Reptile Survey

Land at Tilbury Business Park

The Ecology Partnership, Thorncroft Manor, Thorncroft Drive, Leatherhead, Surrey KT22 8JB

T +44 (0) 1372 364133 E info@ecologypartnership.com W ecologypartnership.com

Contents

1.0 Introduction

Background

1.1 The Ecology Partnership was commissioned by Frankham Consultancy to undertake a Preliminary Ecological Assessment (PEA) of land at the Tilbury Business Park on Fort Road, Tilbury, in Essex. The assessment included an extended Phase 1 habitat survey. As a result of this survey, it was recommended that further survey work was undertaken as the area was considered to have some suitability to support common reptile species, including adders.

1.2 The site is situated at the southern boundary of Tilbury, in the Thurrock area of Essex and lies just east of Tilbury Docks. The site is set within a commercial/light industrial landscape, though is adjacent to the wider rural landscape. Tilbury Fort lies 40m to the east, and the River Thames lies 90m to the south. To the west and north there are significant areas of hardstanding, used by shipping companies. There is a ditch network around the site, though not directly adjacent to it. The west side of the site is a hardstanding car park, and the east side of the site is dominated by grassland and scrub.

1.3 The red line boundary is shown in the figure below:

Figure 1: Approximate red line boundary and survey boundary

1.4 This report presents the results of The Ecology Partnership's survey of the site, which aims specifically to determine the current presence or likely absence of reptiles on the site.

1.5 Section 2 of this report sets out the methodology of this reptile survey. In section 3 the results of the survey are presented. Discussions and implications for development are found in section 4. Section 5 presents the conclusions drawn from the report.

Results of the 2015 Reptile Surveys

1.6 A previous reptile survey was carried out on the same site by the Ecology Partnership during September 2015. The results of these surveys found a low population of common lizards and adders. The adders were found along the northern boundary of the site, whilst the common lizards were distributed mainly in the southern west corner of the site, with only a few within the middle of the field.

1.7 As such the reptiles were translocated off of the site, into a suitable habitat nearby, as well as having a reptile fence erected around the boundary of the site to prevent re-entry. The translocation followed the HGBI guidelines, 1998. Further mitigation was in the form of supervised strimming of the site by a suitably trained ecologist. A total of 17 common lizards were translocated off site during the works, including the clearance works. No adders were translocated or found during this period.

1.8 However, as the site was then left after the strimming work and allowed to regrow fully, a follow up reptile survey needed to be taken to update the results before work could continue.

2.0 Methodology

2.1 A terrestrial survey of the site for reptiles (presence or absence) was carried out at the site during September 2019. Prior to the commencement of the survey, the site was set up with artificial refugia (roofing-felt mats) for reptiles on 4th September 2019.

2.3 The timing and number of survey visits completed were based on guidelines produced by Froglife (1999) and Gent and Gibson (1998). A total of seven survey visits were made to the site to check the refugia for the presence of reptiles and to carry out a visual transect. Visits were only carried out if the weather conditions were suitable for locating reptiles and took place at a variety of times of day (some in the morning and some in the afternoon/evening so that different mats would be exposed to the sun), in order to maximise the probability of finding reptiles if they were present. On each visit to the site, a minimum of one circuit to check all refugia was carried out.

2.4 Note that whilst checking the artificial refugia a visual check was also carried out of natural basking sites and refugia on the site. Natural refugia, such as logs and brash piles, were searched for evidence of reptiles, whilst the route chosen in moving between the artificial refugia allowed a thorough visual transect of the whole site to be carried out, again in accordance with Natural England guidelines.

3.0 Results

3.1 The table below documents the weather conditions of the reptile survey visits. Due to weather conditions preventing surveys being carried out on certain days and the limited time frame, many of the surveys had to be carried out close together.

Table 1: Details of the surveys and finds

Visit	Date	Conditions	Finds
1	12/09/2019	70% cloud, 21°C, Beaufort- 2	1x juvenile common lizard 1x female adult common lizard 1x male adult common lizard
2	17/09/2019	0% cloud, 12°C, Beaufort 1	No reptiles found
3	20/09/2019	0% cloud, 13°C, Beaufort 1	1x juvenile common lizard 1x male adult common lizard
4	23/09/19	0% cloud, 15°C, Beaufort 2	1x female adult common lizard
5	27/09/2019	0% cloud, 15°C, Beaufort 1	2x female adult common lizard
6	30/09/2019	100% cloud, 11°C, 1 Beaufort	No reptiles found
7	02/10/2019	0% cloud, 11°C,, 1 Beaufort	1x adult common lizard

3.2 The first survey was carried out in sub-optimal conditions, at 21°C, however the results were considered to be valid in spite of this, due to reptiles being found, and thus it was not considered necessary to re-do this survey.

3.3 It will be seen from the above table and map below highlights that the site was being used solely by common lizards. The location of the reptiles found are shown in figure 2 below. It can be seen that the common lizards are found within the site boundaries, mainly within the central part of the field. No other reptiles were found on site and it is considered

unlikely that other species would be present, other than possible adders, due to the results of the previous work carried out on this site in 2015.

Figure 2: Location of the common lizards found during the surveys.

4.0 Discussion and Recommendations

4.1 One species of common reptile was found to be using the site, which therefore does not qualify the site as a key reptile site (one which supports 3 or more reptile species or an exceptional population of one type of reptile species). It is considered unlikely that this site supports any other type of reptile.

4.2 The size of the reptile population can be estimated using the Froglife (1999) scoring system. This system assumes a density of 10 refugia per hectare, a number considerably exceeded

in our survey. A population size class assessment, which is based on the number of adults recorded in one survey visit can be made using Table 2.

Table 2: Population class assessment categories (Froglife, 1999)

	Low population (Score 1)	Good population (Score 2)	Exceptional population
Adder	<5	5 - 10	>10
Common lizard	<5	5 - 20	>20
Grass snake	<5	5 -10	>10
Slow-worm	<5	5 - 20	>20

4.3 According to the Froglife criteria, the site supports a 'low' population of common lizards, as no more than two adults were recorded on any one visit.

4.4 As common lizards have been found within the site boundaries a mitigation strategy is required in order to ensure that no individuals are harmed and that their favourable conservation status is preserved in the local area.

Mitigation / Enhancement Strategy and proposed Method

4.5 The majority of the area is to be lost due to the expansion of the car park, as such the common lizards will have to be translocated off site. As such a suitable area for the reptiles to be translocated to will have to be found. The previous area, utilised in the 2017 surveys, would be considered the most viable and it is recommended that an agreement is sought between the LPA and the developer. It is likely that the offsite habitat would need some level of enhancements, including log piles and hibernacula, to support the additional lizards found. It would be recommended that 2 log piles and 2 hibernacula would be sufficient in terms of enhancements.

4.6 A second potential option would be to utilise the adjacent field for enhancements. However, the adjacent field however is currently being grazed by horses, is sub optimal in terms of habitat for reptiles and the ownership is currently unknown. However, if the horses were removed from an area of the grassland or fenced off in the central portion of

the site allowing the surrounding grassland edges to grow, then translocation of the reptiles could take place in the adjacent habitat.

4.7 The translocation will involve the construction of a reptile fence around the development footprint in the vegetated area. The habitats outside the reptile fence are to be maintained and enhanced. The habitats within the reptile fence are to be cleared of reptiles. The reptile fence will be constructed following the standard below.

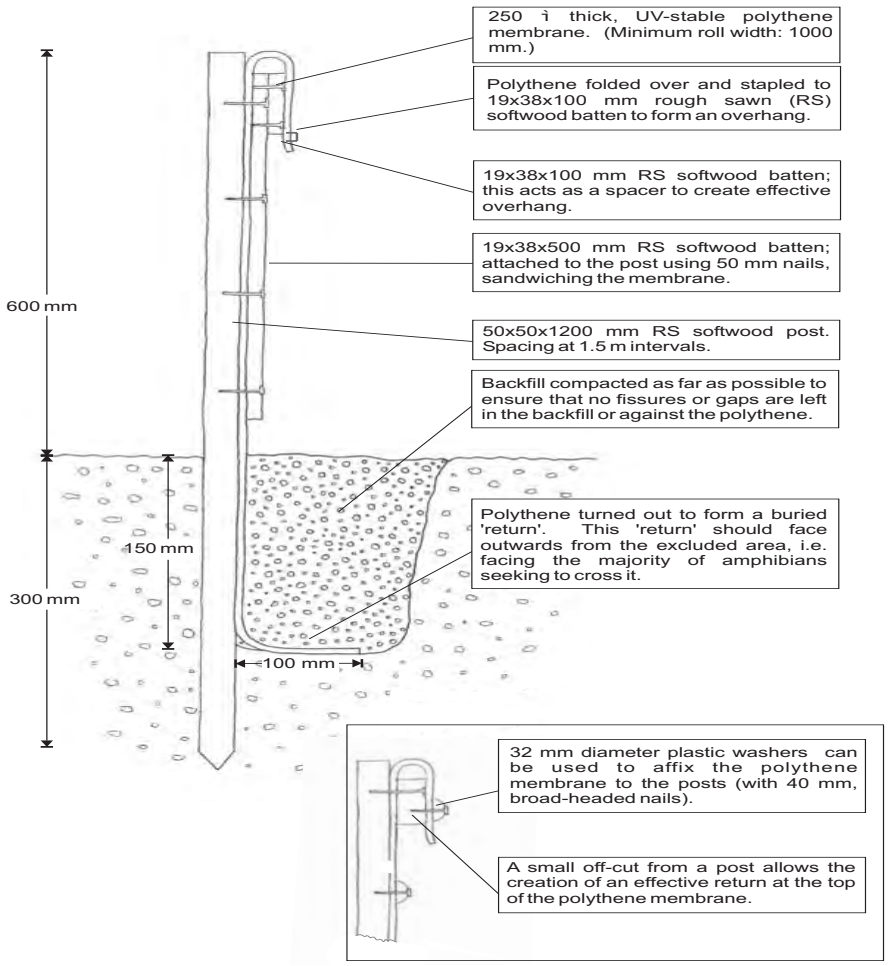

Figure 2: Fence line standards

4.8 With the exclusion fencing set-up, the area inside can be trapped intensively for reptiles. Artificial refugia for the reptiles would be set out in a density of at least 50 refugia per hectare of suitable habitat (HGBI guidelines, 1998) and allowed to bed in. Trapping will take place in optimal weather conditions, between the March and October inclusive and for a period of

at least 30 days, due to the small scale nature of the site, or until there are 5 consecutive no-reptile catch days. It is likely that the translocation will take between 30 to 60 days.

4.11 The grassland will then be strimmed to 150mm, checked, and then finally strimmed down to ground level. This will be undertaken under ecological supervision. The arisings can be taken off site.

4.12 As the final stage of the translocation process, any natural reptile refugia will need to be dismantled by hand or using sensitive machine work under close supervision of an ecologist.

4.13 The mitigation strategy will therefore follow:

- Reptile fencing being placed around the edges of the site, ensuring that the area outside the development footprint is fenced off, therefore fencing off any potential movement of reptiles on to the site. This physical barrier will protect any species using the edges of the site.
- The site will be trapped until there are 5 clear days. The common lizards will be removed from the site. The fence line will prevent them moving back on to the central area of site and the construction zone.
- This area will be monitored during site works by an ecologist to ensure the fence line is fit for purpose and that the area is respected as a 'wildlife exclusion area'.
- Once 5 clear trapping days has been gained the grass within the development zone will strimmed.
- Any areas which support vegetation should be removed sensitively under ecological supervision. The process would entail: visual inspected and finger tip search by an ecologist for the presence of reptiles. This is followed by a cut of the vegetation to 150mm above ground. This cut is inspected once more for the presence of reptiles. Finally vegetation is cut to ground level.
- Final clearance works and sensitive soil removal will also be carried out under the supervision of an ecologist.
- Once this is complete, development works can start.

5.0 Conclusions

5.1 One species of reptiles, common lizards, were found to be present on the site, in low numbers. The habitat available for reptiles itself is small in size and therefore limits the opportunities available for reptiles within the red line boundary.

5.2 Mitigation and enhancement for reptiles would be required should the site be developed. It is likely that an off site receptor site will be required, or enhancing adjacent habitats and then placing reptile fence line around the development boundary. The inside of the site will be intensively trapped for reptiles, which will be moved to a receptor site. A minimum of 30 and up to 60 days (with 5 clear days) will be required. Once this has been reached the site will be sensitive strimmed and then followed by clearance under ecological supervision.

6.0 References

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The Ecology Partnership

Thorncroft Manor

Thorncroft Drive

Leatherhead

KT22 8JB

Tel: 01372 364133

www.ecologypartnership.com

Approved: Alexia Tamblyn MA (Oxon) MSc CENv MCIEEM FRGS

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