



Gladman Developments Ltd.

Dover Road, Deal

REPTILE SURVEY REPORT

October 2017

FPCR Environment and Design Ltd

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1.0 INTRODUCTION

- 1.1 The following report has been prepared by FPCR Environment and Design Ltd on behalf of Gladman Developments Limited and outlines the results of a reptile survey undertaken at a site off Dover Road, Deal, Kent in 2017. The survey was completed to assess the presence/absence of reptile species and any potential impact upon this species group (if present) by a proposed residential development. In the event these species were present mitigation measures would be detailed to ensure reptiles are protected from harm both before and after construction works.
- 1.2 The site consisted of grazed and un-grazed horse paddocks separated by fences, and a block of immature woodland. The margins of the paddocks and areas of grassland were considered suitable for reptile species having the complex and varied vegetation structure preferred by reptiles for basking and shelter.

2.0 LEGISLATION

- 2.1 All common reptile species, including common lizard *Zootoca vivipara*, grass snake *Natrix natrix*, and slow-worm *Anguis fragilis*, are partially protected under Section 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.
- 2.2 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. This requires that:
- the animals must be protected from injury or killing;
 - mitigation should be provided to maintain the conservation status of the species.
- 2.3 All common reptile species are species of principal importance under section 41 of the Natural Environment and Rural Communities Act 2006 (NERC).

3.0 METHODOLOGY

Desktop Survey

- 3.1 A desktop survey was undertaken in June 2017. As part of this study, Kent and Medway Biological Record Centre (KMBRC) was consulted for existing records of reptile species within 1km of the site boundary.

Reptile Presence/Absence Survey

- 3.2 A strategic reptile presence/absence survey was undertaken at the site in specific locations identified as offering potential habitat. The survey was undertaken based on methodology detailed in the Herpetofauna Workers Manual (2003)¹ and the Froglife Advice Sheet 10 - Reptile Survey (1999)². Methods involved a search for basking reptiles on/under naturally occurring and strategically positioned artificial refugia. These were placed in locations that offered the most suitable habitat for common reptiles, i.e. structurally diverse grassland habitats with areas of bare ground/short vegetation and wetland features. A total of fifty-one refugia were placed at the site (Figure 1).
- 3.3 Surveys were undertaken in April, May and June 2017 by suitably experienced FPCR ecologists. Each survey visit was undertaken in accordance with guidelines as follows:
- at temperatures of between 9°C - 18°C;
 - on sunny / cloudy days with little or no wind;
 - between 0900 & 1100 hrs and between 1600 & 1900 hrs.
- 3.4 In addition, the surveys also followed the guidelines recommendations by:
- using regularly spaced roofing felt (approximately 0.5m²) as artificial refugia, with a black upper side;
 - approaching refugia from downwind and avoiding casting a shadow and with care so as to not disturb basking animals when checking;
 - lifting and replacing tins to check for the presence of reptiles underneath in hot weather with care, to avoid potential harm to any animals underneath;
 - mapping the location and number of tins to aid survey and avoid the possibility of leaving tins *in situ* after completion of the survey.

Limitations

- 3.5 Due to unseasonable weather conditions, some of the surveys were undertaken outside of the times recommended in the guidelines. However, this is not considered to have affected the results, as temperatures and weather conditions were optimal for reptile surveys on all survey occasions, and reptiles were observed on all but one of the surveys which took place outside of the recommended times.

¹ Gent, T and Gibson, S. (2003) Herpetofauna Workers Manual, JNCC, Peterborough

² Froglife Advice Sheet 10 (1999). Reptile Surveys . An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Nov, 1999

Assessment

- 3.6 Reptile populations were assessed in accordance with population level criteria as stated in the Key Reptile Site Register (HGBI, 1998)³. This system classifies populations of individual reptile species into three population categories assessing the importance of the population (Table 1). These categories are based on the total number of adult animals observed during individual survey occasions.

Table 1 – Key Reptile Site Survey Assessment Categories (HGBI 1998)

Species	Low Population of (No. individuals)	Good Population of (No. 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

4.0 RESULTS

Desktop Survey

- 4.1 KMBRC returned records from Kent Reptile & Amphibian Group (KRAG). KRAG returned two hundred and twenty slow-worm records, seven grass snake records, two records of unknown snake species, and sixteen common lizard records. Of these, six grass snake records and the two unknown snake species records were from locations over 1km away from the site. Of the sixteen common lizard records returned, twelve were at locations over 1km away. The majority of the slow worm records were from a 2010 survey of fields approximately 2.6km north-west of the site, and only two of the two hundred and twenty records returned for slow-worm were located within 1km of the site. All three species were recorded in 2012 in allotments located approximately 540m north-west of the site, and at Hawkø Hill, approximately 540m east of the site in 2000. A common lizard was also recorded in 2014 at a private residence approximately 470m north-west of the site. No records for reptiles located within the site itself were returned.

Field Study

- 4.2 At the time of the initial site walkover in November 2016, areas were observed that were considered to offer suitable habitat to support reptile species. These areas were restricted to the field and woodland margins, and areas of ungrazed grassland.
- 4.3 Table 2 details the results of the reptile surveys completed. The locations are presented in Figure 1.

³ 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.

Table 2- Reptile Survey Results 2017

Survey Occasion	Date	Time	Weather	Common Lizard	Grass nake	Slow-Worm	Other Species
1	06/04/2017	12:04	Cloud % 0-10,Beaufort - 0,clear,bright,sunny, 11°C	0	0	1	0
2	11/04/2017	11:09	Cloud % 0-10,Beaufort - 1/2,clear,bright,sunny, 13°C	0	0	1	0
3	10/05/2017	13:35	Cloud % 0-10,Beaufort - 1/2,sunny, 12°C	0	0	0	0
4	25/05/2017	08:01	Cloud % 0-10,Beaufort - 0,clear,sunny, 14°C	0	0	1 (+1 Juv)	0
5	31/05/2017	06:00	Cloud % 10-20,Beaufort - 1/2,bright,sunny, 17°C	0	0	0	0
6	05/06/2017	11:00	Cloud % 10-20, Beaufort - 2/3, sunny 16°C	0	0	1	0
7	13/06/2017	11:08	Cloud % 0-10,Beaufort - 1/2,clear,bright,sunny, 17°C	0	0	1	0

- 4.4 Slow-worm were recorded on five of the seven survey occasions with a peak count of one individual adult on each of the five survey occasions. In accordance with the Key Reptile Site Survey Assessment Categories this constitutes a low population of slow-worm.

5.0 DISCUSSION & RECOMMENDATIONS

- 5.1 The habitats present within the site including the unmanaged grassland and field margins were considered to have the potential to support reptile species including slow-worm through their varied vegetation structure and habitat mosaic. In addition to this, consultation results highlighted records of slow worm within the local area.
- 5.2 Slow-worms are partially protected under the Wildlife and Countryside Act 1981 (as amended) in that it is an offence to intentionally kill or injure the species.
- 5.3 A low population of slow worm (peak count 1) was recorded on site. Animals were recorded at the southern end of the western boundary with Dover Road, and along the margins of the plantation woodland. Current site proposals show an access road cutting through the western boundary, but the majority of the areas where reptiles were recorded are to be retained and enhanced, and connections will still be maintained to fields to the south.
- 5.4 Only a small area of reptile suitable habitat will be lost and it is considered that sufficient habitat will be retained such that, with appropriate mitigation, the local conservation status of the slow-worm population identified will be maintained and potentially enhanced post-development.

Proposed Mitigation Strategy

- 5.5 Given the small amount of suitable habitat to be lost and the presence of suitable habitat adjacent to the working area it is recommended that reptiles are displaced from areas of suitable habitat to be lost to ensure no reptiles are harmed during construction. All on-site areas of suitable vegetation should be directionally trimmed from the central regions of the site towards the southern and western margins. This should take place in two stages, initially to a height of

200 mm and then, 1 to 2 hours later, to at least 100 mm, allowing any reptiles present to move out of the working areas and into the retained and off-site habitats.

- 5.6 All arisings should be removed and the area should be left for between 3 to 4 hours to further allow animals to move out of the working areas, before the area can be cleared as normal for construction. Any piles of wood or rubble on-site should be hand-searched by an ecologist and dismantled with care and any reptiles found transported safely into the areas of retained habitat.
- 5.7 Dense patches of bramble or shrubs that provide suitable habitat for reptiles should first be cut to a height of 400mm and then cut 1-2 hours later to 50mm. Strimming should be in the direction that allows reptiles to move to suitable retained habitat. Cuttings should be removed from site to prevent the creation of suitable refugia.
- 5.8 All works should be undertaken under the supervision of an experienced ecologist. Works should be undertaken during the reptile active season and in suitable weather conditions (i.e. March/April to September inclusive, temperatures between 10°C . 18°C).
- 5.9 Dense bramble and scrub also provide suitable habitat for nesting birds, which are protected under the Wildlife and Countryside Act 1981 (as amended). Ideally therefore, vegetation removal work should be carried out after the bird breeding season (after August 31st) or as early in the season as possible. Where this is not possible potential bird nesting habitat should be checked prior to removal during passive displacement by an experienced ecologist and if active nests are found, vegetation should be left untouched until all birds have fledged.

Enhancements

- 5.10 In order to compensate for the small scale loss of habitat on site, it is recommended that the margins with the woodland along the southern and eastern boundaries are enhanced for reptile use by creating and maintaining strips of informal tussocky grassland to enhance commuting and foraging activity. This would also provide a section of optimum habitat for reptiles to move into prior to works on site. The creation of dead wood piles in strategic locations on new or retained habitats would provide further opportunities for shelter and basking.
- 5.11 Other enhancements that should be incorporated into the retained and newly-created areas include:
 - the creation of two hibernacula;
 - long term management to allow vegetation succession to increase the cover available to reptiles.
- 5.12 The hibernacula design will be based upon a modification of those described by Stebbings (2000)⁴ and Showler *et al.* (2005)⁵. The hibernacula will be at least 2m wide, 4m long and 1m high and their construction will be supervised by a suitably experienced ecologist. They will be constructed in sunny positions on an east-west orientation within areas of suitable habitat in order to create a feature where reptiles can both overwinter and bask on top of. To optimise these opportunities each hibernacula will be constructed in a crescent shape, however, the final construction is likely to be influenced by local conditions.

⁴ Stebbings R. (2000). Reptile hibernacula - providing a winter refuge. *Enact*, 8 (2), 4-7

⁵ Showler D.A., Aldus N., & Parmenter J. (2005). Creating hibernacula for common lizards *Lacerta vivipara*, The Ham, Suffolk, England. *Conservation Evidence* . 2 96-98. [online]. Available at: <http://www.conservationevidence.com/individual-study/2175> [Accessed 09/10/2015].

- 5.13 Construction will involve the following key steps:
- use of a mini-digger to create a trench of appropriate dimensions;
 - laying a 200mm of gravel at the base of the trench will help facilitate adequate drainage;
 - in-filling with inert rubble (that is contamination free), logs and mulch, to create a range of crevices with a humid microclimate;
 - access into the hibernacula interior will be facilitated with gaps left in the capping material at ground level;
 - back-filling with earth and capping with turf and brash; and
 - leaving the hibernacula to vegetate naturally.
- 5.14 To minimise potential impact of ground compaction low ground pressure vehicles will be used throughout the hibernacula creation operations. The integrity of all retained trees will be maintained in accordance with best working practices, including the avoidance of ground works within the root protection areas of retained trees.
- 5.15 Areas around the hibernacula should be left to develop a rank, tussocky structure, with the areas trimmed on a three-year rotation. One third will be cut in any one year, each third being uncut for successive years.
- 5.16 These enhancements will ensure that the favourable conservation status of reptiles in the local area is maintained and enhanced in the long term by providing increased areas of suitable habitat whilst also maintaining the connectivity to offsite reptile populations.

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Key

- Tin Location
- ◆ Adult Slow Worm
- ◇ Juvenile Slow Worm
- Site Boundary
- Tree
- Wall
- Hedgerow (H#)
- xxx Scrub - scattered line
- Fence
- Buildings (B#)
- Broadleaved Woodland - Plantation
- Standing Water
- Other Tall Herb and Fern - Ruderal
- SI Poor Semi-Improved Grassland

