



Gladman Developments Ltd

**Land off Swanstree Avenue, Sittingbourne**

**REPTILE SURVEY REPORT**

September 2021

**FPCR Environment and Design Ltd**

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## **1.0 NON -TECHNICAL SUMMARY**

- 1.1 A residential development of approximately 135 units is proposed on a site located to the south of Sittingbourne, Kent.
- 1.2 The site predominantly comprised an arable field with intensively cultivated fruit orchards, small areas of species poor semi-improved grassland, treelines and an isolated hedgerow to the north. A fence line and Swanstree Avenue defined the northern boundary of the site.
- 1.3 Presence/absence reptile surveys have been undertaken in May, June and September 2021 and a 'low' population of common lizards were recorded within the onsite habitats. Mitigation methods comprise vegetation management to passively move reptiles towards the retained boundary habitats.
- 1.4 The proposed green infrastructure will retain, maintain and enhance the boundary habitats, through structural planting. Further enhancements on site will include the creation of hibernacula, log piles and attenuation features to provide suitable habitat conducive for reptiles.

## **2.0 INTRODUCTION**

- 2.1 The following report has been prepared by FPCR Environment & Design Ltd on behalf of Gladman Developments Ltd, for an area of land south of Swanstree Avenue, in the village of Sittingbourne, Kent (central OS Grid Reference TQ91216257). Hereafter referred to as the Site.
- 2.2 A Phase 1 habitat and protected species surveys, including bats, badger *Meles meles*, reptiles and dormice *Muscardinus avellanarius* were undertaken at the Site by FPCR in 2014 in support of a previous application, which encompassed arable fields to the east of the site. The Site red line boundary has since been reduced for this new application in 2021 and a walkover survey was undertaken on 11<sup>th</sup> March to update the baseline information. This report should be read in conjunction with the Ecological Appraisal (FPCR, August 2021) for the site.

### **Site Location and Context**

- 2.3 The 5.9ha site lies on the south-eastern periphery of the town of Sittingbourne, Kent. Arable land surrounds the site to the south and east, with a Local Wildlife Site (LWS) beyond the southern boundary. The northern site boundary is bound by Swanstree Avenue beyond which lies the residential area of Sittingbourne and the A2 road. The site can be accessed via Chilton Manor Farmhouse and shop, which lie immediately to the north-west of the Site off Highsted Road, which separates the site from further residential areas to the west.
- 2.4 The Site predominantly comprises a commercial arable field, with intensively managed orchards in the south of the Site. The application site is bound predominantly by fencing, with tall mature treelines along the southern and eastern boundaries and a short section of isolated hedgerow in the north. Other small areas of habitat on site included semi-improved grassland, tall herb/ruderal herb, and ephemeral vegetation.

### **Development Proposals**

- 2.5 The proposals are for a residential development of up to 135 units with associated infrastructure and landscaping (*Development Framework Plan 06302-FPCR-ZZ-ZZ-DR-L-0002*). New entry points will be incorporated into the site via Swanstree Avenue along the northern boundary which is marked by a fence line. The majority of treeline extent within the site boundaries will be retained, with provision of approximately 2ha of green infrastructure (GI), to include public open space, orchard trees, play areas, a wildlife pond and additional structural planting (new hedgerows, trees and scrub).

### 3.0 LEGISLATION AND POLICY

#### Reptile Legislation

3.1 All widespread reptile species, including slow-worm *Anguis fragilis*, adder *Vipera berus*, common lizard *Zootoca vivipara* and grass snake *Natrix helvetica* are partially protected under Sections 9(1) and 9(5) of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation protects these animals from:

- intentional killing and injury;
- selling, offering for sale, possessing, or transporting for the purpose of sale or publishing advertisements to buy or sell a protected species.

3.2 The impact that this legislation has on the Planning system is outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, this states:

*'The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult English Nature [now Natural England] before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned.'*

3.3 This partial protection does not directly protect the habitat of these reptile species. Where these animals are present on land that is to be affected by development, the implications of legislation are that providing that killing can reasonably be avoided then an operation is legal. Guidance provided by Natural England<sup>1</sup> and the Amphibian and Reptile Groups of the UK<sup>2</sup> recommends that this should be achieved by ensuring that:

- the animals are protected from injury or killing;
- mitigation is provided to maintain the conservation status of the species;
- population monitoring is carried out subsequent to operations.

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<sup>1</sup> Reptiles: guidelines for developers, English Nature (2004).

<http://publications.naturalengland.org.uk/publication/76006?category=31018>

<sup>2</sup> Maintaining best practise in reptile mitigation/translocation programmes: Herpetofauna Groups of Britain and Ireland.

[http://www.arguk.org/index.php?option=com\\_docman&task=cat\\_view&gid=13&Itemid=17](http://www.arguk.org/index.php?option=com_docman&task=cat_view&gid=13&Itemid=17)

## 4.0 METHODOLOGY

### Desk Study

- 4.1 In order to compile existing baseline information, relevant ecological information was requested from Kent and Medway Biological Records Centre (KMBRC).
- 4.2 Further inspection of colour 1:25,000 OS base maps ([www.ordnancesurvey.co.uk](http://www.ordnancesurvey.co.uk)) and aerial photographs from Google Earth ([www.maps.google.co.uk](http://www.maps.google.co.uk)) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

### Reptile Survey

- 4.3 The survey methodology was based on that detailed in the *Herpetofauna Workers Manual*<sup>3</sup> and the *Froglife Advice Sheet 10 - Reptile Survey*<sup>4</sup>. Methods involved a search for basking reptiles on/under naturally occurring and strategically positioned artificial refugia. The artificial refugia used were 0.5m<sup>2</sup> sections of bitumen roofing felt with a black upper side. These were placed in areas of suitable habitat on 9<sup>th</sup> April 2021 and allowed to 'bed down' prior to the first survey visit.
- 4.4 In line with guidance, refugia were installed at a minimum density of five refugia per hectare of suitable habitat (a greater density than this was used to further increase the likelihood of detection).
- 4.5 Survey visits were undertaken under suitable weather conditions i.e. air temperature between 10-18°C, no strong wind or heavy rain. The surveys also followed the guidelines recommendations by approaching refugia from downwind and avoiding casting a shadow and with care so as to not to harm or disturb basking animals when checking.
- 4.6 Seven reptile presence/absence surveys have been undertaken in line with current survey methodology. *Figure 1 Reptile Survey Plan* provides the locations of the refugia.

#### Timings/Conditions

- 4.7 The following are the weather conditions and timings for reptile surveys on site, provided in *Table 1* below. Surveys were conducted before 10:30am (AM survey) or after 16:30pm (PM survey), however when there were high temperatures in the survey period the finish or start time was moved to ensure the temperature was never over 18°C.

**Table 1: Reptile Survey Weather Conditions**

Survey Occasion	Date	AM or PM survey	Weather conditions
1	10.05.21	AM	13°C, 70-80% cloud cover, wind 4-5, rain earlier in the day
2	17.05.21	AM	13°C, 80-90% cloud cover, wind 1-2
3	24.05.21	AM	10°C, 20-30% cloud cover, wind 1-2, sunny, bright
4	07.06.21	AM	18°C, 0-10% cloud cover, wind 2-3, clear, sunny, bright

<sup>3</sup> Herpetofauna Workers Manual, Gent and Gibson (1999). JNCC

<sup>4</sup> Froglife Advice Sheet 10: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation <http://www.froglife.org/documents/FroglifeAdviceSheet10.pdf>

Survey Occasion	Date	AM or PM survey	Weather conditions
5	06.09.21	AM	15°C, 50-60% cloud cover, no wind
6	13.09.21	AM	17°C, wind 2-3, 70-80% cloud cover
7	20.09.21	AM	16°C, wind 3-4, 90% cloud cover

#### Population Assessment

- 4.8 Reptile populations are assessed in accordance with population level criteria as stated in the Key Reptile Site Register<sup>5</sup>. This system classifies populations of individual reptile species into three population categories assessing the importance of the population (*Table 2*). These categories are based on the total number of adult animals observed during individual survey occasions.

**Table 2: Key Reptile Site Survey Assessment Categories (HGBI 1998)**

Species	Low Population (No. of individuals)	Good Population (No. of individuals)	Exceptional Population (No. of individuals)
Adder	<5	5 - 10	>10
Common lizard	<5	5 - 20	>20
Grass snake	<5	5 - 10	>10
Slow worm	<5	5 - 20	>20

#### Limitations/notes

- 4.9 The majority of the surveys were undertaken within the peak survey period May with one undertaken in June when the temperature allowed. However, this is still considered to be an appropriate time for reptile surveys so is not a significant constraint. All surveys were taken at least two days apart in line with guidance to ensure the validity of the information.

<sup>5</sup> HGBI (1998) Evaluating local mitigation/translocation programmes: Maintaining Best Practices and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). Herpetofauna Groups of Britain and Ireland, c/o Froglife, Halesworth.



## 5.0 RESULTS

### Desk Study

- 5.1 Consultation records returned by KMBRC are provided in *Table 3*, these comprised three common lizards and three slow-worm records within 1 km of the site boundary.

**Table 3: Reptile Records Summary**

Species	Date	Approximate location relative to site boundary
Slow-worm <i>Anguis fragilis</i>	2013	510 m north
	2014	480 m north-west
	2018	700 m north-west
Common Lizard <i>Zootoca vivipara</i>	2015	365 m south-east
	2015	230 m south-east
	2015	130 m east

### Habitats

- 5.2 The intensively managed orchards, arable fields and surrounding, well maintained, grassland margins that comprise the bulk of the site are considered sub-optimal habitat for reptiles, as the sward height is kept too short to provide any conducive cover for reptiles, or to support a diverse invertebrate population on which they might forage. The bases of the treelines and a small extent of rough grassland in the north-east corner comprised the only suitable habitat within the Site boundaries.

### Reptile Survey

- 5.3 Common lizards have been recorded on a single occasion within the rough grassland area in the north-east corner of the Site. *Table 3* below presents the findings of the reptile surveys with locations of refugia and reptiles shown on *Figure 1*.

**Table 3: 2021 Reptile Survey Results**

Date	Common lizard	
	Adult	Juvenile
13 <sup>th</sup> September 2021	2	2

- 5.4 A number of common lizards *Zootoca vivipara* were also recorded off-site, within rough grassland surrounding the farm buildings adjacent the western Site boundary. Three adult common lizards were observed during the first survey visit and one adult observed during the second visit; the locations of the reptiles observed off site are presented on *Figure 1 Reptile Survey Plan*.
- 5.5 The previous surveys undertaken in 2014 for the larger site application observed a 'good' population of slow-worm and common lizard in the surrounding off-site field margins.

## **6.0 DISCUSSION**

- 6.1 The habitats within the Site boundary were generally considered to be sub-optimal for reptiles due to the highly managed nature of the site; the margins between arable plots were regularly mown, treated with herbicide and subject to regular disturbance from farm vehicles.
- 6.1 The number of common lizards observed has been assessed in accordance with population level criteria as stated in the Key Reptile Site Register<sup>6</sup>. A peak count of two adult common lizards (and two juveniles) were recorded on the 6<sup>th</sup> survey visit, this is classed as a 'Low' population falling within the '<5 adult individuals' level.
- 6.2 Reptiles will therefore be incorporated into the proposals, by retaining and enhancing habitats where the reptiles were observed and creating specific reptile habitats that are linked to the surroundings through the site GI. Such areas include the retained treelines and margins and created open space grassland and the attenuation.
- 6.3 Prior to implementation of mitigation, there is potential for an adverse impact on reptile populations caused by (in the event that their presence is confirmed on-site):
- loss of habitat through vegetation clearance; and
  - incidental harm during earthworks/site clearance.
- 6.4 Mitigation measures would aim to ensure that reptiles are not killed or injured during works and that their local conservation status is maintained. This will include passively moving reptiles into retained areas by removing vegetation in stages during the active period (March – September inclusive) to allow reptiles to disperse of their own autonomy.

## **7.0 METHOD STATEMENT**

- 7.1 The following method statement and mitigation strategy will focus on the following aspects:
- Minimising risk to reptiles from the habitat clearance,
  - Preventing reptiles entering affected areas during ongoing works, and
  - Providing suitable replacement for reptile habitat as part of the operations as well as establishing habitats suitable for these species in the long-term.
- 7.2 Provided the below measures are adhered to it is considered that there will be no impact to the conservation status of reptiles on site, with the redevelopment providing habitats of benefit.

### **Good Practice Working Methods**

- 7.3 The working area will be subject of a thorough passive displacement exercise which will focus on manipulation of affected habitats to reduce their suitability without harming the animals themselves.
- 7.4 The passive displacement/good practice clearance exercise will comprise the following:
- a) A toolbox talk and information sheets (including identification documents) will be provided to the contractors to make them aware of the potential ecological issues;

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<sup>6</sup> HGBI (1998) Evaluating local mitigation/translocation programmes: Maintaining Best Practices and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). Herpetofauna Groups of Britain and Ireland, c/o Froglife, Halesworth.

- b) Hand search of suitable affected vegetation where deemed appropriate (such as marginal tussocky habitats such as grassland, ruderal/hedges/scrub/woodpiles) by an ecologist on day each area is affected by works.
- c) Strimming of the grassland down to 30cm/300mm under supervision from the on-site ecologist.
- d) The strimmed area will be left for at least 2.5 hours and the cut areas will then be hand searched again by the on-site ecologist.
- e) Following the second-hand search, the contractors will then carefully trim the vegetation down to ground level.
- f) Although piles of compacted rubble/earth are not known to be present in the working areas, where recorded they will be searched under supervision from the on-site ecologist as carefully as possible.
- g) In the event that reptiles are recorded in the working areas they will be moved a short distance to retained suitable habitat (such as the scrub in retained areas).
- h) The main works (main clearance and site preparation for contractors) will then be undertaken the following day. Given that habitat of value for reptiles will have been removed by this point, this aspect of work will not require supervision. During this period, any vegetation in the working area should be kept to a low level (not above 10cm/100mm). This should prevent reptiles entering the working areas during operations.
- i) Contact details will be left with on-site staff so in the unlikely event any animals are recorded during the subsequent unsupervised works, further advice can be sought.
- j) In terms of timings, it is considered that vegetation removal should be undertaken outside of the main hibernation period (mid-October to mid-March) when temperatures are above 5°C overnight/9°C ambient daytime.

## **Enhancement**

- 7.5 The site will be enhanced for reptiles through provision of suitable habitats within the GI. These new habitats will provide links across the site and into the wider area.
- 7.6 Enhancements which would benefit reptiles, amphibians and invertebrates in general include:
- The creation and maintenance of strips of informal tussock forming grassland, which will enhance commuting and foraging opportunities for reptiles.
  - Linear features such as hedgerow and tree/shrub planting around the boundaries of the development providing cover for commuting around the site into surrounding areas;
  - Long-term management to ensure the site continues to provide suitable habitat;
  - A hibernacula at least 1m x 2m in size, created within the retained green infrastructure in the north-west corner of the Site. This feature will have a rubble/brick base with mounded earth and will be allowed to colonise naturally with vegetation;
  - Two log pile style refugia at least 1m x 1m in size, situated in strategic locations. These features can be created using material removed during site clearance;
  - The attenuation feature proposed will be designed to hold water year-round and should be planted with a diverse range of native species.



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**Key**

- Site Boundary
- Reptile Tin
- Common Lizard