



EASTERGATE ECOLOGY

REPTILE SURVEY

Prepared for Linden Homes

by

Hankinson Duckett Associates

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1 INTRODUCTION

1.1 Site location and summary description

1.1.1 This report describes a reptile survey of approximately 11.5ha of land at Eastergate, West Sussex, hereinafter referred to as the site. The site centre is located by National Grid Reference SU 948055. The study was commissioned by Linden Homes Ltd in July 2013.

1.1.2 The site is located on the northern edge of Eastergate and is bordered to the south by Barnham Road with residential development beyond, to the east by a public footpath with farmland beyond and to the west by residential development fronting Fontwell Avenue and Collins Close. Unmanaged orchard and farmland extends to the north. The location and boundary of the site are shown in *Appendix A*.

1.1.3 In general terms, the site comprises a disused fruit farm characterised by areas of unmanaged orchard separated by managed species-poor semi-improved grassland fields and areas of species-poor semi-improved grassland/ scrub mosaic. Field boundaries within and around the site generally comprise fences with mature tree lines and a single stretch of species-poor hedgerow.

1.1.4 Further information on the distribution of habitats across each area of the site is provided in the Ecological Appraisal (HDA, 2013).

1.2 Background and legislative context

1.2.1 Four species of reptile are widespread in England, Grass Snake *Natrix natrix*, Slow-worm *Anguis fragilis*, Common Lizard *Zootoca vivipara* and Adder *Vipera berus*. The Sand Lizard *Lacerta agilis* and Smooth Snake *Coronella austriaca* are restricted to certain sand dune and heathland sites.

1.2.2 Reptiles can be found in a range of habitats and typically require a mosaic of vegetation types. Habitat interfaces are important with reptiles requiring woodland, scrub or hedgerow for shelter, with adjacent longer vegetation for hunting and patches of sheltered short turf, bare ground or log piles for basking areas. Areas which catch the sun (i.e. those with a southerly aspect) are preferred over those where direct sunlight is absent for most of the day. In addition, Grass Snakes favour damp habitats such as those associated with still and running water, grazing marshes, mires etc.

1.2.3 All species of reptile are protected through Sections 9(1) and 9(5) of the Wildlife and Countryside Act 1981 (as amended). It is an offence to:

- Intentionally kill or injure any reptile; and
- Sell, offer for sale, possess or transport for the purposes of sale or publish advertisements to buy or sell any reptile.

Due to their rarity, Sand Lizards and Smooth Snakes have additional protection.

- 1.2.4 Reptiles across the UK have undergone significant declines in recent years and all species of reptile within the UK are now listed as Priority Species for conservation action under the UK Biodiversity Action Plan (BAP). Planning policy, legislation and guidance requires that these species are a material consideration when making planning decisions.

1.3 Scope and purpose of the report

- 1.3.1 Although no records of reptiles were identified in the desk study carried out as part of the Ecological Appraisal (HDA, 2013), the extended Phase 1 Habitat survey recorded considerable areas of potential reptile habitat across the site in the form of rough grassland, along orchard and scrub edges, and hedgerow bases.

- 1.3.2 The aims of this study are:

- i. To establish the presence/probable absence of reptiles at the site;
- ii. To assess the relative importance of different parts of the site for reptiles; and
- iii. To predict likely impacts potentially arising from development of the site and give recommendations for impact avoidance, minimisation and mitigation.

2 METHODOLOGY

- 2.1 The methodology has been devised to accord with the requirements of all relevant legislation and good practice guidance, including The Herpetofauna Worker's Manual (JNCC, 1999) and Reptile Survey guidance (Froglife, 1999).

- 2.2 The site was surveyed six times by Anna Senior MCIEEM of HDA. Surveys were generally carried out during optimum temperature and weather conditions (intermittent or hazy sunshine, temperature between 9°C and 20°C and low winds). Dates of survey visits, with survey timings and weather conditions, are shown in *Table 1* below:

Table 1: Survey times and weather conditions

Survey visit	Date	Time of Visit	Weather conditions	Temp (°C)
1	16/08/2013	16:20-18:20	Calm, overcast, dry and humid	19
2	23/08/2013	17:15–18:50	Dry, overcast, calm	23-22
3	30/08/2013	17:15-18:45	Dry, partially overcast, calm	20-19
4	01/09/2013	08:30-10:15	Dry, sunny, calm	15-19
5	26/09/2013	15:45-17:15	Dry, overcast, sunny spells	21-17
6	07/10/2013	11:00-14:00	Dry, sunny, calm	16-19

- 2.3 Two methods of surveying were used. Firstly, artificial refugia (squares of roofing felt 0.5m x 0.5m) were placed, in advance of the survey commencing, at potential basking areas throughout the site. A total of 111 refugia were placed, giving a total density of 9.4 refugia per hectare. This is within the recommended density of 5 to 10 refugia per hectare; this density was considered appropriate in order to obtain an accurate representation of reptile presence and distribution across the site. Locations of refugia are shown on the map in *Appendix A*.
- 2.4 During each of the six visits, each refugium was inspected for any reptiles basking on the upper side, then lifted and checked for sheltering animals before being carefully replaced.
- 2.5 The second survey method involved transect searches across suitable habitats within the site. This ensured that all areas were represented in the survey, and that the survey was not biased towards those reptiles more likely to use refugia. Transect searches involve walking slowly around the site, visually searching potential basking areas and marking the locations of any reptiles observed on a map. Potential reptile refuges already present on the site such as discarded wooden boards and plastic sheets were also lifted to check for the presence of animals.
- 2.6 The following information was recorded for each reptile survey: species seen, number of animals seen, location (refugium number), date, start and finish times, temperature and weather.
- 2.7 Limitations**
- 2.7.1 The reptile surveys were carried out at an appropriate time of year during suitable weather conditions. No significant disturbance to refugia occurred during the survey and the density of refugia remained well above the minimum number required per unit of reptile habitat. It is therefore considered that no limitations were encountered during the survey and the survey findings allow a robust assessment of the likely effect of the proposed development on reptiles.
- 3 RESULTS**
- 3.1 Habitat assessment**
- 3.1.1 Considerable areas of moderate and high quality habitat for reptiles are provided within the mosaic of rough grassland and scrub and in the areas of unmanaged orchard and hedgerow bases.
- 3.2 Refugia and visual searches**
- 3.2.1 Despite the presence of suitable habitat within the site, no reptiles were recorded during the survey.

4 CONCLUSION AND RECOMMENDATIONS

- 4.1 No reptiles were recorded during the survey. It is therefore considered that Eastergate site does not support reptiles on a regular basis. This result is reinforced by the placing of a high density of refugia which would have increased the likelihood of finding any reptiles present at the site. No mitigation specific to reptiles is therefore recommended in relation to the proposed development of the site.

5 REFERENCES

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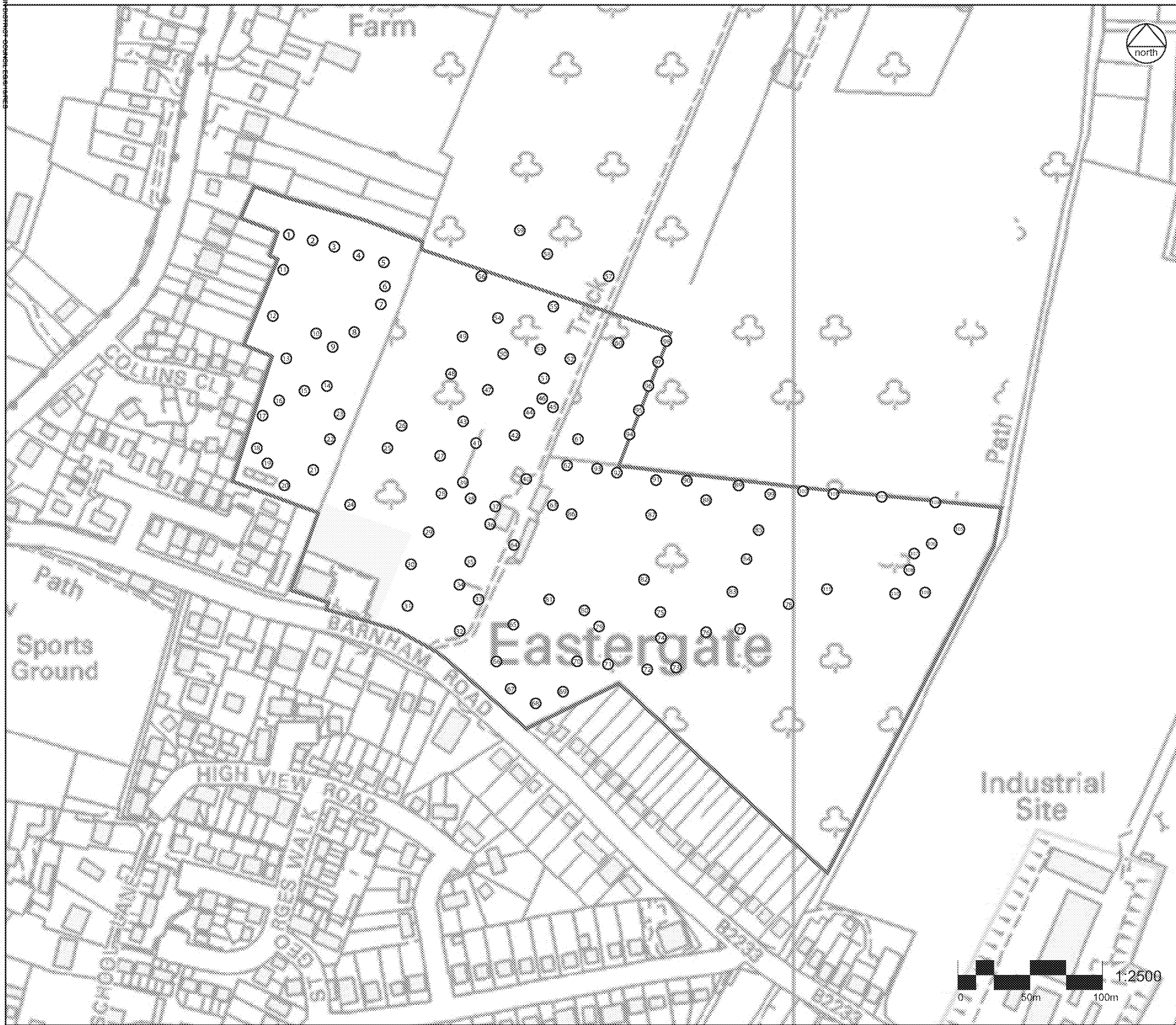
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APPENDIX A

Reptile Survey Summary Plan



KEY

-  Site boundary
-  Reptile refugia

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