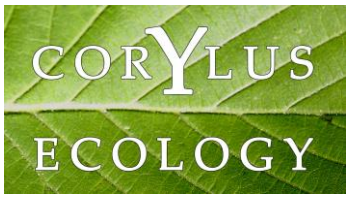


Barkers Cottages,
East Farleigh, Kent

Reptile Survey and Mitigation Strategy Report

For and on behalf of

DHA Planning Ltd.

June 2018

CONTENTS

1.0 INTRODUCTION

1.1 Corylus Ecology has undertaken a suite of surveys to establish the presence of reptiles at land off New Cut in East Farleigh, Maidstone, hereinafter referred to as 'the Site'. The reptile surveys were to inform the planning permission for the Site (15/50424/FULL) and any mitigation strategy that would be required to discharge condition 9.

1.2 The reptile mitigation strategy has been produced in response to Condition 9 that states that:

"No development shall take place (including any demolition, ground works, or site clearance) until details of a precautionary ecological mitigation strategy is submitted to and approved in writing by the local planning authority that shall include the method used to clear the vegetation, the time of year the works can be implemented, and a site plan showing where areas of suitable reptile habitat will be retained or created within the development. The works shall be carried out strictly in accordance with the approved details."

Site Context

1.3 A baseline ecology survey, including a 'Phase 1 Ecological Audit Survey' of the Site, was undertaken in July 2013 by Marsh Environmental (Marsh Environmental, 2013). The Site was identified as well managed amenity grassland with boundary features including hedgerows and brick walls. A small amount of suitable habitat for reptiles was noted within the Site, restricted to areas of overgrown grass/scrub and garden waste, and further presence / likely absence surveys were recommended. However, Kent County Council deemed that a reptile presence / likely absence survey was not required and that a reptile mitigation strategy, likely involving habitat manipulation, would be sufficient.

1.4 In 2018 Corylus Ecology undertook an Update Ecological Walkover Assessment of the Site to assess if there have been any significant changes in habitats since the original 2013 Phase 1 survey. During this assessment the majority of the Site including the amenity grassland and scrub was found to be over-grown and unmanaged, these habitats are suitable for reptile foraging, commuting and resting. In addition, there are large and vegetated spoil piles and earth mounds which have potential to be used as refugia by hibernating reptiles. Overall, the entire Site was identified to have potential to support a population of reptiles and the Site is adjacent to residential gardens and an orchard which are likely to contain suitable reptile habitat.

Scope of Survey

1.5 The aims of the reptile presence/likely absence surveys were to:

- Determine the presence/likely absence of reptiles;

- Evaluate the importance of the reptile population within the Site;
- Suggest appropriate mitigation and compensation where necessary.

2.0 METHODOLOGY

2.1 Reptile presence/likely absence surveys

2.1.1 A total of 19 heat traps were placed throughout the Site in areas of suitable reptile habitat (see Figure 1). The Site area is approximately 0.1ha therefore a density of greater than ten heat traps per hectare as per guidance from Froglife was achieved (1999). Heat traps were made from heavy gauge roofing felt cut into approximately 0.7m x 1m rectangles and were placed generally following linear margins and orientated to receive the maximum amount of sunshine.

2.1.2 The Froglife guidance suggests that a minimum of seven survey visits under favourable weather conditions are required, whilst the English Nature advice within the Species Conservation Handbook (1994 *et seq.)* states that *'it is difficult to get any reliable opinion of animals in a population in less than 5 to 10 visits'*. For this survey, seven visits were undertaken: this decision was made due to the habitat types present within this area. The Site was surveyed from 10th May to 7th June 2018 with surveys being undertaken in conditions considered suitable for reptiles. The Herpetofauna Groups of Britain and Ireland (HGBI) guidance suggests that optimum conditions are in temperatures between 9°C and 18°C, in absence of wind and rain, and, depending on conditions, between the hours of 08:30 and 11:00 hours or 16:00 and 18:30. Peak counts of reptiles can often occur outside those times mentioned above, in particular immediately after rain. The surveys were therefore timed to utilise the best available weather conditions.

Reptile Evaluation Methodology

2.1.3 The criteria for designating Local Wildlife Sites, these consisting of sites of importance on a county level (previously known as SINCs), include criteria for their selection on the basis of their reptile populations. These criteria follow the guidelines established by Froglife in identifying Key Reptile Sites: a scoring system provided in Table 1.

2.1.4 The scoring system is based upon the maximum number of adult animals: that is all animals recorded, excluding hatchlings/juveniles, seen under artificial refugia (placed at a density of a minimum of 10 per hectare) or by general observation by one person, in one day.

Table 1 – Evaluation of Reptile Population Status Based on Counts and Score Given

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

2.1.5 A Key Reptile Site is identified when a site meets any of the following thresholds:

- Supports three or more reptile species; or
- Supports two snake species; or
- Supports an exceptional population of any one species; or
- Supports an assemblage of species scoring ≥4 points using the above system; or,
- Supports a population of adder scoring >1.

2.1.6 Any other species noted under the refugia were also recorded, principally any amphibian species in terrestrial phase.

3.0 RESULTS

3.1 Reptile presence/likely absence survey

3.1.1 A peak count of one sub-adult grass snake *Natrix helvetica* was recorded during two of the seven surveys, one individual was recorded on 16th May and one was recorded on 30th June 2018. The peak count for grass snake reflects a 'Low' population under the Key Reptile Site criteria and results in one point. The full data, including weather conditions, are shown in Appendix 1. Figure 1 shows the locations of the felts.

3.1.2 The individuals were recorded in the north-west of the Site: one was recorded to the north-west of the building (mat 7) and one was recorded to the south-east of the building (mat 4).

3.1.3 In summary, one species of common reptile has been confirmed present in the Site.

4.0 EVALUATION

4.1 Reptile Presence/Likely Absence Survey

4.1.1 A reptile presence / likely absence survey has been carried out in land off New Cut in East Farleigh, Kent. The reptile surveys were to inform the planning permission for the Site (15/50424/FULL) and a mitigation strategy has been produced in response to Condition 9, which states a mitigation strategy would be required prior to any development taking place.

4.1.2 Condition 9 is in accordance with recommendations made during the 'Phase 1 Ecological Audit Survey' undertaken by Marsh Environmental in 2013; this survey identified a small amount of reptile habitat within the Site therefore it was considered habitat manipulation would be sufficient to discourage reptiles from using habitats within the development area. In 2018, an Update Ecological Walkover Assessment undertaken by Corylus Ecology found the habitats within the Site had become over-grown since 2013 and optimal opportunities for reptile foraging, commuting and potentially hibernating were identified throughout the Site. This represented an increase in suitable habitat for reptiles across the Site since the original survey: from a limited area which was found to be suitable in 2013, to the majority of the Site being suitable in 2018.

4.1.3 A total of 19 heat traps were placed throughout the Site and the Site area is 0.1ha. This achieved a density of greater than ten per ha following guidance from Froglife (1999). A peak count of one sub-adult grass snake was recorded at the Site, on both occasions the individual was found in the north-western corner. The peak count for grass snake is equivalent to a 'Low' population, scoring a total of one point. This score does not qualify the Site for consideration as a Key Reptile Site under the Froglife criteria. The reptile assemblage within the Site is assessed of being of **Neighbourhood Importance.**

Grass Snake Ecology

4.1.4 Grass snakes are Britain's largest snake and hibernate from October to early March. The species is wide ranging, with records of individuals travelling up to 120m per day and a recorded home range of up to 33 hectares. Within southern England the species is locally common with the preferred habitat type consisting of ponds, streams, ditches and marshland. As well as wetlands grass snake are also known to frequently use areas of open woodland, woodland edge, hedgerows and rough grassland, although research has disclosed a preference for these habitats within the local vicinity of water. Feeding and egg laying sites may be several hundred metres from hibernacula and snakes will use hedgerows, ditches and banks as movement corridors where possible. Newts, frogs and toads form the majority of their diet and grass snakes are accomplished swimmers (Beebee & Griffiths, 2000).

Population Estimates

4.1.5 It is problematic to estimate an accurate population for grass snake based on the survey method, as densities are limited by available resources and typical home ranges. Grass snake tend to live at densities <5 her ha (Beebee and Griffths, 2000). The single sub-adult grass snake appears to be using the grassland on site which is on the edge of the available suitable habitat.

Likely Impacts

4.1.6 The majority of the Site comprises suitable terrestrial reptile habitat consisting of unmanaged grassland, dense scrub and tall ruderal. There are also several large spoils including compost heaps and rubble piles which have become vegetated and provide suitable refugia features and potential hibernation opportunities. The northern, southern and western boundaries are adjacent to residential gardens and a managed orchard which are likely to provide suitable reptile habitat.

4.1.7 The plans for the Site include the construction of a single residential dwelling with car parking, access and landscaping including groundworks throughout the Site. The proposals will impact on the reptile habitat with areas of suitable reptile habitat being permanently lost. As all common reptile species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) against intentional death or injury then a reptile mitigation strategy is required to discharge Condition 9. This has been provided in Chapter 5.

5.0 REPTILE MITIGATION STRATEGY

5.1 A reptile mitigation strategy aims to minimise the risk of harming reptiles on Site during the works and provide habitat enhancement for reptiles to be retained to ensure the long-term survival of reptiles. With regards to this Site, it is considered that if a buffer zone margin of between 1m and 2m of vegetation can be retained along the northern and eastern boundaries of the Site then a trapping and relocation exercise and exclusion fencing would not be necessary and the most appropriate method of moving reptiles out of the development area would involve habitat manipulation to encourage animals to move out of those areas of suitable vegetation. The retained area/s would need to be clearly marked out prior to development and enhanced in the long term with appropriate management, demarcation and the installation of log piles.

Habitat Manipulation Procedure and Timeline

5.2 The area to be affected is approximately 0.1ha in size and due to the size, low number of reptiles likely to be affected and location in which the reptiles were recorded habitat manipulation during the summer months when grass snake are active would be carried out.

Timeline of work

1) Demarcation of retained reptile habitat and installation of two log piles within this area.
2) Commence cutting regime in development area in reptile active months (April – October), this will involve a two-step process with vegetation being cut to c. 150mm in height, followed by a second cut at least seven days later to a height of 100mm and then as close as possible over a two-week period with each cut at least five days apart. Regarding the dense scrub and tall ruderal, the cuts should be done using hand-tools only until reduced to a height of 150mm. The grassland can be cut using a two-step mowing system.
3) Maintain sustained period of cutting pressure within the area until the ground works start to ensure reptiles are displaced from the affected area. The grassland and vegetation should be maintained to as close to ground level as possible.
4) Any rubble and spoil piles should be cleared by hand under ecological supervision and removed from the works area. Where these are too large to be dismantled carefully by hand a destructive search should be carried out under ecological supervision. Dismantling of the spoil piles should be undertaken during the spring, summer or early autumn months and as a precaution will avoid the winter to avoid the possibility of finding hibernating animals.
5) As reptiles have been recorded as present it is recommended that measures are taken to ensure that materials stored temporarily within the works area not colonised by reptiles.

Piles of rubble and building materials can all provide suitable refugia for reptiles and it is advised that these materials either be moved off-Site or raised off the ground, e.g. on pallets.

Birds

5.3 The Site supports suitable habitat for nesting birds in the dense bramble scrub and trees. All wild birds, including eggs and chicks, are protected against injury or killing and their nests are protected against damage or destruction when in use under the Wildlife Countryside Act (1981). It is recommended that any vegetation clearance works are undertaken outside of the bird breeding season, avoiding the period March – September inclusive. If these dates do not coincide with clearance work then it is recommended that the structure or vegetation is checked by a suitably experience ecologist before the works commence. Where nests are found, works will need to be delayed until all of the chicks have fledged and the nest is no longer in use.

Enhancements

5.4 The retained reptile habitat includes the hedgerows and unmanaged grassland along the northern and eastern boundaries. Ongoing management of these marginal areas will be needed however cutting should be to a minimum height of 150mm to avoid injuring reptiles. The retained reptile habitat along the boundaries will provide suitable habitat in which reptiles can forage and shelter and will also allow them to move through the landscape, including into the adjacent residential gardens to the north and orchard to the east. The buffer zones will be enhanced further through the installation of two log piles.

5.5 The buffer area will be fenced using chestnut pale fencing or similar appropriate fencing with a gate to allow an annual cut to be undertaken in winter to ensure continued provision of suitable habitats for biodiversity.

6.0 CONCLUSIONS

6.1 A presence / likely absence survey for reptiles has been undertaken at land off New Cut in East Farleigh, Kent in 2018. Peak counts of one sub-adult grass snake were recorded.

6.2 A mitigation strategy has been provided to ensure that no reptiles are harmed during the proposed works within the Site and to create habitats within the development area to ensure their long-term presence within the wider countryside. This includes habitat manipulation and retaining a 1 – 2m margin of vegetation along the northern and eastern boundaries of the Site and enhancing this area for reptiles.

6.3 A long-term sensitive management plan will be required to ensure continued provision of suitable habitat for biodiversity.

References

Beebee, T. & Griffiths, R. 2000. *Amphibians and Reptiles.* Harper Collins Publishers, Hammersmith, London.

Beebee, T & Grayson, R., 1998. Herpetofauna Workers Manual.

Edgar, P. Foster, J. & Baker, J 2010. *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth

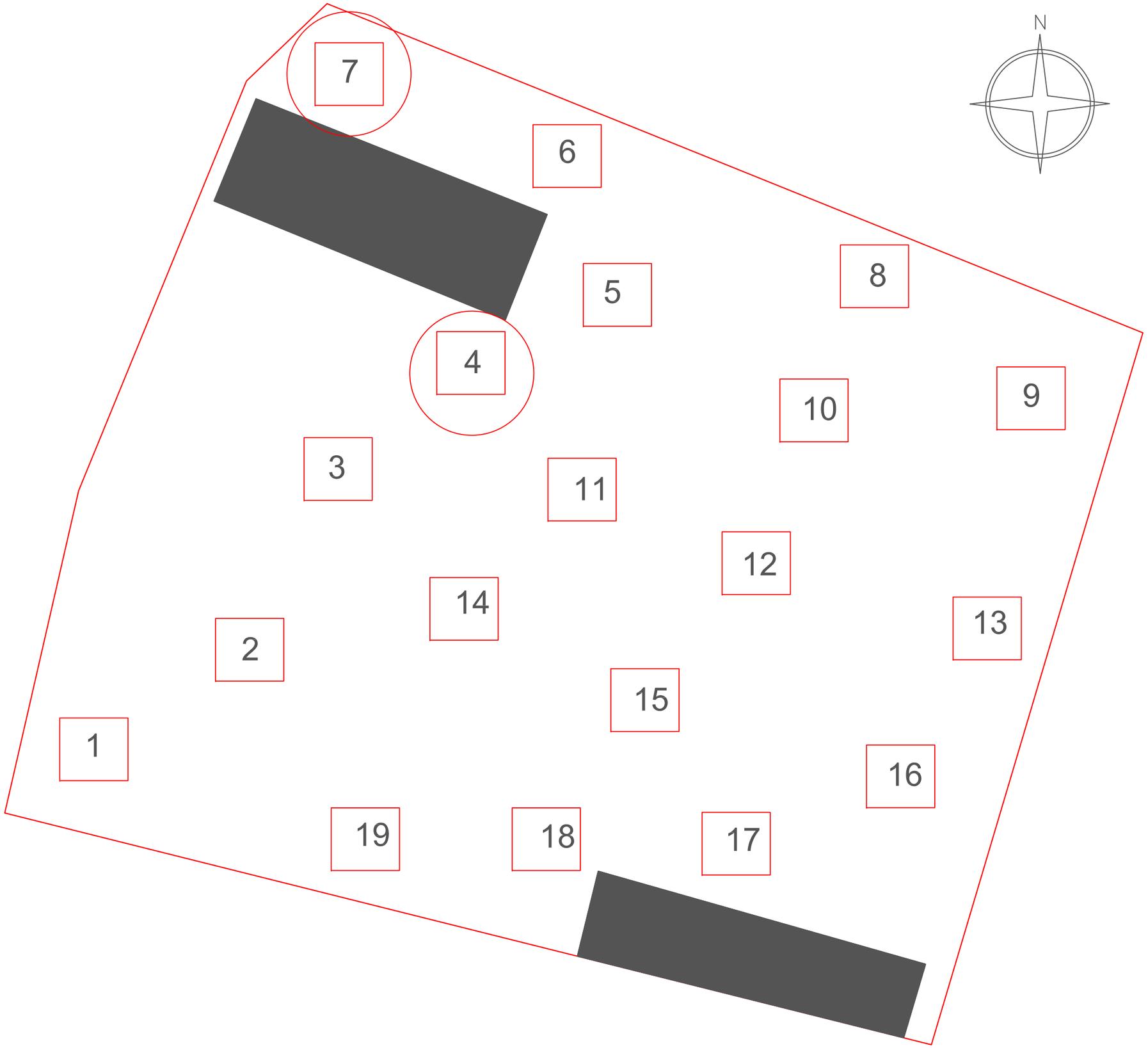
Froglife. 1999. *Froglife Advice Sheet 10: Reptile Survey.* Froglife, London.

Froglife, 1999. *Reptile survey, an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

Herpetofauna Groups of Britain and Ireland (HGBI), 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.

Marsh Environmental, 2013. *Baseline Ecological Audit of Land and Buildings at Barker Cottages New Cut East Farleigh, Kent.*

English Nature 1994 Species Conservation Handbook Peterborough



Key

Site Survey Area

1 Reptile Felt

1 Reptile Location

revision	description	date	checked by

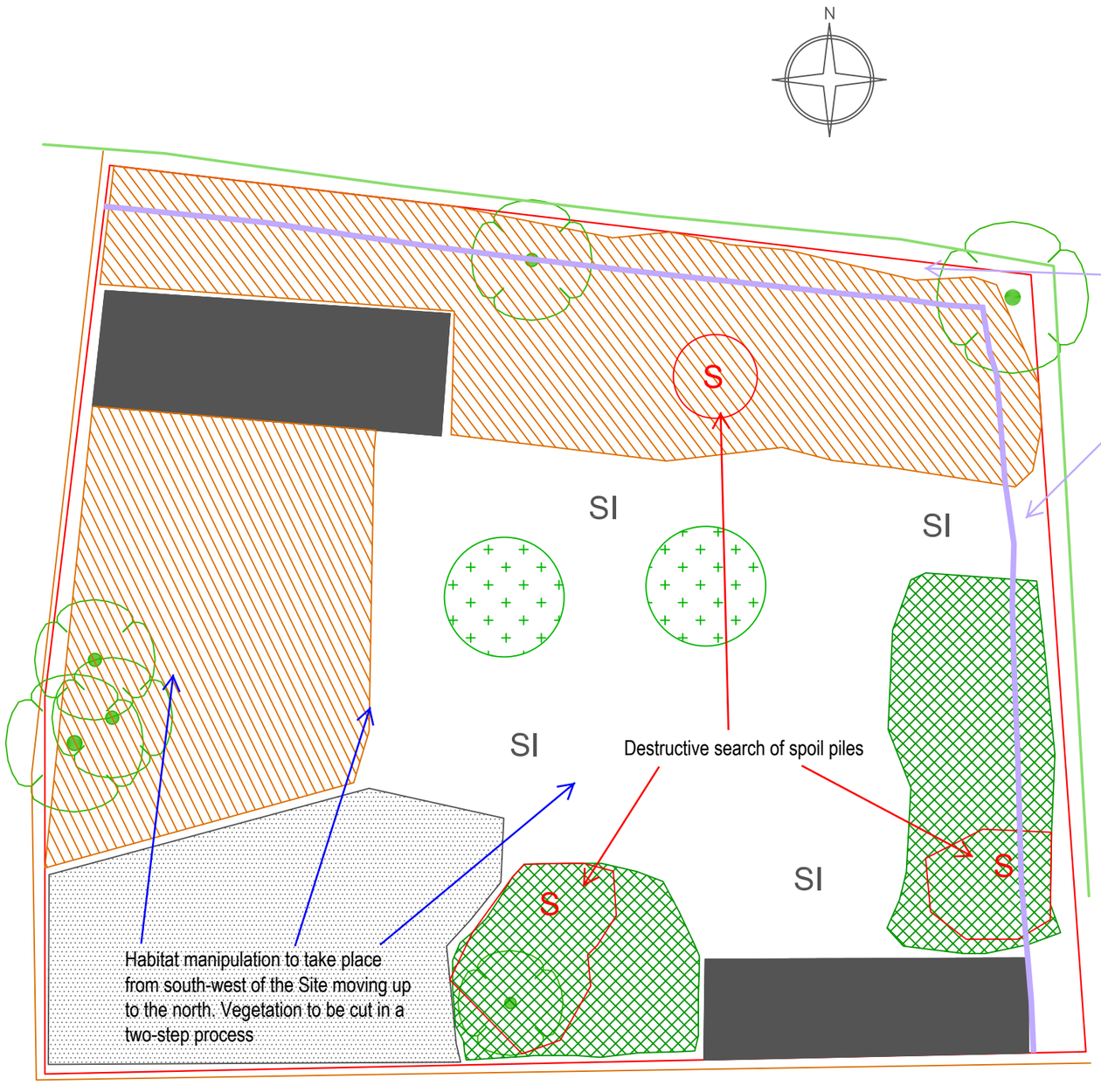
Corylus Ecology Ltd, Unit A3, Speldhurst Business Park, Went Farm, Langton Road, Speldhurst, Kent TN3 0NR Corylus Ecology is the trading name of Corylus Ecology Ltd registered in England, No 5005553, Registered Office: Henwood House, Henwood, Ashford, Kent TN24 8DH

Project:
18040 Barkers Cottages, East Farleigh

Title:
Reptile Plan

status		drawing no.		
		Figure 1		
scale	size	date	drawn	checked
NTS	A3	02.06.2018	LR	BC

CAD filename
Figure_1.dwg



Key

- Site Survey Area
- Tree
- Dense Scrub
- Scattered Scrub
- SI — Semi-Improved Grassland
- Tall Ruderal
- Species Poor Hedge
- Wall
- Short perrenial
- Buffer zone fencing

revision	description	date	checked by

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Project:
18040 Barkers Cottages, East Farleigh

Title:
Mitigation Plan

status		drawing no.		
		Figure 2		
scale	size	date	drawn	checked
NTS	A3	02.06.2018	LR	BC

CAD filename
Figure_1.dwg

Appendix 1: Reptile Survey Results 2018 Site Name: Barkers Cottage, Reptile Surveys

Visit no	Date	Initials	Species	Common lizard	Slow worm	Grass Snake	Adder	Weather conditions	
1	10/05/2018	LR	Male					Time	14:30
			Female					Temperature	15.5
			Adult Unknown					Cloud cover %	50%
			Sub					Rain	Dry
			Juv					Wind	BF4
			TOTAL	0	0	0	0		
			PEAK	0	0	0	0		
2	16/05/2018	EK	Male					Time	9:40
			Female					Temperature	14
			Adult Unknown					Cloud cover %	80%
			Sub			1		Rain	Dry
			Juv					Wind	BF1
			TOTAL	0	0	1	0		
			PEAK	0	0	1	0		
3	22/05/2018	HuLu	Male					Time	9:35
			Female					Temperature	80%
			Adult Unknown					Cloud cover %	80%
			Sub					Rain	Dry
			Juv					Wind	BF 3
			TOTAL	0	0	0	0		
			PEAK	0	0	0	0		
4	25/05/2018	EK	Male					Time	9:10
			Female					Temperature	14
			Adult Unknown					Cloud cover %	100%
			Sub					Rain	Light in am
			Juv					Wind	BF0
			TOTAL	0	0	0	0		
			PEAK	0	0	0	0		
5	30/05/2018	LR	Male					Time	10:45
			Female					Temperature	16
			Adult Unknown					Cloud cover %	100%
			Sub			1		Rain	Recent
			Juv					Wind	BF1
			TOTAL	0	0	1	0		
			PEAK	0	0	1	0		
6	06/06/2016	LR	Male					Time	11:20
			Female					Temperature	14
			Adult Unknown					Cloud cover %	100%
			Sub					Rain	Dry
			Juv					Wind	BF2
			TOTAL	0	0	0	0		
			PEAK	0	0	0	0		
7	12/06/2018	LR	Male					Time	10:15
			Female					Temperature	14.5
			Adult Unknown					Cloud cover %	100%
			Sub					Rain	Light rain
			Juv					Wind	BF1
			TOTAL	0	0	0	0		
			PEAK	0	0	0	0		

Appendix 1 – Reptile Legislation

All British reptiles are afforded legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) largely as a consequence of a national decline in numbers due to habitat loss. Under the terms of the Act, it is an offence to intentionally kill or injure a reptile and accordingly in order to avoid committing an offence under the Act, appropriate mitigation techniques need to be incorporated for reptiles occurring within development sites. Mitigation methods for reptiles may include trapping and relocation of animals to a suitable receptor site, combined with the exclusion of the development site through the use of reptile fencing. Measures to enhance habitats for reptiles include the provision of hibernacula and appropriate management to improve foraging areas may also be required.

Mitigation for the more common British reptiles and amphibians does not require a licence from Natural England but would typically be agreed in consultation with the local planning authority.