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Report prepared for: John and Ciaran Leahy

For the Site of: Land Adjacent to 45 Kentish Lane, Herts, AL9 6NG

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Cherryfield Ecology has prepared this report for the named clients use only.

Ecological reports are limited in shelf life, Natural England usually expect reports for licences to be no more than 12 months old and therefore should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of survey; recommendations are made without bias based on good practice guidelines within the industry. However, species presence and ecological parameters can change over time.

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Full Common Reptile Survey

0.0 Non-Technical Summary

0.1 Background

The survey follows national guidelines allowing for refuges, commonly known as ‘felts’, to be placed across the site and then checked for reptiles. Recommendations for mitigation if considered necessary are detailed in section 4. If a deviation from the guidelines has been made, this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of Land Adjacent to 45 Kentish Lane, Herts, AL9 6NG.

The client commissioned Cherryfield Ecology to undertake an EA as the proposals include for building a new dwelling at the southern end of the plot, with associated landscaping and infrastructure.

0.2 Results and Findings

- Following a stage 1 ecological assessment undertaken on 02/04/2020, further surveys were recommended, which included for seven surveys across the months of July and August.
- These surveys have shown that one of the four common reptile species are using the site, as grass snake were found during the full survey effort.
- Grass snake were found to be present on site with the highest count of two across the surveys, which is classed as a small population.

0.3 Impact Assessment and Recommendations

Grass Snake - A low impact at local level.

Recommendations (see section 4.3 for further details):

- Any vegetation removal will be done via a supervised destructive search / habitat manipulation.

- Any log/brush/rubble/debris piles will be dismantled by hand and overseen by an ecologist.
- Any grass snakes / reptiles found will be translocated to a pre-determined area of suitable habitat on site.
- Reptile enhancements for the site will be required.

1.0 Introduction

The client, John and Ciaran Leahy, has commissioned Cherryfield Ecology to undertake a full reptile survey (FRS) for the site of Land Adjacent to 45 Kentish Lane, Herts, AL9 6NG. Planning permission is being sought to build a new dwelling, along with associated infrastructure.

This survey has utilised standard methods for checking for reptiles, by placing out felts, tins or carpet tiles across the site. These are then checked in suitable weather for reptiles. Whilst checking the felts, the surveyor also looks for reptiles moving around the site.

The inspections were conducted on the 15/07/2021, 22/07/2021, 28/07/2021, 04/08/2021, 12/08/2021, 23/08/2021 and 31/08/2021.

The survey can only ever provide a 'snapshot' of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find reptiles e.g. flooding.

Biological records have been requested to give the report context and allow a study of the surrounds. The information is often sensitive and, therefore, a synopsis is provided and the full data released separately for verification.

The survey can be conducted between March to October when temperatures of between 9-18°C are generally accepted to be the optimum for reptiles to be active. These months are generally considered optimal for observing active reptiles, except the warmest summer months (where temperatures can exceed 18°C, which are considered sub-optimal).

There are six species of reptiles in Great Britain (Edgar *et al.* 2010) and four of these are commonly found; the Grass Snake *Natrix natrix* and/or the Barred Grass Snake *Natrix helvetica*), Adder *Vipera berus*, Common Lizard *Zootoca vivipara* and Slow Worm *Anguis fragilis*.

All native British species of reptiles are legally protected through their inclusion in Schedule V of the Wildlife and Countryside Act 1981. As such, all species are protected from deliberate killing or injury. Therefore, where development is permitted, and there will be a significant change in land use, a reasonable effort must be undertaken to avoid

committing an offence. The same act makes the trading of native reptile species a criminal offence without appropriate licensing.

Two species of reptile; the Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis* are further protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which defines UK protected species of animals (“rare reptiles”).

2.0 Methods

The survey follows the national guidelines, which is taken as following:

- Froglife (1999). Reptile Survey. Froglife Advice Sheet 10. Froglife, Halesworth.
- Herpetofauna Groups of Britain and Ireland (1998). Evaluating local mitigation/translocation programs: Maintaining Best Practice and Lawful Standards. HGBI.
- JNCC (2004). Common Standards Monitoring Guidance for Reptiles and Amphibians.
- Edgar et al. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile

The survey consists of placing out felts, tin or carpet tiles across the site. These are then checked for reptiles in suitable weather and notes made of the species, sex and age.

From this information, an estimate of the population can be made e.g. more than 5 slow-worms on the site would be a good population.

If a deviation from the guidelines has been made, the reason and justification will be explained below:

No deviation from the standard guidelines has been made for this survey.

3.0 Results

The following section details the results of the desk study, inspection and survey, it includes MAGIC information, biological records data and map/aerial photo information.

3.1 Desk Study

The desk study is centred on Grid Reference - TL261045 and postcode - AL9 6NG.

Table 1: Weather Records

Date	Survey	Weather: Start	Weather: Finish
08/07/2021	Set Up	Temp: 17°C Wind: 1/12 Cloud: 50% Precip: None	Temp: 18°C Wind: 1/12 Cloud: 60% Precip: None
15/07/2021	1 st Check	Temp: 18°C Wind: 0/12 Cloud: 40% Precip: None	Temp: 18°C Wind: 1/12 Cloud: 40% Precip: None
22/07/2021	2 nd Check	Temp: 18°C Wind: 0/12 Cloud: 20% Precip: None	Temp: 18°C Wind: 0/12 Cloud: 30% Precip: None
28/07/2021	3 rd Check	Temp: 16°C Wind: 1/12 Cloud: 60% Precip: None	Temp: 17°C Wind: 0/12 Cloud: 60% Precip: None
04/08/2021	4 th Check	Temp: 17°C Wind: 0/12 Cloud: 20% Precip: None	Temp: 18°C Wind: 0/12 Cloud: 20% Precip: None
12/08/2021	5 th Check	Temp: 18°C	Temp: 18°C

		Wind: 2/12 Cloud: 100% Precip: None	Wind: 2/12 Cloud: 100% Precip: None
23/08/2021	6 th Check	Temp: 17°C Wind: 0/12 Cloud: 10% Precip: None	Temp: 19°C Wind: 0/12 Cloud: 10% Precip: None
31/08/2021	7 th Check	Temp: 16°C Wind: 0/12 Cloud: 90% Precip: None	Temp: 17°C Wind: 0/12 Cloud: 90% Precip: None

3.2 MAGIC

The following statutory sites have been located on the search (2km) see Figure 1 -

- A single SSSI/LNR is located to the east, approx. 1.7km from the site. Known as Northaw Good Wood.
- Three EPS licences are found in the search area. None of these are closer than 1km from the site. These are 2009-982, 2010-1812 and 2013-6057, all include for pipistrelle.

MAGiC

Kentish Lane AL9 6NG

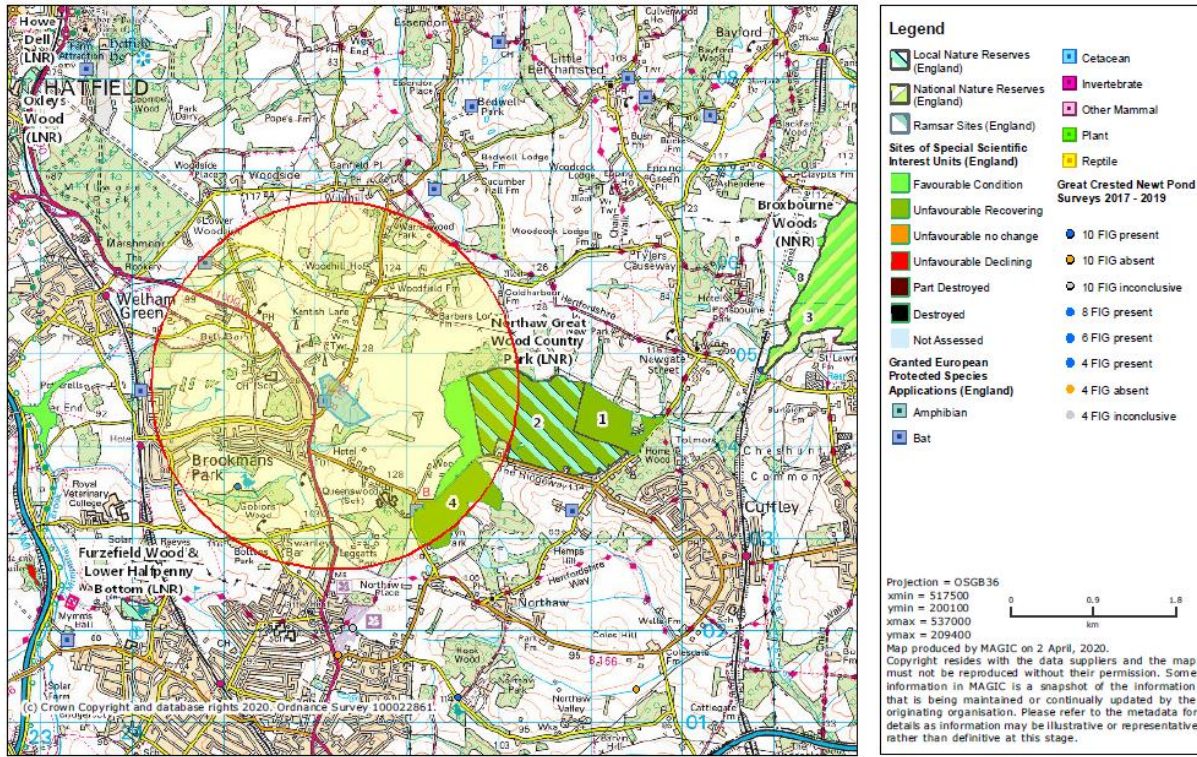


Figure 1: Magic Map Search

3.3 Biological Records Data

A standard 1km data search of existing records for protected species and nature reserves has been commissioned, below details the results and site context:

Biological records were obtained from Herts Environmental Records Centre (2020).

Table 3: Biological records data

Species	Number of records	Closest record (accuracy)	Most recent record (year)
Bats	33	Four figure references only (10km or more)	2018
Brown long eared <i>Plecotus auritus</i>	4	140m (1km accuracy)	2018
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>			

Common pipistrelle <i>P. pipistrellus</i>	46	0m (1km accuracy)	2018
Noctule <i>Nyctalus noctula</i>	2	460m (1km accuracy)	2018
Natterer's <i>Myotis nattereri</i>	78	570m (1km accuracy)	2017
Daubentons <i>M. daubentonii</i>	76	570m (1km accuracy)	2017
Badgers <i>Meles meles</i>	21	440m (1km accuracy)	2015
Reptiles			
Grass snake <i>Natrix helvetica</i>	5	140m (1km accuracy)	1991
Great crest newt <i>Triturus cristatus</i>	3	570m (1km accuracy)	2004
Common lizard <i>Zootoca vivipara</i>	1	Four figure reference supplied	1965
Otter/water-vole	n/a		
Dormouse	n/a		
Other	n/a		
Non-Statutory Sites (see Figure 1a)			
Name	Ref no	Type	Description/designated for
Gobions Wood	79/001/01	Herts and Middlesex Wildlife Trust Nature Reserves	36.40 of woodland
Kentish Lane Farm Wood (N.E. of Brookmans Park)	70/010	Local wildlife site	Ancient semi-natural broadleaved woodland with coppice-with-standards.
The Legg North	70/088/01	Local wildlife site	Thin strip of broadleaved semi-natural broadleaved woodland.
Gobions Wood Central	79/001/01/01	Local wildlife site	Largely ancient woodland occupying a shallow valley with small streams that flow into swallow holes.

Gobions Wood Meadows	79/001/01/02	Local wildlife site	A relatively large semi-improved grassland site, in a well-connected landscape.
Queenswood Home Farm Grove	79/010	Local wildlife site	Semi-natural woodland consisting of predominantly old Hornbeam (<i>Carpinus betulus</i>) and Pedunculate Oak (<i>Quercus robur</i>).
George's Wood	79/012	Local wildlife site	Ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) woodland.
Grasslands S. of Mymfield	79/030	Local wildlife site	Three fields with semi-improved to unimproved neutral to slightly acidic grassland.

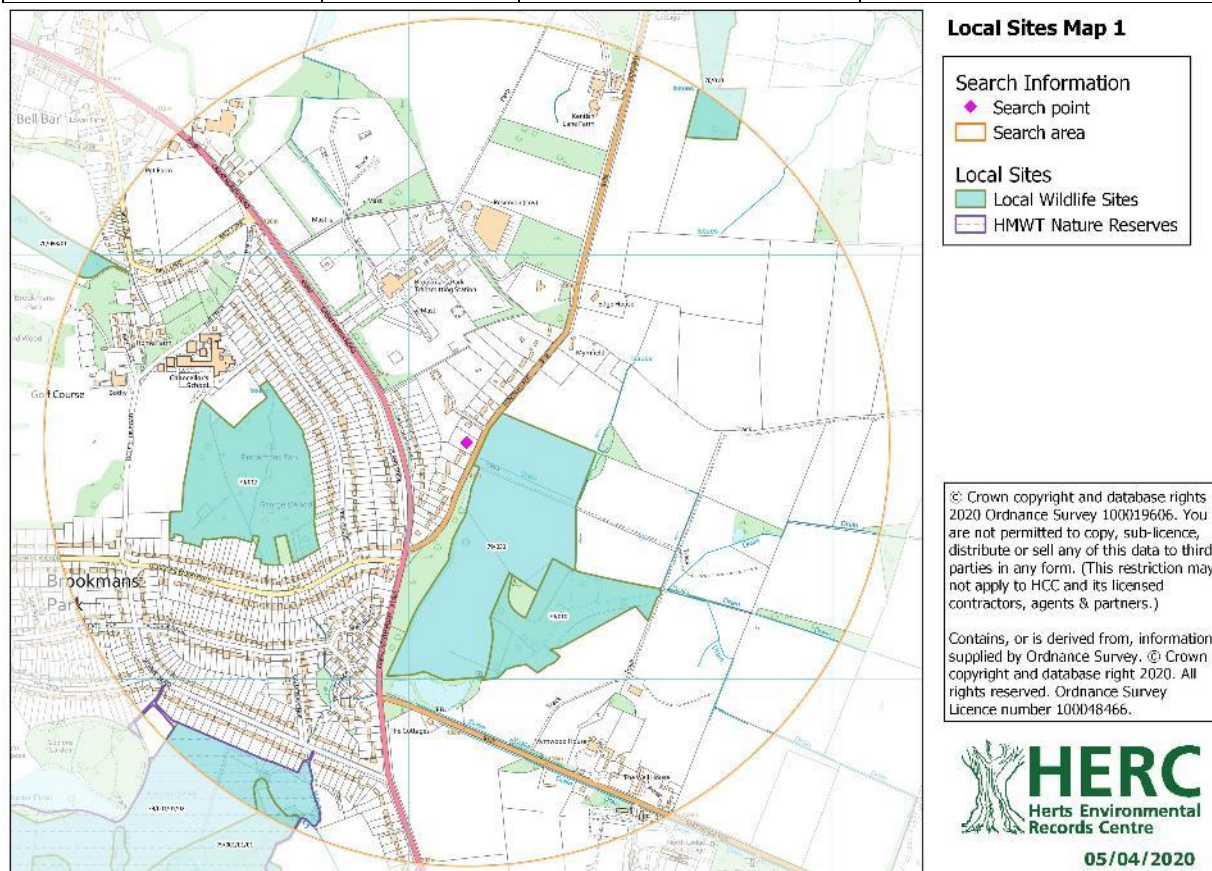


Figure 1a: Local sites

3.4 Site Location and Surrounds

The site is located in Hertfordshire, Brookmans Park and is surrounded by local density housing in the immediate local. Table 4 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 4: Habitat features suitable for use by protected species

Feature	Description
Water course	No named watercourses are found in the search area. Small drainage ditches are scattered around the general area.
Water bodies	Two unnamed ponds are located to the south, the first is approx. 300m from site and a further larger pond to the south approx. 700m from site.
Woodland	Woodland block and strips are found to the rear of the site, with small blocks located to the north and south, the blocks are no more than 200m from site, with strips leading to them.
Linear e.g. hedgerows	Garden hedging and tree lined roads are found to the immediate surrounds.
Pasture/arable/grassland	Amenity dominates the area, with a large open field to the rear boundary, this appears to be improved.
Other	n/a

3.5 Observations

Table 4: Results and observations of the surveyors' checks (see Figure 6 for Site Plan)

Surveyor	Survey	Reptile Activity Observed and Other Observations
AP	Set Up	No reptiles found. Juvenile toad seen on one felt.
MOC	1 st check	1 adult male Grass snake <i>Natrix Helvetica</i> (see figure 2) was found (see figure 3 and 6 site plan for location).



Figure 2: Grass snake found under felt on 1st check



Figure 3: Location of felt where grass snake found



MOC	2 nd check	No reptiles found.
AP	3 rd check	No reptiles found.
AP	4 th check	Two adult grass snakes found; 1 male and 1 female. See site plan for locations.



Figure 4: Example of grass snake found



Figure 5: Further example of grass snake found

		 <p>Figure 4: Example of grass snake found</p>  <p>Figure 5: Further example of grass snake found</p>
KH	5 th check	One male grass snake found in north-eastern corner of the site.
RB	6 th check	One adult grass snake found in north-eastern corner of site.
AP	7 th check	Two adult grass snakes found within the top end of the plot.

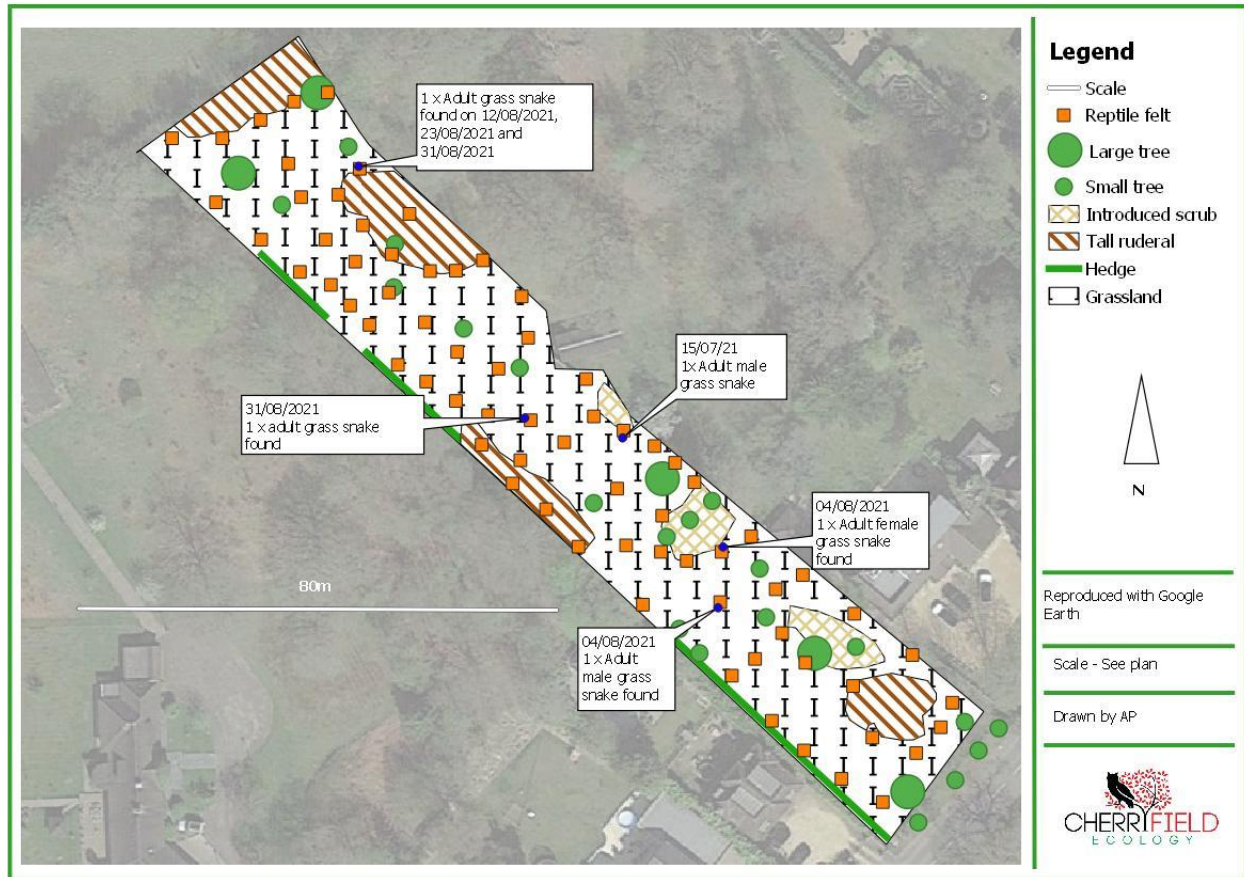


Figure 6: Site Plan

4.0 Conclusions, Discussion and Recommendations

The following section details the conclusions, discussion and recommendations in the context of the proposed works.

4.1 Conclusion and Discussion

Following a stage 1 ecological survey, a full set of reptile surveys was recommended, as the site offers suitable habitat in the form of grassland, scrub and scattered trees, with links to more open grassland to the rear. Grass snake were found to be present on site with the highest count of two across the surveys, which is classed as a small population. A small amount of the suitable habitat found on site will be lost to the development. Therefore, it is considered that grass snake will be affected by the development and mitigation and compensation will be required.

4.2 Potential Impact

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and the following details a proportionate impact assessment based on current information.

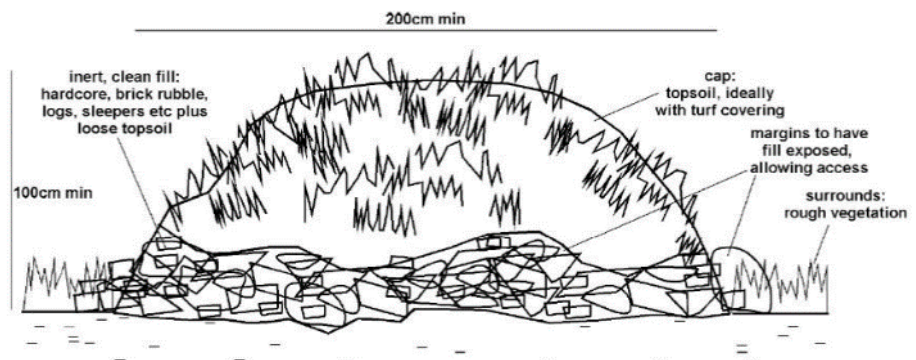
Table 5: Impact Assessment

Impact	Reptile habitat will be lost in the development.
Characterisation of unmitigated impact on the feature	Reptile habitat will be lost when the clearance of the site is carried out creating a negative impact in the local area.
Effect without mitigation	Deliberate killing and injuring of reptile species.
Mitigation	Reptiles will be trapped and moved to a pre-determined receptor site. See Section 4.3 for details.
Significance of effects of residual impacts (after mitigation)	Habitat will be created to allow local populations to be maintained at their current levels, resulting in no net loss to the conservation status.

4.3 Recommendations

Grass Snake - It is currently understood that most of the area to the north of the plot will be retained and largely untouched, with only small amounts of vegetation removal at the southern end of the site. Therefore, the following mitigation is recommended:

<p>General</p>	<ul style="list-style-type: none"> The resulting enhancements/mitigation/method statement and plans are based on general good practice.
<p>Grass snake Mitigation</p>	<p>The following is based on a low population of grass snake on site and a minimal loss of suitable habitat:</p> <ul style="list-style-type: none"> A supervised habitat manipulation/destructive search of any suitable habitat (improved grassland, scrub and tall ruderal) is required during its removal: <ul style="list-style-type: none"> Cutting/strimming of the tall, improved grass/tall ruderal should be performed in a concentric circle from the centre of said area, outwards, which will help to push any snakes out of the site. There will be two cuts; the first of which vegetation will be cut to a height of approx. 150mm. During the second cut vegetation will be cut to height of no more than 50mm. A buffer strip round the edge of the area of no less than 0.5m wide will be left for 24 hours to allow any reptile (and any other wildlife i.e. amphibians) to move away from the site. After which the remaining vegetation will be cut to 50mm under supervision. Ideally this will be done outside of the hibernation period of November to February. Any grass snakes found will be translocated to a pre-determined area of suitable habitat that will be required for reptiles. It is currently understood that the northern end of the plot is to remain largely unaffected, and this area will be utilised if any grass snakes are found. Any rubble piles, debris, tree stumps and any other potential feature on site suitable for use will be carefully searched and dismantled by hand. Any individual animals found will be moved off site / to a safe location on site. A final inspection and search for any remaining reptiles will be undertaken. A resting period of at least 24 hours will be enforced to enable animals to move into adjacent habitats, off-site. Exclusion Fencing - Fencing the construction zone with a suitable reptile fence, to prevent reptiles from returning to or entering the site.

<p>Additional Measures</p>	<p>The following additional measures need to be followed prior to and during the works:</p> <ul style="list-style-type: none"> • The trimmed vegetation will be maintained at the aforementioned height for the duration of the development, to discourage any reptiles from entering the area. • All trenches, pits or holes will be infilled at night or a rough sawn timber plank installed to provide an escape route. • Any materials used during the works should be stored on existing areas of hard standing timber plank placed in to allow any reptiles to get out if they fall in.
<p>Reptile Enhancements</p>	<p>During and once works are completed the following enhancements should be observed -</p> <ul style="list-style-type: none"> • Areas of improved grassland at the north of the site should be retained to provide habitat. • These should be further enhanced with brash or stone piles where possible. Brash or log piles can be used to provide shelter and feeding habitat. • Stone piles or large rocks can be used to provide basking areas (see Figure 7). <ul style="list-style-type: none"> • Any stone piles or rocks should ideally be placed south facing. • These refugia can be checked annually • It is recommended that this reptile habitat is fenced off from the gardens to ensure the habitats protection and longevity. <div data-bbox="470 1302 1380 1659" style="text-align: center;">  <p>200cm min</p> <p>100cm min</p> <p>inert, clean fill: hardcore, brick rubble, logs, sleepers etc plus loose topsoil</p> <p>cap: topsoil, ideally with turf covering</p> <p>margins to have fill exposed, allowing access</p> <p>surrounds: rough vegetation</p> </div> <p>Figure 7: Example of log piles/stones used to provide reptile habitat</p>

5.0 References

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland:

Terrestrial, Freshwater and Coastal, September 2018. Chartered Institute of Ecology and Environmental Management, Winchester, online at

<https://www.cieem.net/data/files/ECIA%20Guidelines.pdf>

Froglife Advice 'Sheet 10' Reptile Survey. An introduction to planning, conducting + interpreting surveys for snake + lizard conservation.

Office of the Deputy Prime Minister (2005a). Planning Policy Statement 9: Biodiversity and Geological Conservation. London: HMSO.

Paul Edgar, Jim Foster and John Baker (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth

Records: Herts Environmental Records Centre, 2020

Office of the Deputy Prime Minister (2005). Circular 06/2005: Biodiversity and Geological Conservation. Para.99