Land at Mercer Road, Horsham

Reptile Presence / Likely Absence Survey

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

Background

1.1 The Ecology Partnership was commissioned by Riverdale Developments Ltd to undertake a reptile presence/likely absence survey for the land at Mercer Road, Warnham, Horsham, West Sussex, RH12 3RL. This follows an extended phase 1 habitat survey by the Ecology Partnership in May 2024, with previous surveys conducted in 2017 and 2020.

1.2 This report presents the results of the reptile surveys on site in 2024, which aim specifically to provide a current understanding of the population of reptile species onsite.

1.3 This report comprises:

- Introduction, including the legislative and planning context (Section 1);
- Assessment methodology (Section 2);
- Results of reptile surveys (Section 3);
- Discussion and recommendations (Section 4);
- Conclusions (Section 5).

Site Context and Status

1.4 The site is characterised by several fields, used as horse paddocks, with associated margins, the site is split into two separate parcels by Mercer Road. It totals c. 14.6ha. It is situated within a rural setting close to Warnham Railway Station, north of Horsham in West Sussex (central grid reference: TQ 17340 33825).

1.5 The approximate red line boundary of the site and the immediate surrounding area are shown in **Figure 1**.

Figure 1: Approximate location of the red line boundary and immediate surroundings (Taken from Google Earth Pro, August 2024)

Description of Proposed Development

1.6 The current proposals are for a new housing estate, associated access and landscaping. This will involve clearance of majority of the grassland onsite in addition to disturbance to edge habitats.

Legislation

1.7 In the UK, there are six native reptile species. The four widespread species are adder (*Vipera berus*), grass snake (*Natrix helvetica*), common lizard (*Zootoca vivipara*) and slow worm (*Anguis fragilis*). The two rare species are smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*).

1.8 The widespread reptiles are protected under the Wildlife and Countryside Act 1981 (as amended) against intentional killing and injuring and the sale of a wild reptile or any part of such animal. The rare reptiles also receive legal protection under the Conservation of

Habitats and Species Regulations 2010 against deliberate injury, killing, capture or disturbance of a rare reptile and damage or obstruction of any place used for shelter or protection.

1.9 All six reptile species are also listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, which means local authorities have a legal duty to take their conservation into account.

2.0 Methodology

2017 & 2020 Surveys

2.1 A terrestrial survey of the site for reptiles (presence or absence) was carried out at the site between the dates of 1st September and 27th of September 2017. Prior to the commencement of the survey, the site was set up with artificial refugia (roofing-felt mats) for reptiles on 13th June 2017.

2.2 Prior to the commencement of the survey, the site was set up with artificial refugia (roofing felts) for reptiles on 18th August 2020. The reptile surveys were carried out between 26th August and 9th September 2020.

2.3 Approximately 160 refugia were placed around the field boundaries (See appendix 1), and were left undisturbed to bed in prior to the commencement of the reptile survey (as recommended in the advice from Natural England). Note that the guidelines produced by Froglife (1999) and Gent and Gibson (1998) recommend a density of artificial refugia of at least 25 per ha of suitable reptile habitat, hence the number of refugia used exceeds the recommended minimum. Mats were not placed in the centre of the grazed fields as these were not considered suitable habitat.

2024 Surveys

2.4 A terrestrial survey of the site for reptiles was carried out over seven survey visits between 11th April and 24th May 2024. Prior to the commencement of the survey, the site was set up with artificial refugia (roofing felt) for reptiles on 26th March 2024. Artificial refugia were

placed in areas of suitable reptile habitat and around the boundary habitats. The approximate mat locations are marked in yellow in Figure 2.

Figure 2: Approximate locations of the reptile mats during the survey (yellow line) on site (red line). (Taken from Google Earth Pro, August 2024)

2.5 Reptile mats were placed within areas of suitable habitat, using the surveyor's professional judgement (Figure 2).

2.6 The mats were left in place for a bedding-in period of two weeks prior to the commencement of the reptile survey, meeting the required period as per standing advice from Natural England. The timing and number of surveys completed were based on guidelines produced by Froglife (1999) and Gent and Gibson (1998).

2.7 A total of seven survey visits were carried out to check the refugia for the presence of reptiles. Visits were only carried out if the weather conditions were suitable for locating reptiles. Visits were carried out at a variety of times during the day to take any potential

diurnal variation in activity into account. On each visit to the site, a minimum of one circuit to check all refugia was carried out.

2.8 In the event reptiles were found on site, the size of the reptile population can be estimated using the Froglife (1999) scoring system. This assumes a density of 10 refugia per hectare. A population size class assessment, which is based on the number of adults recorded in one survey visit, can be made using Table 1.

Table 1: Population class assessment categories (Froglife 1999)

	Low Population	Good Population	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

3.0 Results

2017 Surveys

3.1 Peak counts of 4 adult slow worm (27th September 2017), 9 adult common lizards (25th September 2017) were recorded resulting in a 'low' population of slow worms and 'good' population of common lizards. Given the presence of both sub-adult (6th September 2017) and juvenile grass snakes (4th, 12th & 25th September 2017), it can also be assumed there was a 'low' population of grass snakes.

2020 Surveys

3.2 The peak counts of adult reptiles were 5 slow worms (2nd September 2020) and 3 common lizards (30th August 2020) and 1 adult grass snake (30th August and 5th September) 2020). This corresponds to a 'low' population of slow worm, common lizard and grass snake according to the Froglife (1999) scoring system.

2024 Surveys

3.3 Table 2 below documents the dates, weather conditions and results of the reptile survey visits

Table 2: Reptile survey results (2024)

Visit number	Date	Temperature (°C)	Conditions	Reptile numbers
1	11/04/2024	16	100% cloud, light breeze	**Slowworm:** 1 adult male, 1 adult female.
2	16/04/2024	13	10% cloud, light breeze	**Slowworm:** 1 adult male. **Common lizard:** 1 adult male, 2 adult female.
3	23/04/2024	10	100% cloud, light breeze	**Common lizard**: 1 adult male, 2 adult female.
4	01/05/2024	13	100% cloud, gentle breeze	**Slowworm:** 2 adult male, 1 adult female. **Grass snake:** 1 adult male.
5	09/05/2024	12	0% cloud, light breeze	**Slowworm:** 1 adult male, 1 juvenile. **Grass snake:** 1 adult male.
6	15/05/2024	14	20% cloud, light breeze	**Slowworm:** 2 adult male, 1 juvenile. **Grass snake:** 1 adult male.
7	24/05/2024	13	80% cloud, light breeze	**Slowworm:** 1 adult male. **Common lizard**: 1 unknown adult.

3.4 Over 7 visits, three species of reptiles were discovered: slow worm, common lizard, and grass snake. The peak counts of such were 3 adult slow worm, 3 adult common lizard and 1 adult grass snake. The peak count does not include the number of sub-adult and juvenile individuals. Figure 3 below show the approximate locations of reptiles recorded within the site.

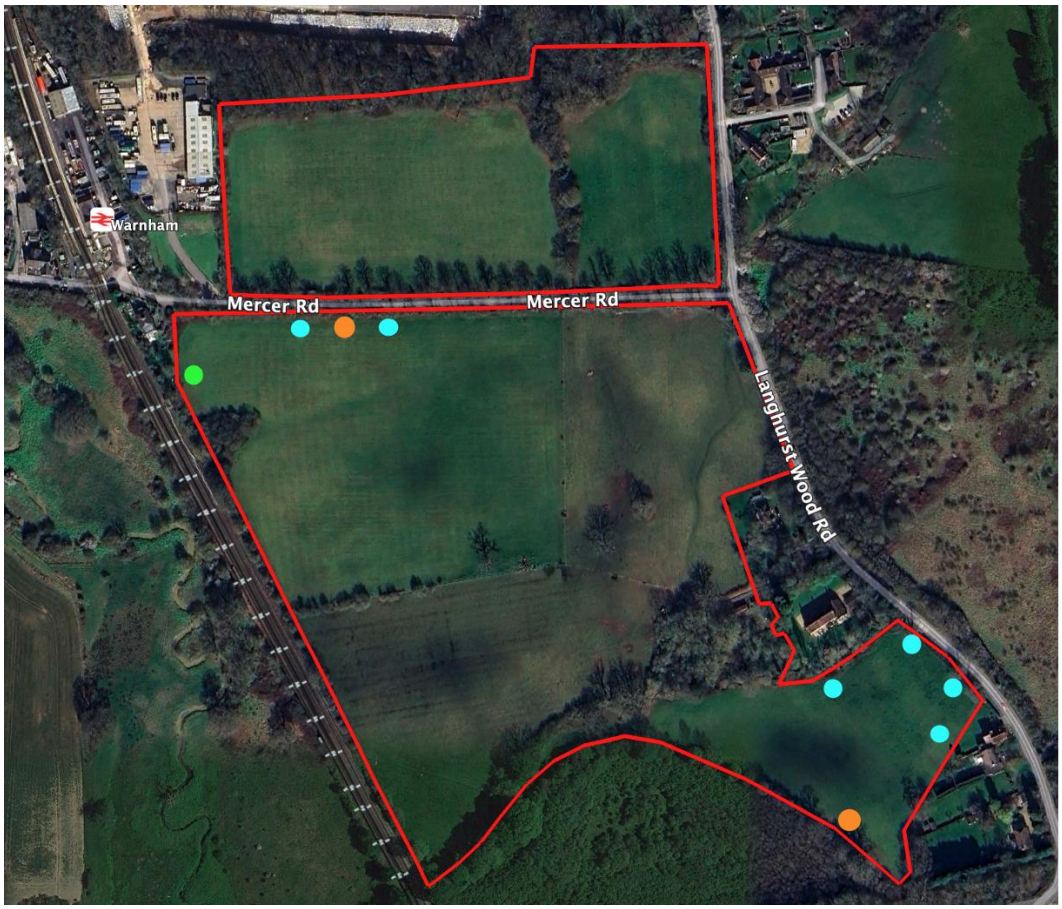

Figure 3: Approximate location of reptiles identified during the survey with slow worms indicted by blue circles, common lizards indicated by orange circles and grass snakes indicated by green circles.

3.5 According to the Froglife criteria, it is considered that the site supports a '**low'** population of slow worm, common lizard, and grass snake.

4.0 Discussion

4.1 A reptile presence/likely absence survey was undertaken within areas of suitable habitat within the red-line boundary of the site between 11th April and 24th May 2024.

4.2 The size of the reptile population can be assessed using the Froglife (1999) scoring system. This system assumes a density of 10 refugia per hectare. As the site was comprised of c. 14.6ha, approximately 150 reptile mats were established, therefore it is considered that the survey effort is sufficient to support a mitigation strategy based on the data.

4.3 Three of the four widespread species of reptile were found on site: slow worm, common lizard, and grass snake. No evidence of any other reptile species such as adder, smooth snake, or sand lizard was found on site or during the 2017 or 2020 surveys, and it is considered that their potential to be present within the site is likely to be negligible owing to the lack of specific sandy heathland habitat requirements or likely absence of a local population.

4.4 For a site to be classified as a 'key reptile site', the site must meet one of the following criteria outlined by Froglife (1999):

- Supports three or more reptile species.
- Supports two snake species.
- Supports an exceptional population of one species (Table 1)
- Supports an assemblage of species scoring at least four (Table 1)
- Does not satisfy the above but is of particular importance due to local rarity (e.g. in the East Midlands of England, adders are very rare so even "low" populations should be designated as Key Sites).

4.5 Evidence of three species of reptile was found onsite: slow worm, common lizard, and grass snake. Although all classified as a '**low'** population, as three species were discovered the site meets the criteria of a 'key reptile site'. However, it should be noted that available habitat to reptiles is only present on the field boundary edges. The site is heavily grazed by horses on regular rotation, severely limiting the sites suitability for reptiles through much of site under current management. Short sward grassland and regularly disturbed ground severely limits habitat refuge and foraging opportunities, leaving individuals vulnerable to attack from predators.

4.6 Provided current management is maintained across site or if horse grazing ceases, regular management of the paddocks is maintained no translocation would be required. Following this reptiles can be suitably protected from injury or mortality during works by following a suitable system of Reasonable Avoidance Measures (RAMs). This system of measures should include the following:

- All currently unsuitable areas of grassland within the impacted portion of site should be kept unsuitable (i.e. short-sward), via either mowing or grazing, to discourage reptiles from using it.
- A toolbox talk should be given on site during the first day of vegetation clearance, regarding the legality surrounding reptiles, habitat requirement, basic identifying features and procedure if they are found. Works should be undertaken when reptiles are active in suitable weather condition avoiding likely hibernation times (November – February inclusive)
- Vegetation should be cut moving in a single direction to encourage reptiles to move towards suitable retained vegetation as per the direction of the on site ecologist.
- Unsuitable short-sward grassland (c. <5cm) can be cleared without direct ecological supervision. However, any tussocky grassland, taller sward grass, or edge habitat (hedgerow, shrubs, taller ruderal, or scrub) must be cleared under direct ecological supervision.
- Any suitable reptile habitat should be cleared in a staged cut, in suitable conditions (dry and above 8°C), across five days (or following advice by the project ecologist):
    - Day 1: Strim to 200mm
    - Day 2: No works to vegetation to allow for reptiles or other small animals to vacate site.
    - Day 3: Strim to ground.
    - Day 4: No works to vegetation to allow for reptiles or other small animals to vacate site.
    - Day 5: End of sensitive vegetation clearance process.
- All significant materials generated by vegetation clearance (brash / log piles) should not be left on the ground and removed from site, if this not possible further watching brief work maybe required when removing features from site.
- Destructive search work will then be undertaken on any habitat features that the project ecologist deems necessary.
- Root protection fencing around the site boundary will prevent encroachment into the site boundaries, preventing storage of materials and disturbance from machinery.

- All building materials brought on to site should be stored, raised off the ground or stored within areas of hardstanding or cleared ground away from site boundaries, to limit their availability as refugia piles.
- All excavations should either be covered overnight or have an egress ramp placed within them, to prevent any reptiles or mammals such as hedgehogs from becoming trapped. Likewise, all fitted pipes should be blocked until the plumbing/drainage system is complete, to prevent any reptiles or small mammals/amphibians from becoming trapped.

Enhancement Strategy

4.7 Habitat piles should be installed within greenspaces for use as refugia by reptiles. These could be log or stone piles (see Figure 4 below) and should be established in a variety of conditions, including under shrubs, and along site boundaries. Additionally, to be placed close to ponds and waterbodies onsite to promote refuge of reptiles and amphibians. Planting around habitat piles with such species as honeysuckle can also add value in addition to maintaining grassland in surrounding areas.

4.8 The overall landscaping strategy will bring much more available habitat reptiles, with large swaths of wildflower grassland creation as well as additional scrub and wetland creation. These habitats are proposed to be managed favourably for reptiles in perpetuity, securing the available habitat to reptile species on site in the long-term.

Figure 4: Examples of log piles that can be located at the edges of the site

5.0 Conclusions

5.1 A presence/likely absence survey for reptiles was undertaken within areas of suitable habitat on site between 11th April and 24th May 2024.

5.2 The reptile survey found a '**low'** population of slow worm, common lizard, and grass snake. Although due to the presence of three species it is considered a 'key reptile site', in reality the vast majority of the site is unsuitable for reptiles due to ongoing management. To ensure no reptiles are harmed by the development, works should be conducted under a system of Reasonable Avoidance Measures (RAMs) laid out within this report.

5.3 General site enhancements have also been recommended to provide new opportunities for a range of wildlife post-development. Significant reptile habitat creation and appropriate management should safeguard the sites suitability for the three species using the site, providing larger extents of suitable habitat managed in perpetuity.

6.0 References

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Google Earth: www.earth.google.co.uk

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