



THE
ENVIRONMENT
PARTNERSHIP



STANSTY CHAIN ROAD

WREXHAM

REPTILE TECHNICAL APPENDIX

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Drawing G6358.01.010 Reptile Survey Plan

Executive Summary

1. TEP were commissioned by Russell Homes in May 2023 to carry out an updated presence/absence reptile survey within the land off Stansty Chain Road, Wrexham. Ecological surveys are required to inform an outline application for residential development.
2. The survey used refuge tiles, suitable for use by basking reptiles, set out in areas of habitat identified as offering suitability for the species group. The survey was undertaken within the appropriate season and under suitable weather conditions.
3. Seven presence/likely absence surveys were carried out between 4th September and 25th September 2023 following placement of 120 mats on 17th August 2023.
4. Records of common lizard *Zootoca vivipara* from 2010 have been returned from the local records centre from within 2km of the site boundary. Two common lizards were identified at the site utilising the refuge mats during the surveys.
5. Consideration should be given for site clearance works to be conducted under precautionary measures and included as ecological input into the contractors' Construction and Environment Management Plan (CEMP) to avoid harm to both common reptiles and amphibians on site, to allow natural dispersal away from the development areas.

1.0 Introduction

Scope and Site Location

- 1.1 TEP was commissioned by Russell Homes in May 2023 to carry out updated reptile presence/absence surveys within the land off Stansty Chain Road, Wrexham, hereafter referred to as 'the site'. Ecological surveys are required inform an outline planning application for residential development.
- 1.2 Previous surveys have been undertaken by TEP in 2019, which found no evidence of any reptile species. Given the time lapsed since this survey was undertaken updated surveys were considered necessary.
- 1.3 The site lies to the north west of Wrexham town centre, either side of Stansty Chain Road (central grid ref: SJ 32529 51972). The site supports a variety of habitats including improved grassland, hedgerows, tall ruderal, a wet ditch in the centre of the southern part of the site and adjacent woodland parcels. Detailed descriptions of habitats within and adjacent to the site are provided in the updated Ecological Assessment (Ref: 6358.01.006).
- 1.4 Agricultural and residential land dominates the wider landscape. Directly to the south of the site is the A541, to the east the A483 and to the north a railway line. Further grassland and bare ground habitat are present to the north and west of the site.
- 1.5 The site location within the context of the wider landscape is illustrated in Figure 1 below.

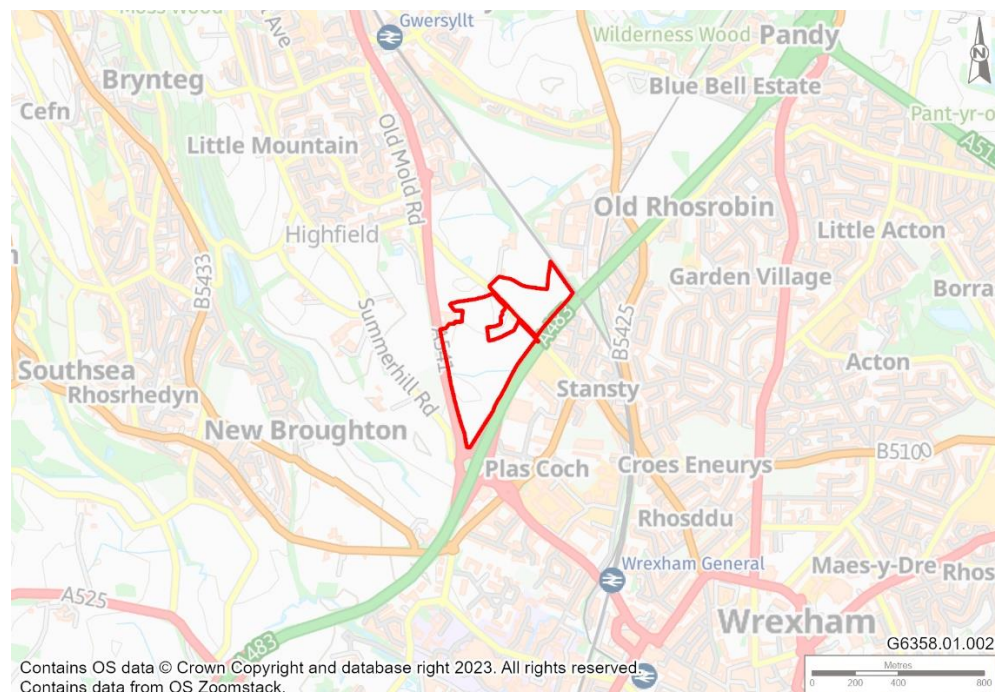


Figure 1: Site boundary.

- 1.6 The surveys are designed to establish whether or not there are any reptile species present and breeding on site. This information is required to inform development proposals including the design of any mitigation and consideration of any relevant legislation or licensing requirements.
- 1.7 Reptiles favour a combination of habitat types with varying topography to provide suitable conditions for shelter, basking, foraging and hibernating. The site offers such opportunities with areas of open grassland and scrub mosaics, woodland, recolonising bare ground, standing water (ditches) and several rubble piles all of which provide an optimal habitat mosaic for reptiles.

Legislation Summary

- 1.8 All species of reptile native to the UK are protected to some degree under national and/or international legislation, which provides mechanisms to protect the species, their habitats and sites occupied by the species.
- 1.9 Sand lizards *Lacerta agilis* and smooth snakes *Coronella austriaca* are European protected species and are afforded full protection under Section 9 of the Wildlife and Countryside Act 1981 and Regulation 41 of the Conservation of Species and Habitats Regulations 2010. Given the location of the site and habitats present, these European protected species are not considered likely to occur.
- 1.10 The remaining species of native reptiles (adder *Vipera berus*, grass snake *Natrix helvetica*, slow-worm *Anguis fragilis* and common lizard) are protected under part of Section 9(1) and all of Section 9(5) of the Wildlife and Countryside Act 1981. These species are protected against intentional killing and injury and against sale, transporting for sale etc. The habitat of these species is not protected. However, disturbing or destroying reptile habitat during the course of development activities while reptiles are present is likely to lead to an offence under the Wildlife and Countryside Act 1981. It is therefore important to ensure the species are removed from any threat of injury or death created by development activities.
- 1.11 All UK reptile species are also listed as S7 Welsh Priority Species.
- 1.12 Each species of native reptile has specific habitat requirements, but general shared requirements include a structurally diverse habitat that provides opportunities for shelter, basking, foraging and hibernating.

2.0 Method

Desktop Search

- 2.1 Desktop records of protected or notable species recorded within a 2km radius of the site were gathered from Cofnod in August 2023 (TEP Report: 6358.01.003).

Habitat Suitability Survey

- 2.2 A reptile habitat suitability survey was carried out by TEP Ecologist Emma Hickson in June 2023 in conjunction with Phase 1 habitat surveys.
- 2.3 Reptiles favour a combination of habitat types and varying topography to provide the conditions required for shelter, basking, foraging and hibernating.
- 2.4 The site was assessed for the following factors:
- Location in relation to species range;
 - Vegetation structure;
 - Insolation (sun exposure);
 - Aspect;
 - Topography;
 - Surface geology
 - Connectivity to nearby good quality habitat;
 - Prey abundance;
 - Refuge opportunity;
 - Hibernation habitat;
 - Disturbance;
 - Egg-laying site potential (Grass snake only).

- 2.5 A walkover survey allows a competent fieldworker to gauge these 12 factors and give a whole-site assessment as to whether a refuge survey is required.

Refuge Survey

- 2.6 Having confirmed the site offered potentially suitable reptile habitat a refuge survey was undertaken. Reptiles are often found under or on top of objects resting on the ground. These refuges can act as a place to shelter from predation and disturbance, and as an aid to absorbing heat. Artificial refuge mats of a suitable material trap heat and have been shown to be effective in attracting reptiles.
- 2.7 A total of 120 artificial refugia comprising 0.5m² sheets of corrugated metal and roofing felt were placed evenly on the ground around the site, in areas suitable for use by reptiles at a spacing of no less than 10m on 17th August 2023. The refugia, when warmed by the sun, provide attractive basking habitat for reptiles.
- 2.8 Drawing G6358.01.010 shows the approximate locations of the refuges on site.
- 2.9 The refuges were left in position on site for 10 days (to 'bed in') before checks commenced. Seven surveys were conducted in total between 4th September and 25th September. To ensure effective detection rates the refuge surveys were undertaken in the morning or early evening when temperatures were between 9°C and 19°C in dry conditions.

- 2.10 For each survey the site was walked methodically with each mat being carefully lifted, checked and replaced in the same position. The surveys were undertaken by TEP ecologists experienced in identifying UK reptile species. Dates and surveyor details are provided in Table 1.

Limitations

- 2.11 All seven visits were completed within the optimum survey period of September under optimum conditions for reptile surveys, being warm and sunny with little or no wind. There were there no other limitations to the surveys.

3.0 Results

Desktop Search

- 3.1 There is seven records for common lizard *Zootoca vivipara* approximately 625m north of the site, the most recent being 2018.
- 3.2 There are also 12 records of grass snake *Natrix natrix* within 1km of the site, the most recent being in 2022.

Field Survey

- 3.3 The results of the refuge mat surveys are summarised in Table 1 below. A total of two reptiles were found during the surveys; common lizard in the north of the site near to H1 during the second visit. Figure 2 shows one of the common lizards observed underneath the refuge mat, the other observed lizard had escaped prior to a photograph being captured. Figure 3 shows the location of this observation.
- 3.4 No other non-notable species were found during the site surveys.

Table 1: Survey Results

Date:	Surveyor:	Temp:	Weather Conditions:	Observations (Location)
04/09/2023	Anthony Carr	21°C	Light breeze, dry, sunny	None
06/09/2023	Anthony Carr	19°C	Dry, sunny, clear and still.	2x Common Lizard, northern area along H1
08/09/2021	Anthony Carr	22°C	Light breeze, dry, sunny	None
13/09/2023	Anthony Carr	16°C	Light breeze, dry, overcast	None
18/09/2021	Anthony Carr	17°C	Light breeze, dry, overcast	None
21/09/2021	Anthony Carr	18°C	Light clouds, dry, occasional sunshine, still	None
25/09/2021	Anthony Carr	15°C	Dry, sunny, clear and still	None



Figure 2: Common lizard observed underneath a refuge mat on site



Figure 3: Location of the common lizard observations on site

4.0 Conclusion

- 4.1 Survey work, comprising refuge surveys, undertaken in September 2023 identified the likely presence of small numbers of reptile species, namely common lizard, within the site.
- 4.2 The site offers suitable sheltering and foraging habitat for reptiles as it has areas of dense/continuous scrub, hedgerows and tall ruderal vegetation, as well as tussocky grass within the arable grassland throughout site. The stone walls along the hedgerows also offer suitable basking opportunities.
- 4.3 Two reptiles were observed during the reptile surveys on site. A pair of common lizard (WCA5, S41) were found under a refugia mat in the north of the site along hedgerow H1. This, coupled with the presence of suitable habitats on site, the presence of pre-existing records of reptiles within 2 km of site, and good terrestrial connectivity between the site and other suitable reptile habitat in the wider area suggests there is potential for direct impacts to occur to reptiles on site during future development works.
- 4.4 A Precautionary Working Measures Method Statement (PWMS) will be required, as well as input into the Construction and Environment Management Plan (CEMP), to ensure that killing or injury of reptiles that are present within the site are avoided during site clearance. The PWMS will need to include methods such as staged strimming, hand searching and removal of any reptiles or common amphibians to a safe location off site.
- 4.5 A suitably qualified ecologist will act as an Ecological Clerk of Works (ECoW) on site to supervise all vegetation clearance works.
- 4.6 There are opportunities to provide habitat enhancement within the site for reptiles following completion of the works. This could include the creation of refugia and the retention of creation of a mosaic of habitats that reptiles may use for basking, sheltering, foraging and commuting such as rough grassland, scrub, waterbodies and bare ground. Connectivity with suitable habitats within the wider area such as the hedgerows on eastern boundary should also be maintained.
- 4.7 The landscape design for the site should also incorporate terrestrial habitat suitable for reptiles. This will allow reptiles to expand their ranging opportunities to the south along the railway line.
- 4.8 Reptile surveys are valid for at least 2 years and potentially 4 years or more depending on the specific use of the data, local conditions and the potential impact predicted on reptiles. When data is greater than 2 years old advice should be sought from an appropriately experienced ecologist.

DRAWINGS

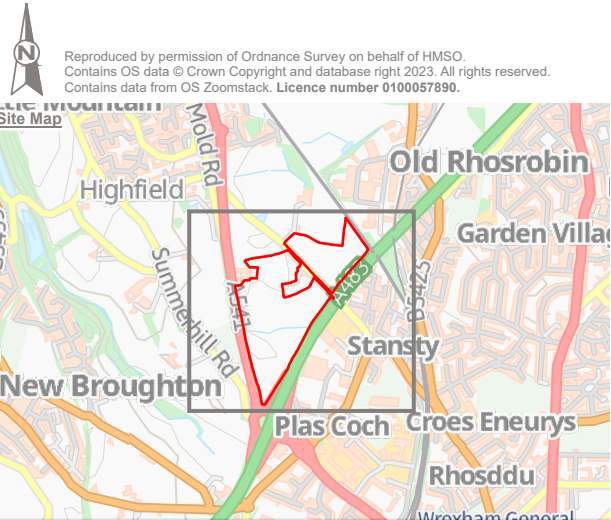
Drawing G6358.01.010 Reptile Survey Plan



KEY

- Site boundary
- Reptile refuge mat location (123 total)
- Phase 1 Habitat Survey**
 - Semi-natural broad-leaved woodland
 - Plantation broad-leaved woodland
 - Modified neutral grassland
 - Improved grassland
 - Tall ruderal
 - Hardstanding

Note:
The locations of habitats and habitat features are indicative.



Rev	Description	Drawn	Approved	Date



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Project
Stansty Chain Road, Wrexham

Title
Reptile Mat Location Plan

Drawing Number
G6358.01.010

Drawn	Checked	Approved	Scale	Date
IJ	CW	EH	1:3,500 @ A3	24/08/2023



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