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REPTILE PRESENCE / ABSENCE SURVEY

At

Plot 3A

Wrexham Industrial Estate
Bryn Lane
Wrexham
LL13 9UT

NGR: SJ 339340 350457

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A handwritten signature in black ink, reading 'K James', is positioned below the 'Approved by' line of the table.

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EXECUTIVE SUMMARY

Reptile presence / absence surveys have been undertaken at Plot 3A, Wrexham Industrial Estate, Wrexham by United Environmental Services (UES) Ltd across April to September 2022.

The objective of the surveys was to establish whether or not reptiles are present on 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 completed as part of a Preliminary Ecological Appraisal (PEA) that was undertaken of the site by UES in August to September 2021. A walkover survey was conducted in June 2022 to inform an updated PEA (see report reference Updated V2 UES03448/01). Records of common lizard *Zootoca vivipara*, slow worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix natrix* were returned from within 2km of the proposed development site; specifically, Wrexham Industrial Estate within a range of 700m-1.2km west of the site.

The development site has an area of approximately 20.9ha comprising large semi-improved species-rich grassland fields interspersed with ponds, small stands of woodland, hedgerows and scattered trees. Large areas of the site have succeeded into dense scrub, and areas of bare ground and ephemeral / short perennial are present on previously developed land within the south-eastern section of the site. The south-western section of the site contains an area of amenity grassland and a large hardstanding compound used to store vehicles. A shallow stream runs along the northern site boundary and wet ditches are present along the eastern and western boundaries.

The site boundary was amended as part of the June 2022 PEA to incorporate an additional 4.5ha of mitigation land. The two intensively managed agricultural fields provide limited opportunities for reptiles, however, the hedgerows and trees along the boundaries and willow scrub around the pond are of greater suitability for reptiles.

The small areas of woodland edge, areas of dense scrub, the bases of hedgerows and tall ruderal present throughout the site are broadly suitable for use by reptiles as they provide multiple opportunities for foraging, commuting, basking and sheltering.

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 north, east and south. To the immediate 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. Higher quality habitat is present further afield including Wrexham Industrial Estate Wildlife Site located 30m south-west, at its closest point, which contains unmanaged grassland and ancient broad-leaved woodland.

No reptiles were recorded during the 2022 surveys, as such it is considered that reptiles are not present on site. It is considered highly unlikely that the proposals will adversely impact reptiles, therefore no further surveys or mitigation works specifically targeting reptiles are required.

The 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 (see report reference Updated V2 UES03448/01).



1 INTRODUCTION

1.1 Author, surveyors, and qualifications

This report is compiled and written by Noah Fulton, UES Graduate Ecologist. Other surveyors included:

- Tom Kenwright BSc MSc, UES Senior Ecologist
- Alastair Grubb BSc, UES Senior Ecologist
- Daniel Smith BSc MScRes, UES Ecologist
- Jacob Miller BSc, UES Graduate Ecologist
- Robert Mooney MSc, UES Graduate Ecologist
- James Stubbs BSc, UES sub-contractor
- Michael Bradley, 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 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

The development proposals are for the construction of three industrial units with associated parking and access roads.

A preliminary ecological appraisal was undertaken of the site by UES in August and September 2021. A walkover survey was conducted in June 2022 to inform an updated PEA (see report reference Updated V2 UES03448/01).

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.

The 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 (see report reference Updated V2 UES03448/01).



2 METHODOLOGY

2.1 Desk study

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 metal and bitumen sheets, were examined during site visits.

2.2.3 Artificial refugia

Artificial refugia were laid throughout 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 were 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 site area is approximately 20.9 hectares, as such 225 artificial refugia were deployed at the site. The resulting refugia density of 10.8 refugia per hectare was deemed sufficient to establish reptile presence or likely absence given that a percentage of the site has low suitability to support reptiles.



The refugia were left to bed down for more than 14 days prior to the first checks. During this time they develop favourable conditions, such as suitable humidity and temperature gradients, and the reptiles 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	14/03/2022	10	100	Light Breeze	Light Rain
1	04/04/2022	10	100	Light Breeze	Dry
2	08/04/2022	8	50	Very Light Breeze	Dry
3	11/04/2022	8	100	Moderate Breeze	Dry
4	13/04/2022	14	50	Light Breeze	Light Drizzle
5	14/04/2022	14	30	Light Breeze	Dry
Refugia re-laid	30/06/2022	15	60	Calm	Light Rain
6	04/07/2022	14	40	Calm	Dry
7	11/07/2022	28	10	Calm	Dry
8	01/08/2022	21	80	Very Light Breeze	Dry
9	11/08/2022	27	0	Calm	Dry
10	15/08/2022	19	50	Light Breeze	Light Drizzle
11	11-12/09/22	15 to 18	75	Light Breeze	Light Drizzle
12	26/09/2022	14	70	Moderate breeze	Dry - Rain
13	04/10/2022	17	100	Light breeze	Light Drizzle

2.4 Survey limitations

A number of the refugia sheets were damaged prior to survey six being conducted. Replacement traps were re-laid on the 30th June 2022 and additional surveys have been undertaken.

The open central sections of the fields were excluded from the survey area due to their poor suitability to support reptiles. Instead, refugia were concentrated along linear features such as woodland borders, hedgerows and areas of scrub, which offer the highest value habitat for reptiles on site.

Since the initial walkover survey, the site boundary has been amended to incorporate an additional 4.5ha of mitigation land. Although the field boundaries have suitability to support



reptiles this area was excluded from the survey area as it forms part of the mitigation proposals only and will not be subject to development.



3 RESULTS

3.1 Desk study

Records of common lizard, slow worm, adder and grass snake were all identified within Wrexham Industrial Estate between 700m-1.2km west of the proposed development site. The common lizard and grass snake records date from 2020 and 2018. Records of slow worm and adder date from 'before 2009' and 'before 1999'.

3.2 Habitat assessment

The site has an area of approximately 23.2ha and is located on the north-eastern edge of Wrexham Industrial Estate, to the east of the city of Wrexham. Habitats within the development boundary comprise semi-improved neutral grassland, scrub, broad-leaved scattered trees, broad-leaved woodland, marshy grassland, amenity grassland, tall ruderal, ponds, ditches, amenity grassland, ephemeral / short perennial, hedgerows, buildings and areas of hard-standing.

The areas of grassland, woodland edge, hedgerow, scrub and ephemeral / short perennial vegetation on site provide an array of suitable reptile habitats and provide foraging, commuting, basking and hibernating opportunities for slow worm, grass snake and common lizard. The drains and the ponds on site further provide suitable foraging habitat for grass snake, 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 north, east and south with interconnecting field boundary hedgerows, interspersed with broad-leaved trees. Wrexham Industrial Estate extends to the south-west with extensive areas of hardstanding. The surrounding fields and hedgerows will provide some foraging and commuting opportunities and will provide connectivity to higher quality habitat further afield, such as Wrexham Industrial Estate Wildlife Site to the southwest. Wrexham Industrial Estate Wildlife Site contains unmanaged grassland and ancient woodland, which will provide sunny woodland edge transitional zones that are important interfaces for reptiles. These habitats will contain a greater diversity of plant species and habitat structure that will provide warmth and shelter, access to cover to escape from predators, adequate habitat connectivity, climatically stable sites for hibernation, temporal continuity, and a broad expanse of habitat.

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 north, east and south. Wrexham and Wrexham Industrial Estate lie to the west.

3.3 Presence / absence survey

No reptiles were recorded during the survey. Species recorded include short-tailed field vole *Microtus agrestis*, common shrew *Sorex araneus*, common toad *Bufo bufo*, great crested newt (GCN) *Triturus cristatus* and weasel *Mustela nivalis* (see Table 2 below).



Table 2 - Survey results

SPECIES	DATE	LOCATION (ARTIFICIAL REFUGIA NUMBER)
Short-tailed field vole <i>Microtus agrestis</i>	11 th April 2022	118
	13 th April 2022	42
	11 th September 2022	14, 136, 198, 210, 220
	26 th September 2022	35
Common shrew <i>Sorex araneus</i>	4 th April 2022	111
	11 th September 2022	130
	26 th September 2022	31 & 61
Common toad <i>Bufo bufo</i>	4 th April 2022	114
	8 th April 2022	11
	1 st August 2022	48, 108, 160
	11 th September 2022	135 and grid reference SJ3951850404 & SJ907750407
	26 th September 2022	32, 57 (x2), 149, 199
	4 th October 2022	183, 134 (x2), 204, 38 & 59
Great crested newt <i>Triturus cristatus</i>	4 th April 2022	62
	4 th October 2022	186 (x1 female), 14 (x2 female) & 59 (x1 juvenile)
Weasel <i>Mustela nivalis</i>	26 th September 2022	55



4 EVALUATION AND RECOMMENDATIONS

4.1 Evaluation of results

Whilst the habitats at the boundaries of the site and in the surrounding area are broadly suitable for use by common species of reptile, the majority of the site is broadly unsuitable as it comprises semi-improved grassland that is presently maintained with a short sward through cutting.

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

4.2 Impacts

No reptiles were recorded during the 2022 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 proposals 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 statutorily required specifically targeting reptiles. However, where possible, suitable reptile habitat should be retained and protected as part of the development.

The mitigation proposals which will form part of the GCN European Protected Species Licence will also provide suitable habitats for reptiles locally.



5 CONCLUSION

A reptile presence / absence survey was completed by UES at Plot 3A, Wrexham Industrial Estate, Wrexham. No reptiles were recorded during the survey. Therefore, no mitigation or compensation measures which specifically target reptiles are required.



6 REFERENCES

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Department for Communities and Local Government (2021). *National Planning Policy Framework*.

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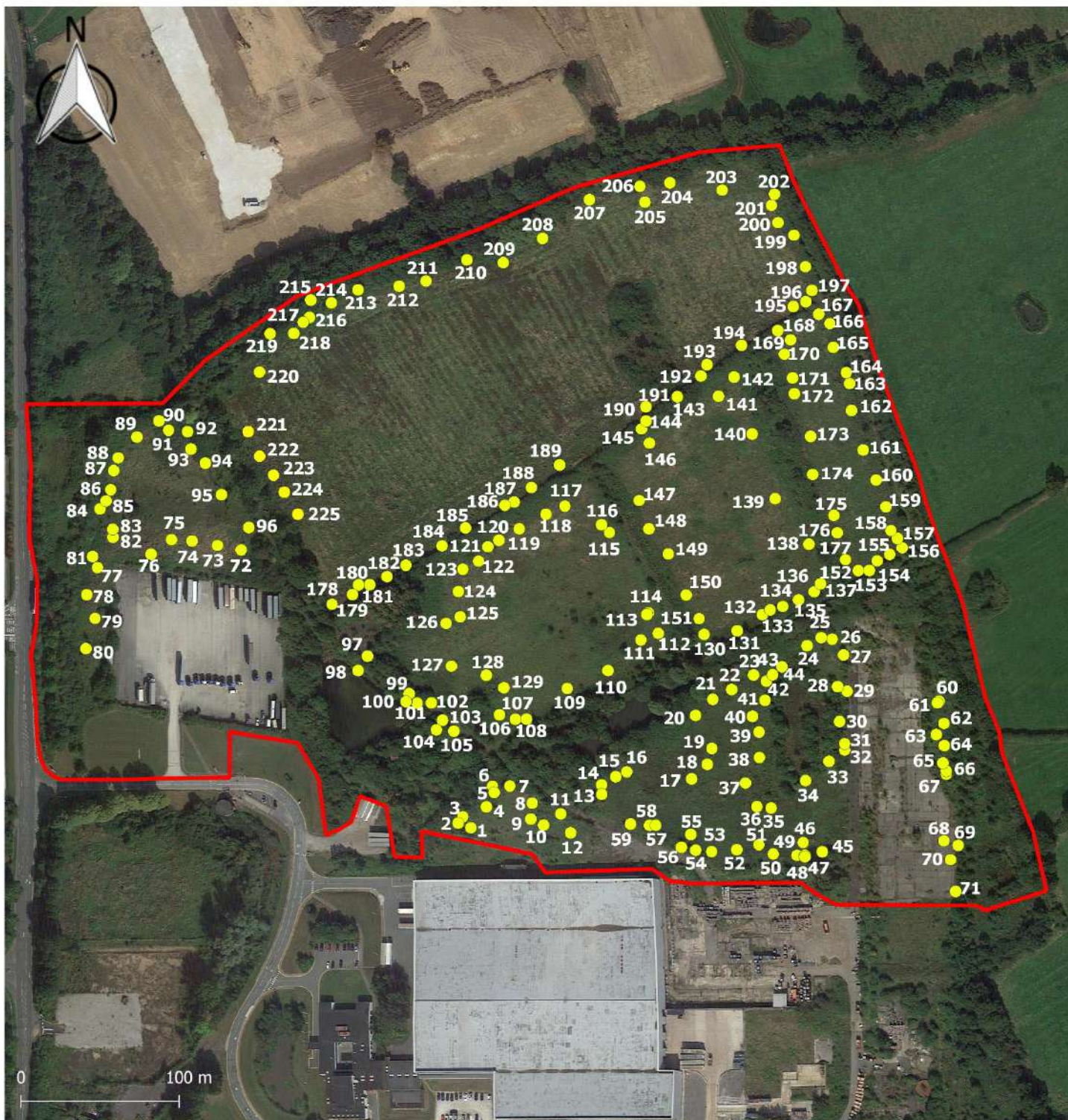
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APPENDICES

Appendix 1 – Site plan



Reptile Presence / Absence Survey

Site: Plot 3A, Wrexham
NGR: SJ 39250 50410
Author: Daniel Smith
Date: 31/03/2022



KEY:

- Trap locations
- Survey boundary

THIS PLAN IS BASED UPON OpenStreetMap® AND IS OPEN DATA, LICENSED UNDER THE OPEN DATA COMMONS OPEN DATABASE LICENCE (ODbL) BY THE OpenStreetMap FOUNDATION.

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Appendix 2 – Aerial photographs



Plot 3a – Wrexham Industrial Estate

Close aerial photograph

— Survey boundary





Plot 3a – Wrexham Industrial Estate

Wide aerial photograph

 Site location





Appendix 3 – Photographs



Photograph 1 – Small area of woodland within the central section of the site, located in close proximity to Pond 1.



Photograph 2 – Small stand of woodland within the central southern section of the site, surrounding Pond 2.



Photograph 3 – Looking towards the offsite woodland edge that borders the northern site boundary.



Photograph 4 – Looking towards an area of dense willow scrub.



Photograph 5 – Looking towards an area of mixed species scrub on site.



Photograph 6 – Example of scattered scrub encroaching upon the areas of grassland.



Photograph 7 – Example areas of tall ruderal vegetation on site.



Photograph 8 – The ditch along the eastern site boundary is heavily vegetated and is being encroached by scrub.



Photograph 9 – Example of hardstanding in the south-eastern section of the site with significant encroachment from scattered scrub and ephemeral / short perennial vegetation.



Photograph 10 – Example of hardstanding in the south-eastern section of the site with significant encroachment from scattered scrub and ephemeral / short perennial vegetation.



Photograph 11 – Looking east along Hedgerow 2.



Photograph 12 – Looking north towards Hedgerow 4.



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

Great crested newts

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