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Reptile Survey Report & Translocation Method Statement

Land off Hearnfield Road

**Littlehampton
West Sussex**

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July 2010**

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Summary

- AEWCLtd. was commissioned by Hanbury Properties Ltd. to undertake surveys for Reptiles at Land south of Hearnfield Road, Littlehampton, West Sussex, to inform the proposed development of the site.
- The site is located at grid TQ 502875 103886 to the north of Littlehampton, just off to the east of the A284 Lyminster Road.
- A previous survey (AEWC 2010) at the site by a qualified ecologist Stephanie Murphy, BSc (Hons) MIEEM to assess for the potential presence of any protected species and identify habitats of conservation importance, concluded there was a significant amount of habitat suitable for reptiles within the proposed application site. A search on the National Biodiversity Network revealed that there were records of Common Lizard (*Lacerta vivipara*) within 1km of the site. Further surveys were recommended in order to ascertain whether reptiles are present on site.
- Reptile surveys were carried out on all areas considered potentially suitable for reptiles. Artificial refugia (sheets of corrugated metal and roofing felt) were placed in these areas and checked seven times during July 2010, in suitable weather conditions.
- Two species of reptile were found on the site: Lizard Slow Worm. Both species were found throughout the entire field but specific concentrations of Slow Worms were found along the southern boundary (adjacent to the railway) and concentrations of Lizards were found along the eastern boundary with Fairhaven Nursery.
- A translocation is required for the reptiles present in the land south of Hearnfield Road, Littlehampton West Sussex. This is because there are not enough suitable habitats adjacent to this area that will remain after the development to push the reptiles in to.
- The proposed mitigation plan is detailed in Section 6.

This report has been prepared by AEWCLtd, with all reasonable skill, care and diligence within the terms of the Contract with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

1 Introduction

- 1.1 AEWCLtd. was commissioned by Hanbury Properties Ltd. to undertake surveys for Reptiles at Land south of Hearnfield Road, Littlehampton, West Sussex, to inform the proposed development of the site.
- 1.2 The site essentially comprises a field which is enclosed by the south coast railway to the south, residential properties and the A284 Lyminster Road to the west, residential properties to the north, and a conifer hedge forms the boundary to the east with Fairhaven Nursery.
- 1.3 This report gives details of the results of the reptile survey carried out at Land South of Hearnfield Road, Littlehampton, West Sussex and recommended mitigation measures.
- 1.4 A previous survey (AEWC 2010) at the site by a qualified ecologist Stephanie Murphy, BSc (Hons) MIEEM to assess for the potential presence of any protected species and identify habitats of conservation importance, concluded there was a significant amount of habitat suitable for reptiles within the proposed application site and recommended that further reptile surveys were necessary in order to ascertain whether reptiles were present at the site. A search on the National Biodiversity Network revealed that there were records of Common Lizard (*Lacerta vivipara*), within 1km of the site.
- 1.5 The four common UK reptile species (Adder, Grass Snake, Slow-worm and Common Lizard) are all partially protected under Schedule 5 of the Wildlife and Countryside Act 1981 (and as amended) with part of Section 9(1) and all of Section 9(5) applying. As such it is an offence to:
 - intentionally kill or injure any individual: and
 - sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell individual reptiles.
- 1.6 A general habitat requirement of reptile species is sunny undisturbed glades and/or slopes, usually in the vicinity of some thick cover. Further details of species-specific habitat preference are given below:

Sand Lizard

- Areas of open sand dunes.
- Mature dry heath.

Common Lizard

- This species occupies a large range of habitat types. Their home range is usually quite small.
- Open patches to bask in, especially piles of rubble and wood in sunny areas.

- Ground cover of ivy is especially good for lizards for feeding and to avoid predators.

- Dense but short vegetation, open to the sun.

Slow Worm

- Also occupies a large range of habitat types.
- Thick ground vegetation – they bask less often than other British reptiles.
- Regularly frequent habitats influenced by man, such as railway cuttings and gardens.

Grass Snake

- This species has a large home range.
- Grass snakes are highly aquatic and are strongly associated with riparian habitat.
- Compost heaps or dung piles are good egg laying habitat for Grass Snakes.

Adder

- Light chalk or sandy soils are preferred.
- A main requirement is that the area should be undisturbed
- Heathlands, woodlands rides and chalk downland are good habitat for adders.

Smooth Snake

- Found almost exclusively in dry heathland, especially in mature stands of heather or gravely lowland heaths.

2 Methods

- 2.1 Accepted guidance on reptile survey methodologies is set out within the JNCC Herpetofauna Workers Manual (2003) and within Froglife's Advice Sheet 10.
- 2.2 Artificial refugia (sheets of corrugated metal and roofing felt, approximately 0.5m² in area) were placed in areas of suitable habitat for reptiles.
- 2.3 The area of the entire site, shown in Photographs 2.1 and Photograph 2.2, was considered to provide potentially suitable habitat for two of the commoner species; Slow-worm and Common Lizard so refugia were placed in all suitable areas across the field.

- 2.4 Within the areas of suitable habitat, refugia were placed in likely basking spots (for example, sunny areas near to cover). A total of 78 sheets were positioned across the site on the 27th June 2010.
- 2.5 The refugia were checked on seven occasions in July 2010. Where possible, survey visits took place when weather conditions were most suitable for reptile surveying (predominately early morning visits). The most suitable conditions are intermittent or hazy sunshine, low air temperature and little or no wind (Gent & Gibson, 1998). Any reptile seen basking on or sheltering underneath the refugia were noted, and their locations recorded.

Photograph 2.1: Abandoned field comprising predominately of rough grassland and young scrub habitat, Land south of Hearnfield Road, Littlehampton, West Sussex.



Photograph 2.2: Abandoned field comprising predominately of rough grassland and young scrub habitat, Land south of Hearnfield Road, Littlehampton, West Sussex.



3 Results

- 3.1 Two species of reptile were found on the site: Lizard Slow Worm. Both species were found throughout the entire field but specific concentrations of Slow Worms were found along the southern boundary (adjacent to the railway) and concentrations of Lizards were found along the eastern boundary with Fairhaven Nursery.
- 3.2 Table 3.1 shows the results of the surveys and maximum counts for each survey which indicate the minimum number of reptiles on the site.

Table 3.1 Results of the reptile surveys

Date	Common Lizard	Slow Worm
05/07/10	0	0
07/07/10	7 (2 adults 5 juveniles)	2 (2 adults)
09/07/10	19 (11 adults 8 juveniles)	4 (3 adults 1 juvenile)
11/07/10	24 (10 adults 14 juveniles)	1 (1 adult)
12/07/10	13 (8 adults 5 juveniles)	4 (2 adults 2 juveniles)
13/07/10	5 (3 adults 2 juveniles)	0
29/07/10	8 (adults)	1 (1 adult)

* see paragraph 5.2

- 3.3 Table 3.2 shows the weather conditions at the site during the six visits.

Table 3.2: Weather Conditions at Land south of Hearnfield Road, Littlehampton, West Sussex during the reptile surveys.

Date	Weather conditions
05/07/10	Cloudy, warm, with light breeze 16°C.
07/07/10	Overcast, still and warm, 18°C.
09/07/10	Cloudy, muggy, still and warm 16°C.
11/07/10	Sunny, warm, with light breeze 17°C.
12/07/10	Sunny, warm, with moderate breeze 17°C.
13/07/10	Overcast, still and warm, 19°C.
29/07/10	Overcast, muggy, 18°C.

4 Constraints/Limitations

- 4.1 The surveys took place in July, which is not the optimal survey period for reptiles as the refugia can get very hot and reptiles are less likely to use them when the air temperatures are above 19°C. However, the surveys took place in suitable weather conditions, before 7am and after 7pm when the temperatures were cooler, and reptiles were more likely to use the refugia. Reptiles were recorded under the refugia on six of the seven surveys carried out at the Land off Hearnfield Road.

5 Evaluation

- 5.1 The surveys provide adequate information to demonstrate which areas of habitat reptiles are using (i.e. they are present through the entire development footprint) and which species are present. The results also confirm that both species are breeding on the site.
- 5.2 The numbers of maximum counts in Table 3.4 for reptiles show the maximum number of reptiles recorded on any one visit. However, these figures should not be taken as an indication of population size.
- 5.3 As all British reptiles are protected from injuring and killing, mitigation will be required as the area in which they are present is to be developed.
- 5.4 The mitigation required may depend on the extent of the habitat loss.
- 5.5 Gradual, two-stage clearance of vegetation at the appropriate time of year, which should encourage the reptiles to leave of their own accord, is usually acceptable if:
 1. If the amount of reptile habitat to be lost is relatively small (approximately 25% or less of the total amount present on the site);
 2. if the area(s) does not represent a core part of the reptiles habitat (such as a hibernation site);
 3. estimated densities of these species are low (<50 individuals/ha for Common Lizards and <50/ha for Slow Worm, HGBI (undated)); and,
 4. links to other good reptile habitat remain intact.
- 5.6 If these criteria are not met, the other option for reptile mitigation is translocation, (which is the likely method that will be employed in this instance). This usually involves increasing the density of refugia and catching reptiles as they use them for basking or shelter. A receptor site needs to be identified and, if this is off the original site, it should be agreed with the local Natural England office and/or County Ecologist.
- 5.7 Using the Key Reptile Sites Assessment (Froglife 1999) the number of Slow Worms recorded at the site would indicate that there is a 'low' population present (< 5 /ha). The number of Common Lizards recorded at the site would indicate that there is a 'good' population of Common Lizard present (5 – 20/ha).

6 Mitigation plan

- 6.1 A translocation is required for the reptiles present in the land south of Hearnfield Road, Littlehampton West Sussex. This is because there are not enough suitable habitats adjacent to this area that will remain after the development to push the reptiles in to.
- 6.2 Prior to the commencement of demolition and construction activities, a reptile proof fence will be put up around the perimeter of this area. The line of the fence will be hand searched prior to placement of the fence to ensure no reptiles are damaged during the construction process.
- 6.3 Artificial refugia will be placed at a density of approximately 100/ha. The traps and refugia will be checked two to three times per day in suitable weather conditions and Slow-worms and Common Lizards will be captured by hand.
- 6.4 Small populations of reptiles can probably be translocated in approximately 60 trapping days carried out in favourable weather conditions (HGBI, 1998). However, the number of visits should depend on the rate of capture (English Nature 2005). Captures per unit effort will be measured to ascertain if the population has been captured in less than sixty days. It is not necessary for all visits to be made on separate days and therefore translocation should be completed within a four-eight week period, depending on weather conditions.
- 6.5 Once caught reptiles will be swiftly transferred into clean, cloth bags, taken to the receptor site and released immediately in order to minimise stress to individuals.

Receptor Site

- 6.6 A receptor site has been identified for the reptiles in Shillinglee. The animals will be translocated to Winkins Wood farm which is located in the village of Shillinglee where common reptiles are already known to be present.
- 6.7 The receptor site is a total of over 50 hectares most of which is good habitat and 5 hectares are suitable habitat which will be used as a receptor site, this compares to the development site which is 0.6 hectares.
- 6.8 The potential impacts on the receptor and donor site reptile populations is considered not be of great concern, because the receptor site represents new habitat for reptiles with a carrying capacity that is far higher than the population present at the donor site.
- 6.9 The existing reptile populations in other parts of receptor site and wider habitat will prevent the translocated population from becoming isolated and fragmented, the area is good for many species and connects to a number of wider habitats.
- 6.10 The translocation area will be enhanced for reptiles by:
 - No mowing/cutting of grassland within the receptor area and the control of dense overgrown vegetation/bracken; and

- The installation of a minimum of three hibernation sites, which will comprise piles of rubble, hardcore and/or logs, capped with topsoil and turf, and will measure at least 3m x 2m x 1m.

Timetable of works.

- The hibernacula and vegetation control / site enhancement will be conducted at the start of August 2010.
- Trapping will be conducted from the start of August through until at least the end of September during ideal and optimum survey periods for 60 trapping days.

Monitoring of Reptiles.

- 6.11 The receptor site will be resurveyed annually for 2 years after the release of individuals. Surveys will be carried out using a similar method to that employed during the baseline survey. Surveys must be carried out during the months of peak reptile activity i.e. between, May and September.

Management Regime

- 6.12 The site will be managed for reptiles for a period of 10 years to ensure suitable habitat is present for the species.

7 References & Bibliography

AEWC (2010) *Protected Species Walkover Survey*, Land off Hearnfield Road, Littlehampton, West Sussex. AEWCLtd.

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Gent, T. & Gibson, S. (Eds.) (1998) *Herpetofauna Workers' Manual*. JNCC, Peterborough.

Herpetofauna Groups of Britain and Ireland (1998) *Evaluating Local Mitigation/Translocation Programmes: Maintaining Best Practice and Lawful Standards*