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REPTILE PRESENCE / ABSENCE SURVEY

At

The Oaks
Wrexham Industrial Estate
Wrexham
LL13 9RG

NGR: SJ 38806 49238

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EXECUTIVE SUMMARY

This report is written by Josh Howard BSc, Graduate Ecologist at United Environmental Services Ltd (UES). It provides an assessment of the potential impacts on reptiles as a result of a proposed development at The Oaks, Wrexham Industrial Estate, Wrexham.

Reptile presence / absence surveys were undertaken of the site across May to September 2023. The objective of the survey was to establish whether reptiles are present and using the site, and if so to determine the size class of any reptile population present.

An ecological records search of protected or otherwise notable species (including all reptile species) was undertaken as part of a Preliminary Ecological Appraisal (PEA) of the site, undertaken by UES in November 2022 (see report reference UES03918/02). A limited number of records of slow worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix helvetica* were returned from the wider Wrexham Industrial Estate.

The results of the record search and the PEA highlighted the requirement for further reptile surveys, as despite being predominantly covered by woodland and scrub, there is suitable reptile habitat on site in the form of grassland paths and rides throughout the scrub and at the edges. These areas provide foraging, commuting, basking, and hibernating opportunities for reptiles. The watercourses and ponds on site and at the site boundaries provide suitable foraging habitat for grass snakes, which predominantly predate amphibians. The habitats on site are considered to be broadly unsuitable to support adders, which are specialists of heathland, moorland, coastal and woodland edges habitats.

The wider surrounding area around the site comprises extensive areas of greenspace, predominantly arable and pasture fields with interconnecting field boundary hedgerow networks to the south and east. To the immediate north and west of the site extends Wrexham Industrial Estate. The buildings and road network within the industrial state will likely act as barriers to reptile movement.

No reptiles were recorded during the survey, and it is considered that reptiles are not using the proposed development site. As such, no further surveys or mitigation works specifically targeting reptiles are required.

This report should be read in conjunction with appendices 1 to 4, which give visual representations of the survey results. It should also be read in conjunction with the PEA that has been prepared for the site (reference UES03918/02).

1 INTRODUCTION

1.1 Author, surveyors, and qualifications

This report is compiled and written by Josh Howard BSc, UES Graduate Ecologist.

Other surveyors include:

- Daniel Smith BSc MScRes, UES Ecologist
- Bethan Beeston BA, UES Trainee Ecologist
- Noah Fulton BSc, UES Graduate Ecologist
- Ben Cowell, UES Sub-contractor
- Ella Wilding, UES Sub-contractor

All surveyors have the knowledge, skills and experience identified within CIEEM's "Competencies for Species Survey: Reptiles" (2013) or were under the supervision of a surveyor with the required competencies.

1.2 Survey objectives

UES were commissioned in December 2022 to conduct site surveys which include the following activities:

- Establish the presence / absence of reptiles on site.
- Provide advice on any potential requirement for mitigation or compensation.

1.3 Proposed development and previous survey information

At this stage, no detailed proposals have been submitted to UES.

A PEA was undertaken of the site by UES, including an ecological records search and walkover survey in November 2022 (see report reference UES03918/02).

1.4 Structure of the report

This report sets out the methodology, results, and recommendations in relation to a specific reptile survey. Recommendations are in line with statutory legislation and planning policy objectives.

This report should be read in conjunction with appendices 1 to 4, which give visual representations of the survey results. It should also be read in conjunction with the PEA that has been prepared for the site (reference UES03918/02).

2 METHODOLOGY

2.1 Desk study

As part of the PEA undertaken of the site in November 2022, UES were commissioned to undertake a record search, through COFNOD, of protected or otherwise notable species (including all reptile species) within 2km of the proposed development site.

2.2 Field survey

The methodology of the field survey broadly follows that detailed in Froglife Advice Sheet 10: Reptile Survey (1999), which is used as a standard technique for reptile surveys across the UK.

Three standard survey techniques were employed in the search for reptiles: a walkover survey, *in situ* refugia and artificial refugia. To ascertain presence or likely absence of reptiles on a site, seven site visits are required. If reptiles are found to be present, further site visits are required to assess the size classes of any reptile population present.

2.2.1 Walkover survey

Surveyors walked slowly between refugia locations, examining suitable basking places to record any incidental sightings of reptiles.

2.2.2 *In situ* refugia

Where present, log piles and discarded potential refugia, such as corrugated sheet materials, were examined during site visits. Where considered necessary by the project ecologist, destructive searches of log piles were conducted to ensure no reptiles or other signs of reptiles, such as sloughed skins, were missed. These searches were undertaken with care to ensure that no reptiles were harmed. Log piles were then returned to their original state once the search was complete.

2.2.3 Artificial refugia

Artificial refugia were laid throughout the suitable reptile habitats on site and examined on each site visit.

Refugia consisted of bitumen coated corrugated sheets and felt as well as metal corrugated sheets, all of which measured approximately 0.5m x 0.5m. These refugia warm up quickly and retain heat, thus attracting reptiles. A combination of materials was used as each material has different thermal properties. Metal sheets gain and lose heat quicker than bitumen coated sheets, and therefore each can be more suitable to different reptiles in different situations. The refugia were collected upon completion of the survey work.

Froglife (1999) guidance recommends a density of 10 artificial refugia per hectare of suitable habitat, however it is recognised that other guidelines recommend in some instances a higher density is needed to fully assess reptile use of a site. The total survey area was approximately

23 hectares, however the majority of the site is composed of dense scrub which is impenetrable and not possible to survey. These large areas of scrub are of limited suitability for use by reptiles. Areas of suitable reptile habitat on site are limited to small areas of grassland and grassland paths that run through the scrub habitats, and the margins of the scrub. As such, 175 artificial refugia were deployed across the site. This number of refugia was deemed sufficient to establish reptile presence or likely absence on the site given that the majority of the site comprises dense scrub that is of sub-optimal quality for reptiles/

The refugia were left to bed down for 14 days prior to the first checks. This was to allow the refugia to develop favourable conditions, such as suitable humidity and temperature gradients, and for any reptiles present to become more familiar with them.

2.3 Timings and weather conditions

Table 1 – Survey dates and weather conditions

SITE VISIT N^{O}	DATE	TEMP. (°C)	CLOUD COVER (%)	WIND	RAIN
Refugia laid	25/04/23	13ºC	60%	Light breeze	No
1	11/05/23	13ºC	50%	Light breeze	No
2	23/05/23	15ºC	15%	Calm	No
3	09/06/23	20ºC	0%	Calm	No
4	16/06/23	21ºC	0%	Calm	No
5	26/07/23	18ºC	100%	Light breeze	No
6	11/08/23	20ºC	60%	Light breeze	Light rain
7	11/09/23	15ºC	50%	Calm	No

2.4 Survey limitations

Approximately 60 refugia were lost over the duration of the surveys. This was considered to be partly due to vegetation growth engulfing the refugia over the course of the survey period, in addition to interference and removal by members of the public accessing the site. By the end of the survey, 115 refugia were still deployed on site. The number of refugia decreased gradually throughout the surveys and the majority of the refugia were present during the initial surveys. This is not considered to be a significant limitation as a large number of refugia were present during all of the survey visits.

3 RESULTS

3.1 Desk study

Records of slow worm, adder and grass snake were returned, all of which are located within Wrexham Industrial Estate, over 400m to the north-west and south-west of the site boundary. The single grass snake record dates from 2018, and the two slow worm and adder records date from 'before 2009' and 'before 1999', respectively.

3.2 Habitat assessment

The site has an area of approximately 23ha and is generally dominated by dense scrub. Small stands of semi-improved grassland are present across the site including glades and pathways through the scrub. Other habitats present on site include hardstanding access tracks and small areas of marshy grassland, tall ruderal vegetation, bare ground, scattered broadleaved trees and ephemeral / short perennial vegetation. The southern section of the site contains stands of woodland.

The large areas of scrub are of limited suitability for use by reptiles and areas of high-quality reptile habitat are limited to small areas of grassland and the edges of the scrub. These areas provide foraging, commuting, basking, and hibernating opportunities for common reptile species.

The River Clywedog flows along the southern site boundary and Redwither Brook flows along the western boundary. Additionally, a number of ponds are present on site and are known to support numerus amphibian species, however the majority dry annually. These freshwater features provide suitable foraging and commuting habitat for grass snakes, which predominantly predate amphibians.

The habitats on site are considered to be broadly unsuitable to support adders, which are specialists of heathland, moorland, coastal and woodland edges habitats.

The immediate surrounding area (within 0.5km) comprises agricultural and pasture fields to the south and east, with interconnecting field boundary hedgerows, interspersed with broad-leaved trees. Wrexham Industrial Estate extends to the north and west, with numerous roads and urbanised areas. The surrounding fields and hedgerows will provide some foraging and commuting opportunities for reptiles and provide connectivity to higher quality habitat further afield.

The wider surrounding area (2km) is similar in composition, with arable and pasture fields containing networks of field boundary hedgerows dominating the landscape to the south and east. Wrexham and Wrexham Industrial Estate lie to the north and west.

3.3 Presence / absence survey

No reptiles were recorded during the survey.

Numerous short-tailed field vole *Microtus agrestis* and common shrew *Sorex araneus* were observed using refugia spread across the site.

The following amphibians were observed using the refugia during the surveys:

- A single great crested newt (GCN) was observed during Visit 2 on the 23rd May 2023
- Five GCN were observed during Visit 5 on the 26th July 2023
- Two GCNs were observed during Visit 6 on the 11th August 2023
- A single smooth newt was observed during Visit 7 on the 11th September 2023.

All amphibians observed were using a small collection of refugia in the eastern section of the site (see Appendix 1).

4 EVALUATION AND RECOMMENDATIONS

4.1 Evaluation of results

The majority of the site is composed of dense scrub and woodland, which are of some, albeit limited suitability for reptiles. The grassland rides and pathways throughout the scrub, in addition to a small number of larger areas of grassland provide high-quality reptile habitat and the onsite ponds and watercourses at the site boundaries provide suitable foraging and commuting opportunities for grass snakes.

No reptiles were found on site during any of the presence / absence surveys.

4.2 Impacts

No reptiles were recorded during the presence / absence survey. As such it is considered that reptiles are not present on site or within the immediate vicinity of the site. It is considered highly unlikely that the proposed development of the site will adversely impact reptiles, therefore no further surveys or mitigation works specifically targeting reptiles are required.

4.3 Mitigation and compensation measures

No specific mitigation or compensation measures are required specifically targeting reptiles. However, where possible, suitable reptile habitat should be retained and protected as part of the development, as it will form suitable habitat for other species and could allow for reptile colonisation of the site in the future.

Mitigation and compensation measures are required to protect GCNs and other amphibians, however these are discussed separately in the GCN population size class assessment report that has been prepared for the site (see report reference UES03918/34).

5 CONCLUSION

Reptile presence / absence surveys were undertaken of the site across May to September 2023. The objective of the survey was to establish whether reptiles are present and using the site, and if so to determine the size class of any reptile population present.

No reptiles were recorded during the survey, and it is considered that reptiles are not using the proposed development site. As such, no further surveys or mitigation works specifically targeting reptiles are required.

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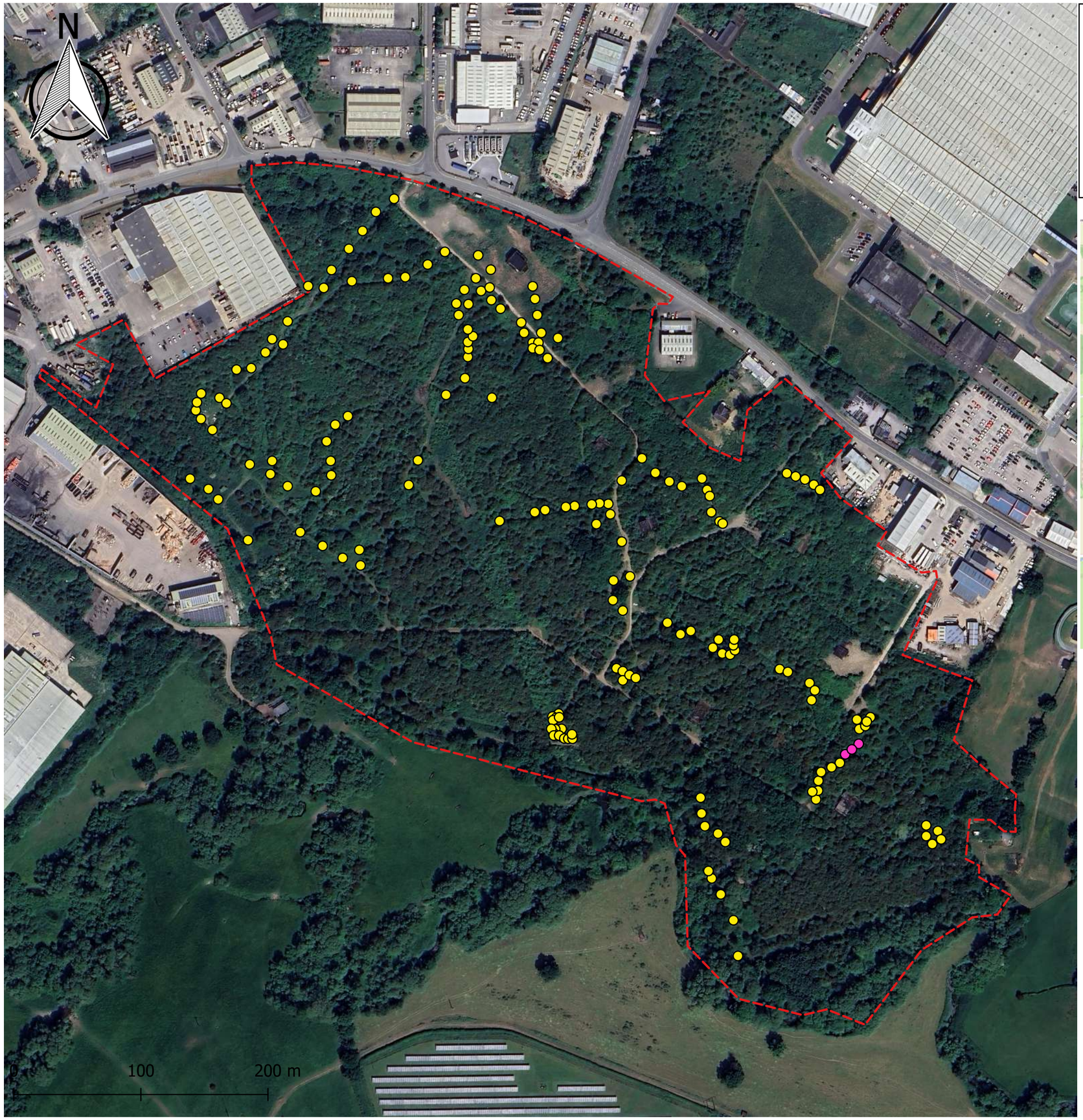
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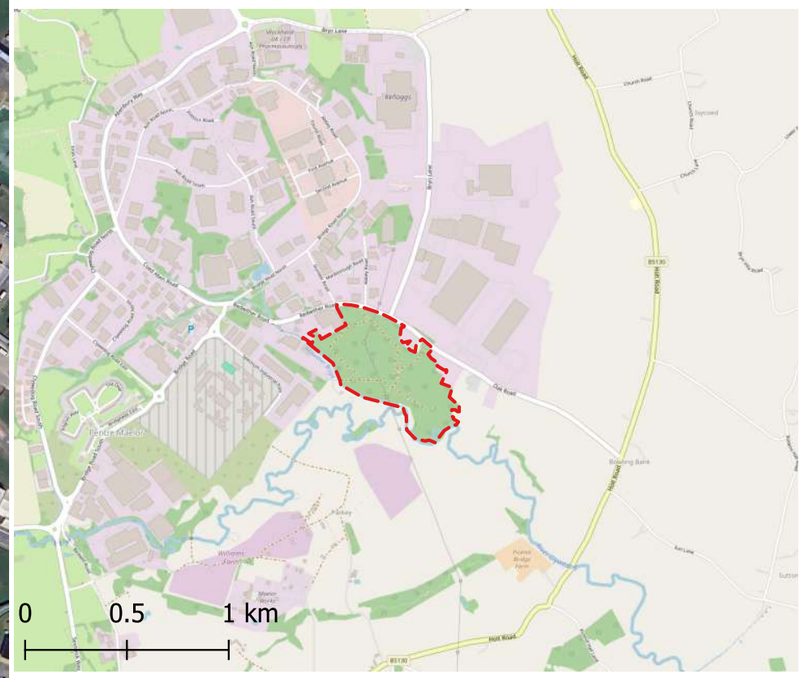
APPENDICES

Appendix 1 – Site plan

Reptile Survey Plan

Site: The Oaks, Wrexham
NGR: SJ 38699 49320
Author: Tom Kenwright
Date: 29/11/2024





KEY:

- Artifical refugia
- Artifical refugia used by amphibians
- Survey boundary

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Appendix 2 – Aerial photographs


The Oaks, Wrexham Industrial Estate
Close aerial photograph
Survey boundary
Map data © 2023 Google, Imagery © 2023 Google


The Oaks, Wrexham Industrial Estate
Wide aerial photograph
Site location
Map data © 2023 Google, Imagery © 2023 Google

Appendix 3 – Photographs



Photograph 1 – Example of dense scrub that dominates the site.



Photograph 2 – Area of woodland with dead wood and dense cover of leaf litter and limited ground flora.



Photograph 3 – One of four ponds on site.



Photograph 4 – Example of small areas of grassland used as footpaths.



Photograph 5 – Small area of open semi-improved grassland within the site.

Appendix 4 – Statutory and planning context

STATUTORY AND PLANNING CONTEXT

Ecological assessments

Ecological assessments play an important part within the planning context; they include an initial assessment which highlights any specific interests of a site. From the initial site assessment, the surveyor assesses the suitability of habitats within the site to support protected species and makes recommendations for further survey works if required. The following paragraphs provide a brief interpretation of the legislative protection that is relevant to the findings of this report.

Habitats

Section 7 of the Environment Act (Wales) places a duty on Welsh Ministers to publish, review and revise lists of types of habitats and species in Wales which they consider are of key significance to sustain and improve biodiversity. The Welsh Ministers must also take all reasonable steps to maintain and enhance the habitats published in these lists, and encourage others to take such steps.

Amphibians

<u>Great crested newts</u>

Great crested newts (GCN) *Triturus cristatus* and their habitat (aquatic and terrestrial) are afforded full protection by the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture GCN
- Deliberately, intentionally or recklessly disturb GCN in such a way to be likely to significantly affect:
    - their ability to survive, breed, reproduce, rear or nurture their young
    - their ability to hibernate or migrate
    - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of GCN
- Damage or destroy breeding sites or resting places of GCN
- Intentionally or recklessly disturb sheltering GCN, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead GCN, any part of GCN or anything derived from GCN

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

GCN are also protected by the Protection of Animals Act 1911, which prohibits cruelty and mistreatment. Releasing a GCN in such a way as to cause undue suffering may be an offence under the Abandonment of Animals Act 1960.

In addition to the above, there are various statutory provisions relating to the transport of animals, designed to ensure their welfare. GCN are also listed under Section 7 of the Environment (Wales) Act 2016.

It is important to identify the presence of GCN individuals and also to identify suitable habitat on sites so that legal obligations regarding this species can be observed. If a survey identifies the presence of GCN on the site, an assessment of the population size class is required. This can then inform a mitigation scheme, which would need to be developed in liaison with the local Natural Resources Wales (NRW) team, and which minimises direct threats to newts and compensates for any loss of habitat. A licence issued by NRW is required for the legal implementation of a mitigation scheme.

An NRW mitigation licence application requires a Mitigation Method Statement and a Reasoned Statement of Application. The Mitigation Method Statement contains details of the proposed mitigation works. The Reasoned Statement needs to provide a rational and reasoned justification as to why the proposed development meets the requirements of the Conservation (National Habitats & c.) regulations 1994, namely Regulations 44(2)(e), (f) or (g), and 44(3)(a).

Other amphibians

More common British amphibians, such as common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *Triturus helveticus* are protected only by Section 9(5) of the Wildlife and Countryside Act 1981 (as amended). This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy.

The above named species are also listed as UK Species of Conservation Concern. Due to general declines in most British amphibian species in recent years, many local authorities require amphibian surveys as a planning condition, or as part of environmental information submitted as part of a planning application, even where the presence of GCN is ruled out.

Natterjack toad *Bufo calamita* and pool frog *Pelophylax lessonae* are also offered the same level of protection as GCN, through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017.

Natterjack and common toad are also listed under Section 7 of the Environment (Wales) Act 2016.

Water bodies that support all five (more common) species of British amphibians in high numbers, may be afforded protection in local plans, as Sites of Importance for Nature Conservation (SINC), or a similar equivalent, for sites of local importance. A site may require statutory protection as a Site of Special Scientific Interest (SSSI).

Reptiles

Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure any of the species listed above
- Sell, offer, advertise or transport for sale a live or dead animal of the species listed above

If a proposed development is likely to have an impact on these reptiles the local statutory nature conservation organisation must be consulted.

Sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* receive full protection under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2017. Read together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture any sand lizards or smooth snakes
- Deliberately, intentionally or recklessly disturb sand lizards or smooth snakes in such a way to be likely to significantly affect:
    - their ability to survive, breed, reproduce, rear or nurture their young
    - their ability to hibernate or migrate
    - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of such an animal
- Damage or destroy breeding sites or resting places of such animals
- Intentionally or recklessly disturb sheltering sand lizards or smooth snakes, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead sand lizards or smooth snakes, any part of such an animal or anything derived from such an animal

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

All reptile species (except for smooth snake) are also listed under Section 7 of the Environment (Wales) Act 2016.

Planning Policy

National planning guidance is issued in the form of Planning Policy Wales (PPW - 2018). The most relevant sections are included in Chapter 6: Distinctive and Natural Places. This chapter details the policies on issues such as the protection of trees, woodlands, species, and designated sites. The document is free and available to view online