



Home Farm, Broadmoor, Abinger Common, Dorking, Surrey. RH5 6JY
01306 731150 www.verdantecology.co.uk info@verdantecology.co.uk

September 2015

A
Reptile Survey and Mitigation Report
from

11, Bound Lane

For

Whittington Designer Homes Ltd

Surveys conducted and report produced by;

Jonathan Bradley

BSc, MSc, TechCertArb, TechArborA

Consultant Ecologist, Arborist and Land Manager

07785 180656 jonathan@verdantecology.co.uk

Copyright

All rights reserved. No part of this document may be copied or reproduced without prior written consent from Verdant Ecology.

Disclaimer

Opinions expressed and information gathered and contained within the report have been done so competently, whilst using diligence and care but no explicit warranty is provided as to their accuracy or effectiveness. This is especially true where information comes from third parties. We are not lawyers – whilst we seek to understand legislation and stay abreast of changes and case law, where we refer to legislation, this is our interpretation and/or summary. This report has been prepared for use by the commissioning party only. No liability is accepted by Verdant Ecology for any inappropriate use of this report. A protected species survey licence obliges the holder to provide records to local records centres.

1	Executive Summary	3
2	Introduction.....	4
2.1	Background to Activity/development	4
3	Survey.....	4
3.1	Pre-existing Information on Reptiles at the Survey Site	4
3.2	Site/Habitat Description	4
3.3	Objectives of the Survey	4
3.4	Method	4
3.5	Results	5
4	Interpretation and Evaluation.....	5
5	Impact Assessment.....	5
5.1	Potential Impacts	5
5.2	Predicted Impacts <u>without Mitigation</u>	6
6	Recommendations/Mitigation	6
6.1	Table 1. List of Tasks and Chronology/Timing	7
7	Summary	7
8	Appendices	8
8.1	Appendix 1. Sketch Map of Site and Refugia Locations	8
8.2	Appendix 2. Table 2. Results of Reptile Survey.	9
8.3	Appendix 3. Proposed Reptile Exclusion Fence Line.....	10
8.4	Appendix 4. Protective Legislation and Policy Pertaining to Reptiles	11
8.4.1	What This Means for You	11
8.5	Appendix 5. References	11

1 Executive Summary

- Whittington Designer Homes Ltd intends to apply for planning permission to build eight new houses on land at 11, Bound Lane.
- In June 2015, Verdant Ecology conducted a baseline ecology survey report which concluded that the site perimeter seemed likely to support protected species, including reptiles.
- Verdant Ecology conducted reptile surveys during summer and autumn 2015.
- The site supports slow-worms.
- The population size has been categorised as Low (on a scale of Low, Good, Exceptional – as in the Froglife 1999 guidelines).
- The project should be designed so as to maintain habitat connectivity and minimise loss of habitat best for reptiles, namely to be sited towards the middle of the site so as to avoid the rougher grass and hedges at the perimeter.
- Nonetheless, habitat used by slow-worms will be lost to the development. This impact needs to be offset with a landscaping/planting and establishment plan incorporating habitats suitable for reptiles, arranged in such a way as to maintain/increase habitat connectivity.
- Additionally, slow-worms will be at risk of physical harm, so a translocation effort must be conducted.
- First, enhance the reptile receptor site under guidance from a competent ecologist.
- Then erect a consistently-maintained, reptile-proof fence for the duration of site preparation and all construction-related activities so as to prevent reptiles moving back onto the areas of the site being disturbed, under guidance from a competent ecologist.
- Then commission competent ecologists to translocate reptiles over a period of at least 60 days (of suitable weather) spread out over the period between April and September inclusive (i.e. not just 60 days over a two month period) in accordance with Froglife 1999 guidance.
- Then, under the supervision of a competent ecologist, conduct gradual, wildlife 'sensitive' vegetation removal. Note that if vegetation suitable for nesting birds is also affected this may be best scheduled for removal during the winter before the reptile translocation – assuming this can be done without negatively affecting the reptiles.
- Captured reptiles should be translocated to unaffected parts of the site. If this is not feasible, they can be moved to areas adjacent to the site. If this is also not feasible they can be moved to another site nearby. Wherever they are moved to, it is essential that the habitat in the receptor area is also suitable and (if currently occupied by reptiles) has been enhanced so as to increase the carrying capacity and will be managed for reptiles in the future.
- Measures should also be taken to avoid indirect impacts on reptiles, namely pollution.
- If the recommendations of this report are complied with it is reasonable to believe that harming individuals can be avoided, habitat loss will be relatively insignificant and habitat enhancements can be delivered so as to maintain/enhance their conservation status.
- Protection of reptiles should therefore not be a reason for refusal of planning permission. An appropriate condition of that permission would be compliance with the recommendations in this report.

2 Introduction

2.1 Background to Activity/development

The site is 11, Bound Lane, Hayling Island, Hampshire PO11 9HU and is at OS grid reference SZ 725990. The site consists of an ornamental garden around a detached two-storey dwelling, with a rear patio, greenhouse and summerhouse. However, the majority of the site consists of a meadow, cut some years for hay by a local farmer. There are trees and hedges lining the border.

It is understood that;

- The house of 11, Bound Lane is to be retained intact.
- Eight new residential dwellings, several car garages/ports and associated access will be constructed across the remainder of the site.

In June 2015, Verdant Ecology conducted a baseline habitat survey of the site and its immediate surroundings. Reptile surveys of the site were recommended. This was because the site consisted of semi-natural habitats including grassland, weeds, scrub/shrubs and trees. These were considered suitable for 'common' reptiles (viviparous lizard, adder, grass snake and slow-worm). In June 2015, Verdant Ecology was commissioned to conduct an investigation into any use of the site by reptiles and to provide recommendations.

3 Survey

3.1 Pre-existing Information on Reptiles at the Survey Site

The ecological record search associated with the baseline habitat survey contained records of slow-worm about 250m to the NE and adder 2km to the W.

3.2 Site/Habitat Description

The areas surrounding the site are suburban gardens and seemed suitable for 'common' reptiles. The site consists of semi-natural habitats including grassland, weeds, hedges and trees. There is a compost heap in the SW corner of the site.

3.3 Objectives of the Survey

To find evidence of the presence of reptiles. If present, to estimate the population size.

3.4 Method

On the 24th June, a visual survey of the site was conducted – focusing on likely spots such as the interface between amenity grassland and lowland hay meadow.

On the 2nd July, 31 artificial refugia were laid out in areas of habitat considered suitable for reptiles, as shown in Appendix 1. These refugia were made of corrugated tin, roofing felt, old car foot-mats and carpet off-cuts in roughly equal proportions. Each refuge was approximately 60cm x 60cm in size.

The introduced refugia were left for one week before the first survey visit so as to allow time for reptiles to discover them. Subsequently, the site was revisited during July - September when weather conditions were as

close to ideal as feasible. As artificial refugia were approached, the upper surface was viewed for resting reptiles. The refugia were then lifted and the underneath inspected for reptiles or sloughed skins.

Suitable habitat is estimated as being 0.7ha. This achieves a density of approximately 40 refugia/ha.

3.5 Results

The only reptiles found were slow-worms. Numbers of slow-worms found are shown in Appendix 2. All records are from introduced artificial refugia checks. None were seen during other surveys.

4 Interpretation and Evaluation

Work to date suggests a Low population size category on a scale of Low, Good, Exceptional – as in the Froglife 1999 guidelines where the maximum number of adults found per visit/day is less than 5, on/under refugia placed at a density of up to 10/ha. In this case the peak count was 10 adults, under refugia at a density of 40/ha. This equates to a peak count of just over 2 if refugia had been at a density of 10/ha.

Slow-worms were recorded across the entire site, with the exception of the garden surrounding the house. This area was not included in the survey, as it is to remain unaffected by the development. However, this area is considered suitable habitat and should therefore be included in any translocation effort and 'sensitive' site clearance and/or if there are alterations to proposals.

Three of the visits were in September (considered by best practice guidelines as a peak survey month) but most of the visits were in July and August which is considered an acceptable but suboptimal (often too warm) survey period. Indeed, on five visits, temperatures were higher than is ideal (9 – 18°C according to Froglife 1999). However, on only one visit was the temperature significantly higher and reptiles were invariably found on these visits. Certainly it is considered highly unlikely that the count on any other day would have been over 20 (the number found with 40 refugia/ha that equates to 5 found with 10 refugia/ha) so this factor is not considered significant.

The number of survey visits (16) for the population class size assessment is in line with that recommended by ARG 2013 (13 to 17 surveys) and Natural England's previous standing advice (15 to 20 surveys - their latest standing advice makes no recommendations in this regard) but less than that recommended by Froglife 1999 (20 surveys). Given the much greater density of refugia than recommended by Froglife 1999, this is not considered significant.

Survey effort is therefore considered adequate and appropriate.

5 Impact Assessment

5.1 Potential Impacts

Potential impacts considered are;

- Physical harm to reptiles during work.
- Direct impacts on habitat.
- Indirect impacts such as pollution.

- Habitat fragmentation.
- Post-development impacts.

5.2 **Predicted Impacts without Mitigation**

The design for the development involves the loss of the lowland hay meadow. Thus, the following impacts are considered likely.

Demolition and construction activities (e.g. site clearance, storage of materials and moving of arisings) have the potential to violate legislation by harming individuals and to conflict with policy by negatively affecting slow-worm conservation/population status.

There is potential for negative indirect impacts on reptiles nearby (e.g. toxic materials in the air and/or in run-off water).

If suitable habitat fringing the site is lost, an increase in habitat fragmentation is likely.

There is potential for harm to individuals from increased predation by cats owned by new residents. This is considered unlikely to be significant given that it is already a residential area. It is considered unlikely to have a negative impact on the population.

Given that the current use is a lowland hay meadow and after use will be residential dwellings, it is considered that there will be a reasonable negative impact on slow-worms at a local scale.

6 Recommendations/Mitigation

Harming individuals can be avoided by the installation of reptile-proof fencing, translocation of individuals to a receptor site that has been improved and by using wildlife 'sensitive' site clearance.

Impacts on habitat suitable for slow-worms can be minimised by retaining areas, especially around the perimeter and by incorporating habitats suitable for reptiles and connected to the wider area into the project layout so as to maintain or enhance their conservation status.

With a pollution prevention plan, other indirect impacts can be avoided.

See table below.

6.1 **Table 1. List of Tasks and Chronology/Timing**

Task	Timing
Ecology work becomes out-dated and may be invalidated by a change to plans. Consult a competent ecologist regularly.	Every few months or when there is new information or a change to plans.
A project design/layout that avoids or minimises impacts on the vegetation at the margins of the site.	Before seeking planning permission.
A (promise to provide before work starts) landscaping design/layout that includes (connected) habitat suitable for reptiles.	Before seeking planning permission.
A (promise to define before any work starts) receptor site and demonstrate how it will be enhanced and managed in the long term for the benefit of reptiles.	Before seeking planning permission.
A promise to comply with pollution prevention measures in line with the COSHH Regulations and the Environment Agency's Pollution Prevention Guidelines series.	Before seeking planning permission.
Remove any vegetation that might be suitable for nesting birds if it will not negatively affect reptiles.	Winter months before the subsequent items in this table.
Enhance receptor site.	Before translocation starts.
Install reptile-proof fencing.	Just before translocation starts.
Translocation.	Over at least 60 days of appropriate weather between April and September inclusive (but not 60 days jammed into a period only slightly longer than 60 days).
'Sensitive' site clearance (gradual, conducted/supervised by competent ecologists).	May be appropriate after or during latter stages of translocation - according to directions from a competent ecologist.

7 Summary

Slow-worms are present. The proposed development involves the loss of much of the meadow due to the construction of eight residential dwellings and associated garages and access. However, some areas, particularly the perimeter, will be retained. The gardens of the proposed dwellings are considered likely to be suitable for slow-worms. A post-development planting scheme will include measures to benefit wildlife, including slow-worms.

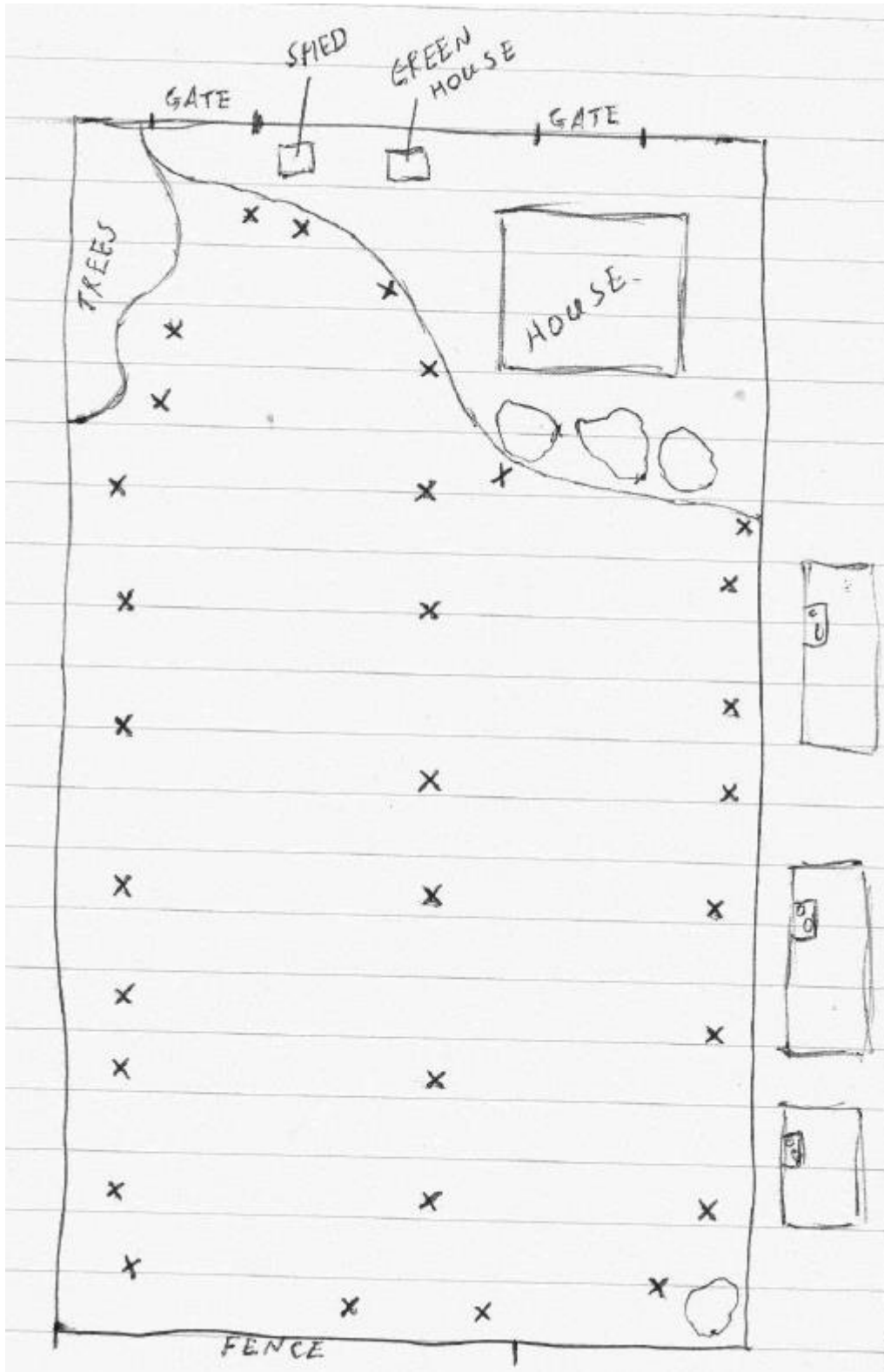
This document demonstrates in principle that it is reasonable to believe that significant impacts are unlikely and that mitigation can feasibly be delivered so as to avoid harming individuals and to maintain or improve the conservation status of slow-worms locally.

Consequently, protection of reptiles need not be a reason for refusal of planning permission.

An appropriate condition to the planning permission would be compliance with the recommendations herein.

8 Appendices

8.1 Appendix 1. Sketch Map of Site and Refugia Locations



8.2 **Appendix 2. Table 2. Results of Reptile Survey.**

visit #	Date	Survey start time	Temp (°C)	Humidity (%)	Cloud cover (octas)	Windspeed (Beaufort scale)	Descriptive text	Slow-worms found	Number of refugia at start (and end)	Surveyor
0	2/7	-	-	-	-	-	Refugia laid out.	-	0 (31)	Nathan
1	9/7	09.05	16.1	?	0	1 - 2	Dry. Weak sun.	0xad , 5xjuv/subad	31 (31)	Alex
2	10/7	06.30	11.3	93	0	0	Damp ground (dew). Sunny.	1xad , 0xjuv/subad.	31 (31)	Jonathan
3	14/7	08.45	17.3	?	6	1 - 2	Dry. Hazy sunshine.	2xad , 9xjuv/subad.	31 (31)	Alex
4	16/7	10.00	20.8	81	2	1	Dry. Sunny.	6xad , 16xjuv/subad.	31 (31)	Jonathan
5	19/7	20.15	26.3	72	1	1	Dry. Sunny.	3xad , 11xjuv/subad.	31 (31)	Jonathan
6	27/7	16:30	16.1	59	7	2-3	Dry. Overcast.	10xad 27xjuv/subad.	31 (31)	Nathan
7	29/7	08:30	15.3	69	1	1-2	Damp ground (dew). Sunny.	6xad 14xjuv/subad.	31 (31)	Nathan
8	2/8	09:45	17.6	73	2	0-2	Dry. Sunny.	1xad 3xjuv/subad.	31 (31)	Nathan
9	6/8	16:45	18.2	54	4	0-1	Dry. Sunny.	9xad 9xjuv/subad.	31 (31)	Nathan
10	12/8	16:15	22.3	59	5	0-2	Dry. Sunny.	10xad 16xjuv/subad.	31 (31)	Nathan
11	18/8	08:30	14.0	66	7	0-1	Damp. Hazy sunshine.	10xad 15xjuv/subad.	31 (31)	Nathan
12	22/8	08.30	19.6	83	2	0-1	Dry. Sunny.	9xad 18xjuv/subad.	31 (31)	Jonathan
13	25/8	16:00	15.9	85	8	3	Wet. Overcast.	9xad 19xjuv/subad.	31 (31)	Nathan
14	1/9	19:00	17.3	74	6	2	Cloudy. Damp.	3xad 2xjuv/subad.	31 (31)	Nathan
15	2/9	08:15	15.8	71	0	1	Sunny. Damp.	5xad 5xjuv/subad.	31 (31)	Nathan
16	08/9	09.00	12.5	74	0	2	Sunny. Damp.	10xad 36xjub/subad.	31 (31)	Nathan

Figures for temperature and humidity taken from ETI Thermadata logger on site at time of survey except Alex who used a max/min thermometer (no humidity records).

8.3 **Appendix 3. Proposed Reptile Exclusion Fence Line**



8.4 Appendix 4. Protective Legislation and Policy Pertaining to Reptiles

The main items of legislation protecting reptiles in England are;

- The Conservation of Habitats and Species Regulations 2010.
- The Wildlife and Countryside Act 1981 (as amended).

Smooth snakes, sand lizards and their habitats have legal protection.

More 'common' reptiles (slow-worms, adders, grass snakes and common or viviparous lizards) are legally protected from killing or injury and their habitats are protected by policy. The Countryside and Rights of Way Act 2000 and The Natural Environment and Rural Communities Act 2006 expect those in a position of influence to consider the impacts of their actions on biodiversity, especially Biodiversity Action Plan features and to seek opportunities to benefit them.

Reptiles are a material consideration in planning decisions under the National Planning Policy Framework, meaning that local planning authorities must consider the potential impacts of development on reptiles before granting permission.

Reptiles may also be indirectly protected by virtue of their association with 'Important' hedgerows (Hedgerow Regulations 1997), trees (also a material consideration), veteran trees and habitats that serve to connect (both specifically mentioned in PPS9) or some special habitats that are protected in their own right.

8.4.1 What This Means for You

Planning permission should only be given if the status of the affected protected species can be maintained or enhanced and if measures are taken to avoid harming individuals. Recent changes in legislation and policy are increasing the emphasis on expecting improvements or enhancements.

The onus is on the developer to provide enough information to enable the planning authority to make an informed decision as to whether the development will have negative impacts on the local population and if so, what can be done to conserve reptiles.

8.5 Appendix 5. References

- Sewell *et al* (2013). Survey Protocols for the British Herpetofauna. ARC and the Universities of Sussex and Kent.
- Froglife (1999). Advice Sheet 10. Reptile survey; an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife, Halesworth.
- Natural England. Standing Advice Species Sheet: Reptiles (now outdated).
- Herpetofauna Groups of Britain and Ireland (1998). Evaluating Local Mitigation/Translocation Programmes: Maintaining Best Practice and Lawful Standards.
- Natural England (2004). Reptiles: guidelines for developers.
<http://publications.naturalengland.org.uk/publication/76006?category=31018>
- Wildlife and Countryside Act 1981 (as amended). www.opsi.gov.uk
- The Hedgerows Regulations 1997 (as amended). www.opsi.gov.uk
- The Conservation of Habitats and Species regulations 2010. www.opsi.gov.uk
- The Conservation (Natural Habitats, &c.) Regulations 1994. www.opsi.gov.uk
- The Countryside and Rights of Way Act 2000. www.opsi.gov.uk
- The Natural Environment and Rural Communities Act 2006. www.opsi.gov.uk
- The National Planning Policy Framework 2012. www.opsi.gov.uk
- HM Government (1995). Biodiversity: The UK Steering Group Volume 2: Action Plans. JNCC, Peterborough.
- HM Government (1998). Tranche 2 Action Plans: Volumes I and II. English Nature, Peterborough.
- Institute of Environmental Assessment (1995). Guidelines for Baseline Ecological Assessment. E & FN Spon, London.
- Institute of Ecology and Environmental Management (2012). Guidelines for Preliminary Ecological Appraisal. IEEM, Winchester.
- Institute of Environmental and Ecological Management (2006). Guidelines for Ecological Impact Assessment in the United Kingdom.
- Institute of Environmental and Ecological Management (various dates). Professional Issues Series. Various documents.
- Environment Agency. Pollution Prevention Guidelines (various), www.environment-agency.gov.uk
- Health and Safety Executive (2002). Control of Substances Hazardous to Health Regulations.