Reptile Survey

of

Land at Malyons Farm Hullbridge, Essex

on behalf of

Southern and Regional Developments Ltd

July 2014

Rev A: October 2014

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Job Number: JBA 10/252

Title:
Reptile Survey of Land at Malyons Farm, Hullbridge, Essex

Disclaimer

JBA Consultancy Services Ltd. have made every effort to meet the client’s brief. However, no survey ensures complete and absolute assessment of the changeable natural environment. The findings in this report were based on evidence from thorough survey: It is important to remember that evidence can be limited, hard to detect or concealed by site use and disturbance. When it is stated that no evidence was found or was evident at that point in time, it does not mean that species are not present or could not be present at a later date: The survey was required because habitats are suitable for a given protected species, and such species could colonise areas following completion of the survey.

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EXECUTIVE SUMMARY

JBA Consultancy Services Ltd were commissioned by Southern and Regional Developments Ltd to carry out a reptile survey of land at Malyons Farm, Hullbridge, Essex.

The aim of the survey was to establish the presence or likely absence of reptiles across the site, following current Froglife (1999) and Natural England approved guidelines.

A low population of slow worms and common lizards were found, these species were located in the north western fields, with an individual slow worms also recorded on the eastern boundary.

Recommendations for preventing harm to reptiles and enhancement suggestions are included in the report. These include the retention of a public open space area with reptiles in situ and the erection of reptile fencing to the eastern boundary.
INTRODUCTION

Background to the study

1.1 JBA Consultancy Services Ltd were instructed by Southern and Regional Developments Ltd to carry out a reptile survey of land at Malyons Farm, Hullbridge, Essex. Grid ref: TQ 80689 94615 (taken from the centre of the site).

1.2 The site has no designated conservation status assigned to it.

1.3 The reptile surveys were undertaken by Mary Davies BSc (Hons) MSc MCIEEM; Alister Killingsworth BSc (Hons) MSc Grad CIEEM; Phil Aldwinckle BSc (Hons) MRes Grad CIEEM; James Booty BSc (Hons) Grad CIEEM; Ellie Rickman BSc (Hons) MSc ACIEEM; Emily Moore BSc (Hons) Grad CIEEM; Emily Costello BSc (Hons) MSc and Crystal Acquaviva BSc (Hons) MSc MCIEEM of JBA Consultancy Services Ltd. between the 29th May and 9th July 2014 on days with suitable weather conditions for finding reptiles.

1.4 Protected and NERC Section 41 species such as reptiles are a consideration under the National Planning Policy Framework (NPPF) 2012, which places responsibility on Local Planning Authorities to aim to conserve and enhance biodiversity and to encourage biodiversity in and around developments.

Site Description

1.5 The site was located to the west of Maylons Lane at Malyons Farm, Hullbridge in Essex. Adjacent to the northern and eastern boundaries were residential properties, with small areas of woodland sporadically placed within the housing estates. Lower Road ran along the southern boundary of the site. To the west were arable fields with hedgerows separating the individual fields. In addition, the River Crouch estuary flowed approximately 500m north of the site. The wider landscape consisted of a mosaic of hay meadows and grazed fields surrounded by hedgerows and tree lines and residential areas. Hannover Golf and Country Club was approximately 300m to the south east of the site with a number of ponds associated with the golf course (see Figure 1).
1.6 The site itself was a working farm and consisted mainly of grazed fields and hay meadows. The site was split east to west by an access track to Maylons Farm. The farm consisted of stables, allowing the horses and cattle to graze in fields towards the north of the site. These northern fields and southern hay meadows provided a mosaic of semi-improved and improved grasses suitable for foraging and potential dispersal routes of reptiles via hedgerow margins. The eastern boundary was separated by fencing from the housing estate. Areas of hard standing associated with the farmyard provided potential basking opportunities.
Aims and objectives

1.7 The aim of this survey was to identify the presence or likely absence of any reptile species on the site; to advise of any implications their presence would have on the development; and to suggest appropriate mitigation options where necessary.
2 METHODS

2.1 In order to undertake the reptile survey across the site, artificial refuges were used (felt mats). These increase the chances of observing otherwise elusive reptiles, which are attracted to these ‘refuges’ as they can bask on, or shelter below them. The refuges allow the reptiles to regulate their body temperatures out of sight from predators.

2.2 Three-hundred and thirty three roofing felt refuges, each measuring approximately 0.25m², were laid down on the 16th May 2014. The refuges were laid in sunny locations near suitable natural refuge habitat within the survey area, which has approximately 26ha in extent.

2.3 The refuges were left for a period of thirteen days prior to the commencement of the survey, to allow any reptiles present to begin using the refuges.

2.4 The refuges were surveyed on seven separate visits to the site.

2.5 On each visit, the refuges were observed from a distance. This survey method was adopted to observe reptiles basking in the sun, to avoid disturbing the reptiles before they can be recorded.

2.6 Following this, each refuge was approached cautiously and turned over to survey for reptile species using the refuge to warm up, or shelter, underneath.
3 RESULTS

3.1 The Essex Field Club provided records of adder (*Vipera berus*), common lizard (*Zootoca vivipara*), slow worm (*Anguilis fragilis*) and grass snakes (*Natrix natrix*) within 2km of the site (See Table 1).

Table 1: Results from the desk study undertaken in 2012, shows the reptiles that have been found within 2km of the site.

<table>
<thead>
<tr>
<th>Reptiles</th>
<th>Protection</th>
<th>Approximate distance from site</th>
<th>Year of Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adder</td>
<td>Partially protected under the WCA Schedule 5 &amp; NERC Section 41</td>
<td>1.8km south</td>
<td>2005</td>
</tr>
<tr>
<td>Common lizard</td>
<td></td>
<td>1.8km south</td>
<td>2005</td>
</tr>
<tr>
<td>Slow worm</td>
<td></td>
<td>300m east</td>
<td>2005</td>
</tr>
<tr>
<td>Grass snake</td>
<td></td>
<td>2km south</td>
<td>2005</td>
</tr>
</tbody>
</table>

WCA = *Wildlife and Country Act 1981 as amended. NERC = The Natural Environment and Rural Communities Act 2006*

3.2 Slow worms and common lizards were found during the surveys (Table 2) and their locations can be seen in Figure 2 in the appendix.

Table 2: Summary of Results for Protected Reptile Species

<table>
<thead>
<tr>
<th>Visit</th>
<th>Date</th>
<th>Temperature (°C)</th>
<th>Weather Conditions</th>
<th>Reptiles observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>29/05/14</td>
<td>17</td>
<td>75% cloud cover, Beaufort 1.5</td>
<td>3 common lizards, 2 slow worms(1♂, 1♀)</td>
</tr>
<tr>
<td>2</td>
<td>13/06/14</td>
<td>18</td>
<td>20% cloud cover, Beaufort 0</td>
<td>1♂ common lizard</td>
</tr>
<tr>
<td>3</td>
<td>16/06/14</td>
<td>15</td>
<td>100% cloud cover, Beaufort 3</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>19/06/14</td>
<td>13</td>
<td>80% cloud cover, Beaufort 1</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>26/06/14</td>
<td>18</td>
<td>50% cloud cover, Beaufort 1</td>
<td>1 common lizard, 2 slow worms (1♂, 1 juv.)</td>
</tr>
<tr>
<td>6</td>
<td>30/06/14</td>
<td>18</td>
<td>50% cloud cover, Beaufort 1</td>
<td>2 slow worms (1♂, 1♀)</td>
</tr>
<tr>
<td>7</td>
<td>09/07/14</td>
<td>18</td>
<td>100% cloud cover, Beaufort 3</td>
<td>1♂ slow worms</td>
</tr>
</tbody>
</table>
Reptile Population Assessment

3.3 Froglife (1999) provides means of evaluating reptile populations based on survey results using a density of 10 refuges per hectare. “low”, “good” or “exceptional” populations are based on numbers of adult reptiles recorded by one surveyor in one visit (see Table 2).

Table 3: Reptile population assessment Froglife (1999)

<table>
<thead>
<tr>
<th>Species</th>
<th>Low Population</th>
<th>Good Population</th>
<th>Exceptional Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grass snake</td>
<td>Less than 5</td>
<td>5-10</td>
<td>Greater than 10</td>
</tr>
<tr>
<td>Adder</td>
<td>Less than 5</td>
<td>5-10</td>
<td>Greater than 10</td>
</tr>
<tr>
<td>Slow worm</td>
<td>Less than 5</td>
<td>5-20</td>
<td>Greater than 20</td>
</tr>
<tr>
<td>Common lizard</td>
<td>Less than 5</td>
<td>5-20</td>
<td>Greater than 20</td>
</tr>
</tbody>
</table>

3.4 Figures in the table refer to the minimum number of adults seen by one surveyor in one day at a refuge density of up to 10 per hectare.

3.5 A peak count of three common lizards was recorded on the 29th May 2014. It was

3.6 A peak count of two slow worms was recorded on 26th May 2014 and the 26th June 2014, therefore it was considered that a low population of slow worms were using the site.

3.7 Given that the density of refuges used during this survey was marginally higher than recommended guidelines, the observations are considered to provide an accurate representation of use of the habitats within the site boundary by reptiles.
4 DISCUSSION

4.1 Surveys were carried out in suitable weather conditions at the optimal time of year for reptile surveys and the density of refuges used was above the recommended: Three hundred and thirty three refuges were used across approximately 26ha of land, guidelines suggest 10 per hectare. Therefore, the survey results are considered to provide an accurate account of the reptile status on the site.

4.2 A low population of common lizards were recorded under artificial mats during the survey, utilising the north western fields. A low population of slow worms were found utilising the site during the survey period, in both the north western fields and individuals in the eastern field (see Appendix).

4.3 It is recommended that, if possible, the north western corner be retained as a public open space and enhanced with the recorded reptiles in-situ. This would require the erection of a reptile fence surrounding this area throughout the development works, to prevent reptiles accessing the construction site. If not possible a translocation prior to any development work will be necessary to prevent harm to reptiles. This should be carried out under a Mitigation Method Statement agreed with the Local Planning Authority and/or Local Wildlife Trust (see Appendix).

4.4 It is recommended that reptile exclusion fencing is erected along the eastern boundary adjacent to the gardens. This will prevent reptiles entering the site during development and being harmed. If the eastern margins are to be impacted, it is recommended that a supervised precautionary clearance is conducted; this would involve sequentially strimming areas of suitable habitat under the supervision of a suitably qualified ecologist.

4.5 If development has not commenced within three years from the date of the surveys then the surveys should be updated to ensure an accurate assessment of the reptile population at the site is obtained.
5 ENHANCEMENT RECOMMENDATIONS

5.1 The following suggestions could enhance the value of the site for reptiles and other wildlife.

5.2 Landscaping should include native or wildlife attracting plants, particularly rough grassland areas or wildflower meadows to attract invertebrates and foraging reptiles.

5.3 Grass clippings and other vegetation could be collected and composted in the suggested public open space on the site (see Appendix).

5.4 The introduction of pond/swales would enhance the invertebrate and reptile populations.

5.5 Hibernacula, log or rock piles for example, located within the proposed public open space and along the eastern boundary of the site could provide refuge habitat for reptiles and other wildlife.

5.6 Suitable management of public open space to north west and eastern margin if retained.

6 CONCLUSION

6.1 A low population of slow worms and common lizards were found using the site. These were concentrated in the north western fields, however to prevent harm to reptiles a mitigation strategy would need to be in place before development commences.

6.2 It is recommended that reptiles and their habitat are retained within the development. Precautionary clearance following exclusion fencing should be undertaken along the eastern boundary. The receptor area should be suitably managed for the reptile population under a long-term management regime. The specifications of this management should be included within the Mitigation Method Statement. If reptiles cannot be retained within the site boundary a translocation may be required and a suitable off-site receptor sourced.
6.3 If development does not occur within three years from the date of this report, then the surveys should be repeated. It was also considered that by following some, or all, of the enhancement recommendations that the value of the site could be enhanced for reptiles and other wildlife, post development.
7 REFERENCES


The Natural Environment and Rural Communities (NERC) Act 2006, Section 41: Species of Principal Importance in England

*Web references*

MAGIC: Designated area data downloaded from URL http://www.magic.gov.uk.html

8 LEGISLATION

<table>
<thead>
<tr>
<th>Widespread reptiles</th>
<th>Under the WCA (1981), it is an offence to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Partially protected under Schedule 5 of the Wildlife and Countryside Act (1981) as amended.</td>
<td>• intentionally kill or injure these animals • sell, offer for sale, advertise for sale, possess or transport for the purposes of selling any live or dead animals or part of these animals</td>
</tr>
</tbody>
</table>
Figure 2: Location of reptile mats and records

Key
- Site boundary
- Location of mats
- Slow worm distribution
- Common lizard distribution
The creation of a pond/swale would enhance the invertebrate and reptile populations.

The creation of hibernacula would provide refuge habitat for reptiles and other wildlife.

Proposed public open space. It is recommended that the grassland is retained, with native planting, providing suitable foraging habitat for reptiles.

Exclusion fence must be at least 3m away from boundary.

**Figure 3:** Indicative location of reptile receptor area and the exclusion fencing