



Wokingham Borough Council

SOUTH WOKINGHAM DISTRIBUTOR ROAD

Reptile Survey Report





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Reptile Survey Report

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EXECUTIVE SUMMARY

Following an Ecological Gap Analysis by WSP (2024), Wokingham Borough Council (WBC) instructed WSP to conduct reptile surveys to inform on shifts in ecological baseline that could require changes to the previously developed design and discharge of planning conditions for the South Wokingham Distributor Road (SWDR) Scheme. The proposed SWDR development is located between Easthampstead Road and Finchampstead Road, south of Wokingham. The main objective of the SWDR is to facilitate access for strategic housing allocations and reduce the impact of increased traffic on local roads.

The majority of the Survey Area is dominated by grassland of various forms including some areas which may be of elevated botanical interest, traversed by hedgerows and ditches, with scattered scrub and trees also present. The western extent of the Survey Area comprises roads within Wokingham and is formed mainly of hardstanding. The Emm Brook and associated bank vegetation also runs through the western part of the Survey Area.

The reptile survey was undertaken in May 2024 in accordance with published guidance. The results indicate a 'low' population of grass snake and a 'good' population of slow worm within the Survey Area with most records coming from parcels near the railway in the eastern side of the Site and land adjacent to, or near, the Emm Brook in the western part of the Site.

In order to comply with relevant legislation and planning policy, avoidance, mitigation and enhancement measures have been reviewed and recommended in this report, including directional destructive search methods, preparation and enhancement of retained or newly created habitat and ongoing on-site and off-site enhancement measures.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1. Wokingham Borough Council (WBC) secured planning permission in 2021 (planning ref. 192928) to construct the South Wokingham Distributor Road (SWDR) in land between Easthampstead Road and Finchampstead Road, hereafter referred to as the 'Site'. The SWDR is to facilitate access for strategic housing allocations and to reduce the impact of increased traffic on local roads. The SWDR development is hereafter referred to as the 'Scheme'.
- 1.1.2. The Scheme is currently progressing through detailed design and discharge of planning conditions. Given the time elapsed since the previous survey efforts, an updated suite of ecological surveys is required, where there is a reasonable likelihood of change in presence/absence or where previous information was not obtained.

1.2 ECOLOGICAL BACKGROUND

- 1.2.1. WSP completed ecological surveys of the Scheme between 2017 and 2021 to support the planning application. In addition, ecological survey work for areas targeting the South Wokingham Strategic Development Location (SDL) and associated major phased development, which the Scheme forms part of, were carried out by ECOSA and The Ecology Partnership between 2013 and 2022. This additional survey data has not been made available to WSP.
- 1.2.2. The SDL is defined as the following:

'...an urban extension of Wokingham town, Montague Park and south of the railway between the boundary with Bracknell Forest and Finchampstead Road. It will include new homes, new primary schools, local shopping and community facilities in two new neighbourhood centres, open spaces and roads including a South Wokingham Distributor Road.'
- 1.2.3. Previously conducted habitat suitability and subsequent presence/likely absence reptile surveys were carried out by WSP in 2018 with a 'low' reptile population recorded. One adult grass snake *Natrix helvetica* and one adult slow worm *Anguis fragilis* were recorded in rough grassland to the east of the crossover of Easthampstead Road and the railway (WSP, 2018).
- 1.2.4. An Ecology Gap Analysis (WSP, 2024) was undertaken for the Scheme in January 2024, consisting of a detailed, desk-based review of existing survey information, planning conditions and associated documents to determine detailed further survey and pre-construction support requirements. The Gap Analysis identified potentially suitable habitats for reptiles with confirmed records of reptile presence from previous surveys. Since the data from previous reptile surveys has exceeded its validity period (CIEEM, 2019), the Ecology Gap Analysis concluded that further reptile surveys were required.
- 1.2.5. Reptiles are a mobile species and may have increased their distribution across the Survey Area, particularly if previously unsuitable habitat has become suitable in the time since the previous surveys were undertaken. Moreover, breeding may have occurred which may change the population assessment, which in turn may change the recommendations if larger populations are now present.



1.3 BRIEF AND OBJECTIVES

- 1.3.1. WBC commissioned WSP UK Ltd to conduct reptile habitat scoping surveys and presence/ likely absence surveys across the Scheme, if deemed required. Moreover, WSP was appointed to subsequently evaluate the results of these surveys in order to inform and update the baseline information from previous surveys to support the Scheme and ensure compliance in respect of legislation and planning and biodiversity policy.
- 1.3.2. The methods and results of this survey, and subsequent recommendations with enhancement measures, are included within this report.

2 METHODS

2.1 OVERVIEW

- 2.1.1. Land within the Scheme boundary (Figure 1), hereafter referred to as the 'Survey Area', was scoped for the presence of suitable reptile habitat on 25 and 26 March 2024. Habitat features such as open grassy areas, hedgerows, scrub, waterbodies, natural reptile refugia and habitat connectivity were considered during the scoping survey to identify suitable reptile habitat. Where suitable habitat was recorded, further population assessment surveys were undertaken. Suitable habitat was predominantly found in the north-east and west of the Survey Area (Figure 2).
- 2.1.2. The reptile survey to determine presence/likely absence was completed in line with guidance within the Herpetofauna Workers' Manual (1998) and the methodology within Froglife's Reptile Survey Advice Sheet 10 (1999) and the Design Manual for Roads and Bridges (DMRB), Volume 10, Section 4 (National Highways, 2020).

2.2 REPTILE PRESENCE/LIKELY ABSENCE SURVEY

- 2.2.1. The survey comprised seven survey visits to the Survey Area, each incorporating two elements: survey of artificial refugia; and visual observation of habitats and natural refugia present. A total of 154 refugia were installed within suitable habitat on 18 April 2024 and 19 April 2024. The installed refugia were allowed to bed down for two weeks prior to the beginning of the survey visits.
- 2.2.2. A mixture of materials sized approximately 0.5m x 0.5m or 0.5m x 1m were used as artificial refugia, comprising bitumen felt and corrugated bitumen.
- 2.2.3. Suitable reptile habitat in the Survey Area totalled approximately 11 hectares (see Figure 2). By using 154 refugia (giving approximately 14 refugia / ha) the density exceeded the minimum density recommended by good practice guidance (Froglife, 1999). The guidance states the number of artificial refugia used '*will depend on many factors, such as likelihood of disturbance, size of site and what the survey is attempting to achieve*' and recommends a minimum of 5-10 refugia per hectare for 'general survey purposes.' The increased refugia density was used in order to increase confidence in results. The locations of all refugia are represented by a transect line and respective transect number shown in Figure 2.
- 2.2.4. Although the Froglife guidance forms the current, recognised, good survey practice, it should be noted that it is not specifically designed for use in demonstrating absence of reptiles from a development site, rather the focus is on identifying key reptile sites and increasing recording of reptiles. In contrast, the DMRB (National Highways, 2020) recommends a refugia density of '*no fewer than 10 per hectare, with greater concentrations around key habitat features....in some areas it will be appropriate to deploy an equivalent density of up to 50 artificial refuges per hectare*'. The DMRB (National Highways, 2020) also advises one refugia every 10m ought to be used for survey of linear habitat on existing road networks. A compromise between the contrasting guidelines has been sought, with professional interpretation applied to tailor the survey design to the habitats present within the Survey Area. Should likely absence be concluded, the method outlined here ensures compliance with the densities described within the DMRB also (National Highways, 2020).
- 2.2.5. Reptiles are ectothermic animals, deriving their body heat from the external environment. Therefore, the timing of the survey visits was largely dictated by weather conditions. All surveys were completed within the appropriate season (March to October) and within the appropriate ambient air

temperature range (10-18°C). Further considerations of weather conditions include no or minimal precipitation during the survey, time of day (location of the sun in relation to refugia and angle of light hitting the refugia) and the percentage of cloud cover in relation to ambient air temperature (for example high or intermittent cloud cover may cool down refugia during the upper temperature range and bring reptiles out for basking for longer periods and vice versa). Furthermore, the reptile surveys were carried out early in the season (May) when male adults are most active.

- 2.2.6. Froglife guidance (1999) was used to inform the population size class estimates. However, due to certain limitations of the guidance, which does not include consideration of variables such as site size, whether both visual observation and refugia survey contribute to peak counts and individual reptile species ecology, professional judgement has been applied to avoid misinterpretation of data.

2.3 DATES OF SURVEY AND PERSONNEL

- 2.3.1. The reptile survey was completed by two WSP ecologists and was led by a suitably experienced surveyor with at least four years' experience of ecological survey, including reptile survey experience enabling them to develop a strong understanding of the ecology of native reptile species.

- 2.3.2. Surveys were completed on the following dates:

1. 02 May 2024
2. 07 May 2024
3. 10 May 2024
4. 13 May 2024
5. 17 May 2024
6. 20 May 2024
7. 23 May 2024

- 2.3.3. An additional check on 22 May 2024 was made to complete visit 6. During the original date for visit 6, the environmental conditions became unsuitable for the reptile survey as the air temperature exceeded 20 °C in the shade midway through the survey. The surveyors completed refugia checks in the parts of the Survey Area east of the Easthampstead Road on 20 May 2024 and returned to survey the rest of the Survey Area during the additional visit on 22 May 2024.

2.4 NOTES AND LIMITATIONS

- 2.4.1. Ecological survey data is typically valid for up to 18 months unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or anticipated changes in management (CIEEM, 2019).
- 2.4.2. During the original date for visit 6, the environmental conditions became unsuitable (air temperature exceeded 20 °C in shade) for completing a full check of refugia during the set day. As such, the surveyors checked only refugia to the east of the Easthampstead Road. An additional visit was undertaken on 22 May 2024 to survey the remaining refugia and complete visit 6 under more suitable conditions. It is not considered that this presents a limitation to the robustness of the results as all refugia were checked over the two days. The risk of false positive results (i.e. recording the same individuals twice) has been accounted for within interpretation of the results.

3 RESULTS AND EVALUATION

3.1 OVERVIEW

- 3.1.1. Two species of reptile were recorded during the presence/likely absence surveys: grass snake and slow worm.
- 3.1.2. No other reptile species were recorded during the survey and, therefore, other species (adder *Vipera berus*, common lizard *Zootoca vivipara*, smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis*) are considered to be likely absent from the Survey Area. Furthermore, the habitat within the Survey Area is not suitable for smooth snake or sand lizard.

3.2 RESULTS OF REPTILE SURVEY

- 3.2.1. Weather conditions during the surveys ranged between 12°C and 20°C in temperature, with cloud cover of between 0% and 100%. Full details of weather conditions are included in Appendix A.
- 3.2.2. The results of the reptile survey are summarised in Table 1 below.

Table 1 - Summary of Survey Results

Survey visit	Grass Snake		Slow Worm	
	Adult count	Juvenile / sub-adult count	Adult count	Juvenile / sub-adult count
1	-	-	1	2
2	-	-	4	1
3	-	-	3	1
4	1	4	3	4
5	1	2	4	3
6 (20.05.24)	-	-	1	-
6 (22.05.24)	1	-	3	2
7 (during collection of refugia)	-	1	9	5
Maximum adult count	1		9	

- 3.2.3. Peak counts of one adult grass snake and nine adult slow worms were recorded within the Survey Area during the survey visits.
- 3.2.4. Peak counts per transect did not exceed three individuals per reptile species, with reptile presence records diffused across the Survey Area (See Appendix C for a summary of peak counts per visit).

- 3.2.5. Reptile presence was recorded near the railway in the eastern side of the Site and land adjacent to, or near, the Emm Brook in the western part of the Site (Figure 3).
- 3.2.6. The transects where reptiles were recorded are summarised in Table 2 below.

Table 2 - Summary of Transects with Confirmed Reptile Presence

Reptile species	Transect Number
Grass snake	15, 16, 17
Slow worm	4, 5, 7, 9, 15, 16, 17

3.3 INTERPRETATION OF THE SURVEY RESULTS

- 3.3.1. Grass snake and slow worm are both national Species of Principal Importance (SPI) in England under the Natural Environment and Rural Communities (NERC) Act 2006. They also receive partial protection from killing and injury under the Wildlife and Countryside Act 1981 (as amended). Both species have undergone declines nationally, largely due to habitat loss and degradation, although they are generally common and widespread within the south of England itself, where the Survey Area lies.
- 3.3.2. The Froglife Advice Sheet 10 (Froglife, 1999) states that peak count <5 reptiles found in a day equates to a 'low' population. A peak count of 5-10 defines a 'good' population and peak counts >10 are considered to represent an 'exceptional' population of reptiles in a site. Therefore, based on published guidance (Froglife, 1999), the population of grass snake within the Survey Area is considered 'low'. Furthermore, the population of slow worm has increased since the last recorded baseline and is now considered to be 'good'.
- 3.3.3. The division of visit 6 into two separate checks may have increased the overall peak count of reptiles for the sixth visit's combined count (as per section 2.5). However, as peak counts for either reptile species were recorded on other survey visits, it is not considered that the division of visit 6 into two days has significantly affected the robustness of interpretation of the survey results.
- 3.3.4. The suitable habitats within the Survey Area are moderately well connected to suitable habitat within the wider landscape. The grassland and tall ruderal vegetation within the Survey Area presents summer basking and foraging opportunities for reptiles, whilst the roots of mature trees and hedgerows may provide hibernation opportunities.

4 IMPLICATIONS FOR DEVELOPMENT

4.1 OVERVIEW

- 4.1.1. Reptiles are protected from killing and injury under UK legislation. In addition, planning policy affords further protection within the planning system, as described below. As a 'low' population of grass snake and a 'good' population of slow worm has been confirmed to be present within the Survey Area, it will be necessary to adopt appropriate avoidance and/or mitigation measures as part of the Scheme (see Section 5).

4.2 LEGAL COMPLIANCE

- 4.2.1. Native, widespread reptile species (common or viviparous lizard, adder, grass snake and slow worm) are partially protected under Schedule 5 of The Wildlife and Countryside Act 1981 (as amended), under part of Section 9(1) and all of Section 9(5). As such, it is an offence to:
- 'Intentionally or recklessly kill or injure' an individual of these species; or
 - 'Sell, offer or expose for sale, or [have in] possession or transport for the purpose of sale, any live or dead [individual] or any part of, or anything derived from' an individual of these species'.
- 4.2.2. All species of reptile are also listed as SPI for the Conservation of Biodiversity in England in accordance with Section 41 of the NERC Act 2006. Under Section 40 of the NERC Act (2006), public bodies, including local planning authorities, have a duty to have regard for SPI when carrying out their functions, including determining planning applications.
- 4.2.3. As grass snake and slow worm have been confirmed to be present within the Survey Area, it will be necessary to adopt appropriate avoidance and/or mitigation measures as part of the Scheme to minimise the risk of an offence under the legislation protecting reptiles.

4.3 PLANNING POLICY COMPLIANCE

- 4.3.1. At the national level, the National Planning Policy Framework (NPPF) (2023) forms the basis for planning system decisions with respect to conserving and enhancing the natural environment, including reptiles. The Office of the Deputy Prime Minister (ODPM) circular 06/2005 also provides supplementary guidance, including confirmation that 'the presence of a protected species is a material consideration when a planning authority is considering a development proposal'.
- 4.3.2. The NPPF sets out, amongst other points, how at an overview level '*planning policies and decisions should contribute to and enhance the natural and local environment by:*
- *...recognising the wider benefits from natural capital and ecosystem services; and*
 - *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures...*
- 4.3.3. A list of principles which local planning authorities should follow when determining planning applications is included in the NPPF, and includes the following:
- *'- if significant harm to biodiversity resulting from a development cannot be avoided...adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
 - *- ...opportunities to incorporate biodiversity in and around developments should be encouraged;*

- - development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused planning permission should be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists...

4.3.4. At a local level, Core Policy CP7 of the Wokingham Borough Core Strategy (2010) states that *'development which may harm habitats or, species of principal importance in England for nature conservation...will only be permitted if it has been clearly demonstrated that:*

- *the need for the proposal outweighs the need to safeguard the nature conservation importance;*
- *No alternative site that would result in less or no harm is available which will meet the need; and*
- *Mitigation measures can be put in place to prevent damaging impacts or appropriate compensation measures to offset the scale and kind of losses are provided.'*

4.3.5. Without appropriate measures, it is considered that the Scheme will contravene the legislation and planning policy through the potential of the works to kill or injure reptiles present in habitats within the Survey Area. Mitigation, compensation, and enhancement measures are recommended in Section 5 to enable the Scheme to be compliant with the above legislation and planning policy.

5 RECOMMENDATIONS

5.1 AVOIDANCE AND MITIGATION MEASURES

- 5.1.1. In the first instance it is recommended that, where possible, habitat known to support reptiles is retained within the Scheme designs. Although the habitat of widespread reptile species is not directly protected by law, habitat removal or alteration has potential to cause death or injury to individual reptiles which should be avoided to ensure legal compliance (see Section 4).
- 5.1.2. It is understood that the overall Scheme design minimises unnecessary loss of habitat in most of the remaining land within the Survey Area. The Scheme design also avoids habitat fragmentation through creation and retention of hedgerows and tree lines and creation of 'rain gardens' for drainage to improve the east-west commuting potential, whilst north-south commuting lines have been preserved as far as possible, negating fragmentation effects.
- 5.1.3. Nonetheless, the footprint of the Scheme will result in habitat loss of areas in the western part of the Survey Area where reptile presence has been confirmed (parcels of semi-improved grassland, tall ruderal vegetation, scrub, hedgerows and ditches with riparian vegetation adjacent to Emm Brook near Finchampstead Road). Additionally, the Scheme will likely result in loss of habitat in parcels with confirmed reptile presence in the east of the Scheme near the Easthampstead Road crossing with the railway (Figure 3).
- 5.1.4. Despite the growth in the ecological baseline in slow worm population, no additional avoidance and mitigation measures to previous recommendations from 2018 (WSP 2018) are currently required. Due to the diffuse distribution of the slow worm population within the Survey Area, the potential risks associated with reptiles within the Scheme remain similar to the previous baseline.
- 5.1.5. Where it is not possible to avoid effects upon reptiles, it will be necessary to provide mitigation measures to avoid killing and/or injury of individual animals and avoid detrimental effects upon the local populations. Given the area of habitat to be lost, and the diffuse distribution of populations present, mitigation using precautionary methods of vegetation clearance as set out previously (WSP, 2018) is recommended to displace any reptiles and avoid an offence, as laid out below:
- In the first instance, areas which will not be affected by any temporary works should be identified and the habitat prepared and protected prior to works commencing. Given the diffuse distribution of reptile populations, it is considered that sufficient retained reptile habitat can be provided within the Scheme boundary.
 - Where clearance of suitable grassy or ruderal vegetation is unavoidable, precautionary methods of clearance should be used including a toolbox talk, supervised strimming and soil stripping in phases and in a directional manner to the south, during the active season (indicatively March to September / October inclusive). Upon completion of the vegetation clearance, a destructive search should take place under ecological supervision as outlined in Appendix B. Any reptiles found during the habitat manipulation and destructive search will be captured by hand and released into adjoining retained and protected habitat (i.e. the railway sidings).
 - Features that may be used by reptiles for hibernation such as tree roots, stumps, hedgerows, rubble and brash piles must be removed under ecological supervision, by hand, during the active season (March to October, inclusive). Disturbing reptiles during hibernation causes a high risk of death to individuals. Summer clearance of hibernation features should be undertaken by hand,

with any reptiles discovered being removed and moved to suitable retained habitat within the Survey Area by a suitably experienced ecologist.

- 5.1.6. Newly created or retained habitat should be managed to provide habitat for reptiles during the operational phase of the Scheme. Long term maintenance should include a 'reptile friendly' cutting regime and maintenance of long sward levels during summer months. It is recommended that this is set out in a habitat management plan, which includes a commitment to monitoring the reptile population present.

5.2 ECOLOGICAL ENHANCEMENT MEASURES

- 5.2.1. National and local planning policy requires ecological enhancement measures to be designed into new development schemes. Therefore, it is recommended that enhancement measures are incorporated into the proposals which seek to achieve net gain in habitat available to reptiles on site and enhance habitat connectivity within the landscape. It is understood that the following measures have been incorporated into the planning application and design of the Scheme:

- The highway embankments will be planted with native species of tree (planted individually or as woodland), formal hedges using native species, and species-rich grassland. This will deliver a mosaic of habitats that may act as interface habitat of particular value to reptiles.
- New culverts will be equipped with wildlife passages above the water levels, through the embankments, measuring approximately 300mm in diameter. These will facilitate commuting corridors and movement of reptiles through the Site.
- Rain gardens, which are a part of the drainage strategy within the Scheme, will have naturalised bank profiles, with vegetated edges and a varied structure (i.e. generally grassed swales with flood-tolerant trees, shrub and grassland species) to provide opportunities for foraging and basking grass snake.
- The wider SDL design and planning also include creation of a suitable alternative natural greenspace (SANG) to the south of the Scheme. The SANG is subject to a separate planning application (ref. 190900). The SANG to the south of the Scheme will ensure that created and retained habitats within the Scheme are connected to high quality habitat areas outside the Survey Area, thus allowing for the potential colonisation by reptiles in the future of these areas and enhancing habitat connectivity in the local area.

- 5.2.2. It is advised that the following measures are also considered for inclusion within the Scheme design to mitigate impact on reptiles within the Survey Area:

- The provision of one or more 'egg laying heaps' for grass snakes. These are primarily piles of rotting vegetation in which grass snakes lay their eggs (usually in the early summer) and which provide protection from predation, as well as a constant temperature in which the eggs can develop. Additional vegetative material should be added each year to ensure the long-term maintenance of high quality habitat.

6 CONCLUSIONS

- 6.1.1. On behalf of WBC, WSP undertook a reptile survey of land to the south of Wokingham, Berkshire which lies within the SWDR development, in 2024, in order to inform on any significant shifts in ecological baseline that could require an update in design and delivery of the Scheme.
- 6.1.2. The survey was undertaken in accordance with published guidance and recorded a 'low' population of grass snake (peak adult count of one) with no significant shift from the previous ecological baseline. In contrast, the survey discovered a growth from the previous baseline in slow worm population (peak adult count of nine). The slow worm population in the Survey Area is now considered 'good'. Reptile presence was confirmed at multiple locations within the Survey Area, with most records coming from parcels near the railway in the eastern side of the Site and land adjacent to, or near, the Emm Brook in the western part of the Site (Figure 3).
- 6.1.3. Updated avoidance, mitigation and enhancement measures for the current ecological baseline have been recommended in order to minimise the risk to individuals and to maximise the long-term success of the local populations of grass snake and slow worm, in line with legislation and planning policy.

7 REFERENCES

7.1 PROJECT REFERENCES

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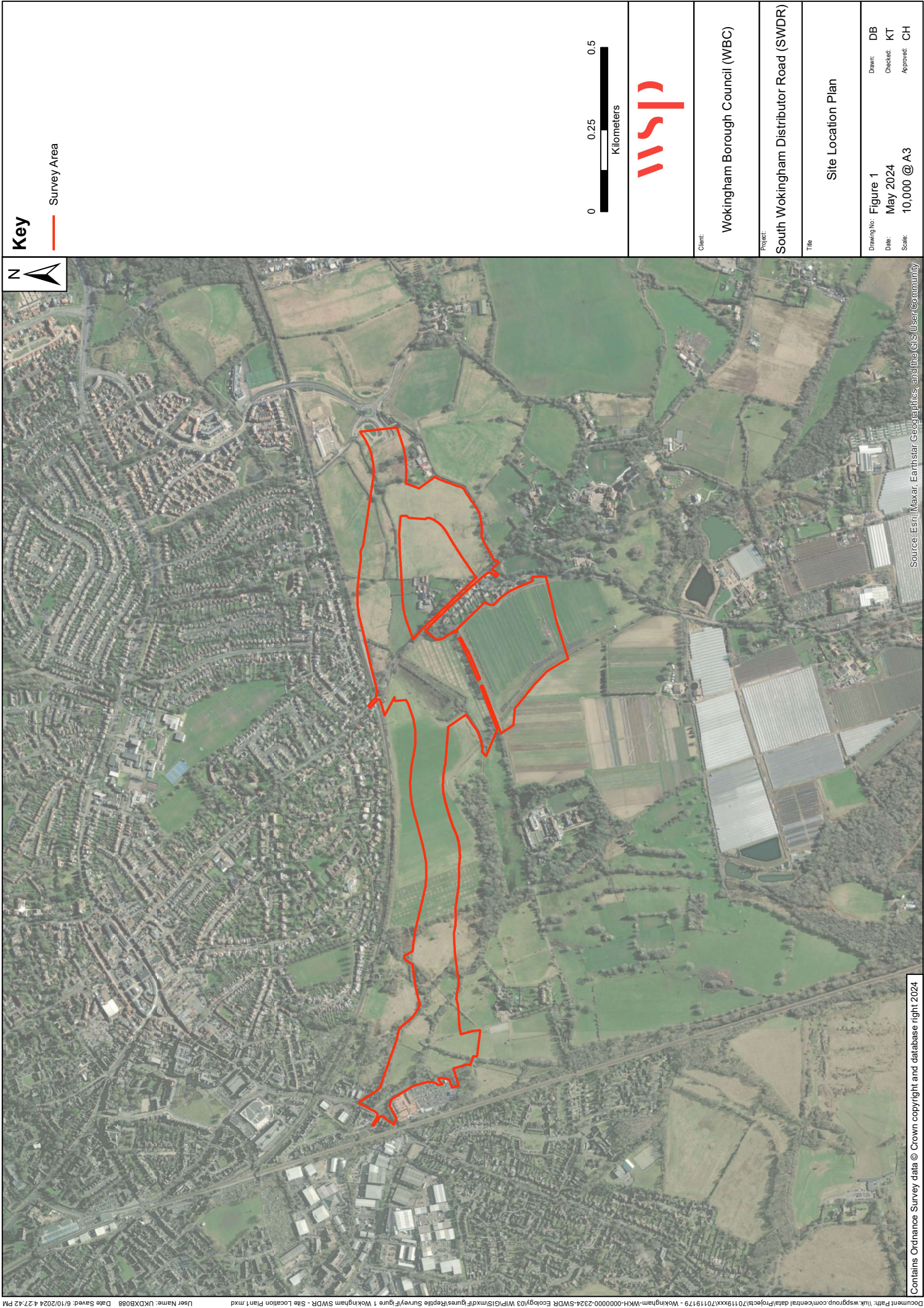


FIGURES

Figure 1 - Site Location Plan

Figure 2 - Reptile Refugia Distribution

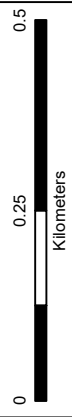
Figure 3 - Reptile Survey Results





Key

- Survey Area
- Reptile Refugia Transects



Client:	Wokingham Borough Council (WBC)
Project:	South Wokingham Distributor Road (SWDR)
Title:	Reptile Refugia Distribution
Drawing No:	Figure 2
Date:	June 2024
Scale:	7,000 @ A3
Drawn:	DB
Checked:	KT
Approved:	CH



Appendix A

WEATHER CONDITIONS

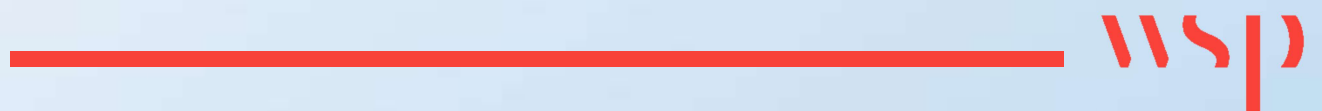
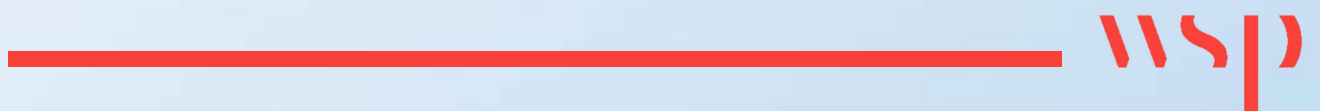


Table A-1 – Weather Conditions During Survey

Survey Visit Number		1	2	3	4	5	6 1/2	6 2/2	7 (during collection)
Date		02.05.24	07.05.24	10.05.24	13.05.24	17.05.23	20.05.24	22.05.24	23.05.24
Start	Time	09:15	10:00	09:00	09:15	09:20	11:15	09:00	09:45
	Air Temp. (°C) (shade)	12	15	14	13	14	17	13	13
	Cloud Cover (%)	100	0	0	100	20	0	100	100
	Wind Speed	0	1	0	0	1	0	1	1
Finish	Time	11:30	12:00	11:00	11:20	11:20	12:30	10:20	12:55
	Air Temp. (°C) (shade)	15	16	18	15	16	20	15	16
	Cloud Cover (%)	100	0	0	100	20	0	100	100
	Wind Speed	0	1	0	0	1	0	1	1
Description / Notes		Damp	No rain	No rain	No rain	No rain	Survey interrupted at mid-point due to unsuitable temperatures	Continuation of survey from 20 May 2024	No rain

Appendix B

DESTRUCTIVE SEARCH METHODS



The following destructive search methods should only be used during the reptile active season when it is considered there is low potential for reptiles to be encountered.

TOOLBOX TALK

The ecologist will give a toolbox talk to the vegetation clearance contractors; this will include:

- A brief introduction to the widespread reptile species which potentially may be discovered on the Site; and
- Working methods to be employed and permitted equipment types.

VEGETATION CLEARANCE:

Vegetation clearance must be completed using hand tools (these can include mechanised hand tools such as brush cutters or chainsaws). Clearance must move towards retained habitat on or adjacent to the Survey Area (where not all habitat is due to be removed and connecting habitat is available). The steps listed below must be completed:

- Hand search by ecologist for reptiles within vegetation to be cleared;
- Clearance of vegetation to 200mm above ground level using hand tools;
- Re-inspection of vegetation by ecologist; and
- Clearance to ground level (or as close as is practicable).

Any active reptiles found must be captured by the suitably experienced ecologist and placed into a soft cloth bag before being moved to a receptor site or adjacent suitable habitat lying outside the working area. To reduce the chances of predation, any captured animals must be placed under suitable natural or artificial refugia.

SOIL STRIPPING

Once the vegetation has been reduced to ground level (or as close as is practicable) land within the Scheme area should be soil-stripped under an ecological watching brief. This should entail the use of a 360 degree tracked excavator (seven tonne or similar) using a small, toothed bucket to carefully scrape back the remaining vegetation and 150mm of topsoil. The topsoil and any debris must be spread on to the ground to allow the ecologist to search for any remaining reptiles, in the unlikely event that animals are present.

Appendix C

SURVEY OCCURENCE DATA





Table C-1 – Occurrence Data Summary for Visit 1

Transect No.	Grass Snake		Slow Worm	
	Adult count	Juvenile / sub-adult count	Adult count	Juvenile / sub-adult count
Transect 5	-	-	-	1
Transect 9	-	-	1	-
Transect 16	-	-	-	1
Total adult count	-		1	

Table C-2 – Occurrence Data Summary for Visit 2

Transect No.	Grass Snake		Slow Worm	
	Adult count	Juvenile / sub-adult count	Adult count	Juvenile / sub-adult count
Transect 5	-	-	1	-
Transect 7	-	-	1	-
Transect 15	-	-	1	-
Transect 16	-	-	1	-
Transect 17	-	-	-	1
Total adult count	-		4	

Table C-3 – Occurrence Data Summary for Visit 3

Transect No.	Grass Snake		Slow Worm	
	Adult count	Juvenile / sub-adult count	Adult count	Juvenile / sub-adult count
Transect 9	-	-	1	-
Transect 15	-	-	-	1
Transect 16			1	-
Transect 17			1	-
Total adult count	-		3	

Table C-4 - Occurrence Data Summary for Visit 4

Transect No.	Grass Snake		Slow Worm	
	Adult count	Juvenile / sub-adult count	Adult count	Juvenile / sub-adult count
Transect 5	-	-	1	2
Transect 15	1	2	-	2
Transect 16	-	1	1	-
Transect 17	-	1	-	-
Total adult count	1		2	

Table C-5 - Occurrence Data Summary for Visit 5

Transect No.	Grass Snake		Slow Worm	
	Adult count	Juvenile / sub-adult count	Adult count	Juvenile / sub-adult count
Transect 5	-	-	-	2
Transect 15	-	-	3	-
Transect 17	1	2	1	1
Total adult count	1		4	

Table C-6 - Occurrence Data Summary for Visit 6

Transect No.	Grass Snake		Slow Worm	
	Adult count	Juvenile / sub-adult count	Adult count	Juvenile / sub-adult count
Visit 6 1/2	(date of visit 20.05.2024)			
Transect 16	-	-	1	-
Visit 6 2/2	(date of visit 22.05.2024)			
Transect 4	-	-	-	2
Transect 9	-	-	3	-
Transect 17	1	-	-	-
Total adult count	1		4	

Table C-7 - Occurrence Data Summary for Visit 7

Transect No.	Grass Snake		Slow Worm	
	Adult count	Juvenile / sub-adult count	Adult count	Juvenile / sub-adult count
Transect 4	-	-	-	4
Transect 5	-	-	2	-
Transect 9	-	-	3	1
Transect 15	-	1	3	-
Transect 16	-	-	1	-
Total adult count	-		9	



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