# APPENDIX 14A: BASELINE ECOLOGICAL SURVEY REPORT

## **NOT PROTECTIVELY MARKED**



# EDF Energy Hinkley Point C Associated Development

Bridgwater A: Baseline Ecological Survey Report

September 2011

AMEC Environment & Infrastructure UK Limited



## Report for

**EDF Energy** 

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## **EDF** Energy

## Hinkley Point C Associated Development

Bridgwater A: Baseline Ecological Survey Report

September 2011

AMEC Environment & Infrastructure UK Limited





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Appendix A Species List from the Invertebrate Survey



## 1. Introduction

## 1.1 Purpose of Report

EDF Energy is seeking to construct a new nuclear power station on land to the west of the existing Hinkley A and B stations (Hinkley Point C, hereafter referred to as 'HPC'). As part of the suite of associated development sites necessary to support the construction of HPC, EDF Energy are proposing to construct an accommodation campus in Bridgwater, Somerset, on a site adjacent to the A39 Bath Road in the north-eastern part of the town (the 'proposed development site').

This report presents the results of the baseline ecological survey work<sup>1</sup> completed at the proposed development site, comprising; habitat survey work (an extended Phase 1 survey) and surveys in respect of the following protected or notable species (or species groups), which the site was assessed as having potential to support<sup>2</sup>:

- bats:
- · reptiles; and
- invertebrates.

This report does not include an assessment of the biodiversity value of each receptor or the potential effects of the development proposals, as this is reported in the accompanying Environmental Statement (EDF, 2011).

## 1.2 Site Description

The proposed development site is located on the outskirts of Bridgwater, at central grid reference ST310381 (see **Figure 1.1**). The northern part of the site is dominated by industrial buildings and hardstanding (which are remnants of the former Innovia Cellophane Factory); whilst the southern part of the site comprises the Bridgwater Sports and Social Club, with associated buildings, car parking and short-mown sports fields. The proposed development site is bordered to the north by Sydenham Manor House and its grounds, to the west by a mainline railway, whilst the A39 borders (or forms) much of the south-eastern boundary of the site.

<sup>&</sup>lt;sup>1</sup> The methodology for, and the results of, the desk study undertaken to collate existing baseline data for the proposed development site are reported in the accompanying Environmental Statement (EDF, 2011).

<sup>&</sup>lt;sup>2</sup> During the desk study, ecological baseline data that was collected by FPCR between 2007 and 2009 to inform the North-East Bridgwater development (as presented within the documents that support the planning application - Planning Application Reference: 09/08/00017), was reviewed to inform the scope of required survey work.





## 2. Methodology

## 2.1 Habitat Survey

## 2.1.1 Extended Phase 1

An extended Phase 1 habitat survey of the development site and adjacent land was undertaken on 7 June 2011. This survey combined the Phase 1 habitat survey methodology (JNCC, 2007), which is a standardised system for classifying and mapping British habitats, with a survey to identify the presence or potential presence of species of importance for nature conservation, including those that are afforded legal protection (IEA, 1995). Distinct habitats were identified and mapped, with any features considered to be of particular biodiversity interest subject to a more detailed description in a target note (TN) if required.

## 2.2 Species Surveys

#### 2.2.1 Bats

The methodology for undertaking the bat survey work followed guidance provided by Natural England (Bat Mitigation Guidelines, English Nature [now Natural England], 2004]) and the Bat Conservation Trust (Bat Surveys- Good Practice Guidelines, Bat Conservation Trust. 2007). Sunset and sunrise times for all the surveys were taken from Metcheck website (www.metcheck.com).

#### **Habitat Suitability**

Habitat suitability for bats was initially assessed during the extended Phase 1 habitat survey (see Section 2.1.1) and then subsequently whilst undertaking bat activity surveys (see below) and a roost assessment. Habitat suitability was assessed in respect of the following three criteria: features that offer potential for roosting (e.g. trees, buildings and other built structures); opportunities for commuting (e.g. provided by structural features such as hedgerows, waterways and woodland edge); and opportunities for foraging (e.g. over areas of grassland or adjacent to woodland). Characteristics that are likely to reduce the value of a feature or habitat for bats, such as high light levels, were also recorded.

#### **Roost Assessment**

On the 14th and 15th June 2011 an external roost assessment survey was carried out at the proposed development site by an experienced bat ecologist (Caroline Chipperfield, MIEEM). Due to the information available for the former Innovia Cellophane Factory part of the site from the surveys supporting the North East Bridgwater development and the partial and on-going demolition of this area (due to be completed winter 2011/2012), the bat roost assessment focused primarily on the Sports and Social Club areas (which were not surveyed for the North-East Bridgwater development). During the survey any trees, buildings or other structures thought to have a moderate to high potential to support bat roosts were mapped, and detailed notes on them were made. Each such building, tree or structure was assessed in respect to the



likely number and suitability of roost spaces present, and its proximity to good commuting and foraging habitat. Factors affecting the likelihood of a potential roost site being used by bats, such as high levels of illumination from street lamps and security lighting, were also included in the assessment (as far as is possible during a daytime survey).

## **Emergence/Re-entry and Activity Surveys**

Emergence/re-entry surveys were only conducted on the Sports and Social Club building (because the buildings on the former Innovia Cellophane Factory are being demolished). Dusk emergence surveys were carried out on 5 July and 8 August 2011, with dawn re-entry surveys undertaken on 15 June and 5 August 2011. Following each of the dusk emergence surveys, a transect was then walked around the sports field and boundaries of the Sports and Social Club site to record levels of bat activity.

Emergence surveys commenced approximately 15 minutes before sunset and finished approximately 90 to 120 minutes after sunset. Re-entry surveys commenced approximately 120 minutes before sunrise and concluded up to 15 minutes after sunrise. A summary of each survey date, weather conditions and sunset/sunrise times is shown in **Table 2.1**.

Table 2.1 Emergence/Re-entry Survey Dates, Times and Weather Conditions

Survey Location	Survey Type	Date	Sunset / Sunrise Time	Weather Conditions
Static survey locations 1&2	Emergence	05/07/11	21.24	15°C, light rain showers, calm wind, 100% cloud cover
Static survey locations 1&2	Re-entry	15/07/11	5.15	12 °C, no rain, calm wind, 70% cloud cover
Static survey locations 1&2	Re-entry	05/08/11	5.44	14°C, no rain, calm wind, 50% cloud cover
Static survey locations 1&2	Emergence	08/08/11	20.47	18°C, no rain, calm wind, 60% cloud cover

#### **Data Recording and Analysis**

On each visit surveyors recorded bat calls using a frequency division bat detector (a Batbox duet) and a recording device (an Edirol R09) and the calls were subsequently analysed using BatSound. Upon recording a bat call, each surveyor also made a note of the likely bat species, the location of the registration and, where discernable, other details such as the direction of flight, activity (e.g. foraging or commuting), number of passes and number of bats.

## 2.2.2 Reptiles

The methodology for the reptile survey followed guidance provided in Froglife's Advice Sheet 10 - Reptile Survey, an introduction to planning, conducting and interpreting surveys for snake and lizard conservation (Froglife, 1999) and took into account additional guidance provided by the Herpetofauna Workers' Manual (JNCC, 1998) and Reptiles: guidelines for developers (EN, 2004).

The Froglife Advice Sheet (Froglife, 1999) recommends placing between five and ten artificial refugia per hectare (ha) and this guidance was adopted, or exceeded, for all suitable reptile



habitats on site. The proposed development site is, in total, approximately 13ha in size, but the majority of the site does not provide suitable habitat for reptiles (e.g. the large areas of hardstanding and amenity grassland are neither likely to provide shelter nor be attractive basking or foraging areas). In total, 81 artificial refugia (comprising tiles of roofing felt, minimum size of 0.5m x 0.5m) were set out across the site in all habitats assessed as having the potential to support reptiles (see **Figure 2.2**) – equating to approximately nine tiles per hectare of the site.

Once the artificial refugia had been allowed to 'bed-in', 20 survey visits (Froglife, 1999) were then undertaken between June and August 2011 (see **Table 2.2**). On each visit, the experienced surveyor(s) utilised three survey techniques to determine the presence/absence of reptiles on site, namely: direct observation; checking any existing refugia (e.g. discarded plastic or metal sheeting, piles of wood etc.); and checking the artificial refugia.

Table 2.2 Dates and Weather Conditions for Reptile Survey Visits

Survey No.	Date	Start Time	End Time	Weather	Start Temp. (°C)	End Temp. (°C)
1	08/06/2011	15.00	16.00	Sunny with patches of rain	17	17
2	15/06/2011	11.00	12.00	Sunny with patches of cloud	18	18
3	16/06/2011	15.00	16.00	Cloud, patches of sunshine, drizzle before start	15	15
4	21/06/2011	8.30	9.30	Sunny with patches of cloud	16	16
5	23/06/2011	10.00	11.00	100% cloud cover, no wind	17	17
6	28/06/2011	8.30	9.30	100% cloud cover, no wind	16	16
7	30/06/2011	15.00	16.00	Sunny	17	17
8	19/07/2011	15.15	16.10	Sunny	19	19
9	20/07/2011	15.15	16.00	Sunny with patches of cloud	18	18
10	25/07/2011	9.40	10.40	Sunny, 50% cloud, no breeze	19	19
11	29/07/2011	10.15	11.15	100% cloud, light drizzle, humid, no breeze	16	17
12	02/08/2011	15.00	16.00	Sun after rain	18	18
13	03/08/2011	15.00	16.00	Sun after rain	19	19
14	08/08/2011	15.05	16.00	Sun after rain	16	16
15	10/08/2011	15.10	16.10	Sun after rain	17	17
16	11/08/2011	15.00	16.00	Sun after rain	18	18



Survey No.	Date	Start Time	End Time	Weather	Start Temp. (°C)	End Temp. (°C)
17	12/08/2011	10.00	11.00	98% cloud, light breeze	18	19
18	16/08/2011	9.30	10.30	95% cloud, moderate breeze, humid	17	18
19	24/08/2011	9.40	10.40	50% cloud, light breeze, dry ground	17	18
20	25/08/2011	9.45	10.45	50% cloud, light breeze, damp ground	15	15

#### 2.2.3 Invertebrates

An invertebrate survey was carried out by experienced entomologist Andy Godfrey on 7th June 2011, in suitable weather conditions. The main purpose of this walkover survey was to assess the quality of the habitats present within the proposed development site for invertebrates. A survey to sample the invertebrate assemblage present was also undertaken to augment this habitat assessment and identify any requirement for further invertebrate survey work.

#### **Habitat Assessment**

A habitat assessment was completed to ensure that the surveyor visited, and assessed, all the habitat types present on site. The surveyor recorded information on any habitat features or characteristics that were likely to affect the overall quality of the habitat for invertebrates (for example, presence/absence of food plants or degree of structural habitat complexity) and, in so doing, assessed the potential for the site to support a varied or notable invertebrate fauna.

## **Invertebrate Sampling**

During the survey all habitat compartments within the site boundary were visited and all observations of butterflies, day-flying moths and other conspicuous invertebrates were recorded in the field, without the need for collection. In addition, terrestrial invertebrate samples were collected by both sweep-netting and direct searching (e.g. under stones or timber, on flower-heads) at carefully chosen sample points within each habitat compartment either in a unique or a more representative habitat. These samples were then preserved in alcohol for later identification under a microscope (to species-level wherever practical), using standard reference works.

## 2.2.4 Other Species

No further species or species group specific surveys have been completed. However, any evidence of other species or incidental sightings, particularly those listed on the UK and Local Biodiversity Action Plans, was noted during each of the above surveys.



## 3. Results

## 3.1 Habitat Surveys

## 3.1.1 Phase 1 Habitat Survey

The results of the Phase 1 habitat survey are illustrated in **Figure 3.1**. The site comprises hardstanding and buildings in the northern part (the former Innovia Cellophane Factory) and a Sports and Social Club with associated playing fields in the southern part.

Around the buildings and areas of hardstanding in the northern part of the site are occasional stands of buddleia (Buddleja davidii), elder (Sambucus nigra) and bramble (Rubus fruticosus agg.). Ruderal species, including teasel (Dipsacus fullonum), sow thistles (Sonchus sp.) and weld (Reseda luteola), are present in places. Adjacent to the former site entrance off the A39 is an area of grassland with scattered semi-mature and mature trees, including small leaved lime (Tilia cordata) and cherry (Prunus sp) with dominant grass species including perennial ryegrass (Lolium perenne) and Yorkshire fog (Holcus lanatus). There are infrequent forb species such as white clover (Trifolium repens), selfheal (Prunella vulgaris) and creeping cinquefoil (Potentilla reptans).

Along the western boundary of the site is a narrow strip of disturbed ground (which can be described as early stage brownfield mosaic habitat) and recently created (from the demolition process) rubble piles. This has been sparsely, and relatively recently, colonised by a variety of ruderal and low-growing ephemeral species. Dominant species include bristly ox-tongue (*Picris echioides*), fat hen (*Chenopodium album*), broad-leaved dock (*Rumex obtusifolius*), poppy (*Papaver rhoeas*), hoary cress (*Lepidium draba*), oil-seed rape (*Brassica napus* subsp. *oleifera*), selfheal and biting stonecrop (*Sedum acre*).

A security fence separates the northern part of the site (the former Innovia Cellophane Factory) from the Sports and Social Club and associated sports field to the south. A line of mature cypress species and ornamental trees, including cherry (*Prunus* sp.) has been planted along this boundary. The frequently managed and regularly disturbed amenity grassland, which characterises the playing field, is species-poor comprising species such as greater plantain (*Plantago major*), white clover, perennial rye-grass, creeping buttercup (*Ranunculus repens*) and yarrow (*Achillea millefolium*). A small area of disturbed bare ground, to the north-west of the playing fields and extending south along the edge of the railway line, has been colonised around the edge by abundant common horsetail (*Equisetum arvense*), and nettle (*Urtica dioica*) with occasional hop trefoil (*Trifolium campestre*) and evening primrose (*Oenothera biennis*). Bramble scrub is present along the fence separating the railway line from the site. A line of mature poplar (*Populus* sp.) divides the area of disturbed bare ground from the playing fields.

The Sports and Social Club comprises of a cluster of single storey buildings with block-work walls and corrugated fibre-sheet roofs around a close mown bowling green. Ornamental shrub planting, which in places creates hedge features, has been planted around the edges of the buildings. A car park is present to the south-west of the Sports and Social Club building complex. A line of mature leyland cypress (X *Cupressocyparis leylandii*) and bramble scrub screens the railway from the car park.



The southern tip of the site (to the south of the Sports and Social Club complex and adjacent to Bath Bridge) is dominated by an area of mature broad-leaved trees with an infrequent understorey of bramble and elder scrub, patches of ivy (*Hedera helix*) and less intensely mown grass comprising species such as wood false-brome (*Brachypodium sylvaticum*) and false oatgrass (*Arrhenatherum elatius*). Tree species include white willow (*Salix alba*), poplar (*Populus* sp.), wild cherry (*Prunus avium*) and ash (*Fraxinus excelsior*).

## 3.2 Species Surveys

#### 3.2.1 Bat

## **Habitat Suitability**

The habitats present on site are described in detail in Section 3.1 of this report. Given the habitat types present within and adjacent to the site, it is, overall, likely to support a moderate resource of invertebrate prey and offer some areas of suitable foraging habitat for bats.

The linear features present, particularly the railway line with associated trees and scrub, as well as some other boundary tree lines, are likely to provide corridors for bats commuting across and around the site. Many of these linear features also connect with off-site habitat corridors, which in turn may lead to off-site areas of suitable foraging and roosting habitat (for example, the areas of cattle-grazed grassland and hedgerows approximately 500m to the north of the site).

## **Roost Assessment**

During the roost assessment survey of the main Sports and Social Club building various potentially suitable roost features were identified. These features comprise; a number of cracks in the soffit boxing (potentially leading into the space behind the soffit boxing), gaps in the barge boards and drainage slots above the windows (which could lead into a wall cavity). However, there was no evidence of use of any of these features by bats and, furthermore, many of these features were heavily cobwebbed indicating that they had not been recently used by bats. None of the auxiliary buildings on the Sports and Social club site were found to support potential roost sites.

None of the trees within the site were identified as having suitable features to support bats roosts.

## **Emergence/Re-entry and Activity Surveys**

A minimum of five bat species were recorded on site during the surveys<sup>3</sup> (see **Figure 3.2**), but no bats were observed exiting or entering the Sports and Social club building (or any of the surrounding auxiliary buildings).

- Common pipistrelle (Pipistrellus pipistrellus);
- Soprano pipistrelle (Pipistrellus pygmaeus);
- Noctule (Nyctalus noctula);

<sup>&</sup>lt;sup>3</sup> A small number of the bat calls analysed (11) were too faint for identification.



- Serotine (*Eptesicus serotinus*);
- Myotis sp.; and
- Big bat species (either Noctule, Leisler's or Serotine)

The majority of the bats recorded were commuting and/or foraging along the vegetation on the western boundary of the site, with a small number of records associated with boundary vegetation around the playing field and the Bath Bridge area.

## Common pipistrelle

Common pipistrelle was the most frequently encountered bat species during the surveys, with 44 registrations in total. Most registrations were from the habitats along the railway line on the western boundary of the site, with common pipistrelle also recorded in the Bath Bridge area and along the eastern boundary of the playing field. This species was recorded both foraging and commuting within the site, with the greatest levels of activity typically recorded more than an hour after sunset along the railway line. The earliest common pipistrelle registration was recorded 55 minutes after sunset during the survey on 08 August 2011, with the latest record during a dawn survey 43 minutes before sunrise on 05 August 2011.

## Soprano pipistrelle

Soprano pipistrelle was the second most frequently encountered bat species during the surveys, albeit with only six registrations in total. As with common pipistrelle, the majority of activity was located along the railway line, where they were recorded foraging and commuting. The earliest soprano pipistrelle registration was 35 minutes after sunset during the survey on 08 August 2011, with the latest record during a dawn survey 55 minutes before sunrise on 05 August 2011.

#### Myotis sp.

Two registrations of *Myotis* sp. were recorded during the surveys, one in July and one in August, and on both occasions the bat was recorded commuting along the railway line. The closest of the two *Myotis* sp. registrations to sunset or sunrise was 103 minutes before sunrise on 05 August 2011.

## Serotine

Two serotine registrations were recorded on the 05 July 2011 survey. However, these two registrations were very likely of the same bat as they were independently recorded by the two surveyors, but at the same time and location. The record was 120 minutes after sunset, commuting through the Sports and Social Club car park.

## Noctule

One noctule registration was recorded, 46 minutes after sunset on the 05 July 2011 survey. It was recorded commuting by the railway line.

#### Big bat

One registration of a big bat was recorded during the 05 July 2011 survey, 110 minutes after sunset near the railway line. The recording was too faint to distinguish whether the call came from a noctule, serotine or Leisler's Bat. However, given the baseline results, it is most likely to represent a noctule or serotine pass.



## 3.2.2 Reptiles

The results of the surveys are set out in **Table 3.1** (for details of weather conditions and survey times see **Table 2.2**). The locations at which reptiles were found are illustrated on **Figure 3.3**.

Table 3.1 Reptile Survey Results

Survey Date Number		Species Recorded						
		Male Slow-worm	Female Slow- worm	Juvenile Slow- worm	Adult Grass Snake			
1	08/06/2011	0	1	0	0			
2	15/06/2011	2	0	1	0			
3	16/06/2011	2	0	0	0			
4	21/06/2011	0	0	0	0			
5	23/06/2011	1	1	0	0			
6	28/06/2011	2	1	0	0			
7	30/06/2011	1	0	0	1			
8	19/07/2011	0	1	0	0			
9	20/07/2011	0	2	0	0			
10	25/07/2011	1	1	0	0			
11	29/07/2011	1	1	0	0			
12	02/08/2011	0	1	0	0			
13	03/08/2011	1	1	0	0			
14	08/08/2011	1	3	1	0			
15	10/08/2011	2	0	0	0			
16	11/08/2011	2	2	0	0			
17	12/08/2011	0	1	0	0			
18	16/08/2011	1	2	0	0			
19	24/08/2011	1	1	0	0			
20	25/08/2011	1	2	0	0			

Two reptile species were recorded during the survey, slow-worm (*Anguis fragilis*) and grass sanke (*Natrix natrix*). The maximum adult count for number of slow-worms was four, which was recorded on both 8 August and 11 August. The maximum count for juvenile slow-worms on any one survey visit was one, recorded on 15 June and 8 August. A single adult grass snake was recorded on 30 June.

Slows-worms were mainly found along the western boundary of the site and in the small area of habitat in southernmost corner, close to Bath Bridge. The only grass snake recorded during the survey was located on the western boundary, in the southern part of the site, between the Sports



and Social Club car park and the railway line. The two juvenile slow worms were also recorded on the western boundary of the site, one from the same location as described for the grass snake and the other in the area of habitat between the sports field and railway line further north.

Using the Froglife assessment criteria (1999), the results of this survey demonstrate that a 'low' population of slow-worms and grass snakes is present on site.

#### 3.2.3 Invertebrates

#### **Initial Habitat Assessment**

The habitats present on site are described in detail in Section 3.1 of this report. The invertebrate survey walkover route was chosen to include invertebrate sample points in all habitats assessed as having potential to be of value for invertebrates, namely the areas of the site with mature broad-leaved trees, scrub/hedgerows and/or ephemeral/ruderal vegetation. The site also incorporates large areas with very limited potential invertebrate interest, such as hardstanding and amenity grassland.

## **Terrestrial Invertebrate Sampling Results**

A total of 115 terrestrial invertebrate taxa were recorded during the survey visit (a full list of these species is provided in **Appendix A**). This includes one Red Data Book and two Nationally Scarce species, as set out in **Table 3.2**.

Table 3.2 Notable Terrestrial Invertebrate Species Recorded

Scientific Name	Common Name	Nature Conservation Status
Homoneura interstincta	A true fly	Red Data Book 3
Homoneura thalhammeri	A true fly	Nationally Scarce
Dicraeus scibilis	A true fly	Nationally Scarce

Homoneura interstincta, which is a species that is usually associated with woodland, was only recorded in the area of trees/woodland in the southernmost corner of the site, adjacent to Bath Bridge. Dicraeus scibilis was found around the edges of the hardstanding in the northern part of the site, which is not characteristic habitat for this species (which is generally coastal habitats), but may be indicative that it is more common and widespread than current information suggests. Homoneura thalhammeri was found at all sampling locations, which may reflect its habitat preferences for commonly found scrub and tall herbs.

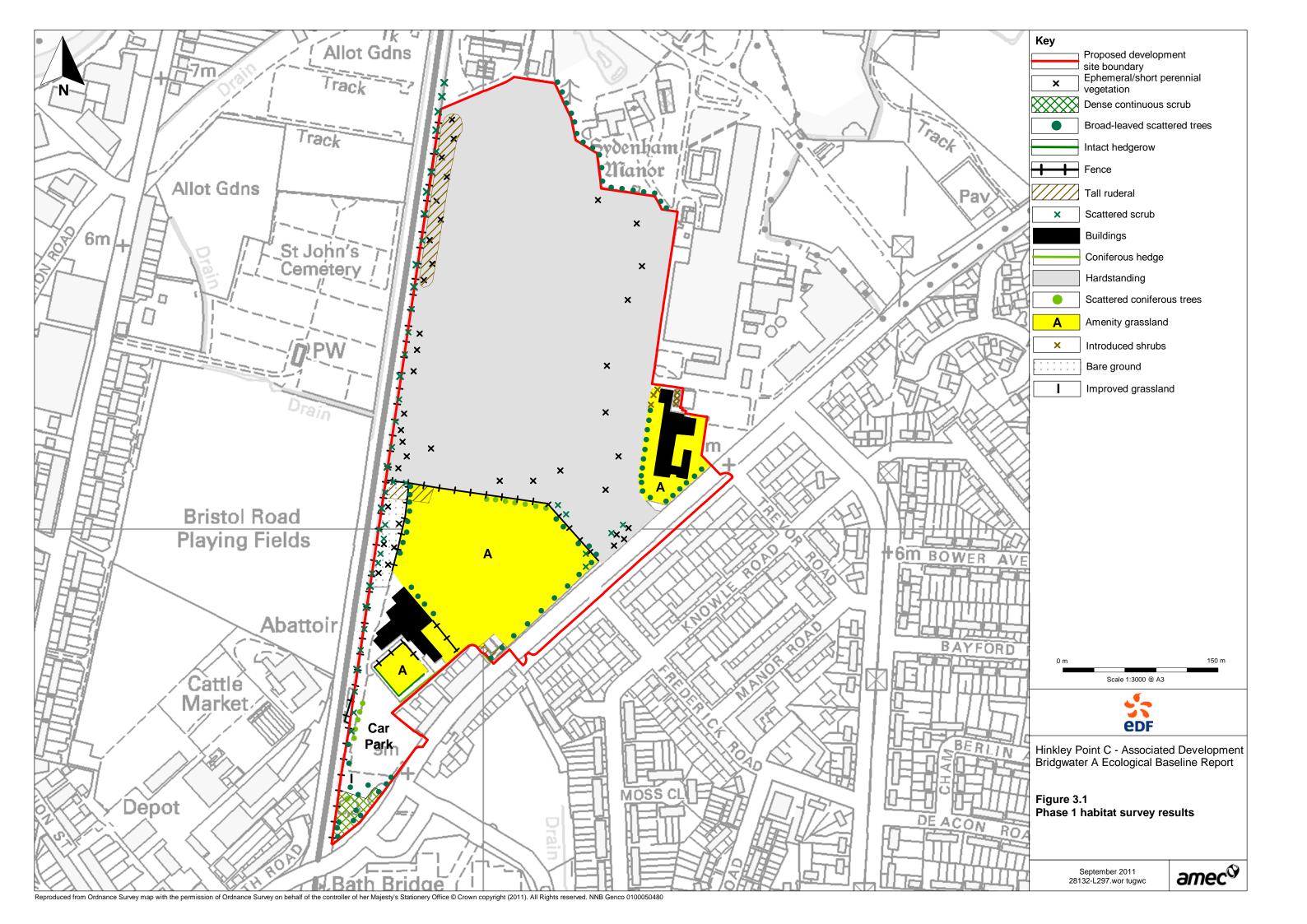
## **Habitat Evaluation and Summary of Findings**

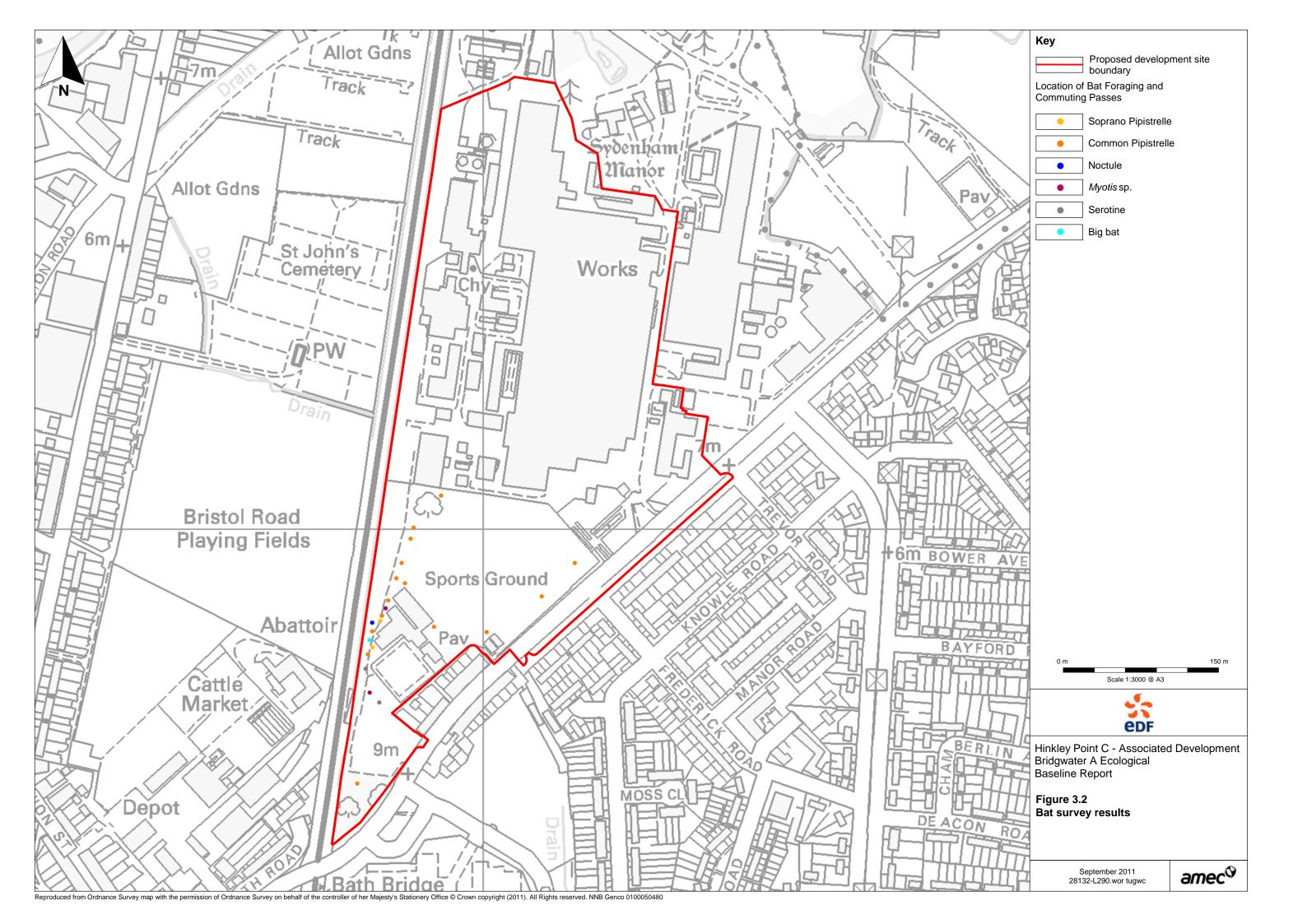
In summary, it is concluded that certain parts of the site, namely the area of trees near Bath Bridge and the edges of the former Innovia Cellophane Factory site, provide good habitat for notable *Diptera* (True Flies). The presence of notable invertebrate species in these areas indicates that they are also likely to constitute good invertebrate habitat more generally. However, comparatively fewer invertebrates were recorded during the sampling in the areas of

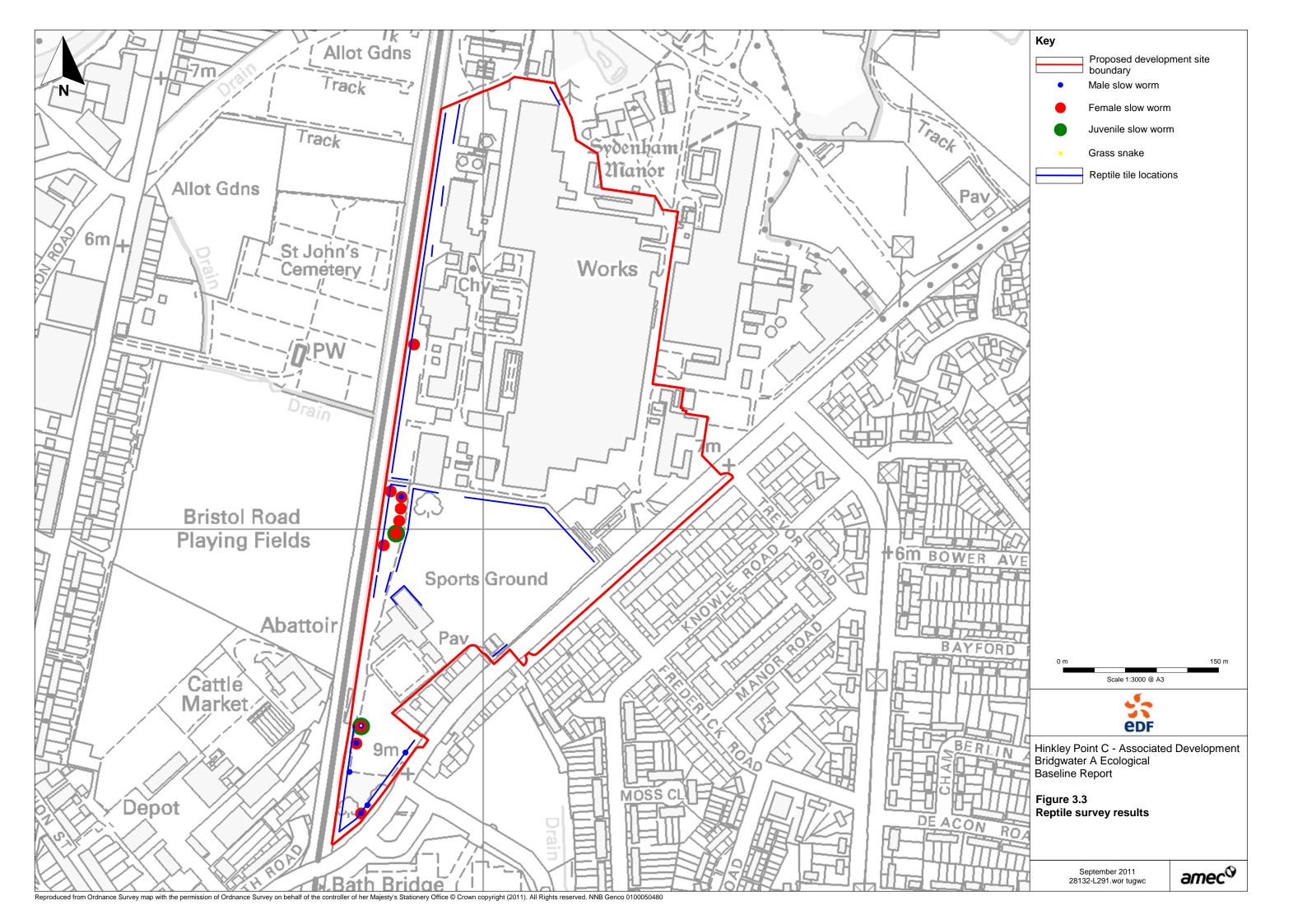


amenity grassland and the central parts of the site, indicating that these areas provide less suitable invertebrate habitat.

No requirement was identified for further invertebrate survey work to be undertaken.









## 4. Summary

An extended Phase 1 habitat survey of the proposed development site was undertaken in June 2011. Surveys for bats, reptiles and invertebrates were also completed during 2011. The survey results confirm slow-worm, grass snake, a small range of bat species, one red data book and two Nationally Scarce invertebrates occur within or adjacent to the proposed development site.





## 5. References

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## **Appendix A Species List from the Invertebrate Survey**

2 Pages

## Table A.1 Species Recorded during the Terrestrial Invertebrate Sampling Survey

Armadillium vulgare	Pachygaster leachii	Sapromyza sordida
Philoscia muscorum	Platypalpus minutus	Pherbellia cinerella
Porcellio scaber	Platypalpus pallidiventris	Geomyza nartshukae
Eriophyes campestricola	Dolichopus griseipennis	Geomyza tripunctata
Eriophyes goniothorax typicus	Dolichopus plumipes	Opomyza germinationis
Eriophyes tiliae	Medetera muralis	Sepsis fulgens
Lacinius ephippiatus	Medetera truncorum	Cryptonevra flavitarsis
Forficula auricularia	Lonchoptera lutea	Dicraeus scibilis
Chrysopa carnea	Bolopus furcatus	Dicraeus vagans
Drepanosiphon platanoides	Verralia villosa	Meromyza saltatrix
Pemphiguus spyrothecae	Eristralis tenax	Oscinella vastator
Eupelix cuspidata	Heringia heringi/senilis (F)	Thaumatomyia glabra
Philaenus spumarius	Meliscaeva auricollis	Thaumatomyia notata
Anthocoris nemorum	Merodon equestris	Thaumatomyia trifasciata
Deraeocoris ruber	Myathropa florea	Tricimba cincta
Elasmostethus interstinctus	Neocnemodon vitripennis	Cerodontha denticornis
Heterogaster urticae	Pipiza luteitarsis	Phytomyza cirsii
Leptopterna dolabrata	Platycheirus europaeus	Phytomyza pastinacae/sphondylii
Stenodema laevigatum	Platycheirus scutatus group (F)	Heteromyza rotundicornis
Drusilla canaliculata	Sphaerophoria scripta	Scaptomyza pallida
Adalia 10-punctata	Syritta pipiens	Hydrellia maura
Propylea 14-punctata	Terelia ruficauda	Philygria flavipes
Oedemera lurida	Urophora stylata	Psilopa nitidula
Oedemera nobilis	Xyphosia miliaria	Lotophila atra
Cantharis livida	Chyromya femorellum	Scathophaga stercoraria
Psilothrix cyaneus	Gymnochiromyia inermis	Calliphora vicina
Anthrenus verbasci	Lonchaea chorea	Nyctia halterata
Cassida viridis	Palloptera anderssoni (M)	Coenosia tigrina
Aglais urticae	Palloptera anderssoni/ustulata (F)	Ocytata pallipes
Lyonetia clerkella	Homoneura interstincta s.s.	Pontania proxima
Tyria jacobaeae	Homoneura subnotata	Lasius niger s.l.



Trichiura crataegi? (L)

Homoneura thalhammeri

Symplecta stictica

Meiosimyza rorida

Spilomena sp

Sciophila lutea

Minettia fasciata

Nomada fabriciana

Cookella albitarsis Minettia inusta Bombus lapidarius
Beris chalybata Minettia longipennis Bombus pascuorum
Chloromyia formosa Minettia tabidiventris Bombus terrestris

Microchrysa flavicornis Pseudolycia pallidiventris group (F)

Pachygaster atra Pseudolycia stylata

## **KEY TO ABBREVIATIONS**

F = Female(s); L = Larva(e); M = Male(s);

Notable invertebrates highlighted in **bold type**.