

## **AWE ALDERMASTON, HYDRUS PROJECT BERKSHIRE**

### **BADGER REPORT**

**NOTICE: THIS REPORT CONTAINS INFORMATION RELATING TO THE LOCATION OF BADGER SETTS. IT SHOULD NOT BE GENERALLY CIRCULATED, AND SHOULD ONLY BE PASSED TO THOSE WITH A GENUINE REASON TO KNOW THIS INFORMATION.**

---

Prepared by:  
RPS, Oxford

July 2009

**RPS**  
Mallams Court  
18 Milton Park  
Abingdon  
Oxon  
OX14 4RP

**Tel** 01235 821888  
**Fax** 01235 820351  
**Email** [rpsox@rpsgroup.com](mailto:rpsox@rpsgroup.com)

---

# CONTENTS

---

	Page No
Summary	iii
1 Introduction	1
2 Methodology	2
3 Results	5
4 Evaluation/Recommendations	6
5 Conclusions	8
References	

# FIGURES & APPENDICES

---

## Figures

- Figure 1 Site Location Plan
- Figure 2 Location of Badger Records

## Appendices

- Appendix A Desk Study Records
- Appendix B Natural England's Species Conservation Handbook Good Practice Guidelines for Badgers

## SUMMARY

---

- S.1 RPS was commissioned to undertake a badger survey of the proposed Hydrus project redevelopment at AWE Aldermaston, Berkshire. The survey followed Cresswell *et al* methodology (1990) and investigated all potential habitats on the site.
- S.2 The site is comprised largely of semi-improved and acid grassland with some scattered semi-mature trees. A small copse, running wet ditch and a veteran oak tree are located in the southeast corner of the site.
- S.3 Badgers are known to be present on the wider AWE Aldermaston site. No badger setts were identified during the survey on the Hydrus project redevelopment site.
- S.4 The recommendations within this report will need to be reviewed against the masterplan once available. The main recommendations of this report are that where possible the design and management of the site should be carried out with the intention of maintaining foraging potential for badgers. Measures have also been outlined within this report for safeguarding badgers that use the wider AWE Aldermaston site during the Hydrus project construction phase.
- S.5 Badgers frequently excavate new setts and change their centres of activity. Therefore, the constraints that exist at the time of this survey may change over time. A resurvey of the development site should be undertaken before site clearance or construction commences.

# 1 INTRODUCTION

---

- 1.1 The following report provides details of a survey of the status of badgers (*Meles meles*) of the proposed Hydrus project redevelopment at AWE Aldermaston, Berkshire. The badger survey was commissioned by AWE for their forthcoming planning application.
- 1.2 The survey covered an area of approximately 8.5 hectares, most of the Hydrus site consists of neutral grassland which in places can be considered flower-rich with patches of acid grassland. This grassland has developed over aggregate and broken ground is effectively “brownfield” in nature. A small deciduous copse is located in the southeast corner of the site with a field layer which is dominated by bramble. There are scattered trees over the remainder of the site and a veteran oak is located adjacent to the copse. Figure 1 shows the location of the site.
- 1.3 Hydrus project site covers an area of approximately 8.5 hectares.
- 1.4 The site is bordered by areas of managed grassland interspersed with deciduous woodland and parkland trees.
- 1.5 The survey was undertaken by a suitably qualified RPS ecologist. The aim of this survey was to investigate suitable habitat and other signs of badgers throughout the site by carrying out a field survey and classifying any setts that were found.
- 1.6 This report details the methods and results of the survey, provides an evaluation of the results and details recommendations as a result of the evidence of badgers recorded.

## 2 METHODOLOGY

---

2.1 Badgers are protected under the Protection of Badgers Act 1992 against cruelty and wilful killing, injury or taking. Badger setts are protected against interference from damage or obstruction, or allowing dogs to enter a sett, or to disturb a badger whilst in a sett.

2.2 The badger study comprised two phases: a desk study and a site inspection.

### Desk Study

2.3 The purpose of the desk study was to gather records of badger setts and road traffic accident (RTAs) data from the local badger group and local biodiversity records centres for the site and a 2km study area.

### Site Inspection

2.4 The badger survey was carried out on the 3<sup>rd</sup> June 2009. The survey involved a walkover search of the site during which any characteristic signs of badger activity were recorded. The usual evidence of badger activity on a site is detected by one of the following signs:

- presence of holes with evidence of badgers such as footprints, discarded hair, etc.;
- presence of dung pits or latrines;
- presence of well used runs with subsidiary evidence of badger activity; and
- presence of other indications of badger activity, such as signs of foraging and footprints.

2.5 A sett is defined as “any structure or place, which displays signs indicating current use by a badger”. Natural England interprets current use as having been used at any point in the last 12 months. As a guide to classifying each sett the following criteria has been followed:

- **Main** – normally the focal sett for a badger social group. Generally always occupied, main setts usually have several active holes with radiating tracks, latrines and other signs of activity. The actual number of holes can vary greatly, depending on social group size and soil conditions.

- **Annex** – a secondary sett, close to the main sett. Will normally be connected to the sett with very obvious tracks. Annexes may not be occupied constantly, even when the main sett is very active.
- **Subsidiary** – occurring at a greater distance from the main sett, and not as clearly linked to it as an annex. These setts will fall clearly within the territory of a social group and may be seasonally used by badgers.
- **Outlier** – less frequently used, these setts may be colonised by other species when not in use by badgers. Outliers may represent a temporary sett, or a habitation for migrating individuals, or those excluded from a social group.

2.6 In addition to classifying each sett the number of holes were counted and their status recorded using the following criteria:

- **Well-used:** being clear of any debris or vegetation, are obviously in regular use, and may or may not have been excavated recently.
- **Partially-used:** not in regular use and have debris such as leaves and twigs in the entrance, or have moss and/or other plants growing in or around the entrance. Partially-used holes could be in regular use after a minimal amount of clearance.
- **Disused:** not been in use for some time, are partially or completely blocked, and could not be used without considerable amount of clearance. If the hole has been disused for some time, all that may be visible is a depression in the ground where the hole used to be, and the remains of the spoil heap, which may be covered in moss or plants.

2.7 Other signs of badger activity include the following:

- **Dung Pits:** The normal method of excretion for badgers is to defecate into a small scrape or pit, which is left uncovered;
- **Latrines:** Collective name for a series of dung pits within an area. These are used by badger social groups to demarcate their territory, and may be used for other behavioural purposes. Latrines are therefore an important part of badger social life;
- **Track:** A main arterial route frequently used by badgers. May be clearly visible over a considerable distance, even along flat ground;
- **Run:** A less frequently used route which may only be visible where it crosses some obstacle, such as a bank, hedge or fence. Badger hair can sometimes be collected along tracks and runs where they have pushed under barbed wire fences;
- **Foraging area:** An area which shows signs of foraging activity. Most often occurs as some form of rooting up of turf or ground cover, snuffle holes, overturning of

dried cow manure, all presumably in search of earthworms. Other foraging evidence may appear as holes left from digging out wasp or bees nests, or in arable areas, the 'rolling' of cereal crops; and

- **Prints:** Can be detected where badgers have crossed areas of bare ground and are easily distinguishable from other mammal prints.

2.8 The survey was restricted to within the development site boundary and 30 metres beyond the fence line, access allowing.



## 3 RESULTS

---

### Desk Study

- 3.1 Three consultees were contacted to gather baseline badger data for the Hydrus site and a 2km study area; the Thames Valley Environmental Records Centre, Hampshire Biodiversity Information Centre and the Binfield Badger Group.
- 3.2 One badger sett record and an road traffic accident (RTA) were provided within the 2km study area but not within the site development boundary itself. The records received from the consultees can be seen at Appendix A and are shown on Figure 2.

### Site Inspection

- 3.3 No badger setts or signs of their activity were recorded on the Hydrus project site during the time of the walkover inspection. It should be noted that badgers (setts, foraging and commuting) have been recorded within the wider AWE Aldermaston site.
- 3.4 The surrounding offsite areas were investigated to a depth of 30 metres for badger activity. No badger activity was recorded at the time of the survey.

### Other

- 3.5 There are also a number of narrow animal runs throughout the site, which appear to have been created by foxes (*Vulpes vulpes*). Fox spraints and a fox itself were recorded during the survey on the Hydrus site. Numerous rabbit warrens are present within the copse to the south east of the site. It should be noted that both foxes and rabbits are protected under *The Wild Mammals (Protection) Act 1996*. Under this Act it is an offence to inflict unnecessary suffering to both these species.

## 4 EVALUATION/RECOMMENDATIONS

---

- 4.1 To date no badger setts or signs of their activity have been recorded on the Hydrus project site or 30 metres from the development boundary. However, badgers are known to be present and active across the wider AWE Aldermaston site.
- 4.2 The following recommendations are made in order to minimise timing delays to the development programme and enhance the site for wildlife once operational.

### **Construction**

- 4.3 As a precautionary measure, care should be taken during the construction period on the site especially when constructing deep vertical sided trenches (>1.5 m), as these could act as 'pitfall traps'. Where these are to be left overnight, access ramps should be provided to allow animals (including badgers) to escape. In addition, such excavations should be inspected each morning to ensure that animals are not trapped. Natural England should be advised should animals be found.
- 4.4 Additional mitigation measures could be carried out following advice supplied in Natural England's Species Conservation Handbook, such as restricted working hours. A copy of this good working practice is attached at Appendix B.
- 4.5 It should be noted that badger social groups, like all wild animals, are dynamic and react to internal and external stimuli in ways which are not always predictable. Badgers frequently excavate new setts (or modify rabbit burrows or fox earths), and change their centres of activity. Therefore, the constraints that exist at the time of this survey may change over time. This should be taken into consideration by the developer by commissioning a resurvey of the development site for badgers before site clearance or construction commences. Any reports of increased badger activity prior to or during construction should be immediately investigated.

### **Lighting**

- 4.6 The site is currently well lit along the north, west and southern boundary. However, the woodland that runs along the south eastern and eastern boundary does not experience much background lighting. It is not thought that the increased lighting levels on the Hydrus site will have an impact on badgers foraging habits.

### **Foraging habitat**

- 4.7 An assemblage of fruit- and nut-bearing shrubs (native and local provenance stock) could be planted to enhance the site to badgers. Species and cultivars could be selected which fruit at slightly different times of the year, in order that the badgers are supplied with food for the longest period possible.

### **Operation**

- 4.8 Road casualties account for a very high number of badger mortality, with approximately 50,000 badgers killed annually on British roads (Harris et al, 1995). Traffic speed restrictions are already adopted within the AWE Aldermaston site. Speed restrictions of 20 mph are in place across the site which would benefit badger movements across the wider site. These speed restrictions would also be implemented as part of the new road networks within the operational Hydrus site.

### **Other**

- 4.9 The results of the survey indicate that foxes and rabbits are utilising the site. It should be noted that foxes and rabbits are protected under the *Wild Mammals (Protection) Act 1996*.
- 4.10 Fox spraints and a fox itself were recorded during the survey on the Hydrus site. Suitable measures should therefore be taken i.e. resurvey before construction, to ensure that there are no foxes inhabiting any holes scheduled for removal upon the Hydrus project site. The same precautionary construction measures outlined previous for badgers i.e. covering of trenches and access ramps, would also benefit foxes utilising the site.
- 4.11 Numerous rabbit warrens are present within the copse to the south east of the site. This area is to be retained as part of the redevelopment proposals. However, if this changes, suitable measures should be taken for any works in this area to ensure that no rabbits inhabit any holes before the spoil and vegetation removal commence.
- 4.12 The spoil and vegetation should be removed using hand tools to avoid harm to the animals within the warren, but also to allow animals to move out of the way before heavy machinery is utilised. Any spoil and vegetation removal should be supervised by an ecologist.

## 5 CONCLUSION

---

- 5.1 The results of the survey show that no badgers inhabit the Hydrus project site. However, badgers are known to be present and active across the wider AWE Aldermaston site. Therefore, recommendations have been made within this report in order to minimise timing delays to the development programme, safeguard animals through the construction period and to potentially enhance the site for wildlife.
- 5.2 Badgers frequently excavate new setts (or modify rabbit burrows or fox earths), and change their centres of activity. Therefore, the constraints that exist at the time of this survey may change over time. A resurvey of the Project Hydrus site and 30 metres beyond the project boundary should be undertaken before site clearance or construction commences.

## REFERENCES

---

AARIS-SØRENSEN J. 1987 *Past and present distribution of badgers Meles meles in the Copenhagen area*. Biological Conservation 41 159-165.

CRESSWELL P., HARRIS S., JEFFERIES D. J. 1990. *The history, distribution, status and habitat requirements of the badger in Britain*. Nature Conservancy Council.

NATURE ENGLAND. *Species Conservation Handbook*

HARRIS S., JEFFERIES D., CHEESEMAN C., BOOTY C. 1994 *Problems with Badgers?* 3rd Edition RSPCA.

NEAL E. 1986 *The Natural History of Badgers* Croom Helm.

*Protection of Badgers Act 1992* HMSO Publications.

SHEPHERDSON D. J., ROPER T. J. & LUPS P. 1990. *Diet, food availability and foraging behaviour of badgers (Meles meles L.) in southern England*. Z. Saugetierkunde 55, 81-93.

Wildlife and Countryside Act 1981 (as amended). Chapter 69. HMSO

# Figures

---

## Figure 1

---

### Site Location Plan

**Location of Badger Records**



# Appendices

---

# Appendix A

---

## Desk Study Records

**Natural England's Species Conservation Handbook (Good Practice  
Guidelines for Badgers) 1995**

**The following gives advice on good working practice for badgers:**

- The work may be undertaken only if it is necessary and unavoidable and must be limited to causing the minimum amount of disturbance or damage necessary to achieve the purpose for which it is being carried out.
- The local badger group should be consulted if badgers may be disturbed within a sett to ensure that any risk of severe disturbance or injury to badgers is kept to a minimum. If such a risk exists a suitably experienced person should be on hand to advise.
- All digging within 10 metres of the nearest sett entrance should be done by hand.
- Noisy machinery near setts should be used before mid-day, if possible, to allow badgers to settle down afterwards so that their normal foraging activity is not disturbed any more than is necessary.
- Operations involving use of machinery near setts should be undertaken by only those suitably trained or competent in the use of the equipment. The operations should be made aware of the likely extent of the sett and the need to take extra care in that area.
- Work near active badger setts should be carried out between the months of July and November, thus avoiding the badger breeding season (December to June) and also remembering to avoid the bird breeding season when scrub clearance is undertaken.
- No chemicals should be used in the immediate area of a sett unless absolutely necessary and in these circumstances only those known to be safe for animals should be used. Chemicals should be stored safely away from the sett area.
- Where badgers may be forced to move from the sett, or place of shelter, because the structure, such as a garden shed, or farm outbuilding, is being dismantled, the work should be carried out as late in the day as possible to avoid badgers being bolted above ground level in broad daylight.
- Scrub clearance should be avoided over the tops of setts and close to sett entrances.
- Trees and shrubs should be felled away from the obvious direction of a sett and should not be uprooted but cut to ground level where necessary. (Forestry operations are licensable, woodland management is not.)

- All trenches left open overnight should include a means of escape for any animals which may fall in.
- Buildings and structures, such as sheds, may be dismantled, but in such cases the floor should be left in place, if possible, if it forms top of the sett.
- Fires should be lit at the furthest distance possible from the sett.
- Obvious badger pathways should be left clear of obstruction.
- Where avoidable, dogs should not be taken onto the site by any of the workforce.
- Reinstatement of sett damage should be under the guidance of an experienced badger worker.
- Entrances may be protected against materials falling in accidentally. Any methods used should not restrict air-flow and must be removed before leaving the site at the end of the day.
- If the sett area is to be marked off to avoid interference, This should be done with rope, fencing or wire. Plastic tape can be very disturbing to badgers in windy weather and should be avoided.
- Where it is necessary to walk over the top of a sett, planking should be provided to spread the load if the soil is very light, or there is a chance of sett collapse.
- All work should be carried out as quickly and quietly as possible.