Shepherd's Spring School, Andover, Hampshire

Extended Phase 1 Habitat Survey and Reptile Survey Report

23 December 2010

Our Ref: **JSL1628**

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Date:	**23 December 2010**
Project Number/Document Reference**:**	**JSL1628**

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EXECUTIVE SUMMARY

- RPS Ecology was commissioned by Hampshire County Council to carry out a Phase 1 Habitat Survey at the former Shepherd's Spring School, Andover, Hampshire.
- The survey identified suitable areas of reptile habitat on site, therefore a reptile survey was also carried out.
- Species-poor semi-improved neutral grassland made up a large proportion of the site. This was considered to have some low ecological value due to the habitat it provided for reptiles, small mammals, invertebrates and nesting birds.
- A small population of slow-worm was recorded on site and recommendations with regards to this species have been made.
- There is nesting bird habitat present on site in the form of young trees and scattered scrub therefore this should be cleared outside of the nesting bird season.
- Given the low ecological value of the majority of the site, assuming the recommendations made in this report are followed, the development should have negligible ecological impact.

1 INTRODUCTION

Background to the Study

1.1 RPS Ecology was commissioned by Hampshire County Council in summer 2010 to carry out a Phase 1 Habitat Survey at the former Shepherd's Spring School, in Andover, Hampshire.

1.2 The Phase 1 Habitat Survey identified potential reptile habitat in rough grassland around the site, therefore a reptile survey was carried out by RPS surveyors in September 2010.

Development Plans

1.3 It is proposed that part of the school site, in particular the former playing fields, is disposed of to facilitate residential development.

Site Description

1.4 The northern half of the site comprises the former school playing field that had been allowed to grow long. Part of the former school buildings were in use as a Children's Centre with the remaining as the Andover Education Centre. The survey covered the northern section of the site as this was the area scheduled for disposal.

1.5 The school site is surrounded on all sides by mixed-aged residential housing, with associated gardens. The western boundary is adjacent to the Newbury Road with Smannell Road to the south. The wider area is residential in nature.

Aims and objectives

Field Survey

1.6 The purpose of the Phase 1 Habitat Survey was to identify the habitats present within and around the site. The site walkover surveys also assessed the potential for the site and adjoining habitats to be used by species that receive legal protection (at a UK and/or European level) and species that are otherwise notable including Species of Principal Importance, UK BAP priority species, and Birds of Conservation Concern.

1.7 This report presents the Phase 1 Habitat Survey information and provides an ecological baseline of the site. Consideration has been given to potential ecological impacts that could arise from the proposals on designated sites in the area.

Reptile Survey

1.8 Aims and objectives of the field survey were as follows:

- To establish presence / absence of reptiles;
- If reptile presence is confirmed, to determine species, density and distribution;
- To provide sufficient information for the evaluation of perceived impacts of the proposed development and to provide recommendations to ensure legal compliance.

2 METHODS

Field Survey

2.1 The survey was conducted in accordance with The Handbook for Phase 1 Habitat Survey (JNCC 2003), and included searches for signs of protected species.

2.2 A walkover of the site was undertaken on 16th August 2010, during which habitats within the site were classified, mapped and described, with respect to their structure and floristic composition.

2.3 The habitats within the site were assessed for their potential to support legally protected or otherwise notable flora and fauna. Where suitable habitat was identified on site, a search was conducted for signs indicating the presence of protected species such as droppings, burrows, tracks and evidence of feeding. Where species are not specifically mentioned, this indicates that no habitat of potential value for these species was identified during the survey.

2.4 Consideration was also given to habitats outside the site, in order to understand the ecological context of the site within the wider landscape. Adjacent habitats were also considered with respect to their own ecological value and their potential to enhance the ecological value of habitats within the site.

2.5 Searches were made for invasive non-native plant species focussing on those species currently listed in Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), including those species included in the revised Schedule 9.

2.6 Botanical nomenclature follows Stace (1997).

Reptile Survey

2.7 Reptile survey equipment was set out in areas of potential habitat for reptiles on 9th September 2010. The equipment consists of artificial refugia made of bitumen roofing felt that is cut into approximately 100 x 50 centimetre mats. The felt warms up quickly and retains the heat well, attracting reptiles. Refugia were laid out in suitable habitat across the 1.6 ha site (shown on Figure 3.1).

2.8 The refugia were evenly placed across the grassland and were left to bed down for two weeks. During this time, they develop favourable conditions (e.g. suitable humidity and temperature gradient) and the reptiles become more familiar with them. To assess presence or absence, the refugia were checked once each day for 7 days during optimal weather conditions. The refugia were collected from the rough grassland upon completion of the fieldwork.

2.9 All seven survey visits were undertaken in suitable weather conditions during the recommended optimum period for reptile surveys (considered to be between April to early June, and September to October).

3 RESULTS

Extended Phase 1 Habitat Survey

3.1 The results of the field survey are shown in Drawing JSL1628 3.1 Phase 1 Habitat Survey Map. The habitats present on the site are described below broadly in order of extent.

Semi-improved Neutral Grassland

3.2 The majority of the site supported semi-improved neutral grassland (the former school playing field) that has been left to get long and rank (Plate 1). The grassland was relatively species poor, lacking a substantial herb layer. It was dominated by common bent *Agrostis capillaris* with creeping bent *Agrostis stolonifera*, cock's-foot *Dactylis glomerata,* False Oat-grass *Arrhenatherum elatius* and rough meadow-grass *Poa trivialis*, occasional perennial rye-grass *Lolium perenne* and Timothy *Phleum pratense.* Occasional forb species included creeping buttercup *Ranunculus repens,* daisy *Bellis perennis* and frequent greater plantain *Plantago major*.

Plate 1 – Semi-improved neutral grassland of former playing field

Dense/Scattered Scrub

3.3 An area of dense scrub was present within the site that comprised blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna,* dogwood *Cornus sanguineus* and dog rose *Rosa canina*.

3.4 Scattered scrub occurred along the northern and western boundaries comprising dogwood and hawthorn with frequent bramble *Rubus fruticosus* agg.

Broad-leaved woodland

3.5 The eastern and southern boundary of the survey area comprised broad-leaved woodland with ash *Fraxinus excelsior*, cherry *Prunus avium var.*, willow sp. *Salix sp.* and English oak *Quercus robur* all present. The understorey was dominated by ivy *Hedra helix* with occasional dogwood.

3.6 A further stand of broad-leaved woodland was present on the western boundary of the site dominated by oak with cherry and sycamore *Acer pseudoplatanus* also present.

3.7 Several patches of plantation broad-leaved woodland were present within the site dominated by field maple *Acer campestre*, with frequent ash and hazel *Corylus avellana*.

Hard Standing

3.8 Several areas of hard standing, representing former school car park areas, were present within the survey boundary.

Spoil

3.9 Two large piles of spoil were present on hardstanding to the west of the site (Plate 2). These had been colonised by a range of ephemeral species including mugwort *Artemisia vulgaris*, ragwort *Senecio jacobaea*, false oat-grass and broad-leaved dock *Rumex obtusifolius*.

Plate 2 – Spoil on hardstanding to the west of the site.

Tall Ruderal

3.10 An area of ruderal vegetation with scattered scrub was present along the northern boundary of the site dominated by common nettle *Urtica dioica*.

3.11 Two further smaller areas of tall ruderal species were present on areas of disturbed ground in the north east corner of the site dominated by spear thistle *Cirsium vulgare*.

Improved grassland

3.12 Small areas of short-mown improved grassland were present adjacent to the hardstanding in the south of the survey area. This supports species typical of amenity grassland, with abundant perennial rye-grass, creeping bent, timothy and rough meadow-grass. Forb species included black medick *Medicago lupulina* and yarrow *Achillea millefolium* and frequent greater plantain *Plantago major*, ribwort plantain *P. lanceolata*, red clover *Trifolium pratense,* dandelion *Taraxacum officianale* and white clover *T. repens*.

Reptile Survey Results

3.13 A summary of the reptile survey results is provided in Table 3.1 and described in the following paragraph.

Table 3.1 – Reptile Survey Results

Date	Species and Number	Weather Conditions
23/09/2010	Juvenile slow-worm x 1	Clouds and intermittent sunshine, 17°C
27/09/2010	Adult slow-worm x 1	Partly cloudy, 14°C
29/09/2010	-	Cloudy, 16°C
30/09/2010	Adult slow-worm x 3	Sunny, 15°C
06/10/2010	Adult slow-worm x 1 and Juvenile slow-worm x 1	Sunny, 17°C
08/10/2010	Adult slow-worm x 1	Sunny, 20°C
11/10/2010	Adult slow-worm x 1	Sunny, 16°C

3.14 A low number of slow-worm (including juveniles) were recorded on most of the seven visits, always under sheets in the north west of the site.

3.15 No other reptiles were recorded on site.

4 EVALUATION

Habitats

4.1 The large proportion of the site comprises species-poor semi-improved neutral grassland, broad-leaved woodland, hard standing and improved (amenity) grassland, with small areas of scattered scrub, planted trees and semi-improved neutral grassland around a small pond. The hard standing is considered to have no botanical value.

4.2 The species-poor semi-improved neutral grassland supports a low number of plant species but these are widespread grasses with few forbs that will occur commonly in the local area. However, as the grass has developed, it supports slow-worm and is therefore more of value for the ecology it supports. It is likely, therefore to be of some ecological value in the context of the site.

4.3 The improved grassland is frequently mown, with a uniform short sward and little botanical and structural diversity and is considered to be of low ecological value. The scattered scrub and tall ruderal are relatively species-poor and are considered to be of low botanical value.

Species

Bats - Roosting

4.4 No buildings were present within the survey boundary and none of the trees on site had any features that could support bat roosts.

Bats - Foraging

4.5 The tree lines around the site, especially on the east side, may be of limited use to bats in the local area as foraging / commuting routes.

Badger

4.6 Under the Protection of Badgers Act 1992, badgers *Meles meles* are protected from killing, injuring or disturbance, while occupying a sett, and their setts are protected from obstruction, damage or destruction.

4.7 No setts or obvious signs of badger, such as snuffle holes, prints or latrines, were noted during the site walkover. Gaps underneath the wire fencing on the western boundary have been attributed to fox rather than badger due to the presence of fox hairs and tracks. It is considered likely that badgers are absent from the site.

Nesting Birds

4.8 Nesting birds are protected by the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to intentionally kill, injure or take the birds or their eggs, or to intentionally destroy or disturb a nest, when it is in use or being built.

4.9 Areas of cover in the scattered/dense scrub and the broad-leaved woodland on site provide suitable nesting opportunities for a range of common bird species.

4.10 The combination of scrub, grassland and tall ruderal habitats around the edges of the site will provide a foraging resource for nesting birds in the wider area.

Reptiles

4.11 The four widespread reptile species (grass snake *Natrix natrix*, adder *Vipera berus*, viviparous lizard *Lacerta vivipara* and slow-worm *Anguis fragilis*) are protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended). These are also Priority Species in the UK Biodiversity Action Plan.

4.12 The majority of the semi-improved neutral grassland on site is un-mown and is therefore suitable habitat for reptile species. The reptile survey has confirmed that the north west of the site supports a low population of slow-worm. Slow-worms are widespread and common in Hampshire, therefore the site is likely to be of low local importance for these species.

Great Crested Newt and Other Amphibians

4.13 The great crested newt *Triturus cristatus* receives full protection under The Conservation of Habitats and Species Regulations 2010, and the Wildlife & Countryside Act 1981, (as amended). Great crested newt is also a UK BAP priority species.

4.14 Although the rough grassland on site is suitable terrestrial habitat for newts, there are no waterbodies within 500 m that could support a breeding population. It is concluded that the habitats are very unlikely to support great crested newt.

Invertebrates

4.15 While the site is likely to provide some habitat for invertebrates, it is considered unlikely to support an assemblage of conservation importance, lacking sufficient botanical diversity.

5 CONCLUSIONS

5.1 The majority of the survey area comprised species-poor semi-improved grassland which is considered to have some ecological value for the habitat it provides other species.

5.2 The improved (amenity) grassland is considered to have low ecological value. The tall ruderal, broad-leaved woodland and scattered scrub on the boundaries of the school are considered to offer low botanical value but do provide some habitat for reptiles, small mammals, invertebrates and nesting birds.

5.3 The survey found trees on site had negligible potential to support roosting bats while the broad-leaved woodland may provide some habitat for foraging bats.

5.4 Low populations of slow-worm have been recorded in the north west of the site.

6 RECOMMENDATIONS

Bats

6.1 Broad-leaved woodland on the edge of the site may be used by bats in the local area as foraging / commuting routes. Protection of the boundary features and maintenance of dark corridors (without any artificial light spill) will avoid impacting on the potential for bats to forage at the site.

6.2 It is recommended that, in order to enhance the site for roosting bats, at least two bat boxes should be fitted in appropriate locations within the new development.

Nesting Birds

6.3 If any habitat identified as suitable for nesting birds is to be removed it should be undertaken outside of the bird nesting season (normally considered to be March-August inclusive). If this is not possible, works completed within the bird nesting season will need to take into account the potential presence of active nests. Where birds are found to be nesting on or in a building or within scrub on site, any works that result in damage to or loss of the nest would be unlawful.

6.4 Any active nests established in the working area during site operations will need to be protected until after the young have fully fledged and no longer return to the nest site. Any active nest should be cordoned off to a distance of 5-10m. No works will be allowed within the cordoned area until it has been confirmed that the nest is no longer active.

6.5 In order to enhance the site for nesting birds, it is recommended that a range of different nest boxes are installed in appropriate locations across the site.

Reptiles

6.6 Although small numbers of reptiles were only found in the north western corner of the site, the majority of the remainder of the site is considered suitable reptile habitat, the bulk of which will be lost during development of the site.

6.7 Suitable mitigation will therefore be required in order to ensure no animals are killed or injured during the development. A detailed mitigation strategy will be required once the final development plans have been drawn up illustrating how the existing population of reptiles on site will be protected.

6.8 Broadly, this strategy would focus on clearing the site of reptiles in a systematic way to ensure the population is maintained/enhanced in the long-term. Given the small number of animals found, a suitable area of retained habitat would be sufficient to maintain the population on site. An area of improved grassland to the south east of the site has been identified as a possible reptile receptor site although the final location of a suitable receptor site would need to be agreed once the overall masterplan were finalised. During development this area would be left undisturbed and managed/maintained for the benefit of reptiles.

6.9 The site (excluding the receptor site) would need to be fenced with reptile exclusion fencing to ensure no animals can access the site from nearby residential areas once the clearance programme has started.

6.10 Once suitably fenced, artificial refugia, consisting of roofing felt, would be laid out in “islands”, focusing particularly in the north west of the site where reptiles were previously recorded. The vegetation in between those islands would be subject to a phased clearance as detailed below. The refugia need to be checked daily during suitable weather conditions with any reptiles seen caught by hand, by an experienced ecologist, and placed into a reptile bag, or a cool container with a secure lid, and be transported to the receptor site where they would be released as soon as possible in favourable habitats under suitable weather conditions.

6.11 Vegetation clearance should be undertaken under the watching brief of an ecologist experienced in reptile survey and relocation. Should any individual reptiles be found during vegetation clearance then they would also be caught by hand and relocated to suitable cover in the receptor site as detailed above.

6.12 Initially, a hand search would be undertaken by the ecologist to remove any deadwood or piles of grass cuttings within the working area for the development. Vegetation clearance should be undertaken with handheld tools (i.e. strimmers).

6.13 The vegetation cutting would be implemented in two stages. The whole of the area of rough grassland to be cleared around the “islands” containing the refugia would be cut to approximately 10 cm above ground level and any thatch of dead grass removed. A subsequent second cut would remove vegetation to ground level. This phased systematic cutting regime will ensure that any reptiles or other species of fauna present within the site are encouraged to move into the retained islands where they could be caught and moved to the receptor site. In addition, degrading the vegetation should discourage reptiles from re-entering the site during the development works thereby reducing the potential for animals to be injured or killed.

6.14 Any logs and sticks cut during the vegetation clearance would be used to create small piles of approximately 2 m x 1 m x 0.5 m within the receptor site that would provide additional shelter for reptiles.

6.15 After an agreed period of trapping, the retained islands of grassland could be reduced in size, using a similar methodology to that detailed above, to further concentrate any remaining animals.

6.16 Once trapping had been undertaken for a further agreed period and no animals had been caught for the final five days of this period, the remaining vegetation on site would be cleared, as above, and the site released for development. Once the on-site habitat had been cleared, the majority of the reptile exclusion fencing could be removed, except around the receptor site to ensure this area was protected. Also during development, suitable Herras-style fencing should be installed around the receptor site in order to keep all site personnel away and maintain it as un-disturbed throughout the development period. The fencing would be removed only after the completion of all works on site.

6.17 The final land owner would agree to an on-going habitat management plan in order to safe guard the population of reptiles on site. This would detail the timing, frequency and extent of any yearly grass cutting, the control of potential encroaching scrub or trees and the maintenance of the log piles as they begin to rot.

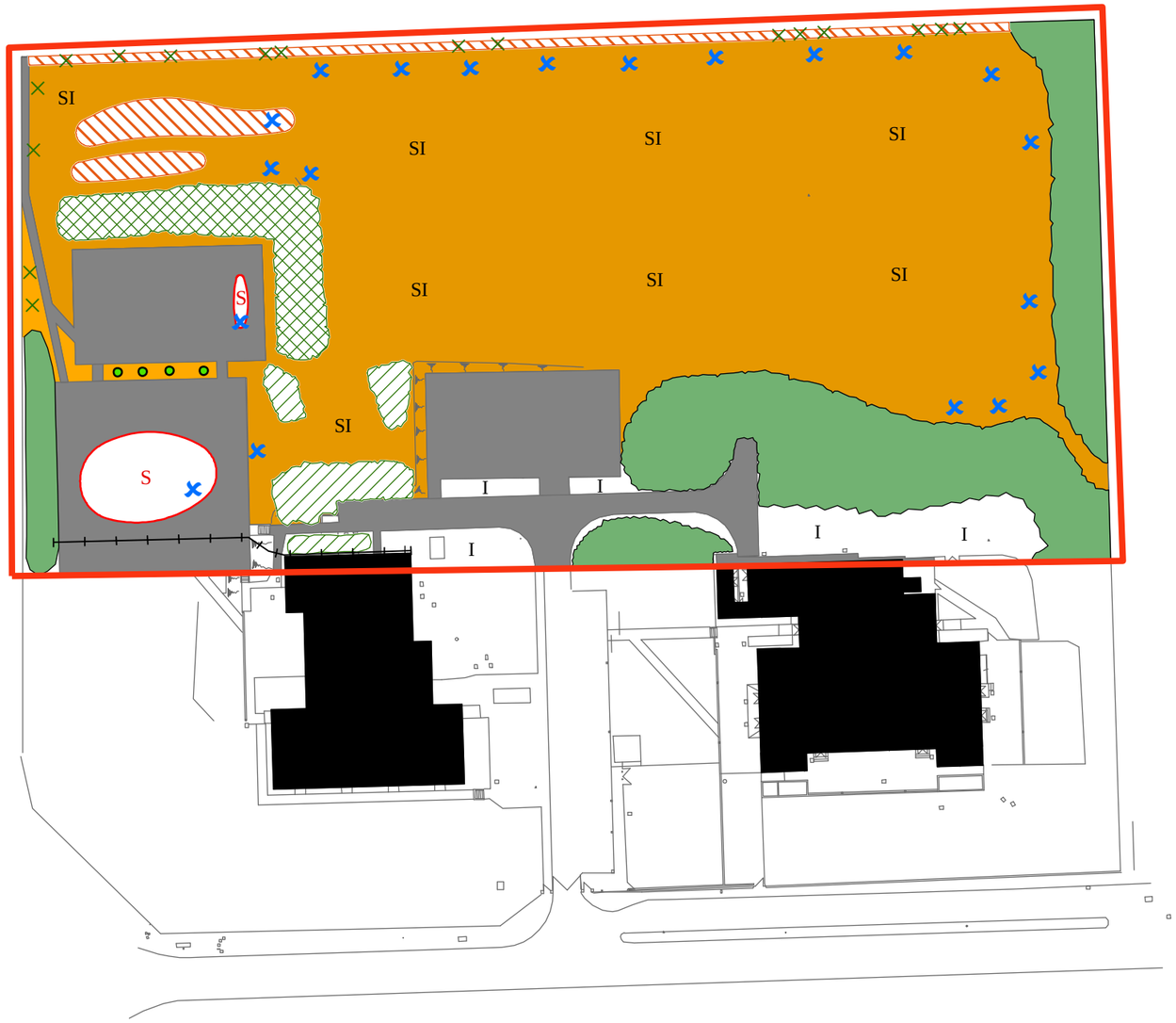
7 REFERENCES

JNCC (2003). *Handbook for Phase 1 habitat survey: a technique for environmental audit (revised reprint)*. JNCC: Peterborough.

Stace, C. (1997). *New Flora of the British Isles (2nd Edition)*. CUP: Cambridge.

FIGURE 3.1

Phase 1 Habitat Survey September 2010 – Shepherd's Spring School, Andover, Hampshire



Legend

- Survey Boundary
- Scattered Broad-leaved Tree
- Fence
- Scattered Scrub
- Reptile Survey Sheet Location
- S — Spoil Heap
- Plantation Broad-leaved Woodland
- I — Improved Grassland
- Dense Scrub
- Tall Ruderal
- Broad-leaved Woodland
- Buildings
- Hardstanding
- SI — Semi-improved Neutral Grassland

Rev:	Date:	Amendment:	Name:	Checked:

Data Source: RPS 2010

Status: FINAL

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Client: Hampshire County Council

Project: Shepherds Spring School

Title: Phase 1 Habitat Survey Map

Scale: A3 @ 1:1000

N

Date: 21/12/2010 Datum: OSGB36 Projection: BNG

Drawn: SH Checked: NB Job Ref: SL1628

Figure No: **3.1** Revision: -