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REPTILE SURVEY

LAND OFF ROVER WAY, CARDIFF

PARC CALON GWYRDD LTD

DOCUMENT REF: WWE17143 | OCTOBER 2017

| | |
|-------------------|-----------------------------|
| Client: | Parc Calon Gwyrdd Ltd |
| Site/Job: | Land off Rover Way, Cardiff |
| Report title: | Reptile Survey |
| Report reference: | WWE17143 |

| | |
|---------------------|---|
| Grid Reference: | ST 21651 76215 |
| Survey date(s): | September 2017 |
| Surveyed by: | Dr Alex Pollard MCIEEM MRSB; Ms Charlotte Poole; Mr Peter Hacker; Ms Emma Douglas |
| Architect/Agent: | Philip Morgan |
| Planning reference: | n/a |

VERSIONING AND QUALITY ASSURANCE

| Rev | Status | Date | Author(s) | Reviewed by | Approved by |
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| A | Draft | 06/10/2017 | A Pollard MCIEEM MRSB Senior Ecologist | Richard Dodd CEcol MCIEEM |  |

DISCLAIMER

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The evidence which we have prepared and provided is true, and has been prepared and provided in accordance with the guidance of The Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

SUMMARY

| | |
|-----------------|---|
| Purpose | <ul style="list-style-type: none">• Wildwood Ecology Ltd was contracted to undertake a reptile survey at a site known as Land off Rover Way, Cardiff, in order to inform the redevelopment of the site. |
| Methodology | <ul style="list-style-type: none">• In addition to a directed visual transect, an Artificial Cover Object (ACO) survey was carried out in order to determine the presence or likely absence of reptile species.• A total of 150 bitumen felt refugia sheets were distributed across the site in mid-August. A number of in situ metal sheets and anthropogenic refuges were also checked during each survey. |
| Key issues | <ul style="list-style-type: none">• Despite there being suitable habitat on site to support reptiles, there were no reptile encounters during the survey visits. |
| Recommendations | <ul style="list-style-type: none">• No further surveys are recommended.• It is unlikely that onsite habitat enhancement will benefit any reptile populations, and so would not be appropriate.• General retention of linear corridors of scrub and trees is advised to provide commuting and foraging links for a variety of wildlife species along the site boundaries. |
| Conclusions | <ul style="list-style-type: none">• Reptiles are likely to be absent from the site.• This ecological report will remain valid for a period of 2-years from the date of the last survey – i.e. until end September 2019. |

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1 INTRODUCTION

- 1.1 Wildwood Ecology Ltd was contracted to undertake a suite of reptile surveys at a site known as Land off Rover Way, Cardiff, in order to inform a redevelopment proposal.
- 1.2 Previous ecological assessment of the site resulted in the site being classified as having potentially suitable habitat features which may support reptile populations (Sturgess Ecology, 2014).

Site description

- 1.3 The site is currently used as a motocross track (CMX) on a Frag Tip. To the immediate south-east of the site is the River Severn with its associated mudflats and shoreline. To the west and south are industrial units and major processing sites for metals, waste and water. To the north are fields used for horse grazing and residential complexes.
- 1.4 The main city of Cardiff is to the west with the Gwent Levels to the north-east.

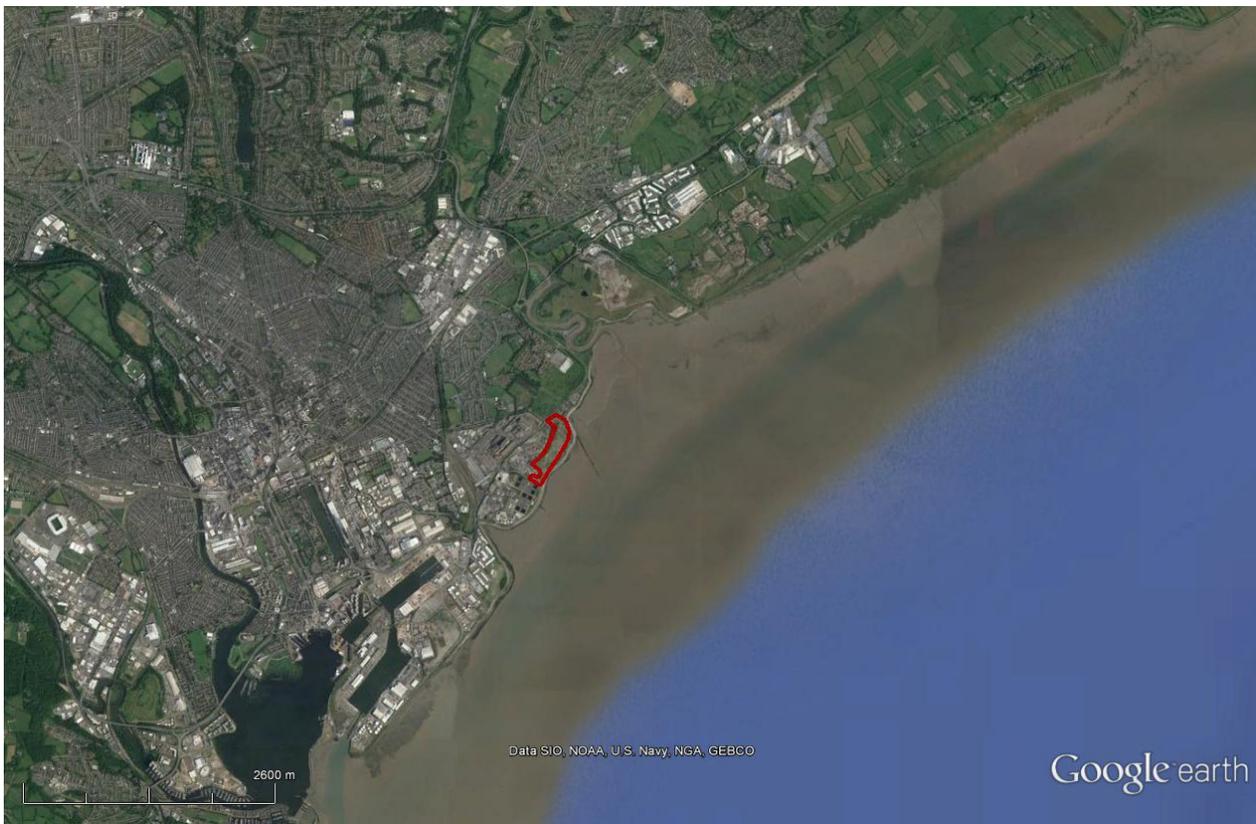


Figure 1 - aerial view of the site (in red) within the wider environment. Imagery dated 16/08/2016 © Google 2017

Proposed project

- 1.5 The full extent of the development is not currently known.

Purpose of this report

- 1.6 This report aims where possible to provide sufficient information for the local planning authority to fully assess the potential ecological impacts of the proposed development, or alternatively, to identify what further information is required to fully inform the scheme.
- 1.7 The outcome of the surveys has been used to inform and specify whether further surveys are required, or to establish the need for, and extent of, any mitigation or compensation measures required as part of the proposed works.

2 METHODOLOGY

Field survey

- 2.1 No universally agreed upon methodology for surveying reptiles is currently available. Therefore, the methodology employed in this survey was adapted from the following reptile survey publications. The survey therefore conforms to current best practice guidelines.
- Evaluation of Reptile Survey Methodologies (1996) Report No. 200. *English Nature Research*.
 - Advice Sheet 10 Reptile Survey: An introduction to conduction and interpreting surveys for snake and lizard conservation (1999). *Froglife*.
 - Technical Information Note TIN102, Reptile mitigation guidelines (2011) [withdrawn] *Natural England*.
 - Herpetofauna Workers' Manual (2003), *JNCC*.
 - Sewell et al. (2013) Survey protocols for British herpetofauna; Version 1.0. *Amphibian and reptile conservation; Durrell Institute of Conservation and Ecology (DICE); University of Kent; University of Sussex*.
- 2.2 This survey will assume the possible presence of all of the common UK reptile species (adder, common lizard, grass snake and slow worm).
- 2.3 There are only two reptile survey techniques practised commonly in the UK (terminology as used in most recent publication regarding survey protocol – Sewell et al., 2013):
- Directed visual transects (including potentially important reptile basking areas);
 - Refugia searching – refugia may be natural (e.g., rocks and stones), anthropogenic (e.g., discarded rubbish) or laid deliberately for the survey (these are often referred to as Artificial Cover Objects (ACOs)).
- 2.4 In addition to a directed visual transect, an ACO survey was carried out in order to determine the presence or likely absence and also the breeding activity of reptile species at the site. This type of survey technique exploits the affinity of reptiles for microhabitats created beneath objects on the ground, warmed by the sun. In this survey, ACOs made from bitumen roofing felt (0.5m × 0.5m) were utilised.
- 2.5 A total of 150 ACOs (all roofing felt) were positioned on the site (see Figure 2). These were placed at a density of 100 per hectare, in areas of the site that were suitable for reptiles. The ACOs were pressed down onto herbaceous vegetation in order to facilitate a good range of microclimate and humidity and then allowed to 'bed-in' for 14 days prior to the start of the survey.
- 2.6 A total of eight separate reptile survey visits were made during the survey over a 23 day period from 07/09/2017 to 30/09/2017 (this included a minimum interval of 2 days between each survey visit).
- 2.7 Survey visits were undertaken at a suitable time of day and in suitable weather conditions as defined by Natural England Technical Information Note TIN102, Reptile Mitigation Guidelines (see Appendix III).



Figure 2 - location of refugia sheets set out (white squares)

Surveyor information

2.8 Surveys were completed by the following team:

Table 1 - surveyor information

| Surveyor | Licences | Ecological experience |
|--|-----------------|---|
| Alex Pollard Ph.D., B.Sc. (Hons.), MCIEEM, MRSB Senior Ecologist | Bat Dormouse | Holds a Ph.D (Visual constraints in bird behaviour). Experienced in undertaking ornithological surveys, and bat surveys. Is a licensed bat ecologist in England and Wales. Supervisor and advisor to undergraduate and postgraduate ecological research projects. |
| Charlotte Poole M.Sc., B.Sc. (Hons) Seasonal Ecologist | - | Holds a 2:1 Honours degree in Biology and a Masters (Conservation and Geographical Information Systems). Experience of working with ecological consultancies and local authorities as a surveyor of bats and newts. |
| Peter Hacker M.Sc. (Hons.), B.Sc. (Hons) Seasonal Ecologist | - | Holds a 2:1 Honours degree in Ecological Consultancy. Has field experience gained through both academic and professional training. Experience of surveying a range of protected species including reptiles, bats, great crested newt, and common dormice. |
| Emma Douglas Seasonal Ecologist (assistant) | | Experienced reptile surveyor working towards sand lizard licence. |

Limitations and assumptions

2.9 This survey was limited to indicating reptile presence or likely absence – the true absence of a reptile species extremely difficult to establish with high confidence.

2.10 Results may be affected by movement of, or disturbance to, the ACOs (normally by members of the public or blown by the wind). Where it is possible, careful placement of ACOs within relatively hidden

locations or the weighting-down of ACOs can reduce this factor. In addition, any influence of this on the results can be partially negated as the number of ACOs recovered is factored into the overall estimate of population size. However, if large numbers of ACOs are removed, the results will become more heavily influenced.

3 RESULTS

Field survey

- 3.1 During the course of the survey no reptiles were encountered on the site All searches took place between 0900 and 1700hrs. Temperatures were within the range of 14-18.5°C. Wind was variable from visit to visit ranging from F1, to winds of F3 (Beaufort scale), with some gusts. Whilst there was a small amount of drizzle, the survey was not limited by any rainfall.
- 3.2 Table 2 shows the results of the reptile survey undertaken.

Table 2 – reptile presence or likely absence survey results.

| Visit | Date | Cloud cover (Oktas) | Wind speed (Beaufort) | Air temp °C | Survey start | Results |
|-------|------------|---------------------|-----------------------|-------------|--------------|----------------------|
| 1 | 07/09/2017 | 2 | 3 | 14 | 10:00 | No reptiles observed |
| 2 | 11/09/2017 | 6 | 3 | 15 | 10:00 | No reptiles observed |
| 3 | 14/09/2017 | 4 | 1/3 | 16.5 | 15:00 | No reptiles observed |
| 4 | 19/09/2017 | 3 | 1/3 | 18.5 | 13:25 | No reptiles observed |
| 5 | 22/09/2017 | 5 | 2/3 | 14.5 | 10:00 | No reptiles observed |
| 6 | 26/09/2017 | 2 | 3 | 15 | 10:30 | No reptiles observed |
| 7 | 28/09/2017 | 8 | 2 | 17 | 15:30 | No reptiles observed |
| 8 | 30/09/2017 | 2 | 3 | 15 | 10:00 | No reptiles observed |

4 INTERPRETATION AND ASSESSMENT

- 4.1 Based on the survey findings, no impacts on reptiles are anticipated as a result of the proposed development.
- 4.2 The lack of reptiles present within this typically suitable habitat mosaic may be due to a lack of colonisation opportunities following formation of the existing land structure or lack of sufficient or high quality foraging resource potentially due to the poor substrate on which the site is constructed upon (pulverised ash; waste metal slag).
- 4.3 If individual or small numbers of reptiles are occasionally present on site at a population density too low to be found by the survey, then the broad impact level of the development across the site on the reptile populations would be categorised (according to Natural England Technical Information Note TIN102) as ‘Negative: negligible’. See Table 3.

Table 3 – broad impact level.

| Impact on population | Typical effects on reptiles and their habitats |
|----------------------|--|
| Negative: negligible | <ul style="list-style-type: none"> ▪ Minor disturbance to individual reptiles ▪ Minor loss or damage to broad habitat |
| Negative: low | <ul style="list-style-type: none"> ▪ Killing of small proportion of population ▪ Fragmentation minimally affecting dispersal ▪ Moderate damage of broad habitat ▪ Introduction of minimal decline factors |
| Negative: medium | <ul style="list-style-type: none"> ▪ Killing of a moderate proportion of population ▪ Fragmentation moderately affecting dispersal ▪ Minor damage to key habitat feature ▪ Moderate loss of broad habitat ▪ Introduction of moderate decline factor |
| Negative: high | <ul style="list-style-type: none"> ▪ Killing of high proportion of population ▪ Fragmentation seriously affecting dispersal ▪ Loss of key habitat feature ▪ Major loss of broad habitat ▪ Introduction of serious decline factor |

5 CONCLUSIONS AND RECOMMENDATIONS

- 5.1 Wildwood Ecology Ltd was contracted to undertake a reptile survey at a site known as Land off Rover Way, Cardiff, in order to inform development proposals.
- 5.2 No reptiles were encountered during the survey and no further reptile surveys are recommended.
- 5.3 This ecological report will remain valid for a period of 2-years from the date of the last survey – i.e. until end September 2019. Further surveys may be required to update the site information if planning is not obtained or works do not commence within that time period.

Recommendations

- 5.4 Whilst the site was not found to be used by reptiles, the presence of boundary scrub is likely to be important for a variety of wildlife species including migratory birds, foraging bats and invertebrates. Retention and enhancement of linear scrub features along boundaries will allow continued connectivity across this part of the Cardiff landscape and Severn Estuary.

6 REFERENCES

- Edgar, P., Foster, J., Baker, J. (2010) *Reptile Habitat Management Handbook*. Bournemouth: Amphibian and Reptile Conservation.
- Froglife (1999) *Reptiles survey: An introduction to planning, conducting, and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.
- Gent, T., Gibson, S. (2003) *Herpetofauna Workers' Manual*. Peterborough: Joint Nature Conservation Committee.
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- Sturgess Ecology (2014) Proposed wind turbine at Rover Way, Cardiff, Ecology Survey.

APPENDIX I: PLANNING POLICY AND LEGISLATION

The following local and national planning policy and both primary and European legislation relating to nature conservation and biodiversity status are considered of relevance to the current proposal.

Planning and biodiversity

Local Authorities have a requirement to consider biodiversity and geological conservation issues when determining planning applications under the following planning policies.

Planning Policy Wales (2016) and Technical Advice Note 5 (2009)

Planning Policy Wales (Edition 9, November 2016) sets out the land use planning policies of the Welsh Government, with Chapter 5 dealing with Conserving and Improving Natural Heritage and the Coast. The advice contained within Planning Policy Wales (PPW) is supplemented for some subjects by Technical Advice Notes (TAN's).

TAN 5 (Welsh Government, 2009) specifically provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN provides advice for local planning authorities on the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and development affecting protected and priority habitats and species.

Under Section 2.4 within the TAN 5, 'when deciding planning applications that may affect nature conservation local planning authorities should':

- Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective;
- Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment;
- Promote the conservation and enhancement of statutorily designated areas and undeveloped coast;
- Ensure that appropriate weight is attached to designated sites of international, national and local importance;
- Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
- Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation;
- Ensure that the range and population of protected species is sustained;
- Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered;

Legislation and biodiversity

Certain species of animals and plants found in the wild in the UK are legally protected from being harmed or disturbed. These species are listed in the Wildlife and Countryside Act 1981 (as amended) or are named as European Protected Species (EPS) in the Conservation of Habitats and Species Regulations 2010 (as amended). These two main pieces of legislation have been consulted when writing this report and are therefore described in detail within this section.

Other relevant legislation and policy documents that have been consulted include – The Environment (Wales) Act 2016; The Countryside and Rights of Way Act 2000; The Hedgerow Regulations 1997; Biodiversity Action Plans, both UK-wide (UKBAP) and Local plans (LBAPs), and The National Planning Policy Framework (NPPF).

There is also legislation that legally protects certain animals - for example, the Protection of Badgers Act (1992) protects badgers and their setts, and the Deer Act (1991) places restrictions on actions that can be taken against deer species.

Environment (Wales) Act 2016

Section 6 of the Act places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty.

Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience.

Section 7 replaces the duty in section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.

The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife & Countryside Act 1981 (as amended) [WCA] is the primary legislation for England and Wales for the protection of flora, fauna and the countryside. Part I within the Act deals with the protection of wildlife.

Most European Protected Species offences are now covered under the Conservation of Habitats and Species Regulations (see below), but some 'intentional' acts are still covered under the WCA, such as obstructing access to a bat roost.

The WCA prohibits the release to the wild of non-native animal species listed on Schedule 9 (e.g. Signal Crayfish and American Mink). It also prohibits planting in the wild of plants listed in Schedule 9 (e.g. Japanese Knotweed and *Rhododendron ponticum*) or otherwise deliberately causing them to grow in the wild. This is to prevent the release of invasive non-native species that could threaten our native wildlife.

The provisions relating to animals in the Act only apply to 'wild animals'; these are defined as those that are living wild or were living wild before being captured or killed. It does not apply to captive bred animals being held in captivity.

There are 'defences' provided by the WCA. These are cases where acts that would otherwise be prohibited by the legislation are permitted, such as the incidental result of a lawful operation which could not be reasonably avoided, or actions within the living areas of a dwelling house.

Licensing: certain prohibited actions under the Wildlife and Countryside Act may be undertaken under licence by the proper authority. For example scientific study that requires capturing or disturbing protected animals can be allowed by obtaining a licence – e.g. bat surveys.

Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010 (as amended) (which are the principal means by which the EC Habitats Directive is transposed in England and Wales) update the legislation and consolidate all the many amendments which have been made to the Regulations since they were first made in 1994.

These regulations provide for the:

- protection of European Protected Species [EPS] (animals and plants listed in Annex IV Habitats Directive which are resident in the wild in Great Britain) including bats, dormice, great crested newts, and otters;
- designation and protection of domestic and European Sites - e.g. Site of Special Scientific Interest [SSSI] and Special Area of Conservation [SAC]; and
- adaptation of planning controls for the protection of such sites and species.

Public bodies (including the Local Planning Authority) have a duty to have regard to the requirements of the Habitats Directive in exercising their function – i.e. when determining a planning application.

There is no defence that an act was the incidental and unavoidable result of a lawful activity.

Licensing: it is possible for actions which would otherwise be an offence under the Regulations to be undertaken under licence issued by the proper authority. For example, where a European Protected Species has been identified and the development risks deliberately affecting an EPS, then a 'development licence' may be required.

Species protection

The following protected species information is relevant to this report. Legislation is only discussed in relation to planning and development; other offences may exist.

Reptiles

Adders, slow worms, grass snakes and common lizards are protected against killing and injuring under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it illegal to intentionally kill or injure a common reptile. As a result, reptiles must be removed from areas of development and relocated onto suitable release sites before any site works can commence.

Smooth snakes and sand lizards are European Protected Species under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). This makes it illegal to carry out the following activities:

- Deliberately or recklessly disturb, capture or kill these animals;
- Deliberately or recklessly take or destroy eggs of these animals;
- Damage or destroy a breeding site or resting place of such a wild animal; or
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal, or any part of, or anything derived from such a wild animal.