

Southampton to London Pipeline Project

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Appendix 7.11: Reptile Factual Report
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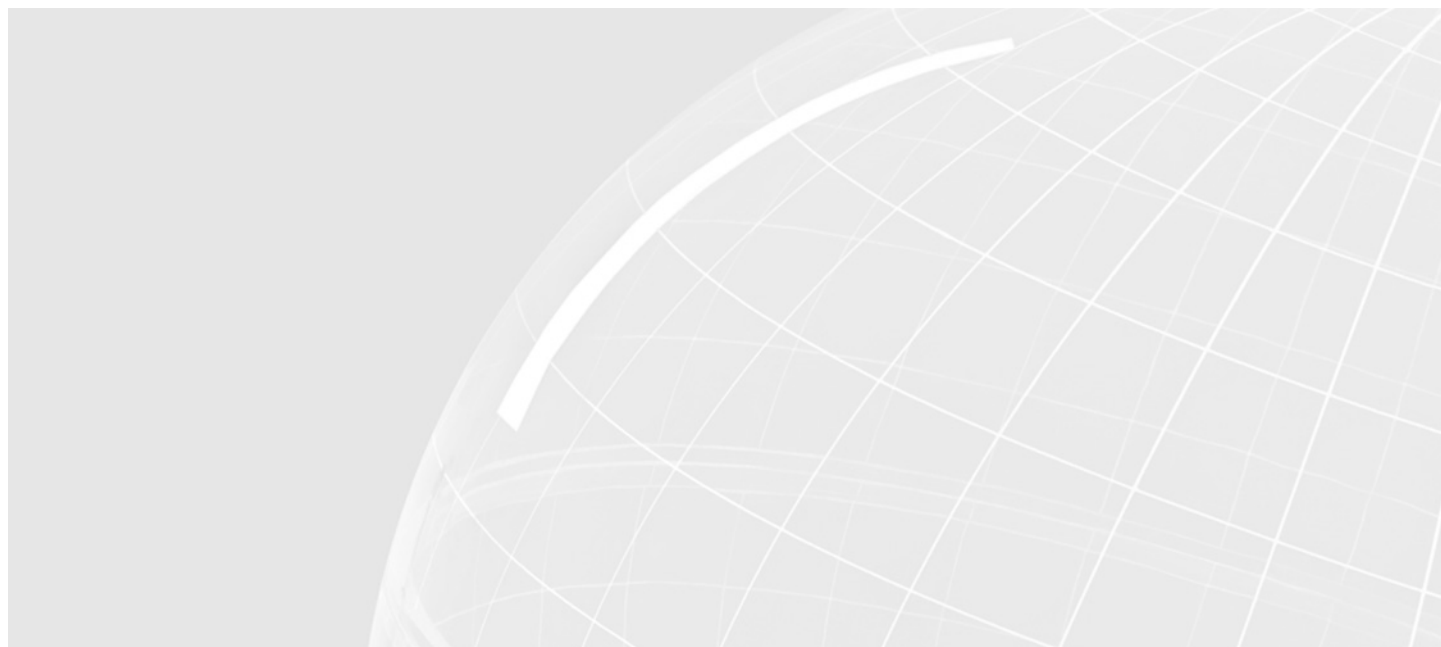
Southampton to London Pipeline Project

Esso Petroleum Company, Limited

Appendix 7.11: Reptile Factual Report

B2325300-JAC-000-ENV-APP-000069

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Southampton to London Pipeline Project

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1 Introduction

1.1 Overview

- 1.1.1 Esso Petroleum Company, Limited (Esso) is making an application for Development Consent to replace 90km (56 miles) of its existing aviation fuel pipeline that runs from the Fawley Refinery near Southampton, to the West London Terminal storage facility in Hounslow.
- 1.1.2 This Reptile Factual Report has been produced to support the application for development consent under the Planning Act 2008 and the accompanying Environmental Statement.

1.2 Scheme Description

- 1.2.1 Esso has already replaced 10km (6 miles) of pipeline between Hamble and Boorley Green in Hampshire and now wants to replace the 97km (60 miles) of pipeline between Boorley Green and the West London Terminal storage facility in Hounslow. The areas of land to be permanently or temporarily used for the project are known as the Order Limits.
- 1.2.2 The replacement pipeline starts near Boorley Green at the end point of the previously replaced pipeline. The route runs generally in a northeast direction via Esso's Pumping Station in Alton. It terminates at the Esso West London Terminal storage facility. The replacement pipeline is 97km (60 miles) long, and is referred to as 'the project'.

1.3 Terminology

- 1.3.1 This report encompasses survey results and discussion of both common and rare native reptiles in the United Kingdom.
- 1.3.2 The term 'common reptiles' comprises:
- common lizard (*Zootoca vivipara*);
 - slow worm (*Anguis fragilis*);
 - adder (*Vipera berus*); and
 - grass snake (*Natrix helvetica* (formerly classified as *Natrix natrix*)).
- 1.3.3 The term 'rare reptiles' refers to:
- sand lizard (*Lacerta agilis*); and
 - smooth snake (*Coronella austriaca*).

1.4 Legal Context

- 1.4.1 All native reptiles are protected by the Wildlife and Countryside Act 1981 (as amended) against:
- intentional killing and injuring;



- selling, offering or exposing for sale, or having in possession or transporting for the purpose of sale any live or dead animal, any part of or anything derived from such an animal; and
- publishing or causing to be published any advertisement likely to be understood as conveying buying or selling any of those things.

1.4.2 Additionally, rare reptiles are protected by the Conservation of Habitats and Species Regulations 2017, which prohibits:

- deliberate capturing, injuring or killing;
- deliberate disturbance;
- deliberate taking or destroying of eggs; and
- damaging or destroying a breeding site or resting place of such an animal (also includes accidentally).

1.4.3 The term 'disturbance' when applied to rare reptiles includes any disturbance which is likely to:

- impair their ability to survive, breed or reproduce, rear or nurture their young, or hibernate; or
- affect the local distribution or abundance of the species.

1.4.4 Further to this, all native reptiles are listed as species of principal importance for the purpose of conserving biodiversity under Section 41 of the National Environment and Rural Communities (NERC) Act 2006. This requires public bodies to take reptiles into consideration in planning policy.

2 Methodology

2.1 Introduction

2.1.1 The survey methodology described below is based on the methodology described in the project's Scoping Report (Esso, 2018) but has also been informed by consultation and engagement with relevant stakeholders (e.g. Natural England), the results of desk studies, and professional judgement.

2.2 Desk Study

2.2.1 Data was requested from Greenspace Information for Greater London, Hampshire Biodiversity Information Centre (HBIC) and the Surrey Amphibian and Reptile Group (SARG). These data searches provided all available records of reptiles within the study area (see Chapter 7 Biodiversity).

2.2.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) website was reviewed to identify the locations of any European Protected Species (EPS) licences, with respect to rare reptiles, within the study area.

2.2.3 Aerial imagery (including high-resolution photographs obtained from a light aircraft survey) and habitat maps (e.g. those provided by HBIC and the MAGIC website) were



used to identify habitat with the potential to support rare reptiles or medium or large populations of common reptiles (Herpetofauna Groups of Britain and Ireland (HGBI), 1998), as detailed in Table 2.1.

- 2.2.4 These resources were also used to identify all other areas of habitat within the Order Limits that might support low populations of common reptiles. These sites were not subject to field surveys, as standard mitigation in the form of habitat manipulation would be implemented before any construction activity to ensure legal compliance. This approach would be appropriate for sites which satisfy the following criteria:
- the site must comprise of 'non-complex' habitats, i.e. those with a uniform ground structure with low potential for extensive or buried refugia;
 - the areas of construction effect would not exceed approximately 0.5ha; and
 - there is suitable adjacent habitat to which displaced reptiles can move.
- 2.2.5 Habitats that were sub-optimal for supporting reptiles (e.g. land subject to regular agricultural management or grazing, or amenity grassland) were scoped out of the assessment and would not be subject to further surveys or mitigation.
- 2.2.6 This approach is considered proportionate given the localised and temporary nature of the proposed construction works.
- 2.2.7 During consultation with Paul Edgar, Senior Environmental Specialist (Amphibians and Reptiles) at Natural England, it was agreed that areas of heathland routinely support large breeding populations of all common reptiles and some along the route are known to support sand lizard populations (e.g. Chobham Common). As such, the Natural England representative advised that presence/absence surveys in such areas would be unnecessary as there is existing data from local record centres. Instead, a process of mapping habitat suitability for rare reptiles in these areas of heathland was recommended.

2.3 Field Surveys

Selection of Sites for Further Assessment

- 2.3.1 The results of the desk study formed the basis of the selection of sites for further assessment. These sites consisted of:
- sites with no recent or historical records of rare reptiles but with the potential to support these species (e.g. areas of suitable habitat that are adjacent to known rare reptile sites, or other sites supporting extensive tracts of heathland habitat);
 - sites that have the potential to support medium or high populations of common reptiles due to the presence of large areas of high-quality habitat (e.g. rough grassland but excluding heathlands) likely to be affected by construction activity; or
 - sites supporting 'complex' or isolated habitat features where habitat manipulation would be an inappropriate mitigation technique.
- 2.3.2 Numerous locations are considered likely to support low populations of reptiles (e.g. field margins, road verges, riparian verges). Such features and locations are often ephemeral in nature and regularly subject to mowing or cutting, meaning they can often



change in suitability over time and at certain times of the year. As such, it is not deemed necessary to map these areas with potential to support low populations of common reptiles. Instead, it would be the job of the Environmental Clerk of Works (ECoW) to determine the condition of these features during the vegetation clearance phase and determine appropriate methods of clearance and the requirement of any mitigation.

- 2.3.3 Where land access permitted, the aims of the field surveys were:
- to visit and assess the shortlisted sites to confirm further surveys at these locations were appropriate;
 - to confirm the presence or likely absence of reptile species; and
 - to estimate the population size of all reptile species present.
- 2.3.4 An initial list of survey areas was compiled as part of the Scoping Report (Jacobs, 2018). Several areas were scoped out of presence/absence surveys during this stage due to a variety of factors, including lower quality reptile habitat than initial desk studies suggested, or simple habitat that can be subject to standard mitigation techniques without the need for surveys.

Presence/Likely Absence Surveys

- 2.3.5 Where land access permitted, surveys to confirm the presence or likely absence of reptiles were undertaken in accordance with current best practice guidelines (Froglife, 1999).
- 2.3.6 The first stage of the survey required ecologists to visit each site and lay 0.5m x 0.5m squares of roofing felt (also referred to as artificial cover objects (ACOs)). ACOs create an area for reptiles to shelter from predation or disturbance, and aid in heat absorption due to their ability to absorb greater amounts of heat than the wider environment.
- 2.3.7 ACOs were placed in areas likely to be favourable to reptiles, often characterised as those that catch a lot of sun which may also be close to cover, e.g. south facing slopes or hedgerow bases. The number and density of ACOs varied depending on the landscape present, but it is generally considered that a greater number of ACOs increases the probability of reptile detection in areas where reptiles are present. However, a minimum of one ACO every 10m (either in a grid or along a linear feature) was distributed at each site, in accordance with survey recommendations (Froglife, 1999). The location of ACOs was mapped using a Geographical Information Systems (GIS) application on a tablet which allowed ecologists to accurately locate each ACO during return surveys and to record ACO-specific results.
- 2.3.8 Once the survey set-up was complete, all ACOs were left on site for a minimum of seven days to allow time for them to bed-in and for any reptiles to discover them.
- 2.3.9 Surveys began after the minimum bedding-in period. To confirm presence or likely absence of reptiles at each site, a minimum of seven survey visits were undertaken during suitable weather conditions. Surveys ceased at sites with no records of reptiles after seven visits during suitable conditions.
- 2.3.10 Surveys were undertaken between August and November 2018, during the reptile active season and continuing into November due to weather conditions and



temperatures remaining suitable for reptiles, with records of reptile presence still being made. Surveys were undertaken when daytime temperatures reached between 9°C and 20°C, with early morning or early evening visits preferred to midday/mid-afternoon visits (especially during the summer months) to avoid the hottest part of the day when reptiles are less likely to make use of ACOs (Froglife, 2016). Weather patterns can also affect detection rates of reptiles. For example, a hot spell after prolonged cold weather can often yield high detection rates; similarly, showery weather after a dry period can have the same effect. Surveys were not undertaken during considerable rain or high wind.

- 2.3.11 During each survey visit, every ACO was carefully viewed on approach to identify any reptiles basking on top before they fled. Once the ACO was reached, it was carefully lifted and the area below inspected. All reptiles observed were recorded.

Direct Observations

- 2.3.12 In addition to ACO surveys, ecologists undertook direct observation surveys during each visit. This methodology can be particularly useful for detecting presence of species less likely to use ACOs, such as the sand lizard (Sewell *et al.*, 2013). As such, transect routes were walked in conjunction with the ACO surveys so that areas of optimal habitat could be surveyed. Particular attention was given to features that may already be reptile hotspots on a site, e.g. large refugia in sunny locations or sandy areas close to cover.
- 2.3.13 Furthermore, surveyors were vigilant for the presence of reptile sloughs (shed skin) which can often be identified to species level by looking at features such as shape, markings, scale size and form. This can be used to indirectly confirm presence of a species but cannot be used towards a population estimate.
- 2.3.14 If rare reptiles were found on a site where no previous records existed, then the survey would have been abandoned if the ecologists on site were not licenced for rare reptile surveys. All future surveys there would have then been undertaken by a licenced or accredited ecologist.

Population Estimate Surveys

- 2.3.15 A minimum of 15 visits were planned for sites where reptile presence was confirmed during the first seven visits. These surveys were undertaken in accordance with the methodology described for presence/absence surveys.
- 2.3.16 The results of these surveys informed a population estimate for the site using guidance provided by HGBI (1998), see Table 2.1.

Table 2.1: Reptile Population Size Classifications as Taken from HGBI, 1998

Species	Low Population	Medium Population	High Population
Common lizard	< 20/ha	> 40/ha	> 80/ha
Slow worm	< 50/ha	> 50/ha	> 100/ha
Adder	< 2/ha	2 - 4/ha	> 4/ha
Grass snake	< 2/ha	2 - 4/ha	> 4/ha
Sand lizard	> 5/ha	20/ha	> 34/ha



Species	Low Population	Medium Population	High Population
Smooth snake	< 1/ha	2 - 4/ha	> 4/ha

Reptile Habitat Suitability Mapping on Heathland Sites of Special Scientific Interest (SSSI)

- 2.3.17 Ecologists visited heathland SSSI sites within the Order Limits accompanied by Paul Edgar (Senior Environmental Specialist (Amphibians and Reptiles)) from Natural England on 18 and 19 October 2018. The aim of the site visits was to map all areas of habitat for their suitability to support rare reptiles or important assemblages of common reptiles. The sites surveyed were:
- Chobham Common SSSI (SU 97979 64196);
 - Colony Bog and Bagshot Heath SSSI (SU 91382 60803), including Unit 5 Turf Hill (SU 93517 61544); and
 - Bourley and Long Valley SSSI (SU 82713 52776).
- 2.3.18 At each site the team assessed the habitats within and adjacent to the Order Limits, recording all features relevant to reptiles, especially those that could support rare reptiles. Features that might support large numbers of hibernating reptiles were also mapped, along with any locations where specific mitigation might be required.
- 2.3.19 Areas were mapped using a GIS application on a tablet and ranked by their importance for reptiles using a traffic light colour-coding system. Areas of green were those least suitable to support reptiles or where impacts would likely be low (in the absence of mitigation), while areas of red had the highest potential to support important populations of reptiles or where impacts would likely be high (in the absence of mitigation). The habitat suitability mapping results of these areas is displayed in Figure 7.11.2.

2.4 Survey Constraints

- 2.4.1 Field surveys were prevented in some locations by land access permission not being available at the time of survey. In some instances, surveys were considered unreasonable due to health and safety concerns associated with the site or surrounding area. In total, 10% of sites were unable to be visited at all due to the above reasons and 3% were visited once but not subject to presence/absence surveys due to health and safety concerns.
- 2.4.2 Additionally, the late start of reptile surveys in the year meant that weather conditions deteriorated during repeat surveys of ACOs and reptiles became increasingly likely to be entering hibernation rather than continue activity on sites. This meant that it was not possible to carry out the full 15 surveys of each site as stated in the methodology. The number of times each site was visited is shown in Table 3.1.
- 2.4.3 Despite these constraints, the combination of desk study results, habitat mapping with species experts, presence/absence surveys and population estimate surveys are considered likely to present an accurate picture of reptile presence throughout the Order Limits.



3 Results

3.1 Desk Study

- 3.1.1 Records provided by HBIC and SARG confirm that common reptiles are abundant along the route, with certain areas considered more favourable to reptiles than others.
- 3.1.2 The records from SARG also confirmed the presence of sand lizards at Chobham Common SSSI and Unit 5 Turf Hill of Colony Bog and Bagshot Heath SSSI. The route crosses these sites.
- 3.1.3 Adders were not recorded during field surveys, but desk study results confirm their presence on heathland sites at Bourley and Long Valley SSSI, Colony Bog and Bagshot Heath SSSI and Chobham Common SSSI.
- 3.1.4 All desk study records and areas highlighted as having potential to support medium to high populations of common reptiles are shown in Figure 7.11.1.

3.2 Field Surveys

Selection of Sites for Further Survey

- 3.2.1 All sites selected for further survey based on field surveys can be seen in Table 3.1 and Figure 7.11.1.

Presence/Absence Surveys

- 3.2.2 The presence or absence of reptiles at each survey site can be seen in Table 3.1 and Figure 7.11.1.

Direct Observations

- 3.2.3 All direct observations made on site were used to confirm the presence of the related reptile species. As such, results of direct observations are encompassed by the confirmed presence of any reptile species shown in Table 3.1 and Figure 7.11.1.

Population Estimate Surveys

- 3.2.4 Population estimate surveys at the targeted sites returned results suggestive of small populations of common reptiles at the locations specified in Table 3.1. Population size estimates were based on the number of surveys undertaken at each site and so there is potential that these may underestimate population sizes, although the number of individuals found at each site was well within the low population size classes (described in Table 2.1).



Table 3.1: Species Recorded and Estimated Population Size at Each Survey Site

Site number	Location	Number of survey visits	Species recorded	Peak count	Population size estimate
3	Esso Pump Station, Alton	10 (9 in optimal weather)	Slow worm	3	Low
6	Land adjacent to Peacocks Nursery, A287, Ewshot	12 (10 in optimal weather)	Slow worm	1	Low
7	Ewshot Meadows, Ewshot	13 (11 in optimal weather)	Common lizard Slow worm	3 1	Low Low
18	Windlemere Golf Course, Windlesham	8 (7 in optimal weather)	-	-	Likely absent
22	Hanworth Lane, Chertsey	11 (8 in optimal weather)	Grass snake	2 juveniles	Low
23	Chertsey Meads, Chertsey	11 (8 in optimal weather)	Grass snake	1	Low

4 Discussion

- 4.1.1 Population size estimates were based on fewer surveys than the 15 stated in the methodology. However, the predicted sizes are considered reliable as all sites had a minimum of nine surveys in optimal weather conditions, and peak counts for reptile species on all sites were towards the lower end of the low population classification (Table 2.1).
- 4.1.2 The exception to this is Site 7, where it is believed there may be a medium-sized population of common lizards, rather than the low population suggested by the surveys carried out. The population is believed to be greater in size due to the large quantity of suitable habitat in the extended area around the survey site. Given the habitat present, it is possible that grass snake is also present, although this would be in low numbers.
- 4.1.3 Additionally, there is potential for the baseline to change during the interim between these field surveys and the scheduled start of construction. This is particularly relevant to Site 18, which is the former Windlemere Golf Course currently in the process of being converted into Windlemere Suitable Alternative Natural Greenspace (SANG). This change of use may make the site more suitable for common reptiles. Consequently, there may be an increased potential for common reptiles to be present on the site nearer the time of construction, despite them being recorded as 'likely absent' in 2018. However, the speed of any occupancy by reptiles is likely to be limited by physical barriers, in particular the A322 between Site 18 and adjacent heathland at Turf Hill. Therefore, it is unlikely that population sizes for common reptiles would be high, nor is the site likely to be occupied by rare reptiles.
- 4.1.4 Common reptiles are generally widespread and prevalent, particularly in the south of England (Wilkinson & Arnell, 2013). Therefore, the suitable areas that the route passes through are likely to represent a very small proportion of land use for common reptiles and would be unlikely to result in an adverse effect on the conservation status of the



various species. An exception may be added if large hibernacula are lost on the heathland sites during the winter.

- 4.1.5 However, the presence of sand lizard along the route is of note. Sand lizards are a rare species known to occur on just a few specific sites throughout Surrey. The wider UK population predominantly exists on sandy heathland in Dorset and Hampshire and coastal sand dunes in Wales and northwest England, plus some recent reintroductions to former home ranges (Joint Nature Conservation Committee, 2007). As such, there is potential for the local conservation status of this species to be adversely affected if unmitigated effects were to arise.
- 4.1.6 The results of the desk study and field surveys show that both common and rare reptiles are present within, and in close proximity to, the Order Limits. Construction activity has the potential to kill or injure these animals, or damage, destroy or fragment their terrestrial habitat. To avoid and reduce these effects, and to ensure legal compliance, construction works with potential to affect common and rare reptiles would be subject to appropriate mitigation. Outline mitigation strategies for common reptiles can be found in Appendix 7.17 Protected and Controlled Species Compliance Report. Mitigation for sand lizards is detailed in a draft EPS licence in Appendix 7.16 Draft Sand Lizard Licence Application.

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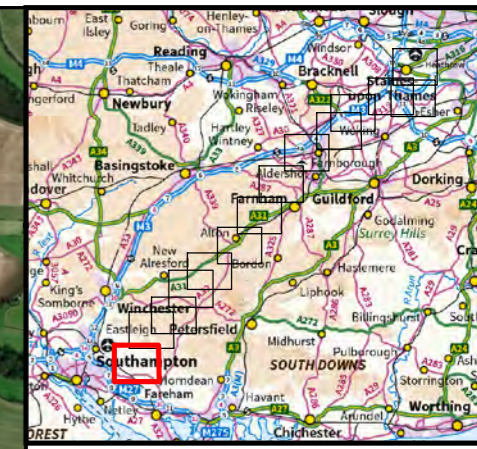
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Figures

Figure 7.11.1 Reptile desk study and field survey results

Figure 7.11.2 Rare reptile desk study and field survey results for heathland Sites of Special Scientific Interest (SSSIs)



- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
 - Slow worm
 - Common lizard and slow worm
 - No species found
- Hampshire Biodiversity Information Centre records**
- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake

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Rev.	Rev. Date	Purpose of revision	Orig/Dwn	Checkd	Rev'd	Apprv'd
0	24/04/2019	For issue	ZR	NS	CM	SH

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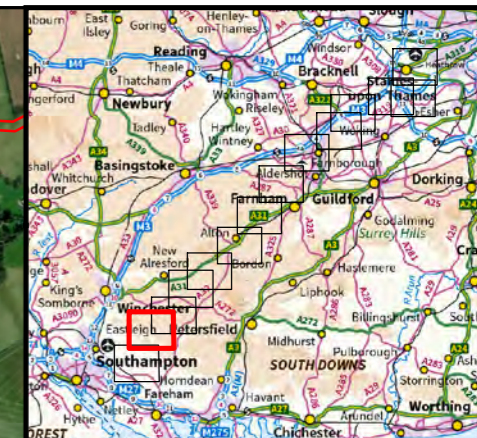
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**ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)**

Drawing Status	For Issue
Scale	1:25,000 @ A3 DO NOT SCALE
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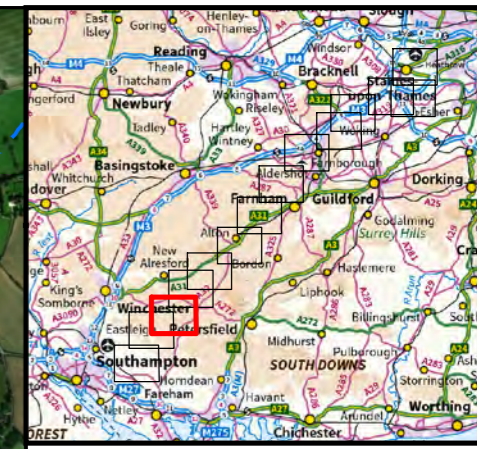
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Sheet displays parts of Section A and Section B

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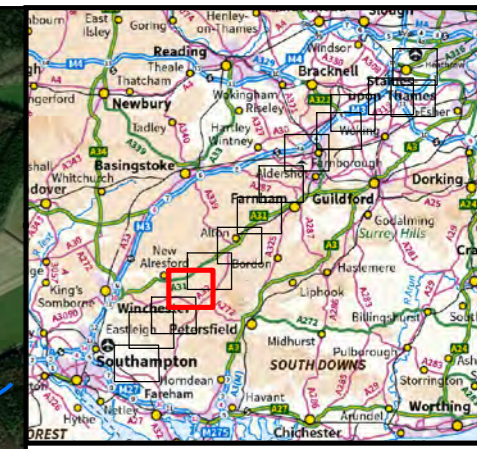
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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
 - Slow worm
 - Common lizard and slow worm
 - No species found
- Hampshire Biodiversity Information Centre records**
- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake

Sheet displays parts of Section A and Section B

Rev.	Rev. Date	Purpose of revision	Orig/Down	Checked	Rev'd	Apprv'd
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Project

Southampton to London Pipeline Project

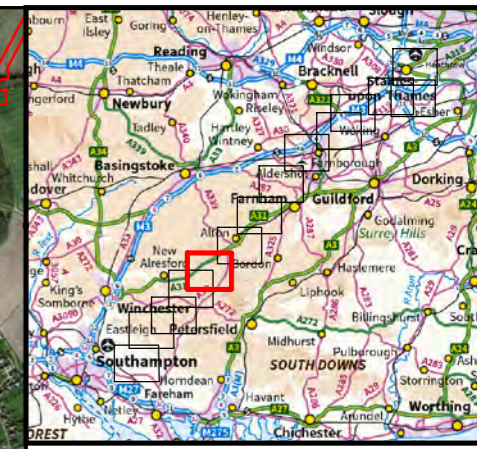
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ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)

Drawing Status	For Issue
Scale	1:25,000 @ A3 DO NOT SCALE
Jacobs No.	B2325300
Project/Wise No.	B2325300-JAC-000-ENV-DRG-001073
Drawing number	Figure A7.11.1 Sheet 4 of 14
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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
 - Slow worm
 - Common lizard and slow worm
 - No species found
- Hampshire Biodiversity Information Centre records**
- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake

Sheet displays part of Section B

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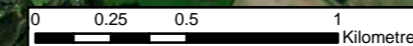
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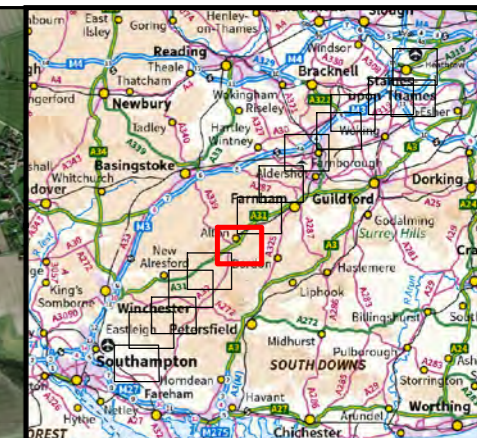
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ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)

Drawing Status	For Issue	
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ProjectWise No.	B2325300-JAC-000-ENV-DRG-001073	
Drawing number	Figure A7.11.1 Sheet 5 of 14	Rev 0

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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
 - Slow worm
 - Common lizard and slow worm
 - No species found
- Hampshire Biodiversity Information Centre records**
- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake

Sheet displays parts of Section B and Section C

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0	24/04/2019	For issue	ZR	NS	CM	SH

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Project

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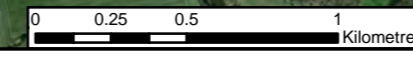
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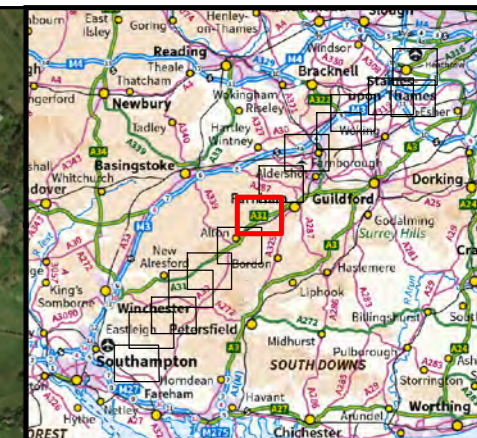
**ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)**

Drawing Status	For Issue
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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
 - Slow worm
 - Common lizard and slow worm
 - No species found
- Hampshire Biodiversity Information Centre records**
- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake

Sheet displays part of Section C

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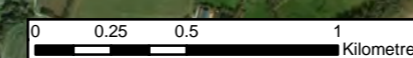
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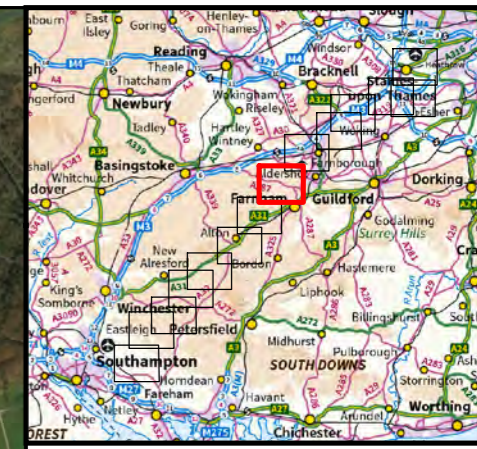
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Drawing title
**ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
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 APFP Reg. (2009) 5(2)(l)**

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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
 - Slow worm
 - Common lizard and slow worm
 - No species found
- Hampshire Biodiversity Information Centre records**
- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake

Sheet displays parts of Section C and Section D

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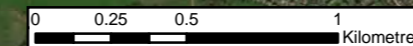
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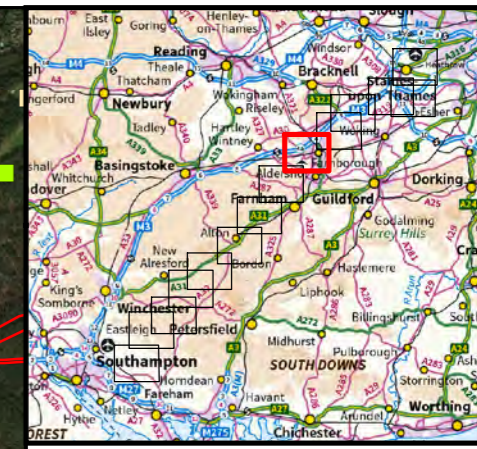
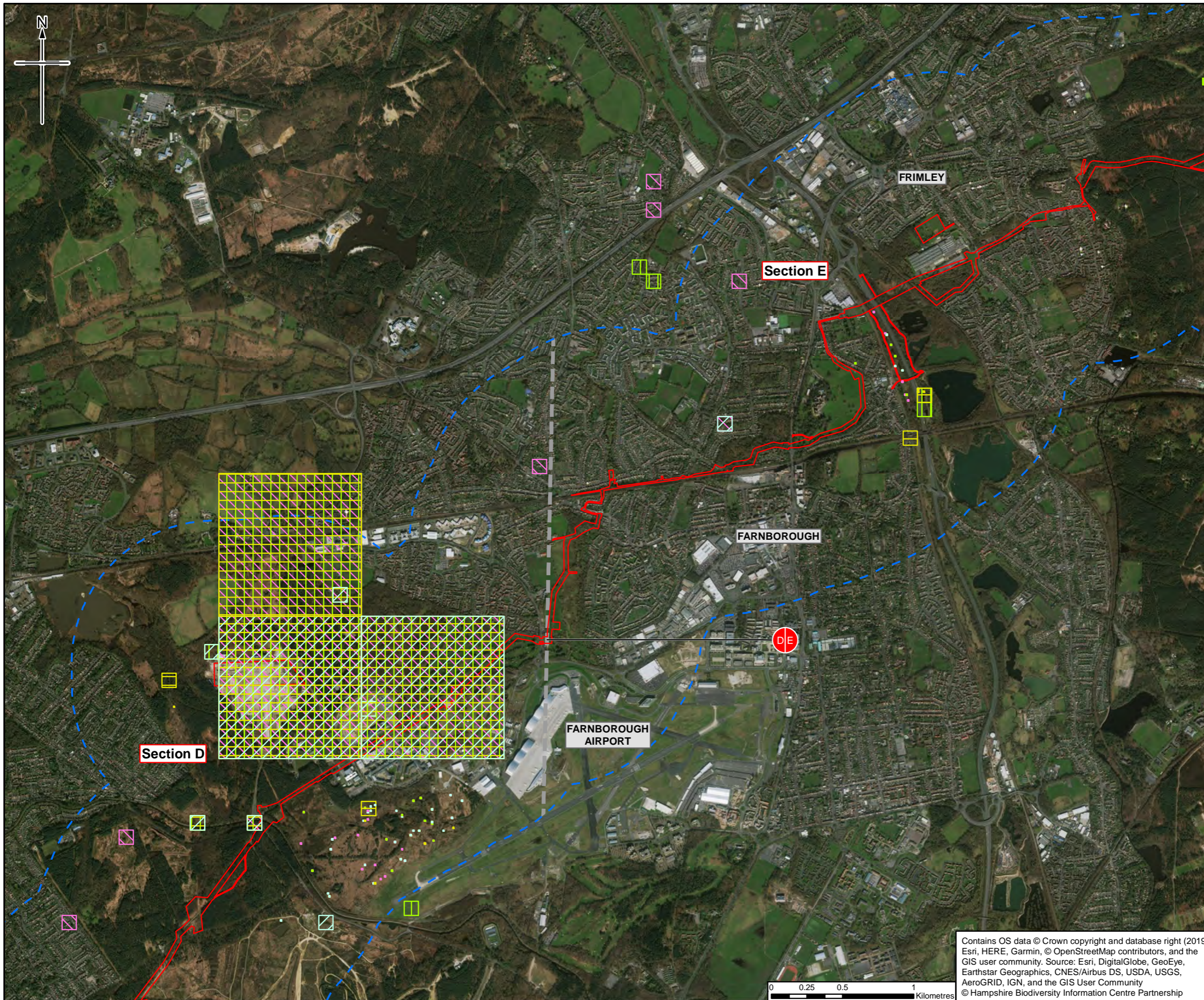
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**ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)**

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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
 - Slow worm
 - Common lizard and slow worm
 - No species found
- Hampshire Biodiversity Information Centre records**
- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake

Sheet displays parts of Section D and Section E

0	24/04/2019	For issue	ZR	NS	CM	SH
Rev.	Rev. Date	Purpose of revision	Orig/Dwn	Checkd	Rev'd	Apprv'd

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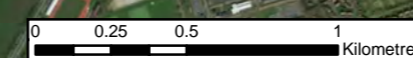
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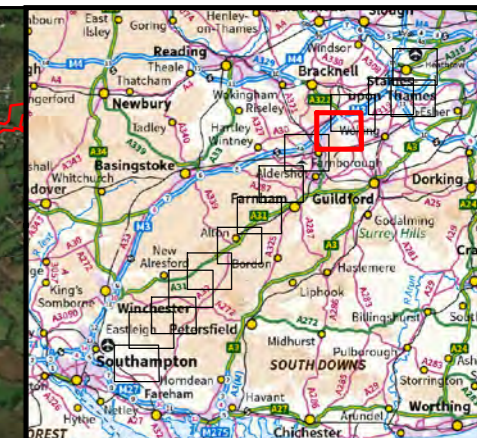
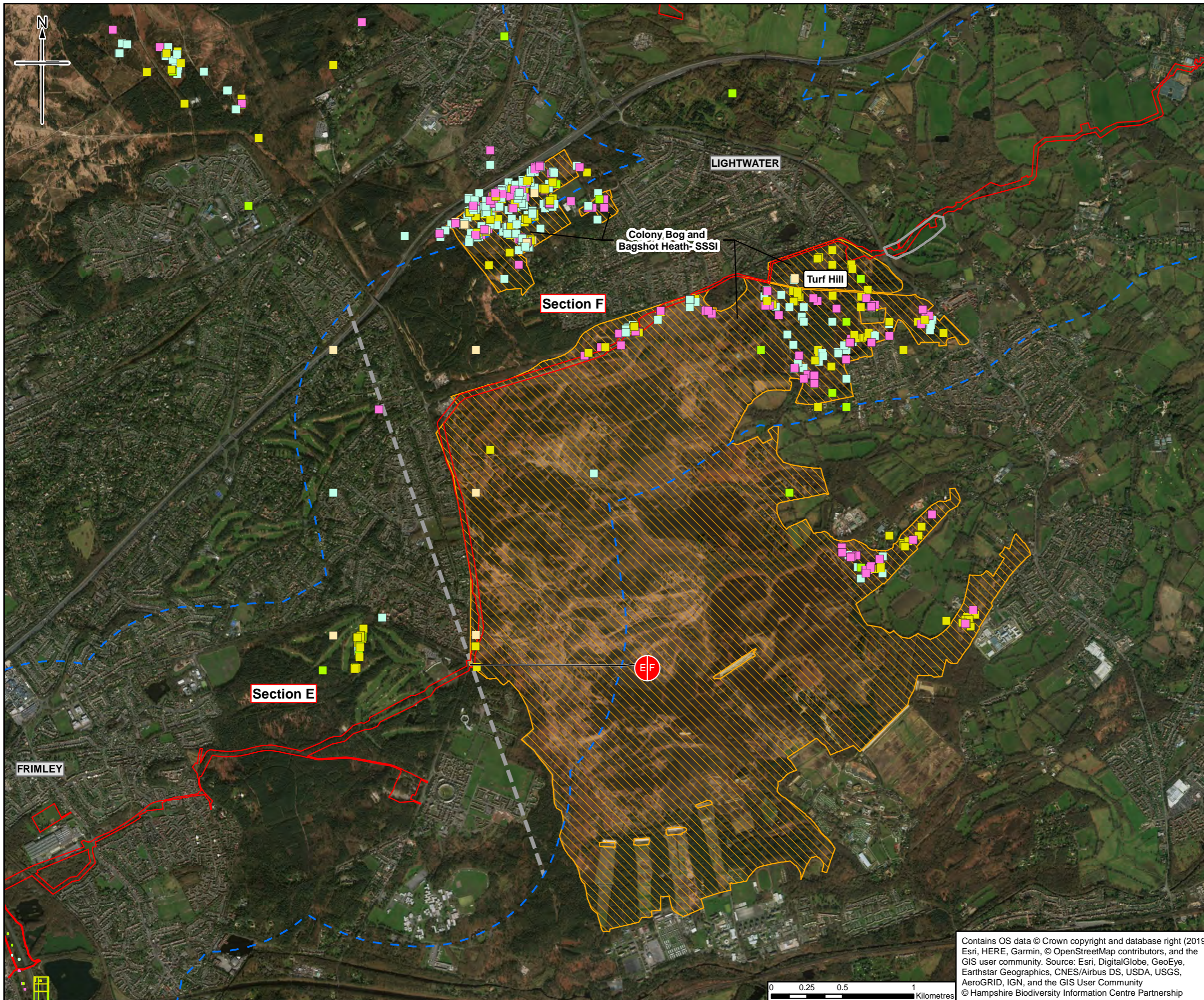
Project
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Drawing title
 ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)

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Legend

- Order Limits
- Order Limits 1km buffer
- Section break
- Section break

Reptile survey area and species found

- Grass snake
- Slow worm
- Common lizard and slow worm
- No species found

Hampshire Biodiversity Information Centre records

- Adder
- Common lizard
- Grass snake
- Slow worm

Surrey Amphibian and Reptile Group records

- Adder
- Common lizard
- Grass snake
- Sand lizard
- Slow worm
- Smooth snake

Site of Special Scientific Interest (SSSI)

Sheet displays parts of Section E and Section F

0	24/04/2019	For issue	ZR	NS	CM	SH
Rev.	Rev. Date	Purpose of revision	Orig/Dwn	Checked	Rev'd	Apprv'd

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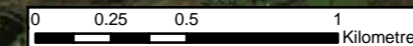
Project
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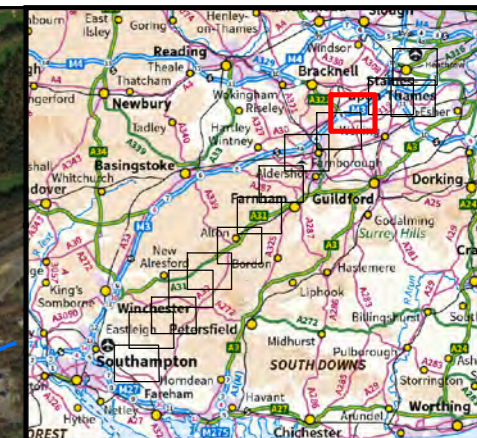
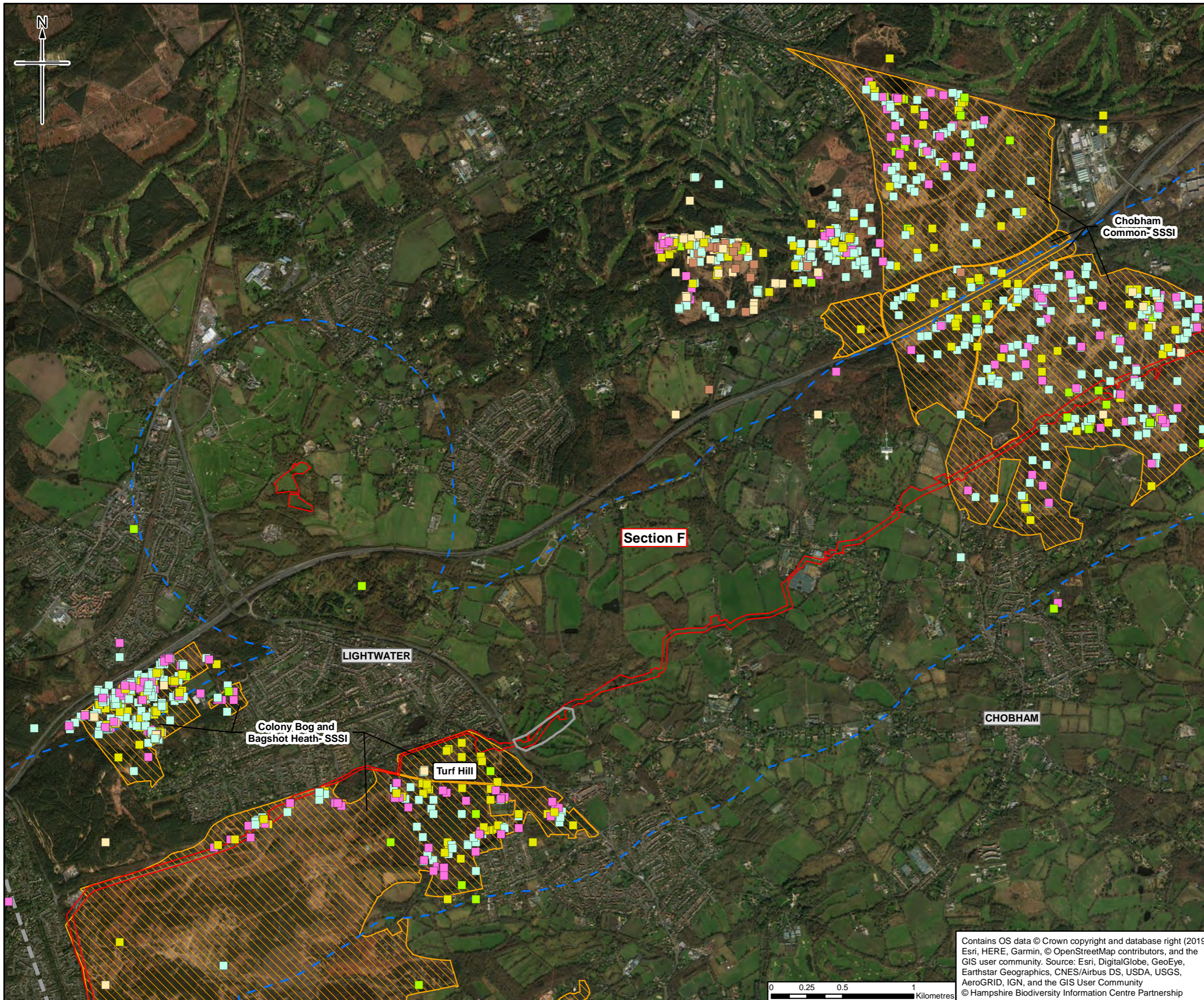
Drawing title
**ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)**

Drawing Status	For Issue	
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ProjectWise No.	B2325300-JAC-000-ENV-DRG-001073	
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Legend

- Order Limits
- Order Limits 1km buffer
- Section break
- Section break

Reptile survey area and species found

- Grass snake
- Slow worm
- Common lizard and slow worm
- No species found

Hampshire Biodiversity Information Centre records

- Adder
- Common lizard
- Grass snake
- Slow worm

Surrey Amphibian and Reptile Group records

- Adder
- Common lizard
- Grass snake
- Sand lizard
- Slow worm
- Smooth snake

Site of Special Scientific Interest (SSSI)

Sheet displays part of Section F

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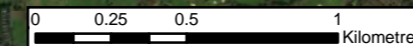
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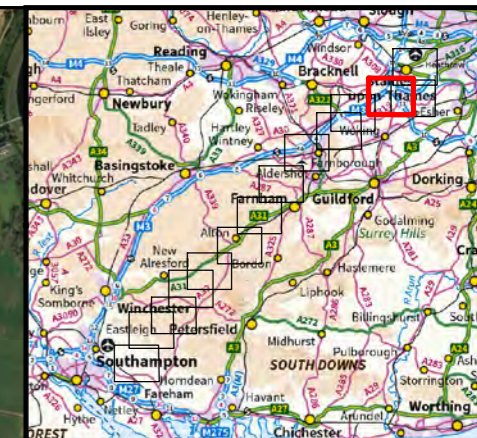
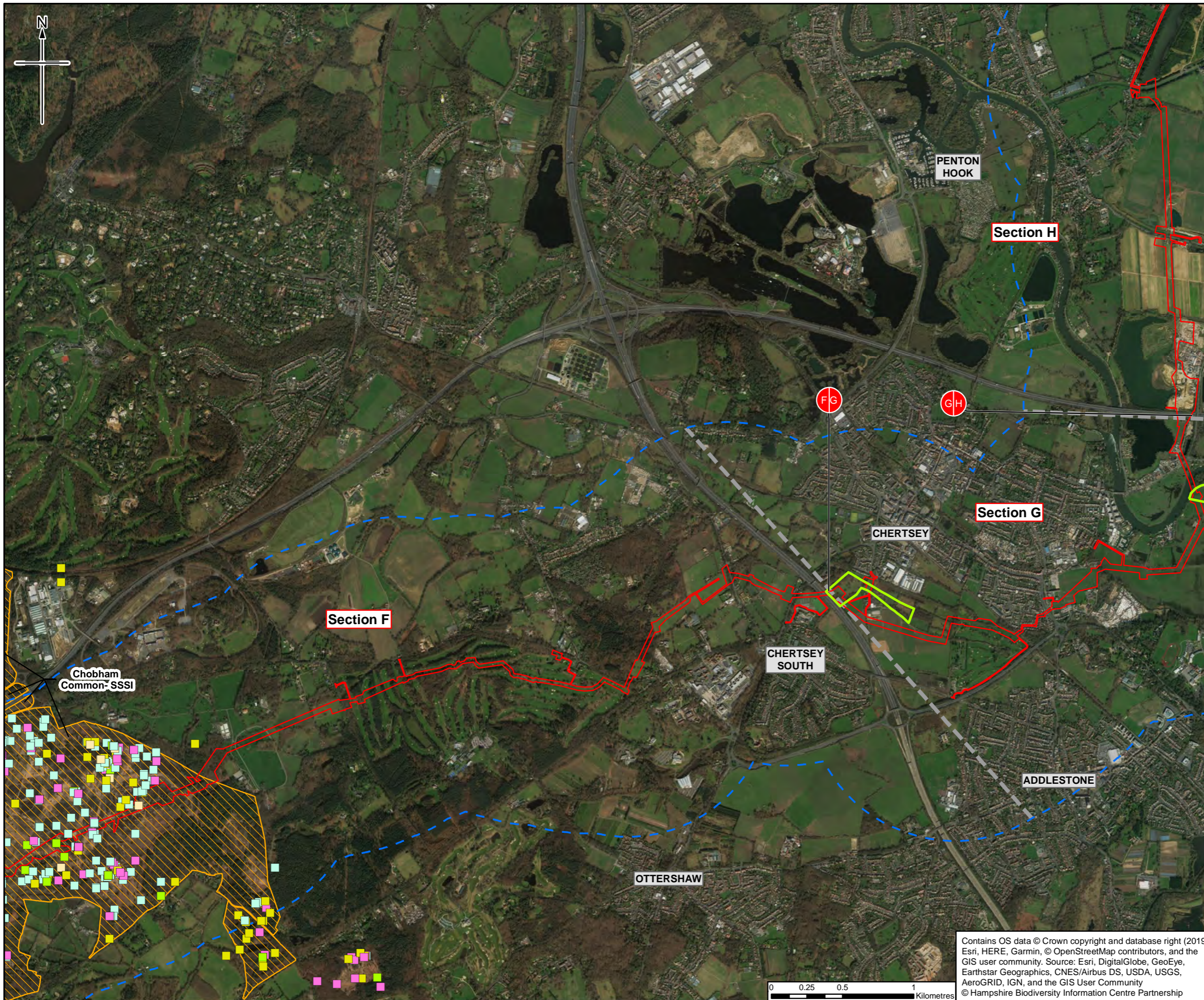
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Drawing title
**ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(I)**

Drawing Status	For Issue	
Scale	1:25,000 @ A3	DO NOT SCALE
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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
 - Slow worm
 - Common lizard and slow worm
 - No species found
- Hampshire Biodiversity Information Centre records**
- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake
- Site of Special Scientific Interest (SSSI)**
- Site of Special Scientific Interest (SSSI)
- Sheet displays parts of Section F, Section G and Section H

Rev.	Rev. Date	Purpose of revision	Orig/Down	Checked	Rev'd	Apprv'd
0	24/04/2019	For issue	ZR	NS	CM	SH

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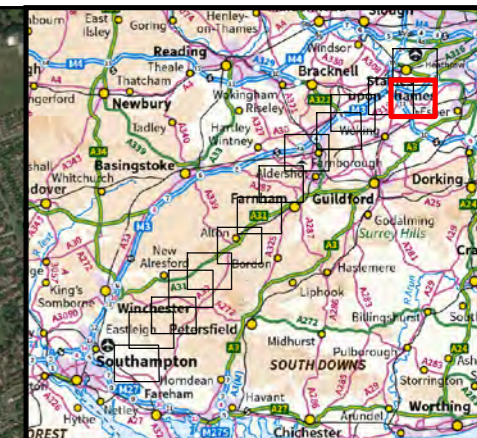
Project
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Drawing title
 ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)

Drawing Status	For Issue
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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
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 - Common lizard and slow worm
 - No species found
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- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake

Sheet displays parts of Section F, Section G and Section H

0	24/04/2019	For issue	ZR	NS	CM	SH
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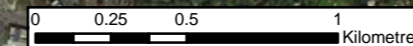
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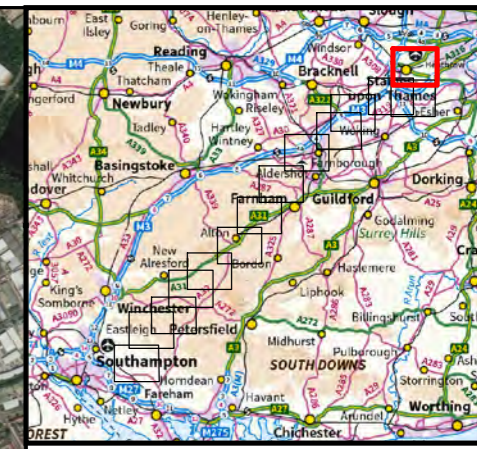
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Drawing title
 ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)

Drawing Status	For Issue	
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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile survey area and species found**
- Grass snake
 - Slow worm
 - Common lizard and slow worm
 - No species found
- Hampshire Biodiversity Information Centre records**
- Adder
 - Common lizard
 - Grass snake
 - Slow worm
- Surrey Amphibian and Reptile Group records**
- Adder
 - Common lizard
 - Grass snake
 - Sand lizard
 - Slow worm
 - Smooth snake

Sheet displays part of Section H

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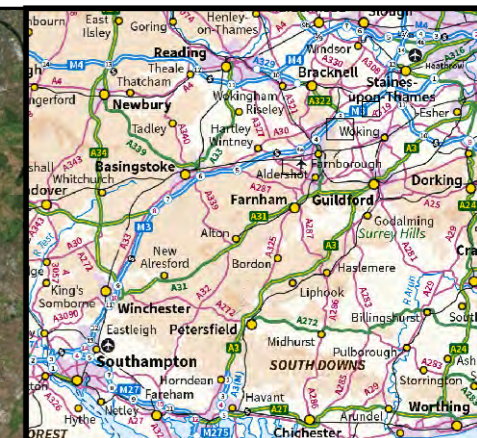
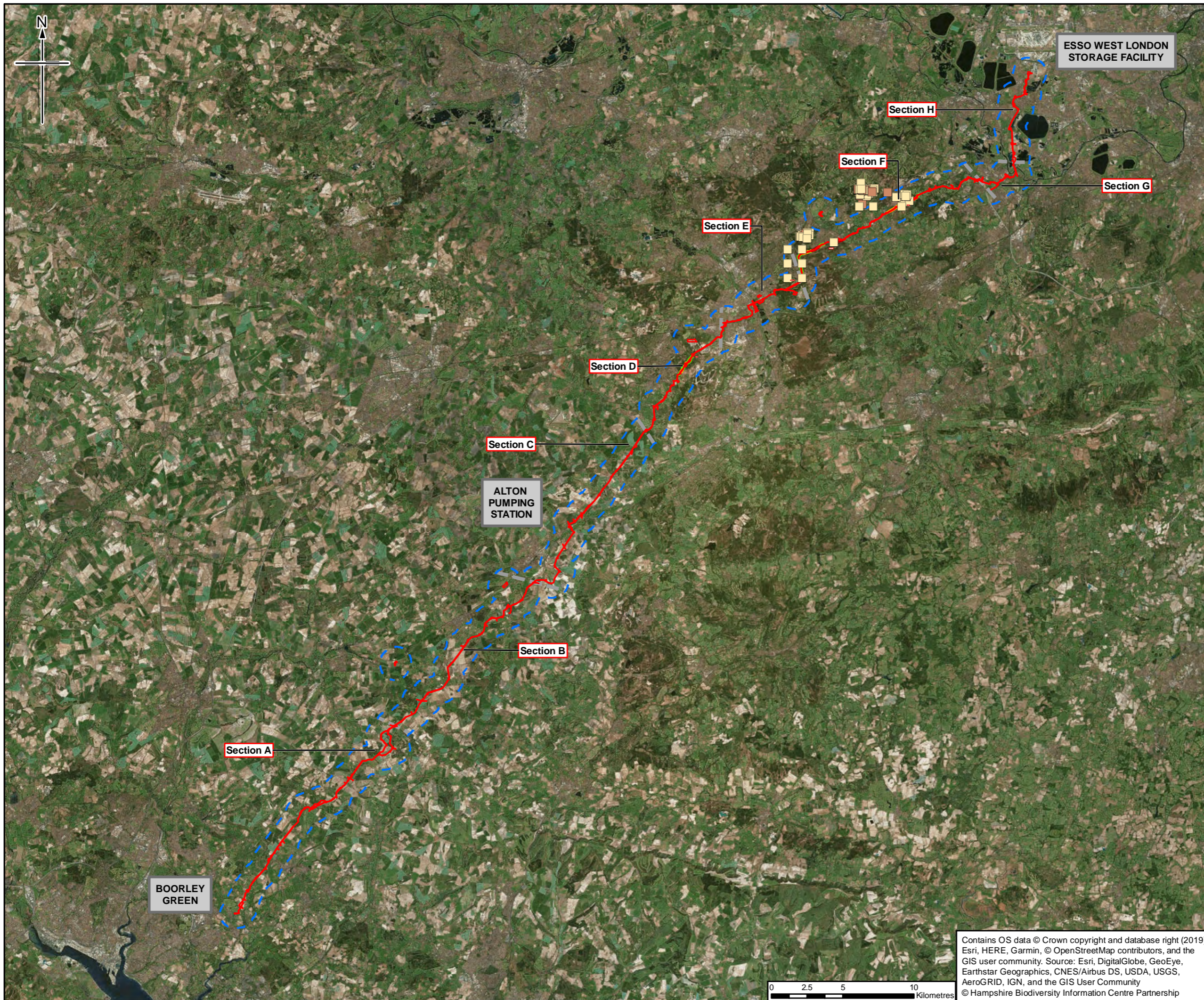
Project
 Southampton to London Pipeline Project

Drawing title
 ENVIRONMENTAL STATEMENT
 REPTILES - DESK STUDY
 AND FIELD SURVEY RESULTS
 APFP Reg. (2009) 5(2)(l)

Drawing Status	For Issue	
Scale	1:25,000 @ A3	DO NOT SCALE
Jacobs No.	B2325300	
ProjectWise No.	B2325300-JAC-000-ENV-DRG-001073	
Drawing number	Figure A7.11.1 Sheet 14 of 14	Rev 0

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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile habitat suitability**
- High reptile potential
 - Moderate reptile potential
 - Low reptile potential
- Surrey Amphibian and Reptile Group records**
- Sand lizard
 - Smooth snake

0	24/04/2019	For Issue	ZR	NS	CM	SH
Rev.	Rev. Date	Purpose of revision	Orig/Down	Checked	Rev'd	Apprv'd

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Project
 Southampton to London Pipeline Project

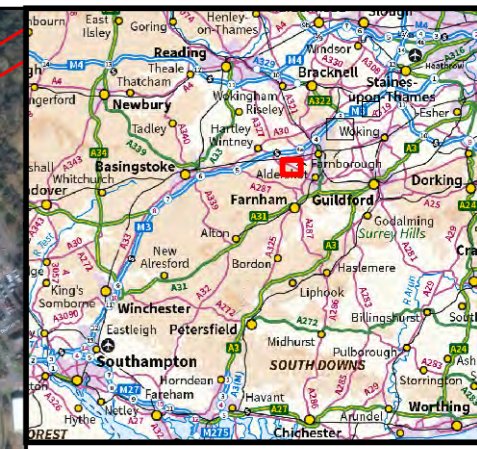
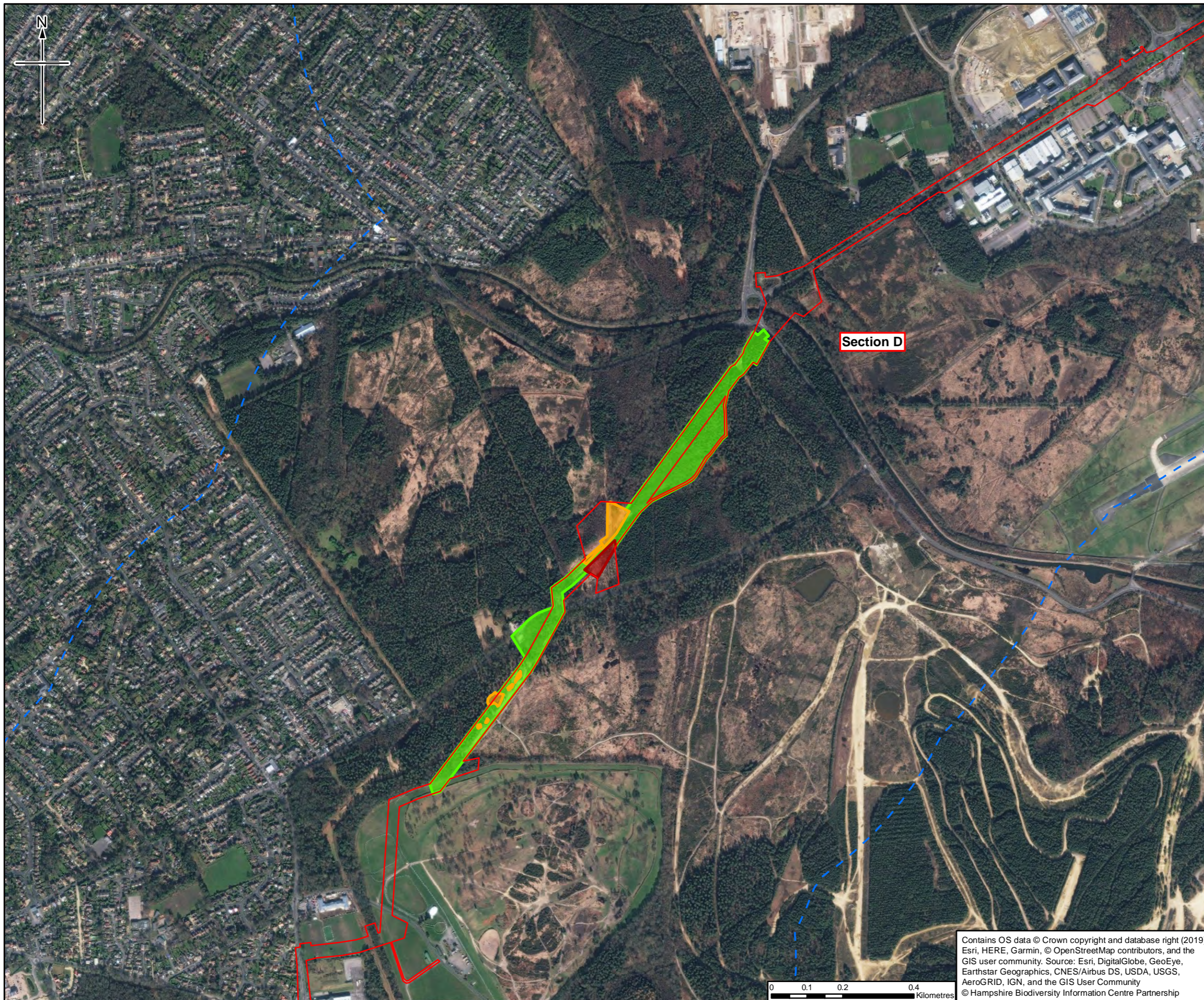
Drawing title
 ENVIRONMENTAL STATEMENT
 RARE REPTILE DESK STUDY AND FIELD SURVEY RESULTS FOR HEATHLAND SSSI
 APFP Reg. (2009) 5(2)(l)

Drawing Status	For Issue	
Scale	1:250,000 @ A3	DO NOT SCALE
Jacobs No.	B2325300	
Project/Wise No.	B2325300-JAC-000-ENV-DRG-001013	
Drawing number	Figure A7.11.2 Key Plan	Rev 0

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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile habitat suitability**
- High reptile potential
 - Moderate reptile potential
 - Low reptile potential
- Surrey Amphibian and Reptile Group records**
- Sand lizard
 - Smooth snake

Sheet displays parts of Section D

0	24/04/2019	For Issue	ZR	NS	CM	SH
Rev.	Rev. Date	Purpose of revision	Orig/Dwn	Checkd	Rev'd	Apprv'd

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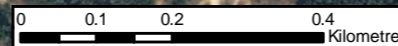
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 Surrey,
 KT22 8UX

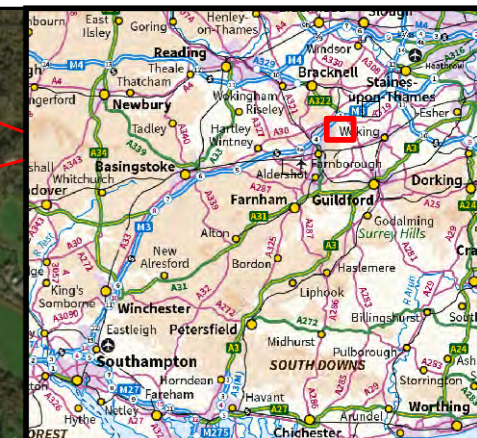
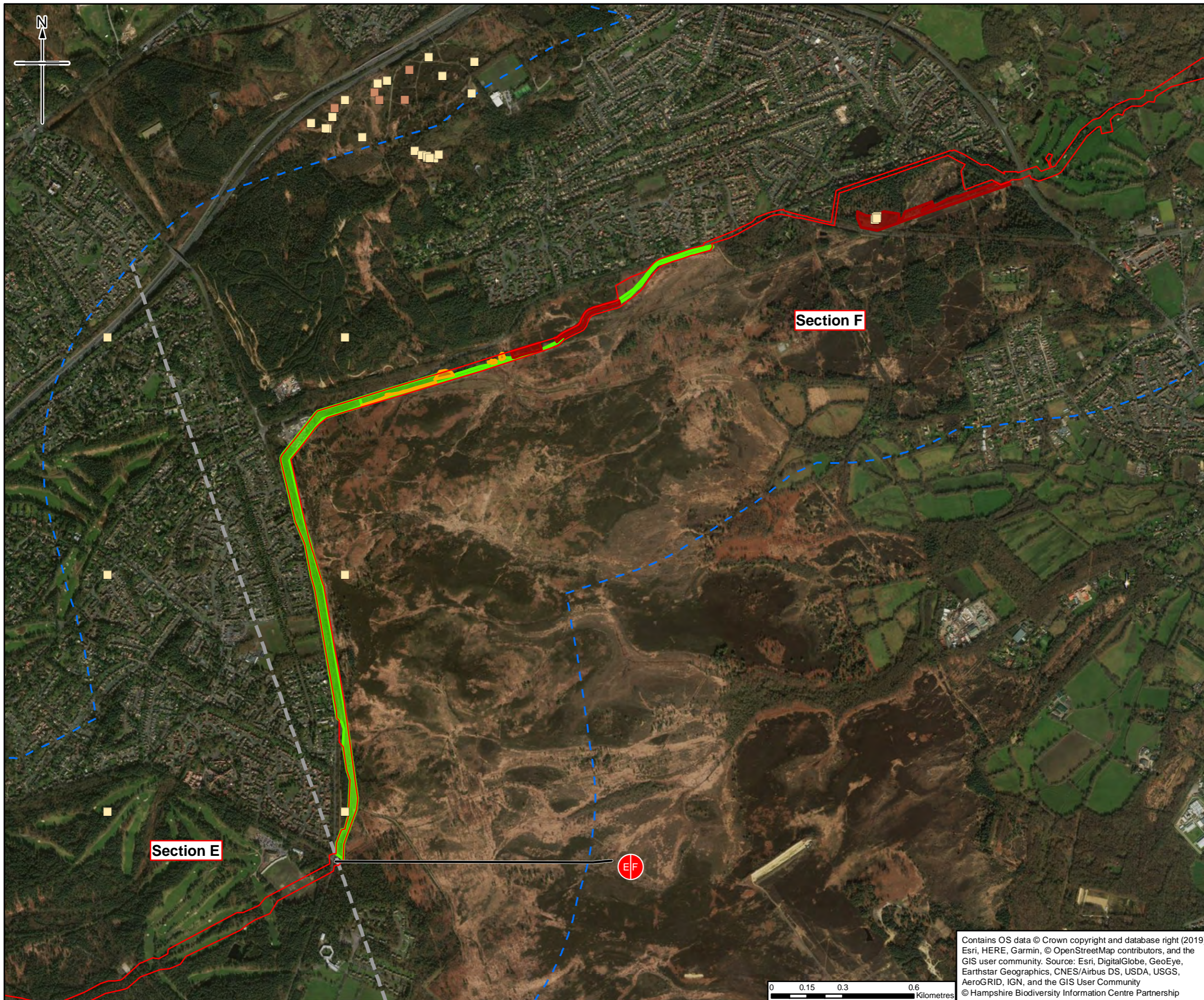
Project
 Southampton to London Pipeline Project

Drawing title
**ENVIRONMENTAL STATEMENT
 RARE REPTILE DESK STUDY AND FIELD
 SURVEY RESULTS FOR HEATHLAND SSSI
 APFP Reg. (2009) 5(2)(l)**

Drawing Status	For Issue	
Scale	1:10,000 @ A3	DO NOT SCALE
Jacobs No.	B2325300	
ProjectWise No.	B2325300-JAC-000-ENV-DRG-001013	
Drawing number	Figure A7.11.2 Sheet 1 of 3	Rev 0

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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile habitat suitability**
- High reptile potential
 - Moderate reptile potential
 - Low reptile potential
- Surrey Amphibian and Reptile Group records**
- Sand lizard
 - Smooth snake

Sheet displays parts of Section E and Section F

Rev.	Rev. Date	Purpose of revision	Orig/Dwn	Checkd	Rev'd	Apprv'd
0	24/04/2019	For Issue	ZR	NS	CM	SH

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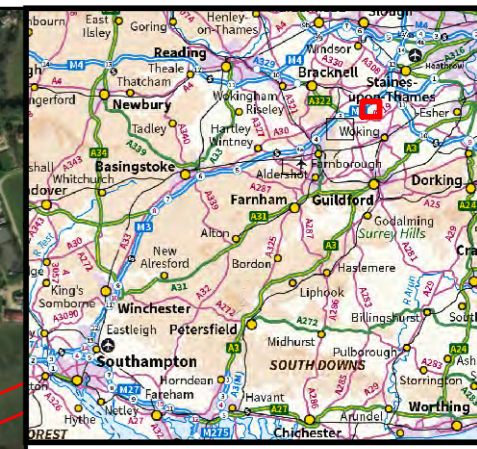
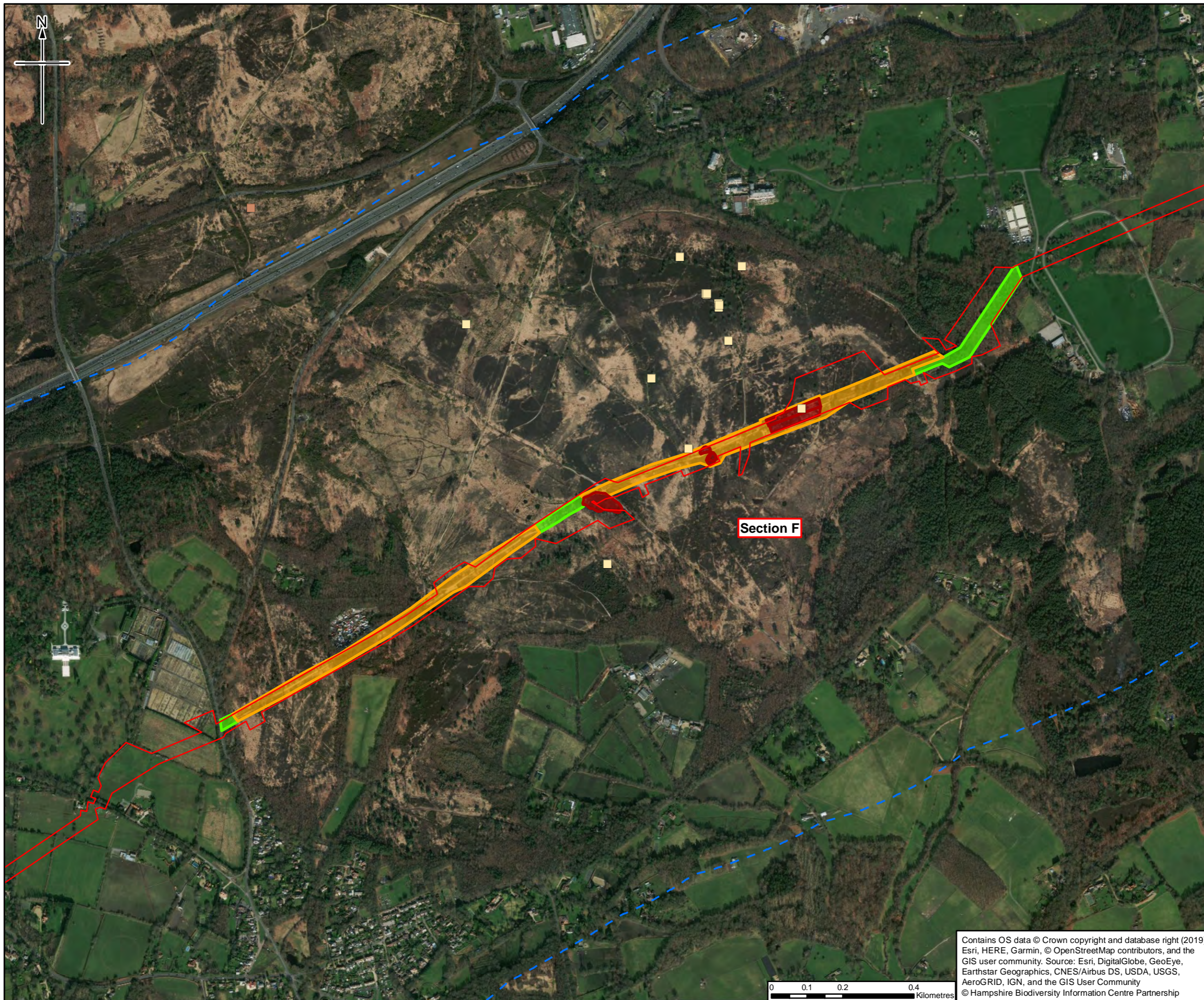
Drawing title

ENVIRONMENTAL STATEMENT
 RARE REPTILE DESK STUDY AND FIELD SURVEY RESULTS FOR HEATHLAND SSSI
 APFP Reg. (2009) 5(2)(l)

Drawing Status	For Issue
Scale	1:15,000 @ A3 DO NOT SCALE
Jacobs No.	B2325300
Project/Wise No.	B2325300-JAC-000-ENV-DRG-001013
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	Rev 0

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- Legend**
- Order Limits
 - Order Limits 1km buffer
 - Section break
 - Section break
- Reptile habitat suitability**
- High reptile potential
 - Moderate reptile potential
 - Low reptile potential
- Surrey Amphibian and Reptile Group records**
- Sand lizard
 - Smooth snake

Section F

Sheet displays parts of Section F

Rev.	Rev. Date	Purpose of revision	Orig/Down	Checked	Rev'd	Apprv'd
0	24/04/2019	For Issue	ZR	NS	CM	SH

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Drawing title
 ENVIRONMENTAL STATEMENT
 RARE REPTILE DESK STUDY AND FIELD
 SURVEY RESULTS FOR HEATHLAND SSSI
 APFP Reg. (2009) 5(2)(l)

Drawing Status	For Issue
Scale	1:10,000 @ A3 DO NOT SCALE
Jacobs No.	B2325300
Project/Wise No.	B2325300-JAC-000-ENV-DRG-001013
Drawing number	Figure A7.11.2 Sheet 3 of 3
Rev	0

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