

**M42 Junction 6 Improvement
Scheme Number TR010027
Volume 6
6.3 Environmental Statement
Appendix 9.10 Reptile Report**

Regulation 5(2)(a)

Planning Act 2008

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

January 2019

Infrastructure Planning

Planning Act 2008

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

**M42 Junction 6 Improvement
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**6.3 Environmental Statement
Appendix 9.10 Reptile Report**

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Appendix 9.10 - Reptile Report

1 Introduction

1.1 Purpose of document

- 1.1.1 Where the Scheme is likely to affect reptiles, then survey work was undertaken in accordance with the advice given in DMRB Volume 11: Environmental Assessment [REF 1]. The purpose of this Appendix is to provide further detail contained within Chapter 9 Biodiversity of the Environmental Statement [TR010027/APP/6.1] on the results of the reptile surveys carried out in 2017 and 2018 to determine the current status and distribution of reptiles in the zone of influence of the Scheme.
- 1.1.2 Suitable habitats for reptiles were identified through a Phase 1 habitat survey undertaken for the Scheme in 2017 and updated in 2018 (see Appendix 9.2 and 9.3 [TR010027/APP/6.3]). All suitable habitats, except those for which land access permission was not granted, were surveyed for reptiles in accordance with the methods given in Section 3 of this appendix. The extent of the reptile surveys is shown on **Figure 9.10**.
- 1.1.3 This appendix provides a summary of current policy and legislation regarding reptile species likely to be present. The methods used to undertake the reptile surveys and survey limitations are described, and the results of the surveys are provided.

2 Relevant legislation and planning policy

2.1 Wildlife and Countryside Act 1981

- 2.1.1 All species of UK reptile are protected under Schedule 5 Section 9 (1) of the Wildlife and Countryside Act 1981 (as amended) [REF 2] making it an offence to intentionally, deliberately or recklessly kill, injure or take individuals.

2.2 Planning policy

- 2.2.1 As a protected species the presence of reptiles is a consideration in the planning process through the application of relevant planning policy.
- 2.2.2 The National Policy Statement for National Networks (NPSNN) [REF 3] sets out the Government's policies to deliver development of nationally significant infrastructure projects (NSIPs) on the national road and rail networks in England. It provides guidance and imposes requirements on matters such as good scheme design, as well as the treatment of environmental impacts. The NPSNN [REF 3] states that when a project is subject to EIA the applicant should ensure that the environmental statement clearly sets out any likely significant effects on protected species such as reptiles. Applicants are also expected to show how the project has taken advantage of opportunities to conserve and enhance biodiversity.

3 Methodology

3.1 Habitats within the Order Limits and areas of survey

- 3.1.1 A review of the habitats within the Order Limits was conducted based on the Phase 1 survey carried out in 2017 and updated in 2018.

3.2 Presence/absence survey

- 3.2.1 Surveys investigating the presence/absence of reptiles were conducted on the areas of habitat identified as having suitability for reptiles within the Order Limits in accordance with the Froglife advice sheet [REF 4].
- 3.2.2 Artificial refugia consisting of a 50/50 mix of 1m x 0.5m mats of bitumen felt and 0.5m x 0.5m corrugated metal tins were deployed at a density of 50 per hectare of suitable habitat. Where there was less than a hectare of suitable habitat in an area, a minimum of 30 refugia were deployed. This high density of refugia was deployed to optimise detectability in small habitat areas. In areas where livestock was likely to be present only bitumen felt refugia were deployed.
- 3.2.3 The site was split into two areas; Survey Area A and Survey Area B. For full location details of these areas refer to **Figure 9.10**.
- 3.2.4 These refugia were left to bed in for a minimum of ten days prior to the first survey. A minimum of 7 survey visits were conducted between 11th June 2018 and the 2nd October 2018 (but more were conducted where possible). All survey visits were undertaken by a suitably experienced ecologist.
- 3.2.5 Survey visits where possible were undertaken within the following weather conditions the weather conditions for each survey visit can be found below in **Table 1** and **Table 2**:
- air temperature between 10°C and 20°C;
 - wind speed between 0 (still) and 2 (light breeze) on the Beaufort Scale; and
 - no rain.
- 3.2.6 Surveys were conducted through a mixture of refuge searches and direct observation of any naturally occurring features suitable for basking reptiles.

Table 1: Weather conditions for surveys in Area A

Survey	Date	Temperature (°C)	Wind Speed (Beaufort Scale)	Cloud Cover (%)	Rain
1	11/06/2018	14	2	50	None
2	31/08/2018	19	5	10	None
3	03/09/2018	19	1	60	None
4	07/09/2018	15	3	30	None
5	10/09/2018	19	2-3	100	None
6	14/09/2018	13	2	30	None

Survey	Date	Temperature (°C)	Wind Speed (Beaufort Scale)	Cloud Cover (%)	Rain
7	18/09/2018	17	4	75	None
8	25/09/2018	14	1	60	None

Table 2: Weather conditions for surveys in Area B

Survey	Date	Temperature (°C)	Wind Speed (Beaufort Scale)	Cloud Cover (%)	Rain
1	31/08/2018	19	5	10	None
2	03/09/2018	19	1	60	None
3	07/09/2018	15	3	30	None
4	10/09/2018	19	2-3	100	None
5	14/09/2018	13	2	30	None
6	18/09/2018	17	4	75	None
7	25/09/2018	14	1	60	None
8	28/09/2018	14	1	35	None
9	02/10/2018	17	1-2	100	None, Rained just before survey

3.3 Survey limitations

- 3.3.1 A number of the surveys were undertaken in sub optimal conditions i.e. temperature greater than 18 degrees Celsius or in strong winds i.e. a Beaufort scale score of 3 or more. This is not considered to have impacted the results as no reptiles were detected in optimal conditions across any of the surveys.
- 3.3.2 Several areas of potentially suitable habitat were inaccessible:
- A strip of land east of Catherine-de-Barnes Lane was inaccessible. This area is not considered to have impacted the results as it is directly adjacent to Survey Area A and so any reptiles present are likely to have been detected by these surveys.
 - An area of land located to the southwest of Junction 6 and Hollywell Brook and its immediate surrounds were inaccessible for surveys. These areas are suitable for reptiles and have potential for occasional use by grass snake so this species may be on site and has gone undetected by these surveys.
- 3.3.3 Due to land access constraints the Survey Area was split into two distinct Survey Areas A & B. Access was granted to Survey Area B later in the year and one survey visit was undertaken in October. Although this is considered a suboptimal time of year, weather conditions were favourable for this survey visit i.e. within the optimal weather conditions and so it is not considered that this will have impacted the results.

4 Results

4.1 Assessment of habitats within the Order Limits

- 4.1.1 The survey area was focussed to the west where the impact to potentially suitable reptile habitat is greater. Furthermore, the majority of habitat affected by the Scheme to the east of the M42 is heavily managed arable land that has limited suitability for reptiles.
- 4.1.2 Hollywell Brook runs to the northeast Junction 6. It is surrounded by rough grassland and provides suitable habitat foraging for reptiles especially grass snake.
- 4.1.3 To the west of the M42, the Scheme would pass through arable land, improved grassland, semi-improved grassland and amenity grassland. Many of these habitats have been heavily managed. Areas of closely mown amenity grassland and heavily sheep grazed improved grassland were also discounted as having little suitability for reptiles as they provide limited foraging or basking opportunities. The arable land the scheme will pass through was also discounted. These areas are intensively farmed with no field margins present and also provide little foraging or basking opportunities' for reptiles.
- 4.1.4 Areas of semi-improved and improved grassland were present to the west of the Scheme and to the southeast of the existing Junction 6 that are less heavily managed. These grasslands provide a varied vegetation structure and with pockets of scrub creating a range of potential foraging and basking habitats. These areas were targeted for further survey as they had a high chance of detecting any reptiles present in the area. Hibernation potential was present in these areas in the form of log piles/dead wood and animal burrows. Some areas of the site had collapsed sheds and fence panels that would also provide shelter for reptile species.
- 4.1.5 North of the A45 much of the effected habitats are the hard standing areas associated with the NEC car parks and associated landscaping. These were discounted from further survey as they have limited suitability for reptiles.
- 4.1.6 Areas of ephemeral habitats associated with the A45/B4438 junction and the Arden hotel offered some potential suitability for reptiles both bordered areas of scrub and provided a varied mixture of vegetation and bare ground. The area next to the Arden hotel offered good connectivity to other sites and habitats along the rail corridor. The area associated with the A45/B4438 had a large amount of fly-tipped refuse present. These provided artificial basking and hibernating habitats for reptiles.
- 4.1.7 Within the areas previously surveyed in 2017 (see Annex A), two fields to the west of Catherine-de-Barnes Lane and the southern embankment of the Clock Interchange (see **Figure 9.10**) remain unchanged from the previous year's surveys, so were scoped out of further surveys for this year.

4.2 Presence/absence surveys

4.2.1 The results of the presence/absence surveys for Survey Area A are shown in **Table 3** below:

Table 3: Reptile Survey Results for Survey Area A

Survey	Date	Results
1	11/06/2018	No Reptiles Recorded
2	31/08/2018	No Reptiles Recorded
3	03/09/2018	No Reptiles Recorded
4	07/09/2018	No Reptiles Recorded
5	10/09/2018	No Reptiles Recorded
6	14/09/2018	No Reptiles Recorded
7	18/09/2018	No Reptiles Recorded
8	25/09/2018	No Reptiles Recorded

4.2.2 The results of the presence/absence surveys for the Survey Area B are shown in **Table 4** below:

Table 4: Reptile survey results for Survey Area B

Survey	Date	Results
1	31/08/2018	No Reptiles Recorded
2	03/09/2018	No Reptiles Recorded
3	07/09/2018	No Reptiles Recorded
4	10/09/2018	No Reptiles Recorded
5	14/09/2018	No Reptiles Recorded
6	18/09/2018	No Reptiles Recorded
7	25/09/2018	No Reptiles Recorded
8	28/09/2018	No Reptiles Recorded
9	02/10/2018	No Reptiles Recorded

5 Discussion

5.1.1 The presence/absence surveys in both 2017 and 2018 detected no reptiles within the Order Limits. However, suitable habitat for reptiles is present on within the Order Limits that could not be accessed which could potentially be used on an occasional basis by grass snake.

5.1.2 In the absence of mitigation there is a potential for grass snake to be accidentally harmed during construction and therefore precautionary mitigation measures shall be implemented to ensure that this species is not harmed.

- 5.1.3 The low risk of harm to this species will be mitigated through the following implementing the following measures where potential presence exists:
- a. works affecting reptile hibernation habitat should be completed under the supervision of a suitably qualified ecologist and only during suitable weather conditions (bright spells with little wind and when temperatures 9°C or above) in the active reptile period, i.e. mid-March to mid-October, inclusive;
 - b. in advance of work affecting other areas of suitable habitat (i.e. non-hibernation habitat) in the reptile active period, the vegetation should be managed to discourage reptiles from the working area. This should only be completed during suitable weather conditions and involves the phased mowing or strimming of vegetation towards areas of retained reptile habitat. Vegetation should be cut to a height of 250mm and then after three days to 100mm or less; and
 - c. in the event that reptiles are encountered then works in that area should cease until further advice has been sought from an ecologist.

6 References

REF 1	Highways Agency (2009). Design Manual for Roads and Bridges, Volume 11, Section 4, Part 1, HD44/09, Assessment of Implications (of Highways and/or Roads Projects)
REF 2	The Wildlife & Countryside Act 1981. HMSO (1981).
REF 3	National Policy Statement for National Networks. Department for Transport (2014).
REF 3	Froglife (2015) Surveying for reptiles Tips, techniques and skills to help you survey for reptiles

Annex A – 2017 Reptile Survey Report

HIGHWAYS ENGLAND

M42 JUNCTION 6 IMPROVEMENT REPTILE SURVEY REPORT

JULY 27, 2017

CONFIDENTIAL





M42 JUNCTION 6 IMPROVEMENT REPTILE SURVEY REPORT




FINAL
CONFIDENTIAL

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DATE: JULY 2017

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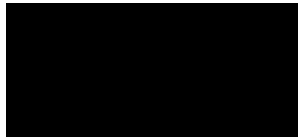
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TABLE 3.1 REPTILE SURVEY RESULTS3

1 INTRODUCTION

1.1 BACKGROUND

WSP (formerly Mouchel) was commissioned by Highways England to undertake ecological surveys to inform the proposed M42 Junction 6 Improvement Scheme. An extended Phase 1 habitat survey was undertaken by Mouchel in February 2017. During this survey, habitats within and adjacent to the proposed scheme were assessed for their suitability to support protected species. Areas of grassland within and adjacent to the scheme were identified as being suitable to support reptiles.

Reptile surveys were undertaken across areas of suitable habitat between June and July 2017. This report presents the results of the survey work undertaken.

1.2 SCHEME LOCATION

At the time of writing, three possible route options (Options 1, 2 and 3) are being considered. All three options are predominantly located to the south west of Junction 6 close to the village of Bickenhill, although all route options also include improvements to the junction itself. The land within the proposed scheme is predominantly used for agriculture and pasture grazing, although the scheme is also close to the National Exhibition Centre (NEC), Birmingham International Railway Station and Birmingham Airport as well as proposed developments including High Speed 2 (HS2) route and terminal, a Motorway Service Area (MSA) and UK Central development.

1.3 STUDY AREA

Three areas of suitable reptile habitat within and/or adjacent to the proposed route options were identified and subject to further survey. These include two fields to the west of Catherine de Barnes Lane (central grid references SP182818 and SP183813) and the southern embankment of the Clock Interchange and adjacent field margin (central grid reference: SP186828). No further areas of suitable reptile habitat were identified within or adjacent to the proposed route options.

1.4 STUDY AIMS AND OBJECTIVES

The study sought to determine whether reptiles are present within suitable habitats within the study area and if so, to assess likely impacts of the proposed scheme on these species. To achieve this, field surveys to search for evidence of reptiles within suitable habitats within the study area were undertaken.

2 METHODOLOGY

2.1 FIELD SURVEY

Surveys investigating the presence or likely absence of reptiles were undertaken in areas of suitable habitat present within or adjacent to the proposed route options.

Artificial refugia, comprising 500mm x 500mm sheets of bitumen felt, were placed at the site on 17th May 2017. Refugia were placed at 20m intervals along the edge of the fields. In accordance with best practice, the refugia and left to 'bed-in' for a period of two weeks prior to the first survey visit. In total, 140 refugia were deployed.

Seven survey visits were undertaken between 1st June 2017 and 25th July 2017 during suitable weather conditions. During each survey visit, refugia were inspected from a distance before being lifted and turned over searching for the presence of reptiles. In addition, any natural refugia such as debris, logs and large stones were searched for the presence of reptiles.

2.2 LIMITATIONS

Numbers of reptiles observed are likely to be affected by weather conditions, with reptiles being more evident during sunny weather with relatively low air temperatures and little wind. While reptiles are active throughout the summer, the months of April, May and September tend to be more effective for surveying, when temperatures typically fall in the range from 9°C to 18°C. Although surveys were undertaken during June and July, all surveys were undertaken within the optimal temperature range.

Typically, refugia would be placed across the entire area of suitable habitat however in this instance, refugia could only be placed around the margins of the areas surveyed to facilitate mowing by the landowner. Although this meant that a reduced number of refugia was used, it is considered that the margins offered optimal habitat for reptiles and the refugia in these locations were best placed for detecting the presence of reptiles. .

3 RESULTS

3.1 FIELD SURVEY

Table 3.1 below shows the results of the reptile surveys. No reptiles were recorded during the survey work undertaken.

Table 3.1 Reptile survey results.

SURVEY	DATE	WEATHER CONDITIONS	RESULTS
1	01.06.17	18°C, dry, cloud 0/8, BF1	No reptiles
2	07.06.17	14°C, dry, cloud 4/8, BF1	No reptiles
3	12.06.17	18°C, dry, cloud 6/8, BF1	No reptiles
4	29.06.17	16°C, dry, cloud 7/8, BF1	No reptiles
5	04.07.17	16°C, dry, cloud 8/8, BF2	No reptiles
6	18.07.17	17°C, dry, cloud 4/8, BF1	No reptiles
7	25.07.17	16°C, dry, cloud 3/8, BF1	No reptiles

4 EVALUATION AND RECOMMENDATIONS

4.1 OVERVIEW

No evidence of reptiles was found within the survey area and as such, no further surveys or specific mitigation in respect of reptiles is recommended.

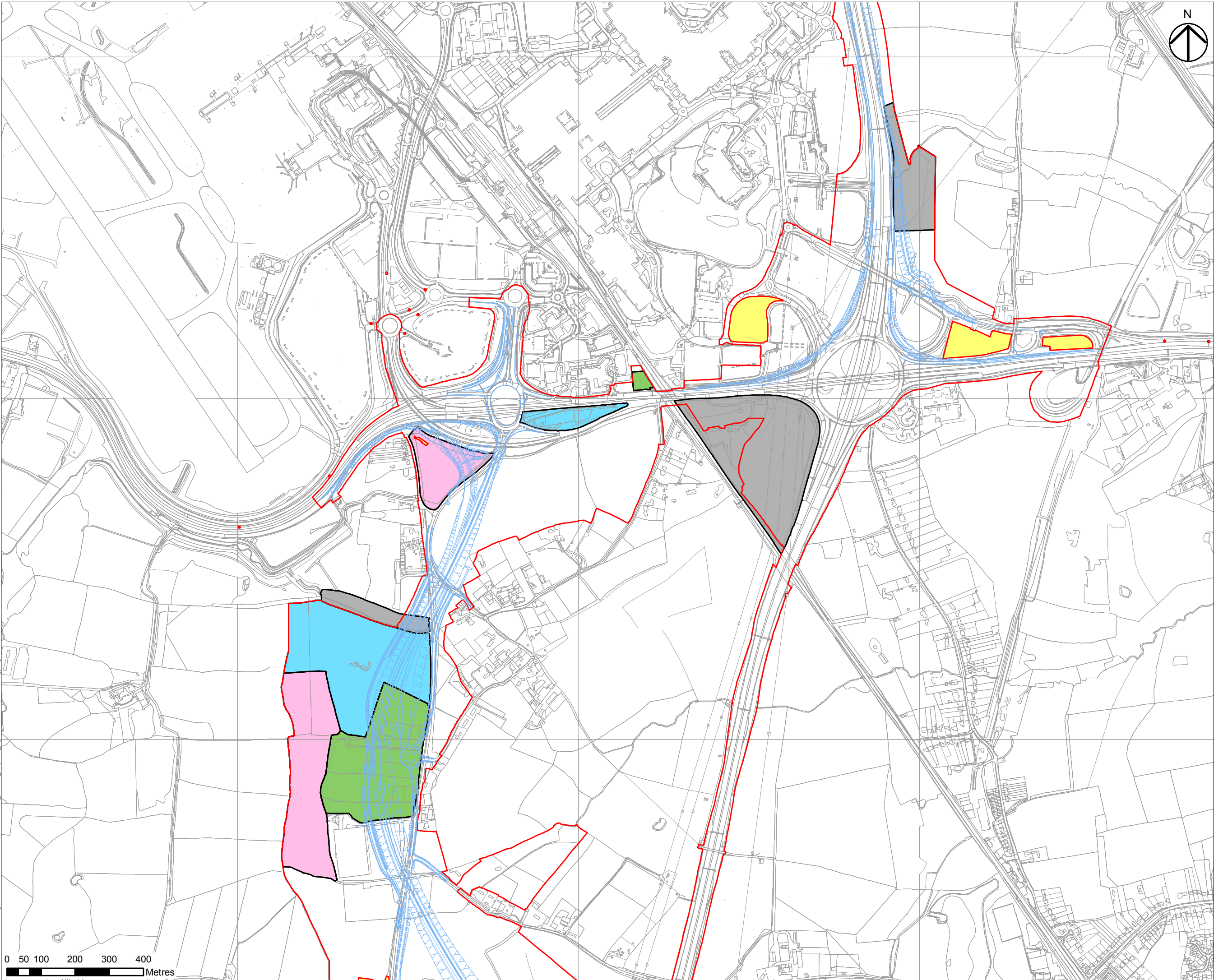
Although no reptiles were recorded during the surveys, it is possible that individual reptiles may be discovered during the construction stage. As such, it is recommended that the overseeing organisation maintain a watching brief throughout the construction works. All staff working on the site should be briefed as to the possible presence of reptiles within the working area. If a reptile is observed, works in the immediate area should cease and the advice of an ecologist sought.

5 FIGURES

5.1 FIGURE 1: REPTILE SURVEY MAP

Annex B: Figures

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NOTES

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.

LEGEND

- THE SCHEME
- LIMITS OF LAND TO BE ACQUIRED OR USED PERMANENTLY OR TEMPORARILY (THE ORDER LIMITS)
- LIMITS OF LAND TO BE TEMPORARILY ACQUIRED FOR SIGNAGE INSTALLATION
- LAND NOT INCLUDED WITHIN THE ORDER LIMITS

REPTILE SURVEY AREAS

- AREA OF 2017 SURVEY
- SURVEY AREA A 2018 SURVEYS
- SURVEY AREA B 2018 SURVEYS
- AREAS OF SUITABLE HABITAT WITH NO LAND ACCESS IN 2018.

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