

REPTILE SURVEY REPORT

OCTOBER 2024

Sandy Brow RFP

Perimeter Road

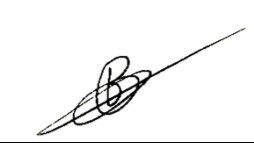
Knowsley

L33 3AN

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QUALITY MANAGEMENT

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1 NON-TECHNICAL EXECUTIVE SUMMARY

- 1.1.1.1 Balance Power Ltd is proposing to develop land off Perimeter Road in Knowsley (hereafter referred to as 'the site'). The proposals include the development of a battery storage site, with power grid infrastructure and associated hard landscaping.
- 1.1.1.2 Urban Green has been appointed to complete reptile surveys and a report of the site. A Preliminary Ecological Appraisal (PEA) was conducted at the site in August 2023. Further surveys, in the form of reptile surveys to identify and assess the presence/likely absence of reptiles was recommended, focusing on the habitats which were deemed most likely to support reptiles.
- 1.1.1.3 Presence/likely absence surveys were undertaken between May and September 2024 following standard guidance detailed within the Herpetofauna Workers' Manual (Gent & Gibson, 2003) and reptile survey guidance (Froglife, 1999; Sewell *et al.*, 2013).
- 1.1.1.4 Though the habitat on site was deemed suitable to support reptiles, no reptiles were recorded during the surveys. No further surveys or ecological guidance for this group should be required, pending development commences before September 2025.

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Client: Balance Power		Issue: 01	Figure: 01	
Project: Sandy Brow		Scale @ A4 1:10,000		
Title: Site Context		Approved by: BG	Checked by: OS	
Drawing Ref: UG_2142_SITE_CONTEXT		Author: CL	Date: 22/07/2024	



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Legend

- Red Line Boundary
- Survey Area
- Reptile Matt

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2 Introduction

2.1 Background to the Scheme

- 2.1.1.1 Balance Power Ltd is proposing to develop land off Perimeter Road in Knowsley (hereafter referred to as ‘the site’). The proposals include the development of a battery storage site, with power grid infrastructure and associated hard landscaping.
- 2.1.1.2 Urban Green has been appointed to complete reptile surveys and a report of the site. A Preliminary Ecological Appraisal was conducted at the site in August 2023. Further surveys, in the form of reptile surveys were recommended to further assess the site for the likely presence/absence of reptiles within the site.
- 2.1.1.3 The author of the report is Barnaby Indio Gardner, MEnvSci, Assistant Ecologist. Barney has several years’ experience in ecological consulting services for a range of development schemes across the UK, including residential, and landscape remediation schemes.

2.2 Site Context

- 2.2.1.1 The site is located at National Grid Reference SJ 44170 98325 and comprises a total area of approximately 2.7ha (see Figure 1).
- 2.2.1.2 The site is located in the rural outskirts of the greater Liverpool built-up area, ~2.2km north of Knowsley. The site is bounded west by Perimeter Road, immediately beyond which lies an extensive retail/industrial estate. Expansive rural land dominates the wider landscape to the north, east, and south of site – mostly agricultural land, and notably Knowsley Park & Safari, ~3km to the south.

2.3 Purpose of this Report

- 2.3.1.1 This report has been produced to demonstrate the results of reptile surveys which were completed at the site to confirm the likely absence or presence of reptiles. Appropriate mitigation and suitable habitat compensation are detailed (if required). The report has been produced in support of the proposed planning application.
- 2.3.1.2 Relevant UK legislation of the protection of all UK reptiles are detailed in Appendix 1.

3 Previous Surveys

3.1 Preliminary Ecological Appraisal (Urban Green, 2023)

- 3.1.1.1 A PEA was completed at the site by Urban Green in August 2023 and is detailed within report UG_2142_ECO_PEA_01 (Urban Green, 2023). The survey assessed the site as providing “suitable value to reptiles with a range of habitats present which could provide sufficient sheltering, foraging, and basking opportunities”, credited to the unmanaged mosaic of suitable habitats, such as unmanaged, disturbed grassland featuring patches of scrub and rock debris, with bordering woodland and scattered waterbodies, with a distinct, undisturbed ecotone between these habitat features.
- 3.1.1.2 It was recommended that reptile surveys be conducted, employing artificial refugia and seven visits throughout early spring and late summer in line with good practice guidelines.

4 Methods

4.1 Desk Study

4.1.1.1 Sources of information used in the desk study are presented in Table 1.

Table 1– Desk Study Sources of Information

Source	Date Consulted	Information Sought
Online aerial imagery	12/09/2023	Review of satellite imagery.
Merseyside Biobank & Lancashire Ecological Records Network	12/09/2023	Locally designated wildlife sites within 1km of site boundary. Records of protected and notable species within 1km of the site boundary.

4.2 Presence/Likely Absence Reptile Surveys

- 4.2.1.1 On 16th April 2024, 74 refugia (comprising a mixture of bitumen roofing felt and corrugated metal sheets approximately 0.5m² in size) were placed within habitats that were considered to be potentially suitable for use by reptiles within the site – typically bordering scrub, woodland, waterbodies, and dense grass patches on predominantly south and west-facing ecotones.
- 4.2.1.2 Refugia were deployed throughout a wider ‘Survey Area’ that extends beyond the site boundary (but within client ownership), due to a lack of dispersal barriers at the arbitrary site bounds. (See Figure 2).
- 4.2.1.3 In addition to refugia, large rocky debris piles were identified as potentially suitable for use by reptiles and these were inspected during the survey.
- 4.2.1.4 Refugia were left to settle for a period of nine days prior to survey commencement. Presence/likely absence surveys were undertaken between May and September 2023 following standard guidance detailed within the Herpetofauna Workers’ Manual (Gent & Gibson, 2003) and relevant reptile survey guidance (Froglife, 1999; Sewell *et al.*, 2013).
- 4.2.1.5 During each survey visit, a visual survey of the area and artificial refugia was carried out prior to any sheltering reptiles observed underneath. A summary of survey details is found in Table 2.

Table 2– Summary of weather conditions and results

Visit number	Date	Surveyor names	Temperature at start	Weather conditions
1	25.04.2024	Barnaby I. Gardner	10°C	Scattered Clouds
2	14.05.2024	Barnaby I. Gardner	17°C	Scattered Clouds

Visit number	Date	Surveyor names	Temperature at start	Weather conditions
3	29.05.2024	Barnaby I. Gardner Toby Mills	16°C	Broken Clouds
4	06.08.2024	Barnaby I. Gardner	18°C	Passing Clouds
5	20.08.2024	Olivia Jones	18°C	Scattered Clouds
6	03.09.2024	Barnaby I. Gardner	16°C	Scattered Clouds
7	16.09.2024	Toby Mills	16°C	Passing Clouds

4.3 Population Assessment

- 4.3.1.1 If the presence/likely absence surveys confirmed species of reptiles are utilising the survey area, the following scoring methodology set out in Froglife (1999) Advice Sheet 10, is used to estimate population size. The population size of all species present within the site were calculated and are demonstrated in Table 3.

Table 3– Criteria for Estimating Population Size and Assessing the Site (Froglife, 1999)

Species	Low Population Score 1	Good Population Score 2	Exceptional Population Score 3
Adder (<i>Vipera berus</i>)	<5	5-10	>10
Grass snake (<i>Natrix natrix</i>)	<5	5 – 10	>10
Common lizard (<i>Zootoca vivipara</i>)	<5	5 – 20	>20
Slow-worm (<i>Anguis fragilis</i>)	<5	5 - 20	>20

4.4 Constraints to the Survey

- 4.4.1.1 It is not possible to provide accurate population size without undertaking detailed capture, mark and release surveys which require a substantial effort. However, it is possible to provide an indication of the relative population sizes by using peak counts of observed reptiles (if applicable).
- 4.4.1.2 Throughout the survey season few refugia were either overgrown by scrub and grasses and their location lost or unreachable. Several refugia throughout the centre-site were trampled by cattle herds occasionally present. At the season's end, 49 of the original 80 were recovered.

- 4.4.1.3 This is not thought to be a major constraint. Reptile handbook guidance suggests 10 refugia per hectare; the 2.7ha site should only warrant 27 mats, though due to habitat connectivity a 5.7ha survey area was considered, which should only warrant 57 refugia. An overabundance (80) was deployed to account for forecasted losses, and it is thought the findings throughout the season were sufficient.

5 Results

5.1 Desk Study

- 5.1.1.1 The results of the desk study completed are demonstrated in Table 4.

Table 4– Desk Study Results

Information Sought	Details
Review of satellite imagery.	The site is evidenced to comprise a mosaic of unmanaged habitats, including dense grasses with scattered, patchy scrub, bordering woodland, and with interspersed waterbodies. Large rocky debris was present throughout. These features collectively provide a range of habitats for hunting, cover, and basking. The site is open to all aspects but west, with connectivity to the wider arable landscape. The unmanaged site may be considered an isolated refuge for its diversity of unmanaged habitats in the wider landscape.
Records of reptiles within 1km of the site boundary.	None

5.2 Presence/Likely Absence Reptile Surveys

- 5.2.1.1 The site's habitats were deemed moderately suitable for the potential presence of reptiles, featuring an unmanaged mosaic of variable, structurally complex, wet grassland, interspersed by minor ponds, bramble and gorse scrub, and rocky outcrops, with woodland bordering.
- 5.2.1.2 However, no evidence of reptile species presence on the site was detected on any of the seven survey visits. On several occasions, prey species such as field mice (*Apodemus sylvaticus*) and common toad (*Bufo bufo*) were found beneath refugia.

6 Evaluation and Enhancement

6.1 Summary

- 6.1.1.1 The majority of the site comprised unmanaged grassland habitats, which could provide suitable terrestrial cover for reptile species, with an abundance of suitable ecotones between bramble and gorse scrub, dense hedges, rock debris, waterbodies, and woodlands. However, no reptiles were found.
- 6.1.1.2 No further surveys nor ecological guidance for reptiles on the site is required for the development to lawfully proceed. Several enhancements could be employed (see Section 6.2) to improve the suitability of the site for the group
- 6.1.1.3 These findings may be considered valid for up to 12 months following the final survey (e.g. until September 2025). Should the construction phase not begin before this time, these findings may need to be reconsidered.

6.2 Enhancements

- 6.2.1.1 The National Planning Policy Framework (NPPF) (2023) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment.
- 6.2.1.2 Paragraph 180 states that this should be achieved by (in terms of this assessment only):
 - d) *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- 6.2.1.3 Specific enhancement recommendations could be made, according to the Reptile Management Handbook (Edgar, Foster, and Baker, 2010), to benefit reptiles and other protected species (e.g. amphibians).
 - Creation and installation of log piles in sunny areas for the benefit of cover, structural complexity, and encouragement of amphibian, mammal, and invertebrate prey. Additional brash piles may be likewise created, from the material collected from scrub clearance on the site.
 - The mosaic of unmanaged and lesser-managed grasslands, and scrub should be retained and maintained as best possible in the finalised landscaping plans.

7 References

Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.

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

Gent A. H. & Gibson S. D. (2003). Herpetofauna Workers' Manual 2nd Edition. Peterborough, Joint Nature Conservation Committee.

Sewell D, Griffiths R. A., Beebee T. J. C., Foster J. and Wilkinson J. W. (2013). *Survey protocols for the British herpetofauna* (Version 1.0).

Urban Green. (2023). Preliminary Ecological Appraisal of Sandy Brow RFP. Ref: UG_2142_ECO_PEA_01

Appendix 1 – Relevant Legislation

Legislation relating to European Protected Species (e.g. Smooth snake, sand lizard)

European Protected Species and their resting places (e.g. bat roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way (CROW) Act 2000, and the Conservation of Habitats and Species Regulations 2017.

The Conservation of Habitats and Species Regulations 2017 transpose the European Union's 'Habitats Directive' (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora (EC Habitats Directive) into UK law. The Regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European Sites. EPS are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017.

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to:

- Intentionally kill, injure or take certain animals listed in Schedule 5;
- Intentionally or recklessly damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any structure or place which any such animal uses for shelter or protection.

In addition, under this legislation there are offences relating to sale, possession and control of wild animals listed in Schedule 5.

- Under the Conservation of Habitats and Species Regulations 2017 it is an offence to:
- Deliberately capture, injure or kill any wild animal listed as a European Protected Species;
- Deliberately disturb wild animals of any such species in such a way as to be likely:
- to impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or;
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate, or;
- to affect significantly the local distribution or abundance of the species to which they belong.
- Deliberately take or destroy the eggs of such an animal, or;
- Damage or destroy a breeding site or resting place of such an animal.

In addition, under this legislation there are offences relating to possession, control sale and exchange of an EPS.

Legislation relating to reptiles

All native reptile species have some degree of protection in the UK, through section 9(1) and (5) (specified in Schedule 5) of the Wildlife and Countryside Act 1981 (as amended). There are two different levels of protection afforded to reptiles through this legislation according to species and this is described in more detail below.

Full Protection

Sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*) are afforded protection under The Conservation of Habitats and Species Regulations 2010 (are species of European importance) and are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the CRow Act (2000). The Conservation of Habitats and Species Regulations 2010 implements the European Union's 'Habitats Directive' (Council Directive 92/43/EEC (a) on the Conservation of Natural Habitats and of Wild Fauna and Flora) in Great Britain. The relevant sections of this legislation make it an offence to:

- Intentionally kill, injure or capture or take a reptile;
- Possess or control (live or dead animal, part or derivative);
- Deliberately (intentionally) or recklessly damage, destroy or obstruct access to a breeding site or any structure or place used for shelter or protection by a reptile;
- Disturb whilst the reptile is occupying such a structure or place; and
- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Sand lizard and smooth snake are listed as a SoPI under Section 41 of the NERC Act 2006.

Protection against killing, injuring and trade

This level of protection under section 9 (parts 1 and 5) applies to the four widespread species of reptile, namely the common lizard, slow-worm, grass snake and adder. Only part of sub-section 9(1) applies, which make it an offence to:

- Intentionally kill or injure, and
- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Grass snake, slow-worm and adder are all listed as SoPI under Section 41 of the NERC Act 2006.