

Ref: AWAT124/003/002

June 2010



Heyford Park  
Oxfordshire

Reptile Survey

For

Waterman  
Energy,  
Environment  
and Design

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**Heyford Park, Oxfordshire**  
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# 1 SUMMARY

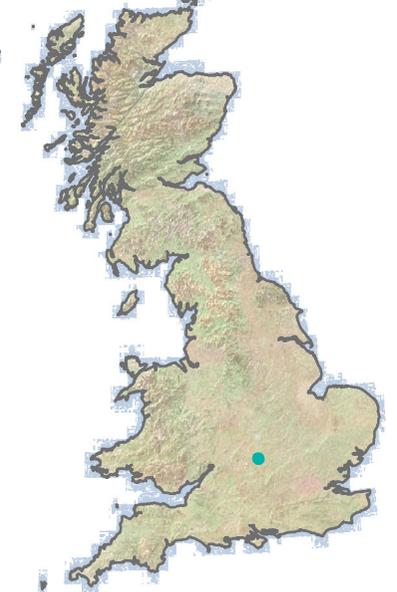
## 1.1 SUMMARY

- 1.1.1 Waterman Energy, Environment and Design proposes to redevelop a site in Upper Heyford known as the Settlement Area (see Figure 1). The Development works proposed at this site are to be submitted to planning along with an Environmental Impact Assessment (EIA). The proposals include the refurbishment and demolition of existing buildings, the construction of new-build houses and extensive landscaping proposals.
- 1.1.2 An ecological assessment of the Settlement Area to update the existing Phase 1 habitat survey was undertaken by Thomson Ecology in April 2010 (Thomson Ecology Report Ref: AWAT124/001/001). During this survey it was noted that potentially suitable habitat for reptiles (coarse grassland, dense scrub and tall ruderal vegetation in the south-east, and coarse grassland in the north-west of the Settlement Area, is present on the Site. All reptiles are protected by the Wildlife and Countryside Act 1981, as amended, from intentional killing, injuring and selling only. In addition all reptiles are listed as Priority Species in the UK Biodiversity Action Plan (HM Government 1994 *et seq.*). As a Priority Species in the UK Biodiversity Action Plan, all reptiles are also listed as Species of Principal Importance for the Conservation of Biodiversity in England under Section 41 of the NERC Act 2006 and therefore a further survey to determine the presence or likely absence of reptiles was recommended.
- 1.1.3 Waterman Energy, Environment and Design commissioned Thomson Ecology on the 30<sup>th</sup> April to undertake a survey for reptiles at the Site. The brief was to undertake a reptile survey using visual and refugia searches consistent with best practice guidelines. The main objective of the survey was to determine whether reptiles are present on the site and, if so, provide the basis of an estimate of population size.
- 1.1.4 No reptiles or evidence of reptiles was found during the reptile survey. As no reptiles were found to be present, the proposed development should not contravene legislation and planning policy with regard to reptiles. However, two juvenile grass snakes (*Natrix natrix*) were recorded during the great crested newt survey in an area within 250m north east of the Settlement Area (Thomson Ecology Report Ref: AWAT124/002/001). Suitable habitat for reptiles can be found to the north of this site, particularly around the boundaries and waterbodies, within the Flying Field area of Heyford Park for which planning permission has been granted subject to ecological mitigation which includes reptiles.

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- 1.1.5 A summary of the biology, conservation status and legal protection of reptiles is given in Appendix 1.



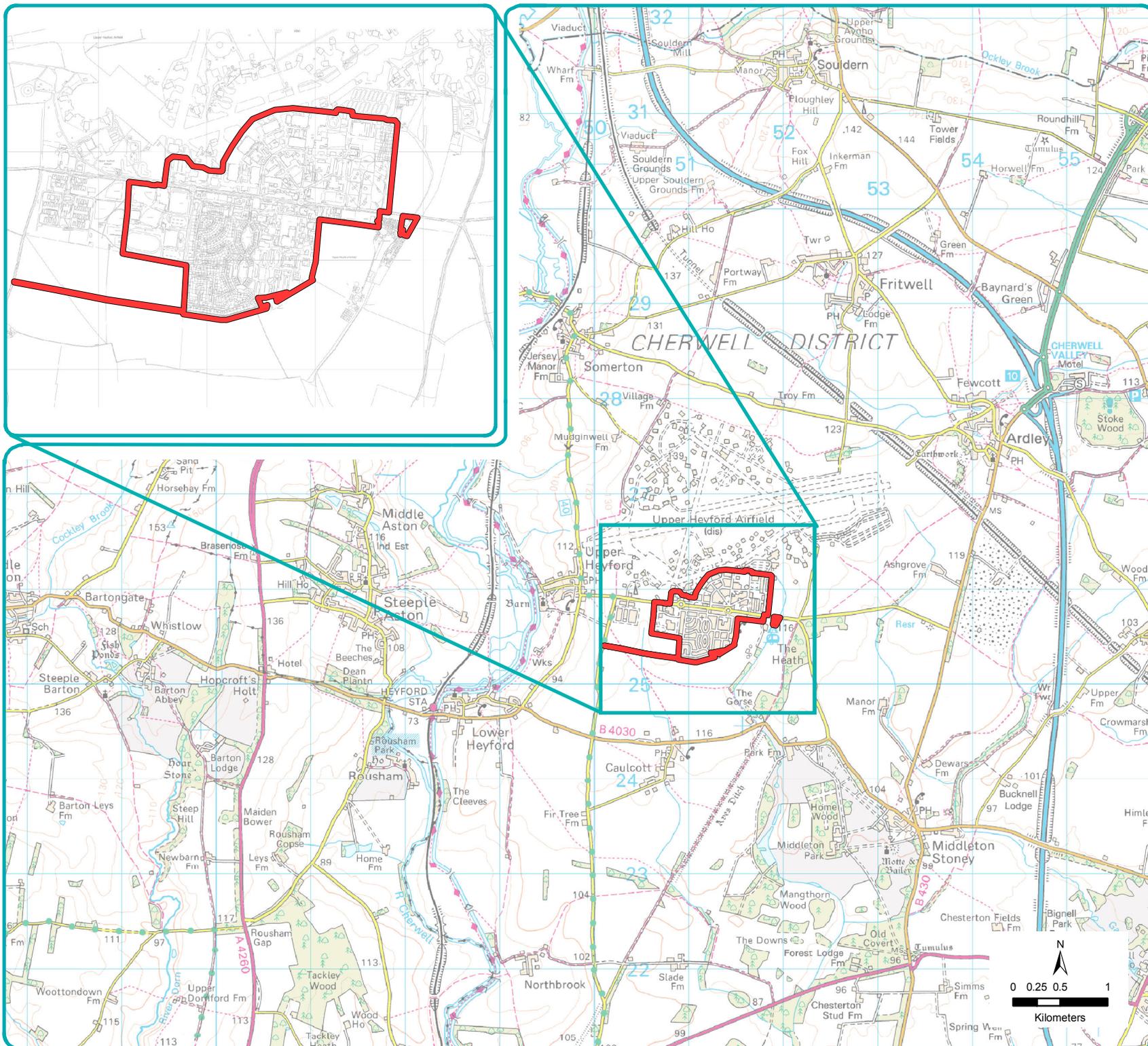
**Legend**

 Application Site Boundary

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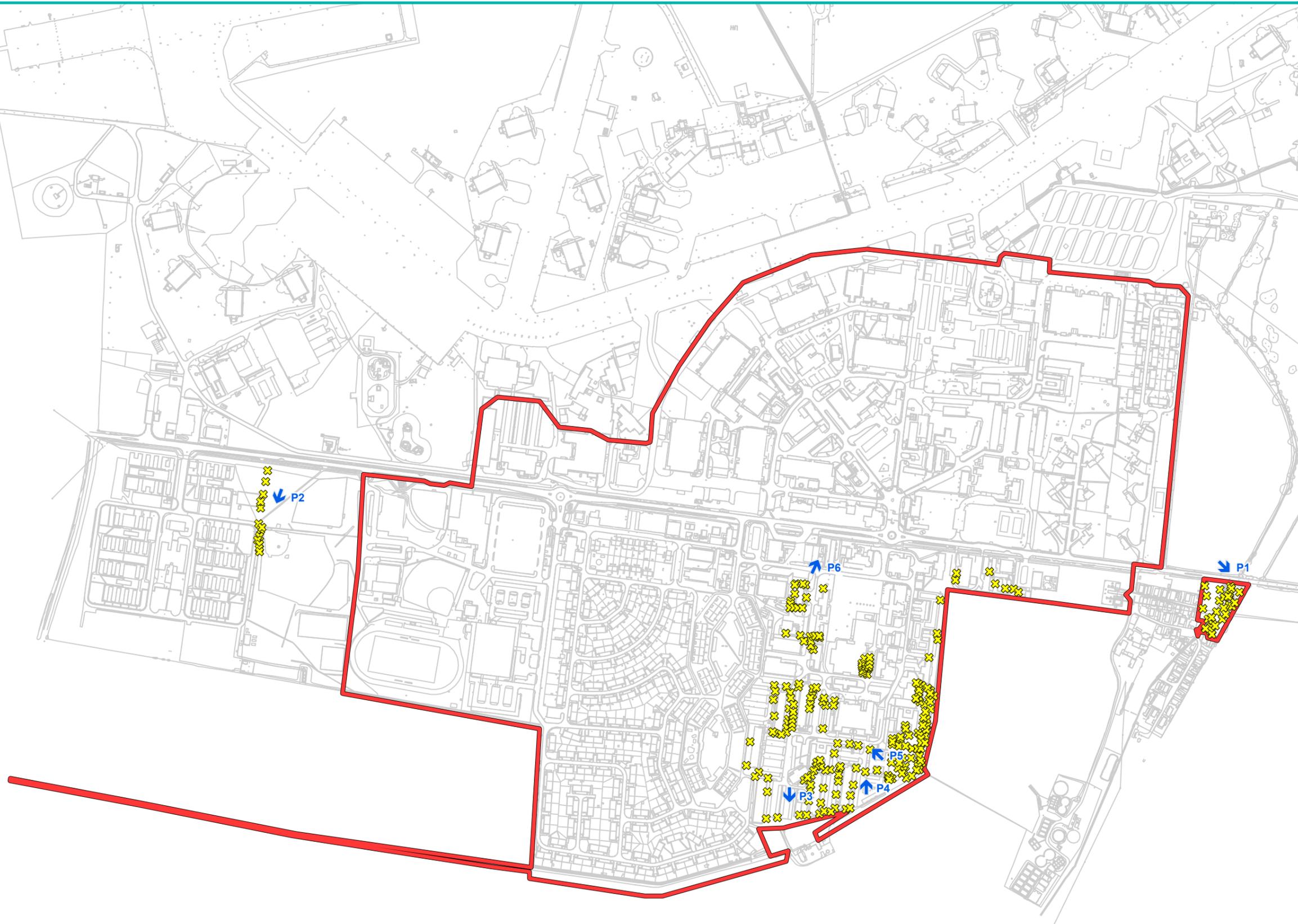
**Figure: 1  
 Site Location**

For: Waterman Energy, Environmental and Design  
 Drawing Ref: AWAT124/6379/1  
 Drawing Size: A4  
 Drawn By: Thomson Ecology (KS)  
 Checked By: Thomson Ecology (NS)  
 Date: 19/08/2010



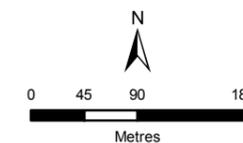
**Legend**

- ➔ Location and Direction of Photograph
- ✕ Location of Reptile Refugia (Indicative)
- ▭ Application Site Boundary



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**Figure: 2**  
**Locations of Reptile Refugia**



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Drawing Ref: AWAT124/5998/2  
Drawing Size: A3  
Drawn By: Thomson Ecology (KS)  
Checked By: Thomson Ecology (TD)  
Date: 23/09/2010



Photograph 1: Area to east of the caravan park, showing the stream to the left



Photograph 2: Area adjacent to the sports field



Photograph 3: Coarse grassland and tall ruderal vegetation within the Barracks area adjacent to Building 441



Photograph 4: Tall ruderal vegetation within the Barracks area south of Building 498



Photograph 5: Dense scrub within the Barracks area north of Building 498



Photograph 6: Coarse grassland within the Barracks area west of Building 459

## **2 INTRODUCTION**

### **2.1 THE BRIEF AND OBJECTIVES**

2.1.1 Waterman Energy, Environment and Design commissioned Thomson Ecology on 30<sup>th</sup> April 2010 to undertake a reptile survey. The brief was to:

- Carry out a reptile survey of suitable reptile habitat within the site, comprising one visit to deploy artificial reptile refugia and seven subsequent visits during suitable weather conditions to check for the presence of reptiles;
- Provide a report on the survey giving the methods and results of the survey, discussion of the legal and planning policy issues and
- Provide digitised maps of the survey results.

### **2.2 LIMITATIONS**

2.2.1 The reptile surveys were undertaken within the optimal survey period and the surveys were also carried out in optimal weather conditions.

## **3 METHODOLOGY**

3.1.1 A survey area was defined that encompassed the approximate extent of the site (this has since been reduced due to changes to extent of the Development), with survey effort concentrated in areas of suitable habitat (areas of coarse grassland, dense scrub and tall ruderal vegetation) identified from the Phase 1 habitat survey update, previously undertaken by Thomson Ecology (Thomson Ecology report ref: AWAT124/001/001). The location of reptile refugia and the key areas surveyed for reptiles are shown on Figure 2 and in photographs in Figures 3a and 3b.

3.1.2 Two survey methods were used to determine the presence or likely absence of reptiles. These were a visual search for basking reptiles and the checking of artificial refugia deployed specifically to attract reptiles.

### **3.2 VISUAL SEARCH**

3.2.1 The survey area was walked around slowly looking for basking reptiles. Any reptiles seen were approached cautiously so as not to disturb them and to allow species identification. Where practicable, binoculars were used to aid identification. The number, species and location of any reptiles seen were recorded.

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**3.3 REFUGIA SEARCH**

3.3.1 On 12<sup>th</sup> May 2010, a total of 295 artificial refugia were placed in suitable locations throughout the survey area at a density of around 50 per hectare. The survey areas included the barracks, an area of suitable habitat adjacent to the sports field and the area adjacent to the caravan park.

3.3.2 The artificial refugia comprised 0.5m x 0.5m cuts of roofing felt positioned so that they were in contact with the ground, with the black side facing upwards and exposed to sunlight. The location of the areas within which refugia were placed was recorded on a map digitally using a mobile mapper GPS unit. 28 refugia were placed in suitable habitat within the area adjacent to the caravan park, 13 in the sports field area and 198 in the barracks (see Figure 2).

3.3.3 The artificial refugia were left in place for one week before the survey commenced. Subsequently, on seven occasions, all refugia were cautiously checked for reptiles, both on top and underneath. If any reptiles were found, the refugia location and the species and numbers of reptiles were recorded.

3.3.4 On hot, sunny days, the survey was conducted during the early morning or late afternoon. The air temperature in the shade and the times of survey were recorded on each survey visit.

3.3.5 The artificial refugia were collected up and removed from the site after the end of the survey.

**3.4 DATES OF SURVEY**

3.4.1 Tables 1, 2 and 3, below, detail the time of visit, the date and the air temperature for each of the seven survey visits. The barracks and the area next to the caravan park were, on two occasions (19<sup>th</sup> and 20<sup>th</sup> May 2010), visited twice throughout the day concentrating on areas with suitable habitat, to coincide with optimal survey conditions.

Table 1: Survey Dates for the Barracks.

Visit No.	Date	Time (start/finish)	Air Temp °C
1	19/05/2010	9.35 - 10.42	18 - 16
2	19/05/2010	15.55 - 16.30	17
3	20/05/2010	9.40 - 10.45	16
4	20/05/2010	16.30 - 17.35	20 - 19
5	21/05/2010	9.36 - 10.35	18 - 21
6	24/05/2010	16.30 - 17.30	23
7	25/05/2010	7.55 - 8.50	13 - 14
8	26/05/2010	8.20 - 9.35	10 - 13
9	27/05/2010	9.10 - 11.00	11 - 15

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Table 2: Survey Dates for the Area Adjacent to the Sports Field.

Visit No.	Date	Time (start/finish)	Air Temp °C
1	19/05/2010	11.21 - 11.35	18
2	20/05/2010	12.15 - 12.25	18
3	21/05/2010	11.00 - 11.10	21
4	24/05/2010	17.35 - 17.45	23
5	25/05/2010	6.53 - 7.05	12
6	26/05/2010	8.05 - 8.20	10
7	27/05/2010	11.30 - 11.45	15

Table 3: Survey Dates for the Area Adjacent to the Caravan Park.

Visit No.	Date	Time (start/finish)	Air Temp °C
1	19/05/2010	9.00 - 9.30	15 - 18
2	19/05/2010	15.07 - 15.30	17
3	20/05/2010	11.18 - 11.45	18
4	20/05/2010	17.40 - 18.05	19
5	21/05/2010	8.25 - 8.45	17
6	24/05/2010	18.10 - 18.25	22
7	25/05/2010	8.55 - 9.15	15
8	26/05/2010	7.40 - 8.00	9 - 10
9	27/05/2010	7.55 - 8.27	9 - 10

## 4 RESULTS

4.1.1 The contents of the results section are the factual results of the reptile survey.

4.1.2 During the visual and refugia searches no reptiles were observed and no evidence of reptiles using the areas of the site surveyed was found. However, two juvenile grass snakes were found just north-east of the New Settlement Area and within 250m of the application boundary during the great crested newt survey (see Figure 1 in Thomson Ecology Report Ref: AWAT124/002/001). Adult grass snakes can cover significant distances with home ranges of 3-120ha (Arnold and Ovenden, 2002) to find hibernation or feeding areas.

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## 5 REFERENCES

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- 5.1.2 Arnold, N and Ovenden, D (2002) *A field Guide to the Reptiles and Amphibians of Britain and Europe*. Collins, London.
- 5.1.3 English Nature (2004) *Reptiles: Guidelines for Developers*.
- 5.1.4 Gent, A.H and Gibson, S.D eds (1998) *Herpetofauna Workers Manual*. Joint Nature Conservation Committee, Peterborough.
- 5.1.5 HM Government (1998) *Tranche 2 Action Plans: Volumes I and II*. English Nature, Peterborough
- 5.1.6 Thomson Ecology (2010). *Update of Desk Study and Extended Phase 1 Habitat Survey for Heyford Park, Oxfordshire (AWAT124/001/001)*. Thomson Ecology Ltd.
- 5.1.7 Thomson Ecology (2010) *Great Crested Newt Survey for Heyford Park (New Settlement Area) Emergency Water Supply (EMS) and Interceptor Tanks (AWAT124/002/001)*. Thomson Ecology Ltd.