A47 Wansford to Sutton Dualling

Scheme Number: TR010039

Volume 6
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APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

July 2021

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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ENVIRONMENTAL STATEMENT APPENDICES
Appendix 8.7 - Reptile Survey Report

Regulation Number:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010039
Application Document Reference	TR010039/APP/6.3
BIM Document Reference	HE551494-GTY-EBD-000-RP-LB-30015
Author:	A47 Wansford to Sutton Project Team, Highways England

Version	Date	Status of Version
Rev 0	July 2021	Application Issue

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1. Introduction

1.1.1. Highways England have undertaken a reptile survey at a site near the A47 between Wansford and Sutton, hereafter referred to as 'the Proposed Scheme', in line with the Road Investment Strategy announced in 2014 (Highways England 2014). This is to inform the Environmental Statement (ES) Chapter 8 (Biodiversity) (**TR010039/APP/6.1**) at PCF Stage 3 for the A47 Wansford to Sutton Dualling Scheme (the 'Proposed Scheme').

1.1.2. This baseline report provides a summary of the reptile survey undertaken by Sweco UK in 2020, assesses potential impacts of the Proposed Scheme upon reptiles and provides recommendations for mitigation and further survey work where necessary.

1.2. Works description

1.2.1. The Proposed Scheme is designed to provide a new 2.6km dual carriageway which largely follows the existing A47 at the Wansford end, crossing to the north and running parallel to the existing A47 after Sutton Heath road. There would also be a dedicated free-flow link road from the A1 southbound to the A47 eastbound to alleviate congestion at the Wansford junctions.

1.2.2. The Proposed Scheme is located at Wansford and extends eastwards to Sutton and forms a section of Single carriageway that is part of the main arterial highway route connecting to Peterborough and Norwich to the east.

2. Ecological background

2.1. Previous studies

Extended Phase 1 habitat survey

2.1.1. An extended Phase 1 habitat survey was undertaken in 2016 and combined with a desktop study, identified suitable habitat for reptiles. Habitats identified within the 100m study area include deciduous woodland, hedgerows, semi-improved calcareous grassland, improved grassland, wet heath and bog, standing water, running water and more (Highways England, 2018b).

Phase 2 surveys 2017

2.1.2. In September and October 2017 reptile surveys were undertaken to inform PCF Stages 1 and 2. Areas within 50m of the proposed route option were assessed for their suitability to support reptiles and subsequent reptile surveys were undertaken in suitable areas including scrub and tall ruderal on arable field margins, semi-improved grassland, woodland edges, rubble piles, ephemeral/short perennial and bare ground (Amey, 2017).

2.1.3. One adult male common lizard *Zootoca vivipara* was recorded during the 2017 surveys on Sutton Meadows County Wildlife Site (CWS), 20m east of the BP petrol station (Grid Reference: TL 08356 99666) (Amey, 2017 and Highways England, 2018).

Phase 2 surveys 2018

2.1.4. In 2018, between April and June, further reptile surveys were undertaken, to supplement those undertaken in 2017, of suitable habitat within 50m of the Proposed Scheme boundary for the Proposed Scheme (the 'survey area'). Eight survey sites were identified and 199 artificial refugia (roofing felt mats) were deployed across these eight sites (Highways England, 2018a).

2.1.5. The 2018 surveys identified populations of common lizard, located adjacent to the east of the A47/A1 junction and in an area east of the BP petrol station adjacent to the south of the A47.

2.2. Legislation

Wildlife and Countryside Act (WCA) 1981 (as amended)

2.2.1. Common lizard, slow worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix helvetica* are native reptile species and are protected under Schedule 5, Section 9.1 and 9.5(a)(b) of the WCA 1981 (as amended), making it an offence to:

- intentionally kill or injure a reptile
- trade or sell a reptile

2.2.2. Full protection of Schedule 5, Section 9 is afforded the sand lizard *Lacerta agilis* and the smooth snake *Coronella austriaca,* for which it is an offence to:

- intentionally kill, injure or take (capture) a sand lizard or smooth snake
- intentionally disturb a sand lizard or smooth snake while it is occupying a place used for shelter or protection
- intentionally destroy a place used by a sand lizard or a smooth snake for shelter or protection

The Conservation of Habitats and Species Regulations (CHSR) 2017 (as amended)

2.2.3. The sand lizard and smooth snake are European Protected Species (EPS) afforded protection under Section 2 of the CHSR 2017 (as amended) Regulation 42.

2.2.4. Under the CHSR, it is an offence if you:

- deliberately capture, injure or kill any wild animal of EPS
- deliberately disturb wild animals of any such species
- deliberately take or destroy the eggs of such an animal
- damage or destroy a breeding site or resting place of such an animal

2.2.5. Disturbance is defined as that which is likely:

1. To impair their ability –
   - to survive, to breed or reproduce, or to rear or nurture their young
   - in the case of animals of a hibernating or migratory species, to hibernate or migrate
2. To affect significantly the local distribution or abundance of the species to which they belong.

Natural Environment and Rural Communities Act (NERC)

2.2.6. All six species of reptile found in the UK are also afforded more general protection in England (and Wales) within the Natural Environment and Rural Communities Act (NERC) 2006. This imposes a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, "*to have due regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity*" [Section 40 (1)]. It notes that "*conserving biodiversity includes restoring or enhancing a population or habitat*"

[Section 40 (3)]. Consequently, attention should be given to dealing with the modification or development of an area if aspects of it are deemed important to reptiles.

2.2.7. Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, when carrying out their normal (e.g. planning) functions.

Cambridgeshire and Peterborough Local Priority Species (LPSs)

2.2.8. Adder, common lizard, grass snake and slow worm are listed as Local Priority Species (LPS) by the Cambridgeshire and Peterborough Biodiversity Group (2015).

2.2.9. The list of LPS is reviewed annually and includes species likely to be resident or breeding in Cambridgeshire and Peterborough, UK priority species including those which are not UK Biodiversity Action Plan (BAP) research only and species recorded in Cambridgeshire and Peterborough in the last 50 years. Adder, common lizard and grass snake have been recorded as recently as 2013, and slow worm as recently as 2011 (Cambridgeshire and Peterborough Biodiversity Group, 2015).

East of England Biodiversity Delivery Plan

2.2.10. Adder, common lizard, grass snake and slow worm are also listed on priority species categories present in the East of England. The east of England biodiversity forum has produced a detailed biodiversity delivery Plan for the region (East of England Biodiversity Forum, 2021) which combines targets for habitats with species considerations.

National Planning Policy Framework (NPPF) (2019)

2.2.11. The NPPF (2019) outlines government planning policies and how they should be applied within local authorities. The framework places an emphasis on sustainable development, encouraging the re-use of land that has previously been developed over-using land that has a higher environmental value and by minimising impacts on biodiversity. The NPPF states that developments should aim to conserve or enhance biodiversity and encourages opportunities to incorporate biodiversity in and around developments using the principles of the mitigation hierarchy. Paragraphs 170, 174 and 175 of the NPPF give policy support to the provision of measurable net gains in biodiversity. Paragraph 174 specifies that plans should identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including locally designated

sites; and promote the conservation, restoration and enhancement of priority habitats and ecological networks and the protection and recovery of priority species.

National Policy Statement for National Networks (2014)

2.2.12. The National Policy Statement for National Networks (2014) states "*development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. The applicant may also wish to make use of biodiversity offsetting in devising compensation proposals to counteract any impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought*."

2.3. Aims and objectives

2.3.1. This survey and the report presented herein are intended as an update to the reptile surveys previously undertaken in 2017 (Amey, 2017) and 2018 (Highways England, 2018a) outlined in Section 2.1.

2.3.2. The aim of the survey is to establish the presence or likely absence of reptiles on-ite, assess potential impacts of the Proposed Scheme upon reptiles and provide recommendations for undertaking the Proposed Scheme in compliance with relevant legislation regarding reptiles (see Section 2.2).

2.3.3. The following elements of work were included in the reptile survey programme:

- Field surveys, including one visit to place artificial refugia (see Section 3.2 for a description of artificial refugia used) on-site undertaken in June 2020 and four subsequent visits undertaken in July, September and October 2020 to survey the refugia and Site for reptiles.
- Ecological report, detailing the survey results, implications of the Proposed Scheme on reptiles and future mitigation requirements

3. Methodology

3.1. Desk study

3.1.1. A desk study undertaken in 2020 included a data search for records of protected/notable species, including reptiles, on and within 2km of the Site within the last 10 years obtained from Cambridgeshire and Peterborough Environmental Records Centre (CPERC) and Northamptonshire Biological Records Centre (NBRC).

3.2. Field survey

3.2.1. The locations of the reptile survey remain largely the same as those locations previously surveyed in 2018. The locations of previous surveys undertaken in 2018 and 2017 (Highways England, 2018a) were based on a walkover of the 50m survey area (Amey, 2017) which identified suitable habitat and locations for survey refugia.

3.2.2. The survey was undertaken with reference to the best practice guidelines in *Froglife Advice Sheet 10: Reptile Survey* (Froglife, 1999) and the *Herpetofauna Workers Manual* (Gent and Gibson, 2003).

3.2.3. The survey utilised the following methodologies:

- The use of roofing felt mats, further referred to as 'artificial refugia', which attract reptiles as a place of shelter from predation and disturbance, and as an aid to absorbing heat when basking
- Manual searches of placed artificial refugia on-site
- Visual observations of all areas of the Site, including checking for signs of sloughed skin, burrows and egg laying

3.2.4. A log was kept throughout the surveys noting any reptile observed, including their species, number, gender and age. Amphibians and other protected or notable species observed during the survey visits were also recorded.

Refugia

3.2.5. In total 200 artificial refugia were placed on-site, across the eight survey areas previously identified ((Highways England,2018a) Annex A: Artificial refugia locations and Survey Results Map). The numbers of artificial refugia in each survey area is as follows:

- Area 1 – 20 mats
- Area 2 – 30 mats

- Area 3 – 30 mats
- Area 4 – 40 mats
- Area 5 – 40 mats
- Area 6 – 20 mats
- Area 7 – 20 mats

3.2.6. Artificial refugia was composed of roofing felt mats cut to approximately 50cm x 50cm. Artificial refugia were placed in suitable reptile habitat including rides through grassland or scrub and road verges. These areas provide basking habitat adjacent to areas of shelter and protection. It was not considered necessary to place artificial refugia in less optimal habitat around the Site as the surveys aims to determine presence or likely absence only.

3.2.7. Survey area two was altered slightly from previous surveys in 2017 and 2018 (see Section 2.1). The survey area was extended up the field margin parallel to the A1. Common lizards were found on the margin of this arable field adjacent to the A1/A47 junction during previous surveys (see Section 2.1) and extending the survey area allowed for further investigation into the common lizard population in this area of the Site.

3.2.8. Annex A contains a map of the survey area locations.

Survey season and weather conditions

3.2.9. Reptiles are active between March and October (Froglife, 1999) and the survey visits were undertaken in, July, September and October 2020.

3.2.10. Surveys focused on the species most likely to be found at the Site: slow worm, grass snake, common lizard and adder. The sand lizard is associated with heathland and coastal sand dunes and the smooth snake is associated with heathlands (Gent and Gibson, 2003). Therefore, it is considered unlikely these species are present on-site due to lack of suitable habitat to support them and as such they will not be considered further in this report.

3.2.11. Froglife (1999) recommends surveying between temperatures of 9 - 18°C. Common lizard and slow worm will bask between 9 - 18°C, grass snake will bask between 12 - 20°C and adder will bask between 8 - 16°C (Gent and Gibson, 2003). All surveys were undertaken within the recommended temperatures of 9 - 18°C (see Table 4-2 below).

3.2.12. The survey was undertaken by Ishbel Campbell ACIEEM (Consultant Ecologist, Sweco), Lydia Waite (Ecology Field Assistant, Sweco), Keith Ross MCIEEM (Ecology Technical Manager, Sweco), Chelsea Edwards (Senior Ecologist, Sweco) and MLM Group.

3.3. Limitations

3.3.1. The results of this survey, and the information detailed in this report, shall remain valid until March 2022 after which time, should construction not have commenced, an update of the surveys, impact assessment and recommendations is recommended in line with the Chartered Institute of Ecology and Environmental Management's (CIEEMs) guidelines on the lifespan of ecological data (2019).

3.3.2. Due to delays in surveys commencing and resourcing difficulties because of the COVID-19 Pandemic and its associated restrictions it was not possible to undertake the full seven survey visits following deployment of the artificial refugia. Four survey visits only were undertaken (see Table 4-2) within the reptile active season (March – October inclusive (Froglife, 1999)). This is considered a significant limitation to the survey.

4. Results

4.1. Desk study

4.1.1. Three records of common lizard were returned during the data search (see Section 3.1), the most recent dated 2014 and the nearest located approximately 475m south of the Proposed Scheme boundary. One record of grass snake was returned, dated 2013 and located a minimum of 870m south of the Proposed Scheme boundary within Sutton/Sibson Flood Meadows CWS. No exact location data are available for this record. Historical records only (the most recent records dated 1990) of slow worm and adder were returned.

4.1.2. Additionally, the Northamptonshire Bat Group, from who further records of bats within 2km of the Site were purchased, state that adder and common lizard are found in the woodlands of the local area.

4.2. Field survey

4.2.1. The surveys comprised five visits, one visit to place out the artificial refugia, undertaken on 25 and 26 June 2020, and four subsequent visits in suitable weather conditions to manually check the artificial refugia and undertake visual observations of the Site. These visits were undertaken on 22 July 2020, 9 September 2020, 6 October 2020 and 9 October 2020.

4.2.2. The dates of survey, surveyors, weather conditions and results are shown in Table 4-1 below.

Table 4-1: Survey dates, weather conditions and results

Visit number	Date	Surveyors	Weather conditions	Results
Refugia placement	25 and 26 June 2020			
1	22 July 2020	Keith Ross and Chelsea Edwards	Temperature - 18°C (a period of extended hot weather preceded survey) Precipitation – none Cloud cover (Oktas) – 1 Wind (Beaufort) - 2	Adult female common lizard x1 and juvenile common lizard x2 on Sacrewell Farm adjacent to the north-east of the A1/A47 junction slip-road (approximate grid reference: TL 07643 99842)
2	9 September 2020	MLM Group	Temperature - 16°C Precipitation - none Cloud cover (Oktas) - 7 Wind (Beaufort) - 3	No reptiles found
3	6 October 2020	MLM Group	Temperature - 14°C Precipitation – none Cloud cover (Oktas) – 5 Wind (Beaufort) - 2	Female common lizards x2 at TL 08373 99636 and TL 08314 99642
4	9 October 2020	MLM Group	Temperature - 11°C Precipitation – none Cloud cover (Oktas) – 2 Wind (Beaufort) - 2	No reptiles found

5. Assessment and recommendations

5.1. Reptile status at the Site

5.1.1. The 2020 update surveys have identified common lizard on-site in a field adjacent to the A47, south-east of the petrol garage and adjacent to the north-east of the A1/A47 junction slip-road (at approximate grid reference TL 07643 99842), at the latter location where juveniles have been found. Common lizard are therefore confirmed as breeding on-site. See Annex A: Survey locations and results map for the locations at which common lizard were identified on-site.

5.1.2. The lack of observations of other common reptile species does not prove their absence from the Site.

5.2. Impact assessment

5.2.1. Anticipated impacts of the Proposed Scheme upon common and widespread reptiles includes the temporary loss of habitat including roadside verges and arable field margins.

5.2.2. Due to the construction of a new slip road between the A47 and the A1 to the north-east of the current A47/A1 junction an 'island' would be formed at one of the two locations on-site at which common lizards have been recorded (in 2018 and 2020). It is likely that all of the arable field margin and road verge habitat within this immediate location would be lost to construction and remaining habitat here shall be fragmented and isolated from further habitat due to the new A47 and slip road.

5.3. Mitigation measures

5.3.1. Roadside verges and adjoining arable field margins where the new route footprint meets arable land would be created/reinstated as part of the landscape design and may provide suitable habitat for reptiles on-site, replacing those areas of the same habitats which would be temporarily lost during construction (see Section 5.2.1).

5.3.2. Vegetation clearance should take place during the reptile active season (from March to October inclusive) in order to prevent any hibernating reptiles being killed or injured which would constitute an offence (see Section 2.2).

5.3.3. An ecological clerk of works (ECoW) should be present during vegetation clearance to deliver a toolbox talk regarding relevant legislation, the risk of finding reptiles on-site and reptile identification. Vegetation should be directionally strimmed to a height of approximately 10 - 15cm to allow the ECoW to undertake a fingertip search, removing any reptiles, or other animals found,

offsite to a place of safety. Vegetation should then be strimmed to ground level and any areas of potential refugia on-site should be subject to a destructive search by the ECoW and removed from Site.

5.3.4. Should it not be possible to undertake works in the reptile active season and vegetation clearance be required during the reptile hibernation period (November – February inclusive) clearance should be supervised by an ECoW. Any potential reptile hibernaculum would be identified by the ECoW, demarcated and left undisturbed.

5.3.5. The following general mitigation measures should be employed on-site throughout works:

- In the event a reptile is found on-site during works, works in the vicinity of the reptile should cease until the reptile has moved out of the works area.
- Trenches or excavations should be covered overnight to prevent injury/death of animals. If this is not possible, a means of escape, such as a ramp, should be inserted into the trench or excavation to allow animals to exit.
- The Site should be kept tidy throughout construction with materials (including rubbish) on-site stored off the ground on pallets (or in skips in the case of rubbish) and to prevent creating any refugia areas to attract reptiles onto the Site.

6. References

- Amey (2017). Stage 3 Ecology Baseline Report A47 Wansford to Sutton. COCDFL1WA7.
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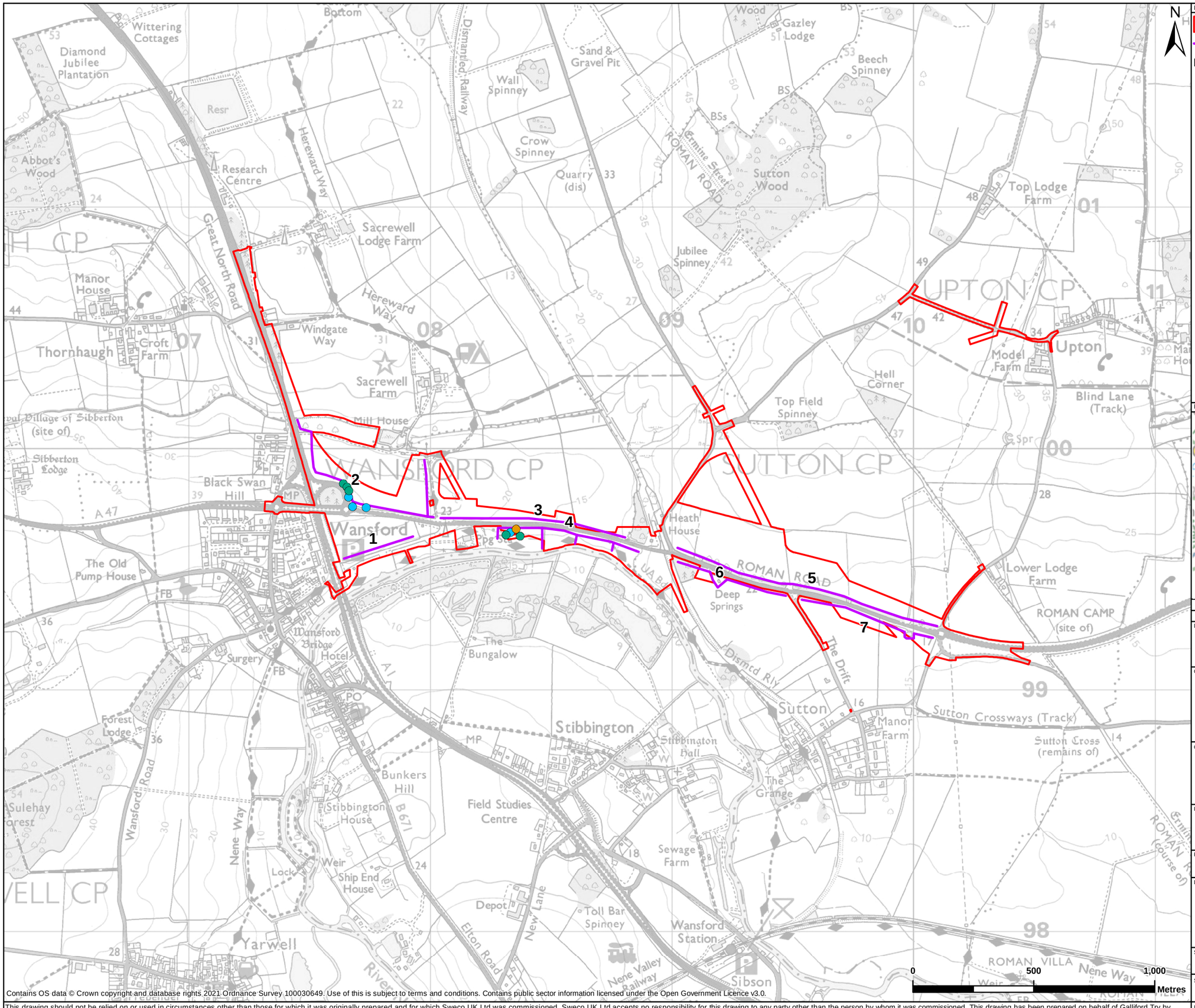
- Multi-Agency Geographical Information for the Countryside. Available online at: http://magic.defra.gov.uk/ (Accessed 11/12/20).

Annex A. Survey locations and results map



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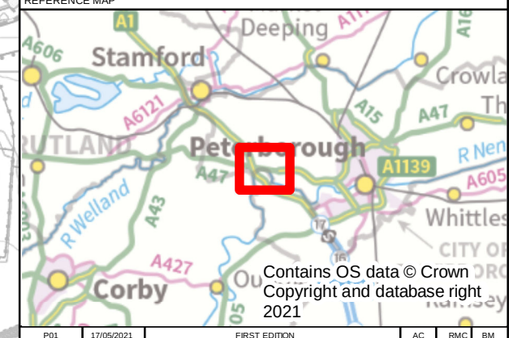
LEGEND

- Proposed Scheme Boundary
- Survey Area

Reptile Survey Result

- Common Lizard - 2017 survey results
- Common Lizard - 2018 survey results
- Common Lizard - 2020 survey results

REFERENCE MAP



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REV	DATE	REVISION NOTE	ORG	CHK'D	APP'D
P01	17/05/2021	FIRST EDITION	AC	RMC	BM

DESIGNER

SWECO

CONTRACTOR

GallifordTry

CLIENT

highways england

PROJECT TITLE

A47 WANSFORD TO SUTTON

PROJECT STAGE

PCF STAGE 3

DRAWING TITLE

ANNEX A: SURVEY LOCATIONS AND RESULTS

TR010039/APP/6.2

SUITABILITY

FOR INFORMATION

SHEET SIZE	SCALE	STATUS
A3	1:15,000	S2

DRAWING NUMBER

HE551494-GTY-EGN-000-DR-GI-30086

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