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## **Reptile survey for proposed new prison on land adjacent to HMP Gartree, Gallow Field Road, Market Harborough, Leicestershire**

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## Non-technical summary

### Introduction

CGO Ecology Ltd was instructed by Mace Ltd, on behalf of the Ministry of Justice, to conduct a reptile survey to the south of HMP Gartree, Market Harborough, Leicestershire. The Ministry of Justice proposes a development as part of its New Prisons Programme on a 25ha site (SP 7052 8873). The Local Planning Authority (LPA) is Harborough District Council. A Preliminary Ecological Appraisal by Ramboll identified a few local records of grass snake *Natrix helvetica*, and recommended a reptile survey.

### Methodology

An initial walkover was conducted by Dr Chris Gleed-Owen MCIEEM on 1<sup>st</sup> February 2021, to identify all areas of habitat suitable for reptiles on site. This was followed by a set-up visit on 2<sup>nd</sup> March 2021, to deploy artificial refugia (roofing felt mats 50cm x 30cm in size). 120 artificial refugia were laid in transects of 10, with a spacing of 5m between refugia. After three weeks, seven survey visits were conducted between 24<sup>th</sup> March and 4<sup>th</sup> May 2021, in suitable weather and times of day. Each visit involved a walkover of the whole site, visually searching for reptiles, and checking all 120 artificial refugia. The surveyors were Phoebe Collier, Amy Dennett, and Chris Gleed-Owen, all experienced reptile ecologists.

### Results

No reptiles were encountered on any of the survey visits. The only suitable habitat areas are narrow strips of rough grassland along hedgerows and field boundaries, and patches of scrub. These are relatively well connected, but there are no extensive areas of habitat suitable for reptiles.

### Conclusions and mitigation recommendations

Reptiles appear to be absent from the site, although grass snakes could be present at an undetectably-low level, occasionally passing through the site. Reptiles appear to be scarce in the local landscape. No reptile mitigation is required, and no enhancements are recommended.

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# 1. Introduction

CGO Ecology Ltd was instructed by Mace Ltd, on behalf of the Ministry of Justice, to conduct a reptile survey to the south of HMP Gartree, Market Harborough, Leicestershire. The Ministry of Justice proposes a development as part of its New Prisons Programme on a 25ha site (SP 7052 8873). The Local Planning Authority (LPA) is Harborough District Council.



Figure 1 – Development site boundary (red line) and MoJ ownership boundary (blue line).



Figure 2 – Proposed development and landscaping plan, with habitat areas for BNG purposes, produced by Pick Everard.



Reptiles are protected by the Wildlife and Countryside Act 1981 (as amended). A Preliminary Ecological Appraisal (PEA) conducted by Ramboll (Molesworth, 2021) included a 2km search with Leicestershire and Rutland Environmental Records Centre (LRERC). This returned seven records of grass snake (*Natrix helvetica*) within 2km of the site, including one 315m east of the site in 2008, and 860m north of the site in 2014. No other reptile records are held by LRERC. On this basis, a reptile survey was recommended.

## 2. Methodology

An initial walkover was conducted by Dr Chris Gleed-Owen MCIEEM on 1<sup>st</sup> February 2021, to identify all areas of habitat suitable for reptiles on site. This was followed by a set-up visit on 2<sup>nd</sup> March 2021, to deploy artificial refugia (roofing felt mats 50cm x 30cm in size). 120 artificial refugia were laid in transects of 10, with a spacing of 5m between refugia.



Figure 3 – Reptile survey artificial refugia transects within proposed development boundary (red line) and wider MoJ ownership (blue boundary).

After three weeks, seven survey visits were conducted between 24<sup>th</sup> March and 4<sup>th</sup> May 2021, in suitable weather and times of day. Each visit involved a walkover of the whole site, visually searching for reptiles, and checking all 120 artificial refugia. The surveyors were Phoebe Collier, Amy Dennett, and Chris Gleed-Owen, all experienced reptile ecologists.

The lead surveyor, Dr Chris Gleed-Owen BSc (hons) PhD MCIEEM, Director & Principal Ecologist of CGO Ecology Ltd, has been an ecological consultant since 2008 (13 years). He is trained in First Aid at Work, Fire Marshal, Asbestos Awareness, CDM Awareness, COSHH, Manual Handling, and Health & Safety Management. Survey licences: CL09 great crested newt (GCN, *Triturus cristatus*), sand lizard (*Lacerta agilis*), smooth snake (*Coronella austriaca*), natterjack toad (*Epidalea calamita*), Roman snail (*Helix pomatia*). Previous mitigation licence-holder for smooth snake and/or sand lizard (6), and badger (*Meles meles*) sett closure (3). Experienced surveyor of Phase 1 habitats, National Vegetation Classification (NVC), flora (FISC level 4 botanist), vertebrates, and invertebrates.

Survey effort and refugia density were consistent with widely-used guidance on reptile survey methods (Froglife, 1999; HGBI, 1998; Natural England, 2011).

Visits were conducted in appropriate conditions and times of day for reptile detection, which can broadly be defined as sunshine or partly cloudy weather with air temperature 10-20°C, or warm overcast weather at 13-20°C. Time of day was selected to suit the weather conditions, starting at least two hours after sunrise, and finishing at least one hour before sunset. Survey immediately after rain, or in the first sunshine after rain, is ideal for reptile detection.

It is also prudent to select a wide range of conditions and different times of day, in order to capture a comprehensive dataset. This may include unexpected anomalies in reptile behaviour, and idiosyncrasies of certain parts of a site, such as areas that only receive sun in the morning or evening.

The spring of 2021 has been unusually cold, wetter, and windier than usual. This has limited the number of days where reptile survey could take place. Peak temperatures were lower than usual, and often exceeded 10°C (suitable for reptile activity) for only a few hours per day. However, the conditions selected for the seven surveys were sufficient for detecting reptile presence-absence, and on balance, this has not placed a limitation on the survey results.

The Phase 1 habitat maps were drawn by GIS technician Jack Parker of CGO Ecology.

Surveyor	Visit	Date	Times	Weather
CGO	setup	02/03/2021	n/a	n/a
PC	V1	24/03/2021	10:50-13:20	10-13C, 40% cloud, intermittent sun
AD	V2	26/03/2021	13:00-15:30	10C, 90% cloud, sunny intervals, recent rain
PC	V3	08/04/2021	13:20-16:00	12C, 90% cloud, sunny intervals
AD	V4	20/04/2021	10:45-13:30	14-15C, 0% cloud, sunny
PC	V5	23/04/2021	16:15-19:00	16C, 30% cloud, intermittent sun
AD	V6	27/04/2021	09:35-12:15	10C, 90% cloud, sunny intervals
CGO	V7	04/05/2021	14:00-17:00	10C, 20-100% cloud, intermittent sun, showers

Table 1 – Survey details. CGO = Chris Gleed-Owen, PC = Phoebe Collier, AD = Amy Dennett.

### 3. Results

No reptiles were encountered on any of the survey visits. The only suitable habitat areas are narrow strips of rough grassland along hedgerows and field boundaries, and patches of bramble (*Rubus fruticosus* agg.) and blackthorn (*Prunus spinosa*) scrub. These strips of habitat are relatively well connected, but there are no extensive areas of habitat suitable for reptiles.

### 4. Conclusions and mitigation recommendations

Reptiles appear to be absent from the site. It is possible that occasional grass snakes pass through the site, at undetectably-low levels. The LRERC search results show that reptiles are scarce in the area, and most species are completely absent from the local landscape. For example, slow-worm (*Anguis fragilis*) might be expected in some of the rough grass fringes of the site, but it is locally absent, and therefore unlikely to be found anywhere on site.

No reptile mitigation is required, and no targeted enhancements are recommended. The creation of additional ponds which will increase the local amphibian population is likely to have an indirect benefit to grass snakes, and could encourage a resident subpopulation. The creation of meadow grassland habitats would generate additional capacity to support reptiles if they were present in the area. As it stands, however, translocation would be the only likely way of slow-worms and other species colonising the site.



## 5. References

Froglife (1999). *Advice Sheet 10. Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife, Peterborough.

HGBI (1998). *Evaluating local mitigation/ translocation programmes: maintaining best practice and lawful standards*. Herpetofauna Groups of Britain and Ireland.

Molesworth, J. (2020) *Raven. Preliminary Ecological Appraisal*. Ramboll, Exeter.

Natural England (2011). *Standing Advice Species Sheet: Reptiles*. Natural England, Sheffield.



Plate 1 – Artificial refuge (roofing felt mat) on rough grass field edge adjacent to Welland Avenue.



Plate 2 – Reptile survey mat on suitable habitat (rough grass and rubble mounds) in agricultural yard adjacent to HMP Gartree.