



# **Preliminary Environmental Information Report**

## **Volume 4 Appendix 7.8**

Reptile Survey Report 2023



# Reptile Survey Report 2023

River Thames Scheme

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## Introduction

### Background

WSP Binnies Joint Venture (WBi) was commissioned by the Environment Agency (EA) in 2023 to undertake a reptile survey of all potentially suitable habitats within the River Thames Scheme (hereafter referred to as RTS, or 'the Project'), including several priority areas for habitat creation, enhancement and mitigation.

The Preliminary Ecological Appraisal (PEA) undertaken in 2022 (GBJV, 2023) identifies the sites with suitability to support reptiles at the time of survey. Surveys for reptiles were carried out across suitable sites within the RTS project area between April and September 2023.

### Scheme description and proposed development

The RTS, pending Outline Business Case approval and Development Consent Order (DCO) approval from the Secretary of State, will include large-scale engineering works to construct a new flood channel measuring between 20 and 50 metres wide and 8km long. The new flood channel will be built in two sections (the Runnymede Channel and the Spelthorne Channel) and connect to a series of existing lakes, between Egham Hythe and Desborough Island. The Project will also include capacity improvements works comprising bed lowering of the River Thames downstream of the Desborough Cut, increasing the capacity of existing weirs at Sunbury, Molesey and Teddington, and works across several areas for habitat creation, enhancement and mitigation:

- Land South of Wraysbury Reservoir
- Royal Hythe
- Laleham Reach
- Former Laleham Golf Course
- Littleton Lane
- Sheepwalk Lakes
- Sheepwalk
- Land West of Sheepwalk
- Manor Farm
- Land South of Chertsey Road
- Desborough Island
- Land between Desborough Cut and Engine River
- Abbey River
- Abbey Meads
- Drinkwater Pit
- Penton Park

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- Grove Farm
- Norlands Lane

The proposed Runnymede and Spelthorne channels, weirs and priority areas for habitat creation are collectively referred to as the area within the Project Boundary for Environmental Impact Assessment (EIA) Preliminary Environmental Information Report (PEIR).

### Previous Surveys

Reptile surveys have previously been undertaken based on earlier project footprints.

Reptile surveys were undertaken in 2021 at six areas within a former iteration of the Project boundary (AECOM, 2021). Reptile survey locations were informed by Phase One Habitat Surveys (P1HSs) undertaken in 2020 (GBV 2021a – GBV 2021g). During the 2021 reptile surveys Royal Hythe, Area South of Thorpe Hay Meadow (referred to as Field East of Meadlake in the Preliminary Ecological Appraisal (GBJV 2023)), Abbey Meads, Sheepwalk and Land West of Sheepwalk (previously collectively known as Area south of Sheepwalk Lakes) and Land South of Chertsey Road (previously known as Area West of Ferry Lane Lake) were found to have low populations of grass snake *Natrix helvetica*. Manor Farm had a good breeding population of grass snake, with male, female and juveniles present.

Galliford Binnies JV Ltd (Binnies) conducted reptile surveys at seven potential HCAs in 2021 (GBJV, 2021). Low populations of grass snakes were present within Penton Hook and Desborough Island. No reptiles were recorded at the remaining sites. These results are presented in Table 1-1.

**Table 1-1: Summary of Binnies 2021 survey results**

Site	Date	Survey activity	Results	Refugia no.
Desborough Island	13/07/2021	Direct observation	Adult male grass snake	N/A
	13/07/2021	Direct observation	Juvenile grass snake	N/A
Land between Desborough Cut and Engine River	-	-	-	-
Funky Footprints	-	-	-	-
Land South of Chertsey Road (previously Area West of Ferry Lane Lake)	-	-	-	-
Penton Hook	13/07/2021	Direct observation	Adult male grass snake	N/A

Site	Date	Survey activity	Results	Refugia no.
	13/07/2021	Direct observation	Juvenile grass snake	N/A
<b>Hurst Park (now descoped)</b>	-	-	-	-
<b>Ockwells Park (now descoped)</b>	-	-	-	-

### Scope of the report

The brief provided to WBi for this reptile survey is as follows:

- To assess historic records of all reptile species provided by the local biological records centres;
- To evaluate habitats within the project boundary for EIA PEIR in relation to their value for reptiles;
- To undertake reptile surveys to determine presence or likely absence of reptiles within the project boundary for EIA PEIR;
- To provide recommendations to enable compliance with relevant nature conservation legislation and planning policy; and
- To identify the need for avoidance, mitigation, compensation and/or enhancement of the proposed options of the Scheme.

### Legislation

All native species of reptiles are protected under the Wildlife and Countryside Act 1981, making it illegal to intentionally kill or injure a common reptile. Rare reptiles (smooth snake and sand lizard) also receive legal protection under the Conservation of Habitats and Species Regulations 2017 (as amended).

It is illegal to deliberately injure, kill, capture or disturb a rare reptile, or to damage or obstruct any place used for shelter or protection. Rare reptiles may only be handled by licensed ecologists.

All reptile species are species of principal importance under the Natural Environment Rural Communities (NERC) Act 2006, and local authorities and other public bodies have a legal duty to take their conservation into account. Because of this they are a material consideration in the planning process.

For further details of reptiles and their legal protections, refer to Appendix D.

### Site Locations

Potentially suitable habitats within the project boundary for EIA PEIR, as highlighted during the Preliminary Ecological Appraisal (GBJV 2023), were the subject of detailed habitat surveys to confirm the potential for suitable reptile habitat. These habitats

included grasslands, mosaic habitats, habitats in close proximity to waterbodies and the understorey of lines of trees and scrub edges. These areas are considered to provide suitable habitat for commuting, foraging and basking. Note that an additional site beyond the project boundary for EIA PEIR, at Sweep's Ditch, was also included in the reptile survey area.

Table 1-2 contains the central grid references and nearest postcodes for the areas which were subject to reptile habitat suitability assessments for the 2023 reptile surveys, together with a habitat description for each site. Locations are shown on drawing [ENVIMSE500260-CBI-ZZ-3ZZ-DR-EN-00026](#).

**Table 1-2: Habitat description for potential reptile survey sites**

Site	Central grid reference	Nearest postcode	Site Description
<b>Royal Hythe</b>	TQ 0323 7052	TW20 8EL	Grassland used as cattle pasture. Small patches of wet and other broadleaved woodland.
<b>Norlands Lane</b>	TQ 0275 6926	TW20 8TE	Grassland on landfill. Woodland and large pond. Horse pasture and wooden stables.
<b>Area east of Lake south of Green Lane</b>	TQ 0332 6948	TW18 3LJ	Previously used as a landfill, now a grassland with a woodland and built up areas and gardens.
<b>Thorpe Park Lakes and adjacent land</b>	TQ 0376 6809	KT16 8PU	Several lakes surrounded by fragmented woodland and grassland.
<b>St Ann's Lake</b>	TQ 0284 6812	KT16 8PH	A large lake surrounded by grassland and woodland.
<b>Laleham Reach North</b>	TQ 0457 6915	KT16 8RT	Grassland bordered by residential properties.
<b>Laleham Reach South</b>	TQ 04761 6884	KT16 8QS	Grassland being used as horse pasture. Pond surrounded by wet woodland.
<b>Former Laleham Golf Course</b>	TQ 0453 6810	KT16 8QE	Grassland previously managed as a golf course. 5 ponds and a standing body of water.
<b>Abbey Lakes 1 &amp; 2</b>	TQ 0414 6783	KT16 8PW	Large lakes.
<b>Abbey Meads</b>	TQ 0490 6749	KT16 8RN	Grassland with Burway Ditch running through it.
<b>Abbey River (confluence with River Thames)</b>	TQ 0514 6715	KT16 8JW	Different types of woodland habitat and grassland. Abbey River runs through centre of area connecting to River Thames. Built up areas associated with care home.

Site	Central grid reference	Nearest postcode	Site Description
<b>Littleton East Lake (part of Sheepwalk Lakes)</b>	TQ 0646 6761	TW17 0JH	Lake surrounded by woodland and mosaic of developed surfaces.
<b>Littleton Lane</b>	TQ 0594 6775	TW17 0NF	Area used as construction site.
<b>Littleton North Lake and surrounding area</b>	TQ 0552 6752	TW18 1SX	Large lake surrounded by woodland and reedbeds. Developed land to the east comprised of buildings and hardstanding sealed surfaces.
<b>Land West of Sheepwalk</b>	TQ 0610 6700	TW17 9NX	Developed land including concrete roads, car park, metal corrugated building and office buildings. Grassland used as horse pasture and woodland.
<b>Sheepwalk</b>	TQ 0657 6697	TW17 9NU	Previously a landfill site, mixed scrub and tall ruderal habitats on previously developed land. Fragmented woodland.
<b>Funky Footprints</b>	TQ 0760 6729	TW17 9AL	A large lake surrounded by grassland and woodland.
<b>Manor Farm</b>	TQ 0727 6710	TW17 9NN	Previously developed land, with a pond in centre surrounded by reedbeds and wet woodland.
<b>Land South of Chertsey Road</b>	TQ 0695 6639	TW17 9NL	Large cow-grazed grassland with an area of scrub, a wet ditch and several tree lines.
<b>Ferry Lane Lake (Ferris Meadow)</b>	TQ 0767 6623	KT13 8LX	Lake surrounded by grassland and scattered fragmented woodland.
<b>Desborough Island</b>	TQ 0814 6624	KT12 1QP	A recreational grassland with areas of woodland, tall ruderal and lines of trees.
<b>Drinkwater Pit</b>	SU 9984 6690	GU25 4JL	Grassland used infrequently as horse pasture and woodlands.
<b>Grove Farm</b>	TQ 1381 6624	KT10 8AX	Grassland used as horse pasture. Pond and fragmented woodland.
<b>Sweep's Ditch</b>	TQ 0447 6949	TW18 2SZ	Other neutral grassland that is used intermittently as a horse pasture. The field lies in a floodplain and is regularly flooded.

During the PEA , a number of priority areas for habitat creation were assessed as not having suitability as reptile habitat and were therefore not subject to further habitat suitability assessment. These sites were:

- Sheepwalk Lakes (with the exception of land at Littleton East Lake)
- Land South of Wraysbury Reservoir
- Land between Desborough Cut and Engine River
- Abbey River (with the exception of the confluence with the River Thames).



## Methodology

### Desk study

A comprehensive ecological desk study was conducted by Binnies in July 2022 for the Project Boundary for EIA Scoping plus a 2km buffer (referred to as the 'Wider Study Area'), including the retrieval of data from relevant biological record centres. It is noted that the area of the 2023 reptile survey almost entirely falls within the Project boundary for EIA Scoping and therefore whilst the survey area was defined after the desk study, it is anticipated that the results of this exercise will be sufficient for the purposes of this survey report.

Data was sourced from:

- Greenspace Information for Greater London (GiGL);
- Thames Valley Environmental Records Centre (TVERC);
- Surrey Biodiversity Information Centre (SBIC)

Additionally, an existing ecological report produced by eCountability 2020 was consulted as part of the desk study (eCountability, 2022).

### Field Survey

Reptile surveys were conducted from April to June 2023, following the Froglife Advice Sheet 10 (Froglife, 1999) methodology, whereby two complementary methods of observation were used:

- Artificial refugia survey; and
- Direct observation of basking/commuting reptiles.

Seven survey visits were undertaken for each site in suitable weather conditions. Full details of each survey can be found in Appendix C.

Reptiles are considered detectable when the air temperature is between 9-18°C as at these temperatures they need to bask or use shelters to increase their body temperature. Survey timing is primarily between 08:30-11:00 or 16:00-18:30, where temperatures are optimal for survey. However, in cloudy, overcast or exceptionally sunny weather this survey window can vary.

The use of artificial refugia is the most commonly used method for locating reptiles. All reptiles may use certain materials that warm up in the sun, and the use of artificial refugia exploits this tendency by providing a suitable basking site, as well as an area to avoid predation.

Artificial refugia, sheets of felt 100x50cm and 50x50cm, were distributed and placed in sunny locations near to suitable cover including scrub, tall ruderal, grassy areas and woodland. Refugia placement was carried out between April 25<sup>th</sup> and May 4<sup>th</sup> 2023, with placement being in accordance with lead surveyor judgement.

Of the 24 sites which were the subject of habitat suitability assessments for reptiles (Table 1-2), three were concluded to not offer suitable habitat for reptiles due to intense grazing (see Table 2-1). Of the remaining 21 sites with suitable habitat for reptiles, four did not have access for full reptile surveys. The sites which were not the subject of full reptile surveys are detailed in Table 2-1.

**Table 2-1: Sites with no reptile mats**

Site	Reason for no reptile mat placement
Littleton East Lake	No access to site.
Littleton Lane	No access to site.
Littleton North Lake and surrounding area	No access to site.
Grove Farm	No access to site.
Royal Hythe	Habitat within site unsuitable for reptiles due to intense grazing by cattle.
Laleham Reach south	Habitat within site unsuitable for reptiles due to intensive grazing by horses.
Sweep's Ditch	Habitat within site unsuitable for reptiles due to intensive grazing by horses.

The number of refugia placed at each of the 17 sites where full reptile surveys were completed is detailed in Table 2-2.

**Table 2-2: Reptile refugia per site**

Site	Site Area (Hectares)	No. of Refugia	Date placed
Norlands Lane	61.9	55	4 <sup>th</sup> May
Area east of Lake south of Green Lane	6.7	40	26 <sup>th</sup> April
Thorpe Park Lakes and adjacent land	51.6	46	26 <sup>th</sup> April
St. Ann's Lake	31.1	12	26 <sup>th</sup> April
Laleham Reach North	6.7	23	3 <sup>rd</sup> May
Former Laleham Golf Course	50.3	28	25 <sup>th</sup> April
Abbey Lakes 1 & 2	29.5	80	27 <sup>th</sup> April
Abbey Meads	27.4	60	27 <sup>th</sup> April
Abbey River confluence with River Thames	11.4	14	25 <sup>th</sup> April
Sheepwalk	18.9	50	4 <sup>th</sup> May/1 <sup>st</sup> June
Land West of Sheepwalk	2.7	5	3 <sup>rd</sup> May
Funky Footprints	5.5	14	3 <sup>rd</sup> May
Manor Farm	36.3	108	2 <sup>nd</sup> May

Site	Site Area (Hectares)	No. of Refugia	Date placed
Land South of Chertsey Road	41.8	10	26 <sup>th</sup> April
Ferry Lane Lake	16.8	25	4 <sup>th</sup> May
Desborough Island	33.1	40	27 <sup>th</sup> April
Drinkwater Pit	4.9	15	3 <sup>rd</sup> May

All surveys were conducted by suitably experienced ecologists and consisted of surveyors visually scanning potential basking spots and checking artificial refugia. The surveys were carried out by the following Binnies staff:

- Alexander Bell
- Kieran McElroy
- Katie Tamin
- Jack Childs
- Joseph Ross
- Lucy Robertson
- Alfie Martin-Parsons
- Henry Johnston
- Amy Roberts
- Anne Marie Palfrey

Artificial refugia were left to bed in for two weeks prior to the initial reptile check being undertaken. The location of all refugia across the sites are shown on drawing [ENVIMSE500260-CBI-ZZ-3ZZ-DR-EN-00078](#) in Appendix A.

### Key Reptile Site Register

The Key Reptile Site Register (KRSR) has been utilised to assess the value of the sites within the RTS for reptiles. The KRSR is a mechanism designed to promote the safeguard of important reptile sites (Froglife, 1999). To qualify the site must meet at least one of the following criteria:

- Supports three or more reptile species;
- Supports two snake species;
- Supports an exceptional population of one species;
- Supports an assemblage of species scoring at least 4 (see Table 2-3); or
- Does not satisfy any of the above but which is of particular regional importance due to local rarity.

**Table 2-3: Key Reptile Register Population Scores\***

Species	Low Population (Score 1)	Good Population (Score 2)	Exceptional Population (Score 3)
<b>Adder</b>	<5	5 - 10	>10
<b>Grass snake</b>	<5	5 - 10	>10
<b>Common lizard</b>	<5	5 - 20	>20
<b>Slow worm</b>	<5	5 - 20	>20

*\*Figures in the table refer to the maximum number of individuals seen by observation and/or under refugia placed at a density of up to 10 per ha, per day.*

### Limitations

Every effort was made to fully assess the current status or reptile populations within the Project Boundary for EIA PEIR. However, a number of limitations to the survey exist:

- Reptiles are mobile species so it is possible that they could move into the survey area after the surveys have occurred. Therefore, it cannot be guaranteed that reptiles will or will not be present within areas of the site.
- Reptiles present underneath or on top of the refugia could quickly move away before surveyors reach the refugia meaning some individuals may be missed.
- Due to fluctuating weather conditions, it was not always possible to undertake the entire reptile survey in the optimum 9-18°C window. This was seen during checks between 12<sup>th</sup> June to 15<sup>th</sup> June where temperatures in the area were exceptionally hot. This meant it was inevitable that maximum temperatures were exceeded at times. However, reptiles were still observed in temperatures exceeding the optimum window, so the surveys were still considered valid.
- Some of the sites included public access, for example Abbey Lakes 1 & 2 and Desborough Island are popular dog walking areas. Some of the reptile refugia were removed multiple times at these sites, most likely due to members of the public interfering with refugia i.e. stealing mats or mistaking mats for littering.
- After the refugia placement and initial reptile checks, vegetation at some sites had grown higher than expected. Due to this, surveyors could physically not access some areas due to dense vegetation. This made some areas inaccessible, so refugia could not be accessed or located. For example, Former Laleham Golf Course had 28 refugia placed across the site but due to dense vegetation 14 refugia were inaccessible.
- Some sites which were originally identified to provide suitable habitat for reptiles and were subjected to mat placement had changes to habitat structure within the site during the survey period i.e. intensive grazing by livestock and mowing of long grass.

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- Sheepwalk had an additional 21 artificial refugia deployed on the 1st of June due to delayed land access. However due to further access constraints these mats could not be checked and were collected in 2 weeks later.
- Where mats were destroyed/stolen they were replaced at the first earliest convenience by surveyors. On some sites where mats were destroyed/stolen/inaccessible surveyors decided against replacing due to access issues and/or loss of suitable reptile habitat and continued public interference with mats. The exact number of refugia replaced per site is detailed in Table 2-4. Mats which are listed as 'stolen' are those mats which were removed from the original location and could not subsequently be found.

**Table 2-4: Reptile refugia replaced**

Site	Number of refugia at start	Number of refugia affected	Reason	Replaced (Yes/No)	Date
Norlands Lane	55	6	Mown	No	-
Thorpe Park Lakes and adjacent land	46	7	Mown	Yes	24/05/23
Laleham Reach North	23	22	Mown	Yes	01/06/23
Former Laleham Golf Course	28	4	Inaccessible due to vegetation	No	
Former Laleham Golf Course		10	Intensive grazing	No	-
Abbey Lakes 1 & 2	80	12	Mown	No	
Abbey Lakes 1 & 2		21	Stolen		
Abbey Meads	60	27	Mown	Yes	24/05/23
Abbey Meads		2	Inaccessible due to vegetation	No	-
Abbey River confluence with River Thames	14	1	Mown	No	-
Sheepwalk	71 <sup>1</sup>	19	Inaccessible due to land access		-
Sheepwalk		1	Mown	Yes	01/06/23
Ferry Lane Lake	25	7	Mown	Yes	-
Ferry Lane Lake		2	Mown	No	-
Desborough Island	40	3	Stolen	No	-

<sup>1</sup> An additional 21 mats were added after initial mat placement.

## Results

### Desk study

11 records of grass snake were found in Former Laleham Golf Course. All records are from 2019, with five of the records located to the east of the site. The desk study also reported nine additional records of grass snakes within 2km of the Project Boundary for EIA Scoping.

### Field survey

The key results from each survey can be seen in Table 3-1 with the full results table shown in Appendix B.

**Table 3-1 Total reptiles recorded at each site**

Site	Species	Total Number
Norlands Lane	Adult grass snake	1
Norlands Lane	Juvenile grass snake	1
Area east of Lake south of Green Lane	Juvenile grass snake	1
Area east of Lake south of Green Lane	Common lizard	1
Thorpe Park Lakes and adjacent land	Adult grass snake	1
St Ann's Lake	Adult grass snake	3
Laleham Reach North	-	-
Former Laleham Golf Course	-	-
Abbey Lakes 1 & 2	-	-
Abbey Meads	Adult grass snake	1
Abbey River confluence with River Thames	-	-
Sheepwalk	-	-
Land West of Sheepwalk	-	-
Funky Footprints	Juvenile grass snake	6
Manor Farm	Juvenile grass snake	13
Manor Farm	Sub-adult grass snake	2
Land South of Chertsey Road	-	-
Ferry Lane Lake	-	-
Desborough Island	Sub-adult grass snake	1
Drinkwater Pit	Adult slow worm	5
Drinkwater Pit	Sub-adult slow worm	1
Drinkwater Pit	Juvenile slow worm	15

### Incidental sightings

There were three incidental reptile sightings during the course of the surveys, as shown in Table 3-3 below.

**Table 3-3: Incidental reptile observations**

<b>Site</b>	<b>Date</b>	<b>Incidental finding</b>	<b>Incident</b>
<b>Royal Hythe</b>	30/05/23	Grass snake	Trampled by livestock
<b>Land South of Chertsey Road</b>	07/06/23	Grass snake	Found dead beneath track matting during site demobilisation.
<b>Manor Farm</b>	16/05/23	Grass Snake	Found in small puddle while putting out refugia

## Conclusion and Recommendations

### Conclusion

Full reptile surveys were carried out across seventeen sites within the project Boundary for EIA PEIR between May and June 2023. No species listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) were found on any of the sites. Species listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) – namely grass snake, slow worm and common lizard – were identified within the Project Boundary for EIA PEIR as shown in Table 4-1. These include an incidental observation of grass snake at Royal Hythe where a full reptile survey was not completed.

**Table 4-1: Reptile species identified within the Project Boundary for EIA PEIR**

Site	Grass Snake	Slow Worm	Common Lizard
Royal Hythe	✓		
Norlands Lane	✓		
Area east of Lake south of Green Lane	✓		✓
Thorpe Park Lakes and Adjacent Land	✓		
St. Ann's Lake	✓		
Abbey Meads	✓		
Funky Footprints	✓		
Manor Farm	✓		
Sheepwalk	✓ (assumed)		
Desborough Island	✓		
Drinkwater Pit		✓	

Despite the presence of suitable basking, sheltering, hibernation and foraging habitat within the remaining sites, no reptiles were found during surveys. Grass snakes were recorded in 2021 surveys at Land South of Chertsey Road and Land West of Sheepwalk.

Due to access constraints additional reptile survey mats were placed at Sheepwalk and then collected two weeks later with no checks being completed. Given the suitability of habitats on this site for grass snake, previous survey records in 2021, and the proximity to Manor Farm where a good population of grass snake was found, it is considered likely that grass snake are present on this site.

Four sites assessed as having suitable habitat for reptiles (Littleton East Lake, Littleton Lane, Littleton North Lake and surrounding area and Grove Farm) could not be accessed for survey and could support reptile populations.



A total of 21 slow worms were found at Drinkwater Pit across the survey. The maximum count on any one day was eight, indicating a good population of slow worm as assessed by the KRSR. Whilst the presence of a good population does not qualify the site for the register, due to the local rarity of slow worm the site is considered to be of regional importance for this species and therefore qualifies for the KRSR. 15 grass snake were identified at Manor Farm, with a maximum count of six on any one survey day, again indicating a good population. Similarly to Drinkwater Pit, due to the local rarity and high density of reptiles this site is also considered to qualify for the KRSR.

### Recommendations

Where reptiles have been found to be present the mitigation hierarchy should be adopted, with retention of suitable habitat for these species being the first option. If this is not possible, and loss of significant areas of suitable reptile habitat is unavoidable, then trapping and relocation of reptiles may be required in advance of works. This is most likely to be necessary where there are good reptile populations (i.e. Manor Farm and Drinkwater Pit), and where adjacent retained habitat is not suitable or will not be of sufficient extent to support the existing reptile populations. Following trapping, reptiles will need to be excluded from returning to the construction area. As no species listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) were identified a license would not be required for these works.

Where limited loss of suitable reptile habitat is proposed, or where works are small scale and with temporary habitat disturbance, risks to common reptile species should be managed via a precautionary working method statement (PWMS). This approach should be adopted in all areas identified as having suitability for reptiles, and would include:

- Toolbox talk for site personnel.
- Habitat clearance works to be undertaken outside of the hibernation period, which is between October-March.
- Vegetation, rubble and debris clearance in confirmed reptile areas to be supervised by a suitably qualified ecologist.
- Habitat manipulation, including phased clearance of suitable reptile habitat (e.g. long grass), to allow reptiles to disperse out of the working areas.
- Any machinery left overnight on site to be checked before use to make sure no resting and/or basking reptiles are present.
- Excavations to be covered to ensure no reptiles become trapped.
- Storage of material and waste above ground on pallets or similar so that they are not used as refuge areas by reptiles.

The potential impacts on reptile populations and the mitigation approach to be adopted in each area will be fully assessed when the final Scheme is known.

Access was not available to four sites for survey in spring 2023 (Littleton East Lake, Littleton Lane, Littleton North Lake and surrounding area and Grove Farm). Additional reptile surveys of these sites should be completed when access issues have been resolved in order to establish the presence/absence of reptile species and assess population size and potential impacts of the Project.

There were limitations to the reptile survey at Sheepwalk due to land access, however as stated above it is assumed that the site supports grass snake. Royal Hythe was also not subject to detailed survey in 2023 as it was deemed to not have significant suitable habitat for reptiles during the habitat suitability assessment. An incidental observation of grass snake was however subsequently recorded at the site confirming presence and grass snakes had been recorded in the 2021 surveys. Similarly Field East of Meadlake (immediately to the south of Royal Hythe) was not surveyed in 2023 but reptiles were recorded in 2021. Further detailed survey is not considered to be required at this time given the current limited reptile habitat on site.

The reptile survey results are considered to be valid for up to two years, after which updated surveys are recommended. This should include a repeat habitat suitability assessment of the land within the project boundary at that time, which in conjunction with previous survey results from 2021 and 2023 should be used to inform full reptile survey requirements. The surveys should include a full survey of Sheepwalk where there were limitations to the 2023 reptile assessment as detailed above. Royal Hythe should include a habitat suitability assessment, and a full reptile survey should be undertaken if there has been a change to the land use and habitats have higher suitability for reptiles than in 2023.

## References

### Documents

AECOM (2021b) *River Thames Scheme Reptile Survey Report, v2, November 2021.*

Froglife (1999) *Reptile survey: An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation.* Froglife Advice Sheet 10. Froglife, London.

eCountability (2020) *River Thames Scheme Improvement and Flood Channel Scheme: UKHab Habitat and Habitat Condition Survey, 2020.*

GBJV (2021) *Reptile Survey Report, November 2021. Asite reference: ENVIMSE500260-GBV-ZZ-3ZZ-RP-EN-00232.*

AECOM (2021) *River Thames Scheme Reptile Survey Report, v2, November 2021.*

GBV (2021a) *River Thames Scheme Capacity Improvements and Flood Channel Project. Phase One Habitat Survey for Desborough Island.*

GBV (2021b) *River Thames Scheme Capacity Improvements and Flood Channel Project. Phase One Habitat Survey for Funky Footprints.*

GBV (2021c) *River Thames Scheme Capacity Improvements and Flood Channel Project. Phase One Habitat Survey for Hurst Park.*

GBV (2021d) *River Thames Scheme Capacity Improvements and Flood Channel Project. Phase One Habitat Survey for Land between Desborough Cut and Engine River.*

GBV (2021e) *River Thames Scheme Capacity Improvements and Flood Channel Project. Phase One Habitat Survey for Land South of Chertsey Road.*

GBV (2021f) *River Thames Scheme Capacity Improvements and Flood Channel Project. Phase One Habitat Survey for Ockwells Park.*

GBV (2021g) *River Thames Scheme Capacity Improvements and Flood Channel Project. Phase One Habitat Survey for Penton Hook Marina.*

GBJV (2023) *River Thames Scheme Preliminary Ecological Appraisal.*

### Datasets

- Surrey Biodiversity Information Centre (SBIC). Datasets for statutory and non-statutory designated sites, protected species and rare records.
- Thames Valley Environmental Records Centre (TVERC). Datasets for statutory and non-statutory designated sites, protected species and rare records
- Greenspace Information for Greater London (GiGL). Datasets for statutory and non-statutory designated sites, protected species and rare records.

## Appendices

### Appendix A - Survey Maps

Figure Number	Description of Figure
<a href="#">ENVIMSE500260-CBI-ZZ-3ZZ-DR-EN-00026</a>	Reptile Survey Scope
<a href="#">ENVIMSE500260-CBI-ZZ-3ZZ-DR-EN-00078</a>	Reptile Refugia Locations
<a href="#">ENVIMSE500260-CBI-ZZ-3ZZ-DR-EN-00079</a>	Reptile Refugia: Species Present

## Appendix B - Survey Results

Site	Date	Survey activity	Results	Time of result	Refugia no.
<b>Norlands Lane</b>	18/05/23	Reptile mat checks 1	No reptiles found		
	24/05/23	Reptile mat checks 2	No reptiles found		
	31/05/23	Reptile mat checks 3	No reptiles found		
	08/06/23	Reptile mat checks 4	No reptiles found		
	14/06/23	Reptile mat checks 5	No reptiles found		
	21/06/23	Reptile mat checks 6	Adult grass snake	08:28	23
	28/06/23	Reptile mat checks 7	Juvenile grass snake	09:54	25
<b>Area east of Lake south of Green Lane</b>	10/05/23	Reptile mat checks 1	No reptiles found		
	17/05/23	Reptile mat checks 2	No reptiles found		
	23/05/23	Reptile mat checks 3	Juvenile male grass snake	09:25	23
	31/05/23	Reptile mat checks 4	No reptiles found		
	07/06/23	Reptile mat checks 5	Common lizard	10:40	/
	13/06/23	Reptile mat checks 6	No reptiles found		
	20/06/23	Reptile mat checks 7	No reptiles found		
<b>Thorpe Park Lakes and adjacent land</b>	10/05/23	Reptile mat checks 1	No reptiles found		
	16/05/23	Reptile mat checks 2	No reptiles found		
	23/05/23	Reptile mat checks 3	No reptiles found		
	31/05/23	Reptile mat checks 4	No reptiles found		
	07/06/23	Reptile mat checks 5	Adult grass snake	10:11	19
	13/06/23	Reptile mat checks 6	No reptiles found		
	20/06/23	Reptile mat checks 7	No reptiles found		
<b>St Ann's Lake</b>	10/05/23	Reptile mat checks 1	No reptiles found		
	16/05/23	Reptile mat checks 2	Adult grass snake	11:15	8
	22/05/23	Reptile mat checks 3	Adult male grass snake	16:42	8
	31/05/23	Reptile mat checks 4	Adult grass snake	14:00	8
	07/06/23	Reptile mat checks 5	No reptiles found		
	13/06/23	Reptile mat checks 6	No reptiles found		
	20/06/23	Reptile mat checks 7	No reptiles found		
<b>Laleham Reach North</b>	17/05/23	Reptile mat checks 1	No reptiles found		
	23/05/23	Reptile mat checks 2	No reptiles found		
	31/05/23	Reptile mat checks 3	No reptiles found		
	06/06/23	Reptile mat checks 4	No reptiles found		
	14/06/23	Reptile mat checks 5	No reptiles found		
	22/06/23	Reptile mat checks 6	No reptiles found		
	27/06/23	Reptile mat checks 7	No reptiles found		
<b>Former Laleham Golf Course</b>	10/05/23	Reptile mat checks 1	No reptiles found		

## Reptile Survey Report 2023

Site	Date	Survey activity	Results	Time of result	Refugia no.
	16/05/23	Reptile mat checks 2	No reptiles found		
	23/05/23	Reptile mat checks 3	No reptiles found		
	31/05/23	Reptile mat checks 4	No reptile found		
	07/06/23	Reptile mat checks 5	No reptile found		
	13/06/23	Reptile mat checks 6	No reptile found		
	20/06/23	Reptile mat checks 7	No reptile found		
<b>Abbey Lakes 1 &amp; 2</b>	11/05/23	Reptile mat checks 1	No reptiles found		
	17/05/23	Reptile mat checks 2	No reptiles found		
	23/05/23	Reptile mat checks 3	No reptiles found		
	31/05/23	Reptile mat checks 4	No reptile found		
	06/06/23	Reptile mat checks 5	No reptiles found		
	15/06/24	Reptile mat checks 6	No reptile found		
20/06/23	Reptile mat checks 7	No reptile found			
<b>Abbey Meads</b>	12/05/23	Reptile mat checks 1	No reptiles found		
	17/05/23	Reptile mat checks 2	No reptiles found		
	24/05/23	Reptile mat checks 3	No reptiles found		
	01/06/23	Reptile mat checks 4	Adult grass snake	15:45	24
	06/06/23	Reptile mat checks 5	No reptiles found		
	13/06/23	Reptile mat checks 6	No reptiles found		
	22/06/23	Reptile mat checks 7	No reptiles found		
<b>Abbey River confluence with River Thames</b>	10/05/23	Reptile mat checks 1	No reptiles found		
	16/05/23	Reptile mat checks 2	No reptiles found		
	22/05/23	Reptile mat checks 3	No reptiles found		
	30/05/23	Reptile mat checks 4	No reptiles found		
	06/06/23	Reptile mat checks 5	No reptiles found		
	13/06/23	Reptile mat checks 6	No reptiles found		
	20/06/23	Reptile mat checks 7	No reptiles found		
<b>Sheepwalk</b>	18/05/23	Reptile mat checks 1	No reptiles found		
	24/05/23	Reptile mat checks 2	No reptiles found		
	30/05/23	Reptile mat checks 3	No reptiles found		
	08/06/23	Reptile mat checks 4	No reptiles found		
	13/06/23	Reptile mat checks 5	No reptiles found		
	21/06/23	Reptile mat checks 6	No reptiles found		
	27/06/23	Reptile mat checks 7	No reptiles found		
<b>Land West of Sheepwalk</b>	18/05/23	Reptile mat checks 1	No reptiles found		
	24/05/23	Reptile mat checks 2	No reptiles found		
	30/05/23	Reptile mat checks 3	No reptiles found		
	08/06/23	Reptile mat checks 4	No reptiles found		
	13/06/23	Reptile mat checks 5	No reptiles found		
	21/06/23	Reptile mat checks 6	No reptiles found		

## Reptile Survey Report 2023

Site	Date	Survey activity	Results	Time of result	Refugia no.
	27/06/23	Reptile mat checks 7	No reptiles found		
<b>Funky Footprints</b>	17/05/23	Reptile mat checks 1	No reptiles found		
	23/05/23	Reptile mat checks 2	Juvenile male grass snake	16:20	9
			Juvenile male grass snake	16:24	13
	30/05/23	Reptile mat checks 3	No reptiles found		
	05/06/23	Reptile mat checks 4	Juvenile grass snake	9:30	8
	13/06/23	Reptile mat checks 5	Juvenile grass snake	9:21	2
	19/06/23	Reptile mat checks 6	Juvenile grass snake		
26/06/23	Reptile mat checks 7	Juvenile grass snake			
<b>Manor Farm</b>	16/05/23	Reptile mat checks 1	No reptiles found		
	22/05/23	Reptile mat checks 2	Juvenile male grass snake	15:03	21
			Juvenile male grass snake	15:34	34
			Sub-adult male grass snake	15:51	54
			Sub-adult female grass snake	16:51	108
	30/05/23	Reptile mat checks 3	Juvenile grass snake	16:50	105
			Juvenile grass snake	16:54	108
	05/06/23	Reptile mat checks 4	Juvenile grass snake	16:00	16
			Juvenile grass snake	16:15	17
			Juvenile grass snake	16:29	25
			Juvenile grass snake	16:44	33
			Juvenile grass snake	16:44	33
			Juvenile grass snake	16:45	34
	15/05/23	Reptile mat checks 5	Juvenile grass snake	10:03	35
21/06/23	Reptile mat checks	No reptiles found			
27/06/23	Reptile mat checks 7	Juvenile grass snake	14:51	82	
		Juvenile grass snake	14:55	16	
<b>Land South of Chertsey Road</b>	10/05/23	Reptile mat checks 1	No reptiles found		
	17/05/23	Reptile mat checks 2	No reptiles found		
	23/05/23	Reptile mat checks 3	No reptiles found		
	31/05/23	Reptile mat checks 4	No reptiles found		
	08/06/23	Reptile mat checks 5	No reptiles found		
	13/06/23	Reptile mat checks 6	No reptiles found		
	22/06/23	Reptile mat checks 7	No reptiles found		
<b>Ferry Lane Lake (Ferris Meadow)</b>	18/05/23	Reptile mat checks 1	No reptiles found		
	24/05/23	Reptile mat checks 2	No reptiles found		
	30/05/23	Reptile mat checks 3	No reptiles found		
	06/06/23	Reptile mat checks 4	No reptiles found		
	13/06/23	Reptile mat checks 5	No reptiles found		
	19/06/23	Reptile mat checks 6	No reptiles found		
	26/06/23	Reptile mat checks 7	No reptiles found		



## Reptile Survey Report 2023

Site	Date	Survey activity	Results	Time of result	Refugia no.
<b>Desborough Island</b>	11/05/23	Reptile mat checks 1	Sub-adult male grass snake	11:17	2
	17/05/23	Reptile mat checks 2	No reptiles found		
	23/05/23	Reptile mat checks 3	No reptiles found		
	30/05/23	Reptile mat checks 4	No reptiles found		
	07/06/23	Reptile mat checks 5	No reptiles found		
	13/06/23	Reptile mat checks 6	No reptiles found		
	21/06/23	Reptile mat checks 7	No reptiles found		
<b>Drinkwater Pit</b>	17/05/23	Reptile mat checks 1	No reptiles found		
	23/05/23	Reptile mat checks 2	Adult female slow worm	15:50	4
			Adult female slow worm	16:00	7
			Sub-adult female slow worm	16:03	8
			Adult female slow worm	16:04	9
	30/05/23	Reptile mat checks 3	No reptiles found		
	07/06/23	Reptile mat checks 4	No reptiles found		
	14/06/23	Reptile mat checks 5	Adult male slow worm	10:45	2
			Juvenile slow worm	10:49	3
			Juvenile slow worm	11:00	10
	20/06/23	Reptile mat checks 6	Juvenile slow worm	12:57	3
			Juvenile slow worm	13:03	5
			Juvenile slow worm		
			Juvenile slow worm		
			Juvenile slow worm	13:05	6
			Adult female slow worm	13:11	13
	26/06/23	Reptile mat checks 7	Juvenile slow worm	14:34	2
			Juvenile slow worm		
			Juvenile slow worm	14:39	3
			Juvenile slow worm	14:42	4
Juvenile slow worm			14:45	5	
Juvenile slow worm					
Juvenile slow worm			14:48	6	
Juvenile slow worm					

## Appendix C - Survey Details

Site	Date	Survey activity	Timing	Temp. (°C)	Weather conditions	Surveyors
<b>Norlands Lane</b>	04/05/23	Refugia placement	12:04	13	Overcast with gentle breeze	Alex Bell and Kieran McElroy
	18/05/23	Refugia check and direct observation	08:19	15	Sunny	Lucy Robertson and Kieran McElroy
	25/05/23		10:01	18	Sunny	Lucy Robertson and Kieran McElroy
	31/05/23		11:10	16	Overcast	Lucy Robertson and Kieran McElroy
	08/06/23		14:07	20	Sunny	Lucy Robertson, Katie Tamin and Alfie Martin-Parsons
	14/06/23		07:14	17	Sunny	Kieran McElroy and Jack Childs
	21/06/23		06:13	16	Sunny	Lucy Robertson and Alfie Martin-Parsons
	28/06/23		09:01	20	Overcast	Lucy Robertson and Alfie Martin-Parsons
<b>Area east of Lake south of Green Lane</b>	26/04/23		Refugia placement	09:01	12	Overcast with gentle breeze
	10/05/23	Refugia check and direct observations	11:23	16	Sunny with light breeze	Alex Bell and Kieran McElroy
	17/05/23		09:19	18	Sunny with light breeze	Lucy Robertson and Kieran McElroy
	23/05/23		08:10	14	Sunny with light breeze	Katie Tamin and Joseph Ross
	31/05/23		13:23	19	Sunny with light breeze	Lucy Robertson and Kieran McElroy
	07/06/23		09:30	16	Sunny with light breeze	Katie Tamin and Lucy Robertson
	13/06/23		05:30	14	Sunny but cool	Kieran McElroy and Jack Childs
	20/06/23		10:53	19	Overcast	Lucy Robertson and Alfie Martin-Parsons
<b>Thorpe Park Lakes and adjacent land</b>	26/04/23		Refugia placement	14:43	13	Overcast
	10/05/23	Refugia check and direct observations	16:42	14	Overcast	Katie Tamin and Joseph Ross
	16/05/23		13:40	17	Sunny with clouds	Lucy Robertson and Kieran McElroy
	23/05/23		07:30	13	Sunny	Katie Tamin and Joseph Ross
	31/05/23		12:02	16	Cloudy with sunny intervals	Katie Tamin and Henry Johnston
	07/06/23		09:16	15	Overcast	Katie Tamin and Lucy Robertson

## Reptile Survey Report 2023

Site	Date	Survey activity	Timing	Temp. (°C)	Weather conditions	Surveyors
	13/06/23		06:30	17	Sunny	Kieran McElroy and Jack Childs
	20/06/23		10:09	19	Overcast	Lucy Robertson and Katie Tamin
<b>St Ann's Lake</b>	26/04/23	Refugia placement	14:34	11	Overcast with gentle breeze	Amy Roberts and Alfie Martin-Parsons
	10/05/23	Refugia check and direct observations	09:45	14	Overcast	Katie Tamin and Lucy Robertson
	16/05/23		10:10	15	Sunny	Katie Tamin and Joseph Ross
	22/05/23		15:44	19	Sunny	Lucy Robertson and Kieran McElroy
	31/05/23		12:49	18	Sunny	Katie Tamin and Henry Johnston
	07/06/23		10:22	19	Sunny	Katie Tamin and Alfie Martin-Parsons
	13/06/23		09:01	23	Sunny	Joseph Ross and Alfie Martin-Parsons
	20/06/23		11:30	20	Overcast	Lucy Robertson and Alfie Martin-Parsons
<b>Laleham Reach</b>	03/05/23		Refugia placement	09:15	13	Sunny
	17/05/23	Refugia check and direct observations	7:03	14	Overcast	Lucy Robertson and Katie Tamin
	23/05/23		9:00	15	Cloudy	Katie Tamin and Joseph Ross
	31/05/23		14:00	18	Sunny	Katie Tamin and Henry Johnston
	06/06/23		12:39	17	Warm, sun coming through clouds	Joseph Ross and Alfie Martin-Parsons
	14/06/23		08:02	17	Warm bright morning with clear skies	Joseph Ross and Alfie Martin-Parsons
	22/06/23		07:22	18	Sunny	Katie Tamin and Joseph Ross
	27/06/23		11:42	21	Warm and cloudy	Lucy Robertson, Katie Tamin, Joseph Ross and Alfie Martin-Parsons
<b>Former Laleham Golf Course</b>	25/04/23		Refugia placement	09:22	12	Dry and sunny
	10/05/23	Refugia check and direct observations	09:15	17	Sunny	Alex Bell and Kieran McElroy
	16/05/23		12:30	18	Sunny	Katie Tamin and Joseph Ross

## Reptile Survey Report 2023

Site	Date	Survey activity	Timing	Temp. (°C)	Weather conditions	Surveyors
	23/05/23		13:30	18	Cloudy	Lucy Robertson and Kieran McElroy
	31/05/23		11:00	18	Cloudy with sunny intervals	Katie Tamin and Henry Johnston
	07/05/23		10:20	17	Overcast	Lucy Robertson and Alfie Martin-Parsons
	16/06/23		19:09	24	Warm	Joseph Ross and Alfie Martin-Parsons
	20/06/23		15:50	19	Sunny	Lucy Robertson and Alfie Martin-Parsons
<b>Abbey Lakes 1 &amp; 2</b>	27/04/23	Refugia placement	08:14	11	Overcast	Alex Bell, Henry Johnston and Katie Tamin
	11/05/23	Refugia check and direct observations	07:45	14	Clear and sunny	Alex Bell and Kieran McElroy
	17/05/23		13:55	15	Cloudy	Lucy Robertson and Katie Tamin
	23/05/23		13:00	17	Overcast	Kate Tamin and Henry Johnston
	31/05/23		14:36	19	Sunny	Lucy Robertson and Kieran McElroy
	06/06/23		09:35	17	Sunny	Lucy Robertson and Katie Tamin
	15/06/23		07:49	19	Sunny	Joseph Ross and Alfie Martin-Parsons
	20/06/23		15:30	21	Sunny	Lucy Robertson and Katie Tamin
<b>Abbey Meads</b>	27/04/23		Refugia placement	13:20	12	Overcast
	12/05/23	Refugia check and direct observations	07:03	12	Cloudy	Lucy Robertson and Katie Tamin
	18/05/23		07:16	13	Sunny	Katie Tamin and Joseph Ross
	24/05/23		08:30	15	Cloudy	Katie Tamin and Joseph Ross
	01/06/23		14:25	19	Sunny	Kieran McElroy, Katie Tamin and Henry Johnston
	06/06/23		13:59	17	Sunny	Katie Tamin, Joseph Ross and Alfie Martin-Parsons
	14/06/23		08:41	20	Sunny	Joseph Ross and Alfie Martin-Parsons
	22/06/23		08:30	20	Sunny	Lucy Robertson and Alfie Martin-Parsons
<b>Abbey River confluence with River Thames</b>	25/04/23		Refugia placement	12:46	13	Sunny
	10/05/23	Refugia check and direct observations	07:44	12	Sunny	Alex Bell and Kieran McElroy

## Reptile Survey Report 2023

Site	Date	Survey activity	Timing	Temp. (°C)	Weather conditions	Surveyors
	16/05/23		09:40	14	Sunny	Katie Tamin and Joseph Ross
	22/05/23		16:30	19	Sunny	Kieran McElroy and Lucy Robertson
	30/05/23		16:28	18	Cloudy	Kieran McElroy and Lucy Robertson
	06/06/23		16:34	18	Cloudy	Lucy Robertson and Alfie Martin-Parsons
	12/06/23		18:08	22	Cloudy and humid	Joseph Ross and Alfie Martin-Parsons
	20/06/23		11:56	20	Overcast	Lucy Robertson and Alfie Martin-Parsons
<b>Sheepwalk</b>	04/05/23	Refugia placement	08:53	13	Sunny	Alex Bell and Kieran McElroy
	18/05/23		09:16	17	Sunny	Katie Tamin and Joseph Ross
	22/05/23	Refugia check and direct observations	13:45	17	Sunny	Kieran McElroy and Lucy Robertson
	30/05/23		16:13	17	Sunny	Katie Tamin and Henry Johnston
	08/06/23		11:41	14	Sunny	Katie Tamin, Joseph Ross and Alfie Martin-Parsons
	13/06/23		19:05	24	Sunny	Kieran McElroy and Jack Childs
	21/06/23		08:52	20	Sunny	Katie Tamin and Joseph Ross
	27/06/23		09:00	19	Sunny	Joseph Ross and Alfie Martin-Parsons
<b>Land West of Sheepwalk</b>	03/05/23	Refugia placement	15:26	14	Sunny	Alex Bell, Kieran McElroy and Katie Tamin
	17/05/23	Refugia check and direct observations	13:30	18	Sunny	Katie Tamin and Joseph Ross
	22/05/23		14:30	14	Sunny	Kieran McElroy and Lucy Robertson
	30/05/23		16:55	17	Cloudy and windy	Katie Tamin and Henry Johnston
	07/06/23		13:29	19	Sunny	Lucy Robertson and Katie Tamin
	15/06/23		09:22	24	Sunny	Joseph Ross and Alfie Martin-Parsons
	21/06/23		09:40	20	Cloudy with sunny intervals	Katie Tamin and Joseph Ross
	27/06/23		10:20	20	Overcast	Lucy Robertson and Katie Tamin
<b>Funky Footprints</b>	03/03/23	Refugia placement	11:08	14	Sunny	Alex Bell, Katie Tamin and Alex Bell
	17/05/23	Refugia check and direct observations	15:59	16	Cloudy	Kieran McElroy and Lucy Robertson
	23/05/23		13:10	18	Sunny	Kieran McElroy and Lucy Robertson
	30/05/23		14:14	19	Sunny	Kieran McElroy and Lucy Robertson

## Reptile Survey Report 2023

Site	Date	Survey activity	Timing	Temp. (°C)	Weather conditions	Surveyors
	05/06/23		16:42	18	Sunny	Lucy Robertson, Katie Tamin and Alfie Martin-Parsons
	13/06/23		08:09	21	Sunny	Joseph Ross and Alfie Martin-Parsons
	19/06/23		14:05	20	Sunny	Lucy Robertson and Alfie Martin-Parsons
	26/06/23		15:35	20	Overcast	Lucy Robertson and Alfie Martin-Parsons
<b>Manor Farm</b>	02/05/23	Refugia placement	11:56	12	Overcast	Alex Bell, Kieran McElroy, Lucy Robertson and Katie Tamin
	16/05/23	Refugia check and direct observations	16:40	20	Sunny	Katie Tamin and Joseph Ross
	22/05/23		14:00	17	Sunny	Katie Tamin and Joseph Ross
	30/05/23		13:45	18	Cloudy with sunny intervals	Katie Tamin and Henry Johnston
	05/06/23		15:00	19	Sunny	Lucy Robertson and Katie Tamin
	15/06/23		07:35	17	Sunny	Alex Bell, Henry Johnston, and Katie Tamin
	21/06/23		06:59	18	Sunny	Katie Tamin and Joseph Ross
	27/06/23		13:48	20	Overcast	Lucy Robertson, Katie Tamin, Joseph Ross and Alfie Martin-Parsons
<b>Land South of Chertsey Road</b>	26/04/23	Refugia placement	13:01	11	Overcast	Lucy Robertson and Amy Roberts
	10/05/23	Refugia check and direct observations	13:15	15	Sunny	Lucy Robertson and Amy Roberts
	17/05/23		09:00	16	Sunny	Katie Tamin and Joseph Ross
	23/05/23		08:00	13	Cloudy	Kieran McElroy and Lucy Robertson
	31/05/23		15:07	19	Sunny	Katie Tamin and Henry Johnston
	08/06/23		09:15	15	Sunny	Katie Tamin, Joseph Ross and Alfie Martin-Parsons
	13/06/23		07:27	19	Sunny	Joseph Ross and Alfie Martin-Parsons
	22/06/23		08:10	19	Sunny	Katie Tamin and Joseph Ross
<b>Ferry Lane Lake (Ferris Meadow)</b>	04/05/23	Refugia placement	07:09	10	Overcast	Alex Bell, Katie Tamin and Kieran McElroy
	18/05/23	Refugia check and direct observations	09:24	17	Cloudy	Kieran McElroy and Lucy Robertson
	25/05/23		08:56	14	Sunny	Kieran McElroy and Lucy Robertson

## Reptile Survey Report 2023

Site	Date	Survey activity	Timing	Temp. (°C)	Weather conditions	Surveyors
	30/05/23		13:27	19	Overcast	Kieran McElroy and Lucy Robertson
	06/06/23		12:39	15	Cloudy	Lucy Robertson and Katie Tamin
	12/06/23		18:16	21	Overcast and warm	Kieran McElroy and Jack Childs
	19/06/23		13:56	22	Sunny	Katie Tamin and Joseph Ross
	16/06/23		15:30	20	Cloudy	Katie Tamin and Joseph Ross
<b>Desborough Island</b>	27/04/23	Refugia placement	12:36	14	Overcast with light breeze	Amy and Alfie Martin-Parsons
	11/05/23	Refugia check and direct observations	07:25	14	Sunny	Lucy Robertson and Amy Roberts
	17/05/23		07:15	11	Sunny	Katie Tamin and Joseph Ross
	23/05/23		08:36	14	Cloudy	Kieran McElroy and Lucy Robertson
	30/05/23		15:06	19	Overcast	Kieran McElroy and Lucy Robertson
	07/06/23		13:24	20	Sunny	Joseph Ross and Alfie Martin-Parsons
	16/06/23		05:57	14	Sunny	Joseph Ross and Alfie Martin-Parsons
	21/06/23		09:19	20	Sunny	Lucy Robertson and Katie Tamin
<b>Drinkwater Pit</b>	03/05/23		Refugia placement	12:22	14	Sunny
	17/05/23	Refugia check and direct observations	09:05	16	Sunny	Kieran McElroy and Lucy Robertson
	23/05/23		14:50	19	Sunny	Kieran McElroy and Lucy Robertson
	31/05/23		13:19	18	Sunny	Katie Tamin and Henry Johnston
	07/06/23		10:49	19	Sunny	Katie Tamin and Joseph Ross
	14/06/23		09:37	21	Sunny	Kieran McElroy and Jack Childs
	20/06/23		11:56	22	Cloudy	Katie Tamin and Joseph Ross
	26/06/23		13:35	21	Overcast	Lucy Robertson and Alfie Martin-Parsons

## Appendix D - Legislation

*Note that the details provided in this appendix are for general guidance only and should not be relied upon as a definitive statement of the law. The legislation is applicable in Britain only (i.e. not the Isle of Man, the Republic of Ireland or the Channel Islands.). Only legislation applicable to reptiles is provided here.*

### Reptiles

Sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) as they are listed on Schedule 2 which makes it an offence to:

- Intentionally capture, kill or injure a Schedule 2 species;
- Deliberate disturbance of any species as to impair their ability:
  - to survive, breed, or reproduce, or to rear or nurture young; or
  - in the case of animals of a hibernating or migratory species, to hibernate or migrate.
  - to affect significantly the local distribution or abundance of the species;
- Deliberate taking or destroying of the eggs;
- Damage or destruction of a breeding site or resting place; or
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

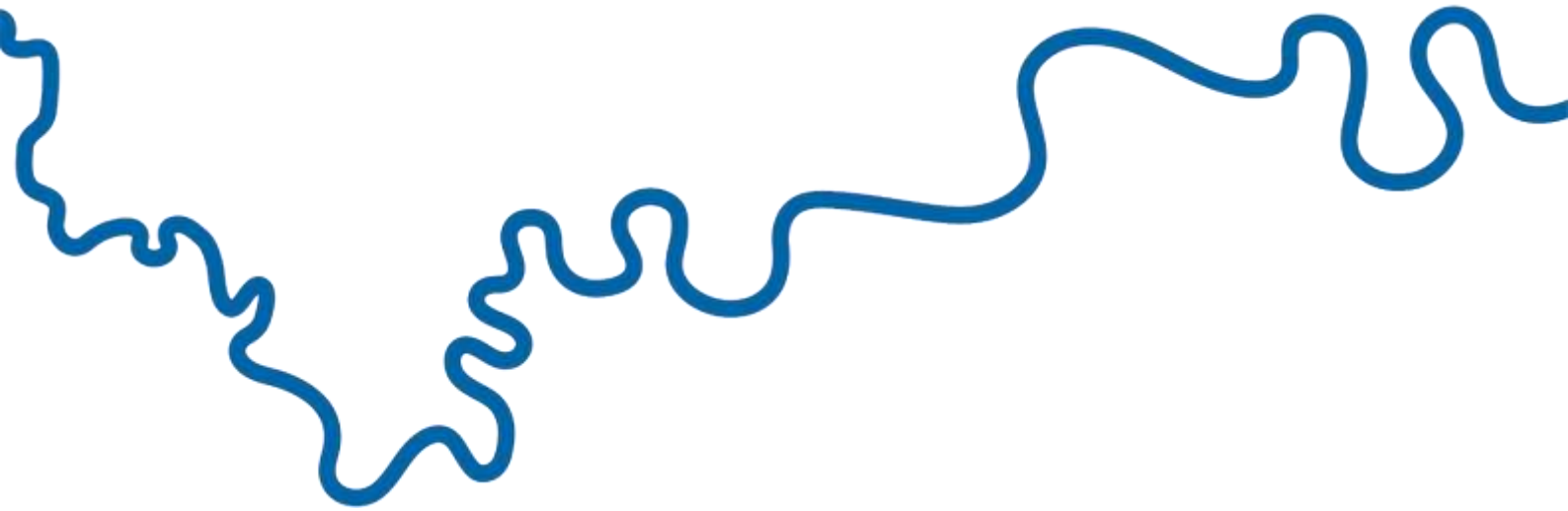
Other native reptile species are afforded legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This includes the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. The Wildlife and Countryside Act makes it an offence to:

- Intentionally kill or injure these species; or
- Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

### Impacts of legislation on development works

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the Wildlife and Countryside Act 1981 (as amended).





The River Thames Scheme, delivered in a partnership led by the Environment Agency and Surrey County Council, will reduce flood risk for residents and businesses and improve the surrounding area.