



Royal Victoria Hospital, Folkestone

Reptile Survey

For

East Kent Hospitals NHS
University Foundation Trust

London & South East

Compass House
Surrey Research Park
Guildford
GU2 7AG . UK
t: +44 (0) 1483 466 000

Midlands & North

Calls Wharf .
2 The Calls
Leeds
LS2 7JU . UK
t: +44 (0) 113 247 3780

Scotland & Borders

20-23 Woodside Place
Glasgow
G3 7QF
UK
t: +44 (0) 141 582 1485

Wales & South West

Williams House
11-15 Columbus Walk
Cardiff
CF10 4BY . UK
t: +44 (0) 2920 020 674

Marine Laboratory

7 Diamond Centre
Works Road
Letchworth
SG6 1LW . UK
t: +44 (0) 1462 675559

Enquiries

e: enquiries@thomsonecology.com
w: www.thomsonecology.com

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	Name	Signature	Position
Author	Natalie Drury		Senior Ecologist
Checker	Davie Prŷs-Jones		Senior Ecologist
Approved By	Claire Andrews		Principal Ecologist

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FIGURE 1 SITE LOCATION

FIGURE 2 REPTILE SURVEY REFUGIA LOCATIONS

Filepath: S:\Guildford\Projects\LBPR104 Stage 2 bat surveys\Folkestone\Reports\Phase 1 report\Mapping\Working\LBPR104_Report\Figure 1 Site Location_TD_200912.mxd
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www.thomsonecology.com
enquiries@thomsonecology.com

Legend

- Site Boundary
- Reptile Survey Area



Site Grid Reference: 622284 136660
Site Postcode: CT19 5BN

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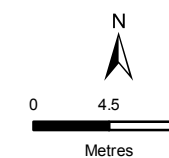
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Date 20/09/2012	Date 20/09/2012

Client
BNP Paribas Real Estate

Figure Number
2

Figure Title
**Reptile Survey
Refugia Locations**



1. Summary and Main Recommendations

1.1 Summary

- 1.1.1** East Kent Hospitals NHS University Foundation Trust is seeking planning permission for a development in Folkestone, Kent. The development will be located on an area of land currently occupied by the existing derelict Royal Victoria Hospital. The main hospital building is to be retained and converted into 16 flats, while all other buildings are to be demolished to allow for the creation of 26 new houses and associated infrastructure.
- 1.1.2** After undertaking a desk study and extended Phase 1 habitat survey in 2007 (Thomson Ecology report reference: LATI/106/001/002), an updated desk study and extended Phase 1 habitat survey of the site was undertaken by Thomson Ecology in July 2012 (Thomson Ecology report reference: LBPR104/001/002). As suitable habitat is present for reptiles in the area proposed for redevelopment and all species of reptile are protected under the Wildlife and Countryside Act 1981, as amended, a survey for this species group was recommended.
- 1.1.3** The brief was to undertake a survey to confirm the presence or likely absence of reptiles at the site and provide a report including methodology and results along with a discussion of the legal and planning policy issues associated with the proposed development and reptiles. The methods used in the survey are consistent with those described in the Herpetofauna Groups of Britain and Ireland (HGBI) advisory note (1998) and Froglife Advice Sheet 10 (1999). The main objective of the survey was to determine the presence or likely absence of reptile species on the site.
- 1.1.4** The survey found no reptiles to be present on site. As no reptiles were found during the survey, no specific mitigation is required and there should be no legal or planning policy issues with respect to this development and reptiles.

2. Introduction

2.1 Development Background

2.1.1 East Kent Hospitals NHS University Foundation Trust is seeking planning permission for a residential development on land occupied by the former derelict Royal Victoria Hospital in Folkestone, Kent. The main hospital building is to be retained and converted into 16 flats, while all other buildings are to be demolished to allow for the creation of 26 new houses and associated infrastructure.

2.1.2 The proposals described above are hereafter referred to collectively as 'the development'.

2.1.3 The area to be redeveloped is approximately 0.7ha in size and comprises the existing derelict hospital complex, storage buildings and undeveloped land (Grid Reference TR223366), see Figure 1.

2.1.4 The area affected by the development is hereafter referred to as 'the site'.

2.2 Ecology Background

2.2.1 A desk study and extended Phase 1 habitat survey of the site was undertaken by Thomson Ecology in March 2007 (Thomson Ecology report reference: LATI106/001/002). An updated desk study and extended Phase 1 habitat survey of the site was undertaken by Thomson Ecology in July 2012 (Thomson Ecology report reference: LBPR104/001/002). As suitable habitat is present for reptiles in the area proposed for redevelopment and all species of reptile are protected under the Wildlife and Countryside Act 1981, as amended, a survey for this species group was recommended.

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

2.3 The Brief and Objectives

2.3.1 BNP Paribas Real Estate, on behalf of East Kent Hospitals NHS University Foundation Trust commissioned Thomson Ecology on 21st August 2012 to undertake reptile surveys of the site. The brief was to:

- Distribute artificial refugia across the site at a density of approximately 100/ha;
- Undertake seven visits to check artificial refugia for the presence of reptiles;
- Collect refugia after the final check on the seventh visit;
- Provide a report including our methodology, results including population size class assessment, discussion of legislation and planning policy issues and recommendations on how these may be overcome; and
- Provide a digitised map of survey results.

2.4 Limitations

- 2.4.1 There are no known limitations to the survey, which was carried during the active reptile season, with all visits being undertaken during periods of suitable weather.

3. Methodology

3.1 General Approach

3.1.1 The survey area encompassed the site, with survey effort concentrated on the areas of semi-improved grassland, identified as suitable reptile habitat identified during the extended Phase 1 habitat survey (see Figure 2).

3.1.2 Two survey methods were used to determine the presence or possible 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 On seven occasions when there was intermittent or hazy sunshine and an air temperature between 10 and 20 °C, 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 aide identification. The number, species and location of any reptiles seen were recorded on a map of the survey area.

3.3 Refugia Search

3.3.1 On 23rd August 2012 a total of 47 artificial refugia were placed in appropriate locations throughout areas of suitable reptile habitat on site, giving an approximate density of 100 mats per hectare.

3.3.2 The artificial refugia were comprised of 0.5m x 0.5m cuts of roofing felt. The refugia were positioned so that they were in contact with the ground, with the dark-side facing upwards and exposed to sunlight. To prevent interference in the survey, the refugia were not placed in areas where there was expected to be a high level of public activity. The location of each artificial refugia was recorded on a map of the survey area (see Figure 2).

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

3.3.4 The survey was conducted during suitable weather conditions, when the temperature beneath the mats was not above 22 degrees centigrade. The air temperature in the shade and the temperature beneath a sample refuge were recorded on each survey visit.

4. Results

4.1.1 No reptiles were recorded in the visual or refugia search during any of the seven survey visits.

4.2 Dates of Survey

4.2.1 All refugia were checked during optimal temperature and weather conditions over the seven occasions. Table 1 below shows the time of visit, the date, air temperature and temperature under the refugia for each of the seven visits.

Table 1: Dates and Weather conditions for Reptile survey visits

Visit No.	Date	Time (start/finish)	Air Temp °C	Temp under Refugia °C	Conditions
1	31/08/12	1130 - 1140	18.3	-	20% cloud cover with slight wind.
2	13/09/12	1645 - 1720	19.1	19.3	10% cloud cover, with slight wind.
3	14/09/12	1615 - 1650	20.0	18.0	80% cloud cover with moderate wind.
4	15/09/12	1615 - 1650	19.0	21.0	25% cloud cover with no wind.
5	17/09/12	1615 - 1650	17.0	19.0	95% cloud cover with no wind.
6	18/09/12	1615 - 1650	17.0	18.0	50% cloud cover with slight wind.
7	19/09/12	1530 - 1605	16.0	17	60% cloud cover with slight wind.

5. Legal and Planning Policy Issues

5.1.1 As no reptiles were found during the survey, there should be no legal and planning policy issues with respect to reptiles and this development.

6. Recommendations

6.1.1 As no reptiles were found during the survey, no specific mitigation is required with respect to reptiles and this development. No further survey for reptiles is recommended.

7. Conclusion

- 7.1.1 No reptiles were found during any of the seven survey visits. Therefore no recommendations have been made and the development should be compliant with current legislation and planning policy with respect to reptiles.

8. References

- 8.1.1 Edgar, P., Foster, J. and Baker, J. (2010) *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.
- 8.1.2 English Nature (2004) *Reptiles: Guidelines for Developers*. English Nature, Peterborough.
- 8.1.3 Froglife (1998). *Herpetofauna Groups of Britain and Ireland. Evaluating local mitigation/translocation programmes: Maintaining Best Practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs)*. HGBI, c/o Froglife, Halesworth. Unpubl.
- 8.1.4 Froglife (1999). *Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.
- 8.1.5 Gent, A.H and Gibson, S.D eds (1998) *Herpetofauna Workers Manual*. Joint Nature Conservation Committee, Peterborough.
- 8.1.6 Thomson Ecology (2012) *Desk Study and Phase 1 Habitat Survey. Royal Victoria Hospital, Folkstone*. Report Reference: LBPR104/001/002.
- 8.1.7 Thomson Ecology (2007) *Desk Study and Phase 1 Habitat Survey. Royal Victoria Hospital, Folkstone*. Report Reference: LATI106/001/002.
- 8.1.8 Thomson Ecology (2012) *Bat Surveys. Royal Victoria Hospital, Folkstone*. Report Reference: LBPR104/002/001.

9. Appendix 1 - British Reptiles

9.1 Introduction

9.1.1 A summary of the biology of British reptiles, the legislation that protects them and other mechanisms of highlighting species of conservation concern is provided below.

9.2 Biology

9.2.1 There are six British species of reptiles, comprised of three snake species, adder (*Vipera berus*), grass snake (*Natrix natrix*) and smooth snake (*Coronella austriaca*), and three lizard species, common lizard (*Zootoca vivipara*), sand lizard (*Lacerta agilis*) and slow worm (*Anguis fragilis*). In addition, there are a few introduced species, which may be encountered occasionally, arising from escapes or illegal releases. A summary of each species is given below, based on information provided in Arnold (1995), Beebee and Griffiths (2000) and Gent and Gibson (1998).

Adder

9.2.2 The adder has a distinctive zig-zag pattern running down the back. Adders emerge from hibernation from March onwards and bask in open areas, particularly in spring. The mean temperature of a basking adder is about 33°C. Adders do not feed before mating each year, with this occurring in April and May. The young are born in late August to September and hibernation commences in October. Adders are venomous and small mammals make up most of their diet.

9.2.3 The adder has a widespread but patchy distribution in Britain and is more abundant in the south than the north but nevertheless occurs in northern Scotland. They require undisturbed, open sunny areas in the vicinity of thick cover. South facing chalk or sandy slopes with mixed vegetation may be ideal, and adders may be found in heathland, moorland, coarse grassland and scrub.

Grass snake

9.2.4 The grass snake is the largest snake in Britain. They emerge from hibernation in March and, during spring in particular, bask in open areas in order to raise their body temperature. Active grass snakes maintain temperatures of between 26 and 30°C. Eggs are laid in June and July with the young hatching in September. Their main food items are amphibians and fish, which they hunt when swimming or in vegetation.

9.2.5 Grass snakes have a lowland distribution in Britain and is absent from Scotland, It is widespread and locally common in the south-east of England. The grass snake is essentially an aquatic species, occurring mainly where there are good populations of amphibians. Nearby open areas with direct sunshine in the vicinity of dense cover are also important, as are suitable egg laying sites.

Smooth snake

- 9.2.6** The smooth snake is superficially similar in appearance to the adder, though lacks the clearly defined zig-zag stripe running down the back. They emerge from hibernation from late February onwards though still spend much of their time below ground. They bask mainly by wrapping themselves around vegetation, rather than in open areas, although they may also lie under sheet material, such as corrugated tin. Their preferred operating temperature is between 28 and 33°C. Live young are produced in August and September. Their main prey is small mammals and other reptiles.
- 9.2.7** The smooth snake is the rarest species of reptile in the UK, occurring almost exclusively on lowland dry heathland in the southern counties of England, namely Dorset, Hampshire, Surrey and West Sussex.

Common lizard

- 9.2.8** The common lizard is the smaller of the two British lizards with the typical legged body form. Common lizards emerge from hibernation from January onwards. Common lizards do bask in open sunny areas and try to achieve an optimum operating temperature of around 30°C. The young are born from mid-July to mid-September and hibernation commences in October. The main food items of this species are invertebrates.
- 9.2.9** Common lizards have a widespread distribution across England, Wales and Scotland and are also native to Ireland. They prefer undisturbed ground, with dense but short vegetation and patches of bare ground or promontories that are fully exposed to the sun. South facing slopes are often favoured. They are found in a variety of open habitats including roadside verges, railway embankments, woodland clearings, rough grassland, scrub, heathland and coastal sand dunes.

Sand lizard

- 9.2.10** The sand lizard is the other British lizard with the typical legged body form. Sand lizards emerge from hibernation from February onwards. They bask in open, sunny areas in spring but spend little time basking in the height of summer. They try to achieve a body temperature of between 27.5 and 32.5°C. Eggs are laid from the beginning of June to the end of August and hatch between 7 and 12 weeks later. Hibernation commences in early October. The main food items of this species are invertebrates.
- 9.2.11** The sand lizard has very specialised habitat requirements and occur naturally only on lowland sandy heathland in areas of Dorset, Hampshire and Surrey, and in Merseyside on coastal dunes densely vegetated with marram grass *Ammophila arenaria*. They have also been introduced to parts of Berkshire, Cornwall, West Sussex, Devon and North Wales in recognition of the fact that the species used to occupy a wider range encompassing these areas.

Slow worm

- 9.2.12** The slow worm is a legless lizard that superficially resembles a snake. Slow worms emerge from hibernation from March onwards. When active, slow worms rarely bask in open areas and instead try to maintain a body temperature between 14.5 and 28°C mainly by contact with warm

surfaces. The young are born from mid-August to mid-September and hibernation commences in October. The main food items of this species are invertebrates.

9.2.13 Slow worms have a widespread distribution across England, Wales and Scotland, but are particularly common in southern and eastern England. They require fairly thick vegetation interspersed with sunny areas for thermoregulation and underground or covered refuges. They are found in a wide variety of habitats including rough grassland, heathland, moorland, downland, hedgerows, scrub and woodland edge. Good populations can sometimes be found on railway embankments, motorway verges and allotments.

9.3 Site Designation

9.3.1 The most important sites for reptiles in the UK receive statutory protection under the following legislation:

- Wildlife and Countryside Act 1981, as amended;
- The Countryside and Rights of Way Act 2000 (which amends the Wildlife and Countryside Act); and
- Natural Environment and Rural Communities Act 2006 (which amends the Wildlife and Countryside Act).

9.3.2 Sites designated under the Wildlife and Countryside Act 1981 (WCA) are known as Sites of Special Scientific Interest (SSSIs). SSSIs received further protection under the Countryside and Rights of Way Act 2000 (CRoW) and the Natural Environment and Rural Communities Act 2006 (NERC).

9.3.3 Some SSSIs are designated for the populations of reptiles that they support. The criteria for selecting SSSIs on the basis of their reptile populations are provided in Guidelines for the Selection of Biological SSSIs (NCC, 1989):

- Sand Lizard - all important and established populations in Dorset and all established populations elsewhere;
- Smooth snake - all important and established populations in Dorset and all established populations elsewhere;
- Other reptiles - best locality in a given area with outstanding assemblages of at least 3 species of the 4 other reptile species.

9.3.4 Sites that qualify as SSSIs are considered to be of at least national importance for the reptiles they support.

9.3.5 Sites designated for nature conservation at the county level may also include reptile populations as part of the site qualifying criteria, although the criteria used may vary from county to county. Such sites are protected through the planning system and there is generally a presumption against development that affects such sites in local authority development plans.

9.4 Species Protection

Legislation

- 9.4.1** Both within and outside designated sites, individual smooth snakes and sand lizards are fully protected by law. Smooth snake and sand lizard are covered by the Conservation of Habitats and Species Regulations 2010 (which replaces the Conservation (Habitats &c) Regulations 1994). The Regulations make it an offence, with very few exceptions, to:
- Deliberately capture, injure or kill a smooth snake or sand lizard;
 - Deliberately disturb a smooth snake or sand lizard in such a way as to be likely:
 - i. to impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
 - ii. to impair its ability to hibernate or migrate; or
 - iii. to affect significantly the local distribution or abundance of the species to which they belong.
 - Damage or destroy a breeding site or resting place of a smooth snake or sand lizard;
 - Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead smooth snake or sand lizard, or any part of, or anything derived from a smooth snake or sand lizard.
- 9.4.2** In addition to the protection given to smooth snake and sand lizard under the Conservation of Habitats and Species Regulations 2010 already described, smooth snake and sand lizard are also partially protected in England under the Wildlife and Countryside Act, which adds the following offences (with certain exceptions):
- Disturbance while it is occupying a structure or place which it uses for shelter or protection; or
 - Obstructing access to any structure or place used for shelter or protection.
- 9.4.3** If proposed work could cause killing, injury or disturbance to either of these species or damage to their habitats, appropriate mitigation which seeks to avoid these impacts should be devised and implemented under licence from Natural England.
- 9.4.4** Grass snake, common lizard, slow worm and adder also receive some protection under the WCA, though are protected from intentional killing, injuring and selling only. If proposed work could result in the killing and/or injury of grass snake, common lizard, slow worm or adder, appropriate mitigation should be devised and implemented with agreement from the local planning authority or Natural England. However, mitigation for these species is not subject to licensing by Natural England.

Planning Policy

- 9.4.5** The National Planning Policy Framework (NPPF) gives further direction with respect to biodiversity conservation and land use change / development. The NPPF encourages local

planning authorities to identify, conserve and restore, ecological networks, which should benefit amphibians, and it also states that planning permission should be refused if significant harm to biodiversity cannot be avoided, mitigated or compensated. In addition, the Government Circular 06/05, which relates to biodiversity conservation, states that all protected species, such as reptiles, are a material consideration for the planning authority when considering proposed developments.

9.5 UK Biodiversity Action Plan and Species of Principal Importance

9.5.1 All British reptiles are listed as Priority Species in the UK Biodiversity Action Plan (HM Government 1994 et seq.). The UK Biodiversity Action Plan was published in response to the 1992 international Convention on Biological Diversity and was last updated in 2007. In addition, reptiles of any species may appear as Priority Species on Local or Regional BAPs. Government Circular 06/05 makes clear that UK and local BAP species are capable of being a material consideration in the planning process

9.5.2 As a Priority Species in the UK Biodiversity Action Plan, reptiles are also listed as Species of Principal Importance for the Conservation of Biodiversity in England under Section 41 of the NERC Act 2006. This places a duty on all government departments to have regard for the conservation of these species and on the Secretary of State to further, or promote others to further, the conservation of these species. In addition, every public authority, including local planning authorities, has a general duty to have regard for the purpose of conserving biodiversity. This duty does not extend specifically to the Section 41 list; however, guidance published by Defra indicates that the Section 41 species should be considered a priority when implementing the duty. Furthermore, the NPPF states that local planning authorities should promote the protection and recovery of priority species populations, which presumably means those listed under the Section 41 of the Act.

9.6 References

- 9.6.1** Arnold, H.R (1995) *Atlas of amphibian and reptiles in Britain*. HMSO. London.
- 9.6.2** Beebee, T.J.C and Griffiths, R.A (2000) *Amphibians and Reptiles*. Harper Collins Publishers. London
- 9.6.3** Gent, A.H and Gibson, S.D eds (1998) *Herpetofauna Workers Manual*. Joint Nature Conservation Committee, Peterborough.
- 9.6.4** HM Government (1994 et seq) *Biodiversity: The UK Action Plan*. JNCC, Peterborough.
- 9.6.5** HM Government (1998) *Tranche 2 Action Plans: Volumes I and II*. English Nature, Peterborough.
- 9.6.6** NCC (1989) *Guidelines for Selection of Biological SSSIs*. Nature Conservancy Council, Peterborough.