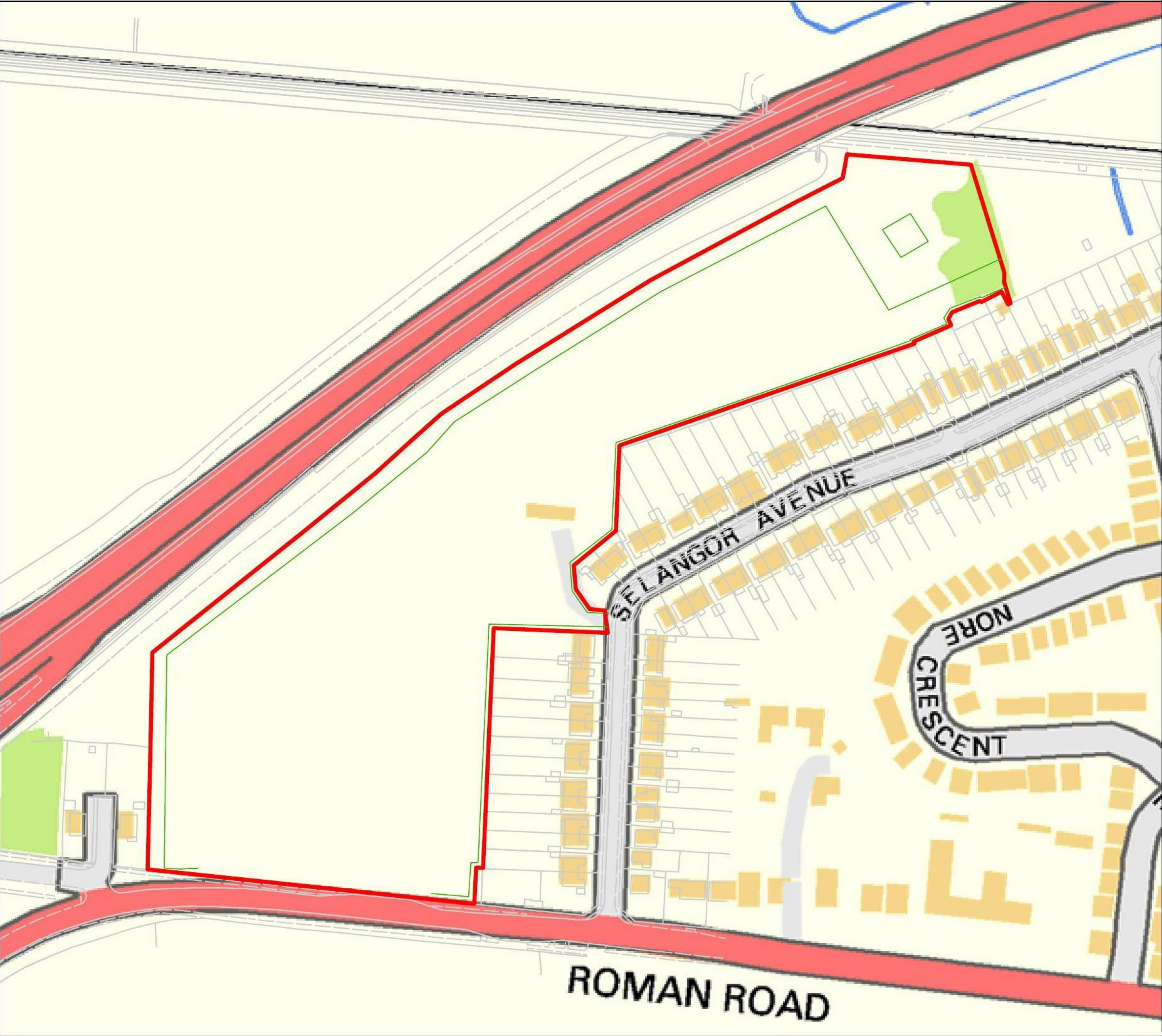
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Reptile mat locations

Scale at A3:	Drawn by: EA	Date: 03/12/14	Checked By: EH	Date: 03/12/14	Approved By: CM	Date: 03/12/14
Project No: A088368	Office: 45	Type: 94	Drawing No: Figure 1	Revision		

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Legend

- Reptile fence line location
- Site Boundary



The Pavillion, 1st Floor
Botleigh Grange Office Campus
Hedge End
Southampton
Hants
SO30 2AF
WYG Planning & Environment

Tel: 02382 022800
email: ecology@wyg.com


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Land at Havant Road Warblington

Reptile mitigation plan

Scale at A3:	Drawn by: EA	Date: 03/12/14	Checked By: EH	Date: 03/12/14	Approved By: CM	Date: 03/12/14
Project No: A088368	Office: 45	Type: 94	Drawing No: Figure 2	Revision		

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