

**PHASE 1 HABITAT SURVEY AND  
PROTECTED SPECIES ASSESSMENT  
AT ST JOHN'S CAMPUS,  
WORCESTER**

*Report to University of Worcester*

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<b>CONTENTS</b>	<b>Page</b>
<b>1. Summary</b>	<b>2</b>
<b>2. Introduction</b>	<b>3</b>
<b>3. Survey Constraints</b>	<b>3</b>
<b>4. Site Description</b>	<b>3</b>
<b>5. Methodology</b>	<b>3</b>
<b>5.1 Phase 1 Habitat Survey</b>	<b>4</b>
<b>5.2 Bats</b>	<b>4</b>
<b>5.3 Badgers</b>	<b>4</b>
<b>5.4 Great Crested Newts</b>	<b>4</b>
<b>5.5 Reptiles</b>	<b>5</b>
<b>5.6 Birds</b>	<b>5</b>
<b>5.7 Water Voles</b>	<b>5</b>
<b>5.8 Otters</b>	<b>5</b>
<b>5.9 White-clawed Crayfish</b>	<b>6</b>
<b>5.10 Dormice</b>	<b>6</b>
<b>6. Results</b>	<b>6</b>
<b>6.1 Phase 1 Habitat Survey</b>	<b>6</b>
<b>6.2 Bats</b>	<b>7</b>
<b>6.3 Badgers</b>	<b>7</b>
<b>6.4 Great Crested Newts</b>	<b>7</b>
<b>6.5 Reptiles</b>	<b>8</b>
<b>6.6 Birds</b>	<b>8</b>
<b>6.7 Water Voles</b>	<b>8</b>
<b>6.8 Otters</b>	<b>8</b>
<b>6.9 White-clawed Crayfish</b>	<b>8</b>
<b>6.10 Dormice</b>	<b>9</b>
<b>7. Conclusions and Recommendations</b>	<b>9</b>
<b>7.1 Phase 1 Habitat Survey</b>	<b>9</b>
<b>7.2 Bats</b>	<b>9</b>
<b>7.3 Badgers</b>	<b>9</b>
<b>7.4 Great Crested Newts</b>	<b>9</b>
<b>7.5 Reptiles</b>	<b>10</b>
<b>7.6 Birds</b>	<b>10</b>
<b>7.7 Water Voles</b>	<b>10</b>
<b>7.8 Otters</b>	<b>10</b>
<b>7.9 White-clawed Crayfish</b>	<b>10</b>
<b>7.10 Dormice</b>	<b>10</b>
<b>7.11 General recommendations</b>	<b>11</b>
<b>8. Bibliography</b>	<b>11</b>
<b>Appendix 1 Photographs</b>	<b>12-18</b>
<b>Appendix 2</b>	
<b>Information from Worcestershire Biological Records Centre</b>	<b>19</b>
<b>Appendix 3 Wildlife gardening information</b>	<b>20</b>

## **1.Summary**

In October 2006, Worcestershire Wildlife Consultancy were commissioned by University College of Worcester to undertake a Phase 1 Habitat survey and a protected species survey assessment at the St John's Campus, Worcester prior to development work.

The habitat is not particularly diverse, due mainly to the fact that it is part of the campus and its infrastructure. There is some limited ecological interest in the planted hedgerows and the mature standard trees.

The only implication in relation to protected species is a recommendation for a dedicated amphibian survey, focussing on great crested newts.

## **2. Introduction**

In October 2006, Worcestershire Wildlife Consultancy were commissioned by University College of Worcester to undertake a Phase 1 Habitat survey and a protected species survey assessment at the St John's Campus, Worcester prior to development work.

## **3. Survey Constraints**

The comprehensiveness of the ecological assessment was limited by the season in which the site visit was made. To confirm the presence or absence of all protected species usually requires multiple visits at suitable times of the year. The site visit focussed on assessing the potential of the site to support species given protection under British or European law.

In view of the above constraints this assessment cannot be considered to provide a comprehensive survey of the ecological interest of the site. It does however provide a "snapshot " of the ecological interest present on the day of the visit and highlights areas where further survey work may be required.

## **4. Site description**

St John's Campus is situated to the east of Worcester city centre at NGR SO835553, just off Hylton Road in the suburb of St John's.

The site is a built environment, bounded by roads, predominantly flat and consists mostly of amenity grassland and hard standing around the campus buildings. The entire site is bounded by fencing, mostly with hedgerows closely set behind the railings.

Buildings range from recently constructed to mid 20<sup>th</sup> Century and there are numerous external buildings such as greenhouses and groundsman's sheds. At the time of the survey large heaps of leaves and other garden refuse were piled near the groundsman's sheds.

The surrounding land use is predominantly urban housing. There is an allotment site on the south-eastern boundary and a primary school on the southern boundary.

## **5. Methodology**

A data search was commissioned from Worcestershire Biological Records Centre for records of protected species and sites within a 1km radius of the site. A copy of this is included in Appendix 2. In addition, a data search for areas of ecological importance was undertaken using the Multi-Agency Geographical Information for the Countryside website (MAGIC).

### **5.1 Phase 1 Habitat Survey**

Habitat assessment was made in accordance with the NCC Phase 1 Habitat Survey methodology (NCC, 1990).

Habitats on the site were assessed to assist in determining areas with the potential to support protected species and areas where further survey work will be required. The habitat and vegetation survey involved walking over the site.

### **5.2 Bats**

Bats are afforded legal protection on a European and national basis, predominantly under the Habitat Regulations 1994 and the Wildlife and Countryside Act 1981 with further protection added under the Countryside and Rights of Way Act 2000, which makes it a criminal offence to disturb or obstruct a bat roost.

Typically bat species roost in roof spaces, cracks in walls, caves or trees that have suitable holes and/or are covered with dense ivy.

### **5.3 Badgers**

Badgers (*Meles meles*) are afforded protection under The Protection of Badgers Act 1992, under which it is an offence to kill, injure, take, possess or cruelly mistreat a badger or to interfere with, or obstruct access to a sett.

Evidence of the presence of badgers is determined by searching for setts and for signs of badger activity, such as their distinctive latrines, snuffle holes, padding or guard hairs caught on thorn bushes or fences along routes which they have used.

Badgers tend to use the same routes for travelling between their setts and feeding areas over long periods of time; these routes develop into tracks, which are obvious to the naked eye. Suitable tracks are therefore searched for signs of badger activity to determine whether they are badger runs or tracks formed by other animals (such as dogs or humans).

### **5.4 Great Crested Newts**

Great-crested newts (*Triturus cristatus*) and their habitat are protected under the Wildlife & Countryside Act 1981 and the Habitat Regulations 1994. This protection was further strengthened under the Countryside and Rights of Way Act 2000.

Great crested newts (*Triturus cristatus*) require a body of water in which to breed. This should contain suitable submerged and marginal vegetation to provide opportunities for egg-laying with some less vegetated areas to enable courtship display.

Great crested newts also require a terrestrial habitat in which both to forage and to hibernate over winter. The site was examined for suitable waterbodies and terrestrial habitat.

## 5.5 Reptiles

Slow-worms (*Anguis fragilis*) and common lizards (*Zootoca vivipara*) inhabit a large variety of habitats, such as rough grassland, heathland or woodland edge where there are suitable opportunities for maintaining their body temperature and finding suitable prey. Grass snakes (*Natrix natrix*) are normally associated with waterbodies but they have a wide home range of up to 2km<sup>2</sup> and can occur anywhere within that range, particularly in grassy sites as the common name implies. The site was assessed for suitable habitats.

Protection is afforded to the slow-worm, common lizard and grass snake under Section 9 (1) and 9 (5) of the Wildlife & Countryside Act 1981.

## 5.6 Birds

There are varying degrees of protection for birds as some are classed as pest species while others are protected by special penalties. All wild birds receive special protection under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to “take, damage or destroy the nest of any wild bird while it is in use or being built” and to “take or destroy the eggs of any wild bird”.

All bird species are noted whether flying over, singing or feeding and the likelihood of the habitat to support each species in terms of feeding, nesting and roosting is assessed.

A comprehensive bird survey such as a breeding bird survey was not undertaken as this was beyond the remit of the survey assessment.

## 5.7 Water Voles

Water voles (*Arvicola terrestris*) receive legal protection under the Wildlife and Countryside Act 1981. This protects individuals when they are occupying their places of shelter (burrows) but not when they are outside them. It is an offence, therefore, to damage, destroy or obstruct access to burrows and to disturb water voles when they are using them.

The area was searched for suitable habitat that might support water voles.

## 5.8 Otters

Otters (*Lutra lutra*) are protected under the Wildlife and Countryside Act 1981 which prohibits intentional killing or taking as well as damaging, obstructing or destroying any place of shelter and disturbance of the animal whilst in any such place. Further legal protection is afforded through the Habitat Regulations 1994.

The area under assessment was searched for habitat that may be used by otters. This includes relevant riparian habitats but also features within close proximity of water bodies that provide lying up or denning sites, such as fallen trees or bankside holes.

## 5.9 White-clawed Crayfish

White-clawed crayfish (*Austropotamobius pallipes*) have in more recent years undergone a dramatic decline. They are afforded protection under the Wildlife and Countryside Act 1981, which makes it an offence to take or sell this species. Further protection is afforded through the Habitat Regulations 1994

The area under assessment was searched for suitable habitats. This typically includes freshwater streams and rivers but may also include still waterbodies. Where relevant habitat occurs, evidence in the form of refugia, such as holes or rocks, is searched for.

## 5.10 Dormice

Evidence of the presence of dormice (*Muscardinus avellanarius*) is determined by systematically searching for gnawed hazelnuts underneath hazel (*Corylus avellana*) coppice, as well as searching for nests, which are often found in brambles or other low growing shrubs including hazel. They are afforded legal protection on a European and national basis via the Habitat Regulations 1994 and the Wildlife and Countryside Act 1981.

The area was assessed for suitable habitats that could potentially be used by dormice.

## 6. Results

The assessment was carried out in the daytime on 24<sup>th</sup> November 2006 by Alan Shepherd of Worcestershire Wildlife Consultancy. The weather was dull and overcast following heavy rain showers with a slight north-easterly breeze and an air temperature of 8.1° C.

The data search from Worcestershire Biological Records Centre yields records of Protected Species within a 1km radius of the site. These are slow-worm, badger, water vole and grass snake.

There are no Areas of Outstanding Natural Beauty, Specially Protected Areas, Special Areas of Conservation, Ramsar Sites, Sites of Special Scientific Interest or National Nature Reserves within a 1km radius. Laugherne Brook Local Nature Reserve lies within 1km<sup>1</sup> but is unlikely to be directly affected by any work on the site.

### 6.1 Phase 1 Habitat Survey

Apart from the metalled roads and car park areas, most of the site is amenity grassland with some planted shrubberies and hedges. There are many mature trees that appear to be remnants of previous parkland planting.

All of the internal hedges and most of the boundary hedges consist of an assortment of planted species, including hazel (*Corylus avellana*), hawthorn (*Crataegus*

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<sup>1</sup> Data obtained from the Multi- Agency Geographical Information for the Countryside website – (MAGIC)

*monogyna*), guelder rose (*Viburnum opulus*), wayfaring tree (*Viburnum lantana*) and dogwood (*Cornus sanguinea*).

Between the hedges and the grassland common ruderal species and occasional patches of tall herb occur with some patches of bramble (*Rubus fruticosus*). There are several standard trees, some native and some ornamental. The largest of these is a large London plane (*Platanus x hispanica*) with occasional pedunculate oak (*Quercus robur*), hybrid poplar (*Populus x canadensis*) and exotics include weeping willow (*Salix babylonica*) and conifers.

Three ponds provide some aquatic habitat but only one has any major ecological interest. This is an artificially created lined pond that has been planted or colonised with a variety of plants, including brooklime (*Veronica beccabunga*), water forget-me-not (*Myosotis scorpioides*) and fool's water-cress (*Apium nudiflorum*). The two other ponds are concrete-lined; one is dominated by pendulous sedge (*Carex pendula*) while the other is overshadowed by a hedge and has no submerged vegetation, although there is a covering of duckweed (*Lemna* spp.).

## **6.2 Bats**

There are no buildings on the site that would provide a roost site for bats and even the larger trees lack holes and crevices.

## **6.3 Badgers**

As this is an active campus, there is considerable disturbance, which would make it highly unlikely that badgers would occur regularly. There is nowhere that badgers could excavate a sett.

The data search from Worcestershire Biological Records Centre yields historical records of badgers within a 1km radius of the site and although there is an outside possibility that badgers from the nearby sett could make their way into the grassland in order to forage, it is extremely unlikely that this will happen under normal circumstances.

No evidence of badger activity was seen on the day of the survey visit.

## **6.4 Great Crested Newts**

There are three waterbodies on the site that could provide breeding opportunities for amphibians, although two are sub-optimal and unlikely to provide sites for newts. The third is a lined pond, which appears to have been artificially created near the greenhouses and which has a suitable egg-laying strata provided by the aquatic and marginal plants. This is considered suitable for newts to breed in and although it is somewhat isolated it has the potential to support a meta-population of great crested newts.

In addition to the pond on site, if there is a breeding pond outside the site but within 500 metres then it is possible that great crested newts could occur during their

terrestrial phase. It is not known whether there are ponds in any of the adjacent gardens.

It is known that common frog (*Rana temporaria*) occurs on the adjacent allotment (A. Shepherd Pers comm.) and this indicates that other amphibians could well be found there. If this is the case then it is inevitable that some will venture into the campus site.

## **6.5 Reptiles**

There is suitable habitat for slow-worms around the site, such as hedge bottoms and rank grass but unless a small population was already present and has been effectively captive for some time, it is unlikely to have been colonised since the campus was built. Worcester is noted for its slow-worm populations<sup>2</sup> and there is a possibility that this species may occur in, albeit it most likely in small numbers. It is highly unlikely that common lizards will be found.

The habitat is generally less favourable for grass snakes but since this species has an extensive range there remains an extreme possibility that one may occur at some point even with the apparent barrier of the roads and gardens.

## **6.6 Birds**

Some birds were recorded but clearly the time of year was too late to provide an accurate sample or an indication of breeding. Small passerines such as robin (*Erithacus rubecula*), wren (*Troglodytes troglodytes*), chaffinch (*Fringilla coelebs*), greenfinch (*Carduelis chloris*), blue and great tit (*Parus caeruleus* & *P. major*) were noted as well as magpie (*Pica pica*), carrion crow (*Corvus corone corone*), collared dove (*Streptopelia decaocto*) and wood pigeon (*Columba palumbus*). Black-headed gulls (*Larus ridibunda*) were seen using the playing field as a foraging and loafing site.

## **6.7 Water Voles**

There are no suitable habitats on site that could support water voles.

## **6.8 Otters**

There are no suitable habitats on site that could support otters.

## **6.9 White-clawed Crayfish**

There are no suitable habitats on site that could support white-clawed crayfish.

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<sup>2</sup> Shepherd, A.G. 1997

### **6.10 Dormice**

There is insufficient habitat that would support dormice and a lack of connectivity to the site from any suitable habitat means that there are no opportunities for colonisation.

## **7. Conclusions and recommendations**

### **7.1 Phase 1 Habitat Survey**

The majority of the vegetated site is amenity grassland, which is of **low ecological interest** apart from supplying habitat for invertebrates and/or foraging areas for birds. The diversity is low and all of the plant species are common, widespread and typical of such sites. In addition the larger part is used as a sports pitch and the resultant management regime will always conflict with any ecological interest.

The tarmac car parking and roads have no ecological interest. The assorted mature trees, the planted hedges and the shrubberies have some ecological interest but again this is mostly for birds and invertebrates. Therefore any development should have very little impact.

### **7.2 Bats**

There are few, if any, cracks and holes in the mature trees that would provide opportunities for roosting.

Equally, the buildings provide very few niches for bats to exploit, being either modern and in good repair and/or of unsuitable construction. Therefore, **there are no obvious and immediate implications with regard to bats.**

### **7.3 Badgers**

No evidence of badgers was found on site during the survey assessment. Therefore, **there are no obvious and immediate implications regarding this species on site.**

In the extremely unlikely event that any badgers are found during the course of the proposed works, work should be halted immediately, Natural England should be informed and allowed time to advise on the best way to proceed.

### **7.4 Great crested newts**

It is recommended that a great crested newt survey should be carried out on at least one of the ponds, the lined one near the greenhouses.

This must be undertaken by a licensed surveyor between April and June in any given year and in order to meet the required standard there should be a minimum of four visits in suitable weather conditions with at least two of the visits in mid-April to mid-May.

If great crested newts are present then approved mitigation measures subject to a European Protected Species Licence (EPSL) issued by Natural England/Rural Development Services will be required before any work can begin.

In the event of any great crested newts being encountered then work must be halted immediately and specialist advice sought from a suitably qualified herpetologist. It is advisable to provide the work force with an identification guide to enable them to recognise any newts that are encountered.

## 7.5 Reptiles

**There are no obvious and immediate implications for slow-worms, common lizards or grass snakes.** However, if they are found to be present, **work must cease** and mitigation measures must be undertaken. This must be carried out on the advice of a suitably qualified herpetologist.

## 7.6 Birds

Care should be taken to ensure that no nesting wild birds are disturbed during clearance work if this takes place between **early March and late August** of any given year. Should clearance of the site be undertaken during these months then a suitably qualified ecologist must be engaged prior to any work commencing to check for nesting birds and advise accordingly on the most appropriate way to proceed.

## 7.7 Water Voles

No suitable habitat for this species was found on site during the survey assessment. Therefore, **there are no obvious and immediate implications regarding this species on site.**

## 7.8 Otters

No suitable habitat for this species was found on site during the survey assessment. Therefore, **there are no obvious and immediate implications regarding this species on site.**

## 7.9 White – Clawed Crayfish

No suitable habitat for this species was found on site during the survey assessment. Therefore, **there are no obvious and immediate implications regarding this species on site.**

## 7.10 Dormice

No suitable habitat or evidence of this species was found on site during the survey assessment. Therefore, **there are no obvious and immediate implications regarding this species on site.**

### 7.11 General recommendations

As a matter of course any open trenches should be covered at the end of the working day and a 45° exit ramp of soil or wood should be installed to enable any animal that may fall into the excavation to escape.

Trees to be retained should be protected during works. Exclusion fencing should be placed around the extreme edge of the canopy, which should correspond approximately to the area of the root ball and no materials or wastes should be stored or disposed of within this area. Compaction and/or disturbance of the roots by machinery must be avoided.

With regard to Planning Policy Statement 9 (PPS9), it is now a requirement for local planning authorities to maintain and enhance, restore or add to biodiversity. As stated within paragraph 14 of the document, "Development proposals provide many opportunities for building-in beneficial biodiversity..... as part of good design. When considering proposals, local planning authorities should maximise such opportunities in and around developments, using planning obligations where appropriate". This is most pertinent to any future re-development of this site and could be achieved by incorporating a range of measures, including planting a suitable mix of native trees and shrubs (refer to Appendix 3) during landscaping and the provision of bird and bat boxes or ridge tiles on any buildings to be constructed. These should be viewed as merely outline suggestions and not a comprehensive mitigation package.

**It should be noted that if more than twelve months elapse between this assessment and the commencement of any development then a further survey assessment should be undertaken at an appropriate time to determine the status of any protected species which may have taken up residence during the intervening period.**

### **8. Bibliography**

England Field Unit, Nature Conservancy Council, 1990. Handbook for Phase 1 habitat survey- a technique for environmental audit. Joint Nature Conservancy Committee, Peterborough.

Shepherd, A.G. 1997. Slow-worm Survey of Worcester City 1997. Worcestershire Wildlife Consultancy (Report to Worcester City Council).

**Appendix 1 Photographs**



**1: Amenity grassland and surrounding shrubberies in north-east of site**



**2: Planted hedge between grassland and car park**



**3: Groundsman's shed and garden refuse pile**



**4: Groundsman's shed**



**5: Hybrid poplars along drive**



**6: Sports pitch**



**7: Hedge along southern side of sports pitch**



**6: Ornamental tree planting**



**7: Area of rough grassland**



**8: Lined pond with potential as amphibian breeding site**



**9: Overgrown small concrete pond**



**10: Overshadowed concrete pond**

**Appendix 2**  
**Data Search from Worcestershire Biological Records Centre**

### **Appendix 3 Wildlife gardening information**